

In the Ohaupo locality, *Sporadanthus* is seldom found near the margin of the swamp; but toward the centre, where there is a great depth of peat which affords ample room for its creeping rhizomes and long stringy roots, it occurs in immense abundance, often covering hundreds of acres to the exclusion of almost all other vegetation. Mr. J. Stewart, C.E., informs me that the workmen engaged in constructing the railway dreaded to encounter it, as its thick matted roots not only made it difficult to open out the drains, but were also a sure sign of a bad part in the swamp. In habit it is quite peculiar, and very distinct from any other New Zealand plant. Single clumps, with the stiff, erect stems bare at the base, but branched above, the branches all terminated with brown panicles, and gently drooping outward at the tips, are by no means devoid of elegance; but when seen covering large areas its general appearance is dreary and monotonous.

The discovery of *Sporadanthus* in New Zealand proper, taken in connection with the fact that *Myosotidium* (or the Chatham Island Lily, as it is absurdly called by our gardeners) is known to occur on the Snares, has deprived the Chatham Island Florula of any claim to an endemic genus; and brings into still greater prominence the relationship existing between its vegetation and that of New Zealand; a relationship so close that hardly a dozen species out of the 200 known to inhabit the group are specifically distinct from New Zealand plants.

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ART. XLIX.—*A short Sketch of the Flora of the Province of Canterbury, with Catalogue of Species.*—By J. B. ARMSTRONG.

[Read before the Philosophical Institute of Canterbury, 2nd October, 1879.]

THIS short essay is intended as an introduction to the botany of that portion of New Zealand included within the boundaries of the Provincial District of Canterbury.

For the purposes of botanical demonstration, the Province may be conveniently divided into four districts, each differing considerably in its floral features from the others. These are—

1. The Littoral District.
2. The Banks' Peninsula District.
3. The Lowland, or Middle District.
4. The Alpine District.

The *Littoral District* extends along the coast, and inland about a mile and a half, usually ceasing when the land attains an altitude of twenty or twenty-five feet above the sea level. This district is composed of sand-hills

and maritime swamps. The plants of this district are few, but generally of a totally different character from those found further inland, being especially adapted for growing in sand, and within the influence of the salt breezes of the ocean. Prominent among these sea-side plants are three species of *Convolvulus* identical with those found on the sea-shores of the old country, and which seem to be found in similar localities in almost all countries. We find also several species of *Juncus*, or rush, *Senecio lautus*, *Selliera radicans*, species of *Salicornia*, *Spinifex*, *Samolus*, *Scirpus*, *Euphorbia*, *Mesembryanthemum*, and others, which are equally common in Australia and many other countries. Of species confined to the colony we find *Lepidium oleraceum*, *Festuca littoralis*, *Desmoschœnus*, *Utricularia novæ-zealandiæ*, *Pimelea virgata*, numerous species of sedges, etc.

In the swampy places near the coast we find a number of pretty little herbaceous plants belonging to the following genera:—*Mazus*, *Mimulus*, *Ranunculus*, *Poa*, *Gratiola*, *Utricularia*, *Euphrasia*, and various *Orchidaceæ*. The Canterbury littoral district contains no indigenous trees, but patches of shrubs were common a few years ago, though in many parts of the coast they have almost entirely disappeared. These shrubs belong chiefly to the genera *Coprosma*, *Cassinia*, *Plagianthus*, *Veronica*, and *Leptospermum* or manuka. The native grasses of this district are neither numerous nor of a useful character, and are rapidly dying out under the influences of settlement, though whether their places are being filled by more useful varieties is, I think, extremely doubtful. The littoral district of Canterbury contains about 110 species, comprised in no less than 83 genera. Such a large proportion of genera to the species could not be found in any other similar space outside of New Zealand.

*The Banks' Peninsula District.*—Banks' Peninsula possesses widely different features in comparison with the district last described. Its boundaries are so well known that I need not attempt to describe them any further than to state that I include the range known as the Port Hills under this name, as they belong botanically to the same region. The peninsula approaches the North Island much more nearly in its floral character than does any other part of the province. The northern slopes of its numerous ranges are generally well grassed, and capable of carrying large numbers of stock in the natural state; though they have unfortunately been much injured by the senseless system of burning which, I am sorry to say, still prevails in this district. The southern slopes, and particularly the gullies, are, or rather were, covered with a most luxuriant vegetation of sub-tropical and Polynesian aspect. Noble trees of most various species entirely covered the ground, and gave shelter and shade to a vast variety of shrubs of great beauty, and nearly one hundred species of ferns luxuriated in the almost

tropical warmth of the deep ravines. Towering stems of tree-ferns, clothed with lovely mosses and *Hymenophyllums*, were to be seen raising their noble heads above the smaller trees and shrubs, whilst numerous lianes belonging to various species of *Clematis*, *Rubus*, *Passiflora*, *Parsonsia*, *Rhipogonum*, and *Muhlenbeckia* hung from one tree to another, connecting these giants of the forest together. Nearly all the trees of the peninsula are evergreen in character, indeed the only deciduous ones I know of are *Plagianthus betulinus* or ribbonwood, and the konini, *Fuchsia excorticata*.

This constant evergreen character of our New Zealand vegetation is by most travellers described as sombre and gloomy, but I think that those who look deeper than the surface will find most beautiful features in many of the trees and shrubs composing this so-called sombre forest.

The forest is composed of a remarkably large number of trees and shrubs belonging to genera of the most varied character and relationship. It is this mixed character which gives the peculiar charm to the New Zealand flora in the eyes of a professional collector. The principal timber-trees of the forest on Banks' Peninsula are:—

1. The totara, *Podocarpus totara*, a fine stout-stemmed tree of the natural order *Coniferae*, producing a reddish coloured wood, well known to all settlers; and which is now proved to be more durable than any other New Zealand timber, and to stand better in salt water than any other timber yet tried for that purpose.

The totara was formerly abundant over the whole of the peninsula, but is now becoming scarce and more difficult to obtain. It thrives very well under cultivation, but takes a long time to mature its wood and for this reason it will not be much planted.

2. The black pine or matai, *Podocarpus spicata*, another tree of the same family as the last, is still common on many of the spurs in the interior of the peninsula; though a useful tree it is in every way inferior to the totara.

3. The white pine, *Podocarpus dacrydioides*, is not so common on Banks Peninsula as in some parts of the colony. This tree produces a well-known white wood, not durable, but easily worked and excellent when used for inside work. The white pine likes a moist soil, and consequently does not attain any great height on the slopes of the peninsula hills. It is very difficult to cultivate, and is a very slow grower while young, but seems to grow much faster as it gets older.

4. The miro, *Podocarpus ferruginea*, is a much smaller tree than either of those just mentioned, and the wood is generally considered to be of inferior quality, though several instances have come under my observation where this wood has stood for several years in exposed situations without showing

any signs of decay. The miro is easy to cultivate, but is very deficient in beauty in the young state, the whole plant being of a rusty red colour.

5. The rimu or red pine, *Dacrydium cupressinum*, is much less abundant on the peninsula than any of the above sorts, being chiefly found on the higher ridges, and is here a far inferior tree in beauty compared to the West Coast variety of the same species. The well-known red wood of this species makes beautiful furniture, and is also used for interior house-work, for which it is especially adapted when well seasoned. The rimu is a beautiful object under cultivation, but is liable to be killed by exceptionally hard winters. A number of fine young trees in the Christchurch Public Gardens were entirely destroyed by frost during the winter of 1878, and I have also seen it injured in the bush.

6. The cedar, *Libocedrus doniana*, is a very rare tree on the Peninsula, and, as far as I have been able to ascertain, is not found in any other part of the South Island. It is a beautiful tree, of graceful, upright habit, and does well under cultivation. The timber is valuable.

7. The kawaka, *Libocedrus bidwillii*, which in Otago grows to a large size, is here little better than a shrub. Its wood, however, is hard and durable.

8. The broadleaf, *Griselinia littoralis*, is abundant in the district, and produces a hard red wood of a durable nature, which has been used for various purposes.

9. The manuka, *Leptospermum ericoides*, is another hard-wooded tree, which has been used for the different purposes requiring strength, which it possesses in an eminent degree. It is, however, fast becoming extinct.

10. The kowhai, *Sophora tetraptera* var. *grandiflora*, belongs to the great family of pod-bearers, and is a large tree with splendid yellow flowers. It attains a height of 40 feet to 50 feet, and a diameter of 3 feet, and is much used for furniture-making, but is already becoming scarce.

11. The ribbon-wood, *Plagianthus betulinus*, a large deciduous tree with a very upright poplar-like habit of growth, yields a softish white timber which splits well, but is not durable.

The species of *Fagus* or beeches, erroneously called birches by our bushmen, are very rare on the peninsula, occurring only in small quantities, and consequently their timber has never formed an item in the export trade of the district.

The above-mentioned kinds of trees comprise all that are usually cut for their timber, but very many others enter into the composition of the forest and may perhaps be found to have some useful properties at present unknown. Such are:—The hini-hini, *Meliccytus ramiflorus*. The titoki, *Alectryon excelsum*. The ivy-tree, *Panax arboreum*. The very curious and beauti-

ful lancewood, *Panax crassifolium*. The tipau or matipo, *Pittosporum tenuifolium*, which makes the best ornamental hedge I know of. The tarata or lemonwood, *Pittosporum eugenioides*, a most beautiful tree also used for hedges. The hohera, *Hoheria angustifolia*. The mako-mako, *Aristolelia racemosa*. The milk-tree, *Epicarpurus microphyllus*, which yields a peculiar milky fluid from the inner bark. The hinau, *Elæocarpus dentatus*, from the bark of which the Maoris obtained a fine dye. The pokako, *Elæocarpus hookerianus*. The ake-ake, *Olearia forsteri*, and the cabbage trees, *Cordyline australis?* and *C. indivisa?* The shrubby plants of the peninsula are exceedingly numerous, belonging to many varied genera; prominent among them are species of *Coprosma*, *Piper*, *Drimys*, *Myrsine*, *Myoporum*, *Carpodetus*, *Olearia*, *Veronica*, *Panax*, *Myrtus*, etc. Several species and genera, which are common in the North Island, are totally absent from Banks' Peninsula, and of course from the rest of the province; such are *Geniostoma*, *Dysoxylum*, *Hoheria populnea*, *Entelea*, *Atherosperma*, *Eugenia*, *Brachyglottis*, *Knightia*, *Nesodaphne*, *Freycinetia*, etc. The large North Island genus *Metrosideros* has no arboreous representative in this district, though *M. lucida* is common much farther south.

Plants which attain their southern limit on the peninsula are the Nikau palm, *Areca sapida*; the karaka, *Corynocarpus lavigata*, which is found in several small bays at the eastern point of the peninsula. Several small and stunted specimens of karaka formerly grew in Dampier's Bay, Lyttelton. *Senecio saxifragoides* finds its southern limit here, and probably also *Alectryon excelsum* and *Libocedrus doniana*. I have not been able to ascertain that any species finds its northern limit on Banks' Peninsula, but the following plants appear to be confined to the district—*Celmisia makawai* and *Pittosporum obcordatum*.

Banks' Peninsula contains 350 species of flowering plants belonging to 171 genera.

*The Lowland or Middle District.*—Under this name I include the great Canterbury plain, together with the groups of downs at each end of the province, and so much of the eastern face of the great Alpine range as lies below 2000 feet. A reference to the map will show that the district, as here defined, is a very extensive one, being about 150 miles long by 30 to 50 miles wide.

The great Canterbury plain is remarkably poor in plants, and is very uniform in character. Grasses form here the principal part of the vegetation, except in the numerous swampy places along the sea-coast, which before the settlement of Europeans were covered with a dense growth of *Phormium tenax*, *Astelia grandis*, and numerous species of *Cyperaceæ*, and *Junceæ*.

The most abundant grasses are the tussock-grass, *Poa cæspitosa*, etc., an undescribed species of fescue usually referred to *Festuca duriuscula*, Linn., by most New Zealand collectors. The hassock-grass, *Aira cæspitosa*, *Agrostis æmula*; the holy-grass, *Hierochloë redolens*; the plume-grass, *Dichelachne crinita*; and the blue-grass, *Triticum squarrosum*. Among these grasses grew a few pretty little herbaceous plants belonging to the genera *Raoulia*, *Craspedia*, *Cotula wahlenbergia*, *Pelargonium*, *Geranium*, and *Geum*, and in wet places many interesting little plants, such as species of *Pratia*, *Ranunculus*, *Lomaria*, *Triglochin*, *Micromeria*, and others. The vegetation of the downs does not differ materially from that of the plain, but in many of the valleys at the base of the main chain, small patches of forest are found, and have been of great value to the settlers. These small forests, or bushes as they are commonly called, consist of totara, miro, rimu, matai, and the two common species of birches—*Fagus cliffortioides* and *F. solandri*.

When these bushes are at a low elevation, as at Waimate and Geraldine, the *Coniferae* prevail; but whenever the elevation much exceeds 600 feet, the *Fagus* become the principal tree; though the *Coniferous* species do not altogether cease until we reach a height of 2,000 feet. The smaller trees mentioned as common on the peninsula are here comparatively rare and often altogether absent. Shrubby plants are much less numerous in this district than in any other part of the colony.

A few patches of shrubs were occasionally to be found on the plains, and were formed of *Discaria toumatou*, *Coprosma parviflora*, *Leptospermum scoparium*, *Olearia virgata*, and *Cassinia vauwilliersii*. The common cabbage-tree of the South Island, a species of *Cordylina* doubtfully referred to *C. australis*, of Hooker, was formerly rather common, and helped to enliven what was at best a dreary scene.

The lowland district contains about 360 species arranged under 160 genera of flowering plants.

*The Alpine District.*—This is by far the most interesting of these divisions, as it contains a very large number of most beautiful shrubs and herbaceous plants which are likely at no distant date to become the common ornaments of European gardens, for which they are eminently fitted, from their great hardiness, easy propagation, and exquisite beauty. Indeed, a demand for our native Alpine plants has already sprung up in England, and several of them are to be found in the lists of the leading London nurserymen.

