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February issue

SKETCHES

TOWARDS A

HORTUS BOTANICUS AMERICANUS;

OR,

COLOURED PLATES

(WITH A CATALOGUE AND CONCISE AND FAMILIAR DESCRIPTIONS OF MANY SPECIES)

OF

NEW AND VALUABLE PLANTS

OF THE

West Indies and North and South America.

ALSO OF

SEVERAL OTHERS, NATIVES OF AFRICA AND THE EAST INDIES:

Arranged after the Linnæan System.

WITH

A CONCISE AND COMPREHENSIVE GLOSSARY OF TERMS, PREFIXED,

AND A GENERAL INDEX.

By W. J. TITFORD, M.D.

CORRESPONDING MEMBER OF THE SOCIETY FOR THE ENCOURAGEMENT OF ARTS, &c.

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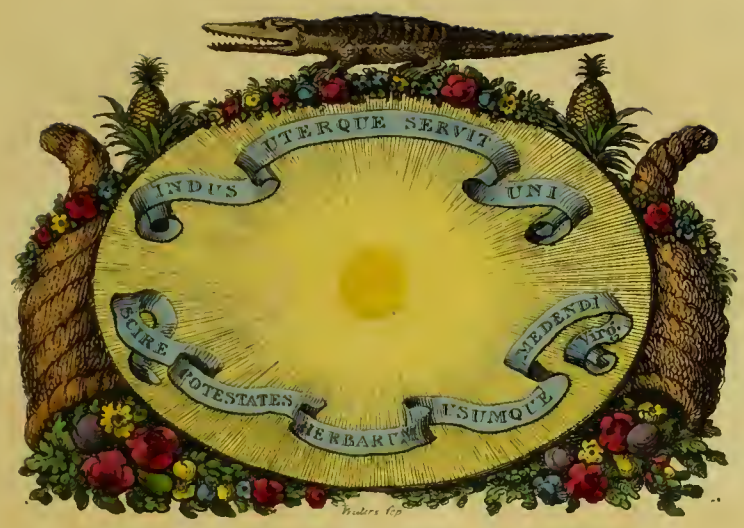

TO HIS EXCELLENCY THE GOVERNOR,

THE HONOURABLE THE COUNCIL,

AND TO

THE HONOURABLE HOUSE OF ASSEMBLY,

OF HIS NATIVE ISLAND

JAMAICA,

THIS WORK

IS RESPECTFULLY DEDICATED,

BY

THEIR MOST OBEDIENT HUMBLE SERVANT,

THE AUTHOR.

EXPLANATION OF THE FRONTISPIECE.

TROPICAL FRUITS.

For a more particular description, see each under its proper Class and Order in the work.

Fig. 1. Bread Fruit, *(Artocarpus Incisa)* a valulable fruit, about the size of a child's head. When gathered green, parboiled, and afterwards baked, the inside very nearly resembles new bread. It is not cultivated to the extent it should be in Jamaica, probably because it is more liable to be injured and destroyed by hurricanes and storms than ground provisions. It was brought by Captain Bligh from Otaheite to Jamaica in February, 1793.

Fig. 2. Musk Ochro, *(Hibiscus abelmoschus.)* A five-cornered capsule, containing the seeds, (which smell strongly of musk) in the cells.

Fig. 3. Pine Apple, *(Bromelia ananas).* This exquisite and valuable fruit, in every variety, is in the greatest plenty and perfection in Jamaica, and may be purchased for the smallest piece of coin current there.

Fig. 4. Soursop, *(Annona Muricata.)* A large fruit, of an irregular oblong heart-shape. The pulp within is white, juicy, soft, and of a sweet and acid taste mixed. It is considered grateful and cooling by some, and by others compared to cotton dipped in vinegar.

Fig. 5. Shaddock. *(Citrus Decumana.)* Is a fine fruit, roundish, about six inches in diameter, having a yellow, spotted rind, of a pungent, aromatic flavour. The pulp within is red or flesh colour, separated into divisions, and is granulated in the form of pegsor wedges, containing a sweet, aromatic, subacid juice, highly grateful and cooling. This fruit may be preserved at sea for some time by hanging it up in the air, and sealing the top of the stalk where it was separated from the tree.

Fig. 6. Jack Friut, *(Artocarpus Integrifolia.)* This very large fruit frequently weighs thirty pounds, and grows immediately from the trunk or branches on strong footstalks. See Plate II. Fig. 48. The outer surface is rough, and each protuberance ends in a point. The fruit, and every part of the tree abounds with a glutinous, milky juice, which may be drawn out in threads. The body of the fruit is principally composed of a white, tasteless, fibrous pulp, interspersed in which are numerous seeds, each of them surrounded by an orange-coloured pulp, about half an inch thick, of a very rich, sweet taste, which, after being washed in salt and water, is preferred by many to all the fruits in the island. The seeds are oval, about the size of an almond in the shell, and when roasted very nearly resemble chesnuts. This tree is of the same genus as the bread fruit, and introduced from Otaheite; it is not very common. The smell of the fruit is so powerful that some persons cannot bear it in a house.

Fig 7. Sweetsop, *Annona Squammosa).* This fruit is about the size of a large orange, and has a very soft, white pulp of a luscious, sweet taste.

Fig. 8. Pigeon Pepper, *(Capsicum.)*

Fig. 9. Coral Pepper.

Fig. 10. Bird Pepper, of which Cayenne is made.

Fig. 11. Purple, or Sore Throat Pepper; all the capsicums make excellent and wholesome pickles.

Fig. 12. Spanish Fig, *(Ficus).* A rich, luscious fruit, and very cooling and wholesome.

Fig. 13. Garden Egg. *(Solanum Melongena.)* Cut in slices, parboiled and fried, resembles fried eggs.

Fig. 14. Long Cerasee, *(Momordica Balsamina.)* Medicinal and vulnerary.

Fig. 15. Star Apple, *(Chrysophyllum Cainito).* The soft pulp is of a rich, clammy, sweet taste, and mixed with orange juice, resembles strawberries and cream.

Fig. 16. Naseberry, *(Achras Sapota.)* The pulp is of a reddish brown, and tastes like a sleepy pear, but of a very rich and luscious sweet.

Fig. 17. Mammee Apple, *(Mammea Americana.)* Has a thick, leathery, outside rind, and a very bitter, whitish one within; the pulp is yellow and firm, of a peculiar flavour and sweetness, preferred by some to all other fruits.

Fig. 18. Chocho, *(Sicyos angulata.)* A large green fruit, the pulp of which is boiled, and is a very wholesome vegetable.

Fig. 19. Mango, *(Mangifera Indica.)* A fine fruit, introduced from the East Indies, with a yellow, juicy pulp, of a delicious sweet taste, and, if not stringy, reckoned one of the best fruits. When first introduced they sold for a dollar each, but now four dozen may be procured for that price. They are also degenerating for want of care in planting the seeds of the best sorts. The fruit is very wholesome ripe, and when green, makes an excellent pickle.

Fig. 20. Cashew Apple, *(Anacardium Occidentale.)* A fruit, with an austere acid, restringent juice. The kernel of the nut, when green, is delicate as a walnut, and is also eaten roasted when ripe.

Fig. 21. The Young Cocoa Nut, *(Cocos Nucifera.)* Just as it appears when first formed in considerable numbers on the spadix; only a part of which come to maturity.

Fig. 22. Sand Box, *(Hura Crepitans.)* This curious fruit, when the seeds are picked out of the cavities at the bottom, and the hole sealed up, forms a natural sand-box, for which it is used. If left on the tree till quite ripe, a sudden shower of rain will burst the capsules with reports like pistols, which is the mode ordained for the dispersion of the seeds. The seed is sweetish, but poisonous.

Fig. 23. Pomegranate, *(Punica Granata.)* The pulp surrounding the seeds is red and of a fine cooling nature, and taste of mixed acid and sweet.

Fig. 24. Akee, *(Blighea.)* The white substance attached to the seeds of this beautiful fruit, parboiled and fried, tastes exactly like marrow, and is a most delicious vegetable.

Fig. 25. Avocada Pear, *(Laurus Persea)* called Pattas, in Peru. Has a soft yellow pulp, which, when ripe, melts in the mouth, and, eaten with pepper and salt, is called vegetable marrow. It is very nutritious and wholesome ripe, but when unripe it occasions dysentery.

Fig. 26. Plantain, *(Musa.)* A valuable, wholesome and nourishing food, boiled or roasted, the chief support of the negroes, and preferred by many of the whites (for constant use) to bread.

Fig. 27. Large Purple Plum of Salt Ponds. A very fine fruit, but not common.

Fig. 28. Indian Fig, *(Cactus Ficus Indicus.)* The fruit of the plant on which cochineal is found in Jamaica; the pulp and juice is of a most beautiful purple. If the fruit be eaten it tinges the urine of a deep red.

Fig. 29. Guava, *(Psidium (pyriferum.)* The pulp of this fruit is of a faintish, aromatic, sweet taste, and very wholesome. It is, however, principally made into marmalade and jelly.

Fig. 30. Rose Apple, *(Eugenia Fragrans.)* This fruit is hollow, containing the seeds, having a considerable space round them. It smells exactly like a rose, and the taste is much the same, with a faint sweetness.

Fig. 31. Tomato, or Love Apple, *(Solanum Lycopersicum.)* This fruit is considered very wholesome to colour and flavour soups and hashes.

Fig. 32. Yellow Hog Plum, *(Spondias Myrobalanus.)* An oval small plum, of a sweetish taste and mealy, not much esteemed by the whites.

Fig. 33. Common Ochro, *(Hibiscus Esculentus.)* A valuable, nourishing, mucilaginous vegetable, when boiled, and a principal ingredient in Ochro soup and pepper pot.

Fig. 34. French Sorrell, *(Hibiscus Sabdariffa.)* The calyx has a fine acid taste, which, when deprived of the seeds, makes good jam for tarts, and a very cooling drink in fevers.

Fig. 35. Granadilla, *(Passiflora Quadrangularis.)* This delicious fruit has a pulp of a fine sweet and acid taste, which is very cooling and pleasant; when ripe, it may be allowed to the sick in any quantities. It is eaten by some with wine.

Fig. 36. Cerasee, *(Momordica Balsamina.)* This species is of a roundish shape, and the inner pulp of a glorious red; when pricked with a pin, it bursts open and scatters its seed.

Fig. 37. Wild Gooseberry, *(Cactus Pereskia.)* The pulp of this fruit, when unripe, is of a most austere, acid taste, and will take ink-spots out of mahogany. When ripe, Dr. Barham says, it is black, cooling, and laxative.

Fig. 38. Pinguins, *(Bromelia Pinguin.)* The pulp is of an acid taste, and when mixed with sugar, is cooling in fevers, and given to children for worms.

Fig. 39. Banana, *(Musa sapientum.)* This fine fruit, when ripe, has a rich, yellow, sweet, mealy pulp, very agreeable and nourishing, raw, baked, or sun-dried. It makes a drink exceeding cyder.

Fig. 40. Tamarind, *(Tamarindus Indica.)* The Tamarind bean, the shell of which is hard and brittle, containing the fibrous pulp and seed. The preserve made of this fruit is well known.

Fig. 41. Lime, *(Citrus Medica.)* A very common small fruit, containing a very acid juice, used for making punch. It is a diminutive lemon, with a smooth rind.

THE FOLLOWING FRUITS ARE ALSO FOUND IN JAMAICA.

Olives, Many wild sorts; and they might with care be produced very good.

Currants, *(Ehretria Bourreria).* The fruit of a tall stately tree, of which birds are fond, but neither the European currant nor gooseberry will grow in Jamaica.

Grapes, *(Vitis Vinifera.)* When cultivated and taken care of are produced very large and delicious in Jamaica. There are several wild sorts.

Clammy Cherry, or Barbadoes Cherry, *(Malpighia)*, make an excellent red jelly for fevers; but none of the European sorts are to be found, either of the cherry, plum, or apricot, *(Prunus)*.

Mammee Sapota, *(Achras Mammosa).* A brown, oblong oval fruit, of a luscious, sweet taste, called natural marmalade, containing a seed like a polished shell. See Plate III. Fig. 10.

Cunep, or Honey Berry, *(Melicocca).* See Plate III. Fig. 62. The shell turns brown as it ripens.

Whortleberry, *(Vaccinium Meridionalis).* A fine acid berry.

Neither Apples nor Pears, *(Pyrus)* will grow in Jamaica.

Strawberry *(Fragaria)*, Raspberry and Blackberry *(Rubus)*, are very uncommon and never to be seen in the markets; but sometimes found wild in the cool mountains.

Pindars. See Plate III. Fig. 41. A delicious species of earth nut.

Oranges, Sweet and Seville, *(Citrus aurantium,)* abound in great plenty and variety, and are very fine; they commonly grow wild in woods and road sides, like many other of the fruits, and may frequently be purchased in the market, a dozen for the smallest piece of coin current: a tumbler of the juice every morning fasting is very wholesome.

Forbidden Fruit, *(Citrus Decumana).* A fine fruit of a sweet aromatic flavour, resembling the orange and shaddock, and of a size between both.

Lemon, *(Citrus Medica)* in great plenty, and very fine, particularly a large species with protuberances, called the French lemon; they are not so much used for lemonade and punch as the limes above mentioned, one species of which, the sweet lime, is of a sweet aromatic taste.

Mulberry *(Morus)*, will grow in Jamaica, and where cultivated are very fine; as they are easily raised in great abundance, it is a matter well worthy of consideration whether the breeding of silk worms would not be very advantageous and profitable in Jamaica.

Walnut, *(Juglans Baccata)*. One sort grows at Guanaboa, in St. John's, having a quadrangular shell, with four nuts, which taste like a filbert, called by some, Virginia bread nut. The American Hickory degenerates, and will not come to perfection in Jamaica.

Bread Nuts, *(Brosimum alicastrum)*. The nuts fatten pigs, and the leaves are good for horses.

Pumpkin, *(Cucurbita pepo)*, grows very large, and is much cultivated as an article of food, boiled, or made into pie; eaten too freely it causes surfeit and fevers.

Water Melon, *(Cucurbita citrullus)*, grows very large, fine, and full of juice in the driest soils; they are very wholesome and refreshing. The seeds are good in emulsions.

Musk Melon, *(Cucumis Melo)*, grow very freely in every variety, and are a fine wholesome fruit of a sweet aromatic flavour.

Squash, *(Cucurbita melopepo)*. A wholesome vegetable.

Cucumbers, *(Cucumis sativus)*, grow in great abundance and every variety; and with vinegar, salt, and cayenne pepper, are wholesome.

Prickly Wild Cucumber, *(Cucumis anguria)*, grows very luxuriantly and makes one of the best sort of pickles; they are small, egg shaped, and armed with soft prickles.

Abbays, *(Elæis guineensis)*. The fruit of a species of palm, called oily palm, which produces palm oil. See Plate II. Fig. 56. They have a fibrous, yellow, oily pulp over the stone, and when boiled are pleasant and wholesome.

Anchovy Pear, *(Grias cauliflora)*, See Plate II. Fig. 54. The fruit of a large tree growing in the mountains, the leaf one foot long and half a foot broad; resembles the Mango when pickled.

Custard Apple, *(Annona reticulata)*. The pulp, yellow, soft and sweet, like a custard; but frequently watery and without flavour.

Water Apple grows by the side of salinas and crecks, is food only for alligators, but poisonous to men.

Garlic Pear, *(Cratæva Gynandria)*. A cooling and restringent fruit the pulp of which smells like garlic.

Water Lemons, *(assiflora maliformis)*. The fruit is a pleasant sweet with sour, and very cooling in fevers.

Locust Fruit, *(Hymenæa courbaril)*. A fruit with a pleasant acid pulp contained in a thin shell.

Cabbage Tree, *(Areca oloracea)*. The succulent top of this lofty palm, called the cabbage, is very sweet and delicious food, and also makes a good pickle.

Papaw, *(Carica papaya)*. See Plate II. Fig. 50. The pulp is yellow when ripe, and of a sweet aromatic taste, boiled, or made into pies it very much resembles apples.

Mangosteen. See Explanation of Plate X. Fig. 5.

Sea-side Grape, *(Coccoloba uvifera)*. A pleasant acid grape with a purplish skin, but so highly astringent as to render it dangerous to eat them.

Cocoa Nut, *(Cocos nucifera)*. This well known and valuable fruit is common in Jamaica, and well worth planting to the greatest extent. When quite young they are full of a delicious cooling water or milk, which is very wholesome and strengthening; as they grow older this hardens to a kernel like an almond, when not too old, in this state they are frequently brought to England, the fibrous part of the tree will make cloth, the shells cups, and by boring the trunk, arrack is procured.

PREFACE.

THE term Botany is derived from Βοτανη, *(Botane)* a herb, and signifies, generally, a knowledge of the great vegetable kingdom of nature, the properties of plants, as food and medicine, and the various uses to which they may be applied in agriculture, medicine, domestic œconomy and the arts. In a more confined sense, it may be defined the knowledge of a scientific mode of arrangement, for the numerous plants which are to be found scattered over the surface of the globe, and diversified by the hand of Infinite Wisdom and Goodness, according to the respective climates, and the wants of the inhabitants of the various regions of the earth. In Tropical climates, the vegetable productions of nature are in the highest degree beautiful and magnificent. She is there clothed in perpetual verdure, and seems to be endowed with superior powers of fertility, presenting to the wondering eye, her ripest fruits; and on the same tree, the budding leaf, the verdant foliage, the bursting blossom, and the future fruit in different stages of maturity. Not only do these beautiful objects arrest our attention and command our admiration, but the more humble shrub and lowly herb are fraught with wondrous medical virtues, many of which are known only, perhaps, to the

natives (otherwise illiterate) by experience and observation. To gentlemen studying medicine, a scientific knowledge of Botany is indispensably necessary ---to the man of leisure and taste what study can be more interesting, or calculated to fill his mind with more pleasing ideas of the Creator, than the great book of vegetable nature, which lies open before his eyes, and invites him, by all the allurements of beauty, and wonderful and minute contrivance, to a nearer acquaintance; by which the hours devoted to exercise and health may at the same time be both agreeably and profitably employed. But for the fair sex, who to the advantage of leisure unite the still greater advantage of a natural taste and discriminating judgment, for pleasures as pure and innocent as they are noble and sublime, the study of Botany is peculiarly adapted, and has become particularly pleasing, as we may judge from the taste which has of late years prevailed in its favour in the United Kingdom, is also prevalent in other parts of the globe, and it is to be hoped will continue to increase. Its usefulness cannot be doubted, when we consider that the principal articles of our food, and many which furnish materials for our clothing, are plants, and that the most valuable and powerful, as well as the most safe of the remedies to be found in the Materia Medica, are drawn from the vegetable kingdom; and it is a generally received opinion that most countries possess within themselves simples adapted to the cure of their most prevalent diseases; and particularly so in Tropical climates. A skilful botanist can, in many instances, from the examination of an unknown plant, by considering its scientific and natural class, determine if it be wholesome food for man or beast, or whether on the contrary its properties be poisonous and deadly. By attending to the habit and characteristic appearance of the several plants in the natural orders, a wonderful analogy and correspondence may be found in their properties and use as food, and particularly as to their medical properties. A comparative view of the plants growing in each country on the globe under the same climate, and between the same parrellels of latitude, is a most interesting, and might be made a most useful and profitable study, by leading to the introduction and cultivation of new and valuable plants: Botany then may be safely pronounced to be a study, noble and useful, interesting and pleasing.

The motive which induced me to the undertaking of the present work, was the scarcity of books treating of the plants of the West Indies; and such as were in existence, being of old date, out of print, and unaccompanied

with figures. My leisure time has been employed in the collection of plants, and their names, in making drawings of them, and in giving some accounts of their virtues. An opportunity likewise offered to procure from Negro doctors in Jamaica, and, subsequently, from the Indians in North America, information which may prove new, curious and valuable. It was also hinted to me by the worthy Secretary of the Society for the Promotion of Arts, &c. at the time that Society honoured me by electing me a Corresponding Member, that my attention might be usefully turned to the subject of Jamaica Botany; and when afterwards I spent a considerable time in America, a great part of which was devoted to the study of medicine, and a part to travelling in the interior of the country, I increased my collection of drawings of American plants, gained additional information, and met with encouragement from the medical and other gentlemen there, to prosecute botanical researches, and publish the result of them, as being a work very much wanted. Thus (though I felt myself inadequate to the task,) I endeavoured to put together such information as could be collected, and arrange the plants indigenous or freely growing in North America, according to the Linnæan classes and orders, as I had previously, the Jamaica plants. I was also favoured with several dried plants by a friend from Yucatan in South America. From the mode in which my information was collected, from Negroes and Indians, it must necessarily have been very liable to error; and, no doubt, many other uncertainties and mistakes may be found, for which I trust to the liberality of the public for indulgence. The following sheets were compiled abroad, partly while travelling, and totally debarred from the use of books, which might have greatly assisted to render the work more complete; but it was inconsistent with my plan to make it voluminous and expensive, and since my return to England, my time being fully taken up with other avocations, which leave no leisure to consult all the very useful and valuable publications which have of late appeared in this science, I am compelled to submit my collections to the public as they were brought over.

The mode of arrangement adopted is---A Glossary of the Terms used in the work, compiled for my own use from books in my possession when learning the science, as short and simple as possible, referring to the plates for an idea of the several parts of fructification and shapes of leaves, &c. instead of long definitions. But I have carried this part of the work to a greater length than originally intended, and in the compilation of it have endeavoured to make it as comprehensive and useful, yet concise as possible, on the consideration that in the West Indies there is a great want of an *elementary* work on the sub-

ject, in a small compass, for general use. It may also be found useful for persons learning Botany, and the use of Schools. The work proceeds with a few Observations on the Character and Habit of Trees, of the various classes, illustrated by plates---A Description of various Seeds and Pericarps, with a plate---West Indian Plants, arranged after the Linnæan System, under their classes and orders---American Plants arranged in the same manner---A general Index referring to the pages, and a list of Subscribers will close the whole.

W. J. T.

ADVERTISEMENT

To Appendix Part II. of the Medical Assistant.

" MANY of the plants recommended in the Catalogue of Simples in the Appendix to " the Medical Assistant, being imperfectly known, or perhaps wholly unknown, to some of " those who have the greatest occasion to use them, it has been suggested to the Author that " he should have given a short and clear description of them. This he would have done, were " he satisfied that it could have answered the purpose intended; but such descriptions as those " given by Dr. BARHAM, or that are not scientific, are of little or no use in conducting the " search; and there are few of those for whom this work was chiefly intended, either versant " in botany, or who have leisure for such a study. The only way, therefore, of supplying the " deficiency of the work in this respect, would be by Engravings or Figures. The Author has " such an undertaking in view: viz.—of publishing a set of engraved Figures of all the " Medicinal Plants, except such as are perfectly familiar, of a size to bind up with the present " edition of the work. He only waits to know how far such a publication—describing and " designating the plants by their various names, &c. mentioning their place of growth, season " of gathering, &c. with a reference to the Medical Assistant for their properties and uses " —may be deemed necessary; and whether the encouragement it is likely to meet with would " justify the expence.

" IN every soil unnumber'd weeds will spring,
" Nor fewest in the best. ——————————

" And yet some weeds arise
" Of aspect mean, with wondrous virtues fraught:
" Such, planter, be not thou asham'd to save
" From foul pollution, and unseemly rot;
" Much will they benefit thy house and thee.
" But chief the *yellow thistle** thou select,
" Whose seed the stomach frees from nauseous loads;
" And if the music of the mountain dove
" Delight thy pensive ear, sweet friend to thought,
" This prompts their cooing, and inflames their love.

* Gamboge Thistle or Poppy. *(Argemone.)*

" Nor let rude hands the *knotted grass** profane,
" Whose juice worms fly:—Ah, dire endemial ill,
" How many fathers, fathers now no more,
" How many orphans now lament thy rage!
" The *cow-itch* also save, but let thick gloves
" Thine hands defend, or thou wilt sadly rue
" Thy rash imprudence, when ten thousand darts,
" Sharp as the bee-sting, fasten in thy flesh,
" And give thee up to torture. But unhurt,
" Planter, thou may'st the humble *chickweed*† cull.
" And *that*‡ which coyly flies the astonish'd grasp,—
" Not the confection nam'd, from Pontus' King,
" Nor the bless'd apple Median climes produce,
" Tho' lofty Maro (whose immortal muse
" Distant I follow, and submiss adore)
" Hath sung its properties, to counteract
" Dire spells, slow mutter'd o'er the baneful bowl
" Where cruel stepdames poisonous drugs have brew'd
" Can vie with these low tenants of the vale,
" In driving poisons from the infected frame.
" For here, alas!—ye sons of luxury mark—
" The sea, tho' on its bosom Halcyons sleep
" Abounds with poison'd fish, whose crimson'd fins,
" Whose eyes, whose scales, bedropt with azure, gold,
" Purple and green, in all gay Summer's pride,
" Amuse the sight, whose taste the palate charms,—
" Yet death in ambush, on the banquet waits,
" Unless these antidotes be timely given.
" But say what strains, what numbers can recite
" Thy praises, *vervain*, or *wild liquorice*§ thine;
" For not the costly root, the gift of God,‖
" Gather'd by those who drink the Volga's wave,
" (Prince of Europa's streams, itself a sea)
" Equals your potency. Did planters know
" But half your virtues, not the cane itself
" Would they with greater, fonder pains preserve."

* Worm Grass. *(Anthelmia.)* † *Holosteum.* ‡ Sensitive Plant. *(Mimosa.)*
§ *Abrus Precatorius.* ‖ Rhubarb.

ADVERTISEMENT TO PART III.

Being the Completion of the Work.

IT may, I trust, be permitted at this the close of the work to say a few words on the circumstances and motives that first induced to the undertaking, and also as to the mode adopted in the performance of it.

The foregoing Advertisement, and the Lines, are extracted from the Appendix, Part II. of a valuable and popular work on West-Indian Diseases, by the late Dr. DANCER. When I first read them, I resided some miles distant from Spanish Town, in Jamaica, and thought my leisure might be employed in the collection of plants, for the purpose of drawing them after Nature, and in enquiries as to the names by which they were known, and the uses or virtues generally ascribed to them; in which I was assisted by a negro doctress, whose fame was great in the Red Hills, and whose knowledge, in the opinion of the negroes, was far superior to that of physicians. I also occasionally procured information from other persons; and in many instances depended upon the botanical name given to me, as I had not the advantage of a single work on Jamaica Botany to refer to; neither SLOANE, BROWNE, LONG, GRAINGER, WRIGHT, nor SWARTZ, could I ever procure a sight of, which may apologize for many errors and uncertainties. I once indeed met with Dr. BARHAM's Hortus Americanus, a thin octavo book, published in 1794; but sixteen pounds would not induce the owner to part with it; nor were the Linnæan Names, classes or orders given to all the plants, noticed. Thus was I obliged to make my collections, in a great measure, in the dark, without a proper guide as to the genera and species; and as for full botanical descriptions from the plant, I could not spare the time necessary for so Herculean a task. I had not then the most distant idea of publication, much less in London.

Shortly before I left Jamaica, Proposals for a Hortus Jamaicensis were issued by a very respectable gentleman in Spanish Town, who was in possession of all the above-mentioned scarce works, and also of Martyn's Miller's Dictionary;—a work which to the scientific botanist is invaluable, and for extent, comprehensiveness, and accuracy of information as to every known genus and species, is above all praise. He proposed to publish a compilation from them all, describing in Alphabetical order each species scientifically, that was native of

Jamaica; and also what was said by each author as to their virtues and uses: to be completed in thirty numbers, (but probably from the immense number of species lately added by Swartz and others, it would on that plan have occupied considerably more). I know not if this work proceeded beyond the first number, but sincerely hope it has, as it would be highly valuable, and deserving of success; the only objection to the plan I ever heard mentioned was the length of the work, and the deficiency of plates. Neither was there any Glossary, or explanation of terms; and the persons for whom such a work would be useful on plantations, generally have neither leisure nor inclination to read through, much less to study, a thick volume of any of the very full and excellent Elements of Botany published of late years, any more than they would have to look out for the botanical and familiar description of Jamaica plants, in a general work among thousands of others, natives of all parts of the world, to them, therefore, uninteresting. But this remark by no means applies to medical and scientific gentlemen.

Seeing that my plan (which never was intended to go deeper into the scientific part than to mention the classes and orders, natural orders, generic and specific names, and number of species, and arrange the plants in that manner, with plates) would take up some of those ideas which did not form a part of the plan, of the Hortus Jamaicensis, I formed a design as I was at that time proceeding to New-York, of having my Drawings engraved and published there, with a Catalogue of the Plants. As I had leisure there also, I procured some information respecting, and made some drawings of, American Plants and Indian Remedies, and had begun the publication, when circumstances calling me to England, I ventured to publish the first two numbers for a trial; though, I again repeat, it was not my original intention to publish at all, much less in London. In the sale of the first two numbers I have, however, met with considerable encouragement; but, from the West-Indies and America, where I depended upon near two hundred subscribers, the returns have been, and must necessarily be, slow, and uncertain from existing circumstances, and the expence already incurred has been very considerable; but nevertheless, I held myself bound to finish the work, which has been accomplished in six numbers, as proposed; that, perhaps, however may be rather exceeded as to the letter-press, on account of the additional Tables of Climates, and Nosological Index given, which it is hoped will be acceptable, and render the work more complete. Should it not succeed, I must submit, with the consolation of good intention alone. The *whole* of the figures of the natural size being engraved from impressions actually taken by a peculiar method from the living plants, or from the dried specimens, (with the exception of four or five of which drawings were given me) and most of them being new, as I believe, (unless contained in valuable and expensive books not in my possession, nor of persons in general) I hope they will be found useful and interesting. In these four latter numbers it will be observed, that there are fewer plates for each number than in the two first; but they all contain numerous figures, (whereas some in the first and second numbers contained only four) those plates were engraved and coloured at half the price of the frontispiece and other plates of these four numbers. It will be found that more figures are actually given; and the expence of

engraving and colouring the ten double plates for the present four numbers is equal to what sixteen plates such as from 1 to 6, would have been; and they are indeed, as I trust they will be considered, fully adequate to the price charged for the work; for the expences of publication are now enormous in every article, and peculiarly disadvantageous to an individual who undertakes it at his own risk, and on his own account.

The shortness of the descriptions, and their being only familiar and noticing principally the uses and virtues of the plant, may perhaps be dissatisfactory to some of the scientific gentlemen of the present enlightened age, and probably little botanical information may this work afford to them; but my attempt was of a more humble nature, and only promised *coloured Plates* and a *Catalogue* with *concise* and familiar *descriptions* of *many* species: for it has been said a great book is a great evil. I have included in the text particular accounts of the medical virtues of the greater part of the most valuable American plants and Indian remedies, and a catalogue and arrangement of the remainder will be found in the Appendix and Addenda; many of which genera and others are common to England and North America. Should a full botanical description of a particular species or genus be required, reference may be had to Martyn's Dictionary, the Genera Plantarum, or an Encyclopædia.

I have likewise added a Nosological Table of the more frequent diseases, for the purpose (with the assistance of the Table of the Medical Virtues of Plants, in the second number,) of referring to the pages where the plants useful in each disease, are to be found, and also a Table of Climates and Habitats, with Catalogues, Addenda, and a general Index, containing the common names of the plants, with pages of reference. Some omissions, and other interesting particulars, are thrown into an Appendix. The names of many subscribers not having yet come to hand, has prevented the insertion of that list. Some copies are bound up with *Plates not coloured*, upon the same paper, for the convenience of those who may wish to colour them themselves, and some *without any Plates*, at a price proportionably low.

Thus far respecting the Mode adopted in bringing these Sketches to a conclusion. I beg leave to add a few general observations.

The learned and amiable Sir William Jones has observed, " I grieve to see Botany " imperfect in its two most important articles, the Natural Orders and Virtues of Plants, " between which I suspect a strong affinity. I envy those who have leisure to pursue this " bewitching study. If Botany could be described by metaphors drawn from the science itself, " we may justly pronounce a minute acquaintance with plants, their classes, orders, kinds, " and species, to be as flowers which can only produce fruit by an application of that knowledge " to the purposes of life; particularly to *diet*, by which diseases may be avoided, and to " *medicine* by which they may be remedied." In another passage he describes Botany as an " elegant and delightful study for a well born and well educated female, and one the most " likely to assist and embellish other female accomplishments."

The importance of the above observations must forcibly strike every reader, and I cannot myself imagine a more useful or delightful employment, if leisure and fortune allowed, than the cultivation of indigenous plants of our native country; and the introduction and naturalization (as they habituate themselves in a wonderful degree) of plants from other countries, with constant trials and experiments to ascertain all the uses and virtues of each, thereby to increase the subsistence and comforts, and lessen the ills of our fellow-creatures. Our most valuable staples and finest fruits in the West-Indies have been *introduced*, and flourished freely; and it is impossible to say to what extent this might be carried. Happy the man who has it in his power so to serve his country. The superintendants of our Botanic gardens in the East and West-Indies might be encouraged to devote their whole time to this; and the constant interchange of seeds and plants between both parts of the world, should be their bounden duty, as it would be their pleasure and advantage. Reports printed at different stated periods, would be also of the greatest use; and every facility should be given to the distribution of plants and seeds, freely to all applicants; also of seeds of esculent plants to the negroes. A plan of this kind steadily followed up, as to the Botanical Garden in Liguanea, would be highly worthy of that loyal and patriotic body of liberal and enlightened men,—The Honourable House of Assembly of Jamaica.

The celebrated Professor Barton, of Philadelphia, makes the following observation in one his works:

"The man who discovers one valuable new medicine, is a more important benefactor to "his species, than Alexander, Cæsar, or an hundred other conquerors. Even his glory, "in the estimation of a truly civilized age, will be greater and more lasting than that of these "admired *ravagers of the world.* I will venture to go farther,—all the splendid discoveries "of Newton, are not of so much real utility to the world, as the discovery of the *Peruvian* "*Bark*, or of the powers of *Opium* and *Mercury*."

It may perhaps be said that if the remedies mentioned in this work were really cures for the diseases noticed, that there should be no diseases at all. One of the causes that they exist in such lamentable abundance, and diversified forms, has been the prevalence of luxury, and total inattention to diet and regimen, attention to which, with other measures of prudent prevention, would preserve the health unimpaired, under the most unfavourable circumstances and climates, as I have myself experienced. Another cause is that these virtues and uses of plants are not sufficiently known, or if known, not attended to. Some will again say, our Materia Medica is already too full; but probably it might b found advantageous if other valuable articles were introduced, and some most, perhaps, pernicious ones now in it, rejected. Substitutes for the medicines composed of minerals, might surely be found in the vegetable kingdom, if that was sufficiently known and attended to: it is perhaps as yet not half understood. There certainly appears to be something incongruous between mineral substances, always very active when not in quantity to be poisonous, and the exquisitely tender coats of

the stomach and intestines. Vegetables once supposed poisonous have proved by experience to be noble remedies: witness—Fox-glove, Stramonium and Opium. Many a life has been sacrificed, sooner or later, at the shrine of Mercury—more insatiable than the altars of Moloch; or what has perhaps been worse to thousands than immediate destruction, the constitution has been ruined, the powers of the mind injured, and years of ill health and torment have dragged their slow length along, from the use of mercury and other mineral medicines.

Let us for example compare Dover's Powder, an excellent diaphoretic, composed of opium and ipecacuanha, (both vegetable productions), to James's Powder, composed of antimony, an active remedy in skilful hands; but the imprudent use of which is supposed to have hastened, if not caused the death of the great philanthropist--HOWARD.

The *choice* of remedies is also of consequence in particular circumstances and constitutions, and simple remedies have been sometimes found of avail when officinal medicines have failed. It should also be remembered that many of the medicines, allowedly the best in the Materia Medica, have been more recently discovered; and it was not by a backwardness and hesitation in disclosing its supposed virtues, that the power of Peruvian Bark, and other of the noblest remedies was established; and indeed we find that even this was given up after its introduction, and its use discontinued for many years. *Other* medicines equal in value to bark and opium may *yet* be discovered. It has been observed that Botany is the only science known to savage nations, and they are frequently acquainted with the general medical properties of vegetables, (which knowledge was made use of by Patroclus and others, at the Siege of Troy; or to go farther back, is as old as the Deluge) as well as their use for food; and they also know œconomical substitutes for the comforts and even luxuries of more civilized society, (*see the Index*) by which they can enjoy many things for which we are indebted to manufactures and commerce.

In giving an account of the virtues ascribed to plants, I have only humbly followed the example of Drs. BARHAM, DANCER, and other respectable authors mentioned in the Preface, as to West-Indian, and Dr. BARTON, in his valuable works, as to American Botany. A great number mentioned have been made use of by myself, or within my actual knowledge; and the others are generally given on such information and corroboration as I conceive sufficient authority: but in this case, even suggestions and repetitions, quotations and hearsay, are valuable, as trials may generally be made without any danger. The genus of a plant, and its natural order will also be a considerable guide, as there certainly exists an affinity of qualities between species of a genus, and the genera of a natural order. Facts are valuable, even hints have their use; and when a path is once opened to the better knowledge of vegetable remedies, it may be taken up by those who have far better opportunities and abilities, by which not only their country, but the world at large would benefit.

It would be desirable that works on this subject, like a dictionary, should profit by, and make use of all the suggestions of former writers, rejecting such as had since been found inert upon trial, and adding the further results of collection and experience.

The volume of Nature it is true lies constantly open before our eyes, but like other objects always visible, it has scarcely yet been considered, never perused, or thoroughly studied.—I would be understood principally, as to medical virtues and exotic botany.

In the West Indies, particularly, a knowledge of the medical properties of plants growing around them is particularly desirable and valuable to persons living on plantations, as the attack of disease is remarkably sudden, its progress peculiarly rapid, and skilful medical assistance, which is to be found in the towns, (and to which I would recommend those who have it in their power, to apply without an hour's delay) being at a distance, seldom to be procured, and of course expensive. In general works, *officinal* plants are so mixed with long descriptions of those never used, or of no peculiar beauty or quality, that it requires more time and labour than most persons can afford to bestow, to separate and distinguish them. Premiums are constantly offered for improvements and discoveries in agriculture, arts and sciences; and surely discoveries to preserve the health of our fellow-creatures, are also of importance, and would deserve reward; but in many cases it is difficult on this subject to trace the original author or suggester of remedies, which, however may afterwards become valuable; and till they are strictly attended to, and fairly tried, the suggestions cannot be too often repeated.

The mode of preserving seeds to be sent to a distance beyond sea, as connected with the above subject, is of considerable interest and importance. Seeds should if possible be sent in their dried husks or capsules, and packed up in a bag or gourd, well secured from air and damp; or they may be preserved in wax; perhaps jars exhausted under the receiver of an air pump, and in that situation sealed up by a burning glass, would answer very well, and be the least trouble. Roots and slips that are not in a growing state, might be packed up in moss, which will keep them alive a very long time. Some seeds have been known to vegetate after thirty years,—there is a great difference in this respect between different sorts; and the vegetation of old seeds may be assisted by the means mentioned in page 9.

From the views I entertain of the importance of this subject, I have perhaps been too diffuse, but every attempt, however feeble, prompted by good intention to promote it, will be received, I trust, with candour and liberality by the public, and to it do I commit myself with hope.

TABLE

OF

CLIMATES AND HABITATS

OF

Plants;

To ascertain, by a comparative View, to what Countries they are common, and to shew those which might be introduced from congenial or neighbouring Climates into any given one.

THERE are in all, between the Equator and the Pole, 30 Climates. In the 12 mentioned below, and the 12 next towards the North Pole, the longest day increases by half hours; in the the remaining six, between the Polar Circle and the Poles, the days increase by months. The specification of the particular countries lying under the first twelve Climates, will be sufficient for the present purpose; and it is interesting to observe, how many Plants are common to countries under the same Climate; and that this is not confined to the same, but extends through two or three, perhaps 20 or 30, degrees of latitude. The principle it is intended to illustrate may be applied to a very great extent, and might be productive of the most beneficial and general advantages; as there are many valuable Plants which are not yet common, though it is highly important they should be so; and with this object in view, it may be useful to observe, that the original *Native* country of a Plant is not of so much consequence to be known and kept in mind, as its *Habitat*, or the country where it has become naturalized, and freely and spontaneously grows. The greater part of the most valuable Plants we know, are in this situation; for instance, the Potatoe, that invaluable root, is native of South America, about as many degrees to the South of the Equator as London is to the North; the Sugar Cane, Coffee, and most valuable Plants in the West Indies, are also *Naturalized Foreigners*. This is a most important subject, and should be attended to in its utmost extent, by superintendants of Botanic Gardens, both in the East and West Indies, to the incalculable advantage of both, and then the motto of the Jamaica arms might be applied to this subject:—

"INDUS UTERQUE SERVIT UNI."

The First Climate extends from the Equator to 8 deg. 25 min. North Latitude, and in it are situated the following countries and places:—the Gold Coast, and part of Ajan and Adel, in Africa; the Maldives, Sumatra, Malacca, and Borneo, in the East Indies; Gallapagos Isles, New Granada, Surinam, Cayenne, and Guiana, in South America.

The Second Climate extends from 8 deg. 25 min. to 16 deg. 25 min. and contains Senegambia, Negroland, and part of Abyssinia, in Africa; Ceylon, Siam, Madras, and Pondicherry, in the East Indies: also part of Cochinchina, the Phillippine Isles; Carthagena, Honduras, Panama, and Darien, in North America; the Windward Islands, as Barbadoes, Tobago, &c. in the West Indies.

The Third Climate extends from 16 deg. 25 min. to 23 deg. 50 min. the Tropic of Cancer, and comprehends the Cape Verd Islands, part of Senegambia, Zahra, and Nubia, in Africa; Arabia, in Asia; Bombay, Calcutta, and part of Bengal, in the East Indies; Pegu, Ava; Tonkin, and Canton, in China; the Ladrone and Sandwich Islands; part of Mexico; Cuba, Jamaica, Saint Domingo, Antigua, Martinique, Gaudaloupe, and Porto Rico, in the West Indies.

The Fourth Climate extends from 23 deg. 50 min. to 30 deg. 25 min. and comprises the Canary Islands, Morocco, Tripoli, and Egypt, in Africa; the North of Arabia, part of Persia, the Mogul Empire, and part of China, in Asia; the Sandwich Islands, California, New Orleans, New Biscay, and East Florida, in North America.

The Fifth Climate extends from 30 deg. 25 min. to 36 deg. 28 min. and contains part of the Azores, Gibraltar, and Sicily, in Europe; Madeira and the Barbary Coast, in Africa; Candia, Cyprus, Syria, Palestine, Persia, Tibet, and Nankin, in Asia; New Mexico, Louisiana, Georgia, West Florida, North and South Carolina, in North America.

The Sixth Climate extends from 36 deg. 28 min. to 41 deg. 22 min. and comprehends part of the Western Islands, Portugal, Spain, Minorca, Sardinia, Naples, the South of Italy, the Morea, and Greece, in Europe; Anatolia, Georgia, and Great Tartary, in Asia; Pekin, in China; Korea and Japan; New Albion, part of Louisiana, Virginia, Maryland, and Pensylvania, in North America.

The Seventh Climate extends from 41 deg. 22 min. to 45 deg. 29 min. and comprises the North of Spain and the South of France, Corsica, the North of Italy and the North of Turkey, in Europe; Georgia and Tartary, in Asia; *the Western Indians*,

New York, New Jersey, and the Northern United States, part of New Brunswick, and Nova Scotia in NORTH AMERICA.

The EIGHTH CLIMATE extends from 45 deg. 29 min. to 49 deg. 01 min. and contains the North of France, Switzerland, and Hungary, in EUROPE; part of Turkey and Tartary, in ASIA; Canada, Nova Scotia, and Newfoundland, in NORTH AMERICA.

The NINTH CLIMATE extends from 49 deg. 1 min. to 52 deg. 0 min. and comprises the Netherlands, Germany, the South of England, part of Poland, and Russia, in EUROPE; Siberia, and part of Tartary, in ASIA: the North part of Canada, and Newfoundland, in NORTH AMERICA.

The TENTH CLIMATE extends from 52 deg. 0 min. to 54 deg. 27 min. and comprehends Ireland, the midland counties of England, Holland, Hamburgh, Hanover, part of Poland, Prussia, and Russia, in EUROPE; Siberia, in ASIA; Labrador, and the Esquimaux Country, in NORTH AMERICA.

The ELEVENTH CLIMATE extends from 54 deg. 27 min. to 56 deg. 37 min. and contains the North of England and Ireland, the South of Scotland, Denmark, Gothland, Courland, and Moscow, in EUROPE; Siberia, and part of Kamschatka, in ASIA; Hudson's Bay and Labrador, in NORTH AMERICA.

The TWELFTH CLIMATE extends from 56 deg. 37 min. to 58 deg. 29 min. and comprises the Western Islands, the North of Scotland, the Orkneys, part of Norway, Sweden, and Petersburgh, in EUROPE; Tobolsk, Siberia, and Kamschatka, in ASIA; Hudson's Bay, and Cape Farewell, in GREENLAND.

In the First Climate, *New Granada*, *Surinam*, *Cayenne*, and *Java*, the following Plants are found:—Arabian jasmine, arrack palm, areca palm, artemisia, moxa, anatto, bitter wood, quassia, balsam of capivi, coffee, clove, cokarito palm, cowhage, caruna poison tree, toxicaria, gout remedy, ipecacuanha, Indian rubber or caoutchouc, mangosteen mangrove, manicoli palm, nutmeg, mace, pepper, pine apple, sugar cane, trooley palm, Ticuna poison vine, (nearly the same as Macassar poison) and Upas poison tree.

Sumatra.—Benzoin, banyan, camphor, coffee, (but does not thrive) cassia, cherimoya, ebony, guaicum, matisia, myrtles, musa, mopa-mopa, (yields varnish) pepper, rattan-bamboo, silk-cotton, and wax palm.

Second and Third Climate.—*Spanish North America*.—Adam's needle, arums, American aloe, arbour vines, balsam of capivi, bamboo reed, cocoa, cacti, cocos, cedar, calabash tree, de las meuritas, geraniums, gum-copal tree, gigantic sun flower, logwood, lilacs, lily root, liquid ambar, mahogany, mentzelia, melia, myrasols, mastic tree, maguey, nopal, (on which the cochineal insect feeds) oak, olive, plumeria, pomegranate, sage, splendid dahlia, sisyrinchium, silk-cotton, superb lily, sensitive plants, solanums, swallow wort, sweet sop, Tolu balsam tree, thistle, tomatoes, turnsole, tamarind, violets, vanilla, and wood sorrel.

Arabia.—Aloe, almond, amaranth, banyan tree, balsam of Mecca (amyris) bead tree, cacti, cotton tree, coffee, cocoa nut, date, euphorbia, fig marigold, fan palm, gourd, gum-arabic, liquorice, lily root, melons, orange, oil nut, pomegranate, plantain, staphelia, sugar cane, sycamore fig, sensitive plants, senna, tamarind, and white lily.

Further India and *Cochinchina*.—Arbour vine, amaryllis, Arabian jasmine, black ebony, banyan tree, betel pepper, black pepper, braziletto, bimbling plumb, babouls, butea superba, corypha palm, cardamon, capsicums, carthamus, croton, camphor, cocoa nut, carambole, custard apple, caryota palm, carrissa, clearing nut, (for water) cotton, cloves, dracena ferrea, calamus rotang, (producing dragon's blood) dillenia indica, dahlbergia, (a timber) datura metel, egg fruit, elate sylvestris, (elephant's food) elephant's apple, eagle wood, ferreola, ginger, gamboge, gourds, grapes, (of a very large size) hibiscus, hog plum, indigo, iron wood, Indian madder, Indian vine, justicia, (dyes green) jasmine, jack fruit, long pepper, lawsonia, laurel, love apple, lemon, lime, morinda, melons, mangosteen, Malabar nut, mangoe, morea, Mackaco nut, myristica, mountain rice, nux vomica, nutmeg, orange, plantain, pine, papaw, pillaw, rose bay, rose apple, sandal tree, sycamore fig, strawberry, spikenard, sweet potatoe, sago palm, soap berry, silk-cotton, strychnos, superb lily, teak wood, turmeric, tamarind, thorn apple, and wild vines.

Third, Fourth, and Fifth Climate.—*China*.—Arbor vitæ, azalea, arenaria, antirrhinum, asparagus, astragalus, artemisia, aster, amaranth, acalypha, andropogon, ash,

asplenium, banyan fig, balsamine, bamboo, bind weeds, barleria, Barbadoes millet, blitum, bradleia 21—8, buckthorn, briza, bidens, balm, brassica, burmannia, box-thorn, chesnut, china root, china aster, cowhage, calavances, china gourd, crotolaria, china rose, china pink, corispermum, cyperus, cynosurus, chenopodium, chrysanthemum, catstail, cenchrus, colutea, carduus, carthamus, cotton, chaw-whaw and camellia, (used to scent tea) capsicum, clematis, dolichos soya, (from which soy is made) daphne indica, dodder, dog's bane, day lily, euphorbia, elæagnus, elephant's foot, ferns, four o'clock, globe amaranth, galangale, Guinea corn, gardenia, garlic, ginseng, hibiscus, hemp, hedysarum, ipomea, ixia, Indian shot, ixora coccinea, inula, ilex, Indian corn (grows from the equator to 51 deg. but best between 30 and 40 deg.) juncus, kidney bean, kowleary or lofty corn, laurus, lobelia, lolium, leonurus, lee chee, (used to scent tea) leadwort, monarda sinensis, mallow, momordica, mimosas, nymphæa nelumbo, nettle, nauclea, orange, oily grain or sesame, ophioglossum, plantain, paper mulberry, panicum, poa, polygonum, potentilla, parsley, polypodium, pindall, psychotria, prickly yellow wood, red bead tree, rose bay, rice, rose, rumex, spurge, sarsaparilla, Solomon's seal, sweet potatoe, solanums, spindle tree, swallow wort, salsola, sow thistle, sida, sempervivum tectorum, scirpus, stratiotes, spider wort, sagittaria, sugar cane, tallow tree (croton sebiferum) tamarind, tea tree, tobacco, tribulus, thrift, trefoil, trichomanes, vine, vervain, valisneria, white mulberry, water lily, (with esculent root) water cress, willow, wild basil, water soldier, winter cherry, and yam.

The Fourth and Fifth Climates.—*Egypt*, *Syria*, and *Persia*.—Almond, arum, colocasia, atriplex, acacia, anemone, anthyllis, bead tree, box thorn, bay tree, cercis, cherry, carob, cedar, cocculus indicus, cyperus papyrus, caper bush, croton, coloquintida, cyperus esculentus, cocoa, date, egg fruit, exacanthus, fig, four o'clock, hibiscus, heath, hyacinth, henbane, jasmine, Jews' mallow, or sosumber (corchorus) lemon, lilac, lawsonia, Lebanon pink, mulberry, myrtle, mastic, mimosa, menispermum, melons, manna ash, momordica elaterium, nymphæa lotus, olive, orange, oleander, oil nut, pomegranate, peach, pistachia nut, prickly cupped oak, (produces Aleppo galls) plantain, poppy, rice, rhus, rushes, storax, sycamore fig, senna, saltwort, sumach, sugar cane, spurge, Syrian madder, smilax, scammony, sebesten, sesame, spikenard, trailing plum, tamarisk, thrift, tulip, vine, willow, and wild olive.

The Sixth Climate.—*Japan*.—Arum, aletris japonica, black pepper, bay tree, bamboo, branched asphodel, calla, cotton, camphor tree, camellia, cocoa nut, chamærops, cycas, four o'clock, ginger, indigo, lily, mulberry, mimosa, orange, poppy, plantain, rose of Jericho, soybean, sugar cane, shaddock, star of Bethlem, trumpet flower, tallow tree, varnish tree, (rhus vernix) volkameria, winter cherry and willow.

Seventh, Eighth and Ninth Climates.—*Tartary*.—Aspen, amianthus, artemisia, asparagus, avena, ash, aster, buck wheat, barberry, buck thorn, bell flowers, briza, carduus, caltroppes, cassia, crassula, capsicum, cestus, cyperus, elder, elm, garlic,

hen bane, ixia, Jerusalem oak, lily of the valley, loose strife, mulberry, madder, morea, nymphæa nelumbo, (seeds and roots eaten) oxeye, oak, poplar, pink, poa, panicum, pine, peony, rice (two crops) stone-crop, sophora, swertia, swallow wort, spindle tree, solanum, sanguisorba, scabious, syringa, tallow tree, tobacco, vine, vipers bugloss, valeriana, veronica, willow, wax privet, and weeping thuya.

The following Countries SOUTH *of the Equator produce the Plants mentioned.*

Brazil.—Amaryllis formosissima, amyris elemi, banana, brasil, brasilian myrtle, cocoa nut, chocolate nut, copaiva, coffee, capsicums, canella alba, contrayerva, ebony, fustic, gourd, ginger, guaicum, ipomea quamoclit, jalap, logwood, melons, mechoacan, mahogany, nicaragua wood, plantain, potatoe, pine apple, pepper, rose wood, satin wood, scarlet fuchsia, tamarind, turmeric, wild cinnamon, and yam.

Cape of Good Hope.—Adansonia digitata, avicennia, African oak, bamboo, baobab, banana, butter tree, cocoa nut, cotton, capsicum, copal tree, crassula, cotyledon, dracæna draco, ebony, elais guineensis, euphorbia, Guinea grass, ginger, gourd, geranium, hassagai wood, indigo, iron wood, lemons, mangrove, maize, melon, mimosa senegal, maccaw, mangles, mesembryanthemum, orange, oak, palm, papaw, pisango, pterocapus santalinus, pelargonium, protea argentea, rice, robinia, sugar cane, sweet cassava, sweet potatoe, sandal wood, schaa or croton, stone pine, stapelia, sago palm, scarlet-flowered guaicum, strelitzia regina, turmeric, tulip-tree of Guinea, tetrandra, taxus, weeping willow, yam, yellow wood, and zamia.

Chili.—Acacia, called jarilla, (yields an excellent vulnerary balsam) Chili strawberry, (white tipped with purple) cacantahuen, (sudorific and febrifuge, but particularly useful in diseases of the throat) cullen, stomachic, [makes a vermifuge tea] cassia, senna, cypress, (in the Andine vallies) cedar, red, white, and lofty; cacti (with thorns eight inches long) carob tree, ceratonia, has spines four inches long, used as nails; gentian, incense shrub, four feet in height, distilling gum, leaves of a whitish yellow, and a bitter aromatic taste; maguta, a kind of rice; myrtle (seven kinds) the fruit of one yielding an excellent wine; potatoes, (indigenous, thirty kinds) payco, (for indigestions) puye, (the trunk supplies corks) palqui,(esteemed a febrifuge equal to bark) pines, quelghin, salsola kali, tuca, a species of barley; vira-vira,(expels the ague) wild tobacco, willow (with intire thin leaves of yellowish green, its bark is a febrifuge.)

Friendly Isles.—Aloe wood, aralia, areca, bamboo, bauhinia, bean, calambac, cajeput, canaria, producing gum elemi; cocoa nut, cucumber, canna, erythrina, eschynomene, euphorbia, eugenia, great fan palm, ginger, gourd, hibiscus, ixora, melaleuca cericadendron, mango, melon, orange, pomegranate, palmeto, plantain, pine apple, rice, sitodium and cynometra (with bags of oily kernels produced from the trunk) sandal wood, sago, sugar cane, sweet potatoe, tamarind, turmeric, and yam.

La Plata and Paraguay.—American pine, called cury, with red veins; Algarobba or carob tree, (St. John's bread) a broadpod, with beans or seeds of a brownish colour, the pulp whitish and sweet, makes bread, and an intoxicating drink by fermentation,

called lagga, which is wholesome and diuretic, and cures consumptions, the pulp also fattens horses and cattle; the wood of the white carob is of a violet colour, and used for the keels of vessels; the black is smaller, and the pulp must not be eaten raw; the third sort resembles the acacia, yields a gum like gum arabic, and is used to dye black; Alaba, is the petahaya of California, a delicious and refreshing fruit, which might be cultivated like the pine apple; Anguay, has violet pips of a triangular shape, used for necklaces; anana, ant tree, of a spongy nature, serves as a haunt for those insects; ambay, used to strike fire; Angola pea, baroba, banana, borage, bean, barley, [about Buenos Ayres] cinchona, called pezoes; caa, [yields dragon's blood] cacao, cedars, lofty and abundant; chanar, cotton tree, cochineal, cacaquata (a species of aloe) canes, cucumber, cresses, figs, izapi, [drops water from its leaves copiously] indigo, Indian corn, from which is made a fermented drink called chicha; jalap, jujube, lemon, lettuce, leek, mangay, yields an elastic juice, is about the size of a cherry tree, with odorous white flowers and yellow fruit, like large plums; mammou, the fruit grows on the trunk, and resembles the melon; molle, yields a copious and fragrant gum; manioc, mint, mane, the fruit of a beautiful plant, two feet high, resembles the almond in taste and form, and yields an oil better than olive; melon, mustard, nux vomica, nakalie, five feet high, a beautiful yellow dye; orange, onion, palo santo, Paraguay tea is the produce of the caa, which resembles the orange, the tea is made of the leaves dried by a slow fire; peach, pomegranate, passion flower, yields a wholesome and exquisite fruit, like a small apple, of a golden colour, with red spots; potatoes, white, red and yellow; quabyra (in which a kind of ants form wax as white as snow which makes candles) quembe, a fruit of a cylindrical form, as thick as the fist, weighing two pounds, with a delicious pulp, on a creeping plant; rhubarb, with a leaf ending in a point; reeds, rosemary, rue, sarsaparilla, [root of a thorny plant] sassafras, seibo, a tree bearing violet blossoms; timbabi, supplies a beautiful golden gum, which may be run into moulds; tatay, produces a yellow fruit like the mulberry; tarumay, resembles the olive, but inferior; turnip, umber, of a prodigious size, so as to shade fifty men; urucuy, a strong scarlet dye; vanilla, vines [cultivated] white rhubarb or mechoacan, (grows like bryony) willow, wild asparagus, wheat [about Beunos Ayres] yacani, zamia, small at bottom and top, and bulging in the middle; zevil, yields a bark useful in tanning; zepallo.

Madagascar.—Banana, betel, bamboo, benzoin, cocoa nut, corn, cinnamon, cotton, dolichos, ebony, flax, gourd, ginger, gummifera madagascariensis, whose juice concretes into an elastic gum, like the caoutchouc; gumlac, Indian fig, indigo, mauritanian mulberry, with green fruit; nymphæa lotus, orange, pine apple, pomegranate, pepper, rice, tamarind, turmeric, water melon, and yam.

New Holland.—Arum macrorizon and esculentum, by culture and boiling becomes a mild farinaceous food; Banksia, bellarderia scandens, bears a cylindrical fruit, and tastes like a roasted apple; ceratopotalum gummiferum, convolvolus, eucalyptus robusta, yields a brown gum; elegant papilionaceous plants, are the platilybuim formosum and pultnea stipularis, embothyrum formosisimum, has large crimson blossoms, like peony; New Holland mahogany, Botany Bay wood, or spotted red wood; red gum tree, styphelia

tubiflora, with fringed scarlet flowers like buckbean; sweet potatoes, and yams thirty pounds weight.

Otaheite.—Ava or kavy, is an intoxicating drink, from the piper mellisticum; bread fruit (aroo) five trees will support one man for 18 months, the inner bark makes cloth; the wood, huts and canoes; the juice, cement and birdlime; cratæva, dracæna terminalis, esteemed sacred, and employed in shading the Morais; evee [eatable] figs; mimosa, pandarus odorotissimus, inocarpus, [fruit resembles chesnut] paper mulberry, shaddock, terminalis glabra or tara ove.

Peru.—Acacias, aloe, amomum, algorob (incorruptible) achras sapota, broom, box, cedar, cotton tree, cabbage palm, cocoa nut, cotton shrub, chocolate nut, canna, cinchona (two species) cardana alliodora (a large timber tree, the leaves and fresh wood having a strong smell of garlic) capsicum (six species) calceolaria, cascarilla, datura arborea, ebony, ferns, gigantic fennel, (ferula) affords a very light yet strong wood; guaicum, jalap, large flowered jessamin, love apple, mangles, Maria (used for masts) majestic sun-flower, nasturtium, nolana, olive, palm (with roots rising six or seven feet above ground) pine apple, plantain, pepper (24 species) potato, (native) prosbata, quina-quina, sugar cane, salvia longiflora, turmeric, tobacco, tropæolum, tamarind, wild coffee (coffea racemosa, berries used in the same manner as the other) wild orange, and willow.

Rio Janeiro.—Cactus, coffee, cacao, cotton, fern, grape vine, ipecacuanha (an herbaceous plant, three feet high, single stem, and herbaceous leaves) indigo, mastic tree, mango, manioc, orambela, papaw, plantain, rice (cleaned by sand and sifted) sugar cane and wheat.

Society Isles.—Divoe, large as a potatoe, fiery and pungent, baked for one night, it as well as the mapooro is esculent; ehuoye, a kind of fern, grows in the marshes, when dressed is good food; ehegan, a fruit of red hue, or watery apple, has filaments hanging from it which come from the core; hearee, or cocoa nut, affords meat, drink, cloth, and oil; mapooro like wild tarro, but smaller; pæea like potato, and of the nature of cassada, is grated, and washed several times; rataa, like a chesnut, but bean-shaped, two inches and a half across, eaten roasted; shaddocks, from Friendly Isles; tarro, a root from 12 to 18 inches long, and as much round, the leaves used as spinach, it requires much dressing; tee, a small root, growing in the mountains, good eating, and produces a juice like melasses; yapple, larger than tarro, rather acrid, as arum, but good food, well prepared; yellow apple, evee, like a peach, oblong, with a stone, growing three or four in a bunch.

Van Diemen's Land.—Apium prostratum, ancistrum, aletris, banksia integrifolia and gibbosa, camarina limodorum, caledolaria, carpodontos lucida, drosera bifurca, eucalyptus globosus, of an enormous size; embothrium leptospermum, epacris, exocarpus expansa and cupressiformis, festuca, ficoide, glycine, lobelia, mazotoxeuron rufum, and reflexum, mimosa, morœa, melaleuca aster, orchis, plantago. ptolea, rechia glauca, scheffleria repens, terebinthinus, thesium, utricularia.

The STIGMA is usually placed on the top of the style, or if that part be wanting, immediately on the germ. It is a part of great importance, as it receives the dust of the anthers, and conveys it, or its effluvia, through the fine vessels of the style to the seed contained in the germ. Indeed, the anther and stigma are by Linnæus considered as the essential parts of a flower, and, in the language of Botany, they constitute one. These parts being present, are sufficient to the production of fruit--without them, there can be none: the presence of the stigma implies that of the germ, as the anther does of the dust. It is exceedingly various in its form, generally downy or velvety, sometimes ramified finely, or filiform or thread-like; single, bifid, trifid, quadrifid, quinquifid or globular; perforated, hooked, simple, flat and orbicular, spreading or rolled back. The stigma is also frequently bedewed with a clammy moisture, which is admirably adapted to catch the dust from the anther. In monæcious plants the female flowers are placed below the male, as is admirably exemplified in Sand Box-tree and Oil-nut.

V. The PERICARP, or Seed Vessel, *περι, peri*, round, and *καρπος, carpos*, fruit, is a case or covering for the seed, which is present in most plants, though in some the seed is naked, and fixed on the end of the receptacle, and in others, contained in the bottom of the calyx. According to the diversity of its structure it takes the different apellations of Capsule, *(capsula,)* Silique, *(siliqua)*, Legume, *(legumen)*, Follicle, *(folliculus)*, Drupe, *(drupa)*, Pome, *(pomum)*, Berry, *(bacca)*, Cone, *(strobilus)*, Nut, *(nux)*.

