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VICTORIA.

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ANNUAL REPORT

OF THE

GOVERNMENT BOTANIST AND DIRECTOR OF THE
BOTANICAL AND ZOOLOGICAL GARDEN.

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

By Authority:

JOHN FERRES, GOVERNMENT PRINTER, MELBOURNE.

No. 37.



REPORT.

Melbourne Botanical and Zoological Garden,
12th January, 1860.

SIR,

I have the honor of transmitting to you my general report on the labors in this establishment during the past year, and beg to submit at the same time an outline of the arrangements which I propose for our work during the next season.

Some additions to the cultivated ground have been effected by forming ornamental shrubberies along the northern side of the gardens, and flower borders near the office building, at the palm-house, and at the southern lagoon. The nursery-ground has likewise been considerably enlarged, it being our aim to meet fully the annual demand for young plants by the gardens and reserves of the various public institutions throughout the colony.

Many rare or ornamental plants have been transferred from the nurseries to the main garden. Extensive lines of edgings around the flower borders had to be renewed; whilst the attendance to the great *melange* of plants in the now very large space of cultivated ground absorbs alone a considerable amount of attendance and labor. Rows of such umbrageous trees as are suitable to this climate, including Chinese locust trees, white cedars, paulownias, walnuts, &c., were planted in the central part of the garden and along the northern margin of our ground, and with a view of beautifying the banks of the Yarra towards Prince's bridge willow cuttings have been planted around the lagoons of the reserve.

About three hundred and twenty trec-guards of iron are either ready or contracted for, and will be required for the protection of the young trees, which we have reared for lining the walks of the northern ground, and these tree preservers may be used for very many years in establishing successively avenues through our area and the surrounding domains.

Numerous stumps of trees, felled unfortunately before our grounds were set apart to their present purposes, have been removed. A second and larger propagating house has been constructed; a dwelling for the foreman of the northern ground is erected at the western entrance, and also two wooden lodges are built in the southern ground. In anticipation of the arrival of the twenty-four camels and dromedarics from India, ordered at the expense of this establishment, stables have been built in the south reserve, where also a wooden building for the accommodation of smaller animals is raised, and a similar one, already contracted for, will offer additional shelter to the animals in that enclosure. A wooden house for sheltering the Llamas and Angora goats has been constructed in the southern reserve.

The aviary has been completed by adding the other wing; and as soon as the substitution of an iron bridge for the rustic decayed one was effected, the two divisions of the aviary were united, the whole dry and shady space below the bridge thereby becoming available as a secluded spot for brooding birds.

It was found needful to raise a stone wall and causeway on the depressed part of the Yarra banks, near the lagoon, in order to protect the garden against the periodical inundations to which it was subjected through the Yarra floods.

By the application of a small ornamental windmill, it is intended to establish the

requisite current of fresh water from the river to the lake. At the southern ground similar appliances we may be able to adopt this year for forcing Yarra water to the higher parts of our ground until the Yan Yean pipes shall be brought within our reach.

With the advantage of an unlimited supply of water, our plan of enhancing the beauty of this spot by fountains may be realized. Meanwhile cisterns and tanks have been provided at all the principal buildings of the establishment, for collecting as much as possible of the rain water for gardening purposes.

In further reference to the progress of building works throughout the year, I beg to allude to the extensive and substantial fences already erected, or under progress of erection. The close wooden fencing of the northern area was completed in the beginning of last year, thus securing a pasture to many of the herbivorous animals. Of the higher and therefore more salubrious ground of the southern reserve a portion has been enclosed by high wooden fences as grazing ground for various animals, whilst another portion of the reserve by iron fencing has been separated as a paddock for larger graminivorous quadrupeds. A line of superior iron fencing is now in course of construction, to be placed parallel to the northern limits of the above enclosures, and sufficiently distant to admit of the formation of a carriage drive, and a shady promenade.

The Board of Land and Works has been pleased to concede the use of the reserve between Prince's bridge and the botanic garden, for the additional accommodation of the expected camels, and to sanction also the temporary occupation of two and a half acres at the eastern rise of the Government house reserve, for the more convenient trend of the proposed fence lines.

Further iron and wooden fences have been raised at the northern ground, and near the Yarra foot-bridge.

After the completion of the iron fences, the worn out lines of paling can be removed, and much ground will thereby be added to the nurseries, and space be obtained to cultivate around some of the cottages, a selection of standard varieties of vines and other fruits, which I regret to say, it would be at present hopeless for us to attempt to rear in less guarded localities.

A main walk has been formed through the northern ground, by conveying from the opposite side of the river, the requisite quarry rubble and gravel. Walks have also been laid out, leading to the palm house. Some of the older lines of walk have only been completed this season.

With the formation of the contemplated drive in the reserve, and some additional paths, the extension of the system ground, the raising of islands in the lagoons, the construction of a pavilion, of bowers, grottoes, and rockwork, the principal arrangement of our ground may be considered as decided on; and then a lithographed plan of the whole establishment may be issued, for facilitating the search after certain plants or to serve as a general guide to visitors in the inspection of the gardens.

The main underground drains in the southern grounds have been for the greater part completed during the past year, but many surface gutters are yet to be laid, whenever material for that purpose shall be available; but a complete system of drainage has yet to be introduced into the more recently added northern division of our area.

More than 2000 of our cultivated plants are now furnished with conspicuous metal labels; and since their inscriptions seem to have afforded much desirable information, we may by degrees augment their number.

Although many additional benches have been furnished, they are still inadequate for the accommodation of the visitors, for it is pleasing to record that the recreation which this locality affords is so greatly appreciated. In corroboration of this, I may adduce the fact that seldom less, and often more, than 5000 visitors are counted on Sundays as entering at the principal gates of the southern ground; about half this number visiting simultaneously the northern reserve.

The total of our Sunday visitors to the southern ground during 1859, irrespective of those who enter by the smaller gates, was 160,220; the number of visitors at the northern ground during seven months was 41,035. The aggregate of visitors during week days may be regarded as nearly equal to that of the Sundays, so that probably the total has rather exceeded than fallen short of 300,000 during the past year.

Anxious to render the establishment one of not less utility than one of healthful recreation and agreeable information, we have endeavoured to furnish from hence as extensive supplies as possible. Thus, on ninety-one occasions, boughs and flowers for decoration have been furnished for public festivals, and not less than 20,438 plants, 2406 cuttings, and 44,572 papers of seeds have been distributed, either to public gardens and reserves, or to donors entitled to supplies by reciprocation, or in our maintaining or initiating an interchange with similar institutions abroad; and means have been adopted to render similar supplies available next season. Besides several thousand lots of seeds gathered in the establishment have been re-sown in this garden.

A list is added to this document of such plants as were imported or raised during the season; and although some contained in the catalogue of the previous year are lost, particularly many of the annual plants, which are always an uncertain possession, there are also still many other young plants cultivated, which, on account of having been received without accurate appellations, could not yet be examined and enumerated. The total of the species in our possession may therefore be approximately estimated at 4500, numerous additional varieties uncounted.

The curator, Mr. Dallachy, was engaged from July, 1858, till February, 1859, in collecting plants and seeds on the rivers Murray and Darling, the collections formed having proved not only valuable for adding to our varieties of such ornamental plants as are calculated to resist the drought, but also as comprising many species previously nowhere under cultivation, and therefore highly acceptable for continuing the interchange with the gardens of Britain, the colonies, and foreign countries.

By this journey the material for the elaboration of the work on our native plants became also augmented, as may be observed by referring to the appended list of new Victorian plants.

We being further desirous of adding to our collections both of cultivated and dried plants, Mr. Augustus Oldfield proceeded to the northern districts of Western Australia, from whence he recently returned after an absence of seventeen months. The phytological features of that part of Australia have not merely the charm of novelty, but furnished also, as was anticipated, a clue to the scientific interpretation of several plants, which under a rather similar clime vegetate in the north western desert of Victoria, and are therefore of importance for the elucidation of our own flora. Dr. Beckler, supported like Mr. Oldfield, only with such slender means as this department could afford, has undertaken the botanical examination of the "brush country" situated within the systema of the rivers McLeay, Hastings, Richmond, and Clarence, and is to accumulate also for our public collections, plants from the hitherto little explored alpine and subalpine ranges, in which these rivers rise, and will thereby afford the means of ascertaining the relation which exists between these plants to those of the Victorian Alps.

