Introduction. The island of Singapore with the small islands of Pulau Ubin and Pulau Tekong in the Johore strait and a few smaller ones lying within English waters form the area the flora of which is enumerated in this paper. The whole is little more than 200 square miles in extent and consists of undulating country, the highest hill being Bukit Timah with an altitude of 500 feet above sea level. The Geology of the island was the subject of a paper by Mr. J. R. Logan (Journ. As. Soc. Beng. xvi. p. 519, published in 1846), but unfortunately he much misunderstood it, mistaking sedimentary rocks for volcanic ones. The bigger hills, Bukit Timah, Bukit Mandai, and Tanjong Gol, are composed of a grey granite, which crops out again near Bajau, Changi and Pulau Ubin. The rest of the island is covered with sedimentary deposits of clays, gravels, and sands, often very ferruginous and permeated with bands of clay-ironstone, very much resembling that of some of the Wealden beds in Kent. This clay iron-stone has unfortunately received the name of Laterite here, a name properly applied to soils baked by a lava-flow, or other volcanic heat. These sedimentary rocks have never produced any fossils except some obscure traces of vegetable remains. They appear to have been derived from disintegrated and decomposed granite, the ironstone bands being formed in many cases at a much later date. No borings of any depth having been made it is impossible to say how deep these strata are, but it is probable that they are of very great thickness and comparatively modern, as appears to be the case in Selangor and elsewhere. In the south of the island in some spots the strata are very strongly upheaved.

Originally the island appears to have been covered with a dense forest, except along the mangrove edged rivers and the sandy tract of country lying between Tanjong Ru and Changi point. But soon after it was acquired, a great deal of this forest
was felled, partly for the value of the timber and partly for cultivation. Later a very large proportion of the cleared ground was abandoned, and became covered with secondary growth, or lalang, and every year still sees the disappearance of some woodland, so that in several of the localities quoted for certain plants in this list, such as Ang Mo Kio, few traces of any native plants can now be found. The names of many villages and districts are taken from trees which doubtless plentiful fifty years ago are now either very scarce or quite extinct. Such are Kranji (Diatomum) Changi (Balancarpus), Tampenis (Sloeia sideroxylon), Tanjong Ru, the Cape of Casuarinas, Kampong Gelam, the village of Melatencus. Extensively as the indigenous flora has been destroyed in this way, I have succeeded in finding most of the plants collected here by Wallich in 1822; and of those mentioned in his Catalogue which I have not recovered, some at least were evidently wrongly localised, having been probably collected in Penang. Many of the trees, however, which were probably formerly more abundant, are represented now by single specimens.

A few fairly large and representative tracts of jungle remain, and though in most cases much of the more valuable timber has been removed, these contain the most varied and interesting portions of the flora. Among the biggest trees therein are the Dipterocarpacea, Dyera, Dichipsis, Irringia, Kumpassia, species of Mangifera, Artocarpus and Tarrietia. Mixed with these are numerous smaller trees and shrubs of all orders, with rattans, and other palms, and especially in rocky spots and damp water-courses, are ground orchids, Scitamineae, aroids, ferns, Ebermaiera, Pentaphragma, Cyrtandrae and many other smaller plants. Here too grow the curious little saprophytes Tissinia, Sciaphila, Aphyllothrix, Burmannia, etc. Many climbing plants such as Uncaria, Willughbeia, Bauhinia, Strychnos and Cinetum form huge hanes climbing to the tops of the trees and covering them with a mat of foliage. On the branches of the loftiest trees grow many epiphytes not met with elsewhere, orchids, ferns, such as the rare Davallia triphylla, Rhododendron, Vaccinium and Dischidia, and it is interesting to note that many of these plants, which in the low country grow only on this elevated position, are to be met with as terrestrial or rock plants at greater elevations in the peninsula. The banks of the larger streams and rivers and a
good portion of the coast line where mud is deposited are edged with a thick mangrove jungle composed of Rhizophoraceae (Rhizophora, Bruguiera, Ceriops) Carapa, Lumnitzera, Avicennia and Heritiera on the branches of which grow abundance of small orchids, ferns, Lyropodarium, Psilotum, Heptapleurum, Pachycentria, Medinillopsis and other epiphytes, while in the mud on suitable spots grow such herbaceous plants as Acaulis, Cryptocoryne ciliata, Tristellateia, Orthocharis and some Cyperaceae and grasses. Inland just behind the mangroves the ground is often sandy and covered with woods of comparatively small trees, Eugenia, Podocarpus, Gmelinium, Argyrea, Azelia, etc., with clumps of the Nibung palm (Oncosperma tigillaria), and on these and on the ground grow many orchids, Cirrhopetalum, Bulbophyllum, Coelogyne, Plocoglottis, Platyclinis, and Eria.

The coast line from Tanjong Ru to Changi is also very sandy, and here is a very distinct flora much resembling that which borders the Pahang river near its mouth. It is rich in grasses and sedges, Xyris, Cyanotis, and other herbaceous plants, with bushes of Rhodomyrtus, Vaccinium, Leucopogon, Capparis, Eugenia, etc. Unfortunately a great portion of this district has been put under coconut cultivation, and the greater part of the flora has disappeared, except at Changi point where it still remains.

As a very large portion of the island has been cleared and cultivated, and often abandoned, there are very large tracts covered either with Lalang (Imperata cylinidrica) or fern either Gleichenia Linearis or bracken, Pteris aquilina or in swampy spots with Selarea to the exclusion of almost everything else. In many places however secondary growth has sprung up (Belukar). This consists of small trees or shrubs of Macaranga javanica and M. hypoleuca, Rhodomandria trinervia, Adinandra dumosa, Vitis pubescens, Melastoma polyanthum, Archytta Vahlii, Arthrophyllum diversifolium and a few others.

In waste ground near villages and in cultivated spots are a number of weeds, many of which are well known as very widely distributed plants, and most of which have probably been introduced accidentally or intentionally at no very great distance of time. These weeds include most of the Compositae, Grasses, Labiate and probably all the Umbellifera and Solana-
ew. It is perhaps worth noting that very few of these are to be found in Wallich’s collection made in 1822, showing that in all probability they were introduced at a later date. Among these weeds one or two are interesting as not occurring in India, such as Clitoria cajanifolia, and Cleome aculeata, both South American plants, which also occur as weeds in Java, whence probably they were carried accidentally to Singapore.

The flora geographically speaking is typically Malayan, and resembles as might be expected that of Johore, and to a certain extent that of the neighbouring coast of Sumatra. A few plants occurring here are as far as is known endemic, but it is probable that most will be re-discovered in the neighbouring countries, when they are more thoroughly explored. These endemic plants not known to occur elsewhere are marked with an *. The absence of certain plants common in the peninsula is somewhat remarkable, such are Eurya acuminata and Grevia umbellata, and there are several striking plants to be found on the neighbouring islands, and on the coast of Johore, especially near Tanjong Kupang, which are quite absent from our flora. Of the native flora it will be noticed that the greater number of plants are either trees or shrubs, herbaceous plants being comparatively scarce in the forests, and chiefly to be found in the open country in the sandy district of the coast. Those of the forest region being usually epiphytes, orchids, Piperaceae, or Scitamineae, aroids, grasses and sedges, with a few saprophytes.

The most extensively represented orders here are those of the Euphobiaceae, Urticaceae, Rubiaceae and Orchideae. The variety of the latter will surprise many residents who have probably seen not more than one or two species growing wild here, but the fact that these plants are very local and frequently occur on the upper branches of the loftiest trees, where they are difficult to see and to obtain, accounts for their being so often overlooked. The largest genera are those of the Figs (Ficus) and nutmeg (Myristica).

As in most equatorial regions, the number of species in proportion to the number of individuals is very large. A Malay jungle consists of innumerable trees, shrubs and climbers, all apparently distinct, and individuals of any one species occurring singly here and there, often very far apart, so that these forests
have a very different appearance from those of the more temperate zones, which frequently consist of but one or two kinds. The contrast is well seen in comparing the English flora with that of Singapore. In Singapore with an area of 200 square miles we have over 1,900 species of flowering plants, while the flora of the British Isles with an area of 121,115 square miles produces but 1,200 species, while of ferns we have here over 130 species, nearly double the number in Europe, and more than three times the number in the British Isles.

Seasons. There is no great amount of difference in the rainfall throughout the year, although as a rule heavier falls occur in December and January than at other times, so that plants here have no definite resting periods and are nearly all truly evergreen. Certain plants, however, such as Cratoxylon formosum and Ficus Miquelii shed all their leaves at tolerably regular intervals, remaining quite bare for one or two days, when the young shoots begin to unfold, and in a few days they are quite leafy again. This change is often but not always followed immediately by the appearance of the flowers, and often the young leaves thus produced are of a brighter green, or brilliant red, orange, white or blue. This change takes place usually three or four times a year, and every tree of the kind in the district undergoes the change on the same day. It is not till we get north of Penang that we find a definite period of rest in which all or almost all plants shed their leaves altogether and become quite bare. A good series of observations on these phenological phenomena would probably throw light on the causes of these irregular seasons.

Very few plants have a definite flowering month. A large number flower more or less steadily throughout the year. Others flower at regular periods three or four times a year, almost every plant of a given kind flowering simultaneously in the district. This is best known in the case of the Pigeon orchid, Dendrobium crumenatum. In this plant the flowers are produced at periods of a little over a month, or two months. The exact day differs in different parts of the peninsula, but in each district they all appear in the same day, and it is remarkable that plants brought to Singapore even from as far north as Siam open their flowers on the day for Singapore, and not on that for Siam. It
is not rare however to find certain plants of Pigeon orchid which do not flower on the regular day, but have a distinct day which they appear to keep to with equal regularity. A curious fact is that another species of *Dendrobium* (*D. criniferum*) invariably flowers in Singapore on the day preceding that of *D. crumenatum*, whenever that happens to be. It might be thought that the weather in the district in which the plant was growing was the influencing agent, but this appears to have but little effect on the orchids. On one occasion (Dec. 5, 1893) the pigeon orchids developed their flowers so far that they were obviously ready to open them on that day, but an extraordinarily heavy rain retarded them, and the flowers opened the next day, but except in cases like this the weather previous to the flowering does not seem to make any difference to the date of flowering. Some few plants have a regular annual flowering season, such are *Calanthe cuculagoides* in September, and *Grammatophyllum*, July and August. A certain number of trees flower only every fifth year, notably the *Dipterocarpaceae*. Every fifth year there appears to be an average higher temperature, and a period of greater dryness in May or June than in other years, and then and only then is it possible to obtain flowers of these trees. Such trees are most of the *Dipterocarpaceae, xanthophyllum Kunstleri*, *Careya* sp. In this case also all the plants in a given district flower simultaneously. It can easily be understood that it is very important to a plant that all should flower on the same day in order that they may be cross-fertilized by the insects that visit them, and this is especially the case in plants in which the flowers last but a single day, as in the case of the Pigeon orchid, but it is difficult to see how this is brought about. A good many trees seem to flower even less often than this and there are not a few which though apparently full grown healthy trees have not given flowers once in ten years.

*Colors of flowers.*

As is well known the colors of flowers depend to a large extent on the kind of insect fertilizer for which they are destined to prove attractive. The most abundant insects in the thick jungle are the flies (*Diptera*) and these appear often in enormous abundance when certain trees are in bloom. The Oaks and
Chestnuts, \textit{Sindora} and \textit{Kurrimia} are particularly attractive to them and the roar of their wings can be heard often at some distance from the tree. The chief of these flies is a black \textit{Musca} with red eyes. The flowers of fly-fertilized plants are usually small and green or whitish, generally possessing an unpleasant odor. Smaller herbaceous plants growing in dark shady woods often have deep brownish purple flowers sometimes with an odor of carrion, at others sweet and aromatic, such are \textit{Amorphophallus}, \textit{Thottca}, \textit{Tusca} and many orchids. These are also fly-fertilized. Many trees produce masses of white flowers in large panicles or corymbs. These are very attractive to butterflies and bees, such are many of the \textit{Eugenias}, \textit{Evodia}, \textit{Rhoodania}, and \textit{Melan-norrhea}. I have noticed as showing the bearing of the color of the flowers on insect visitors, that while \textit{Eugenia lineata} with corymbs of white flowers attracts innumerable butterflies and bees and the pollen-eating flies (Syrphus), another species of \textit{Eugenia} with apple-green flowers, which is growing close by was not visited either by butterflies or bees, but by flies similar to those which visit the oaks. Pink flowers are not so common, and are usually visited by bees, as are the deep red blossoms of \textit{Cratery-lon arborescens}, \textit{Cinphia Hookeri}, and \textit{Enysymena}. Scarlet and bright reds are rare in Singapore except in introduced plants, but we have also the beautiful \textit{Aeschynanthus}, \textit{Rhododendron}, some \textit{Loranthi}, and some species of \textit{Hornstedtia}. The red flowers are most attractive to the Sun-birds, and to butterflies. Bright yellow flowers are chiefly to be met with in open country especially near the sea; such are \textit{Wedelia}, \textit{Aucuba}, \textit{Phylidron}, \textit{Utricularia} (most), \textit{Wormia}, \textit{Timonius}, and \textit{Cinphia sumatrana}. The rarest color of all is blue, which is also to be met with almost exclusively in open spots. \textit{Burmannia coelestis}, \textit{Comeliana}, \textit{Cyanottis}, \textit{Urticularia affinis}, \textit{Evcoelus}, \textit{Monochoria}, \textit{Desmodium heterophyll-um}, are almost the only native blue flowers here.

Visitors to the tropics are often surprised by the apparent paucity and inconspicuousness of the flowers. This is partly due to the enormous proportion of foliage, which conceals the flowers, but the fact that the greater number of our flowers are adapted for fertilization by Diptera and small Hymenoptera, the most abundant insects in the forests, and are consequently small and green or whitish, accounts to a large extent for the small
amount of show that the blossoms make in the great masses of foliage.

Botanists. The number of botanists who have collected or studied the flora of Singapore is even more limited than that of Penang. The first of them was naturally Sir Stamford Raffles who aided by William Jack made extensive collections, all or almost all of which were destroyed in the burning of the "Fame." (For an account of Jack and some others of the Singapore botanists, see Journal 25, p. 163). Shortly after the founding of Singapore Nathaniel Wallich came to Singapore to recuperate after his great Nepaul expedition. He remained here about five months and established the first Botanic Garden, Nov. 1822, being Superintendent of it. This Garden, consisting of 48 acres, included the Government Garden on what is now known as Fort Canning Hill. After he returned to Calcutta, Jan. 1823, Dr. Montgomerie took charge of the Garden till 1827. Wallich seems to have promised to send an assistant from Calcutta Gardens, but did not do so. The Garden, which chiefly contained Nutmegs and Cloves, was abolished later, and no trace of it remains. Dr. Wallich seems to have taken some interest in the development of Singapore, and was one of a committee of three to fix on the site of the town. He built a house, Botany Hall, to stay in during his residence here.

His collection of dried plants was an extensive one, and was eventually distributed with the rest of the East India Company's herbarium. The greater number of species which he discovered here I have been able to find still in Singapore, but some appear to have quite vanished. This is not surprising when it is remembered that at that time the district in which he was collecting, viz. the neighbourhood of the town, was thick jungle, of which nearly every trace has now disappeared under cultivation. In his Catalogue many of the plants are localised "Singapore et Penang," and as I note that many of these are strictly hill plants occurring at a higher elevation than there is in Singapore. I take it that these plants were in a collection of which the exact locality was lost, and that the label perhaps should have been rather "Singapore or Penang." Some few however of the specimens labelled as from this region have never since been found in the peninsula, e. g. Xylia dolabriformis, a
well known Indian tree, and it is probable that the locality is quite wrong.

Col. Farquhar, the first Resident of Singapore, and John Prince, Resident Councillor in 1827, who took a little interest in the botany of the island, are commemorated in the names of some plants, e.g. Myristica Farquhariana, and Erycibe Princei, but little was done in botanical research for many years. In or about 1839, Hugh Cuming well known for his immense botanical and conchological collections in the Philippines, visited Singapore and also ascended Mount Ophir. While in the Straits he seems to have chiefly devoted himself to collecting orchids, and to have sent home a number of live ones, among which were Coelogyne Cumingi, and Dendrobiun longicole. William Lobb, orchid collector for Messrs Veitch, visited Penang and Singapore in 1845, but as mentioned in Journal 25, p. 166, his specimens from the Straits Settlements, Java and India were all mixed up in distribution, so that his localities as quoted in books are quite doubtful. Surgeon-General Maingay during his residence in Singapore made extensive collections, but many of these again were irregularly labelled, and some mentioned in the Flora of British India as from Singapore were probably either collected in Malacca or Penang.

Mr. Murton the first head of the present Botanic Gardens, 1875 to 1880, collected a number of plants, of which a few were sent to Kew, and a few, chiefly ferns, are still in the Botanic Gardens Herbarium. N. Cantley, who succeeded him, employed collectors and obtained a very large number of specimens, but unfortunately hardly any were strictly localised, and many labelled from Singapore in the herbarium, are either cultivated plants or from some part of the peninsula, so that in most cases I have been unable to quote safely from his herbarium.

Among other collectors whose names appear in books, associated to a small extent with Singapore plants, should be mentioned, Dr. Thomas Oxley, who wrote some papers in Logan's Journal, one of which dealt with the Flora of Singapore, but chiefly with Economic plants, while other papers treat of Nutmegs and Gutta percha. He seems to have collected plants, saying that he had collected between 40 and 50 orchids, but what became of his collections and manuscripts, I cannot find
out. He died in or about 1858.

Sir Robert Schomburgk, well known for his explorations in Guiana, where he discovered the Victoria regia, was appointed British Consul in Siam in 1857. He visited Singapore and collected a few plants there, which he sent to Kew, and which were described in the Flora of British India. Some of them, however, were evidently obtained from gardens.

Dr. T. Anderson, 1832 to 1870, was Director of Calcutta Botanic Gardens. He appears to have visited Singapore at some time, and obtained several plants of interest. He devoted himself to the Acanthaceae, and Eranthemum Andersoni Mast, a common garden plant here was named after him.

Mr. R. W. Hullettt made some years ago an excellent herbarium of Singapore plants, which he eventually presented to the Botanic Gardens. Duplicate specimens were sent to Kew and to Calcutta, where they were named, and several new species bear his name.

In the following list all plants with no collector’s name were obtained by myself or by native collectors employed at the Gardens, and the numbers attached are those of my distribution-series. Endemic species, not yet known from elsewhere are marked with an asterisk and introduced plants, which have not properly established themselves but which occur in waste ground and the like, are included in brackets. The Mosses, Lichens, Fungi and Algae, are deferred. Collections of these have been made and submitted to experts, and I hope to publish an account of them at a later date.
DICOTYLEDONS.

DILLENIACEAE.

_Tetracera Assa_ Dec. A scrambling shrub often forming thickets, flowers white or pinkish. Common in open country, Balestier plain, Sepoy lines, Fort Canning, Changi.

_T. Assa var._ Garden Jungle. A very different looking plant, but Dr. King considers it only a large form.

_T. enyandra_ Vah. Climber not rare, Cluny Road, Kranji.

_T. macrophylla_ Wall. Climber common in woods, but seldom to be found in flower. Tanglin, etc.


_Wormia_. Large shrubs or trees with showy yellow or white flowers.

_W. suffruticosa_ Griff. A large bush in damp open country. The flowers are about 3 inches across bright yellow. The fruits when ripe split open like a star and are rosy pink inside, with small black seeds covered with a scarlet aril. The leaves are rather curious from the way in which the winged petioles are closed over the buds. It flowers constantly all the year. Tanglin, Jurong, Pulau Ubin, Pulau Tekong.

_W. pulchella_ Jack. A small bushy tree with oval deep green leaves and pale yellow flowers. It grows in wet places, Tanglin, Bukit Timah Road.


_W. Scortechinii_ King. A small tree with inconspicuous apetalous flowers. Rare, Garden Jungle.

_W. sp_ near _W. oblongifolia_, but having anthers hairy all over and white flowers. Bukit Mandai.
Dillenia indica L. This grand tree with its huge white flowers is doubtfully wild here. It occurs near the Reservoir, Bukit Panjang.

MAGNOLIACEÆ.

This order, chiefly of trees of the hill districts, is not unrepresented here.


Kadsura cauliflora Bl. A climber with rough corky bark and rosy flowers growing on the stem. Garden jungle, Bukit Timah, Kranji.


To this order also belong the Champaks *Michelia Champaka*, and *M. longifolia* Bl. often cultivated for their sweet flowers.

ANONACEÆ.

Stelechocarpus Burahol Hook. fil. "Singapore Lobb." This Javanese plant has never again been collected in the peninsula and is probably wrongly localised.

Cyathostemma Scortechinii King. A big climber bearing small green flowers on the stem, and rather large orange fruits. Common Garden jungle, Bidadari, Bukit Timah, Jurong, Pulau Ubin.


Uvaria. Climbers with purple rarely yellow flowers.

U. dulcis Dunal. Rare, Bukit Timah.
U. Lobbia HooK. fil. Garden jungle,
U. Ridleyi King. Bukit Mandai.
U. macrophylla Roxb. Common all over Singapore.
U. subrepana Wall.* Singapore (Wallich No. 6483). A very little known species, only collected by Wallich.
Cyathocalyx virgatus King. A small tree with green flowers. Rare, Bukit Timah (Hullett).
C. Maingyi Hook. fil. (Cantley’s collection.) Perhaps wrongly localised.
Artabotrys. Climbers with white or green flowers, and very curious woody hooks by which the plant climbs.
A. Wrayi King. Flowers large. Cluny Road, Bukit Mandai.
A. suaveolens Bl. Flowers small. Common all over Singapore.
A. Maingyi Hook. fil. Tanglin.
U. dumosa Roxb. Cluny Road.
U. desmantha Hook. s. A small tree with yellow flowers, Common, Garden jungle, Changi, Chan Chu Kang.
THE FLORA OF SINGAPORE.

U. stenopetala var. A small tree with buff-colored flowers. Garden jungle, Changi, Bukit Timah.

Polyalithia. Small to medium-sized trees.

P. sumatrana King. Flowers green, fruit pink with darker blotches, rare. Chan Chu Kang.

P. Scortechinii King. "Kenanga hutan." A fairly large tree, with large yellow flowers like those of Cananga. Not common, Garden jungle.

P. macropoda King. A tree with large orange fruits very showy. Bukit Timah.

P. Teysmanni King. Common, Chan Chu Kang, Garden jungle.

P. bullata King. Stated in King's Materials to have been collected by me in Singapore, was collected by Cantley and perhaps wrongly localised. It occurs in Selangor and Perak.

P. cinnamomea Hook. fil. is from the same collection, and was also collected by Wallich in Singapore. I have never found it here.

Goniorthalamus. Small or medium sized trees or shrubs.


G. Tapis Miq. Selitar, Jurong.

G. Ridleyi King. A medium-sized tree with large tufts of dull purplish flowers on the stem, chiefly at the base. Sungei Morai, Bukit Timah.

Orophea hastata King. Bukit Timah.


P. ramosissima Hook. fil. Bukit Timah.

Oxymitra calycina King. Dense woods, Garden jungle.

O. affinis King. Sumbawang, Bukit Timah.
Melodorum. Climbers with yellow flowers usually sweet-scented.


* M. manubriatum Hook. fil. Changi, Bedoh.

* M. latifolium Hook. fil. Garden jungle, Toas, Selitar.

* M. cylindricum Maingay. Common, Bukit Timah, Bukit Mandai, Chan Chu Kang, Loyang.

* M. lunajnosum Hook. fil. Fairly common, Bukit Timah, Sumbawang, Jurong.

* M. prismaticum Hook. fil. Garden jungle, Changi, Kranji.

* M. eleyans Hook. fil. Garden jungle, Selitar.

* M. pisocarpum Hook. fil. Bukit Timah, Bukit Mandai, Toas.


* X. dicarpa Hook. fil. Singapore (Maingay). Not seen.


* X. magna Maingay. "Singapore Ridley" in Materials; was not collected in Singapore.


* X. Ridleyi King. * Rare, Changi, Bukit Timah.


Meszettia leptopoda Oliver. A very large tree with green flowers, and large globose fruit containing two very hard seeds, "Poko P'rau." Garden Jungle.

MENISPERMACEAE.

Climbing plants with very small dioecious flowers and drupaceous carpels with the seeds usually curved.

Tinospora cordifolia Miers. Probably introduced. Macpherson Road, Balestier plain, Pulau Ubin.

Tinomiscium petiolare Miers. "Akar Lankap." A stout climber with milky juice, flowers white, fruit green with white spots. A decoction of the roots is used for rheumatism. Common in open woods, Garden Jungle, Siglap, Jurong, Bukit Mandai.

Fioreaea chlorolucu Miers. "Akar Kuning." A big woody climber with yellow juice formerly used in dyeing. The male flowers are white in large panicles on the stem. The females green. The fruit is about an inch long, orange-colored. Common all over Singapore.

Coscinium fenestratum Colebr. "Akar Kunyit, Kunyit Babi." A stout woody climber with large round leaves white beneath and large globular fruits. Common in woods. Chan Chu Kang, Changi, etc.


Limacia fulvina Miers. A low rather slender climber, the leaves covered with a velvety golden olive fur. Common in open country. Tanglin, Bukit Timah, Changi, etc.

J. Kustersi King. A pretty little slender climber with white flowers and yellow stamens. Rare, on bushes by the sea, Changi beach.

Stephania hermandifolia Wall. A slender climber with peltate
leaves, white flowers and red fruits. Edges of jungle, not rare. Chan Chu Kang, Bukit Mandai, Jurong.

_Cycla peliata_ Hook. fil. var. _Arnotti_. Miers. A slender climber with orbicular ovate hairy leaves, small hanging panicles of green flowers and white flat fruits. The natives boil the leaves with sugar and make a kind of jelly not remarkably delicious. Common in hedges, Tanglin, Chua Chu Kang, Pulau Ubin.

**NYMPHEACE.E.**

_Bariera Motleyi_ Hook. var. _Kunstleri_, “Dawn Kalapa.” This grows in shallow muddy streams in thick jungle. It has round dark-colored leaves, and inconspicuous dull colored flowers, greenish or brown outside and yellow and pink within. Capsule pink. Local, Bukit Timah, Ang Mo Kio.

(Velumium speciosum Willd. The Lotus is often cultivated by the Chinese, but not wild here.)

**CAPPARIDE.E.**

_Cleome aculeatum_ Jacq. _Cl. Hulletii_. King. An introduced thorny weed with white flowers, native of the West Indies, occurs round Tanglin and Kallang.

_Cl. viscosa_ L. A sticky weed about a foot tall, with yellow flowers, occurs near the town casually.

