

1864-5.

VICTORIA.

65.10.01

111/22042 B

copy 2

---

# ANNUAL REPORT

OF THE

GOVERNMENT BOTANIST AND DIRECTOR OF THE  
BOTANIC GARDEN.

---

PRESENTED TO BOTH HOUSES OF PARLIAMENT BY HIS EXCELLENCY'S COMMAND.

---

By Authority:

JOHN FERRES, GOVERNMENT PRINTER, MELBOURNE.

No. 72.



# REPORT.

---

Melbourne Botanical Garden,  
30th September, 1865.

SIR,

I have the honor of submitting to you a General Report on the more recent labors performed in the Botanical Garden, and in the Museum connected with this establishment.

The Yarra flood of October, 1863, had left the lower garden area in a state of such extensive devastation, that ever since a large share of labor available in the department was absorbed, not merely in the restoration of the ground and its plantations, but also by the adoption of such measures as will tend to obviate the recurrence of similar disasters. It became thus necessary to raise the Yarra bank along the whole line of the Garden, generally to the extent of several feet, and this work could even by this time not have been accomplished without a special vote, had not the drought of last summer and autumn laid dry the marginal portion of the lagoon and facilitated the removal of many thousand loads of soil of the river banks to the lower part of the bridge walk, and to the depressed portion of the borders facing the south side of the lake.

By levelling of the flood débris, and by distributing over it the soil from the adjacent excavations, I caused the north-eastern swampy portion of the lake to be transformed into a lawn, accessible especially to boat parties as picnic ground. Fern trees, Bamboos, Dracænæ, New Zealandian and hardy Australian palms, as well as other plants, imparting to the landscape a somewhat tropical feature, have been grouped at the adjoining edge of the lake within the spontaneously growing Melaleuca jungle. Also a good sized bower of rustic workmanship has been erected on the spot. The scattering of some umbrageous trees over this new lawn, and the construction of a frond house of tall American Arbor Vitæ, will complete the main improvements of this part of the Garden. Having seen a structure such as indicated, one of exquisite beauty and refreshing coolness, in the Imperial Garden of Rio Janeiro, I have striven to provide the necessary plants of this Thua. Perhaps other coniferous trees with a tendency to lateral growth might be chosen for kindred purposes.

In many parts of the Garden iron bowers, set in basalt blocks, and thus of long lasting durability, have been provided: indeed these, together with the long extent of iron fences fixed to basaltic foundation stones, and the numerous lines of glazed drain-pipes, must be regarded as among the permanent property of the Garden.

A good many of the walks are now edged with brick or tile gutters; still, as our grounds are mostly lying on declivities, much additional work needs yet to be done for carrying readily off the water after heavy rainfalls.

By the extension of the system of the Yan Yean waterworks to South Yarra during the last year, the boon of inexpensive water supply through gravitation came at last within our reach.

Iron pipes, of 3 inches diameter, extend now from the upper eastern part of the Garden to the summit of the rise beyond the north-western limits of our ground. From hence I was enabled to conduct the water in open channels along the slopes towards the Yarra and the City bridge, through nearly the whole length of the Government House

reserve. An arrangement is under progress to provide a second main pipe of the aqueducts, in order that the tree plantations in the special reserves of the Botanic Garden, and in that part of the Government House domain inclining to the St. Kilda road, may enjoy already this summer a similar benefit of irrigation. In the last-mentioned reserves, not only extensive lines of avenue trees have been arrayed along the walks more recently laid out, but also the grassy undulations and slopes have widely and permanently been planted with Firs and other coniferous trees, and with Mediterranean and American Oaks, many evergreen.

The means for these extensive operations on the grounds also beyond the garden area have been exclusively supplied from the votes of this department. The kinds of trees chosen, and the number planted, are indicated on the attached plan. Thus, the lines of avenues now established in the Garden and in the surrounding reserves comprise the following 42 kinds of trees: the Illawarra Flame tree, the Poplar-Bottle tree, *Pithecolobium pruinosa*, the British Birch, *Grevillea robusta*, *Gleditschia*, the Sugar Maple, the Sycamore Maple, *Ailanthus glandulosa*, the Azedarach or White Cedar, the spreading Black Poplar, the Abele Poplar, the Moreton Bay Fig tree, *Hymenoporus flavum*, the British Elm, the Bluegum tree, the Stringybark tree, the West Australian Redgum tree, the Cork Oak, *Powllonia imperialis*, the columnar and the spreading Mediterranean Cypress, the tall *Cupressus macrocarpa* and *Cupressus Lawsoniana* of California, the Himalayan *Cupressus torulosa*, the Halepo Pine, the Stone Pine, the Japan Gingko, the Wellingtonia or Big tree, the Bunya Bunya tree, the Canary Islands Fir, *Pinus excelsa* from the Indian Highlands, the Deodar Cedar, the Walnut tree, the Weeping Willow, the Locust tree, the true Plane, the North America Wax Ash, and *Pinus insignis* of California.

The three last-mentioned kinds have shown such a celerity of growth that I cannot refrain from drawing special attention to their superiority over very many other eligible avenue plants. Thus *Pinus insignis* has grown here with about twice the rapidity of a Cluster pine, and thrice that of a Scotch Fir. Planes and Wax Ashes, if once established, could be multiplied locally with the greatest ease from cuttings.

Irrespective of these kinds, a number of miscellaneous trees of deciduous foliage, including Horse Chesnut trees, Sweet Chesnut trees, Limes, &c., are mingled with the evergreen tree vegetation on the causeway at the Yarra banks. Some additional lines of trees are projected on the northern reserve, and for these may be chosen such superior species as the Sycamore Fig tree, which is the favored tree along roadsides and around dwellings in Egypt, where single lines of this tree are found sufficient to overshadow broad streets with its expansive ramifications.

As further eligible for avenues may be mentioned the Lemon-scented Eucalyptus, the Karri Gum tree of West Australia, next to Wellingtonia probably the most gigantic tree of the globe; the *Cardwellia sublimis* and other noble trees recently discovered in the jungles of the north-east coast, and probably hardy here; especially also the Manna Ash, which has proved here, as might be expected from its South European origin, much less susceptible to the effects of scorching winds than its middle European congener; further, *Azadirachta* trees, the *Siris Acacia*, *Amyris terebinthifolia*, several North American trees, especially from the southern states, some here already under test of experiment; the Chinese evergreen Elm, the Basket Willow, Oranges, several kinds of true Oaks, *Cupressus Goveniana*, the most rapid and at the same time perhaps the most spreadingly growing of all lofty Cypresses; *Flindersia* trees of several kinds; several *Elæocarpi*, hardy and of tall growth, especially *Elæocarpus holopetalus* of East Gipps Land, and of the southern part of New South Wales; perhaps also *Eucryphia Moorei*, and other trees, such as continued and successive trials may point out as adapted to our clime.

And here the prospects are most cheering. For, with due regard to aspect, soil and shelter, we may select for overshadowing our roads and streets from an almost endless number of kinds of tree within the broad girdle of the whole temperate and also the sub-



tropical zone. And let it further be remarked, that in some states of middle Europe for many years past public roads have been lined with the ordinary fruit trees of our gardens, an example well worthy of imitation in every other adapted part of the globe, since this measure has become not merely a boon to wayfarers but also a source of a lasting revenue.

The total number of avenue trees, which have found a permanent place within the special area of the Botanic Garden, amounts now to 1,230; that of the southern domain, to 1,429; that of the northern ground, to 162; that of the Government House reserve, to 1,656. Besides, between the Garden Bridge and the next railway station, lines of elms are planted. Thus the total number on the grounds under my control amounts to 4,443. The incipient pineta, formed on our ground, are still more important. On the lawns around the Palmhouse, already a collection of 185 kinds exists; this number represents, however, not all species in our possession, since many additional kinds are scattered through the Garden.

On the slope facing the lagoon, 306 pines are planted, amongst which the predominant *Araucariæ* have assumed already a magnificent appearance. From these groups of coniferous trees the young pine forests are uninterruptedly extended for future handsome groves over the Yarra slopes to the City bridge, and from thence again over the brow of the hill facing the St. Kilda road, and continued by young copses of Mediterranean firs along the Domain road. In the Government House reserve alone, 7,342 pines or pine-like trees are planted. Added to these, 1,299 Conifers planted out on the Garden lawns, and more than 1,000 in the Domain copses, and others scattered through the Garden borders, would give at least 10,000 coniferous trees, to which permanent places have been assigned.

The kinds chosen for the various groups, as may be observed on reference to the plan, are the following: *Pinus Pinaster*, *P. maritima*, *P. Halepensis*, *P. pinea*, *P. Laricio*, *P. silvestris*, *P. Mughus*, *P. Abies*, *P. Larix*, *P. Cembra*, *P. Canariensis*, *P. Nordmanniana*, *P. excelsa*, *P. Smithiana*, *P. inops*, *P. Strobilus*, *P. Sabiniana*, *P. Douglasii*, *P. insignis*, *P. ponderosa*, *P. Jeffreyi*, *Sequoia Wellingtonia*, *Araucaria Cookii*, *A. Bidwillii*, *Callitris Gunnii*, *Cupressus glauca*, *C. torulosa*, *C. macrocarpa*, *C. Goweniana*, *C. Lawsoniana*. In their progress of growth the relative superiority and comparative value of all these trees may be watched.

It may justly be anticipated, that whenever, under the protecting shelter of the Wattle-Acacias, these young firs will have advanced to a stately size, that then a striking change in the aspect of this portion of the metropolitan landscape will take place; moreover, the Garden will then much less suffer from exposure and drought; and above all a pine park will be established, to which most of the city inhabitants will have a nearer and more easy access than to the Botanic Garden. We may hope, also, that after the lapse of a decennial period, seeds from this locality will become available in large masses, fresh for forest culture, a branch of State economy which demands to be initiated ere many more years pass away.

In the reserve opposite the Domain road, to 900 either Mediterranean or North American Oaks, many evergreen, and counting among them a large proportion of Cork Oaks, permanent positions have been assigned. *Quercus lancifolia* and *Q. Toza* were found the most rapid grown; then follow in celerity of growth *Q. Suber*, *Q. Sideroxylon*, *Q. confertifolia*, *Q. Mirbeckii*, *Q. Thomasii*, *Q. inversa*, *Q. heterophylla*.

The experimental ground ascending along the south-western side of the lagoon unfortunately suffered much from the last three floods, but may now be considered secure. It has during the last year been considerably extended and the means of irrigation have been applied.

None of the varieties of Cotton have matured any fruit on the spot, though at Yaekandandah and other of the warmer parts of the colony it bore again this season.

Arrowroot and Ginger have shown a satisfactory yield, and the produce of Sweet Potato has been abundant. Among the kinds of Tobacco, the Connecticut variety has proved most prolific, and experiments instituted at Ipswich, in Queensland, with various kinds of tobacco from this Garden have yielded in the warmer climate there similar results. The Maryland tobacco also luxuriated. The Shiraz tobacco, cultivated already last year, evidently does not find in the vicinity of the metropolis that equality of a mild and humid mountain climate, under which, in the highlands of Persia, it advances to perfection, though undoubtedly in our moist and elevated mountain regions this variety would prosper. The Rheeafibre or Grasscloth plant has thriven fairly. For Coffee, as might be anticipated, the climate has proved here too variable, the temperature of our cool season being too low and that of the warm season too dry to secure a remunerative crop of this plant. By seeds, however, distributed from this establishment, the best variety of Mocha Coffee has been introduced, and now for plantation purposes been established in the Feejee group. But our experiments teach us, that even in the vicinity of Melbourne the Chinese Tea can be grown advantageously as far as climatic conditions are concerned. This plant should evidently in Victoria attract a more general attention of the agriculturist, as it is clearly destined to form, at no distant day, one of the commodities of indigenous culture. If the tea plant succeeds well in the changeable and often for lengths of time arid air of the city vicinity, how luxuriantly will not this important plant grow on the slopes of our wooded forest ranges, from which, on account of the difficulty of transport, cereal crops cannot advantageously be realized.

We stand evidently in need of a few small experimental gardens in the mild and humid parts of our mountain regions, where irrigation could easily be effected, and where seclusion from hot winds would be perfect.