Thus it is steadily kept in view to bring into our possession an herbarium as complete as possible for the future elaboration of an universal descriptive work on the vegetation of Australia; and I am gratified to state, that of late a much more general interest has been evinced for investigations into the Australian flora, a work so gigantic, that without the co-operation of circumspect observers in many distant localities, it will be long before it can advance to perfection. Most particularly am I under obligation to W. Woolls, Esq., of Paramatta for contributing an almost complete collection of the plants occurring in his vicinity; to Dr. Milligan and Mr. Oldfield for plants from Tasmania, to Dr. Beckler from subtropical East Australia, to Messrs. Walcott for plants from near Shark's Bay, to Mr.

Charles Stuart for plants from New England, and to Mr. George Maxwell for plants from South Western Australia. Extensive contributions of extra-Australian plants for the herbarium have been received from the United States of North America, presented by Professor Dr. Asa Gray, Mr. Geyer, Dr. Saltwell, Mr. Eaton, United States; Assam plants, presented by Drs. Jos. Hooker and Thomas Thomson; Hong Kong plants, presented by Dr. Hance; and Ceylon plants, presented by Mr. Thwaites. Minor contributions during the year we owe to

Bailey, F., Wellington, New Zealand	Layard, Capt. G., St. Kilda
Bowman, Edw. M., Lower Macquarie	Main, Patr., Bacchus Marsh
Clifton, George, Freemantle	Rusden, G. W.
Cole, Commissioner, Enstone, Murray River	Sandiman, Gordon, Ipswich
Coutts, Dr., South Yarra	Shepherd and Co., Sydney
Dallachy, John	Schmidt, E. B., Castlemaine
Donavan, S.	Smith, John Th., M.L.A.
Goodwin, Rev. Th. H., Darling River	Snellgrove, J.
Gregory, A., Brisbane	Sonder, Dr. W., Hamburg
Gregory, F., Perth, Western Australia	Thozet, Rockhampton
Gunn, R., M.L.A., Launceston	Vernon, W., Woolloomooloo
Hardie, E.	Warburton, Major, Adelaide
Hill, W., Brisbane	Wilhelmi, Charles, South Yarra
Jones, Ph. F., Williamstown	Wood, Rev. Jul. Edw., Penola

The total of the botanical specimens received was 10,938.

From this office a distribution of 11,978 dried plants took place during the year, a share being furnished for the enlargement of the herbariums at the Melbourne University, and at the Public Library.

In endeavouring to enrich the collections, or adding to the notes for the botanical works here under progress, I have enjoyed not only the aid of private gentlemen, but also every support from our Government, of New South Wales, and South Australia. Thus His Excellency Sir William Denison was pleased to submit to this office for examination the plants collected during Mr. Gregory's expedition from Moreton Bay to Lake Torrens, while by desire of His Excellency Sir Richard MacDonnell the Honorable Francis St. Dutton transmitted the botanical collections formed during Mr. Babbage's expedition. The same favor was extended to me by T. Chambers, Esq., of Adelaide, in reference to the plants secured during Mr. Stuart's second expedition. The examination of the plants of tropical Australia, entrusted to me by Her Majesty's Home Government, has absorbed the rest of that time which other duties permitted me to devote for the purpose.

The introduction of plants by interchange of Wardian cases was carried on as formerly, the number of cases received being thirty-four, and exactly the same number was shipped from this establishment. The cases which we received, were furnished by the Royal Gardens of Kew, the Botanic Gardens of Adelaide, Brisbane, Buitenzorg, Capetown, Hobarton, Mauritius, Port Natal, Paradenia, and Portland, and by Captain Anderson, of the Chatham Islands; W. F. Bailey, Esq., of Wellington; J. H. Brooke, M.L.A.; Dr. Evans, M.L.A.; Honorable Dr. Featherstone, Wellington; Dr. Hillebrand, Honolulu; W. K. Hulke, Esq., of New Plymouth; A. Rusden, Esq., Foo-Tehow-Foo; W. Woolls, Esq., of Paramatta. In effecting many of these exchanges we were favored with the gratuitous transit of our consignments, and are thus particularly indebted to the Royal Mail Steamers' Company, to many of the mercantile firms of the city and to many commanders of vessels. An active share was taken by many colonists and friends of this establishment abroad, in adding to its horticultural collections, by securing for it seeds, bulbs, &c., as may be demonstrated by the list of donors, which I am much gratified to promulgate.

Abbott, F., Hobarton	Babbage, Hersch., Adelaide
Alain, Pentland Hills	Bailey, F., Wellington
Alleyne, St. Kilda	Balfour, Professor Dr., Edinburgh
Alloo, John, Emerald Hill	Bancroft, Capt., Toorak
Appelius, Erfurth	Bannier, W., Melbourne
Arnold, E., Melbourne	Barker, Mrs., Cape Schanck
Asher, Charles	Barkly, His Excellency Sir Henry
Atkinson, South Yarra	Barry, Honorable Judge

- Bateman, Edward
 Baynton, G., Darling Downs
 Begerty, C., St. Kilda
 Behr, Dr. Herm., San Francisco
 Beissel, Charles
 Berlin Botanic Garden
 Berry, Thomas, Richmond
 Best, A. F.
 Beveridge, Peter, Murray River
 Buist, R., Philadelphia
 Bosisto, J., Richmond
 Bowman, Edward M., Macquarie River
 Brandis, G., Ensfield
 Bremen Botanic Garden
 Breslau Botanic Garden
 Brewster, Sandridge
 Brooke, J. H., M.L.A., Heidelberg
 Brown, J., Como
 Bryant, George, South Yarra
 Buckley, W.
 Bunce, Daniel, Geelong
 Buttler, H. S.
 Calcutta Botanic Garden
 Chapman, South Yarra
 Clayton, W., Melbourne
 Clifton, George, Freemantle
 Cobham, Mrs., Clifton
 Cole, Capt. G. W.
 Cole, T. C., Richmond
 Coppin, Hcn. George, M.L.C.
 Cresswell, H. S., South Yarra
 Dallachy, John
 Douglass, Mrs., Williamstown
 Duncan, W.
 Dunlop, Brighton
 Dyson, Arthur
 Evans, Dr., M.L.A.
 Falconer, T. J., Sydney
 Farrel, J.
 Fawcett, J. W.
 Fergusou, W., Heidelberg
 Ferguson, Capt., Williamstown
 Fischer, L., Bugle Range, South Australia
 Fisher, W. C., Melbourne
 Fitzallen, E., Little River
 Francis, George, Adelaide
 Francis, J. G., M.L.A.
 Franke, Gustave, Collingwood
 Freeman, Heathcote
 Gaulston, E. B., Melbourne
 Gayet, Henry
 Gell, St. Kilda
 Glasgow Botanic Garden
 Goodall, Harry, Snapper Point
 Goodwin, Rev. Th. H., Darling River
 Gray, Professor Dr. Asa, Boston
 Greeves, Dr. A.
 Gregory, A., Brisbane
 Greigg, Miss
 Grosse, Fr., South Yarra
 Hall, W.
 Hance, Dr., Hong Kong
 Handiside, G.
 Harris, Ch.
 Harvey, Captain of *Harvest Home*
 Hellicar, St. Kilda
 Henderson and Son, London
 Henty, Fr., Portland
 Hill, W., Brisbane
 Hillebrand, Dr. W., Honolulu
 Hooker, Sir W., Kew
 Horne, G. S. W., M.L.A.
 Howarth, Boroondara
 Howitt, Dr. G.
 Ick, Edw.
 Johnson, B. and S., Preston
 Kay, Capt., South Yarra
 Kerr, Rob., St. Kilda
 Lamford, Edw., Castlemaiae
 Lamoile, Mrs., Toorak
 Lang, Th., Ballarat
 Lauceston Horticultural Society
 Law, Will.
 Lee, George
 Lee, Parkin
 Lectch, Conolly
 London Horticultural Society
 Madras Botanic Garden
 Martley J. F., South Yarra
 Mason, Leonard, Lucknow, Gipps Land
 Maxwell, George, Albany, Western Australia
 Mitchell, W.
 Moore, C. Sydney
 Moore, Dublin
 Moore, Thomas, Chelsea
 Morrison, George, Buenos Ayres
 Morrison, Thomas
 Mueller, Dr. F.
 Mulliken, Samuel
 Murray, Andrew
 Murray, W., San Francisco
 McArthur, D. C.
 McGowan, S. W.
 McKenzie, Port Albert
 Newenham, H. H., North Melbourne
 Owen, Adelaide
 Parker, Mrs. K., Sydney
 Perry, Darling River
 Pestell, William
 Phelps, Joseph, Murrumbidgee
 Pittman, Joseph, Prahran
 Politz, St. Kilda
 Portland Botanic Garden
 Ralston, Mrs., South Yarra
 Rickards, J. R.
 Richie, South Yarra
 Roberts, S.
 Roope, Honorable, M.L.C.
 Ross, Murray River
 Russell, J., Richmond
 Russell, Mrs. John, Richmond
 Rutherford, Mrs.
 Salkeld, Mrs., Richmond
 Sangster, South Yarra
 Sayce, Melbourne
 Schott, Dr., Vienna
 Scott, James, Hawthorn
 Scott, W. C., Melbourne
 Seidel, Geelong
 Selwin, Alfred
 Sewell, Dr.
 Shepherd and Co., Messrs., Sydney
 Sloane, J.
 Smith and Adamson, South Yarra
 Smith, John Thomas, M.L.A.
 Smith, Rev. James, Delhi
 Smith, Mrs.
 Snellgrove, Edward H.
 Standish, London
 Stiffe, John, Geelong
 Stuart, Charles, Clifton
 Thozet, Rockhampton
 Thwaites, G. H. K., Paradenia
 Timburg, R., St. Kilda
 Turnbull and Buchanan, Sealers' Cove
 Turnbull, South Yarra
 Tyler, South Yarra
 Vause, Richard, Port Natal
 Veitch, James, jun., Chelsea
 Vernon, W., Sydney
 Wadsworth, R., South Yarra
 Walcott, P., Champion Bay
 Walker, S. J.
 Ward, James
 Weidenbach, Max., Adelaide
 White, George, Geelong
 Wilhelmi, Charles, South Yarra
 Williams, Rev. Thomas
 Wills, Mrs. T., Collingwood
 Wilson, W., Canterbury
 Wood, Rev. Jul. Edw., Penola
 Woods, T. F., Angastown
 Woolls, W., Paramatta
 Wright, J.
 Wright, barrister
 Young, Sir Henry, Tasmania