The Alpine district may be further divided into the following zones of vegetation, which are generally clearly defined, except in the valleys of the rivers, where the plants of the upper zone sometimes occur, having been brought down by the floods from their usual habitat:—

1. The zone of Beeches.
2. The zone of shrubby *Compositæ* and *Scrophularineæ*.
3. The zone of Herbaceous plants.
4. The zone of perpetual Snow.

The lowest of these zones—that of beeches—is principally covered with grasses of a useful character, and patches of *Fagus solandri* and *F. cliffortioides*, which are almost the only trees of this zone. Both are valuable timber trees, and only require to be better known to be more appreciated. A number of shrubby species are common in this zone, such as species of *Korokia*, *Coprosma*, *Discaria*, *Dracophyllum*, *Podocarpus*, *Panax*, and *Pimelea*.

In a few breaks in the great Alpine chain, such as Arthur's Pass, a number of shrubs occur which do not properly belong to the Canterbury flora, but are escapes from the upland region of Westland, which contains very many plants different in character from those of Canterbury. Among these Westland plants may be mentioned the beautiful scarlet rata, *Metrosideros lucida*, the hini, *Dracophyllum traversii*, and the musk-tree, *Olearia colensoi*, all of which are found on Arthur's Pass, and are most magnificent plants. Some curious plants of the natural order *Umbelliferae*, form a peculiar feature in the lower part of this zone. I refer to the species of *Aciphylla*, or spear-grass, which totally differ in aspect from any other known genus. This zone usually rises to about 3,800 feet, at which height the beeches generally cease suddenly, and are succeeded by dense masses of shrubby *Veronicas*, *Olearias*, and *Senecios*, which appear to me to form a well-defined zone. The great beauty of these shrubs has induced their cultivation in the gardens of the colony. The *Veronicas* number no less than forty distinct species, some of them of very extraordinary habit, and all, without exception, of great beauty.

*Olearia* has seven or eight fine species, and *Senecio* six; all of which, together with the *Veronicas*, are confined to the colony, and not a few of them to the province of Canterbury. This zone rises to 4500 feet.

The zone of herbaceous plants ascends to 6000 feet, and occasionally to 7000 feet in the northern part of the province. It possesses an immense number of hardy species of beautiful appearance and most remarkable character. Prominent among them are the numerous species of *Celmisia*, the mountain forget-me-nots (*Exarrhena*), the well-known mountain lily (*Ranunculus lyallii*), and many other species of the same genus equally beautiful but not so well known, such as *Ranunculus godleyanus*—which is the finest of all known *Ranunculi*—*R. haastii*, *R. chordorhizos*, and *R. traversii*. The pretty white-flowered *Ourisias* are common, and also many others of equal beauty. The flowering plants which reach the highest elevations are *Forstera sedifolia* and *Abrotanella inconspicua*, both of which I have gathered at 7000 feet.

*Cryptogams* are very numerous both in this zone and the last, but are chiefly composed of *Musci*, *Lichenes*, and *Fungi*; *Filices* being represented by a very few species, chiefly of the genera *Hymenophyllum*, *Lomaria*, and *Polystichum*.

The Fourth Zone, that of perpetual snow, yields a few species of *Lichenes* and *Algæ*, but no flowering plants. The tree-ferns, which form such a prominent feature in most parts of the colony, are entirely absent from the Alps of Canterbury.

The nearest approach to the arboreal form in a fern occurs in *Polystichum nonindusiatum*, which frequently forms curious masses of root-fibres three or four feet high, and as much in diameter. Some of the *Hymenophyllea* seem to be capable of enduring intense cold, for I have gathered *H. villosum* and *H. multifidum* on boulders embedded in a glacier.

The Alpine district cannot be said to have been even moderately well explored, and no doubt it contains many plants as yet unknown to science. It is to be hoped that some one will be able to explore these wonderful mountains in a more thorough manner than has ever yet been done, and the result will no doubt be highly satisfactory.

My catalogue gives the names of 496 species of flowering plants from the Alpine district, belonging to 164 genera.

*The Forage Plants of Canterbury.*—The forage plants of the province are numerous and important. They have contributed more than is generally admitted to bring about the present advanced state of settlement. Of these forage plants, those belonging to the *Gramineæ* or grasses are, of course, the most important. The grasses of Canterbury number about fifty species of varied relationship and various habit. Many of them are fully equal, as pasture, to any of the imported kinds, and will, I believe, be generally cultivated when their value becomes better understood by the farmers of the province.

The most nutritive grasses as far as I have been able to ascertain are the various species of *Danthonia*, *Microlæna avenacea*, and *Poa foliosa*; but these are not, however, the best adapted for cultivation, owing to their general coarseness of habit, and liability to die out. The best native grasses for general farm purposes are in my opinion the following, which fully deserve a trial from all farmers anxious to improve the productiveness of their pastures:—The rice grass, *Microlæna stipoides*. The long-awned plume grass, *Dichelachne crinita*. The brown bent, *Agrostis canina*, var. The Mount Cook bent, *Agrostis youngii*. The dwarf ring-grass, *Danthonia semi-annularis*. The blue wheat-grass, *Triticum squarrosum*. The short-flowered meadow-grass, *Poa breviglumis*. The leafy meadow-grass, *Poa foliosa*. The mountain tussock-grass, *Poa intermedia*. The native oat-



grass, *Trisetum antarcticum*, and the alpine holy-grass, *Hierochloa alpina*. Since the introduction of sheep and cattle these native grasses have considerably improved in productiveness, except where the senseless burning system has been carried to excess.

Besides the species of grasses we have several other plants which might be advantageously grown. For instance, the aromatic aniseed, *Angelica gingidium*, of which sheep are so fond that they have exterminated it in many parts of the province. This plant seeds freely enough where protected and would be easy to cultivate. *Ligusticum haastii*, another aromatic plant of the carrot tribe, is greedily eaten by horses and sheep and would be very easy of cultivation. *L. aromaticum*, *L. piliferum*, and *L. brevistyle* are similar in character. Many other sorts of plants are eaten by sheep, but I think the few here mentioned are all that are worthy of cultivation for pastoral purposes. It is to be hoped that the farmers of the province may be induced to cultivate these various forage plants, and to thoroughly test their value.

*Summary of Catalogue.*—My catalogue contains the names of 750 species of flowering plants, belonging to 236 genera; and 107 species of ferns, belonging to 34 genera. The lower Cryptogams are so incomplete that I do not think it worth while to summarize them here.

The largest orders are *Compositæ* with 110 species, *Scrophularinæ* 63 species. *Cyperaceæ* 55 species, *Gramineæ* 51 species, and *Umbelliferae* 43 species. The largest genera are *Veronica*, with 44 species; *Celmisia*, 23 species; and *Ranunculus*, 22 species.

The great proportion of genera to species is a peculiar feature, thus no less than 109 genera have only one species each, and many others have only two. Again while 12 natural orders have 464 species, the remaining 286 species belong to no less than 65 orders, many of which have but one species each. Of the flowering plants—538 are confined to the colony, and 212 are found in other countries, 176 are found in Australia or Tasmania, and 108 species are natives of America. There are also 48 species closely allied to Australian plants, and 27 to South American. About 50 species are natives of Europe, and about 35 of Asia.

Of the 236 genera enumerated in the catalogue, no less than 25 are confined to New Zealand. The number of species confined to the Canterbury Province cannot be stated with any exactness until the flora of the adjoining provinces is properly worked up. It does not, however, exceed 20 species, and most probably not more than a dozen. The flora of New Zealand is usually considered by European botanical authors to be closely allied to that of Australia, and no doubt the two countries have a considerable number of plants in common. But the species common to Australia and

New Zealand are not—in either country—the plants which give a character to the vegetation. When I visited Australia in 1873, I explored about half of the colony of Victoria, and a large portion of New South Wales. In this extensive tract of country, containing two or three thousand species, I only observed about thirty or forty New Zealand plants, and they were by no means abundant. The common plants of the two countries are so very different, that I am forced to the conclusion that we must look elsewhere than Australia for the true relationship of our native flora. The space at my disposal here does not permit of any further reference to this very interesting subject, but I hope to return to it on some future occasion.

*The Naturalized Plants.*—No account, however short, of the plants of Canterbury would be complete without some reference to those plants which have been introduced through the agency of colonization. Wherever settlement extends the native plants rapidly die out, and their places are filled by British and other exotic plants, mostly of a very weedy nature. Indeed, the commonest species of plants in the province, at the present time, are introduced weeds such as the sorrel, *Rumex acetosella*, the white clover, *Trifolium repens*, and numerous kinds of British grasses.

These introduced plants are not all small herbs, shrubs are fairly represented, and trees are not altogether wanting. There can, I think, be no doubt whatever that the native vegetation will eventually be almost, if not entirely, exterminated, and the floral features of the country altogether changed through the introduction of these foreign weeds. When we consider that these plants have nearly all been introduced within the last twenty years, it is certainly surprising that they have already become so abundant.

The rapidity with which these introduced plants have spread over the province of Canterbury is indeed an extraordinary circumstance. A list of the introduced plants of Canterbury was laid before this Institute by my father on the 4th October, 1871; and I now furnish an additional list, making a total of 250 species. Most of the species contained in these two lists are common British weeds, very few of them possessing much beauty.

Along the roadside, throughout the province, may be found abundance of such plants as the common knot-weed, *Polygonum dryandri*. The chick-weed, *Stellaria media*. The shepherd's purse, *Capsella bursa-pastoris*. The common docks, *Rumex obtusifolius* and *R. crispus*. The so-called Cape-weed, *Hypochaeris radicata*. The wild stork's bill, *Erodium cicutarium*. The May-weed, *Matricaria chamomilla*. The mullem, *Verbascum thapsus*, and the hemlock, *Conium maculatum*. The most useful members of the introduced flora are the grasses, which abound everywhere, number more than forty species, and are still increasing in numbers. The common English water-

gress, *Nasturtium officinale*, has proved very troublesome in the rivers, where it attains a size and strength quite unknown in its native country. Another aquatic, the Canadian pond-weed, *Anacharis canadensis*, of recent introduction, is now abundant in the Avon and other rivers, where it seriously interferes with drainage and navigation. I am of opinion that the fact of the naturalization of foreign plants in New Zealand furnishes a key to the origin of large portions of the floras of other countries, notably of England and Italy.

No doubt many of the plants now considered indigenous to those countries have been introduced through the indirect agency of man—perhaps very many generations ago. I think that this theory is borne out by the fact that all countries widely separated from the great masses of land, and cut off from communication as New Zealand was before its discovery by Europeans, have very few species in common with other countries, and these chiefly such as might be carried by the sea, by stray birds, or by strong winds.

I have included in my catalogue of introduced plants a few species which are usually considered indigenous, but, after a careful examination of all the evidence obtainable, I am satisfied that they are really introduced, and have no claims to be considered indigenous; these are,—*Cyperus tenellus*, *Sporobolus elongatus*, *Koeleria cristata*, *Alopecurus geniculatus*, *Picris hieracioides*, and *Polygonum aviculare*.

*Economic Plants of Canterbury.*—The most important economic plants of the province are the timber trees, which have already been mentioned when describing the various districts in which they are found. In the way of plants fitted for human food, the native flora has very few species and they are in every way inferior—the two or three vegetables cultivated by the Maoris not being indigenous. The fruits eaten by the natives of the South Island were the berries of the pines, those of the *hinau*, the *karaka*, the *poroporo*, *Solanum aviculare*, and *Aristotelia racemosa*; few or none of which would be considered eatable by Europeans. The sea-side cress, *Lepidium oleraceum* and the New Zealand spinach, *Tetragonia trigyna*, have been used by English settlers as pot-herbs. Plants yielding fibre are both numerous and important. Foremost among them are the two species of flax or *Phormium*, which are now so well known throughout the world. The two kinds of cabbage-tree or *Cordyline* yield a fine soft white fibre, nearly as strong as and probably more valuable than the *Phormium*. *Astelia grandis* also yields a soft brown fibre of considerable strength, and is easily cultivated. Some of the coarser kinds of grasses, such as the tussock, *Poa caspitosa*, *Aira*, *Apera*, etc., would no doubt yield fibres of some value. The whole of the fibre-plants mentioned here are very easy of cultivation,

and ought certainly to become a considerable source of income to the colony. There are, no doubt, many other plants found in the province from which valuable products of some kind might be obtained, and it is to be hoped that more attention will be given to this subject than has been in the past.

In conclusion, may I express a hope that some of the members of this Institute may be induced to study the native plants of the province, as much remains to be done in ascertaining the geographical and altitudinal range of the various Alpine species, and many new plants may yet be discovered in the more secluded mountain valleys.

In the *Cryptogams* much remains to be done in all the districts, in both collecting and arranging the species which have not been carefully sought for by any collector.

The catalogue attached to this paper I have made as complete as possible. The whole of the species enumerated have been collected by my father and myself, and the identification may be relied upon as correct. My studies and explorations, however, have been carried on during what little time could be spared from my regular employment, and I have, therefore, no doubt but that many additions will be made to our knowledge of the flora of Canterbury by future observers.

#### Catalogue of Canterbury Plants.

Abbreviations.—P., Banks Peninsula; L., Littoral; M., Lowland, or Middle District; A., Alpine; 3, Abundant; 2, Local; 1, Comparatively rare. All those not marked \* are cultivated in the Christchurch Public Gardens.