A CAPSULE, or Casket, is composed of several dry elastic valves which, usually burst open at the points, sometimes at the bottom or in the middle. If it consists of two valves it is called Bivalve, if of three Trivalve, and so on. The cavity of the capsule is called a Cell, *(loculamentum)*, and, according to the number of cells, is denominated Unilocular, Bilocular, Trilocular, &c. The divisions of the cells are called Dissepimenta, and the substances connecting the partitions to the seeds Columellæ. If it consists of three cells, with each a single seed in it, it is called Tricoccous. Capsules differ much with respect to the manner in which they open, as also in their form and suface; thus we find them, round, oval, long, angular, jointed, &c. some smooth, others prickly, as Indian Shot, plate 3, fig. 1. and Arnotto, plate 3, fig. 24.

SILIQUE, or Pod, has two valves, in which the seeds are fixed to both sutures alternately, as in Mustard, Radish, and Nephritic Tree, plate 9, fig. 6. When the seed vessel is small, short, or round, it is called a Silicle.

LEGUME, or Cod, has two valves, and the seeds affixed to one suture only, as in Beans, Peas, and Gum Arabic, plate 3, fig. 22.

FOLLICLE, or Bag, sometimes called Conceptaculum, is a seed vessel of one valve, opening from top to bottom on one side, the seeds being attached to a receptacle within it, not to any suture, as in Bastard Ipecacuanha, plate 7, fig. 1.

DRUPE, or Stone Fruit, is secculent or pulpy, having no external opening or valve, containing within its substance a stone, or nut, as the Plum, Sassafras, Sour Olive.

the two side ones, the Wings, *(alæ)*, and the lowermost, the Keel, *(carina)*. The Corol is also called Compound, *(composita)*, when it consists of a number of florets, placed in a common receptacle, and contained within a common calyx, as in Dandelion, Blue Bottle, &c. Of Compound Flowers there are three kinds—Ligulated, *(ligulata)*, when all the florets are flat; Tubulated, *(tubulosa)*, when all the florets are tubular and nearly equal; and Radiated, *(radiata)*, when those in the centre are tubular, and those in the circumference flat and spreading. Double or Full flowers, *(mulplicatus seu plenus flos)* last longer than simple ones, but are incapable of producing perfect seed.

III. The STAMEN is the male organ of generation, and is composed of three parts, the Filament, *(filamentum)*, the Anther, *(anthera)*, from ανθος, *anthos*, a flower; and the Dust, *(pollen)*, which parts are all visible in Barbadoes Pride, plate 7. fig. 7. The filament is the slender thread-like substance (sometimes called chives) which supports the anther, and connects it to some part of the fructification, most commonly to the corol, frequently to the calyx and receptacle, and sometimes to the pistil. It is in some tapering, in others of the same thickness throughout, smooth or hairy. The filaments in some flowers are very long, in others, entirely wanting. The anther is that part which contains the pollen, or impregnating dust, and when ripe, bursts and scatters it abroad for the use to which nature has destined it. In general it is composed of two oblong or roundish cavities, which burst longitudinally, in some plants gradually, in others, all at once, with considerable violence; for this purpose the filament is curled up like the spring of a watch, and is suddenly set at liberty. In some flowers, which generally hang down, this dust is discharged through a hole in the top of the anther. It varies much in its shape, and takes the several ones, of round, flat, oblong, kidney-shaped, twisted, horned, or terminated by a membrane. When the filament is inserted near the end of the anther, it is called erect; or, oblique, when it is connected with the middle; when the anther lies across, it is incumbent; if it turns as on a pivot, versatile, and where the filament is wanting, adnate. The dust is a fine powder, contained in the anther, for the purpose of impregnation, of a yellow colour; but from this it sometimes varies, as also in the form of the corpuscles, of which it is composed.

IV. The PISTIL, also called Pointal, is the female organ of generation, and contains the seed which is to be fertilized by the dust; it is placed in the very centre of the flower, and is composed of three parts, the Germ, *(germen)*, the Style, *(stylus)*, and the Stigma, *(stigma)*, which parts may be distinctly seen in the blossom of Calabash, plate 8, fig. 4.

The GERM, considered by Linnæus as the *ovarium* or *uterus* of plants, is of various shapes, but is always situated at the bottom of the pistil. It contains the embryo seeds, and when mature, takes the name of Pericarp. It gives origin to the style, as in the Guaiacum Tree, plate 7, fig. 9.

The STYLE is that small pillar which grows from the germ, on the top of which is usually placed the stigma. In some plants the style is extremely short—in others entirely wanting. It corresponds to the vagina in animals.

sides this general cup, its own particular perianth. Its leaves are generally disposed in a radiated manner, as in Dogwood. The involucre belonging to each umbel, or bunch of flowers, is called Partial; that which grows at the base of the whole collection of umbels, is called General. In Fool's-parsley it is half-leaved, *(dimidiatum.)*

3. Glume, *(Gluma)* or Chaffy Husk, is a species of cup which chiefly belongs to grasses, and consists of one two, three or more valves folding over each other, like scales, and frequently terminated by a long stiff-pointed prickle, called the Awn, or Beard—for example, Rice, Mays, or Indian Corn.

4. Ament, *(Amentum)* or Julus, is commonly called a *Catkin*, and consists of a great number of chaffy scales, disposed along a slender thread, or receptacle, as in Hickory, Chinquepin, &c. Those flowers, supported by an ament, are generally destitute of petals.

5. Spathe, *(Spatha)* consists of a simple membrane, growing from the stalk in a sheath-like form, and wraps round the flower or flowers contained in it, till they are strong enough no longer to require its protection. It is sometimes simple, as in Narcissus, sometimes divided in two, as in Water Soldier, or imbricated, as in Plantain and is common to flowers having bulbous or tuberous roots.

6. Calyptre, *(Calyptra)* from καλυπτο, *calupto*, I cover, is peculiar to mosses.

7. Volve, *(Volva)* is membranaceous, and peculiar to mushrooms and funguses in general; it is also called Ruffle or Curtain.

II. The COROL (literally, a Garland) is that delicate part of the flower which most attracts our notice, being generally beautifully coloured; it is enclosed by, and situated next to, the calyx, and surrounds and protects the organs of generation. Linnæus says it is formed from the inner rind of the plant, as the calyx is from the outer. Its coloured leaves are called Petals. When the Corol is composed of one petal, it is called Monopetalous, sa in Arrow Root, plate 4, fig. 1. Dipetalous, as Enchanter's Nightshade, Tripetalous, as in Water Plantain, Pentapetalous, as in Marsh-mallow, &c. or Polypetalous, as Water Lily, according to the number of pieces of which it is composed, two, three, five, &c. or many. The lower narrow part of a Monopetalous Corol is called the Tube, *(tubus)*; the upper spreading part, the Limb, *(limbus)*, as in Four o'Clock, plate 6, fig. 1. The lower narrow part of a Polypetalous Corol is called the Claw, *(unguis)*, the upper spreading part, Lamina, as in Barbadoes Pride, plate 7, fig. 7. The Corol also assumes different names according to the diversity of its form. Bell-shaped, *(campanulata)*, as the Red Lily, plate 7, fig. 2. Funnel-shaped, *(infundibiliformis)*, as in Tobacco; Salver-shaped, *(hypocrateriformis)*, as in Four o'Clock, plate 6, fig. 1. Wheel-shaped, *(rotata)*, as in Savanna Flower, plate 6, fig. 3. Rose-like, *(rosacea)*, as in Mammee Apple, plate 8, fig. 3. Gaping, *(ringens)*, as in Sesame, plate 9, fig. 7. the opening of the latter is called the Mouth, *(faux)*; when that is closed with an intervening substance, it is called Grinning, *(personata)*, Twisted, *(torta)*, as in South Sea Rose, plate 5, fig. 5. Undulated, *(undulata)* as in Calabash, plate 8, fig. 4. Butterfly-shaped, *(papilionacea)*, as in Sweet Pea. This latter consists of four petals, the uppermost of which is called the Standard, *(vexillum)*,

A GLOSSARY;

OR,

EXPLANATION OF THE OUTLINES OF BOTANY, AND THE TERMS USED IN THE DESCRIPTION OF PLANTS.

AS the flower may be considered the termination or end of the old plant, and a preparation for the seed or rudiment of the new plant, it will be proper to begin with *The Parts of Fructification*, which are eight. 1. The Calyx, *(Calyx.)* 2. The Corol, *(Corolla.)* 3. The Stamen, *(Stamen.)* 4. The Pistil, *(Pistillum.)* 5. The Pericarp, *(Pericarpium.)* 6. The Seed, *(Semen.)* 7. The Receptacle, *(Receptaculum.)* 8. The Nectary, *(Nectarium.)*

1. CALYX, a general name, expressing the cup of a flower ; it is the termination of the outward bark, and surrounds, encloses, or supports the other parts of the flower, is usually of a green colour, but in some few flowers entirely wanting. It is various in its structure, and is distinguished by the several names of,

1. PERIANTH, *(Perianthium)* from περι, *peri*, around, and ανθος, *anthos*, the flower, called Empalement, consists of several leaves, or of one leaf divided into several segments, it is then called Monophyllous, Diphyllous, Triphyllous, &c. or Polyphyllous, as it may consist of one, two, three, &c. or many segments. See plate 4, fig. 2. of the Perianths in Arrow Root and Indian Shot. It is called Common, when it supports and connects together a great number of florets—and Imbricated, when composed of a number of leaves lying one over the other, like scales or tiles on the top of a house.

2. INVOLUCRE *(Involucrum)* is, when the Calyx, usually consisting of several leaves, is situated at the foot of a number of flowers growing together, each of which has, be-

Pome, or Apple, a fleshy seed vessel, without any external opening, containing within its substance a capsule, as the Apple, Cucumber, Melon and Mammee Apple, plate 3, fig. 10.

Berry, a pulpy seed vessel, containing within its substance a number of naked seeds, as Raspberry, Currant, and Coffee, plate 3, fig. 5.

Cone, or Strobile, a species of seed vessel, composed of woody scales, within which lie the seeds; it is defined to be formed of an ament, with hardened scales; examples of this are found in the Fir, the Pine, &c.

Nut, expresses a pericarpium of extraordinary hardness, containing a kernel, and has no external opening, as the Filbert, Butternut, Antidote Coccoon, plate 3, fig. 21.

Propago. The seed of the mosses, which has no covering.

VI. The SEED is analogous to the egg in animals, and is defined by Linnæus to be the rudiment of a new plant, similar to the parent stock. It consists of the part which is to be the new plant and of nourishment for it, till it has attained sufficient strength to provide for itself: the young plant consists of the Plumule and the Radicle; the plumule rises into the air and constitutes the trunk and branches, the radicle penetrates into the earth, and forms the roots. The plumule and radicle together are called the Embryo *(corculum)*. The part which is to provide nourishment for the young plant forms the bulk of the seed, and consists generally of a farinaceous matter, fit for food, as in Corn, Rice, &c. or mixed with essential oil, as in Oil-nuts, Almond, &c. In most plants it is divided into two parts, called Cotyledons or Seed Lobes, which are sometimes converted into leaves, (though some have only one cotyledon). From the extremity of these arise a number of very minute vessels which unite as they proceed towards the embryo into which they enter in two distinct bodies. Many seeds have also a White *(albumen)*, and some a Yolk *(vitellus)*, but not commonly. The husk *(cutis)* sometimes called shell, *(testa)* incloses and preserves the cotyledons and embryo, and is composed of two coats of various consistence, having a duplicature which incloses the end of the radicle. The eye *(hilum)* is a mark in the end or middle of the outer husk, being the cicatrix, formed by the breaking off of those vessels which supplied the seed with nourishment. Seeds also generally have a small hole *(foramen)* between the eye and the radicle, and some are furnished with an additional covering termed an aril, *(arillus)* which is a substance very like parchment, exemplified in the Coffee. Seeds vary much in colour, see plate 3, also in number, from one, two, three, or four, to fifteen thousand, likewise in their form, and surface; some are crowned with a pappus, aigrette, or down. When placed immediately on the seed it is called Sessile, when on a footstalk Stipitated, as in Dandelion; when the pappus consists of simple rays it is called Simple, when branched or feathered, Plumose; some are furnished with hooks. The surface of some is rough as Four o'Clock, plate 3, fig. 6, or reticulated like a honey comb, as in Pindars, plate 3, fig. 41.; some glossy, as Akee, plate 3, fig. 14.; others grooved, as

Musk-ochro, plate 3, fig. 26.; some round, as Soapberries, plate 3, fig. 11.; flat, as Sand Box, kidney shaped, as Capsicums, plate 3, fig. 7, and Cashew, plate 3, fig. 15.; or three cornered, as Buck-wheat; oval, as Sweet Sop, plate 3, fig. 25.; twisted, as in Skrew Tree, plate 3, fig. 46.; acuminated, as Star Apple, plate 3, fig. 8.; pointed, as in Naseberry, and Sour Sop, plate 3, figs. 9, and 27. Nature has provided for their dispersion in several ways; some are furnished with a wing, as Mahogany, plate 3, fig. 60.; three wings, as Horse Radish Tree, plate 3, fig. 16.; or an inflated seed vessel, as Bladder Senna; others are thrown out of the seed vessels by the elasticity of the valves, as Balsamine, or an elastic spring surrounding the capsule, and others have long threads, which wrap round the arms of trees. Many are swallowed by birds, rats and squirrels, and afterwards voided entire; the Indians indeed think all their timber planted by squirrels. Seeds also migrate by Rivers, the Ocean, Winds, &c. They retain their vegetative power a long time, which in old seeds may be increased by moistening the earth with water, to which is added oxygenated Muriatic Acid.

VII. The RECEPTACLE is the end of the stalk, which supports all the other parts of fructification, and by which they are connected. It is called Proper, when it supports the parts of only one flower, and Common, when it supports several florets; this last belongs to the compound flowers. Umbel, when it supports from a common center, several small footstalks of proportionable lengths; Spadix is the receptacle of a palm, always branched, and produced within a Spathe or Sheath; in the Indian turnip, and Skunk cabbage it is simple.

VIII. NECTARY is a part found in many flowers, and is extremely various in its forms and uses, sometimes united to the Petals, and sometimes separate from them; appearing in some flowers as a gland secreting honey, in others, as a kind of vessel to receive it. It assumes the different forms of, threads, a cup, or a number of little cups, a beard, a gland, sometimes of a horn or horns, at others of a cockspur, which in some plants is extended to a long point, as in Balsamine, and Chain Cotton, plate 8,fig. 1. The honey contained in it appears to be for the nourishment of the anthers and stigmas. In general when any part occurs in a flower whatever may be its form, if it does not appear to answer the purpose of any of the other parts of fructification, it may safely be considered a nectary.

Having described the parts of fructification, we now proceed to the other parts of the plant, beginning at

The ROOT *(Radix)* is generally understood to be that part of the plant which is under ground, and which draws forth nourishment from the earth necessary for the existence of the plant. The body of the root, or that which lies below the surface of the earth, is termed by Linnæus the Descending Caudex, the fibrous part is termed *(Radicula)*, which imbibes nourishment from the earth for the support of the whole plant. The root, like the stalk, consists of the Outer Bark, *(cortex)* the Inner Bark, *(liber)* the Wood, *(lignum)* and the Pith, *(medulla)*. In duration it is—Annual, *(annua)* living but one year,—Biennial, *(biennis)* a root which continues to vegetate two years, and Perennial, *perennis* continuing several years. Climates and cultivation have a great effect

on the term of duration of roots of vegetables, as exemplified in the Oil Nut. Plants attaching themselves to the branches of trees are called Parasitic, *parasiticæ* as Vanilla Old Man's Beard and Dodder.

From their various shapes Roots assume the different appellations of

Fibrous, *(fibrosa)* having no solid body, but entirely made up of thread-like fibres, as the Grasses in general: if the fibres are very slender it is called Hairy Root, *(capillacea)*.

Præmorse, *(præmorsa)* a root which does not run tapering to its extremity, but seems bitten off, as the Scabious.

Granulated, *(granulata)* consisting of small knobs attached to the root by slender fibres, as in White Saxifrage.

Tunicated, *(tunicata)* consisting of many coats, each forming concentric layers, as Onion.

Fusiform, *(fusiformis)* Spindle-shaped, or Tap-root, a root which tapers downwards to a point, as in Carrot, and in Arrow-root, plate 1, fig. 2.

Subrotund, *(subrotundus)* a root which is nearly round, as in Turnip.

Solid, *(solidus)* of one substance, and not disposed in coats or scales, as in Crocus.

Squammose, *(squamosa)* a root composed of scales lying over each other, as in the Lilies.

Creeping, *(repens)* running under ground, and sending forth shoots at the joints, as the May Apple.

Dentated, *(dentata)* a root having many tooth-like knobs, not attached by fibres, as in Toothwort.

Reptant, *(reptans)* running on the surface of the ground and taking root at the joints, as Mint.

Tuberous, *(tuberosa)* consisting of subrotund bodies, collected into a bundle, as in Sweet Potatoe, plate 1, fig. 11. and Yams, plate 2, fig. 45. It is called Palmated, when it spreads so as to resemble a hand. Fasciculated, when collected into a close bundle, Pendulous, when the knobs hang down, as in Sun Flower, Duplicate, composed of two joined together as the Ophrys, vulgarly called in America, Adam and Eve.

Truffle, *(lycoperdon)* is all root, without stalk or leaves.

The STALK is that part of the plant which rises immediately from the root, and supports the leaves, flowers and fruit; it is termed by Linnæus the ascending Caudex, and is very similar in its structure to the root, consisting of the *outer and inner bark, and the sap (alburnum)*, a soft white substance between the inner bark and the wood, which, in process of time acquiring solidity, becomes the wood, in the centre of which is the pith, which disappears as the trees grow old. The inner structure of plants is found to be chiefly composed of tubes and cells for conveying air and circulating the sap and proper juices of the plant. Some stalks, on being cut, emit a milky juice, and are thence called *lactescent*, as the Physic Nut. Linnæus enumerates four kinds of stalks, Stalk or Stem, *(caulis)* from Καυλος, (*kaulos*) that stalk which supports both the fructification and leaves, and is common to plants in general. Straw, *(culmus)* peculiar to the

grasses, proceeding immediately from the root, generally cylindrical and jointed, plate 1, fig. 8—9, but sometimes triangular, as in Adrue, plate 1, fig. 10. Scape, *(scapus)* which supports the fructification, but not the leaves, as in Lily of the Valley. *Stipes*, a kind of stalk peculiar to the fungi and ferns. When the stalk dies down to the root yearly, it is called herbaceous, *(herbaceus.)* If it continues and produces buds it is called Shrubby, *(fruticosus)* or Woody, *(arboreus)*. In trees it is generally called the *Stem*. Stalks vary also very much in their form and appearance, the following most frequently occur: Aculeated, *(aculeatus)* beset with sharp prickles, as in Melon Thistle and Dildoe, plate 1, fig. 23 and 24. Two edged, *(anceps)* forming two angles opposite to each other, as in Sisyrinchium. Angulated, *(angulatus)* having many angles. Three-Sided *(Trigonus.)* Compressed, *(compressus)* compressed on opposite sides, so that the transverse section forms an Ellipsis, as Poa Compressa. Tubular, *(fistulosus)* a hollow stem as in Elder. Foliose, *(foliosus)*, covered with leaves, as Tuberose. Hispid, *(hispidus)* covered with prickles, superficially rooted, as in the Mad Apple. Pithy, *(inanis)* neither solid nor tubular, as in Papaw, plate 2. fig. 50. Naked, *(nudus)* without leaves or branches. Procumbent, *(procumbens)* lying horizontally along the ground, as Convolvulus. Ramose, *(ramosus)* having many branches. The branches of the stalk are called *(rami.)* Very ramose, *(ramosissimus)* abounding with branches irregularly disposed, as Naseberry, Star Apple, plate 1. fig. 12. Creeping, *(repens,)* running horizontally along the ground, and sending forth radiculæ at the joints. Sarmentose, *(sarmentosus)* a creeping or climbing stalk, almost naked, producing leaves at the joints, as the Vine. Climbing, *(scandens)*, as the Coccoon Antidote. Simple, *(simplex)* a single stem up to its top, not dividing, as the Cocoa nut, plate 2. fig. 42. Solid, *(solidus)* a stem having substance, opposed to tubular and pithy. Thorny, *(spinosus)* having strong woody prickles, as Cashaw, Fingrigo and Nephritic Tree, plate 9, fig. 6. Striated, *(striatus)* grooved or superficially channelled. Hanging down, *(dependens)* as in Weeping Willow and Mangrove, plate 1. fig. 22. Sulcated, *(sulcatus)* deeply grooved or channelled. Stinging, *(urens)* as Thistle. Volute, *(volubilis)* twining up a pole or stem of another plant in a spiral form, as the Yam, plate 2, fig. 45.

LEAVES, *(folia)* are defined to be fibrous and cellular processes of plants, which are of various figures, but generally extended, with a flat membranous or skinny substance; they appear to be the organs of perspiration and inspiration, and are composed of the *woody substance*, similar to the bones in the human body, distributed in ramifications through the middle of the leaf, which gives it firmness and durability. The Fleshy or Pulpy substance, *(parenchyma)* forming its principal substance, and giving the leaf its green colour. These two parts are covered on each side by a membrane or *skin*, which is considerably tougher than the fleshy part; on the under side this appears to be furnished with a number of absorbent vessels to imbibe the humidity of the air. Leaves are primarily divided into Simple and Compound. A Simple Leaf is such whose footstalk is ter-

minated by a single expansion, and assumes many different names, of which the following are some of the principal and most common. First as to their duration.

Caducous, *(caducum)* falling off at the first opening of the flower.

Deciduous, *(deciduum)* falling off with the flower.

Permanent, *(persistens)* remaining till the fruit is ripe.

The above terms are also made use of to express the duration of the Perianth.

Ever-green, *(sempervirens)* the longest degree of duration.

Second, as to their disposition, insertion and direction, they are termed,

Floral, *(florale)* immediately attending the flower, as in Chain Cotton, plate 8, fig. 1.

Rameous, *(rameum)* seated or inserted on the branch, as in Calabash, plate 2, fig. 30.

Cauline, *(Caulinum)* growing immediately on the stem, without the intervention of branches, as in Plantain, plate 2, fig. 49, and the Palms.

Axillary, *(axillare)* proceeding from the angle which the branches form with the stem.

Radical, *(radicale)* proceeding immediately from the root, as Thatch, plate 2, fig. 51.

Seminal, *(seminale)* or seed leaf, into which the cotyledons of the seed expand.

Adnate, *(adnatum)* growing close to the stem, sometimes called Sessile.

Connate, *(connata)* when two leaves opposite are joined at their base, so as to have the appearance of one, as in Honey-suckle.

Drowned, *(demersum)* sunk under water, as Valisneria Americana.

Decussated, *(decussata)* growing opposite in pairs and each pair being alternately on opposite sides of the stem.

Distichous, *(disticha)* growing in two rows on two sides of the branch only.

Fasciculated, *(fasciculata)* growing in bundles or bunches, as in Hemlock, Pine, Pitch-pine, &c.

Imbricated, *(imbricata)* lying over one another like the tiles of a house.

Peltated, *(peltatum)* the footstalk being inserted into the disk of the leaf, not the base, as in May Apple.

Perfoliated, *(perfoliatum)* when the base of the leaf surrounds the stalk, it appearing to pierce or go through it, as in Thorough Wort.

Pixidated, *(pixidatum)* one leaf let into another as in Horsetail.

Reclinate, *(reclinatum)* bending downward, the top lower than the base, as in Chocolate Nut, plate 2, fig. 34.

Recurvated, *(recurvatum)* bending in a greater degree than reclinate.

Revolute, *(revolutum)* rolled backwards, as Wild Rosemary. Involute, *(involutum)* rolled inwards.

Vaginant, *(vaginans)* the lower part of the leaf, forming a sheath to the stem.

Whirled, *(verticillatum)* surrounding the stem like the radii of a wheel.

Inflexed, *(inflexum)* bending upwards towards the stem.

From the variety of their forms and surface they take the following names.

Scymeter-shaped *(acinaciforme,)* one edge convex and sharp, the other straiter and thicker.

Acerose, *(acerosum)* surrounded at the base by chaffy squammæ, as in Cedar.

Pointed, *(acuminatum)* terminating in a long tapering point, as in Spanish Dagger, plate 2. fig. 53.

Acute, *(acutum)* terminating in an acute angle, as in Indian Arrow Root, and Indian Shot, plate 4, figs. 1 and 2,

Aggregate, *(aggregatæ)* so regularly composed that a leaf cannot be taken away without destroying the uniformity of the whole, as Houseleek.

Blistered, *(bultatum)* when the parenchymatous substance rises higher than the veins, as in Clary, plate 4. fig. 4.

Ciliated, *(ciliatum)* whose margin is finally edged with hairs, as in American Live for ever.

Notched, *(crenatum)* bluntly notched with angles inclining towards neither extremity, sometimes with segments of small circles, as Wild Sage, plate 9, fig. 4.

Undulated, *(crispum)* from the margin of the leaf being too long for the disk.

Toothed, *(dentatum)* diverging remote points on the margin, as Vervain, plate 4, fig. 3.

Eroded, *(erosum)* when the margin appears gnawed or bitten.

Gibbous, *(gibbum)* when the intermediate pulp renders both sides convex.

Lineare *(lineare)* straight, narrow and the sides nearly parallel, as in Wild Wormwood.

Nervous, *(nervosum)* having nerves or vessels, extending themselves from the base to the apex without branching out, as in Cinnamon, plate 7, fig. 5.

Palmated, *(palmatum)* divided in several parts beyond the middle, as the Bread Fruit, plate 2, fig. 38.

Serrated, *(serratum)* notched with teeth like a saw, inclining to the apex, or top of the leaf, as in Jack in a Box, plate 9, fig. 5.

Spatulated, *(spatulatum)* roundish at the top, but lengthened by a narrower base in a form of a Spatula, as in Calabash, plate 8, fig. 4.

Spinose, *(spinosum)* having strong sharp prickles, as Mexican Poppy, plate 9, fig. 1.

Tomentose, *(tomentosum)* covered with numerous white hairs, closely matted.

Venous, *(venosum)* whose veins branch and spread over the whole surface of the leaf.

Stinging, *(urens)* burning, as Nettle. Wrinkled or plaited, Plicated, *(plicatum)* as Sea Eryngo.

Woolly, *(villosum)* downy, covered with distinct soft hairs.

Lanceolated, *(lanceolatum)* oblong, gradually tapering towards each point, as Bastard Ipecacuanha, plate 7, fig 1.

Rooting, *(radicans)* as the Aloe, Squill, &c. which will vegetate.

Compound leaves are such whose footstalks are terminated by more than one expansion. The principal distinctions are,

Articulated, *(articulatum)* when one leaf grows from the extremity of another, as in Prickly Pear, plate 1, fig. 25.

Digitated, *(digitatum)* a number of small leaves connected to the extremity of a footstalk, like Radii, as in Horse Chesnut.

Pedated, *(pedatum)* when the footstalk divides into two and connects the leaflets on the interior sides only as in Passion flower.

Pinnated, *(pinnatum)* when many leaflets are connected or grow on each side of a common footstalk, as in Barbadoes Pride, plate 7, fig. 7.

Binate, *(binatum)* having two leaflets on one stalk, as in Jeffersonia Binata.

Abrupt, *(abruptum)* when the same terminates abrupt or without a leaflet, as in Tamarind, plate 5, fig. 1.

Ternate, *(ternatum)* having three leaflets, as in Strawberry.

Interrupt, *(interruptum)* when the leaflets are alternately less.

Doubly Pinnated, *(bipinnatum decompositum)*.

Trebly Pinnated, *(tripinnatum supra decompositum)*.

Fronds *(frondes)* expresses leaves consisting of several other leaves and forming the whole of the plant; as is the case in the fern kind, in which the fructification being on the back of the leaves, the single leaf makes the whole plant. In this case it is not called Folium but Frons.

The other parts usually attendant on the stalk, are called by Linnæus

SUPPORTS, (Fulcra, from *Fulcrum*, a prop) and are calculated either to assist the plant in its growth, or to defend it from injuries. Of these he enumerates seven different kinds.

Bracts, *(bractea)* leaves growing with the flower, and usually differing greatly in shape and colour, as in Chain Cotton, plate 8, fig. 1.

Hairiness, *(pubes)* all kinds of hairiness, whether fine or coarse, whether terminating in a sharp point or viscid globule, as in Egg Fruit.

Petiole, *(petiolus)* the footstalk of a leaf, which it supports without any flower.

Peduncle, *(pedunculus)* the footstalk of a flower.

Stipules, *(stipulæ)* from στυπη, *stupe*, two small leaves usually placed in pairs at the joints, mostly of leguminous plants, also in the Tulip Tree, the Peach, &c.

Tendril, *(cirrus)* a clasper, by which the plant fastens itself to any other body, as in Winged Pea, Granadilla, Grape, Ivy, and many Cucubitaceous plants.

The following are termed ARMS, *(arma)*

Prickles, *(aculea)* which are superficially fixed only in the rind.

Forks, *(furcæ)* when several grow together; they are called bifid, as in Horned Acacia, trifid, as in Honey Locust, &c.

Thorns, *(spinæ)* rigid prickles growing from the woody part, as in Nephritic Tree, plate 9, fig. 6. Orange Tree, Aloe, Thistle, plate 9, fig. 1. and Thorn Apple.

Stings, *(stimuli)* are the pipes of a small bag furnished with a venomous fluid.

Glands, *(glndulæ)* in different forms, are found in many plants, as Cassada, Oil-nut, Gum Arabic and Mountain Ebony.

INFLORESCENCE, is the mode in which plants flower; the principal of which are,

Whirl, *(verticillus)* the flowers disposed circularly at each joint of the stem, having very short peduncles or footstalks, as in Mint or Horehound.

Spike, *(spica)* ranged alternately, or all round a simple stalk, as in Wheat or Mullein.

Bunch, *(racemus)* each flower furnished with a short proper footstalk proceeding as lateral branches from the common one, as in Grapes or Pokeweed.

Panicle, *(panicula)* disposed on footstalks, variously subdivided, as in Guinea Grass.

Thyrse, *(thyrsus)* a panicle, contracted into an oval or egg-shaped form, as in Lilac or Horse Chesnut.

Umbel, *(umbella,)* footstalks proceeding from a common centre and rising to an equal length, so as to form an even or round surface at top, as in Wild Sage, plate 9, fig. 4, in Parsley, Ginseng.

Cyme, *(cyma)* the footstalks proceeding from a common centre, and rising to the same heighth, but the secondary footstalks irregularly disposed, as in Elder and Dogwood.

Corymbe, *(corymbus)* the partial flower stalks produced along the common stalk on both sides, and though of unequal length, rising to the same heighth.

Head, *(capitulum)* a mode of inflorescence in which many flowers are collected at the summit of the footstalk, as in Bachelor's Button.

Bunch, *(fasiculus)* the peduncles erect, parallel, placed close, and equal in height, as in Sweet William, Globe Amaranthus.

ON THE CLASSES AND ORDERS OF PLANTS.

A CLASS is the first and highest division of every system. The classic character is constituted from a single circumstance, as the words in a dictionary are arranged by a single initial letter; this one circumstance must be possessed equally by every plant admitted into the class, how different soever they may be in other respects. Linnæus has made choice of the Stamens, and has founded his classes on their number and situation, and his System, or mode of arrangement, (though not entirely exempt from imperfections) has now been so generally received and adopted, that, it has nearly superseded all the rest, and his language become the universal language of Botany. He has divided the vegetable kingdom into twenty-four classes. The first ten, 1—10, include plants in whose flowers both Stamens and Pistils are found, (thence called Hermaphrodite) in which the stamens are neither united nor unequal in height when at maturity. These are therefore simply distinguished from each other by the number of stamens in each flower, and are compounded of the Greek numerals μονος, *monos*,

one, δις, *dis*, two, τρεις, *treis*, three, τεσσαρες, *tessares*, four, πεντε, *pente*, five, εξ, *ex*, six, επτα, *epta*, seven, οκτα, *okta*, eight, εννεα, *ennea*, nine, δεκα, *deka*, ten, and the Greek word ανηρ, *aner*, a Male, joined to them, to signify one Male, or Stamen, two Stamens, three Stamens, &c. as far as ten Stamens. 1. Monandria, 2. Diandria, 3. Triandria, 4. Tetrandria, 5. Pentandria, 6. Hexandria, 7. Heptandria, 8. Octandria, 9. Enneandria, 10. Decandria.

11. Dodecandria, from δωδεκα, *dodeca*, twelve, and ανηρ, *aner*, a Male, Hermaphrodite flowers having from twelve to nineteen Stamens, fixed to the receptacle.

12. Icosandria, from εικοσι, *eikosi*, twenty, and ανηρ, *aner*, a male, hermaphrodite flowers, having twenty Stamens and upwards, inserted into the calyx.

13. Polyandria, from πολυς, *polus*, many, and ανερ, *aner*, a male, hermaphrodite flowers having from twenty to a thousand Stamens, inserted into the receptacle.

14. Didynamia, from δις, *dis*, double, and δυναμις, *dunamis*, power, hermaphrodite flowers having four Stamens, two long and two short.

15. Tetradynamia, from τεσσαρες, *tessares*, four and δυναμις, *dunamis*, power, hermaphrodite flowers having six Stamens, four long and two short.

16. Monadelphia, from μονος, *monos*, one, and αδελφος, *adelphos*, a brother, hermaphrodite flowers having the Stamens united by their filaments into one body or brotherhood.

17. Diadelphia, from δις, *dis*, two, and αδελφος, *adelphos*, a brother, hermaphrodite flowers having the Stamens united by their filaments into two bodies.

18. Polyadelphia, from πολυς, *polus*, many, and αδελφος, *adelphos*, a brother, hermaphrodite flowers having the Stamens united by their filaments into three or more bodies.

19. Syngenesia, from συν, *sun*, together, and γενεσις, *genesis*, generation, hermaphrodite flowers having their Stamens united by their anthers (seldom by their filaments), into a cylinder.

20. Gynandria, from γυνε, *gune*, a female, and ανερ, *aner*, a male, hermaphrodite flowers having the Stamens sitting on the pistillum, or on an elongated receptacle.

21. Monæcia, from μονος, *monos*, one, and οικια, *oikia*, a house. Male and female flowers on the same plant.

22. Diæcia, from δις, *dis*, two, and οικια, *oikia*. a house. The male flowers produced on a separate plant from the female, or the Stamens growing on one plant, and the Pistil on another.

23. Polygamia, from πολυς, *polus*, many, and γαμος, *gamos*, marriage, hermaphrodite and also male or female flowers on the same plant.

24. Cryptogamia, from κρυπτος, *cryptos*, hidden, and γαμος, *gamos*, marriage, the fructification hidden within the fruit, produced in some unusual manner, or no visible Stamens.

The first 20 Classes, are hermaphrodite flowers, or having Stamens and Pistil in one flower. The first 11, depend on number; only the 12th and 13th Classes, depend on number and insertion; the 14th and 15th on number and equality; the 16th, 17th, 18th

and 19th on connection ; the 20th on insertion only ; the 21st, 22nd and 23rd on situation ; and the 24th on absence.

An ORDER is the second division in the system, and in the first thirteen Classes from Monandria to Polyandria, is denominated from the number of Pistils; the greek numerals μονος, *monos*, δις, *dis*, τρεις, *treis*, &c. are compounded with the word γυνη, *gune*, a female, forming the terms Monogynia, Digynia, Trigynia and so on to Polyginia, one, two, three, and so on to many Pistils. In numbering the Pistils, count from the bottom of the styles ; but if the styles are wanting, the calculation is made from the numbers of stigmas.

The 14th Class Didynamia, has the following orders,

Gymnospermia, from γυμνος, *gumnos*, naked, and σπερμος, *spermos*, a seed, having the seeds naked, and contained in the bottom of the Calyx.

Angiospermia, from ανγιος, *angios*, a covering, and σπερμος, *spermos*, a seed, having the seeds covered or contained in a pericarp.

The 15th Class Tetradynamia, contains two orders,

Siliculosa, seeds in a small, short, or round pod.

Siliquosa, seeds in a long slender pod.

The 16th, 17th and 18th Classes, Monadelphia, Diadelphia and Polyadelphia, take the names of their orders from the number of stamens, as, Pentandria, Decandria, Polyandria, &c. according to their number.

The 19th Class, Syngenesia, contains six orders, viz.

1. Polygamia equalis, consists of many florets or little flowers, all of which have both Stamens and a Pistil. It is called æqualis or equal because the Polygamy is equal over the whole flower.

2. Polygamia Superflua ; the hermaphrodite flowers in the centre producing perfect seed, the female flowers likewise in the circumference producing perfect seed. It is called Superflua, or Superfluous, as perfect seed is capable of being produced by the hermaphrodite flowers in the centre without the concurrence of the female flowers in the circumference.

3. Polygamia Frustranea, when the hermaphrodite flowers in the centre produce perfect seed, but the flowers which form the circumference produce no perfect seed. It is therefore called frustranea, as the flowers in the circumference appear to answer no purpose in the production of the seed.

4. Polygamia Necessaria, when the hermaphrodite flowers in the centre produce no seed ; but the female flowers in the circumference produce perfect seed. It obtains the name of necessaria, from the flowers in the circumference being Necessary to the production of perfect seed.

5. Polygamia Segregata, when the florets are furnished with partial calices or cups, inclosed within one common calyx. It is called Segregata, the florets being separated from one another by the partial calices.

6. Polygamia Monogamia contains flowers which are simple and no way compounded; which is implied by the term Monogamia.

The 20th Class, Gynandria, takes the names of its orders from the number of the Stamens, as Diandria, Triandria, Pentandria, &c.

The 21st Class, Monæcia, takes its first eight orders from the numbers of the Stamens, and has also three other orders, Monadelphia, Filaments united, Syngenesia, Anthers united, and Gynandria Stamens, growing out of the Pistil.

The 22nd Class, Diæcia, takes the names of ten orders from the number of Stamens, has also four other orders, Monadelphia, Polyadelphia, Syngenesia, and Gynandria; which terms have already been explained.

The 23rd Class, Polygamia, contains three orders, Monæcia and Diæcia already explained, and Triæcia, which signifies Hermaphrodite, male and female flowers growing separately on three distinct plants of the same species, as in Fig-tree, *(Ficus)*.

The 24th Class, Cryptogamia, contains four orders,—the Ferns, *(Filices)*, the Mosses, *(Musci)*, the Sea Weeds, *(Algæ)*, and the Mushrooms or Funguses, *(Fungi)*.

The further divisions of Plants are into GENERA and SPECIES, which gives them their generic and specific names. And also a further division, called a variety, which, however, is generally more regarded by Florists than Botanists, as it is frequently the effect of accident or culture, but may be produced by the application of ripe Pollen of different flowers to the stigma of others.

THE LINNÆAN

NATURAL METHOD OF CLASSIFICATION.

(So called in Contradistinction to the Artificial or Sexual Method), arranges Plants according to their Appearance, Virtues and Uses, conformably to the affinities established by Nature, and is highly valuable, useful and interesting.

ORDER 1. *Palmæ*, Palms, are perennial, of the Shrub or tree kind with simple stems, bearing fronds, or fan leaved; and varying in height from two to two hundred feet. They generally have a branched spathe or sheath called a Spadix, as in Abbay, plate 2, fig. 55, and bear a fruit of the berry or nut kind, fit for food. The lofty are properly palms, as Cocoa Nut, plate 2, fig. 42, and the low, Palmetos, as Thatch, plate 2, fig. 51.

2. *Piperitæ*, (from Piper, Pepper), are perennial and mostly herbaceous, the roots when fresh, acrid, and the general character of the plants, astringent, as Dumb Cane, Arum, and Indian Betel.

3. *Calamariæ*, (Reed like), the bottom of the leaf where it embraces the stalk undivided, example Adrue, *(Cyperus)*, plate 1, fig. 10, and the mode of flowering generally a spike, their virtues and uses nearly the same as the following,

4. *Gramina*, (Grasses), herbaceous plants, sometimes creeping, at others upright, with fibrous roots mostly contained in Class Triandria Ord Digynia. All these plants are wholesome and valuable food, as Guinea Grass, plate 1, fig. 8. Bahama Grass, fig. 6. Scotch Grass, fig. 9, and Sugar Cane, fig. 5, also Indian Corn, plate 2, fig. 37, and Guinea Corn, fig. 47.

5. *Tripetaloidæ*, (Three Petalled), nearly allied to the Grasses, as Arrowhead and Water Plantain.

6. *Ensatæ*, (Sword Shaped), a beautiful family of herbs, allied to the Liliaceous plants with fleshy roots and simple stalks, as Saffron and Flower de Luce.

7. *Orchideæ*, (from Orchis), plants with fleshy knobbed roots, leaves spathaceous, flowers produced in a spike or panicle; plants of this order, are generally considered Strong Aphrodisiacs, Example Vanilla, plate 3, fig. 45, and Bee Orchis, Ophrys.

8. *Scitamineæ*, (from Scitamentum agreeable food), beautiful plants, natives of Tropical Climates, and furnishing exquisite fruits, some have a hot pungent taste, and the roots of many are resinous, example Indian Shot, plate 1, fig 1. Arrow root, plate 2 fig 1. Plantain Tree, plate 2, fig. 49.

9. *Spathaceæ*, (Sheath like). The flowers protruded from a sheath, as in Red Lily, plate 1, fig. 16, and Oyster Plant, fig. 17.

10. *Coronariæ*, (Crowned). Herbaceous plants with fleshy roots, (without a stem in some) the flowers seated on the top of the flower stalk; the roots generally innocent except such as have a heavy nauseous smell. Example of this order, American Aloe, plate 1, fig. 15, Pine Apple. fig. 14.

11. *Sarmentosæ*, (Shooting stemmed). Plants with climbing stems and branches, supporting themselves on neighbouring bodies, as Velvet Leaf and Yams, plate 2, fig. 45.

12. *Holeraceæ*, (Pot Herbs). Plants used for the table, and in domestic œconomy, and the fruit esculent, as Cashew Nut, plate 1, fig. 21. Beet, Cinnamon, plate 1, fig. 18. Colilu, plate 2. fig. 39. Those used for seasoning, may be called Condiments, Condimenta.

13. *Succulentæ*, (Succulent), flat, fleshy and juicy plants, of which the greater part, are evergreen. In their qualities astringent and refreshing, as Melon Thistle, plate 1, fig. 23. Torch Thistle, fig. 24. Cochineal plant, fig. 25. Hydrangea.

14. *Gruinales*, (from Grus, a Crane). Geraniums Cranes Bill, and other plants nearly similar, as Flax and Wood Sorrell.

15. *Inundatæ*, (growing in the water), aquatic and herbaceous plants, as Pondweed, Lily of Lake Champlain.

16. *Caliciflorœ*, plants having the stamens inserted into the Calyx, of the Shrub and Tree kind, and generally astringent, as in Wild Olive, *Eleagnus.*

17. *Calycanthemæ*, (from Calyx and ανθος, *anthos*, a flower), having the Corolla and Stamina inserted in the Calyx; these plants also are frequently of an astringent quality, as American Wild Gooseberry, and Tree Primrose.

18. *Bicornes*, (Two Horned). Plants in which the anthers have the appearance of two horns, of the shrub and tree kind, and possessing astringent qualities, example American Honey-suckle, Bilberries, Mangostan, Forbidden Fruit, plate 2, fig. 35. and Indian Date Plum.

19. *Hesperideæ*, (Golden Fruited). Plants of the shrub and tree kind mostly evergreen, and bearing esculent berries, as Guava, Rose Apple, and Pimento, plate 2, fig. 46.

20. *Rotaceæ*, (Wheel-shaped), the petal in the shape of a wheel and no tube, as Pimpernell and Gentian.

21. *Preciæ*, (Early), plants that flower early, as Primrose and Sow Bread.

22. *Carophyllatæ*, (from the Genus Carophyllus). The plants of this order are innocent, have bitter seeds, attenuating and detersive, Examples Carnation, Pink, and Soap Wort.

23. *Trihilatæ*, (Three-eyed), plants with three seeds marked distinctly with a hilum or eye, as Barbadoes cherry, Chaw Stick, and Maple.

24. *Corydales*, (Helmeted), from κορυς, *corus*, a helmet. Plants with irregular Corols, somewhat resembling a helmet, as Balsamine, Fumatory.

25. *Putamineæ*, (Hard Shelled), plants having a fleshy seed vessel covered with a woody shell, as Calabash Tree, plate 2, fig. 30. Garlick Pear.

26. *Multisiliquæ*, (Many Podded), or rather having many seed vessels of the Capsular kind, and numerous seeds. The qualities of some, are Acrid and Purgative, example Pheasants Eye, and Virgins Bower.

27. *Rhœdeæ*, (from Rhæas Red Poppy), plants emitting a milky juice, and of a narcotic quality, but externally applied, corrosive, as Mexican Poppy, plate 9, fig. 1. also May Apple and Puccoon.

28. *Luridæ*, (Lurid), plants whose appearance is ominous and indicating something noxious in their quality, generally of the fifth Class, as Night shade, or of the masqued tribe. The plants have an insipid taste, a nauseous smell, and are frequently poisonous, example Thorn Apple, Mullein and Deadly Night shade.

29. *Campanaceæ*, (Bell-shaped), plants with bell-shaped flowers—many plants of this order abound with a milky juice, and it furnishes valuable medicines and articles of food, Ex. Quamoclit, American Lobelia, Jalap, Sweet Potatoe, plate 1, fig. 11.

30. *Contortæ*, (Twisted), plants having petals bent to one side—generally abound in milky juice, and are of a poisonous quality, as South Sea Rose, plate 5, fig. 5. Bastard Ipecacuanha, plate 7, fig. 1. Periwinkle and Red Jasmine.

31. *Vepreculæ* (Briar-like), plants resembling a Bramble, as Leatherwood and Mezereon.

32. *Papilionaceæ*, (Butterfly-shaped), plants with papilionaceous flowers, of which numerous family, are all leguminous plants. Many of these plants are fit for food; some emollient, vulnerary and astringent, examples Wild Liquorice, Dogwood Tree, Indigo, Pea, Bean, &c.

33. *Lomentaceæ*, (Colouring), plants furnishing useful and beautiful tinctures used in dying, as Brazil Wood, Logwood, Locust Tree, plate 7, fig. 8, Barbadoes Flower Fence, fig. 7, Nickertree, &c.

34. *Cucurbitaceæ*, (Gourd-like), these plants generally have Tendrils and climb, as in Granadilla, Antidote Coccoon, Tomatos, or run along the ground as Melons, plate 2, fig. 43.

35. *Senticosæ*, (Bramble-like), resembling a bramble in their port and appearance, as the Rose, Raspberry, and Strawberry, their fruits are cooling, leaves vulnerary, and roots diuretic.

36. *Pomaceæ*, (from Pomum an Apple), plants having a pulpy eatable fruit, of the Apple, Berry, or Cherry kind, frequently subacid, mostly shrubs and trees, as Medlar, Apple, Currant, Hog Plum, plate 1, fig. 19, Pomegranate, Cherry, and Mango, plate 2, fig. 52.

37. *Columniferæ*, (Column bearing), plants whose Stamens and Pistil, have the appearance of a column or pillar in the middle of the flower, as plants of the Monadelphia Class, and Mallow Tribe; the Silk Cotton, plate 2, fig. 32, and Musk-ochro furnish beautiful specimens of this Order, the plants are mucilaginous and many excellent food, as Common-ochro, other examples are Arnotto, Tea Tree, and Skrew Tree, Jews Mallow and Chocolate Nut, plate 2, fig. 34.

38. *Tricoccæ*, (Three Berried), having a three cornered capsule with three berries and three seeds, as Papaw, Carica, plate 2, fig. 50, Cassava, fig. 40, Oil Nut, fig. 44.

39. *Siliquosæ*, (Podded), plants having a pod for their seed vessels, as Cabbage, Mustard, Shepherds Purse.

40. *Personatæ*, (Masqued), having a gaping petal, as Sesame, or Oily Pulse, plate 9, fig. 7, Trumpet Flower, Fiddle Wood, and Garden Balsam.

41. *Asperifoliæ*, (Rough Leaved), principally herbaceous plants, their virtues cordial, vulnerary, and astringent, as Wild Clary, plate 4, fig. 4. Borrage, Cornfrey, &c.

42. *Verticillatæ*, (Whorled), synonymous with Lip Flowers, herbaceous vegetables with four seeds, and the flowers placed in Whorls along the branches. Their virtues are fragrant, penetrating and cordial, as Jamaica Spikenard, Lavender, Orange Balm, Mint, &c.

43. *Dumosæ*, (Bushy), plants thickly and irregularly set with branches, as New Jersey Tea, Naseberry and Star Apple, plate 1, fig. 12, and Mammee Apple, fig. 26. The berries of some, are esculent, and the flowers of many, cathartic. This order contains also Stafftree, Poison Sumach, Spindle Tree, Elder, &c.

44. *Sepiariæ*, (Hedge plants), a beautiful tribe of woody plants proper for hedges, of the shrub and tree kind, as Lilac, Horse Radish Tree, Logwood, Arabian Jasmine Privet and Olive.

45. *Umbellatæ*, (Umbelled), the plants of this order that grow in dry places are sudorific and cordial, as Parsley, Coriander, Cummin and many plants of Class Pentandria, Ord. Digynia, but growing in wet places they are poisonous, as Hemlock, Fools Parsley, &c.

46. *Hederaceæ*, (Ivy-like), creeping plants similar to ivy, parisitic or attaching themselvesto others, as Dodder, Wild Grape, Ginseng and Tooth Ache Tree.

47. *Stellatæ*, (Starred), plants with two naked seeds, the leaves and flowers disposed round the stem in form of a star, as in Coffee, plate 1, fig. 13, Wormgrass and Dogwood.

48. *Aggregatæ*, (Aggregate), a number of small flowers growing together in a bunch, as Honeysuckle, Button Tree and Misletoe.

49. *Compositæ*, (Compound), as Dandelion, Scabious, &c.

50. *Amentaceæ*, (Amentaceous), catkin bearing plants, as Willow, Walnut, Juniper, Arbor Vitæ, Sand Box Tree, &c.

51. *Coniferæ*, (Cone bearing), bearing the seeds in a cone or strobile, as Pitch-pine, Cedar, and Yew: they generally produce a resinous or gummy substance, with an agreeable smell, as Gum Sandarach; and the Larches, Pines and Firs, also yield Turpentine, &c.

52. *Coadunatæ*, (Joined together), the seed vessels numerous and slightly attached together. This order furnishes a beautiful collection of exotics with an aromatic smell and bitter bark, as the Custard Apple, Tulip Tree and Magnolia.

53. *Scabridæ*, (Rugged), plants whose leaves are much rougher than asperifoliæ. These plants are generally astringent, bitter and styptic,—example, Hemp, Contrayerva, plate 4, fig. 3, Fig, Hop, Mulberry and Elm.

54. *Miscellaneæ*, (Miscellaneous), not connected by numerous relations, as Duck-meat, Globe Amaranth, Pokeweed, Side Saddle Flower, and Mahogany.

55. *Filices*, (Ferns), plants bearing flower and fruits on the back of their leaves or stalk; their virtues are opening and attenuating.

56. *Musci*, (Mosses), are in general cathartic, and sometimes emetic.

57. *Algæ*, (Flags), plants whose root, leaf and stem are all one, as the Sea Weeds.

58. *Fungi*, (Mushrooms), either creeping or erect, and seldom branched; externally used, they are astringent and styptic; as a food they should be used very cautiously, many being poisonous.

59. *Dubii Ordinis*, (Doubtful), those plants which cannot be arranged under any of the above orders.

Many plants of the order of Grasses produce sugar, and might thence be called *Saccharifera*, as the Sugar Cane, Indian Corn, Guinea Corn; the Acer Saccharum of North America, also yields Sugar in considerable quantities.

Some plants also from the peculiarity of their fruit, which serves as a good substitute for Bread, might with propriety be called *Paniferæ*, as the Bread Fruit, plate 2, fig. 38, the Plantain, fig. 49.

CLASSIFICATION

OF THE

MEDICAL VIRTUES OF PLANTS.

I. GENERAL STIMULANTS.

Diffusible Stimulants. Narcotics, *(narcotica)*, from ναρκαω, *narkao*, to render torpid, diminish the action of the system, relieve pain, and procure sleep, as poppy, thorn apple, tobacco, spotted hemlock, wild carrot, mountain laurel, broad-leaved laurel, azalea, mountain tea, black henbane, wolf's bane, deadly nightshade, hemlock, foxglove, Indian berries, camphor, prickly yellow wood, hops, ginseng, lettuce.

Antispasmodics, *(antispasmodica)*, from αντι, *anti*, against, and σπασμος, *spasmos*, a spasm, allay pains and spasm, as Mexican tea, clary, asafætida, skunk cabbage, Indian turnip, camphor, cajeput, valerian, saffron, garlick.

Permanent Stimulants. Tonics, *(tonica)*, from τονοω, to strengthen, primarily give strength to the system, as Peruvian bark, Jamaica bark, English oak bark, white oak, bitter wood, centaury, boneset, yellow root, columbo, gentian, parsley-leaved yellow root, centry, frasera-caroliniensis, wild cherry tree, sassafras, persimmon, dogwood, rose willow, horse chesnut, beaver tree, tulip tree, aspen, snake root, alder, halbert weed, chamomile, wild horehound, buckthorn, poplar, macary bitter, bully tree, hops, quassia, contrayerva, locust tree, shrub yellow root, yarrow.

Cordials, restore and invigorate, as tacamahaca, sweet gum, abanga, arnotto, caranna, coffee, mint, adrue, saffron, avens, gout root.

Astringents, *(astringentia)*, from *astringo*, to bind up, obviate or remove increased evacuations, as tormentil, simarouba, purslane, banana, kino, rose, oaks, spotted geranium, alum root, pomegranate, cashew, arrow root, pleurisy root, sea-side grape, guava,

logwood, black snake root, uva ursi, sweet fern, pippiseva, candleberry myrtle, black alder, cancer root, agrimony, white ash, avens, water avens or canker root, choke cherries, privet, rose, nickers, catechu, nutmeg, galls, rhubarb, red mangrove, narrow-leaved sumach, Pensylvanian sumach, Virginian sumach, white willow, broad-leaved willow, sept foil, blackberry root, red elm, cranes bill, Indian nut, mouse ear, copaiba, vanilla, wild basil, shepherd's purse, horse tail, quince, strawberry, wild olive, plantain, poponax, cashaw, self heal, woad, medlar, yarrow, myrtle, rice, loose strife, quinchamali, sloes, spelt, five fingers, golden thread, wild gooseberry, briar rose, Jamaica dogwood, flower gentle, wild and sea side grape, amaranth, marsh rosemary, snake weed, puff balls, button wood, blood flower (asclepias currasavica), brasiletto, canker root.

Aromatics, *(aromatica)*, stimulate the stomach, accelerate circulation and increase heat; so also do carminatives, as cassia, lavender, turmeric, capsicum, caraguay, wild carrot, saffron, clove, cascarilla, orris, cow parsnep, cinnamon, white wood, dill, peppermint, wormwood, lavender, anise, balm, ginger, cardamoms, kennebeck snake root, wild allspice bush, camphor, sassafras, pimento, angelica, bayberry, chamomile, wild cinnamon, citron, clove, collinsonia, coriander, penny royal, mace, nutmeg, balsam tree, myrrh, pimento, black pepper, long pepper, rosemary, sage, cubebs, cummin, galangal, clary, sweet marjoram, sweet flag, ginger, rosemary, alligator wood, cedar, peach.

Alexipharmics, *(alexipharmica)*, from αλεξεω και φαρμακον, *alexeo* and *pharmacon*, are antidotes to poison, as arrow root, caaco, blue scullcap, (hydrophobia), mangrove, plantain and horehound, (for bite of rattle-snake), contrayerva, nhandiroba, nhambi, ginseng, coccoon antidote, cedar, chickweed, sensitive plant, yellow prickle wood, velvet leaf, olive, rattle-snake root, swallow-wort, borrage, marigold, rice, ghandiroba, halbert weed, Spanish carnation, sassafras, sarsaparilla, China root, lignum vitæ, burdock, indigo weed, eryngo, navel wort, hares' ears, orange, vipers' grass, rattle-snake plantain, gub a gubs, black snake root.

Alteratives, from *altero*, to alter, have a favourable effect on the constitution, without sensible operation; for examples see the above class and Tonics.

II. LOCAL STIMULANTS.

Emetics, *(emetica)*, from εμεω, *emeo*, to vomit, excite vomiting by their action on the stomach, independent of the quantity taken, as ipecacuanha, mustard, Indian physic, walnut, lobelia, emetic weed, blessed thistle, cassio berry tea, yellow Mexican thistle, lignum vitæ, euphorbia, wild ginger, staff tree, thorough wort, puccoon, violet, bayberry, poke weed.

Cathartics, *(cathartica)*, from καθαιρω, *kathairo*, to purge, quicken or increase the evacuation from the intestines, as jalap, aloes, oil nut, colocynth, common physic nut, French physic nut, butter nut, black alder, sempervive, belly-ach weed, may apple, gamboge, cassia marilandica, leather wood, seneca snake root, yaw weed, pleurisy root, nicker, buckthorn, guaicum, scammony, black hellebore, dwarf elder, yellow water flag, attoo, wild turnip, white hellebore, bind weed, wild cucumber, purging flax, white mechoacan.

Laxatives, *(laxantia)*, from *laxo*, to relax, open and relax the bowels, without much stimulation, as tamarind, Barbadoes flower fence, oil nut, cassia fistularis, cranberries, daisy, bastard ipecacuanha, pleurisy root, wild rhubarb, wild senna, vervain, seneca rattle snake root, guaicum, rhubarb, cassia marilandica, manna ash, plum tree, common elder, violet, avens, Jamaica wild gooseberry, French sorrel.

Emenagogues, *(emenagoga)*, from εμμενια, *emmenia*, the menses, and αγω, *ago*, to move and promote the menstrua, as madder, erigeron Philadelphicum, wild carrot, cohush, Mexican tea, nanny bark, green wheat, savine, ergot of rye, sow bread, mugwort, orach, mother-wort, camels hay, sweet marjoram, penny royal, ground pine, dandelion.

Diuretics, *(diuretica)*, from δειρεω, *deireo*, increase the urinary discharge, as hemlock pine, flaxweed, milk wort, nephritic tree, penguins, blackberry, may weed, ginten root, pepper grass, rest harrow, fumatory, madder, onion, elder, arnotto, cashew, dwarf elder, samphire, turmeric, fennell, glass wort, toad flax, dragon root, wild lettuce, larch, squill, winter cherries, wild sea asparagus, chervil, ox eye, dandelion, bear's whortleberry, skunk cabbage, scurvy grass, copaiba, fox glove, tobacco, lobelia syphylitica, spiked saw wort, emetic weed, South Sea tea, Indian cucumber, skevish, locus tree, artichoke, fir, brake, buck bean, burdock, wild carrot, checker berry, nickers, pleurisy root, blessed thistle, juniper cedar, parsley, berberries.

Diaphoretics, *(diaphoretica)*, from διαφορεω, *diaphoreo*, to carry through, increase the natural exhalation by the skin, as rattle-snake root, sarsaparilla, sassafras, angelica, catnep, centaury, payco herba, lignum vitæ, water eryngo, seneca snake root, boneset, pleurisy root, contrayerva, wild sage, silk cotton, devil's bit, tooth-ach tree, millet.

Sialagogues, *(sialagoga)*, from σιαλος, *sialos*, saliva, and αγω, *ago*, to force, increase the quantity of the salivary discharge, as hemlock, camphor, seneca snake root, tooth-ach tree, tobacco, prickly yellow wood, payco coatinga, pepper, squills.

Expectorants *(expectorantia)*, from *expectoro*, to discharge from the breast, promote rejection of mucus from the lungs, as pine ivory, maidenhair, skunk cabbage, garlic, hyssop, balsam of Peru, balsam of tolu, cross wort, horse radish, elecampane, tobacco, rattlesnake root, puccoon, squill, benzoin, coltsfoot, slippery elm, arbor vitæ, wake robin, daisy, cotton, hemp, ground ivy, orris, jujubes, opoponax, mullein, laurel-leaved tulip tree, oily pulse, velvet leaf, horehound, currants.

Errhines, *(errhina)*, from εν, *in*, and ριν, *rin*, the nose, promote a discharge of mucous or serous fluid from the nostrils, as asarabacca, white hellebore, bear's foot, orris, andromeda, kalmia, spurge, asarum canadense, beet, betony, horse chesnut, sow bread, lily of the valley, eyebright, canella, tobacco.

Epispastics, *(epispastica)*, from επι, *epi*, and σπαω, *spao*, to draw, produce when applied to the surface of the body, a serous or puriform discharge after inflaming the parts, as butter nut, moose wood, daphne, crowfoot, poison vine, poison oak, vernice tree, cashew nut, spurge laurel.

Rubefacients, *(rubefacientia)*, from *rubefacio*, to make red, excite pain and inflamma-

tion, but discharge no fluid, as Indian turnip, pyrola umbellata, butter nut, fig, capsicum, spruce fir, mustard, common nettle, currato, dumb cane, wild radish, mezereon.

CHEMICAL REMEDIES.

Refrigerants, *(refrigerantia)*, from *refrigero*, to cool, allay heat of the body.

Antacids, *(antacida)*, from *anti* and *acida*, obviate acidity in the stomach.

Antiseptics, *(antiseptica)*, from αντι, *anti*, against, and σηπω, *sepo*, to corrupt, prevent or stop putrefaction, as purslane, scurvy grass, sorrell, southernwood, aloes, chamomile, nettle, canella, water cresses, indigo weed, pepper grass, columbo, myrrh, wood sorrell, snake weed, marsh rosemary, berberries, coffee, angustura, wormwood, orange, lemon, Spanish oak, red mountain oak, wild cherry tree, sassafras, persimmon, dogwood, rose willow, horse chesnut, beaver tree, tulip tree, bitterwood, contrayerva.

Lithonthriptics, *(lithonthriptica)*, from λιθον, *lithon*, a stone, and θρυπτω, *thrupto*, to break, dissolve urinary culculi, or antilithics, which prevent the formation of them, as nephritic tree, onion, horsemint, Jamaica spikenard, spiked saw wort, bears whortleberry, uva ursi, wild potatoe, arsmart, hazel nut, Philadelphia flea bane, convolvulus panduratus,—see also Diuretics.

Escharotics, *(corrosiva)*, from εσχαρα, *eschara*, a scar, dissolve and erode animal matter, as cevadilla, vegetable caustic of Yucatan, garden spurge, manchineel, sundew, celandine, papaw.

Antivenereals, *(antisyphilitica)*, from ante and syphilis, remove syphilitic affections, as lime roots, majoe, nickers, sassafras, wild cherry, rose willow, lobelia syphilitica, seneca snake root, may apple, crowfoot, poke weed, prickly ash, balsam rakaisiri, ceanothus, china r ot, lignum vitæ, spurge laurel, sarsaparilla, new Jersey tea.

MECHANICAL REMEDIES.

Vulneraries *(vulneraria)*, from *vulnus* a wound, cleanse, defend and heal up wounds, as ribbed plantain, self heal, periwinkle, golden rod, spirit leaf, tway blade, caranna, centaury, hemp agrimony, herb robert, hog gum, all-heal, hares' ears, slippery elm, Peruvian balsam, wild tansey, velvet leaf, balm of gilead, thorough wax, goose grass, iron wort, St. John's wort, Santa Maria, cerasee, Jamaica daisy.

Anthelmintics *(anthelmintica)*, from αντι, *anti*, and ελμινς, *elmins*, a worm, as *(anthelmia*, worm-grass), destroy worms, and expel them, as aloes, wild ipecacuanha, wild fig, devil's bit, poisonberry or bead tree, male fern, stinking weed, angelyn tree, brakes, Carolina pink root, worm seed, or Jerusalem oak, (chenopodium anthelminticum), may apple, stinking hellebore, cardinal flower, ground pink, tobacco (as a cataplasm), Virginian goats' rue, speckled alder, cabbage bark, penguins, cowhage, persimmon, benzoin, mulberry, Virginian plum.