_Capparis Finlaysoniana_ Wall. A thorny climber with large white flowers with a yellow spot in the throat, and a sausage-shaped red fruit. Rare. In sandy spots near Changi.

**VIOLACE.E.**

The only genus represented here is the shrubby _alsodeia_ with small yellow and white flowers.

_Alsodeia echinocarpa_ Korth. “Se bilek.” A shrub or treelet with ovate serrate leaves, small white flowers, and cap-
scales covered with mossy hairs. The seeds are used as a purgative. Common in dry woods. Reservoir, Chan Chu Kang, Chua Chu Kang.

A. floribunda King. Woods near Ang Mo Kio.

A. membranacea King. Ang Mo Kio, Changi.


BIXINEAE.

Scolopla rhinanthera Clos. A shrub or small tree, thorny with white flowers and black berries. Sandy spots near the sea. Changi, Serangoon River.

Flacourtia Rukam Zoll. A thorny tree, with small yellowish flowers and globose dull red berries, with a taste of gooseberries. Common in woods and even in thick jungle, and evidently truly wild, but also planted. Bukit Timah, Chan Chu Kang.

Fl. cataphracta Roxb. “Rukam.” A similar tree with smaller leaves. I do not think it is wild though often cultivated and established here and there. It a much better eating fruit than the last.

Fl. inermis Cl. A larger tree, quite unarmed, with thinner narrower leaves. Jurong and Tanjong Karong.

Ryparosa Hullettii King. A small tree with slender spikes of green flowers. Rare in forests. Bukit Timah, Sungei Buloh.

PITTOSPORACEAE.

Pittosporum ferrugineum Ait. “Giramong.” A small tree with yellowish white flowers. Sea shores, Kranji, Changi, Selitar.

POLYGALACEAE.

Polygala brachystachya Bl. A little prostrate herb with yellow flowers, growing in turf or sandy spots. Not common, Gardens, Macpherson Road.
Salomonia cantoniensis Lour. A small branched weed about 3 inches tall with pink flowers. Common in waste ground.

S. oblongifolia Dec. Rare, sandy spots, Changi.

S. aphylla Griff. A very small buff colored saprophytic plant with minute flowers. Rare, in dense wet woods. Chua Chu Kang.

Trigoniasrum hypoleicum Miq. Small tree, flowers white. Bukit Timah.

Xanthophyllum. Large or small trees, with white or pink flowers and globose one or several seeded fruits. "Lima Beruk."


X. obscurum Benn. A large tree with dark green shining leaves, flowers white tinted with rose. Fruit as large as a cricket ball, greyish green with a very thick woody rind orange color inside, and numerous seeds. Woods, Tanglin.

X. ellipticum Korth. A medium sized tree with deep green leaves. Flowers at first white then yellow, with a red calyx. Drupe globular orange turning dark red, with a sweet but rather soapy taste. Tanglin, Changi.


PORTULACACE.E.

Portulaca oleracea L. Purslane. A common succulent prostrate weed with yellow flowers. Waste ground.
P. quadrifida L. A much smaller plant with tufts of white hair on the joints of the stem. Common in and round the town, on the wharfs, etc.

**Hypericaceae.**

Hypericum japonicum L. Small herb with yellow flowers. Pepper plantations, Bukit Mandai, Chua Chu Kang.


C. formosum Benth. A beautiful tree flowering twice a year. The flowers rose-pink, appear abundantly when the tree sheds its leaves. The leaves are red when just open, gradually becoming green. Common in open country, Tanglin, Bukit Mandai, Chua Chu Kang, Bukit Timah.


**Guttiferae.**

Garcinia eugeniefolia Wall. Tree, flowers white, sweet. Woods, Sungei Tengeh, Changi, Chan Chu Kang, Pulau Ubin, Tanjong Gol.

G. rostrata Benth. Flowers white or pink. Woods, Sungei Morai, Chan Chu Kang, Changi.

G. cuspidata King. Rare, Kranji.

G. Hombroniana Pierre. The peach-flavoured mangosteen. The tree resembles the common mangosteen, but the flowers are cream colored, the fruit smaller crimson, with a short beak on which is an entire dotted stigma, the rind is thin and scented like an apple, the pulp acid and scanty but peach-flavoured. Seashores, more rarely inland, Blakang Mati, Chan Chu Kang, Changi, Pulau Ubin.

(G. mangostana L. The mangosteen cultivated everywhere. A wild or reverted form with smaller more acid fruits, occurs near villages.)
G. atrorividis Griff. "Asam Gelugur." A beautiful tree, leaves bright red when young, deep green when old. Flowers large red. Fruit large succulent, flattened at both ends, and grooved all round, orange color stigma and persistent sepals red. It is dried in the sun and used in curries. It makes excellent preserves and pies. Doubtfully wild here. Tanglin, Tanjong Penjuru.


G. Bancana Miq. Tidal rivers, Kranji, Selitar.


G. parvifolium Miq. Garden jungle.

G. Forbesii King. Small tree, flowers cream or pink, fruits small crimson, eatable. Not very common, Garden jungle, Bukit Mandai, Chua Chu Kang.

G. nervosa Miq. Rare, Pulau Ubin, Serangoon Road.


Calophyllum. Trees with white flowers and green or purplish drupes.

C. pulcherrimum Wall. Common, Garden jungle, Changi, Kranji.

C. spectabile Willd. "Bintangor Banut." Garden jungle, Bukit Timah, Selitar

C. retusum Wall. Singapore, (Wallich).

C. canum Hook. fil. Not common, Tanglin, Bukit Mandai.
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C. inophylloide King. Rare, Garden jungle, Changi.


C. Griffithii T. Anders. Rare, Sungei Morai.

C. macrocarpum Hook. fil. Changi.

TERNSTREMIACEAE.

Trees with white or pink flowers usually rather small with many stamens.

Adinandra dumosa Jack. "Tiup-Tiup." A very common tree about 20 feet tall, with white flowers, which are fertilized by bees and wasps, and the pulpy fruit eaten by bats. Open country everywhere.


1. maculosa T. Anders. Rare, North Selitar.

1. miquelii King. "Kwak." A very different looking tree with thick leaves and larger white flowers, and fruits of a Ternstroemia. Edges of Mangrove swamps, local, North Selitar, Changi, Sungei Morai, also woods, Bukit Timah.

1. sp. "Mongol." Rare, Bajau (4004).

1. near integerrima but less hairy. A big tree, Changi.

Ternstroemia penangiana Choisy. A big dense tree with dark green leaves and white flowers. Fruit egg-shaped about 1½ inch long orange, splitting and showing 3 or 4 seeds enclosed in a red pulp. Dry woods near the sea. Bajau, Toas, Batu Putih, Changi, Pulau Tekong.

Savanja tristyla Miq. Fern valley, Bukit Timah.

P. Kunstleri King? Rare, Selitar.

Gordonia excelsa Bl. A tall tree with flowers like those of the tea plant but larger. Fruit a long woody capsule containing thin winged seeds. Rare, Selitar.

Var. with much larger coriaceous leaves, larger flowers and fruits. A very different looking tree, but referred by Dr. King to the same species. Common, Tanglin, Holland Road, Jurong, Changi.

Archieta Vahlii Choisy. "Riang-Riang." A bush or tall slender tree with pretty pink or white flowers. Common in secondary jungle. Tanglin, Jurong, Changi, Blakang Mati.

Dipteroncarpe.

Tall, often vast trees, with straight bare stems. Flowers large or small pink white or yellow, very sweetly scented. Fruit usually with two to four of the calyx lobes developed into long wings, by which the fruit drifts away from the tree in the jungle. The trees usually flower only once in five years. Very few flower annually. They supply good and useful timber, and the resin known as dammar and used for torches, and varnish, &c. Some also produce wood oil.

Dipteroncarpus cornutus Dyer. "Minyak Kerning." One of the best wood-oil trees, even the fruits are often full of oil. Woods, Changi, Bukit Timah.

D. Hasselti Bl. Bukit Timah.

D. grandiflorus Blanco. This has very large winged fruits, 6 inches or more long, red. Bukit Timah.


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II. Griffithii Kurz. Garden jungle (No. 4738).

II. merantha Hook. fil. Singapore (Cantley).


S. gibbosa Brandis. Flowers pink, Garden Jungle.


S. rigida Brandis.* Flowers white. Rare, Garden Jungle.

S. puniciflora King. Flowers yellow, Garden Jungle.

S. bracteolata King. Dalvey Road (No. 1827).

Cotyledolium flavum Pierre. Rare, Sungei Morai.

Vatica Ridleyana Brandis. Common, Garden Jungle, Bukit Mandai, Changi.


Malvaceae.

Herbs shrubs or trees with showy flowers.

Sida. Small shrubby plants with yellow flowers.

S. carpinifolia L. Common everywhere in waste ground.

Abutilon indicum Don. Weed in waste ground. Alexandra Road, Pulau Ubin.

Urena lobata L. "Pulut-pulut." A very common weed with pink flowers opening in the early morning. The leaves are used for adulterating Patchouli, and it is cultivated for its fibre in America, where it is called Cesar-weed. Common in open dry spots; the variety simuata with deeply lobed leaves occurs more usually near the sea.

Hibiscus, several species are cultivated, including H. rosa-sinensis L. the Shoe-flower, "Bunga Rayah," the flowers of which are used for blackening leather, and for coloring sweetmeats red. H. abelmoschus L. the Musk seed, "Kapas hantu," with large yellow flowers with a maroon centre, occurs cultivated and half wild. H. sabdariffa, "Rosella," used as a vegetable or preserve. H. esculentus L. "Lady's fingers."

H. surattensis L. A prickly climbing or creeping plant, with yellow flowers and a maroon eye. Tanglin, Changi, Pulau Ubin.

H. tiliacus L. "Baru." A common sea-coast tree with large yellow flowers with a maroon eye, turning pink soon after opening. All round the coast.

Thespesia populnea Corr. Tree very similar to the last. Sea coasts, common, Toas, Chan Chu Kang, Pulau Ubin.

(Eriodendron anjouanum De C. The tree Cotton, "Kapok." Cultivated.)

(Durio zibethinus L. The Durian. Cultivated.)


Neesia synandra Mast. The woody Durian. A big tree, with rather small flowers and large wooden blue-grey fruits,
which partly open, the walls inside are covered with yellow stinging hairs. The seeds are black with a yellow waxy aril. Rare, Bukit Timah, Chan Chu Kang, Kranji, Chua Chu Kang.

_Cotlosetogia Griffithii_ Benth. "Punggai." A very big tree with small flowers on the old wood and large round woody fruits, the outside, covered with thorns, is black, the inside brilliant orange. The bark is used in tanning. Rare, Bukit Timah, Garden Jungle.

_Boschia Griffithii_ Mast. "Durian-Durian." A medium sized tree with small white flowers and little scarlet durians. Rare, Garden Jungle, Bukit Timah.

**Sterculiaceae.**

_Sterculia macrophylla_ Vent. A big tree with large red pods. Rare, Reservoir Woods, Chan Chu Kang.

_S. toxis_ Wall. A shrub or small tree with green flowers and scarlet pods which split open into 3 to 5 lobes in the form of a star, and show the oblong blue-black seeds suspended all round the margin. Woods, common, Tanglin, Bukit Timah, Pulau Ubin, etc.

Var with very narrow leaves. Chan Chu Kang, Bukit Mandai, Bukit Timah.

_S. rubiginosa_ Vent. A small or medium sized tree very showy in fruit, flowers pink. Common, Tanglin, Bukit Timah, etc.

_S. parviflora_ Vent. Big tree, Garden Jungle.

_S. scaphigera_ Wall. "Kembang Samangko." A very large tree, often over 100 feet tall. The fruit in the form of a long green boat containing an oblong seed at one end. When the seeds are put into water the outer coat swells up and becomes mucilaginous, and this mucilage is eaten with sugar in the morning to cool the blood. Rare, Bukit Mandai.
Tarrietia simplicifolia Mast. A vast tree. Not common, Dalvey Road, Bukit Timah.


Pterospermum diversifolium Bl. A gigantic tree. Pulau Ubin.


Melochia corchorifolia L. A common weed with small pink flowers. Waste ground everywhere.

[Pentapetes phoenicea L. A tall herb with deep red flowers. Waste ground, Tanglin, Blakang Mati.]

Butteria Malayanj Mast. "Akar Kachubong." A big woody climber with curious little white and pink flowers and round prickly capsules. Common, Garden Jungle, Changi, Bukit Mandai, etc.


Commersonia platyphylla Andr. "Durian Tupai." A common tree with white flowers, in large cymes and bristly capsules. Open country Tanglin, Jurong, etc.

TILACEAE.

Brownlowia lanceolata Benth. Rare, "Mangroves, Kranji.


Grewia umbellata Roxb. A stout climber with white flowers. Common, Tanglin, Galang, etc.
**G. fibrocarpa** Mast. Small tree with orange fruits. Rare, Cluny Road.

**G. latifolia** Mast. A large shrub with orange pear-shaped fruits about an inch long, and pleasantly flavoured. Flowers yellow. Tanglin, Bukit Timah, Chan Chu Kang.

The absence of the common peninsular shrub *G. paniculata* Roxb. is very remarkable.

**Triumfetta rhomboidea** Jacq. A common weed with small yellow flowers and prickly fruit. Waste ground, Tanglin, Changi, etc.

**T. pilosa** Roth. Singapore (King) not seen.

*(Corchorus capsularis* L. *"Jute."* Bukit Timah (Dr. King).

**C. acutangulus** Lam. Weed with yellow flowers, rare. Chan Chu Kang.

**Echinocarpus** sp. Tree with white flowers in axillary panicles. Very rare, Kranji (No. 6174).

**Eucarpus.** Trees with white flowers, often showy, and blue or green drupes. *"Mendong."*

**E. punniris** Roxb. Cultivated only. The globose oily blue fruits contain a hard tubercled seed much in request by Tamils as a bead. It is usually 5 grooved, but very rarely a 6 grooved one is found, which commands as high a price as 5 dollars.

**E. porrifolius** Wall. Common, Tanglin, Changi, etc.

**E. stipulatus** Bl. Very common, Tanglin, etc.

**E. salicifolius** King. *"Jurunong Padi."* Not common, Bukit Timah, Selitar.


**E. petiolatus** Wall. Common, Tanglin, Selitar, Changi.

**E. Griffithii** Mast. Common, Tanglin, Selitar.
E. Hullettii King. Not common, Bukit Timah, Bukit Mandai.

E. pedunculatus Wall. Sea shores, Loyang, Toas, Jurong, Pulau Tekong.

E. apiculatus Mast. Rare, Bukit Timah Road.

E. polystachyus Wall. "Jurumong Babi." Flowers buff, common in woods, Bukit Timah, Jurong, Teban, Changi.

E. Jackianus Wall. Not rare, Tanglin, Selitar, Bukit Mandai.

E. Masterii King. Common, Tanglin, Bukit Timah, Kranji, Changi.

E. sp. near E. polystachyus. Rare, Bukit Timah (1919, 3611)

Roucheria Griffithiana Planch. Climber, with yellow flowers, and small red drupes. Common in thickets and woods, Tanglin, etc.


Ixonanthes icosandra Jack. "Pagar Anak." Tree. Common, Tanglin, etc.


MALPIGHIACEE.


Hiptage sericea Hook. fil. Scandent, but forming bushes in open sandy spots. Flowers pink and white. Rare, Changi, Bukit Mandai road.

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GERANIACEE.

(Oralis corniculata L. A garden weed, common.)

(Acervhoa Bilimbi L. the Blimbing, and C. Carambola L. "Kembola," are cultivated.)

Conneropsis macrophylla King. Tree, flowers crimson. Not common, Selitar

RUTACEE.

A number of these are cultivated, among which are Rue (Ruta graveolens) the Kamuning (Murraya exotica) of the ornamental wood of which the sheaths and handles of Krises are made, the Lime berry, "Limau Keah" (Triphasia trifoliolata), the pumelo (Citrus decumana L.), orange (Citrus aurantium), various Limes (Citrus medica L.)


E. glabra Bl. A fine tree. Local, but not rare, Tanglin, Bukit Timah, Chan Chu Kang.

E. robusta Hook. fil. A tall tree, very conspicuous in flower. Not rare, Reservoir, Toas, Bukit Manda.

E. pedunculosa Hook. fil.* A very little known plant, said to have been collected in Singapore by Lobb.

Zanthoxylum ovalifolium Wight. Wallich No. 7469, not seen.


Micromelum hirsutum Oliv. Wallich (No. 8156 c.) Not seen.

Clausena exarata Burm. A small tree with white flowers,
strongly scented foliage and semitransparent pink fruits. Doubtfully wild. Open country, Tanglin, Pulau Ubin.

*Lurungia cleutherantha* Dalz. Climber, very rarely flowering. Changi, Bukit Timah.

*Paramignya grandiflora* Oliver. Very rare, Changi (Hullett); also collected by Lobb.


**SIMARUBEAE.**

*Brucea sumatrana* Roxb. A shrub with aromatic foliage small purple flowers and black berries. Wallich (No. 8182). I have never seen this here, but on introducing some plants from Pahang, it established itself all about Tanglin, the seeds being borne about by birds.

*Eurycoma longifolia* Jack. "Bidara Pahit." An elegant shrub with a very bitter bark used in medicine against fever. Common in dry woods, especially near the sea. Tanglin, Changi, Bukit Timah, Blakang Mati, etc.

*Irvingia Malayana* Oliver. "Pauh Kijang." A gigantic tree over 100 feet tall, with small green flowers, and fruit like mangoes, green with an orange pulp. Tanglin, Reservoir woods, Bajan, etc.

**OCHINACEAE.**


E. minor Jack. Singapore, according to Jack. I have only found it at Pulau Battam, south of Singapore.

Burseraceae.

Triomma malaccensis Griff. A big tree exuding a very aromatic turpentine, fruit green three-winged, containing three oval flat-winged seeds. Not common, Garden Jungle, Bukit Timah.

Canarium Planchoni King. Not common, Bukit Mandai.

C. grandiflorum Benn. Flowers orange. Rare. Changi (Hullett), Bukit Mandai.


C. purpurascens Benn. Not common, Bukit Timah, Changi, Chan Chu Kang.


C. secundum Benn. Not common, Changi Road, Tanglin, Selitar.

C. nitidum Benn. Open woods, common, Changi Reservoir woods, Bukit Timah.


S. apiculata Benn. Flowers greenish white, fruits rosy. Bajau, Bukit Timah.

S. multiflora Benn. Not common, Selitar.

MELIOCEE.


Chisocheton pauciflorus King. Thick woods, not common, Bukit Timah.

Ch. erythrophorus Hiern. Not common, Pulau Ubin.

Ch. macrophyllus King. Rare. A big tree, Pulau Ubin.

Ch. patens Bl. A big tree with long racemes of white flowers, very fetid. Common, Garden jungle, Bidadari, Changi, Selitar.


D. costulatum Miq. A large tree, flowers white. Not rare, Changi, Chan Chu Kang, Bukit Timah.

D. macrothyrum Miq. Selitar.

D. candidiflorum Hiern. A medium sized tree with white flowers on the stem, scented of almonds, and red capsules, containing black seed with a red aril. Common in thick woods, Changi, Chan Chu Kang, Bukit Timah, Pulau Ubin.

D. turbinatum King. Rare, Bukit Timah (8108).

Amoora Aphananicis Schultes. Not rare, Toas, Bukit Mandai, Selitar.

A. rubiginosa Hiern. A superb tree, over 100 feet high, the leaves of a copper color beneath, flowers rose. Jungles, Chan Chu Kang.

A. *rubescens* Hiern. Singapore (Maingay), Selitar.

*(Aglaia odorata* Lour. Cultivated for its sweet flowers.)


A. *glabraflora* Hiern. Small tree, leaves deep shining green, flowers and fruits white. Local. Garden Jungle, Changi.


A. *cordata* Hiern. Rare. Selitar.

A. *tennivariabilis* Hiern. Singapore (Lobb), perhaps an error.


*(Lansium domesticum* Jack. The Duku; cultivated.)

*Carapa obovata* Bl. "Nireh." A big tree, with sweet white flowers and large globular fruits, with corky seeds. The bark is used in medicine for dysentery. Mangrove swamps, very common, Kranji, Serangoon, etc.

**CHAILLETIACEAE.**

*Chailletia deflexifolia* Turcz. A climbing or scrambling shrub, flowers white. Rare, Bajau.

**OLACINEAE.**

*Ochanostachys amentacea* Oliver. "Petaling." A well known timber tree with leaves like those of a beech-tree, small spikes of green flowers, and green fruit with much white milk. Common, Garden Jungle, Changi, Reservoir woods.

*Strombosis verticillifolia* King. Woods, Bukit Timah, Garden jungle, Bukit Mandai.

*Lepiomurus sylvester* Bl. A small shrub, Garden jungle, Bidadari.

*Ctenolophon parvifolius* Oliver. Rare, Garden jungle.
Ximenia americana L. "Bidara Laut." A spiny shrub with white flowers and orange edible drupes. The wood is scented. Sea coasts, Changi, Pulau Selitar, Jurong, Pasir Panjang.

Scorodocarpus borneensis Beec. "Kulim" A large timber tree with white flowers, all parts having a strong smell of onions. Common, Garden jungle, Bukit Timah.


G. lanceolata Kurz. Not common, Bukit Timah.

Lasianthera secundiflora Miq. A large tree, flowers white. Rare, Bukit Mandai, Selitar.


Phytocereus oblonga Wall. A large woody climber with dense racemes of small grey flowers growing on the stem, fruit wedge-shaped brown covered with brown bristles and forming a ball as big as a man's head. The seeds are cuneate oblong and curiously reticulated. Rare, Bukit Timah.

Ph. bracteata Wall. Common, open woods, Tanglin, Tanjong Katong, Bukit Panjang.

Iodes velutina King. Climber. Rare, Bukit Timah Road.


Erythopalum scandens Bl. A slender climber with inconspicuous green flowers, and very curious and ornamental fruit, which at first is an oval drupe, but when ripe the husk becomes bright red and splits into 4 lobes, which recurve and expose a deep blue seed in the centre. Not common, woods, Bukit Mandai, Reservoir woods, Garden jungle.

Pteleocarpa malaccensis Oliver. A fair sized tree, flowers yellow, fruit round thin, winged. Rare, Changi woods.
ILICINEE.

*Ilx cymosa* Bl. A small or medium sized tree with very white bark, more rarely a bush. Flowers very small and green. "Timah-Timah" or "Titimah." Common in open country, Tanglin, Changi, Chan Chu Kang.


CELASTRINEE.


*Lophopetalum fimbriatum* Wight. "Krabu." A tree with yellow petals and the central disc purple. Rare, Bukit Mandai, Changi.


*Kurrinia pulcherrima* Wall. A tall tree with small red flowers. Not common, Bukit Mandai, Gardens.

*K. paniculata* Wall. A large handsome tree with dark green leaves and panicles of small green flowers, with an unpleasant smell. Much frequented by flies. Fruit a heart-shaped red capsule. Common in dry woods, Tanglin, Chan Chu Kang, Bukit Mandai, etc.

*Hippocratea indica* L. A climber with very small white flowers. Local in sandy spots, Changi, Pulau Ubin.

Salacia grandiflora Kurz. "Ampedal Ayam." A shrub half scandent, gnarled, with black stems, small pearly flowers, and eatable orange coloured fruits. Woods and open country, Bukit Timah, Pulau Ubin, Changi, Toas.

Var. longifolia, Changi.

S. latifolia Wall. Singapore (Wallich No. 4222). Not seen.

S. prinoides De C. A slender climber (a large straggling shrub according to King), with very small brown flowers and small globular orange fruits. Not common. Garden jungle, Bukit Timah Road, Pulau Ubin.

S. flavescent Kurz. A climber with yellow or reddish flowers. Not common, Bukit Timah, Tanglin, Changi.


S. sp. near flavescent. Rare, Changi (4785).

S. Lobbii Laws.* "Singapore Lobb." Not seen, very imperfectly known.

Celastrus Championi Benth. var? Sungei Loyang.

RHAMNEAE.


V. madraspatana Gaertn. Rare. Bukit Mandai.


Z. elegans Wall. (Wallich No. 4233). Not seen.

Z. colophylla Wall. A large climber very thorny dark green polished leaves, small white flowers and orange globose eatable fruit. Very common, Garden jungle, Bukit Timah, Selitar, etc.

Var. with small leaves, and smaller fruits. Selitar.
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Z. Horsfieldi Miq. Rare, Bukit Timah.

Colubrina asiatica Brongn. A shrub with green flowers. Sea coasts, Galang.

Smythea reticulata King. Climber. Not common, near the sea. Toas, Serangoon.

AMPELIDAE.

Vitis macrostachys Miq. Hedges, common, Tanglin, Bukit Timah, Jurong.

V. gracilis Wall. Very common, Changi, Reservoir, Tanglin, Selitar, etc.

V. cinnamomea Wall. Not very common, Chan Chu Kang, Reservoir, Bukit Mandai.

V. polyphylla Miq. Rare, Changi.

V. elegans Kurz. Hedges and borders of woods. Very common, Tanglin, Jurong, etc.

V. Lawsoni King. A big climber with large yellow grapes quite eatable. Woods, Bukit Timah, Garden jungle.

(V. quadrangularis Wall. An odd four-angled stemmed vine, with very few leaves; not native, but cultivated here and there.)

V. furcata Laws. A long vine with flat stems 4 angled green with thick bands of brown cork along the edge, grapes black. Common in dense woods, Bukit Timah, Bukit Mandai, Tanglin, etc.


V. cerasiformis Teysm. Bukit Timah.

V. glaberrima Wall. A succulent vine with grey four angled stems and red tendrils, berries black. Very common in hedges. "Asam Riang". Tanglin, Changi, etc.
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V mollissima Wall. "Lakom Gajah." A hairy vine with trifoliolate leaves and large dirty white grapes. Common, Cluny Road, Sungei Buluh, Reservoir woods.

V. trifoliata L. Very common, hedges, Reservoir, Race Course, Kalang Puding.


V. sp. Leaves simple, flowers very small green in axillary panicles, crowded at the ends of the branches. Rare, Selitar.

Pterisanthus coriacea Korth. A very slender vine remarkable for its long flattened crimson flower spikes 3 or 4 inches long one or 2 wide; female flowers small sunk in the spike, males on stalks along the edge, grapes black. Local in thick woods, Chan Chu Kang, Bukit Mandai, etc.

Leea. Large shrubs with green or red flowers in corymbs. "Malli-malli".

L. sambucina Willd. Six to ten feet tall, flowers greenish white. Very common in damp spots. Tanglin, Bukit Timah, Selitar.


L. robusta Roxb. Rare, Blakang Mati.

L. rubra Bl. A smaller plant with red flowers, very pretty. Tanglin, perhaps introduced.

L. Javanica Bl. Singapore (Schomburgk). Not seen.


SAPINDACEAE.

