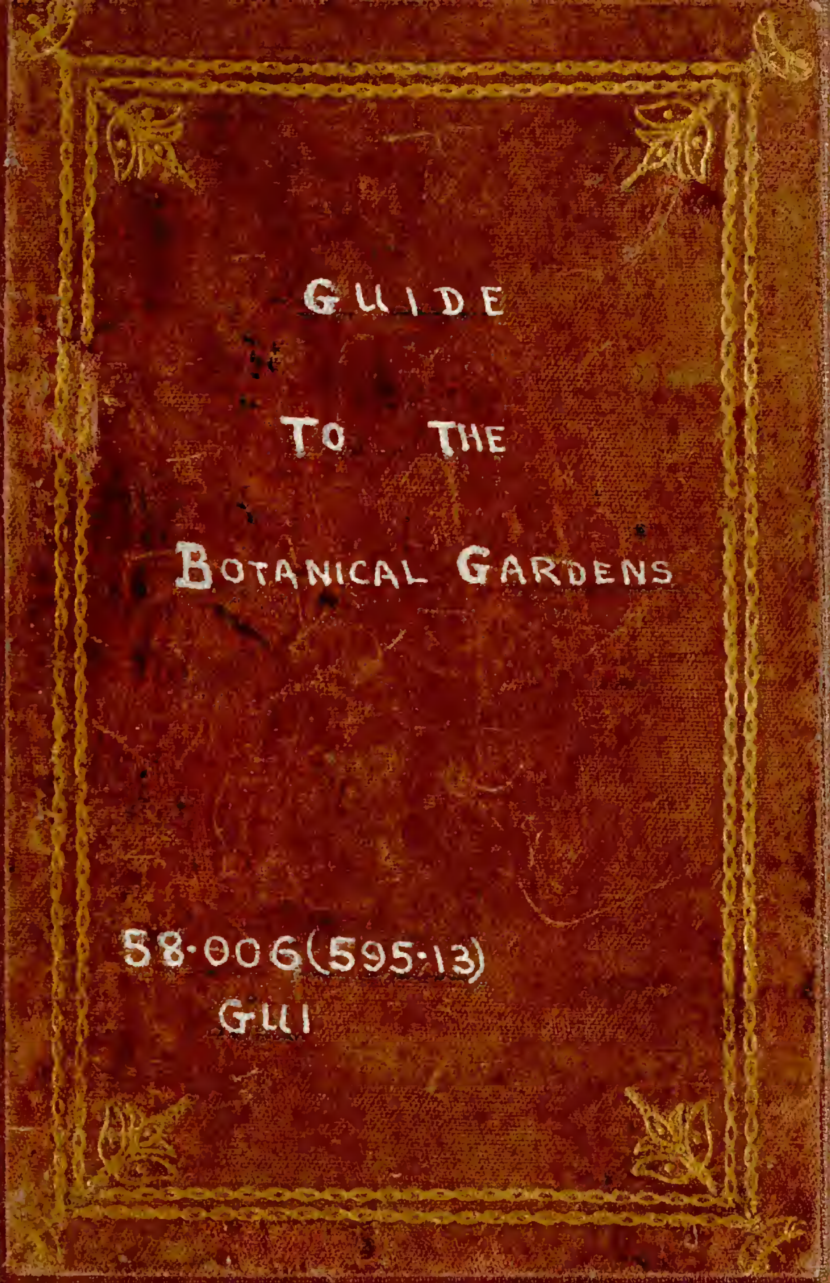

GUIDE

TO THE

BOTANICAL GARDENS

Guide
to the
Botanic Gardens.

Singapore
Printed at the Government
Printing Office
1889

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BY-LAWS

1. The Botanical Gardens shall be open to the public daily from sunrise to sunset, and, on nights when the Band plays, to 11 p.m.

2. Carriages of all kinds are admitted, but it is forbidden to feed the horses in the Gardens. A halt can only be made at the side of the walks and where sufficient room can be left for other carriages to pass. No gharries or jinrickshas are allowed to ply for hire in the gardens.