The animals of the menagerie are at present all in a healthy condition. They comprise Angora goats, fat-tail sheep, Llama-alpacas, 13 fallow deer, with 3 fawns, a Sumatra deer, Ceylon elk, several kangaroos and emus, koalas, an ichneumon, monkeys of various species, a considerable variety of singing birds, of which the canaries, goldfinches, and linnets have reared broods, whilst the thrushes are nesting; Californian quail, which also increased; native companions, 16 black and 6 white swans, English and silver pheasants, Murray pheasants, Australian eagles, hawks, and several other smaller animals.

Some eagles and waterhens have been shipped for interchange to the Zoological Society of London. An importation of South African game, through the friendly co-operation of the Government of the Cape Colony, may be soon expected.

Contributions towards the menagerie have been gratefully received from the following donors:—

Allan, T. M., Warruambool	Mureutt, Robert
Baker, C., Collingwood	Nash, R., St. Kilda
Baxter, Rev., Kew	Newell, Hooper and Stevens
Beamish, Rev. Dr. J. T., Warrnambool	Parson, J. G., Brighton
Berse, Samuel	Pensou, R., Prahran
Buttler, A. E., Geelong	Pendergast, W. E., Suapper Point
Cameron, Hugh, Prahran	Perkins, G. B., Brighton
Cave, Capt., of the <i>Panama</i>	Perry, R. D., Melbourne
Clow, Rev. Mr.	Pritchard, Capt., of <i>Camilla</i>
Coppin, Honorable G., Richmond	Riches, Capt. C. F., of <i>Gazehound</i>
Craigg, S. K., Enfield, Middlesex	Riley, Thomas, Sandridge
Cropper, W., St. Kilda	Robertson, Dr., Queenscliff
Cumberlaud, B.	Roope, Honorable Mrs.
Embling, Dr., M.L.A.	Russell, Mrs. Lydia, Emerald Hill
Frazer, Hugh, Welshpool	Salkeld, Richmond
Degraves, Will.	Sewell, Dr.
Haselgrave, Brighton	Slade, Lieut., R.N.
Heape, Charles	Simpson, Queenscliff
Hick, George	Smith and Adamsou, South Yarra
Hooper, Mrs.	Smith and Clare
Hugham, Allan, Avoca	Thompson, Henry
Isaacs, B.	Topp, Miss Alice, South Yarra
Johnson, Hon. G. W., Kyneton	Twoose, R. F., Richmond
Keith, Archibald	Wadsworth, R., South Yarra
Kelly, Will. Lancel.	Webber, F. B., Gardiner's Creek
Knull, Miss Mary, Toorak	Wehl, Dr. Edward, Mount Gambier
Lamoile, Toorak	Wild, Miss
Layard, Capt., St. Kilda	Wilson, Edw., London
Mallett, D., South Yarra	Winglesworth.

The canary birds having considerably increased in number, a trial was made under the sanction of the committee for carrying out the original design, to naturalize foreign singing birds, by setting them at liberty in our shrubberies; the experiment seemed at first to be attended with success, but gradually, although well provided with food, the number of the liberated birds decreased, and at last they entirely disappeared. In an attempt to naturalize the more hardy thrushes, we may anticipate to be more successful, particularly if at the proper season, the birds are at once transferred to suitable spots in the forest ranges, or perhaps to some of the islands. Of thrushes, not less than forty-six were obtained through the extreme liberality of Edward Wilson, Esq., and the disinterested zeal, the circumspect care, and patient perseverance of that gentleman, for the introduction of the treasures of the animal kingdom into this country, cannot receive a sufficiently high eulogium. To his exertions, supported by some friends of the colonies in Britain, we owe principally the donation of our llama-alpaca flock, and we shall probably be soon indebted to him for rendering the salmon a denizen of the Australian rivers; some pheasants were likewise received from Mr. Wilson, of which five were transferred to Phillip Island, where Mr. McHaffy declared himself ready to bestow every care on them and their offspring. The Angora goats have increased by four, the llama-alpacas by seven; the fleece of one of the former yielded approximately, 8 lbs. of wool, that of a young superior animal of the latter, 4½ lbs., although some of the large llamas furnished a greater weight of coarser wool; this supply falls considerably short of the produce obtained from some of the genuine alpacas of the government's flock in New South Wales, two of the best animals having respectively furnished 12

and 18 lbs. of wool; great gratitude is therefore due to the enlightened rulers of that colony, for their liberality in adding a pure alpaca ram to our flock, with a view to the improvement of the breed, the fleeco of ours being otherwise scarcely of any mereantile value. Should, as might be expected, the Angora goats thrive in many of the scrubby grassless districts of our ranges, where neither sheep nor eattle prosper, an inestimable addition will be made to the pastoral resourees of the colony, and many districts now unoccupied, may become thereby available for settlement. Both Angora goats and alpacas, it may be added, prove here remarkably prolific.

For the temporary reception of future importations of fish, especially salmon, a series of tanks is now under construction, through which, by the appliance of mill-work, a constant current of river water will be secured; for although it is intended to locate the principal supply of salmom ova at once after arrival in the elevated and artificially protected shallows of rivers rising in our Alps, it will be still desirable that also an attempt should be made to hatch them on our ground, and to rear some of the young fish for experiment, and eventual distribution to other localities of this country.

To these manifold obligations has been added by the military officers another, deserving of high praise, namely, the frequent attendanee of the excellent regimental band at the gardens.

A few weeks of the previous summer were devoted by the Government botanist to researhes into the vegetation of the mountains along the McAllister river. The tributaries of the latter stream were found on that ocaasion to traverse a country of rather extensive fertility and, to judge by its physical aspect, of auriferous formation. Some botanicael novelties, enumerated in the appendix, were discovered and secured for the herbarium. In this journey, the main range of the South Western Alps was ascertained to extend in an almost semi-elliptical line from Mount Wellington to Mount Useful, at an elevation varying from 4000 to 5000 feet, only the northern part of this mountain tract, encircling the sourees of the McAllister, being more depressed and somewhat broken. From several high mountains, then ascended for the first time, bearings were secured to elevations included in the trigonometrical survey. From the more elevated western portion of these mountains, now designated on the chart as the Barkly Ranges, a leading spur will in all probability be found to extend to the hitherto unapproached alpine elevations of Mount Baw Baw.

This question which I left during my first visit unsolved I am anxious to set at rest during the next season. Mount Wellington, inasmuch as it can be reached by a path accessible to horses from the Avon Ranges, may be regarded as the southern key of the Australian Alps, from whence along the crest of the main ramifications of the high land a journey with horses seems possible in most directions. Otherwise, the dense underwood of the less lofty ranges, stretchng between the alpine tract and the low land, frustrates any attempt to traverse the country between the Yarra sources and Gipps Land without cutting previously traets through the jungle, whereas the main range, at elevations exceeding 4000 feet, is usually destitute of these impediments.