Demulcents *(demulcentia)*, from *demulcens*, softening, obviate the action of acrid and stimulant matters, as Iceland moss, cocoa nuts, ochro, pindars, chocolate, oily grain or

benne, gum arabic, slippery elm, pistachio, salep, turnip, olive, maidenhair, almonds, coltsfoot, tragacanth, oats, fig, liquorice, mallows, wheat, dates, white ash, fever bush, white pond lily, sago, sugar cane, sun flower.

Diluents, *(diluentia)*, from *diluo*, to dilute, increase the quantity of fluid in the blood and system, as balm, barley, white horehound, gland flax or nuil, &c. &c.

Detergents, *(detergentia)*, from *detergo*, to make clean, cleanse wounds and ulcers, as cassada, canella, cerasee, cashew, marsh rosemary, red onion, wild parsnip, plantain, red mountain oak, buckthorn, wild madder, water dock, rhus glabrum, tooth-ach tree, birch, cats tail, clary, coral tree, ringworm bush, vervain, prickly yellow, French physic nut, Indian turnip, wild carrot, savine, broad-leaved laurel, balsam pine, hemlock tree, Scotch fir, black alder, wild cherry, currato, broomweed, soap berry, house leek, celandine, arraganas, arrow head, basil.

Emollients, *(emollientia)*, from *emollio*, to soften, render the solids more lax and flexible, as barley, beet, cabbage, oil nut, cotton tree, wild liquorice, banana, marsh mallow, hyssop, galbanum, flax, mullein, melilot, chickweed, ochro, coltsfoot, sugar cane.

Discutient, *(discutientia)*, from *discutiens*, medicines having power to repel, as purslane, cancer root, turnip, palm, hemlock, bittersweet, white hellebore, angelica, bean, borrage, burdock, chamomile, chickweed, love apple, sow bread, ben nut, ducks' meat, spleenwort, water lily, arsmart, anchoaca, clove strife, cotton tree, garlic pear, sow bane, oil nut, yellow pond lily of lake champlain, sumach, clown's heal-all.

Materials to put in *Aromatic Baths*,---red cedar, hemlock pine, broomweed, Spanish elder, star wort, oak bark, piper amalago, bay, hog plum, wild sage, Jamaica spice wood, vervain, clary, spikenard, &c. &c. &c.

CLASS I. MONANDRIA.

This class is the first in the Linnæan System, and comprises those plants having only one stamen or anther. It contains a fine natural order of plants, nearly allied to each other; viz. the scitamineæ, which comprehend a number of valuable aromatic, esculent and medicinal herbaceous vegetables, in which both Indies are peculiarly rich.

ORDER I. MONOGYNIA.

To avoid prolixity and the taking up too much room by a particular description of each part of fructification in every plant, the notice of them will be confined to the great leading distinctions of the classes and orders, familiar descriptions and their virtues, uses and species. For those scientific Botanists, however, who may have time and inclination for such full descriptions, they are highly interesting and useful. The following may serve as an example of a full botanical description of the parts of fructification.

Indian Arrow Root, *Maranta Arundinacea.* Calyx—a small erecto-patent perianth, fixed upon the germ, divided into three segments of a lanceolated figure. Corol—monopetalous and gaping, the tube oblong, crooked and compressed; the limb six parted, the alternate exterior segments ovated, small and equal, one below, two above; the two alternate lateral segments large, roundish, and represent a lower lip, the upper one small. Stamen—a single filament, similar to a segment of the corol. Anther—small and linear,

and fixed to the side of the filament. Germ—roundish beneath the receptacle. Style—simple and as long as the corol, towards the top revolute. Stigma—three-sided and hollowed. Pericarp—roundish, obscurely three-sided, tivalvular, and contains a seed, single, ovated, hard and rough. Receptacle—is proper. Named, from Bartolomeo, Maranta: For remainder of description, see Explanation of Plate 4.

INDIAN SHOT, *Canna Indica.* Greek Καννα,—hence our word cane. For remainder of description see Explanation of Plate 4.

NARROW-LEAVED GINGER, *Amomum Zinziber.* N. O. Scitamineæ; Fr. Gingembre; Ital. Gingiovo; Span. Gingibre,—also Zinziber; Gr. Αμωμον; from the Arabic; nat. East Indies.

This valuable plant is herbaceous, having palmated tuberous roots, of a yellowish brown outside, extremely white within, and acrid when fresh. It creeps and spreads so as not easily to be eradicated, and renders the land barren. The stalks are erect, reed-like, two feet high, with alternate lanceolate leaves, embracing the stalk at their base. The flowers are borne on scapes, and arise from the sinuses of the squammæ (which are reddish at the points), small, of short duration and of a blue colour. Seed vessel, smooth, with many oblong seeds.

The root is aromatic and carminative; when preserved is an excellent stomachic, expels wind, and is very good in sea sickness. The expressed juice with cocoa nut oil is good for an embrocation in rheumatism.

It is cultivated for sale in the West Indies. The roots being dug up, carefully scraped and dried, is the White Ginger; when scalded it is termed Black Ginger. The shifted syrup made in preserving ginger is made into a liquor by fermentation, called cool drink, and commonly sold by the Negroes for five pence per bottle. Dr. Barham says the Wild Ginger will cure cancers. Ginger is preserved by soaking, boiling and scraping, and putting it in two syrups.

Broad-leaved ginger, a, zerumbet, is a native of the East Indies; great wild ginger, a, sylvestre, of Jamaica; Japan ginger, a, mioza, of Japan; cardamom ginger, a, cardamomum, of the East Indies; villose ginger, a, villosum, of Cochin-China; globose ginger, a, globosum, of China; grains of paradise, a, granum paradisi, of Guinea and the East Indies; galangale, a, galanga, of China and Cochin-China; given frequently for zedoary; tree ginger, a, arboreum, Sumatra; hirsute ginger, a, hirsutum, of the East Indies; sweet scented ginger, a, escapum, of Sierra Leone; purple bracted ginger, a,

purpureum, of the East Indies. Of the above species the cardamom, grains of paradise, and galangal, being valuable remedies, might be introduced into the West Indies with advantage.

Spiked Costus. *Costus Spicatus.* N. O. Scitamineæ; Fr. Canne de Riviere; Ital. Costo; Gr. Κοστος; from the Arabic; nat. West Indies.

This plant is herbaceous with an irregular knotty root, simple stems, alternate lanceolate leaves, and flesh coloured flowers in a handsome spike; Seeds black. It is an aromatic pungent root, used in making cool drink, and a decoction is used in the first stages of Syphilis by the Negroes. The following are natives of the Indies.

Smooth-leaved, costus arabicus, both Indies; hairy-leaved, c. speciosus, East Indies; glabrous, c. glabratus, West Indies; Malacca, c. Malaccensis, Malacca.

Ginger-leaved Hellenia, *Hellenia Allughas.*

Sweet-scented Garland Flower, *Hedychium Coronarium.* These are natives of the East Indies, but have not yet been introduced into the West.

Spreading Hogweed, *Boerhaavia Diffusa.* N. O. Aggregatæ; called also Hogmeat; nat. Jamaica; named after Dr. Boerhaave, of Leyden.

This useful plant is herbaceous and parasitic, many round and glossy stalks rise from an oblong hard root, and branch out in every direction, rising sometimes ten feet. The leaves are ovated, of a bright green, and reddish at the edges, in pairs; the flowers stand in the alæ of the leaves, of a pale red outside, and a deep purple within; the stamen and style purple, anther yellow; seed single, oblong, obtuse, and angular. It grows plentifully in Jamaica, especially about Spanish town, where it is made use of to feed hogs who eat it greedily, whence it is called Hogweed. Dr. Barham calls it a wild sort of Valerian, and says it is very cooling and emollient.

Upright hogweed, b. erecta, nat. both Indies; clammy, b. viscosa, Peru; hirsute or scarlet, b. hirsuta, West Indies; climbing, b. scandens, Jamaica; tetrandrous, b. tetrandra, Society Isles.

Jamaica Alpinia, *Alpinia Occidentalis.* N. O. Scitamineæ; nat. Jamaica. Named after Prosper Alpinus, a physician and botanist.

This plant is herbaceous, with fleshy branched roots, nearly similar to ginger; stem round and smooth with alternate lanceolate leaves, sheathing the stalk at the base. Bracts of a blood red colour, as is the calyx; the flower white; capsule roundish, obscurely trigonous; seeds shining.

Alpinia Racemosa, is also a native of the West Indies.

Long-rooted Turmeric, *Curcuma Longa.* N. O. Scitamineæ; Ital. Turtumaglio; Span. Curcuma; nat. Cochin-China; named from the Arabic Curcum; also called Mangel Kaa.

This plant is herbaceous, has a large oval bulbous root, with annular protuberances; within solid, of a fine yellow colour, fragrant smell, and rather acrid taste; it creeps, and is increased by smaller bulbs. The leaves are large, firm, oval, vaginant and pointed; the flower stalks rise separate, round and succulent, naked below, and the flowers formed into a thick spike above, protruded from the squammæ of the calyx; of a yellowish colour, which soon fall off; seed vessel a roundish trivalvular capsule, each cell containing many seeds.

It grows freely in the West Indies, the root is taken up as soon as the flowering stalks fade, cut in pieces and dried in the sun. Its medical virtues are attenuant and deobstruent, of use in obstructions in the viscera and jaundice. It dies a fine yellow colour, and is a principal and wholesome ingredient in the curry powder made in the West Indies. It is applied as a cataplasm with wild rosemary leaves for those swellings of the abdomen so common among the Negroes, arising from Amenorrhagia. The following species are natives of the East Indies.

Round-rooted, c. rotunda, East Indies and China; aromatic, c. aromatica, ditto; pale, c. pallida, ditto.

Tall Renealmia, *Renealmia Exaltata.* N. O. Scitamineæ; named from Paul Reneaume, a physician, native of Surinam.

This plant grows to twenty feet in height, with an erect trunk which bears a bunch of flowers; the leaves are six feet long and lanceolated; the fruit is a fleshy esculent berry, and the seeds numerous. The following are natives of the East Indies.

Drooping flowered, r. nutans; upright flowered, r. calcarata.

Kæmpferia Galanga, *Officinal Galangale.* N. O. Scitamineæ; Ital. Cipero; Span. Galanga; nat. East Indies; named from E. Kæmpfer.

This plant is herbaceous, with bulbous palmate roots, leaves egg-shaped, flower white with a violet spot in the middle, seeds many. The medical virtues are aromatic, diaphoretic and alexipharmic. Broad-leaved, k. latifolia; narrow-leaved, k. angustifolia; round galangal, k. rotunda, are also natives of the East Indies, and would thrive well in the West Indies.

Round-headed Globba, *Globba Marantina.* N. O. Scitamineæ; malayan name; nat. East Indies.

This plant is somewhat similar to maranta. The species uviformis, bears a fruit similar to grapes, which is sometimes eaten. There are also g. nutans, g. japonica, g. purpurea, all natives of the East Indies.

Opera Girls Mantisia, *Mantisia Saltatoria.*

Woolly Phylidrum, *Phylidrum Lanuginosum.*

Are natives of the East Indies and China, but not yet introduced into the West.

Herbaceous Marsh Samphire, *Salicornia Herbacea.* From Sal, Salt and Cornu a horn.

This valuable plant grows in great plenty in Jamaica, on the Salinas and Marshes near the sea coast; particularly about Port Henderson, Salt Island, and Old Harbour; and yields an alkali in great abundance, fit for making soap; there are many species natives of other climates; of which most are natives of Europe.

CLASS II. DIANDRIA.

This is the second class, comprising plants with two fruitful anthers, of equal lengths and contains many fragrant plants of the natural order Sepiariæ; and many others of the order Verticillatæ; which are very valuable aromatic medicines, as sage rosemary, &c.

ORDER I. MONOGYNIA.

Red Jasmine, *Jasminum Officinale.* N. O. Sepiariæ; Fr. Jasmin; Ital. Gelsomino; Span. Jasmin; from ιον και ισασμη; violet odour; nat. East Indies.

This beautiful and well known plant is common in the West Indies and principally used for hedges in gardens and arbours; a delightful perfume is extracted from the flowers by the Spanish ladies, made into a consistence with other balsams and worn about their persons. The following species also grow freely in the West Indies; Arabian jasmine, nyctanthes sambac; yellow Indian jasmine, j. odoratissimum; and many varieties with double flowers.

Common Privet, *Ligustrum Vulgare.* N. O. Sepiariæ; Fr. Troene; Ital. Ligustro; Span. Altrena; nat. West Indies; the Ligustrum of Pliny.

This handsome shrub grows freely in the West Indies, and is a very elegant specimen of hedge plants ; l. Japonicum, and l. sinense, are natives of Japan and China ; and the wax tree privet, l. lucidum, of China.

European Olive, *Olea Europea*. N. O. Sepiariæ ; Fr. Olivier ; Ital. Ulivo ; Span. Olivo ; nat. South of Europe.

This valuable tree might be cultivated with advantage in the West Indies, the fruit, and oil expressed from it is too well known to require a description. There are many wild sorts in Jamaica, as the black olive or olive bark called in Antigua, French oak, Bucida Buceras, a genus of the tenth class, first order, called by the French Grignon, is a valuable timber tree and the bark is very restringent and styptic.

There are seven species of the Olive and many varieties.

Fringe Tree, or Snow Flower, *Chionanthus Compacta*. N. O. Sepiariæ; nat. West Indies ; from χιων, *chion*, snow, and ανθος, *anthos*, a flower.

This handsome tree grows about twelve feet in height, the leaves are entire and shining, about six inches long. The flowers are of a snowy whiteness, divided into several long and narrow segments. The fruit is a one celled drupe. C. axillaris is a native of the East Indies.

Wave-leaved Trumpet Flower, *Bignonia Longissima*. N. O. Personatæ ; Fr. Chene noir ; nat. West Indies ; named after Abbe Bignon.

This is a beautiful tree thirty feet high and more, having entire waved leaves. The Inflorescence is a panicled Raceme with numerous sweet whitish flowers ; Siliques slender, roundish and two feet long. Thrives in the Savannahs in Jamaica and is considered an excellent timber tree. B. unguis is also a native of the West Indies and supports itself by tendrils, having axillary personated flowers.

Hairy-leaved Trumpet Flower, *B. Pentaphylla*, has an upright stem, and pale blue flowers, the Siliques crooked.

White Wood, *B. Lencoxylon*, grows to a large tree, the wood of which is excellent hard timber called White Fiddle Wood, the flowers are white and soon fall off, the pod is six inches long, the juice and tender buds are said to be an antidote to Manchineel poison. There are in all twenty-seven species of this tree most of which are natives of warm climates.

Balsam Herb, *Justicia Comata vel Dianthera Comata*. N. O. Personatæ ; nat. Jamaica ; named from James Justice, Esq.

This plant is very common in Jamaica, and rises about 1½ feet high, erect, branched angularly, with lanceolate leaves and small pale blue flowers, ovate

capsule containing four round flatted seeds. It grows plentifully in the low lands of Jamaica, and the juice, or distilled water, is good for sore eyes. The decoction made into syrup is said by Jacquin to be demulcent and pectoral, and cures coughs. There are twelve species of Dianthera mostly natives of the East and West Indies.

Vervain and Wild Clary. See Explanation of Plate 4. Add. Vervain. The dried leaves, powdered, are used to sprinkle on ulcers.

Thyme-leaved Hedge Hyssop, *Gratiola Monnieria*, from gratia. N. O. Personatæ: nat. both Indies. A small, creeping, spreading plant, eight inches in length, with minute blue flowers. The Indians eat this herb in their soups to refresh them. Creeping Gratiola, *G. Repens*, is also a native of Jamaica, and there are ten other species mostly natives of the East Indies.

ORDER III. TRIGYNIA.

Rough-leaved Pepper, *Piper Amalago*. N. O. Piperitæ; πεπερι, Peperi of Theophrast & Diosc: nat. Jamaica. Is a shrub eight feet high, leaves alternate, acuminate and nerved, flowers clustered, berries sessile, containing a single seed, small, black, and pungent. It grows commonly on hilly situations; taste and flavour same as the black pepper of the East Indies; should be picked (as Pimento) when full grown and before it ripens.

The leaves and young shoots boiled are a favourite remedy with the negroes for discutient baths and fomentations, and pounded, are applied to foul ulcers. A slight decoction of the root is sudorific, diaphoretic, and deobstruent, in obstructions from lentor or inertion. It is also called Pepper Elder, and the Piper Aduncum, Spanish Elder; Black Pepper, P. Nigrum, and Betle. P. Betle, are natives of the East, and might probably be cultivated in the West Indies. There are in all sixty species of Piper, of which thirty are natives of Jamaica. Ulloa asserts that the Coca, or Koka, of Peru, is the same with the Betel. Jaborand, P. Reticulatum, is an antidote against the poison of mushrooms and cassada.

Santa Maria Leaf, *Piper Umbellatum*. Is very common in the woods of Jamaica, and grows about three feet high, the leaves large and round, the footstalks embracing the stem. Piso says, the root is a warm, active remedy against poisons, and that a syrup is good for colds and catarrhs. Barham says, the leaves of racemosum malvaceum are cordated and soft, and relieve the head-ach and gout, and the juice of the leaves cures burns.

CLASS III. TRIANDRIA.

This is the third class, and contains plants furnished with three stamens, comprising the useful and valuable plants of the Natural Order Gramina, under which head are found those species of grain fit for the food of man, as the oat, rye, wheat, barley, and sugar-cane, and grasses for the food of cattle; some of the Natural Order Ensatæ and others of the Carophyllatæ.

ORDER I. MONOGYNIA.

Entire-leaved Maiden Plum, *Comocladia Integrifolia.* N. O. Terebintaceæ Jussieu: nat. Jamaica. This tree grows about fifteen feet high, with a small trunk, erect, dividing at the top into a few branches with pinnated leaves. The tree abounds with a watery sap, slightly glutinous, which grows black in the air, the stain of which is not to be washed out. The wood is hard and reddish, and it is commonly cut down to make palisadoes and rails for fences. There are two other species natives of the West Indies, C. Dentatá and C. Ilicifolia.

Martinico Flower de Luce, *Iris Martinicensis.* N. O. Ensatæ: nat. of Martinico and St. Lucia. This plant has a solid root and a roundish stem, two feet high, and yellow flowers without scent. There are fifty-three species, mostly natives of the cold climates of Europe and Asia, and the Cape of Good Hope.

Plaited Moræa, *Moræa Plicata.* N. O. Ensatæ: nat. Jamaica.

This plant has radical leaves from two to three feet long, flowers white and spathaceous. It flowers the whole year, one flower coming out at a time at four o'clock in the afternoon. There are seventeen species, mostly natives of the Cape of Good Hope.

Adrue, or Anti-emetic Grass, *Cyperus Articulatus.* N. O. Calamariæ. This rush has a tuberous, red, knobbed root, smelling like Calamus Aromaticus. Stalk about three feet high, with transverse partitions, and at the top chaffy brown panicles. It grows on the rills of the Savanna, near Two Mile Wood in Jamaica, and in Egypt on the banks of the Nile. The roots are cordial and diuretic, resisters of poison, and good in the first stages of dropsy. The roots are also aromatic and stimulant, and may be used in the place of Virginian snake root: it was much used in practice by the late Dr. Brodbelt, of Spanish Town. The infusion is good in vomitings, fluxes, &c. but its most valuable and surprising quality is its virtue in restraining vomiting in fever, and relieving sickness of the stomach, which I have often witnessed. It gives out its virtues to water in decoction, or warm infusion, to be taken cold. The whole plant, cut or sliced, makes the strongest decoction.

A variety of the Adrue is used by the Indians, near Truxillo, as a cure for the belly-ache. C. Minimus, C. Elegans, C. Odoratus, and C. Viscosus, are also natives of Jamaica, and there are fifty-one other species mostly natives of the East Indies; among them is the C. Papyrus, of which paper is made.

Rough-spiked Cenchrus, *Cenchrus Echinatus*. N. O. Gramina: nat. Jamaica. This is a very common grass in the pastures, and a wholesome food for cattle. There are ten other species, of which two are natives of the West and several of the East Indies.

Creeping Callisia, *Callisia Repens*. N. O. Ensatæ: nat. West Indies.

A small, tender, creeping plant, with ovate acuminate leaves, and small sessile, greenish flowers, growing three together. Is found in moist shady places.

Tamarind. See Explanation of Plate 5.

ORDER II. DIGYNIA.

Common Sugar Cane, *Saccharum officinarum*. N. O. Gramina: nat. both Indies. This plant and its cultivation has been so long known in the West Indies, that it will be needless to say much of it. There are several different species cultivated in the Island, which suit the various soils and climates. There are also varieties of this cane both as to size of the joints and colour; some being a yellowish white, and long jointed, others red and shorter jointed, and another sort Elephantine, with the culm thick, and knots approximate. There is also the Ribbon cane, the culm of which is curiously striped and variegated; but not much esteemed. The Otaheite and Bourbon canes are now very much cultivated, and found to be very productive. In preparing the ground for planting, the plough is not yet used so much as it might be, and one would suppose with the most beneficial effect. There are ten other species. The virtues of sugar are attenuant, pectoral, vulnerary, and in a high degree nutritious. Muscovado sugar, with Cocoa nut oil, is fatal to worms. A species of wild cane in Jamaica makes an excellent pickle.

GRASSES.—Guinea Grass and Scotch Grass, *Panicum*. See Explanation of Plate 5. The roots of the grasses in general make a diuretic decoction.

The following grasses are natives of Jamaica:

Fox-tail Grass, *Alopecurus Indicus*.

Barley-like Fox-tail Grass, *Alopecurus Hordeiformis*, is also an Indian grass, grows about a foot high, leaves flat and channelled: there are six other species.

Ciliated Meadow Grass, *Poa Ciliaris*, grows six inches high, a slender stalk, fine leaves, and downy head. Clammy Meadow Grass, *Poa Glutinosa*, and there are sixty-nine other species, natives of all parts of the world.

Flat-stalked Bent Grass, *Agrostis Complanata:* also Purple Bent Grass, A. Purpurascens, growing one foot and a half high, stalks round and solid, small leaves, and a branched panicle. There are thirty-three other species.

Dotted Millet Grass, *Milium Punctatum*, grows in moist meadows, from one to two feet high, broadish entire leaves, and upright, simple panicle. Compressed Millet Grass, M. Compressum. Fingered, M. Digitatum, and Panic, M. Paniceum: and there are in all eight other species.

Pea-flowered Melic Grass, *Melica Papilionacea*, is said by Sloan to be a native of Jamaica. It has rodlike panicles. There are in all thirteen other species.

Rye, *Secale:* Barley, *Hordeum:* Oat, *Avena:* and Wheat, *Triticum*, are neither of them to be found in the West Indies: the grain there cultivated is Indian and Guinea Corn; but in North America they are all cultivated with success, and in quantity far greater than the wants of the population, so that a considerable part of their commerce consists of the exportation of flour. As to their medical properties, an infusion of toasted wheat bread is useful in febrile diseases, and is particularly useful in cholera morbus, which it has been said to cure. A decoction of young green wheat is also a popular remedy in America to remove suppression of the menses. Wheat starch is demulcent, and useful for enemas in dysentery and diarrhœa, as also arrow root starch.

Decoctions of pearl barley, strained and acidulated, are eminently useful in diseases of the kidneys and breast, and all inflammatory cases.

Rye is subject to a disease, called by the French, ergot, by the Americans horned or spurred, and smutted rye, which renders the bread made of it very unwholesome, and the grain is fatal to cattle and poultry. This substance has been found by respectable American physicians to excite a specific action upon the uterus, and to relax the contracted muscular fibres during parturition. In lingering cases it speedily induces forcible pains and expedites delivery, but care should be taken not to administer this powerful parturient in preternatural presentations: the dose in powder is from five to ten, or fifteen grains; but it is more active in decoction, half a drachm of the powder being gently boiled in half a pint of water, one third to be given every twenty minutes till the pains are commenced. A large dose will excite nausea and vomiting. A drachm in decoction has also removed amenorhæa.

ORDER III. TRIGYNIA.

Bamboo Cane, *Arundo Bambos.* N. O. Gramina: nat. Both Indies; Gr. καλαμος; Kalamos.

This valuable plant grows freely in the West Indies and southern parts of America. It rises about twenty feet high by river sides, and is well known. It was used by the Spaniards inside the roofs of their houses; and a house in which I resided in Spanish Town had such a roof, entire, which was supposed to be upwards of two hundred years old. It is also used to make houses, bridges, masts, wattled fences, boxes, cups, baskets, mats, and paper (by bruising and steeping in water, and forming it into a paste). It is likewise useful for fishing rods, and pipes to convey water, and the tops of the young branches are pickled. In the cavities is found at certain seasons a white substance, called by the Arabians Tabasheer, and highly esteemed by them. The decoction of the leaves and bark is cooling and emollient. A. Orientalis furnishes the Turks with writing pens, and the stems of another species are converted into tobacco pipes. There are in all fourteen species of Arundo. This plant belongs to Ord II.—Digyna, instead of Trigynia, p. 38, inserted by mistake.

ORDER III. TRIGYNIA.

American Chickweed, *Holosteum Cordatum.* N. O. Carophyllei: nat. Jamaica; called also Alsines. This plant is creeping, leaves opposite and heart-shaped, rises about ten inches from the ground: the birds feed on the seeds; and the fresh plant applied warm is cooling and resolutive; two-stamened.—H. Diandrum, also a native of Jamaica, is very small, and not common. There are three other species.

Another species of Alsine, Mollugo Verticillata, is also a native of Jamaica. It spreads out six inches each way, and has seven leaves at a joint, in the form of a star. Its virtues are cooling, like the purslanes. There are five other species.

CLASS IV. TETRANDRIA.

This class contains plants with four stamens of uniform length, and comprises the natural order of Aggregatæ, and several of the Stellatæ; and also has several plants possessing valuable medical properties.

ORDER I. MONOGYNIA.

Slender Button Weed, *Spermacoce Tenuior*, called also Iron Grass. N. O. Stellatæ. This grows two feet and a half high, with stiff stalks, two

leaves at each joint, and smaller leaves in whirls ; the flowers are small, white and sessile near the tops of the stalks. Rough-haired, thorny, and shaggy Button Weed, S. Hirta, S. Spinosa, and S. Hispida, are natives of Jamaica; and there are sixteen other species.

Three-flowered Iron Tree, *Siderodendrum Triflorum:* nat. West Indies. A tall branching tree with ovate lanceolate leaves, flower small, a red colour without, and white within : the wood is very hard, like iron, whence its name.

Ash-leaved Ægyphila, *Ægyphila Martinicensis,* nat. West Indies. N. O. Vitices (Juss.)

A shrub six feet high, branches opposite, leaves ovate acuminate, flowers white. Goats are fond of this plant. Æ. Elata, Æ. Fætida, and Æ. Trifida, are all natives of Jamaica.

Callicarpa Ferruginea, and C. Reticulata are natives of Jamaica.

English Plantain, *Plantago Major.* This will grow if cultivated carefully, and is in much esteem in Jamaica, as an excellent eye water is made from the juice of its leaves ; and the water mixed with linseed oil, cures burns.

Sweet-scented Broom, *Scoparia Dulcis.* N. O. Personatæ : nat. Jamaica. Fr. Balai doux ; Sp. Escobilla Menuda. This plant grows about three feet high, with small white flowers. It is vulnerary, and makes a cleansing bath for children : the negroes make brooms of it. An infusion, or expressed juice, (three spoonfuls) is said to be good for disorders of the breast. There are two other species.

Three-leaved Cissus, *Cissus Acida.* N. O. Hederaceæ : nat. Jamaica. This has a climbing succulent stalk, alternate leaves, thick sub-ovate sessile leaflets, and black berry. The whole plant is acid. C. Sycioides and C. Trifoliata, are natives of Jamaica ; and there are twelve other species natives, mostly of the East Indies.

Contrayerva. See Explanation of Plate VI. Fig. 4 ; but the plant there figured and described is not the Dorstenia, but Aristolochia Odorata, of the Class Gynandria, Order Hexandria. N. O. Sarmentaceæ.

Bastard Iron Wood, *Fagara Pterota.* N. O. Dumosæ : nat. Jamaica. Rises about eight feet high, with pinnated leaves, and small white flowers in double spikes : the wood is very hard. F. Emarginata rises twenty feet high, the wood is white, solid, and in burning very odoriferous. F. Spinosa, and F. Acuminata are also natives of Jamaica, and there are six other species.

Ammania Sanguinolenta, is a native of Jamaica, and A. Latifolia is said to be Brown's Isnardia, which he says is pretty common about the Ferry.

White and Yellow Sandal Wood, *Santalum Album.* N. O. Onagræ (Juss.); nat. East Indies. This valuable tree grows plentifully in Malabar; in appearance it resembles a myrtle, and has the habit of the privet. It has black berries which are eaten by the birds, and the tree when old acquires great hardness, a yellow colour, and fragrant smell. It might doubtless be introduced with great advantage into the West Indies.

Climbing Rivina, or Hoop Withe, *Rivina Octandra.* N. O. Holeraceæ: nat. West Indies. Fr. Lianne a baril. This plant climbs trees, and has long flexile branches oblong acuminate leaves, and dark purple berries. In a scarcity of hoops, the stems and branches make a good substitute. There are three other species.

Great-flowered Dogwood, *Cornus Florida.* N. O. Stellatæ. This beautiful tree is well known in America. The flowers come out large and white, edged with rose colour, in clusters of several together. The bark is astringent and has long been employed in intermittent fevers, and a decoction cures horses of the Canada distemper. The berries in brandy make an agreeable bitter, and a tea of the flowers is good for flatulent cholic. Rose Willow, C. Sericea, is another species, the bark of which the Indians smoke with their tobacco, and it is also used with success in intermittents. There are in all twelve species.

ORDER II. DIGYNIA.

Dodder, *Cuscuta Americana.* N. O. Convolvuli (Jussieu); nat. West Indies. This is a parasitical plant, creeping and climbing over whole trees, and destroys them, from which it is vulgarly called Devil's-guts and Hell-weed. There are in all three other species.

ORDER IV. TETRAGYNIA.

South Sea Tea, *Ilex Vomitoria.* N. O. Dumosæ. A native of the Southern states of America. A decoction of the toasted leaves is a most powerful diuretic, and in great esteem among the Indians, who call it black drink, and permit only men to drink it. It is called by them Cussæna and Yaupon, and is the famous Paraguay tea of South America. The Indians come down in tribes to the sea side to drink it, till it causes vomiting; and some of them consider it a specific for all diseases. It would grow very well in the West Indies.

Myginda Rhacoma and M. Latifolia are natives of Jamaica, but of no particular use or virtue.

CLASS V. PENTANDRIA.

This class is immensely numerous. It contains the natural orders of Asperifoliæ, Luridæ, Contortæ, Umbellatæ and Dumosæ, and comprises plants highly important to mankind, as valuable and powerful medicines, and some esculent fruits and roots.

ORDER I. MONOGYNIA.

Indian Turnsole, or Wild Clary, *Heliotropium Indicum.* See Explanation of Plate IV. fig. 4. Wild Clary, instead of being a Salvia, is of this genus, Heliotropium Indicum. There are 24 species in all. A decoction of this species is diuretic.

Tournefortia, *Tournefortia,* named from J. P. Tournefort, the famous botanist. N. O. Asperifoliæ. There are eleven species, of which seven are natives of Jamaica; but I know of no particular virtues ascribed to them: in future, when this is the case, the names and number of species only will be mentioned.

Annual Worm Grass, *Spigelia Anthelmia.* N. O. Stellatæ; nat Jamaica. This valuable plant is well known and highly esteemed as a remedy for worms. Boil two handfuls of the plant in 2 quarts of water to one; to the strained liquor add sugar and lime juice. Dose, to a full grown person, half a pint every six or twelve hours, for three or four times, and then a cathartic. The worms are discharged in great quantities, and it relieves fever and convulsions; but too large doses are narcotic. An injection with a little laudanum is also a useful form. It should not be given to children under two years. There is another species, native of the Southern States of America, called Perennial Worm Grass, or Indian Pink, S. Marilandica, a valuable anthelmintic among the Indians, and is much used in America, in form of the powdered root, in which it is also supposed febrifuge.

Smooth-flower Lisianthus. N. O. Rotacææ. An elegant little plant. Five species are natives of Jamaica and there are four others.

Climbing Leadwort, *Plumbago Scandens.* Native of Jamaica. There are in all seven species.

Sweet or Spanish Potatoes, *Convolvulus Batatas.* N. O. Campanaceæ; nat. both Indies—from *convolvo,* to turn round. This valuable plant grows freely in the West Indies and produces a number of roundish, esculent roots, yellow inside and very sweet. The roots are a reddish brown outside, and they are fine food boiled or baked. They are imported by sea into New York from Carolina and considered a delicacy. The vines are good to feed

hogs and rabbits. The young shoots boiled are also as good as spinach. The growth of these potatoes, covering the ground with vines and leaves, it is said, improves the soil.

Blue Bind Weed, *Convolvulus Nil.* This beautiful plant has heart-shaped leaves, on long petioles, and climbs on the fences and trees. The flowers are large and purple. Another species, C. Roseus, has large rose-coloured flowers. Syrian Scammony, C. Scammonia, and Jalap, C. Jalapa, both strong cathartics, might doubtless be cultivated to advantage in the West Indies, and are said to have been found in the United States. C. Brasiliens: a decoction of the root is good in dropsy. There are in all 110 species, very many of which are natives of the East and West Indies, several of them yield an extract not inferior to scammony. Dr. Rush's celebrated purgative in yellow fever, is said to have been twenty grains of jalap and ten of calomel, which I have often experienced to be the most efficacious and safe cathartic for adult negroes. Wild potatoe-vine, C. Panduratus, is supposed to be the mechameck or wild rhubarb of the Indians: in Delaware the root is called cussander. The root is also used, in Virginia, in cases of gravel, and assists greatly the passing of calculi renales.

Indian Pink, *Ipomæa Quamoclit.* N. O. Campanaceæ; nat. both Indies; also called Sweet William. This beautiful plant is a climber and has slender stalks and numerous leaves very finely pinnated. The flowers come out in constant succession from the side of the stalks on long peduncles, of a most beautiful scarlet, small and thickly set, succeeded by four black seeds. Dr. Barham says, the root in decoction is a strong cathartic. Scarlet Ipomæa, I. Coccinea, has larger flowers, not so deep a red as the former, and a variety with orange flowers, is remarkable for the curved figure of the tube of the corolla. Spanish Arbour Vine or Seven-year Vine, I. Tuberosa, has tuberous roots, large leaves and yellow flowers, sometimes purple, of a very fragrant smell: it will spread over an arbour 100 yards long. It is lactescent and purges watery humours strongly. There are in all twenty-seven species, of which many are natives of the West Indies.

Long-flowered Lobelia, *Lobelia Longifolia.* N. O. Campanaceæ; nat. West Indies. This is a handsome plant, upright, herbaceous, and about sixteen inches high, leaves sessile, toothed and long; flowers white, upright and four inches long. The plant internally taken produces an invincible purging and is considered poisonous; it will kill horses, and handling it produces inflammation. Chili Cardinal Flower, L. Tupa, is also considered poisonous, and the smell causes vomiting. Blue Lobelia, L. Syphilitica, is a native of America, very common and well known, and

considered a valuable remedy in syphilis and certainly in gonorrhœa; (the root used in decoction,) the knowledge of which was purchased from the Indians. L. Inflata vel Emetica, Emetic Weed or Indian Tobacco, another well known species, with oblong serrated leaves and pale blue flowers; is considered by medical men in America, and, among others, my friend Dr. Rogers of Mamaraoneck, State of New York, as a valuable remedy. The leaves chewed produce vomiting, and frequently when tartar emetic and the other emetics have failed. It often produces profuse perspiration and has been serviceable in cholic and chronic rheumatism. Also, in the form of tincture, fully saturated, in asthmatic affections it has frequently proved more beneficial than any other medicine; perhaps smoking it would be also eligible: but being a powerful remedy and probably narcotic, it should be given with caution. Its stimulus is of the diffusive kind and it has an evident effect upon the urinary passages, and is very useful in the cure of leucorrhœa. It has also been found successful in the cure of hydrophobia and also of tetanus, on the same principle as exciting a strangury by cantharides, has been found effectual in the same. Lobelia Cardinalis. A decoction of the root is used by the Indians against worms. There are in all forty-two species.

South Sea Rose, or Rose Bay, *Nereum Odorum.* N. O. Contortæ; nat. of the East and West Indies. This beautiful tree rises about ten feet high, having stiff leaves and large bunches of flowers at the end of the branches, very similar to Red Plumeria, Plate V. Fig. 5. of a purple or white colour, with a very fragrant odour. The leaves are acrid and poisonous, and oil in which they have been infused is said to cure psora. The milky juice of plumeria will corrode iron. There are eight species.

Centry or Centaury, *Chironea Centaureum vel Angulaus.* N. O. Rotaceæ. A beautiful annual plant, an excellent aromatic and bitter, and given in infusion with great success in fevers by physicians, and is also a favourite popular remedy. Ten species.

Coffee Tree, *Coffea Arabica.* Native of Arabia. Nat. Or. Stellatæ. This valuable plant has been known in the East time out of mind, was introduced into Jamaica by Sir Nicholas Laws, in 1731, and is now cultivated to great extent; but particularly of late years. There are mountain plantations in the parishes of Liguanea and St. Andrews, producing from 250 to 400,000 weight of clean coffee per annum, on which are extensive works and machinery for the peeling, pulping, washing and drying the coffee, some of which is nearly equal to the Mocha in size, colour and flavour, the small semi-transparent bean, with a bluish cast, being reckoned the best. This plant is

cultivated usually by suckers, but will grow well from seeds and bear in about three years, after which, by care in pruning and keeping the coffee-piece free from weeds, it will continue bearing for many years. The trees are kept low, about the height of five or six feet, to give more strength to the bearing horizontal branches and for the convenience of picking. When kept for use in the island, it should always be dried and preserved in the outer covering or pulp and parchment, and if it could be shipped in this way to Europe, it would no doubt preserve its virtues and flavour much better than in the present mode, and not be so liable to imbibe the flavour of rum or sugar, which is frequently shipped with it. See a Communication on this subject to the Society of Arts, by Dr. I. Titford, of Jamaica. Transactions, Vol. IX. p. 174. It is a most valuable article of commerce, and a common and wholesome beverage, being cordial and cephalic. A decoction or infusion of the raw Coffee cherries, bruised, is much used by the Arabians. It is also a native of Abyssinia. Western Coffee, or Wild Jessamin, C. Occidentalis, is a native of Jamaica. There are eight other species.

Ipecacuanha, *Psychotria Emetica.* N. O. Stellatæ; nat. South America. This valuable plant is also said to grow in the Southern States of America, and would doubtless thrive in the West Indies. There are nineteen species, natives of Jamaica, and twenty other species.

Thorn Apple, *Datura Stramonium.* N. O. Luridæ; nat America; called also Floripondio. This is a common plant, with large, scented, white, bell-shaped flowers, and bears a prickly capsule, with numerous seeds, which are highly narcotic. An ointment of the flower is good for burns, contracted nerves, spasms, and irritable sores, and the leaves applied are said to ease the gout. It is common in the West Indies, and considered a troublesome weed in America, called James-town weed, to the southward. An extract has been used with success in mania and epilepsy. Its efficacy for relieving asthma, by smoking the plant, is well established. There are eight species.

Hairy Rondeletia, *Rondeletia Hirta.* N. O. Rubiaceæ, (Jussieu). This, with ten other species, are natives of Jamaica, and three others of the Spanish West Indies.

Peach-coloured Trumpet Flower, *Solandar Grandiflora.* Nat. Jamaica. A climbing, sub-parasitical shrub, with large sweet flowers, and fruit of a subacid flavour.

Nightshade, *Solanum.* N. O. Luridæ. There are ninety-three species of this genus. One sort, which runs in a vine along the ground, is troublesome in pastures, poisoning the horses and sheep, when its young shoots rise with the grass; but if at its full growth and easily discernible, they will

avoid it; so that in endeavouring to eradicate it, great care should be taken completely to extract the whole of the root. The juice of one species is good in extensione ani, attended with inflammation. Irish Potatoe, S. Tuberosum, that invaluable plant, is a species of this genus. It was imported into England, 1597, from Virginia, probably originally introduced from Peru. It loses its flavour and turns sweet when planted in Jamaica, so that the potatoes used for the table are generally imported in the packets. Canker-berry, S. Vahamenu, makes an excellent gargle for sore throat, and is considered a specific for a cankerous mouth.

Oval-leaved Macrocnemum, *Macrocnemum Jamaicense.* N. O. Contortæ; nat. Jamaica. A tree growing about fourteen feet high, on the banks of rivulets, with greenish flowers, in a panicle. There are two other species.

Great-flowered Portlandia, *Portlandia Grandiflora.* Nat. Jamaica. This is a shrub, with very large, white, fragrant flowers, common among the rocks. The bark is bitter and astringent and cures intermittents. There are three other species.

Guinea Pepper, *Capsicum Annuum.* N. O. Luridæ; nat. Jamaica. Of this species there are fifteen varieties, and of the genus four other species. It is very common in the East and West Indies, and also grows in America. The pods are variously shaped and coloured, and much used by the Negroes, as a seasoning, and also by the Whites, for a pickle or sauce. The Cayenne is made from the pods of the small Bird Pepper, dried and ground between two stones, and mixed with salt. As the seeds and the inner divisions of the pod are the most acrid, they are frequently cut out of those large sorts, used for pickling. The use of them in moderation acts as a stimulus on the stomach, creates an appetite and restrains vomiting. It is now frequently prescribed in pills, or a tincture. Infused in oil they take away the numb palsy, and cataplasms are useful in coma and delirium. In opthalmia, from relaxation, the diluted juice is a sovereign remedy. A few bird peppers, swallowed whole, relieve the heart-burn and prevent dyspepsia. The following are the sorts most commonly to be found:

Pigeon Pepper,—bearing a green or yellow pod, of a roundish shape.

Bell Pepper,—bearing a yellow or red pod, bell-shaped, or smallest at the extremity next the foot-stalk.

Cherry Pepper,—Red and of a roundish shape.

Coral Pepper,—bearing a long red pod, tapering to a small point.

Bird Pepper,—bearing a small oval fruit, green or red.

Great Pepper,—A large species, of the size of a peach, green or red, and frequently used for pickling, and there are many other varieties.

Purple or Sore-throat Pepper, has the leaves, stalks, and fruit of a dark purple, inclining to black, whereas the leaves of the other species are of a light green. This sort is esteemed a specific for the cure of the sore-throat, made into a gargle with barley-water and honey. All the varieties of Capsicum are very useful and ornamental. The seeds are numerous and kidney-shaped.

Marvel of Peru, *Mirabilis*. See Explanation of Plate VI. Fig. 1.

Snowberry, or David's Root, *Chiococca Racemosa*. N. O. Aggregatæ; nat. Jamaica. Rises about seven feet high, with many branches, flowering in a raceme, and covered with snow-white berries. A decoction of the root is good in rheumatisms, bone-ache and spina ventosa; has the same taste as the Seneca Snake-root. The smaller the plants, the greater the efficacy of the root.

Grape Vine, *Vitis Vinifera*. N. O. Hederaceæ. There are many sorts of wild Grapes in the West Indies, besides the garden vine, which is not cultivated to any extent, but where it is, produces fine fruit, and of a rich, luscious flavour. It certainly deserves more general cultivation, both there and in America, where it doubtless would thrive very well, and be both advantageous and profitable. There are fifty-two varieties of Vitis Vinifera. Indian Vine, or Water Withe, thrives in the Red Hills of Jamaica, and produces small black grapes, which, if properly managed, would make good red wine. A piece cut off, of three feet long, yields a pint of clear, refreshing water. There are ten other species.

Shrubby Erithalis, *Erithalis Fruticosa*. N. O. Rubiaceæ; (Juss.) Two species.

Spanish Elm, or Prince Wood. See Explanation of Plate VI. Fig. 5.

Jamaica Button Tree, *Conocarpus Erecta*. N. O. Aggregatæ; nat. Jamaica. This tree is very common on the sea coast, grows about twenty-five feet high, with small, globular, yellow flowers. The wood is useful for burning, called by the Spaniards Mangle Saragoza. Barham says, the fruit is drying, binding, and healing. Another species, C. Racemosa, is called White Mangrove, and by the Spaniards, Mangle Bobo. The bark is used for tanning leather. Butterflies swarm about this tree. There is one other species.

Rough-leaved Cestrum, *Cestrum Hirtum*. N. O. Luridæ. Is a native of Jamaica, and there are eight other species, one called Poison-berries.

Obtuse-leaved Jacquinia, *Jacquinia Armillaris*. N. O. Dumosæ; nat. Jamaica; Span. Bubasco. This is an elegant little shrub, four feet high, with small white flowers, like jasmine, and sweet scented; the berries are

oval, of a brownish yellow, and strung for necklaces. It grows on the rocks. There are three other species, nat. of the West Indies.

Bastard Cherry-tree, *Ehretria Tenuifolia.* N. O. Asperifoliæ; nat. Jamaica. This tree rises about twenty-five feet high, with a laurel leaf and yellow berries, about the size of large currants, from which Dr. Barham calls it Currant-tree. They are good for poultry. There are four other species.

Bastard Bully Tree, *Bumelia Nigra.* N. O.; nat. Jamaica. This is a hard wood tree, with a small, smooth fruit, (on which pigeons fatten,) it is the size of an olive, and black. Mountain Bully Tree, B. Salicifolia or Achras Salicifolia, a pale yellow, hard wood and lasting timber. Beef Wood is another species: there are in all seven. The bark of B. Salicifolia is said to answer as a substitute for jesuits' bark, in twice or thrice the quantity.

Teak Wood, or Indian Oak, *Tectona Grandis.* Nat. East Indies. This tree grows to an immense size in the vast forests of India, and is the best timber for ship-building, being light, strong, and durable. It would certainly be an object of high importance to introduce it into the West Indies, where it would doubtless thrive: some seeds given me by Dr. Dancer, came up very well.

Barbadoes Bastard Cedar, *Cedrela Odorata.* Nat. Jamaica and Barbadoes. This large tree, next in size to the Cotton Tree, grows common in the West Indies, on the mountains, having a trunk sixty feet high, and a soft, reddish wood, of a pleasant odour, which is sawn into boards and split into shingles. Neither insects nor cockroaches attack any thing in boxes of this wood, but it is not fit for casks.

Neither Currant Tree nor Gooseberry, *Ribes,* thrive in the West Indies, but are plentiful in North America.

Perfoliate Feverwort, or Bastard Ipecacuanha, *Triosteum Perfoliatum.* N. O. Aggregatæ; nat. North America. The bark of the root of this plant, in large doses, is emetic; but it is a good cathartic, in doses of twenty and thirty grains. Called also Dr. Tinker's Weed. There are two other species.

Virginian Tobacco, *Nicotiana Tabacum.* N. O. Luridæ; nat. America. This well-known plant has funnel-shaped flowers of a white colour, edged with red, is cultivated to great extent in the southern States of North America, and its use is general all over the world. It is sometimes raised by Negroes in their grounds, in Jamaica, for their own use and thrives very well; but the Havanna Tobacco, in the form of segars, is mostly used there. Soaked in urine, or made into an ointment with green pepper, and rubbed on, it cures psora or vermin, and is a powerful enema in dry belly-ache,

spasms, tetanus, and colic: the smoke or infusion, administered as an enema in ruptures has been useful. Smoking tobacco in moderation is said to relieve tooth-ache, preserve the teeth, and to prevent corpulency, if drinking any liquid with it is refrained from. The seeds are very numerous and small, and have been found useful as an anthelmintic. It is narcotic and errhine, and a powerful diuretic; an infusion, from 60 to 100 drops, has brought away gravel. It is also useful in asthma, and a cataplasm of the pounded leaves in vinegar has also had a wonderful effect in worm cases, epilepsy and obstinate intermittents. There are in all seven species.

Winter Cherry, *Physalis Angulata.* N. O. Luridæ; nat. both Indies. The juice of the plant, with Cayenne pepper, promotes urine and eases the colic. Seventeen species.

Tall Achyranthes, or Bastard Hoop Withe, *Achyranthes Altissima.* N. O. Miscellaneæ; nat. Jamaica. Eleven species in all. Grows in the Low Bush between Spanish Town and Passage Fort, on the banks of the river Rio Cobre.

Bastard Plantain, *Heliconia Bihai.* N. O. Scitamineæ; nat. Jamaica. An elegant, herbaceous plant, ten feet high. There are two other species.

Panicled Coxcomb, *Celosia Paniculata.* N. O. Miscellaneæ; nat. Jamaica. A beautiful, well-known ornament to the garden. There are thirteen other species.

Willow-leaved Cerbera, *Cerbera Thevetia.* N. O. Contortæ; nat. Jamaica. This is an elegant, lactescent plant, about ten feet high, with large yellow flowers and fruit, containing a poisonous nut. There are four other species.

Savanna Flower. See Explanation of Plate VI. Fig 2, for the description of a weed common in Jamaica so called, but the name seems to be incorrect.

Red Plumeria, *Plumeria Rubra.* See Explanation of Plate V. Fig. 5.

Citron-leaved Tabernæmontana, *Tabernæmontana Citrifolia.* N. O. Contortæ; nat. Jamaica; Fr. Bois Laiteux. Rises fifteen feet high with a woody stalk and thick leaves, both lactescent. The flowers are in bunches, small, and of a yellow colour and agreeable smell. T. Laurifolia is also a native of Jamaica, and there are seventeen other species.

Indian Buckbean, *Menyanthes Indica.* N. O. Preciæ; nat. both Indies. It is a water plant, having a roundish leaf, like Coltsfoot, on long petioles. Dr. Barham says, a decoction of the leaves in ale is a wonderful remedy in goutish distempers, drank every four hours; also good in hydropic cases. Four other species.

ORDER II. DIGYNIA.

Bastard Ipecacuanha, Blood Flower, or Red Head, *Asclepias Currassavica.* See Explanation of Plate VII. Fig. 1. The bark of the root of an American species, Pleurisy Root or Butterfly Root, A. Decumbens, is celebrated as a remedy in dysentery, from twenty to thirty grains, and a specific in pleurisy. In decoction it produces general and plentiful perspiration, without heating the body, when other medicines have failed.

Hares Ear, *Bupleurum.* N. O. Umbellatæ. Nineteen species. Are accounted vulnerary, and a cataplasm of the leaves to cure the bite of the rattle-snake.

Wormseed Goosefoot, *Chenopodium Anthelminticum.* N. O. Holeraceæ; nat. America. The seed of this plant was in great request in America, at the time I left it, as a safe and efficacious remedy for worms. It is common in New Jersey and Pennsylvania. Also called Jerusalem Oak. The seeds are reduced into a fine powder and made into an electuary, of which a table spoonful is given morning and evening, for several days. Twenty-three species.

Globe Amaranth, *Gomphræna Globosa.* N. O. Amaranthi, (Jussieu). This beautiful and ornamental plant is cultivated in gardens, in America. The flowers, gathered full grown and dried in the shade, retain their form and beauty many months. It is commonly called Waxwork, and sometimes Bachelor's Button.

American Sanicle, or Alum Root, *Heuchera Americana.* N. O. Succulentæ. The root of this plant is very astringent and is supposed to be efficacious in the cure of obstinate ulcers, and sometimes even of cancer, for which it is used by the Indians. Two species.

Eryngo, or Sea Holly, *Eryngium Fœtidum.* N. O. Umbellatæ; nat. West Indies. This plant grows in Jamaica, and is a common remedy against hysteric affections, whence the Negroes call it Fittweed. An infusion of the leaves is the form used. Eleven species.

Common Parsley, *Apium Petroselinum.* N. O. Umbellatæ. This well-known plant is cultivated in America, and the following remedy for the dropsy, in its first stages, is said to be very successful: Parsley roots and raspings of lignum vitæ, equal quantities, boiled in hard cyder. A decoction of the leaves is also considered to be useful in gravel and stone. Care should always be taken to distinguish this from Fool's Parsley, Æthusa Cynapium; the safest way is to cultivate only the curled parsley. There is one other species, A. Graveolens, Smallage.

Sea Samphire, *Crithmum Maritimum.* N. O. Umbellatæ. This herb grows very common in Jamaica, upon the sea shore, and on land overflowed by the sea. It makes an agreeable and wholesome pickle, which is gently diuretic, and removes obstructions of the viscera. Three species.

Navel Wort, *Hydrocotyle Umbellata.* N. O. Umbellatæ; nat. Jamaica. This plant grows in ditches and standing waters; the leaves round and smooth; the foot-stalk entering the middle. It is said to open obstructions of the liver, and to be an antidote to poison. There are in all fifteen species, four of which are natives of Jamaica.

ORDER III. TRIGYNIA.

Hog Gum, *Rhus Metopium.* N. O. Dumosæ; nat. Jamaica. This tree is very common in Jamaica, growing about twenty feet high, with a roundish head, pinnate leaves, and reddish berries, on which the bald-pate pigeons feed. There exudes from the tree a yellowish gum, which becomes hard in the air. It heals fresh wounds, and a plaster of it is strengthening and eases the gout and rheumatism, as it is of a warm and discutient nature. A solution of the gum is purgative and diuretic, and good in belly-ache or colic. Made into pills it acts like balsam of Capivi, in stopping gleets and fluor albus. The water that comes from the buds, (when they are baked in banana leaves,) is said to have cured persons nearly blind. The tree takes its name from the wild hogs rubbing themselves against it, when wounded, to heal their hurts. The following are American species:

Poison Vine, *Rhus Radicans,* is a climber, with small, yellow, odoriferous flowers, produced along the whole course of the smaller branches.

Swamp Sumach, *Rhus Vernix,* is a larger species, and is called, in New England, Dogwood. It grows in swamps and makes a fine appearance.

Poison Oak, *Rhus Toxicodendron,* is a low, shrubby species, leaves trifoliate.

All these three are highly poisonous, particularly in warm weather and after a meal, and if touched or smelt, excite inflammatory eruption and vesication, with fever in most people, though others are not affected by it; it sometimes causes blindness for some days. A decoction of the bark of R. Radicans has been found useful in consumption and asthma. The infusion of this plant and the leaves of R. Toxicodendron have been used with great success in paralysis, the latter in doses of half a grain or a grain three times a day. The very best Japan varnish is prepared from the Rhus Vernix.

Smooth Pennsylvanian Sumach, *Rhus Glabrum,* rises eight or ten feet, with feathered leaves, which, with the seeds, turn to a beautiful red, in autumn, covered with a white powder, of an agreeable acid taste. The berries are

used to dye red. An infusion sweetened makes an excellent gargle. The bark, boiled in milk, cures chronic ulcers. Narrow-leaved Sumach, Rhus Copallinum, rises about six feet, with acid berries, sprinkled with a greyish powder. These two species are considerably astringent. The leaves or berries are a valuable substitute for nut galls in dying a permanent black, or making ink. The whole plant is also a good substitute for oak bark, in tanning, especially glove-leather, and might be introduced with advantage into England for that purpose. This species produces gum copal. Virginian Sumach, R. Typhinum, called Stagshorn, or Vinegar Plant, is similar in properties to the two species next above mentioned. The seeds have purple, woolly, succulent covers, and the upper leaves turn to a brownish purple. This is also used for tanning leather.

Rhus-leaved Spathelia, *Spathelia Simplex.* N. O. Bicornes; nat. Jamaica. This beautiful plant rises about eighteen feet high, with a simple stalk and pinnated leaves at the top, like a palm, above which the flower-spike rises several feet. It is common in Above Rocks, near the Ferry. No other species.

Narrow-leaved Sea-side Laurel, *Xylophilla Angustifolia.* N. O. Tricoccæ; nat. Jamaica. This elegant tree rises about fifteen feet high; the leaves are long, smooth, and evergreen, and when in flower it is a great orment to the rocky shores. In all seven species.

Elm-leaved Turnera, *Turnera Ulmifolia.* N. O. Columniferæ; nat. Jamaica. This shrub rises eight or ten feet, with lanceolate leaves, and flowers of a pale yellow. It grows plentifully in the Red Hills and on the Guanaboa Road. The flower opens wide at eleven in the forenoon. It is said to be good for fluxes. There are in all nine species, of which four are natives of Jamaica.

ORDER IV. TETRAGYNIA.

Flax-leaved Evolvulus, *Evolvulus Linifolius.* N. O. Campanaceæ; nat. Jamaica. This beautiful little plant rises about a foot high, with a slender, simple, upright stalk; few and narrow leaves, with a small, delicate, axillary peduncle. It is common at the foot of the Liguanea Mountains. E. Nummularius has trailing stalks, taking root at small distances. The flowers are axillary, of a light blue. E. Sericeus is also a native of the West Indies. E. Alsinoides, of the East Indies, reputed a sovereign remedy in dysentery. There are three others pecies.

ORDER V. PENTAGYNIA.

Cluster-flowered Ivy, *Hedera Capitata vel Aralia Capitata.* N. O. Hederaceæ; nat. Jamaica. A woody, erect stem, leaves scattered, trinervous, and a bright green. Racemes erect, having round heads of flowers, numerous and sessile. A. Sciodaphyllum is also a native of Jamaica.

ORDER VI. POLYGYNIA.

Parsley-leaved Yellow Root, *Xanthorrhiza Apiifolia vel Tinctoria.* nat. Carolina and Georgia. This shrub rises about three feet high; the root is woody and of a bright yellow within. The bark of the root and stem is more intensely bitter than colombo, and it has some pungency. The infusion, or the saliva, when chewed, is of a beautiful yellow, and if its colour could be fixed, it would be a valuable article for dying, and its use in medicine, as a bitter, is, in some cases, to be preferred to colombo. It sits easy on the stomach, in a dose of forty grains. It dyes cloth a drab colour, and silk a handsome yellow; but will not take on cotton or linen.

The watery extract of the grated extract of the grated roots, with alum, is better than gamboge, to mix with Prussian blue, for greens, in water colouring, as it is more lively and stands better.

OMITTED, CLASS V. ORD. I.

Egg Fruit or Mad Apple, *Solanum Melongena.* N. O. Luridæ, nat. Africa; Spa. Balankuna; Ital. Melanzana. This plant has an irregular, prickly stalk, about two feet high, with trailing branches, having large, sinuated, tomentose, prickly leaves, with a flower very like the common potatoe, but much larger, and of a deep violet. The number of stamens irregular, frequently seven. For a representation of the fruit, see Frontispiece, Fig. 13. Cut in thin slices, parboiled and fried, the taste is delicious, and it is wholesome and much resembles fried eggs; the skin, which is bitter, must be taken off. It is called in India, Branjaw, in Jamaica, Garden Egg and Valanghanna, Brown Jolly or Bolangena.

Tomatoes, or Love Apple, *Solanum Lycopersicum.* N. O. Luridæ; nat. Jamaica. An herbaceous, climbing plant, with small, sinuated leaves, ending in a point, bearing bunches of yellow flowers, succeeded by a red and yellow, pulpy fruit, (see Frontispiece, Fig. 31) which imparts an agreeable acid flavour to soups and sauces, and is considered very wholesome. I have also frequently seen it in the market of Philadelphia.

Star Apple, *Chrysophillum Cainito*. N. O. Dumosæ; nat. Jamaica. This beautiful tree rises thirty feet high, with a thick trunk, and the branches garnished with ovate, acute leaves, of a bright green above and gold colour beneath, shining like satin. See Plate I. Fig. 12, for the habit of the tree, and Frontispiece, Fig. 15, for the fruit. When cut across, it resembles a star. The juice of the fruit is milky, and the pulp soft, sweet and clammy, and much admired by some. One sort of fruit is green, another purple. The branches, if planted in wet weather, will grow. There are six species.

CLASS VI. HEXANDRIA.

This class embraces those vegetables whose flowers are furnished with six stamens of uniform length. It is one of the most beautiful in the sexual system, and embraces the ninth and tenth natural orders of Spathaceæ and Coronariæ and a part of the eleventh, Sarmentaceæ, some plants of which are wholesome, as the Asparagus, Yam, Mediola Virginica and Convallaria, while others of the same order are poisonous, as Gloriosa and some others. It contains also some important medicinal plants, as aloes, squill and meadow saffron, and esculent plants, as rice, leek, garlic, onion, &c. The West Indies are remarkably rich in plants of this class.

ORDER I. MONOGYNIA.

Common Pine Apple, *Bromelia Ananas*. Nat. West Indies and Spanish America; N. O. Coronariæ. This delicious fruit is well known and very common in Jamaica, where there are several sorts, as the Queen Pine, the Sugarloaf, the Montserrat, the King, the Green, the Ripley. The best are frequently to be bought in the markets for five pence currency, the lowest piece of money in the West Indies. They grow wild in the woods, in such abundance, that I have sent out and procured several hundred plants in one day. For the manner of its growth, see Plate I. Fig. 14; for the fruit, see Frontispiece, Fig. 3. Wild Pine or Silk Grass, B. Karatas, grows at the root of shady trees, and has leaves and fruit similar to the Pinguin; the outward green part being scraped off and washed, the fibres appear quite straight, which are worked into ropes, fine twine, hammocks, nets, cloth, &c. Pinguin, B. Pinguin, is similar in its growth to the Pine and is very commonly used in Jamaica for fences, as its radical leaves grow very thick and about four feet high, armed with spines, and it spreads by suckers from the

root, forming an impassable fence (except to goats, who jump over them.) The fruit grows at the head of the stalk, in clusters of sixteen or twenty, and while it is ripening, the lower part of the leaves turn red ; the fruit is about the size of a walnut, of an orange colour, containing an acid pulp, the juice of which, with water, is cooling in fevers, and the pulp, with sugar, is agreeable to children and kills worms, and with honey, cures ulcerated mouths. It is also diuretic, mixed with Rhenish wine, and makes, by proper management, fine vinegar. The fibres also may be twisted into ropes, the same as the Silk Grass. For a representation of the fruit, see Frontispiece, Fig. 38. WATER-HOLDING PINE, B. Aquilega. This species grows on branches of trees in the woods ; the leaves are channelled, and from their form and connection, form a reservoir at the bottom, which frequently contains a considerable quantity of water, generally about a quart. This plant is also arranged as a Tillandsia Utriculata. There are in all nine species of Bromelia.

TUBEROSE, *Polianthus Tuberosa.* N. O. Coronariæ. This beautiful and sweet smelling flower grows very common in gardens, in Jamaica, and is too well known to need description.

SCARLET PITCARNIA, *Pitcairnia Bromeliæfolia,* and two other species, are natives of Jamaica, as is Green-flowered Chlorophytum, Chlorophytum Inornatum.

MOSSY TILLANDSIA, or OLD MAN'S BEARD, *Tillandsia Usneoides.* N. O. Coronariæ ; nat. West Indies and Southern States of America. The leaves of this plant are small and thread-like, with a hoary, shining skin ; when this is rotted off and washed, the fibres can scarcely be distinguished from horse-hair. It is used to stuff pannells, cushions, pillows and mattrasses. It hangs from ebony and manchineel trees, in such a form as to give it its trivial name. The nests of the Banana birds are generally made of it. There are sixteen species, mostly natives of Jamaica.

CARIBÆAN LILY ROOT, *Pancratium Caribæum.* Nat. West Indies ; N. O. Spathaceæ. This plant grows wild in Jamaica, with large leaves and numerous flowers, rising about eighteen inches high. The bulbs, in decoction, make a diuretic drink for horses, and a cataplasm of the roots roasted is maturating. There are in all fifteen species.

JAMAICA GARLIC, *Allium Gracile.* N. O. Spathaceæ ; nat. Jamaica ; Fr. Ail ; Spa. Aio ; Ital. Aglio. Has leaves like the narcissus, a foot in length, with a slender scape, three feet high. Many species of Allium, as Common Garlic, Leek, Onion, Scallion, Cives and Shalotts are very common, and particularly wholesome in Jamaica. The Jews use the garlic considerably,

and particularly season with it a sort of smoked sausage, called chorisas, which are very good. The onion tribe is generally stimulant and diuretic. A free use of boiled onions is useful in the first stages of dropsy, and external applications of garlic and onion, as sinapisms or poultices, are frequently useful. There are in all forty-five species of Allium.