#### PHÆNOGAMS.

#### EXOGENS.

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| <p>RANUNCULACEÆ. 3—30.<br/> <i>Clematis indivisa</i>, Willd. P.M.2.<br/> <i>hexasepala</i>, Fst. P.M.2.<br/> <i>foetida</i>, Raoul. P.M.2.<br/> <i>parviflora</i>, Cunn. P.M.2.<br/> <i>marata</i>, Armstrong. L.M.A.2.<br/> <i>afoliata</i>, Buchanan. P.1.<br/> <i>colensoi</i>, Hk.f. P.M.1.<br/> <i>Ranunculus lyallii</i>, Hk.f. A.2.<br/> <i>traversii</i>, Hk.f. A.1.<br/> <i>pinguis</i>, Hk.f. P.M.A.2.<br/> <i>godleyanus</i>, Hk.f. A. 4—6000ft. 1.<br/> <i>geranifolius</i>, Hk.f. A.2.<br/> <i>chordorhizos</i>, Hk.f. A.2.<br/> <i>haastii</i>, Hk.f. A. 5—7000ft. 1.<br/> <i>*crithmifolius</i>, Hk.f. A.1.<br/> <i>sericophyllus</i>, Hk.f. A.2.</p> | <p><i>*Ranunculus sinclairii</i>, Hk.f. A.1.<br/> <i>hirtus</i>, B. et Sol. P.M.A.3.<br/> <i>multiscapus</i>, Hk.f. P.M.A.3.<br/> <i>*subscaposus</i>, Hk.f. A.1.<br/> <i>*macropus</i>, Hk.f. A.2.<br/> <i>rivularis</i>, B. et Sol. P.M.2.<br/> <i>limosella</i>, F. Muell. M.A.2.<br/> <i>*inundatus</i>, B. et Sol. M.3.<br/> <i>*acaulis</i>, B. et Sol. L.M.2.<br/> <i>triternatus</i>, Kirk. M.2.<br/> <i>*gracilipes</i>, Hk.f. A. 1.<br/> <i>*pachyrhizos</i>, Hk.f. A.1.<br/> <i>sessiliflorus</i>, Br. M.2.<br/> <i>*Caltha novæ-zealandiæ</i>, Hk.f. A.1.</p> |
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#### MAGNOLIACEÆ.

- Drimys colorata*, Raoul. P.M.3.

## CRUCIFERÆ. 6—11.

\**Nasturtium palustre*, DC. M.A.2.  
*Sisymbrium novæ-zealandiæ*, Hk.f.  
 A.1.

*Cardamine hirsuta*, L. P.M.A.3.  
 \**depressa*, Hk.f. A.2. 2–4000ft.  
*fastigiata*, Hk.f. A.2. 3000ft.

\**Pachycladon novæ-zealandiæ*, Hk.f.  
 A. 4–5000ft.

*Lepidium oleraceum*, Fst. L.M.2.  
 \**sisymbrioides*, Hk.f. M.A.2.  
 \**incisum*, B. et S., var. *alpinum*.  
 A.1.

*Notothlaspi australe*, Hk.f. A. 2–  
 4000ft.

\**rosulatum*, Hk.f. A. 3000ft.

## VIOLARIÆ. 3—8.

*Viola filicaulis*, Hk.f. P.M.A.1.

*lyallii*, Hk.f. M.A.2.

*cunninghamii*, Hk.f. P.M.A.3.

*Melicytus ramiflorus*, Fst. P.2.

*lanceolatus*, Hk.f. P.M.1.

\**mieranthus*, Hk.f. P.1.

*Hymenanchera crassifolia*, Hk.f. M.  
 A.P.2.

*angustifolia*, Hk.f. A.1.

## PITTIPOREÆ. 1—6.

*Pittosporum tenuifolium*, B. et S.  
 P.M.3.

*colensoi*, Hk.f. M.A.2.

\**rigidum*, Hk.f. A.1.

*obcordatum*, Raoul. P.1.

*fasciculatum*, Hk.f. A. 2–4000ft.  
 2.

*eugenioides*, A. Cunn. P.M.3.

## CARYOPHYLLACEÆ. 3—8.

*Stellaria parviflora*, B. et S. P.M.  
 A.2.

*roughii*, Hk.f. A. 3–7000ft. 3.

*gracilentata*, Hk.f. A.3.

\**Colobanthus quitensis*, Bar. P.M.  
 A.2.

*billardieri*, Fenzl. A.3.

*subulatus*, Hk.f. A.2.

*acicularis*, Hk.f. A.2.

\**Spergularia media*, L. L.M.2.

## PORTULACÆ. 3—3.

*Claytonia australasica*, Hk.f. L.M.  
 P.A.3.

\**Montia fontana*, Linn. L.M.A.3.

\**Hectorella cæspitosa*, Hk.f. A.1.  
 4–6000ft.

## HYPERICINÆ. 1—2.

*Hypericum gramineum*, Fst. P.M.2.  
*japonicum*, Thun. P.L.M.A.3.

## MALVACEÆ. 2—4.

*Plagianthus divaricatus*, Fst. L.P.2.  
*betulinus*, Cunn. P.M.A.3.

*lyallii*, Hk.f. A.3. 2–5000ft.

*Hoheria angustifolia*, Raoul. P.M.3.

## TILIACEÆ. 2—6.

*Aristotelia racemosa*, Hk.f. P.M.3.  
*colensoi*, Hk.f. A. 2000–4000ft.

*fruticosa*, Hk.f. P.A.3.

*erecta*, Buch. A.1.

*Elæocarpus hookerianus*, Raoul. P.  
 M.3.

*dentatus*, Vahl. P.M.2.

## LINEÆ.

*Linum monogynum*, Fst. L.M.P.3.  
 \**marginale*, A. Cunn. Probably  
 introduced. 1.

## GERANIACEÆ. 3—8.

*Geranium patulum*, Fst. P.M.A.G.

*dissectum*, Hk. non Linn.

*microphyllum*, Hk.f. P.M.L.3.

*sessiliflorum*, Cav. P.M.A.3.

*molle*, Linn. P.1.

*Pelargonium clandestinum*, L'Hér.  
 L.P.M.A.3.

*Oxalis corniculata*, Linn. L.P.M.A.3.

*stricta*, Linn. M.P.A.2.

*magellanica*, Fst. A.2. 3–6000ft.

## DIOSMACEÆ.

*Melicope simplex*, Cunn. P.M.3.

## OLACINÆ.

*Pennantia corymbosa*, Fst. P.3.

## STACKHOUSIÆ.

*Stackhousia minima*, Hk.f. A. 1.  
 3000ft.

## RHAMNÆ.

*Discaria toumatou*, Raoul. L.M.P.  
 A.3.

## SAPINDACEÆ. 2—2.

*Dodonæa viscosa*, Fst. L.P.2.

*Alectryon excelsum*, DC. P.3.

## ANACARDIACEÆ.

*Corynocarpus lævigata*, Fst. Banks  
 Peninsula only; perhaps an  
 escape from cultivation.

## CORIARIÆ. 1—3.

*Coriaria ruscifolia*, Linn. P.M.A.3.

*Coriaria thymifolia*, Humb. A. 2.  
*angustissima*, Hk.f. A. 3.

PAPILIONACEÆ. 4—12.

*Carmichaelia nana*, Col. L.P.M. 3.  
 (?) *crassicaulis*, Hk.f. A. 2.  
*grandiflora*, Hk.f. A. 3.  
*pilosa*, Col. (?) P.M. 2.  
*australis*, Br. L.P.M. 3.  
*odorata*, Col. M.A. 1.  
*flagelliformis*, Col. P.M. 3.  
*juncea*, Col. L.M. 2.  
*monroi*, Hk.f. A.M. 2.

*Notospartium carmichaeliæ*, Hk.f. M. 1.  
*Swainsonia novæ-zealandiæ*, Hk.f. A. 1.

*Sophora microphylla*, Jacq. P.M. 3.  
*grandiflora*, Ait. P.

ROSACEÆ. 4—14.

*Rubus australis*, Fst. P.M. 2.  
*schmidelioides*, A. Cunn. Leaves ovate.  
*cordata*, J.B.A. Leaves cordate.  
*cissoides*, A. Cunn. Leaves linear-oblong.  
*pauperata*, J.B.A. Leaves reduced to ribs.

*Potentilla anserinoides*, Raoul. L.M. A.P. 3.

*Geum magellanicum*, Com. M.P.A. 3.  
*parviflorum*, Com. M.A. 3.  
 \**uniflorum*, Buch. A. 2.

*Acæna anserinæfolium*, Fst. P.M.A. 3.  
*adscendens*, Vahl. P.M.A. 3.  
*novæ-zealandiæ*, Kirk. P.M. 2.  
 \**microphylla*, Hk.f. M.A. 2.  
*inermis*, Hk.f. A. 2.

SAXIFRAGÆÆ.

\**Donatia novæ-zealandiæ*, Hk.f. A. 3—5000ft. 1.

ESCALLONIACEÆ. 3—3.

\**Quintinia serrata*, Cunn. M.P.A. 1.  
*Carpodetus serratus*, Fst. P.M. 3.  
*Weinmannia racemosa*, Fst. A. 2000ft.

CRASSULACEÆ. 1—3.

*Tillæa moschata*, DC. P.M.A. 3.  
 \**sinclairii*, Hk. P.M.A. 2.  
*muscosa*, Fst. P.M.A. 1.

DROSERACEÆ. 1—4.

\**Drosera arcturi*, Hk.f. A. 2.  
 \**spathulata*, Lab. P.A. 2.  
*binata*, Lab. L.P.M. 2.  
 \**auriculata*, Back. M. 1.

HALORAGÆÆ. 4—12.

*Haloragis alata*, Jacq. L.P.M.A. 3.  
*tetragyna*, Lab. M.A. 3.  
*depressa*, Hk.f. A. 2—4000ft. 2.  
*uniflora*, Kirk. A. 3000ft. 2.  
 \**aggregata*, Buch. A. 2.  
*micrantha*, Br. L.M.A. 2.  
*Myriophyllum elatinoides*, Gaud. M. A. 1.

*variæfolium*, Hk.f. M.A. 3.  
 \**pedunculatum*, Hk.f. M. 1.  
*Gunnera monoica*, Raoul. L.M.P.A. 2.  
 \**prorepens*, Hk.f. M.A. 2.  
*Callitriche stagnalis*, L. L.M.A. 2.

MYRTACEÆ. 3—8.

*Leptospermum scoparium*, Fst. P. M.L. 3.  
*ericoides*, Rich. P.L.M. 2.  
*Metrosideros lucida*, Menz. A. 1—3000 ft.  
*hypericifolia*, Cunn. P.M.A. 2.  
*colensoi*, Hk.f. P. 2.  
 \**scandens*, B. et S. P. 2.  
*Myrtus obcordata*, Hk.f. P. 2.  
*pedunculata*, Hk.f. P.M. 2.

ONAGRARIÆÆ. 2—17.

*Fuchsia excorticata*, Linn.f. P.M. 3.  
*colensoi*, Hk.f. P.M. 3.  
*Epilobium pendulum*, B. et S. P.M. A. 3.  
*purpuratum*, Hk.f. P.M.A. 3.  
*linnæoides*, Hk.f. A. 1.  
 \**macropus*, Hk. P.M.A. 2.  
*confertifolium*, Hk.f. M.A. 3.  
 \**crassum*, Hk.f. M.A. 3.  
 \**alsinoides*, Cunn. A. 1.  
*microphyllum*, Rich. P.M.A. 3.  
*rotundifolium*, Fst. P.M.A. 3.  
*glabellum*, Fst. L.P.M.A. 2.  
*melanocaulon*, Hk. M.A. 2.  
*junceum*, Fst. L.M.P. 3.  
 \**pubens*, Rich. L.M.P. 3.  
*billardierianum*, Ser. P.M. 3.  
*pallidiflorum*, Sol. P.M.A. 3.

PASSIFLOREÆ.

*Passiflora tetrandra*, B. et Sol. P. 2.

FICOIDEÆ. 2—2.

*Mesembryanthemum australe*, B. et S. L. 3.

*Tetragonia trigyna*, B. et S. L. 2.

UMBELLIFERÆ. 11—43.

*Hydrocotyle elongata*, Cunn. P.M.A. 2.

- \**Hydrocotyle americana*, Linn. M. P.A. 3.  
*asiatica*, Linn. P.L.M.A. 3.  
 \**muscosa*, Br. P.M.A. 2.  
*dissecta*, Hk.f. P.M.A. 3.  
*novæ-zealandiæ*, DC. A.P. 2.  
 \**moschata*, Fst. M.P.A. 2.  
 \**microphylla*, Cunn. A.M. 1.  
 \* n. sp. (?) A. 1.
- Pozoa exigua*, Hk.f. A. 3-6500ft. 3.  
*haastii*, Hk.f. A. 3-4000ft. 2.  
*hydrocotyloides*, Hk.f. P.M.A. 3.  
 \**trifoliolata*, Hk.f. A. 3000ft. 2.  
*roughii*, Hk.f. A. 4000ft. 2.
- Crantzia lineata*, Nutt. L.P.M.A. 3.  
 „ *var. aquatica*. M. 3.
- Apium australe*, Thoms. L. 3.  
 \**filiforme*, Hk. L. 2.
- Eryngium vesiculosum*, Lab. L. 3.
- Oreomyrrhis colensoi*, Hk.f. A.M. 3.  
*haastii*, Hk.f. A. 3.  
 \**ramosa*, Hk.f. A. 2.  
 n. sp. (?) A. 2000ft.
- Aciphylla squarrosa*, Fst. L.M.P.A. 3.  
*colensoi*, Hk.f. M.A. 3.  
*lyallii*, Hk.f. A. 3.  
*monroi*, Hk.f. A. 2-5000ft. 3.  
 \**montana*, Armstrong. A. 3000 ft. 1.  
 \**crenulata*, J.B.A. A. 4-6000ft. 1.  
 \**dobsoni*, Hk.f. A. 4-6000ft. 1.
- Ligusticum haastii*, F. Muell. A. 2-5000ft. 2.  
 \**brevistyle*, Hk.f. A. 1.  
*filifolium*, Hk.f. A. 2-3000ft. 2.  
*carnosulum*, Hk.f. A. 3-5000ft. 2.  
*piliferum*, Hk.f. P.A. 2-4000 ft. 2.  
*aromaticum*, B. et S. P.M.A. 3.  
*imbricatum*, Hk.f. A. 2.  
 \**trifoliolatum*, Hk.f. A. 2000ft. 1.
- Angelica gingidium*, Hk.f. L.P.M. A. 3.  
*decipiens*, Hk.f. *Ligusticum enysi*, Kirk (?) A. 2.  
*rosæfolia*, Hk.f. P.M. 2.  
*geniculata*, Hk.f. P.M. 3.
- Daucus brachiatus*, Sieb. L.P.M.A. 3.
- ARALIACEÆ. 2-9.
- Panax simplex*, Fst. P.M.A. 3.  
 \**edgerleyi*, Hk.f. A. 1. 2000ft.
- \**Panax anomalum*, Hk.f. A. 1.  
 \**lineare*, Hk.f. A. 3000ft. 3.  
*crassifolium*, D. et Pl. P.M. 3.  
*longissimum*, Buch. P.M. 3.  
*colensoi*, Hk.f. P.A. 1-4000ft. 3.  
*arborescens*, Fst. P.M. 3.  
 sp. P.A. 2.
- Schefflera digitata*, Fst. P.M. 2.  
 CORNÆÆ. 2-2.
- Griselinia littoralis*, Raoul. P.M. 3.  
 „ \**var. alpina*. A. 2-4000ft.
- Corokia cotoneaster*, Raoul. P.M.A. 3.
- LORANTHACEÆ. 3-9.
- \**Loranthus colensoi*, Hk.f. A. 2.  
*tetrapetalus*, Fst. A. 2.  
 \**tenuiflorus*, Hk.f. A. 2.  
*decussatus*, Kirk. A. 3.  
 \**flavidus*, Hk.f. A. 2.  
*micranthus*, Hk.f. P.M.A. 3.
- \**Tupeia antarctica*, Ch. et Schl. P.M. 2.
- \**Viscum salicornioides*, Cunn. P.M. 2.  
 \**lindsayi*, Oliver. P.M. 3.
- RUBIACEÆ. 5-25.
- Coprosma lucida*, Fst. P.M. 3.  
*robusta*, Raoul. P.M. 3.  
*cunninghamii*, Hk.f. P.M. 3.  
*rotundifolia*, Cunn. P.M.A. 3.  
*tenuicaulis*, Hk.f. P.M. 3.  
*rhamnoides*, Cunn. P.M. 3.  
*divaricata*, Cunn. P.M. 3.  
*parviflora*, Hk.f. L.P.M. 3.  
*propinqua*, Cunn. P.M. 3.  
*fœtidissima*, Fst. P.M.A. 2.  
*pusilla*, Fst. P. (?) 1.  
*cuneata*, Hk.f. P.M.A. 3.  
*acerosa*, Hk.f. L.P.M.A. 3.  
*depressa*, Col. (?) A. 3.  
*microcarpa*, Hk.f. (?) P.A. 2.  
*linariifolia*, Hk.f. P.M.A. 3.  
*repens*, Hk.f. A. 3. 4-7000ft.  
 \**pumila*, Hk.f. A. 3. 4-6000ft.  
*serrulata*, Hk.f. A. 2-3000ft. 3.
- Asperula perpusilla*, Hk.f. A.P.M. 3.
- Nertera depressa*, B. et Sol. P.A. 3.  
*dichondræfolia*, Hk.f. A. 2.  
*cæspitosa*, J.B.A. n.s. Densely tufted, flowers dioecious. A. 2.
- Galium umbrosum*, Fst. P.M.A. 2.  
*tenuicaule*, A. Cunn. P.M.A. 3.
- COMPOSITÆ. 20-111.
- Olearia colensoi*, Hk.f. A. 3000ft. 1.  
*nitida*, Hk.f. P.M.A. 3.