Whether under the expenditure here as yet attending cultivation, as compared to that of India and China, tea produced in this colony can be brought to compete with that imported, remains to be demonstrated by facts; but it seems not unlikely that with our superior ingenuity in the application of apparatus and machinery the preparation of the tealeaves might be largely aided, while the engagement of labor, especially of the juvenile and infirm, might still be rendered remunerative for the gathering of the leaves. The cultivation of tea has certainly of late drawn into India a large amount of European capital and is there now most successfully pursued.

That the tea plant adopts itself to much diversified soil with facility has been borne out by all authentic information. Mr. Handley Sterndale observed the plant thriving on vegetable mould largely mixed with sand, on débris of metamorphic rocks, on trap, on clay slate, on mica slate, on mica rocks mixed with quartz, and even on ferruginous clay. In the mountains about Assam and elsewhere in India it ascends to 6,000 feet elevation. In Kohistan and the Punjab the tea shrubs are exposed to occasional snowfall and frosts, under which the plant only in a young seedling state, when it is unfit to cope with great atmospheric changes, succumbs. Where bush fires had destroyed tea plantations they have been observed to spring again after the advent of rain. Mr. Sterndale recommends the importation of tea seeds from Bengal whenever required on a large scale and of a superior kind.

In the local experimental gardens, the establishment of which suggests itself as desirable, and which perhaps could be connected with industrial schools, other plants of importance might be subjected to trials.

The first of such experimental gardens of a limited extent might be established in East Gipps Land, at Mount Macedon, and on the Murray River. Some preliminary measures to form a small Cinchona plantation in one of the mild glens of Mount Macedon have been initiated. How important it would prove to plant the warmer coast ranges of Australia and any other accessible parts with these precious trees, may be estimated by the circumstance, that Cinchona bark is brought in South America remuneratively from distances of several weeks' travels through the forests to the nearest mercantile dépôt.



# PLAN

OF THE

## GOVERNMENT HOUSE RESERVE

### BOTANIC GARDEN AND ITS DOMAIN

INDICATING THE PRINCIPAL PLANTATIONS

Drawn under direction of D<sup>r</sup> F. Muller

By E. B. Heyne.









Though in Australia we have only in the high coast ranges of Queensland and the northern part of New South Wales localities precisely corresponding in elevation, humidity and temperature to those parts of the Andes in which the most valued *Cinchonas* are indigenous, we may still entertain the hope, that what in Victoria we are missing in elevation of mountain tracts of mild atmosphere, would be recompensed by our lower mountain regions with their equability of a serene climate, and that therefore, in the Palm tree country of the eastern part of Gipps Land, or perhaps even in any of our extensive Fern tree gullies, the *Cinchona* would flourish. Plants of the two most important quinine yielding species, *Cinchona succirubra* and *Cinchona Calisaya*, are long since secured for the conservatories of this Garden, and if provision could be made for local experiments, such as I indicated, the number of plants could readily be increased by the ingenious method of layering, first adopted by Mr. Melvor in the Madras Presidency, a method unknown in South America, but which has yielded hundreds of thousands of plants within a short space of time to the many Indian *Cinchona* plantations.

In the annexed plan, which may serve as a general guide through the Garden and reserves, their prominent features have been delineated. The places allotted to eminently useful, rare or conspicuous plants have been marked with numbers, though such indications on a plan of so reduced dimensions can only be limited. Some of the projected improvements have also been pointed out on the plan. On the southern side of the lake 110 chiefly Australian *Acaciæ* have been congregated, since these plants are to us of special interest as belonging to a genus in species the richest of all in Australia. On the grass land at the adjoining rise a considerable number of different species of *Eucalyptus* are displayed, it being my aim to see the principal forms of this here so important genus of plants well represented in our Garden establishment. Of the Chinese white Mulberry tree a plantation has been formed near the Domain road, a continued demand of the leaves being experienced for sericulture, notwithstanding that the tree has been so extensively distributed from hence year after year.

The rockeries lately formed help to embellish many spots of the Garden. Of statues, as yet, nothing exists, however much they are desirable for enhancing the beauty of the spot. The pressure on the resources of a department so large, in its obligations so extensive and still under the process of formation, has hitherto been such, that calls for works of mere ornamentation were required to give widely way to those of utility.

Still it is hoped, that during the next year improvements may be effected in this direction, when simultaneously the acquisition will be needed of a number of fountains in the more conspicuous and open places. To provide for these works of art marked facilities exist in the fall of the ground, a jet of water for instance from one of the recently formed islands of the lagoon being propelled to the height of about sixty feet, by gravitation. Around the orchestre, and on other much traversed parts of the lawns, where it is difficult to maintain a verdant sward, three kinds of grasses of rigid and unatted growth, *Stenotaphrum glabrum*, *Festuca distichophylla* and *Cynodon Dactylon*, have been adopted as a cover. *Scleranthus biflorus*, a sub-alpine plant of Victoria, forming a dense cushion-like turf, has here and there been chosen for edgings, though its slowness of growth will only allow its adoption gradually. The plant has withstood our summer heat much better than *Spergula pilifera*. Rose and Box edgings have of late here been adopted in preference to those of Chamomile and other plants involving in their maintenance much loss of labor. Some edging has been effected with basalt boulders.

The collection of fruit trees and vines, carefully named, has become gradually rich, and will be further extended, as it is of interest to watch and compare locally the respective merits of every kind.

The orchard thus formed may be transferred to the area of the Government House at a future period. The contents of the conservatories have much increased in variety; the selections of Ferns, *Cactææ* and other succulents being particularly rich. Of 700

species of here cultivated trees and shrubs seeds were collected in as large a quantity as available for interchanges. Of grasses the seeds of 170 kinds, of ferns the spores of 80 species were likewise harvested in the Garden. Of herbaceous plants 1,100 species were last summer under cultivation. The Queensland plants, grouped on one of the slopes of the grassy garden-valley, have endured well the vicissitudes of our clime. The hedge of *Pittosporum eugenioides* proves a feature equally interesting and ornamental, and as the plants can be raised with facility from seeds, and these are so readily accessible in New Zealand, this *Pittosporum*, as well as the allied *P. tenuifolium*, might be extensively employed for surrounding garden areas. *Noltea Africana* has recommended itself similarly for hedging. The call on our nurseries has been as extensive as ever for supplying plants to church and school reserves, cemeteries, and other public institutions. To Parliament House reserve lately 132 plants of pines several years old and 50 large sized bushes have been transferred. How extensively useful the establishment has been in dispersing superior trees and other plants over the country is evinced by the unparalleled instance, that alone of 40,000 Stone Pines raised at one time, and of 7,000 Deodar Cedars raised at another, barely enough were left for the use of the department after satisfying public demands. Under these circumstances, it cannot be otherwise than that the obligation of providing at so large a scale for the requirements of the public ground throughout the whole colony must be excessively burdensome to the department, and were the resources of the establishment to suffer reduction, it would be impossible to respond also in future, as I am still prepared, to all the claims for extensive supplies of plants or for furnishing almost daily cut flowers for fêtes of charities or other public demonstrations.

Nevertheless I regard the claims of the inhabitants of country districts, who cannot draw the same direct advantage from the Garden as metropolitan visitors, the claim to enjoy the indirect benefit of supplies for their public institutions from an establishment solely supported out of the general revenue as extremely just, and their wants have therefore continually and cheerfully been attended to. Thus, 209 institutions have been supplied during the past planting season. If the needful tending has been bestowed on all the plants since a series of years from hence distributed, the gifts conferred must be evident in all directions throughout the Victorian territory.

Seeds of such eminently useful plants as will bear a tropical clime have been provided for several of the northern settlements of Australia, as also for the expedition sent out by the ladies in search of Dr. Leichhardt. Among the seeds distributed were large quantities of various kinds of cotton, mainly received from the Manchester Association, who moreover very thoughtfully and liberally presented a very excellent cotton-gin to the department.

The distribution of plants to private gardens has been very limited, and in reciprocation only, pines and purchasable plants being excluded from the exchange.

Investigations into the causes of rust in cereals engaged my attention during a portion of last summer. The results of the enquiry, one which needs to be largely extended, were submitted in a report to the Board of Agriculture. For many experiments of a chemical or technological character, we are sadly in want of a laboratory and apparatus, requirements which unavoidably must be provided for, if such investigations as led to the recognition of the mercantile value of many oils, gums, resins, barks and other vegetable substances are to be continued, or anew to be initiated. The efforts to provide for the last great home Exhibition have been followed by many gratifying results. As a fact not very generally known, I may instance that from the resin of the Grass trees picric acid can be prepared, now so extensively used as a yellow dye, and on a basis of Indigo for green color. That unbounded treasures of our forests, available by dry distillation of their woods, remain dormant is but too apparent, and in the furtherance of native industry, and in affording new means for the employment of the colonists, the special application of technological chemistry should be brought to bear on this branch



of our resources. The extension of the Museum building stands also much in need, though the contemplated large middle room for the display of timber and other vegetable products, whether commercially or medicinally or technologically important, cannot be effected with the vote available during this year, since much of the outer fencing needs to be renewed, and additions to be made to several of the other buildings of the department.

Multifarious other engagements have rendered it impossible for me to resume field labors during the last season; but I cherish a hope to be able to complete the botanical survey of East Cippis Land during the coming summer, a part of our territory not even geographically well explored. We may presume that on the forest mountains and in the jungle-glens between the Genoa River and Snowy River the discovery of plants still new will reward the search, and that the precise southern limits of many species from the warmer parts of East Australia will be ascertained. Mr. Dallachy, under considerable disadvantages, and occasionally not without imminent danger arising from the hostility of the natives, continues zealously to collect in the densely wooded humid ranges about Rockingham's Bay, and he is requested to endeavor to reach the crests of the Bellenden Ker Range, the highest mountain tract of intertropical Australia, and the most promising which remains to be explored. Indeed, we may presume that whenever the high hills of North-East Australia have been scrutinized by an experienced traveller, not many hundred new plants (if Fungi are excluded) will be left to be discovered throughout the wide tracts of this continent. The Fungus Flora, however, will entail special observations for many years.

A brisk interchange is maintained with kindred institutions abroad and in the colonies, as will be manifest from the subjoined list of contributions, many of which are exclusively donations, and evince the continued generous interest which the Garden and Museum experienced. From many mercantile firms we have enjoyed free transit for consignments, and the aid rendered in this direction by the Peninsular and Oriental Steam Navigation Company is beyond all praise. Among the various and important plants recently acquired are the Colchicum, the Inca Maize (obtained from Marshal Santa Cruz, Peruvian Ambassador in Paris), various new varieties of fruits, the Valonia Oak, Tragacanth plant, Tanner's Sumach, Senna, the American Percimoon (obtained through the kindness of Consul Blanchard), the Chinese Tallow tree, the Jalap plant (secured by L. A. Bernays, Esq.), the edible Cluster Fig tree of North-East Australia, Pistacia Terebinthus, and many others numbered in the accompanying plan.

Of the West Australian Mahagoni tree, which yields a wood so completely resisting decay in sea water, a large number of plants are in our nurseries.

Mr. G. Coppin has most attentively arranged for the introduction of some of the hardy Vines of North America, the cultivation of which has of late attracted so much attention.

Future more extended border culture cannot be attempted with the means at our command, though to the tree plantations on our lawns may be added, and the variety of plants cultivated on our borders be vastly increased from extratropical and subtropical countries. Contending with great sterility of soil and with the growth of weeds, active throughout the year, it would be vain to attempt maintaining a larger area neatly under cultivation. The proportions of ground under spade culture, and that occupied by arboreta, are indicated on the plan.

For the further embellishment of the existing borders we might prominently effect large introductions of South African plants through a special emissary, since no country of the world would more abundantly yield plants of ornament calculated to prosper in this climate. As yet we have of the immense number of Pelargonium, Mesembryanthemum, Ericæ, Oxalides, Phyllis, Stapelias, Aloes, Helichrysa, leguminous, iridaceous plants and others indigenous to South Africa, comparatively but a limited number; most of these would

produce here seeds in cultivation and afford the means of interchanges still more extended than even those hitherto carried on.