3. Driving or riding over the lawns is strictly prohibited.

4. Walking or playing over the flower beds is prohibited.

5. It is forbidden to touch the plants or flowers, and cutting or removal from the Gardens of any plant, flower, or seed, or anything appertaining to the Gardens, will render those so doing liable to expulsion and prosecution.

6. Fishing or bathing in the lakes is prohibited.

7. Dogs are not admitted, unless led by a short string or chain.

8. It is forbidden to enter or leave the Gardens except by the proper entrances and exits.

9. All animals found straying in the Gardens will be impounded or destroyed.

10. Shooting in the Gardens is prohibited.

January, 1889.

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GUIDE

TO THE

BOTANICAL GARDENS.

THIS Guide to the Botanical Gardens has been written with the view of enabling those who are passing through Singapore to see, during the few hours at their disposal, the principal objects of interest in the Gardens.

It is hoped that it may also prove to be of some service to residents in Singapore.

For the convenience of visitors, a plan of the Gardens is given, upon which a route is marked by dotted lines.

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By taking this route, there will be no difficulty in readily recognizing the different trees, etc. referred to in the guide.

The guide contains lists of the most interesting of the trees and shrubs, and gives also the lawns where they are respectively to be found.

A complete catalogue of all the species and varieties of trees and shrubs, which the Gardens contain, would be outside the scope of this guide.

The Botanical Garden Catalogue published in 1879 contains 1,802 species and varieties of trees, etc. The number at present exceeds 2,500.

Singapore, the seat of Government of the Straits Settlements, is situated at the southern point of the Island of the same name, in Lat. 1° 16′ North and Long. 103° 53′ East.

The mean temperature for the year 1887 was 80°.7 Fahr. The fall of rain during the same year was above the average, the mean fall being 112.97 inches, and the mean number of rainy days 185.

The population of Singapore, including the Island, by a census taken on 3rd April, 1881, was 139,208. During the year 1887, 101,016 Chinese Immigrants landed in Singapore; 23,555 of these emigrated, under labour contracts, to other parts of the Colony, Netherlands India, Native States in the Malay Peninsula, and other adjoining Countries.

The shipping returns of 1887 show the arrivals in Singapore of 3,467 vessels, with a tonnage of 2,642,195 tons, and crews of 139,393 men. Departures—of 3,393 vessels, with a tonnage of 2,564,592, and crews of 145,468, being an increase over the year 1886 of arrivals 328 vessels, 75,337 tons, and 10,522 crew. Departures—increase of 321 vessels, 55,594 tons, and 18,969 crew.

The value of imports into Singapore, from all Countries and Colonies for the year 1887 was $92,119,736, being an increase of $14,842,200 over the year 1886.

The value of the exports for the same period was $75,066,330, being an increase of $14,487,715 over the year 1886.

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"THE GUIDE."

In the year 1860 a number of the residents of Singapore formed themselves into a Society, called the Agri-Horticultural Society.

To this Society the present Botanical Gardens owe their origin.

The extent to which the present residents of Singapore are indebted to the energy of the Agri-Horticultural Society, and to Mr. NIVEN, who was employed by them to lay out the Gardens, can be readily realized, when it is remembered, that in 1860 the site of the present Gardens was a dense natural jungle without road or path.

In the year 1874, the Agri-Horticultural Society, feeling that their financial position was not such as would enable them to carry on the Gardens in the way they were intended to be carried on by the original founders, made a proposal to the Government, that the Gardens should be handed over to them, in order that they might be placed upon a proper scientific footing.

This proposal was accepted by the Government, and the late Mr. MURTON (recommended by Sir J. D. HOOKER) was appointed Superintendent.

Mr. MURTON'S thorough knowledge of his work soon enabled him to raise the Botanical Gardens to a place of first utility.