It is my duty to bear, on this ocaasion, public aeknowledgment to the generous aid which in performing this journey I experionced from Angus McMillan, Esq., M.L.A., the discoverer of Gipps Land, who not only provided six horses and almost all other requisites for this excursion, but also facilitated it, whilst sharing in it, by his intimate knowledge of the surrounding country. The botanical examination of Victoria, although now for the greater part completed, has yet to be extended to the country towards Lake Hindmarsh, to Mount Baw Baw, and to the most eastern part of the colony about Cape Howe.

Ten numbers of the *Fragmenta Phytographiæ Australiæ* are issued, comprising the diagnoses of nearly 500 new or rare plants contained in our collection. This publication is illustrated by ten plates drawn by Messrs. Becker and Schoenfeld; whilst to botanical science in general it furnishes a series of new observations, it affords the opportunity of publicly

expressing my thanks for many contributions received by us; and it will, moreover, be useful as a work of reference to the herbarium.

Of the *Plants Indigenous to the Colony of Victoria*, about half the first volume is printed, and twenty-eight lithographic illustrations are prepared for it. This work is intended as a continuation of the series of quarto volumes published by Dr. J. Hooker, under the authority of the Lords Commissioners of the Admiralty. Arrangements have been entered into for issuing the first volume in 1860.

In the publication of that part of the work referring to cryptogamic plants, I enjoy the valuable aid of the Rev. Mr. Berkeley and Mr. E. Hampe, who have made those branches of botany referring to cellular plants the subjects of long and careful inquiry.

For the information of those interested in the progress of knowledge of Australian vegetation, I may be permitted to state, that of any apparently uncommon plant, even the smallest fragments, such as can be easily pressed into an ordinary note-book, and be transmitted in a letter, will be acceptable; and that even specimens of the common plants, particularly of the interior districts, are of value to ascertain the range of the various species over the country. Such specimens should, whenever possible, be procured both in flower and fruit.

Beyond the frequent application to this office for the systematic determination of indigenous plants, also not rarely wishes are expressed for information on uses and qualities of vegetable productions, or on plants desirable for introduction—questions which receive, I need not state, the promptest and fullest attention I am able to give them. More extensive information may be expected will be gained when once the building now under progress, intended as a museum of economic botany, is filled with a systematic assortment of such raw and artificial materials, obtained from the vegetable kingdom, as are introduced into manufactures, medicine, or domestic use. The numerous fascicles of classified dried plants will be removed from the small office-building to the museum as soon as the necessary fittings are completed, and we may trust that the opening of one of the richest collections of Australian plants, and an extensive herbarium from other parts of the globe, will materially tend to diffuse knowledge, and add to the attractions of this establishment.

I have the honor to be,

Sir,

Your most obedient and humble servant,

FERD. MUELLER,

*Government Botanist and Director of the
Botanical and Zoological Garden.*

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

11/15
F. M. - 1887
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FIFTH

SYSTEMATIC INDEX OF THE PLANTS OF VICTORIA,

COMPRISING THOSE COLLECTED IN 1859 ;

BY FERDINAND MUELLER, M.D., PH. D.,

GOVERNMENT BOTANIST.

DICOTYLEDONEÆ.

THALAMIFLORÆ.

- Cruciferae, Jussieu.*
- **Senebiera*, Poiret.
S. Coronopus, Poiret.
- Capparideae, Jussieu.*
- Busbeekea*, Endlicher.
B. Mitchelli, Ferd. Mueller.
- Diosmeae, Jussieu.*
- Eriostemon*, Smith.
E. lamprophyllus, Ferd. Mueller.
E. lepidotus, Sprengel.
- Malvaceae, Jussieu.*
- Lawrencea*, Hooker.
L. glomerata, Hooker.
- Buettneriaceae, Brown.*
- Corethrostylis*, Endlicher.
C. Schulzenii, Ferd. Mueller.
- Caryophylleae.*
- Colobanthus*, Bartling.
C. Billardieri, Fenzl.

CALYCIFLORÆ.

- Euphorbiaceae, Jussieu.*
- **Euphorbia Peplus*, Linné.
- Halorogae, Brown.*
- Haloragis*, Forster.
H. odontocarpa, Ferd. Mueller.
- Leguminosae, Jussieu.*
- Acaëia*, Willdenow.
A. sphacelata, Bentham.
Swainsona, Salisbury
S. procumbens, Ferd. Mueller.
- Compositae, Vaillant*
- Calotis*, Brown.
C. cymbacantha, Ferd. Mueller.
C. plumifera, Ferd. Mueller.
Eurybia, Cassini.
E. adenophora, Ferd. Mueller.

- Paehysurus*, Steetz.
P. multiflorus, Turezaniow.
Rhytidochlamys, Sonder.
R. Mitchelli, Sonder.
Ozothamnus, Brown.
O. decurrens, Ferd. Mueller.
- Goodeniaceae, Brown.*
- Goodenia*, Smith.
G. Macmillani, Ferd. Mueller.
Scaevola, Linné.
S. apterantha, Ferd. Mueller.
Dampiera, Brown.
D. ovalifolia, Brown.
- Epacrideae, Brown.*
- Lissanthe*, Brown.
L. depressa, Ferd. Mueller.
Leucopogon, Brown.
L. Woodsii, Ferd. Mueller.
L. exarthenus, Ferd. Mueller.
L. juniperinus, Brown.

COROLLIFLORÆ.

- Loganiaceae, Endlicher.*
- Logania*, Brown.
L. nuda, Ferd. Mueller.
- Asclepiadeae, Brown.*
- Rhyncharrhena*, Ferd. Mueller.
R. quinquepartita, Ferd. Mueller.
- Scrophularinæ, Brown.*
- Anthoereis*, Labillardière.
A. amblyantha, Ferd. Mueller.
- Solanaceae, Jussieu.*
- Solanum*, Linné.
S. simile, Ferd. Mueller.
- Myoporinæ, Brown.*
- Eremophila*, Brown.
E. Sturtii, Brown.

Labiatae, Jussieu.

- Prostanthera*, Labillardière.
P. decussata, Ferd. Mueller.
Tenerium, Linné.
T. trifidum, Schlechtendal.

MONOCHLAMYDEÆ.

- Proteaceae, Brown.*
- Adenanthos*, Brown.
A. terminalis, Brown.
- Amarantaceae, Jussieu.*
- Euxolus*, Rafinesque.
E. enervis, Ferd. Mueller.
Triehinium, Brown.
T. semilanatum, Lindley.
- Salsolaceae.*
- Maireana*, Moquin.
M. stelligera, Ferd. Mueller.
Arthrocnemum, Moquin.
A. triandrum, Ferd. Mueller.
- Polygoneae, Jussieu.*
- Muehlenbeckia*, Meisner.
M. stenophylla, Ferd. Mueller.
- Thymelæae, Jussieu.*
- Pimelæ*, Banks and Solander.
P. striata, Meisner.

MONOCOTYLEDONEÆ.

- Smilacineae, Brown.*
- Ripogonum*, Forster.
R. album, Brown.
- Irideae, Jussieu.*
- **Trichonema*, Ker.
 **T. cruciatum*, Ker.
- Aphyllanthaceae, Endlicher.*
- Laxmannia*, Brown.
L. gracilis, Brown.
- Gramineae, Jussieu.*
- Danthonia*, Candolle.
D. bipartita, Ferd. Mueller.
Neurachne, Brown.
N. paradoxa, Brown.

CATALOGUE

OF THE

PLANTS ADDED DURING 1859 TO THOSE UNDER CULTIVATION IN THE
MELBOURNE BOTANIC GARDEN.