Cardiospermum Halicacabum L. the Balloon vine, is cultivated by the Chinese as a vegetable, and occurs in waste ground. Pulau Ubin, Rochore.
Allophyus Cobbe L. A sea shore shrub with white flowers and red berries. The var. racemosa is the only one here. Common, Kranji, Selitar, Jurong, Alexandra Road.


X. Wallichii King. Singapore, Wallich (not seen).


Pometia gracilis King. Woods, Bukit Timah.

P. alnifolia Radlk. Chan Chu Kang, Bukit Mandai.


G. squamosa Radl. Bukit Timah, Selitar.

G. pubescens Radl. Very common everywhere.

Trigonorchis acuta Radl. Rare, Bukit Timah.

Mischocarpus fuscescens Bl. Bukit Panjang, Pulau Ubin.

M. sumalicus Bl. Tampenih, Serangoon, Changi.

Paranephelium macrophyllum King. Very large tree, with pink flowers, fruit woody covered with processes, brown dehiscing. Bukit Timah.


SAEIACEE.


M. lanceolata Bl. Small tree, not rare. Chan Chu Kang, Jurong, Bukit Mandai

M. Ridleyi King. Common, Garden jungle, Bukit Timah. It also occurs in Johore, near Castlewood.

ANACARDIACEE.


B. sessilifolia Bl. Common, Chan Chu Kang, Jurong, Tampenih

Bouea burmanica Griff. "Ruminiya." A big tree with small acid orange mangos, common, wild and cultivated.

(B. macrophylla Griff. "Kedondong." Cultivated as a fruit tree.)

Mangifera sertophylla Hook. fil. A gigantic tree. Rare, Bukit Timah, Changi.

M. odorata Griff. "Kohini." Bukit Timah, Toas; perhaps only cultivated.

(M. foetida Lour. "Bachang." Cultivated.)

M. lagenifera Griff. "Lanjoot." A magnificent tree, with purple
flowers and large grey pear shaped mangoes, very unpleasant to eat. Jurong, Blakang Mati, etc. Cultivated.

*M. kemanga* Bl. "Kemang." Probably only cultivated, rare.

*M. indica* L. "Mango." Cultivated.


*Parishia pubescens* Hook. fil. A lofty tree, 150 feet tall, flowering before the leaves come out, flowers white. Very rare, Dalvey Road.

*P. pauwijaya* Engler. Rare, Bukit Timah.


*C. Wallichii* King. Dalvey Road, Bukit Mandai, Toas.

*Melanochyla auriculata* Hook. fil. A big tree, with very large stiff leaves and panicles of green flowers fertilized in the evening by brown cockchafers. Wet jungles, Chan Chu Kang.

*Draccontomelum mangiferum* Bl. Rare, Chua Chu Kang.

**CONNARACEAE.**

C. *semidecandrus* Jack. A half scandent bush with lilac flowers, and red pods containing one black seed with a red aril. Dry open country, Toas, Changi, Selitar, Bukit Mandai.

*C. oligophyllus* Wall. Bukit Mandai, Changi.

*C. grandis* Jack. Local. Changi, Pulau Ubin.

*C. ellipticus* King. Bukit Mandai.


*R. rugosa* Planch. "Semilat putih." Common, Changi Road, Selitar.

*R. parallata* Planch. Sungei Buluh, Changi, Kranji.

*R. fulgens* Planch. "Semilat." A tall slender climber with pink and white flowers. The young leaves of a beautiful pink, whence the specific name. A very beautiful plant. The bark is used by natives for colic. Very common, Tanglin, Bukit Timah, Teban.


*A. Hullettii* King. Local, Changi.

*Cnestis ramiiflora* Griff. A climber with brilliant pink shoots, white flowers, and large pear-shaped red fruits. Common in dry woods and open country. Tanglin, Changi, Tanjong Penjuru.
LEGUMINOSÆ.

_Abrus precatorius_ L. A slender climber with pale lilac flowers and red and black seeds. A variety with white seeds occurs and is highly prized by the natives as a medicine. Sea shores, Changi.


_C. retusa_ L. A glaucous herb with showy orange yellow flowers. Sandy shores, Changi.

_C. saltiana_ And. A common weed in waste ground, and sandy places, yellow flowers. Changi, Galang, etc.

_C. quinquefolia_ L. Rare, Kranji.

_C. incana_ L. Flowers yellow. Sea shore, Tanah Merah.

_Flemingia strobilifera_ Br. A shrub. Sea shores, not common, Changi, Blakang Mati.


(V. Catiang End. "Kachang Perut Ayam." Cultivated.)

(Pachyrhizus angulatus_ Rich. "Bengkuang," "Sengkuang." The yam bean is cultivated.)

(Dolichos Lablab_ L. "Karkaras". Flowers blue or white, cultivated.)

_Psophocarpus tetragonolobus_ De C. "Kachang Botor." Cultivated.)

(Clitorea Ternatea_ L. Cultivated.)

_C. cajunifolia_ Benth. A shrub with large lilac white flowers, naturalised from Brazil, round Tanglin, etc. Very common.

(Canavalia ensiformis De C. "Kachang Parang." Cultivated.)

*C. lineata* De C. A creeping bean with pink flowers sweet-scented, beans eatable. Sea shores, common, Changi, Blakang Mati.

*C. obtusifolia* De C. A climber on bushes, flowers pink. Beans said to be poisonous. Sea shores, Toas, Changi.

*Mucuna gigantea* De C. Climber, flowers greenish white. Not common, Blakang Mati.


(Erythrina stricta and *E. lithosperma* Miq. are planted here and there, but not wild.)

*Spatholobus ferrugineus* Benth. "Akar Sejangat." A big liana, one of the best of the water vines, climbing to the tops of the highest trees, flowers deep purplish small. Common, Tanglin, Chan Chu Kang, etc.


*Indigofera hirsuta* L. Sea shore, Teluk Kurau.

*Sesbania paludosa* Roxb. Rare. Marsh near Kranji.

(S. grandiflora Pers. Tree with large white or pink flowers. Cultivated for its flowers, and for the leaves eaten as a vegetable.)

(Tephrosia candida De C. given for Singapore in the "Materials," is only a garden plant.)

*T. Hookeriana* W. & A. Waste ground, Bidadari, probably an escape.

*Milletia eriantha* Benth. A lofty climber with coppery red flowers with a greenish yellow centre to the standard, outside covered with golden fur. Not very common, Bukit Mandai, Garden jungle.
M. Mainagyi Bak. A big climber with large hanging panicles of pink flowers deliciously scented. Pods oblong woody, about 4 inches long, one seeded, wrinkled and covered with fine grey fur. Not common, Tanglin, Chan Chu Kang, Reservoir woods.

M. atropurpurea Benth, is probably not wild here. A fine tree occurs in a garden in Paterson Road.


Derris sinuata Thw. Woody climber, flowers green and white. Tidal rivers, Pulau Ubin.

D. thyrsiflora Benth. Scandent bush, flowers in dense erect panicles, white, pods long and thin, reddish when white. Very common in open country, Tanglin, Changi, etc.

D. uliginosa Benth. “Akar Ketuil”. Scandent shrub, flowers pink. Common on sea coasts and by tidal rivers Rivers Valley Road, Changi, Pulau Ubin, Kranji, Bajau.

D. scandens Benth. Flowers white. Pulau Merambong.


D. sp. with very velvety leaves. Rare, Chan Chu Kang, Changi (6087).

Kunstleria Ridley Prain.* Big climber, flowers small purple almost black. Woods, common but rarely flowering. Garden jungle, Selitar.

Dalbergia Tanglunii. Benth. A woody climber with small
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Greenish white flowers. Woods common, Tanglin, Changi, Pulau Ubin, Sumbawang.


_D. velutina_ Benth. Rare, Changi.

_D. pseudosisssoo_ Miq. Climber, flowers white. Common, Garden jungle, Bukit Mandai, Changi, Selitar, Bajau.

_D. Hulbettii_ Prain. Flowers white produced when the leaves are fallen. Rare, Thomson Road, Selitar.


_Pterocarpus indicus_ Willd. The Angsana, or Sena, planted only.


_Uraria crinita_ Desv. Small shrubby plant with a tall spike of blue flowers, very beautiful; on banks sporadically. Orchard Road, Scott’s Road.

_Alysicarpus vaginalis_ Miq. A slender herb, flowers black purple. Changi, Teluk Kurau.

Var. nonnularisfolia Pulau Ubin (Kunstler).

_Eschyphoneme indica_ L. Shrubby weed, Galang.

_Desmodium triflorum_ De C. Prostrate herb in grass, flowers pink. Common, Tanglin, Changi.

_D. heterophyllum_ De C. Common over the whole island.

_D. umbellatum_ De C. A big shrub, flowers white. Sea coasts all round the island.

_D. polycarpum_ De C. A shrubby plant with erect racemes of deep crimson, or rarely white flowers. Common in open country, Tanglin, Changi, Selitar, etc.

Var. ovalifolia. Rare, Ang Mo Kio.
**Ormosia macrodisca** Bak. A big tree, flowers pink, pod round and flat reddish pink with a large scarlet and black seed. Rare, one tree in Cluny Road.

*O. parvifolia* Bak. Not a very large tree, leaves small deep green, flowers white, pod round, seed red. Not rare. Blakang Mati, Changi, Pasir Panjang, Reservoir.

*O. microsperma* Bak. Var. *Ridleyi*. Tree about 50 feet tall, flowers white. Rare, Selitar, Tanglin.

*Cassia obtusifolia* L. A common weed with yellow flowers. Waste ground, Tanglin, Galang.

*C. hirsuta* L. A hairy weed with yellow flowers. Common, Tanglin, etc.

*C. occidentalis* L. A common weed.


*C. siamea* Lam. Tree, yellow flowers. Occurs near Tanglin, but doubtfully wild in Singapore.

*C. Leschenaultiana* De C. A pretty shrublet with yellow flowers. Common round Tanglin, Bukit Mandai.


*Dialium laurinum* Bak. Kranji, Bukit Timah.

*D. Maingoyi* Bak. Bukit Timah.

*D. Wallichii* Prain. Common, Garden jungle, etc.

The *Dialiums* are big trees, which supply the well known timber "Kranji." The fruit, a velvety black pod filled with a sweet pith enclosing a single seed, is eaten by natives and sold in the shops.

*Bauhinia purpurea* L. is quoted in books for Singapore, but is only in cultivation.
B. semibijida Roxb. Climber with white flowers. Common, Bukit Timah, Bukit Mandai, etc.

Cynometra cauliflora L. "Nam-nam." Cultivated

C. ramiiflora L. var heterophylla. Shrub. Rare, river banks, Sungei Jurong.

Sindora Wallichiana Benth. "Saputi." A very fine tree, with green flowers. The calyx is covered with soft processes, not firm prickles as has been described. The flowers are fertilized by flies, which visit them in such quantity that I have heard the roar of their wings from the base of a very lofty tree, when in flower. The pods are flat, usually one seeded and covered with prickles which exude a gum. Garden jungle, Changi, Dalvey Road.

S. intermedia Bak. Changi, Blakang Mati.

Afzelia retusa Kurz. A small tree, flowers white; sea coasts, common, Bajau, Changi, Pulau Ubin. Selitar, Serangoon.

Peltophorum ferrugineum Benth. "Batai." A handsome tree with yellow flowers. Rare, Changi.

Cesalpinia nuja Ait. Thorny climber, flowers yellow. Sea shores Changi, Selitar.

C. tortuosa Roxb. Rare, Selitar.

Mezoneuron sumatranum W. and Arn. A very thorny climber with erect racemes of tubular flame-coloured flowers and thin flat pods bright red. Either in fruit or flower, this is a most beautiful plant. Not very common. Along the Bukit Timah Road. Sungei Jurong.

Parkia speciosa Hassk. "Petai." A tree with pear-shaped heads of small yellowish flowers on long hanging peduncles, and flat green pods, eaten by the Malays. Common wild and also planted. Bukit Timah, Bajau, Changi, Selitar, etc.

Entada spiralis Ridl. Woody climber with curious curled pods and very large brown subtriangular seeds. Common all over Singapore.
Adenanthera pavonina L. "Saga." Commonly planted and perhaps wild.

* A. bicolor Moon. A more compact tree than "Saga," the seeds half red and half black. Bukit Timah, Bukit Mandai, Bedoh, Pasir Panjang, etc.

* Neptunia oleracea Lour. The water-sensitive plant, a floating plant with bright yellow flowers. Cultivated as a vegetable and formerly very abundant in Singapore, now rather uncommon.

* Xybia dolabriformis Benth. "Singapore Wallich No. 5279." This has never again been found in the peninsula, and is probably wrongly localised.

* Leucaena glauca Benth. Occurs near villages, doubtless planted

* Mimosa pudica L. The sensitive plant, is a well known pest over the whole island.

* M. sepiniia Benth. An introduced shrub very common along the Bukit Timah Road, Dalvey Road, and near the Reservoir.


* A. pennata Willd. A thorny climber, climbing very high. Tanglin, hedges and thickets.

* Serianthes grandiflora Benth. Singapore (Wallich). Not seen.

* Albizzia littoralis Teysm. A tree with pink heads of flowers. Rare, Pulau Ubin.

* A. pedicellata Bak. Rare, Kranji Road.

* A. lucida Benth. Singapore Jeti Baker, possibly from a cultivated specimen.

* A. odoratissima Benth. \* A. Lebbek Benth. A. moluccana, some-
times planted, establish themselves in many places.

Pithecolobium dulce Benth. Cultivated only.

P. conjertum Benth. A tree, rare, Bedoh, Selitar.

P. bubalinum Benth. Rather rare, Tanglin.

P. lobatum Benth. "Jering." Tree with fetid pods, very popular with Malays. Common over the whole island.

P. microcarpum Benth. A common little tree with white flowers and bright orange curly pods, very pretty when in fruit. Tanglin, Chan Chu Kang, Bukit Timah, etc.

P. ellipticum Hassk. "Jering hutan." A large tree with big curled orange pods from which when ripe hang black seeds covered with a grey bloom. Not rare, Selitar, Pulau Ubin.

P. costatum Mart. Common, Tanglin, Changi, Selitar, etc.

P. clypearia Benth. Common, Selitar, etc.

P. angulatum Benth. Very common in open country, woods, etc. Tanglin, Changi, Chan Chu Kang, etc.

Rosaceæ.

Parinarium costatum Bl. A big tree with white flowers and hard brown drupes with white dots. Rare, Chan Chu Kang.

P. oblongifolium Hook. fil. "Balau." A well known timber tree of great size with large leaves white beneath. Rare, Bukit Timah, Bukit Mandai.

P. Griffithianum Benth. A big tree with deep green leaves, corymbs of white flowers and yellow plum-like fruits. Local, Fort Canning, Changi.

Parastemon wrothyllum De C. Sandy places near the sea, Changi, Chan Chu Kang.

Pygeum Maingayi Hook. fil. Tree with white flowers clustered on the branches. Not common, Cluny Road.


P. persimile Kurz. Rare, Kranji Road.

Rubus Moluccanus L. The common wild raspberry, fruit red small and very poor. Thickets over the whole island, very common.

R. glomeratus Bl. I doubt this than a variety, it has a longer terminal panicle and more entire leaves, and usually replaces typical R. Moluccanus in the hills; I have gathered it however in Jurong.

SAXIFRAGACEE.

Polyosma fragrans Benn. Wallich No. 8472. Not seen.

P. Ridleyi King. * Tree with white flowers. Rare, Selitar.

RHIZOPHOREE.

Rhizophora mucronata Lam. "Belukup." A common mangrove used for firewood. All mangrove swamps. Jurong, Bajau, Changi.


Ceriops Candolleana Arn. "Tengah." Common. Bark used in dyeing either a red brown when used alone, or purple or black in combination with Indigo.

Bruguiera eriopetala W. and A. Common, Bakau, Kranji, Jurong.

B. gymnorhiza Lam. Common, Jurong, Changi, Sungei Miora.
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B. Caryophylloides Bl. "Bakan Putih." Very common, River Valley Road, Seritai, Serangoon, Jurong, Pulau Ubin.


Carallia Scortechinii King. Tree, rare, Changi.


Gynotoches acillaris Miq. "Mata Keli." Tree with whorls of small greenish flowers, and very small red or black berries; very common in secondary jungle and woods, all over the whole island.

Anisophyllea disticha Baill. An elegant shrub with pendulous branches and distichous leaves. Common in woods, Tanglin, Changi, Seritai, etc.

A. Griffithii Oliver. Rare, Chan Chu Kang.

Combretaceae.


T. Catappa L. "Ketapang." Common along the coasts, and often planted along road sides.

T. subpathulata King. A very large tree with winged fruits. Near the Garden jungle, Bukit Timah Road.


Lumnitzera coccinca W. & A. Tree with panicles of scarlet flowers. Common near the sea. Bajau, Serangoon, etc.

L. racemosa Willd. Flowers white, Jurong.
Combretum trifoliatum Vent. I have found fruits of this floating in the sea near Singapore.

C. sundaeum Miq. Climber, flowers green, Changi, Chan Chu Kang.

Illigera appendiculata Bl. Climber, rare, Bukit Timah.

**MYRTACEAE.**

Melaleuca leucadendron L. "Gelam." Wild at Tanah Merah, near Changi. Kampong Gelam may perhaps take its name from trees formerly growing here.


T. sp. flowers small white, leaves more coriaceous. Woods, Bukit Timah, Bukit Mandai.

T. Merguensis Griff. Sungei Morai.

(T. rufescens Pierre. A shrub much resembling Sideroxylon ferrugineum, apparently this Cochin Chinese plant occurs on cliffs of the island Pulau Battam, South of Singapore.)

Rhodamnia trinerva Bl. A medium-sized tree with white flowers, often as white as Hawthorn when in flower; berries red turning black. Very common all over Singapore. The var. concolor with leaves green on both surfaces grows in shady places; var. spectabilis with the backs of the leaves silvery is common in open country, but the two varieties pass into each other and are often indistinguishable.


Eugenia. This genus of trees, probably the largest one known, is a very difficult one, and the identification of many of the species in this list must be somewhat doubtful at present. All in Singapore are trees of no very great size, with white, pink or rarely green flowers. Those with large flowers and fruits are usually known as Jambu, by the Malays, those with smaller flowers, as Kelat.

(E. (Sect. Jambosa) Malaccensis L. "Jambu Bol." Flowers large brilliant pink, fruit large white or pink, eatable. Cultivated.)

(E. aqua Burm. "Jambu Ayer Mawan." Flowers white, fruit semitransparent rose or white, eaten. Cultivated).

(E. Jambos L. Flowers white. Cultivate).}

E. densiflora De C. Flowers pink, fruit globular pinkish, not rare, Changi, Siglap, Bukit Mandai, Bukit Timah road.


E. lepidocarpa Wight. "Samak Tebrau." Big tree, flowers white; bark used for tanning nets. Common on the sea coast and inland. Tanglin, Bajau, Kranji, Changi.


E. pendens Duthie. Dense woods, Bukit Timah.


E. (Syzygium) cymosa Lam. "Kelat Merah." Small tree, flowers
white.  Bentley’s Hill (Hullett), Changi, Teban, Pulau Tekong.

_E. myrtifolia_ Roxb.  River banks and near the sea.  Sungei Morai, Selitar, Sungei Jurong.


_E. clarijlora_ Roxb. and _E. leptantha_ Wight.  “Singapore and Penang, Wallich.”  Not seen; probably both from Penang.


_E. chlorantha_ Duthie.  A very handsome tree with bright pink flowers.  The name is a very unfortunate one, the petals are greenish white but very inconspicuous beside the brilliant red stamens.  Cluny road, Bukit Timah, Tanjong Gol.

_E. lineata_ Bl.  One of our commonest trees in open country, flowers and fruits copious white.  Tanglin, etc. whole island.

_E. pyrifolia_ Wall.  Cluny road, Changi.

_E. Thumra_ Roxb.  Garden Jungle.

_E. scoparia_ Wall.  Singapore (Wallich 2594, not identified).

_E. venulosa_ Wall.  Not common, Tampenis, Bukit Mandai.


_E. papillo]%a_ Duthie.  Big tree with red flaky bark.  Wet jungles common, Cluny road, Bukit Timah, Bukit Mandai.

_E. bracteolata_.  Garden Jungle.

E. anisosepala Duthie. Shrub near sea shore. Pulau Ubin (Hullett).

E. microcalyx Duthie. Bukit Timah.

E. Griffithii Duthie. Woods, Changi, Selitar, Garden Jungle, Bukit Timah.

E. nitida Duthie. Small tree, flowers pink. Ang Mo Kio, Bukit Mandai, Bukit Timah.


(E. Jambolana Lam. “Jiwat.” Planted here and there)

And a considerable number of undetermined species.

Barringtonia speciosa Forst. Sea coasts, Changi, Pulau Tekong, Beach road.

B. inclita (Miers). “Putat.” Sea shores, Kranji, Blakang Mati, Galang. This is certainly distinct from B. racemosa of the Bot. Mag. t. 3831, to which it is referred in the Flora of British India.

B. conoidea Griff. A large shrub, tidal rivers, Selitar.

B. cylindrostachya Griff. Shrub with very long racemes of pink on white flowers. Sandy woods. Toas, Changi, Pulau Tekong, Macpherson Road.

B. pendulum (Miers). Rare, Bajau.

Careya n. sp. A huge tree with large flowers, petals white, stamens white with pink bases. Leaves oblong obtuse coriaceous. Fruit like an apple with grey brown seeds and a strong coarse odour. Rare and seldom flowering. Garden Jungle.

MELASTOMACEAE.


M. molle Wall. Singapore Wallich. No. 4046; otherwise only known from the Philippines.
M. decemfidum Jack. Singapore, Wallich. (Evidently an error for Penang.)


O. borneensis Cogn. Rare, tidal rivers, Selitar.

O. paniculata Korth. Singapore, Wallich, 4083. (Not seen).

Sonerila heterophylla Herb. Dense woods, Chan Chu Kang, Bukit Timah.

S. moluccana Roxb. Dense woods, Chan Chu Kang.


Marurnia rhodocarpa Jack. A climber with large handsome flowers white with a purple eye. Common, Tanglin, Jurong, Bukit Timah, Choa Chu Kang, Selitar.


D. gracilis Bl. Slender climber, flowers white. Bukit Mandai, Bukit Timah, Pulau Ubin.


D. intermedia Bl. Rare, Bukit Mandai.


A. annulata Triana. Rare, Pulau Ubin.

*M. macrocarpa* Bl. Rare, Bukit Mandai.

Medinilleopsis sessiliflora Cogn. Epiphyte, with waxy pink flowers. Mangrove swamps, common, Toas, Selitar, Kranji, Sungei Buloh.


These two Pachycentrias are classed by Beccari as ant-plants (*Piante hospitatrici*), but the ants do not live in the swollen stems as suggested by him, the swollen portions being quite solid.

*Pogonanthera reflexa* Bl. Epiphyte, more rarely terrestrial, usually near the sea, Kranji, Changi, Selitar, Toas, Bukit Timah.

(*Clidemia hirta* Don. A coarse weed, native of South America, has established itself in Tanglin, near Fort Canning and elsewhere.)

*Pt. capitellata* Jack. Tree, flowers blue, not common, Toas, Selitar.


*Pt. paniculata* Benth. Rare, Chan Chu Kang.


*K. acuminata* Dene. Collected here by Walker and Maingay; not seen.

*Memecylon*. Trees with small blue or white flowers; a very difficult genus, as the species appear to run into each other.
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M. *myrtinoides* Bl. Bukit Mandai.


M. *levisatum* Bl. "Dulek." Common on the coasts, Kranji, Sungei Buluh, Bukit Mandai, Pulau Tekong.

M. *acuminatum* Bl. Thick woods, Bajau, Bukit Timah.

M. *grande* Retz. A very handsome plant, with panicles of blue flowers. Selitar, Garden jungle, Serapong, Pulau Mera-awan.


M. *amplexicaule* Roxb. Rare, Chan Chu Kang.

M. sp. Garden jungle (4436).

M. sp. Bukit Timah (6788).

M. sp. Leaves very narrow. Garden jungle (5753).

M. sp. Sungei Morai (3840).

**LYTHRACEÆ.**

*Pemphis acidula* Forst. A bush with white flowers. Sea coasts, not common, Changi, Selitar.

*Lagerstroemia Flos-Reginae* Retz. Given for Singapore in King's "Materials," is not wild here.

*Sonneratia*. Large sea-shore trees, often growing in the sea itself.

S. *acida* Linn. Leaves narrow, stamens red. Rare. Balestier plains, by streams.


S. *Griffithii* Kurz "Pedada." Toas, Changi, Jurong.
ONAGRACEAE.

Herbs or shrubs.

*Jussiaea repens* L. Floating in streams with swollen pithy floats. Flowers white with a yellow centre. Tanglin.

*J. suffruticosa* L. Shrubby, about 5 feet tall with yellow flowers. Common, Serangoon, Kallang, Thomson Road.


*Ludwigia prostrata* Roxb. A small herb with small yellow flowers. Common in wet spots, Tanglin, etc.

SAMYDACEAE.

Trees or shrubs with usually very small inconspicuous flowers.

*Casearia Lobbiiana* Turcz. A small shrub, not a tree as in King’s “Materials,” usually about 3 feet tall. Flowers minute green, capsule orange with red seeds. Common in woods all over Singapore.

*C. escu'enta* Roxb. Woods, Sembawang, Selitar.

*C. Clarkei* King. Rare, Chua Chu Kang.

*Ozmeilia Mainqayi* King. Tree, not rare, Bukit Timah, Kranji, Bukit Mandai, Toas.

*Homalium grandiflorum* Benth. Tree, rare, Kranji.

PASSIFLOREAE.

*Modecca Singaporeana* Mast. Climber, flowers green, capsule red with black seeds in a white aril. Common, Tanglin, Bukit Timah, Bukit Mandai, Selitar, Pulau Tekong.

*M. populijolia* Bl. Less common, Bajau.

*Passiflora foetida* has established itself in waste ground near Tanglin and elsewhere, as have to a smaller extent *P. suberosa*, *P. minima*, and *P. quadrangularis*. 
A good many of these are cultivated by the Chinese here, but very few are wild.

**Trichosanthes.** Slender climbing pumpkins with white fimbriate tubular flowers, opening about ten o'clock at night, and egg shaped crimson fruit yellow inside the flat seeds enclosed in a dark green slimy pulp. They are said to be poisonous, but are used by the natives in medicine, the pumpkin being squashed on the head to cure headache.

*T. Wallichiana* Wight. Very common in woods and hedges, all over Singapore.

*T. Wawruci Cogn.* Not rare, Tanglin.