During the five years of his holding the office of Superintendent, he increased the number of known species in the Gardens, from about five hundred to over thirteen hundred.

In 1880, Mr. MURTON left the Colony, and entered the service of the King of Siam.

He died in Bangkok the same year. Mr. MURTON was succeeded by the late Mr. CANTLEY, then Assistant Director

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of Gardens and Forests, Mauritius. Under Mr. CANTLEY'S direction a Governmental Forest Department was established.

This Department will always be connected with Mr. CANTLEY'S name. The success it has obtained being mainly due to his experience.

In February, 1888, Mr. CANTLEY died in Tasmania; where he had gone for a holiday with the hope of re-establishing his health. His successor is Mr. RIDLEY, M.A., F.L.S.

Many of the most valuable trees and plants in the Botanical Gardens, are contributions from travellers passing through Singapore, and from the Officers of the numerous vessels trading with this Port.

The calling attention to these much appreciated presents will, it is hoped, induce those who have the opportunity of collecting plants and seeds in other countries, to avail themselves of such opportunities, and on their return to Singapore to give the Botanical Gardens the benefit of their collections.

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THE GARDENS.

THE Botanical Gardens, Singapore, situated in the district of Tanglin, are about three miles from the town. The Gardens proper cover an area of about 66 acres, of which about 10 acres are original jungle.

With one or two exceptions, this is the only piece of original jungle left on the Island. Although it necessarily gives a very poor impression of the dense jungles in the interior of the Malay Peninsula, it does give a visitor some idea of the wonderful richness of tropical vegetation. Special notice should be taken of the banks of ferns, which bound this piece of jungle on the side next to Garden Road.

These ferns are locally known by the Natives as *Resam* and botanically as *Gleichenia dichotoma*.

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CLIMATE.

SITUATED nearly on the Equator, in Latitude 1° 17″ N., Singapore possesses a very equable climate. The mean monthly temperature ranges between 78° and 82° Fahr., the highest and lowest temperature in the shade, during last year, being 91° 8′ Fahr. and 68° 6′ Fahr. No very distinct dry or wet seasons exist. A fortnight without rain would be considered a long drought.

As might be expected, it sometimes rains very heavily; as much as six inches falling in twenty-four hours. In 1887, the rainfall reached 112.97 inches.

During these heavy rains, tender annuals, planted in the open ground, are more or less spoiled, hence the paucity of flowers, which is frequently remarked by visitors.

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ROUTE.

ROUTE suggested to be taken by any one who has only a limited time in which to see the Gardens.

On referring to the plan, this route (marked with a dotted line) will be seen to start from the entrance gates of the Gardens, and to proceed to the various lawns, where objects of interest are situated.

The lawns are marked alphabetically, and in the Appendix, lists are given of the principal trees and shrubs to be found on each lawn.

Starting from the entrance gates, on the right hand of the road, is lawn *A*. The plants on this lawn are mostly of an ornamental character; a list of these plants is given in Appendix *A*.

With this list, and the assistance of the labels attached to the plants, visitors should have no difficulty in identifying the various species.

On the left of the road, on the lawn marked *L*, a fine drooping tree is to be noticed. This is the gum copal (*Hymenœa verrucosa*) affording a copal used in varnish. It is a native of Madagascar, and attains to a great size. Here also several plants of the Traveller's tree (*Ravenala speciosa*), so called from the water contained in the sheathing leaf stalks, which are hollow. If these leaves are pierced with a spear or knife, a considerable amount of palatable water can be obtained from them. These trees are natives of Madagascar. The following passage occurs in ELLIS'S " Madagascar ":—"This tree has been most celebra-"ted for containing during the most arid "season a large quantity of pure fresh "water, supplying to the traveller the "place of wells in the desert. Having

"formerly been somewhat sceptical on the
"point, I determined to examine some of
"the trees, and during my journey this
"morning, we stopped near a clump of
"the trees. One of my bearers struck a
"spear four or five inches deep into the
"thick firm end of the stalk of the leaf,
" about six inches above its junction with
"its trunk, and on drawing it back a
"stream of pure clear water gushed out,
"about a quart of which we caught in a
"pitcher, and all drank of it on the spot.
"It was cool, clear, and perfectly sweet."