Trailing Hypoxis, *Hypoxis Decumbens*, is a native of Jamaica ; but the flower of no great beauty.

Common Asparagus, *Asparagus Officinalis.* N. O. Sarmentaceæ ; Fr. Asperge ; Sp. Esparago ; Ital. Sparagio. This well-known plant grows very well in the mountains, or in the low lands, if well watered. Dr. Barham says, the roots of Wild Sea Asparagus are a powerful diuretic. There are in all thirteen species.

Aloe-leaved Adam's Needle, *Yucca Aloifolia.* N. O. Coronariæ ; native South America. This beautiful plant grows in Jamaica, eight feet high, with narrow, stiff leaves, ending in a sharp spine. The flowers are borne on a pyramidal head, rising in the centre, of a purple colour. It is also called Dagger-plant and Spanish Dagger. There are four other species.

Hillia Longiflora and Tetrandria are natives of Jamaica. N. O. Contortæ.

Solomon's Seal, *Convallaria.* N. O. Sarmentaceæ. This plant is well known to the Negroes in Jamaica, who eat it boiled, and the Indians in North America also feed upon the root. There are eleven species of this genus.

Barbadoes Aloes, *Aloe Perfoliata vel Barbadensis.* N. O. Coronariæ ; nat. West Indies. This plant is well known and very common in the West Indies, where it is also called Sempervive. The juice of this plant, inspissated by boiling or drying in the sun, is the medical substance, known by the name of Barbadoes and Hepatic Aloes, and it is cultivated to a considerable extent in Barbadoes, for the purpose of exportation. The best and purest, for medicinal purposes, is that produced from the A. Socotrina, thence called Succotrine Aloes ; the coarser sort of this is called Horse Aloes, A. Caballina. Aloes are a valuable cathartic, and the basis of many approved medicines of that class ; and its bitter taste is best covered by Spanish liquorice. It is useful in cases of worms, the primæ viæ loaded with mucus, and in chlorosis, with steel. The fresh juice is frequently given for worms with milk, or it is used in a plaster, applied to the abdomen, or sometimes mixed with pulverised conch-shells, made into pills. The juice is a powerful antiseptic and heals old sores, and is an useful ingredient in an enema.

It is an excellent preservative to ships' bottoms from the worms so common in harbours in the West Indies, incorporated with pitch, Spanish brown and oil, in the proportion of one ounce of aloes to two square feet of plank ; one coat will preserve a ship's bottom eight months. This plan is well worthy attention and encouragement. Rafters and timbers are also preserved by it from the destructive ravages of the wood-ant, and books from the scarabæus, if a small proportion be used in binding them ; and a spirituous extract destroys bugs. An aquatic solution of Aloes protects young plants from insects, and will also preserve dead animals and vegetables from putrefaction. A decoction dyes wool brown, and silk a violet colour, by simple immersion. There are in all fifty-three species.

American Aloe, or Currato, *Agave Vivipara.* See Explanation of Plate VII. Fig. 4. The expressed juice of the leaf is also diuretic. Boiled to a thick consistence, with lime-juice and molasses, is a good dressing for ulcers.

Common Naseberry, *Achras Sapota.* N. O. Dumosæ ; nat. West Indies; called also Sappadilla. This is a tree of considerable size, and the timber of it is hard ; the branches are thickly set, with smooth, bright leaves, and the young shoots and unripe fruit full of a milky juice. The berry, when ripe, is brown, (see Frontispiece, Fig. 16.) of the size of a small apple, of a sweet, luscious taste, very numerous on a tree, and must be gathered while hard, and in a few days they become soft and fit for eating, but soon decay. For the seeds see Plate III. Fig. 9 ; from six to twelve make a pint of good bitter emulsion. Mammee Sappota, A. Mammosa, grows about forty feet high, with a straight trunk and regular head. The branches are thickly set, with large, smooth leaves, and the fruit is of an oval shape, with a thick brown rind, and a very luscious, sweet, yellow pulp, called American marmalade. It is good in fluxes. For the seed see Plate III. Fig. 10. A variety of this, called the Bully-tree, grows very tall, and is the hardest timber in Jamaica : from its straight, thick trunk, it is best fitted for main rollers of sugar mills, and a single trunk, for that purpose, fifteen inches diameter, delivered at the mill is worth fifty pounds and upwards. There are also Beef-wood, Bastard Bully-tree, and Mountain Bastard Bully-tree, all hard, fine timber. White Bully-tree or Galimeta Wood, A. Salicifolia, is a tall, straight, timber tree ; the fruit is black and fattens pigeons, grows about the size of an olive. The bark of A. Sappota and A. Mamosa is very astringent, but will not answer as a substitute for Jesuits' bark, though it has been given for it, in twice or thrice the quantity. There are two other species.

ORDER II. DIGYNIA.

Common Rice, *Oryza Sativa.* N. O. Gramina; Fr. Riz; Sp. Arroz; Ital. Riso. This valuable plant is not cultivated in Jamaica, but will grow very well in the low, moist lands, and such as are fit for Scotch grass. Great quantities are raised in the Southern States of America. It is cooling and restringent, and an emulsion is good for strangury. No other species. There is a sort of Rice, in the East Indies, called Mountain Rice, which will grow on dry, mountainous soils: the seed of this would be a valuable acquisition in Jamaica.

ORDER IV. TETRAGYNIA.

Garlick-scented Guineahen Weed, *Petiveria Alliacea.* N. O. Holeraceæ; nat. Jamaica. This plant is very common, and rises about two feet high, with oblong leaves, and flowers in spikes. It grows in moist, shady places, and is green in the driest weather; when the cattle feed on it, it gives their milk the taste of garlic, and I have had the flesh of wild cattle caught in ropes, in dry weather, so rank with it, that the meat was totally unsaleable. Guinea-hens feed on it, and are to found, in great numbers, where this weed abounds. Dr. Barham says, the root put to aching teeth, eases them. There is one other species, P. Octandra.

ORDER V. POLYGYNIA.

Yellow Water Plantain, *Alisma Flava.* N. O. Tripotaloideæ; nat. Jamaica. This is very common in ditches and standing water. There are eight other species.

CLASS VII. HEPTANDRIA.

This class contains plants whose flowers are furnished with seven stamens, and is the least numerous of the whole twenty-four. There are no plants, natives of Jamaica, comprised in it, though that island contains numerous genera of every other class.

CLASS VIII. OCTANDRIA.

This class embraces plants whose flowers are furnished with eight stamens, and comprises plants of the natural orders of Calycanthemæ, Bicornes,

Sarmentaceæ and Inundatæ. It contains many curious, useful and medicinal plants.

ORDER I. MONOGYNIA.

Akee, *Blighia.* Nat. Africa. This plant was introduced from Africa, and now thrives very well in Jamaica. Dr. Broughton describes it, in the Hortus Eastensis, as follows:—Gen. Char. Calyx five-leaved and inferior, with concave, acute, ovate, small leaves, persistent and hairy; corolla five-petalled, oblong, lanceolated, acute, hairy, bent at the base, and pressed to the receptacle, alternate with the calyx and longer; stamina eight short filaments, hairy, inserted at the base of the glandulous receptacle of the germen; anthera oblong, disposed in an orb, and almost of the same length round the germen; germen subovate, three sided and hairy; the style the length of the germen, cylindrical and hairy; the stigma obtuse; pericarpium a fleshy capsule, oblong, obtuse on both sides, triangular, trilocular, trivalved, and gaping from the apex; semina three, orbicular and glossy, having a rising appendice. This beautiful tree rises twenty feet high and upward. The trunk has a rough, brown bark; the branches irregular and declining; the leaves are pinnated, ovate, lanceolated, bright above, and veined underneath; the flowers are disposed in spikes, small, white, and scentless; the fruit is as large as a goose's egg, of a red and orange colour. See Frontispiece, Fig. 24. The seeds are three. See Plate III. Fig. 14. To each seed grows a white substance twice or thrice its size, of the consistence of beef fat, which, when parboiled and fried in butter, tastes exactly like marrow, and is the richest and most delicate of vegetables. This, by the inhabitants of Guinea, is served at table alone, or mixed with broth or pottage. It thrives well in the low lands of Jamaica, is easily propagated from the seeds, and well deserves cultivation. When in bearing, it has a most beautiful appearance from its variety of colours. There is no other species. It is named after Captain Bligh, who brought the bread fruit and other valuable plants from Otaheite.

Cunep, or Wing-leaved Honeyberry, *Melicocca Bijuga.* N. O. Sapindi, (Juss.); nat. South America; Dutch, Knippen; Spa. Monos. This tree has been introduced into Jamaica, and grows pretty common, about twenty feet high, with bright green, ovate, acuminate leaves. The fruit is an egg-shaped drupe, with a thin, brownish, brittle shell or bark, containing one seed, covered with a sweetish, acid, gelatinous, orange-coloured pulp, which is pleasant and cooling; but accidents sometimes happen, from child-

ren's letting the seed slip into their throats. For figure of the fruit, see Plate III. fig. 62. There is no other species.

Musk, or Alligator Wood, *Guarea Trichilioides*. N. O. Meliæ, (Juss.); nat. of Jamaica; Fr. Bois Rouge. This is a tree of middling size, with pinnated leaves. The bark smells strongly of musk: a small piece in a tobacco-pipe will perfume a room. The powder of the bark is sometimes used for an emetic. There is no other species.

White Candle Wood, or Rose Wood, *Amyris Balsamifera*. N. O. Teribintaceæ, (Juss.); nat. Jamaica; called also Lignum Rhodium. This is a valuable, heavy timber, of considerable size; the wood whitish, and, when young, of a curled grain, and bears a good polish. It has a laurel leaf, and the wood smells very sweet and burns like a candle. An infusion of the leaves is diaphoretic, aromatic in baths and fomentations, cordial and particularly restorative to weak eyes. The berries have much the taste of Balsam Copaiba. Small Shrubby Sweetwood, A. Maritima, is also a native of Jamaica, and if the Amyrises of this island were tapped at a proper time, a balsam, similar to the balm of Gilead or balsam of Mecca, the produce of A. Opobalsamum, might probably be obtained. There are seven other species. The gum elemi of the shops is said to be the produce of A. Elemifera, a native of Carolina. Half an ounce of gum elemi, dissolved in four pints of good rum, a large spoonful three times a day, is the best remedy for a cough.

Ximenia, *Ximenia Inermis*. N. O. Aurantia, (Juss.); nat. Jamaica. A small, bushy tree, eight feet high, with leaves only an inch long. One species, X. Americana, bears a fruit very like the cunep. There is one other species. Rhexia Acisanthera, Hispida, and Rutilans, are natives of Jamaica, in Luidas Vale.

Prickly Lawsonia, *Lawsonia Falcata*. N. O. Salicariæ, (Juss); nat. East Indies. This shrub rises about six feet high, very much branched, with acuminate leaves and bunches of white flowers, of a very powerful animal scent; so much so, that too many near a house are unwholesome. The pulverised leaves of the L. Inermis form the henna or alhenha so much used by the Eastern nations to dye their nails a yellow colour. There are three other species.

Jamaica Bilberry, or Whortle Berry, *Vaccinium Meredionale*. Nat. of Jamaica, in the Blue Mountains; Sp. Arandano. The berries are sapid, red, acid, astringent and bitter, like bilberries; the leaves are annual, racemes leafy, and flowers variegated. They make a good rob or jelly, which is excellent in colds and sore throats. There are in all twenty-seven species.

Lace-bark Tree, or Laurel-leaved Lagetto, *Daphne Lagetto*. N. O. Vepriculæ; nat. West Indies; Fr. Bois Dentelle. This tree has laurel leaves, the wood is white, and the inner bark white and thick, but may be drawn out into fine lace, which will bear washing. King Charles II. wore a cravat of it, presented by Sir Thomas Lynch, governor of Jamaica. It is used to make twine and ropes, and would doubtless make paper, if properly prepared. D. Occidentalis is also a native of Jamaica, and there are twenty-six species in all.

ORDER TRIGYNIA.

Mangrove Round-leaved Sea-side Grape, *Coccoloba Uvifera*. N. O. Holeraceæ; nat. West Indies; Fr. Raisinier du bord de la Mer; Sp. Uvero. This is a pretty large, irregular tree, growing by the sea side; the wood hard and red, used for fuel, and when large for cabinet work; leaves entire, thick and large; flowers small and whitish, berries purplish, about the size of grapes, having, under a thin rind, a pleasant, soft, astringent pulp, and a round stone, with a kernel. The berries are a very powerful astringent, and instances have occurred, in which the effects of incautiously eating them could not be removed, by the most powerful remedies, in less than three weeks. Properly administered, it is useful in dysentery, and the bark, in rum, good for a fomentation in fluor albus. Great-leaved C. Pubescens, called by the French, Bois à grandes feuilles; C. Excoriata, and C. Nivea, are also natives of Jamaica, and some are hard, red timber of considerable size. There are ten other species.

Asmart, *Polygonum Persicaria*. Though this plant be not a native of Jamaica, it may be mentioned here, that the fresh plant in decoction,—dose a wine glass full,—or the infusion of the dried plant, are powerfully diuretic and very useful in gravelly complaints. The root of P. Hydropiper, bruised and applied, cures the tooth-ache, and the essential oil is good for knotty gouts.

Supple Jack, *Paullinia Polyphylla*. N. O. Trihilatæ; nat. Jamaica. This is common in the woods, with a slender, flexile, tough, knobby stalk, which is usually cut into lengths for riding and walking-sticks, and is boiled in a sugar copper and rubbed with oil, to prevent its becoming too brittle. There are in all seventeen species.

Soap Berry, *Sapindus Saponaria*. N. O. Trihilatæ; nat. West Indies; Spa. Saponaria. Rises about twenty feet high, with many branches towards the top, furnished with winged leaves; the flowers are produced in spikes, small and white; the berries are smooth, round and black. See Plate III.

Fig. 11. The seed-vessels, and pulp which surrounds the nuts, are detersive, acrid, and rather corrosive, lather freely in water and will cleanse more linen than sixty times their weight of soap. Pounded and steeped in ponds and creeks, they intoxicate and kill the fish. The seeds, having a fine polish, are frequently used for buttons and necklaces, and these also, being bruised and steeped, make a fine lather. Another species, S. Spinosus, is common in the parish of St. James's in Jamaica, called there the Licca Tree. There are in all thirteen species. The berries, bruised and mixed in rum, form a good embrocation in rheumatism, cramps, and pains in the joints, especially if the rum be a strong tincture of canella alba. It is said, the ashes of the Soap Berry Tree spoil potash.

Great-flowered Heart-seed, *Cardiospermum Grandiflorum*. N. O. Trihilatæ. Is a native of Jamaica, called in America, Wild Parsley; Fr. Pois de Merveille. Is a climbing plant, and has seeds contained in a kind of bladders, marked with a black spot, in the shape of a heart. There are two other species.

CLASS IX. ENNEANDRIA.

This valuable class, though small, contains many important vegetables, both for medical and domestic purposes, especially the aromatic Spices and the Rhubarbs, and comprehends the natural order of Holeraceæ.

ORDER I. MONOGYNIA.

For Cinnamon and the other species of Laurus, see Explanation of Plate VII. Laurus Sassafras, Benzoin, and Borbonia are natives of North America.

ORDER II. TRIGYNIA.

Rhubarb, *Rheum*; Fr. Rhabarbe. This valuable plant might be cultivated to advantage in the United States, where, it is probable, there are some native species.

CLASS X. DECANDRIA.

This is a very extensive class, containing many valuable and important vegetables, and comprising the natural orders of Papilionaceæ, Lomentaceæ, Carophyllei, Trihilatæ, and Gruinales; also some of the Bicornes and Succulentæ. Many are useful in medecine and others in the arts and manufactures.

ORDER I. MONOGYNIA.

Red Bead Tree, *Sophora Monospermum.* N. O. Papilionaceæ; nat. Jamaica. Rises about ten feet high, with blue flowers, and an ovate legume, containing one large, spherical, scarlet seed, with a black spot. There are in all twenty-five species of sophora.

Dwarf Mountain Ebony, *Bauhinia Divaricata.* N. O. Lomentaceæ; nat. Jamaica. This rises about eight feet high, and is common in the Red Hills. The leaves are cordate, cloven half way, with the lobes standing wide from each other. The flowers are white, in a raceme, and have a pleasant smell. It folds its leaves before rain. There are thirteen species.

For Locus Tree, Brasiletto, Barbadoes Pride or Flower Fence, Nicker Tree, Guaiacum, see Explanation of Plate VII. To which add, the wood of Guilandina Moringa, or Horse-radish Tree dyes a fine blue colour. Nickers, G. Bonduc, pounded with gum elemi, are very efficacious in diabetes; also, burnt Nickers expel the yaws from the blood, and half a drachm of the nut in powder is good in convulsive affections. A tea of Barbadoes Pride or Spanish Carnation restores the bile to its natural state, after illness, and a powder of the seeds in the dose of one drachm is a cure for the belly-ache. A decoction of Brasiletto strengthens the stomach, and takes away inflammations and defluctions of the eyes. Nicaragua Wood, C. Vesicaria, is a much more valuable dye than Brasiletto and might be introduced into Jamaica with advantage. It is called by the Dutch, Stockvishout.

Cassia. See Explanation of Plate IX. Also, Wild Senna, (*Cassia Senna Italica.*) Rises about a foot high, with pinnated leaves and yellow flowers. It is found on the Palissades, near Port Royal, and is supposed to resemble the true Alexandrian Senna. A handful infused in half a pint of water and quickened with a spoonful of juice of Sempervive, may be given. Labat says, the French imported Senna from their West India islands, and there the leaves of several species of Cassia are used, as also the leaves of Barbadoes Pride, instead of the true Senna. American Senna, *Cassia Marilandica,* is also in general use in the southern parts of America, as a substitute for the Alexandrian. Round-leaved Cassia, *Cassia Obtusifolia,* is also a native of Jamaica; rises about two feet high, and bears a legume four inches long, containing upwards of twenty seeds. Also Hairy Cassia, Cassia Pilosa,—Creeping Cassia, C. Serpens,—Ringworm Bush, *Cassia Alata vel Herpetica* (the juice of which cures the ringworm,) called by the French

Herbe a Dartres ;—C. Frutescens,—C. Minima,—C. Sericea,—C. Lineata, C. Virgata, are all natives of Jamaica. In all fifty-one species.

Logwood. See Explanation of Plate X. Fig. 3.

Balsam of Tolu, *Toluifera Balsamum.* N. O. Terebintaceæ ; nat. Tolu in Darien, South America. A large tree with spreading branches, alternate, ovate leaves, and yellow flowers, in bunches. The balsam is mild, fragrant, vulnerary, pectoral, and much employed in medicine. No other species.

Prickly Parkinsonia, or Jerusalem Thorn, *Parkinsonia Aculeata.* N. O. Lomentaceæ ; Fr. Genet Epineux ; nat. Jamaica. Rises about ten feet high, very similar, in every respect to the Barbadoes pride, with yellow flowers, of a sweet smell, and makes very elegant fences. There is no other species.

Yellow-flowered Adenanthera, *Adenanthera Pavonina.* N. O. Lomentaceæ ; nat. East Indies. This is one of the largest trees in the East Indies, of a hard, solid timber, and its duration two hundred years. The seeds are scarlet and lens-shaped, with a black streak in the middle. It might be advantageously introduced into the West Indies.

Rough Trichilia, *Trichilia Hirta.* N. O. Trihilatæ ; nat. Jamaica. This tree rises about twenty feet high, with branched, pinnated leaves, at the end of the twigs. It grows plentifully between Spanish Town and Passage Fort. There are in all twelve species.

Common Mahogany, *Swietiana Mahogani.* N. O. Trihilatæ ; nat. Jamaica. A lofty, branching tree, with shining leaves and white or yellowish flowers. For seed-vessel and seed, see Plate III. Fig 60 and 61. It formerly grew in great plenty in Jamaica, so that the shingles, beams, ceilings, and floors of many houses are constructed with it ; but it is now only to be met with in the mountains in the interior, and on rocks by the sea side ; but it surely would be worth attention and cultivation, as it is of quick growth. Its value and uses are well known. Boil an ounce of shavings in two pints of water till half is wasted, dose from two to four table spoonfuls frequently in diarrhœa. A species is used in Bermuda for ship-building, which does not splinter with cannon-ball, and resists the worm. I have heard of trees, in the high mountains of Jamaica that would saw into planks five feet wide. There are two other species, nat. East Indies.

Evergreen Bead Tree, or Indian Lilac, *Melia Sempervirens.* N. O. Trihilatæ ; nat. Jamaica. This tree has indented, shining leaflets, has a beautiful foliage and shade, and bunches of blue flowers. The pulp surrounding the nut is said to be poisonous. In America, where it is common, in the Southern States, it is called Poison Berry, Pride of India, and China

Tree. Dr. Barton, Professor of Botany in Philadelphia, highly recommends it as a valuable anthelmintic. The bark of the root, in substance or a saturated decoction, is employed. It is said, the pulp which invests the stones of the fruit is pounded with tallow, and used as an antisphoric, in cases of tinea capitis, in Persia. The fruit is employed in Japan to furnish an expressed oil, which grows hard, like tallow, and is used for making candles. The mocking bird, (turdus polyglottos,) feeds on the berries. The dried berries also have been given, in Carolina, for worms, and the decoction is good for worm fever. There are two other species, natives of the East Indies. M. Azederach is a native of Syria.

Bitter Quassia, *Quassia Amara.* N. O. Gruinales; nat. West Indies; named from Quashi, a Negro, who discovered its virtues. This is a tree of considerable size; the wood light and white; leaves pinnated; and flowers deep red, in spikes. All the parts of this tree are intensely bitter; but the wood of the root and the bark are the best. It is a remedy in malignant, epidemic fevers, common at Surinam; it is an excellent tonic, antiseptic and febrifuge; useful in debility, dyspepsia, flatulency, costiveness, and diabetes; and, combined with an absorbent, in the hysteric atony of females. It may be given in powder, or pills of the watery extract, infusion, or decoction, with orange-peel and rum: the infusion is generally made, in Jamaica, by putting a small quantity of the chips into a glass of cold water at night, and drinking it the first thing in the morning. I have given it with it success in the room of Peruvian bark, when that would by no means remain on the stomach. It is often substituted for hops, in brewing. Mountain Damson, or Stavewood tree, Simarouba Quassia; nat. Jamaica. The bark of the root of this species, given in decoction, is a most valuable remedy in diarrhœa, lientery and dysentery, even in the late stages of which I have found it useful. Lofty Quassia, Q. Excelsa, is also a native of Jamaica.

Jussieua. Several species are natives of Jamaica.

Oval-leaved Melastoma, *Melastoma Acinodendron.* N. O. Calycanthemæ; nat. Jamaica. A large tree, with crooked branches and smooth, entire leaves, and the fruit purple, in long spikes. There are sixty-seven species, of which near forty are natives of Jamaica and the West Indies.

Balsam of Peru, *Myroxylum Peruiferum.* N. O. Lomentacæ; nat. South America. A handsome tree, with alternate, ovate, lanceolate leaves, and white flowers. The balsam is fragrant, excellent for wounds of the nerves, and, given in such cases, prevents locked jaw; and is a great pectoral, useful in asthma and disorders proceeding from debility of the solids. There is no other species.

Trailing Gaultheria *Gaultheria Procumbens.* N. O. Bicornes; nat. North America; called also Mountain Tea, Berried Tea, Grouse Berry, and Deer Berries, a favourite remedy with the Indians, who call it Pollom. Is a small, trailing shrub, with obovate, smooth leaves, and red berry. It is used as a tea in Canada, and a strong infusion is stimulant and anodyne. It also is said to be an useful medicine in cases of asthma.

Pubescent Samyda, or Clovenberry Bush, *Samyda Pubescens.* Nat. Jamaica. Grows common in the low lands and rises about seven feet high. The berries are the size of small sloes cloven in two. The birds eat them. In all nine species.

Balsam of Capivi or Copaiba, *Copaifera Officinalis.* N. O. Leguminosæ; nat. South America. A tall, elegant tree, with pinnated leaves, white flowers in racemes, and a roundish pod. The balsam flows from incisions in the trunk. Its use in coughs and diseases of the urinary passages is well known. It is also vulnerary and is good in an enema, for belly-ache. It has been introduced into Jamaica and deserves cultivation. No other species.

Jamaica Olive Bark, or Black Olive, *Bucida Buceras.* N. O. Holeraceæ; nat Jamaica. This tree grows near thirty feet high, with slender, crooked branches, and tufted leaves, and is a hard timber tree; the bark is very restringent, and esteemed by tanners; and a decoction is a good styptic for stopping bleedings. In Antigua, it is called French Oak; by the French, Grignon. There is no other species.

ORDER II. DIGYNIA.

Shrubby Hydrangea, *Hydrangea Arborescens.* N. O. Succulentæ; nat. Virginia. This has a low, soft stem, with opposite leaves, three inches long and two broad. The petioles are long, adorned with large bunches of whitish flowers, in a cyme, of an agreeable odour. There are two other species. H. Hortensis has rose-coloured flowers.

Purslane-leaved Trianthema, *Trianthema Monogyna.* N. O. Succulentæ; nat. Jamaica. This plant sends out many branches, which lie flat on the ground, with oval, stiff, shining leaves, like purslane; the flowers of a purplish colour. It is very common and considered frequently a troublesome weed. Its virtues are said to be cooling. There are seven species of this genus.

ORDER III. TRIGYNIA.

Smooth-leaved Barbadoes Cherry, *Malpighia Glabra.* N. O. Trihilatæ; nat. West Indies. This tree rises about sixteen feet high, with spread-

ing branches and a round head ; the leaves acute and opposite. The fruit is nearly the size and colour of a cherry, and is sometimes eaten. Birds and poultry are fond of it. One species is called Cowhage Cherry, and another, Locus Tree, the bark of the small branches of which may be used for Peruvian bark. There are in all eighteen species.

Laurel-leaved Sycamore, *Banisteria Laurifolia*. N. O. Trihilatæ ; nat. West Indies. This is a climbing shrub, seven feet high, with opposite leaves, yellow flowers, and winged seed-vessels. Chawstick is a species of Banisteria. The stems are cut into short lengths, and used by the Negroes for cleaning and whitening their teeth. The end of the piece held in the mouth becomes quite fibrous, like a brush, and produces an agreeable bitter taste, and excites a flow of saliva. There are in all twenty-four species of this genus, mostly natives of hot climates.

ORDER IV. PENTAGYNIA.

Bimbling Plum, *Averrhoa Bilimbi*. N. O. Gruinales ; nat. East Indies. This has been introduced into Jamaica, and will grow, if care be taken of it. The leaves are pinnated, with red flowers, the fruit a five-celled pome, of an acid taste, growing on the branches or trunk. There is one other species, A. Carambola.

Upright Wood Sorrell, *Oxalis Stricta*. N. O. Gruinales ; nat. West Indies. This plant may be eaten as sallad, or made into a pleasant, cooling decoction. There are ninety-six species of this genus.

Yellow Hogplum, *Spondias Myrobalanus*. N. O. Terebintaceæ ; nat. Jamaica ; This tree is common, rises about twenty-five feet high, with crooked, irregular branches. The flowers and fruit come out before the leaves, which are pinnated. For fruit see Frontispiece, Fig. 32 ; also Plate I. Fig. 19. The stone is covered with fibres and the pulp thin and sweet. Hogs feed greedily on them, and the tree is easily propagated from cuttings. There are three other species. A bath of the bark and leaves will cure inflammation, pain and swelling in the legs, after a fever, and is also useful in anasarca.

ORDER V. DECAGYNIA.

Poke Weed, or Jucato Calleloe, *Phytolacca Octandra*. N. O. Miscellaneæ ; nat. Jamaica ; called in New England, Cunicum, Shoke, or Coakum. The stalk is herbaceous, two feet high, and divides into a few short branches at the top ; leaves ovate-lanceolate, with sessile, white flowers. Brown says, it is a palatable, wholesome green, and that the young shoots are a good substitute for asparagus ; but Thunberg says, it is poisonous, when

old. P. Decandra, or *Virginian Poke,* is a common, well-known weed, in America, by road sides. The juice of the root is cathartic; an ounce of the dried root, infused in a pint of wine and given to the quantity of two spoonfuls, operates kindly as an emetic; the leaves of the plant, bruised, as a poultice, in cancer, is very detersive; and the extract is used as a plaster, in swellings and fistula lachrymalis. The roots are applied to the hands and feet, in ardent fevers, and the berries stain a fine purple dye, but not permanent. Poultry are fond of them. Steeped in rum, it is a popular remedy for rheumatism. There are four other species. Scabies and herpes have been removed by the juice, and it is said to be very useful in every stage of syphilis.

CLASS XI. DODECANDRIA.

This class contains several curious, valuable, and medicinal plants, and comprises some of the natural orders, Sarmentaceæ, Bicornes, Calycanthemæ, Succulentæ, Columniferæ and Tricoccæ.

ORDER I. MONOGYNIA.

Canadian Asarabacca, *Asarum Canadense.* N. O. Sarmentaceæ; nat. America; called Wild Ginger and Coltsfoot. This plant has large, kidney-shaped leaves, rising on a single footstalk, direct from the root. The powder of the dried root is emetic and cathartic, and is a valuable sternutatory, being the basis of cephalic snuff. As an errhine, in the quantity of a grain or two, it has removed head-ache, tooth-ache, ophthalmia, and some paralytic and soporific affections. There are two species.

Yellow Sanders, or Mountain Olive, *Hudsonia of A. R.* The bark, in decoction, cures venereal complaints. Negroes call it Negressa.

Tree Celandine, or Parrot Weed, *Bocconia Frutescens.* N. O. Rhæadeæ; nat. Jamaica. Rises about ten feet high, with a straight, pithy trunk, and oblong, sinuated leaves, and has a handsome appearance. The juice is yellow and acrid, and used to take off tetters, warts, and specks from the eyes. There is one other species.

Mangrove. See Explanation of Plate VIII. Fig. 2. The bark, boiled with mammee bark, is good for hardening the soles of the feet, after the cuticle is separated. A decoction of the bark is a styptic for stopping bleedings.

Three-nerved Blakea, *Blakea Trinervia.* Nat. Jamaica. This beautiful plant rises from fifteen to twenty feet high, in most places supporting itself against another tree. The stem divides into a thousand declining branches, with ovate, shining leaves, having three distinct nerves, and elegant rose-coloured flowers. There is one other species.

For Canella Alba and Mangosteen, see Explanation of Plate X. Figs. 4 and 5.

Garlic Pear, *Cratæva Tapia.* N. O. Putamineæ; nat Jamaica. Grows common in dry coppices, near the sea. Rises thirty feet high, with large trunk and spreading branches, garnished with trifoliate leaves. The fruit is about the size of an orange, with a brown, hard shell, a mealy pulp, smelling of garlic, and kidney-shaped seeds. The fruit of C. Marmelos is considered very delicate in the East Indies. The fruit is cooling and restringent; the leaves, applied, take away inflammations and pains of the head and ears; and the bark of the root blisters like cantharides. There are in all five species.

Prickly-seeded Triumfetta, *Triumfetta Lapula.* N. O. Columniferæ; nat. Jamaica. A shrub, rising about eight feet high, with small, yellow flowers and burry capsules. There are eleven species.

Hairy Purslane, *Portulaca Pilosa.* N. O. Succulentæ; nat Jamaica, on the Palisades, and the Keys, off Port Royal. A well-known, herbaceous, branching plant, always green, and used by some as a stomachic bitter. P. Oleracea is cooling and moistening and takes away the strangury; bruised and applied to the forehead, relieves excessive heat and pain. The juice, with vinegar, cures inflammations, and with oil, cures burns and scalds; fried with oil or lard, is good in diarrhœa; eaten as a salad, or boiled, or the expressed juice, is diuretic. There are in all twelve species, of which four are natives of the West Indies.

Ciliated Lythrum, *Lythrum Ciliatum.* N. O. Calycanthemæ. This plant is a native of Jamaica. There are in all eighteen species.

ORDER III. TRIGYNIA.

Myrtle-leaved Spurge, *Euphorbia Tithamyloid.* N. O. Tricoccæ; nat. Jamaica. An erect plant, about five feet high, abounding with a milky juice, numerous pliant stems, and beautiful slipper-shaped, scarlet flowers. The juice is extremely acrid, and will draw blisters on the skin, and take off warts, but, mixed with the blood, it is said to be fatal. A decoction of the stalks is used, in South America, for curing syphilis and amenorrhœa. Creeping Hairy Spurge, *Caiacica,* Piso says, is the best antidote in the world against poison, the juice or decoction taken inwardly or applied outwardly; and that a drachm, taken and repeated every three or four hours, will cure the dry belly-ache. There are no less than ninety eight species of this genus.

CLASS XII. ICOSANDRIA.

This valuable class comprehends a number of beautiful plants and esculent fruits, of the natural orders of Succulentæ, Hesperideæ, Pomaceæ, and Sensæ. It contains also many highly useful medical vegetables.

Melon Thistle, *Cactus Melocactus*. N. O. Succulentæ; nat. Jamaica. This curious plant is very common; it grows on rocky places, as in Plate I. Fig. 23, or salt, sandy ground. They are also called Turks' Caps and Popes' Heads. The inside is a greenish flesh, full of moisture, of which cattle are fond, in dry weather. One species bears a red fruit, of a tart taste and cooling.

Upright Torch Thistle, *Cactus Repandus*. This grows very common, as in Plate I. Fig. 24. It is frequently planted for fences on a bank. When old and dry, it burns like a torch. The flower is generally white and large, next the south sun; the fruit yellow or red, with a white, sweet pulp.

Oblong Indian Fig, or Prickly Pear, *Cactus Ficus Indica*. Is very common, growing as in Plate I. Fig. 25, and for fruit, see Frontispiece, Fig. 28. The species, C. Cochinillifer, or Tuna, without prickles, is the food of the cochineal insect, which is frequently found on it, and perhaps, would be worth attention in Jamaica. The ripe fruit is diuretic, and colours the urine crimson.

Great-flowered Creeping Cereus, *Cereus Grandiflora*, is a native of Jamaica. The flower opens in the night and continues only six hours. It is very large, beautiful and magnificent, and of a delightful smell.

Barbadoes Gooseberry, *Cactus Pereskia*. Has many slender, trailing branches, beset with whitish spines. The leaves are roundish and succulent; the fruit oblong. See Frontispiece, Fig. 37.

Raquette, *Cactus Peruvianus*. Is a dildo, but without prickles; supposed to be the plant from which gum euphorbium is procured. The best is that which is white, bright and clear, and the older the better.

Green Withe, *Cactus Pendulus vel Aphylla*. Runs straight up the sides of large trees; has a green, succulent, round stalk, without any leaves. A piece put into any liquor, to be fermented, sets it working immediately. When dry and tough, it is used for tying up rails, in fences. There are in all twenty-eight species of Cactus.

Guava. See Explanation of Plate X. Fig. 7.

Bastard Greenheart, *Calyptranthes Chytraculia*. N. O. Hesperideæ; nat. Jamaica. An excellent timber tree, but seldom exceeds fourteen inches in diameter, chiefly growing in the parish of St. Johns. There are six species, one of which is the Jamboland, *Jambolifera*.

Fragrant Rose Apple, *Eugenia Fragrans.* N. O. Hesperidea; nat. Jamaica. This beautiful tree rises about twenty-five feet high, and is well known. It bears a yellow fragrant fruit. See Frontispiece, Fig. 30. The roots are said to be poisonous.

Clove Tree, *E. Carophyllata,* is a species of this genus, and might be introduced with advantage into the West Indies. There are in all twelve species.

Jamaica Pepper, *Myrtus Pimenta,* N. O. Hesperideæ; nat. Jamaica. This elegant tree is very common, and cultivated in groves or walks for the berries, which are an article of commerce, under the name of Pimento or Allspice. It rises about thirty feet high, having a smooth trunk, covered with a light coloured bark; the leaves come out in pairs, like bay leaves, have a fine aromatic odour when rubbed, heal ulcers, and are a good ingredient in aromatic baths. The inflorescence is a spike succeeded by bunchesof berries, which are picked while green, and afterwards dried on barbiques or platforms. It is a fine subastringent aromatic, and yields an oil exactly similar to oil of cloves, and when ground has been sold by the Dutch for ground cloves; probably the fruit when very young might be a good succedaneum for that spice. Myrtus acris is a very beautiful tree with light bark, shining leaves, and a pyramidal head. The berries are of an highly aromatic flavour, like cloves. It is called Wild Clove Tree, Wild Cinnamon, and Bay Tree, in Antigua, and by the French Bois d'Inde. The wood is red, very heavy and hard, used for cogs in mills. There are thirty-six species of Myrtus, many of which are evergreens, and natives of Jamaica. They are also called Arraganas. The Myrtus cotini folio of Sloane, strengthens the stomach and eases cholic. A fomentation cleanses ulcers.

Pomegranate Tree, See Explanation of Plate X. Fig. 1. The rind of the fruit boiled in water, with cinnamon, Port wine, and Guava jelly, is good in fluxes; or a conserve may be made of the flowers or pulp with sugar.

Peach, *Amygdalus Persica.* N. O. Pomaceæ; nat. Persia. This delicious fruit, of which there are near forty varieties, and of the Nectarine ten, will not grow in the West Indies, except a few half-formed ones without flavour, in the mountains of Port Royal; but in America they are in great abundance, and generally planted, like apple trees, in orchards; and in plentiful years they are frequently left on the trees to drop, and the pigs turned in to feed upon them. A decoction of the leaves is a specific for the belly-ache. The Almond, A. Communis, and the double flowering variety, which when in full bloom, is a most elegant object, grow and flower, but do

not bear fruit in America. The kernel makes a demulcent emulsion, good in coughs, and yields a fine oil. The oil with laudanum, dropped into the ear hot, is good for deafness. There are in all seven species.

Plums, cherries, and apricots are also plentiful, and in great variety in America. They are all species of the prunus. Laurel-leaved Cherry Tree, P. Occidentalis, and some others, are natives of Jamaica. There are thirty-three species of prunus, and innumerable varieties.

ORDER III. TRIGYNIA.

Purslane-leaved Samphire, *Sesuvium Portulacastrum.* N. O. Succulentæ; nat. Jamaica. This plant is very common about the Ferry, Port Henderson, Old Harbour, and the Deanry, and indeed all salinas, covering the ground in beds of considerable extent. The stems are herbaceous and subdivided. Leaves wedge-shaped, fleshy, and bright green. It makes an excellent pickle, as good as the pickled samphire imported from England in small bottles, and sold at large prices; and is very full of a neutral alcalescent salt, easily procured from it, and which would doubtless make good soap, sufficient for the island consumption. Dr. Barham says another sort resembles English Kali or Kelp, and that they help stoppage of urine, and a decoction makes a good gargle. No other species.

ORDER IV. PENTAGYNIA.

Medlar, *Mespilus.* Fr. Neflier; Ital. Nespolo; Spa. Nispero, does not grow in the West Indies; but the fruit is found very good in America. Snowy Mespilus, M. Canadensis, is a native of Canada and Virginia. There are nine species of this genus.

Common Pear, *Pyrus Communis*; Fr. Poir; Ital. Pero; Spa. Pera. Apple, *Pyrus Malus*; Fr. Pomme; Ital. Melo; Spa. Manzana and Quince, *P. Cydonia*; Fr. Comassier; Ital. Copogno; Spa. Munbrillero. N. O. Pomaceæ. None of these fruits are adapted to the climate of the West Indies: those introduced into Port Royal mountains have degenerated and produce but few apples, and those not worth eating. They are frequently imported into Jamaica from America, where they grow in the greatest abundance, so as sometimes to be not worth carrying from the orchards. I have known a hogshead of cyder, of sixty gallons, sold (exclusive of cask) for a dollar, the same price as is charged at a tavern in Jamaica for a bottle, but it cannot be imported from America into Jamaica; yet, in that climate it is very wholesome, and will sometimes stop an incipient fever. There are

many hundred varieties of pears and apples. Siberian Crabs, P. Prunifolius, are also common in America. There are 13 species of the Genus Pyrus.

ORDER V. POLYGINIA.

Rose, *Rosa.* N. O. Senticosæ. Fr. Rose; Ital. Rosajo; Spa. Rosa. Some species of this beautiful plant are cultivated in gardens in Jamaica, and grows freely and with little trouble. In the East Indies they are cultivated in fields for the purpose of procuring attar of roses. A tincture of roses is good in malignant angina. There are forty species of this genus and numerous varieties. Oil of roses on a bait will irresistibly attract the rats into a trap.

Raspberry, *Rubus Idæus*; Fr. Framboise; Ital. Rogo; Spa. Frambueso. Blackberry, *Rubus*; Fr. Ronce; Spa. Zarza. N. O. Senticosæ. The raspberry is sometimes found wild in the high mountains of Jamaica, but never seen in the markets; and the Jamaica Bramble, R. Jamaicensis is a native. Several species are natives of America, and the fruits plentiful there, and the roots of R. Occidentalis decocted, is an Indian cure for dysentery, which has been found very successful. There are thirty-two species of Rubus.

Esculent Strawberry, *Fragaria Vesca.* N. O. Senticosæ. Fr. Le Frasier; Ital. Fragola; Spa. Fresera. This well known and delicious fruit grows wild, and is sometimes cultivated in gardens in the mountains of Jamaica, and might be more so, with success; but is not seen in the market. In America they are very plentiful, and the Chili strawberry grows to an immense size. They are very wholesome, promote perspiration, dissolve the tartar of the teeth and calculi; also are said, by Linnæus himself, to relieve the gout. The bark of the root is astringent. There are three species.

Indian Physic, *Spiræa Trifoliata.* N. O. Senticosæ or Pomaceæ; nat. North America. The bark of the root is a safe and efficacious emetic, in doses of about thirty grains; also possesses a tonic power, and is very beneficial in intermittent fever, called also Bowman's root. There are in all twenty-two species. Nine Bark, Spiræa Opulifolia, is also an active remedy, and is said to be useful in cases of amenorrhæa.

CLASS XIII. POLYANDRIA.

This numerous class abounds in very active and some poisonous vegetables, as the twelfth class Icosandria, does in esculent and innocent plants. The distinction lies in the different mode of insertion of the stamens. It contains the natural orders of Putamineæ, Columniferæ, Rotaceæ, Rhæadeæ, Mul-

tisiliquæ, and Coadunatæ. Some of the plants of this class are esculent, and it contains many of valuable medical properties, particularly the Poppy, Gamboge and others.

ORDER I. MONOGYNIA.

Umbelled Marcgravia, *Marcgravia Umbellata.* N. O. Putamineæ; nat. Jamaica. A shrubby creeping plant, something like a Fern; the seeds and pulp of a scarlet colour; frequent in the woods. No other species.

Long-podded Caper Tree, *Capparis Cynophallophora.* Fr. Caprier; Ital. Cappera; Spa. Alcaparra. N. O. Putamineæ; nat. West Indies. A shrub with alternate smooth stiff leaves, the flowers beautiful and fragrant. the pod six inches long, the seeds surrounded by a scarlet pulp. There are in all twenty-five species of this genus.

White Poppy, *Papaver Somniferum.* That invaluable medicine, opium, is the inspissated juice of this plant, which might be doubtless cultivated to advantage in the southern states of America or the West Indies. In cases of poison from opium or laudanum the remedy is an emetic of twenty grains of sulphate of zinc, or any other strong emetic, repeated every ten minutes as long as necessary; then a strong cathartic, and plenty of lemon juice or vinegar, to which may be added, a stimulus on the skin by whipping with small rods, till the danger is over. Strong coffee, without milk or sugar, is also an effectual antidote, and taken after a dose of laudanum or opium, so as to prevent its narcotic effects, will cure the head-ache.

Mexican Poppy. See Explanation of Plate IX. Fig. 1.

Mammee Apple. See Explanation of Plate VIII. Fig. 3.

Black Snake Root, *Acta Racemosa.* N. O. Multisiliquæ; nat. North America: called also Squaw Weed, Rich Weed, and Rattle Weed: has large compound leaves, rising immediately from the root: flower stems rising five feet. The root is astringent, and a strong decoction is an excellent gargle in putrid sore throats. A decoction cures psora. It is highly esteemed by the Indians; and in North Carolina is given to cattle as a drench to cure the murrain. It is also considered as an antidote against poison, or the bite of the rattle-snake, with plantain juice. As an ingredient in bitters it is diaphoretic and alexipharmic. There are four species.

Canada Puccoon, *Sanguinaria Canadensis.* N. O. Rhœdeæ; nat. North America. Has a tuberous root yielding a red juice with which the Indians paint themselves. The root is said to be emetic, and the seeds narcotic. There is no other species. A weak decoction is alexipharmic, and externally

applied is useful in the management of old ulcers: a powder of the root, in a dose of one drachm is exhibited in jaundice. No other species.

Gamboge, *Cambogia Gutta.* Spa. Goma Guta. N. O. Tricoccæ; nat. East Indies. A tall tree, with spreading branches, leaves lanceolate-ovate, flowers verticillate of a yellow colour, fruit two inches in diameter, with a sweet yellow esculent pulp; the gum flows from incisions made in the bark. In small doses it is a powerful hydragogue, good in dropsies and worm cases; its principal use is as a yellow in water colours. No other species.

Anchovy Pear, *Grias Cauliflora.* Nat. Jamaica. Rises forty feet high, branches at the top short or none, leaves very large and long, flowers on the trunk, large and sweet smelling, fruit of a brown colour, size of an aligator's egg, when pickled resembles the mango; this tree grows in moist bottoms or shallow waters. No other species. The bark of the root blisters like cantharides.

Peltated Duck's-foot, *Podophyllum peltatum.* N. O. Rhædeæ; nat. North America; called May Apple. This root has numerous tubers fastened together by fibres; the foot-stalk is fastened to the underside of the leaf like a target. It flowers in May. The fruit is by some thought delicious; the leaves are poisonous, but the root in doses of twenty grains, with calomel, is an excellent cathartic. The Indians use the dried root powdered as an anthelmintic.

Common Arnotta, *Bixa Orellana.* N. O. Columniferæ; nat. East and West Indies; rises ten feet high with many branches; the leaves heart-shaped and pointed, the flowers of a flesh colour. For the seed vessel see Plate III. Fig. 24. The French call it Roucau; Spanish Anato; in the Mexican language it is Achioll. A fine aurora colour is prepared in cakes by washing the seeds. It is cordial, and used in chocolate and soups, and to colour butter and cheese. Its extract is good in fluxes and disorders of the kidnies. The bark makes good ropes. The Indians preserve their feet from chigoes and insects, by anointing them with arnotto and oil. The wood rubbed produces fire. No other species.

Santa Maria or Bastard Mammee, *Calophyllum Calaba.* Nat. West Indies. A tall straight tree with ovate leaves; flowers in racemes white and fragrant; fruit green, with a smooth nut, the wood is red and used for heading casks; an oil is expressed from the nut; and the balsam heals up a green wound at one or two dressings. There is one other species; nat. East Indies. A large timber tree, ninety freet in height.

Green Tea, *Thea Viridis.* N. O. Columniferæ; nat. China. Fr. Thé. This plant is well known, and too commonly used as a daily beverage. The green especially, drank hot, injures the stomach, destroys the teeth, and

enervates the nervous system, besides the great evil of its expensiveness, which is severely felt by the lower classes, who often deny themselves and families real necessaries and nourishing food, so infatuated are they with the love of tea drinking. A cheap and wholesome substitute is coffee, which should be made strong. Tea if boiled, or suffered to stand till cold and warmed again, may be useful as a medicine, to excite watchfulness and produce diaphoresis. It might grow in the Southern States of America or the West Indies, where it has not yet been tried. Dr. Lettsom has published an elegant and interesting work on this plant.

Laurel-leaf Magnolia, *Magnolia Grandiflora.* N. O. Coadunatæ; nat. N. America. This beautiful tree rises with a straight trunk, to the height of seventy feet; the branches are spreading; leaves large and thick; flowers large and spread open, white and fragrant; fruit is in the form of a cone, with scarlet seeds, suspended by a long fibre. The bark of the Beaver Tree, M. Glauca and other species, is aromatic and tonic, and useful in intermittents: a spirituous tincture of the seed vessel is good in rheumatism. There are seven species. Angustura Bark, a celebrated tonic, is supposed to be the bark of a species of this genus.

Sour Sop, *Annona Muricata.* N. O. Coadunatæ; nat. West Indies. This tree is about twelve feet high, leaves oblong and acuminate. See Plate I. Fig. 29, and for the fruit, Frontispiece, Fig. 4. The jam made of the fruit is diuretic, and the French make a wine from it, called corossal.

Sweet Sop, *Annona Squammosa.* A smaller tree, with spreading branches and entire smooth leaves. See Plate I. Fig. 28. and for the fruit, Frontispiece, Fig. 7. A leaf laid on a bed will attract all the bugs.

Common Tulip Tree, *Liriodendron Tulipifera.* Spa. Magnolia Tulipifera. N. O. Coadunatæ; nat. North America. A tree of the largest size, sometimes called Poplar. The leaves are divided into three lobes, ending in blunt points, the flowers come out from the end of the branches, six petalled and bell-shaped, from whence it is called Tulip Tree. Petals are spotted with yellow and red, and the seed vessel is a cone. The timber is useful and the bark is good in intermittents. There is one other species.

Custard Apple, *Annona Palustris.* A small tree which grows well in marshy places, having a smooth heart-shaped fruit, called Alligator Apple, which is said to be a strong narcotic. The wood is soft and white, and used for corks, from whence it is called Cork Wood in Jamaica. There are in all ten species. The dried fruit of A. Triloba is cathartic.

Traveller's Joy, *Climates Dioica.* N. O. Multisiliquæ; nat. Jamaica. Has stiff stalks, climbing without tendrils; leaves trifoliate. It is also

called Virgins Bower and Pudding Withe. Dr. Barham says the juice of the flowers beaten and boiled is cosmetic. Twenty-one species.

Smooth-fruited Bitterwood, *Xylopia Glabra.* N. O. Coadunatæ; nat. Jamaica. This tree grows fifty feet high, every part of a bitter taste: the bald-pate pigeons feeding on the berries acquire a bitter flavour. The wood is good timber, and easily worked; bedsteads and presses made of it are proof against cockroaches moths and all insects. A decoction is useful in cholics, kills worms, and creates appetite. X. Muricata, is found in Sixteen Mile Walk. There is one other species.

Canadian Yellow Root, *Hydrastis Canadensis*; nat. Canada. The root is composed of fleshy tubers or bulbs of a deep yellow within, stalks about nine inches high, leaves cut into lobes; the stalk is terminated by one white flower; the root is very astringent and bitter, and used by the Indians to cure cancer and obstinate ulcers. A spirituous infusion is used as a tonic bitter, and an infusion of the root in cold water is useful in inflammation of the eyes; the root yields a brilliant yellow colour. No other species.

CLASS XIV. DIDYNAMIA.

This class comprises the two natural orders of Verticillatæ and Personatæ; the Verticillate plants of this class are generally fragrant, warm, and penetrating, and few, if any, are poisonous; they are well deserving attention in the practice of physic; when growing on dry soils they mark a healthy situation. Some of the plants of the order Angiospermia, and of the natural order Personatæ are poisonous, and these are frequently Pentandrous, in which class will be found many noxious plants.

ORDER I. GYMNOSPERMIA.

Penny Royal Tree, *Satureja Viminea.* N. O. Verticillatæ; nat. Jamaica. A shrub with an upright stem, very much branched, leaves small oblong, and wedge-shaped, flowers sessile and white; frequent in cool mountains. The whole plant when dry is fragrant. It is a good ingredient in aromatic baths. There are eight species of this genus.

Ground Ivy, *Glechoma Hederacea.* Fr. Lierre Terrestre; Spa. Yedra Terrestre. This well-known herb is common in Jamaica. A decoction sweetened is good for coughs and catarrhs, and will discuss tumours; the dried leaves powdered are a good errhine for relieving head-ache. There are in all six species.

Wild Basil, *Ocymum Rubrum Medium,* Fr. Basilie; Ital. Bassilico;

Spa. Albahaca. N. O. Verticillatæ. A fragrant herb, rising about nine inches high, with small oval leaves, and minute flowers, contains a balm good for sores, and against the sting of scorpions ; it is also said to be good for the eyes. There are in all twenty-five species of this genus.

Wild Spikenard or Sweet-smelling Black Horehound, *Ballota Sua veolens* ; Fr. Nard Indique ; Ital. Spiganarde ; Spa. Pinillo Oloroso. N. O. Verticillatæ ; nat. West Indies. The stem is upright, rising about three feet, branches and leaves villose, flowers blue. This fragrant plant is well known, and used commonly in warm baths, also by the negroes to heal ulcers ; the oily spirit is lithonthriptic and diuretic; it likewise expels poison, and is cephalic ; and is also useful in dropsy. There are in all six species: it is called in Jamaica, Spignel. This is rather Bystropogon Suaveolens.

Wild Hops or Iron Wort, *Clinopodium Capitatum* ; nat. Jamaica. Rises three feet high with square stalks, and hairy ovate leaves. It heals wounds and stops fluxes : a decoction with honey is excellent for sore throats.

Mint, *Mentha* ; Fr. Mente ; Ital. Menta ; Spa. Menta. N. O. Verticillatæ. This well-known herb grows freely in Jamaica ; is a valuable antispasmodic, and relieves cholic ; an infusion will stop vomiting. Nineteen species in all.

Blue Scull Cap, *Scutellaria Galericulata.* N. O. Verticillatæ. This plant grows in America on the banks of rivers and ponds, about two feet high, stems square, leaves heart-shaped and pointed. It is bitter and astringent, and with the addition of green vitriol may be used for dying black. It has been lately employed with great success as a specific remedy for canine madness, and a certain antidote against the poison which produces it, by a person of the name of Lewis, near Mamaroneck in New York. The whole plant was by him dried and reduced to a powder or given in decoction for some time : two ounces of the herb is sufficient for a cure if administered in time, its success has been proved in numerous instances, and attested by many respectable characters in New York, There are in all sixteen species of this genus.

Self-heal, *Ruelia Paniculata,* N. O. Personatæ ; nat. Jamaica ; called Christmas Pride. The stem rises three feet high, much branched, leaves lanceolate, flowers blue and rather large. The whole plant smells something like camphor, and is very common about Spanish Town ; the juice is a specific for diebruen, and for sore mouths and throats; mixed with honey of roses and vinegar, it takes away swelling of the testes, and bruised is excellent for fresh wounds. In all forty-three species.

ORD. II. ANGIOSPERMIA.

Scarlet Flowered Cyrilla, *Cyrilla Pulchella.* N. O. Personatæ. nat. Jamaica; near Hope River, in Liguanea. A handsome plant, with several branched stems, leaves ternate, ovate, sharp at both ends, frequently blood red beneath, flowers axillary, solitary, and red. It deserves to be cultivated for its beauty. No other species.

American Brunsfelsia, or Trumpet Flower, *Brunsfelsia Americana,* N. O. Personatæ; nat West Indies. Grows from eight to ten feet high, trunk smooth, and the branches divaricate; leaves entire, smooth, flowers yellow and fragrant, the tube four inches in length. One other species.

Trumpet Flower, *Bignonia.* See Class II. Order I. Plate 34, where it is inserted by mistake, as it belongs to this class and order.

Besleria Lutea, is a native of the West Indies.

Petrea Volubilis, is a native of the West Indies.

Oval Leaved Fiddlewood, *Citharexylum Caudatum.* N. O. Personatæ; nat West Indies. French, Guittarin, and Bois Cotelet; called also Old Woman's Bitter. This tree has a round, upright trunk, a foot in diameter, to the height of 20 feet, with a handsome head; leaves oblong, oval, pointed at both ends, long and shining; flowers small, white, many and fragrant; berries succulent and black when ripe. Black-heart Fiddlewood rises forty feet high, and is considered one of the hardest and best timber trees; berries small and yellow, which are sometimes eaten by the negroes. There are five species, all natives of Jamaica.

For Calabash Tree. See Explanation of Plate VIII. Fig 4. Add, the French apply the calabash poultice to burns, and to the shaved head in coup de soleil, or stroke of the sun.

For Wild Sage, see Explanation of Plate IX. Fig. 3.

Vangloe or Oily Pulse, *Sesamum Indicum.* See Explanation of Plate IX. Fig. 7.

Thick-spiked Ruellia, *Ruellia Blechum,* is a native of Jamaica, in the lower mountains.

Jamaica Tea Goatweed, or Sweet Weed, *Capraria Biflora*; N. O. Personatæ. A small shrub, with erect branches, and oblong, acuminate serrate leaves, flowers white, seeds very small; it is common in Jamaica, and all the West India islands, called by the French, Thé Du Pays. An infusion is a very good beverage. There are seven species in all.

Chaste Tree, *Vitex Umbrosa,* N. O. Personatæ, is a native of Jamaica. There are in all fourteen species.

Yellow Toad Flax, *Antirrhinum Linaria*; Ital. Linaria; Spa. Linaria. N. O. Personatæ. A species, Minor erecta cærulea, grows two feet high, and the flowers stand on long peduncles; the juice mixed with hog's lard cures the piles or hæmorrhoids.

Prickly Duranta, *Duranta Ellisia*. N. O. Personatæ; nat. Jamaica. This shrub rises about six feet high, having long reclining branches, with spines; leaves ovate lanceolate; frequent in fences between Kingston and Spanish Town. Two other species.

Prickly Volkameria, *Volkameria Aculeata*, is very common in the low lands of Jamaica. There are eight species in all.

Barbadoes Wild Olive, *Bontia Daphnoides*. N. O. Personatæ; nat. West Indies. The leaves are thick, stiff, and smooth; corolla yellowish. Pigeons fatten on the berries, which are intensely bitter. There is no other species.

Hairy Columnea, *Columnea Hirsuta*. N. O. Personatæ; nat. Jamaica; also called larger hairy Achimenes. This handsome plant is frequent in the cool mountains: the stem is thick, and the leaves opposite; flowers large, variegated, and hairy on the outside: it deserves cultivation for its beauty. In all six species.

Fox Glove, *Digitalis*. N. O. Luridæ. Fr. Digitale, or Gantelée; Spa. Dedalera; Ital. Oralda. This plant is indigenous in America, and is much in use as a very powerful narcotic and diuretic; but its properties are very active, and in large doses it is poisonous. Dr. Barham says it heals all wounds and ulcers, made into an ointment, with hog's lard and green tobacco. There are in all twelve species.

Cancer Root, *Orobanche*. N. O. Personatæ; nat. North America. Every part of this plant is very astringent and bitter: it is considered as a powerful remedy in dysentery; but it is chiefly celebrated as a cure for cancer, and formed the principal part of Martin's powder. Externally applied to obstinate ulcers it has been very successful.

CLASS XV. TETRADYNAMIA.

This class is the most natural in the system, containing all the plants of the natural order Siliquosæ. There is no tree in the whole order, and the stem is generally herbaceous. The plants are frequently acrid, but none of them poisonous. It supplies several articles of food which are extremely nutritious, as the turnip, cabbage, &c. and likewise furnishes stimulating condiments, as mustard, horse radish, &c. which are also useful in a medical point of view for cataplasms.

ORDER II. SILIQUOSÆ.

INDIAN KALE. See Explanation of Plate X. Fig. 8.

MUSTARD, *Sinapis*; Fr. Moutard; Ital. Senape; Spa. Mostasa. This well known plant will grow in Jamaica. A vomit of the seeds relieves heart-burn and dyspepsia, and the seed in white wine is good for numbness of the extremities, and gives relief to the gout and rheumatism; a cataplasm or sinapism is an excellent stimulant.

RADISH, *Raphanus*; Fr. Rave; Spa. Rabano; Ital. Radicchio; and CABBAGE, *Brassica*; Fr. Chou; Ital. Cavolo; Spa. Berza; grow in Jamaica in cool situations, and numerous species are to be found in North America.

WILD MUSTARD, *Cleome Triphylla.* The whole plant is balsamic and vulnerary; boiled in oil remedies cutaneous diseases and cures deafness.

WATER CRESS, *Sisymbrium*; Fr. Cressou; Spa. Berro; grows in springs and rivers in Jamaica, and is rather more biting than the European sort.

CLASS XVI. MONADELPHIA.

This class is a natural class, comprehending principally plants of the natural order Columniferæ, of which see a beautiful specimen, Plate XI. Fig. 2; also the order Gruinales. It contains plants from the size of the herb to the most immense trees, and comprizes many valuable vegetables, among which is the cotton. Some of the plants are fit for food, as the Okra, and it also furnishes a few articles to the materia medica.

ORDER I. TRIANDRIA.

TAMARIND TREE. This tree is now placed in this class formerly Class III. Ord. 1; for a description see Explanation of Plate V. Fig. 1; and for the habit of the tree, Plate I. Fig. 7.

HARES FOOT OCHROMA, *Ochroma Lagopus.* N. O. Columniferæ; nat. West Indies. A large tree with straggling branches, the wood white and light, and used for corks; leaves a foot in diameter; flowers on thick peduncles, white, fleshy, and reflex. It abounds on the banks of the Rio Cobre in Jamaica. Desportes says that the beauty of the English beavers is chiefly to be ascribed to the down in the fruit of this tree. No other species.

ORDER V. DECANDRIA.

SPOTTED GERANIUM, or CROW FOOT, *Geranium Maculatum*; nat. North America; Fr. Racine à Becquet; Spa. Rinonculo; Ital. Flamula; is a pow-

erful astringent. The root boiled in milk has been found an excellent remedy in the cholera of children, and probably would relieve nephritic complaints, where astringents are proper. A decoction is used by the inhabitants of New York in cases of dysentery. The Indians say it is a most effectual remedy for the cure of syphilis. An aqueous infusion as an injection, alone or combined with white vitriol, is a cure for gonorrhœa. A decoction of the root of a species of Napæa, called by the negroes Lass, is also said to be a sovereign remedy in syphilis. Thirty-two species of this genus in all.

Scarlet-flowered Brownea, *Brownea Coccinea.* N. O. Lomentaceæ; nat. West Indies. A small tree growing about twenty feet high; leaves oval and smooth; the flowers grow in bunches, and are pendulous; the corolla is scarlet, and the stamens yellow. There are two other species.

Broad-leaved Screw Tree, *Helicteres Jamaicensis.* N. O. Columniferæ; nat. Jamaica. A small tree about twelve feet high; leaves petioled and tomentose; flowers white; the capsule is twisted in a spiral form. See Plate III. Fig. 46. This curious shrub is frequent in the low hills. Nine species in all.

ORDER VI. POLYANDRIA.

Sour Gourd, or Monkey Bread Tree, *Adansonia digitata.* N. O. Columniferæ; nat. of Senegal. An immense large tree, upwards of sixty feet in circumference, but not high in proportion, similar to the cotton tree, the leaves are large and pointed at both ends; the fruit large and oblong; but the seeds are covered with meal instead of a silky down. This is esculent when dried, and the fresh fruit is of a pleasant acid. A syrup of the pulp is diaphoretic, and used in fevers and dysenteries. There is no other species.

Silk Cotton Tree. See Explanation of Plate X. Fig. 6.; add, the young buds are very mucilaginous like Ochro.

Jamaica Sida, *Sida Jamaicensis.* N. O. Columniferæ. Stem a foot high; leaves alternate, small, and softish; flowers small and yellow; the leaves and buds are very mucilaginous, and make a soft lather with water. It is also called Broom Weed, and the plants are cut to make besoms. There are in all ninety-nine species, many of which are natives of Jamaica: they all abound with mucilage, and are emollient.

Spiked Mallow, *Malva Spicata*; Fr. Mauve; Spa. Malva; Ital. Malva. Stem three feet high, branched; leaves nearly round; flowers orange coloured, in spikes. The properties of Malva are similar to Sida. There are in all thirty-four species, of which many are natives of Jamaica.

Cotton. See Explanation of Plate VIII. Fig. 1. The species cultivated

with much success in the southern states of America, is the Gosspium Herbaceum; nat. East Indies.