I may avail myself of this opportunity to submit my views how, at a future period, the best access could be given to the Garden when the palace of the Governor shall have been raised at the site reserved in the early days of the colony for this purpose, and the present drive from the City bridge will not be any longer available for general traffic. If the path formed already along the base of the ridges facing the Yarra was so far widened as to be transformed into a carriage drive, then a most pleasant road would be opened without any encroachment on the seclusion of the Government House domain. By widening the causeway which separates the Yarra from the lake, we might extend the river drive through the Garden area, and therewith one of the most delightful passages for vehicles could be established. If a carriage bridge could be extended over the Yarra abreast of Jolimont road the access to the Gardens would become perfect.

The Yarra foot bridge, though it suffered so much from the three last devastating floods, after the temporary repair effected by the order of the Board of Land and Works, will serve for traffic until the beautiful and lasting iron girder structure now provided by the Government shall have been completed.

In the literary branch of the department four works emanated within the last year. To these I may be permitted briefly to allude. A quarto volume of lithograms of Victorian plants embraces sixty-six plates, illustrative of such species not delineated before as exhibit more prominently characters of orders and genera of our indigenous vegetation. The analytical details are given extensively; hence by the use of this volume, the student will not only without special reading be readily initiated into the terminology of botanical science, but be enabled also to start from some leading point for any unaided enquiry into the vegetation which may surround him, especially since other publications, some specially applied to the Flora of this country, exist to facilitate his researches. The series of these lithograms is under continuation. Of the *Fragmenta Phytographiæ Australiæ*, the fourth volume has appeared, mainly replete with descriptions of plants not previously known to science. It is probable, that the fifth volume, of which a considerable portion has been printed, and in which, among other grand features in the Australian empire of plants, the lofty Alexandra palm and several new fern trees are rendered known, can be issued before the end of the year. A series of drawings of mosses, published also within the year, will probably attract the attention of a number of observers to the delicate forms of these readily preserved objects for microscopic investigation, the local study of which presents especial charm so long as we are far from being fully acquainted with the moss-flora of this country. A small volume on the plants of the Chatham Islands, elaborated in the latter part of last year, is based on material presented to the museum of our botanical department by W. T. L. Travers, Esq., of Nelson, N.Z., with a special request for the elucidation of these plants. Though this material afforded actually but a limited number of species, of the existence of which we had no previous knowledge, it was well deserving of special elucidation, since the little Chatham group was formerly almost unexplored regarding its vegetable productions. At the time when the plants of the Chatham Islands were received here and rendered known, a volume also on the plants of New Zealand, written by Dr. Jos. Hooker, passed in London through the press, for which volume Mr. Travers's collections became not timely accessible. But while the new researches on the New Zealand plants were still unknown to me, I purposely gave simultaneous publicity to my own observations, in order that the independent views of two observers on a number of identical plants might subsequently be compared, the expression of disparity of opinion always tending largely to elicit truth. How far our observations are concordant may be demonstrated by the fact, that Dr. Hooker admits not less than seventeen New Zealandian species of the genus *Epilobium*, while I recognize but one, and that what I consider varieties of one polymorphous *Veronica* is moulded by the illustrious author of the New



Zealand Flora into nineteen specific forms. That through want of extensive field studies untenable limits are assigned to a vast number of supposed specific forms admits of no doubt whatever, and it is equally evident that the vain attempt to draw lines of specific demarcation between mere varieties or races, hitherto not sufficiently understood in their relation to allied forms of organic life, has largely tended to suggest the theory of transmutation, a doctrine against which in the treatise under consideration I have expressed though cursory still unequivocally a dissenting opinion. Of the second volume of Victorian plants, the greater portion descriptive of the order of Leguminosæ has been printed. But the continuation of this work, commenced on a more comprehensive scale than almost any other existing of a kindred tendency, has for a while been suspended, with a view of giving precedence to a more concise publication, brought out under the aid of our botanical office, by Mr. G. Bentham, the President of the Linnean Society. The expressions of opinions given by this great phytographer in the issue of this work cannot be otherwise than of advantage in the elaboration of the future volumes to be devoted to the "plants of Victoria." For the two volumes hitherto written, and the third under preparation, on the universal vegetation of Australia, comprising all Thalamifloræ and with exception of Compositæ all Calycifloræ hitherto found in Australia, 468 fascicles of plants from the Melbourne Botanical Museum have successively been forwarded for temporary perusal and consultation to Kew. For the concluding portion of the third volume 61 fascicles of Compositæ are prepared. On reference to Mr. Bentham's work, it will be observed that the united material, which in Australia through my researches since 1847 was brought together, is larger than the collections which since the time of Sir Jos. Banks's voyage with Capt. Cook accumulated in Britain, if mine deposited there are subtracted. Seizing on every opportunity which presents itself to add to our store of prepared plants, and maintaining continually one collector in the field, I am almost constantly augmenting the riches of our collections. The whole herbarium of this establishment may be estimated as comprising about 286,000 specimens; the number of extra-Australian individual plants exceeds somewhat those of the Australian portion. Both divisions are kept separate, for the sake of affording increased facility for working with the Australian specimens. How far the formation and elucidation of these collections have already exercised an influence on the process of rendering descriptively known the plants of the Australian continent may be learned, in a retrospective view, from the exposition annexed, according to which, by my local researches, more than 300 genera either not indicated before or specifically not elucidated, were for the first time introduced into the systematic arrangement of the vegetation of this great part of the globe; 95 of these represent generic types novel to science.

Genera not previously known among described Australian plants: *Caltha*, *Myosurus*, *Tetracera*, *Stephania*, *Drimys*, *Sisymbrium* (*Blennodia*), *Capsella*, *Turritis*, *Busbeckia*, *Polygala*, *Xanthophyllum*, *Hugonia*, *Scolopia*, *Brackenridgea*, *Adansonia*, *Helicteres*, *Melochia*, *Riedleya*, *Melhania*, *Waltheria*, *Corchorus*, *Triumfetta*, *Grewia*, *Sloanea*, *Abelmoschus*, *Gossypium*, *Pavonia*, *Urena*, *Lagunaria*, *Bergia*, *Xanthoxylon*, *Euodia*, *Melicope*, *Ryssopterys*, *Atalaya*, *Ratonia*, *Harpullia*, *Nephelium*, *Cardiospermum*, *Ailantus*, *Turraea*, *Ximenia*, *Villaresia*, *Byronia*, *Erythroxylon*, *Sagina*, *Polycarpæa*, *Glinus*, *Mollugo*, *Trianthema*, *Aizoon*, *Sesuvium*, *Tetragonia*, *Hippocratea*, *Gouania*, *Celastrus*, *Euonymus*, *Canarium*, *Rhus*, *Parinarium*, *Homalium*, *Zizyphus*, *Melanthesa*, *Baloghia*, *Mallotus* (*Rottlera*), *Macaranga* (*Mappa*), *Bridelia*, *Acalypha*, *Tragia*, *Hemicyelia*, *Andrachne*, *Excoecaria*, *Aleurites*, *Ceratophyllum*, *Weinmannia*, *Geissois*, *Donatia*, *Argophyllum*, *Jussiaea*, *Ludwigia*, *Ammannia*, *Ameletia*, *Ceriops*, *Bryoniopsis*, *Muckia*, *Lagunaria*, *Trichosanthes*, *Luffa*, *Zehneria*, *Memecylon*, *Metrosideros*, *Syzygium*, *Cathartocarpus*, *Calpurnia*, *Westonia*, *Adenanthera*, *Agati*, *Sesbania*, *Æschynomene*, *Lourea*, *Cajanus*, *Rhynchosia*, *Tephrosia*, *Erythrophlæum*, *Pterolobium*, *Viscum*, *Rhytidandra*, *Paratropia*, *Seseli*, *Pozoa*, *Crantzia*, *Ligusticum* (*Gingidium*), *Guettarda*, *Polyphragmon*, *Gardenia*,

*Ixora*, *Knoxia*, *Timonius*, *Cuclospermum*, *Spermacoce*, *Hedyotis*, *Nertera*, *Sarcocephalus*, *Eupatorium*, *Ageratum*, *Berthelotia*, *Pluchea*, *Adenostemma*, *Antennaria*, *Abrotanella* (*Trineuron*), *Spilanthus*, *Eclipta*, *Enhydra*, *Gynura*, *Bidens*, *Haplotaxis*, *Centratherum*, *Grammatotheca*, *Symplocos*, *Bidaria*, *Gongronema*, *Alstonia*, *Cerbera*, *Lactaria*, *Melodinus*, *Chilocarpus*, *Mitreola*, *Fagraea*, *Geniostoma*, *Adhatoda*, *Dieliptera*, *Ebermayeria*, *Dipteracanthus*, *Adenosma*, *Bonnaya*, *Rhamphicarpa*, *Peplidium*, *Bæa*, *Hydrolea*, *Lycium*, *Datura*, *Canscora*, *Coldenia*, *Echinosperrum*, *Ocimum*, *Pogostemon*, *Ligustrum*, *Ardisia*, *Choripetalum*, *Maesa*, *Helicia*, *Echinopsilon*, *Ærva*, *Psilotrichum*, *Amarantus*, *Pouzolsia*, *Potomorphe*, *Drymispermum*, *Elæagnus*, *Ephedra*, *Ouvirandra*, *Aponogeton*, *Hydrocharis*, *Hydrilla* (*Udora*), *Ruppia*, *Cyanotis*, *Polia*, *Oberonia*, *Saccolabium*, *Pholidota*, *Bolbophyllum*, *Erythrochis*, *Phajus*, *Musa*, *Typhonium*, *Costus*, *Zingiber*, *Alpinia*, *Caryota*, *Cocus*, *Freyinetia*, *Oryza*, *Polypogon*, *Sclerachne*, *Ceratopteris*, *Hypolytrum*, *Antrophyum*, *Meniscium*, *Helminthostachys*, *Cyathea*.

The genera of Mosses and Algæ first rendered known through our collections by the monographic labors of other authors have been omitted.

New Genera: *Ancana*, *Fitzalania*, *Wilkia*, *Palmeria*, *Tristichocalyx*, *Selwynia*, *Sarcopetalum*, *Hymenosporum*, *Cadellia*, *Emblingia*, *Apophyllum*, *Streptothamnus*, *Howittia*, *Lysiosepalum*, *Hannafordia*, *Dicarpidium*, *Brombya*, *Halfordia*, *Coatesia*, *Bosistoa*, *Distichostemon*, *Owenia*, *Hearnia*, *Monococcus*, *Emmenosperma*, *Hedraianthera*, *Neorœpera*, *Petalostigma*, *Synostemon*, *Gillbeea*, *Cuttsia*, *Macropteranthus*, *Gunnia*, *Diplobium*, *Barklya*, *Archidendron*, *Nematophyllum*, *Osbornia*, *Lysicarpus*, *Phynatocarpus*, *Atkinsonia*, *Dichopetalum*, *Pogonolobus*, *Hodgkinsonia*, *Mackinlaya*, *Nothocittus* (*N. Irvingii*, F. M.), *Polycalymma*, *Eriochlamys*, *Trichanthodium*, *Minuranthus*, *Pleuropappus*, *Lachnothalamus*, *Lamprochlena*, *Elachopappus*, *Cyathopappus*, *Oliganthemum*, *Hæckeria*, *Spiropodium*, *Cheioloma*, *Ixiochlamys*, *Ethuliopsis*, *Elachanthus*, *Diodontium*, *Pentalepis*, *Acomis*, *Acanthocladium*, *Kippistia*, *Coleocoma*, *Wittsteinia*, *Michiea*, *Earlia*, *Maccoya*, *Denisonia*, *Newcastlia*, *Bunnya*, *Duttonia*, *Sentis*, *Haussmannia*, *Faradaya*, *Bulweria*, *Rhyncharrhena*, *Cardwellia*, *Arthrotrichum*, *Babbagia*, *Sclerochlamys*, *Osteocarpum*, *Disocarpum*, *Octoclinis*, *Maundia*, *Arthrochilus*, *Agrostocrinum*, *Hodgsoniola*, *Petermannia*, *Reedia*, *Juncella*.

The definition of about 20 additional genera, either quite unknown or additional to Australian generic forms, is reserved for the fifth volume of the *Fragmenta*.