*T celebica Cogn.* Leaves deep green rather stiff and shining trifoliate. The fruit much larger and cylindrical oblong. Tanglin, Choa Chu Kang.


**FICOIDEAE.**

* Sesuvium portulacastrum* L. Herb, flowers pink. Tidal mud, Changi, Tampenis road.


**UMBELLIFERAE.**

This order, as elsewhere in the tropics, is very scantily represented. I have doubts as to any of the species being native.

*Hydrocotyle asiatica* L. "Pegaga." A very variable creeping herb, much in request as a salad and as medicine, it is regularly collected and sold in the herb shops. Very common over the whole island in grassy spots.
H. *rotundifolia* Roxb. A very small-leaved species. Occurs in flower beds in the botanic gardens as a weed.

*Eryngium petiolum* Jacq. A prickly herb with a nauseous odour. Eaten by Chinese. About villages, Changi, Choa Chu Kang, etc. A native of the West Indies.

Araliaceae.

*Aralidium pinatifidum* Miq. “Tinggal Balai.” A shrub or small tree with lobed or entire leaves, panicles of small green flowers and large drupes, at first white, when ripe black with an unpleasant soapy taste. Common, Bukit Timah, Jurong, Kranji.

*Heptapleurum aureum* Seem. Epiphyte usually in mangrove swamps, the lower leaves are trifoliolate, the upper ones simple. Not common, Kranji, Selitar, Pulau Ubin.


H. *subulatum* Seem. Epiphyte on trees in woods, not common, Chua Chu Kang.


H. *Ridleyi* King* An epiphyte, or a shrub on rocks near the sea. Flowers yellow. Not rare, Kranji, Sungai Morai.


*Arthrophyllum diversifolium* Bl. “Jolok Hantu.” A tree about 20 feet tall with green flowers and black fruit, very common all over Singapore in open country.

Cornaceae.

*Mareea nobilis* C. B. Clarke. “Sutubal.” Big tree. Rare, Bukit Timah.

M. *ebenacea* C. B. Clarke. “Lidah Kerbau” (Buffalo tongue.)
A very fine and large tree with white flowers. A good timber; the fruit is large and deep purple. Garden jungle.

M. Griffithii C. B. Clarke. Rare, Sungei Buluh.

M. sp. "Kayu Tas." Rare, Ponggol.

This tree is supposed to have remarkable powers in driving away tigers, and the Malays often wear bits of its wood to protect them from these animals.


**Caprifoliaceae.**

Viburnum sambucinum Reinw. A large bush with white flowers and red drupes. Rare, Road to Kranji near Bukit Mandai.

**Rubiaceae.**


S. subdita Miq. Rarer, Kranji.

S. Maingagi Hav. Bukit Timah Road.


Uncaria. "Akar Kait-Kait." There are a number of kinds of wild gambiers, all are climbers, and often climb very high by the aid of short hook-shaped branches, whence the native name (Kait, a hook). Some attain a great size, as thick as a man's leg, and these can be safely depended on
as water-vines, supplying an excellent clear water, to obtain which it is only necessary to cut the stem through at one blow of a parang, as high as can be reached and then cut through it again about three feet below, when the water will drip rapidly from the cut portion. A piece 3 feet long cut like this will give about half a pint of water. The flowers are produced in balls two inches or more through, and are usually green and reddish. The fruits are capsules, with very fine winged seeds.

*U. pedicellata* Roxb. "Akar Sulumbah." One of the biggest species, with very large flowers covered with white silky hairs. Common on edges of woods, etc. Tanglin, Bukit Timah, Toas, Chan Chu Kang.


*U. orata* Hook. fil. Rare, Tanglin near the Gardens.

(*U. gambir* Roxb. The gambier plant is cultivated and often persists long after cultivation has been abandoned. It is probably not a native.)

*U. jasminiflora* Wall. Flowers greenish white. Not common, Dalvey Road, Jurong, Selitar.

*U. glabrata* De C. Not very common. Bukit Timah, Bukit Mandai, Pulau Ubin.

*U. ferrea* De C. Chan Chu Kang, Chua Chu Kang.


*U. dasyoneura* Korth. was said to have been collected here by Lobb. Probably an error for Penang.

*Coptosapelta flavescens* Korth. A climber with sweet greenish white flowers. Rare, Chua Chu Kang.
Dentella repens Forst. "Bunga Karang." A little creeping weed with white flowers. Common in waste ground, Tanglin, Galang, etc.

Argostemma parrifolium Benn. A. elatostemma Hook, and A. spinulosum C. B. C., collected by Lobb and labelled Singapore, were doubtless mislabelled. The Argostemmas are all hill plants.


II. auricularia L. Somewhat resembling the last, but less hairy, and with white flowers. Common, Tanglin, Chan Chu Kang, Toas.

II. pinifolia Wall. A common weed in sandy spots with narrow linear leaves and white flowers. Changi, Teluk Kurau, var. coespitosa. A much more tufted form, grows in the same places.


Oldenlandia corymbosa L. A common little annual weed in waste ground with white flowers. Very variable, the variety alsinifolia is as common as any form. Tanglin, Changi, etc.

O. difusa L. Common in sandy spots. Tanglin, Changi, Jurong.

O. Heynici Br. Tanglin in grass plots.

O. trinervia Retz Sandy places, Galang, Tanglin.

**Ophiorrhiza Harrisiana** Heyne. var. A small herb with white flowers. It differs from the type in being very much more pubescent, and having pubescent capsules, and is perhaps a distinct species. Damp rocks in jungles. Common, Chan Chu Kang, Bukit Timah, Bukit Mandai, Chua Chu Kang, Pulau Ubin, Jurong.

**Mussaenda glabra** Vahl. "Balik Adap." A common and conspicuous shrub with orange or yellow flowers, and one lobe of the calyx developed into a large white leaf-like limb. Very variable. In the typical form the leaves are narrow lanceolate and glabrous in another they are ovate and pubescent. In the var. *setulosa* broad and rounded with bristles on the midrib above and pubescent beneath. Common all over Singapore.

**M. variabilis** Hemsl. A half scandent shrub with large star-like flowers, at first scarlet, then orange. Common in the peninsula, rare in Singapore. Selitar.

**Lucinea morinda** De C. Local in deep wet jungle. Bukit Mandai, Chan Chu Kang.

**Adenosacme longifolia** Wall. A slender shrub about 3 feet tall with small flowers, and translucent white berries. Damp rocky ravines. Bukit Timah.

**Urophyllum.** Slender shrubs, rarely small trees, with very small white flowers in axillary clusters and yellow or orange berries.

**U. Griffithianum** Wt. Common in woods, Changi, Bukit Timah, Bukit Mandai, Sungei Buluh.

**U. glabrum** Bl. Very common, Bukit Timah, Chan Chu Kang, Garden jungle,

**U. streptopodium** Wall. Common, Garden jungle, Bukit Mandai, Pulau Ubin.

**U. hirsutum** Wt. Common, Kranji, Toas, Selitar.


W. mollis Wall. Small tree, Garden jungle, Bukit Mandai, Selitar.


Gardeniopsis longifolia Miq. This curious shrub grows in woods. The flowers are seldom produced, they are fairly large and white tinted with rose. Miquel's description of the plant, as obtained by him in Sumatra, fits the peninsular species very well. Bukit Timah.

Randia fasciculata De C. A thorny shrub, common near the sea, Changi, Pasir Panjang, Balestier plain, Teluk Kurau.


R. angulosa, Canthium angulosum Wall. A strong spiny climber like the last, but with much smaller flowers in dense heads. It is indeed referred to that species as a variety in the Flora of British India, but seems to me utterly different. Rare, Garden jungle.


R. anisophylla Jack. "Simpoh." A medium sized tree with small white flowers, and oblong green fruits, woody, containing many flat seeds in a sweet black pulp, eaten by monkeys, but said to be poisonous by the Malays. Common in woods, and secondary jungle all over Singapore.
R. macrophylla Br. 'Delima hutan.' A small shrub with large white trumpet-shaped flowers 4 inches across, white with dark purple spots in the mouth. A most beautiful plant. Common, Garden jungle, Changi, Bukit Timah, etc.

Gardenia tubifera Wall. A shrub or large tree with large sweet-scented flowers opening nearly white and becoming orange very quickly. Dense woods and river banks, not very common here. Garden jungle, Changi, the Reservoir.

G. Griffithii Hook. fil. A slender straight tree, with much larger flowers than the last and very large globose fruit. Local, damp thick woods. Bukit Timah, Selitar, Sungei Buluh, Bukit Mandai.

G. speciosa Hook. *Singapore, Lobb,* I have not seen. This fine gardenia has only been collected by Lobb and never met with again.

Petunga venulosa Hook var. (?) Small tree, possibly a distinct species. Garden jungle.

Scyphiphora hydropityllacea Gaertn. ‘Chingum.’ A very common sea shore shrub, with small white flowers. The seeds may often be seen thrown up on the sea shore in great quantities. Along the coast with mangroves.

Jackia ornata Wall. A tall slender tree about 20 feet tall, with drooping panicles of rosy white flowers, and red fruits, very beautiful. Common in open swamps and wet borders of woods. Dalvey road, Bukit Timah, Changi, Selitar.

Guettarda speciosa L. A common small or medium sea-coast tree, flowers white, Changi, Selitar.

Timonina Jambosella Thw. A very common tree 12 to 20 feet tall, with small yellow flowers. Secondary jungle everywhere.


C. glabrum Bl. A tall tree, 20 feet high, with small greenish white flowers and large grey-green plum-shaped fruits containing two 3-sided stones. Woods, Garden road, Toas.

C. confertum Korth. Garden jungle (4124), Selitar, Pulau Tekong.

C. sp. "Gading." The white wood, suggesting ivory, gives it its native name, the leaves are used for making a kind of tea. Not rare, Tanglin, Thomson Road, Selitar, Jurong (6506).

C. horridum Korth. "Bulangan Tikus." A small thorny shrub, with small green flowers and plum-like yellow fruits. Common especially near the coast in dry spots. Tyersall, Tanjong Katong, Bukit Timah, Changi, etc.


I. fulgens Roxb. "Bunga Pechah Priok," lit. the broken pot, the red spreading corolla lobes supposed to resemble a broken earthenware pot. One of the showiest native plants, the splendid orange red trusses of flowers being most conspicuous. Common in woods, Tanglin, Bukit Timah, Changi, Pulau Tekong, etc.

I. congesta Roxb. A similar plant with broader leaves and shorter flowers. Common, Changi, Chan Chu Kang, Pulau Ubin, Garden jungle.
I. concinna Br. A shrub or small tree, flowers red or yellow. Rather rare, Chan Chu Kang, Chua Chu Kang.

I. parijflora Vahl. A tree with small yellow flowers. Rare, Chan Chu Kang.

I. amena Wall. Shrub with orange red flowers not common, Serembun, Chua Chu Kang.

Pucella indica L. "Jarum-Jarum." A large bush with greenish white flowers, Kranji, Bukit Timah, Chan Chu Kang.

Morinda citrifolia L. "Mengkudu." A small rarely large tree with white flowers, and large pulpy semitransparent heads of fruits. The bark of the root is used for dyeing and tanning nets, also in native medicine. The fruit is used as soap and eaten. It is very doubtfully wild, though it is very common in waste ground.


M. persicifolia Ham. Singapore (Maingay); not seen.

M. umbellata L. Climbing or erect shrub, heads of fruit small orange. Very abundant in open country near the sea. Changi, Pulau Ubin.

M. sp. A tall climber with slender stems pubescent leaves and small orange heads of fruits. Garden jungle.

M. sp. "Subong Akar Darat." A scandent shrub with thick leaves pubescent at the back, flowers few in a head white with a long tube and pubescent mouth, very fragrant. Borders of woods, Changi, Pulau Ubin, Pulau Tekong.

Prismatomeris albiflora Thw. A pretty shrub with white flowers. Open places near the coasts, also in swampy woods. Changi, Bajau, Selitar, near the Bungalow.

Gynochthodes sublinceolata Miq. A climber with white flowers
and curious lead-grey fruits. Common near the sea, rarer inland, Changi, Tanglin.


Psychotria. A large group of shrubs or climbers with white or green flowers, and black orange or white berries.

Shrubs. Berries orange or black.

P. stipulacea Wall. Not common, Bukit Timah.

P. angulata Korth. Changi, Garden jungle.

P. Helicteres Kurz. Common, Garden jungle, Jurong, Selitar, Kranji, etc.

P. Malayan Jack. Fruit black. Bukit Timah (6468), Bukit Mandai, Pulau Ubin.


P. montana var. tabacifolia Wall. Singapore, Wallich 8331. (Not seen.)

Climbers, berries white or green.

P. polycarpa Miq. "Akar Chinta Mula." Common in hedges, Garden jungle, Changi, Kranji, etc.

P. sarmentosa Bl. Common, woods, Serangoon, Changi, Bukit Mandai, Selitar.


P. morindiforma Wall. Rather common, Sungei Bulub, Bukit Mandai, Chan Chu Kang.

P. ovoidea Wall. Common, woods, Garden jungle, Jurong, Bukit Timah.

P. sp. with grey green fruits and large leaves. Reservoir woods.

P. sp. leaves lanceolate, flowers green. Kranji, Ang Mo Kio.

Chasalua curritoria Thw. "Pechah Piring putih." A very common and variable small shrub or herb, flowers white
on purple stalks, berries black on thickened white stalks. Woods, everywhere, Garden jungle, Bukit Timah, etc.

*C. rostrata* Miq. Garden jungle, Bukit Timah.


*Cephalis Griffithii* Hook. A small shrub with yellow honey-scented flowers in an involucrate head; berries light blue. Sandy woods, Toas, Bajan; also Garden jungle.

*Lasianthus*, small shrubs with axillary whorls of white flowers and blue or white berries.

*L. cyanocarpus* Jack. Sea coasts, Pasir Panjang, Changi, Pulau Ubin, Pulau Tekong.


*L. pterospermus* Wt. Rare, Chan Chu Kang (6711).


*L. Griffithii* Wt. Common, Bukit Timah, Chan Chu Kang, Sungei Blukang.

*L. stipul'aris* Bl. Bukit Timah (1903).


*L. erinitus* Hook. fil. Garden jungle, Bukit Mandai, Pasir Panjang.

*L. Maiangyi* Hook. fil. Singapore (Hullett 628.) and several other unidentified species.

*Saprosma sp.* Rare, Bukit Mandai.

*Hydrophyton formicarium* Jack. The ant plant, "Kapala Beruk," one of our most curious plants, epiphytic with a large swollen tuberous stem containing passages always full of
ants, flowers small white, fruits orange juicy. Common Tanglin, Selitar, Sungei Morai, etc.

*Myrmecodia echinata* Jack. Much resembles the last, but is covered with spines. Rarer, Bukit Timah, Jurong.

*Poederia foetida* L. "Akar Sekuntut." A slender climber with panicles of violet and white flowers. The whole plant has an unpleasant odor. Not common, Chan Chu Kang, Bukit Timah.

*P. tomentosa* Bl. Singapore (Fl. Brit. Ind.): not seen.

*Spermacoce hispida* L. A common weed with pink flowers. Paths and waste ground, Tanglin, Changi, Selitar, etc.

*S. scaberrima* Bl. A rough "scrambling herb, flowers white. Waste ground, Chasseinau estate.


**COMPOSITÆ.**

This large order is represented here by four or five native plants and a number of weeds introduced, but now established in waste ground and such places.

*Vernonia arborea* Ham. "Merambong." A large tree with lavender colored flowers. There are two forms of it, one a tall straight tree 50 feet high with perfectly glabrous leaves, Cluny Road, etc., and one more stunted and gnarled with pubescent leaves, Changi, Chan Chu Kang, Jurong, Chua Chu Kang.

*V. cinerea* Less. A common little weed with purple flowers, grows everywhere.


*V. scandens* De C. "Tombak-Tombak." A climber in thickets, flowers yellow. Tanglin, Bukit Timah, Selitar, Changi.
Elphantopus scaber L. "Tutup bumi." A very common weed flowers pink. Whole island.

Adenostemma viscosum Forst. A coarse herb with white flowers, waste ground near houses, Chan Chu Kang, Pulau Ubin, Bukit Panjang.

Ageratum conyzoides L. An exceedingly common weed with blue or white flowers, everywhere.


Erigeron linifolius Willd. "Sumbong Jantan." A large coarse weed. Waste ground, Tanglin, Selitar, etc.

Blumea lacera De C. An erect herb with yellow flowers. Common waste ground and grassy places. Tanglin, Selitar, etc.

Bl. membranacea De C. Alexandra Road.

Bl. balsamifera De C. Ngai Camphor. "Sumbong." A tall herb about 8 feet high or less, with yellow flowers. The whole plant has a strong camphor smell, and is used in medicine by the natives. Very common in open ground, Tanglin, Bedoh, etc.

Pluchea indica Less "Poko Beluntas." A sea-shore shrub with lilac flowers. Very common on the sea coast, Changi, Galang, etc.; rarer inland, Tanglin, near the rifle range,

Sphoranthus africanaus L. A herb with heads of white flowers. Ditches, Galang.

Casulia axillaris Roxb. Ditches, Tanglin and Galang.

Echiota alba Hass-k. Common weed in waste ground, flowers white.

Centipeda orbicularis Lour. A very small prostrate weed with minute purple flowers. Paths in the Botanic gardens.

Spilanthes acmella L. "K'rabo." The toothache plant, a common weed with conical heads of yellow flowers very pungent. Sold in the native herb shops. Open country, Sungei Morai, Ang Mo Kio.

Sychemrella nodiflora Gaertn. Stiff weed with yellow flowers. Very common everywhere.

Tridax procumbens L. Sandy places, Tanjong Katong, Cathedral Close, Changi, Teluk Kurau.

Artemisia vulgaris L. Often cultivated for medicine in Chinese villages.

Gynura sarmentosa De C. "Akar Subiak." Climbing herb with glaucous green leaves, and yellow flowers in a purple involucre. Swampy spots in dense jungle, Bukit Mandai, Bukit Timah, Tanglin.

G. pseudochina De C. A coarse common weed. Tanglin, Tanjong Katong, Selitar, etc.

Emilia sonchifolia De C. "Katumbi jantan." Common herb with bright pink flowers, waste ground.

(Cosmos bipinnatus. Often cultivated as a vegetable.)


GOODENOVIÆ.


CAMPANULACEÆ.

Pratia begonifolia Lindl. Small creeping herb with blue and white flowers. Wet spots by streams, Bukit Timah, Choa Chu Kang.

VACCINIACEAE.

Vaccinium malaccense Wt. "Kalumpadang." A large bush with pink or white fragrant flowers and eatable black fruits. Sandy places at Changi, abundant.

V. bancanum Miq. Epiphytic or terrestrial. A bush or small tree, leaves often red stiff, flowers waxy pink red or white. Sea coast, Toas, Changi, Sungei Morai, on high trees, Bukit Timah.

V. acuminatissimum Miq. Rare, Bukit Mandai.

ERICACEAE.


EPACRIDEAE.

Leucopogon malayanus Jack. Shrub with small white flowers and red fruit. Sea shore, Changi.

PLUMBAGINACEAE.

Plumbago zeylanica L. "Cheraka." Waste ground near villages, Galang, etc.

MYRTACEAE.

Musa indica L. A large shrub or small tree with very small white flowers. Common in woods, Bukit Timah, Reservoir woods, etc.

M. ramentacea De C. A half climbing shrub with narrower leaves, but otherwise much like the last. The branches
often bear moss-like masses of abortive branchlets, which are much more elegant than the very insignificant flowers. One of the commonest shrubs in jungles and secondary forest, everywhere.

*Myrtaceae capitellata* Wall. A small tree, with small white flowers and fruits. Sea coasts, not common, Changi, Bajau.

*Embeia Ribes* Burm. Very common in woods and thickets, Tanglin, Bukit Timah, etc.

Var. *garciniifolia*. A distinct looking plant with much more coriaceous leaves. Rarer, Changi, Reservoir woods, Bukit Timah.

_E. coriacea_ A. De C. Thick jungles, Selitar, Bukit Mandai.

_E. limpanii_ Scheff. Hedges, not common, Changi, Bukit Timah.

_E. amentacea_ Clarke. Hedges, Bukit Timah Road, Bukit Mandai.

_E. lucida_ Wall.* Cat 2315. Singapore. I have not met with it.

_Lalisia pothoina_ Lindl. "Akar Fatimah." A little shrub with small pink flowers, and scarlet fruit, leaves of young plants crenulate deep green edged with pink, when older lanceolate with long petioles (var. *lanceolata*) or the petiole winged the whole length, (*pothoina* proper). Common in dense woods.

_Ardizia._ Shrubs, rarely small trees, with or rose pink flowers, often showy, and red or black berries.

_A. crassa_ Clarke. Rare, Chan Chu Kang (3844).


_A. colorata_ Roxb. Flowers very small, pale pink. Common, Bukit Timah, Garden jungle, Changi Road.

_A. tuberculata_ Wall. Common, Bukit Timah, Selitar, Sungei Morai.
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A. crenata Roxb. "Mata Pelandok." Common, Alexander Road, Changi, etc.

A. villosa Roxb. Rare, dense woods, Pulau Ubin.

A. odontophylla var. Lobbi. Singapore, Lobb; probably an error of locality.

A. sp. near Bhotanica Clarke. Rare, Ang Mo Kio (6434).

A. sp. near villosa. Rare, Pulau Ubin (2816), Changi.

A. humilis Vahl. One of the largest species, flowers rose pink, berries black. Tidal mud, and damp spots. Common, Galang, Holland Road, Tanjong Katong, Changi, etc.

Pimelandra Wallichii De C. A small tree, flowers pinkish white, berries white with black spots. Common, Tanglin, Changi, Sembawang

Aegicras majus Gaertn. Mangroves local, Toas, Sungai Morai, Pulau Ubin.

Sapotaceae.

A group of trees, of which many produce gutta percha or Caoutchouc. There are a considerable number here, but they are difficult to collect on account of their great size, and are not easy to identify.

Chrysophyllum Rockburghi G. Don. A tall tree with small dark green leaves and yellow flowers, fruit globose 5-angled yellow ½ an inch long, sweet and eatable but full of rubber. Not rare, Tanglin, Bukit Timah.

Sideroxylon ferrugineum Hook. Small tree or shrub. Common along the coast, Serangoon, Kranji, Changi, Pulau Damar.


S. Malaccense Clarke. Very large tree. Tanglin, Garden jungle, Selitar.

Dichopsis bancana Miq. Vast tree, flowers and fruit green. Garden jungle.
D. obovata Clarke. A big tree producing a gutta inferior only to that of D. Guttta. Tanglin, Changi.

D. Guttta Benth. A large tree, easily known by the beautiful golden underside of the leaves. Though it was formerly very abundant in Singapore, nearly all the larger trees have been cut for the gutta percha. Flowers small white, very rarely produced. D. oblongifolia is I think specifically undistinguishable, merely a variety. It is the commonest form now in Singapore. Dense jungle, widely scattered over Singapore. Garden jungle, Bukit Timah, Selitar, Pulau Damar.

D. rubens Clarke. Rare, Changi, Chan Chu Kang.

Bassia Mottlejana De Vr. A big tree, Selitar. Jurong, Kranji, Bukit MandaI.

B. cuneata Bl. Rare, Bukit Timah.

B. Kingii Stapf. Bukit Timah.

B. Malaccensis (Payena Malaccensis Clarke). Common, Garden jungle, Changi, Bukit Timah, Selitar.


P. Maingayi Clarke. "Getah Percha Burong." Rare, Sungei Morai (6497).


Mimusops herandra Roxb. "Niato hitam." Rare, Tanjong Gol.

(M. Elenyi l. "Poko Tanjong." Commonly planted, but doubtfully wild.)

EBENACEAE.

Maba luxifolia Pers. Small tree. Rare, Tampinis.

Diospyros microphylla Beld. Large tree, produces ebony. Garden Road, Bukit Timah.


D. sapotoides Kurz. Very large tree, Bukit Timah, Chan Chu Kang.

D. oblonga Wall. Garden jungle, Bukit Timah, Tanjong Gol.


D. argentea Griff. "Bedil Lalat." "Mulatope Lalat." A small tree with large leaves coated beneath with golden yellow fur. Fruit large, covered with red hair. The dried leaves when burnt crackle, and this is supposed to drive away mosquitoes, hence the native name "Fly-cracker." Not rare. Dense jungle, Bukit Timah, Changi, Chan Chu Kang.

D. sp. with large coriaceous leaves, and cream colored flowers on the stem, fruit pearshaped. Bukit Timah.

**Styraceae.**

*Symplocos*, small or medium trees with white flowers and blue or green fruit.

*S. spicata* Roxb. Rare, Bukit Mandai.

*S. fasciulata* Zoll. Flowers white in small nearly sessile cymes drupes blue. Very common, woods and secondary jungle. Tanglin, Bukit Timah, Selitar, etc.

*S. adenophylla* Wall. Common in woods, especially near the sea. Changi, Jurong, Kranji, Toas, Pulau Tekong.

*S. cebrastrifolia* Griff. Rare, Jurong River (8123).

*S. rubiginosa* Wall. Not very common, Chan Chu Kang, Bukit Timah.

*S. rigidula* Clarke. A big tree. Rare, Changi.
S. sp. "Donoon." A medium sized tree, flowers in compact cymes. Rare, Kranji.

Styrax Benzoin Dryand. Gum benjamin. "Kemeniyan." A tall tree with sweet white flowers, and hard grey round flattened fruits. Produces the gum benjamin of commerce, which is obtained by cutting gashes in the bark, when the gum, after some weeks, exudes. Common in jungle, Garden jungle, Bukit Timah, Selitar, Choa Chu Kang.

S. crotonoides Clarke. Singapore (Wallich No. 7848); also in Cantley's collection. I have never seen it here.

OLEACEÆ.

Jasminum bifarium Wall. "Melor hutan." Wild Jasmine, very common in open country, and hedges, Tanglin, Balestier plain, Changi, etc.


Olea maritima Wall. A large bush with small green flowers and black drupes. Sea coasts in dry spots, Tanjong Katong, Changi, Pulau Ubin.

Linociera pauciflora var. palembanica. A big tree with small white flowers. Common, Bukit Mandai, Bukit Timah, Changi.

APOCYNACEÆ.

Williamsia firma Bl. "Getah Grip or Gegrip." A large woody climber with rough black bark, white flowers and green or orange oblong or globose fruits. Seeds deep violet inside. It abounds in rubber, and is the best of all the local rubber vines. The fruit is eatable and sweet, but full of rubber milk. Common, Garden jungle, Bukit Timah, Changi, etc.

W. coriacea Wall. "Getah Ujol." An inferior Gutta, which does not set readily, it is used for adulterating and for
bird lime. Common, Tanglin, Bajau, Changi, Blakang Mati, Bukit Timah.