Ochro, *Hibiscus*. See Explanation of Plate XI. Fig. 1. A free use of the Ochro is good in consumptions.

Scarlet Achania, *Achania Malvaviscus*. N. O. Columniferæ; nat. Jamaica. This plant is common in the woods; rising about nine feet high; leaves heart-shaped, woolly, and lobated; flowers single, upright, and scarlet; the tube of the corolla twisted. There are two other species.

CLASS XVII. DIADELPHIA.

This is nearly a natural class, comprising plants of the natural order Papilionaceæ, and is one of the most important classes in the system, containing many plants valuable for food, as the pea, bean, &c. also several useful medicines, as liquorice, seneca, snake root, and cowhage; likewise many plants used in dying, as indigo, dyers broom, &c. Linnæus asserts, that in the whole order of Papilionaceæ, there is not one poisonous plant, except the lupin, which kills the hippopotamus; but perhaps this operates in the same way as the Cashaw, which kills horses in the West Indies, but in itself is not poisonous.

ORDER III. OCTANDRIA.

Climbing Securidaca, *Securidaca Scandens*. N. O. Papilionaceæ; nat. Jamaica. A shrubby plant with long tendrils; oblong ovate leaves; red and scentless flowers; a pod in the shape of an axe, from whence its name. There are two other species, natives of the West Indies.

Seneca Rattle Snake Root, *Polygala Seneca*. N. O. Lomentaceæ; Spa. Lechera. The root of this valuable plant is perennial, woody, and branched, covered with ash-coloured bark: the stems are erect, about a foot in height, of a reddish colour; leaves alternate and acute; flowers small and white, in spikes. The root, with juice of broad-leaved plantain, is a specific remedy for the bite of the rattle-snake, and also useful in pleurisy, rheumatisms, and dropsies; the dose is from one scruple to two of the powder, in Madeira wine, or two or three spoonfuls of decoction, prepared by boiling an ounce of the root in a pint and a half of water till reduced to a pint, and a tea-spoonful given every half hour, drinking nothing else. It is one of the most invaluable articles in the materia medica: and is particularly useful in cases of cynanche trachealis, croup or hives, bringing away a membrane by the mouth. A case of locked jaw, occasioned by the bite of a rattle-snake,

has been cured by means of the Seneca. It is a powerful sudorific, and is used in malignant sore throat and syphilis by the Indians, with great success. It sometimes is salivatory to a great degree.

Panicled Milk Wort, *P. Paniculata.* This beautiful little plant is a native of Jamaica and Hispaniola; the stem is less than a foot high; branches thread-like and erect; leaves acute and entire; flowers small and purplish; it has much the smell and taste of the Seneca Root, and an infusion or decoction taken in the morning is a mild attenuant and sudorific, promotes expectoration, and is good for catarrh and cough. A cold infusion all night is a strong diuretic, and eases pleuritic pains.

Rest Harrow, *Ononis,* removes obstructions, and cures hernia carnosa.

P. Diversifolia, or Bastard Lignum Vitæ, grows plentifully in the Red Hills; rising seven or eight feet; taste not unlike guaicum, and it is sometimes used for the same purposes. Dr. Barham says it is a strong diuretic, and eases pleuritic pains. There are in all forty-five species.

ORDER DECANDRIA.

Green or Wild Ebony, *Amerimnum Ebenus*; Fr. Ebene; Spa. Ebano; Ital. Ebano. N O. Papilionaceæ; nat. West Indies; rises about fourteen feet high, full of branches and small twigs, very tough and flexile; leaves are small and stiff, with sessile flowers, numerous and of a bright yellow; pods compressed and moon-shaped, inclosing one kidney-shaped seed; the trunk seldom exceeds four inches in diameter, but the wood is of a fine greenish brown, very hard, and polishes well; the oil of it put into a hollow tooth, cures the tooth ache. One other species. It is frequently exported to Europe.

Smooth-leaved Coral Tree, *Erythrina Corallodendron.* This beautiful tree has a thick stem, rising about twenty feet high; leaves heart-shaped and smooth; flowers of a deep scarlet, in thick spikes, succeeded by crooked pods. The Spaniards planted them among their cacao trees, to break the force of the winds. There are seven species in all. The flowers make an excellent eye water.

Pindall, or Earth Nut. See Explanation of Plate XI. Fig. 6,

For Wild Liquorice, see Explanation of Plate XI. Fig. 4.

Crotolaria Sagittalis is a native of Jamaica. There are thirty-two species in all.

Jamaica Dog Wood, *Piscidia Erythrina.* N. O. Papilionaceæ; nat. Jamaica. This tree rises upon a thick stem twenty feet high, branching at the top; leaves pinnate, and flowers white, succeeded by oblong pods; grows chiefly in the low lands, by road sides, or on dry hills. The bark of the

root, leaves, and twigs, pounded, and mixed with the water in some deep and convenient part of a river or creek, intoxicates the fish, which rise and float on the surface as if they were dead, and after some time recover. It is considered as one of the best timber trees, very hard and resinous, makes excellent piles for wharfs, and is commonly used for fellies for wheels. The bark of the trunk is very restringent; a decoction stops the discharge of ulcers, and cures the mange in dogs. It would probably answer for tanning, and the bark is good in fomentations. There is one other species.

Cowhage, *Dolichos Pruriens*. N. O. Papilionaceæ; nat. West Indies. This is a climbing and spreading plant, stems round; leaves ovate and pointed, always three on each stalk; flowers purple, in spikes. Bean compressed, inflex at the base, reflex at the tip, covered with short sharp spiculæ, which cause an itching when handled. A decoction of the root is a powerful diuretic; and an infusion of the pods in wine, twelve to a quart, is said to be a certain remedy for the dropsy, the dose half a pint, and made into beer: the bean boiled in oil eases the gout and St. Anthony's fire. The broth of a fowl stuffed with cowhage, will carry off incipient dropsies. (Boiling destroys the spiculæ). The fresh pods dipped in molasses, and the spiculæ scraped off is the best medicine for destroying worms, which it does mechanically; it may be safely taken in doses of a spoonful, each morning fasting; see Dr. Chamberlain's Essay on Stizolobium. There are in all thirty-eight species; many of which are natives of Jamaica. The ox-eye bean called by the French Yeux bourrique, is the seed of the D. Urens, common in the West Indies.

Indigo. See Plate XI. Fig. 5. Fr. Indigo; Ital. Indico; Spa. Anil.

Wild Indigo, or Bastard Indigo, *Amorpha Fruticosa*. N. O. Papilionaceæ; nat. Carolina; rises with irregular stems, twelve feet high, having very long, winged leaves, and spikes, of purple flowers; formerly the inhabitants made a coarse sort of indigo from the young shoots. There is no other species.

Angola, or Pigeon Pea, *Cytisus Cajan*. N. O. Papilionaceæ; nat. both Indies and Africa; rises about eight feet high, with many branches; flowers are a deep yellow; legumes hairy, and intercepted by obliquely transverse streaks. Pigeon Pea is frequently planted; it will thrive on poor land, and continue many years. The pea when green or dried is very wholesome and delicate food; it is also used to feed pigeons, and is said to bear seven years: the leaves make an excellent eye water. There are in all eighteen species.

Bastard Cabbage Tree, *Geoffroya Inermis*. N. O. Papilionaceæ; nat. Jamaica. This tree rises a considerable height, sending off branches towards

the top; leaves pinnate; flowers rose-colour, in clusters; fruit a large subovate drupe; the wood is hard, and the bark is a powerful anthelmintic, given in decoction, syrup, powder, or extract: it should be given cautiously at first, the dose is a scruple, not more, as the bark and fruit are both bitter and active. Two ounces of dried bark, boiled from three pints of water to two, and sweetened, dose two table-spoonfuls every morning in the week, then a dose of castor oil, for worms; or fifteen grains of the powdered bark, with as much jalap, is a good cathartic. There is another species.

Glycine Reticulata, is a native of Jamaica; also Milky Clitoria, C. Galactia.

Two-leaved Hedysarum, *Hedysarum Diphyllum*. N. O. Papilionaceæ. This and several other species of this genus, of which there are ninety in all, are natives of Jamaica, also called Onobrychis; the seeds are stomachic and expellers of poison.

CLASS XVIII. POLYADELPHIA.

This class cannot be considered a very natural class; it contains plants of the orders Columniferæ, Gruinales, Bicornes, and Rotaceæ. It is one of the smallest of the classes in the system; but comprehends the Cacao, and the different species of orange and lemon.

ORDER I. DECANDRIA.

Chocolate Nut. See Explanation of Plate XI. Fig. 7. The oil is good to rub weak and paralytic limbs.

ORDER DODECANDRIA.

Bastard Cedar, *Bubroma Guazuma*. N. O. Columniferæ; nat. West Indies. This tree rises thirty or forty feet high, the branches spreading out wide at the top; leaves oblong, heart-shaped, ending in a point, and serrated, like hazel; flowers small, odoriferous, and yellowish, succeeded by a hard, rugged fruit; see Plate III. Fig. 28. It forms a good shade for cattle, which will feed on the leaves and young twigs; the wood is light and easily wrought, and generally used to make pannels for kitterines. There is no other species. The inner bark is glutinous, like the elm, and said to be good for elephantiasis, swelled limbs, bruises, and fractures.

ORDER ICOSANDRIA.

Orange, *Citrus Aurantium*; Fr. Orange; Ital. Arancia; Spa. Naranjo. N. O. Bicornes. All the species of this genus are small trees or shrubs,

branching into a roundish head; the leaves are ever-green, and ovate lanceolate; sometimes solitary spines are found on the branches; the flowers are white and sweet-scented. For an account of the different fruits of this genus, see Explanation of Frontispiece; and for the habit of the forbidden fruit, C. Decumana, see Plate III. Fig. 35. The oranges of the West Indies are very large and juicy, the juice quenches thirst, allays heat, is antiseptic, and useful in scurvy, and corrects the acridity of the bile; the rind is aromatic and stomachic, and useful in agues and menorrhagia. The inside roasted is an excellent cataplasm for maturating inflammations; according to Labat, citron juice is useful with other cordials to obviate the effects of manchineel poison, and the juice of either the sour or sweet orange with salt, is the common cathartic among the lower people in the French islands. Ripe oranges may be freely allowed with safety in fevers. Lemons or lime juice given with oil kills worms, and with salt of wormwood, swallowed in the act of effervescence, stops vomiting and abates fever; and rubbed in with gunpowder, after the parts are made to bleed, cures ring-worms. The lime tree makes excellent fences, and a decoction of the root is good in syphilis; the leaves are also a good ingredient in aromatic baths. The acid juice of lemons or limes is a well known antidote against narcotic vegetable poisons, particularly opium; hence, the use of acids for persons who are habitually obliged to take considerable doses of opiates, cannot be too strongly recommended. The most convenient form for having the benefit of the citric acid at sea, is in the form of crystals; but it is often adulterated in the shops with vitriolic acid. The lemon is Citrus Medica, the shaddock is C. Decumana, the Mandarine orange, C. Nobilis. Another species is called Grape Fruit, and there are five species in all.

Yellow Leaf, or Horse Sugar, *Hopea Tinctoria*; nat. America. The leaves dye a fine yellow colour, and are said to be useful in cases of nephritis and calculus.

CLASS XIX. SYNGENESIA.

This class is, with the exception of the last order, Monogamia, a very natural assemblage of plants, comprehending the family of compound flowers, of the natural orders Aggregatæ and Compositæ. There are only two or three poisonous plants in this order, and several of the semifloscular flowers are esculent, and some are medicinal, as the lettuce, dandelion, camomile, coltsfoot, &c. It is remarkable, that although the milky plants of other classes are generally poisonous, the milky plants of this class with a few exceptions are not so.

ORDER I. EQUALIS.

Garden Lettuce, *Lactuca Sativa*; Ital. Laettuga; Fr. Laitue; Spa. Lecchuga. N. O. Compositæ Semiflosculosæ; nat. India. This well known plant will grow in Jamaica in cool situations; it is wholesome, cooling, and proper in hot, bilious dispositions. It promotes sleep, and the seeds make a cooling emulsion useful in strangury. The milky juice of Wild Lettuce, L. Virosa, has an opiate power of considerable strength, and may be made into pills when dry, or dissolved in wine, when it is said to be an excellent anodyne. The extract may be taken, in doses from eighteen grains to three drachms, in twenty-four hours; it has repeatedly cured the dropsy, and is celebrated also as a diuretic and resolvent medicine in cases of calculi. There are in all eleven species.

Common Dandelion, *Leontodon Taraxacum*. N. O. Compositæ Semiflosculosæ. Fr. Dent de lion; Spa. Diente de lion; Ital. Dente de leone. This plant is common in America, and is too well known to need description; it is much celebrated as a diuretic and resolvent medicine, the dose is three ounces, to be taken three or four times a day; it has also great efficacy in dropsical complaints, and obstructions of the viscera, and promotes the catamenia. When very young the leaves are good in sallads, and the French eat the roots with bread and butter; the distilled water with vitriol is good against petechial fevers. There are four species in all.

Halbert Weed, *Calea Lobata*, rises five feet high, with a strong stalk, and large rough sinuated leaves; on twigs at the top of the stalk are many naked yellow flowers. The fresh herb in infusion is a good bitter, and a spirituous infusion of the tops is an active, warm stomachic; the infusion drank constantly after a fever will bring back the bile to its natural state. Halbert Weed flowers with Vervain are good to make a tea to drink every morning, against habitual costiveness.

Hawk Weed, *Hieracium*; Spa. Iracio. N. O. Compositæ Semiflosculosæ. The virtues are astringent; the juice, with honey and roch alum, makes an excellent eye water. There are fifty-five species.

Halbert-leaved Mikania, *M. Hastatus*, a native of Jamaica.

Sweet-scented Hemp Agrimony, *Eupatorium Odoratum*. N. O. Compositæ Discoideæ; nat. Jamaica; Fr. Eupatoire. A weakly shrubby plant, about six feet high; leaves petioled and three-nerved; flowers terminating and white; smell like Meadow Sweet; is very common in the lower hills. Its virtues are opening and cleansing. There are in all forty-nine species, many of which are natives of the West Indies. An American species in Georgia has nearly

superseded the use of Peruvian bark in the cure of fevers ; given in infusion it does not oppress the stomach as Peruvian bark is sometimes apt to do.

Bastard Saffron, or Safflower, *Carthamus Tinctorius*; Ital. Zafarano; Spa. Azafran; Fr. Safran. N. O. Compositæ Capitatæ. An annual plant, rising three feet high, dividing into many branches, with ovate, pointed, sessile leaves. It will grow in the West Indies, and would perhaps be worth cultivation for dyers' use; it dyes a beautiful yellow colour, and the kernel taken in broth is a very strong cathartic. There are ten species in all.

Spiked Saw Wort, *Serratula Spicata.* A decoction of this plant is said by the Indians to cure gonorrhœa and syphilis, and is also useful in cases of nephritis calculosa, or gravel.

ORDER SUPERFLUA.

A species of Daisy, *Bellis*; Fr. Marguerite; Spa. Marja; grows in Jamaica, the juice of which is said to be useful in consumptions.

Feverfew, *Pyrethrum* ; Ital. Matricale ; Spa. Matricale. The virtues of this plant are tonic, astringent, and bitter, and strengthen the stomach.

Quinchamali, a species of Santolina ; bears a yellow and red flower. A decoction of this plant, drank plentifully, is an infallible remedy for bleeding inwardly, or at the nose, in consequence of a fall.

Upright Eclipta, *Eclipta Erecta.* N. O. Compositæ; nat. East and West Indies. Stem erect, about a foot high; the leaves are in pairs, and trinervous; the flowers come out two together, white, and discoid; the juice is used for dying hair, both of men and quadrupeds, from whence it is called ink plant. There are in all five species.

Golden Rod, *Conyza Lobata.* Is vulnerary, and carries off the tartareous matter which forms calculi.

Wing-stalked Verbesina, *Verbesina Alata.* N. O. Compositæ Oppositifoliæ; nat. Jamaica. This plant has an herbaceous, upright stem, subdivided, and rough-haired; leaves oblong, acuminate, and nerved; flowers in a single head, of a deep orange. There are twelve species, most of which are natives of the West Indies.

Coltsfoot, *Tussilago Uniflora*; Ital. Farfaro; Spa. Tusilago. This well-known plant is of singular use in obstructions of the viscera. The juice of the leaves and roots, given in Madeira wine, purifies the blood, and excites the catamenia; the distilled water, sharpened with vitriolic or sulphuric acid, is useful in putrid fevers.

Sea-side Oxeye, *Buphthalmum Maritimum*; Fr. Oeil de bœuf. A fine aromatic, and a good ingredient in a bath or fomentation.

ORDER FRUSTRANEA.

Annual Sun Flower, *Helianthus Annuus*; Fr. Soleil; Spa. Girasol. N. O. Compositæ Oppositifoliæ. These well-known plants are natives of America, and will grow in the West Indies. They have been of late cultivated in considerable quantities, for the sake of their seeds, which are excellent to feed and fatten poultry; and also produce a clear limpid oil. They are given for coughs, and may also be used in bread. One species, H. Tuberosus, is the Jerusalem artichoke, which is delicate eating. The root of H. Strumosus is also eaten in Canada. There are twelve species, all perennial except two.

ORDER SEGREGATA.

Rough-leaved Elephant's Foot, *Elephantopus Scaber*. N. O. Compositæ Capitatæ; nat. Jamaica. This plant rises from half a foot to three feet high; stem rigid; leaves embracing, wrinkled, and hairy; and the side branches are terminated by heads of purple flowers. It is common on the north side, and is considered a good vulnerary, and much used in consumptive cases. The leaves are frequently used by the French instead of carduus benedictus; the herb bruised will dissolve the carbuncle; a decoction of the root drank forty days, is useful in leprosy and breakings out, and expels poison. There are two other species, natives of Jamaica.

CLASS XX. GYNANDRIA.

This class cannot be considered as a natural class; it comprehends plants of the natural orders of Orchideæ, Ensatæ, Columniferæ, and Piperitæ. The properties of the plants of the order Orchideæ, have for a long time been reputed aphrodisiac, many of them are at least extremely nutritious; the salep of the shops is produced from the Orchis morio, and the bulbs of other species would also yield it. The Piperitæ when fresh are very acrid, which quality is lessened by boiling or roasting. Some of the genera are also valuable in a medical point of view.

ORDER I. DIANDRIA.

Orchis, *Orchis Habenaria*. N. O. Orchideæ; nat. Jamaica, in low meadows at the foot of mountains. The bulb is single and oblong; stem erect and leafy, eighteen inches high; leaves sessile, ovate lanceolate, and three-nerved, sheathing the stem; flowers white, and in spikes; corolla five petalled of a singular shape. Salep is demulcent, and useful in dysentery, dysury, and

calculous complaints, and an admirable demulcent in symptomatic fever, after amputation. It contains a great quantity of nourishment in a small bulk: one ounce of this powder and one ounce of portable soup, with two quarts of boiling water, might, in a case of necessity, be sufficient nourishment for one man for a day, and should therefore be always carried on shipboard, to prevent a famine at sea. There are in all fifty species of this genus. Red-flowered Neottia, N. Speciosa, and Frosted-flowered, N. Orchioides, are natives of Jamaica.

Tall Limodorum, or Jamaica Salep, *Limodorum Altum*. N. O. Orchideæ; nat. Jamaica, in the cool mountains; and the root properly cured is stomachic. There are thirteen species of this genus.

Vanilla, *Epidendrum Sanguineum*; Fr. Vanilla; Spa. Vaynilla. N. O. Orchideæ; nat. Jamaica. This plant climbs trees, taking hold of the bark by its tendrils; from the stalk arises one thick, roundish, tuberous leaf, an inch in diameter; from the top of this come two smooth, striated leaves, three inches long, between which springs out a stalk about a foot high, and near the top stand several long, beautiful, purple flowers. The aromatic Vanilla is a native of South America; the pods of which are filled with an immense number of small, black, shining seeds; the fruit is used to flavour chocolate and perfume snuffs: it yields a great quantity of oil and volatile salts. There are in all 124 species, of which fifty are natives of the West India Islands, and principally of Jamaica. The expressed juice of Green Withe, E. Claviculatum, in a dose of a table-spoonful, is diuretic, cathartic, and vermifuge.

Granadilla, *Passiflora Quadrangularis*. N. O. Cucurbitaceæ; nat. Jamaica. This well-known plant is common in gardens, where it forms very close arbours in a few months; a slip cut off the vine will grow if planted in rainy weather; the fruit is delicious; see Explanation of Frontispiece, Fig. 35. P. Maliformis also makes fine arbours, and has a roundish fruit, of the size of a large apple, which is very good; as also is the Water Lemon, P. Laurifolia. Bull Hoof, or Dutchman's Laudanum, P. Murucuja, bears a fruit of the size of a large olive, flesh-coloured when ripe. The syrup and decoction of the plant, or an infusion of the flowers in wine or spirits, is a very effectual and easy narcotic. The root of Wild Passion-Flower, or Contrayerva, is recommended as a counter poison by Hernandez. The flower of all the species is singularly beautiful, and supposed to contain representations of the instruments of our Saviour's passion—whence the name. There are thirty-seven species, mostly natives of the West Indies.

ORDER V. HEXANDRIA.

Sweet-scented Birthwort, or Contrayerva, *Aristolochia.* See Explanation of Plate VI. Fig. 4, where it is inserted by mistake under the name of Dorstenia. It is the Lianne, or Serpent Withe, of the French. The infusion of the root in wine, with orange peel, is stomachic and diuretic.

Virginia Snake Root, *A. Serpentaria*; Spa. Serpentaria de Virginia; Ital. Bistorta; is a native of Virginia and Carolina. The root is a warm diaphoretic, diuretic, and alexipharmic, very useful in low malignant fevers and epidemic diseases; it is given in substance, a few grains to a scruple, or half a drachm to a drachm and upwards, in infusion. A spirituous tincture is a stimulating tonic bitter. It is a good addition to the Peruvian bark, and is useful as a gargle in putrid sore throats. A new species, S. Kennebis, has been found in America. There are twenty-seven species in all.

ORDER IX. POLYANDRIA.

Esculent Arum or Cocos, *Arum Esculentum, vel Colocasia.* N. O. Piperitæ; nat. East and West Indies. This plant is very common, and generally cultivated for food; the root is large, tuberous, and subovate; plant two feet high, see Plate II. Fig. 36. The leaves boiled may be eaten, and are a wholesome and agreeable food, as well as the roots. The bruised leaves are applied to tumours and stings of scorpions; the raw root is acrid, but roasted or boiled becomes mild and well tasted. Another species, called Eddo, or Wild Cocoa, A. Peregrinum, is esculent. A large sort called Tayo is still more acrid, and even when boiled, scratches the throat, as the negroes term it; therefore is given to hogs. Fresh roots of cocos are a maturating and cooling cataplasm.

Indian Kale, or Narrow-leaved Arum. See Explanation of Plate X. Fig. 8, where it is erroneously inserted as a species of Brassica.

Dumb Cane, *Arum Seguinum*, if bitten swells the salivary glands, and benumbs the tongue, so as to prevent speaking for some time. To make an ointment for the dropsy, beat the most juicy in a mortar, and add double the quantity of lard, warm, agitate and strain, and boil it to a due consistence. Rubbed on the swollen parts it will discharge the watery humours. Several sorts of Withes, A. Funiculacea, climb and hang from the trees: the green Withe roasted makes a softening cataplasm. The roots lose their acrimony by drying, and a powder of the dried root of one species is sold by the French at a high price, under the name of Cypress Powder; it is an innocent cosmetic. An electuary or emulsion of the fresh root has been recommended in

rheumatism, from ten grains to a scruple, three or four times a day. The leaves of the Indian Turnip, A. Triphyllum, & Dracontium are employed by the Indians to cure dropsy, the whole body of the patient being covered with the leaves. The roots may be preserved fresh for a year, by burying them in a cellar in sand. The fresh root boiled in milk is useful in consumption, asthma, croup, and hooping-cough, and boiled in lard cures tinea capitis. Fine Sago has been prepared from the roots.

Skunk Cabbage, or Pole Cat Weed, *A. Americanum vel Dracontium Fœtidum.* The first appearance of this singular plant is the flower, and it has no stem. The roots dried and powdered are an excellent medicine in asthma, in doses of forty grains given in the fit; the Indians repeat the dose after the paroxysm is gone off, several mornings, then miss as many, continuing the medicine till the patient is perfectly recovered. It is an antispasmodic, and appears to be efficacious in dropsy; the seeds have more efficacy in asthma than the root. The bear of North America is well acquainted with the cathartic property of the Skunk Cabbage. There are in all thirty-two species. Dracontium Pertusum is a native of the West Indies.

Violet-fruited Pothos. N. O. Piperitæ; nat. Jamaica. A subparasitical plant, creeping on the trunks and roots of trees, about three feet in length, with scattered accuminate leaves, and a pellucid, violet-colour berry, with four seeds. There are in all thirteen species.

CLASS XXI. MONÆCIA.

This class comprises plants of the natural orders Inundatæ, Cucurbitaceæ, Lomentaceæ, Coniferæ, and Calamariæ. It contains a number of plants useful for food, and several valuable timber trees.

ORDER I. MONANDRIA.

For Bread Fruit, *Artocarpus Incisa,* see Explanation of Plate II. Fig. 38, and Explanation of Frontispiece, Fig. 1; and for Jack Fruit, *A. Integrifolia,* see Plate II. Fig. 48, and Explanation of Frontispiece, Fig. 6. There is no other species.

ORDER III. TRIANDRIA.

Indian Corn, *Zea Mays.* N. O. Gramina. This valuable plant grows naturally in the West Indies, and is cultivated to a great extent for food; rising from four to six feet high. See Plate II. Fig. 37. When the seasons

have been remarkably favourable the same land has been known to produce three crops a year; the unripe ears, boiled or roasted, are a very common dish as vegetables, both in the West Indies and North America; it is then called Mutton Corn. It is made into various messes by the Negroes, and is the principal support of poultry, small stock, and horses; the latter are also fond of the green stalk. Unless this grain is quite ripe, and salt used with it, it is apt to breed worms in horses, and the Indians attribute the loss of numbers of their children to the use of unripe Zea Mays. They dress all their dishes, prepared of the Indian Corn, with a strong lixivium, in order to prevent the generation of worms.

Androgynous Tripsacum, *Tripsacum Hermaphroditum*. N. O. Gramina; nat. Jamaica. Culm erect, two feet high; leaves alternate, smooth; a single spike at the top of the stem. This grass is fed upon by all sorts of cattle. There is one other species.

Olyra Paniculata and Pauciflora are both natives of Jamaica.

ORDER III. TRIANDRIA.

Whistling Jack in a Box, or Hernandia, *Hernandia Sonora*. N. O. Tricoccæ. An upright, lofty tree, with an elegant head; flowers of a pale yellow, in panicled racemes. It is frequent in the parish of Portland, Jamaica, and the seeds are oily. There is one other species.

ORDER IV. TETRANDRIA.

Nettle, *Urtica*, Fr. Ortie; Ital. Ortica; Spa. Ortiga. There are several species of this plant, natives of Jamaica. The juice of the leaves, mixed with sugar, milk, and brimstone, drives out and cures psora. There are in all fifty-nine species. A leaf put on the tongue, and pressed on the roof of the mouth, will stop bleeding at the nose. U. Grandiflora, given in strong decoction, is said to be a certain cure for the dropsy.

Mulberry, *Morus*; Fr. Mure; Ital. Gelso; Spa. Moura. N. O. Scabridæ. The leaves of this well-known tree are the principal food of the silk-worm, and the fruit also is wholesome. It is a subject well worthy attention, whether the silk-worm could not be raised to advantage, and silk become a valuable article of commerce, in the West Indies, or some part of North America; as, from the state of the Continent, the supplies from Italy have been so uncertain and scanty, as lately to raise the price of Piedmont to upwards of eighty shillings per lb. and such as was fit for lace to five guineas; and to throw many thousand workmen out of employ. The Paper Mulberry makes paper and cloth.

Fustic, *M. Tinctoria,* Spa. Fustoc; is a tall branching tree, with a fine head, abounding with a slightly glutinous milk; leaves acuminate and serrate; aments solitary; fruit yellowish green, sweet, and eaten by birds. The fruit is astringent and cooling. Ten grains of the salt made from the ashes, with treacle, three or four days successively, gives immediate ease to the gout and rheumatism. It is a fine timber wood, and a beautiful yellow dye, for which purpose it is exported to Europe, and commands a steady, good price. It is a native of Jamaica and Campeachy. Seven species in all of the genus Morus.

Goosefoot, *Amaranthus Polygonoides.* A strong, rank weed, cold and moist, even to poison; with hogs' fat it makes a good ointment against an inflammation.

Colilu, *Amaranthus.* See Explanation of Plate XI. Fig. 8.

Wild Wormwood, or Mugwort, *Parthenium Hysterophorum.* Spa. Artemisa; Ital. Artemisia; N. O. Nucamentaceæ. Grows in great plenty in the low lands of Jamaica, and has the virtue of feverfew; it makes a resolutive bath; and is good as an enema. It is also emenagogue.

ORDER VI. HEXANDRIA.

Water Rice, *Zizania Aquatica.* Fr. Folle Avoine; N. O. Gramina; nat. Canada. Culm two feet high, covered with sheaths of the leaf. This useful grain will grow where the water is two feet deep. It is a nourishing and pleasant food, and would probably thrive in the Lagoons in Jamaica. There is another species, Z. Terrestris, sometimes called the Trumpet Tree.

Guettarda Speciosa and G. Elliptica; N. O. Tricoccæ; are natives of Jamaica, and there are two other species.

ORDER VIII. POLYANDRIA.

Jamaica Walnut, *Juglans Baccata.* Fr. Noyer; Ital. Noce; Spa. Nogal; N. O. Amentaceæ. Grows in St. Johns, with a quadrangular nut; see Explanation of Frontispiece. There are several species, natives of America; as the White Walnut or Hickery Nut, which is sweet and well-tasted, and yields a pleasant oil, and the wood is the principal sort used for firing: the Black Walnut, *J. Nigra,* also bears a nut, the kernel of which is small, but sweet: the Shag-Bark Walnut, *J. Compressa,* also has a small, sweet kernel: as have Black Oblong-fruited Walnut, *J. Nigra Oblonga*; the Butter Nut, *J. Alba Oblonga*; the Sharp-fruited Hickery, *J. Alba Acuminata*; the Pignut Hickery, *J. Alba Minima*; the Balsam Hickery, *J. Alba Odorata*; the Shell-barked Hickery, *J. Alba Ovata*; and the Illinois Hickery, *J.*

Pecan. The Walnuts generally are good timber, and fit for the use of the the cabinet-maker. An extract of the bark of Butter Nut affords a mild and safe cathartic. The bark and shells of the nuts dye a good brown colour, scarcely ever fading.

Lance-leaved Arrowhead, *Sagittaria Lancifolia.* N. O. Tripetaloidæ. Is a native of Jamaica, growing in stagnant waters. The root bruised is vulnerary and good for crabyaws; the juice applied to the breasts is said to clear them of milk.

Shining Begonia, *Begonia Nitida.* N. O. Holeraceæ; nat. Jamaica. Stem almost upright, branched and cylindric; leaves acuminate, four or five inches long; racemes compound, androgynous; the flowers rose-coloured, or of a darker red. B. Acuminata is a native of Jamaica, on the Blue Mountains. There are in all twenty-three species.

Oak, *Quercus.* Fr. Chene; Ital. Quercia; Spa. Roble. There is no species of Oak in the West Indies; but in North America they are numerous; as the Common White Oak, *Quercus Alba*; Barren White Oak, *Q. Alba Minor*; Swamp White Oak, *Q. Alba Palustris*; Common Pensylvanian Black Oak, *Q. Nigra*; Finger-leaved Black Oak; *Q. Nigra Digitata*; Maryland Black Oak, *Q. Nigra Trifida*; Entire-leaved Black Oak, *Q. Nigra Integrifolia*; Dwarf Black Oak, *Q. Nigra Pumila*; the largest Red Oak, *Q. Rubra Maxima*; Water Red Oak, *Q. Rubra Ramosissima*; Upland Red Oak, *Q. Rubra Montana*; Dwarf Barren Oak, *Q. Rubra Nana*; Narrow Willow-leaved Oak, *Q. Phellos Angustifolia*; Broad Willow-leaved Oak, *Q. Phellos Latifolia*; Evergreen Willow-leaved Oak, *Q. Phellos Sempervirens*, (Spa. Encina;) Chesnut-leaved Oak, *Q. Prinus*; Chinquepin Oak, *Q. Prinus Humilis*; also Live Oak, *Q. Virens.* The astringent quality of White Oak bark is well known and it also possesses tonic and antiseptic virtues, and, given in decoction, is, in some cases, a substitute for Peruvian bark. The Black Oak bark, in powder, is efficacious in intermittents, and the bark of Mountain Red Oak has been equally successful with Peruvian bark, in gangrenes. A strong decoction of the Oak barks is a good strengthening bath, particularly serviceable after fevers, and the most beneficial effects, in giving tone and strength to the system, have been experienced from a regular use internally of a decoction of the bark of English Oak. The Indians eat the acorns of the Live Oak, and draw a sweet oil from them. The wood of the White Oak is the most durable timber, and great quantities are imported into the West Indies in the shape of staves for rum puncheons, for which, as well as provision, the planters must pay in rum or specie, as they are not allowed to exchange their sugar or coffee for them; but it is to be hoped that

these restrictions will not continue. During the late embargo, attempts were made to find a substitute for White Oak, but without success, as some woods turned the rum the colour of ink, and through others it leaked out; but substitutes were found for the Red Oak staves, to make coffee tierces and sugar hogsheads. There are twenty-six European species in all.

Beach Tree, *Fagus Sylvatica Atropunicea.* Fr. Hetre; Ital. Faggio; Spa. Haya. Is a hard and close-grained timber. The Chesnut Tree, *Fagus Castanea Dentata,* splits freely for rails, and outlasts the oak; the Dwarf Chesnut or Chinquapin, *Fagus Castanea Pumila,* seldom rises above ten feet high.

Sweet Birch, *Betula Nigra*; Red Birch, *Betula Lenta*; Aspen-leaved Birch, *B. Populifolia*; Dwarf Birch, *B. Humilis*; are natives of North America.

Silver-leaved Alder, *Betula Alnus Glauca*; Ital. Ontano; Spa. Aliso. Sea-side Alder, *B. A. Maritima*; and Common Alder, *B. A. Rubra,* are natives of America. The virtues of Alder are cooling, drying and binding.

Sweet Gum Tree, *Liquidambar Stiracifolia.* N. O. Coniferæ; nat. North America. Rises forty feet high; leaves five-pointed, on long petioles; flowers in spikes, of a yellowish red. A sweet, glutinous substance exudes from the leaves, in dry weather, and renders them clammy. The wood is a fine timber, of a good grain, and beautifully variegated. A fragrant gum trickles from the wounded tree, in drops, smelling like balsam of Tolu, which the Indians chew to preserve their teeth, and they use the bark to cover their huts. It is called by the Indians Ococol, and is useful in quinsies, ulcers, and fistula. They also mix the dried leaves with tobacco, for smoking.

Shrubby Sweet Fern, *Liquidambar Asplenifolia.* A small shrub, about three feet high; leaves resembling spleenwort. An infusion of the leaves has been used as an astringent in diarrhœa. No other species.

ORDER IX. MONADELPHIA.

Pine Tree, *Pinus.* N. O. Coniferæ; Fr. Pin; Ital. Pino; Spa. Pino. The following species are natives of America; Prickly Coned Bastard Pine, *Pinus Echinata*; Marsh Pine, *P. Palustris*; Common Virginia Pine, *P. Rigida*; White Pine, *P. Strobus*; Frankincense Pine, *P. Tæda*; Jersey or Spruce Pine, *P. Virginiana.* P. Palustris and P. Teda produce turpentine, tar, and are cut into boards. P. Rigida and P. Strobus are also cut into boards, and used for spars. I have passed through forests of the former to the extent of many hundred acres, without any other tree intermixed. Balm of Gilead Fir Tree (Pinus Abies Balsamea); Newfoundland Spruce (P. A. Canadensis);

Hemlock Spruce (P. A. Americana): the former produces Spruce, from which Spruce beer is brewed, and the bark of the latter is good for tanning leather, and dyes a red colour; and in rheumatism, a bath, so contrived as for the limb to receive the steam, is useful.

The Red Larch Tree (Pinus Larix Rubra); White Larch (P. L. Alba); and Black Larch (P. L. Nigra); are natives of North America.

Plane Tree, or Button Wood, *Platanus Occidentalis.* Rises sixty or seventy feet high, by river sides in America. The flowers are produced in brown, pendulous balls. It is sawed into boards and used for card-backs.

Climbing Dalechampia, *Dalechampia Scandens.* N. O. Tricoccæ. Is a native of Jamaica. No other species.

American Arbor Vitæ, or White Cedar, *Thuja Occidentalis.* Fr. Cedre Blanc; N. O. Coniferæ; nat. Canada. Rises about forty feet high, with irregular, horizontal branches; the flowers are small and yellowish; the leaves are divided, oblong, and squammose. The fresh leaves, pounded and mixed with lard and spread on linen, gives certain relief to the rheumatism in a short time; a decoction of the leaves is used as a remedy in coughs and intermittent fevers, at Saratoga in New York. The wood is hard timber and useful to the cabinet-makers; the branches have an agreeable scent, and are used all over Canada for brooms. To cure violent wandering pains, they use the cones with four-fifths of polypody, both powdered coarsely and made into a poultice with warm water, and wrapt round the body with a cloth between, to prevent scorching the skin. In all four species.

Wild Rosemary, *Croton Lineare.* Fr. Romarin; Spa. Romero; Ital. Rosamarino. See Plate XI. Fig. 9.

Cascarilla, *Croton Eleutheria.* This tree rises about twenty feet high, and is found on the sea-shore, in Jamaica. It has an agreeable smell, and bitterish, pungent, aromatic taste. A piece put into a tobacco-pipe will perfume a room; the smell is like musk. It is successful in intermittent fever, petechial fevers, cholic, hœmorrhages and dysenteries. The best form is from ten to thirty grains every four or six hours, in powder.

Physic Nuts and Cassada. See Explanation of Plate XI. Figs 10 and 11. Sweet Cassada bears a large berry. The powder of the gland in the stem of Wild Cassada is errhine.

Oil Nut. See Explanation of Plate XII. Fig. 2. An infusion or tincture has been recommended, and the oil is useful externally in swellings.

Yaw Weed, *Stilingia Silvatica,* called also Cock-up-hat, is a cathartic and said to be a specific in syphilis and yaws.

Cobnut, *Omphalea Nucifera vel Triandra.* N. O. Tricoccæ; Fr. Noi-

settier. It is frequently cultivated. The kernels are esculent and sapid; the cotyledons only being emetic and cathartic; the branches and petioles, when broken, pour out a tenacious, watery liquor.

Acalypha Reptans and six other species of the same genus are natives of Jamaica.

Manchineel Tree. See Explanation of Plate XII. Fig. 5.

Sand Box Tree; Fr. Sablier; Spa. Hura. See Ditto, Figs. 3 and 4.

Phyllanthus Nutans is a native of Jamaica.

ORDER SYNGENESIA.

Cerasee, *Momordica Balsamina.* N. O. Cucurbitaceæ. See Explanation of Frontispiece, Figs. 14 and 36. A climbing plant, common in Jamaica, which makes fine arbours; it is famous in Syria for curing wounds. They cut open the unripe fruit and infuse it in sweet oil, exposing it to the sun for some days till it becomes red, it is applied, dropt on cotton, and esteemed next to balsam of Mecca. A decoction of the whole plant is emenagogue, cathartic and good in jaundice, obstructions of the liver, and spleen—dose of the powdered root is a scruple to forty grains with cream of tartar. The distilled water is a good wash in St. Anthony's fire; inwardly given, with loaf sugar, it cools the heat of fevers; the oil from the fruit cures burns, and takes away scars; the juice of the unripe fruit is styptic. There are in all eight species, one of which produces elaterium.

Bottle Gourd, *Cucurbita Lagenaria*; Fr. Gourde. Pumpkin, *C. Pepo*; Squash, *C. Melo Pepo*; Water Melon, *C. Citrullus*; are all to be found in Jamaica. For some of the fruits see Explanation of Frontispiece. The shells of the gourd are used by the Negroes for bottles and cups, holding from one ounce to nine gallons. A decoction of the leaves is useful in enemas with castor oil, and the pulp is good in resolutive poultices for inflammation of the eyes, and other parts; it is bitter and cathartic, and may be used instead of coloquintida. The Warted Gourd, *C. Verrucosa,* is common in America, being sometimes round, flat, and whitish; when half grown, it is boiled to eat as a sauce with meat, as is also the Squash, which is a trailing plant. This fruit is of great use in long voyages, as it will keep fresh and sweet for several months. The seeds of Musk and Water Melons are used in emulsion for strangury.

Musk Melon, *Cucumis Melo*; Spa. Melon Almazaleno; Fr. Melon Musqué. Cucumber, *C. Sativus*; Spa. Melon Alon; Fr. Concombre; are common in Jamaica. See Explanation of Frontispiece. Prickly-fruited Cu-

cumber, *C. Anguria,* is frequently used in soups, and makes an excellent pickle.

Sicyos Laciniata is a native of the West Indies.

CLASS XXII. DIÆCIA.

This class comprises plants of the natural orders of Amentaceæ, Coniferæ, Palmæ, Sarmentaceæ, and Tricoccæ, and contains several medical plants and valuable timber trees.

ORDER I. MONANDRIA.

Bread Nut Tree, *Brosimum Alicastrum.* Nat. Jamaica, and frequent in the parishes of St. Elizabeth and St. James. The leaves and younger branches are a good fodder for cattle, and the fruit boiled or roasted is a wholesome and not unpleasant food. Milk Wood, *B. Spurium,* is common in St. Mary's; the milk soon grows viscous and makes bird-lime. Both sorts are used as timber trees, though not very hard.

ORDER II. DIANDRIA.

Trumpet Tree, *Cecropia Peltata.* N. O. Scabridæ; nat. Jamaica. Rises thirty feet high; the trunk and branches are hollow; the leaves few, large, and lobated; the fruit is something like raspberry; the wood light and dry, and will take fire by attrition; the bark is strong, fibrous and used for cordage; the smaller branches make wind instruments; and the ashes of the tree yield a great quantity of fixed salt, used to granulate sugar. Pigeons feed on the berries. The juicy pith and leaves cure ulcers, and the ashes of the tree are useful in dropsy, with bitter wood infusion, and may be substituted for salt of wormwood. It produces an elastic gum. No other species.

ORDER IV. TETRANDRIA.

Ramoon, *Trophis Americana.* N. O. Calyciflora; nat. Jamaica. A tree twenty feet high; branches nearly upright; leaves oblong, acuminate, and entire. A white milky juice flows from incision, and the leaves and twigs are an agreeable, wholesome fodder for all sorts of cattle. The berries are about the size of large grapes, of a pleasant flavour. No other species.

Candleberry Myrtle, *Myrica Cerifera.* Nat. North America. From the berries a green tallow or wax is procured, from which candles and soap are made in Carolina, and they likewise make sealing-wax from the berries. The root is accounted a specific in the tooth-ache, and a decoc-

tion of the bark is a powerful astringent, useful in dropsical affections succeeding to intermittents and hæmorrhage from the uterus. There are nine species of this genus. It is common by the sea-side.

Whorled Misseltoe, *Viscum Verticillatum*. Spa. Muerdago; N. O. Aggregatæ; nat. Jamaica. Grows upon dog-wood, and is said to be good against the falling sickness, and the juice of the berries mixed with oil to cure pleurisies and cramps, taken inwardly. V. Rubrum and V. Purpureum are natives of Jamaica.

Tooth-ache Tree, *Xanthoxylum Clava Herculis*. Nat. Jamaica. Rises fifteen feet high, having protuberances on the bark terminating in spines; leaves composed of four or five pairs of lanceolate leaflets, with an odd one. It is considered a good timber tree. The bark and capsules are acrid and used for curing the tooth-ache, and a tincture for the cure of rheumatism; the root, finely scraped and applied to the foulest ulcer, will heal it, and answers as an antiseptic in the place of rhubarb or columbo; two spoonfuls of the expressed juice of the young roots give ease in dry belly-ache, and relieve spasmodic symptoms and epilepsy; an infusion of the root is a good collyrium for the eyes, and a tea is good against fish-poison. It is sometimes called Prickly Yellow Wood.

ORDER V. PENTANDRIA.

Majoe Bitter, or Tom Bontein's Bush, *Picramnia Antidesma*. Nat. Jamaica. A small tree, with subdivided branches; leaves pinnate, a foot long or more; racemes terminating, pendulous, many-flowered; berries oblong; cells two-seeded, at first scarlet, afterwards black. It is considered by the Negroes as antisiphylitic, and they also use an infusion of it in the cholic; a wine-glass full of the decoction is stomachic. One other species, P. Pentandra

White Mastic, *Pistacia Lentiscus*, and Black Mastic; Ital. Lentischio; Spa. Lentisco, grow in St. John's. The gum comes out in drops, of the scent of mastic. Black Mastic bears a round, black nut, and Yellow Mastic has a yellow wood, like box, and as durable.

Antidote Cocoon, *Feuillea Scandens*. N. O. Cucurbitaceæ; nat. West Indies. The stem is suffrutescent at bottom, and divided at top, with herbaceous branches, climbing to the tops of trees; leaves petioled, lobate, and heart-shaped; flowers racemed, of a dusky yellow; the fruit is like a green calabash, with a circular black line round it, and two or three little knobs; the inside of the shell is full of flattish beans, close and compressed, having a thin, hard crust, inclosing a very white kernel (See Plate III. Fig. 21) full

of oil and excessively bitter ; they are commonly infused in rum or Madeira wine with orange peel and canella alba, a small quantity of which tincture is stomachic and will cure an incipient dropsy, and a larger dose operates as an emetic and cathartic ; it is taken when there is suspicion of poison, and considered an excellent antidote ; and the oil cures aches and pains the effects of the night air, and also gives a clear, fine light in lamps ; the Negroes burn the seeds for candles, by fastening a number upon a skewer and setting fire to the uppermost, it descends very gradually to the bottom. It is called Nhadhiroba and is common near the Walks. The Negroes call it Sabo and the Spaniards Avilla ; they say the seeds are worth their weight in gold as expellers of poison. F. Trilobata is a native of the East Indies.

ORDER VI. HEXANDRIA.

China Root, *Smilax China*. N. O. Sarmentaceæ ; nat. West Indies. Has strong, taper, climbing stems with spines ; leaves thick and large, ending obtusely and having five longitudinal veins ; flowers in bunches ; berries red ; the root large, twisted, knotty and reddish. The root is nourishing, strengthening and demulcent, and of considerable use in recovery from syphilis and yaws. Prepared in the same manner as arrow root, it produces an impalpable reddish powder, which mixed with boiling water becomes a beautiful, nourishing jelly ; the Indians sometimes use it mixed with fine corn flour and fried in sweet oil. A decoction of the root is a good alterative, in the place of true sarsaparilla. *S. Sarsaparilla* is a species of this genus, and given in powder is considered as a valuable medicine in syphilis, rheumatism, scrofula, and cutaneous complaints ; taken as a ptisan, it should be used freely. There are in all twenty-three species of this genus, many of which are natives of the West Indies.

Rajania Angustifolia is a native of the West Indies.

Yam, *Dioscorea*. See Explanation of Plate XII. Fig. 6. Unripe yams produce lax among Negroes.

ORDER VII. OCTANDRIA.

White Poplar, *Populus Deltoide*. Fr. Peuplier; Ital. Pioppio; Spa. Alamo. Virginian Poplar, *P. Heterophylla* ; Black Poplar, *P. Nigra* ; Aspen Tree, *P. Tremula* ; Tacamahac Tree, *P. Balsamifera* ; and Lance-leaved Balsam Tree, *P. B. Lanceolata* ; are all natives of America. The Lombardy Poplar is planted on each side the Broad Way in New York, a handsome street nearly two miles in length, reaching down to the Atlantic Ocean. They yield a delightful shade in summer. Gum of Tacamahac is said to ease pains and vapours.

ORDER IX. DECANDRIA.

Papaw Tree, *Carica Papaya*. N. O. Tricoccæ; See Plate II. Fig. 50; and for the fruit Explanation of Frontispiece. It abounds with a milky, acrid juice, which is corrosive and will destroy warts and ringworms, and take specks off the eyes. When green the fruit may be pickled like mangoes; the blossoms are odoriferous, and it is supposed by the Negroes to render the air healthy. Dwarf Papaw, *C. Posoposa*, only rises four or five feet in height; the flower is of a rose-colour. Papaws grow to a large size in Yucatan. I have a drawing of one from thence twelve inches long and eight inches thick. There is no other species.

ORDER XII. MONADELPHIA.

Barbadoes Juniper, or Cedar, *Juniperus Barbadensis*; Fr. Cedre; Spa. Cedro; Ital. Cedro; N. O. Coniferæ. Is one of the largest trees in the West Indies, and a fine timber for building ships. The branches spread very wide; the leaves are small and imbricate; berries small and light brown. Bermuda Cedar, *J. Bermudiana*, has acute, pointed leaves, placed by threes and fours round the branches; berries dark red; the wood has a strong odour and a light and close grain, fit for furniture; boxes made of it keep off the cockroaches and insects. There are in all twelve species.

Velvet Leaf. See Explanation of Plate XII. Fig. 7.

Adelia, or Acidoton. N. O. Tricoccæ. Grows in the Savannahs of New Greenwich. A very delicate plant, about four feet high, like a young ebony. There are two other species, also natives of Jamaica.

Red Cedar Tree, *Juniperus Virginiana*, and Red Carolinian Cedar, *J. Caroliniana*, are natives of North America, and used for posts for fencing, &c.

ORDER XIV. SYNGENESIA, or MONADELPHIA TRIANDRIA.

Nutmeg Tree, *Myristica Aromatica*; Fr. Muscad; Ital. Nocemoscada; N. O. Lauri; nat. East Indies. A large tree, with erect branches, and smooth, ash-coloured bark; leaves petioled, entire, shining and nerved; the covering of the fruit or mace is reticulated and fulvous, and if the trunk or branches are wounded, they yield a glutinous, red liquor. It has been introduced into the British East Indies, and also has grown in Jamaica, but not to any extent; but is well worth attention. M. Fatua is a native of Tobago. One other species.

CLASS XXIII. POLYGAMIA.

This class is not considered a natural one. It contains plants of the natural orders Gramina, Scitamineæ, Lomentaceæ, Sepiariæ, Bicornes, Scabridæ, and Hederaceæ, and embraces a number of valuable esculent plants and several of medicinal properties.

ORDER MONŒCIA.

Plantain Tree, *Musa Paradisiaca.* N. O. Scitam neæ; nat. Guinea. See Plate II. Fig. 49, and also Explanation of Frontispiece. This most valuable plant is too well known to need description. It is the principal substitute for bread, and by many preferred. Three dozen plantains will serve a man for one week, and support him better than bread. The spikes of fruit are sometimes so large as to weigh thirty pounds, and it is supposed to have been the grapes brought out of the Promised Land to the Israelites. When the fruit is ripe, the tree decays and many young suckers spring up from the root; but if the trunk be cut down and the juice expressed from it, the fibres make excellent cordage, for the manufacture of which rewards have been offered by the honourable house of Assembly of Jamaica. It can also be made into cloth, and a fermented liquor may be procured from the fruit. It is generally gathered when full grown, (but before it ripens,) peeled, and roasted or boiled; and when ripe, being soft and sweetish, it is made into tarts or sliced and fried with butter. On incision, a quantity of clear water runs from the tree, which is a rough astringent, and will stop fluxes and spitting of blood. The leaves are good to dress blisters, and, when dried, are made into mats or used to stuff mattrasses; the green leaves are useful to clay sugar and make it very white. The Banana Tree, *M. Sapientum,* has stalks marked with purple stripes; the fruit is shorter and rounder, and the pulp more luscious; the juice of the ripe fruit fermented makes a pleasant drink, exceeding cyder, and the marmalade made of it is an excellent pectoral; when roasted they are good in diarrhœa; the leaves are also a good application to burns; the roasted fruit, packed in dry leaves and tight casks, will keep at sea. In the South Sea Islands they put some wood ashes and burnt plants with a little shell-lime into the hole where they plant the Musa, by which the growth is so accelerated as to produce fruit in six or even four months, instead of eighteen months. There are two other species, M. Coccinea and M. Troglodytarum, natives of the East Indies.

Pellitory of the Wall, *Parietaria,* grows on the sides of shady rocks, and is good for strangury, dropsy, and pleurisy.

Guinea Corn, or Indian Millett, *Holcus Sorghum*; Fr. Houque Sorge; N. O. Gramina; nat. India. This well-known plant is cultivated to great extent in Jamaica, rising five or six feet high; leaves two feet long, embracing the stalk; flowers in large panicles at the top. It is a hearty and nourishing food and makes very white flour, which may be made into cakes; it is also used for feeding poultry and pigeons, and for horses, for which latter purpose it should be stript off the stalk in the husk and wetted; the stalks are also good food for cattle; but if the grain be eaten by the Negroes when unripe, it is apt to produce fluxes It yields a spirit which, with spirit of turpentine, resembles gin. Guinea Grass, according to Brown, is a species of Holcus; it bears dry weather remarkably well, and in wet weather may be cut once a fortnight; it soon fattens all kind of stock. See Explanation of Plate V. Fig. 2.

Yellow-flowered Balsam Tree, *Clusia Flava*. N. O. Guttiferæ (Juss.); nat. West Indies. Grows fifteen feet high; branches on every side; leaves thick, round and succulent; flowers red or yellow, succeeded by oval fruit. A thick resinous gum exudes from the trunk or branches, when wounded, which is used as a vulnerary. There are in all six species.

Jamaica Nettle Tree, *Celtis Micrantha*. N. O. Scabridæ; nat. Jamaica; as also are C. Aculeata and C. Lima. In all seven species. The fruit of C. Occidentalis, called American Sugar Nut, is agreeable eating.

Maple Tree, *Acer Saccharinum*; Fr. Erable; Ital. Acero; Spa. Arce; N. O. Trihilatæ; nat. North America. A large tree, fifty feet high, with lobate leaves and winged seeds. From the sap of this, the Scarlet, and Silver-leaved Maple and some others, the back inhabitants of America make sugar in considerable quantities, by boiling the sap. The tree is said to yield more syrup the oftener it is tapped. The Indians have practised the making of sugar from it time out of mind. The roots boiled with oil are said to relieve hardness of the spleen. The Pensylvanian Maple, *A. Pensylvanicum*; the Silver-leaved Maple, *A. Glaucum*; the Ash-leaved, *A. Negundo*; the Striped, *A. Canadense*; and the Scarlet-flowering, *A. Rubrum*, are also natives of America.

Climbing Mimosa, or Coccoon, *Mimosa Scandens*. N. O. Lomentaceæ; nat. West Indies. This plant climbs to the top of the tallest trees; the withs slender, but tough; leaves pinnated, nerved, and shining; tendrils long and bifid; spikes axillary, many-flowered; legume six feet long and five inches wide; the seeds are reddish, orbicular, and compressed, with a hard, polished rind, of which snuff-boxes are made; the kernel is strongly emetic and cathartic, so as to be considered poisonous.

The Mountain or Wild Tamarind Tree, *M. Arborea*; Spa. Tamariz; grows to a considerable size in Jamaica, and is considered an excellent timber wood. See Plate III. Fig. 4. Oppoponax, *M. Juliflora*, grows very common in the low lands. The flower-spikes are oblong and odoriferous; the husks of the pods dye black, and, soaked all night in water, with a little alum mixed, make a black ink that never fades. The tree is good timber; the extract is a strong astringent, the same as succus acacia. M. Catechu produces the valuable astringent gum, called catechu or Japan earth, very useful in fluxes, uterine profluvia, debility of the viscera, and catarrh; the best form is an infusion in warm water with cinnamon.

Acacia, or Cashaw, *M. Tortuosa*; Ital. Acazia; Spa. Acacia. A troublesome, prickly shrub, in the low lands of Jamaica, and almost impossible to eradicate. It continues green in the driest weather. The ripe pods of Cashaw, which drop on the ground, are greedily eaten by horses, cattle, and sheep; the former, if suffered to drink water shortly after, are swelled up and killed in a few hours. There are several species of Mimosa in Jamaica which are sensitive. One species, which grows wild, creeps on the ground, with a small, delicate, purple flower. For Nephritic Tree, see Explanation of Plate IX. Fig. 6, and for Gum Arabic, Explanation of Plate XII. Fig. 8. The Sensitive Plants fold their leaves before rain. There are eighty-five species of Mimosa in all.

Fingrigo, *Pisonia Aculeata*. N. O. Nyctagines (Juss.); nat. Jamaica. A well-known, common plant, with strong, crooked thorns and burry seeds, of which the doves are fond. The wood is sometimes used for hoops. There are five species.

Goose Grass, *Valantia Hypocarpia*. N. O. Stellatæ; nat. Jamaica, in the Mountains. Stem herbaceous, two feet high; branches divaricate; leaves in fours and sessile; flowers yellow. It stops fluxes and heals wounds, and the juice, taken in wine, is good against the bite of a spider, called phalangium. There are nine species.

ORDER II. DIŒCIA.

American Date Plum, or Persimmon, *Diospyros Virginiana*. N. O. Bicornes; nat. America. The fruit, when ripe and mellowed by the frost, is pleasant and wholesome. A beer is brewed from it and a spirit distilled from it equal in taste and flavour to rum. The wood is useful for tools; the Indians make bread of the fruit by mixing with the ripe pulp a portion of flour of mays; the bark is useful in intermittents and ulcerous sore throats. In all nine species.

Jamaica Birch Tree, *Bursera Gummifera*; Fr. Gommier Blanc; Ital. Scopa; Spa. Abedue; nat. Jamaica. A lofty tree, with an upright, smooth trunk; the bark shining and peeling off; branches horizontal; leaves pinnate; flowers small and white, in racemes; capsule red, with a triangular stone, containing a kernel; flowers come out before the leaves. A transparent resin exudes from the bark, which looks like mastic, and, by incision, yields a considerable quantity of fluid having the smell and appearance of turpentine; it may be used for the same purposes. An infusion of the buds and young leaves is recommended in disorders of the breast; the gum is odoriferous and good in syphilis, and also makes a transparent varnish; a decoction of the root is astringent, and a species of it has been supposed to furnish simarouba bark.

Long-spined Gleditschia, *Gleditschia Horrida,* and two other species are natives of North America.

White Ash Tree, *Fraxinus Americana*; Black Ash, *F. Pubescens,* and Elder-leaved Ash, *F. Sambucifolia,* are all natives of North America.

Ginseng, *Panax Quinquefolia*; Spa. Ginseng; N. O. Hederaceæ; nat. of Canada and Chinese Tartary. Has a fleshy, taper root, as large as the finger, jointed, but frequently divided; the stalk rises about a foot and a half, of a deep purple, and divides at the top into three footstalks bearing the leaf, each composed of five spear-shaped leaflets; the flowers are yellow, in a small umbel; the berries red and two-seeded. It was once collected by the Indians in the woods of Canada, and sold by them to the French merchants, who exported the roots to China. The Chinese have long considered it as a sovereign remedy in almost all diseases. The French use the root to cure cough, asthma, consumption and spasms, and as a stomachic it is used in decoction, a drachm of the root boiled a long time in a sufficient quantity of water is a dose; the Indians also prepare a tea of the leaves. There are nine species in all. It should be cultivated in gardens in America, and would probably grow in England.

Fingrigo, *Pisonia Aculeata,* inserted in page 106, belongs to this order.

Water Tupelo Tree, *Nyssa Aquatica.* Rises eighty feet high, near large rivers in Carolina, with large, oval, spear-shaped leaves, and berries like small olives, which are pickled. The timber is light and compact. There are two other American species, *N. Ogeche* and *N. Sylvatica,* or Sour Gum, of a close, curled grain, used for naves of wheels.

ORDER III. TRIÆCIA.

Carob Tree, or St. John's Bread, *Ceratonia Siliqua.* N. O. Lomen-

taceæ. This tree grows to a considerable size ; leaves pinnate and leaflets roundish ; the pod is about four inches long, four-cornered, when dry containing one obovate, lens-shaped, smooth seed, invested with papery lamina or pulp. There is no other species.

Fig Tree, *Ficus Carica*. N. O. Scabridæ ; Fr. Le Figuier ; Ital. Figo ; Spa. Higuera. This well-known tree, common in Jamaica, is called the Spanish Fig. For the fruit see Frontispiece, Fig. 12. The fruit is very delicious and there are several species and varieties, of different shapes and colours. One species is the Sycamore Fig, native of Egypt, and, in the East Indies, there is a wild Fig, called the Banyan Tree, which is very large and spreading ; the branches grow down like withes, striking root in the ground, and spreading over a large extent.* The sap or milk of the young branches of the Common Fig is an antidote against manchineel poison, and the leaves externally applied inflame the part, and are used as rubefacients in rheumatism, numbness, &c. The medical properties of Figs are demulcent and pectoral in coughs ; a decoction is a good gargle in sore throat, and externally applied they maturate swellings and relieve the ear-ache. There are in all fifty-six species of this genus, of which the following are natives of the West Indies : Round-fruited Fig Tree, *F. Virens vel Martinicensis*, bearing a fruit of a scarlet colour, not larger than a hazel nut, the taste sweetish and pleasant ; it is eaten by the wild pigeons : *F. Americana*, bearing a round, yellowish fruit. There are also many varieties of the Spanish Fig, which are extremely well-flavoured, and the cultivation of this tree is well worthy of attention in the West Indies, as it is both a pleasant and wholesome fruit. The rest of the species are mostly natives of the East Indies. A method is practised in the Levant, called caprification, being the introduction of a small fly to puncture the fig before ripe, which causes the trees to produce very large and heavy figs and in much greater quantities. For this object they have two sorts of Fig-trees to manage in most of the islands of the Archipelago, the Wild Fig-tree and the Garden Fig-tree. The Wild Fig-tree bears three sorts of fruit, fornites, cratitires and orni'; in the first, breed small worms, which turn to a peculiar sort of gnats ; these of themselves make their way into the second fruit, and deposit their eggs. The third sort of fruit is again pricked by gnats from these, to lay their eggs also. Neither of these sorts are fit to eat ; but the last, the orni, are carefullly taken to the Garden Fig-trees, and the gnats from the orni piercing the Garden Fig and and conveying with them the farina from the Wild Fig, cause it to ripen very large, juicy, and well-favoured in about forty days, a tree usually producing between 2 and 300 pounds of figs, which being dried in an oven, the eggs of the gnats are killed, and the dried fruit is a principal article of food.

PALMS, PALMÆ.

Areca, or Cabbage Palm; grows in the East and West Indies, near two hundred feet high; the fronds are about fifteen feet long, and numerous; the top is white, sweet and succulent, and eaten boiled as cabbage, and the flower is pickled; the leaves may be written on with a steel pen; the nuts are thin shelled the size of Coffee Berries, and being planted, produce young Cabbage Trees; the pith makes a sort of Sago; and the large white worms bred in it when felled, are reckoned a great delicacy by the French.

Areca Cathecu, the Faufel Nut Palm; rises about thirty feet, with a straight trunk, and fronds; the shell containing the fruit is about the size of a Cocoa Nut; the kernel is astringent, and with the leaves of Betel and Shell Lime, made into packets called Pinang, is used universally in the East Indies; chewing it fastens the teeth and gums, and cools the mouth. It should be introduced into the West Indies. A. montana is a native of St Vincents.

Aavora, a lofty Palm in the West Indies and Africa, bearing a fruit the size of an egg, several of which are inclosed in a large shell; the kernel of the nut is astringent.

Ady, a Palm Tree of St. Thomas, has a thick upright stem, and the head shoots into many branches, which being cut off afford a great quantity of sweet juice, which is fermented into wine; the fruit is called Abanga, of the size and shape of a Lemon, with an esculent kernel; it is cordial and restorative, and yields an oil which is used for food, and to anoint contracted joints.