A little further along the drive, looking still to the left, will be seen a fine clump of sago palm (*Sagus lævis*), from which is obtained the sago of commerce. Sago is also produced in small quantities from several other plants, such as Cycas. It is prepared from the soft inner portion of the trunk, which is scooped out, and pounded in water until the starchy matter separates, when it is drained off with the water and allowed to settle. It is in this stage known as sago meal.

Close to these palms is the Nymphœa pond. The best time to see this pond is in the early morning. There, are to be seen the fine plants of the Victoria water lily (*Victoria regia*) presented to the Botanical Gardens by the representatives of the late Mr. WHAMPOA, whose gardens in Singapore have long been noted for them. This lily is a native of the tributaries of the Amazon, and was first brought into public notice by Sir R. H. SCHOMBURGHK, who in 1837 discovered it on the Berbice River, in British Guiana. It was not, however, successfully introduced into cultivation until 1849. The seeds are edible, and the farina is said to be as good as the flour of the finest wheat.

At the far end of the pond, will be found the Sacred lotus (*Nelumbium speciosum*), regarded by the early Egyptians and Buddhists as an emblem of peculiar sanctity. The seeds and stem contain a quantity of starch and are used as food.

On the triangular plot marked *M* are

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several very showy flowering trees and shrubs. Of the former, the *Spathodea campanulata*, and the beautiful *Amherstia nobilis*, named after Countess AMHERST, wife of a Viceroy of India, are the most conspicuous. Of the shrubs, the best is the beautiful golden flowered Allamanda—*A. Cathartica.*

Further on to the left is the main lake, which covers an area of two acres. It has a small island in the middle, and is of varying depth, from three to nine feet.

Striking off to the right, and taking the small path which leads to the aviaries, a clump of trees will be seen on the left, among them are some Tembusee (*Fagraea peregrina*), one of the most graceful and beautiful indigenous trees. On the same lawn *B*, but more in the centre, are also several very fine specimens of it. The wood is very hard and durable. Another tree in the clump worth notice is the scandent one, with large bright green leaves and yellow flowers (*Wormia suffruticosa*).

On the small triangular plot of grass

to the right of the path is a tree of Champaca *(Michelia champaca)*. Its flowers are most exquisitely scented. There are two varieties—a yellow one with a powerful odour, and the white one with a delicate one. This is the white variety. It belongs to the Magnolia family.

After crossing the inner drive, the path leads to the aviaries. Here will be found a fairly representative collection of our native birds, together with specimens from Australia, New Guinea, Japan, etc. On leaving the aviaries on the opposite side, a tall Norfolk Island pine *(Araucaria excelsa)* immediately arrests one's attention. This pine attains in its own country a height of 200 feet. Here it is much subject to the attack of the white ants, which have carried off 7 or 8 during the last five years. The building seen on the right is the gardens office, library, and herbarium.

The lawn marked *D* is entirely devoted to palms. Here will be seen several very fine young specimens.

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Amongst them, at the point of the walk where it joins the drive, is a specimen of the Date palm *(Phœnix dactylifera)*. It does not seem to be happy removed from its beloved desert, and has as yet shown no signs of flowering. Before crossing the road, notice on the left hand, bordering the inner drive, several trees of *Amherstia nobilis*. Should they happen to be in flower, they are worthy of close inspection. Resuming the route, on the point of the lawn *E*, is a specimen tree of the Funeral Cypress *(Cu-(pressus funebris)*, somewhat analagous in its weird aspect, and use, to our yew trees at home. On the right hand, a litttle further along the drive, is the beautiful red-stemmed palm *(Cyrtostachys rendah)* which is peculiar to the Straits, and is, from its high colouring, quite unique even among its own princely relations. To the left is the old rosery. The Queen of flowers, as she appears in Singapore, is no doubt a little disappointing. It is not, however, to be wondered at, considering the nature of the Singapore climate.