- ABELIA uniflora*, R. Br.
Abrus precatorius, L.
Abutilon avicennæ, Gaertn.
 Bedfordianum, Hook
 insigne, Planch.
Acacia amoena, Wendl.
 Arabica, Willd.
 chordophylla, F. Muell.
 cuneifolia, F. Muell.
 falcata, Willd.
 grandis, Henfrey
 leucocephala, Link.
 leucophylla, Lindl.
 pravissima, F. Muell.
 prominens, Cunn.
 stenophylla, Cunn.
 trinervata, Sieb.
Acantholimon venustum, Boiss.
Acanthophippium bicolor, Lindl.
Achillea decolorans, Schrad.
Acnida cannabina, L.
Adansonia digitata, L.
 Gregorii, F. Muell.
Adenophora Lamarckii, Fisch.
 suaveolens, Rehb.
Æsenulus glabra, Willd.
Agathaea Bergeriana, D. C.
Agrostemma flos jovis, L.
 parviflora, Cav.
Alchemilla arvensis, Lam.
Alfredia cernua, Cass.
 stenolepis, Kar. & Kis.
Aloe ciliaris, Haw.
 succotrina, Haw.
Alphitonia excelsa, Reiss.
Alsophila Colensoi, J. Hook.
Althaea nudiflora, Ldl.
 Sieberii, Hort.
Amaranthus gracilis, Desf.
 hypochondriacus, L.
 lividus, L.
 polygamus, L.
 retroflexus, L.
 speciosus, Don.
 tricolor, L.
Amaryllis latescens, Herb.
Amberboa odorata, D. C.
Amblyolepis setigera, Sweet.
Amorpha fragrans, Sweet.
Ampelopsis hederacea, D. C.
Amsinckia intermedia, F. and M.
Anacyclus clavatus, Pers.
 pedunculatus, Pers.
 tomentosus, D. C.
Anagallis
 indica, Wight
 latifolia, L.
Anchusa Agardhii, Lehm.
 incarnata, Schrad.
Anchusa italica, Retz.
 officinalis, L.
Andromeda speciosa, Mehx.
Ancilema acuminata, R. Br.
Anethum segetum, L.
Anisanthus eunonia, Sweet
Anoda Dilleniana, Cav.
 hastata, Cav.
Anona reticulata, Sieb.
 squamosa, L.
Ansonia angustifolia, Mchx.
Anthemis altissima, L.
 arabica, W.
 arvensis, L.
 anstriaca, Jaqu.
 Chia, L.
 Marsehalliana, W.
Anthocercis amblyantha, F. Muell.
Anthoxanthum odoratum, L.
Anthyllis barba jovis, L.
Aralia Japonica, Thunb.
 Schæfflera, Spreng.
Arbutus microphylla, Forst.
 procera, Dougl.
Aretotis breviscapa, Thunb.
 grandiflora, Jaqu.
Ardisia pumila, Blume
Areca horrida
 rubra, Borg.
Argyrea nitida, Choiss.
Argyrodendron trifoliolatum, F.
 Muell.
Aristea spiralis, Vahl.
Aristolochia
 sempervirens, L.
Aristolotelia racemosa, J. Hook.
Artirolobium ebracteatum, D. C.
 repandum, D. C.
Artocarpus integrifolia, L. fil.
Aselepias incarnata, L.
Asparagus racemosus, Willd.
 scandens, Thunb.
Asperula angustifolia
 montana, W. K.
 tinctoria, L.
Astelia Banksii, A. Cunn.
Aster Chinensis, L.
 tenellus, L. fil.
 Tradescantii, Lindl.
Astragalus depressus, L.
 maximus, W.
Astroloma denticulatum, R. Br.
Atriplex patulum, L.
 roseum, L.
 spongiosum, F. Mueller.
 Venetum, W.
Averrhoa Carambola, Adans.
Azalea crispiflora, Hook.
Azolla pinnata, R. Br.
BAECKIA diosmifolia, Schauer.
 linifolia, Rudge.
Banksia coccinea, R. Br.
 grandis, Willd.
Baptisia alba, Hook
 Anstralis, R. Br.
 leucantha, Torr and Gr.
 perfoliata, R. Br.
Barbarca orthoceras, Ledl.
 præcox, R. Br.
 stricta, Andr.
 vulgaris, R. Br.
Bauhinia purpurea, Willd.
Begonia Malabarica, Lam.
 Natalensis, Hooker.
Belladonna blanda, Sweet.
Berberis dealbata, Lindl.
 glumacea, Lindl.
Berberis Japonica, Spreng.
 Sibirica, Pall.
Bidens grandiflora, Balb.
Bignonia incarnata, Aubl.
Blitum capitatum, L.
 virgatum, L.
Bolbophyllum pygmaeum, Lindl.
Borrago officinalis, L.
Bossia paucifolia, Benth.
 spinescens, Meisner.
Brachycome calocarpa, F. Muell.
 paehytera, Turoz.
 trachycarpa, F. Muell.
Brachypterum scandens, Benth.
Brassica Mesopotamica, Bernh.
 oleracea, L.
Briza maxima, L.
Bromus unioides, H. B. K.
 velutinus, Schrad.
Browallia elata, L.
Bulbine Fraserii, Kunth.
Buxus Balearica, Lam.
CÆSALPINA coriaria, Willd.
 Sepiaria, Roxb.
 Sappan, L.
 tortinosa, Roxb.
Cæsia parviflora, R. Br.
Calamintha alpina, Benth.
Calandrinia
 calyptata, J. Hook.
 compressa, Schrad.
 discolor, Schrad.
 lingulata, D. C.
 umbellata, Gill.
Calceolaria petiolaris, Cav.
 pinnata, L.
 scabiosifolia, Sims.
Calendula arvensis, L.
 officinalis, L.
 Tragus, L.