- Olearia dentata*, *Hk.f.* A. 1-2500ft. 2.  
*ilicifolia*, *Hk.f.* A. 1-3000ft. 2.  
 \**lacunosa*, *Hk.f.* A. 3000ft. 1.  
*haastii*, *Hk.f.* A. 2-4000ft. 2.  
*cymbifolia*, *Hk.f.* A. 2.  
*moschata*, *Hk.f.* A. 3.  
*nummularifolia*, *Hk.f.* A. 3.  
*forsteri*, *Hk.f.* P.M.A. 3.  
*avicenniæfolia*, *Hk.f.* P.M.A. 3.  
*virgata*, *Hk.f.* P.M.A. 3.  
*hectori*, *Hk.f.* P. 2.  
*angustata*, *Armstrong.* A. 1.  
 \**Celmisia densiflora*, *Hk.f.* A. 2.  
*discolor*, *Hk.f.* A. 3-5000ft. 3.  
*walkeri*, *Kirk.* A. 1.  
*hieracifolia*, *Hk.f.* A. 1.  
 \**haastii*, *Hk.f.* A. 3-5000ft. 2.  
*incana*, *Hk.f.* A. 3.  
 \**sinclairii*, *Hk.f.* A. 2.  
*verbascifolia*, *Hk.f.* M. 2.  
*coriacea*, *Hk.f.* P.A. 3.  
 \**mackaui*, *Raoul.* P. 1.  
*monroi*, *Hk.f.* A. 3-6000ft. 3.  
*linearis*, *J.B.A.*, n. sp. Leaves  
 2 to 4 inches long, linear,  
 densely covered with close  
 white cotton, flowers not seen;  
 forms broad dense patches in  
 the Alps. A. 3000ft. 3.  
*lyallii*, *Hk.f.* P.A. 1-3000ft. 3.  
*viscosa*, *Hk.f.* A. 3.  
*petiolata*, *Hk.f.* A. 2.  
*spectabilis*, *Hk.f.* P.M.A. 3.  
*traversii*, *Hk.f.* (?) 1.  
*longifolia*, *Cass.* P.L.M.A. 3.  
 \**laricifolia*, *Hk.f.* A. 2.  
 \**hectori*, *Hk.f.* A. 1.  
*sessiliflora*, *Hk.f.* A. 3-6000ft. 3.  
*bellidioides*, *Hk.f.* A. 2-4000ft. 3.  
 \**glandulosa*, *Hk.f.* A. 3000ft. 3.  
*Vittadinia australis*, *Rich.* L.M.P. 3.  
*Lagenophora forsteri*, *DC.* M.P.A. 2.  
*petiolata*, *Hk.f.* M.P.A. 3.  
 \**pinnatifida*, *Hk.f.* A. 1.  
*Brachycome sinclairii*, *Hk.f.* A. 3.  
 \**Abrotanella pusilla*, *Hk.f.* A. 3-6000  
 ft. 1.  
 \**inconspicua*, *Hk.f.* A. 3-6000  
 ft. 1.  
*Cotula coronopifolia*, *Linn.* L.M.P.  
 A. 3.  
*tenella*, *Cunn.* M.A. 2.  
 \**atrata*, *Hk.f.* A. 3-5500ft. 2.
- Cotula minor*, *Hk.f.* M.A. 3.  
*filiformis*, *Hk.f.* M. 1.  
*pectinata*, *Hk.f.* P.M. 3.  
*pyrethrifolia*, *Hk.f.* P.M.A. 3.  
 \**perpusilla*, *Hk.f.* M. 1.  
 \**dioica*, *Hk.f.* P.M. 3.  
*squalida*, *Hk.f.* P.M. 3.  
 \**minuta*, *Fst.* M.A. 2.  
*Craspedia fimbriata*, *DC.* P.M.L.  
 A. 3.  
*alpina*, *Back.* P.M.A. 3.  
*Cassinia fulvida*, *Hk.f.* P.M.A. 1.  
*vauvilliersii*, *Hk.f.* P.M.L.A. 3.  
*Ozothamnus glomeratus*, *Hk.f.* P. 3.  
*microphyllus*, *Hk.f.* A. 3.  
*depressus*, *Hk.f.* A. 3.  
*Raoulia australis*, *Hk.f.* L.M.P.A. 3.  
*tenuicaulis*, *Hk.f.* P.M.A. 3.  
*haastii*, *Hk.f.* A.M. 2.  
*monroi*, *Hk.f.* M. 3.  
 \**subulata*, *Hk.f.* A. 2.  
*eximia*, *Hk.f.* A. 4000ft. 1.  
 \**hectori*, *Hk.f.* M.A. 2.  
*glabra*, *Hk.f.* M.A. 3.  
*subcericea*, *Hk.f.* M.A. 3.  
*grandiflora*, *Hk.f.* A. 1. 3-6000ft.  
 \**mamillaris*, *Hk.f.* A. 5000ft. 1.  
 \**bryoides*, *Hk.f.* M.A. 2.  
*Gnaphalium prostratum*, *Hk.f.* P.A.  
 M. 1.  
*bellidioides*, *Hk.f.* P.M.A. 3.  
*youngii*, *Hk.f.* A. 1.  
 \**lyallii*, *Hk.f.* A. 1.  
*trinerve*, *Fst.* A. 1.  
*filicaule*, *Hk.f.* P.M.A. 3.  
 \**traversii*, *Hk.f.* A. 2.  
 \**luteo-album*, *L.* L.M.P.A. 3.  
*grandiceps*, *Hk.f.* A. 2.  
*involucratum*, *Fst.* M.P.A. 3.  
*collinum*, *Lab.* M.P. 3.  
*Haastia recurva*, *Hk.f.* A. 3-7000  
 ft. 2.  
 \**sinclairii*, *Hk.f.* A. 3-4000ft. 2.  
 \**sp. nov.*, *Mt. White.* A. 1.  
*Erechtites prenanthoides*, *DC.* M.A. 2.  
*arguta*, *DC.* L.M.P.A. 3.  
 \**scaberula*, *Hk.f.* M.A. 2.  
*quadridentata*, *DC.* M.P.A. 3.  
 \**pumila*, *J.B.A.* M. 2.  
*Senecio lagopus*, *Raoul.* L.M.P.A. 2.  
*bellidioides*, *Hk.f.* L.M.P.A. 3.  
*saxifragoides*, *Hk.f.* P. 2.  
 \**haastii*, *Hk.f.* A. 2.  
*lautus*, *Fst.* L.M.P. 3.



- Senecio odoratus*, *Horn*, var. *banksii*. P.2.  
*lyallii*, *Hk.f.* A.3.  
*sciadophilus*, *Raoul*. P.2.  
*elæagnifolius*, *Hk.f.* A. 2-4000 ft. 3.  
*buchanani*, *Armstrong*. A. 3000 ft. 1.  
*bidwillii*, *Hk.f.* A.2.  
*cassinoides*, *Hk.f.* A.3.  
*pottsii*, *Armstrong*. A. 4-5000 ft. 1.  
*Traversia baccharoides*, *Hk.f.* A. 2-3000ft. 1.  
*Microseris forsteri*, *Hk.f.* M.P.A.2.  
*Crepis novæ-zealandiæ*, *Hk.f.* M.A.2.  
*Taraxacum dens-leonis*, *Des.* var. *minor*. M.P.A.3.  
*Sonchus aspera*, *Vill.* M.P.A.2.  
 STYLIDIEÆ. 2-5.  
*Forstera sedifolia*, *Linn. fil.* A. 4-7000ft. 2.  
*\*tenella*, *Hk.f.* A. 4-7000ft. 2.  
*\*Helophyllum clavigerum*, *Hk.f.* A. 4-6000ft. 2.  
*\*colensoi*, *Hk.f.* A. 3-6000ft. 2.  
*\*rubrum*, *Hk.f.* A. 3-6000ft. 2.  
 CAMPANULACEÆ. 1-3.  
*Wahlenbergia gracilis*, *DC.* L.M.P. A. 3.  
*capillaris*, *DC.* M.P. 3.  
*saxicola*, *DC.* A.M.3.  
 LOBELIACEÆ. 3-7.  
*Lobelia anceps*, *Thun.* P.M.A.2.  
*roughii*, *Hk.f.* A. 4-5000ft. 3.  
*Pratia angulata*, *Hk.f.* M.P.A.L.3.  
*macrodon*, *Hk.f.* A.2.  
*linnæoides*, *Hk.f.* A.2.  
*Selliera radicans*, *Cav.* L.P.2.  
*\*fasciculata*, *Buch.* M.2.  
 ERICEÆ. 2-3.  
*Gaultheria rupestris*, *Br.* A.P.3.  
*antipoda*, *Fst.* A.P.3.  
*Pernettya tasmanica*, *Hk.f.* A.2.  
 EPACRIDACEÆ. 6-17.  
*Cyathodes acerosa*, *Br.* P.3.  
*empetrifolia*, *Hk.f.* A.2.  
*colensoi*, *Hk.f.* A.3.  
*Leucopogon fasciculatus*, *Rich.* P.M.3.  
*frazeri*, *Cunn.* L.M.P.A.3.  
*Pentachondra pumila*, *Br.* A.3.  
*\*Epacris alpina*, *Hk.f.* A.2.
- Archeria traversii*, *Hk.f.* A.3.  
*Dracophyllum traversii*, *Hk.f.* A. 3000ft. 1.  
*\*menziesii*, *Hk.f.* A.2.  
*strictum*, *Hk.f.* A.3.  
*longifolium*, *Br.* A.2.  
*urvilleanum*, *Hk.f.* A.3.  
*scoparium*, *Hk.f.* A.3.  
*uniflorum*, *Hk.f.* M.P.A.3.  
*rosmarinifolium*, *Fst.* A.3.  
*\*muscoides*, *Hk.f.* A.3-6000ft.3.  
 MYRSINEÆ. 1-3.  
*Myrsine urvillei*, *DC.* P.3.  
*divaricata*, *Cunn.* P.A.3.  
*nummularia*, *Hk.f.* P.A.2.  
 PRIMULACEÆ.  
*Samolus repens*, *F. Muell.* L.3.  
 APOCYNÆÆ.  
*Parsonsia albiflora*, *Raoul.* P.M.3.  
*rosea*, *Raoul.* P.M.3.  
 LOGANIACEÆ.  
*Logania ciliolata*, *Hk.f.* A.3.  
*\*tetragona*, *Hk.f.* A.2.  
 GENTIANEÆ. 2-6.  
*Gentiana montana*, *Fst.* M.P.A.3.  
*novæ-zealandiæ*, *Armstrong.* A. 2000ft. 1.  
*pleurogynoides*, *Griseb.* M.A.2.  
*saxosa*, *Fst.* A.2.  
*hookeri*, *J. B. A.* A. *G. saxosa* var. *γ*, *Hk.f.*  
*\*Sebæa ovata*, *Br.* L.P.M.3.  
 BORAGINEÆ. 2-10.  
*Myosotis uniflora*, *Hk.f.* A. 3-5000ft. 2.  
*\*pulvinaris*, *Hk.f.* A.2.  
*\*spathulata*, *Fst.* P.M.2.  
*antarctica*, *Hk.f.* P.M.A.3.  
*australis*, *Br.* P.M.A.2.  
*\*forsteri*, *Hk.f.* P.2.  
*capitata*, *Hk.f.* P.2.  
*\*traversii*, *Hk.f.* A.2.  
*\*Exarrhena petiolata*, *Hk.f. (?)* A.2.  
*macrantha*, *Hk.f.* A.3.  
 CONVULVULACEÆ. 2-5.  
*Convolvulus tuguriorum*, *Fst.* P. M.3.  
*\*sepium*, *Linn.* L.M.P.3.  
*soldanella*, *Linn.* L.P.3.  
*erubescens*, *Br.* P.M.A.3.  
*\*Dichondra repens*, *Fst.* M.P.A.2.