W. flavescens Dyer. Flowers short yellowish white, fruit globose orange, containing 2 to 7 seeds. Garden jungle, Pulau Ubin.

W. tenuiflora Hook. fil. Changi.

W. sp. near flavescens, with very small flowers. Corolla tube short and globose, lobes long. Changi (6023), Chan Chu Kang, Jurong.

W. grandiflora Dyer. Flowers larger than any other species 1 1/2 inch long. I take this to be the plant intended for W. grandiflora, but note that the leaves are not thickly coriaceous, nor rounded at the tip as described. The mouth of the corolla tube is hairy. Rare. Reservoir woods.


L. Maingayi Dyer. Singapore (Maingay); not seen here.

Melodinus orientalis Bl. Climber, rare, Changi.


Cerbera lactaria Ham. "Buta-Buta." A large tree with white flowers and a pink eye and large ovoid reddish fruits. The white milk with which the tree abounds is poisonous and said to cause blindness if it falls into the eye. Very common in tidal rivers and swamps. Balestier plain, Selitar, Tampenis.

C. odollam Gaertn. Kranji, Changi.

(Vinca rosea L. has established itself in many places near the sea, and Allamanda Schottii Pohl. has run wild in a few places.)


A. spathulata Bl. Jungle swamps, Cluny Road, Bukit Mandai.

A. angustifolia Wall. "Buta Buta Darat." Common woods, Bukit Timah, Changi, Kranji, Sungei Morai.

A. grandifolia Miquel. Singapore (Anderson); doubtful.


T. Malaccensis Hook. fil. "Lada La a jantan." A shrub with small white flowers and orange pods containing several seeds wrapped in crimson arils. Common in woods. Garden jungle, Changi, etc.

(T. coronaria Roxb. "Bunga susu." Is often cultivated and half wild near villages.)

Parsonsia spiralis Wall. Climber with greenish yellow flowers. Mangrove swamps. Not rare, Changi, Tampines, Selitar, Toas, Sungei Morai.

Vallaris Maingayi Hook. fil. A large tree with deep green leaves and large white flowers. Pods long and slender
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containing many long-plumed seeds. Not common.

Garden jungle.

*Strophanthus dichotomus* De C. "Bunga Hantu." A big shrub
with large white flowers, with long claret-colored tails
to the petals. Open country, Changi, Alexandra road.

*S. brevicaudatus* Wt. Smaller shrub with small deep purple
flowers. Tanglin, Holland road, Balestier plain.

*Urecola Malaccensis* Hook. fil. "Getah grip tembaga." A clim-
ber flowers very small white. Produces a fairly good
rubber. Thickets, Tyersall, Changi, Bedoh.

*U. Maingayi* Hook. fil. Rare, Kranji.

*U. brachysepala* Hook. fil. Bukit Mandai, Bukit Timah.

Chan Chu Kang.

*U. lucida* Benth. Changi, Pulau Ubin.

*Parameria polyneura* Benth. Climber with pink flowers, Garden
jungle, Cluny Road.

*P. glandulifera* Benth. "Singapore Lobb"; not seen.

*Ayamosma marnynata* Don. Singapore, (Fl. Brit. Ind.); not seen
wild.

ASCLEPIADEAE.

Ind.; but Wallich’s No. 8249 is in the Catalogue "Penang
et Singapore;" doubtless from Penang only, where it is
common.

*Toxocarpus Griffithii* Don. "Singapore, Lobb"; certainly an
error of locality.

*Genianthus Maingayii* Hook. fil. Very rare, Bukit Timah,
(Cantley).

*(Calotropis procera* Br. Escape from cultivation, Toas, Changi,
Pulau Ubin).
(Asclepias curassavica L. has established itself at Selitar, etc.)

(Raphistemma pulchellum Wall. Garden road; escape.)

Sarcolobus globosus Wall. Climber, flowers small yellow with brown streaks. Tidal river banks, not rare, Balestier plain, Alexandra road, Kalang Puding, Changi, Selitar river.

Stephanotis Maingayi Hook. fil. A splendid white flowered climber, flowers bigger than the garden Stephanotis. Very rare, Changi (Hullett), once collected.


Cynanchum ovalifolium var. Bamboo Hedges. Cluny road, Balestier plain, Bukit Timah Road.

Dischidia nummularia Br. An exceedingly common creeping epiphyte draping orchard trees, and doing much damage. Stems very slender, leaves small and fleshy flowers white (scarlet as in Fl. Brit. Ind.). Whole island.


D. albida Griff. Flowers creamy white. Rare, Bajau.


D. Rafflesiana Wall. A very curious plant with some leaves developed into pitchers, green or often yellow, inside purple, flowers yellow. Common on trees especially near the sea. Tanglin, Blakang Mati, Teluk Kurau.

D. collyris Wall. A slender creeper on trees, leaves rounded buff yellow, above purple beneath, lying flat on the trees.
Flowers white. Ants often make their nests between the leaves and the branches of the trees. Common, Tanglin, Chan Chu Kang, Bukit Timah, Kranji.

*D. coccinea* Griff. Flowers scarlet. On lofty trees, Bukit Timah, Selitar, Choa Chu Kang. Very distinct from the last, of which Maingay suggested it was a variety.

*D. Wallichii* Wt. Wall. Cat. 8183. Is apparently a *Ficus*.

*Hoya lacunosa* Bl. Flowers white. Not rare, Tanglin, Selitar, Bukit Mandai.

*H. revoluta* Wt. Singapore, Wallich 8160 B; not identified.


*H. parasitica* Wall. Common near the sea, very floriferous, and pretty, flowers pink. Blakang Mati, Changi, Chan Chu Kang, Toas, Pulau Jahat.

*H. coronaria* Bl. The largest-flowered species. Flowers star-like and waxy opening white, with a yellow tint, then becoming spotted with pink and finally altogether pink. Common especially near the sea. Serangoon, Changi, Kranji, Pulau Tekong, etc.


*H. coriacea* Bl. Flowers yellowish white. Rare, Tampenins (D'Almeida).

*H. obtusifolia* Wt. A very stout kind with thick oblong leaves. Flowers white with a pink centre, large, rarely produced. Serangoon, Changi.

*H. Finlaysonii* Wall. Cat 8166. Leaves only, not identified.

Roots scented like new mown hay. Rare, Tampenins river, Kranji, Toas.


**LOGANIACEE.**

*Fagraea cariosa* Jack (?). Epiphyte, Bukit Timah. Rare. Perhaps a new species, leaves large ovoid, flowers with a long tube in pairs.

*F. auriculata* Jack. A large spreading shrub, with enormous thick white trumpet-shaped flowers. The capsule is very large greyish green conic, splitting when ripe and showing the minute black seed in orange pulp. There are two forms: one has the flowers as large as in Miquel's picture, the other is much smaller. Not common, rocks overhanging the sea, Pulau Ubin.

*F. olorata* Wall. Not common, Kranji.

*F. racemosa* Jack. A big shrub or small tree with short thick racemes of pinkish white flowers. Rare here. Pulau Ubin quarries.


*F. lignistina* Bl. A tree, leaves deep green small flowers slender creamy white with buff coloring in the throat, fragrant. Rare, Tampenins.


*F. speciosa* Bl. A very much larger tree, with fewer and larger flowers. Garden jungle, Tyersall.

*Nornisia malaccensis* Garden. A fairly large tree, flowers white. Garden jungle, Changi.
Strychnos Tieue Bl. “Ipoh Akar.” A big climber with small tubular green flowers, fruit large globose gray green with a hard rind, seeds flat, enclosed in a bitter pulp. Every part of the plant, even the flowers, is intensely bitter, from the presence of Brucine, nevertheless monkies and musangs often eat the fruit. The bark is used by the Sakais in their dart poison. Common in thick jungle. Garden jungle, Chan Chu Kang.

S. malaccensis Benth. Not common. Toas, Garden jungle.

S. pubescens Clarke. Bukit Timah.

Guertnera Koenigii Wt. var. oxyphylo Wall. Singapore (Wallich); not seen.

G. ciminea Hook. fil. Small slender shrub, with very small white flowers. Common, Garden jungle, Bukit Timah, Pulau Ubin, Changi.


G. grisea Hook. fil. Not rare, Bukit Timah, Changi, Chan Chu Kang, Sungei Morai.

Gentianaceae.

Limnanthemum indicum Thw. An aquatic plant with round floating leaves and a tuft of white flowers with a yellow centre. Reservoir.

Boraginaceae.

Tournegortia Wallichii De C. Climber, flowers green. Thickets, Bukit Panjang, Jurong, Bukit Mandai.

Heliotropium indicum L. A common weed in waste ground everywhere.

Cordia myxa L. Shrub, Chan Chu Kang, Pasir Panjang.
**THE FLORA OF SINGAPORE.**

**CONVOLVULACEAE.**


*E. Griffithii* Clarke. Not common, Garden jungle, Bukit Timah.

*E. coriacea* Wall. Not common, Changi.

*E. leucocyloides* King. A small-leaved climber, flowers white sweet. Thickets and woods, rarely flowering, common, Tanglin, Chan Chu Kang, Bukit Timah, Changi.


*Ipomea digitata* L. A large pink convolvulus. Not rare, Bukit Timah Road, Loyang, Changi beach, Chan Chu Kang.


1. *chryseides* Ker. Flowers in heads small lemon yellow Waste ground, Tanglin, Government Hill, Bukit Timah Road, Bajau.


I. sepiaia Koen. White with a pink eye; I. quincoelit L. and coccinea with small scarlet flowers; I. batatas L. the sweet potato, "Keledi," flowers pink; and I. aquatica Forsk. "Kangkong," a white flowered aquatic eaten as spinach, occur as escapes from cultivation here and there.

Evolculus alvinales L. A little prostrate plant, flowers light blue. Sandy spots, Changi.

**Solanaceae.**

I doubt that any of these, except one Solanum, are native to Singapore.

**Solanum nigrum L.** Galang.

*S. torrump* Sw. Shrub with white flowers, the leaves smoked by Malays like tobacco. Waste ground, Tanglin.

*S. melongena L.* "Brinjal." Cultivated.

*S. sarmentosum* Nees. A prickly prostrate plant with blue flowers and black fruits, weed. Botanic Gardens.


*S. biflorum* Lour. Singapore (Wallich); more probably an error for Penang. It is a hill plant.

*Capsicum frutescens* L. *C. minimum*, and more rarely *C. grossum* Willd. are much cultivated, and the two first occasionally occur as escapes.

*Datura fastuosa* L. "Kachubong." Weed in waste ground, often planted for use in medicine. Tanglin, etc., Pulau Ubin.

**Scrophularineae.**

*Mazus rugosus* Lour. Small weed, flowers pale violet almost white in the centre of the lip, where are 4 or 5 yellow spots. Waste ground, Botanic gardens.
Adenosma oratum Benth. An aromatic herb about 2 feet tall with axillary pale blue flowers. Road sides, not rare, Tanglin, Chan Chu Kang.


A cerul-um Br. Singapore (Fl. Brit. Ind.); not seen.


L. pulcherrima Hook. fil. Wet spots, Selitar, Bukit Timah, Bukit Mandai, Chan Chu Kang, Jurong.

Herpestes Monniera H. Bk. A small glabrous herb in wet spots, flowers white or blue. Common, Bukit Timah, Rochore, Serangoon, Teluk Kurau, Tamper, etc.

Aranema angustifolium Benth. Singapore (Wallich 3885), not seen.

Torenia polygonoides Benth. Common little creeping plant in grass, upper lip of corolla red, lower white. Whole island, Tanglin, Changi, etc.

T. mucronulata Benth. Weed in Botanic gardens, Bukit Timah.


V. scabra Benth. Flowers pink. Teluk Kurau.

V. hirsuta Benth. Little weed, hairy, flowers pale lilac. Garden weed.

V. pedunculata Griff. Wet spots, flowers pale violet. Government Hill.

Bonnaya veronicaefolia Spreng. Wet spots, Chan Chu Kang, Ang Mo Kio.
B. reptans Spreng. Chan Chu Kang, Bukit Panjang.


Scoparia dulcis L. "To Macao." A common weed with small white flowers. A tea for fever is made of it. Whole island.


Lentibulariaceae.


U. exoleta Br. Much smaller than the last. Garden lake, ditches Tanglin, Ang Mo Kio.


U. racemosa Wall. Very slender, with very small white flowers. Sandy spots towards Tanah Merah, Changi.

Gesneraceae.

Æschynanthus Motleyi Clarke. An epiphyte forming large tufts with pendulous branches, leaves pink on the back. Calyx lobes very narrow purple. Corolla green marked in the mouth with brownish red. Woods, not rare, Bukit Mandai, Kranji, Choa Chu Kang, Teban, Selitar.


*Didymocarpus platypus* Clarke. A shrubby plant with white rarely bluish flowers, with a yellow spot in the mouth. Common, woods, Bukit Timah, Bukit Mandai, Chan Chu Kang, Changi.

*D. sp.* Very rare, two plants out of flower in a wooded ravine near Bukit Mandai.


**BIGNONIACEÆ.**

*Dolicandrone Rheedii* Seem. Shrub or tree with long tubular white flowers opening in the early morning and closing soon. Common. Tidal Rivers, Alexandra Road, Blakang Mati, Bajau, Ponggol, Pulau Ubin.

*Stercospermum chelonoides* De C. Tree. "Chachar." Rare, Bukit Timah.

*S. hyposticta* Miq. Tree, flowers white or violet. Not rare, Tanglin, Bukit Timah, Bukit Mandai.

**PEDALINEÆ.**

*Sesamum indicum* De C. Til-seed, "Bijan." Weed in waste ground. Flowers pink rarely white. Cultivated for the seed, which is crushed for oil. Tanglin, etc.
THE FLORA OF SINGAPORE.

ACANTHACEE.

*Thunbergia alata* Bojer., climber with yellow or orange flowers with or without black eye, and *T. fragrans* Roxb. with white flowers, are common in hedges, being escapes from cultivation.

*Ebermaiera Griffithiana* Anders. Dense jungle, Bukit Timah.

*E. setigera* Nees. Dense jungle, Bukit Timah, Chan Chu Kang, Chua Chu Kang, Jurong.


*H. quadrivalvis* Nees. Changi, Bukit Mandai.

*Ruellia repens* L. Erect or creeping in grass, flowers pale lilac with darker marks in the throat. Very common, Tanglin Changi, Bajau, Selitar, etc.

*Acanthus ebracteatus* Vahl. "Jeruju." A holly-leaved plant with white or blue flowers. Common in tidal mud. Kandang Kerbau, Tanjong Pagar, Alexandra Road, Changi, etc.


*Angstasia intrusa* Bl. Straggling plant 3 feet tall or less, flowers pale violet. Hedges and thickets. Fort Canning, Government Hill, Tanglin, Chua Chu Kang.

*Eranthemum album* Nees. Flowers white, Jungles, local, Changi, Chan Chu Kang, Ponggol, Selitar, Choa Chu Kang.

(E. Andersoni Masters, described from a plant obtained in Singapore by T. Anderson, is only cultivated here.)

*Justicia andrographioides* Clarke. A straggling herb, with pale yellow flowers, leaves veined with white when young. Damp woods, Bukit Mandai, Chan Chu Kang.
THE FLORA OF SINGAPORE.

J. Gendarussa L. "Ganda Rusa." A common shrub round villages, usually an escape from cultivation.


P. montana Nees. "Noja." Flowers pink, larger than the last. Leaves used for dyeing eggs, cakes, etc., pink. Tanglin, Blakang Mati, Jurong.

Verbenaceae.

Lantana Camara L. "Tahi Ayam." All over Singapore, very common. There are several color varieties, the commonest is orange red color, turning orange yellow when passing over; another form is pale pink with a yellow eye turning darker pink, and where these two forms grow together there is an intermediate or hybrid form. There is a slight difference in the form of the lower lip in the two forms, in the orange one the lip is shorter and broader than in the pink one, where it is nearly quadrate, so that the pink flower appears more irregular than the orange one. The plant is a native of South America.


(S. mutabilis, much bigger, with rosy flowers, introduced here and there.)

Geunsia farinosa Bl. (Wallich, No. 1836); not seen.

(Callicarpa Reeschii Wall. Singapore, Murton in Fl. Brit. Ind. is cultivated only.)

*Premna.* "Buas Buas." A group of shrubs with small white flowers, and black drupes. All very closely allied and difficult to distinguish.

*P. cordifolia* Roxb. Tanglin, Thomson Road.

*P. parasitica* Bl. Changi.

*P. corymbosa* Roth. Climber, Garden jungle.

*P. flavescent var. rubens.* Pasir Panjang.

*P. coriacea* Clarke. Jurong.

*P. integriolia* var. angustior. A low prostrate plant, Serangoon River.


*G. Hystrix* Kurz. occurs in the Garden road, possibly wild.

*Vitex trifolia* L. "Lagundi." Often planted, possibly wild at Bajau.

*V. Negundo* L. Bukit Timah Road, Bukit Mandai; probably an alien.


*V. yamosepula* var. Tree, rare, Changi.

*Clerodendron inermis* Gaertn. Shrub, flowers white stamens pink. Very abundant near the sea, Rochore, Changi, Selitac.

*C. disparifolium* Bl. "Guriam Padang." Small tree, flowers yellow, fruit black with a red calyx. The wood is used
for blackening the teeth. Very common in woods and thickets. Tanglin, Bukit Timah, Changi, etc.

Cl. deflexum Wall. A small shrub about 4 feet high with nodding heads of white flowers surrounded with numerous red sepals. Drupe black. Very common. Tanglin, Garden jungle, Chan Chu Kang, Tempeh.

Cl. paniculatum L. Shrub with brilliant crimson flowers. Mandai, Kranji. Doubtfully wild.

Cl. ciliatum Bl. Common shrub with white flowers. Whole island.

Cl. myrmecophilum Ridl. * A slender shrub, with the stem hollow and filled with ants' nests. Panicles large, flowers orange. A handsome plant, rare, streams at Choa Chu Kang. Several cultivated kinds also occur in waste ground near villages; such are C. fallax Lindl. C. squamatum Vahl. C. fragrans Vent. and C. siphonanthus Br. which is cultivated by Klings, who use the leaves for smoking instead of Hemp, and call it Ganja.

Cl. ixoriflorum Hassk. A white flowered species, introduced into Java from Singapore about 1855, I know nothing of, and Cl. Colebrookianum Walp. "Singapore Lobb" and Cl. infortunatum Gaertn. mentioned from Singapore also in Flor. Brit. Ind. I have never met with.


Acicennia officinalis Bl. "Api-Api." Very common in mangroves and along tidal rivers. River Valley Road, Changi, Pulau Ubin, etc.

LABIATE.


Hyptis suaveolens Poit. Very common in waste ground. Sepoy Lines, Tanjong Katong, Mt. Faber, Changi, etc.
*H. brevipes* Poit. Common, Tanglin, Ang Mo Kio, etc. Both of these are introductions from South America, now thoroughly established.

*Dysophylla auricularia* Bl. "Ekor Kuching." Flowers pale lavender in long spikes. Very common in wet spots. Tanglin, Changi, etc.

*Anisomeles ovata* Br. Not common, Tanglin.

*Leucas zeylanica* Br. "Katumbet." A common weed with white flowers, waste ground. Tanglin, Blakang Mati, Seletar, etc.

*L. linifolia* Spr. Less common, Mt. Faber, Siglap.

*Ocimum basilicum* L. Basil. "Ruku-Ruku," often cultivated, occurs spontaneously in waste ground, as does also *Leonurus sibiricus* L. and *Leonotis nepetfolia* Br.

**Plantaginaceae.**

*Plantago major* L. "Ekor Angin." Waste ground, Chan Chu Kang, Tanglin, etc.

**Nyctaginaceae.**

*Boerhaavia repens* L. Sandy places, Galang.

**Amaranthaceae.**

*Allmania nodiflora* Br. Sandy spots. Changi, common.

*Amaranthus spinosus* L. "Bayam Duri." Common weed in waste ground. Tanglin, Rochore, etc.

*A. viridis* L. "Bayam Itek." Common in waste ground, everywhere.

*A. caudatus* L. Cultivated, and often as an escape.

*A. paniculatus* L. Government Hill.

*Cyathula prostrata* Bl. Not rare, weed in waste ground. Bukit Timah, Pulau Ubin, Teluk Kurau.
Alterpanthera sessilis Br. Common everywhere.


**POLYGONACEAE.**

Polygonum julaceum Meisn. Common in wet spots, ditches, etc. Tanglin, Bukit Timah Road, Rochore.

P. pedunculare Wall. Singapore. Wallich, not seen.

P. barbatum L. Ditches, Holland Road, Galang, Chan Chu Kang.

**NEPENTHACEAE.**

The pitcher plants are known to the Malays as “Poko Priok Kiah,” (ape’s cups). The stems of the stouter kinds are used for binding fences. They always occur in open country, borders of woods, etc., and are absent from dense jungle.

*N. ampullaria* Jack. A common kind with the pitchers in whorls often sunk in the ground, pitchers green, or more or less spotted with purple. I once found a plant with ivory white pitchers. Tanglin, Chan Chu Kang, etc.

*N. Rafflesiana* Jack. Pitchers often very large. Common all over Singapore.

*N. phyllanphora* Willd. Not common, Changi, Jurong.

*N. Reinwardtii* Miq. Common, Bukit Timah, Changi.

*N. gracilis* Korth. Blakang Mati, Changi, Bukit Timah.

*N. albolimarginata* Lobb. “Singapore, Wallich.” Surely an error for Penang, where it is abundant.

**ARISTOLOCHIACEAE.**


Th. dependens Klotsch. Rare, Sungei Buluh.

Piperaceae.


P. (Cubeba) sumatrana Cas. Not common, Reservoir woods.

P. pedicellatum Wall. Rare, Chan Chu Kang.

P. muricatum Bl. An erect herb. Not very common, Bukit Timah, Chan Chu Kang, Jurong.


var. lanata. Less common, in more exposed spots. Siglap, Chan Chu Kang, Pulau Ubin.

var. angustifolium. Garden jungle, Changi.

P. chaba L. "Bakek." Cultivated. I have also what may be a wild form of this under the name "Bakek hutan" from Bukit Mandai, (5851).


(P. Betel L. "Sirih," and P. nigrum L. "Lada hitam" are often cultivated.)

P. rostratum Roxb. Erect, rare, Bukit Timah.

P. porphyrophyllum E. Br. A well known ornamental climbing plant, leaves deep green spotted white and pink. Common but rarely flowering, dense woods, Bukit Timah, Selitar, etc.

(Peperomia exigua Miq. A little weed in gardens, on walls, etc., introduced. Tanglin, Chan Chu Kang).

Chloranthaceae.

Chloranthus officinalis Bl. Shrublet, with slender spikes of white flowers and translucent white berries. Damp ravines in jungles, local but abundant. Bukit Timah, Bukit Mandai, Jurong.

Myristicaceae.

The wild nutmegs are very plentiful in Singapore, occurring in all the bigger jungles, but almost invariably in an isolated manner, so that it is often by no means easy to get both sexes of any species. They are all trees, varying in height from about fifteen feet to 100 or more. The seeds seem to be (in all but M. cinnamomea) deficient in aromatic properties, and are not used by the natives at all. The timber is often good. The native name for the cultivated Nutmeg is “Pala,” the Mace being called “Bunga Pala,” (literally flowers of Nutmeg). Many of the wild species are called “Pala Hutan,” etc.; but “Pendarah,” with the local variants Menarah, Mendarah, and Chendara, is the common name for other species.


M. bracteata De C. A very large tree, rare, Bukit Timah.

M. cinnamomea King. Not common, Bukit Mandai, Sumbawang, Changi, Selitar.

M. crassa King. Flowers orange, Garden jungle, Bukit Mandai, North Selitar, Sungei Morai.

M. Lowiana King. Rare, Kranji.
M. inerv Bl. Rare, woods, Bukit Mandai.

M. ferruginea Wall. (Cat. 6803.) Rare, Selitar.

M. superba Hook. fil. Rare, Sungei Bengkuang, Toas.

M. rubiginosa King. Rare, Garden jungle, Mt. Faber.

M. Wallichii Hook. fil. Bajan (3364), also collected by Cantley without locality.

M. sucosa King. Rare, Kranji (6558).

M. Furquhariana Wall. Common, Garden jungle, Bajan, Selitar.

M. Forbesii King. Selitar.

M. viridis Hook. fil. Very rare, a single male tree in the Botanic Gardens, probably planted, but not known elsewhere.

M. crassifolia Hook. fil. Bukit Mandai, Chan Chu Kang, Bajan.

M. lyci Gaertn. Rare, Garden jungle.

M. majuscula King. Not rare, Tanglin, Cluny road, Bukit Timah, Selitar.

M. brachiata King. Singapore (Wallich); not seen.


M. oblongifolia King. Rare, Bukit Timah.

M. conferta King. Bukit Mandai, Changi.

M. Wrayi King. Rare, Sungei Jurong.

M. intermedia Bl. The commonest species. Tanglin, Changi, Bukit Timah.

M. laurina Bl. Common, Garden jungle, Bukit Timah.

M. glauca Bl. Garden jungle, Kranji, Pulau Ubin.

M. glaucescens Hook. fil. Cluny Road.
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*M. Hookeriana* Wall. Usually about 20 feet tall, with large leaves covered when young with brown wool which peels off as the leaves become coriaceous, fruit covered with brown wool. Not rare, Tanglin, Bukit Timah, Chan Chu Kang, Choa Chu Kang.


*M. longifolia* Wall. Bukit Timah.

*M. pendulina* Hook. The only tree of this species known is in the Botanic Gardens, but must have been planted.

**Monimiaceae.**


**Laurineae.**

Trees, more rarely shrubs, with usually unisexual flowers. A difficult group, owing to the difficulty of getting flowers of both sexes and fruits, many being imperfectly known. The trees are usually called "Medang" by the Malays.


*C. impressa* Meissn. "Munjut." A tall tree. Rare, Garden jungle.

*C. ferrea* Bl. Chan Chu Kang, Choa Chu Kang, Bukit Mandai. And two other species.

*Beilschmiedia malaccensis* Hook. fil. Rare, Bukit Timah.

*Dehaasia microcarpa* Bl. Sungei Jurong.

*Cinnamomum javanicum* Bl. Not rare in dense woods, but very rarely flowering. Garden jungle, Bukit Timah, Ang Mo Kio.
THE FLORA OF SINGAPORE.

C. iners Reinwät. A medium sized tree, never tall, common in open country. The young leaves are red and yellow and appearing just before flowering give the tree a fine appearance. The flowers are yellow and fetid, the fruit blue-black. The bark is but feebly aromatic. Whole island, Tanglin, Changi, etc.