The existence in Australia of fifteen ordinal or subordinal groups of plants, either not noticed before, or without specific limitation of their Australian representatives only indicated, was elucidated by the researches of this office. These groups are *Ochnaceæ*, *Erythroxyleæ*, *Hippocrateæ*, *Brexiaceæ*, *Ilicineæ*, *Homalineæ*, *Ceratophylleæ*, *Alangiaceæ*, *Styraceæ*, *Vaccinieæ*, *Hydrophyllææ*, *Elæagneæ*, *Ephedreæ*, *Musaceæ*, *Pontederiaceæ*. To these might be added *Trithuriaceæ*, a group altogether here for the first time defined, and perhaps also *Orobanchææ*, inasmuch as *Orobanche cernua* has become naturalized since a series of years in widely distant parts of South and West Australia. Further phytological investigations of North-East Australia will undoubtedly add to this series members of other orders, especially of Indian type, as yet not recognized in the great complex of forms of vegetable life in this part of the globe.

Hitherto approximately 2,000 of the 10,000 plants, which, with exclusion of Fungi, constitute the total flora of Australia, received their systematic position and exact appellation by the independent investigations of this department. If for our phytological museum, which is already unique in the southern hemisphere, additionally the private herbarium of one of our leading botanical celebrities could be secured, a herbarium rich in autographical samples of such plants as were connected with the writings of authors published during the first decennial periods of this century, we would then possess a botanical institution second to but very few of the great metropolitan state herbaria of Europe, and excelling all in its Australian division.



The botanical library, which I had formed since a series of years, has now passed over permanently to the department. It comprises predominantly such a selection of books as are needed for local investigations into our flora. Had these works been scattered it would have been difficult, expensive and tedious to restore a similar collection. It consists of 1,086, to a large extent costly, volumes, and of many hundred smaller publications. A brief catalogue is appended to this document.

Though it involved many years' toilsome exertions as well in the field as in the study to advance our botanical department to its present position, it remains gratifying to reflect, that the labors have not been in vain, and that for independent phytographic researches now in Australia more extensive means and greater facilities exist than in many of the metropolitan institutions of an analogous tendency in Europe.

I have the honor to be, Sir,

Your most obedient Servant,

FERD. MUELLER, M.D., F.R.S.,

*Government Botanist for Victoria,  
and Director of the Botanic Garden of Melbourne.*

The Honorable the Chief Secretary,  
&c., &c., &c.





SEEDS OR PLANTS OF SPECIAL VALUE OR INTEREST WHICH WERE RECEIVED  
FROM THE FOLLOWING DONORS SINCE THE ISSUE OF THE LAST REPORT.

- From the Imperial Acclimation Society of France, seeds from India, Japan and Algiers.  
From the Agricultural and Horticultural Society, Punjaub, large assortment of seeds, especially Indian Pines.  
From Professor Dr. Th. Anderson, Calcutta, large collection of pine and other seeds of the Indian Highlands, also Wardian cases with tropical plants.  
From His Excellency Sir Henry Barkly, Mauritius, several Wardian cases containing tropical plants.  
From W. Blanchard, Esq., Consul for the United States of America in Melbourne, seeds of eminently valuable North American forest trees.  
From the Botanical Gardens of Adelaide, Berlin, Brisbane, Calcutta, Capetown, Copenhagen, Hamburg, Hobartou, Lyon, Montpellier, Moscow, Nizza, Otago, Palermo, Paris, Petersburg, Sydney and Vienna, considerable collections of seeds.  
From the British Consul at Arica, seeds of the Peruvian tree-cotton.  
From J. H. Butler, Esq., Calcutta, numerous Wardian cases with Indian plants.  
From His Excellency Sir William Denison, Madras, Wardian cases with Cinchona plants and Orchids.  
From W. Glen, Launceston, case with Tasmanian plants.  
From Messrs. Haage and Schmidt, Erfurt, splendid collections of seeds, and a large assortment of Cactus and other succulents.  
From Mr. W. Hall, Williamstown, large quantity of Dahlias.  
From Sir William Hooker, Kow, large collection of seeds and some Wardian cases with ornamental plants.  
From Messrs. Huber Frères, Hyères, acorns of Mediterranean oaks and other seeds of valuable plants.  
From Mr. T. Hulke, New Plymouth, Wardian case with New Zealand plants.  
From Mr. McKen, Botanical Gardens, Port Natal, Encephalartos and other plants of special interest.  
From S. W. Moore, San Francisco, important contributions of seeds of Californian Pines.  
From Mons. Paucher, New Caledonia, several Wardian cases with valuable New Caledonian plants and seeds locally collected.  
From Professor Dr. Philippi, Santiago, Wardian case with Peruvian plants.  
From Mons. Prosp. Ramel, Paris, numerous valuable collections of seeds and a consignment of fruit-and other trees.  
From Rev. James Smith, Delhi, valuable seed collections, including large quantities of Deodars and other Asiatic Conifers.  
From Mrs. Stewart, Fingal, Tasmania, Wardian case with ornamental plants.  
From Dr. G. H. K. Thwaites, Ceylon, Cinchona and other valuable plants.  
From Professor Todaro, of Palermo, valuable collections of succulent plants.  
From Mons. T. Tiesmann, Java, collection of seeds and plants.  
From Messrs. Vilmorin, Andrieux and Co., Paris, valuable collections of seeds.  
From Messrs. Veitch and Son, London, Wardian cases with new and interesting plants.  
From W. A. Virgoe, Esq., Brighton, donation of spotted Aroids and other ornamental stove plants.  
From Mr. W. Walker, San Francisco, seeds of Californian Pines.  
From Edw. Wilson, Esq., numerous consignments of seeds.  
From Mr. H. Winterstein, Alexandria, large collections of seeds of useful or ornamental plants.

Total number of Wardian cases received, 43.

CONTRIBUTORS OF DRIED PLANTS TO THE BOTANICAL MUSEUM.

Abbott, F., Hobart Town.  
Allitt, W., Portland.  
Anderson, Dr., Calcutta.  
Areschoug, Professor J. E., Upsala.  
Atkinsou, Miss Louisa, Fernhurst, New South Wales.  
Baudinot, E., Kent's Group.  
Berlin Botanical Museum.  
Bolander, Dr. H. M., San Francisco.  
Bordère, A., Paris.  
Bowman, E., Rockhampton.  
Boyle, David, Mulgrave.  
Cadell, Captain.  
Chamberlain, J., Ballarat.  
Clifton, G., Dartmoor.  
Cosson, Dr., Paris.  
Decaisne, Professor, Paris.  
Dickie, Professor, Aberdeen.  
Dorsey, F., Suttor River.  
Dræge, W.  
Durieu de Maisonneuve, Profess., Bordeaux.  
Dutton, the Hon. Francis, Adelaide.  
Fereday, Rev. J., Georgetown.  
Haast, Dr., Christchurch.  
Hall, W., Portland.  
Hamman, F., Gaffney's Creek.  
Hance, Dr., Hong Kong.  
Hannaford, Sam., Launceston.  
Hardy, J., Wellington.  
Hawkins, M., Belfast.

Hector, Dr., Dunedin.  
Henderson, Miss E., Phillip Island.  
Hill, Walter, Brisbane.  
Hillebrandt, Dr., Honolulu.  
Hooker, Sir William, Kew.  
Jardine, T., Somerset.  
Lefevre, G., Paris.  
Leighton, the Rev. A., Shrewsbury.  
Lenormand, R., Vire.  
McGowan, Sam.  
Martin, Dr., Champion Bay.  
Maxwell, G., Albany.  
Miquel, Professor, Utrecht.  
Moore, C., Sydney.  
Pancher, Mons., New Caledonia.  
Parceval de Grandmaison, Paris.  
Philippi, Dr., Santiago.  
Regel, Dr., Petersburg.  
Schroeder, E., Castlemaine.  
Scott, B., Camperdown.  
Sonder, Dr. W., Hamburg.  
Stuart, C., Tenterfield.  
Thozet, A., Rockhampton.  
Thwaites, Dr. G. H. K., Ceylon.  
Tranqueville, Mons. A. de, Paris.  
Travers, W., Christchurch.  
Tyesman, J., Java.  
Walcott, Pemb., Warren River.  
Woolls, W., Parramatta.

The reciprocal transmissions of plants from our Museum continue extensive, and thereby vast additions to our own collections are secured.

## LIST OF CONTRIBUTORS OF PLANTS AND SEEDS.

- A'Beckett, the Hon. T.  
 Acclimation Society, Melbourne.  
 Adamson, W.  
 Allitt, W., Portland.  
 Anderson, Colonel, South Yarra.  
 Atkinson, W., Brisbane.  
 Atkinson, T. J.  
 Ausfeld, H., Arnstadt.  
 Autard, B. d', Mauritius.  
 Bagshaw, W., Emerald Hill.  
 Barry, His Honor Sir Redmond.  
 Beach, Dr., Bombay.  
 Begg, A., Dunedin.  
 Behr, Dr. H., San Francisco.  
 Benison, P., Prahran.  
 Bernays, L. A., Brisbane.  
 Beveridge, P., Swan Hill.  
 Biekuell, F., Dunedin.  
 Blathesly, E.  
 Blow, W.  
 Board of Agriculture.  
 Bogie, W., South Yarra.  
 Bookey, Captain, Richmond.  
 Bosisto, J., Richmond.  
 Bowman, E., Rockhampton.  
 Boxwell, H., Brighton.  
 Boyle, D., Mulgrave.  
 Boyne, G., Feejee.  
 Brandis, G., Enfield.  
 Bremer, G. W., San Francisco.  
 Brewster, R., Penola.  
 Brewster, F., Sandridge.  
 Browu, J., Como.  
 Bruce, A.  
 Brunning, G., St. Kilda.  
 Bryan, J., Brighton.  
 Bucknall, —, Carisbrook.  
 Bull, Captain, Castlemaine.  
 Butchard, James.  
 Cadell, Captain, Auckland.  
 Cairns, C.  
 Campbell, D. S.  
 Cariza, H., Stawell.  
 Chambers, Hugh, Toorak.  
 Champ, Colonel, Pentridge.  
 Chapman, J., Colac.  
 Christy, W., Toorak.  
 Clarke, Dr., Sandridge.  
 Clarke, Rev.  
 Cleghorn, Dr., Calcutta.  
 Cobham, Mrs., Sydney.  
 Cole, Honorable Captain, Brighton.  
 Coller, David.  
 Connor, David, Buneep Creek.  
 Coppin, George.  
 Crawford, Rev. C., Castlemaine.  
 Criakle, T.  
 Curr, R.  
 Dacombe, W., Portland.  
 Dardell, J., Batesford.  
 Daveuport, the Hon. Samuel, Adelaide.  
 Dorsen, J.  
 Dunn, E.  
 Durieu de Maisonneuve, Bordeaux.  
 Edwards, J., St. Kilda.  
 Embling, Dr. T.  
 Everard, J., Duuolly.  
 Fawcett, —, Richmond River.  
 Ferguson, W., Flemington.  
 Fisher, Marm., Duukeld.  
 Flieger, J., Mount Moliagul.  
 Foxton, Mrs., Loddon.  
 Francis, —, Christchurch.  
 French, Charl.  
 Fulton, F. W., Prahran.  
 Georgeson, Mrs., South Yarra.  
 Gerhard, G., Sale.  
 Glass, Hugh, Flemington.  
 Goodwin, the Rev., Darling Junction.  
 Graigner, L.  
 Grey, His Excellency Sir Geo.  
 Grazebrook, J., South Yarra.  
 Hall, J., Hastings River.  
 Hamilton, —, Gleuaraou.  
 Handasyde and McMillan.  
 Hardman, J., Emerald Hill.  
 Hardy, W., Wellington.  
 Harrington, F., London.  
 Harris, G., South Yarra.  
 Harrison, E.  
 Hebert, A.  
 Heldreich, Dr. Theod. von, Athen.  
 Helpman, Captain, Warrnambool.  
 Henderson and Son, London.  
 Heufray, J.  
 Heyde, W. von der, South Yarra.  
 Hill, —, Auckland.  
 Holdsworth, J., Sandhurst.  
 Holt, W., Boroondara.  
 Homfray, R. R., Perth.  
 Hommel and Co.  
 Horne, R.  
 Horticultural Society of Launceston.  
 Howitt, Dr. E.  
 Hyndman, W.  
 Ireland, Hon. R.  
 James, Phillip, Sydney.  
 Joachimi, G.  
 Johnson, R. and B., Thomastown.  
 Johnston, T., Hawthorn.  
 Jones, P. F., Williamstown.  
 Jouis, Lloyd, Avenel.  
 Joshua Brothers.  
 Kampf, F. A., Leipzig.  
 Kellaway, W.  
 Kenworthy, Dr., Ballarat.  
 Kern, J., Sandhurst.  
 Knox, J.  
 Kramer, F., Sandhurst.  
 La Moile.  
 Lang and Co., Ballarat.  
 Langley, J.  
 Latin, W.  
 Law, Somner and Co.  
 Lejourdan, A., Marseille.  
 Levi Brothers.  
 Lewis, G. L.  
 McFadzan, D.  
 McGowan, Sam.  
 McGrady, G.  
 McIntyre, Duncan.  
 Malpus, R., on board the *Great Britain*.  
 Manyfold, Mrs., South Yarra.  
 Martichon, Père et Fils, Cannes.  
 Manpers, F., Carlton.  
 Maxwell, G., Albany.  
 Merrett, J., Malvern.  
 Moore, Dr., Dublin.  
 Moore, Dr., Adelaide.  
 Murray, P., Twofold Bay.  
 Murray, Andr.  
 Neate, A., Collingwood.  
 Noble, Mrs., Brisbane.  
 Nott, Mrs., Maldon.  
 Osborne, J. W.  
 Pamplin, W., London.  
 Panton, —, Sandhurst.  
 Perry, His Lordship the Bishop.  
 Perry, J.  
 Perry, R. W., London.  
 Petermann, Dr. Aug., Gotha.  
 Piffen, H., Auckland.  
 Playford, C., Stawell.  
 Politz, J., Richmond.  
 Poore, Rev. —, St. Kilda.  
 Pugh, Dr.  
 Ralston, A., Sydney.  
 Ramsay, John, M.L.A.  
 Raven, Mrs., Studley Park.  
 Reynolds, J. N.