- Calliopsis Drummondii*, Dou.
Callistemon brachyandrus, Lindl.
 lanceolatus, D. C.
 paludosus, F. Muell.
 speciosus, D. C.
Callitriche verna, L.
Calophyllum Inophyllum, L.
Calostemma luteum, Lindl.
Calotis erinacea, Steetz.
Calycanthus grandiflora.
Calycothrix glabra, R. Br.
Calyptrocalyx spicatus, Blume.
Campanula latifolia, D. C.
 persicifolia, L.
Canavalia Baueriana, Endl.
 rosea, D. C.
Canna.
 gigantea, Desf.
 Sellowii, L. R.
Capparis iucanescens, D. C.
Capsicum annuum, W.
 ceerasiforme, W.
Cardamine hirsuta, L.
 laciniata, F. Muell.
Carduncellus cœruleus, D. C.
Carissa acuminata, A. D. C.
Caryophyllus aromaticus, L.
Cassia alata, L.
 falcata, Dun.
 glauca, Lam.
 grandiflora, Desf.
 grandis, W.
 platypoda, Brown
 purpurea, Roxb.
 Roxburgii, D. C.
 sehiuifolia, A. D. C.
 smaragdina, McF.d.
Cassinia Vauvilliersii, Hook. fil.
 subtropica, F. Muell.
Castanea Americana, G. Don.
Casuarina equisetifolia, Fost.
 muricata, Roxb.
 stricta, Ait.
Ceanotus dentatus, Torr and Gr.
 divaricatus, Nutt.
Celastrus recurvatus, E. & Z.
Celtis Tournefortii, Lam.
Cenia turbinata, P. T.
Centaurea orientalis, L.
 ovina, Pall.
 salicifolia, L.
 Seabiosa, L.
 suaveolens, W.
Centranthus Calcitrapa, Dufr.
 macrocephalus, Boiss.
Cephalandra quinque loba, Schrad.
Crastium perfoliatum, L.
Cereus Chilensis, Colla.
 einerascens, D. C.
 giganteus, Engelm.
 grandiflorus, Mill.
 Pitajaya, D. C.
 strigosus, T. Dyck.
 tortuosus, Tweed.
 Tweedii, Hook.
Chaenostoma polyanthum, Benth.
Chamaecyparis thurifera, Endl.
Chenopodium album, L.
 ambrosioides, L.
 ficifolium, Tm.
 Quinoa, W.
 urbeum, L.
Chilianthus dyssophyllus, D. C.
Chironia linoides, L.
Chrysanthemum coronarium, L.
Chrysurus eynosuroides, Pers.
Cicer arietinum, L.
Cichorium endivia, L.
Cirsium laniflorum, Bbst.
 lanceolatum, Scop.
Cistus incanus, L.
 parviflorus, Lam.
- Citharexylum cyanocarpum*, Hook & Arn.
Citrus trifoliata, L.
Clarkia pulchella, Pursh.
Clematis aristata, R. Br.
 cœrulea, Lindl.
 florida, Thubg.
 lanuginosa, Lindl.
 mauritiana, Lam.
 montana, Buchan
 pedicellata, Tw.
 pedunculata, Arrab.
Clerodendron Bungei, Steud.
Clethra arborea, Ait.
Cochlearia officinalis, L.
Cocos nucifera, L.
Coix lacryma, L.
Colutea media, W.
Convolvulus Siculus, L.
Coprosma spathulata, A. Cunn.
Cordylina stricta, Steud.
Coreopsis Drummondii, Torr. & Gr.
Coronilla Emerus, L.
 grandiflora, Boiss.
Correa decumbens, F. Muell.
Cotoneaster buxifolia, Wall.
 thymifolia, Hort.
Crambe filiformis, Jaqu.
Craspedia pleiocephala, F. Muell.
Crinum aquaticum, Burch.
Crotalaria Mitchellii, Benth.
Cryptandra ericifolia, Tm.
Crytocarya triplinervis, R. Br.
Cryptostemma hypochondriaca, R. Br.
Cupressus anacardioides, Rieh.
Cyanotis nodiflora, Benth.
Cydonia Sinensis, Thouin.
Cymbidium albuciflorum, F. Muell.
 suave, Brown
Cynara horrida, Ait.
Cynodou Dactylon, L.
Cynoglossum stamineum, Desf.
Cyperus virens, Mehx.
Cytisus Alschingeri, Vis.
 capitatus, Jaqu.
 chrysobothrys, Fisch.
 ruthenicus, Fisch.
 sessilifolius, L.
- DACTYLIS *Altaiea*, Bess.
Dais cotinifolia, L.
Dalbergia melanoxylon, Guill & Pers.
 scandens, Roxb.
Damasonium Australe, Sal.
Dampiera Cunninghami, Vriese
Datura cecatocaulon, Ortega
 fastuosa, L.
 ferox, L.
 humilis, Desf.
Daviesia acicularis, Tm.
 cordata, Tm.
 eorymbosa, Tm.
Delphinium azureum, Mehx.
 intermedium, Ait.
 staphis agria, L.
Deudrobium Cunninghamii, Lindl.
 gracilicaule, F. Muell.
 linguiforme, Sm.
 monophyllum, F. Muell.
 pungentifolium, F. Muell.
 Shepherdii, F. Muell.
 teretifolium, R. Br.
 tetragonum, F. Muell.
Denhamia xanthosperma, F. Muell.
Desfontainea spinosa, R. and P.
Desmodium canadense, D. C.
 gyraus, L.
Dianella Archeri, J. Hook.
 Tasmanica, J. Hook.
- Dianthus atropurpureus*, Boyle
 Gardnerianus, M. B.
 monspessulanus, L.
 prolifer, L.
 Seguierii, Vill.
Dillwynia scabra, Schlehtd.
Dimorpholepis australis, As. Gray.
Diosma alba, Thunb.
Diphyllea eymosa, Michx.
Diplopappus fruticulosa, Less.
Dipsacus azureus, Schrenk.
Disemma coeinea, D. C.
Diuris corymbosa, Lindl.
Dodonaea acerosa, Lindl.
 ceratocarpa, Eudl.
 triquetra, Andr.
Dolichos Lablab, W.
 fabæformis, Herit.
Dracaena umbraenifera, Jaqu.
Dregea virgata, Eckl. Zeyh.
Duboisia myoporoides, R. Br.
- EARINA *autumnalis*, Hook. fil.
 mucronata, Lindl.
Ecbalium agreste, Rehb.
Echeveria bracteolata, Lk. Klolseh and Otto.
Echinocactus electraeanthus, Lehm
 Eyriesii, Turp.
 hexædrophorus, Lehm.
 Linkii, Lehm.
 multiplex, Hort. Berol.
 stellatus, Scheidw.
Echinopsilon sclerolænoides, F. Muell.
Echium amœnum, F. and M.
 salmanticum, Lagasc.
 vulgare, Brot.
Ekebergia Capensis, Sparm.
Elais guinensis, W.
Elæodendron australe, Vent.
 croceum, Jaqu.
Emilia sagittata, D. C.
Epilobium montanum, L.
Eragrostis Purshii, Schrad.
Erechtites hispidula, Rieh.
Eremophila divaricata, F. Muell.
 oppositifolia, R. Br.
Erigeron armeriaefolium, Turez.
Eriodendron anfractuosum, D. C.
Eriostemum lepidotus, Sprgl.
 salicifolium, Ventin.
Erodium Arabicum, Decaissn.
 hymenodes, Herit.
Eruca sativa, Lam.
 vesicaria, Cav.
Ervum Ervilia, L.
 hirsutum, L.
 monanthos, L.
 tetraspermum, L.
Eryngium ovinum, Cunn.
Erythraea Indica, Lem.
Eucalyptus amygdalina, Lab.
 citriodora, Hook.
 dumosa, A. Cunn.
Eugenia apiculata, D. C.
Eulophia macrostachya, Lindl.
Euodia erythrocoeca, F. Muell.
Eupatorium Fraseri, Poir.
Euphorbia Chamaesyce, L.
 bupleurifolia, Jaqu.
 pyrifolia, Lam.
 uneiuata, D. C.
Eurybia adenophora, F. Muell.
 decurrans, D. C.
Exocarpus aphylla, R. Br.
 glandulacea, Mig.
- FAGUS fusca*, J. Hook.
Fedia cornocopiae, Vahl.
Ferula communis, L.
 glauca, L.