C. nitidum Bl. Very much like the last, but with larger flowers. Not common. Tanglin.

Phoebe opaca Bl. A big tree, flowers yellow, fruits black on swollen red peduncles. Garden jungle, Bukit Mandai.

Ph. declinata Nees. "Singapore, Wallich." Not identified.

Ph. sumatrana Miq. Changi (1811).

Machilus rimosus Bl. Changi (4707).


A. costalis Nees. and A. lucida Nees. collected in Singapore by Wallich Nos. 2591 B and 2590, are entirely doubtful plants.

Actinodaphne pruinosa Nees. Botanic Gardens.

A. Maingayi Hook. fil. Dense woods, Bukit Timah.

Litsea grandis Bl. Near Tyersall, Bukit Mandai.

L. amara Bl. Jurong, Pulau Ubin.


L. myristicorfolia Wall. Siglap, Changi.

L. Panamonja Ham. Rare, Garden jungle.

L. longipes Meissn? "Mullay." Rare, Balestier Road.
THE FLORA OF SINGAPORE.

L. ferruginea Bl. Garden jungle, Bukit Arang.

L. zeylanica Nees. A large bush, common on the sea coast. Changi, Pulau Ubin, Bedok.

L. salicifolia Roxb. Garden jungle,


L. nitida Bl. Bukit Mandai.

And a number of unidentified species.

Lindera malaccensis Hook. ill. Small tree, flowers yellow. Abundant in woods, Garden jungle, Tanglin, Bukit Timah, Chan Chu Kang, etc.


Cassytha piliformis L. A leafless twining parasite. Common near the sea, Blakang Mati, Changi, Chan Chu Kang, etc.


PROTEACEE.

Helicia petiolaris Benn. Tree, common in woods. Bukit Timah, Jurong, Woodlands, Kranji, Changi, Garden jungle.


THYMELEACEE.

Aquilaria malaccensis. The Gaharu, is rare here. I have only seen it at Kranji.

A. grandiflora. Rare, Bajau.

A. sp. A medium sized tree with small white flowers and very small fruits. Garden jungle.
Gonystylus Maingayi Hook. fil. This aberrant tree is now referred by some botanists to Tiliaceae. It occurs in the Garden Jungle, Bukit Mandai and Chua Chu Kang.


Santalaceae.

Henslowia Lobbiiana De C. Climber. Common near the coast, Changi, Kranji, Chan Chu Kang.

H. buxifolia Bl. Apparently a root parasite. It is a twiggy, often nearly leafless shrub, entirely bright yellow. Berry at first yellow, then red and finally black. Dry woods near the sea, Bajau, Changi, Kranji, Sungei Buluh.

Scleropyrum Maingayi Hook. fil. “Rukam puteh.” A shrub or small tree with stout spines, flowers greenish yellow in dense spikes, fruit pear-shaped green juicy when ripe. Woods, not rare, Tanglin, Changi, Kranji, Bukit Mandai, Selitar.

Champerea Griffithiana Planch. “Chemperei.” A shrub with white branches, small light brown flowers and orange fruit. The leaves are eaten as a vegetable, but it is said to be poisonous to dogs. Sandy spots on the coasts, Changi, Tampines, Selitar, Bajau.


Loranthaceae.

These parasites are often very destructive to trees in gardens. They are called by the Malays “Api-API” or Senalu, with its variants Bendalu, Ndalu.
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L. coccineus Jack. Bukit Mandai.

L. ferrugineus Roxb. Common, Tanglin, etc.

L. longiflorus Desr. Flowers crimson-scarlet. On a very lofty tree, Bukit Timah.


L. albidus Bl. Flowers white, rare, Bukit Timah.


L. Maingayi Hook. fil. A very curious little flowered species, flowers brown. Rare, Kranji (6923).


V. orientale Willd. On Ficus, and Macaranga javanica. Common, Rochore, Bukit Timah, Jurong, Chan Chu Kang, etc.

EUPHORBIACEAE.

Euphorbia atota Forst. A shrubby plant, sea coasts, Changi.

E. pilulifera L. “Gelang Susu.” Common weed in waste ground, everywhere.

E. thyamjofolia Benn. Prostrate weed, waste ground, paths, etc. Common, Tanglin, etc.

(E. Tirucalli L. A large succulent shrub, often cultivated, occurs as an escape. The milk is used in native medicine, and for putting into the wounds made for marking
cattle to make the marks permanent. Said to be a native of Africa.)


*Bridelia tomentosa* Bl. “Kenidai.” Shrub or small tree. Garden jungle.


*Cleistanthus heris* Hook. fil. Tree, Garden jungle, Changi.

*Cl. myrianthus* Kurz. Bushy tree with coppery leaves. Kranji road, near Stagmount, Jurong, Chan Chu Kang.

*C. hirsutulus* Hook, fil. Rare, Bukit Timah.

*C. macrophyllus* Hook. fil. Rare, Bukit Timah.


*Phyllanthus pectinatus* Hook. fil. “Laka, Malakka.” A handsome tree with a trunk like a yew and elegant feathery foliage. The fruit a yellowish green angled drupe, acid, and used for preserves and in curries. The town of Malacca is said to take its name from the tree. Common in woods, Bukit Timah, Chan Chu Kang, Mandai.

*P. coriaceus* Wall. “Singapore, Wallich 7946.” Not seen only known from Wallich’s collection.


*P. maderaspatensis* L. A small weed. Changi.

P. urinaria L. "Dukong Anak." Common weed everywhere, used medicinally, and it is also supposed that after chewing a bunch of this plant it is possible to bite up glass with impunity.

(P. distichus Muell. Cieca acidissima is sometimes cultivated.)


G. desmogynne Hook. fil. Rare, Bukit Timah, Selitar.

G. insulare Hook. fil. Not rare, Selitar, Bukit Mandai, Toas, Jurong, etc.


G. brigaturn Hook. fil. Bukit Timah, Sungei Brnang, Bukit Mandai.

G. microbotrys Hook. fil. Tall tree with flaking bark. Flowers very small scented of cucumbers. Gardens, Chan Chu Kang, Changi, Pulau Ubin.

G. superbum Baill. Small tree with large leaves. Common in open country all over Singapore.


G. coronatum Hook. fil. Rare, Jalan Bray.

Brounia rhomboides Muell. Large shrub. Eskbank (Hullett).

B. discigera Muell. Rare, Upper Bukit Timah.

B. reclinata Hook. fil. "Hujan Panas," A shrub conspicuous from its bright red berries, but why called Hujan Panas,
lit. warm rain, no one seems to know. Very common, especially near the sea, Tanglin, Reservoir, Changi, etc.

*Sauropsis albicans* Bl. "Chekop Manus." A small shrubby plant with dark green leaves with a white central blotch, red flowers and pink or white fruit. A popular native vegetable, leaves eaten as spinach. Waste ground, common.

*Cyclostemon longifolius* Bl. A tree with pendent branches and large leathery leaves. Rarely met with in flower. Common in woods, Garden jungle, Selitar.

*Choriophyllum malayanum* Benth. Sandy spots near the sea. Rare, Seremban; also collected by Wallich, 7975.

Aporosa *ficifolia* Baill. Not rare, Bukit Timah, Chan Chu Kang, Garden jungle.

*A. nigricans* Hook. fil. Tanglin, Bukit Timah, Bukit Mandai.

*A. Mainyagi* Hook. fil. A shrub, Garden jungle, Selitar, Kranji, Jurong.


*A. Praineana* King. Bukit Mandai, Selitar, Kranji.

*A. Benthamiana* Hook. fil. Tree, about 40 feet tall, with red showy fruits. Not rare, Tanglin, Bukit Timah, Chan Chu Kang.

*A. lunata* Benth. Not common, Jurong.

*A. stellifera* Hook. fil. Garden jungle, Kranji, Bukit Timah.

*A. fulcifera* Hook. fil. Not common, Jurong, Toas.

*Daphniphyllum laurinum* Baill. "Ruas-Ruas jantan." A big shrub or tree with white flowers, and olive shaped green fruits. Usually near the sea, Changi, Kranji, Teban, Siglap.

*Antidesma relatiosum* Bl. Shrub with racemes of pink fruits. Common, Garden jungle, Changi, Pulau Ubin, etc.
A. cuspidatum Muell. "Sebasah." A big shrub, common in thick woods, Bukit Timah, Changi, Bukit Mandai, Teban, Reservoir woods.

A. fallax Meisn. Not common, Bukit Timah.

A. abatum Hook. fil. Thick woods, common, Bukit Timah, Changi, Bukit Mandai, Jurong.

A. bunius Spreng and A. ghaesembilla Gaertn. mentioned in Flora Brit. Ind. I have not seen wild.

Buccourea. A genus of trees of no great size, with flowers in long scented racemes. Fruit usually a capsule, orange colored or brown, splitting and disclosing the seeds enwrapped in an orange pulp hanging from the placentas; sometimes the fruit is a berry, and does not split. Most are more or less eatable though often acid.

B. parraviora Muell. "Setambun." A small tree with a knotted stem, and very hard compact yellow wood, used for making sticks. The male flowers are borne in racemes in tufts on the stem, they are yellow and smell like cowslips. The female racemes are borne at the foot of the tree, so as to lie on the ground. The fruit is a spindle-shaped berry, claret colored and eatable though acid. A common plant. Tanglin, Bajau, Changi, etc.

B. macrophylla Muell. Tree small or medium. Fruits globose dull orange russet, pulp of seed orange, sweet. Garden jungle, Selitar.

B. molleiana King. "Rambai." A well known fruit, common in cultivation and apparently also wild.

(B. Malayaana King. "Tampoi." Occurs in cultivation but is not common.)

B. bracteata Muell. A small tree. Common, Bukit Mandai, Holland Road, Kranji.

B. latifolia King. Garden jungle (6264).


B. minor Hook. fil. Fruit as big as a cherry, ochreous pulp orange. Garden jungle, Bukit Timah.


B. sp. Tree with narrow lanceolate acute leaves, flowers green. Garden Jungle (6263).

Microdesmis cascarifolia Planch. A small tree, flowers bright yellow, berries red. Thick woods, common, Garden jungle, Changi.

Galauria. Low shrubs with long slender spikes of very small flowers, fruits white pulpy. The species are all very much alike and difficult to distinguish.


G. Wallichii Br. Changi (Hultett).

G. subulata Muell. Garden jungle.

G. phlebocarpa Br. The commonest species Garden jungle, Bukit Timah, Chan Chu Kang, Pulau Ubin.

G. sp. with the leaves pubescent beneath, shoots and racemes covered with black pubescence. Changi, Siglap.

(Jatropha curcas L. "Jarak Blanda." Occurs in and near villages.)

(J. gossypifolia L. A garden escape, occurs here and there).

(Alcuretes Moluccana Willd. Candle nut Singapore nut, Kamiri, Buah Kras, is often cultivated).

Croton araygratus Bl. A shrub, leaves silvery beneath. Local, Batu Putih, Changi.
C. caulatua Geisel. "Tuku Takal." There are two forms, if they are not specifically distinct here, one a long stout woody liana with rough greenish capsules. Common at Tanglin, Chan Chu Kang. The other a scandent or erect shrub with erect racemes of white flowers and hard globose yellow capsules as big as a bullet. Common in open country. Tanglin, Bukit Timah, Bajau, Changi.


C. longifolia Roxb. Bukit Mandai, Selitar.


Ostodes macrophyllus "Kayu Julong." A tree, rare, Bukit Panjang (common in Malacca).

O. muricata var. minor and Dimorphocalyx capillipes Hook. fil. "Singapore Lobb"; evidently an error for Penang.

Agrostistachys filipendula Hook. fil. A big stiff shrub. A gum which exudes from the buds was formerly collected for making a resin for polishing sheaths of Krises. Local. Sandy spots near Changi.

A. longifolia Benth. var. Malayanu. "Julong Julong." A low little or unbranched shrub, with large erect stiff leaves, used for thatching and wrappers. The Singapore plant is very different from that of Pahang and Perak, which is a much larger branched shrub. Common in woods. Tanglin, Sungei Buluh, Chan Chu Kang, etc.

Clowylon indicum Hassk. A large shrub. Thickets, Grange Road.

Cl. longifolium Muell var. brachystachys. Woods, not rare, Bukit Timah, Pulau Ubin, Bukit Mandai, Chan Chu Kang.

Acalyspha indica L. A weed, common in waste ground. Bajau, Galang, Pulau Ubin, Teluk Kurau.
Coelodnpas ferrugineum Hook. fil. A small tree with long slender yellow flower spikes, and capsules covered with brown wool. Garden jungle (5391, 6481), Bukit Timah.

Alchornea villosa Muell. "Ramin bukit." A big shrub, the bark used for string. Common in thickets and edges of woods. Bukit Timah Road, Reservoir woods, Chan Chu Kang, Bukit Mandai.

A. rugosa Muell. Common, Changi, Serangoon.

Mallotus macrostachys Muell. A big shrub. Thickets, Bukit Timah Road at the 9th mile.

M. Cochinchinensis Lour. "Balik Angin." A small tree, pretty when in flower from its pendent white racemes. The under side of the leaves is white, so that when blown by the wind the whole tree appears white, whence the native name. A fairly good fibre can be obtained from the bark. Common in open country, Tanglin, Kranji, etc.

M. penangensis Muell. Not common, Bajau, Toas, Sungei Morai.

M. philippinensis Muell, and M. barbatus Muell, given in Flor. Brit. Ind. as from Singapore; (the latter collected by Lobb) are doubtless errors.

M. vernicosus Hook. fil. "Singapore Botanical Garden, Cantley" is altogether doubtful.

Macaranga hypolenea Muell. A fair sized tree with white stems and white undersides to the leaves. Sticks of its wood are used for setting gambier. Common in dry woods and secondary growth, all over Singapore. "Mahang putih."

M. *trichocarpa* Muell. A shrub half scandent, with irritating prickly capsules. Dry woods, common, Tanglin, Bukit Timah, Changi.

*M. javanica* Muell. "Mahaung." A common tree all over the island with reddish inflorescence, and small capsules bilobed smooth, and covered with a waxy coat. It is doubtful whether this is the same as the Javanese species. Open country and secondary growth, exceedingly common.

*M. triloba* Muell. A medium sized tree, leaves entire or three lobed. Young plants have red leaves, and look very handsome. Abundant all over Singapore, in woods, Tanglin, Changi, Pulau Ubin.


*M. populifolia* Muell. Big tree, in woods, Bukit Timah.


(*Ricinus communis* L. "Jarak," Castor oil; occurs near villages.)

*Endospermum malaccense* Muell. "Sendok-sendok." A big tree, with smooth grey bark, flowers green very sweet, fruit as large as a pea, orange, sweet. The wood is used to make clogs. Not rare, Bukit Timah, Chua Chu Kang.

*E. chinense* Benth. Singapore, Wallich 7846; a doubtful specimen.

*Helonias multiflorum* Juss. Woods, Changi, Bukit Timah.

*G. bijarim* Roxb. Sea coasts, Changi, Pulau Ubin.


*Homalanthus populifolius* Grah. Occurs here and there, about the Alexandra road and elsewhere, probably planted.
Sapium discolor Muell. A tall tree, very common, Tanglin, Jurong, Reservoir.


Excocaria agallocha L. A small tree full of poisonous milk, flowers green, very fragrant. Sea coasts, often growing between rocks. All round the coasts, Kranji, North Selitar, Toas.

Sebastiania chamalea Muell. A herb. Sandy spots, Changi, Blakang Mati.

URTICACEÆ.

Trema orientalis Bl. A common shrub in waste ground. Tanglin, Changi.

T. angustifolia Bl. Not common, Changi.


G. parvifolia Planch. A small tree in dense jungle common in the hill districts of the peninsula, rare in Singapore, Bukit Timah, Kranji.

Streblus asper Lour. A climber with milky juice. Rare, Pulau Ubin.

Sloettia sideroxylon Teysm. "Tampenis." A big tree with dark brown heart wood, one of the best timbers in the region, being untouched by termites and unaffected by ordinary decay for a very long time. The wood when fresh cut exhales an unpleasant odor. Large trees are now scarce as the natives cut them when young to make carrying sticks, and gambier stirrers, etc. There is a good deal of difference in the size of the leaves
according to the age of the tree. Young shoots from an old stump usually have large leaves, and it seems to me that *S. penangiana* Oliv and *S. Wallichii* King are mere states of *S. sideroxylon*, Teysm. The natives however certainly draw a distinction between some forms calling *S. Wallichii*, *Tampenis putih* and *S. sideroxylon*, *Tampenis Merah*, i.e. red and white *Tampenis*. The plant flowers very readily, even seedlings in a pot sometimes flower and fruit when only a foot and a half tall. The fruit is a soft white drupe enclosed in the four thickened white sepals. These are sweet and eatable and any pressure on them ejects the fruit to some distance so that if a bird attempts to eat them the fruit is thrown out.

Common in dry woods, open country, etc., especially the broad leaved var. *penangiana* Tanglin, Chan Chu Kang, Changi, etc.

*Ficus*. The figs are tolerably well represented here, no less than 35 species occurring in the island. They comprise creeping shrubs, big climbers, erect shrubs from two feet tall to trees of great size. The figs, none of which here are eatable, are sought for by birds, especially pigeons, bulbul and starlings, and by fruit-bats, which frequent the trees when in fruit in great numbers, and distribute the seeds everywhere. The common Malay name for any species of *Ficus* is "Ara." "Sipadik" is applied to many scandent species, and "Kelampong" to such trees as bear the figs clustered on the stem. Most of the trees are of rapid growth with soft valueless timber.

*F. pisifera* Wall. Small tree, figs white, common, Bukit Timah, Bukit Mandai, Pulau Ubin.


(*F. bengalensis* L. A big tree, often planted.)
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F. bracteata Wall. A medium sized tree, figs orange. Not rare near the sea, Changi, Batu Puteh, Chua Chu Kang.

F. annulata Bl. Climber or tree, figs large and orange. Rare, Bukit Timah.

F. globosa Bl. A bushy tree, figs dark green, common in thickets, Bukit Timah, Bukit Mandai, Changi, Toas, Reservoir.

F. cyclophylla Wall. A small tree or epiphyte, figs 2 inches long orange with darker spots, very handsome. Not rare, Galang, Bukit Timah, Changi, Selitar.

F. obtusifolia. Rare, Pulau Ubin.

F. altissima Bl. Big tree. Garden jungle, Serangoon.

F. consociata Bl. Var. Murioni. A tree or large shrub, figs orange. Not rare on the coast, Changi, Selitar, Ponggol, Bukit Timah.


F. indica var. Gelderi. An epiphyte or tree. Selitar, Pulau Ubin.


F. acamptophylla Miq. Big tree, not rare, Bukit Timah, Changi, Kranji, Bajau, Serangoon.

F. binnendykii. Mangrove swamps, Jurong, Kranji, Tampenis.

F. obtusifolia Roxb. Rare, Pulau Ubin (Hullett).

F. Benjaminia L. "Waringin." Commonly cultivated.

F. glabella Bl. Big tree, figs small white with pink spots. Chan Chu Kang, Bedok, Bukit Timah.

F. retusa var. nitida. Tree. Galang, Changi, Bajau.

(F. religiosa L. Commonly planted.)

F. *calicarpa* Miq. A big climber with flattened stem, figs very large, pear-shaped orange with paler spots, very showy. On big trees, common, Bukit Timah, Chan Chu Kang.


F. *apiocarpa* Miq. Strong climber, figs pear-shaped large orange red. Tanglin.


F. *levis* Bl. Rather rare, Bukit Timah, Pulau Ubin (Hullett), Chua Chu Kang.


F. *ramentacea*. Climber with yellow milk, figs bright pink. Dense woods, Bukit Timah, Chan Chu Kang.

F. *villosa* Bl. Climber, figs red or yellow, hairy. Tanglin, Bukit Timah, etc. Very common.


F. *Miquelii* King. Medium to large tree, figs green with whitish spots, at length dull red in clusters on the stem. Very common, Tanglin, Bukit Timah, Bukit Mandai.

F. *ribes* Reinw. Singapore, Wallich; not seen.

F. *fistulosa* Reinw. Bukit Timah, Changi, Chan Chu Kang, Pulau Ubin.

F. *glandulifera* Wall. Tree with spreading crown, figs yellow. Not very rare, Garden jungle, Changi.
F. alba Reinwdt. A shrub leaves lobed and large when young smaller and entire in older trees, white beneath, figs, yellow, becoming red. Very common in open country.

F. chrysocarpa Reinwdt. A small shrub with rough leaves and golden hairy figs. Common in open country everywhere. Dr. King calls this 10 to 30 feet tall, and distinguishes it from F. hirta by the latter being small and having lobed leaves. I have never seen this more than 5 or 6 feet tall, and the leaves are never lobed.

F. chartacea Wall. A very slender shrub with very small yellow figs. The lark is used for string. Common in thick woods, Garden Jungle, Changi, Bukit Mandai.


A. Kunstleri King. "Getah Terap." A large tree, very variable in the shape of its leaves in young trees deeply lobed, in adults ovate oblong entire. The best is used for cordage, and as clothing by the Sakais. The milk is used as birdlime. Common all over Singapore.

A. Lowii King. Rare. Bukit Timah.

A. Maiingayi King. Rare, Toas.

A. Scortechnii King. Not rare, Garden jungle, Kranji.


A. peduncularis King. Rare, Bukit Mandai.
A. integrifolia L., the Jack, "Nangka;" A. incisa L., Bread fruit; and the "Sukun" said to be a variety of it; and A. polyphema Pers., the Champedak, are cultivated. The latter may possibly be wild at Changi.

A. sp. Large tree with pinnate leaves and fruit like that of A. rigida, probably undescribed. Garden jungle, Pulau Ubin, Bukit Timah.

A. sp. Medium sized tree with small leaves, and small green fruits with white flesh 1½ inch long, seeds few. Garden jungle.

Conocephalus swarcoleus Bl. A big scrambling shrub with large leaves and compact heads of dirty white flowers, smelling of pears. Not rare, thick jungles, Bukit Timah, Bukit Mandai, Pulau Ubin.

C. amomus King. Flowers pink. Dense jungles, Selitar, Pulau Ubin.

C. Scortechinii King. Singapore, Maingay, and C. subtrinervius Miq. collected by Lobb, probably erroneously localised.

Fleurya interrupta Gaud. A weed, sometimes stinging. Tanglin. (Pilea muscosa Lindl. Introduced, common in waste spots in gardens, etc.)

Pouzolzia indica L. and var. angustifolia. "Ubai-Ubai." Used as a vegetable by the natives. A low weed, not very common, Bukit Timah, Chan Chu Kang.

P. pentandra Benn. A common weed, Tanglin, etc.


Elatostema molle Wedd. Singapore, Wallich 4633; probably an error for Penang.

Pipturus mollissimus Wedd. Shrub. Rare, Toas.
Engelhardtia Wallichiana Lindl. Tree with winged fruits. Rare, Garden jungle.

E. serrata Bl. Rare, Changi.

Myrica Nagi Thumb. "Gilinche." A small tree with dark green leaves and very small red drupes, much smaller than those figured in the Botanical Magazine t. 5727. Common on the sea coasts, Toas, Changi, Jurong, Blakang Mati; rarer inland, Bukit Timah.

Oaks and chestnuts are very abundant in Singapore, and are usually fairly large trees, the timber however is usually remarkably poor and valueless. When in flower, the small green blossoms are visited by myriads of small blue-bottle flies, with red heads. The fruits are sought for and dispersed by squirrels.

Quercus oculocarpa Korth. Not common, Garden jungle.


Q. spicata var. graci ipes. "Berangan Padi." Bukit Timah, Pulau Ubin.


Q. conocarpa Oudem. Common, Garden jungle, Reservoir, Changi.
Q. Bennettii Miq. Rare, Garden jungle, Bajau.


Q. lucida Roxb. Common, Changi, Selitar, Bukit Mandai.

Q. enclisoarpa Korth. A big tree, acorns almost completely enclosed in the very thin cup. Common, Tanglin, Bukit Timah, Changi.

Q. cyclophora Endl. with very large disc-like acorns. Singapore, Wallich; not seen.


C. hystrix Dr C. Rare, Toas.

C. Hulletii King. Involucre without spines but stout ridges on them. Nuts eatable and good. Garden jungle, Bukit Timah, Sumbawang, Bukit Mandai.

C. sp. Like the last, but the involucres are spiny, and leaves smaller. Garden jungle, Changi.

C. nephelioides King. Rare, Bukit Timah, Pulau Damar.

C. sumatrana De C. Singapore, Wallich 2762; not seen.

Casuarineæ

Casuarina equisetifolia Forst, “Ru”, is often planted, and was possibly wild here formerly.

Coniferæ

Dacrydium elatum Wall. “Singapore, Schomburgk” in Flor. Brit.Ind, must have been of course from a garden. The tree does not occur wild at much less than 2,000 feet altitude in the peninsula.
Podocarpus neglectus Bl. "Sintada." Common in mangroves, and all round the island, Kranji, Changi, Jurong, Serangoon.

P. verticifolia Don. Sea coasts, Changi.

Agathis loranthifolia Salisb. Very rare, a few young plants in a wood near Changi. This Damar tree is usually to be met with only at an altitude of about 2000 feet in these latitudes, but both at Changi, and in the low country of Siak, Sumatra, I have found small plants growing far in the jungle.

Gnetaceae.


G. macrostachyum Hook. fil. Not rare, Bukit Timah, Changi, Jurong, Selitar.

G. juveniculare Bl. A big climber, the bark used for making string. Common, Tanglin, Sumbawang, Kranji.

G. edule Bl. Rare, near Selitar.

Cycadaceae.

Cycas Rumphii Miq. Sandy spots by the sea. Changi, Toas.
MONOCOTYLEDONES.

HYDROCHARIDEÆ.

_Hydrilla verticillata_ Casp. A common water weed in ditches Tanglin, Chan Chu Kang.


_Enhalus Koenigi_ Rich. “Setul.” A marine plant with long strap-like leaves. The male flowers are very small and white, borne in a pair of large green boat-shaped bracts on the end of a long stalk. When fully developed the inflorescence rises to the surface, and the flowers break off and float away till they come in contact with a female flower which they fertilise. The sea is sometimes sprinkled all over with them. The female flowers are solitary in the bracts. After fertilization the stalk contracts into a spiral and the fruit is drawn down to the bottom of the sea to ripen. It is ovoid, green and hairy, about 1½ inch long. Malay children eat it. The Dugong (_Halicore_) lives mostly on the leaves of this plant. It is very abundant in shallow bays in the Johore Strait, round Blakang Mati and wherever the sea is shallow enough for it.


BURMANNIACEÆ.

_Burmannia coelestis_ Don. “Sisik Naga.” A slender little plant with blue urn-shaped flowers, in grassy spots, common. Tanglin, Pasir Panjang, Mt. Faber.