- SOLANÆÆ.
- Solanum aviculare*, *Fst.* P.3.
- SCROPHULARINÆÆ. 8—62.
- Mimulus repens*, *Br.* L.M.3.  
 \**Mimulus repens*, *var. colensoi* (M. colensoi, *Kirk*). L.M.3.  
*radicans*, *Hk.f.* M.A.3.  
*Mazus pumilio*, *Br.* L.M.P.3.  
*Gratiola nana*, *Benth.* P.M.3.  
*Limosella tenuifolia*, *Nutt.* M.A.2.  
*Veronica stricta*, *B. et. S.* M.P.3.  
*kirkii*, *Armstrong.* A. 3—4000ft.2.  
*parviflora*, *Vahl.* M.2.  
*ligustrifolia*, *Cunn.* P.M.3.  
*traversii*, *Hk.f.* A.M.2.  
*vernica*, *Hk.f.* A.P.3.  
*anomala*, *Armstrong.* A. 3000ft.2.  
*elliptica*, *Fst.* P.M.2.  
*colensoi*, *Hk.f.* P.A.3.  
*lævis*, *Benth.* A.2.  
*obovata*, *Kirk.* A.2.  
*buxifolia*, *Benth.* A.2.  
*haustrata*, *Armstrong.* A. 2000ft.2.  
*carosula*, *Hk.f.* A.2.  
*amplexicaulis*, *Armstrong.* A. 3—4000ft.  
*pinguifolia*, *Hk.f.* A.2.  
*decumbens*, *Armstrong.* A.2.  
*buchanani*, *Hk.f.* (?) A. 4000ft.1.  
*pimeleoides*, *Hk.f.* A.2.  
*glauco-cærulea*, *Armstrong.* A.2.  
*lycopodioides*, *Hk.f.* A. 4000ft.2.  
*tetrasticha*, *Hk.f.* A. 5000ft.1.  
*hectori*, *Hk.f.* A. 4—5000ft.2.  
*salicornioides*, *Hk.f.* A.2.  
*armstrongii*, *Johns. Hort.* A. 4—6000ft.2.  
*cupressoides*, *Hk.f.* P.A.3.  
*haastii*, *Hk.f.* A. 4—6000ft.2.  
*epacridea*, *Hk.f.* A. 4—7000ft.2.  
 \**macrantha*, *Hk.f.* A. 4—6000ft.2.  
*hulkeana*, *F. Muell.* M.2.  
*sp. nov.* M.2.  
*gracilis*, *Armstrong.* A.2.  
*lavaudiana*, *Raoul.* P.2.  
*raoulii*, *Hk.f.* P.2.  
*linifolia*, *Hk.f.* A. 5000ft.3.  
*lyallii*, *Hk.f.* A.3.  
*bidwillii*, *Hk.f.* A.3.  
*cataractæ*, *Fst.* M.1.
- Veronica lanceolata*, *Benth.* M.P.1.  
*canescens*, *Kirk.* L.M.A.3.  
*loganioides*, *Armstrong.* A. 5000ft.1.  
*greyii*, *Armstrong.* A. 3—5000ft.1.  
*canterburiense*, *Armstrong.* A. 4—5000ft.1.  
*montana*, *Armstrong.* A. 3000ft.2.  
 \**Pygmea ciliolata*, *Hk.f.* A.2.  
 \**pulvinaris*, *Hk.f.* A.2.  
*Ourisia macrophylla*, *Hk.f.* P.A.3.  
*macrocarpa*, *Hk.f.* A. 3000ft.2.  
 \**sessilifolia*, *Hk.f.* A.2.  
*cæspitosa*, *Hk.f.* A.3.  
 \**glandulosa*, *Hk.f.* A.2.  
 \**n. sp. (?)* A.2.  
*Euphrasia cuneata*, *Fst.* L.M.3.  
 \**monroi*, *Hk.f.* M.P.3.  
 \**revoluta*, *Hk.f.* A. 3—5000ft.3.  
*antarctica*, *Benth.* A. 4—6000ft.3.
- LENTIBULARIÆÆ.
- Utricularia novæ-zealandiæ*, *Hk.f.* L.2.  
*monanthus*, *Hk.f.* L.M.P.A.3.
- VERBENACEÆ. 2—2.
- Teucrium parvifolium*, *Hk.f.* L.P. A.3.  
*Myoporum lætum*, *Fst.* P.3.
- LABIATÆ. 2—2.
- Micromeria cunninghamii*, *Benth.* L. M.P.A.3.  
 \**Scutellaria novæ-zealandiæ*, *Hk.f.* P.A.2.
- PLANTAGINÆÆ. 1—4.
- \**Plantago brownii*, *Rapin.* M.A.P.2.  
*lanigera*, *Hk.f.* A.2.  
*spathulata*, *Hk.f.* M.A.3.  
*raoulii*, *Decaisne.* P.M.A.3.
- CHENOPODIACEÆ. 5—8.
- Chenopodium triandrum*, *Fst.* L.P.2.  
 \**ambiguum*, *Br.* P.1.  
*carinatum*, *Br.* M.3.  
*detestens*, *Kirk.* M.A.3.  
 \**Suaeda maritima*, *Dum.* L.2.  
 \**Atriplex cinerea.* *Poir.* L.2.  
 \**Salsola australis*, *Br.* L.2.  
*Salicornia australis*, *Fst.* L.3.
- PARONYCHIÆÆ.
- Scleranthus biflorus*, *Hk.f.* L.M.P.3.
- POLYGONÆÆ. 3—7.
- Polygonum decipiens*, *Br.* L.M.3.

- Muhlenbeckia adpressa, *Lab.* M.P. A.3.  
Muhlenbeckia adpressa, *var. truncata.* P.1.  
    *complexa, Meis.* L.M.P.A.3.  
    *axillaris, Hk.f.* L.M.P.A.3.  
    *ephedroides, Hk.f.* M.3.  
Rumex flexuosus, *Fst.* L.M.P.A.3.  
    *\*neglectus, Kirk.* L.1.
- MONIMIACEÆ.  
Hedycarya dentata, P.3.
- THYMELEÆ. 2—9.  
\*Pimelea gnidia, *Fst.* A. 2.  
    *traversii, Hk.f.* A. 3.  
    *virgata, Vahl.* L. 3.  
    *arenaria, Cunn.* A. 3.  
    *prostrata, Vahl.* L.M.A.P. 3.  
    *lyallii, Hk.f.* A. 3.  
    *\*sericeo-villosa, Hk.f.* A. 2.  
\*Drapetes dieffenbachii, *Hk.* A. 3—5000ft. 3.  
    *\*lyallii, Hk.f.* A. 2.
- SANTALACEÆ.  
Exocarpus bidwillii, *Hk.f.* M.A. 2—4000ft. 2.
- EUPHORBIACEÆ.  
Euphorbia glauca, *Fst.* L.P. 3.
- CUPULIFERÆ. 1—4.  
Fagus menziesii, *Hk.f.* M. 1.
- Fagus fusca, *Hk.f.* P.M. 1.  
    *solandri, Hk.f.* P.(?)M.A. 3.  
    *cliffortioides, Hk.f.* P.(?)M.A. 3.
- URTICACEÆ. 4—6.  
Epicarpurus microphyllus, *Raoul.* P.M. 3.  
Urtica ferox, *Fst.* P.M. 3.  
    *incisa, Poir.* M.P.A. 3.  
    *\*australis, Hk.f.* A. 3.  
\*Parietaria debilis, *Fst.* P. 2.  
\*Australia pusilla, *Gaud.* P. 1.
- PIPERACEÆ.  
Macropiper excelsum, *Seem.* P. 2.
- CONIFERÆ. 4—13.  
Libocedrus doniana, *End.* P. 1.  
    *bidwillii, Hk.f.* A. 2—3300ft. 3.  
Podocarpus ferruginea, *Don.* P.M. 3.  
    *nivalis, Hk.f.* A. 3.  
    *spicata, Br.* P.M. 3.  
    *totara, Cunn.* P.M. 3.  
    *dacrydioides, Rich.* P.M. 3.  
Dacrydium cupressinum, *Sol.* P.M. 3.  
    *\*colensoi, Hk.* A.1.  
    *\*westlandicum, Kirk.* A.1.  
    *\*bidwillii, Kirk.* A. 4000ft. 3.  
    *laxifolium, Hk.f.* A. 5000ft. 3.  
Phyllocladus alpinus, *Hk.f.* A. 3000ft. 3.
- ENDOGENÆ.
- ORCHIDÆ. 12—25.  
Earina mucronata, *Lind.* P.3.  
    *autumnalis, Hk.f.* P.3.  
Dendrobium cunninghamii, *Lind.* P. M.2.  
    *\*pygmæum, Smith.* P.2.  
\*Gastrodia cunninghamii, *Hk.f.* M. P.2.  
Cyrtostylis oblonga, *Hk.f.* A.P.1.  
Corysanthes triloba, *Hk.f.* P.M.A. 2.  
    *\*rotundifolia, Hk.f.* M.P.2.  
    *\*rivularis, Hk.f.* P.2.  
    *macrantha, Hk.f.* P.M.3.  
Microtis porrifolia, *Spr.* L.M.3.  
\*Caladenia minor, *Hk.f.* A.P.1.  
    *\*lyallii, Hk.f.* A.P.2.  
    *bifolia, Hk.f.* A.1.  
Pterostylis banksii, *Br.* L.M.3.  
    *graminea, Hk.f.* L.M.2.  
    *micromega, Hk.f.* A.1.
- \*Pterostylis foliata, *Hk.f.* A.1.  
    *\*trullifolia, Hk.f.* A.1.  
Chiloglottis cornuta, *Hk.f.* (?). P. A.2.  
\*Lyperanthus antarcticus, *Hk.f.* P. A.3.  
Thelymitra longifolia, *Fst.* L.M.3.  
    *\*uniflora, Hk.f.* M.P.2.  
Prasophyllum colensoi, *Hk.f.* M.3.  
    *\*nudum, Hk.f.* M.1.
- IRIDEÆ. 1—4.  
Libertia ixioides, *Spreng.* P.3.  
    *vestioides, Klatt.* P.2.  
    *grandiflora, Sweet.* P.M.3.  
    *\*micrantha, Cunn.* P.A.2.
- MELANTHACEÆ.  
Anguillaria novæ-zealandiæ, *Hk.f.* MS. M.3.
- HYPOXIDÆ.  
Hypoxis pusilla, *Hk.f.* M.3.

## TYPHACEÆ.

- Typha latifolia*, Linn. M.P.3.  
 \**angustifolia*, Linn. M.A.2.  
 NAIADÆÆ. 5—7.  
 \**Lemna minor*, Linn. M.P.A.3.  
*Triglochin triandrum*, Mich. M.L.  
 P.A.3.  
*Potamogeton natans*, Linn. M.P.L.  
 A.2.  
 \**gramineus*, Linn. P.1.  
 \**compressus*, Linn. P.A.1.  
 \**Ruppia maritima*, Linn. L.2.  
 \**Zostera marina*, Linn. (?) L.1.

## LILIACEÆ. 9—15.

- Rhipogonum scandens*, Fst. P.M.3.  
*Callixene parviflora*, Hk.f. A.2.  
*Cordyline australis*, Hk.f. (?) M.P.3.  
*hookeri*, Kirk. (C. indivisa?) P.3.  
*veitchi*, Hort. P.2.  
*Dianella intermedia*, End. P.M.3.  
*Astelia grandis*, Kirk. M.P.3.  
*nervosa*, Fst. P.A.3.  
*solandri*, Cunn. P.A.2.  
 \**linearis*, Hk.f. A.P.2.  
*Arthropodium candidum*, Raoul. P.  
 A.3.  
*Anthericum hookeri*, Col. L.M.P.A.3.  
*Phormium tenax*, Fst. L.M.P.A.3.  
*colensoi*, Fst. P.A.2.  
 \**Herpolirion novæ-zealandiæ*, Hk.f.  
 A.2.

## PALMEÆ.

- Areca sapida*, Fst. P.3.

## JUNCEÆ. 3—16.

- Juncus vaginatus*, Br. P.M.3.  
 \**australis*, Hk.f. M.3.  
*maritimus*, Lam. L.M.3.  
 \**effusus*, Linn. M.3.  
 \**planifolius*, Br. M.A.3.  
*bufonius*, Linn. M.P.A.3.  
 \**holoschœnus*, Br. M.P.A.2.  
 \**scheuzerioides*, Gaud. A.P.2.  
 \**antarcticus*, Hk.f. (?) M.A.2.  
 \**novæ-zealandiæ*, Hk.f. A.M.3.  
 \**paniciflorus*, Kirk. (J. novæ-zealandiæ?) A.2.  
 \**Rostkovia magellanica*, Hk.f. A.M.  
 P.3.  
 \**gracilis*, Hk.f. A.M.3.  
*Luzula campestris*, DC. P.M.A.3.  
 \**picta*, Rich. A.P.M.2.  
 \**oldfieldii*, Hk.f. M.P.A.2.  
*pumila*, Hk.f. A.3.

## RESTIACEÆ. 2—4.

- Leptocarpus simplex*, Rich. L.M.3.  
 \**Gaimardia ciliata*, Hk.f. A.3.  
 \**setacea*, Hk.f. A.2.  
 \**pallida*, Br. A.2.