- Ficus capensis*, Thubg.
Flindersia xanthoxyla, F. M.
Fourcroya tuberosa, Ait.
Fuchsia serratifolia, R. and P.
Fumaria glabellata, Gasparini.
macrosepala, Boiss.
- GAILLARDIA** *aristata*, Pursh.
Galega biloba, Sweet.
Galinsoga dentata, Rehb.
Galium divaricatum, Lam.
gracile, M. K.
sacharatm, All.
Galphimia splendens, Mackay.
Garcinia Cochinchinensis, Choiss.
Mangostaua, L.
Garrya elliptica, Dougl.
Fadenii, Hook.
Gaura Lindheimeri, Engelm.
Gelasine azurea, Herb.
Genista.
elata, Wenderoth
lusitanica, Bois.
racemosa, Hort.
triangularis, W.
Geranium aucomonæfolium, Herit.
lucidum, L.
palustre, L.
Sibiricum, L.
Gilia Beirichiana, Bouché
leptosiphon, Steud.
tenuiflora, Buth.
Gladiolus cuspidatus, Jaqu.
undulatus, L.
Gloriosa Plantii, Hook.
Gnaphalium polyecephalum, W.
Godetia bifrons, Hook.
Gomphocarpus fraticosus, Brown.
Gouiopteris pennigera, J. Sn.
Goodenia amplexans, F. Muell.
Graptophyllum hortense, Nees.
Gratiola pedunculata, R. Br.
Grewia hirsuta, Vahl.
Grevillea Chrysodendron, R. Br.
pterosperma, Ferd. Mueller.
Gymnogramme ealomeclanos, Kaulf.
Gyrostemon cotinifolius, Desf.
- HACKEA** *pugioniformis*, Cav.
Halleria lucida, L.
Harpulia Hillii, F. M.
Hedychium lanecolatum, Schum.
 and Thonn.
Heimia myrtifolia, Cham. aud
 Schldt.
Helenium autumnale, L.
tenuifolium, Nutt.
Helianthus argophyllus, Torr and
 Gr.
Helichrysum Behrii, F. M.
maritimum, D. C.
obtusifolium, Sond and Muell.
Heliosis buphtalmoides, Dun.
Helipterum polyphyllum, Muell.
Hemitelia capensis, R. Br.
Heterodendron oleifolium, Desf.
Heterolepis decipiens, Cass.
Hexaglottis virgata, Sweet.
Hibiscus Abelmoschus, L.
Cameronii, Knowl and Westc.
Humboldtii, Colla.
hackeæfolius, Giordan.
Lindleyanus, Wall.
palustris, L.
pedunculatus, Thubg.
tiliaceus, L.
vesicarius, Cav.
Hieracium tomentosum, All.
Hippocrepis ciliata, D. C.
Holcus lanatus, L.
- Hyoecyamus agrestis*, Kit.
Albus, L.
Hypericum hircinum, L.
involutum, Choiss.
monogynum, L.
Hypochaeris glabra, L.
- IBERIS** *Forseticrii*, Jordan
Hlex crassifolia, Hook.
Cassine, Ait.
Dohoon, Wall.
dipyrena, Wall.
laurina, H. B. Kunth.
microcarpa, Lindl. and Paxt.
vomitaria, Ait.
Indigofera Dejua, Hamilt.
enncaphylla, L.
monophylla, D. C.
Iondium floribundum, Lindl.
Ipomæa.
digitata, L.
polyanthes R. S.
Roxburghii, Stend
Iris sambucina, L.
Ixora acuminata, Roxb.
- JAMBOSA** *Malaccensis*, D. C.
Jatropha pauduræfolia, And.
Jonesia asoca, L.
Juniperus sphaerica, Lindl. & Paxt.
thurifera, L.
- KENNEDYA** *Baumannii*, Meisn.
Kingia Australis, R. Br.
Kleinia ficoides, Haw.
Kochia lanosa, Ldl.
sedifolia, F. Muell.
- LACTUCA** *sonchifolia*, W.
Lambertia formosa, Sm.
Lappa major, Gaertn.
tomentosa, All.
Lapsana intermedia, Bbst.
Lardizabala biternata, R. and P.
Lasthenia Californica, Desf.
Latania Borbonica, Lam.
Lathyrus aphaca, L.
Armitagcanus, West.
lusitanicus, Mart.
Nissolia, L.
palustris, L.
purpureus, Desf.
sylvestris, L.
verticillatus
Laurelia aromatica, Poir.
Lavatera Cachemiriana, Cambes.
Cretia, L.
maritima, Gouan.
Leonurus cardiaca, L.
villosus, Desf.
Leopardanthus scandens, Blume.
Leptocyanus LaTrobei, F. Muell.
sericeus, F. Muell.
Leptorrhynchus rhytidanthe,
 Benth.
Leptospermum flavescens, Sm.
Leucopogon rotundifolius, R. Br.
Leucopsidium Arckansauum, D.C.
Leuzea Australis, D. C.
Lilium cordifolium, Thubg.
Linaria minor, Desf.
spartea, Lk. Hffmssgg.
supina, Desf.
vulgaris, Mill.
Limn angustifolium, Huds.
decumbens, Desf.
flavum, L.
grandiflorum, Desf.
Lissanthe subulata, R. Br.
Livistonia Chincensis, R. Br.
- Lobelia amplexicaulis*, Vriese.
piuifolia, L.
Lonicera Standishii, Hort.
Lotus aristatus, D. C.
gracilis, W. K.
Lupinus albus, L.
arboreus, Tims.
Donglasii, Agahra.
Ehrenbergii, Schldt.
lucidus, Bnth.
Nootkænsis, Don.
perennis, L.
rivularis, Lindl.
tomentosus, D. C.
varius, L.
Lychnis viscosa, L.
Lycium Australe, F. Muell.
Capense, Mill.
Lycodium gracillimum, Kze.
Lycopsis arvensis, L.
Lysimachia nummularia, L.
Lythrum tenellum, Thunb.
- MACROZAMIA** *Pauli Guilielmi*,
 F. Mueller.
Preissii, Miq.
Magnolia umbrella, Desr.
Malva cretica, Cav.
Mauritiana, L.
microcarpa, Desf.
moschata, L.
peruviana, L.
Tournefortiana, L.
Mandragora vernalis, Bertol.
Mangifera Indica, L.
Manula violaceæ, Lk.
Maranta Indica, Rose
Marrubium supinum, L.
Marsilea hirsuta, R. Br.
Martynia proboscideæ, Glox.
Matricaria discoidea.
nigellæfolia, D. C.
Matthiola annua, Swt.
sinuata, R. B.
Maurandia aurirrhiniflora, H. B.
Medicago Catalonica, Schrank.
denticulata, W.
falcata, L.
Græca Hornem.
ummunularia, D. C.
orbicularis, W.
polycarpa, W.
Melaleuca acuminata, F. Muell.
liuarifolia, Sm.
minor, Smith.
Melilotus albus, Desr.
leucanthus, Roch.
gracilis, D. C.
officinalis, Z.
Melicope ternata, Forst.
Melicytus lanecolatus, J. Hook.
Melissa Caroliniana, Benth.
Memecylon tinctorium, Kœnig.
Mentha gracilis, R. Br.
Menziesia polifolia, Juss.
Mesembryanthemum bicolor, Z.
depressum, Haw.
longum, Haw.
spectabile, Haw.
Mesua Roxburghii, Wight.
Metrosideros florida, Sm.
lucida, Menz.
Micranthea ericoides, Desf.
Microtis porrifolia, Spreng.
Miliusa montana, Gardn.
Monenyanthes gnaphalioides, As.
 Gr.
Monoploca leptopetala, F. Muell.
Monopsis debilis, Prsl.
Morgania glabra, R. Br.
Muckia micrantha, F. Muell.

- Muehlenbeckia Australis*, Meisn.
stenophylla, F. Muell.
Mussaenda arcuata, Lam.
Myosotis sylvatica, Ehrh.
Myristica moschata, Thunb.
Myrsine salicina, Heward.
Myrtus tenuifolia, Sm.
- NASTURTIIUM officinale*, R. Br.
Nelumbium speciosum, W.
Neptunia gracilis, Benth.
Nicotiana Nepalensis, Lk. & Otto.
Nigella coarctata, D. C.
hispanica, L.
Nonea lutea, D. C.
Nuphar luteum, Sm.
Nymphaea blanda, Meyer.
guinensis, Schum & Thoun.
Lotus, W.
- OBELISCARIA columnaris*, D. C.
primata, Cass.
pulcherrima, D. C.
- Oenothera Fraserii*, Pursh.
glauca, Mchx.
pumila, L.
purpurea, Curt.
Romanzowi, Ldb.
stricta, Ldb.
taraxacifolia, Swt.
tetraptera, Cav.
- Ononis antiquorum*, L.
hircina, Jaqu.
repens, L.
spinosa, L.
- Onopordon Acanthium*, L.
arabicum, L.
heteracanthum, Mey.
- Ornithopus compressus*, L.
isthmocarpus, Cosson.
- Orobos augustifolius*, L.
canescens, L.
coccineus, Mill.
sylvaticus, L.
- Ortegia hispanica*, Loeffl.
Oursia macrophylla, Hook.
Oxyanthus hirsutus, D. C.
Oxystelma esculentum, R. Br.
- PALIURUS Australis*, Gaertn.
Panætia atrixioides, Sond. & Muell.
- Panax papyrifer*, Hook.
quinquefolius, L.
- Panicum miliaceum*, L.
plicatum, Lam.
- Papaver croceum*, Ledeb.
Passiflora incarnata, W.
- Pelargonium barbatum*, Jaqu.
scandens, Ehrh.
- Pentstemon Murrayanum*, Hook.
pulehellus, Lindl.
pubescens, Ait.
Torreyi, Benth.
- Pernetia mucronata*, Gaud.
Phajus Australis, F. Muell.
Phalenopsis grandiflora, Lindl.
Phalaris Americana, Ell.
Pharbitis hispida, Choiss.
heterophylla, Choiss.
- Phaseolus multiflorus*, L.
vulgaris, L.
- Philadelphus Zeyherii*, Schrad.
Phlomis fruticosa, L.
- Phenocoma prolifera*, Don.
Phygelius Capeensis, E. May
Phylla olcifolia, Vent.
paniculata, W.
- Phyllanthus calycinus*, Lab.
crenulatus, F. Muell.
- Physalis Alkekengii*, L.
Physochlæna grandiflora, Miers.
Phytolacca acinosa, Rxbg.
decandra, L.
dioica, L.
- Phyteuma limonifolia*, Sibth.
Picridium arabicum, Hochst.
Pieris pauciflora, W.
- Pinus alba*, Ait.
austriaca, Tratt.
californica, Loiseleur.
cedrus, L.
cembra, L.
deodara, Rxbgh.
Freemontiana, Endl.
jezoensis, Sieb. & Zucc.
Lambertiaua, Dougl.
Laricio, Poir.
Larix, L.
macrophylla, Lindl.
Mughus, Jaqu.
muricata, Don.
patula, Cham.
pyrenaica, Lap.
Russelliana, Lindl.
Sabiniana, Dougl.
- Piper excelsum*, Forst.
grandifolium, H. B.
nigrum, L.
- Piptanthus Nepalensis*, D. Don.
Pittosporum cornifolium, A. Cunn.
- Plantago alopecuroides*, Lam.
amplexicaulis, Cav.
ciliata, Desf.
cordata, Lam.
coronopus, L.
- Cynops*, L.
Hookeriana, F. and M.
major, Z.
serpentina, Lamb.
- Pleurandra juniperina*, Lab.
Pocockia cretica, Ter.
- Poa ramigera*, F. Muell.
- Podocarpus Chiliua*, Rich.
coriacea, Rich.
macrophylla, Don.
nueifer, Lond.
- Podolepis affinis*, Sond.
- Podospermum calcitrapæfolium*, D. C.
- Polemonium lacteum*, Lehm.
- Polycalymma Stuartii*, Sond. and Muell.
- Polycarpon alsinifolium*, D. C.
- Polygonum Orientale*, L.
- Polypodium irioides*, Poir.
- Pomaderris*.
parvifolia, Hook.
- Porana elegans*, Follinger.
- Portulacca Thellussonii*, Lindl.
- Potamogeton natans*, L.
obtusifolius, M. K.
- Potentilla argentea*, L.
Garriepensis, Eckl.
insignis, Royle.
Morrissonii, D. C.
pedata, W.
pilosa, W.
Thomasii, D. C.
- Prionium Palmita*, E. Mey.
- Prockia serrata*, W.
- Prosopis strombulifera*, Benth.
- Prunus Mahaleb*, L.
- Psidium polycarpum*, Lamb.
- Psoralea acaulis*, Stev.
eriantha, Benth.
involverata, Thubg.
tenax, Lindl.
- Psychotria expansa*, Blume.
- Ptelea trifoliata*, L.
- Pteris umbrosa*, R. Br.
- Pterocarpus Dalbergioides*, Roxb.
- Pterostylis Banksii*, R. Br.
squamata, R. Br.
- Pyrenaria lasiocarpa*, Blume.
- Pyrethrum tenuifolium*, W.
- Pyrus Aria*, Ehrh.
- QUERCUS coufertifolia*, H. B.
heterophylla, Melix.
inversa, Lindl. and Paxt.
lanata, Sm.
macrophylla, Nee.
pseudo-coccifera, Desf.
virens, Ait.
- RANUNCULUS arvensis*, L.
rivularis, Banks.
sessiliflorus, R. Br.
- Reseda alba*, L.
lutea, L.
luteola, L.
- Rhagodia spinescens*, R. Br.
- Rheum crassinervum*, Mart.
hybridum, Ait.
tartaricum, L.
- Rhipogonum scandens*, Forst.
- Rhododendron argenteum*, J. Hook.
barbatum, Wallich.
cinnabrinum, J. Hook.
Falconerii, J. Hook.
fulgens, Hook.
Griffithianum, Wight.
lepidotum, Wallich.
Maddenii, J. Hook.
Wightii, J. Hook.
- Rhodolia Championi*, Hook.
- Rhodostemon gardenioides*, Scheidw.
- Rhus toxicodendron*, L.
typhinum, L.
viminale, Vahl.
- Ricinocarpus Mitchelli*, Sond.
Tasmanicus, Sond. and Muell.
- Robinia Carragana*, L.
tortuosa, Hfingg.
viscosa, Vent.
- Roelea odoratissima*, D. C.
- Rosa Fortuneana*, Hook.
- Rudbeckia speciosa*, W.
- Rumex alpinus*, L.
cordifolius, Hornem.
giganteus, Ait.
hamatus, Trevis
longifolius, H. B.
maximus, Schreb.
nemolapathura, Whlbg.
orientalis, Bruh.
sanguineus, L.
- Ruscus aculeatus*, L.
- SACCOLABIUM calcaratum*, F. Muell.
Hillii, F. Muell.
- Salix Helix*, Sm.
Humboldtiana, W.
- Salpiglossis picta*, Swt.
- Salsola Australis*, R. Br.
- Salvia Africana*, L.
asperifolia, Buth.
mollis, Don.
oblongata, Vahl.
patula, Desf.
Roemeriana, Scheele.
- Santalum obtusifolium*, R. Br.
- Saracha biflora*, R. P.
- Sarcopetalum Harveyanum*, F. Muell.
- Saxifraga cordifolia*, Haw.
ligulata, Wall.
- Scaevola Hookerii*, F. Muell.