Borassus Flabelliformis, also called Ampana, rises thirty feet high, having fronds at the top, armed with spines; the leaf part is used for a fan or umbrella; the fruit is the size of a child's head; the sap makes wine and sugar.

Bactris, Major. Grows twenty-five feet high; the trunk is two inches or more in diameter; the leaves six feet long; fruit the size of an egg, with a succulent purple coat, of which wine may be made, the nut is large, with an oblong kernel, and is sold in the markets under the name of Cocorotes. It is called Prickly Palm. There is another species native of the West Indies, B. Minor.

Cocoa Nut, *Cocos nucifera*, *Monœcia Hexandria*. This useful tree is cultivated in both Indies. It is well known, but more attention should be paid to

the planting of it. The kernel is nourishing, and the tree yields wine and arrack, the oil is demulcent, and good externally for pains; for the purpose of procuring toddy and arrack the tree must be kept from bearing fruit; the trunk is useful for gutters and roofs, and the leaves for thatch; the water is cooling and strengthening, and cosmetic.

Cokarito. The trunk is a hard splintery wood of which poisoned arrows are made.

Carimpana. A Palm of the East Indies, the leaves of which are thirty feet long and nine feet broad.

Caranna. A Palm of New Spain, producing the gum of that name, the application of which has extraordinary virtue to relieve pains in the head and joints; it is also vulnerary, and cures hæmorrhoids.

Caryota Urens. Native of the East Indies, called there Schunda pana. *Monœcia Polyandria.* A lofty Palm with a thick trunk, the fronds are produced at the top all round it; the fruit is a succulent berry, with a soft acrid pulp; the sap will yield sugar, and the buds resemble walnuts or almonds. C. Mitis is a beautiful Palm, fifteen feet high, two inches thick, and very regular; the berry is round, smooth and black, but not eatable.

Ceroxylon Andicoli, or Wax Palm. On the trunk between the rings it is covered one fifth of an inch with two parts resin, and one part wax.

Chamærops Humilis. Dwarf Fan Palm, *Polygamia Diœcia.* This has no stem, but the foot stalks of the leaves rise immediately from the root, and spread open like a fan; it is commonly used in the West Indies for thatching, and for making besoms and baskets; the pith next the root is sweetish and esculent; C. excelsa is lofty; C. Cochinchinensis eight feet high.

Cycas Revoluta, Sago Tree. The trunk is round and branched, about six feet in height; the fronds are furnished with spines; fruit an ovate flat red drupe, one inch and a half long; it is cultivated in China for its beauty; and in Japan, Sago is made from the pith of the trunk; it is very nutritious, and with milk of almonds is slightly astringent. C. Circinalis is a native of China.

Corypha Umbraculifera. Great Fan Palm, called Codda Panna and Talipot. This Palm is very large and straight, as tall as a ship's mast; the leaves are so large and broad as to cover fifteen or twenty men, but will fold close to the size of a man's arm; the blossoms are yellow and beautiful, and smell very fragrant; the fruit is round and hard, the size of a cherry; the trunk within is pith only, this they beat in a mortar to flour, and make

cakes of it, which taste like white bread; the leaves serve for tents and covering houses, and for writing on with an iron pen, they may afterwards be made into books. There is another species C. Minor, native of Carolina.

Chamærops Palmetto, and three other species, are natives of North America.

Date Palm, *Phœnix dactylifera. Diœcia Hexandria.* This valuable Palm grows in great abundance in Egypt, and on the coast of Barbary, and has grown in the West Indies; it rises to a great height, the stems are knotted, and the center filled with pith; the fronds are eight feet long, the fruit a berry of a delicious farinaceous taste, having a hard oblong stone, with a deep furrow running longitudinally. The Date makes a great part of the diet of many families in Arabia, Egypt and Persia. The stones are ground for camels, and beads turned and formed of them. The date is pectoral, and given in red wine, good in the piles. The leaves are used for baskets, &c. and the sap makes arrack. There is one other species two feet high, P. Farinifera.

Elate Sylvestris, is a native of the East Indies,

Elæis Guineensis, or *Abbay Palm.* Trunk erect, irregular, fronds sheathing, pinnate fifteen feet long, and spinous; spadix axillary and erect, divided into about fifty branchlets compressed; the fruit the size of a pigeon's egg, yellow striped with brown, the pulp fibrous and full of butyraceous oil. The Negroes boil them, and eat the pulp; expressed they yield an oil, and the trunk produces wine; the leaves are wrought into mats. The French call it Palmier.

Ground Rattan, *Raphis Flabelliformis*, is a native of China.

Maccaw Palm, *Cocos butyracea. Monœcia Hexandria.* This Palm grows in Africa and South America; the pulp of the nut is very mucilaginous, and used to fatten hogs; an oil or butter prepared from it is in constant use among the Indians in their food: the fresh oil is demulcent and discutient, and good externally for pains, cramps and chilblains. The great Maccaw Tree, C. Aculeata, has a large trunk rising thirty feet high, thick set with prickles, bearing a fruit the size of a crab, with a sweet eatable kernel; the husks are full of oil. Palm oil has been used for anointing the body all over the East, from the most ancient times.

Manicoli. rises fifty feet high, with a stem scarce nine inches in diameter

Mobile Palm. Grows on the river Mobile, in North America; has no stem, the leaves regularly spreading and flabelliform; in the center there is a receptacle the size of a sugar loaf, containing a vast number of drupes as

large as plumbs, covered thickly with a sweet fibrous farinaceous coating, which is a delicious and nourishing food.

Prickly Pole, *Cocos Guineensis. Monœcia Hexandria.* Rises about twelve feet high, with an erect trunk, about an inch in diameter, armed with prickles; the fruit the size of a cherry, of a dark purple, eatable, but not pleasant; the wild hogs feed upon them; their acid juice makes a sort of wine; light black, shining jointed canes are made of the trunk, called by the French Cannes de Tobago; the bark is elastic and hard like whalebone, fit for bows and ramrods.

Troolies. The leaves lie on the ground, thirty feet long by three feet broad, and will last as thatch some years.

Thrinax Parviflora. *Palmetto Royal. Hexandria Monogynia.* This Palm rises from ten to twenty feet high, swelling at the base, without prickles, fronds terminating, two feet long; berry roundish, the size of a small pea; the leaves are used for thatch. It is a native of Jamaica.

Zamia, *Aculeata*, or Spanish Dagger, grows about eight feet high, with stiff sharp-pointed leaves. There are four other species.

CLASS XXIV. CRYPTOGAMIA.

ORDER I. FERNS. FILICES.

Achrosticum, *Rufum.* Rises eighteen inches high, stipe round, leafy almost from the root, pinnas about an inch from each other, on a small pedestal; this, with about fifteen other species are natives of Jamaica: there are in all forty-four species.

Brake, *Pteris.* Indian Brake grows very common in America, in moist places; has a whitish stalk and large leaf. P. Caudata and Atropurpurea are both natives of America.

Blechnum, *Occidentale.* Stalk rises simple about fifteen inches, leaves long and narrow; pinnas many, with two small auricles at the base; native of the West Indies, and there are five other species mostly natives of America.

Cænopteris, *Rhizophylla*, is a native of Dominica; has obovate pinnules on short petioles, and forked brown glossy threads.

Dicksonia, *Arborescens.* Tree Dicksonia, is a native of St Helena, and D. Culcita, native of Madeira, called Feila Brom, and supposed to be the same as the Baromets or Scythian lamb. The inhabitants make pillows and cushions of the roots.

Female Fern, *Pteris Grandifolia.* Nat. Jamaica, rising with a simple frond three feet high; the fructification is an uninterrupted marginal line. There are thirty-four species in all, of which fifteen are natives of the West Indies.

Harts Tongue, (see Spleen Wort) *Asplenium.* This genus has the fructification in right lines along the under disk of the frond. There are forty-seven species in all, of which about fifteen are natives of Jamaica.

Horse Tail, *Equisetum.* Fr. *Prèle.* This genus has the fructifications disposed into a long ovate oblong spike. It is styptic, and heals ulcers and excoriations. There are seven species.

Hemionitis, *Mule Fern.* In this genus the capsules are digested into lines meeting together, either intersecting each other, or branched. There are in all eight species, of which five are natives of Jamaica; the roots of one species are esculent.

Isoetes. The small flowers form an anther, and the female a double-celled capsule within the base of the leaf. It is called Quill Wort.

Lichen. There are upwards of two hundred species of this genus, beside several varieties; many of them are of considerable use in dying various colours. Iceland Moss, L. Islandicus, is very mucilaginous and pectoral, and highly useful in consumptive complaints, and Dysentery; boiled in milk over a slow fire, exactly one quarter of an hour, it is also highly nutritious.

Lonchitis. This genus has the capsules disposed in lunulated lines under the sinuses of the frond There are five species natives of the West Indies.

Maiden Hair, *Adiantum Microphyllum*; and twelve other species are natives of Jamaica. It grows among the rocks, in America also. The species with black shining stalks makes a good syrup for coughs; it is likewise an useful sudorific in Pleurisies, an infusion being made with boiling water, and sweetened with liquorice root.

Marattia, *Alata.* This has oval capsules gaping longitudinally at the top, with cells on each side; it has a bipinnate frond and solitary capsules; and is a native of Jamaica. There are two other species.

Meniscium, *Reticulatum.* This genus has capsules heaped in crescents between the veins of the frond. It is a native of the West Indies. There is no other species.

Marsilea. There are three species of this genus in stagnant waters, nearly related to Jungermannia.

Osmunds. *Osmunda.* This genus has the capsules distinct, disposed in a raceme, or heaped on the back of the division of the frond, sessile, subglobular, opening transversely, without any ring, seeds numerous and extremely small. There are twenty-seven species.

Onoclea. This genus has capsules under the pinnules of the frond, resembling Pericarps. O. Sensibilis, is so very tender that it withers on being touched. One other species.

Ophioglossum, *Adders Tongue.* This genus has numerous capsules, connected into a spike, subglobular, when ripe opening transversely without an elastic ring. There are nine species, of which the O. reticulatum and O. Scandens are natives of Jamaica.

Polypody, *Polypodium*, or Male Fern. Two or three drachms of the root of this genus gathered in Autumn, and reduced to a very fine powder, taken in four or six ounces of water distilled from Fern, was the celebrated remedy of Madam Noufer, against the Tænia, or Tape Worm. She obtained a great price from the King of France for the secret. The ashes of this Fern are also used instead of soap. An oil is distilled from the ashes with lime, which is used with the oil of stone to varnish Porcelain. P. aureum and effusum are natives of Jamaica.

Pilularia. This genus has a globose receptacle having four cells and four valves, with numerous anthers and globose germs. It is found in shallow ponds, and called Pill Wort or Pepper Grass.

Spleen Wort, *Asplenium.* Also called Ceterach, Is said to be diuretic and emenagogue; useful in Jaundices and obstructions of the Spleen.

Shield Fern, *Aspidium patens*, is a native of Jamaica

Trichomanes, *Membranaceum.* This genus, has the fructifications inserted into the margin, separate involucres, urn shaped and divided, opening outwards, columns extending beyond like stiles. These Ferns have a black flat stalk, covered with hair, and small roundish membranaceous semitransparent leaves. There are in all twenty-seven species, of which fifteen are natives of Jamaica. It is called Hare's-foot Fern.

ORDER II. MOSSES. MUSCI.

Bryum. This genus is distinguished by a capsule covered with a lid, and over that a smooth veil; the thread supporting the fructification grows from a tubercle at the end of the stem and branches. There are sixty-five species besides many varieties.

Buxbaumia. There are two species of this genus: B. Aphylla, and B. Foliosa.

Fontinalis. A Moss, the capsules of which are sessile, with short pedicles, covered with calyptræ, and included besides in a membranous husk. There are five species.

Hypnum. This genus has a peduncle from a lateral tubercle fenced with scales, capsule outer fringed, with sixteen teeth. Seventy species in all.

Lycopodium. Has the fructifications in the axils of the scales, digested into oblong imbricate spikes, or of the leaves themselves sessile, capsule kidney-shaped, two valved, elastic, many seeded, no veil. Twenty-nine species. L. Nudum is a native of the West Indies.

Mnium. Has a capsule with a lid calyptre smooth, bristle from a terminating tubercle; the male flowers discoid; if the fruit stalk of the M. Hygrometricum be moistened at the bottom, the head makes three or four turns, and if the head be moistened it turns the contrary way. Twenty-four species.

Neckera. Has an oblong capsule, double peristome, the outer with sixteen teeth, the inner with sixteen cilias alternate with the teeth, males gemmaceous on different plants.

Octoblepharis. The capsule ovate, peristome simple, eight teeth, triangular, males subdiscoid, axillary and on the same plant.

Porella. Has an oblong capsule with many lateral pores, no calyptre. It is a native of Pensylvania, and ascertained to be a species of the jungermannia.

Polytrichum, *Golden Maiden Hair*, with simple stalks, and the capsules covered with calyptræ. It was formerly praised for its virtues in making the hair grow thick.

Phascum. Has an ovate capsule, subsessile, veiled, never opening, males subdiscoid, terminating. Eleven species.

Rocella. *Archil.* A white moss, imported in large quantities for dyers' use; it dyes a beautiful violet, and is employed to give a bloom to other colours.

Sphagnum. This genus has the male flower club shaped, anthers flat, capsule on the same plant, sessile, lidded, without an entire veil, mouth smooth.

Splachnum. Has a cylindrical capsule, veil and receptacle, very large fringe with eight teeth, male a circular terminating bud on a different plant Twelve species.

ORDER III. FLAGS. ALGÆ.

Anthoceros. A genus but little known.

Blasia. There is one species, B. Pusila, which grows on the side of ditches and moist shady places.

Byssus. There are nineteen species of this genus; they appear in the form of threads on rotten wood and in damp cellars; the sort common on wine casks, like a mouse's skin, is an excellent styptic.

Badiaga. A spungy plant common in the shops in Moscow, the powder of which takes away the livid marks of blows and bruises in a night's time; it is always found under water, and is considered as a species of spunge.

Conferva. A species of Water Moss covering the surfaces of pools; one sort of a close texture is poisonous.

Fucus. This, with the spawn adhering to it in the lakes, cures Burns and Inflammations.

Jungermannia. Produces male and female flowers often on the same; the male flower stands on a long pedicle; the female part of fructification consists only of seeds. Forty-eight species.

Kelp. Thick-leaved Sea Wrack. The ashes of this flag are used in the Glass and Allum Works.

Ligula. A Fucus growing on places always covered by the sea, composed of solid long cords or strings.

Marchantia. Has a salver-shaped calix, numerous anthers, imbedded in the male, calix peltate, flowering on the under side, capsules opening at

the top, seeds fixed to elastic fibres. Seven species: these have been raised from seeds by Mr. J. Lindsey, Surgeon in Jamaica.

Riccia. This genus has the male flowers sessile on the surface of the frond, anther conical, truncate, opening at the top. Female flowers, germ terminate, style filiform, stigma simple, capsule sessile, globular, at the apex of the leaf, seeds numerous and hemispherical. R. reticulata is a native of Jamaica; and there are five other species.

Sargassa, *Fucus Natans*. This grows upon rocks on the shores of Jamaica, and is sometimes found at open sea; also called Sea Lentils. It is of a dark brown colour, and if eaten, it will cure Dysuria.

Sea Moss, is remarkably fine and soft.

Sea Mallow. Grows on the rocks at considerable depth under water, about two inches in height, with leaves resembling mallows on pedicles.

Tremella, *Nostoc*. Has a uniform membranaceous gelatinous pellucid substance; not uncommon after rain in grass fields, and on gravel walks; vulgarly supposed to be the remains of a meteor or fallen star. It is generally of an olive colour, and the seeds lie in the form of little strings of beads coiled up within the folds of the plant. There are three other species.

Targionia, *Hypophylla*, Calyx two valved, and compressed, containing a globular capsule, many seeded; it is not larger than the finger nail, green, opake, with white rising tops, afterwards dark purple, the fructification is at the end on the under side, and the fruit full of a yellow pulp.

Ulva. The fructifications are small globules, dispersed through a pellucid membranaceous or gelatinous substance; they are generally maritime plants. U. lactuca is well known by the name of Oyster Green; it is thin and pellucid; its virtues are cooling, and it is said to be good against inflamed Gout. Called Slanke in the West Indies. One species, U. Palmata, is eaten boiled. There are twenty-six species.

White Coral. It is found in great abundance on the rocky shores of Jamaica; also on the shores of Ceylon, in the East Indies. When burnt it makes excellent and very white lime for building.

ORDER IV. FUNGUSES, FUNGI.

Agaricus. Mushroom. In all fifty-five species. The common Champignon, Chantarelle, Orange, Brown, and Violet, are the sorts supposed innocent. They should always be picked from a dry soil.

Boletus. A horizontal Fungus, porous or lamellated underneath. There are about thirty species. From B. Igniarius is prepared the Amadou, used for tinder; and the Agaric, for stopping bleeding after amputations.

Clathrus. This fungus is always of a roundish figure, having a reticulated and hollowed body. Eleven species. They are chiefly found on rotten wood.

Clavaria. This fungus grows perpendicularly, having a simple and uniform surface, generally oblong and club-shaped; the seeds are emitted from every part of its surface. This genus is the lowest in the scale of vegetation.

Helvella. This species of fungus is smooth, both on the under and upper side, having no lamellæ, pores, or fibres in any part.

Hydnum. A horizontal fungus, growing by the side of trees, having no pedicle; it is beset with pointed fibres underneath. Eleven species, some of which are found in Jamaica.

Lycoperdon. This fungus has a radiated bottom like a star, in the center of which grows a round ball full of impalpable seeds.

Mucor, has the seeds naked, or in transparent capsules or vesicles at the end of the stem, they appear in the form of mouldiness, and form one of the last genera of the lowest order of vegetation. Seventeen species.

Octospora, Is hemispheric and bell-shaped, with the several membranes distinct, having eight seeds in them.

Peziza. Is bell-shaped, sessile, concealing lens-shaped, seed-bearing bodies, plant concave, seeds discharged by jerks from the upper surface. Forty species.

Phallus, *Morell.* Even on the under surface, reticulated on the upper, with seeds in the cells; P. esculentus, is eaten. P. impuricus, or Stink Horn, has an intolerable fœtid smell. There is one other species, P. Caninus.

Pepper Mushrooms, are of the same shape as the common Mushrooms, solid and full of an acrid milky juice, as hot as Pepper.

Sphæria. Fructifications spherical, opening at the top, when young filled with jelly; when old, with a blackish powder, mostly without a stem. They grow on the bark or wood of other plants; the capsules are often immersed, so that only their orifices are visible. Twenty-seven species.

Sphærocarpus. This genus has the calix ventricose and undivided, and the seeds numerous, collected into a globe.

Truffle, *Tuber Cibarium.* A genus separated from the lycoperdons, being more solid, and not becoming powdery. It is found under ground at the depth of four or five inches, roundish, whitish and rugged, containing a brown powder in the center. It has no root nor stem. Dogs are taught to hunt it, and pigs find it by instinct. It is said that it may be propagated by the eyes like potatoes. It is considered a great delicacy by some.

Mushrooms as an article of food should be totally avoided: some of the sorts known to be hurtful, are extremely similar to the innocent ones, and even these when old are deleterious.

APPENDIX.

The following List contains Plants which are but imperfectly known, and Additions to the Virtues and Qualities of some mentioned before, and some not mentioned in the Body of the Work.

HERBS.

Asmart. (See Page 61.) Add.—The bruised leaves are good for stings and inflammations.

Aclowa. A species of Colutea, used in Guinea to cure the itch.

Aconcroba. A plant of Guinea with stiff dusky leaves, an infusion of which is given in the Small Pock.

Aloe. (See Page 56.) Add.—The distilled water from the fresh plant is used in Egypt as a cure for jaundice.

Ava-ava. A plant in Otaheite, from the leaves of which an intoxicating juice is prepared, which is drunk very freely by the chiefs.

Artichoke, *Cynara*, Class 19, Ord. 1. Grows in cool situations in Jamaica, and in America.

Acicoca. A Herb that grows in Peru, and is sometimes used for Paraguay Tea, of which it is said to have all the properties.

Afoba. A papilionaceous hairy plant of Guinea, which is used pounded and mixed with oil to cure Psora and Tinea capitis.

Afto. A kind of woolly hedge mustard of the coast of Guinea, which they grind to powder and take as snuff to cure the head-ache.

Amea. The name given by the natives of Guinea to the plant called Pajomirioba, in Jamaica; the leaves dried and powdered, and snuffed up, stop bleeding at the nose.

Aninga. This root grows in the Carribbee Islands, the decoction of it is used to refine and clarify sugar.

Apobee. A species of Corn Marygold; a decoction of which is drunk in Small Pock and eruptive Fevers.

Asarabacca. (See Page 68.) Add.—It is said to be a powerful emenagogue, and has also been recommended in the Gout, and other chronic disorders.

Attrow. A species of Kali, in Guinea, a decoction of the leaves of which is used as a fomentation for swellings and inflammations.

Attrummaphock. A species of Colutea; a decoction of which is given by the natives of Guinea in Syphilis; the fresh juice is errhine.

Avaramo-temo. A Siliquose Tree, the bark of which is astringent, and cures inveterate Ulcers, and even Cancers, and it is also a good material for an aromatic bath.

Avalanda. A name given by the Spaniards to the roots of the sweet cyperus; they are esculent and delicious like a filbert.

Bears Whortle-berry, *Arbutus Uva ursi*, Class 10, Ord. 2. A herb common to America and England; it is highly astringent, and used in Russia for tanning. It is a good medicine in old Gonorrhœa; but its great virtues are as a medicine in Nephritis, arising from Gout, and Affections of the Bladder. The dose in powder is from a scruple to a drachm, twice or thrice a day. It is called in New Jersey, Wild Cranberry.

Black Snake Root *Actæa*. (See Page 74.) Add.—A decoction of the plant made quite hot, and the limb steamed over it, the heat being kept up by hot stones, is an Indian cure for the Rheumatism.

Broad-leaved Moorwort, *Andromeda Mariana*, Class 10, Ord 1. Called Wicke. Is a cure for the Ground or Toe Itch, common in the southern states of America.

Blue Flag, *Iris*, Class 3, Ord 1. Common in swamps in America. The roots of some species, as I. versicolor, and verna, are active cathartics.

Burdock, *Arctium*, Class 19, Ord. 1. The Root makes an excellent ointment for the Itch and Tinea Capitis; and boiled with milk, cleanses the blood. The seeds in tincture are given for a cough; and are also said to be good in fevers.

Broad Plantain, *Plantago*, Class 4. Ord. 1. (See Page 40.) The leaves rise immediately from the root, the same as narrow plantain, but broader, ovate, and ending in a blunt point. It has considerable virtues against poison, and the bite of the Rattle Snake.

Butter Cup, *Ranunculus bulbosus*, Class 13, Ord. 7. Has a small yellow flower, and grows common in meadows. It blisters with a more durable irritation than any other epispastic.

Biting Asmart, *Polygonum Hydropiper*. Salivates horses, and makes them foam at the mouth.

Beet, *Beta*, Class 5. Ord. 2. This is a common and wholesome vegetable for the table in America. It yields sugar in some considerable quantity. The juice is errhine.

Buck Wheat, *Polygonum Fagopyrum*, Class 8, Ord. 3. Is good for horses and all kind of stock. It is said to improve land. Cakes are made of its flour in New York, called Waffles.

Bunbunny. A plant common in Guinea; a decoction of the leaves of which is used as an emetic.

Baccofoe, or Crucifix Plant A variety of the Banana, nat. of Guinea, yields a fruit of an excellent flavour: when cut across there is a mark resembling a crucifix: for which reason the Spaniards and Portugueze will never use a knife to those fruits.

Buckbean, *Menyanthes*, Class 5, Ord. 1. Is said to be a cure for the rot in sheep.

Bugloss, *Anchusa*, Class 5, Ord. 1. The root boiled in oil is astringent. The ancients used it as a cosmetic.

Buckbean, *Trifolium Palustre*. A decoction is said to be good in Scorbutic cases and Chronical Distempers; it is also sometimes substituted for Hops in brewing.

Carapullo. Grows like a tuft of Grass with an ear. The decoction makes those delirious who drink it. The Indians make use of it to discover what trade their sons shall follow, by placing before them the implements of several trades, (during the delirium) and observing their choice.

Canker Root. Two sorts in America, yellow and white : both cure the canker in the mouth.

Clowns Heal-all. A green salve prepared in America from the leaves of this plant, has the effect of relaxing the muscles to set the limbs in dislocations and fractures; but bleeding till faintness supervenes, or a strong emetic has been found to answer the same purpose.

Catnep, *Nepeta.* A decoction is a common and excellent remedy in colds and fevers; as also Boneset, *Eupatorium Perfoliatum*, called by the Indians, Ague Weed ; the latter if drunk warm is emetic; it is also considered good in Consumptions and Pleurisy. The leaves are thick and downy, and the stalk goes through them. It is common in New York.

Checker Berry, or Partridge Berry. Grows on a plant six inches high, and is of the size of a pea, of a crimson colour ; an infusion is diuretic, and a decoction is drunk as bitters.

Cohush. An Indian remedy in Menstrual Obstructions.

Corn Salad, or Fattecous. When young, is an excellent salad, common in America.

Canada Thistle. A noxious weed in loamy land, about the northern part of the State of New York. It grows rapidly in large beds, and is difficult to be got rid of, even by twice ploughing and mowing. When dry, cattle will eat it by choice, but not when green.

Cranes Bill, *Geranium*, Class 16, Ord. 2. A species is made use of to cure the Piles.

Cowslip, *Primula*, Class 5, Ord. 1. Grows in America in great variety and beauty.

Carrot, *Daucus Carota*, Class 5, Ord. 2. This well-known root yields a good spirit.

Caa'-apia. A plant of Brazil; astringent and emetic in the dose of a drachm; the juice of the plant internally, and the bruised plant externally, is used for wounds made by poisoned arrows, and the bites of serpents.

Caamini. A name given by the Spaniards to the finest sort of Paraguay Tea, which grows in the mountains of Maracaya.

Cassada. (See Explanation of Plate 11.) Add.—It is best propagated like the cane, by cuttings of the stalk with a sharp axe between the joints (care being taken not to bruise the eye or bud). It is useful to plant in Cacao walks, to defend the young plants from the wind and sun.

Cabuia. A South American species of Hemp, growing in Panama, of which thread, fishing lines and rope are made; the fibres are so tough as to saw iron.

Cayang. A species of Cytisus ; much used for food in the East Indies, called there Kissery.

Cocculus Indicus. A poisonous narcotic berry, which will intoxicate fish.

Concou. A herb of Guinea, the bruised leaves of which, mixt with oil, and applied as a cataplasm, destroys the Guinea worm.

Cuttofoe. A species of Rest Harrow, grows in great abundance on the banks of the Rio Cobre, near Spanish Town ; a strong decoction is esteemed in Guinea as a cure for the cholic.

Celery-leaved Crowfoot, *Ranunculus Sceleratus*, Class 13, Ord. 7. When bruised and applied it raises a blister.

Cornus Sericea. A Tincture of the bark is useful in the latter stage of Diarrhœa when it is unaccompanied with fever.

Dwarf Pimperneli, *Anagallis Pumila*, Class 5, Ord. 1, is a native of Jamaica; it opens its flowers about eight in the morning, and closes them about three p. m.; but if it be likely to be rainy, it does not open; or if open, closes on the approach of rain. It is also vulnerary, and good against bites and stings.

Dogs Mercury, *Mercurialis perennis*, Class 22, Ord. 8. The leaves are ovated and pointed, and the stalk furnished with numerous tendrils; it dyes blue, and the fibres a fine red.

Elecampane, *Inula Helenium*, Class 19, Ord. 2. A tea of the leaves is excellent in coughs, with Horehound.

Erowa. A Nettle of Otaheite; the fibres of which make fishing lines stronger than silk lines of twice the thickness; also used for cordage and cloth.

Flax, *Linum*, Class 5, Ord. 5, is much cultivated in America; has a blue blossom, and flat brown seed, without a furrow. A wild species is called False Flax; with no fibre; has yellow seed round and long, with a furrow.

Flowering Rush, *Butomus*, Class 9, Ord. 3. Grows in America in swamps and standing waters, has long linear leaves and small yellow flowers.

Fire Weed. Springs up and covers the ground after land has been burnt off in America.

Fenugreek, *Trigonella*, Class 17, Ord. 3, is much cultivated in India. The seeds are emollient, and contain oil blended with resin and mucilage.

Gland Flax, Nuil or Navilu, will cause women's milk to come in great plenty.

Golden Thread. This Root is found in New York, and good for a sore, and cankered mouth.

Ginten Root. An Indian cure for Dysentery and Pleurisy. (Not Gentian.)

Grasses most common in America for Meadows, are Spear Grass, White Clover, Red Clover, Timothy, Fox Tail, Red Top; for Salt Hay, Black Grass, Blue Grass, Salt Grass, Rye or Burden Grass, and Ribbon Grass.

Grass Pink. A small low plant with linear grass-like leaves, and a five-petalled red flower.

Garlic, *Allium*. (See Page 55.) Add.—A Clove of Garlic is carried by the German physicians in their mouths, when they visit patients in malignant Fevers.

Harillo. A herb having a small leaf and flower like Broom, which is vulnerary.

House Leek, or Live for Ever, *Sempervivum*, Class 11, Ord. 6, is cooling; the juice of the leaves with Spirits of Wine, removes Blotches, Redness and Inflammations of the Skin.

Hungry Root, or Wild Spikenard Bush, makes a tonic and bitter infusion.

Heart's Ease, *Viola tricolor*, Class 5, Ord. 1. This beautiful little flower is common in America, and said to possess nephritic virtues.

Hops, *Humulus*, Class 22, Ord. 4. This is cultivated in America. The fibres of the stalk will make cordage and cloth.

Horse Radish, *Cochlearia*, Class 15, Ord, 1. This well-known plant is wholesome, stimulant and antiseptic.

Hemp, *Cannabis*, Class 22, Ord 5. The powder of the seeds is made into Boluses, by the Egyptians called Assis, and by the Persians, Bangue, used as cordials; an emulsion or decoction of them is useful in Jaundice; the seed is good for birds and poultry, but in small quantities.

Heath, *Erica*, Class 8, Ord. 1. The decoction is diuretic, and a fomentation of its leaves and flowers, or a vapour bath, eases the gout; a warm decoction taken thirty days successively, is said to be effectual for breaking and expelling Calculi.

Henbane, *Hyoscyamus*, Class 5, Ord. 1. The seed burnt, and the vapour conveyed to an aching tooth through a funnel, cures the Tooth-Ache.

Hyssop, *Hyssopus*, Class 14, Ord. 1. A cataplasm of the bruised plant cures contusions, and removes pain and blackness.

Jamaica Honey-Suckle. The oil of the flowers is good against numbness and cramp.

Indigo. (See Explanation of Plate 11.) Add.—When cultivated it is very liable to a blight, like the Cotton.

Issong. The negro name for the Black Pea with a white spot; called by the people of Malabar, Ulinga; and in Jamaica, Parsley. A strong decoction, with which the head is to be washed, is a cure for all kinds of Head-Ache.

Ixia, Class 3, Ord. 1. The roots are greatly esteemed at the Cape of Good Hope, as food.

Lacayota. An ever-green climbing herbaceous plant, which makes fine arbours.

Loose Strife, *Lysimachia*, Class 5, Ord. 1. The virtues of this plant are vulnerary and styptic. The distilled water is cosmetic, and the smoke of the plant drives away Musquitoes.

Lucimo. The South-American name for the Mammee Apple. (See Explanation of Plate 8.)

Lemon Grass, makes a very pleasant diaphoretic and cooling drink in fevers.

Live Oat. The three long awns being slightly wetted, by their alternate contraction and dilatation, it will creep or move a considerable distance; the awns will also form hygrometers.

Lead Wort. (See Page 42.) Add.—This plant is of a hot and caustic nature, and used for the cure of the Tooth-Ache.

Lily of the Valley, *Convallaria*, Class 6, Ord. 1. The flowers are stimulatory and cephalic.

Linkio. A water plant in China; the fruit of which is triangular and pyramidical; the inside is white and tastes like a chesnut.

Money Wort, *Lysimachia nummularia*, Class 5, Ord. 1, is vulnerary and good in Fluxes.

Mullein, *Verbascum*, Class 5, Ord. 1, has ovate sessile woolly leaves, and yellow flowers; is vulnerary internally and externally used; is good for poultices, and a tea diaphoretic in fevers.

Marsh Rosemary, *Statice*, Class 5, Ord. 5.. The roots are powerfully astringent; a decoction of them cures cankers and ulcerated sore throat, apthæ and scarlatina anginosa. It is a most powerful antiseptic.

Motherwort, *Leonurus*, Class 14, Ord. 17. An infusion or decoction is used to remove Obstructions of the Viscera, and in Spasmodic and Hysterical Affections. The leaves are hairy and many pointed.

May Weed, *Anthemis*, Class 19, Ord. 2. A tea is diaphoretic in Colds and Fevers.

Milk Weed. Bears a pod containing a fine silky down, used for hats in America.

Mandrake Apple. Has a very large leaf deeply lobed into many segments. The apple is about the size of a lime. It grows in the northern part of the state of New York.

Malabar Nut, Class 2, Ord. 1. This is the fruit of the Justicia adhadota.

Millett, *Milium*, Class 3, Ord. 2. This is reckoned the most fertile of all grain, and as a useful article for food, deserves cultivation in the West Indies.

Maple, *Acer*. (See Page 105.) Add.—The juice distilled is superior to arrack; unboiled it is, like Cane juice, pectoral and antiscorbutic. If the tree be bored with augers, it will yield juice for fifty years.

Narrow Plantain, *Plantago*, Class 4, Ord. 1. The leaf is long and narrow, with ribs running longitudinally, and divided at the top into two points. Called also Ribwort.

Nettle, *Urtica pumila*, Class 21, Ord. 4. The juice mixed with cream is good for the vesication produced by the poison of the Sumach, which sometimes happens from wearing gloves that have been dyed with it by mistake. It has many medicinal qualities. See N. Index.

Oculus Christi. A name given to a species of Clary, from the use of its seeds in clearing the eye from any extraneous substance, which it does by its viscous covering, being put into one corner of the eye, it moves itself over the surface and brings it out; when put into any acid it keeps constantly in motion, It is sold in the shops of New York by the name of Eye Stone.

Onion, *Allium Cepa*, (See Page 56) boiled or roasted are excellent cataplasms for the Piles. A fresh cut onion rubbed on the part till it becomes red and itches is said to be a cure for baldness. A mixture of equal parts of Onion juice and Spirit of Wine, dropped into the ear, is a cure for Deafness; or cut in two, and macerated in spirit an hour, is a good application for the Head-Ache. See also N. Index.

Pepper Grass, is diuretic and useful in Scurvy and Dropsy; and the juice mixed with oil is good in Psora and cutaneous diseases.

Pilewort. A decoction, or the dried leaves, is good in Piles or Prolapsus.

Pond Weed, *Potamogeton*, Class 4, Ord. 4. Grows in ponds, and is cooling and drying.

Prickly Withe. In the center of the green succulent stalk is a lasting strong wiry withe; called by the Negroes, Tye-Tye.

Pine Ivory. A tea of this herb is good for a Cough. It has red flowers and berries.

Pæony, *Pæonia*, Class 13, Ord. 2. Has a large crimson flower, and is a well-known ornament to the gardens in America.

Pig Weed. A low herb with a thick succulent milky leaf, common in America.

Periwinkle, *Vinca*, Class 5, Ord. 1. A creeping herb, having shining oval leaves, with a blue rotaceous flower; one species has the leaf variegated with white.

Patience. A herb eaten as Spinach in America.

Pig Nut, *Bunium*, Class 5, Ord. 2. The root, roasted or raw, is of a pleasant sweetish taste, nourishing and good against Strangury.

Pippiseva, *Pyrola umbellata*, Class 10, Ord. 1. Is used as a remedy for the Gravel.

Ragwort, *Othonna*, Class 19, Ord. 4. This Herb is astringent, and good in Quinsies.

Rue, *Ruta*, Class 10, Ord. 1. Many wild sorts grow on rocks. Take powder of Rue four ounces, Zedoary, Contrayerva, Snake Root and Arrow Root, one ounce each, in powder, Saffron, half an ounce, in powder, of these, with sugar and honey, make an electuary :— dose two drachms, with a glass of Madeira. This is excellent against Poisons, Petechial Fever, Small Pox or Measles ; opens Obstructions, and cures Jaundice and Hysterics.

Red Chickweed. Is useful as an alterative after the bite of a dog.

Radishes, (See Page 81.) Add.—They are antiscorbutic and diuretic.

Rhubarb. (See Page 62.) Add.—It has been cultivated with success in England.

Rupture Wort, *Herniaria*, Class 5, Ord. 2. as been celebrated for its virtues in curing of Ruptures, but is strongly recommended for removing the disorder of the eyes brought on by reading or writing by candle-light. A scruple of the dried powder given once a day, or forty drops of a strong tincture, morning and evening, is the dose.

Spikenard. The leaves ripen swellings, and made into syrup it is deobstruent.

St. John's Wort, *Hypericum*, Class 8, Ord. 2. A tea is good in Fevers.

Sweet, or Fever Balm, *Melissa*, Class 14, Ord. 1. A tea is diaphoretic in Colds and Fevers. Mint may be added.

Shepherds' Pouch, *Thlaspi*, Class 15, Ord. 1. A common little plant, with delicate heart-shaped leaves on long pedicles.

Salt Water Elder. Has small oval leaves, smallest at the end next the stalk.

Salt Water Beet. Has large leaves of the same shape. These roots are considered most valuable remedies in Canker, Sore Throat and Apthæ ; and are kept in the shops of New York for that purpose.

Sage, *Salvia*, Class 2, Ord. 1. This herb is a good diaphoretic. When the Dutch first traded to China it is said they carried dried Sage leaves, which the Chinese eagerly exchanged for their Tea,—giving four pounds of Tea for one pound of Sage. It is said the annual sales of Tea in China are now upwards of twenty millions of pounds.

Spelt Corn is much raised in Pensylvania for feeding horses ; and Broom Corn, of the heads of which, when thrashed, carpet brooms are made. Washington Wheat also is a good and productive species.

Scotch Grass. (See Explanation of Plate 5, fig. 4.) One acre is said to be capable of feeding five horses, at fifty-six pounds per day each.

Stink Weed. An American herb said to be useful in the cure of cancers.

Skunk Cabbage. (See Page 93.) Used in some parts for the cure of Coughs.

Saffron, *Crocus*, Class 3, Ord. 1. Has cordial and diaphoretic virtues.

Samphire. (See Page 72.) Add.—It is antiscorbutic and cooling, eaten as a salad.

Sugar. (See Page 37.) Add.—Is highly antiseptic, and therefore excellent to dress wounds.

Sesame, *Sesamum*. (See Explanation of Plate 9, fig. 7.) Add.—The oil, with flowers and

other aromatic substances is generally used for perfumed oils. It is principally used with food; and in Egypt is sold dearer than oil of olives.

Sweet Fern. (See Page 97.) Add.—The Indians chew the root to stop Hæmorrhages in recent wounds, and inward bleedings.

Sarsaparilla, *Smilax Sarsaparilla*, Class 22, Ord. 6. The leaves of this plant are in threes on short pedicles, ovate, acuminate and serrate. Its uses in Scorbutic disorders, Rheumatism and Syphilis are well known.

Tomatoes. (See Page 53.) Add.—The juice is cooling and good in Inflammations.

Thorn Apple. (See Page 45.) The leaves applied to the temples relieve Head-Ache; a tincture of the seeds is said to be a superior remedy to Laudanum, in Mania and Convulsions. An ointment relieves the Piles.

Tormentil, *Tormentilla erecta*, Class 12, Ord. 5. The roots are highly astringent and good in Dysentery, and make a fine Ink.

Tory Weed. A troublesome weed, so called about Lake Champlain.

Tobacco. (See Page 19.) Add.—A cataplasm of the leaves with vinegar, applied to the stomach, is very useful to hasten the operation of emetics, to eject poison taken into the stomach, by which it has been rendered torpid.

Violets, Class 5, Ord. 1. There are in Jamaica many sorts resembling the European in colour, but not equal in fragrance.

Valerian, *Valeriana*, Class 3, Ord. 1. Is good in Nervous diseases and Epilepsies.

Virginia Goats' Rue, *Galega Virginia*, Class 17, Ord. 3. A decoction of the roots is anthelmintic. A West-Indian species intoxicates fish.

White Jalap, Class 5, Ord. 1. A root held in the hand will take away the cramp.

Water Plantain. (See Page 58.) Add.- The bruised leaves applied to the breasts, is said to clear them of milk; they are cooling to Inflammations, and by their restringency stop fluxes.

Water Lilies, *Nymphæa Odorata*, Class 13, Ord. 1. Grow in Lake Champlain; the juice is good against Inflammations, Burns, Scalds, &c. Roots and seeds good in thirst, vomiting and Diarrhœa.

White Lily of Lake Champlain. A very large odorous flower. (See Water Lilies.)

Wild Buckwheat. The seeds are said to be injurious to poultry.

Wild Sorrel. Grows about six inches high, with a small sagittated leaf, and a spike of red flowers.

Wild Pink. A beautiful plant with a crimson flower, found at Mamaroneck, by the side of the East River in New York.

Wild Columbine, *Aquilegia*, Class 13, Ord. 7. Grows very common in New York in waste Land.

Wild Carrot. The seeds are said to be diuretic. The Spaniards make tooth-picks of the foot stalk of the Daucus Visnaga, and chew the seeds.

Wormwood, *Artemisia*, Class 19, Ord. 2. A tincture is a tonic and stomachic bitter.

Worm Grass, *Spigelia*, Class 5, Ord. 1. Called by the Indians, Unsteetla, is useful in low Worm Fevers, and the Remittent Fever, which ultimately produces Dropsy of the Brain.

Yellow Lily of Lake Champlain, *Nymphæa Kalmiana*, Class 13, Ord. 1. Is good for Swellings, and a poultice of the root cures the Quinsy.

Yarrow, *Achillea Millefolium*, Class 19, Ord. 2. Is a good bitter in Fevers, and useful in Amenhorrhœa.

TREES.

Acaja. A Brazilian tree, producing yellow plumbs with a large stone; the buds and tops are used for pickles.

Anda. A Brazilian tree, the fruit of which is purgative.

Andira. The Brazilian name for the Angelyn, or Cabbage Bark Tree.

Aleppo Pine and Red Juniper. Trees of considerable size, abounding on the Northern Coast of Africa.

Avocado Pear Tree. (See Explanation of Plate 7, fig. 5.) Add.—The fruit eaten before ripe causes Dysentery.

Acacia. (See Page 106.) The flowers are used by the Chinese to dye a fine yellow colour.

Abele Tree. A species of poplar, thriving best in boggy soils, and of a very quick growth; the wood is very white, and useful for turning, flooring, or wainscoating.

Alder, *Betula*. (See Page 97.) Add.—The wood is esteemed by turners, and the bark is a strong styptic.

Aouta. The Paper Mulberry Tree at Otaheite is so called, from which the cloth, principally worn, is manufactured; the leaves of Etou, (the Cordia Sebesten of Jamaica) are used with the juice of the Purple Fig to dye it red.

Aspen, *Populus tremulus*. (See Page 102.) Add.—The bark is a good tonic, and useful as a stomachic in diseases of horses.

Balm of Gilead, or Physic Tree, *Pinus Balsamea*, Class 21, Ord. 9. The buds yield a vulnerary balsam, which is stimulant.

Butternut. (See Page 95.) Add.—It dies brown, an extract of the bark is cathartic, and the powdered bark blisters like cantharides.

Black Birch. (See Page 97.) Add.—The bark is used for tanning, and the timber for framing; the leaves are oval, pointed, and bluntly notched, with oblique veins; the juice yields a spirit.

Beech. (See Page 97.) Add.—Is used partly for building, and for fire-wood.

Black Ash, is used for rails, and sometimes in building.

Black Oak. (See Page 96.) Add.—It is a large timber tree; the lobes end in a blunt round point, but not deeply divided.

Button Wood. A tree with broad leaves, laciniated into numerous points; the timber is not very hard.

Bilstead. A large tree, the wood of which is used by cabinet-makers; the leaves are deeply divided into five pointed lobes.

Basswood, or Linden. Has large ovate pointed leaves, notched at the edges; it bears the blossom in a curious manner from a leaf. The inside bark with milk makes a cooling poultice.

Bilimbi. A tree cultivated in the East Indies, growing about twelve feet high, having a fruit which when ripe is pleasant to the taste, when unripe it makes a good pickle; the leaves boiled with rice are used as cataplasms for Tumours.

Box, *Buxus*, Class 21, Ord. 4. Is a handsome tree with very hard wood, a decoction, or the oil, is said to make the hair grow on parts which are entirely bald.

Brazil. The chips or raspings, with allum, make red ink: and a carmine is extracted from it. Braziletto also yields a red colour, but not so brilliant as Brazil.

Badouce. An East-Indian fruit, round and of the size of an apple, yellow on the outside, with a white transparent pulp.

Bladder Nut, *Staphylæa*, Class 5. Ord. 3. A tree of Virginia, bearing globular seeds inclosed in a kind of bladder; they are strung for beads, and the seeds yield an oil which is resolvent.

Bastard Cedar. (See Page 86.) Add.—The wood is useful for staves for casks.

Cinchona Caribæa. C. Brachycarpa and C. Triflora, are Jamaica indigenous species of the Peruvian Bark, employed in stopping intermittents, but must be given in small doses, being considerably emetic.

Cusso, *Rhus Banksia*. A tree of Abyssinia, possessing powerful anthelmintic virtues.

Cashew Tree. (See Explanation of Plate 10, fig. 2.) The gum and bark are astringent and good in Dysentery: pills made of equal parts of the gum and wax, and given to the quantity of a drachm per day, often cure. The gum and Elemi are useful ingredients for a pill in Fluor Albus.

Chesnut. (See Page 97.) Makes the best rails for fences.

Capollin, or Mexican Cherry. Bears its fruit in clusters; the bark is said to be a cure for Dysentery.

Coral Tree. The wood is used in the East Indies for scabbards.

Carcapuli. The Indian Yellow Orange Tree, of Malabar; the fruit when ripe is whitish, has an acid sweetness of taste, and is rather astringent.

Champada. A name by which the natives of Malacca call the Jack Fruit; the kernels boiled or roasted are similar to chesnuts. (See Explanation of Frontispiece; fig. 6.)

Citron Wood. A tree of the West Indies, called also Candle Wood; the leaves are like Bay leaves, with a black berry similar to Pimenta; the wood has a fine grain and takes a good polish.

Cobban. A small tree like a Peach Tree, with a round esculent fruit enclosing a nut which contains a bitter kernel; the oil of which is used by the inhabitants of Sumatra for swellings of the Spleen, and with the gum is considered by them a sovereign remedy for the gout.

Cerbera, Class 5, Ord. 1. The wood of this tree is so excessively fœtid that it cannot be burnt. It is called Devil's Wood.

Durion. A fruit common in the East Indies; the leaves of which are said to be six inches long, and sixteen inches broad, terminating in a long point. The fruit is very similar to the Jack Fruit; it has the same disagreeable smell, but as to taste is considered the finest of all fruits. This is preferred by the inhabitants of the East Indies to the Mangosteen.

Elder, *Sambucus*, Class 5, Ord. 3. A small tree bearing its flowers in a corymbe. The green bark is very cooling in a poultice, and the leaves are a good ingredient in a bath.

Elm, is a large timber tree fit for framing houses; the leaves are ovate, acuminate, sharply serrated with paralell oblique nerves, from the mid rib to the extremeties.

Elm, Beech and Oak, denote land of the second quality in the United States.

Emphrue. A species of Mulberry in Guinea, the leaves of which boiled in wine are given as a restorative.

Fir, Pitch Pine, and Hemlock, denote land of the third quality in the United States. (For the remainder see Shrubs.)

Fustic. See Page 95.) Add.—The wood of this tree is used for dying black as well as yellow.

Greenwood. A large timber tree, the leaves of which are divided into three pointed lobes.

Hemlock Spruce. (See Page 98.) Add.—The bark is used for tanning, a tea of the leaves is used in Colds and Fevers, and a decoction is a good pediluvium.

Hottentot Cherry, *Cassine maurocenia*, Class 5, Ord. 3. Is found at the Cape of Good Hope, and one species in Jamaica; the berry is oval and two-celled, containing each a single oval seed.

Hornbeam Tree, *Carpinus*, Class 21, Ord. 9. Two species are found in America, the C. Belusus virginiana, and C. Ostyra.

Juniper Cedar, grows in plenty about Lake George; also the Fir.

Juniper. A tree of the West Indies; the fruit of which yields a juice as clear as water, which dyes a fine violet colour.

Kingsbridge Laurel, *Kalmia Latifolia*, Class 10, Ord. 1. A beautiful tree growing in the swamps of New Jersey, but poisonous.

Kingsbridge Laurel, or Calico Tree, *Kalmia Latifolia*. A powder of the leaves made into an ointment is good for Tinea Capitis and Psora; and said also to be useful in Syphilis. The powdered leaves have also been used in intermittents.

Lilac Hoop Tree, *Melias*. The bark is used in the East Indies for Peruvian Bark.

Locus Tree. A tall timber tree with small oval pinnated leaves, and odorous spikes of papilionaceous flowers, frequently planted near houses for its shade.

Lime Tree, *Tilia*, Class 13, Ord. 1. A tea of the flowers is said to cure Epilepsy.

Myrrh and Balm of Gilead. The trees yielding these balsams are found in Abyssinia.

Mammee Tree. (See Explanation of Plate 8.) Add.—From incisions in the trunk it is said Toddy Wine distils.

Mango. (See Explanation of Frontispiece, fig. 19.) Add.—The stone roasted is a remedy for Dysentery; and the Bark and gum are also astringent.

Marotti. A tall tree of Malabar, with leaves like the Bay; bearing a round oblong fruit, including a large yellowish stone containing ten or eleven kernels; the oil from which eases pains, and cures Scabies and Itching.

Moul Elavou. The East Indian name for the Prickly Cotton Tree.

Magnolia Glauca. (See Page 76.) A decoction of the bark of the root has been found useful in Rheumatic Affections.

Prickly Ash, or Tooth Ache Tree, *Aralia Spinosa*, Class 5, Ord. 5. A decoction is good in Rheumatism; and a tincture in the Cholic, or to cure the Tooth-Ache.

Pitch Pine. (See Page 97.) Add.—Tar is extracted from the roots by fire; when fresh it is good for sprains.

Pigeon Wood and Parrot Wood. Both hard timbers of a red colour, but not much known.

Papaw, *Annona Triloba*, Class 13, Ord. 7. The dried fruit is cathartic.

Quillay. The bark of this tree ferments, and lathers like soap, and is best for washing woollen cloth.

Rack. A large tree of Abyssinia, used for boat-building.

Rose Willow. The bark, with Sassafras and Wild Cherry bark, is given to cure Syphilis.

Red Oak. (See Page 96.) The leaves are divided into lobes ending in a roundish blunt point. The timber is cut in great quantities for staves for sugar hogsheads and coffee tierces.

Rock and Curly Maple. (See Page 105.) Add.—The leaves are divided into many and irregular pointed lobes; they are good timber, and the latter has a beautiful curled grain.

Sassafras, *Laurus Sassafras*, Class 9, Ord. 1. A decoction of the bark and chips is antivenereal and antiscorbutic, cures swelled legs and the Numb Palsy, and dyes an orange colour. The leaves are alternately ovate, pointed, three lobed, and veined, the flowers in irregular spikes. The bark is useful in intermittents. The oil is useful for Wens, and destroys insects, and also for Gout and Chronic Rheumatism.

Slippery Elm. A decoction of the inner bark is good in Coughs, Pleurisies, Consumptions and Quinsies; and good as a poultice for Tumours and Gun-shot Wounds; also for Chilblains and Burns.

Spanish Oak, *Quercus rubra montana*. (See Page 96.) Add.—The bark externally used in Gangrene is equal to Peruvian Bark.

Tree Rosemary. The bark smells very strong, and it is a good timber.

Tree Celandine, *Bocconia*. (See Page 68.) Add.—This beautiful tree is common in Jamaica; it was planted by the Indian kings in their gardens for its beauty.

Virginian Angelica Tree, *Aralia Spinosa*, Class 5, Ord. 5. Rises twelve feet high, much branched, and with alternate divaricate leaves; the flowers come out in umbels, succeeded by roundish purple berries.

White or Mountain Ash, *Fraxinus*, Class 23, Ord 2. Is used for shafts, and the bark cures Strangury.

White Oak. The leaves are deeply laciniated, and the segments end in points. It is a most excellent timber, and used for puncheon staves.

White Pine and Hemlock being cut down and cleared from a spot of land, on exposure to the sun, the Black Walnut, Hickory and Chesnut will spring up without any seeds being planted, or any apparent cause.

Walnuts with Chesnuts are a sign of the best land in the United States.

White Cedar.(See Page 98.) Add.—Is also split up for rails, and is the best wood for shingles.

White Oak Bark. A good remedy for wounds in horse-flesh.

Witch Hazel, *Hamamelis*, Class 4, Ord. 2. The bark with copperas dies black, without it brown.

Weeping Willow and Upright Ditto, grow frequently in swampy places in America, similar to the English species.

Walnuts and Hickories. (See Page 95.) Add.—They are fine hard timber. The bark dies yellow. The Black Walnut has pinnated lanceolate leaves.

Water Ash, grows in waters and swampy places.

Wild Grape. Several species in America, as the Blue Fox Grape, Black ditto, and Water Grape, make wines; and if the cultivation of Grapes were properly attended to, the finest wines might be made.

Wild Cherry, *Prunus Virginiana.* The bark is useful in Intermittents.

White, Yellow, and Pitch Pine. (See Page 97.) Add.—They are sawn up into boards. A decoction of W. P. Bark is said to be antiscorbutic. The Turpentine of the W. P. and a tincture of the P. P. are good for pains in the breast.

SHRUBS.

Althæa Frutex. Common in America as an ornament to the gardens.

Acroe. A shrub of the trifoliate kind, which is used by the natives of Guinea in wine, as a restorative.

Ascindoe. A prickly shrub, the decoction of which is given by the natives of Guinea, in Gonorrhœa.

Assrumina. A shrub of Guinea; the leaves of which bruised and applied externally destroy the Guinea worm.

Blue Point, or Huckleberry, has small oval pointed leaves and blue berries in America.

Black Alder. A shrub with lanceolate pointed leaves, serrated at the edges.

Black Huckleberry. Very similar to the Blue Point, the leaves rather larger, and berries black.

Blackberry. (See Page 73.) Add.—The jelly is good in Nephritic and calculous complaints.

Buddleia, Class 4, Ord. 1. A shrub rising ten or twelve feet high, with a thick woody stem covered with a grey bark; native of Jamaica.

Bamboo. (See Page 39.) The substance found in this cane is a cure for the Strangury.

Bellonia, Class 5, Ord. 1, is a native of Jamaica.

Bittersweet, *Solanum Dulcamara*, Class 5, Ord. 1. Makes a cooling poultice with the green bark of Elder; an ointment of the root is relaxing in the Piles.

Cameraria, *Angustifolia*, Class 5, Ord. 1. Has an irregular shrubby stalk about eight

feet high; flowers are produced at the end of the branches in loose clusters; it abounds with an acrid milky juice.

Croton Tinctorium produces the turnsole, and makes a claret dye.

Callaf. A shrub of the East Indies with flexible branches and leaves like a Cherry Tree. The flowers which are produced before the leaves are like oblong downy little balls of a most fragrant smell, from which an excellent water and oil are distilled.

Ensete, *Musa ensete*, nat. Abyssinia. This plant is largely cultivated as a substitute for bread.

Grammelouc. A common East Indian shrub; the leaves long, narrow and pointed, with a tricoccous berry; very cathartic, similar to Ricinus.

Lavorse. A tea of this plant is good to relieve from inflation by wind. The roots and seeds are also good for flatulency. The leaf is deeply divided into three segments, and has a strong smell when rubbed.

Leather Wood, or Moose Wood, *Dirca palustris*, Class 8, Ord. 2. The bark is extremely tough and flexible, and is sometimes used for leather. A slip tied round the leg, is a remedy for Cramp. It blisters in the same manner as Daphne Gnidium.

Moose Wood and imperfect shrubs denote the poorest land.

Mogorin. A shrub of China, bearing a white flower, so odoriferous that a single flower will perfume a whole house.

Meutang, A flower much esteemed by the Chinese, called the King of Flowers; it is larger than the Rose, and more expanded; its colour is a mixture of white with purple, but sometimes reddish or yellow.

Nanny Berry. The bark of a shrub in America so called is good in Chlorosis.

Soap Berry. (See Page 61.) A tincture or extract of the berries is said to be a specific in Chlorosis.

Sycamore, *Acer*, Class 23, Ord. 1. A plant six or seven feet high, with yellowish flowers and winged seed vessels.

Sumach, (See Page 51,) Class 5, Ord. 1. The bark boiled thick with hogs-lard, relaxes the muscles for setting limbs. The Saline powder of the Rhus glabrum, called Indian Salt, is used by the Indians as a condiment, and to fix red colours in dying.

Spice Wood. The bark and leaves give a good flavour to beer. The berries are used as a condiment in place of other spices.

Tetreuma. A species of shrub similar to the Laurustine; the powder of the dried leaves of which is used by the natives of Guinea to cure Whitlows.

Whortle Berry, *Vaccinium*, Class 8. Ord. 1, and Barberry, are signs of land of the fourth quality.

Wooginoos, *Brucea Antidysentirica*. Native of Abyssinia. A shrub celebrated for its medicinal virtues in the cure of Dysentery.

FINIS.

ADDENDA.

THE following genera found in North America (not requiring particular description) have not been noticed, as most of the others have, in the body of the work; they are therefore here inserted and arranged into their respective Classes and Orders.

CLASS I. Ord. Mon. Mealy thalia, thalia dealbata—myrosma cannæformis—two species of valerian, v. rubra and v. calcitrapa—salicornia.

Ord. Digyn. Water starwort, callitriche—strawberry blite, blitum—reed cinna, cinna.

CLASS II. Ord. Mon. Speedwell, veronica—bignonia catalpa, (having only two anthers) —butterwort, pinguicula—hooded milfoil, utricularia—water horehound, lycopus—oswego tea, monarda—sage, salvia—cunila—collinsonia—enchanter's nightshade, circæa—vernal grass, anthoxanthum.

CLASS III. Ord. Mon. Melothria—commelina—valerian, valeriana—cotton grass, eriophorum—narcissus triandrus.

Ord. Dig. Leersia—fox tail grass, alopecurus—bent grass, agrostis—meadow grass poa—sea side oat, uniola—cock's foot grass, dactylis—fescue grass, festuca—brome grass, bromus—oat grass, avena arundinaria—lyme grass, elymus.

Ord. Trig. Mollugo—anychia—lechea.

CLASS IV. Ord. Mon. Button wood, cephalanthus—scabious, scabiosa—Houstonia—Mitchella—ladies bedstraw, galium—great burnet, sanguisorba—shrubby trefoil, ptelea—Ludwigia—Ammania—Bartonia.

Ord. Dig. Witch hazel, hamamelis.——Ord. Trig. Holly, ilex.

CLASS V. Ord. Mon. Gromwell, lithospermum—hound's tongue, cynoglossum—lungwort, pulmonaria—comfrey, symphytum—primrose, primula—American cowslip, dodecatheon—water leaf, hydrophyllum—Ellisia—loose strife, lysimachia—azalea—pyxidanthera—lychnidea, phlox—cantua—Greek valerian, polemonium—bell flower, campanula—honeysuckle, lonicera—Pinkneya—deadly nightshade, atropa belladonna—iron wood, sideroxylon—buck thorn, rhamnus—ziziphus—New Jersey tea, ceanothus —staff tree, celastrus—spindle tree, euonymus—itea—galax—Virginian creeper, ampelopsis—Claytonia—tabernæmontana—Meadia.

Ord. Dig. Gonolobus—cynanchum—dog bane, apocynum—elm tree, ulmus—gentian and soapwort, gentiana—eryngo, eryngium—pennywort, hydrocotyle—sanicle, sanicula—angelica—honewort, sison—fool's parsley, æthusa—deadly carrot, thapsia —parsnep, pastinaca—alexanders, smyrnium—dill, anethum—caraway, carum—hemlock, cicuta.

Ord. Trig. Viburnum—sarothra.

Ord. Pent. Aralia—thrift, statice—flax, linum.

CLASS VI. Ord. Mon. Pontederia—amaryllis—garlic, allium—lily, lilium—erythronium —star of Bethlem, ornithogalum—leontice—asparagus—dracæna—streptopus—aletris —orontium——winter berry, prinos—barberry or pepperidge bush, berberis—snowdrop, galanthus—Bartonia (of Marshall).

Ord. Trig. Dock, rumex—melanthium—medeola—trillium—helonias—meadow saffron, colchicum—winter green, trientalis.

CLASS VII. Ord. Mon. Common and scarlet flowered horse chesnut, æsculus hippocastanum and æpavia.

Ord. Tetrag. Lizard's tail, saururus.

CLASS VIII. Ord. Mon. rhexia—tree primrose, œnothera—gaura—willow herb, epilobium—whortleberry and cranberry, vaccinium—Indian cress, tropæolum—Menziesia.
Ord. Trig. Persicaria, polygonum—yellow wort, chlora.

CLASS IX. Ord. Mon. Laurel, benzoin tree, and borbonia, all lauri, and natives.

CLASS X. Ord. Mon. Podalyria—Judas tree, cercis—eriogonum—Venus's fly trap, dionæa muscipula—Jussieua—ledum—rhodora—rose bay, rhododendron—andromeda—epigæa—gaultheria—alder leaved clethra—winter green, pyrola—storax, styrax.
Ord. Dig. Saxifrage, saxifraga—tiarella—mitella—pink and sweet william, dianthus.
Ord. Trig. Campion, cucubalus—Pennsylvanian catchfly, silene.
Ord. Pent. Stonecrop, sedum—penthorum.

CLASS XI. Ord. Mon. Befaria—snowdrop tree, halesia—decumaria—heath-leaved hudsonia, hudsonia ericoides—purslane, portulaca—lythrum—cuphea—dyer's weed or weld, reseda—triumfetta.
Ord. Dig. Agrimony, agrimonia.

CLASS XII. Ord. Mon. Cactus—syringa or mock orange, philadelphus.
Ord. Dig. Hawthorn, cratægus.
Ord. Trig. Service tree, sorbus.
Ord. Pent. Virginian guelder rose, spiræa.
Ord. Pol. Dalibarda—cinquefoil, potentilla—tormentil or septfoil, tormentilla—avens or herb bennett, geum—allspice, calycanthus—marsh cinquefoil, comarum.

CLASS XIII. Ord. Mon. Herb christopher, actæa—side saddle flower, sarracenia—hydropeltis—lime tree, tilia—loblolly bay, gordonia—rock rose, cistus.
Ord. Dig. Fothergilla.
Ord. Trig. Larkspur, delphinium—wolf's bane, aconitum.
Ord. Poly. Aniseed tree, illicium—custard apple, annona—anemone or wind flower, anemone—atragene—virgin's bower, clematis—meadow rue, thalictrum—pheasant's eye, adonis—crowfoot, ranunculus—globe flower, trollius—hellebore, helleborus.

CLASS XIV. Ord. Gym. Germander, teucrium—hyssop, hyssopus—hyptis—hedge nettle, stachys—horehound, marrubium—thyme, thymus—dragon's head, dracocephalum—trichostema—self heal, prunella—phryma—westringia—obolaria.
Ord. Ang. Bartsia—pedicularis—chelone—penstemon—martynia—figwort, scrophularia—monkey flower, mimulus—Ruellia—Linnæa—Lindernia—Buchnera—Gerardia.