_B. tuberosa_ Becc. A small white saprophyte, usually almost completely buried in the ground. Flowers white with yellow corolla lobes, scented of cowslips. Damp
jungle in rotten leaves, Chan Chu Kang, Bukit Timah, Bukit Mandai.

*Thismia Asevoe* Becc. A saprophyte, with urn-shaped flowers, the perianth lobes drawn out into tails yellow. Decaying leaves in wet jungles. Fairy point, Changi (Beccari), Bukit Timah, Kranji.

*Th. funula* Ridl.* Somewhat like the last but smoky grey. Rare, Chan Chu Kang.


**ORCHIDEE.**

*Oberonia.* Small epiphytic orchids with ensiform distichous leaves and slender spikes of very small green, yellow or red flowers.

*O. dissitiflora* Ridl.* Mangroves, Kranji.

*O. junata* Lindl. On a high tree, Selitar, Bukit Timah.


*O. minuta* Lindl. "Singapore cultivated in Loddiges Garden," has not been seen here of late years, and is probably an error of locality.


*Microstylis.* Terrestrial orchids, with the stems usually swollen at the base, thin-textured leaves, and small red green or yellow flowers.

*M. micrantha* Hook. fil. A creeping plant with a rather long cylindric stem, and lanceolate copper colored leaves, which "sparkle like the stone aventurine.” Flowers very small red and yellow. On dead leaves, Bukit Mandai, Changi, Selitar.
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_M. congesta_ Rchb. f. Stem swollen at the base, flowers pink or green. Common in woods, Bukit Timah, Kranji, Sungei Pandan.


*L. nervosa* Lindl. Flowers yellow or purple. Terrestrial in swamps among grass in water Changi, Ang Mo Kio. near the Reservoir, Tanglin.

*L. elegans* Lindl. Epiphytic, with stiff leaves, and racemes of small yellow flowers with a red lip. Common on old stumps and trees near the sea. Selitar, Kranji.

*L. disticha* Lindl. Epiphyte. The flowers crowded to the end of the raceme with distichous bracts; small, opening one at a time, apricot colored. Common. Mangrove swamps, Kranji, Chan Chu Kang, etc.

*Platyelvis longifolia* Hemsl. Epiphyte, forming large tufts, with conical pseudobulbs, long narrow leaves and long nodding spikes of brown flowers. It is easy to cultivate, and flowers all the year. Dry woods near the sea, Kranji, Sungei Jurong.

*Denrolium longicolle* Lindl. *Epiphytic, forming a tuft of long slender pseudobulbs, bearing one leaf apiece, flowers solitary on long stalks with long filiform petals and a yellow lip. Rare, growing with the last. Sungei Morai. First discovered by Cuming.*

*D. (Bolldium) pumilum* Roxb. A little tufted plant with two leaves to each stem and one or two small flowers, yellow or veined with purple. Not rare on trees. Mangrove swamps, orchards, etc. Kranji, Bajau, Selitar.


*D. criniferum* Lindl. Flowers yellow spotted purple, lip with
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many yellow filaments on the end. Mangroves. Kranji, Sungei Morai, Changi.

*D. Kunstleri* Hook. fil. Flowers cream color with pink spots Bukit Timah, Kranji, Changi.


*D. luciniosum* Ridl. * Flowers yellowish. Rare, Pulau Selitar.

*D. (Sect. aportum) Serra* Lindl. Stems flat covered with opposite distichous triangular leaves sometimes red, flowers very small, white. Common, Kranji, Changi, etc.

*D. sinulatum* Lindl. Stems as the last, but leaves longer; flowers orange small. Common, Selitar, Kranji.


*D. rhizophoret* Ridl. Mangroves, Kranji, Sungei Buloh.

*D. utropurpureum* Miq. Flowers brownish red or yellow. Common, Tanglin, Kranji.


*D. (Sect. stranggle)*. This section has slender stems with terete curved leaves.

*D. teres* Lindl. Stems a foot tall, flowers white, an orange spot on the lip. Pretty but rare, on high trees, Toas.


D. *flexile* Ridl. Rare, Bukit Timah.


D. *cilostum* Wall. Like the last but hairy. On leaves in dry woods, Bajau, Sungei Buloh. Kranji.


D. (Sect. *clavata*) *tuberiferum* Hook. fil. Rare, Selitar, Toas.

D. *cramenatum* Sw. The "pigeon orchid." Very common all over Singapore.


D. *panduata* Ridl. A curious plant with long creeping stems and grassy leaves, flowers fawn color and white. It always grows on Pandans, or Sagos, or Coconut palms, climbing up the stems. Bukit Mandai, Jurong.

D. (Sect. *breviflorum*) *calibotrys* Ridl. * A pretty plant with bunches of white flowers with a red and yellow lip, sweet scented. Rare, Toas, Sungei Morai.

D. *euphlebium* Rehb. f. Mangrove swamps, Kranji, Selitar, Toas.


D. lamellatum Lindl. An odd plant with ovate flat thin stems and white flowers turning yellow. Damp woods, rare, Changi.

D. (Sect. speciosa) Dalhousicanna Wall. This well-known and grand plant has once been found on a big fallen tree in the forest at Chan Chu Kang.


B. patens King. Like the last but smaller. Chan Chu Kang.


B. pileatum Lindl. Selitar.


B. catenarium Ridley. Abundant on mangrove trees. Sungei Buloh, Changi, Selitar.

B. uricella Ridley. On mangroves common, Kranji, Bajau.


B. adenopetalum Lindl. "Singapore Hort. Loddiges;" is probably an error. It has never been found here again.


B. botryphorum Ridley. Forms large tufts on trees, flowers in small pendulous bunches, purple. Mangroves, Kranji, Toas, Sungei Buluh.


B. Trifolium Ridl.* A curious plant with pink flowers in a bunch like clover. Rare, Sungei Morai.

B. stella Ridl. Flowers on a long slender stem in a terminal raceme opening singly at intervals, large yellowish and pink on trees in thick jungle. Bukit Mandai, Jurong, Choa Chu Kang.

Cirrhopetalum Medusa' Lindl. Flowers in a dense mop-like head, with long tails to the sepals, white with pink spots. Stems and branches of trees in jungle often very high up, or on rocks. Tanglin, Galang, Bukit Timah, Chan Chu Kang, Pulau Ubin.


C. concinnum Hook. fil. Flowers cream with pink spots or entirely pink. Common, Bajau, Kranji, etc.

C. gamosepalum Griff. Common, Bajau, etc.

C. acuminatum Ridl.* Rare, Choa Chu Kang.

C. microbulbon Ridl.* Rare, Sungei Buloh.

C. linearifolium Ridl.* Kranji, Bukit Mandai, Chua Chu Kang.

C. semibifolium Ridl.* Rare, Kranji.

C. makoyanum Rehb. f. Rare, Chan Chu Kang.


C. Blumei Lindl. Mangrove swamps, Kranji, Chan Chu Kang.


E. floribunda Lindl. Flowers in dense spikes white with pink lips, pretty common. Mangroves, Kranji, Sungei Buloh, Sungei Morai.


*E. pu\textit{tica}* Ridl. Rare, Changi.

*E. endym\textit{ion}* Ridl. Flowers white, sides of lip purple. Rare, Selitar.


*E. longe-rep\textit{ens}* Ridl. Not common, Sungei Morai.

*E. pulch\textit{ella}* Lindl. Common on trees or rocks. Kranji, Pulau Tekong, Sungei Morai.


*E. stell\textit{ata}* Lindl. Rare, Choa Chu Kang.

*E. striol\textit{ata}* Rechb. f. Rare, Kranji.


*E. oligan\textit{tha}* Hook. fil. Local, Toas.


*Agrostoph\textit{yllium maj\textit{us}*} Hook. fil. Local, Kranji, Selitar.

*Spathoglott\textit{is plic\textit{ata})* Bl. A terrestrial orchid with pink flowers very common in open country and on damp rocks, Tanglin, Bukit Timah, etc.


*Plocog\textit{lottis porphy\textit{rophylla})* Ridl. Terrestrial, leaves purple. Local, Kranji, Toas, Selitar.


Claderia viridisflora Hook. fil. A creeping plant climbing up trees. Flowers large green. Common, Garden jungle, Bajau, etc.

Carlyxne testaceae Lindl. Sandy places near the coast on trees and stumps or on the ground. Kranji, Chan Chu Kang, Sungei Morai.

C. Rochussenii De Vr. Not common, Selitar.

C. Cummingii Lindl. Bukit Timah, on high trees.

C. Mayeriana Rchb. f. Flowers green and black, on palm trees near the sea. Very local, Sungei Buluh, Kranji, on high trees, Bukit Timah.

Calanthe curculigoides Lindl. A beautiful terrestrial plant, with apricot orange flowers with red lip, in a dense spike. Common, Choa Chu Kang, Kranji, Toa Payoh, Bukit Timah.

Dilochia Wallichii Lindl. Singapore (Wallich No. 1952), has never been found again in the peninsula.


Cambidium obfolium Sw. Epiphytic. Common on the island and Pulau Ubin.

var. pubescens less common, Sungei Buluh, Jurong.

Grammatophyllum speciosum Bl. Rare, Toas, Pulau Ubin.


Bromheadia palustris Lindl. Open grassy and sandy spots, very common. Flowers white, lip pink and yellow. Sweet-scented,
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B. a’ticola Ridl. On high trees, common, Bukit Timah, Bukit Panjang.


Renanthera alba Ridl. Local, Pulau Selitar and other islands round the coast.

R. elongata Lindl. Rocks, Pulau Ubin; Roadside, Bukit Timah.


Renantherella histrionica Ridl. Rare. Mangroves, Serangoon.

Rhynchostylis gigantea Ridl. Very rare, one plant on a tree at Selitar.


Microsaccus javensis Bl. Mangroves, Kranji.

Tariaophyllum serrula Hook. f. A leafless epiphyte with long roots and small yellow and white flowers. Common, mangroves, orchard trees, etc. Tanglin, Toas, Kranji, etc.

Chrisostoma laifolium Lindl. Singapore, according to Lindley. Not seen.

C. spicataw Lindl. ? (non abnorm). A common plant in the Peninsula. I am doubtful as to its identification with Lindley’s plant. Not common, Jurong.

Sarcanthus halophitus Ridl. On trees by the sea, common, Kranji, Sungei Morai, Sungei Tengeh, Pulau Tekong.
S. densiflorus Par. S. castaneus Ridl. Rare, on a tree, Dalvey road. This is figured by Dr. King, Ann. Bot. Gard. Calcutta Pl. 83 under the name of Cleisostoma spicatum, but it is not a Cleisostoma at all, as I understand the genus. Lindley's original description of C. spicatum is very short, but he says the flowers are pilose and the lip is longer than the spur, which does not apply to this plant.


S. adnatus Ridl. Very rare, Toas.

Thriespernum lilacinum Rehb. f. Scrambling among bushes and grass in swamps. Flowers lilac or white. Common, Selitar, Changi, Ang Mo Kio, Balestier plain.

Th. calcatus Rehb. f. Grows in great masses on the ground or on trees. Flowers white sweet fugacious. Common, Kranji, Sungei Morai, Bukit Timah Road, Pulau Ubin, Pulau Tekong.

T. erubratis Rehb. f. On trees, flowers yellow dotted red with very long tails to the sepals and petals. Rare, Selitar.

T. notabile Ridl.* Leaves dull red, flowers pink, on trees. Rare Chan Chu Kang, Bukit Mandai.

Dendrocolla muculata Ridl.* Rare, Bukit Mandai.

D. trichoglossis Ridl. Very common on orchards, and gardens. A small plant with fugacious yellowish flowers. Whole island.


Acriopsis javanica Reinwdt. Epiphyte with slender panicles of pink flowers. Trees, open country. Very common, Tanglin, Changi, Kranji, etc.

A. Ridleyii Hook. fil.* Flowers yellow, very rare, one plant only found at Bukit Mandai.

Appendicula bifaria Lindl. Common on trees, Sungei Morai, Kranji, Bukit Timah.

A. caulosa Bl. Very common, Bukit Timah, Sumbawang.

A. Lewisii Griff. Singapore (Wallich); not seen.


Thelasis elongata Bl. Common, mangroves, Kranji, etc.

Oxyanthera elata Hook. f. Mangroves, common, Kranji, Sungei Buluh.


Galcola. Curious saprophytes with long straggling yellow branches, no leaves, and white or yellow flowers, growing among long grass or over stumps or tree trunks, or even over native huts.


G. hydra Rchb. f. Kranji, Sungei Buluh.

Vanilla Griffithii Rchb. f. Flowers white, fruit sweet, not vanilla scented. Local. Pulau Ubin.


V. lancifolia Ridl. Local, Bukit Timah.

V. tristriata Ridl. * A very small plant, leaves reddish olive
with 3 pink stripes. Very wet spots in jungle, rare, Chan Chu Kang.

*Macodes Petola* Lindl. Leaves bright green with gold veins. Rare, Selitar.

*Cystorchis variegata* Bl. Leaves apple green with darker markings. Common in wet woods. Chan Chu Kang, Bukit Timah, etc.


*Hetaria obliqua* Bl. Rare, Bukit Timah.

*Aphyllorchis pallida* Bl. A leafless saprophyte, straw color. Not rare, Tanglin, Reservoir woods, Bukit Timah.

*Amevorchis geniculata* Ridl. Leaves deep red with gold veins, Woods, Toas, Chan Chu Kang; etc.

*Cryptostylis arachnites* Bl. Rare, Bukit Timah, Pulau Damar.

*Pogonia punctata* Bl. Rare, Bukit Timah.


*Leconorchis malaccensis* Ridl. A black wiry leafless plant with pinkish flowers. Common in woods, Bukit Timah, Bajau, etc.

*Gastrocia javanica* Lindl. Rare, Chan Chu Kang, Bukit Mandai.

*Habenaria singapurenensis* Ridl.* Very rare, Choa Chu Kang woods.

*Ila. lacereijera* Benth. Small white flowered ground orchid. Common along paths, in grass, etc. Whole island.

*Ila. Maingayi* King.* "Singapore Maingay." I have not seen this, and hardly see how it differs from the last, which is a somewhat variable plant.
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APOTASIACEE.

*Apostasia nuda* R. Br. Shrubby plant with narrow leaves and small white flowers. Very common in dry woods, Bukit Timah, etc.


*N. Curtisii* Rolfe. Rare, Changi, Kranji. This is the *Tupistra singapuranus* of Wallich's Catalogue.


SCITAMINEE.

The Gingers have already been described in a previous number of the Journal.

*Globba panicoides* Miq. Woods, Bukit Timah, etc.

*G. uliginosa* Miq. Bukit Mandai.


*Curcuma zedoaria* Rosc. Abandoned gardens. Reservoir, Bukit Mandai, etc.

*Costus speciosus* Sm. Common, Jurong, Bukit Timah etc. var. *argyrophyllus* Bukit Timah.

*C. globosus* Bl. Rocky places, Bukit Timah.

*Zingiber zerumbet* Sm. Waste ground.

Z. *gracile* Jack. Bukit Timah.


Z. *Griffithii* Bak. Bukit Timah.


*Horstedtia scyphus* Retz. Common, Tanglin, Bukit Timah.
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H. mejalvchilus Ridl. Rare, Bukit Mandai.
H. conica Ridl. Rare, Bukit Panjang.
H. Maingayi Ridl. Local, Bukit Timah, Sungei Buluh.
Plagiostachys lateralis Ridl. Local, Bukit Timah, Bukit Mandai, Reservoir woods.
Alpinia melanocarpa Ridl. Sandy spots near the sea. Kranji, Selitar.
A. Galanga L. Waste ground and gardens.
A. Rafflesiana Wall. Not common, Sungei Buluh, Changi, Toas.
Donax grandis Ridl. Bukit Timah, Bukit Panjang.
Phrynium Griffithii Bak. Common, Bukit Timah, Jurong.
(Canna indica L. and C. Warcewiczii. Garden escapes. Tanglin, etc.)

OPHIOPOGONEÆ.
Peliosanthes violacea Wall. Dense woods, Bukit Timah.

AMARYLLIDEÆ.
Curculigo recurvata Dryand. "Lumbah." Common in open country, Bukit Timah, etc.
C. latifolia Dryand. Very common and variable. All over the island.
C. villosa, Wall. C. latifolia, var. villosa Bak. This is a very distinct species from C. latifolia. The leaves are narrow lanceolate acuminate caudate stiff, glabrous above, cobwebby
beneath 2½ feet long and 5 inches wide with a petiole one foot long. Spikes 2 inches long, bracts stiff oblong obtuse green, with the points recurved, something like the spike of a curcuma. Flowers ocre yellow ¾ inches across. Sepals lanceolate acute petals shorter and blunter. Fruit with beak one inch greenish white. Seeds few black about half as big as those of C. latifolia Dry. Not rare, in long grass and secondary growth. Bukit Timah, Tanglin, Chua Chu Kang.

_Crinnm asiaticum_ L. "Bakung." The common white sea shore _Crinnm._ _C. pedunculatum_ Br. is said to differ in the long-pedicelled flowers and elongate root stock. I have only seen one species in Singapore and Penang, and that has long pedicelled flowers and no root stock. The flowers open about 6 p. m. and are sweet scented, and very attractive to hawk moths. Sea coasts, Kranji, Selitar, Pulau Ubin.

_Euryale sylvestris_ Salisb. Is probably native here. It occurs in the sea sand at Changi, Bajau, etc., and is often cultivated.

**TACCACEAE.**

_Tacca cris'tata_ Jack. Common in woods, Bukit Timah, etc.

**DIOSCOREACEAE.**

_Dioscorea demona_ Roxb. "Gadung." A fairly large climber with prickly glaucous stems. The tubers sliced and washed in running water are eaten, but unless so washed are stated to be poisonous. Common in villages; I have never seen it elsewhere.

_D. pyrifolia_ Kunth. Common, Bukit Timah, Chan Chu Kang, Bukit Mandai, Sungei Pandan.

_D. oppositifolia_ L. Garden jungle, Selitar, Bukit Mandai Road.

_D. laurifolia_ Wall. Woods and edges of jungles, common, Tanglin, Sungei Morai, Bukit Timah, Changi.


D. glabra Roxb. Tanglin, Bukit Mandai.

D. sativa L. "Ubi Kistala." Waste ground and hedges, common.

(D. alata L. The yam is often cultivated.)

ROXBURGHIACEAE.

Stemon a tuberosa Lour. Not common, Bukit Timah.

LILIACEAE.

Smilax calophylloides Wall. A dwarf erect shrub with yellow flowers and red berries. Common in dense jungle. Garden jungle, Changi, Bukit Mandai, Bukit Timah, etc.

S. myosotiflora A. De C. Slender climber flowers green. Rare, Garden jungle, Chan Chu Kang.

S. megacarpa Roxb. Not common, Garden jungle, Bukit Timah.

S. barbata Wal. A strong climber with thorny stems. Common all over Singapore, Tanglin, etc.

S. lanceophylla Bl. with large lanceolate acuminate leaves broad at the base, smooth unarmed stem, and large flowers in solitary umbels on stout peduncles 2 inches long. Rare. Tanjong Katong (Hullett), Bukit Mandai, Bukit Timah.

Dianella ensifolia Red. "Lenjuang." Herb, flowers yellowish and fruit white, or flowers and fruits blue. Common all over Singapore.

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*D. aurantiaca* Wall. *D. Cantleyi* Bak. A shrub little or not branched, leaves green or purple with lighter rings. Flowers purple rarely white, fruit orange. Damp spots all over Singapore, common, Tanglin, Bukit Timah, Selitar, etc.


*D. singapurensis* Ridl.* Woods, Chan Chu Kang, Bukit Timah.

*D. gracilis* Wall. Common in jungles, Garden jungle, Chan Chu Kang, Bukit Mandai.

(Cordyline *terminalis*, the Dracena of Gardens, is not wild anywhere in the peninsula, it is cultivated only.)

PONTEDERIACEAE.


*M. vaginalis* Presl. Flowers dark blue. Common in ditches all over Singapore; the var. *plantaginea* is even commoner.

PHILYDRACEAE.

*Philydrum lanuginosum* Banks. Local. Wet sandy spots, Bedoh.

XYRIDEAE.

*Xyris anceps* Lam. A tufted grassy plant with terminal cones of brown bracts, with fugacious yellow flowers. Sandy places, Balestier, plain Macpherson road, Changi, Pulau Tekong.

*X. schenoides* Mart. Balestier plain, Reservoir.
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COMMELINACEÆ.


*Commelina nudiflora* L. "Rumput Aur." Common weed with blue flowers opening in the early morning and soon withering. Common all over Singapore.

*C. benghalensis* L. Weed in cultivated ground, flowers blue. Tanglin, Galang.

*A. villosum* Br. Small weed with pink flowers, waste ground, Tanglin.

*A. vaginatum* Br. Telok Kurau.


*Cyanotis cristata* C. B. C. Sandy shores. Changi, Teluk Kurau.

*Floscopa scandens* Lour. Damp spots, Tanglin, Galang.

FLAGELLARIEÆ.


PANDANEÆ.

*Pandanus atrocarpus* Griff. "Mengkuang." The biggest species here, often 40 feet high with very long leaves used for Kajangs, and ataps, baskets, hats, etc. Common all over Singapore, in swamps.
P. Houlletii Carr. About 15 feet tall, leaves large, dark red when young. Dense jungle, Bukit Timah.

P. fusciendaris Lam. "Pandan Duri." A large much branched plant, with heads of fruit as large as a man's head, bright orange. Sea coasts, and often planted. The leaves used for mats and baskets. Common, Changi, Bajau, Blakang Mati, Pulau Ubin.


P. levis Rumph. "Pandan Jelinkeh," with glaucescent unarmed leaves, is often cultivated, the leaves used to flavour rice, and as a perfume.


This has never been completely described nor named so I give a description of it here. Stem 3 feet tall or less, an inch in circumference erect grey, emitting long slender roots from all parts often producing shoots at the base seldom branched higher up. Leaves a foot long and 3 inches wide abruptly caudate acuminate, the point 2 inches long very slender dull green above glaucescent beneath rather thin in texture, spines very small numerous on the edges and keel at the apex, none on the keel at the base of the leaf. Male spadix six inches long, rachis white. Bracts oblong boat-shaped keeled mucronate lowest 4 inches long, the mucro one inch long in the two lowest bracts which are empty, the upper bracts smaller with the keel, edges, and point green and armed with short stiff spiny bristles. Flowering bracts 7, softer than the lower ones ivory white spinulose ovate to ovate lanceolate, the terminal one flat lanceolate barely an inch long. Spikes 5 shorter than the bracts except the terminal one 1½ inch long. Stamens free very slender ¼ inch long. Female spadix solitary globose about 1½ inch long carpels conic rather abruptly passing into a long brown shining upcurved spine nearly ¼ inch long.

Dry woods, common. Bukit Mandai, Bidadari, Changi, Kranji, Sungei Pandan, Pulau Ubin. Also occurs in Johore,
Perak, Sungei Ujong and Malacca. This is a very distinct little species, and one of the smallest known to me. The male plants are very rare. I have only met with one, and have never seen ripe fruit.

Three other Pandans occur here which I cannot at present identify.

P. near P. helicopus Kurz. but with very short styles to the fruit, leaves broad and very thorny at the tip. Woods, Bukit Timah.

P. sp. Stems slender about 5 feet tall much branched, leaves narrow fruit cylindric 3 inches long and one inch through, Carpels small narrowed into a single curved spine. Streams, Bukit Mandai, Bukit Timah.

P. sp. A tall plant about 10 feet high, with long glaucous leaves 1 ½ inch broad, tips deflexed. Fruits about 5 in a spike subglobose on a stout peduncle, each 3 inches long, carpels acuminate into a long spine conic, orange color. Forming large thickets in swamps near Bukit Mandai on the road to Kranji.

Freycinetia angustifolia Bl. A slender climber with narrow leaves, often covering trees like a mat. Spathes apricot orange. common, Garden jungle, Bukit Timah, Kranji.


Palmé.

(Araca Catechu L. “Pinang.” Betel-nut. Commonly cultivated, it does not seem to be known wild anywhere.)

Pinanga coronata Bl. Rare, Selitar.

P. disticha Bl. A dwarf palm with mottled leaves. Rather rare, Selitar.

P. paradoxa Scheff. Rare, Chan Chu Kang. The only specimen I have closely resembles this plant which is otherwise a native of our hills at 2,000 feet upwards.

P. polymorpha Becc. “Singapore Lobb;” doubtless an error for Penang.


O. tigillaria. Areca tigillaria Griff. “Nibong.” Like the Bayas, but with drooping leaves, and smaller fruit. Quite distinct from the Javanese O. filamentosa Bl. which is made a synonym in Flor. Brit. Ind. The wood is used in building and for many other purposes. Common usually near the sea, Kranji, etc. The Malays distinguish several other species under the names of Lenou, Ibas, and Bayas Padi, but they do not seem to me to be specifically distinct.

Iguanura geonomiformis Becc. Not common. Streams in thick jungle, Bukit Timah, Bukit Mandai.

I. Malaccensis Becc. Rare, Chan Chu Kang.

(Arenga saccharifera Labill. "Kabong," Sugar palm, is commonly cultivated.)

Caryota mitis Lour. "Tukus." Common in woods, Grange Road, Bukit Timah.


Nipa fruticans Wurmb. "Nipah." Common in tidal mud, all round Singapore. I have found fruits of this in the swampy ground of the Botanic Gardens near Cluny road, showing that the Bukit Timah stream was formerly tidal and salt as far inland as this.

Phoenix sp. A few plants of a wild date occur scattered about round Singapore, at Toas and elsewhere, but I have never been able to get fruits or flowers.


L. triphylla Griff. A very pretty dwarf species, local, thick woods, Changi.


L. acutijuta Mart. "Singapore Lobb"; evidently an error for Penang.

Livistona Kingiana Becc. A tall palm about 40 feet or more with large fan shaped leaves. Dense woods, Choa Chu Kang, Toas, Kranji.

Calamus. The Rotans so extensively exported from Singapore belong to the genera Calamus, Daemonorops, Korithaksia, Ceratolobus and Myrialepis. They inhabit dense forests climbing to the tops of trees by the aid of their thorny flagella or whips. These flagella are used to protect fruit-trees from bats, the natives attaching them to the branches and bunches of fruits in such a way that the bats tear their wings when they fly to the tree.
*C. javensis* Bl. "Rotan Lilin." A fine slender rattan, Kranji, Bukit Timah.

*C. diffusus* Becc. "Singapore Lobb." I know nothing of this.

*C. Singaporenensis* Becc. Forest near the Botanic Garden, Murlton. A very imperfectly known plant. I do not know it, and can find nothing like it there now.