## CYPERACEÆ. 14—55.

- \**Cyperus ustulatus*, Rich. M.P.2.  
 \**tenellus*, Linn. f. M.P.3. Naturalized?  
*Schoenus axillaris*, Hk.f. M.P.A.3.  
 \**tenax*, Hk.f. P.A.2.  
 \**pauciflorus*, Hk.f. P.M.A.3.  
*Carpha alpina*, Br. A.2.  
 \**Scirpus fluitans* (?) L.M.P.3.  
 \**maritimus*, Linn. L.3.  
 \**triqueter*, Linn. L.3.  
 \**lacustris*, Linn. L.3.  
*Eleocharis sphacelata*, Br. L.1.  
*gracillima*, Br. L.M.P.A.3.  
*gracilis*, Br. M.P.A.3.  
 \**Isolepis nodosa*, Br. P.M.A.2.  
*prolifer*, Br. P.M.A.3.  
*riparia*, Br. P.A.3.  
 \**aucklandica*, Hk.f. A.2.  
 \**Desmoschœnus spiralis*, Hk.f. L.3.  
 \**Fimbristylis dichotoma*, Vahl. P.M.  
 2.  
 \**Cladium glomeratum*, Br. P.A.2.  
 \**teretifolium*, Br. P.A.2.  
 \**junceum*, Br. A.2.  
 \**Gahnia setifolia*, Hk.f. P.M.2.  
 \**procera*, Fst. P.M.3.  
 \**lacera*, Steud. P.M.A.2.  
*ebonocarpa*, Hk.f. P.M.2.  
 \**arenaria*, Hk.f. M.2.  
 \**Lepidosperma tetragona*, Lab. L.  
 M.3.  
 \**Oreobolus pumilio*, Br. A.2.  
 \**Uncinia leptostachya*, Raoul. P.M.  
 A.3.  
 \**australis*, Pers. P.M.A.3.  
 \**ferruginea*, Boott. P.A.2.  
 \**rupestris*, Raoul. P.2.  
 \**banksii*, Boott. P.2.  
*Carex pyrenaica*, Wahl. M.P.A.2.  
 \**acicularis*, Boott. M.A.3.  
 \**inversa*, Br. P.M.A.2.  
 \**colensoi*, Hk.f. P.M.A.2.  
 \**stellulata*, Good. P.M.A.2.  
 \**teretiusecula*, Good. P.M.A.2.  
*virgata*, Sol. L.M.P.A.3.  
 \**gaudichaudiana*, Kunth. M.A.2.  
 \**subdola*, Boott. M.A.2.

*Carex ternaria*, *Fst.* L.M.P.A. 3.  
 \**testacea*, *Sol.* M.P.A. 2.  
 \**raoulii*, *Boott.* P.M.A. 2.  
*lucida*, *Boott.* P.A. 3.  
 \**pumila*, *Thun.* L.M.P.A. 3.  
 \**forsteri*, *Wahl.* M.P.A. 3.  
 \**cataractæ*, *Br.* A.P. 2.  
 \**breviculmis*, *Br.* A.P. 3.  
*trifida*, *Cav.* P.A.M. 2.  
 \**dissita*, *Sol.* P.M.A. 2.  
 \**lambertiana*, *Boott.* M.A. 2.  
 \**vacillans*, *Sol.* P. 2.

## GRAMINEÆ. 20—51.

*Microlæna stipoides*, *Br.* L.M. 1.  
 Very rare.  
*avenacea*, *Hk.f.* P.M. 3.  
 \**polynoda*, *Hk.f.* P. 3.  
 \*(*Alopecurus geniculatus*, *L.*) Naturalized. M. 2.  
*Hierochloë redolens*, *Br.* L.M.P.A. 3.  
*alpina*, *R. et Sch.* A. 2—5000ft. 2.  
 \**Spinifex hirsutus*, *Lab.* L. 2.  
 \**Panicum imbecille*, *Trin.* P. 2.  
*Zoysia pungens*, *Willd.* L.M.P. 3.  
*Echinopogon ovatus*, *Pal.* P.M.A. 3.  
*Dichelachne sciurea*, *Hk.f.* L. 1.  
*crinita*, *Hk.f.* M.P.A. 3.  
*Apera arundinacea*, *Hk.f.* P.M.A. 3.  
 \*(*Sporobolus elongatus*). Naturalized. M. 1.  
*Agrostis canina*, *Linn., var.* P.M.A. 3.  
 \**parviflora*, *Br.* M.A. 3.  
*æmula*, *Br.* M.P.A. 3.  
*pilosa*, *Rich.* M.P.A. 3.  
*billardieri*, *Br.* L.M. 3.  
 \**setifolia*, *Hk.f. (?)*. A.M. 2.  
 \**avenoides*, *Hk.f.* A. 3.

## FILICES. 34—107.

*Niphobolus serpens*, *Fst.* P.M. 3.  
*Phymatodes pustulata*, *Presl.* P.M. 3.  
*billardieri*, *Presl.* P.M. 3.  
*Dyctimia lanceolata*, *J. Smith.* P. ?  
*Gymnogramme rutæfolia*, *Hk.* A. 2.  
*leptophylla*, *Des.* P.M.A. 3.  
 \**Platyloma rotundifolia*, *J. Sm.* P. M.A. 3.  
*Grammitis australis*, *Swtz.* P.A. 3.  
*Otenopteris grammitides*, *J. Sm.* P. A. 2.  
*Goniopteris pennigera*, *Fst.* P.M. 3.  
*Lastrea velutina*, *A. Rich.* P. 3.  
*glabella*, *J. Sm.* P.M. 3.

\**Agrostis youngii*, *Hk.f.* A. 2.  
*quadriseta*, *Br.* P.M.A. 3.  
*Arundo conspicua*, *Fst.* P.M.A. 3.  
*Danthonia cunninghamii*, *Hk.f.* A. 3.  
*raoulii*, *Steud.* P.A. 3.  
 \**flavescens*, *Hk.f.* A. 2.  
*semi-annularis*, *Br.* M.P.A. 3.  
 \**pauciflora*, *Benth.* A. 3000ft. 3.  
 \**buchanani*, *Hk.f.* A. 2.  
 \**Aira cæspitosa*, *Pal.* L.M.P.A. 3.  
 \*(*Koeleria cristata*). Naturalized. M. 2.  
*Trisetum antarcticum*, *Trin.* M.P. A. 3.  
 \**subspicatum*, *Pal.* A. 2.  
 \**youngii*, *Hk.f.* A. 2.  
*Glyceria stricta*, *Hk.f.* L.M.P. 3.  
*Poa imbecille*, *Fst.* P.M. 3.  
*breviglumis*, *Hk.f.* P.M.L. 3.  
*foliosa*, *Hk.f.* M.P.A. 3.  
*anceps*, *Fst.* M.P.A. 3.  
*cæspitosa*, *Fst.* M.P.A. 3. P.  
*lævis*, *Br.*  
*intermedia*, *Buch.* P.A.M. 2.  
 \**acicularifolia*, *Buch.* A. 2.  
 \**purpurea*, *Kirk.* A. 2.  
*colensoi*, *Hk.f.* P.M.A. 3.  
*lindsayi*, *Hk.f.* P.M.A. 3.  
*Festuca littoralis*, *Br.* L. 3.  
*scoparia*, *Hk.f.* L.P. 2.  
 \**sp. F. duriuscula*, *Hk.f. non Linn.* M.A. 3.  
*Bromus arenarius*, *Lab.* L. 1.  
*Triticum multiflorum*, *B. et S.* M.P. A. 2.  
 \**youngii*, *Hk.f.* A. 2.  
*squarrosus*, *B. et S.* M.P.A. 3.  
 \**Gymnostichum gracile*, *Hk.f.* P. 1.

## CRYPTOGAMIA.

*Lastrea hispida*, *J. Sm.* P.M. 3.  
*Polystichum vestitum*, *Presl.* P.M. A. 3.  
*coriaceum*, *Swtz.* P.M. 2.  
*richardi*, *Hk.* P.M. 3.  
*cystostegia*, *Hk.* A. 2.  
*Arthropteris tenella*, *J. Sm.* P. 1.  
*Hypolepis tenuifolia*, *Bern.* P.M.A. 3.  
*millifolia*, *Hk.* P.M.A. 3.  
*distans*, *Hk.* P.M. 3.  
*rugulosa*, *Lab.* P.M.A. 2.  
*Cystopteris novæ-zealandiæ*, *J.B.A.*  
*C. fragilis*, *Hk.f. non Bern.* P.M.A. 3.  
*Cyathea smithii*, *Hk.f.* P.M. 2.

- Cyathea dealbata*, Swz. P.M.3.  
*Alsophila colensoi*, Hk.f. P.M.A.2.  
*Dicksonia fibrosa*, Col. P.M.3.  
     *squarrosa*, Swz. P.M.3.  
     *lanata*, Col. P.M.1.  
*Microlepia novæ-zealandiæ*, J. Sm. P.M.3.  
*Dennstedtia dubia*, J. Sm. P.M.1.  
*Lindsaya linearis*, Swz. M.1.  
*Adiantum affine*, Willd. P.M.3.  
     *assimile*, Swz. P.M.1.  
     *fulvum*, Raoul. P.M.2.  
     *hispidulum*, Swz. P.M.1.  
*Nothochlæna distans*, Br. P.M.A.3.  
*Cheilanthes sieberi*, Kunze. P.M.A.3.  
*Cheilanthes sieberi*, var. *deltoides*. C. tenuifolia, Kirk, non Swz. P.3.  
*Histopteris incisa*, Agardh. P.M.A.3.  
*Pteris tremula*, R. Br. P.M.1.  
*Ornithopteris esculenta*, Agdh. P.M. A.L.3.  
     *scaberula*, Agdh. P.M.A.3.  
*Lomaria elongata*, Bl. P.M.1.  
     *alpina*, Spreng. P.M.A.3.  
     *banksii*, Hk.f. P.1.  
     *\*pumila*, Raoul. P.1.  
     *nigra*, Colenso. P.M.1.  
     *discolor*, Willd. P.M.3.  
     *duplicata*, Potts. P.M.1.  
     *rigida*, J. Sm. L. *dura*, Moore, P.1.  
     *membranacea*, Col. P.M.1.  
     *rotundifolia*, Raoul. L. *fluvialis*, Hk.f. non Spreng. P.M. A.3.  
     *vulcanica*, Br. P.M.2.  
     *minor*, Spreng. P.M.A.3.  
     *procera*, Spreng. P.M.A.3.  
*Asplenium lucidum*, Fst. L.P.2.  
     *obliquum*, Fst. P.1.  
     *obtusatum*, Fst. P.2.  
     *scleropium*, Homb. M.2.  
     *trichomanes*, Linn. P.A.3.  
     *flabellifolium*, Cav. P.M.A.3.  
     *flaccidum*, Fst. P.M.3.  
     *bulbiferum*, Fst. P.M.3.  
     *appendiculatum*, Lab. P.M.2.  
     *colensoi*, Moore. P.M.3.  
     *hookerianum*, Col. P.M.3.  
     *richardi*, Hk.f. P.M.2.  
     *falcatum*, Lamk. P.M.1.  
*Gleichenia microphylla*, Br. P.A.1.  
     *dicarpa*, Br. P.M.A.1.  
     *alpina*, Br. A.M.1.  
*Gleichenia cunninghamii*, Hew. P.A. M.2.  
     *\*semivestita*, Lab. P.A.1.  
*Hymenophyllum polyanthos*, Swtz. P.A.M.3.  
     *rarum*, Br. P.A.M.1.  
     *flabellatum*, Br. P.A.1.  
     *demissum*, Swtz. P.A.M.1.  
     *scabrum*, Rich. P.M.1.  
     *crispatum*, Wall. P.M.1.  
     *pulcherrimum*, Col. P.M.1.  
     *dilatatum*, Swtz. P.M.1.  
     *villosum*, Col. A.3.  
     *montanum*, Kirk. H. *tunbridgense* var. (?). A.2.  
     *tunbridgense*, Sm. P.M.A.3.  
     ,, var. *wilsoni*. P.A.M.2.  
     *ciliatum*, Swtz. M.1.  
     *multifidum*, Swtz. P.M.A.2.  
     *bivalve*, Swtz. P.1.  
     *armstrongii*, Hk.f. A.3.  
     *minimum*, Rich. A.P.3.  
     *ærginosum*, Carm. P.1.  
     *lyallii*, Hk.f. P.1.  
     *malingii*, Hk. P.1.  
*Trichomanes reniforme*, Fst. M.1.  
     *humile*, Fst. P.1.  
     *venosum*, Br. P.M.2.  
     *elongatum*, Cunn. P.M.1.  
     *colensoi*, Hk.f. P.M.1.  
*Schizæa dichotoma*, Swtz. P.1.  
*Todea hymenophylloides*, Presl. P. M.3.  
     *superba*, Col. P.M.2.  
*Ophioglossum gramineum*, Willd. L. M.P.A.2.  
     *costatum*, Br. M.1.  
     *\*lusitanicum*, Willd. P.M.A.3.  
     *minimum*, J.B.A. MS. M.1.  
*Botrychium dissectum*, Muhl. P.M.1.  
     *virginicum*, Willd. M.P.A.3.  

LYCOPODIACEÆ. 3—8.

*Phylloglossum drummondii*, Kunze. L.M.P.2.  
*Lycopodium selago*, Linn. P.A.3.  
     *varium*, Br. A.P.1.  
     *billardieri*, Spring. A.P.2.  
     *laterale*, Br. A.1.  
     *scariosum*, Fst. A.1.  
     *volubile*, Fst. P.1.  
*Tmesipteris forsteri*, End. P.1.  

MARSILEACEÆ. 2—2.

*Azolla rubra*, Br. M.P.A.3.