Richardson, A., Cape York.  
 Riddeil, C., M.L.A., Mount Macedon.  
 Robertson, Mrs. Colonel, Hexham.  
 Robinson, His Excellency Sir H., Ceylon.  
 Ronalds, W., Richmond.  
 Ross, Mrs., Hexham.  
 Roxburgh, A., Deniliquin.  
 Rule, J., Richmond.  
 Rusden, G. W.  
 Sangster, J., Como.  
 Schoenfeld, F.  
 Schuter, J., Portland.  
 Scott, J., Hawthorn.  
 Smith, G., Ballarat.  
 Smith, J. T., M.L.A.  
 Smith, Dr. L. L., M.L.A.  
 Smith, Captain, R.N.  
 Smith, William.  
 Smith and Sons, Riddell's Creek.  
 Stanbridge, W., Daylesford.  
 Stephen, G. M.  
 Stewart, W. J.  
 Stone, C., Brighton.

Straehan, Hon. J. F., Geelong.  
 Stronach, —, South Yarra.  
 Stutzer, J., M.A.  
 Sugar Company, Sandridge.  
 Swan, J.  
 Symmonds, M., Northcote.  
 Taylor, W., Toorak.  
 Thomson, W., Ipswich.  
 Thozet, A., Rockhampton.  
 Tierney, Mrs. Dr.  
 Travers, W., Christchurch.  
 Tullet, H., St. Kilda.  
 Vickery, J., Sydney.  
 Webster, W., Richmond.  
 Wentler, A.  
 Wilhelmi, C., South Yarra.  
 Wilkie, Hon. Dr. David.  
 Wilkinson, Rev., Williamstown.  
 Wilson, S., South Yarra.  
 Wilson, H., Port Elizabeth.  
 Wilson, W., Mauritius.  
 Wingfield, J., Inglewood.  
 Youl, J. A., Hobart Town.

INDEX OF EMINENTLY VALUABLE, CONSPICUOUS OR RARE PLANTS SPECIALLY  
 NUMBERED ON THE PLAN.

- |                               |                                 |                                |
|-------------------------------|---------------------------------|--------------------------------|
| 1. Photinia serrulata.        | 56. Cordyline Australis.        | 111. Castanea vesca.           |
| 2. Hovenia dulcis.            | 57. Hymenanthera Banksii.       | 112. Brachychiton acerifolium. |
| 3. Leucadendron argenteum.    | 58. Yucca gloriosa.             | 113. Bromelia silvestris.      |
| 4. Encephalartos Denisonii.   | 59. Doryanthes excelsa.         | 114. Alectryon excelsum.       |
| 5. Panax papyrifer.           | 60. Sorbus aucuparia.           | 115. Royenia lucida.           |
| 6. Pittosporum Colensoi.      | 61. Wellingtonia gigantea.      | 116. Celastrus scandens.       |
| 7. Ficus Indica.              | 62. Pittosporum bicolor.        | 117. Berberis aristata.        |
| 8. Quercus lancifolia.        | 63. Ficus macrophylla.          | 118. Mahonia Aquifolium.       |
| 9. Quercus Robur Thomasii.    | 64. Podocarpus elata.           | 119. Callitris verrucosa.      |
| 10. Ulmus Chinensis.          | 65. Laurus nobilis.             | 120. Quercus rubra.            |
| 11. Pittosporum phillyroides. | 66. Psidium pyrifera.           | 121. Eucalyptus corynocalyx.   |
| 12. Eremophila longifolia.    | 67. Carya amara.                | 122. Quercus coccinea.         |
| 13. Camellia Japonica.        | 68. Flindersia Australis.       | 123. Angophora lanceolata.     |
| 14. Cryptomeria Japonica.     | 69. Acacia Julibrissin.         | 124. Pericampylos incanus.     |
| 15. Eucalyptus occidentalis.  | 70. Eucalyptus cornuta.         | 125. Grevillea Hillii.         |
| 16. Encephalartos Preissii.   | 71. Eucalyptus Mahagoni.        | 126. Fraxinus Ornus.           |
| 17. Panax dendroides.         | 72. Æsculus Pavia.              | 127. Quercus Ægilops.          |
| 18. Eriobotrya Japonica.      | 73. Pinus longifolia.           | 128. Quercus alba.             |
| 19. Virgilia Capensis.        | 74. Boronia megastigma.         | 129. Brachychiton Delabechei.  |
| 20. Notelaea ligustrina.      | 75. Aberia Caffra.              | 130. Tetragonia implexicoma.   |
| 21. Hakea Baxteri.            | 76. Prunus spinosa.             | 131. Disemma coccinea.         |
| 22. Acmene floribunda.        | 77. Canothus thyrsiflorus.      | 132. Castanospermum Australe.  |
| 23. Citrus medica.            | 78. Leucadendron grandiflorum.  | 133. Livistonia Australis.     |
| 24. Acacia melanoxylon.       | 79. Encephalartos Altensteinii. | 134. Melaleuca stypheloides.   |
| 25. Hakea purpurea.           | 80. Encephalartos Lehmannii.    | 135. Melaleuca genistifolia.   |
| 26. Eremophila bignoniiflora. | 81. Encephalartos spiralis.     | 136. Ficus elastica.           |
| 27. Podocarpus Totara.        | 82. Hedera crassifolia.         | 137. Eugenia Ugii.             |
| 28. Exocarpus cupressiformis. | 83. Coffea Arabica.             | 138. Jambosa Australis.        |
| 29. Araucaria Bidwillii.      | 84. Cinchona succirubra.        | 139. Hakea Victoriae.          |
| 30. Pircunia dioica.          | 85. Dacrydium Franklino.        | 140. Vitis Baudiniana.         |
| 31. Smilax aspera.            | 86. Ficus Australis.            | 141. Agonis flexuosa.          |
| 32. Musa Chinensis.           | 87. Azalea Indica.              | 142. Aleurites triloba.        |
| 33. Myrtus communis.          | 88. Opuntia Tuna.               | 143. Exocarpus pendula.        |
| 34. Hakea encullata.          | 89. Opuntia coccinellifera.     | 144. Elæocarpus cyauens.       |
| 35. Arbutus Unedo.            | 90. Eucalyptus tetragoua.       | 145. Xanthorrhoea Australis.   |
| 36. Araucaria exelsa.         | 91. Widdringtonia juniperoides. | 146. Callitris quadrivalvis.   |
| 37. Araucaria Cunninghamii.   | 92. Aristolochia Siphon.        | 147. Arundo conspicua.         |
| 38. Musa paradisiaca.         | 93. Botryodendron latifolium.   | 148. Olearia Traversii.        |
| 39. Cupressus torulosa.       | 94. Quercus glabra.             | 149. Callitris Macleanii.      |
| 40. Pinus Deodara.            | 95. Acacia Farnesiana.          | 150. Dammara robusta.          |
| 41. Laurus Camphora.          | 96. Corynocarpus lavigatus.     | 151. Syncarpia laurifolia.     |
| 42. Cedrela Taona.            | 97. Callitris cupressiformis.   | 152. Arundo Gyncrium.          |
| 43. Ceratonia Siliqua.        | 98. Arundo Donax variegata.     | 153. Callitris Actinostrobus.  |
| 44. Phoenix dactylifera.      | 99. Olearia argophylla.         | 154. Amyris terebinthifolia.   |
| 45. Morus nigra.              | 100. Hakea cucullata.           | 155. Pinus palustris.          |
| 46. Eucalyptus rostrata.      | 101. Wistaria Chinensis.        | 156. Banksia grandis.          |
| 47. Hakea eucalyptoides.      | 102. MacLura aurantiaca.        | 157. Eucalyptus citriodora.    |
| 48. Bambusa arundinacea.      | 103. Melicytus ramiflorus.      | 158. Grevillea segmentosa.     |
| 49. Protea mellifera.         | 104. Duboisia myoporoides.      | 159. Fagus Cunninghamii.       |
| 50. Ercilla spicata.          | 105. Araucaria imbricata.       | 160. Rubus fruticosus.         |
| 51. Musa Banksii.             | 106. Strelitzia augusta.        | 161. Panax elegans.            |
| 52. Liquidambar styraciflua.  | 107. Phoenix silvestris.        | 162. Broussonetia papyrifera.  |
| 53. Juglans nigra.            | 108. Baloghia lucida.           | 163. Morus rubra.              |
| 54. Musa textilis.            | 109. Dicksonia antarctica.      | 164. Coccoloba platyclada.     |
| 55. Quercus coccifera.        | 110. Alsophila Australis.       | 165. Populus Canadensis.       |