*C. pallidulus* Becc. Rare, Jalan Bray.

*C. Oxleyanus* Teysm. Rare, Toas.

*C. insignis* Griff. Bukit Timah.

*C. densiflorus* Becc. Bukit Mandai.


*C. n. sp. near radulosus.* Garden jungle, Bukit Mandai.

*Demonorops grandis* Mart. "Rotan Sumambu." Common, Garden jungle, Bukit Timah, Selitar.


*D. angustifolius* Mart. Garden jungle, Changi, Selitar.

*D. intermedius* Mart. Garden jungle, Bukit Timah.


*D. didynophyllus* Becc. Common, Bukit Timah, Changi, Toas, Selitar.

*D. leptopus* Mart. Bukit Timah, Selitar.


*D. geniculatus* Mart. Bukit Timah, Toas.
D. longipes Mart. Chan Chu Kang, Bukit Timah, Mandai Changi.

D. cochleatus Teysm. Rare, Selitar.

D. crinita Bl. Not rare, but I have never seen flowers or fruits. “Rotan Chinchin,” Bukit Timah, Chan Chu Kang.


Korthalsia echinometra Becc. Climber with very large swollen sheaths inhabited by ants. Flowers and fruits unknown. Rare, Bukit Timah.


K. polystachys Mart. Bukit Timah.

Ceratolobus Kingianus Becc. Bukit Timah, Selitar.

Plectocoma Griffithii Becc. “Rotan Dahan.” A very large stout rattan. The flowers produced in an enormous inflorescence of pendulous spikes 8 feet long with close dark brown sheaths enclosing the flowers, each plant is unisexual, and the flowering stems die away after flowering. Common in all the woods.


The Sago palms Metroxylon Sagus Rottb. and M. Ruwphi Mart., the “Lontar,” Borassus flabellifer L., and the Coconut, Cocos Nucifera L., are cultivated here.
Cryptocoryne cintata Fisch. Very abundant in tidal mud. Flowers very rarely produced. Kranji, etc.

C. Griffithii Schott. Aquatic in streams in the forests often almost blocking them. Spathes submerged up to the mouth, tube white, limb dark crimson pustular. Fruits pink. Common, Tanglin, Garden Road, Bukit Timah, Toa Payoh, Kranji, Choa Chu Kang.


Typhonium Roxburghii Schott. A weed in waste ground.

Amorphophallus PRAINII Hook. fil. Bukit Timah.

A. sp. Leaf only seen. Reservoir, Bukit Timah.

Colocasia antiquorum L. "Keladi," and Alocasia macrorrhiza Schott and A. indica Schott are commonly cultivated, and occur as garden escapes. A. cucullata Schott occurs in waste ground in Tanglin, also doubtless introduced.

Alocasia denudata Engl. "Keladi Rimau." With hastate leaves deep green with paler nerves entire and peltate in seedlings, stem mottled with olive, is common in woods and banks all over Singapore.


Aglaonema nitidum N. E. Br. with stems 1 to 2 feet tall and narrow deep green leaves at the top, is very common in dense woods. Bukit Timah, Chan Chu Kang, Changi, Pulau Ubin.


A. minus Hook. fil. A dwarf species, leaves often mottled with paler color, or pale or dark green. Common in wet jun-
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H. flava Hook. fl. Singapore, swamps (King). Not seen.


H. singaporenensis Regel. An altogether doubtful plant, cultivated in Russia.


Anadenanthera montanaum Schott. Climbing on trees low down. Common, Garden jungle, Bukit Timah.

A. median Schott. Pothos bajaria Wall. Pothos celatianalis of Gardens. The young plant grows flat on trees and rocks with close set distichous velvety green leaves and has long been cultivated under the last name in Europe. This form gradually passes into the adult which has stalked lobed and perforate leaves like those of Monstera. Not rare, Bukit Timah, Jurong, Bidadari, Reservoir woods.

Scindapsus pictus Hassk. A well known ornamental climber with green leaves mottled with silver. Common in woods.
but rarely to be met with in flower. Bukit Timah, Chan Chu Kang.

*_Sce. hederacea_ Schott. Climber. Common thick wood—, Bukit Timah, Sungei Buluh, Sungei Tengeh, Chua Chu Kang, Bidadari.

*Raphidophora Lobbii* Schott. Wool —, Bukit Timah.

*R. minor* Hook, fil. Rare, Toas.

*R. gracilipes* Hook, f.? Rare, Chan Chu Kang.

_Epipremnum gigantium_ Schott. A strong creeper, with very large leathery leaves on trees and stumps common, Chan Chu Kang, Bedoh, Sungei Blukang.

_Lasia heterophylla_ Schott. Tidal mud, also inland on muddy stream banks. Chua Chu Kang.


_Pothos Curtisii_ Hook, f. Climbing on trees, Bukit Mandai, Kranji.

(_Acorus Calamus_ L. “Deringu” cultivated and occurring as an escape. It rarely flowers here, but I found it in flower in June 1899.)

**LEMNACEA.E.**

_Lemma paucirustata_ Hegelm. Ditches, Tanglin, Galang, etc.

_L. polyrhiza._ Ditches, Tanglin.

_L. sp. near L. trisulca._ L. Galang.

_Wolfia arhiza_ Wimm. Ditches, Alexandra road.

**TRIURIDEA.E.**

_Sciaphila affinis_ Becc. A minute slender plant pink with violet fruits. Not rare, dense jungle among dead leaves. Bukit
Timah, Chan Chu Kang, Selitar. I doubt this being distinct from Blume's *Sc. tenella*.

**Naiadaceae.**

*Naias minor* All. Ditches, Gardens, often a perfect pest in the Gardens lake.

**Eriocaulonaceae.**

*Eriocaulon sexangulare* L. Very common all over Singapore.


**Cyperaceae.**

*Kyllinga cylindrica* Nees. Rare, sandy spots. Cathedral close.

*K. melanosperma* Nees. Rare, in long damp grass. Tanglin.


*K. monocephala* Rottb. Whole island.

*Pycreus nitens* Nees. Rare, damp sandy spots, Selitar, Changi.

*P. polystachyus* Beauv. Very common, waste ground and open spots. var. *laxiflorus*. Marshy ground.

*Cyperus Haspan* L. Very common in marshy spots. Whole island.

*C. diffusus* Vahl. Sandy woods, Bukit Timah.

*C. radicans* Nees. Sea shores, Changi.

*C. compressus* L. Common in waste ground, whole island.

*C. Iría* L. Weed of cultivation, whole island.

*C. distans* L. Very common in waste ground.

*C. Malacensis* Lam. Muddy spots by tidal rivers, Balestier plain.

*C. pilosus* Vahl. Wet or damp spots, whole island.
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C. bancanus Miq. Cantley's collection, no locality.


C. rotundus L. Very common weed, gardens and waste ground.


Mariscus Dregeanus Kth. Common sandy places near the sea. Tanjong Katong, Balestier plain, Changi.

M. Cyperinus Vahl. Very common in dry spots, all over Singapore.

M. Sieberianus Nees. Waste ground, Tanglin, Galang.

M. albescens Gaud. Common near the sea. Tanjong Ru, Rochore, Bajau.

M. microcephalus Pres. Galang.

Eleocharis variiegata, var. luridiflora C.B.C. Very common in ponds and marshes, Tanglin, Reservoir, Blakang Mati, Changi.

E. ochrostachys Steud. Not rare, Garden Lake, Changi, Selitar, Tivoli.

E. capitata Br. Local, Changi, Tampanis, Teban.


E. fistulosa Schultes. Local. Marshes round the reservoir.

Fimbristylis tetragona Br. Balestier plain.


F. setacea Benth. Rare, Tanglin.

F. mutans Vahl. Damp sandy spots, Bukit Timah, Changi, Bukit Mandai, Blakang Mati.

F. pauciflora Br. Common all over Singapore in turf, and in damp spots.

F. diphylla Vahl. Very common all over Singapore.

F. aestivalis Vahl. Damp cultivated ground, Tanglin.


F. spathacea Roth. Sandy spots near the sea, common. Selitar, Bukit Mandai, Kranji, Changi.

F. tenera var. obtusata. Sandy spots and in turf, not rare, Tanglin, Jurong, Bukit Timah, Chua Chu Kang.

F. asperrima Boeck. Woods, Bukit Mandai.

F. mitissima Vahl. Very common in dry spots all over Singapore.


Balbostylis barbata Kunth. Common everywhere in sandy spots.

B. puberula Kth. In Cantley's collection, without locality.

Scirpus mucronatus L. Common in pools and ditches, Reservoir, Chan Chu Kang.

Sc. grossus Lin. fil. Rare. Ditch at Wayang Satu, Bukit Timah Road.


Lipocarpha argentea R. Br. Common in wet spots all over the island.

L. microcephala Kth. Local. Bukit Mandai, and on the Bukit Timah road near Kranji, Galang.

R. malaisica. C. B. C. Rare, Belo'k, Bukit Mandai.
R. aurita Vahl. Common in wet spots all over the island.
R. glauca var chinensis. Rare, Sandy spots usually near the sea.
Blakang Mati, Changi.
Schoenus calostachyus Poir. Rare, Sandy spots, Changi.
Cladium glomeratum Br. Damp sandy spots, Changi.
Gahnia tristis Nees. Common, Blakang Mati, Bukit Timah,
Sungei Morai, Tanglin.
Remirea maritima, Aubl. Sea shores, local, Changi, Tanah Merah.
Thoracostachyum bancanum Kurz. Very common in all jungles.
Mapania pavastri Benth. Dense woods, common, Bukit Timah,
Chan Chu Kang.
M. longa C. B. C. In streams in jungle, rare, Chan Chu Kang.
M. multispicata C. B. C. Jungles, Bukit Timah.
M. humilis Naves Jungles, common, Chan Chu Kang, Bukit Timah,
Kranji, Bajau.
Scirpoloudron costatum Kurz. "Silensing." Common in tidal
woods, forming large clumps of long grassy leaves,
among which the flower panicles are concealed. The
fruit is an inch long and is probably the largest in the
order. Bukit Mandai, Jurong, Changi, Selitar.
Seleria ratcha Hance. Bukit Timah, Bedoh.
Scl. Richi'egi Clarke. Rare, Changi. It also occurs in Pulau
Buru near the Carimou Isles and Hongkong.
Scl. biflora Roxb. Damp spots and turf. Blakang Mati, Bukit
Timah, Changi, Tanglin.
Scl. zeylanica Poir. Wet spots, Changi, Tanglin.

Scl. caricana Benth. Very common, paths and turf, and damp spots. All over Singapore.


Scl. oryzoides Presl. Rare, wet spots, Changi.

Scl. bancana Miq. Common in open country, Tanglin, etc.


Scl. sumatrensis Retz. Very common in open country all over the island.

Scl. levis Retz. Common in dry open spots and waste ground. Whole island.

Carex cyrtostachys Brngn. Local, in a stream on Bukit Timah.

**GRAMINEÆ.**

*Paspalum scrobiculatum* L. Common everywhere.

*P. conjunctum* Berg. Very common, probably introduced.

*P. distichum* Burm. Plentiful in salt mud all round the island, Tanjong Ru, Bajau.

*P. sanguinale* Lam. Common everywhere in waste ground.

*P. longiflorum* Retz. Common in waste ground.


*I. australis* R. Br. Very common in marshes, Tanglin, etc.

*I. milicacea* Roth. Wet spots in woods, Tanglin, Bukit Timah Road 6th mile, Selitar.

*Panicum crusgalli* L. Rare, collected by Hulett without locality

*P. colonum* L. Common in waste ground.
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P. distachyum L. Not Common, Bukit Mandai, Changi, Tanglin.

P. repens L. Common, Tanglin, Reservoir, Changi.

P. auritum Presl. Wet, open spots, Reservoir, Changi, Ang Mo Kio.

P. indicum L. Common, waste ground.

P. myosuroides Br. Ditches, Ang Mo Kio, Kranji.

P. nodosum Kth. Hedges and thickets, Tanglin, Chan Chu Kang.

P. ocafolium Poir. Rare, Government Hill.

P. sarmentosum Roxb. Woods, Grange Road, Changi, Sumba-wang.

P. luzonense Presl. Dry roadsides and waste ground, Tanglin, Galang.

P. patens L. Shady spots, Tanglin, Bukit Timah, Chua Chu Kang.

P. pilipes Nees. Roadsides, Bukit Timah, Gardens, etc.

P. luteolium L. Damp, shady spots, Tanglin.


Thuarea sarmentosa Pe s. Sandy places near the sea, local. Changi, Galang, Teluk Kuran.

Leersia hexandra Sw. Common in marshes, whole island.

Leptaspis urvolata R. Br. Dense woods, Bukit Timah, Changi, Chan Chu Kang.

Perotis latifolia Ait. Sandy places, Cathedral compound, Galang, Changi.

Zoysia pungens Willd. Common in turf and near the sea.
Conx Lachryma-Jobi L. "Job's Tears," "Jilei." Occurs in waste ground.


Imperata arundinacea Cyrill. "Lalang." Probably the commonest plant in the island.


Ischaemum rupestre Salisb. Rare, Galang.

I. magnem Rendle. Blakang Mati, Balestier plain, Galang. I have also collected it in Labuan.

I. unizuni L. Common everywhere.


I. timorensse Kth. Roadsides, Tanglin, Kranji.

Rothboellia glandulosa Trin. Borders of woods and thickets, Changi, Bajan, Pulau Ubin.

Andropogon pseudogyaya Kth. Sandy places, Galang, Changi, Blakang Mati.

A. aciculatus Retz. Very common in turf, etc., everywhere.

A. contortus L. Sandy spots near the sea, Changi.

Anthistiri carpons Willd. Dry open spots. Chinese cemetery, Sepoy lines.


Sphoerocaryum elegans Nees. Wet paths in jungle common, Kranji, Ang Mo Kio.

Sporobolus indicus L. Mt. Faber, Ang Mo Kio, Tanglin, Galang.


Chloris barbata Sw. Pulau Brani (introduced) Passir Panjang

Eleusine indica L. Very common in waste ground. The cultivated variety coracana is also sometimes to be met with.

E. aegyptiaca Desv. Local, Rochore, Changi.

Eragrostis tenella R. and S. Very common in waste ground.

E. amabilis Wight. Very common.

E. elegansita Steud. Chasseriau Estate.

E. elongata Jacq. Dry spots, Tanglin, Changi, Bukit Timah, Chasseriau Estate.

Centotheca lappacea Beam. Common in woods. Garden jungle, Bukit Timah, etc.

Lophatherum Lehmanni Brugn. Woods. Garden jungle, Selitar, etc.

Bambusa Ridleyi Gamble.* A very slender bamboo growing in dense woods, Bukit Timah.

(Dendrocalamus flagellifer Munro. Cultivated for its edible shoots. Jurong, Tanglin.)

Schizostachyum Blumei Nees Perhaps introduced from Java, Roadsides, Selitar, Bukit Timah Road.

(Gigantochloa verticillata Munro. Cultivated, Tanglin, Bukit Timah Road.)

Ochlandra Ridleyi Gamble,* “Buluh Kasap.” Bukit Mandai, Choa Chu Kang. The Javanese say this is introduced from Java, but it is not known elsewhere than Singapore.

FILICES.

In this list of the ferns, I have followed Beddome’s Ferns of British India.
**The Flora of Singapore.**


*A. Ridleyi* Bak. Rare, Sungei Morai.

*Lecanopteris cariosa* Bl. Very rare, on lofty trees, Bukit Timah.


*II. denticulatum* Sw. Not common, mangroves, Kranji.

*II. Neesii* Hook. Selitar, Bukit Timah.

*II. sp.* Bukit Mandai (8938).

*Trichomanes musci* les Sw. Rocks, Bukit Timah.

*Tr. Javanicum* Bl. Terrestrial, very common in all damp woods.

*Tr. rigidum* Sw. Less common, Bukit Timah, Toas, Kranji, Sungei Morai, Selitar, Tanjong Merawan.

*Tr. filicina* Bory. *Tr. bipunctatum* Poir. Creeping on rocks and trees, not very common, Bukit Timah, Chan Chu Kang, Kranji.

*Tr. maximun* Bl. Rare, Bajau.

*Tr. digitatum* Sw. Rare, Kranji.

*Tr. pauciflorum* Poir. "Singapore, Moore's Herbarium" file Beddome; not seen.

*Humata heterophylla* Sw. On trees and on the ground in sandy spots. Common, Changi, Bajau, Tanpeasis, Kranji, Bukit Timah.
II. angustata Wall. On trees, Sungei Morai, Chan Chu Kang.

II. pedata Sw. Not common, Kranji, Bajau.

II. parallela Wall. Tanjong Merawan.

II. sessilijfo ia Bl. "Singapore, Sinclair and Moore's Herbarium" in Beddome; not seen.

Leucostegia parvula Wall. Mangrove swamps. Kranji, Sungei Buluh, Tanjong Merawan.

Prosopidia contigua Sw. "Singapore" side Beddome, must be very doubtful.

Dacalla triphylla Hook. On lofty trees, apparently by no means rare, but difficult to produce. Bukit Timah, Selitar, Kranji.

D. solidu Sw. Common, Selitar, Chua Chu Kang, Sungei Morai.

D. elegans Sw. On trees, often very high, and on the sand of the shores, Bukit Timah, Changi.

Microlepia speluncae L. Common on banks, Tanglin, Ang Mo Kio, Changi, Pasir Panjang, Rochore.

Lindsay's repens Thw. Climbing on small trees in thick forest. Bukit Timah.

L. trapeziformis Dry. L. Lancea (L). Dense forest, Bukit Timah Selitar.


L. rigida Sm. Rare, Sungei Buluh.

L. Walkeriæ Hook. In open wet spots, common, but local, Changi, Tampenis, Bukit Mandai.

L. divergens Wall. Common in dry woods, Bukit Timah, Bajau, Sungei Morai.

L. tanaginosa Wall. On trees, Jurong river, Bajau, on trees in the Botanic Gardens.
Schizoloma lobata Poir. In dense woods, Bukit Timah.
Sch. ensifolia Sw. In thick wet woods. Chua Chu Kang.
Sch. media R. Br. Rare, Pulau Brani.
Sch. heterophylla Dry. Rare, Pulau Brani.
Adiantum flabellatum L. Banks, Changi; Rocks, Pulau Ubin.
A few other species have established themselves as garden escapes.
Chei'anthes tenuifolia Sw. Common in dry spots, Tanglin, Chan Chu Kang, Pulau Ubin.
Pteris ensiformis Burm. Common in dry spots, Bukit Timah, Tanglin, Pulau Ubin.
Pt. longifolia L. Mount Pleasant, (Hullett).
Pt. aquilina L. Common all over Singapore.
Litobrochia incurva Thunb. Tanglin (probably an escape).
Ceratopteris thalictroides L. Common in ditches and sluggish streams. Tanglin, Selitar, Changi.
Blechnum orientale L. Very common in open places, Tanglin, Bukit Timah, etc.
B. Finlaysonianum Wall. In similar localities, Reservoir, Bukit Timah, Chan Chu Kang.
Thamnopteris nidus L. Common on trees all over Singapore, the large form var. musciformis is the commonest form.
Asplenium squamulatum Bl. Much resembles the last, but has a creeping stem. Wet woods, usually growing on stumps, Bukit Timah, Chua Chu Kang.
A. *falcatum* Lam. Rare, woods, Bukit Timah.

A. *macrophyllum* Sw. Not common, Chan Chu Kang, Sungei Buluh, Pulau Ubin (Kunstler).

*Diplazium pallidum* Bl. Toas.

*D. porrectum* Wall. Common in woods, Reservoir, Holland Road, Chan Chu Kang, Bukit Timah, Changi.

*D. bantamense* Bl. Singapore (Hullett).

*D. sylvaticum* Presl. Singapore (Hullett).

*D. speciosum* Mett. Wood near Holland road, Serangoon Road, Bukit Timah.

*D. tomentosum* Hook. Woods, Bukit Timah.

*D. sorzogonense* Presl. Bukit Timah.

*Anisogonium cordifolium* Mett. Rocks, Bukit Timah.


*A. vastum* Bl. Woods, Bukit Timah, Pulau Ubin.

*A. cicatirium* Sw. Common in woods, Sungei Bukang, Bukit Timah, Pulau Ubin.

*A. semilbilum* Wall. Bukit Timah, Bajau, Bukit Mandai.

A. *Zollingerianum* Kze. Bukit Timah.

*Pleocnemia gigantea* Bl. Bukit Timah.

*Lastrea crassifolia* Bl. Bukit Timah, Bajau, Bukit Mandai

*L. fuscipes* Wall. Bukit Timah.

*L. appendiculata* Chua Chu Kang.

*Nepbroidium unicum* L. Common in open places, Galang, Salitar.

*N. cuneatum* Bl. Common, Sepoy lines, Jurong, Changi.

*N. avidum* Don. Jurong, Green Hill, Kranji.
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*N. urophyllum* Wall. Dense jungle, Bukit Timah.


Var. *ambioinerve.* Green Hill, etc.

Var. *procurrens.* Green Hill.

Var. *didymosorum.* Not rare.

*N. pennigerum* Bl. Chua Chu Kang.

*N. lectum* Wall. Singapore (Wallich): not seen.

*N. heterocarpon* Bl. Green Hill (Hullett).  


*N. latifrons* Kze. Bukit Timah.

*N. truscacum* Presl. Singapore (Hullett).

*Nephrolepis exaltata* L. Common in open country all over Singapore.

*N. colubrilis* J. Su. Climbing over bushes, Rochore, Toas, Sungei Mora.

*N. acuta* Presl. Singapore (Hullett.)

*N. Duji.* Has established itself at Changi and a few other places.

*Dictyopteris Barberi* Hook. Bukit Timah.

*Polypodium difformis* Bl. Bukit Timah.

*Polypodium decorum* Brack. Common on trees, mangrove swamps, Kranji, Sungei Buluh, Toas.

*P. streptophyllum* Bak. Very rare. Trees on Serangoon Road (Murton).

*P. adspersum* Bl. and *P. setigerum* Bl. in Moore’s Herbarium (Beddome), probably wrongly localised.
Goiopeelium verruzo-um Wall. Damp open spots, Bukit Mandai, Pasir Panjang.

Niphobolus adnascens Sw. On trees, Changi, Pulau Ubin.

N. acrostichoides Sw. Garden jungle, Chan Chu Kang.

N. penangianus Hook. Rare, Kranji.

Dipteris Horsfieldii Br. Abundant on rocks and banks overhanging the sea, all round the island from Pasir Panjang to Changi, also on Pulau Tekong and other islands in the Strait.


D. quercifo'tium L. On trees, Toas.

D. splendens Hook. Singapore (Beddome).

Pleopeltis stenophylla Bl. On lofty trees, Bukit Timah.

P. sinuosa Wall. Common on trees. This curious fern is remarkable for its hollow rhizome always full of ant's nests.

Gardens, Jurong, Bukit Timah.

P. longifolia Mett. Sungei Morai.

P. angustata Sw. Common on trees, Gardens, Sungei Morai, Changi, Bajau, Serangoon.


Tanglin, Siglap, Sungei Buloh, Chan Chu Kang.

P. phymatoles L. Very common on trees on the ground in dry spots.

Tanglin, Bukit Timah, Selitar, Changi.

P. nigrescens Bl. Woods, Bukit Timah.

Monogramme trichoidea Sm. A very small hair-like fern, rocks.

Bukit Timah.

Syngramme Wallichii Hook. Woods, common, Bukit Timah, Selitar, Chua Chu Kang, etc.

Sel ignea Feei Hook. Common on trees, especially mangroves Kranji, Bajau, etc.

S. membranacea Hook. "Singapore, Moore's Herb." (Beddome.)

Gymnogramme calomelanos. The silver fern occurs here and there as an escape. Tanglin, Chan Chu Kang.

Meniscium triphyllum Sw. Banks of streams, Toa Payoh.


Antrophynm reticulatum Kaulf. On trees and rocks, not common, Bukit Timah.

A. plantagineum Kaulf. Selitar.

Vittoria elongata Sw. Very common on trees, Gardens, Kranji, Thompson Road, etc.


Tarenites boehnoides Willd. Very common in woods all over Singapore.

Drynoglossum piloselloides Presl. Common on trees everywhere.

Elaphoglossum lividulum Sw. On trees in mangrove swamps Kranji.

Stenochlaena palustris L. Common, climbing over trees and bushes. The young creeping form with delicate finely cut fronds may be found in wet woods. I found a curious fasciated form on Bukit Timah, Rochore, Tanglin, Bukit Timah, etc.

Polybotrya appendiculata Willd. Local. Rocks, Bukit Timah.

Gymnopteris subrepanda Hook. Bukit Timah.

G. Presliana Hook. Bukit Timah (Hullet).

Acrostichum aurum L. Common in tidal mud, on all the rivers.

Platyceirium grande Sm. Not seen. Singapore (Beddome).
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Pl. bifurme Bl. Common in trees all over Singapore.

Schizaea dichotoma Sw. Dry woods, common all over Singapore.

Sch. digitatum Sw. Dry woods. Common all over Singapore.

Lygodium microphyllum B. Br. Common in open places, thickets, etc. Tanglin, Changi, Kranji.


L. flexuosum L. Singapore, Hullett.

Angiopteris erecta Hoffm. Rocky woods, Bukit Timah.

Ophioglossum nudiculae L. Bukit Panjang, Chan Chu Kang.

O pendulum L. Epiphytic on Thamnopteris and Platyserium. Not common, Tanglin.

LYCOPODIACEAE.

Lycopodium cernuum L. Terrestrial. Common all over Singapore; in open country and secondary growth.

L. taxifolium Sw. Epiphytic on mangroves and other trees near the sea. Sungei Sumbawang, Chan Chu Kang.

L. phlemaria L. Epiphytic, Garden jungle, Chan Chu Kang.

L. squaroosum Forst. Epiphytic. Tanjong Merawan.

L. nummularifolium Bl Epiphytic, Chan Chu Kang.


S. plumosa Bak. Plentiful in many spots in damp woods, Bukit Timah, Jurong.

S. Willdenowii Bak. Common climbing in thickets. Bukit Timah, Bukit Mandai, Kranji, etc.

S. trichobasis Bak. "Singapore, Sir W. Norris," says Baker; perhaps an error for Penang, where Sir W. Norris collected plants. I have not seen it in Singapore.
S. sp. Small plant, Bukit Timah, No. 6547.

*Psilotum flaccidum* Wall. On trees in mangrove swamps, Kranji

*P complanatum* Sw. Mangroves, Sungei Morai, Kranji.

**Rhizocarpeae.**


**Addenda.**


*Enhydrias angustipetala* Ridl. Common in ponds and ditches, Tanglin. This new genus must be put in place of *Hydrilla verticillata*, for which it was mistaken.