CLASS XV. Ord. Silicul. Pepperwort, lepidium—woad, isatis—whitlow grass, draba—bastard cress, thlaspi—scurvy grass, cochlearia.
Ord. Siliqu. Wall cress, arabis—tooth wort, dentaria—cardamine.

CLASS XVI. Ord. Poly. Stuartia.

CLASS XVII. Ord. Hex. Fumitory, fumaria.
Ord. Dec. Rafnia—rest harrow, ononis—lupin, lupinus—kidney bean, phaseolus—dolichos—glycine—pea, pisum—false acacia, robinia—liquorice, glycyrrhiza—hedysarum—goat's rue, galega—milk vetch, astragalus—trefoil, trifolium—chickling vetch, lathyrus—crotolaria—æschynomene—medick, medicago.

CLASS XVIII. Ord. Poly. Ascyrum—melaleuca, producing cajeput oil.

CLASS XIX. Ord. Æqual. Goat's beard, tragopogon—sow thistle, sonchus—prenanthes—vernonia—liatris—thistle, carduus—cnicus—artichoke, cynara—bur marygold, bidens—cacalia—hemp agrimony, eupatorium ageratum.
Ord. Superf. Tansy, tanacetum—wormwood, artemisia—everlasting or cudweed, gnaphalium—groundsel tree, baccharis—flea bane, conyza—erigeron—groundsel, senc-

clo—starwort, aster—golden rod, solidago—elecampane, inula—tetragonotheca—helenium—zinnia—ox eye daisy, chrysanthemum—milfoil, achillea—siegisbeckia.

Ord. Frustr. Rudbeckia—tick-seed sun flower, coreopsis—centaury, centaurea.

Ord. Necess. Baltimora—silphium—polymnia—marygold, calendula—bastard Jesuit's bark, iva.

CLASS XX. Ord. Dian. Satyrion, satyrium—bee orchis—ophrys—ladies slipper, cypripedium—helleborine, serapias—arethusa—malaris—epipactis—cymbidium.

Ord. Trian. Sisyrinchium.

Ord. Hex. Pistia—birthwort, aristolochia sipho.

CLASS XXI. Ord. Mon. Chara.

Ord. Diand. Duck's meat, lemna.

Ord. Trian. Cat's tail, typha—Job's tears, coix—sedge, carex—Comptonia—bur reed, spargianum.

Ord. Tetrand. Paschysandra.

Ord. Pent. Schisandra—ambrosia—prince's feather and love lies a bleeding, amaranthus—xanthium.

Ord. Hex. Wild oats or grass, pharus.

Ord. Mon. Tallow tree, stillingia—cypress, cupressus—phyllanthus.

CLASS XXII. Ord. Diand. Willow and osier, salix.

Ord. Triand. Valisneria—crakeberry or crowberry, empetrum.

Ord. Tetrand. Sea buckthorn, hippophae—candleberry myrtle, myrica.

Ord. Pent. Virginia oil nut, pyrularia—iresine—spinach, spinacia—acnida.

Ord. Enneand. Mercury, mercurialis—frog's bit, hydrocharis.

Ord. Dodecand. Moon seed, menispermum—Indian berry, or coculus indicus.

Ord. Monadelph. Red cedar, juniperus—yew tree, taxus—napia—adelia.

CLASS XXIII. Ord. Mon. Hellebore, veratrum—man's beard, andropogon.

The following plants, natives of Jamaica (except those marked otherwise), are not described in the text particularly, but their Classes and Orders are inserted below.

h, signifies herb; *s*, shrub; and *t*, tree.

CLASS I. Ord. 2. Lacestema myricoides, *s*.

CLASS III. Ord. 1. Fuirena paniculata, a grass—melothria pendula, a creeping herb, the berries are pickled green—schœnus, a rush, several species—scirpus spadiceus, a club-rush—kyllingia triceps & filiformis, grasses of Jamaica.

Ord. 2. Leersia monandra & hexandra, grasses—paspalum, a grass, fifteen species—aristida americana, a grass.

CLASS IV. Ord. 1. Coccocipsylum repens, *h*—catesbæa parviflora, *s*—ammania sanguinolenta—diodia simplex, *h*—ernodea littoralis, *h* (shores of St. George)—hedyotis rupestris, *h*—Hoffmannia pedunculata, *h*—Ludwigia repens, *h*—petesia stipularis, *s*—samara coriacea, *t*—Wallenia lauriflora, *t*.

CLASS V. Ord. 1. Gardenia aculeata, *s*—indigo berry, hamellia grandiflora—princewood, *t*—illecebrum vermiculatum, *h* (near Rock river)—ardisia trifolia, *t*—itæa cyrilla, *s*—lacyeria lucida & tomentosa, *s*—bastard mangineel—cameraria latifolia—psychotria (several species near Hunt's Bay)—rauwolfia canescens, *s*—rhamnus sphærospermus—gronovia scandens, *h*—Sauvagesia erecta, *h*—Schwenckfeldia hirta, *s*.

Ord. 2. Dichondra repens, *h*—apocynum (several species, the down of which might be exported with advantage)—nama jamaicensis, *h*—Xylophilla latifolia—brosea yervamora or golden rod, *s*—dichondra sericea, *h*.

Ord. 3. Staphylæa, *t*.
Ord. 5. Aralia sciodaphyllum.

CLASS VI. Ord. 1. Loranthus americanus—alstroemeria (a native of South America, with beautiful red and white spotted flowers)—pontederia azurea, a round leaved water plantain, *s* (near Ferry)—schrœdera cephalotis, *s*.

CLASS VIII. Ord. 1. Fuchsia involucra, *s*—athenia guianensis or caffé diable nat. Cayenne—hedwigia balsamifera, or hogwood, *t*—alyphyllus cominia (with orange-coloured berries the size of a pin's head).
Ord. 2. Weinmannia, *t*.

CLASS X. Ord. 1. Clethra tenuifolia—bastard locust tree (fruit esculent)—petaloma myrtilloides or silverwood (a tough timber), *t*.
Ord. 3. Erythroxylon areolatum or redwood timber, *t*—triopteris, *s*.
Ord. 4. Suriana maritima, *s*.

CLASS XI. Ord. 1. Lythrum, *h*.

CLASS XIII. Ord. 1. Erotæum thæoides—kuoxia (of Brown), *h*—lactea guidonia—redwood, *t*—lignotes elliptica, *t*—muntingia calabasa, *s*—sloanea, 2 species.

CLASS XIV. Ord. 1. Lippia cymosa, *s*.
Ord. 2. Gesneria acaulis (with scarlet flowers), *h*—avicennia tomentosa (in swamps by the sea side), *t*—besleria lutea, *h*—buchnera elongata, *h*—stemodia maritima, an aromatic bitter shrub—volkameria aculeata, *s*.

CLASS XVI. Ord. 1. Myrodia turbinata.
Ord. 6. Morisonia americana, *t*.

CLASS XVII. Ord. 4. Galega toxicaria, *s* (intoxicates fish).

CLASS XVIII. Ascyrum hypericoides, *s* (n. o. rotaccæ).
Ord. 4. Symplocos octopetala, *t*.

CLASS XIX. Ord. 1. Lavenia decumbens, *h*, & thamnia, *s* (near the Angels)—bidens hirsuta, *s*.
Ord. 2. Cineraria, *h*—amellus umbellatus—perdicium radicale, *s*—verbesina alata.
Ord. 4. Silphium trilobatum, *s*.

CLASS XX. Ord. 1. Serapias, several species.
Ord. 2. Statyrium, *h*, several species.
Ord. 4. Ayenia lævigata, *s*.

CLASS XXI. Ord. 1. Cynomorium jamaicense, *h* (succulent and astringent).
Ord. 3. Olyra paniculata & pauciflora, *h*—phyllanthus nutans, *s*—scleria, a grass, several species—tragia volubilis, *s*.
Ord. 4. Angythramma caudicans, *s* (n. o. tricoccæ).
Ord. 6. Pharus latifolius (a grass, sometimes called wild oats).
Ord. 7. Mabea pereri & jaquari, *s*—hedyosmum.
Ord. 9. Sechium edule—the chocho, *h*.
Ord. 11. Andrachne.

CLASS XXII. Ord. 4. Isatis maritima, *s*, nat. Jam. (in the Salinas on the south side, may be burnt for barilla)—schœffera completa, *s*.
Ord. 5. Astronium graveolens, *t*—iresine celosia, *h*—recheria grandis, *t*.

CLASS XXIII. Ord. 1. Cupania glabra or loblolly tree (wood soft)—andropogon, a grass (one species of this genus is the nard)—manisuris granularis, a grass—terminalia latifolia & arbuscula.

EXPLANATION OF PLATE I.

HABIT AND CHARACTERISTIC APPEARANCE OF PLANTS.

CLASS I. MONANDRIA.

Fig. 1. Indian Shot, *(canna indica)*, ord. Monogynia, n. o. Scitamineæ. Herbaceous; nat. both Indies. Called also Arundo Indica, Cannacorus, &c. Span. Cana de Indias, Ital. Canna d' India.

2. Indian Arrow Root, *(maranta arundinacea)*, ord. Monogynia, n. o. Scitamineæ. Herbaceous; nat. South America and West Indies: called also by the Indians, Toulola and Agutiguepa, sometimes Sagittaria Alexipharmica; Span. Saeta-Raiz; French, Racine à fleche, from curing wounds made by poisoned arrows.

CLASS II. DIANDRIA.

3. Wild Clary, *(salvia sclarea)*, ord. Monogynia, n. o. Asperifoliæ. Herbaceous; nat. Jamaica; Fr. Sauge sauvage; Ital. Clarea; Span. Salvia sivestre.

4. Jamaica Vervain, *(verbena Jamaicensis)*, ord. Monogynia, n. o. Asperifoliæ. Herbaceous; nat. both Indies; Fr. Vervaine de Jamaique; Ital. Verbena; Span. Verbena.

CLASS III. TRIANDRIA.

5. Sugar Cane, *(saccharum officinarum)*, ord. Digynia, n. o. Gramina. Herbaceous; nat. both Indies; Fr. Canne; Ital. Canna de zucchero; Span. Cana de azucàr.

6. Bahama Grass, *(panicum bahamensis)*, ord. Digynia, n. o. Gramina. Herbaceous; nat. Bahama Islands, (a thick matted short grass, fit for lawns, and grass plots), Ital. Yerba; Span. Erba; Fr. Herbe.

7. Tamarind Tree, *(tamarindus indicus)*, ord. Monogynia, n. o. Multisiliquosæ. Arboreous; classed by some Monodelphia, Triandria; nat. both Indies; Fr. Tamarin; Ital. Tamarindo; Span. Tamarindo.

8. Guinea Grass, *(panicum guineensis)*, ord. Digynia, n. o. Gramina. Herbaceous; nat. Guinea; grows freely and plentifully in the West Indies, and is the principal food for horses and cattle.

9. Scotch Grass, *(panicum latifolium)*, n. o. Gramina. Herbaceous; nat. Barbadoes; grows in swampy places, and is a good substitute for Guinea Grass in dry weather.

10. Adrue, *(cyperus articulatus)*, ord. Monogynia, n. o. Calamariæ. Herbaceous; nat. Jamaica; is aromatic and valuable for its property of repressing vomitings.

CLASS V. PENTANDRIA.

11. Sweet Potatoes, *(solanum batatas)*, ord. Monogynia, n. o. Luridæ. Herbaceous; nat. Peru; Fr. Pomme de terre; Ital. Pomo di terra; Span. Patata; a sweet esculent root, forming a principal article of food among the negroes.

12. Star Apple, *(chrysophyllum cainito)*, ord. Monogynia, n. o. Dumosæ. Arboreous; nat. West Indies, Span. Estrella; bears a purple fruit, containing a sweet luscious pulp.

13. Coffee Tree, *(coffea arabica)*, ord. Monogynia, n. o. Stellatæ. Shrubby; nat. Arabia and West Indies; Fr. Cafier; Ital. Caffé; Span. Café. The species containing one seed, and two seeds in a berry, grow freely in the West Indies; the former is the most rare.

CLASS VI. HEXANDRIA.

14. Pine Apple, *(bromelia ananas)*, ord. Monogynia, n. o. Coronariæ. Herbaceous; nat. both Indies; Fr. Ananas; Ital. Pina; Span. Ananás.

15. American Aloe, *(agave vivipara)*, ord. Monogynia, n. o. Coronariæ. Herbaceous; nat. South America; Fr. Aloés; Ital. Aloé; Span. Aloë.

16. Red Lily, *(amaryllis coccinea)*, ord. Monogynia, n. o. Spathaceæ, Herbaceous; nat. West Indies; Fr. Lis Rouge; Ital. Giglio Rosso; Span. Lirio Loxo.

17. Oyster Plant, *(tradescantia)*, ord. Monogynia, n. o. Spathaceæ. Herbaceous; nat. West Indies and Mexico.

CLASS IX. ENNEANDRIA.

18. Cinnamon Tree, *(laurus cinnamomum)*, ord. Monogynia. Arboreous; nat. Ceylon; Fr. Cannelier; Ital. Cinnamomo; Span. Arbol de la Canela.

19. Yellow Hogplum, *(spondias myrobalanus)*, ord. Trigynia, n. o. Pomaceæ. Arboreous; nat. West Indies; Fr. Prune; Ital. Prugnola; Span. Ciruelo.

CLASS X. DECANDRIA.

20. Occidental Cassia, *(cassia occidentalis)*, ord. Monogynia. Herbaceous; nat. West Indies; Fr. De la Casse; Ital. Cassia.

21. Common Cashew Nut, *(anacardium occidentale)*, ord. Monogynia, n. o. Holeraceæ. Arboreous; nat. both Indies; Fr. Cachou; Ital. Casciù; Span. Bellota de acajou.

CLASS XI. DODECANDRIA.

22. Mangrove, *(rhizophora mangles)*, ord. Monogynia, n. o. Holeraceæ. Arboreous; nat. West Indies; the plate represents the manner in which the Oysters attach themselves to the branches which hang down in the salt water. It is called by the Indians Kandel.

CLASS XII. ICOSANDRIA.

23. Melon Thistle, *(cactus melocactus)*, ord. Monogynia, n. o. Succulentæ. Herbaceous; nat. West Indies; Fr. Melon-chardon; Ital. Mellon-cardone; Span. Cardon cabezado o melon de monte.

24. Four-sided Torch Thistle, *(cactus tetragonus)*, ord. Monogynia, n. o. Succulentæ. Herbaceous; nat. West Indies and South America; Span. Cirio.

25. Cochineal Indian Fig, *(cactus cochinillifer)*, ord. Monogynia, n. o. Succulentæ, Herbaceous; nat. South America and West Indies; Span. Heguera de Indias; fruit, tuna.

CLASS XIII. POLYANDRIA.

26. Mammee Apple, *(mammea Americana)*, ord. Monogynia, n. o. Dumosæ. Arboreous; nat. Jamaica; Fr. Mammé; Ital. Mela Mamea.

27. Cashaw, *(acacia)*, ord. Monogynia, n. o. Lomentaceæ. Arboreous; nat. West Indies; Fr. Acacia; Ital. Acazia arborello espenoso poblado de ramos; Span. Acacia. The Gum Arabic, *(mimosa nilotica)*, is very similar in its manner of growth, and thrives very well in Jamaica; Span. Arbol y goma de Egypto.

28. Sweet Sop, *(annona squammosa)*, ord. Poligynia, n. o. Coadunatæ. Arboreous; nat. South America and West Indies; Fr. Cheremoye.

29. Sour Sop, *(annona muricata)*, ord. Poligynia, n. o. Coadunatæ. Arboreous; nat. West Indies.

EXPLANATION OF PLATE II.

HABIT AND CHARACTERISTIC APPEARANCE OF PLANTS.

CLASS XIV. DIDYNAMIA.

Fig. 30. Narrow-leaved Calabash, *(crescentia cujete)*, ord. Angiospermia, n. o. Putamineæ. Arboreous; nat. Jamaica; Span. Calabaza, arbol de America con cuyas cascaras hacen los Negros tazas para beber, y instrumentos de Musica.

31. Spear-leaved Oily Pulse, *(sesamum indicum)*, ord. Angiospermia, n. o. Luridæ. Herbaceous; nat. East Indies; thrives well in Jamaica. Ital. Sesamo o giuggelono.

CLASS XVI. MONADELPHIA.

32. Five-leaved Silk Cotton Tree, *(bombax ceiba)*, ord. Polyandria, n. o. Columniferæ. Arboreous; nat. both Indies; Fr. Coton a soie; Ital. Coton di seta.

33. Red Sorrell, *(hibiscus sabdariffa)*, ord. Polyandria, n. o. Columniferæ. Herbaceous; nat. both Indies; Fr. Oseille Rouge; Ital. Acetosa, Span. Acedera.

CLASS XVIII. POLYADELPHIA.

34. Chocolate Nut Tree, *(theobroma cacao)*, ord. Decandria, n. o. Columniferæ. Shrubby; nat. South America; Fr. Cacao; Ital Caccao.

35. Forbidden Fruit, *(citrus decumana)*, ord. Icosandria, n. o. Bicornes. Arboreous; nat. both Indies; Ital. Spezie de metanancia; Span. Espezie de naranjas.

CLASS XX. GYNANDRIA.

36. Esculent Coco, *(arum esculentum)*, ord. Polyandria, n. o. Piperitæ. Herbaceous; nat. both Indies. This root is a valuable article of food for the negroes.

CLASS XXI. MONÆCIA.

37. Common Indian Corn, *(zea mays)*, ord. Triandria, n. o. Gramina. Herbaceous; nat. America; Fr Maïs; Ital. Miglio; Span. Trigo de India.

38. Bread Fruit Tree, *(artocarpus incisa)*, ord. Monandria, n. o. Paniferæ. Arboreous; nat. Otaheite, and thrives well in the West Indies. The fruit baked is very similar to new bread.

39. Red Colilu, *(amaranthus sanguineus)*, ord. Pentandria, n. o. Holoraceæ. Herbaceous; nat. both Indies; Fr. Epinards; Ital. Spinace; Span. Espinaca.

40. Bitter Cassada, *(jatropha manihot)*, ord. Monadelphia, n. o. Tricoccæ. Herbaceous; nat. South America. The fresh root of this species is poisonous, but when the juice is expressed, makes most excellent bread. The roots of the Sweet Cassada may be eaten boiled or roasted.

42. Cocoa Nut Tree, *(cocos nucifera)*, of the order Palmæ; nat. both Indies; Fr. Noix de Cocoa; Span. Coco. The plate represents the manner in which a negro will ascend a tree a hundred feet high to gather the nuts.

43. Pumpkin Gourd, *(cucurbita pepo)*, ord. Syngenesia, n. o. Cucurbitaceæ. Herbaceous; nat. both Indies; Fr. Citrouille; Ital. Zucca; Span. Calabaza.

44. Oil Nut Tree, *(ricinus communis)*, ord. Monadelphia, n. o. Tricoccæ. Shrubby and Arboreous; nat. both Indies; Ital. Palma christi; Span. Palma christi.

CLASS XXII. DIÆCIA.

45. Esculent Yam, *(dioscorea sativa)*, ord. Hexandria, n. o. Sarmentaceæ. Herbaceous; nat. both Indies. This root is one of the best of the bread kind or substitutes for bread.

46. Jamaica Pepper, *(myrtus pimento)*, class Icosandria; ord. Monogynia, n. o. Hesperideæ. Arboreous; nat. Jamaica; Fr. Pimente; Ital. Pepe di Jamaica; Span. Pimenta de la Jamaica.

CLASS XXIII. POLYGAMIA.

47. Guinea Corn, *(holcus sorghum)*, ord. Monœcia, n. o. Gramina. Herbaceous; nat. both Indies. Called also Indian Millett; Fr. Bled des Indes; Span. Mijo d' India.

48. Indian Jack Fruit Tree, *(artocarpus integrifolia)*, ord. Monandria. Arboreous; nat. East Indies; thrives well in Jamaica; the fruit which grows to an immense size is born on the trunk and branches, and the seeds when roasted, taste like chesnuts.

49. Plantain Tree, *(musa paradisaica)*, ord. Monæcia, n. o. Scitamineæ. Herbaceous; nat. both Indies; Fr. Plantain; Span. Platano, arbol que se cria in las Indias occidentales de mediana corpulenzia y cuya fruta se come. This is one of the best and most generally used of the bread kind, the fruit being boiled, baked, or roasted.

50. Common Papaw Apple, *(carica papaya)*, class Diœcia, ord. Decandria. Herbaceous, the stalk not being solid; it grows to the height of thirty feet; nat. both Indies; Span. Papayo.

51. Palmetto Thatch, *(chamærops palmetto)*, class Palmæ; so called from from its general use for thatching negro houses; Fr. Palmette; Ital. Palmetto.

52. Mango Tree, *(mangifera)*, classed by some Pentandria Monogynia, n. o. Pomaceæ. Arboreous; Fr. Mangoustan; Ital. Mango spezzia de frutta chi viene dall Indie orientali.

53. Spanish Dagger, *(zamia aculeata)*, Palmæ, has stiff sharp pointed leaves.

54. Anchovy Pear, *(grias cauliflora)*, class Polyandria; ord. Monogynia. Arboreous. In this genus the flower and fruit are born on the stem.

55. Abbay Tree or Oily Palm, *(elæis guineensis)*, class Palmæ; bears an oily drupe which is eaten boiled.

56. Shews the manner in which the wood ants destroy a tree by making their nests round the trunk, from which they have covered ways leading to other trees or fences, which they destroy by eating the wood, and leaving the bark.

EXPLANATION OF PLATE III.

SEEDS AND PERICARPS, OF THEIR NATURAL SIZE AND COLOUR.

FIG. 1. The capsule of the Indian Shot *(canna Indica)*, is prickly on its surface.

2. The seeds of ditto, are black and oval, and sometimes strung by the Negroes for necklaces; they will also kill small birds.

3. The seeds of a species of Tobacco, *(nicotiana jamaicensis)*.

4. The seed-vessel and seed of the Wild Tamarind.

5. The bean or cherry of the Coffee, containing two seeds, surrounded by an aril or parchment.

6. The seeds of the Four o'Clock, *(jalappa mirabilis)*. These are also strung for necklaces, having a curious black furrowed surface.

7. The seeds of the Goat Pepper *(capsicum)*, are kidney-shaped, and when ripe of a yellowish brown.

8. The seeds of the Star Apple, *(chrysophyllum cainito)*, are black, with a white mark and pointed at the top.

9. The seeds of the Naseberry, *(sideroxylon)*, are black and acuminated.

10. The seed of the Mammee Sapota, *(achras sapota)*, has the appearance of a beautiful shell of such hardness and polish, that it is frequently made into a snuff-box after picking out the kernel.

11. The seeds of the Soap Berry, *(sapindus saponaria)*, are quite round and of a polished black—they are also frequently strung for necklaces.

12. The seed of the Yellow Nicker, *(guilandina bonduc)*.

13. The seed of the Grey Nicker, *(guilandina bonducella)*.

14. The seed of the Akee, *(nov gen)*, of a polished black.

15. The nut of the Cashew Apple, *(anacardium acajou)*, which is fixed on the end of the apple, and has a very acrid oil in the shell, but the kernel, when fresh is as sweet as a walnut, and is also very good, roasted.

The seed of the Horseradish Tree, *(moringa)*, which is born in a long pod and furnished with three wings, sheep and goats are very fond of them as food.

17. The seed-vessel of the Lignum Vitæ, *(guaicum officinale)*, containing two seeds enclosed in a pulp, which, made into a preserve, has the same virtues as the gum, and in a superior degree.

18. The seed of the Rose Apple, *(eugenia fragrans)*, has a strong smell like roses.

19. The seeds of the Barbadoes Pride, *(poinciana pulcherrima)*.

20. The seeds of the Mexican Poppy, *(argemone mexicana)*,—a few of them smoked in a pipe of tobacco have a powerful narcotic effect.

21. The seed of the Coccoon Antidote Nut, *(fevillea scandens)*,—the kernel of this infused in rum is a powerful antidote to poison, and is generally kept ready for use in families.

22 The seed-vessel, and, 23, Seeds of the Gum Arabic, from which the gum exudes, as well as from the trunk and branches.

24. The seed-vessel and seeds of the Arnotto, *(bixa orellana)*. The red substance round the seeds forms a pigment or dye of a deep aurora or orange colour, called by the Indians *mucu*, *roucou*.

25. The seeds of the Sweet Sop, *(annona sqummosa)*.

26. The seeds of the Musk Ochro, *(hibiscus abelmoschus)*, have a powerful musky scent.

27. The seeds of the Sour Sop, *(annona muricata)*.

28. The seed-vessel of the Bastard Cedar, *(theobroma guazuma)*, is a capsule, contain-

ing many small seeds in different cells; they are frequently given as food to horses, but should be well salted, like Indian corn, or it is said to give them botts.

The seed of Nephritic Tree, *(mimosa unguiscati)*, is kidney-shaped, and has a white substance round the lower part, resembling the fat round a kidney. The bark of this tree is reputed by the Spaniards a sovereign remedy in all diseases of the kidneys, ureters and bladder.

30. The seeds of the Chain Cotton, *(gossypium)*, are linked together in the form of a chain.

31. The seeds, and, 32, Seed-vessel of the Oily Pulse, or Sesame, *(sesamum Indicum)*. They are mucilaginous, and sometimes used in Soup.

33. The seed of the Wild Liquorice, *(abrus precatorius)*, frequently used for necklaces by the Negroes.

34. The Pigeon Pea, *(cytisus cajan)*, a perennial and shrubby plant. The others are, 35, the Black, 39, the White, 37 and 40, the Speckled, and, 38, the Lady Pea.

36. The seed of the Sand Box, *(hura crepitans)*, is of a sweet taste, but poisonous.

41. Pindars, *(arachis hypogæ)*, earth nuts, the kernels of which are eaten roasted.

42. The Chocolate Nut, *(theobroma cacao)*. The pericarp is a follicle, and the seeds, to the number of twenty or thirty, are fixed along a receptacle in the centre.

43. The seeds of the Orange, *(citrus aurantium)*.

44. The seeds of the Shaddock, *(citrus decumana)*.

45. The seed-vessel of a sort of short-podded Wild Vanilla, *(epidendrum vanilla)*. The seeds are small and shining, and to the number of many thousand in one seed-vessel.

46. The seed-vessel of the Screw Tree, *(helicteres)*, twisted in a spiral form.

47. The seeds of the Forbidden Fruit, *(citrus medica)*.

48. The seed-vessel of the Oil Nut, *(ricinus palma christi)*, tricoccous, or containing 3 seeds, 49, from which is boiled or expressed an essential oil, which is a most valuable cathartic, commonly called Castor Oil. Fig. 50, are larger seeds of the same, but it is not ascertained that they yield more oil in proportion to their size.

51. The seeds of the Tomatos, *(solanum lycopersicum)*, are grooved and rough round the edge.

52. The seeds of a species of Water Melon, *(cucurbita citrullus)*.

53. The Lima Bean, *(phaseolus limensis)*, the most delicious bean to be found in Jamaica, but will not thrive without much care.

55. The Sugar Bean, *(phaseolus)*, a very good sort, which is common, as is the Scarlet Bean, fig. 55.

57. The Pimento, *(myrtus pimenta)*, after it is gathered and dried on barbecues.

58. A few grains of the Guinea Corn, or Indian Millett, *(holcus sorghum)*, which grow in a panicle similar to the Guinea Grass, plate 5, fig. 2, and many ears on a stalk.

59. Seeds of the Cerasee, *(momordica balsamina)*, the seed-vessel of which being pricked with a pin bursts open with violence, scattering the seeds, which are at first surrounded with a slimy mucus, of a scarlet colour.

60. The seed of the Mahogany, furnished with a thin broad wing; the seed is contained in the lower end.

61. The seed vessel of the Mahogany, *(swietiana mahogoni)*, reduced to about half its natural size. The seeds are so imbricated, that when once displaced they cannot be put together again.

62. The Cunep, a fruit of a subacid taste, the pulp of which surrounds the stone, and is enclosed in a thin green shell.

63. The seed-vessel of the Contraryerba, of Yucatan, the seeds being imbedded or inlaid like ivory spots or points, in a thick substance.

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EXPLANATION OF PLATE IV.

THE FIGURES IN THIS PLATE ARE OF THE NATURAL SIZE AND APPEARANCE OF THE PLANTS.

CLASS I. MONANDRIA,. ORD. I. MONOGYNIA.

Fig. 1. Indian Arrow Root, *(maranta arundinacea)*, n. o. Scitamineæ ; Fr. Racine à fleche ; Span. Saeta-Raiz ; nat. South America ; called by the Indians, Toulola, Agueti-guepa, and sometimes Sagittaria Alexipharmica. This valuable plant is herbaceous, having tapering white roots covered with a thin brown skin, nearly the shape and size of carrots, marked with annular protuberances. The stalks are reed-like, about four feet high bearing at their summits small white flowers ; the leaves are oval, acute angled, alternate and when gathered roll up lengthways. Seed vessel roundish, obscurely three-sided. The roots being scraped, washed and pounded, in wooden mortars, and macerated in water, yield a flour of a snowy whiteness, which no worms will touch. Made into a jelly with boiling water, it is a most cordial and nourishing food, that will remain on the stomach when nothing else will ; and a pudding made of it, is most excellent for convalescents. It is also used for starch, which is far superior to that made of wheat flour in quality, and one pound is equal to two pounds and a half, of that prepared from wheat ; and by its use, immense quantities of wheat might be saved annually. The root may be candied as Eryngo, possessing nearly the same virtues. The fresh expressed juice of the root with water, is a powerful antidote to vegetable poisons (as the Savanna flower), taken inwardly ; the bruised root outwardly applied, is a cure for the wounds of poisoned arrows, scorpions, or black spiders, and arrests the progress of Gangrene. It is propagated by cuttings of the roots, and made for sale in considerable quantities in the West Indies, for about a dollar per pound. It has thriven in America, in the states of South Carolina and Georgia, and produced 1840 pounds to the acre ; and perhaps would be well worthy attention in the East Indies. That which is sold in the shops, is not always unadulterated, but the genuine affords a larger proportion of mucilage than any vegetable yet discovered. The medical virtues are astringent, cordial, diaphoretic and said by Dr. Barham to be in some degree emenagogue ; a decoction of the fresh roots, makes an excellent ptisan in acute diseases. When prepared with milk for children if it ferment on the stomach, the addition of a little animal jelly will prevent it. The following species are natives of or will grow in the West Indies. Wood Arrow Root, *(maranta sylvatica)*, Dichotomous, *(maranta dichotoma)*.

2. Indian Shot, *(canna imdica)*, n. o. Scitamineæ ; Ital. Canna d'India ; Span. Cana de Indias ; called also Cannacorus and Arundo Indica Latifolia. This beautiful plant is herbaceous, having large succulent creeping roots of an acrid taste when fresh, the stalks are round and reed-like, about five feet high, but more succulent than arrow root, having oval pointed leaves with marked ribs, running from the foot to the point, sessile and alternate. The stalks are terminated by beautiful large scarlet flowers, succeeded by a prickly pericarp with several black seeds, which will kill small birds. The juice of the root is said by Dr. Barham to be a counter poison, he also attributes virtues to it, mixed with the bruised leaves and water lily, applied as a cataplasm to hard tumours and indurations of the spleen. The following species are natives of or will grow in the West Indies. Scarlet-flowered Indian Shot, *(canna coccinea)*, both Indies. Broad-leaved Indian Shot, *(canna patens)*, both Indies. Glaucous Indian Shot, *(canna glauca)*, South America. Yellow-flowered Indian Shot, *(canna lutea)*, East Indies.

CLASS II. DIANDRIA, ORD. I. MONOGYNIA.

Jamaica Vervain, *(verbena jamaicensis)*, n. o. Asperifoliæ ; Fr. Vervaine ; Ital. Ver-

bena ; Span. Verbena. This valuable though common plant is herbaceous, and seldom rises more than two feet high ; the root is oblong and bitter, the stalk angular, a little hairy and branched, the leaves stand in pairs, oval, veined and notched at the edges. The flower stalk is imbricated, from the squammæ of which arise the flowers, small, blue and scattered at irregular distances. When it is once established it spreads fast. Dr. Barham says, the juice alone, or with Contrayerva infused in wine, is an excellent remedy against dropsies. The expressed juice is given to children as an anthelmintic ; and the bruised leaves, with wheat-flour applied as a cataplasm, are useful in swellings of the spleen, (a common disease in the West Indies) and to discuss hard tumours at their commencement.

It is given as a cooling cathartic to children in doses of one or two table spoonfuls of the expressed juice. A decoction of the plant with spikenard is given in dropsies, and a table spoonful of the juice, four successive mornings, is considered by the Negroes, (with whom Vervain is a favourite remedy,) as an effectual deobstruent and emenagogue, The expressed juice with water is also very good for sore watery inflamed eyes. Vervain tea is likewise frequently drunk as a febrifuge and corroborant.

The following species are natives of warm climates.

Indian Vervain,	*(verbena indica)*,	nat. East Indies.
Changeable,	*(v. mutabilis)*,	South America.
Buenos Ayres,	*(v. bonareensis)*,	Buenos Ayres.
Panicled,	*(v. paniculata)*,	Ditto.
Betony-leaved,	*(v. orubica)*,	South America.
Mexican,	*(v. mexicana)*,	Mexican.
Trailing,	*(v. prostrata)*,	South America.
Upright,	*(v. stricta)*,	Ditto.
Three-leaved,	*(v. triphylla chili)*,	Ditto.

Jamaica Wild Clary, *(salvia sclarea)*, n. o. Asperifoliæ ; Fr. Sauge sauvage ; Span. Salvia silvestre ; nat. West Indies. This plant is common in Jamaica, and grows nearly in the same manner and about the same height as vervain, having ovated rough leaves, and the extremity of the stalk revolute or turned back like the sting of a Scorpion. The flowers are small, numerous and situated near the top of the stalk, of a light blue colour.

It is a remedy much in use among the Negroes, who consider it as cleansing, cooling and consolidating to ulcers and sore legs, to which they are very subject. It is also used in inflammations of the eyes, and the leaves boiled with Cocoa Nut Oil, are said by Dr. Barham to cure the stings of scorpions. This with the vervain are two of the ingredients to make the aromatic warm bath, a remedy which deserves to be in more general use. The garden sage, a species of this genus, made into a decoction, sweetened and acidulated with lime juice, is used as a cooling drink in fevers. The virtues of the sage are stimulant, carminative, tonic and aromatic.

Indian Sage,	*(salvia indica)*,	nat. India.
Dominican,	*(s. dominica)*,	West Indies.
Various-leaved,	*(s. heterophylla)*,	Ditto.
Mexican Sage,	*(s. formosa)*,	Peru.
Hairy-stalked,	*(s. pseudo coccinea)*,	South America.
Bitter,	*(s. amara)*,	Mexico.
Violet-flowered,	*(s. amæna)*,	West Indies.
Germander-leaved,	*(s. chamædrys)*,	Mexico.
Linear-leaved,	*(s. linearis)*,	Mexico.
Broad-leaved,	*(s. latifoliæ)*,	Yucatan.

EXPLANATION OF PLATE V.

THESE FIGURES ARE THE NATURAL SIZE AND APPEARANCE OF THE PLANTS.

CLASS III. TRIANDRIA, ORD. I. MONOGYNIA.

Fig. I. Tamarind Tree, *(tamarindus Indica)*, n. o. Lomentaceæ; Fr. Tamarin; Ital. Tamarindo; Span. Tamarindo; nat. East and West Indies; quasi Indian Date, Tamar being the Arabic for Date; called also Tamarindus Occidentalis, and Balam Pulli.

This is a large well-known tree, bearing pods from two to five inches in length, those of Yucatan in South America, and of the East Indies are larger both in the fruit and leaves. This plant is now placed in class Monadelphia, ord. Triandria, the filaments being united at the base. The timber is hard and used for many purposes in building, frequently for floors, as is the Wild Tamarind. The fruit is preserved by being shelled and pouring hot liquor out of the coppers upon it in a jar and then tying it close up. It is very cooling and antiseptic, used as a drink with water and gently relaxes the body. A decoction of the leaves is said to kill worms, and the fruit mixed with a decoction of Borage is said to allay heat of urine.

ORD. II. DIGYNIA.

2. Guinea Grass, or, Large Panic Grass, *(panicum Maximum vel Guineensis)*, n. o. Graminæ.

The seed of this beautiful and valuable grass, is said to have been sent over from the Coast of Guinea to feed some birds, and to have been accidentally thrown out in a fence (the birds having died) where it grew; it is now the principal pasturage, for Cattle, Horses, &c. and cut and brought into the towns in bundles for sale, there being many thousands of acres of it in cultivation. It grows from five to six feet high and will continue several years without replanting. The seed is food for Ortolans or Butter Birds and Grass Birds. There are upwards of seventy species of panicum, of which about twenty are natives of the West Indies.

3. Bahama Grass.

This is a valuable running grass, not growing more than six inches high, but very closely matted at the roots, and difficult to eradicate when once established, creeping on every side even under fences and stone walls. Sheep are very fond of it, as also Horses and Cattle for a change. It makes a beautiful Lawn being kept short and free from weeds, and is very common for pasture about Content and the Red Hills of St. John's in Jamaica, and other dry situations, where the Scotch Grass will not thrive, nor indeed the Guinea Grass without much rain, and in such situations, when there is much rain, Cattle are apt to tread Guinea Grass out of the ground if turned in to feed.

4. Scotch Grass, or Rough-haired Panic Grass, *(panicum hirtellum)*.

This very useful grass, grows four feet high in low swampy places, is green all the year, and is a juicy and nourishing food for stabled horses, when the dry weather prevents the growth of the Guinea Grass. It is said to have been introduced from Scotland

Estate in Barbadoes, and is become very common and a most valuable property on the Pens near the towns in dry weather, whence it is sent into town in carts daily for sale.

CLASS V. PENTANDRIA, ORD. I. MONOGYNIA.

5. Red Plumeria, or Red Jasmine, *(plumeria rubra)*, n. o. Contortæ ; Fr. Frangipanier Rouge ; Span. Donzelle; nat. West Indies and South America ; named from Father Plumier.

This beautiful tree rises about twenty feet high, the stalks are succulent and milky. The flowers come out at the end of the branches, of a fragrant odour and red colour. This specimen was taken from a tree on Mount Moreland, St. Catharine, Jamaica, the flowers of which are of a deep red, but they are generally paler somewhat inclining to a flesh colour.

White Plumeria, *(plumeria alba)*, Fr. Frangipanier Blanc ; grows similar to the former, but the flowers are white with a yellow spot. P. Obtusa and p. Pudica, are also natives of the West Indies, and have fragrant flowers.

EXPLANATION OF PLATE VI.

THE FIGURES ARE THE NATURAL SIZE AND APPEARANCE OF THE PLANTS.

CLASS V. PENTANDRIA, ORD. I. MONOGYNIA.

Fig. 1. Marvel of Peru, or, Four o'Clock, *(mirabilis dichotoma)*, n. o. Dubiæ; named Mirabilis from the wonderful diversity of its colours; nat. East and West Indies.

This beautiful plant has a tuberous root, and herbaceous stems, which are covered with red, white, yellow and variegated flowers, three or more of these colours frequently existing on the same plant. It is called Four o'Clock by the Negroes from the flowers opening at that hour. The seeds are rough and strung for necklaces. *Mirabilis jalappa* is a native of Mexico, and is common in the West India Islands. It was supposed to be the Jalap of the shops, but Dr. Houston found that to be a convolvolus.

The root is cathartic in a dose of double the quantity of Jalap. The M. Longiflora is a native of Mexico, and the M. Viscosa of Peru.

2. Savanna Flower, *(echites subcrecta)*, n, o. Contortæ; from Εχις, a viper, for its poisonous qualities.

This is a small plant creeping among the grass in Savannahs, and only distinguishable by its small pale blue flowers. It is a slow or quick poison according to the dose, and accidents have happened from stopping breakers of Rum with grass in which this noxious weed has been concealed: the antidote is the coccoon antidote nut, and expressed arrow root juice.

3. Sour Grass.

This species is scarcely to be distinguished from the Guinea Grass, Plate 5, fig. 2. when they are both young and without seed, but by they that are sufficiently distinguishable. It is a troublesome weed, and supposed to be injurious to the cattle that eat it.

CLASS IV. TETRANDRIA, ORD. I. MONOGYNIA.

4. Jamaica Contrayerva, *(Dorstenia contrayerva)*. n. o. Scabridæ; named after Dorstenius a German physician; native of Jamaica and St. Domingo.

This valuable herb has heart-shaped rough leaves on footstalks, and grows common in Jamaica. The roots and seeds are excellent Aromatics and Alexipharmics, or counterpoisons, and cure the bites of serpents and stings of scorpions or black spiders. A decoction of the root in water is also good in dropsies and debilitations, or taken as a bitter in wine with the addition of steel. D. Houstoni, is a native of Campeachy; d. Contrayerva, of New Spain and Tobago; d. Drakena, of Tobago; d. Chinensis, of China.

CLASS V. PENTANDRIA, ORD. I. MONOGYNIA.

Rough-leaved Cordia, *(cordia sebestena)*, n. o. Asperifoliæ; named from Cordus a German Botanist; nat. both Indies.

This beautiful tree grows about fifteen feet high, ornamented with bunches of scarlet flowers on branching peduncles. A small piece of its wood put on lighted coals will perfume a house.

Spanish Elm, or, Prince Wood, *(cordia gerascanthus)*, nat. Jamaica. The small branches are used by the coopers to make hoops, and the heart is a fine brown veiny wood easily worked. It is called by the French Bois de Chypre. Dr. Barham says the oil is equal to Rhodium.

Broad-leaved Cherry Tree, c. Macrophylla, is a native of Jamaica; Clammy Cherry, or Turkey Berry, c. Collococca, has red succulent berries which are good for turkeys and poultry to feed on, native of Jamaica; as are c. Micranthrus, and c. Elliptica.

EXPLANATION OF PLATE VII.

THE FIGURES IN THIS PLATE ARE ALL OF THE NATURAL SIZE AND APPEARANCE OF THE PLANTS.

CLASS V. PENTANDRIA, ORD. II. DIGYNIA.

Fig. 1. Bastard Ipecacuanha, *(asclepias curasavica)*, n. o. Contortæ, a species of Swallow-wort: Fr. Dompte venin; Ital. Vintossico; Span. Vencetosico; named from Esculapius.

This herb grows very common in Jamaica, about two feet high, acrid and milky, with handsome flowers in umbels; the nectaries of an orange, and the corol revolute and of a red colour; succeeded by a follicle with imbricated seeds surrounded by a very fine silky down in considerable quantities.

The juice with syrup is given for worms, and the root dried is used by the Negroes as an emetic. It is called blood flower, being an excellent styptic for fresh wounds and the hæmorrhoids, the whole plant being pounded. Dr. Barham says a decoction will stop gleets and the fluor albus.

Auricula, or, French Jasmin, *(a. gigantea)*, is common in the Savannas of Jamaica, and grows seven feet high.

The species of this genus are very numerous, about thirty-four, of which twenty are natives of warm climates.

CLASS VI. HEXANDRIA, ORD. I. MONOGYNIA.

2. Red Lily, *(amaryllis coccinea)*, n. o. Spathaceæ; Fr. Lis Rouge; Span. Lirio Roxo.

This beautiful plant rises only about a foot in height, and the flower is protruded on a footstalk from a spathe and hangs down, of a rich crimson colour, and is a great ornament to a garden, as are all the species of this genus in number twenty-eight.

3. Oyster Plant, *(tradescantia)*, n. o. Ensatæ.

This curious plant is commonly so called, from the upper part opening and shutting like the shell of an oyster, receiving in and protecting the small white flowers at night. It is of a purple colour, and seldom exceeds three inches in height, and is a curious plant in a garden. It is a species of spider-wort, of which there are nineteen, fifteen of which are natives of the East and West Indies.

4. American Aloe, *(agave vivipara)*, n. o. Coronariæ; Fr. Aloe; Span. Aloi; nat. West Indies and South America; from Αγαυος, *agavos*, admirable.

This beautiful plant is very common in Jamaica upon the honeycomb rocks; the leaves are about four feet long, and beset with spines at the edges. About the latter end of April the flower stalk shoots up very rapidly, so that it is commonly said to grow in one night, and they are made use of as May poles on the 1st of May. Their fine crowned stalks, thirty feet high, covered with yellow flowers, (of which the figure is one) have a very handsome appearance, relieving the dark green scenery at intervals. The inspissated juice of the leaves is used by the Negroes for soap, and the fibres make strong thread. Other species are a. Vivipara, a. Virginica, a. Lurida, a. Tuberosa, and a. Fœtida.

It is also called Currato, and a plaster of the Extract cures the gout and rheumatism, and pains in the joints, giving uneasiness for some time, it then drops off and leaves the part free from the disorder.

CLASS IX. ENNEANDRIA, ORD. I. MONOGYNIA.

5. Cinnamon, *(laurus cinnamomum)*, n. o. Holoraceæ ; Fr. Cannelier; Span. Canela ; Ital. Cinnamomo.

This valuable tree grows freely in Jamaica ; the leaves are trinervous and reticulated, and the young leaves of a bright crimson ; the tree from which this figure is taken, was the present of Dr. Dancer, our late respected Island botanist, and produced seed in my garden at Content something similar in shape to an acorn, the bark had the flavour of the true Ceylon cinnamon, but its cultivation is not now attended to as it deserves in the West Indies, nor are the other valuable species of this genus, though they would doubtless amply repay the trouble of cultivation. This valuable aromatic is a native of the Island of Ceylon, but thrives in the West Indies, and the leaves and young buds are put into their pots by the Negroes as a Condiment, to season their vegetable food.

Wild Cinnamon, *(cassia)*, is rather inferior, and a native of Malabar, Java and Sumatra.

Camphor Tree, *(l. camphora)*, is nearly like the Cinnamon, but grows to a larger size and the wood is useful for Carpenters' work. The Camphor is procured by sublimation or distilling the wood with water, and the Camphor as it rises adheres to hay or straw placed in the hollow of a wooden head. It is a most valuable antiseptic, antispasmodic and diaphoretic in small quantities, and from its penetrating subtle qualities very useful in embrocations and liniments for strains, swellings and inflammations. Native of China, Japan, Borneo and Sumatra.

Mountain Laurel, *(l. montana)*, is a native of Jamaica, and a handsome tree.

Jamaica Laurel, Greenheart, or Cogwood Tree, *(l. chloroxylon)*, is esteemed the best timber wood in Jamaica, and used always for the cogs of rollers in sugar mills.

Sweet Bay, *(l. nobilis)*, grows in Jamaica, the leaves, berries and branches are used in baths and fomentations, and the berries are accounted carminative, infused as tea, or the essential oil is used. It is the Δαφνη, *Daphne*, of the Greeks; Fr. Laurier; Ital. Aloro ; Span. Laurel Regio ; Indian Bay, l. Indica, is a native of Madeira, as also is l. Fæteus.

Alligator Pear, or Avocado, *(l. persea)*, grows to about thirty feet high, and bears a valuable rich mild firm pulped fruit which is called vegetable marrow, and when eaten with salt and pepper is highly nourishing. Its size is that of the largest pear, and generally contains two seeds with a rugged hard brown shell contained in a membranous cover. The Negroes are very fond of it and consume great quantities and when in season it is a delicious vegetable for the table. All animals and even birds are remarkably fond of it.

White Sweetwood, *(l. lencoxylon)*, has large black berries, and the leaves and shoots make excellent fodder for cattle ; l. Exaltata, l. Triandra, l. Coriacea, l. Membranacea, l. Patens, l. Pendula, l. Floribunda, are all natives of Jamaica.

CLASS X. DECANDRIA, ORD. I. MONOGYNIA.

6. Horse Radish Tree, or Moringa, *(guilandina moringa)*, n. o. Lomentaceæ; named from Guilandinus a Prussian traveller.

This useful tree grows about twenty feet high, with a smooth bark and pinnated leaves. It is chiefly used for fences, and the young shoots and seed pods are cut as food for goats and sheep. The seed vessel is a legume two feet long, trivalvular and one-celled, seeds numerous and furnished with three wings. The roots when scraped are used as horseradish to which they are very similar: nat. of East Indies; cultivated in Jamaica and Egypt.

Nicker Tree, *(guilandina bonduc)*, has pinnated leaves and is armed with spines ; legume broad and opening with two valves, inclosing two hard bony seeds used by the Negro children for marbles, of a yellow colour, variegated with spots, see Plate 3, fig. 12, sometimes called Bezoar nuts.

Grey Nicker Tree, *(guilandina bonducella)*, has smaller leaves and ash coloured seeds, plate 3, fig. 13, these seeds powdered are said to be useful in intermittents, and the Negroes take both these and the yellow nickers in venereal cases. In Egypt the nuts of both sorts are worn as necklaces or amulets; g. Gemina, is a native of Cochin-China, and g. Nugo, of Amboyna.

7. Barbadoes Pride, *(poinciana* or *cæsalpinia pulcherrima)*, n. o. Lomentaceæ; Fr. Poinciade ou Fleurs de Paradis; nat. both Indies; named after Cæsalpinus a physician.

This beautiful plant rises about ten feet high, leaves doubly pinnate and armed with spines; the flowers are variegated with deep red and orange, and have a very agreeable odour, the legume and seeds flattish. Also called Spanish Carnation and Wild Senna. Some varieties have flowers all yellow.

The plant is considered by the Negroes a powerful emenagogue, the flowers make a purging syrup and the root dies a scarlet colour. Nat. Jamaica and the West Indies.

C. Elata has yellow flowers with purple filaments and is a native of India. C. Sappan, or prickly Brasiletto has a red, heavy and hard wood, durable in sea water and dies a beautiful red; nat. East Indies. C. Crista is also a native of Jamaica.

Brasiletto, *(c. Brasiliensis)*, has slender branches armed with thorns, and white flowers. This is very abundant in Jamaica, so much that I have known many hundred tons cut on and near one plantation, (Salt Island) and shipped to England for Dyers' use; the trees sometimes exceeding fourteen inches in diameter. It is also split up and used in great quantities in the Island for spokes of wheels. It is of a beautiful orange red and is a wood which is hard, heavy and takes a good polish. C. Bijuga, (perhaps the parrot wood), nat. Jamaica. C. Coriaria, nat. Curaçoa. The ripe pods are used for tanning leather, and called Libidibi.

8. Locust Tree, *(hyminæa courbaril)*, n. o. Lomentaceæ; nat. West Indian Islands; named from Hymen.

This is a large spreading tree, having spikes of yellow flowers succeeded by thick brown pods containing four roundish seeds, inclosed in a whitish sweet filamentous substance of which the Negroes are very fond; the tree is very common in Jamaica. From its roots exudes the Gum Anime, making the finest varnish known; when burnt it emits a fragrant smell, and a tincture or oil is useful in embrocations and liniments; inwardly a solution of the gum is useful in venereal cases, a decoction of the leaves is carminative, and the inward bark anthelmintic. It is a heavy hard tough wood, used for cogs in wheels, and takes a fine polish. Dr. Barham says the bark cures intermittent fevers in the same quantity and as well as Jesuits bark.

9. Lignum Vitæ, *(guaicum officinale)*, n. o. Gruinalis; Fr. Gaiäc; Ital. Legno santo; Span. Guayacan.

This valuable evergreen tree, grows to a pretty large size, the foliage of a dark green and flowers of a bluish violet colour, succeeded by compressed berries with two seeds, plate 3, fig. 17. The wood is heavy firm and of a dark olive colour and takes a fine polish. It is principally used for ships blocks, and I have cut or rather sawn down trees near the sea side from eighteen to twenty inches diameter. The gum is collected in considerable quantities by the Negroes exuding from wounds made by their cutlasses. The fruit is purgative and prepared with sugar excels the bark in venereal cases, and yaws; the flowers make a purging syrup like that of violets; an infusion of the bark or sawdust is valuable in chronic rheumatic and venereal cases and attenuates the blood; the foliage of the tree is of a detersive nature. Bastard Lignum Vitæ, *(guayacum sanctum)*, is also a native of West Indies.

EXPLANATION OF PLATE VIII.

THE FIGURES IN THIS PLATE ARE OF THE NATURAL SIZE AND APPEARANCE OF THE PLANTS.

CLASS XVI. MONADELPHIA, ORD. POLYANDRIA.

Fig. 1. Chain Cotton, *(gossypium)*, n. o. Columniferæ; Fr. Coton; Span. Algodon; Ital. Cotone; Gr. ξυλον.

This is a species of that valuable shrub, which was once cultivated to a great extent in Jamaica, (and is now in the Southern States of America) but was very liable to a blast which destroyed whole fields at once. It grows about ten feet high, with large yellow flowers having horned nectaries situated near the edge of the petals, and the seeds grow together in double rows like the links of a chain surrounded by the cotton, whence the trivial name. There are six species but the most common and the most productive in Jamaica is the Barbadoes Cotton, g. Barbadense the seeds of which are separated in a mill having a number of gins, through which the Cotton passes leaving the seeds behind. An acre will generally produce about 250l. weight. With pruning it will bear for seven years.

An emulsion of the seeds is said to be pectoral, and good against the bloody flux, and an oil expressed from them is detersive and used to burn in lamps.

CLASS XI. DODECANDRIA, ORD. I. MONOGYNIA.

2. Red Mangrove Tree, *(rhizopora mangles)*, n. o. Holeraceæ; Fr. Paletuvier; Span. Mangle; from Gr. ριζα και φερω, *riza and phero*, root bearing.

This tree grows on the borders of the creeks and salinas, and the branches hang down in the water to which the round and flat oysters attach themselves. The seed vessel is long and curiously shaped, and the seed has a vitellus and albumen. The timber is hard and used for firewood and crooked knees for boats, and the bark is most powerfully astringent, and excellent for tanning leather which it will do more perfectly in six weeks than oak bark in twelve. Piso says a piece of the root toasted and applied warm, relieves the pains of the sting of the fish Negur and Stingaree. There is also the white and black Mangrove, the latter grows about twenty feet high, and is serviceable timber and very heavy. There are six species, natives of the East Indies.

CLASS XIII. POLYANDRIA, ORD. I. MONOGYNIA.

3. Mammee Apple, *(achras mamosa)*, n. o. Guttiferæ of Jussieu; Fr. Abricot sauvage; Span. Mamei; now arranged in Class 23, Ord. 1, Polygamia, Monæcia.

This beautiful tree grows as in Plate 1, fig. 26, the leaves are firm and shining, and the flowers stand on short peduncles on the larger branches, they are sweet scented and of the size represented in this Plate fig. 3, having a fine appearance among the dark green foliage and succeeded by a roundish fruit about five inches in diameter covered with a rough brown rind, thick and leathery, the inner thin rind of a yellow colour is excessively bitter. The pulp is yellow of an aromatic smell and uncommon luscious and pleasant

flavour, and by some reckoned the most delicious of the Tropical fruits; there are one, two, or more large angular rugged brown nuts in each fruit. The French distil the flowers with spirit to make Eau de Creole. The gum is like Tacamahacca, and will draw Chigoes out whole, and might be used to advantage in the early stages of Cancer, to extract it whole, as is done in some parts of America.

CLASS XIV. DIDYANMIA, ORD. II. ANGIOSPERMIA.

4. Narrow-leaved Calabash, *(crescentia cujete)*, n. o. Putamineæ; Fr. Calabasier couis; Span. Calabaza; named from Crescentius a writer on agriculture.

This tree does not grow very high and the branches stretch out horizontally, the leaves are placed at distances on very short petioles on the branches, the flower is single, seated on a peduncle arising from the larger branches and sometimes from the trunk, of a large size variegated with red and yellow, and of a beautiful appearance, but nauseous smell, the fruit is round, oval or bottle-shaped, containing a tart yellowish pulp with several flat seeds, inclosed in a hard thin woody shell, covered with a thin green skin which the Negroes cut out in various figures. The shells which contain from an ounce to a gallon, are used for spoons, ladles, cups and water bottles, and will bear the fire so as to boil water in. The pulp is very powerful to force the menstrua and bring away the lochia, and is used sometimes by the Negroes to procure abortion. Dr. Barham says it should be given as an emenagogue with caution. The thicker parts of the shell are used to form button molds. The pulp is much used by way of a poultice, and a syrup made from it is considered pectoral, and useful in inward bruises. The wood is tough and flexile and used for saddle trees and by the chaise and kittareen makers. The leaves and pulp are sometimes eaten by cattle. It grows principally in or near the Lowlands of Jamaica and the other West Indian Islands.

Broad-leaved Calabash Tree, *(c. cucurbitina)*, has more upright branches, the leaves flat, oblong and shining, the border of the corol entire, and ovate acuminate fruit, the shells too thin to be useful, but the wood is hard and white, nat. Jamaica.

EXPLANATION OF PLATE IX.

THE FIGURES IN THIS PLATE ARE ALL OF THE NATURAL SIZE AND APPEARANCE OF THE PLANTS.

CLASS XIII. POLYANDRIA. ORD. I. MONOGYNIA.

Fig. 1. Gamboge Thistle, *(Argemone Mexicana,)* n. o. Rhædeæ. Span. Figo del inferno. In all 3 species. This plant is native of the West Indies and Mexico, is annual, and rises about two feet high, the leaves embracing the stalk, jagged and armed with sharp spines. The stalk and capsule are also prickly; the latter about the size of a walnut, half-valved and ribbed. The flower is solitary, has six yellow petals, and the seeds are very numerous and small. The plant is common in Jamaica and is a troublesome weed, difficult to eradicate. The whole contains a lacteous juice, which turns in the air to a consistence of yellow colour, not distinguishable from gamboge; it is a strong cathartic, in small doses, in dropsies, &c. It is detersive and will take off specks and films from the eyes: the infusion is sudorific. The seeds, when smoked, are more narcotic than opium, and will kill cattle if they eat too many. They are a safe emetic and as useful as the ipecacuanha in curing dysentery, and also strengthen the intestines. Bruise two drachms, infuse in half a gill of boiling water, strain and sweeten it: this is a dose for an adult negro. In the dose of a thimble-full, the seeds are a good purgative in the dry belly-ache. An infusion of the whole plant is diaphoretic.

CLASS X. DECANDRIA. ORD. I. MONOGYNIA.

Fig. 2. Stinking Weed, *(Cassia Occidentalis.)* n. o. Lomentaceæ.
Nat. of Jamaica. In all 51 species. This plant rises about two feet high, and grows in great abundance about Kingston and Spanish Town. The leaves are smooth, acuminate and fœtid. The flowers yellow and not very large. The tops and leaves of this plant are used in baths, and the expressed juice made into an epithem with flowers of sulphur, or a strong decoction, is applied to ring-worms or crawcraws, and for crabyaws the negroes' feet are soaked in it many days. It is called also Pajomirioba, or Wild Indigo, by some: the whole plant is said, by Dr. Barham, to be cooling and cleansing, and the root, in decoction, diuretic and a powerful antidote against poison. An infusion of the root in water, with juice of tansy and a small quantity of garlic, is a good vermifuge.

Weakly Senna Shrub, or Twiggy Cassia, *(Cassia Viminea,)* nat. of Jamaica, The stem is shrubby, branches divaricate, leaves bijugous, like the dogwood tree, leaflets petioled, flowers large. It is also called Atao, or Attoo. A decoction of the root, half a pint at a time, three or four times a day, is said to cure the dry belly-ache; ground to a paste and plastered over the body, it cures fever and head-ache.

Cane-piece Sensitive Plant, or Dwarf Cassia, *(Cassia Chamæcristra,)* nat. of West Indies. An annual plant. Stem herbaceous, about 1 foot high; leaves pinnate; flowers small and yellow; legume compressed. A decoction, 2 quarts in the day, is said, by Dr. Wright, to be good against the poison of nightshade.

Senna Tree, *(Cassia emarginata,)* nat. of Jamaica. A small tree with pinnated leaves and a flat, broad legume, grows in dry coppices. The leaves are frequently used for the true senna.

Cassia Stick, or Pudding Pipe Tree, *(Cassia Fistula,)* nat. both Indies. Rises 40 feet high, with a large trunk, divided into many branches. The flowers are of a deep yellow colour, in long spikes. The pods cylindrical, 18 inches long, with a woody shell, having a longitudinal seam and divided into many cells by transverse partitions, containing oval compressed seeds, lodged in a black, sweetish pulp, which, when fresh,

is a gentle laxative—dose, the bulk of a small nutmeg—but if kept out of the pod, it soon turns rancid, and is then unfit for use.

CLASS XIV. DIDYNAMIA. ORD. II. ANGIOSPERMIA.

Fig. 3. Various-flowered Wild Sage, *(Lantana Camara,)* n. o. Personatæ; Brazilian name, Morobatindum. This well-known shrub grows about five feet high, with many pliable branches. Leaves ovate, acuminate, serrated. Flowers orange colour and crimson mixed.

A decoction of the leaves of this plant is an excellent diaphoretic and of great use in fevers, and also generally strengthens the stomach. Outwardly, it will cleanse the worst ulcers and heal up wounds, and is a good ingredient in the aromatic bath. The tea, with 20 drops of laudanum to half a pint, is good in dysentery; also useful in malignant sore throat, as a gargle.

Fig. 4. Are the florets magnified.

Fig. 5. Lantana Inermis,—another species, commonly called Jack in the Bush. There are 19 species of Lantana, mostly natives of the West Indies.

CLASS XXIII. POLYGAMIA. ORD. I. MONÆCIA.

Fig. 6. Nephritic Tree, or Cat's Claw, *(Mimosa Unguiscati.)* This valuable plant, being a species of Mimosa, belongs to the class Polygamia. It grows more plentifully about Spanish Town, within a few miles, than I have observed in any other part of Jamaica. The seeds are said to have been originally sent by a bishop, from some part of Spanish America, as a very valuable present. The decoction of the bark, drunk plentifully, is said to be a sovereign remedy for stone, gravel and difficulty of making urine. It is a small tree; the branches armed with prickles; the leaves glossy, small and roundish; the fruit a long scarlet pod, with black seeds, kidney-shaped and half surrounded with a white poppy down substance, which the negroes resemble to the fat surrounding the kidney. Some call this tree Guilandina Moringa, and suppose Nephritic wood the wood of the tree that bears the ben nut. Brown calls it the Black Bead shrub, or large leafed Mimosa. It is also called Doctor Long. The seeds are eaten by goats.

The other Mimosas will be noticed in their proper place.

CLASS XIV. DIDYNAMIA. ORD. II. ANGIOSPERMIA.

Fig 7. Vangloe, or Spear-leaved Oily Pulse, *(Sesamum Indicum.)* The Sesamum of Pliny, σεσαμον of Theophrast. and Diosc. Egyptian Semsun. Nat. East Indies. n. o. Luridæ. This is an annual herbaceous plant, plentiful in Jamaica, with square stalks and reddish white flowers. The seeds are used in broths, and made into cakes by the Jews, and are considered as wholesome food. They yield also a good sweet oil, in large quantities, called cergilim. It is also used in Carolina, by the Negroes, who parch the seeds and make them into a pudding, called benny. It is called benne in Carolina, and one hundred weight of seeds will produce ninety pounds of oil, preferable to Florence oil. The benne oil is a gentle laxative and burns well in lamps The cultivation of this plant deserves great attention. A decoction of the leaves and buds is good for inflammations of the eyes and is used by the Egyptians as a cosmetic. An infusion of the leaves in cold water immediately renders it mucilaginous, and so used it is demulcent and good for coughs, pleurisies and dysentery. There are two other species, Sesamum Indicum and S. Luteum.

EXPLANATION OF PLATE X.

THE FIGURES IN THIS PLATE ARE ALL OF THE NATURAL SIZE AND APPEARANCE OF THE PLANTS.

CLASS XII. ICOSANDRIA. ORD I. MONOGYNIA.