## KEY TO THE ORDERS OF PLANTS REPRESENTED IN THE CLASS GROUND.

- |   |   |   |
|---|---|---|
| <p><i>Thalamifloræ.</i></p> <ol style="list-style-type: none"> <li>1. Ranunculaceæ.</li> <li>2. Dilleniaceæ, Menispermæ.</li> <li>3. Magnoliaceæ.</li> <li>4. Sapindaceæ.</li> <li>5. Cistineæ, Papaveraceæ.</li> <li>6. Buettneriaceæ, Sterculiaceæ.</li> <li>7. Malvaceæ.</li> <li>8. Berberideæ, Oxalideæ.</li> <li>9. Geraniaceæ.</li> <li>10. Polygaleæ.</li> <li>11. Ternstroemiaceæ, Hypericineæ.</li> <li>12. Aurantiacæ.</li> <li>13. Rutaceæ.</li> <li>14. Pittosporæ.</li> <li>15. Caryophyllæ, Elæocarpeæ.</li> <li>16. Cruciferae.</li> <li>17. Violarinae, Tamariscineæ.</li> <li>18. Tiliaceæ, Frankeniaceæ.</li> <li>19. Acerineæ.</li> <li>20. Meliaceæ.</li> </ol> <p><i>Calycifloræ.</i></p> <ol style="list-style-type: none"> <li>21. Philadelphææ, Calycantheæ.</li> <li>22-26. Rosaceæ.</li> </ol> | <ol style="list-style-type: none"> <li>27. Saxifrageæ, Lythrarieæ.</li> <li>28. Halorageæ, Onagreae.</li> <li>29. Rubiaceæ.</li> <li>30. Euphorbiaceæ.</li> <li>31. Ribesiaceæ.</li> <li>32. Dipsaceæ.</li> <li>33. Ficoideæ.</li> <li>34-36. Compositæ.</li> <li>37-39. Myrtaceæ.</li> <li>40. Rhamnaceæ.</li> <li>41-43. Papilionaceæ.</li> <li>44. Mimoseæ.</li> <li>45. Cæsalpinææ.</li> <li>46. Umbelliferæ, Araliaceæ.</li> <li>47. Caprifoliaceæ, Passifloreæ.</li> </ol> <p><i>Corollifloræ.</i></p> <ol style="list-style-type: none"> <li>48. Asclepiadææ.</li> <li>49. Apocynææ.</li> <li>50. Jasminææ.</li> <li>51. Bignoniaceæ.</li> <li>52. Gentianeæ, Loganiaceæ.</li> <li>53. Campanulaceæ, Goodeniaceæ.</li> <li>54. Ericineæ, Epacrideæ.</li> <li>55-56. Illicineæ.</li> <li>57-58. Oleaceæ.</li> </ol> | <ol style="list-style-type: none"> <li>59. Ebenaceæ.</li> <li>60-62. Solanææ.</li> <li>63. Myrsineæ.</li> <li>64. Scrophularineæ.</li> <li>65. Myoporineæ.</li> <li>66. Acanthaceæ.</li> <li>67. Plumbagineæ.</li> <li>68. Verbenaceæ.</li> <li>69. Labiatæ.</li> <li>70. Plantagineæ, Primulaceæ.</li> <li>71. Borragineæ.</li> <li>72. Polemoniaceæ.</li> </ol> <p><i>Monochlamydeæ.</i></p> <ol style="list-style-type: none"> <li>73-80. Coniferæ.</li> <li>81. Cycadeæ.</li> <li>82. Thymeleæ.</li> <li>83. Nyctagineæ.</li> <li>84. Laurineæ.</li> <li>85. Casuarineæ.</li> <li>86. Urticeæ.</li> <li>87-88. Proteaceæ.</li> <li>89. Salicineæ.</li> <li>90. Polygoneæ, Elæagneæ.</li> <li>91. Cupuliferæ.</li> <li>92. Moreæ.</li> </ol> |
|---|---|---|

## CATALOGUE OF THE LIBRARY OF THE BOTANICAL DEPARTMENT, MELBOURNE.

- |   |  |
|---|--|
| <p>Abhandlungen der schlesischen Gesellschaft für Cultur.</p> <p>Acharius, Methodus Lichenum.</p> <p>Supplementum.</p> <p>Ackermann, Natur der Gewächse.</p> <p>Agardh, Genera et Species Algarum.</p> <p>La Physiologie Végétale.</p> <p>Theoria Systematis Plantarum.</p> <p>Oefver de Capska arterna of slaegted Irideæ.</p> <p>Aiton, Hortus Kewensis. 3 vols. 2nd ed. 5 vols.</p> <p>Epitome.</p> <p>Anderson, Acanthaceæ.</p> <p>Flora of Lucknow.</p> <p>Florula Adensis.</p> <p>On Sphærocoma.</p> <p>Notes on the Genus Lasyanthus.</p> <p>Annalen des Wiener Museums.</p> <p>Annales Botan. Society Canada. 2 numb.</p> <p>des Sciences Naturelles. 2nd series, 1834 to 1843; 3rd series, 1844 to 1853; 4th series, 1854 to 1864. 58 vols.</p> <p>Appellius, Leitfaden zur Behandlung der Samen.</p> <p>Areschoug, Algæ Scandinaviæ.</p> <p>Laerbok i Botanik.</p> <p>Phycæ Novæ.</p> <p>Autenriet, De Discrimine Sexuali in Seminibus apparentis.</p> <p>Babington, Flora of the Channel Islands.</p> <p>Backhouse, Visit to the Australian Colonies.</p> <p>Baillon, Adansonia.</p> <p>Buxaceæ.</p> <p>Etude générale des Euphorbiacées.</p> <p>Euphorbiaceæ.</p> <p>Loranthaceæ.</p> <p>L'Organogénie de Callitriche.</p> <p>Balfour, Classbook of Botany.</p> <p>Outlines of Botany.</p> <p>Aconitum ferox.</p> <p>Botan. Excursion to Braemar.</p> <p>Botan. Excursion to Switzerland.</p> <p>Dry Rot in Timber.</p> <p>Fruit of Clerodendron Thomsoniæ.</p> <p>New Species of Clerodendron.</p> <p>List of Medicinal and Poison Plants in Bot.</p> <p>Gard. Edinburgh.</p> <p>Notice on Open Air Vegetation in Bot.</p> <p>Gard. Edinburgh.</p> | <p>Balfour, Notice of New Plants.</p> <p>Observations on Temperature.</p> <p>Banks, Catalogus Bibliothecæ Botanicae.</p> <p>Bartling, Dissertatio Geographico-Botanica.</p> <p>Bassineæ, Hedysarum.</p> <p>Bauer, Illustrationes Floræ Novæ Hollandicæ.</p> <p>Bauhin, Historia Plantarum.</p> <p>Beale, How to Work with the Microscope.</p> <p>Beauvois, Agrostographie.</p> <p>Beddome, The Ferns of Southern India.</p> <p>The Ferns of British India.</p> <p>Belanger, Voyage aux Indes.</p> <p>Bennett, Gatherings of a Naturalist in Australia.</p> <p>Wanderings in New South Wales.</p> <p>Bentham, Genera allied to Olæineæ.</p> <p>Handbook of British Flora.</p> <p>Flora Hongkongensis.</p> <p>Flora Australiensis.</p> <p>and Hooker, Genera Plantarum.</p> <p>Berguer, Schwämme der Schweiz.</p> <p>Berkeley, Outlines of British Fungologie.</p> <p>Introduction to Cryptogamic Botany.</p> <p>Bieheno, On Juncus.</p> <p>Bischoff, Handbuch der Systemkunde und Terminologie. 3 vols.</p> <p>Blanco, Flora de la Filipinas. 1st and 2nd editions.</p> <p>Bluff and Fingerhuth, Compendium Floræ Germanicæ. 2 vols.</p> <p>Blume, Flora Java. (Complete.)</p> <p>Museum Botanicum Lugdunense.</p> <p>Bocquillon, Verbenaceæ.</p> <p>Bondt, Dissertatio de Cortice Geoffrææ.</p> <p>Bonpland, Monographia Melastomorum.</p> <p>Bonplandia, 1853 to 1862.</p> <p>Booth, Monography of Carex.</p> <p>Bory and Durieu, Exploration Botanique de l'Algérie. Libr. 16 &amp; 17.</p> <p>Botanischer Garten zu Breslau.</p> <p>Garten zu Petersburg.</p> <p>Kew Garten.</p> <p>Braun, Abnorme Blattbildung von Irina glabra.</p> <p>Characeæ aus Columbien.</p> <p>Ou Isoetes.</p> <p>Isoetes of North America.</p> <p>Ueber Marsilea und Pilularia.</p> <p>Zwei deutsche Isoetes.</p> <p>Parthenogenesis.</p> |
|---|--|



- Braun, Polyembryonie.  
Rede über Bedeutung der Morphologie.
- Breynius, Centuria Prima.
- Brogniart, Fragments de la Nouvelle Calédonie.  
Sur les Granules Spermatiques des Végétaux.  
Considerations sur la Flora de la Nouvelle Calédonie.
- Brown, Botany of Terra Australis.  
Botanische Schriften. 5 vols.  
On Buxbaumia.  
Prodromus Floræ Novæ Hollandiæ.  
Supplementum.
- Buek, Index ad De Candollei Prodromum.
- Bulletins de la Soc. Botan. de France.  
de la Soc. d'Acclimat. de Bourbon.  
de la Soc. Impériale de Moscou. (Fragment.)
- Burmah, Flora Indica.  
Thesaurus Zeylanicus.
- Buxbaum, Centuriæ I.-V.
- Carpenter, The Microscope.
- Carron, Narrative of the Expedition of Kennedy.  
Catalogue of the Victorian Exhibition of 1861, with Essays.  
of the Melbourne Public Library, and Supplement.  
of Natural and Industrial Products of New South Wales Exhibition, 1862.
- Cavanilles, Dissertationes Botanicae, I.-X.
- Chapmann, Flora of the South. United States.
- Chatin, Valisneria spiralis.
- Choisy, Convolvulaceæ.  
Guttiferae.  
Genres des Guttifères.  
Hydroleaceæ.  
Nyctagineæ.
- Clarke's Southern Gold Fields.
- Cleghorn, Excursion to the Valleys of Giri, Pabur and Tonse.  
Principal Plants of the Sutlej Valley.  
Memor. on Timber from the Indus.
- Clusius, Plantæ Exoticae.  
Historia Plantarum.
- Colebrook, Indian Menispermæ.  
Select Indian Plants.  
Terebinthaceæ.
- Colla, Illustrationes.
- Colladon, Les Casses.
- Columna, Εχρηστικæ.
- Commelyn, Hortus Amstelodamensis.  
Icones Plantarum Indiæ.
- Cosson, Espèces Nouvelles d'Algérie.  
Catalogue des Plantes de Cheronese.  
Florula Juvenalis.  
Appendix Florulæ Juvenalis.  
Flore des Environs de Paris.  
Synopsis de Flore de Paris.  
Genera Nova Algerensia.  
Le Genre Hohenackeria.  
Descriptions des Plantes de la Sahara.
- Cruse, Rubiaceæ Capenses.
- Cultivation of Orleans Staple Cotton.
- Cunningham, Remarks of the Vegetation of Terra Australis.
- Curtis, Sims and Hooker, Botanical Magazine. 72 vols.
- Dalzel and Gibson, Bombay Flora.
- Darwin, Fertilization of Orchids.
- Decaisne, Sur la Classification des Algues et Corallines. Paris, 1842.
- De Candolle, Prodromus, 1824 to 1864.  
Systema Naturale. 2 vols.  
Plantæ Rares.  
Rapport des Plantes.  
Mémoire sur le Règne Végétal.  
Géographie Botanique.  
Wirkungen der Sonnenstrahlen.  
Myrtaceæ.  
Leguminosæ.  
Sur le Fatiola.  
Connarées et Saccolabées.  
Ternstroemiaceæ.  
Anonaceæ.
- De Candolle, Ochnaceæ et Simarubæ.  
Lythariaceæ.  
Combretaceæ.
- Delessert, Icones Selectæ. 5 vols.
- Denkschrift der Königl. Bayer. Gesellschaft.
- Dennstedt, Schlüssel zum Hortus Malabaricus.
- Derbes, Mémoire de la Physiologie des Algues.
- Desfontaine, Flora Atlantica.  
Choix des Plantes.  
Histoire des Arbres.
- Dietrich, Das Wichtigste aus dem Pflanzenreiche.  
Flora Universalis. (The last fascicles.)  
Plantæ Cryptogamicæ Jenenses.  
Synopsis Plantarum. 5 vols.
- Dodonæus, Stirpium Historia.
- Don, Gardening Dictionary. 4 vols.  
Prodromus Floræ Nepalensis.  
Indian Gentianeæ.
- Dozi, De Plagiochila Sandei.
- Dunal, Solanææ.
- Duperry, Voyage autour du Monde, botanique.
- Dutrochet, De l'Accroissement des Arbres.
- Ecklon and Zeyher, Enumeratio Plantar. Africae australis.
- Edwards and Lindley, Botanical Register. 25 vols.
- Endlicher, Flora Norfolkiana.  
Iconographia Generum Plantarum.  
Genera Plantarum.  
Nova Genera Plantarum.  
Mantissæ.  
Novarum Stirpium Decades.  
Synopsis Coniferarum.
- Engelmann, Cuscutæ.
- Esenbeck, Calycanthus.  
Genera Plantarum Floræ Germanicæ.  
Solaum Wightianum.
- Fenzl, Reisebericht Reitz's.  
Ueber Lecanora ventosa.  
Diagnoses Plantarum Orientalium.  
Pemptas Stirpium Capensium.  
Monstrose Bluethen der Rosa centifolia.  
Nova Species et Genera Umbelliferarum.  
Differential Character of Cyperus.  
Pflanzengeographische Skizze.  
Stratonomie.  
Molluginæ.  
Stellung der Gattung Oxera.
- Field, Geographical Memoirs of New South Wales and Tasmania.
- Fischer, Beitrag zur Botan. Systematik.  
Synopsis Astragalorum.
- Flora, Zeitschrift für Botanik, 1828-47.
- Flora Danica. 10 vols.
- Florist's Guide.  
Journal.
- Forster, Beschreibung der Pflanzen der Südsee.  
Characteres Generum Plantarum.  
Prodromus Plantarum Australium.
- Fries, Summa Vegetabilium Scandinaviæ.
- Gærtner, De Fructibus et Seminibus.
- Gartenbau-Vereins Mittheilungen, Petersburg.
- Gay, Monographie de Tribu de Lasiopetalée.  
Buttneriaceæ.
- Geiger, Pharmaceutische Botanik. 2 vols.  
Ergänzung von Dierbach.
- Genera et Species Plant. minus cognitarum in Horto Berolinesii cultarum.
- Geschichte des Hamburger botanischen Gartens.
- Gibbes, Accentuation of Names.
- Gmelin, Linnéi Systema Naturæ.
- Gœppert, Dracænæ.  
Botanische Mittheilungen.  
Wärmeentwicklung in Pflanzen.  
Wegweiser zum Botan. Garten von Breslau.  
Officinelle Gewächse.  
and Cohn, Sektions-Bericht der Schles. Gesellschaft.
- Gottsche, Synopsis Hepaticarum.  
Uebersicht der Synopsis.
- Gravenhorst, De Natura Vegetabili Gorgoniarum.
- Gray, Botanical Contributions.  
Botanical Memoranda.  
Botanical Memoirs.