- Pilularia novæ-zealandiæ*, Kirk. A.2.
- ISOETACEÆ. 1—2.
- Isoetes montana*, Kirk. A.3.  
\*sp. Smaller than *I. montana*;  
spores not seen. A.1.
- † MUSCI.
- † None of the following are cultivated in the  
Christchurch Public Gardens.
- Andrea acutifolia*, Wilson.  
*nitida*, Wils.
- Sphagnum cuspidatum*, Ehr.  
*novo-zelandicum*, Mitt.  
*cymbifolium*, Dill.  
*fimbriatum*, Wils.  
*australe*, Mitt.
- Phascum apiculatum*, Wils.
- Gymnostomum calcareum*, Nees.  
*tortile*, Schwæg.
- Weissia crispula*, Lud.  
*flavipes*, Wils.
- Symblepharis perichæticalis*, Wils.  
*pumila*, Mitt.
- Fissidens adiantoides*, Hed.  
*asplenioides*, Swtz.  
*tenellus*, Wils.  
*dealbatus*, Hk.f.  
*rigidulus*, Wils.  
*bryoides*, Hed.  
*brevifolius*, Wils.
- Dicnemum calycinum*, Wils.
- Leucobryum candidum*, Hampe.
- Dicranum incanum*, Mitt.  
*tasmanicum*, Hk.f.  
*trichopodium*, Mitt.  
*dicarpon*, Horn.  
,, *var. spinosum*.  
*robustum*, Wils.  
*fasciatum*, Hed.  
*billardieri*, Brid.  
*setosum*, Wils.  
*menziesii*, Taylor.
- Dicranodontium lineare*, Mitt.
- Campylopus introflexus*, Hed.  
*appressifolius*, Mitt.  
*clavatus*, Brown.  
*torquatus*, Mitt.
- Trematodon suberectus*, Mitt.  
*flexipes*, Mitt.
- Trichostomum lingulatum*, Wils.  
*mutabile*, Bruch.  
*elongatum*, Wils.  
*setosum*, Wils.  
*australe*, Mitt.
- Tortula papillosa*, Wils.  
*muelleri*, Br.  
*rubra*, Mitt.  
*torquata*, Taylor.  
*crispifolia*, Mitt.  
*knightii*, Mitt.  
*calycina*, Schwæg.
- Didymodon papillatus*, Wils.  
*interruptus*, Mitt.  
*erubescens*, Mitt.
- Desmatodon nervosus*, Schimper.
- Distichum capillaceum*, Schp.
- Ceratodon purpureus*, Bridel.
- Eucalypta australis*, Mitt.
- Hedwigia ciliata*, Ehr.
- Braunia humboldtii*, Schimp.
- Grimmia apocarpa*, Hed.  
*pulvinata*, Smith.  
*trichophylla*, Grev.  
*basaltica*, Mitt.
- Racomitrium crispulum*, Wils.  
*rupestre*, Wils.  
*protensum*, Braun.  
*symphiodon*, Mitt.  
*lanuginosum*, Brid.
- Schlotheimia brownii*, Schwæg.
- Macromitrium longirostre*, Schwæg.  
*longipes*, Schwæg.  
*asperulum*, Mitt.  
*gracile*, Schwæg.  
*hectori*, Mitt.  
*microphyllum*, Grev.  
*incurvifolium*, Schwæg. (?).  
*prorepens*, Schwæg.  
*erosulum*, Mitt.
- Orthotrichum luteum*, Mitt.
- Zygodon intermedius*, Schimper.  
*brownii*, Schwæg.  
*reinwardtii*, Braun.  
*menziesii*, Mitt.
- Leptostomum inclinans*, Br.  
*gracile*, Br.  
*macrocarpum*, Br.
- Orthodontium sulcatum*, Wils.
- Mielichoferia tenuiseta*, Mitt.
- Bryum pyriforme*, Hed.  
*truncorum*, Bory. B.<sup>1</sup>  
*campylotheceum*, Taylor.  
*billardieri*, Schwæg.  
*rufescens*, Wils.  
*wahlenbergii*, Schwæg.  
*crudum*, Schreber.  
*eximium*, Mitt.  
*lævigatum*, Wils.

- Bryum nutans*, Schreb.  
*argenteum*, Linn.  
*blandum*, Wils.  
*bimum*, Schreb.  
*torquescens*, Schimp.  
*mucronatum*, Mitt.  
*curvicollum*, Mitt.  
*cæspiticium*, Linn.  
*chryseuron*, Muell.  
*annulatum*, Wils.  
*pachytheca*, Muell.  
*atropurpureum*, Web. et Mohr.  
*Mnium rostratum*, Schwg.  
*rhynephorum*, Hk. et Harv.  
*Meesia macrantha*, Mitt.  
*Conostomum australe*, Swtz.  
*pusillum*, Wils.  
*Cryptopodium bartramioides*, Brid.  
*Bartramia halleriana*, Hed.  
*papillata*, Wils.  
*patens*, Brid.  
*crassinervia*, Mitt.  
*remotifolia*, Wils.  
*australis*, Mitt.  
*tenuis*, Taylor.  
*affinis*, Hk.  
*pendula*, Hk.  
*sieberi*, Mitt.  
*comosa*, Mitt.  
*divaricata*, Mitt.  
*Fumaria hygrometrica*, Hed.  
*glabra*, Taylor.  
*Entosthodon gracilis*, Wils.  
*Eremodon robustus*, Wils.  
*octoblepharis*, Wils.  
*purpurascens*, Wils.  
*Polytrichum angustatum*, Hk.  
*australe*, Wils.  
*magellanicum*, Hed.  
*dendroides*, Comm.  
*tortile*, Swtz.  
*alpinum*, Linn.  
*juniperinum*, Hed.  
*commune*, Linn.  
*gracile*, Menz.  
*Dawsonia superba*, Grev.  
*Anæctangium compactum*, Schwg.  
*Aulacopilum glaucum*, Wils.  
*Leucodon implexus*, Kunze.  
*nitidus*, Wils.  
*Leptodon smithii*, Bridel.  
*Cladomnion ericoides*, Wils.  
*sciuroides*, Wils.
- Meteorium molle*, Wils.  
*cuspidiferum*, Taylor.  
*flexicaule*, Wils.  
*Cyrtopus setosus*, Brid.  
*Mesotus celatus*, Mitt.  
*Phyllogonium elegans*, Wils.  
*Neckera pennata*, Hedwig.  
*lævigata*, Wils.  
*Trachyloma planifolia*, Brid.  
*Isothecium sulcatum*, Wils.  
*pandum*, Wils.  
*arbusculum*, Wils.  
*ramulosum*, Mitt.  
*angustatum*, Mitt.  
*gracile*, Wils.  
*menziesii*, Wils.  
*kerrii*, Mitt.  
*spininervium*, Wils.  
*marginatum*, Wils.  
*comosum*, Wils.  
*comatum*, Muell.  
*Hypnum furfurosum*, Wils.  
*fulvastrum*, Mitt.  
*sparsum*, Wils.  
*læviusculum*, Mitt.  
*uncinatum*, Hed.  
*brachiatum*, Mitt.  
*hispidum*, Wils.  
*tenuirostre*, Hk.  
*crassiusculum*, Brid.  
*jolliffii*, Mitt.  
*pubescens*, Wils.  
*leptorhynchum*, Brid.  
*chrysogaster*, Muell.  
*cupressiforme*, Linn.  
*pulchellum*, Dickson.  
*muriculatum*, Wils.  
*austrinum*, Wils.  
*remotifolium*, Grev.  
*tenuifolium*, Hed.  
*aristatum*, Wils.  
*rutabulum*, Linn.  
*paradoxum*, Wils.  
*plumosum*, Swtz.  
*relaxum*, Wils.  
*decussatum*, Wils.  
*aciculare*, Lab.  
*cochlearifolium*, Schwg.  
*clandestinum*, Wils.  
*chlamydophyllum*, Wils.  
*inflatum*, Wils.  
*divulsum*, Wils.  
*extenuatum*, Brid.



- Hypnum denticulatum*, Linn.  
*Omalia pulchella*, Wils.  
*Rhizogonium distichum*, Brid.  
   *novæ-hollandiæ*, Brid.  
   *bifarium*, Schimper.  
   *nnioides*, Wils.  
   *subbasilare*, Schimp.  
*Hymenodon piliferus*, Wils.  
*Hypopterygium filiculæforme*, Brid.  
   *viridulum*, Mitt.  
   *novæ-zealandiæ*, C. Muell.  
   *tamariscinum*, Sull.  
   *ciliatum*, Brid.  
   *concinnum*, Brid.  
   *struthiopteris*, Brid.  
*Cyathophorum pennatum*, Brid.  
*Calomnion lætium*, Wils.  
*Racopilum strumiferum*, Muell.  
*Hookeria tenella*, Wils.  
   *rotundifolia*, Wils.  
   *pulchella*, Wils.  
   *amblyophylla*, Wils.  
   *flexuosa*, Mitt.  
   *microcarpa*, Wils.  
   *quadrifaria*, Smth.  
   *nigella*, Wils.  
*Hookeria cristata*, Arnott.  
   *flexicollis*, Mitt.  
*Daltonia nervosa*, Wils.
- HEPATICÆ.
- Gymnomitrium concinatum*, Corda.  
*Jungermannia monodon*, Taylor.  
   *colorata*, Lehm.  
   *flexicaulis*, Nees.  
   *rotata*, Taylor.  
   *perigonalis*, Tay.  
*Trigonanthus dentata*, (Radd.) Mitt.  
*Chandonanthus squarrosa*, (Hk.) Mitt.  
*Temnonea pulchella*, Mitt.  
*Plagiochila conjugata*, Lindb.  
   *pleurota*, Tay.  
   *stephensoniana*, Mitt.  
   *gigantea*, Lindb.  
   *arbuscula*, Lehm.  
   *fasciculata*, Lindb.  
   *dicksoni*, Tayl.  
   *microdictyon*, Mitt.  
   *deltoidea*, Lindb.  
   *annotina*, Lindb.  
   *incurvifolia*, Tayl.  
   *lyallii*, Mitt.  
*Lophocolea pallida*, Mitt.  
   *heterophylloides*, Nees.
- Lophocolea triacantha*, Tayl.  
   *novæ-zealandiæ*, Nees.  
   *lenta*, Tayl.  
   *muricata*, Nees.  
*Scapania vertebralis*, Gott.  
*Gottschea lehmaniana*, Lindb.  
   *balfouriana*, Tayl.  
   *repleta*, Tayl.  
   *unguicularis*, Tayl.  
   *appendiculata*, Nees.  
   *nobilis*, Nees.  
   *pinnatifolia*, Nees.  
   *tuloides*, Tayl.  
*Chiloscyphus menziesii*, Mitt.  
   *billardieri*, Nees.  
   *sinuosus*, Nees.  
   *polycladus*, Mitt.  
   *coalitus*, Nees.  
   *odoratus*, Mitt.  
*Adelanthus falcatus*, Mitt.  
*Tylimanthus saccatus*, Mitt.  
*Lepidozia microphylla*, Lindb.  
   *capilligera*, Lindb.  
   *prænitens*, Lehm.  
   *lævifolia*, Tayl.  
   *pendulina*, Lindb.  
   *spinosissima*, Mitt.  
   *lindenbergi*, Gotts.  
   *capillaris*, Lindb.  
*Mastigobryum anisostomum*, Lindb.  
   *novæ-hollandiæ*, Nees.  
   *novæ-zealandiæ*, Mitt.  
   *involutum*, Lindb.  
*Isotachis lyallii*, Mitt.  
*Trichocolea tomentilla*, Nees.  
   *lanata*, Nees.  
*Sendtnera flagellifera*, Nees.  
*Polyotus claviger*, Gotts.  
   *magellanica*, Gotts.  
*Radula buccinifera*, Tayl.  
   *physoloba*, Montagne.  
   *complanata*, Dumort.  
   *marginata*, Tayl.  
*Madotheca stangeri*, Gotts.  
*Lejeunia pulchella*, Mitt.  
   *scutellata*, Mitt.  
   *anguiformis*, Tayl.  
   *papillata*, Mitt.  
   *rufescens*, Lindb.  
   *latitans*, Hk.j. et Tayl.  
   *nudipes*, Tayl.  
   *thymifolia*, Nees.  
   *tumida*, Mitt.

*Frullania cornigera*, Mitt.  
*squarrosula*, Tayl.  
*pycnantha*, Hk.f. et Tayl.  
*cranialis*, Tayl.  
*pentapleura*, Tayl.  
*ptychantha*, Mont.  
*aterrima*, Tayl.  
*congesta*, Tayl.  
*Fossombronina pusilla*, Nees.  
*Noterochlada porphyrorhiza*, Mitt.  
*Zoopsis argentea*, Tayl.  
*Podomitrium phyllanthus*, Mitt.  
*Symphogynia flabellata*, Mont.  
*letopoda*, Tayl.  
*hymenophyllum*, Mont.  
*subsimplex*, Mitt.  
*Metzgeria furcata*, Nees.  
*Aneura alterniloba*, Tayl.  
*palmata*, Nees.  
*multifida*, Dumort.  
*Marchantia tabularis*, Nees.  
*nitida*, Lindb.  
*foliacea*, Mitt.  
*Dumortiera hirsuta*, Nees.  
*Reboulia hemisphærica*, Radd.  
*Fimbriaria drummondii*, Tayl.  
*Riccia fluitans*, Linn.  
*Anthoceros lævis*, Linn.  
*giganteus*, Lindb.  
*colensoi*, Mitt.

## CHARACEÆ.

*Nitella hyalina*, Agardh.  
*hookeri*, Braun.  
*Chara foetida*, Braun.  
*contraria*, Braun.

## LICHENES.

*Collema flaccidum*, Acharius.  
*nigrescens*, Ach.  
*Leptogium tremelloides*, Fries.  
*Sphærophorion compressus*, Ach.  
*coralloides*, Pers.  
*tenerum*, Laur.  
*Cladonia pyxidata*, Fries.  
*fimbriata*, Hoffm.  
*gracilis*, Hoffm.  
*cariosa*, Flk.  
*furcata*, Hoffm.  
*rangiferina*, Hoffm.  
*capitellata*, Lab.  
*aggregata*, Esch.  
*retipora*, Flrk.  
*cornucopiodes*, Fries.  
*Stereocaulon ramulosum*, Ach.