Fig. 1. Dwarf Pomegranate, *(Punica Nana,)* n. o. Pomaceæ ; Myrti, (Juss.) nat. West Indies ; Ital. Melagrano ; Fr. Grenadier ; Sp. Granado. This beautiful plant rises five or six feet high, with small leaves and scarlet flowers. The fruit is not large and has not much flavour. It is frequently planted for hedge rows and is a long time in flower. The common Pomegranate, P. Granata, rises twenty feet high and bears a fine flavoured fruit, in the West Indies, of a cooling, subacid taste. The rind of the fruit of both species is a powerful astringent, and useful in dysentery and for gargles. An injection is also good in fluor albus, and I have found the dried bark as good as galls, for the purpose of making ink. There are no other species. For representation of the Fruit see Frontispiece, Fig. 23.

CLASS X. DECANDRIA. ORD. I. MONOGYNIA.

Fig. 2. Cashew Apple. *(Anacardium Occidentale,)* n. o. Holeraceæ ; nat. West Indies ; Fr. Du Cachou ; originally placed in this class, afterwards transferred by Linnæus to the ninth, and now placed in Class XXIII. Polygamia, Ord. I. Monœcia. This elegant and useful tree rises about twenty feet high, with a flat, spreading top. The leaves are shining and thickly set ; the apples are yellow or sometimes red, and have a very restringent, acid flavour. Dr. Barham says, the fruit makes an excellent wine, and that a spirit may be distilled from it, far exceeding arrack, rum or brandy. The use of the fruit promotes urine and is serviceable in dropsy and disorders arising from dirt-eating among the Negroes. When roasted, it gives an agreeable flavour to punch. The leaves cleanse ulcers, and the oil of the nut blisters, destroys and peels off the skin, (in which way it is said to be used as a cosmetic by some to procure a new and fair skin) kills herpes and worms and destroys corns. The kernel, when the nut is green, has a finer flavour than a walnut, and when full grown and roasted, is considered a great delicacy ; but the roasted shell of the nut is said to be injurious to poultry. The oil stains linen a deep brown, and is said to preserve wood, besmeared with it, from decay. The milky juice stains in like manner, and the tree yields annually considerable quantities of a fine semitransparent gum, in some respects equal to gum arabic, and a good substitute for gum senegal in dying silk. A considerable quantity, upwards of half a ton, was sent from Jamaica, in the year 1789, by Dr. Isaac Titford, of Spanish Town, for which a gold medal was adjudged to him by the Society for the Encouragement of Arts, &c. See their Transactions, Vol. ix. page 171. The timber of the tree is small, but useful for some purposes ; it contains too much watery sap to burn well. There is but one species. For a representation of the fruit see Frontispiece, Fig. 20.

CLASS X. DECANDRIA. ORD. I. MONOGYNIA.

Fig. 3. Logwood, *(Hæmatoxilum Campechianum,)* nat. South America ; n. o. Lomentaceæ ; Leguminosæ (Juss.) also called Bloodwood and Campeachy Wood. Ital. Legno Indico ; Fr. Bois de Campeche ; Sp. Palo de Campeche. This valuable tree has been introduced into Jamaica since 1715, and is now a staple and profitable article of commerce, as it grows in great abundance, particularly about the Red Hills of St. John's, where several thousand tons were cut, within my own knowledge, in the space of a few years. It rises about fifteen feet high, where it has room to grow and ripen ; the trunk and branches crooked and irregular. When the outer bark cracks and peels off, it is known

to be fit for cutting, or ripe; the tree is then sawn down with cross-cut saws, or felled with axes by the Negro men, and the soft outer bark chipped off with light hatchets by the women, when the wood appears of a dark red colour. It is imported into Europe, for dyers' use, and generally commands a steady good price, and a certain quantity is necessary to each ship for dunnage to stow the casks. In some places this tree grows so thickly as to be a serious inconvenience, and unless thinned, they will never ripen, and it is generally a sign of poor land. The young branches may be used for hoops; but the fences formed of this tree, when trained thick and kept cut short, are very handsome, and impervious to man or beast. Several may be seen on the Old Harbour road. The bark and gum of this tree are subastringent and sweetish, and a decoction of the former excellent in dysentery, with red port, and canella alba grated into it. Give a gill three times a day to an adult; also cool enemas of it often and in small quantities. There is no other species.

CLASS XI. DODECANDRIA. ORD. I. MONOGYNIA.

Fig. 4. Laurel-leaved Canella, *(Canella alba,)* nat. Jamaica; also called Winter's Bark, Wild Cinnamon, &c. Span. Canela Silvestre. This elegant tree rises strait, about twenty-five feet high, the branches erect and laurel-leaved. It is known in the woods by the light grey colour and smoothness of its bark. The berries are a purplish black, aromatic, and taste like cubebs, furnishing food to the white belly and bald pate pigeons, (Columba Jamaicensis and Leucocephala,) and I have always found these birds in great plenty in the woods, when these berries were ripe. The bark is peeled off from the tree and spread to dry, after which it is put up in barrels; but now it cannot be exported to the continent, it is a bad article to ship from the West Indies to Great Britain. A shipment I made of one hundred barrels and upwards did not pay the duties and charges. It is a warm aromatic bitter, and is useful in scorbutic diseases and cholic. An infusion in rum is good to give Negroes who have been wet, to prevent their taking cold, and relieves the complaints in the bowels they are so often subject to. The powder is an excellent sternutatory, and sprinkled on ulcers, cleanses and heals them. It is more stomachic and carminative than real cinnamon, and not so binding. The bark from the branches is better than that from the trunk. The oil is similar to oil of cloves, which is often adulterated with it. There is no other species.

CLASS XI. DODECANDRIA. ORD. I. MONOGYNIA.

Fig. 5. Mangosteen, *(Garcinia Mangostana,)* n. o. Bicornes; nat East Indies; Fr. Mangostan. This tree rises about twenty feet high, with an upright stem, sending out many branches on every side. The flower is rosaceous, of a dark red colour; the fruit round, the size of a small orange, capped at the top; the inside of the fruit is of a rose colour, divided into compartments, containing the seeds, surrounded by a soft, delicious pulp, similar to the strawberry; the juice is purple, seeds of the figure and size of almond kernels. It is esteemed one of the finest fruits in the world, and very grateful and useful to the sick, in any quantity. The form of the tree is handsome and its shade cooling. It will grow in Jamaica, but is not yet introduced into general cultivation, which it deserves to be. The dried bark is restringent and used in dying black. There are two other species, G. Celibeca and G. Cornea, which also bear fruits, but not so fine; the wood of the latter is very heavy and hard.

CLASS XVI. MONADELPHIA. ORD. POLYANDRIA.

Fig. 6. Silk Cotton Tree, *(Bombax Ceiba,)* n. o. Columniferæ; nat. West Indies; Fr. Fromager. This very large tree is common in Jamaica, stretching out its immense arms over a large space of ground and its roots spreading as far in a horizontal direction. The trunk is without branches for about fifteen or 20 feet, and sometimes of such a thickness as to make a canoe (when hollowed) capable of carrying fifteen hogs-

heads of sugar; but being very light, the wood is not much valued for other purposes, except for splitting into shingles, laths and heading for casks. The boards also, after soaking in lime water, will bear exposure to the weather for years. Long says, the tree, when decayed, becomes a nest for the Macaca beetle, the caterpillar of which, gutted and fried, is esteemed by many persons one of the greatest delicacies. The leaves fall every year, and before new ones come out, the flowers appear, succeeded by the fruit, oval, and having a woody cover, opening into five parts, when ripe, and containing a silky down, in which are the seeds. This is used to stuff chairs and pillows by the Negroes. It would be a plentiful and valuable substitute for beaver, in the manufacture of hats, but its importation into England is said to be prohibited. The green bark made into a poultice is good for inflammations, and is supposed to be useful to promote the uniting of fractured bones. A tea is diaphoretic in fever. There are three other species, natives of the East Indies.

CLASS XII. ICOSANDRIA. ORD. I. MONOGYNIA.

Fig. 7. White Guava, *(Psidium Pyriferum,)* n. o. Hesperideæ; nat. West Indies; Fr. Goyavier. This tree grows about ten feet high, having numerous branches, a roundish fruit, with a brittle rind, and a rose-coloured, sweet, aromatic pulp, surrounding numerous hard seeds. It is a wholesome fruit, and much liked; when stewed, it eats like English wardens; also makes a marmalade, or jelly, very good in fluxes and dysentery. The wood is hard and tough, fit for ox-yokes, and good fuel. The bark is highly restringent in dysentery, sore throat, and fluor albus. There are seven other species; one, Mountain Guava, Psidium Montanum, grows sixty feet high in the woods, is a good timber, of dark colour and curled grain, and makes beautiful walking-sticks. For a representation of the fruit, see Frontispiece, Fig. 29.

CLASS XV. TETRADYNAMIA. ORD. SILIQUOSA.

Fig. 8. Indian Kale, *(Brassica, ——)* n. o. Holeraceæ. This species of kale grows common in gardens, in the Red Hills, and is an excellent pot-herb, nor does it require much care in the cultivation. The middle of the leaf is of a beautiful crimson. The European species of Brassica do not grow well in the low lands, but may sometimes be raised in the cool mountains of Port Royal, &c.

CLASS V. PENTANDRIA. ORD. I. MONOGYNIA.

Fig. 9. Jamaica Bark, *(Cinchona Jamaicensis,)* n. o. Contortæ; nat. Jamaica; Fr. Quinquina; Sp. Quina. The specimen from which this drawing was taken was brought to me by the negroes employed in the woods collecting canella alba, and stated to be Jamaica bark, and to possess the virtues of Cinchona Officinalis, but I did not myself see the tree. Caribbæan Bark, C. Caribæa, is called in Jamaica, Sea-side Beech. It would be needless here to attempt to enumerate the wonderful and valuable qualities of Peruvian Bark. I believe it to have been the means of saving my life, as well as that of tens of thousands of others. I would only just mention, that in nyctalopia, a singular and distressing disease of the West Indies, it has effected cures: but to enumerate all its virtues and uses would fill a volume. There are in all nine species.

Fig. 10. A Flower of the same magnified.

EXPLANATION OF PLATE XI.

THE FIGURES IN THIS PLATE ARE ALL OF THE NATURAL SIZE AND APPEARANCE OF THE PLANTS.

CLASS XVI. MONADELPHIA. ORD. VI. POLYANDRIA.

Fig. 1. Musk Ochro. *(Hibiscus Abelmoschus,)* n. o. Columniferæ. Nat. East and West Indies, and Society Isles. Called also Musk Mallow, or Musk. This beautiful plant is common in Jamaica, rises about five feet high, with angulated leaves, on long footstalks, and hairy, the flowers are large and yellow, succeeded by pyramidal five-cornered capsules, filled with seeds, which smell strongly of musk. A few of them will perfume a room, and the French exported them from their West India Islands, as an article of commerce, to scent powders and pomatum. The Arabians and Egyptians grind the seeds to mix with their coffee. They are considered cordial and nervine; and Dr. Dancer says they are also emetic. Common Ochro. H. Esculentus, grows rather smaller, and is a most valuable vegetable food; the capsules are picked green, boiled, and eaten either by themselves or in pepper-pot; they are extremely mucilaginous and nourishing; cut in slices and dried they are exported to England, and are a principal ingredient in the soups which are sold at enormous prices. They are also demulcent and good in dysentery: A decoction of the leaves and pods serves in place of linseed tea. See fruit in Frontispiece, Fig. 38. Red Sorrel or French Sorrel. H. Sabdariffa, is well known. For fruit see Frontispiece, Fig. 34. The red calyxes and capsules, before they are quite ripe, freed from the seeds, with sugar, make an excellent preserve and very agreeable tarts; also a cooling and refreshing drink in fevers. Two drachms of the root gently purges the stomach and bowels. Mahot, or Mahoe Tree. H. Elatus. A tall shady tree; flowers like the red lilly; the tender parts abound with an excellent demulcent mucilage. There are, in all, forty-five species, many of which are very beautiful.

Fig. 2. The parts of fructification of the Musk Ochro, rising like a column in the midst of the flower, the stigma or top which catches the dust of the yellow anthers, is like purple velvet.

Fig. 3. The seeds of the same.

CLASS XVII. DIADELPHIA. ORD. IV. DECANDRIA.

Fig. 4. Jamaica Wild Liquorice. *(Abrus Precatorius.)* n. o. Leguminosæ, nat. both Indies. This well-known plant has branching and twining stems. The decoction of the leaves with sugar and acidulated with lime juice, cures a cold and cough, and is good in cholic. The expressed juice of the leaves has the true taste of liquorice, and an infusion is diaphoretic. There is no other species.

CLASS XVII. DIADELPHIA. ORD. IV. DECANDRIA.

Fig. 5. Wild Indigo. *(Indigofera Anil.)* n. o. Papilionaceæ. Nat. of East and West Indies. This plant grows wild in the Savannahs in Jamaica in great quantities, and was formerly cultivated to a great extent in the southern parishes of Vere and Clarendon, and to the planters then appears to have been a source of great riches; some remains of their works are yet to be seen; but it is now scarcely cultivated at all. This species grows luxuriantly on the driest lands, and yields a fine blue colour by maceration. There are, in all, thirty-five species.

SAME CLASS AND ORD.

Fig. 6. Ground Nut or Pindar. *(Arachis Hypogæa.)* n. o. Papilionaceæ. Nat. West Indies and Africa. Also called Gub-a-Gubs. This well-known plant is herba-

ceous, and grows about three feet high. It is common in Jamaica and the Southern States of America; the nuts, roasted or boiled, are very good and nourishing; they are sometimes made use of for chocolate, or substituted for almonds, and yield a thin limpid oil, similar to oil of olives, very fit to burn in lamps. An emulsion of them is pectoral, and a poultice cures the stings of scorpions, &c. There is one other species, A. Fruticosa.

CLASS XVIII. POLYADELPHIA. ORD. I. DECANDRIA.

Fig. 7. Chocolate Nut Tree. *(Theobroma Cacao.)* n. o. Columniferæ. Nat. South America. This valuable tree was once much cultivated in Jamaica, but is now become very scarce, and is said to have been altogether suddenly blasted or destroyed by a hurricane. I never happened to meet but with one tree of it, which grew wild in the woods in St. John's. It is a handsome tree and grows about ten feet high. The pods hang from the stalk or branches, and contain the seeds, to the number of about twenty each, in a whitish pulp of a sweet taste. The unripe seeds prepared with sugar are a very agreeable preserve; when ripe they rattle in the capsule, and in it retain their vegetative power. A tree yields two or three pounds of seeds per annum; they are cured by daily exposure to the sun. When ground and prepared with vanilla, &c. the chocolate is extremely agreeable and nourishing. If the cultivation of them was resumed it would be very profitable on account of the little labour required. There is no other species.

CLASS XXI. MONÆCIA. ORD. V. PENTANDRIA.

Fig. 8. Red Colilu. *(Amaranthus Sanguineus.)* n. o. Holeraceæ. Nat. Jamaica. This useful and beautiful plant is common in Jamaica, as is another species, called Spanish Colilu A. Viridis, of a green colour. They are excellent pot-herbs, when boiled, exactly resembling English spinach, and with salt are a very wholesome and nourishing food. Wild Colilu. A. Spinosus, is also esculent, but not so good. The Amaranthi are said by Dr. Barham to be restringent and stop fluxes. There are in all twenty-nine species.

CLASS XXI. MONÆCIA ORD. IX. MONADELPHIA.

Fig. 9. Wild Rosemary. *(Croton Lineare.)* n. o. Tricoccæ. Nat. Jamaica. A common shrub, rising about six feet, the leaves of which have an aromatic odour. It is commonly used for fomentations and in warm aromatic Baths, and has the virtues of rosemary; the powder is an excellent sternutatory. There are, in all, fifty-three species of Croton:---Laurel-leaved Croton, C. Glabellum, C. Humile and C. Glandulosum, are also very common about Kingston, Spanish Town, and the Savannahs of Liguanea; the seeds are eaten by birds and poultry. Many others are also natives of Jamaica.

SAME CLASS AND ORDER.

Fig. 10. French Physic Nut. *(Jatropha Multifida.)* n. o. Tricoccæ. Nat. West Indies. This beautiful plant grows about six feet high, with spreading branches and multifid leaves; the corymb coloured and branching like coral. It yields a watery liquor. The seeds are sweet, but very purgative, which quality is supposed to reside in the outward skin and inward film; when these are taken away and they are torrified, bruised and steeped in Madeira they are milder. The oil cures the itch and deterges ulcers, and the flower, powdered, purges hydropic water. This juice with juice of aloes are good ingredients for an enema. The following is an excellent recipe to remove costiveness, and operates mildly and without griping:—Grind up equal parts of jalap, French physic nut, Castile soap and juice of aloes, and take two pills at night. The leaves pounded cure ulcers, and with tobacco are a good enema in ruptures.

Fig. 11. Common or Angular-leaved Physic Nut. *(Jatropha Curcas.)* Rises about seven feet high, the leaves five-angled. It is a common weed in Jamaica. The leaves are useful in resolutive fomentations, but the seeds so violently cathartic as to be

accounted poisonous. Boyle suggested that the fruit might be eaten with safety if the embryo were taken out. I was witness to the death of an only child, of six years old, on a pen near Kingston, from eating these kernels inadvertently. Had the mother been in possession of this plate, and, by comparing the leaves and seed vessel, found out what the plants were, they would have been eradicated and the child's life saved. The stalks are used as a pessary to bring away the meconium.

Eatable-rooted Cassada, Jatropha Manihot. Bitter Cassada is cultivated in Jamaica in considerable quantities, and to considerable profit in the Red Hills of St. John's, as it is hardy, and the bread made of it sure to meet with a ready sale. The roots are dug up, scraped and grated, and all the juice carefully expressed, (otherwise the bread is poisonous). The Farina is dried in the sun, sifted and baked on iron plates. The cakes of it are extremely nourishing, and preferred by the negroes to wheaten bread. The juice swallowed by animals, or the raw root eaten, are fatal, as I have more than once witnessed. The remedies are absorbents after a vomit given, juice of nhambi, mint water and salt of wormwood. I once saw a negroe, nearly dead, cured by repeated draughts of water, in which red dirt was thickly mixed. The hogs, who grub the root from the ground and eat earth with it, never suffer. The juice when putrified breeds little worms called Topuea, which the Indians dry and powder, and put under their nails, when they intend to poison any one's drink. Cassada bread, milk and oil, make a fine poultice for swellings, and the grated root cleanses and heals the worst ulcers. Warm water poured on toasted Cassada stops vomiting. Sweet Cassada is a native of South America, and has long tuberous roots, ten or twelve to a stalk, yellowish within and of a sweet taste; these are wholesome and nourishing food and may be eaten, baked or roasted with safety. There are in all fourteen species of Jatropha.

CLASS XXI. MONÆCIA. ORD. X. SYNGENESIA.

Fig. 12. The parts of fructification of a species of Squash or Chocho, Cucurbita Melopepo, esculent.

Fig. 13. The parts of fructification of a species of Pumpkin, Cucurbita Pepo, esculent.

EXPLANATION OF PLATE XII.

THE FIGURES IN THIS PLATE ARE ALL OF THE NATURAL SIZE AND APPEARANCE OF THE PLANTS.

CLASS XXI. MONŒCIA. ORD. VIII. MONADELPHIA.

Fig. 1. Wild Cassava, or Belly-ach Weed, *(Jatropha Gossipyfolia,)* n. o. Tricoccæ; nat. Jamaica; This plant is very common in dry, gravelly soils. Poultry are fond of the seeds. A decoction of the plant is said to be a specific in dry belly-ach; or six or more of the young leaves may be boiled and eaten as callilue, which is equally powerful; also administer fifteen or twenty leaves in decoction with castor oil as an enema. Barham calls it also Papaw Weed, and says it is good in dropsies. The leaves are like the wild cucumber.

Fig. 2 Common Palma Christi, or Oil Nut, *(Ricinus Communis,)* n. o. Tricoccæ This valuable plant grows near twenty feet high in Jamaica and is very common. The oil expressed from the seeds is called cold drawn, but the most usual way of preparing it is by pounding the seeds in a mortar, and afterwards boiling them, and the oil is skimmed off from the surface of the water. This oil is the mildest, safest, and most efficacious cathartic known, and proper in worms, fever, dysentery, and almost all cases. It is also used to burn in lamps, and will keep any length of time. The leaves make the best cooling dressing for blisters and inflammatory swellings. The oil is frequently taken with spirit. In dry belly-ache the following mode is recommended:—Take a large table spoonful of oil and one and a half of rum; mix them together and set the rum on fire; after burning for half a minute blow out the fire. The remaining mixture to be taken every two hours till the desired effect is produced. The yellow blossom is the male, and the lower the female part of fructification, which ripens to a capsule containing the seeds. See Plate III. Fig. 49. A docoction of the roots is diuretic, and useful in syphilis. There are in all five species. The Spaniards call it Pilerilla, and say the leaves applied to nurses' breasts, draw milk into them and to the loins, out of them.

Fig 3. The Female and Germ, and Fig. 4. the Male part of Fructification of the Sand Box Tree, *(Hura crepitans,)* n. o. Tricoccæ. Nat. Mexico. This tree grows in Jamaica about thirty feet high, but is not very common. There is one behind the King's house in Spanish Town; the leaves are heart-shaped, and the fruit is of a curious texture. (See Frontispiece, Fig. 22) and when left to ripen on the trees, frequently bursts open with a loud report; if gathered before it is ripe, and the seeds picked out of the compartments it becomes a good sand-box, whence its name. The seeds are a violent cathartic, and indeed poisonous, though at first tasting very sweet and pleasant, and I knew a lady who nearly lost her life from eating them. The tree, like most others of a poisonous quality, is lactescent or milky, which, if it gets into the eyes, produces blindness. The wood is not of much value; there are no other species. A single seed, or one and a half roasted, has been recommended in dry belly-ache.

Fig. 5. Manchineel Apple, *(Hippomanes Mancinella,)* n. o. Tricoccæ. This is a large tree, rising about forty feet high, and throwing a considerable shade. It abounds with a glutinous milky juice, which, if it fall on the skin, causes blisters, and if into the eye, blindness. The fruit is poisonous to human beings, which I know by experience, having nearly lost some negro children by it; but the crabs, (which are said to be rendered unwholesome by it) sheep and goats eat the apples that fall from the trees with impunity. The wood is a fine clouded grain and durable; but it is necessary to use precautions in felling it. The Indians poison their arrows with this juice, and the tree exudes also a gum, something similar to the lignum vitæ, which is said to carry off the dropsy. The

antidote to the poison is said to be the juice of the white cedar buds, but an emetic and oily demulcent remedies are more to be depended on. There are two other species.

CLASS XXII. DICŒCIA. ORD. VI. HEXANDRIA.

Fig. 6. Esculent Yam, *(Dioscorea Alata, Bulbifera vel Sativa,)* n. o. Sarmentaceæ, nat. both Indies, Fr. Igname. This valuable plant is cultivated for food to great exent by the negroes in their grounds, and for sale in the markets. The roots are numerous, thick and long, weighing from four to twelve pounds, and when roasted, baked or boiled are a most excellent substitute for bread, and frequently preferred. The buckra yam is extremely white and mealy, the negro and wild yam larger, and more apt to be waxy or watery. A very delicious species is small, purple outside, very white within, and called the Yampea or Yampoy. The stalks are twining and run to some height. There are in all fifteen species. One advantage of this bread kind is, that growing under ground, it is not so liable to suffer from hurricanes as the bread fruit and plantain.

CLASS XXII. DICŒCIA. ORD. XII. MONADELPHIA.

Fig. 7. Velvet Leaf, *(Cissampelos Pariera,)* n. o. Sarmentaceæ, nat. West Indies. This plant has a climbing stem, with heart-shaped leaves, smooth as velvet, and is very common in the mountains. Its leaves are considered excellent vulneraries and antidotes against poison, and a syrup of the leaves and root will perform great cures in consumptive cases, (which however are not common in the West Indies.) A decoction of the root is also an excellent diuretic, and good in gravel and all obstructions of the urinary passages. There are in all five species.

CLASS XXIII. POLYGAMIA. ORD. I. MONŒCIA.

Fig. 8. Gum Arabic, *(Mimosa Nilotica,)* n. o. Lomentaceæ, nat. Egypt. The seeds from which the plant grew, from which this figure was taken, were given to me by Dr. Dancer for the seeds of the true Gum Arabic, distinguished by a gland at the bottom of the petioles. It grew rapidly and well, and in less than two years produced seed in great plenty, and gum exuded from the trunk, branches and seed-vessels. Its cultivation could doubtless be made profitable, and might supersede and eradicate the other troublesome and noxious species, the opoponax and cashew, the latter of which is poisonous to horses in dry weather, and has been the destruction of many hundreds of fine horses in a few years, by swelling them, (if they drink water soon after,) till they burst. When opened, the seeds appeared in a state of vegetation in their entrails. The hippopotamus is killed in Egypt in the same manner. The other species of Mimosa will be noticed in the body of the work.

Fig. 9. Is another species, I believe, of the same genus given me at the same time by Dr. Dancer, and called by him East India Ebony. Its growth was extremely rapid, and in three years (it rose upwards of twenty feet high and six inches in diameter, covered with pinnated leaves and beautiful white flowers of a delightful scent, and succeeded by broad legumes more than a foot long. The other seeds received from him also came up in my garden, in the Red Hills of St. John's.—East India Mohoe, East India Motee, Sweet scented Baboul, Bengal Bean, (esculent) Flowering Shrub, Messoor, Small Baboul, Teak, Cinchona, Baboul Gum Arabic, Spanish Vanilla.

Fig. 10. French Cotton.—A plant not common, rising about six feet high, having light green, thick, succulent leaves, and flesh-coloured flowers, succeeded by a tollicle; containing a most beautiful, fine silky down of considerable length, enveloping the seeds. The leaves bound round the head induce a profuse perspiration, and certainly relieve the head-ache. I have often used them for this purpose, and never known them to fail.

Fig. 11. The Parts of Fructification magnified.

Fig. 12. This plant goes by the name of Turkey Weed, and covers the road side from within about four miles from Kingston, where the negroes bring baskets to gather it when in flower, to feed turkies and other poultry, who are extremely fond of it. I do not recollect to have met with it in any other place.

EXPLANATON OF PLATE XIII.

THE FIGURES IN THIS PLATE ARE ALL OF THE NATURAL SIZE AND APPEARANCE OF THE PLANTS,

And taken from dried Specimens, (presented to me by a friend) from Yucatan in South America, with such short notices and information as he had procured respecting their names and virtues.

CLASS XXIV. CRYPTOGAMIA. ORD. I. FILICES.

Fig. 1. Maidenhair. *(Culantrillo o cabellos de Venus (Capillus Veneris.)* A fern, of the species, Adianthum, which the French use for making Capillaire. Dr. Barham says, the Maidenhairs are specifics against all obstructions of the lungs, liver, spleen, &c. and heal ulcers; a syrup is a good remedy in coughs. There are in all 39 species.

CLASS V. PENTANDRIA. ORD. I. MONOGYNIA.

Fig. 2. Borage, *(Borago)* n. o. Asperifoliæ. The flowers of the Borage are considered cordial. The young shoots and leaves are used as a sallad, or boiled, are a good pot-herb. In all five species.

CLASS IV. TETRANDRIA. ORD. I. MONOGYNIA.

Fig. 3. Wild Sorrel or Soursop, *(Cissus)* n. o. Hederaceæ. The leaves of this plant have an acid taste, and are used to make a cooling drink in fevers. There are fifteen species of Cissus.

CLASS XIX. SYNGENESIA. ORD. II. POLYGAMIA SUPERFLUA.

Fig. 4. Chamomile, *(Anthemis,)* n. o. Compositæ. This plant is a valuable aromatic bitter, stomachic and antiseptic, like the European chamomile, the qualities of which are well known. There are nineteen species.

CLASS XXIV. CRYPTOGAMIA. ORD. I. FILICES.

Fig. 5. Doradilla. A very beautiful species of fern, said to be medicinal for dropsy, &c.

Fig. 6. Oak of Yucatan. A large evergreen tree, the timber of which is hard. The difference of the form of the leaves from those of English or any of the American oaks is remarkable.

Fig. 7. Tabasco Tea, said to be very wholesome and medicinal.

Fig. 8. Balsam of Peru, *(Balsamum Peruvianum)* rather Myroxylum Peruiferum.

Fig. 9. Vegetable Caustic, *(Sorillo)* a fresh leaf of which laid on the flesh will corrode and destroy it almost as powerfully as Lunar Caustic.

ALSO,

Albahacca, *(Aromatica y Sudorifica)*. Aromatic and sudorific.

Guayava, said to be the leaves of the tree which is raised from the seed of the apple planted in that climate, varying very much from the apple both in the form of the leaf and the fruit.

Nettle, *(Ortigia.)* Having a large hairy leaf, the size of the hand, serrated at the edges

Wormwood, *(Sisin.)* Aromatic and Medicinal, having a long linear, grey-coloured leaf.

Chaia,—appears to be a species of Kale, having a leaf deeply divided into three parts and notched at the edges, eaten as greens.

Chinchivel. Having a small lanceolate leaf, serrated at the edges, said to be a great vulnerary, and to cleanse and cure ulcers.

Mallows. An ovate serrated leaf.—Medicinal.

Kavalyasnic. An oval leaf, not very large: cures ulcers.

Makulam. A heart-shaped leaf, nine inches long and six inches wide, with strong midrib and nerves; highly medicinal and aromatic.

Chiopley. A leaf nearly the same size, ovate, acuminate and serrated. Medicinal and aromatic.

Orosus. Resembles liquorice in taste, has a small, ovate, acuminate leaf, slightly notched. A decoction good in coughs and asthmas.

Contrayerba. A heart-shaped leaf, four inches long and three inches wide, serrated at the edges; for the seed-vessel, see Plate III, Fig 63.

Salvia. An ovate, acuminate leaf, six inches long and three inches wide.—Medicinal.

Tamarind,—Differs only from the Tamarind of Jamaica by the leaflets being considerably larger.

Lance Wood, *(Erythroxylum)* so called from its straitness and toughness. It is excellent for making shafts for kitterines, so that no other is used. Pigeons fatten on the berries.

Licti or Luisi, a tree of Chili, sleeping under which causes the face and body to swell; the berries are a strong poison; the cure for a wound infected with it is a herb called pilbogui, which is pounded with salt and rubbed on the part.

Lignum Aloes, has a black heart and fine scent, also called sweet iron-wood; is valuable to cabinet-makers.

Nhambi. has a knotty, hard, thick, hairy stalk, a broad, juicy, green leaf, largely indented; the flowers come out single and monopetalous on a foot-stalk; the fruit as big as a cherry, with a rough coat like ricinus. It is an excellent antidote against poison.

Ortigia. *(Loosa Hispida.)* Grows in Chili, and is a sort of stinging palma christi; a violent emetic and cathartic.

Paica Julla, a cathartic plant, so violent as to be considered a poison.

Palghi, a sort of small sage, the leaf resembling wild rosemary.

Palqui, a sort of wall-wort, with a yellow flower, which cures tinea capitis.

Panke. Two sorts grow in Chili. A tea of its leaves is refreshing.

Paraguay Tea, *(Cassine Paragua.)* Two sorts come from Paraguay; it was once considered as the best of teas.

Payco Herba, grows in Chili. Its decoction is sudorific and good in pleurisies; smells like a rotten lemon.

Peumo, a large tree in Chili, fit for ship building, with a red fruit. A decoction of the bark cures the dropsy.

Poquett, a sort of gold button, or female southernwood, with green checquered leaves which die yellow, and the stem green.

Quesnoa, or Quina, has a little white seed, like that of mustard, but not so smooth; good against falls, bruises and spasms.

Coca, is much esteemed and chewed by the Peruvians, who attribute many wonderful properties to it. It is said to be the same as the East India betel.


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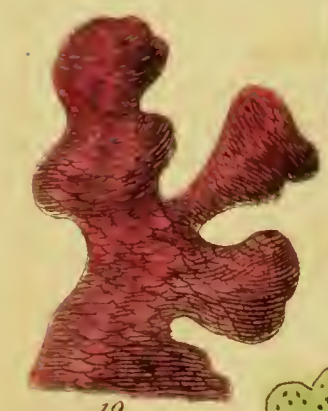
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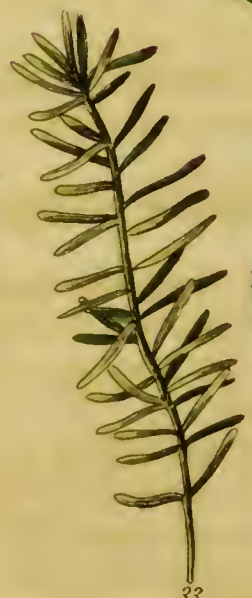
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EXPLANATION OF PLATE XIV.

See Class Cryptogamia, Page 112 *to* 118.

MOSSES, FLAGS, and FUNGUSES, found near LAKE CHAMPLAIN.

FIG. 1. A Moss, with a very fine, soft, silky, green leaf.
2. A Moss, having the capsule at the top of a very slender stalk or thread.
3. A larger species of Moss, with a thicker, red stalk, and the capsules brown, covered with a calyptic of a red colour.
4. A species of Moss, commonly called Feather Moss, alternate and simply pinnated.
5. A very delicate species of Moss, with capsules on very slender, recurvate stalks.
6. A Moss having the fructification on a thread, being a capsule covered with a lid, and over that a smooth veil, ciliated at the edges.
7. Another species of Feather Moss, consisting entirely of simple pinnas.
8. A species of ditto, having the pinna at the top of a rough, brown stalk.
9. A delicate species of moss, with opposite, oval, green leaves on a very slender stalk.
10. Another species of Feather Moss, terminated by the pinnas in threes from the centre.
11. A species having the pinnas at the top, disposed in the form of a star.
12. A species of Feather Moss, in which the pinnas are disposed in an interrupted tapering form to the bottom.
13. A species having green stalks with long ovated leaves.
14. A species of Flat Fungus, of a red colour, growing from old trees and decaying timber, not porous.
15. A species of Club Moss, with a brown stalk and irregular, knotted, scarlet top.
16. A species of Fungus, of a light brown colour, notched at the bottom.
17. A species of Fungus, umbrella shaped, notched at the bottom, and of a bright red colour; the stalk light brown.
18. A species of Moss, funnel-shaped and of a red and yellow colour.
19. A species of Fungus, growing horizontally or vertically from decayed timber, having a scaly surface, and of a bright red colour.
20. A species of Fungus, of a brown colour and notched underneath, with an appendix, of a white colour, rising in the middle and ending in a point.
21. A Fungus, of a light brown colour, smooth at the bottom, having a black stalk.
22. Fungi, small, of a globular shape and sessile, on old rotten wood and of a bright red colour.
23. A Fungus, nearly similar to No. 21, but smaller.
24. A Fungus, of a brown colour, shooting irregularly from old trees in damp situations.
25. A small Fungus, of a roundish, shield-like form, rising to a round point in the centre.
26. A Fungus, shooting from old trees, somewhat in the shape of an oyster; the upper part is lamellated and the appendix porous.
27. A Fungus, of a brown colour, the edges of which turn up and the centre is depressed.

28 and 29. Two species of Algæ, found in Lake Champlain.

30. Ensete. A plant of Abyssinia, growing in water, something similar to the plantain, see page 126.
31. Wild Columbine of New York, see page 125.
32. Canada Thistle, see page 121.
33. Hemlock Spruce *(Pinus Abies Americana,)* see page 98.
34. Golden Thread. An Indian remedy for canker, see page 122.

EXPLANATION OF PLATE XV.

See Class Cryptogamia, page 112 *to* 118.

FERNS, &c. found between Saratoga and Lake George.

Fig. 1. A Fern, with large, veined, lobated leaves.
2. A ditto, with small, sessile, ovate, pointed, reclinate leaves.
3. A ditto, having alternate leaves, at the edges, with an auricle at the base, on the upper side.
4. A ditto, with oval, pointed leaves, having nerves running parallel from the mid-rib to the sides.
5. A ditto, with the leaflets on short pedicles, deeply notched and ending in a blunt point.
6. A ditto, having the leaf continued on each side the stalk, with alternate lobes.
7. A very delicate and beautiful species of Maidenhair,
8. A species of Heath Erica, found, but perhaps not a native, see page 123.
9. Indian Turnip, *(Arum Triphillum,)* see page 93.
11. Wild Pink of New York, see page 125.
12. Dwarf Cedar of ditto.
13. Salt-water Beet, see page 125.
14. Indian Pink, *(Ipomœa Quamoclit,)* Class V. Ord. 1. See page 43.
15. The leaf of a species of variegated Periwinkle Vinca ; the leaves intersected with white lines, see page 114.
16. Biting Turnip, (commonly so called) the root of Fig. 9.
17. A beautiful species of Red Lily, found wild in the woods, near Lake Champlain.
18. Pine Ivory, see page 124.
19. A delicate species of Hickery, as it grows in fences in Jamaica; the seed-vessel is a nut, but never comes to perfection or forms a kernel.

EXPLANATION OF PLATE XVI.

Fig. 1. Chesnut, *(Fagus,)* see page 97.
2. Red Oak, *(Quercus Rubra,)* the leaf deeply and bluntly lobed, nerves reticulated, see page 96.
3. White Oak *(Quercus Alba,)* the leaf deeply lacineated, with pointed lobes, see page 96.
4. Basswood ; see page 127.
5. Button Weed ; see page 102.
6. Rock Maple *(Acer,)* see page 103.
7. Dogwood ; see page 41.
8. The Sassafras *(Laurus Sassafras,)* see page 130. Some of the leaves are lobed, as in Fig. 9.

EXPLANATION OF PLATE XVII.

Fig. 1. Catnep, *(Nepeta,)* see page 123.
2. Broad Plantain, *(Plantago,)* see page 120.
3. Gra-s Pink ; see page 123.
4. Boneset, *(Eupatorium Perfoliatum,)* see page 123.
5. Shepherd's Purse, *(Thlaspi,)* see page 125.
6. Wax Work, *(Gomphræna Globosa,)* see page 50.
7. May Flower, (Class V. Ord. 1) see page 124.
8. White Lily of Lake Champlain; see page 125.
9. Lily of the Valley, *(Convallaria.)* Class VI. Ord. 1., see page 126.
10. Yellow Lily of Lake Champlain: see page 127.
11. Sumach, *(Rhus Typhinum,)* see page 52.
12. Sarsaparilla *(Smilax Sarsaparilla,)* see page 126.

NOSOLOGICAL INDEX,

For Reference to the Medical Virtues of Plants, to which are added a few other simple Remedies.

CLASS I.——Pyrexiæ from Πυρεξια, *Purexia*, Fever.——ORDER I. Fevers, *Febres.*

REFRIGERANTS, to abate heat, see Antiseptics p. 27. Add. Fruits, see Expl. front. See also p. 38, 40, 55, 67, 68, 69, 72, 87, 91, 99, 126; pl. 5, pl. 10, pl. 11, pl. 12, pl 13. Also Apple Water, Strawberry Leaves decocted, Affusion of cold Water, spunging with distilled Vinegar or Spirits, Barley Water.

Emetics, see p. 25 See also p. 41, 44, 45, 48, 60, 68, 73, 74, 99, 102, 105, 120, 121; pl. 9, pl. 11. Also Artichoke, a decoction of Leaves

Cathartics, see p. 25 and 26. See also p. 43, 56, 63, 68, 75, 76, 86, 87, 89, 91, 93, 96, 99, 102, 120, 127, 130, 132; pl. 4, pl. 7, pl. 9, pl. 11, pl. 12.

Blisters, &c. see p. 26 and 27. See also p. 51, 69, 75, 103, 120, 121, 127, 132.

Blisters to dress, see Expl. pl. 12 and p. 104. Also Cabbage Leaves

Diaphoretics, see p. 26, See also 42, 50, 60, 73, 74, 76, 82, 84, 121, 123, 124, 125, 126, 129; pl. 4, pl. 9, pl. 10, pl. 11, pl. 13. Add. Cinquefoil and Ginger Tea.

Cordials, &c. see p. 24 and 25. See also p. 60, 65, 74, 75, 78, 80, 88, 91, 92, 103, 106, 108, 122, 123, 125, 126, 129, 131; pl. 4, pl. 6, pl. 11.

Vomiting to restrain, see p. 24 and 25. See also p. 36, 46, 78, 125; pl. 4, pl. 11.

Tonics and Antiseptics, see p. 24 and 27. See also p. 41, 42, 44, 46, 48, 53, 57, 63, 65, 67, 69, 73, 76, 77, 87, 88, 89, 96, 98, 99, 100, 101, 106, 120, 121, 122, 123, 125, 126, 127, 128, 129, 130, 131; pl. 4, pl. 6, pl. 7, pl. 10, pl, 13. Wormwood, Gentian, New-wort, Crack, Willow, Blessed Thistle, Camomile, Columbo, Mountain Arnica, Lesser Centaury.

Ague, to prevent the Cold Fit, see p. 49, pl. 7. Cataplasms to stomach, Groundsel, Onion, Water Lily, Yarrow. Internally —a Lemon, Saffron, Ginger, Camphor, Snake Root, 6 grs. every hour.

Ague in the Eye or Head, called in America, Pleurisy in the Head. Red Peruvian Bark.

ORDER II. Phlegmasiæ from Φλεγμονη, *Phlegmone*, Inflammation.

Of the Eye, *Opithalmia*, see. p. 25, 28. See also p. 35, 40, 63, 68, 77, 84, 85, 88, 99, 101, 124, 125, 126; pl. 4, pl. 9. Hyssop, Wormwood, Ground Ivy, Marygold.

Of the Brain, *Phrenitis*, from *Coup de soleil*, see p. 25. See also p. 79.

Of the Throat, *Cynanche Tonsillaris*, see p. 24 and 25. See also 46, 47, 52, 55, 60, 72, 73, 74, 78, 84, 89, 92, 97, 106, 108, 122, 123, 125, 127, 128; pl. 9, pl. 10. Mulberries, Black Currants, Cinquefoil, Figs, Steaming.

Croup or Hives, *Cynanche Trachealis*, see p. 83, 93. Emetics, Bleeding, Blisters, Gases

Pleurisy, *Pleuritis*, see p. 26. See also 44, 50, 83, 84, 101, 104, 113, 121, 122, 125, 130, 131; pl. 9, pl. 13. Nettles.

Inflammation of the Lungs, *Pneumonia*, see p. 25 and 26. See also 83. Digitalis, Bleeding, Warm Bathing.

Of the Stomach, *Gastritis*, see p. 27 and 28. See also p. 38, pl. 9. Add. Barley, Gum Arabic, Linseed, Fomentation, Warm Bath.

Of the Intestines, *Enteritis*, see p. 25 and 26. See also pl. 9, 99. Add Barley, Manna, Fomentation, Warm Bath.

Of the Liver, *Hepatitis*, see p. 25 and 26. See also 99, 113; pl. 13. Add. Elaterium, Duck's Meat, Pellitory of the Wall, Sea Voyage.

Of the Kidney, *Nephritis*, see p. 26 and 28. See also 38, 56; pl. 9. Manna, (Almonds, oil of) Barley, Marshmallow, Linseed, Arrow Root, Fomentations, Cupping, Warm Bath.

Of the Bladder, *Cystitis*, see above; also 120. Agrimony, Horse Tail, Capivi, Turpentine, Columbo.

Of the Spleen, *Splenitis*, see p. 99, 105, 114, 128; pl. 4, pl. 7. pl. 13. Add. Pellitory of the Wall, Water Hemp, Agrimony.

Rheumatism, *Rheumatismus*, see p. 26. See also 30, 44, 47, 51, 62, 68, 71, 76, 81, 83, 93, 95, 98, 101, 102, 108, 110, 111, 120, 126, 130; pl. 7, pl. 10. Add. Mezereon, Lavender Cotton, Elder, Burdock and Elecampane, Nettles; Electricity, Galvanism, Oil Skin, Garlic with Gum Ammoniac.

Head-Ach, *Cephalalgia*, see p. 26. See also 35, 45, 68, 69, 74, 77, 98, 102, 110, 119, 120, 121, 123, 124, 125, 126; pl. 7, pl. 9, pl. 10, pl. 11, pl. 12. Add. Carduus, Horse Radish, Ranunculus, Pediluvium, Cold Affusion, Lemon Rind to Temples, Rosemary Steam, Electricity.

Gout, *Arthritis*, see p. 26. See also 35, 45, 49, 51, 61, 73, 81, 85, 95, 102, 117, 119, 120, 123, 128, 130; pl. 7, Add. Elder, Tansey, Venice Treacle, Pediluvium: steaming, friction.

Tooth-Ache, *Odontalgia*, see p. 26. Add. 48, 58, 61, 68, 69, 84, 100, 101, 102, 109, 123, 130; pl. 9, pl. 11, pl. 13. Add. Garlic, Nettle, Turnip; Electricity.

Ear-Ache, *Otalgia*, see p. 69, 81, 108; pl. 4. Add. Garlic, Fig, Onion, Wormwood, Balsam Pine, Olive and Almond, oil of, Laudanum, Tobacco; Electricity, Steam, Blisters.

Bone Ache, *Spina ventosa*, see p. 25 and 26. See also 47.

ORDER III. Exanthemata, from Εξανθεμα, *Exanthema*, a Pustule.

St. Anthony's Fire, *Erysipilas*, see p. 28. See also 69, 85, 99; pl. 10. Add. Elaterium, Elder Leaves, Love Apple, Tar Water.

Small Pock, *Variola*, see p. 25 and 26. See also 119, 125, Expl. pl. 4.

Measles, *Rubeola*, see ditto. Add. 125, Barley, Lemons, Steaming.

Yaws, *Frambœsia*, see 25 and 26. Add. 63, 98, 102; pl. 7, pl. 13.

Crab Yaws, see above, also p. 68, 96; pl. 8, pl. 9.

Prickly Heat, *Urticaria*. Ground Ivy juice and decoction, Parsley bruised, externally.

Thrush, *Apthæ*, and Canker, see Remedies for Inflammation of Throat. Add. 121, 122, 123, 125. Castor Oil, Manna, Rhubarb, Almond Oil, Roses, Simarouba.

ORD. IV. Hæmorrhagiæ, from Αιμορραγια, *Aimorragia*, Eruption of Blood.

Bleeding at the Nose, *Epistaxis*, see p. 24. See also 89, 94, 119; pl. 9. Add. Nettle, Raisins, Vinegar, Cold Affusion, Volatile Fluor Alkali.

Spitting of Blood, *Hæmoptysis*, See p. 25. See also 65, 66, 73, 89, 97, 98, 104, 106, 113, 126, 132; pl. 6. Add. Prunes, Nettles, Sage, Quinces, Yarrow.

Consumption, *Pthisis*, see p. 28, See also 51, 83, 89, 90, 92, 93, 107, 113, 121, 130; pl. 9, pl. 11, pl. 12. Add. Virginian Cherry, Ivy, Hyssop, Water Cresses, Steam of Rosemary, Gases, wearing Flannel, Sea Voyage, Ballston and Saratoga Waters in New York, inhaling the Vapour of fresh-turned Earth, Stabling with Cows.

Piles, *Hæmorrhois*, see p. 25. See also 45, 46, 80, 101, 110, 111, 121, 124, 126, 131; pl. 4, pl. 7. Add. Onion, Flower Gentle, Flax Weed, Toad Flax, Tobacco fresh Leaf, Nettles, Fumigation, Balsam Capivi, cold Affusion.

ORDER VI. Profluviæ, from *Profluvia*, Fluxes.

Cough, *Choriza*, and Catarrh, *Catarrhus*, see p. 26 and 28. See also 35, 37, 38, 40, 60, 64, 65, 66, 72, 77, 83, 84, 90, 93, 98, 106, 107, 108, 113, 120, 121, 122, 124, 125, 130; pl. 8, pl. 9, pl. 11, pl. 13. Add. Stœchas, Fig, Almond, Lemon (with Capivi,) Turnip (with Sugar,) Banana, Raisins, Liquorice, Mulleins, Oily Pulse, Pellitory of the Wall, Peruvian Bark chewed.
℞. Bals. Tolu. Copaib and Peru, each two ounces, Japan Earth one ounce, Cypress Turpentine two ounces, Gum Guaicum two ounces, two quarts of Rum. digest and shake for ten days. Dose ten drops to two hundred, with Balsam tea sweetened with honey.—Useful to keep for the use of Negroes.

Dysentery, *Dysenteria*, see p. 24, 25 and 28. See also 38, 50, 52, 57, 61, 64, 65, 69, 71, 73, 75, 78, 80, 82, 83, 90, 98, 104, 107, 109, 110, 113, 122, 125, 126, 127, 128, 129, 132; pl. 4, pl. 9, pl. 10, pl. 11, pl. 12. Add. Arnica.

CLASS II. Neuroses, from Νευρον, *Neuron*, a Nerve.——ORDER I. Comata, from *Coma*, Sleep.

Apoplexy, *Apoplexia*, see p. 25, 46. Add. Valerian, Asarabacca, Hellebore, Savory, Water Cresses, Asafœtida, Cupping, Bleeding, Salt and Water, Emetics, Erect Position, Blisters, Sinapisms, a Seton, Electricity.

Palsy, *Paralysis*, see p. 24, 25 and 27. Add. 35, 45, 46, 51, 68, 81, 86, 101, 109, 111, 128; pl. 5, pl. 7. Add. Elder, Electricity.

Cramps and Numbness, see above; see also 62, 81, 101, 108, 111, 123, 126, 130, 132; pl. 12. Jamaica Honeysuckle, Oil of Mint, Castor Oil, Ligature under the Knee, Tar Water, Hungary Water, Electricity, Roll of Brimstone in the Hand, Decoction of Mustard, Sage and Elder to wash in, Onions as Cataplasms, Mustard Seed, Horse Radish.

ORDER II. Adynamiæ, from *α priv* and δυναμις, *adunamis*, want of Power.

Indigestion, *Dyspepsia*, see p. 24 and 25. See also 30, 41, 44, 46, 63, 65, 71, 77, 81, 86, 88, 89, 92, 101; pl. 4, pl. 10, pl. 11, pl. 13. Add. Gentian, Marygold, Oranges, Lemons, Cardnus.

Retention of Menstrna, *Chlorosis*, see p. 24, 25 and 26. See also Amennhorrhæa, Class 4, Ord. 5. See also 38, 56, 95, 99, 114, 121, 125, 132; pl. 4, pl. 6, pl. 7.

Obstructions of the Viscera, see p. 24, 25 and 26. See also 32, 33, 35, 36, 51, 66, 71, 77, 78, 84, 88, 89, 92, 99, 101, 102, 106, 107, 113, 123, 125; pl. 6 and pl. 9. Add. Elaterium, Groundsel, Pellitory, Avens, Horse Radish.

ORDER III. Spasmi, from σπαω, *spao*, to draw.

Locked Jaw, *Trismus*, see p. 24. See also 44, 48, 65, 83, 91. Add. Meadow Narcissus, Opium, Musk, Cold Affusion, Bark and Wine, exciting a Fever.

Hooping Cough, *Pertussis*, see p. 24 and 25. Add. Pennyroyal, Roses, Friction with Spirits on the Spine, Change of Air.

Convulsions, *Convulsio*, see p. 24. See also 45, 63, 101, 107, 123, 126. Add. Valerian, Pellitory of the Wall, Pæony Roots as Cataplasms, Aromatic Bath, Electricity.

Epilepsy, *Epilepsia*, see p. 24; also 45, 48, 63, 68, 80, 101, 126, 129. Add. Opium, Bark, Rhus Radicans, Cicutaria, Emetics before the Fit, Ligature, Stretching the Jaws, Errhines, Cold Bath, Seton, Electricity, Change of Climate.

Difficult Breathing, *Asthma*, see p 25 and 26. See also 44, 45, 48, 51, 65, 93, 107; pl. 11. Add. Carrots, Nettles, Radish, Garlic, Saffron, Ipecacuanha, Digitalis, Pediluvium, Tar Water, Tobacco.

Heart Burn, *Pyrosis*, see p. 24. See also 46, 81. Add Camomile, Pepper, Fennel, Parsley, Oysters, Saline Draft, Absorbents.

Hiccup, *Spasmus Diaphragmi*, see p. 24. Add. Preserved Ginger, Musk, Cinnamon, (Oil of) Warm Vinegar.

Palpitation, *Palpitatio*, Motherwort, Cold Affusion, Electricity.

Colic and Dry Belly-Ache, *Colica*, see p. 24 and 25. See also 35, 36, 37, 41, 44, 46, 48, 49, 51, 63, 65, 66, 69, 71, 77, 78, 98, 99, 101, 121, 130; pl. 7, pl. 9, pl. 10, pl. 11, pl. 12, pl. 13. Add. Rosemary, Almonds, Olives, (Oil of) Orange Peel, Juniper Berries, Anniseed, Pediluvium, Flannel worn, Fomentation, Burdock with Laudanum as Enema.

Diarrhœa, see Remedies for Dysentery, and p. 24. Add 64, 65, 77, 97, 104, 122, 125, 126; pl. 4.

Profuse Urine, *Diabetes*, see p. 63. Nickers with Gum Elemi, Alum, Cantharides.

Hysterics, *Hysteria*, see p. 24. Add also p. 50, 65, 102, 123, 125; pl. 4. Add. Rue, Lavender, Gum Asafœtida.

Canine Madness, *Hydrophobia*, see p. 24. See also 44, 78, 125, pl. 4. Add. Trefoil Ashes, Plantain Juice, Vinegar, Salt, Cold Bathing, Oil, Excision, or Cautery.

Sea Sickness, see p. 24. See also p. 30, 81. Add. Vinegar, Æther.

Cholera Morbus, *Cholera*, see p. 24. See also p. 35, 71, 82, 107; pl. 9, pl. 10, Add. also Poppies, Onion to Stomach.

ORDER IV. Vesaniæ, from *Vesania*, Madness.

Madness, *Mania*, see p. 25 and 26. See also 45, 69, 126; pl. 8. Add. Pimpernell, Agrimony, Hellebore, Cold Affusion, Electricity, Turning Box, in which the patient is moved round vertically.

CLASS III. Cachexiæ, from Καχος κ Εξυσ, *Kakos et Exus*, Evil habit.

ORDER I. Marcores, from *Marcor*, Emaciation.

Worms, *Ascarides*, see p. 27. See also 42, 43, 48, 50, 55, 56, 65, 75, 77, 85, 86, 91, 94, 114, 126, 128; pl. 5, pl. 7, pl. 9, pl. 10, pl. 11. Add. Stinking Hellebore, Ground Pink (Silene), Cusso, Sugar with Cocoa-Nut Oil.

ORDER II. Intumescentia, from *Intumesco*, to Swell.

Corpulency, *Polysarcia*, see p. 26. See 48. Alkalies, Regimen, Exercise.

Inflation or Wind, *Tympanitis*, see p. 25. See also 30, 71, 132; pl. 10. Add. Leek and Elder.

Dropsy of the Chest, *Hydrothorax*, see p. 25 and 26. See also 80. Squill, Oxygen Gas, Digitalis.

Dropsy of the Head, *Hydrocephalus*, see p. 25 and 26. See also 42, 43 and 80. Affusion, Exciting the Vaccine Fever has cured it.

Dropsy, *Anasarca*, see p. 25 and 26. See also 35, 36, 43, 49, 50, 56, 67, 69, 75, 78, 80, 83, 85, 88, 92, 93, 94, 100, 101, 102, 104 124; pl. 6, pl. 9, pl. 10, pl. 11, pl. 12, pl. 13. Add. Juniper Berries, Bean Tree, Elder, Butcher's Broom, Water Hemp, Agrimony, Dwarf Elder, Flax Weed, Marsh Trefoil, Pepper Grass.

Swelled Legs, see p. 51, 67, 95, 130. Add. Linden, Olive Oil, Dock Leaves, Steam of Vinegar, Electricity.

ORDER III. Impetigines, from *Impeto*, to infest.

Syphilis, see p. 27. See also 31, 44, 68, 69, 82, 84, 87, 89. 98, 101, 102, 107, 119, 126, 129, 130; pl. 7, pl. 13. Alkaline Solution injected will prevent.

Scurvy, *Scorbutus*, see p. 26 and 27. See also 35, 37, 87, 91, 102, 104, 120, 121, 124, 125, 126, 130, 131; pl. 10, pl. 11. Add. also Horse Radish, Cyder, Oranges, and Fruits in general, Pepper Grass, Buck Bean, Coltsfoot, Pitch Pine, Scurvy Grass, New-wort, Powdered Ginger and Essence of Celery (at Sea,) Guaicum with Senna, Turnips, Tar Water, Bark of Water-Dock Root, Cresses, Nettle Juice, Burdock.

Elephantiasy, *Elephantiasis*, see p. 86. Scabious, Water Hemp, Agrimony, Celery, Elm Bark, Burdock, Electricity.

Scabies and Herpes, see 25 and 27. See also p. 63, 68, 90, 95, 103, 120, 129; pl. 9, pl. 10. Scabious, Pond Weed, Liverwort, Water Hemp, Agrimony, House Leek, Garlic.

Jaundice, see p. 32, 74, 75, 99, 114, 119, 125, 123. Elaterium, Rue, Saffron, Oil Nut, Liverwort, Water Hemp Agrimony, Celandine as Sinapism, Nettles, Burdock, Warm Bath.

CLASS IV. Locales, from *Localis*, Partial.

ORDER I. Dysethesia, from Δυσαιθεσια, *Dusaithesia*, Loss of Sensation.

Film on Eyes, *Leucoma*, see p. 68, 69; pl. 9. Add. Ground Ivy Juice.

Singing in Ears, *Paracusis*. Onions bruised, Hyssop, juice of

Defect of Sight in the Day, *Nyctalopia*, Peruvian Bark (see Expl. of Plate 10.

Cold in the Head, see p. 26. Add. Primrose Juice as Errhine, Orange Rind in Nostril.

Deafness, *Dysecæa*, see p. 72, 81, 108, 124. Almond Oil with Laudanum; pl. 9; Ground Ivy Juice, Syringing, Electricity.

Defect of Sight from Relaxation or Obstruction, *Dysopia*, see p. 24. See also 35, 51, 60, 78, 101, 104, 124, 125; pl. 7, pl. 10. Cyder, Boxthorn, Betony powdered, one drm. Juice Apples rotten, Elder Flower Tincture, Electricity.

ORDER II. Dysorexiæ, from Δυσ κ θρεξις, *Dus et threxis*, Depraved Appetite.

Dirt Eating, *Pica Terrena*, see p. 24. See also pl. 10. Elder Roots, Tar Water, Cyder, Cashew Apples, Meat, Porter, Wine.

ORDER III. Dyscinesiæ, from Δυς κ Κινεω, *Dus et Kineo*, to move ill.

Hoarseness, see p. 25. Add. Radish Juice, Conserve of Roses, Nettle, Garlic, Electricity.

ORDER IV. Apocenoses, from Απο κ κενοω, *Apo et Kenoo*, to evacuate from.

Excessive Spitting, *Ptyalismus*, see p. 25. Chewing Bread constantly, and swallowing Saliva.

Flux, *Profusio*, see p. 25. See also 36, 38, 52, 57, 61, 62, 68, 71, 73, 75, 102, 104, 105, 106, 111, 123, 126; pl. 7, pl. 8, pl. 10, pl. 13. Flea Bane, Pimpernell, Duck's Meat, Germander, Mullein, Stæchas, Violets, Winter Green, Opium, Apples baked and Honey.

Gonorrhœa, see p. 25 and 27. See also 44, 51, 82, 89, 120, 131; pl. 7.

Incontinence of Urine, *Eneuresis*, see p. 25. See also 66. Turpentine, Uva Ursi, Agrimony, Rose, Plantain, Electricity.

Fluor Albus, see p. 44, 51, 61, 128; pl. 7. pl. 10.

ORDER V. Epischeses, from Επισχεσις, *Epischesis*, Retention.

Costiveness, *Obstipatio*, see p. 26. See also 65; pl. 4, pl. 9, pl. 11, pl. 13. Prunes, Apples roasted.

Strangury, *Dysuria*, and Stone and Gravel, *Calculus*, see p. 26 and 28. See also 37, 41, 42, 43, 44, 48, 49, 50, 51, 55, 56, 57, 58, 61, 66, 69, 72, 73, 76, 78, 80, 82, 84, 85, 88, 89, 90, 91, 92, 99, 104, 107, 114, 117, 119, 121, 122, 123, 124, 125, 126, 130, 131; pl. 5, pl. 7, pl. 9, pl. 11, pl. 12, pl. 13. Add. Spinach, Peach, Parsley, Agrimony for three months, Hearts Ease, Bear's Whortleberry, Pippiseva, Asmart, Oil, Gland Flax, Musk and Water-Melon Seeds, Checker Berry, Kali.

Obstructed Menstrua, *Amenhorrhœa*, see p. 26. See also 32, 35, 38, 44, 65, 69, 73, 77, 88, 89, 95, 99, 121, 127; pl. 4, pl. 7, pl. 11, pl. 13. Parsley externally, Parsnips, Tar Water, Tur-Radishes, Comfrey Roots, Lebanon Springs in New York, Electricity.

ORDER VI. Tumours, *Tumores*, from *Tumor*, Swelling.

Imposthume, *Abscessus*, see p. 28, See also 31, 35, 39, 55, 67, 68, 69, 77, 78, 86 92, 95, 98, 99, 108, 117, 119, 125, 126, 127, 128, 129, 130, 131; pl. 4, pl. 8, pl. 9, pl. 10, pl. 11, pl. 13. Add. Slippery Elm, Marygolds, Water Hemp Agrimony, Duck Meat.

Cancer, see p. 25, 27, 28. See also 30, 45, 50, 68, 77, 80, 120, 125; pl. 8, pl. 10. Flax Weed, Pimpernell, Red Poppy, Rose, Sheet Lead, Wild Parsnip, Carrots, Red Onions, Rue and Arrow Root as Poultice, Laurocerasus, Hyoscyamus.

Inflamed Legs, see above. Turnips, Elder Leaves, Pear Leaves, Rotten Apples.

Breast, Hardness of, see pl. 13. Add. Camomile and Mallows as Fomentation, Oil Nut, Turnips roasted, Oil of Roses, Steam.

Chilblain, *Pernio*, see 111, 130. Slippery Elm, Turnip, Mustard Flour or Tincture, Socks of Flannel or Chamois Leather, Myrh.

Polypus, see p. 27. Add. Wake Robin or Arum, Alum snuffed up the nostril.

Wart, *Verruca*, and Corn, *Clavus*, see p. 27. See also 68, 69, 103; pl. 10, pl. 13. Marygold, Ivy Leaves, Radish Juice, Adhesive Plaster, Pediluvium, Blister.

Inflamed Uvula, see p. 25. Dandelion, Hempseed, (Gargle.)

Carbuncle, *Anthrax*, see p. 90. Oak Bark.

Boil, *Furunculus*, see p. 28. Wheat Flour with Honey, Steaming.

Schirrous Testis, *Sarcocele*, see p. 28. See also 78. Saffron Poultice, Agrimony, Decoction externally, Pellitory of Wall externally, Bean Flour as Poultice, Electricity.

Whitlow, *Tetreuma*, see p. 28 and 132. Add. Ivy bruised, Incision, Immersion in Warm Water, Asmart, Flour with Honey, Bread chewed, Water Lily.

ORDER VII. Ectopiæ, from Εξ κ Τοπος, *Ex et Topos*, Out of Place.

Rupture, *Hernia*, see p. 49, 125; pl. 11. Rupture Wort, Ducks Meat, Mullein, Agrimony, Strawberry Roots infused.

Protrusion, *Protrusio*, see p. 25. See also 46, 124. Bittersweet, Oak, (Bath of the Leaves in Red Wine,) Turpentine, Fumigation.

Miscarriage, *Abortio*, to prevent. Lignum Guaicum, Decoction used daily.

Dislocation, *Dislocatio*, Clown's Heal-all, p. 121, 132.

Falling of Palate, *Hypostaphyle*, see p. 46. Mustard Seed Gargle, Cayenne Pepper and Salt, bruised Cabbage Leaf laid hot on the Head.

ORDER VIII. Dialyses, from Διαλυω, *Dialuo*, to dissolve Continuity.

ORDER IX. Obstructions, from *Obstructio*, Impediment.

DISEASES OF CATTLE.

ŒCONOMICAL TABLE.

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