- Gray, Specimens of North American Plants.  
*Chloris Boreali-Americana*.  
*Plantæ Wrightianæ*.  
*Plantæ Novæ Thurberianæ*.  
 How do Plants Grow.  
 Flora of the North United States.  
 On *Favæa* and *Rhytidandra*.  
 Botany of United States Explor. Expedition.
- Greville, Scottish Flora. 5 vols.
- Griesbach, *Plantæ Wrightianæ Cubæ Oriental*.  
 Bericht über Geograph. und System-Botanik.
- Griffith, *Icones Plantarum Asiaticarum*.  
*Icones Plantarum Asiaticarum, Cryptogamæ*.  
*Notulæ*.  
 Posthumous Papers.  
 Private Notes.  
 and Henfrey, *Micrographic Dictionary*.
- Grœnland, *Les Organes glanduleux*.  
 Sur la Fécondation de quelques Algues.
- Guillemin, *Archive Botanique*.  
*Icones Lithographiæ*.
- Hæcker, *Lübeckische Flora*.
- Hamilton, Commentary on Rhede's *Hortus Malabaricus*.
- Hampe, *Icones Museorum*.
- Hance, *Flora Sinica*.
- Hanbury, Notes on Chinese *Materia Medica*.
- Hannaford, Jottings in Australia.  
*Transactions Hortic. Soc. Western District*.
- Hansteiu über *Marsilea salatrix*.
- Harvey, *Thesaurus Capensis*.  
*Nereis Boreali-Americana*.  
*Nereis Australis*.  
*Phycologia Australis*. 5 vols.  
 Characters of New Alga.  
*Index Generum Algarum*.  
 and Sonder, *Flora Capensis*. 3 vols.
- Hasskarl, *Plantæ Javanicæ*.
- Hedwig, *De Fibris Vegetabilium*.  
*Observationes Botanicae*.
- Heldreich die Nutzpflanzen Griechenlands.  
 die Tulpen Griechenlands.  
 Zierpflanzen der griechischen Flora.
- Hegelmeyer, *Callitriche*.
- Henfrey, Botany.  
*Botanical Gazette*.
- Herder, Reisen in den Süden von Ost-Sibirien.  
*Botanische Abtheilung, Monopetaleæ*.
- Heritier (L), *Cornus*.
- Herr's Anleitung zur Botanik.
- Hessler, *De Timmia*.
- Heward, Observat. on Collect. of Ferns from Jamaica.
- Historia Generum Plantarum Lugduni*.
- Hoffmann, *De Usu Lichenum*.
- Hooker, *Niger Flora*.  
*Exotic Flora*.  
*Botanical Miscellany*. 3 vols.  
*Companion to Botan. Magazine*. 2 vols.  
 J., *Antarctic Voyage*. 2 vols.  
 J., *Flora of New Zealand*. 2 vols.  
 J., *Flora of Tasmania*. 2 vols.  
 J., *Handbook on the New Zealand Flora*.  
*British Flora*.  
*Icones Plantarum*. 10 vols.  
*Journal of Botany*. 4 vols.  
*London Journal of Botany*. 7 vols.  
*Kew Miscellany*. 9 vols.  
*Guide to Kew Garden*.  
 J., and Thomson, *Flora Indica*.  
*Genera Filicum*.  
*Filices Exoticae*.  
*Species Filicum*. 5 vols.  
*Garden Ferns*.  
*Century of Ferns*.  
*Musci Exotici*. 2 vols.  
*Kew Museum*.  
 Reports on the Royal Garden of Kew.  
 J., *Flora Tasmaniae Spiellegium*.
- Hornemann, *Hortus Botanicus Hafniensis*.
- Hornschuch, *Metamorphose niederer Gewächse*.
- Horsfield, *Plantæ Javanicæ rarioræ*.
- Horticultural Magazine*.
- Hortus Elthamensis*.
- Host, *Flora Austriaca*.
- Huegel, *Enumeratio Plantarum Australiæ occidentalis*.
- Humboldt, *De Distributione Geographica Plantarum*.  
 et Bonpland, *Monographie des Melastomées*.
- Huser, *De Carice arenaria*.
- Jack, *On Cyrtandra*.
- Jahresbericht der schlesisch. Gesellschaft für Cultur.
- Jessen, *Lebensdauer der Pflauzen*.  
*Monographia Generis Prasiolæ*.  
*Botanik der Gegenwart und Vorzeits*.
- Johnston, *Magazine of Zoology and Botany*.  
*Journal of Natural History, Boston*.  
 American, of Science and Art.  
 of British Association.  
 of Linnæan Society, 1857-1865.
- Julien, *La Rose*.
- Junghuhn, *Javanese Balanophoræ*.
- Jussieu, *Botanique*.  
*Malpighiaceæ*.  
*Meliacées*.  
*Opercularia*.  
*Tentamen Euphorbiacearum*.
- Kæmpfer, *Icones Plantarum Japonicarum*.
- Karsten, *Parthenogenesis*.
- Kelly, *The Vine in Australia*.
- Kippist, *On Acacladia*.  
 On *Jansonia*.
- Kittel, *Deutschland's Flora*.
- Klotzsch, *Aristolochiæ des Berliner Museums*.  
*Tricocceæ*.
- Koeh, *Synopsis Floræ Germanicæ et Helveticæ*.
- König, *Getreidearten*.  
 and Sims, *Annals of Botany*.
- Krauss, *Corallineæ und Zoophyten der Südsee*.
- Kuetzing, *Synopsis Diatomearum*.
- Kunth, *Enumeratio Plantarum*. 5 vols.  
*Botanik*.
- Kurz, *Vegetatie van Het Eiland Bangka*.  
*Eenige Kruidkundige Mededeelingen*.
- Labillardière, *Sur Candollea (Stylidium)*.  
*Sertum Austro-Caledonicum*.  
*Novæ Hollandiæ Plantarum Specimen*.  
*Voyage in Search of Lapérouse*.
- Lamark, *Encyclopædie Méthodique*. 20 vols.
- Lammersdorf, *De Filicum Fructificatione*.
- Lange, *Handbog i den Danske Flora*.  
*Epilobium*.  
*Planters Acclimatisation*.  
*Floristic Skizze*.
- Lawson, *Plants collected in Upper Canada*.  
 On *Botrychium graulatum*.  
 On *Lehmanna variegata*.  
*Synopsis of Canadian Ferns*.
- Lehmann, *Plantæ Novæ Hollandiæ austro-occidentalis*.  
*Asperifoliae*.  
*Cycadeæ Africa australis*.  
*Nicotianææ*.  
*Primulacææ*.  
*Monographia Potentillarum*.  
*Potentillæ*.  
*Historia Potentillarum*.  
*Nova Recensio Potentillarum*.  
*Stirpium Novarum Pugilli*.
- Leichhardt, *Journal of an Overland Expedition from Moreton Bay to Port Essington*.  
*Scientific Excursions in New Holland, extracted from his Letters to Mr. Durand*.
- Leighton, *New British Lichens*.  
*New British Anthoniæ*.  
*Monograph. of British Graphidæ*.  
*British Umbilicariæ*.
- Lejourdan, *La Maladie noire des Plantes*.
- Le Maout, *Botanique*.
- Lénormand, *Sur l'Emploi du Sulfure de Carbone*.
- Leschenault, *Strychnos Tieute*.
- Leybold, *Stirpes in Alpibus Helveticis repertæ*.
- Lindenberg, *Species Hepaticarum*.  
*Synopsis Hepaticarum*.