*Stereocaulon corticulatum*, Nyl.  
*Usnea barbata*, Fries.  
*melaxantha*, Ach.  
*Alectoria ochroleuca*, Nyl.  
*Ramalina calicaris*, Fries.  
*Nephroma australe*, Rich.  
*schizocarpum*, Nyl.  
*lævigatum*, Ach.  
*lyallii*, Bab.  
*Peltigera rufescens*, Hoffm.  
*polydactyla*, Hoffm.  
*Sticta argyracea*, Del.  
*hookeri*, Bab.  
*crocata*, Ach.  
*carpoloma*, Del.  
*filicina*, Ach.  
*damæcornis*, Ach.  
*variabilis*, Ach.  
*orygmæa*, Ach.  
*aurata*, Ach.  
*fossulata*, Dufour.  
*freycinetii*, Del.  
*Ricasolia coriacea*, Nyl.  
*glomulifera*, De Not.  
*Parmelia caperata*, Ach.  
*perlata*, Ach.  
*saxatilis*, Ach.  
*conspersa*, Ach.  
*olivacea*, Ach.  
*physodes*, Ach.  
*pertusa*, Schar.  
*flavicans*, DC.  
*parietina*, Ach.  
*speciosa*, Ach.  
*Psoroma subpruinosa*, Nylander.  
*hypnorum*, Fries.  
*sphinctrinum*, Nyl.  
*Pannaria rubiginosa*, Del.  
*triptophylla*, Nyl.  
*Squamaria gelida*, Decaisne.  
*Placodium murorum*, DC.  
*Lecanora cerina*, Ach.  
*aurantiaca*, Ach.  
*vitellina*, Ach.  
*parella*, Ach.  
*tartarea*, Ach.  
*glaucoma*, Ach.  
*varia*, Ach.  
*atra*, Ach.  
*punicea*, Ach.  
*Urceolaria scruposa*, Ach.  
*Thelotrema lepadinum*, Ach.  
*Cænogonium linkii*, Ehrb.  
*Lecideia cupularis*, Ach.

*Lecidea parvifolia*, Pers.  
*cinnabarina*, Sommerfeldt.  
*vernalis*, Ach.  
*decolorans*, Flk.  
*coarctata*, Nyl.  
*tuberculosa*, Fée.  
*decipiens*, Ach.  
*mamillaris*, Dufour.  
*vesicularis*, Ach.  
*parasema*, Ach.  
*contigua*, Fries.  
*geographica*, Schærer.  
*pachycarpa*, Dufour.  
*Graphis scripta*, Ach.  
*Opegrapha varia*, Pers.  
*Stigmatidium crassum*, Duby.  
*Arthonia lurida*, Ach.  
*conspicua*, Nyl.  
*Verrucaria umbrina*, Wahl.  
*maura*, Wahl.  
*epidermidis*, Ach.  
*nitida*, Schrader.  
*glabrata*, Ach.  
*moniliformis*, Knight.

FUNGI.

*Agaricus phalloides*, Fries.  
*exstructus*, Berk.  
*brevipes*, Bull.  
*cartilagineus*, Bull.  
*carneus*, Bull.  
*colensoi*, Berk.  
*novæ-zealandiæ*, Berk.  
*erebius*, Fries.  
*adiposus*, Fries.  
*sapineus*, Fries.  
*arvensis*, Schæff.  
*campestris*, Linn.  
*semiglobatus*, Bth.  
*fascicularis*, Huds.  
*strophosus*, Fries.  
*muscarius*, Linn.  
*auratus*, With.  
*appendiculatus*, Bull.  
*Coprinus fimetarius*, Fries.  
*Hygrophorus cyaneus*, Fries.  
*Lentinus novæ-zealandiæ*, Bk.  
*Panus maculatus*, Bk.  
*Schizophyllum commune*, Fries.  
*Polyporus arcularius*, Fries.  
*lucidus*, Fries.  
*adustus*, Fries.  
*igniarius*, Fries.  
*scruposus*, Fries.

*Polyporus plebeius*, Bk.  
*borealis*, Fries.  
*versicolor*, Fries.  
*sanguineus*, Fries.  
*Favolus intestinalis*, Bk.  
*Irpex brevis*, Bk.  
*Stereum lobatum*, Kunze.  
*vellereum*, Bk.  
*hirsutum*, Fries.  
*rugosum*, Fries.  
*Corticium polygonium*, Fries.  
*ochroleucum*, Fries.  
*Clavaria lutea*, Vitt.  
*flaccida*, Fries.  
*Pistillaria ovata*, Fries.  
*Hirneola auricula-judæ*, Bk.  
*hispidula*, Bk.  
*Aseroe rubra*, Lab.  
*hookeri*, Bk.  
*Ileodictyon cibarium*, Tulas.  
*gracile*, Bk.  
*Secotium erythrocephalum*, Tul.  
*lilacensis*, Bk.  
*Geaster fimbriatus*, Fries.  
*Bovista brunnea*, Bk.  
*Lycoperdon giganteum*, Bth.  
*cælatum*, Fries.  
*fragilis*, Vitt.  
*pyriforme*, Schæff.  
*Æthidium septicum*, Fries.  
*Cyathus novæ-zealandiæ*, Bk.  
*Nidularia campanulata*.  
*Crucibulum vulgare*, Tulas.  
*Asteroma dilatata*, Bk.  
*Puccinea graminis*, Persoon.  
*compacta*, Bk.  
*Uredo antarctica*, Bk.  
*Ustilago segetum*, Link.  
*candollei*, Tulas.  
*endotricha*, Bk.  
*bullata*, Bk.  
*Stilbum lateritium*, Bk.  
*Cladosporium herbarum*, Link.  
*Sepedonium chrysospermum*, Fries.  
*Morchella esculenta*.  
*Leotia lubrica*, Pers.  
*Geoglossum hirsutum*, Pers.  
*Peziza miltina*, Bk.  
*stercorea*, Fries.  
*calycina*, Fries.  
*Asterina fragilissima*, Bk.  
*Cordiceps sinclairii*, Bk.  
*Hypocrea gelatinosa*, Fries.

- Hypoxylon concentricum*, *Fries.*  
*Dothidea ribesia*, *Fries.*  
*Sphaeria fragilis*, *Bk.*  
     *pullularis*, *Bk.*  
     *herbarum*, *Pers.*  
     *lindsayi*, *Currey.*  
*Chaetomium elatum*, *Kunze.*  
*Meliola amphitricha*, *Fries.*  
*Antennaria robinsonii*, *Mont.*  
*Oidium tuckeri.*
- ALGÆ.
- Sargassum longifolium*, *Agardh.*  
     *plumosum*, *Rich.*  
     *raoulii*, *Harvey.*  
     *sinclairii*, *Harv.*  
     *bacciferum*, *Agdh.*  
*Turbinaria ornata*, *Agdh.*  
*Carpophyllum phyllanthus*, *Harv.*  
     *maschalocarpus*, *Harv.*  
*Marginaria boryana*, *Rich.*  
*Phyllospora comosa*, *Agdh.*  
*Cystophora torulosa*, *Agdh.*  
     *retorta*, *Agdh.*  
     *retroflexa*, *Agdh.*  
     *dissecta*, *Agdh.*  
*Landsboroughia quercifolia*, *Harv.*  
*Fucodium gladiatus*, *Agdh.*  
     *chondrophyllus*, *Agdh.*  
*Hormosira billardieri*, *Mont.*  
*Splachnidium rugosum*, *Grev.*  
*Notheia anomala*, *Bail. et Harv.*  
*D'Urvillæa utilis*, *Bory.*  
*Desmarestia ligulata*, *Lam.*  
*Macrocystis pyrifera*, *Agdh.*  
*Ecklonia radiata*, *Agdh.*  
*Zonaria interrupta*, *Agdh.*  
     *turneriana*, *Agdh.*  
     *velutina*, *Harv.*  
*Dictyota kunthii*, *Agdh.*  
*Adenocystis lessonii*, *Harv.*  
*Chordaria sordida*, *Bory.*  
*Sphacelaria paniculata*, *Suhr.*  
     *funicularis*, *Mont.*  
*Ectocarpus granulosus*, *Agdh.*  
     *siliculosus*, *Lyngbye.*  
*Rytiphloea delicatula*, *Harv.*  
*Rhodomela gaimardii*, *Ag.*  
     *glomerulata*, *Mont.*  
*Bostrychia distans*, *Harv.*  
*Polysiphonia implexa*, *Harv.*  
     *macra*, *Harv.*  
     *rudis*, *Harv.*  
     *abscissa*, *Harv.*
- Polysiphonia variabilis*, *Harv.*  
     *brodiaei*, *Grev.*  
     *comoides*, *Harv.*  
     *australis*, *Agdh.*  
     *decipiens*, *Mont.*  
     *cancellata*, *Harv.*  
*Dasya collabens*, *Hk.f.*  
*Polyzonia cuneifolia*, *Mont.*  
     *harveyana*, *Decais.*  
*Champia novæ-zealandiæ*, *Harv.*  
     *parvula*, *Harvey.*  
*Laurencia virgata*, *Agdh.*  
     *papillosa*, *Grev.*  
*Cladhymenia oblongifolia*, *Harv.*  
*Carpomitra cabreræ*, *Kuetz.*  
*Delisea elegans*, *Lamouroux.*  
*Amphiroa wardii*, *Harvey.*  
*Corallina armata*, *Hk.f.*  
*Jania cuvierii*, *Decaisne.*  
     *micrarthrodia*, *Lamour.*  
     *novæ-zealandiæ*, *Harv.*  
*Delesseria hookeri*, *Lyall.*  
     *quercifolia*, *Bory.*  
*Nitophallum variolosum*, *Harv.*  
*Gelidium corneum*, *Lam.*  
*Rhodymenia lanceolata*, *Harv.*  
*Dasyphloea insignis*, *Mont.*  
*Plocamium angustum*, *Hk.f.*  
     *coccineum*, *Lyng.*  
*Stenogramme interrupta*, *Mont.*  
*Callophyllis hombroniana*, *Kuetz.*  
     *acanthocarpa*, *Harv.*  
     *erosa*, *Hk.f. et Harv.*  
*Gigartina pistillata*, *Gmelin.*  
     *alveata*, *Agdh.*  
     *ancistroclada*, *Mont.*  
     *radula*, *Agdh.*  
*Iridæa micans*, *Bory.*  
*Epymenia acuta*, *Harv.*  
     *obtusa*, *Kuetz.*  
*Chylocladia secunda*, *Hk.f.*  
*Nemastoma prolifera*, *Harv.*  
*Dumontia filiformis*, *Grev.*  
     *pusilla*, *Mont.*  
*Ceramium diaphanum*, *Roth.*  
     *rubrum*, *Agdh.*  
     *cancellatum*, *Agdh.*  
*Ptilota pellucida*, *Harv.*  
*Griffithsia setacea*, *Agdh.*  
     *antarctica*, *Hk.f.*  
*Ballia callitricha*, *Mont.*  
     *hirtum*, *Hk.f. et Harv.*  
*Codium adhærens*, *Agdh.*

Porphyra laciniata, <i>Agdh.</i>	Cladophora gracilis, <i>Griffiths.</i>
Ulva latissima, <i>Linn.</i>	colensoi, <i>Harv.</i>
crispa, <i>Light.</i>	Conferva darwinii, <i>Kuets.</i>
Enteromorpha compressa, <i>Grev.</i>	valida, <i>Harv.</i>
Batrachospermum moniliforme, <i>Roth.</i>	Tyndaridea anomala, <i>Ralfs.</i>
Cladophora lyallii, <i>Harv.</i>	Nostoc verrucosum, <i>Vauch.</i>

## NATURALIZED PLANTS.

A list of naturalized plants will be found in the volume of Transactions for 1871, page 284. The following have been introduced since that date :—

Ranunculus arvensis, <i>L.</i>	Centaurea nigra, <i>L.</i>
pratensis, <i>L.</i>	cyanus, <i>L.</i>
sceleratus, <i>L.</i>	Echium violaceum, <i>L.</i>
Alyssum calycinum, <i>L.</i>	Anchusa italica, <i>L.</i>
Silene inflata, <i>Sm.</i>	Convolvulus arvensis, <i>L.</i>
armeria, <i>L.</i>	Lobelia erinus.
italica, <i>Pers.</i>	Verbascum nigrum, <i>L.</i>
nutans, <i>L.</i>	blatteria, <i>Sm.</i>
orientalis, <i>L.</i>	Lamium amplexicaule, <i>L.</i>
Coronopus didyma.	maculatum, <i>L.</i>
Stellaria graminea, <i>L.</i>	purpureum, <i>L.</i>
Polycarpon tetraphyllum, <i>L.</i>	Mentha arvensis, <i>Sm.</i>
Spergula pilifera, <i>Hort.</i>	Teucrium scorodonia, <i>L.</i>
Malva campestris, <i>L.</i>	Anagallis grandiflora, <i>Hort.</i>
sylvestris.	Prunella grandiflora, <i>Hort.</i>
Eucalyptus globulus.	Polygonum dryandri.
Linum angustifolium, <i>Sm.</i>	Rumex palustris, <i>Sm.</i>
marginale, <i>Cunn.</i>	Chenopodium ambrosioides.
Trifolium maritimum, <i>L.</i>	Euphorbia lathyrus, <i>L.</i>
arvense, <i>L.</i>	Vinca major, <i>L.</i>
maculatum, <i>Hort.</i>	Salix fragilis, <i>L.</i>
ochroleucum, <i>Sm.</i>	Betula alba, <i>L.</i>
filiforme, <i>Huds.</i>	Quercus cerris, <i>L.</i>
Melilotus officinalis, <i>L.</i>	pedunculata, <i>L.</i>
Vicia tetrasperma, <i>Koch.</i>	Acer pseudo-platanus, <i>L.</i>
Lathyrus sylvaticus, <i>L.</i>	Cyperus tenellus, <i>L.</i>
grandiflorus, <i>Hort.</i>	Pinus pinaster, <i>Sol.</i>
Acacia decurrens, <i>Willd.</i>	Koeleria cristata, <i>Pers.</i>
Potentilla reptans, <i>L.</i>	Alopecurus geniculatus, <i>L.</i>
Oenothera biennis, <i>L.</i>	Maizilla stolonifera, <i>End.</i>
grandiflora.	Cinna mexicana.
Helianthus annuus, <i>L.</i>	Sporobolus elongatus, <i>Br.</i>
Helminthis echioides, <i>St.</i>	Lagurus ovatus, <i>L.</i>
Cichorium intybus, <i>L.</i>	Cynodon dactylon, <i>Pers.</i>
Onopordon acanthium, <i>L.</i>	Panicum germanicum, <i>L.</i>
Picris hieracioides, <i>L.</i>	Poa compressa, <i>L.</i>
Anthemis arvensis, <i>C.</i>	Festuca loliacea, <i>Huds.</i>
Chrysanthemum coronarium.	Triticum junceum, <i>L.</i>