- Schizanthus Grahmi*, Hook.
Schotia tamarindifolia, Afz.
Scirpus lacustris, L.
Scolopendrium officinarum, L.
Scorpiurus subvillosus, Swz.
Sclerostylis atalantoides, Wight
 and Arn.
Scrophularia sambucifolia, W.
Scutellaria splendens, Lk. and Otto
Senecio coronopus, Pers.
didyma, Pers.
Senecio Australis, W.
Cunninghamii, D. C.
Gregorii, F. Muell.
undulatus, Thnbg.
viscosus, L.
Setaria Germanica, Beauv.
Sida aurita, Wall.
mollis, Ort.
Sidaleca malviflora, As. Gr.
Silene hispida, Desf.
inflata, Sm.
noctiflora, L.
nocturna, L.
petraea, W. K.
viscosa, Pers.
Silybum marianum, Gaertn.
Sinapis hispida, Schousl.
Sisymbrium acutangulum, D. C.
austriacum, Jaqu.
Trio, L.
officinale, L.
polyceratum, L.
Thalianum, Gaud.
Sisyrinchium laxum, Otto.
Smilax aspera, L.
mauritanica, Poir.
Solandra grandiflora, Sw.
Solanum aggregatum, Jaqu.
Balbisii, Dunal.
cerasiferum, Dunal.
discolor, R. Br.
heterandrum, Pussh.
lacunarium, F. Muell.
Lycopersicum, L.
macranthum, Dunal.
sinense, Blauco.
villosum, Lam.
Sparmannia Africana, L. fil.
Spartium linifolium, Desf.
scoparium, W.
Spilanthus oleraceus, L.
Spherolobium vincineum, Sm.
Sphenogyne adoniflora, D. C.
anthemoides, R. Br.
- Spiræa barbata*, Wall.
opulifolia, L.
trilobata, L.
Sponia crassifolia, G. Don.
Stachys Bridgesii, Bnth.
grandiflora, Bnth.
scitifera, C. A. Mey.
sibirica, Lnk.
Stangeria paradoxa, T. Moore.
Stapelia grandiflora, Mass.
hirsuta, L.
Stenocarpus salignus, R. Br.
Stenochilus longifolius, R. Br.
Stenopetalum sphaerocarpum, F.
 Muell.
Sterculia platanifolia, L. fil.
Stevia Eupatoria, W.
Stewartia Malachodendron, L.
Stipa flavescens, Lab.
Strelitzia Regina, Ait.
Streptocarpus polyanthus, Hort.
Strophanthus aurantiaeus, Hort.
Stylophorum diphyllum, Nutt.
Succovia Balcarica, D. C.
Swietenia Mahagoni, L.
Syciospermum gracile, A. Gr.
Sycios bryoniaefolia, Moris.
Syringa Chinensis, W.
- TAGETES lucida*, Cav.
patula, L.
Taraxacum officinale, Willd.
Tephrosia grandiflora, Pers.
purpurea, Pers.
Tetragonolobus siliquosus, Roth.
Tetranema mexicanum, Bth.
Tetratea thymifolia, Sm.
Therogeron tennifolius, Sond.
Thermopsis lanceolata, R. Br.
Thespesia populnea, Correa.
Thysanotus paniculatus, R. Br.
Tournefortia heliotropioides,
 Hook.
Tradescantia virginica, L.
Trichinium spathulatum, R. Br.
Trichomanes reniforme, Forst.
Trichouema cruciatum, Ker.
Trifolium angustifolium, L.
filiforme, L.
globosum, L.
latinum, Sebast.
spumosum, L.
striatum, L.
subterraneum, L.
vesiculosum, L.
- Trigonella cancellata*, Desf.
coerulea, Sering.
crassipes, Boiss.
Tritonia crocata, Ker.
Tropæolum aduncum, Sm.
Tricoryne tenella, R. Br.
Tydea gigantea, Decaisne.
- UNONA zeylanica*, Hook and
 Thoms.
Uvaria micrantha, Hook and
 Thoms.
- VERBASCUM Blattaria*, L.
phœniceum, L.
thapsiforme, Schrad.
thapsus, L.
Veronica orientalis, Ait.
Verticordia Fontanesii, D. C.
Viburnum lucidum, Mill.
macrocephalum, Fortun.
Vicia bithynica, L.
cassubica, L.
cracca, L.
disperma, D. C.
ferruginea, Bess.
hirsuta, Fisch.
hybrida, L.
onobrychoides, L.
purpurea, Stev.
sativa, L.
sylvatica, L.
sordida, W. R.
triflora, Tenor.
Vicisseuxia tristis, Ecklon.
Vigna Sinensis, Benth.
Viola hederacea, Lab.
Sieberii, Hook.
Vittadenia cuneata, D. C.
- WEINMANNIA trichosperma*, Cav.
Wickstroemia viridiflora, Meisn.
Widdringtonia cupressoides, Endl.
- XERANTHEMUM cylindraceum*.
Xeropetalum tiliaceum, Endl.
- ZICHYA coccinea*, Bnth.
Zygophyllum Billardieri, D. C.
erenatum, F. Muell.
Morgsana, L.
Zizyphus vulgaris, Lam.