- Lindley, Elements of Botany.  
Introduction to Botany.  
Principles of Botany.  
Vegetable Kingdom.  
Flora Medica.  
Figures and Botan. Illustrations.  
Gardeners' Chronicles.  
Theory and Practice of Horticulture.  
Rosarum Monographia.  
Folia Orchidacea.  
Genera and Species of Orchids.
- Lindsay, Flora of Iceland.
- Link, Handbuch zur Erkenntniss der Gewächse.  
Linnaea, 1847-1857.
- Linné, Amoenitates Academicae.  
Bibliotheca Botanica.  
Critica Botanica.  
Dissertatio Botanico-medica.  
Flora Lapponica.  
Flora Suecica.  
Flora Zeylanica.  
Genera Plantarum.  
Lacheris Lapponica.  
Hortus Upsaliensis.  
Mantissa Plantarum.  
Materia Medica.  
Philosophia Botanica, 1755 and 1783.  
Systema Naturae.  
Systema Naturae, editio reformata, 1766.  
Systema Plantarum, curante Gilibert.
- Londes, Charophyllum.
- Loudon, Arboretum Britannicum. 8 vols.  
Encyclopædia of Plants.  
Ladies' Flower-garden.
- Loureiro, Flora Cochinchinensis.
- Macarthur, Letters on the Culture of the Vine.
- Mac Gillivray, Hints on the Preservation of Specimens of Natural History.
- Magazine of Horticulture, Boston.
- Martius, De Regno Vegetabili.  
Hortus Botanicus Monachensis.  
Commentar über Pflanzen von Brasilien.  
Botanische Erforschung Bayerns.  
Erythroxylon.  
Das Königliche Herbarium zu München.  
Eriocaula.  
Wegweiser zum Botan. Garten in München.  
Vermischete Botan. Schriften.  
Flora Brasiliensis, Leguminosae et Myrtaceae.  
Neue Nopale.  
Myristicaceae.  
Palmarum Familia.
- Maxwell, Vegetable Morphologie.
- McIntosh, Book of the Garden.
- McJvor, Propagation of Medicinal Cinchonas.
- McLellan, Calcutta Journal of Natural History.
- Memoria sulle Croci.
- Meissner, Ostindische Thymeleen.
- Meyer, Geschichte der Botanik. 4 vols.  
De Plantis Labrodoricis.  
Novae Plantarum Species.  
Inhalt der Pflanzenzellen.
- Microscopic Objects.
- Miers, Illustration of South American Plants. 2 vols.
- Miquel, Casuarinae.  
Annales Musci Botan. Lugduno-Batavi.  
Stirpes Novo-Hollandicae.  
Analecta Botanica Indiae.  
Commentarii Phytographici.  
Observationes de Melastomeis et Piperaceis.  
Flora Indico-Batava. 4 vols.  
Monographia Cycadearum.  
Cycadeen in Neu Holland.  
Systema Cycadearum.  
Piperaceae.  
Casuarinae.  
Flora Sumatrana.
- Mitchell, Expedition into S.E. Australia.  
Tropical Australia.
- Mittheilungen aus den Verhandlungen der naturwissenschaftlichen Gesellschaft, Hamburg.
- Mohl, Structur der Pflanzensubstanz.  
Spaltöffnungen der Blätter.
- Mohr und Weber, Deutschlands Cryptogamische Gewächse.
- Moore, History of British Ferns.  
Index Filicum.
- Mueller, F., Reports to the Victorian Government, 1853 to 1863.  
Australian Mosses.  
Fragmenta Phytographiae Australiae, I.-XXXIII.  
Plants of Victoria.  
Lithograms of Plants of Victoria.  
Vegetation of the Chatham Islands.  
Record of the Plants collected during F. Gregory's Expedition in N.W. Australia.  
On a general Introduction of useful Plants into Victoria.  
Vegetation in der Gegend des Lake Torrens.  
Definitions of Rare Australian Plants.  
Systematic Arrangement of the Plants noticed around the Gulf of Carpentaria.  
Notes on the North Austral. Explor. Expedit.  
Monogram of the Eucalypti of Tropical Australia.  
Contributiones ad Acaciarum Australiae cognitionem.  
Beobachtungen über die Anwendung einheimischer Pflanzen.  
Remarks on the Vegetation of South Australia.  
Diagnostic Notes on New Plants.  
Barklya, Denisonia et Labouchea.  
Report on North Australian Expedition.  
Treatise on two Alpine Eriybiae.  
On Australian and Tasmanian Umbelliferous Plants.  
On hitherto unknown Australian Plants.  
On the Genus Eremophila.  
Breviarium Plantarum ad Africum ducens Seseivensis hucusque collectarum.  
Diagnoses et Descriptiones Plantarum novarum Australiae.  
Essay on Fitzalan's Burdekin Plants.  
Enumeration of Plants collected by A. C. Gregory at Cooper's Creek.  
Report on the Plants of Babbage's Expedition.  
Lecture on Rust in Wheat.  
Descriptive Characters of New Alpine Plants of Australia.  
C., Synopsis Muscorum. 2 vols.
- Muenter, Ueber Tuscarora Ricc.
- Murray, Systema Vegetabilium.
- Mémoires du Muséum d'Histoire Naturelle, 1815-1829.  
Natural History Review, 1861-1865.
- Naudin, Cucurbitaceae.
- Nöthden, Argumenta contra Hedwigii Theoriam.
- Nolte, Novitiae Florae Holsaticae.  
Stratiotes et Sagittaria.
- Nouveau Dictionnaire d'Histoire Naturelle. 21 vols.
- O'Hara, Cotton Plants and Countries suitable for its Culture.
- Opitz, Deutschland's Cryptogamische Gewächse.
- Pappe, Dissertatio Florae Lipsiensis.
- Parlatore, Nuovi Genera et Species.  
La Méthode Naturelle en Botanique.
- Paul, Rose Garden.
- Paxton, Magazine of Botany. 5 vols.
- Payer, Traité de l'Organographie.  
Botanique Cryptogamique.
- Percira, Materia Medica. 3 vols.
- Persoon, Synopsis Plantarum. 2 vols.  
Mycologia.
- Pharmaceutical Journal of Victoria, 1859 and 1860.
- Planchon, Communications à la Société Botanique de France.  
Les Cistes de Montpellier.  
Droseracées.  
Globulariacées.  
Des Helmodactes.  
La Famille des Guttifères.

- Planchon, Azalées de l'Inde.  
 La Pharmacie à Montpellier.  
 La Méthode Naturelle.  
 Effets de l'Eclipse sur Végétaux.  
 Les Limites de la Concordance.
- Pluckener, Opera.  
 Analthaum Botanicum.
- Poiret, Encyclopédie Méthodique.
- Pollichia, Jahres-Berichte.
- Presl, Repertorium Botanicum.
- Pritzel, Index Iconum Botanarum.  
 Thesaurus Literaturæ Botanicae.
- Proceedings of the Californian Academy of Science.  
 of the Linnean Society, 1859-1865.  
 of the Royal Society, Tasmania. (Complete.)
- Programme des Gymnasiums zu Gotha.
- Putterlick, Synopsis Pittosporarum.
- Quekett, Treatise on the Microscope.
- Ralph, Elementary Botany.
- Ramel, Sur l'Eucalyptus globulus.
- Raoul, Plantes de la Nouvelle Zélande.
- Ratzburg, Dissertatio.
- Rawson and Pappe, Synopsis Filicum Africae Australis.
- Redouté, Les Roses.
- Regel, Uebersicht der Gattung Thalictrum.  
 Flora Usuriensis.  
 Botanische Abtheil. der Reisen in Ost-Sibirien.  
 Gartenflora.  
 Betulaceæ.  
 Enumeratio Plantarum Cis et Transsilensium.  
 Kartoffel-Krankheit.  
 Russische Aepfelsorten.  
 Beobachtung über Viola crispalis.
- Reichenbach, Dissertatio über Flora von Leipzig.  
 Flora Lipsiensis.  
 Einleitung in die Botanik.  
 Icones Plantarum rariorum.  
 Clavis Floræ Germanicae.  
 Iconographia Botanica.
- Reiniger, De Generatione Vegetabilium.
- Reinwardt, Plantæ Indiæ Batavæ Orientalis.
- Report of Proceedings of Cotton Conference.  
 of the United States Expedition, 1856.  
 of Botanical Garden, Cape Town.  
 of the Victorian Acclimation Society.
- Revue Horticole.
- Rheede, Hortus Malabaricus. 4 vols.
- Richard, Hydrocotyle.  
 Musaceæ.  
 Calycerææ.
- Rœmer, Synopses monographicae.  
 et Schultes, Systema Vegetabilium. 6 vols.
- Rœper, Euphorbiaceæ.  
 Vorgefasste Botanische Meinungen.
- Roth, Manuale Botanicum.  
 Novæ Species Plantarum Indiæ Orientalis.
- Rottb. Descriptiones et Icones Novarum Plantarum.
- Roxburgh, Flora Indica.
- Rumphius, Herb. Amboinense. 7 vols.
- Rural Magazine.
- Schacht, Das Microscop.
- Schæffer, Dissertatio de Anthelminticis.
- Schauer, Dissertatio de Regelia, Beaufortia et Calothamno.  
 Myrtaceæ.
- Schivetz, Botanische Reise nach Schleswig.
- Schlechtendahl, Bouvardia.  
 und Schenk, Flora von Deutschland.
- Schleiden, Handbuch der Medic. Botanik.  
 Botanische Pharmacognosie.  
 Principles of Botany.  
 The Plant.
- Schnitzlein, Iconographia Familiarum Naturalium.
- Schott, Genera Aroidearum.  
 Prodromus Systematis Aroidearum.
- Schrader, Genera nonnulla Plantarum.  
 Blumenbachia.  
 Nova Genera Plantarum.
- Schrank, Centuria Botanischer Anmerkungen.
- Schultes, Noms indigènes des Plantes de Japon.
- Seemanu, Journal of Botany. 3 vols.  
 Aecien cultivirt in Europa.  
 Flora Vitiensis. Fasc. I.
- Seringe, Melastomeæ.
- Seubert, Elatinearum Monographia.
- Sickmann, Enumeratio Stirpium Hamburgensium.
- Smith, English Flora. 4 vols.  
 Natural History.  
 J., Catalogue of Cultivated Ferns.  
 and Adamson, Austral. Gardener.
- Smithsonian Reports, 1857 and 1858.
- Souder, Beiträge zur Flora von Süd-Africa.  
 Flora Hamburgiensis.
- Soubeiran and Verlot, Rapport sur une Excursion au Mont Viso.
- Sprengel, Plantarum minus cognitarum Pugillus.  
 Prodromus Umbelliferarum.  
 Systema Vegetabilium. 9 vols.
- Stark, History of British Mosses.
- Steetz, Tremandrea et Lasiopetaleæ.
- Steudel, Nomenclator Botanicus. Editio secunda.  
 Cryptogamæ.  
 Synopsis Plantarum Graminearum.  
 Synopsis Cyperacearum.
- Sturm, Beitrag zur Farnflora Chili's.  
 Deutschland's Flora.
- Sturt's Central Australia.
- Sutter, The Grape Vine and the Orange in Australia.
- Sweet, Flora Australasica.  
 Cistineæ.  
 Hortus Britannicus.  
 Geraniaceæ.
- Sydney Magazine. 6 numb.  
 The Month. 1857.
- Tenore, Discorso Botanico di Napoli.
- Teymann, On Eusideroxylon Zwageri.  
 Plantæ novæ.  
 Plantæ novæ Horti Bogoriensis.  
 Rafflesia.  
 Cycas circinalis.
- Thunberg, Genera nova Plantar.
- Thuret, Sur la Fécondation des Fucacées.
- Thwaites, Report Bot. Gard. Paradisia.  
 Enumeratio Plantarum Zeylanicæ.
- Todaro, Osservazione su Cottone.  
 Flora Sicula exsiccata, Manifesto.  
 Nuovi Generi.
- Torrey, Darlingtonia Californica.  
 Flora of New York.  
 On Batis maritima.  
 Botany of the Boundary Expedition.  
 Plantæ Freemontianæ.  
 and Gray, Flora of North America.  
 Botany of North American Expedition.
- Transactions Edinburgh Botanical Society.  
 Horticultural Society, London.  
 Royal Society, Mauritius.  
 Philosophical Society, Victoria.  
 Philosophical Institute, Victoria.  
 Victorian Institute.  
 Royal Society of Victoria.  
 Linnean Society, 1791-1865.
- Trautvetter, De Pentastemone.
- Treviranus, Plantæ novæ Horti Botanici Vratislaviensis.
- Tuckermann, North American Lichenes.
- Tulasne, Monimiaceæ.
- Turezaninow, Beiträge zur systematischen Botanik  
 Decas septima.  
 Synantheræ indesecriptæ.  
 Myrtaceæ Nov. Hollandiæ.
- Uhlich, Spermatologia Vegetabilis.
- Vahl, Enumeratio Plantarum.
- Vaillant, Botanic. Parisicuse.
- Van Houtte, Flore des Serres. Nos. 163 to 169.
- Verhandlungen der Leopold. Carolin. Academie, 1858-1859.
- Videns Kæbelige Meddelelsen.
- Vine, Geelong Prize Essays.



- Voyage autour du Monde de la Bonite ;  
 de l'Astrolabe ;  
 de la Coquillo ;  
 par l'Uranie ;  
 Letter-press and Plates.
- Vrieso, On *Cycas circinalis*.  
*Analecta Goodenovicarum*.  
*Goodenoviaceæ*.  
*Plantæ novæ Hort. Bogoriensis*.  
*Plantæ Indiæ Batavæ orientalis*.
- Wagner, *Cryptogamen Herbarium*.
- Wallich, List of East India Plants.  
*Plantæ Asiaticæ rariores*. 3 vols.  
*Nepal Plants*.
- Walpers, *Annales Botanicæ*. 7 vols.  
*Repertorium Botanices Systematicæ*. 7 vols.
- Ward, On the Growth of Plants in Close Cases.
- Wawra and Peyritsch, *Sertum Bengalense*.
- Weber, *Primitiæ Floræ Holsatiæ*.
- Weddell, *Urticææ*.
- Wendland, *Acaciæ aphyllæ*.
- Wibel, *Flora Werthemensis*.
- Wickstroem, *Botanische Jahresberichte*.
- Wight, Contributions to Botany of India.  
*Neilgherry Plants*.  
*Icones Plantarum Indiæ orientalis*. 6 vols.  
*Illustrations of Indian Botany*.  
 and Arnott, *Prodromus Floræ Indiæ*.
- Willdenow, *Flora Berolinensis*.  
*Species Plantarum*, with Supplement. 11 vols.  
*Berliner Baumzucht*.
- Willkomm et Lange, *Flora Hispanica*.  
*Botanik*.
- Wimmer, *Das Pflanzenreich*.
- Winkler, *Abbildungen Pharmaceut. Pflanzen*.
- Woodville, *Medical Botany*.
- Wurm, *Gedächtnissrede*.
- Young, *Treatise on Wire Fencing*.
- Zuccarini, *Oxalis*.  
 and Siebold, *Plantæ Novæ Japonicæ*.

An arranged Collection of about 4000 colored Plates from various Botanical Works.