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At the bottom of the steps leading to the terrace is a magnificent specimen of the *Bougainvillea speciosa.* At the top of the steps is the lower terrace, which nearly encircles the band-stand. Here is an attempt at tropical flower gardening with fairly good success.

On turning to the left, the beds, which fringe the walks, will be seen to contain different plants of vivid colours. From this walk are steps leading to the band-stand. This is the highest point in the Gardens, and from it several fine views are to be seen. On the north-east side the wall of creepers composed of *Thunbergia Chamberlainiana* is very noticeable. The band-stand drive is surrounded by several fine trees. In particular two *Adenantheras,* the one on the south side, bearing on its trunk several very large plants of the Elk's horn fern *(Platycerium biforme).*

Taking the small walk, at the opposite side, which leads past the bulb garden, the chief plant-house is reached. This house was erected in 1884 at a cost of

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$6,000. Here, from time to time, Flower Shows are held, for which purpose the house is admirably adapted. As the contents are constantly changing, it is impossible to give anything but a general reference to the plants. By looking at the plan, it will be easy to find where plants such as crotons, begonias, orchids and ferns are placed. The object aimed at is to keep in the house standard collections, of the more beautiful flowering and ornamental foliage plants, ferns, palms, and orchids. A feature is also made of the creepers. The house contains about 3,000 plants.

Leaving the plant-house, and passing through the plant-sheds (where there are plants in various stages of growth, the larger ones intended for the chief plant-house, the smaller ones as stock plants for exchange and sale), the Fern Rockery is reached. The Rockery, which was made in 1884, contains a good collection of our indigenous ferns, conspicuous amongst them are the large plants of *Angiopteris evecta*, the *paka*

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gadjah, or elephant fern, of the Malays.

On emerging from the fernery, two routes are open—the one leading to the jungle (*see* Plan), the other direct to the Palmetum. If the jungle route is preferred, a detour can be made, which leads back along the jungle road to the starting point. Wild monkeys are sometimes seen in the jungle.

The road now to be taken is that which leads towards the Palmetum. On the right, it will pass through the upper part of the economic, and medicinal gardens. (Visitors wishing to visit the "Experimental Gardens," on the Cluny Road some quarter of a mile away, should leave the gardens at this point, and take the Cluny Road, following it, until they come to the entrance which is notified by a sign-board—"Experimental Forest Nursery.") The groups of medicinal economic plants are still in the course of formation, and a great number have yet to be planted. Amongst those already there, are the following *(see* Appendix *B).*

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The Palmetum follows next in order. In it will be found a very fair collection arranged in their proper genera. *(See* Appendix *C)*.

Close to the Palmetum is the Herbaceous grounds, where all the smaller indigenous plants are arranged in their natural families.

The course will now be across, to the small walks leading to the lake, which will bring the visitor back to the main entrance from which he started.

In Appendix *D,* will be found a list of the principal fruits, growing in the experimental nursery, and in Appendices *E* and *F,* respectively, lists of the principal plants producing India rubber, gums and resins, and of plants producing oils and dyes.

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Appendix *A*.

LIST OF PLANTS ON LAWN *A*.

1. Stevensonia grandifolia.
2. Inga saman.
3. Cassia florida.
4. Myristica glabra.
5. Psidium acre variegata.
6. Afzelia bijuga.
7. Allamanda neriifolia.
8. Rourea fulgens.
9. Aganosma marginata.
10. Rhodomyrtus cinerea.
11. Ipomea arborea.
12. Adinandra dumosa.
13. Dammara robusta.
14. Chrysalidocarpus lutescens.
15. Araucaria Rulei.
16. Elæis guineensis.
17. Cocos plumosa.
18. Caryota urens.
19. Filicium decipiens.
20. Casuarina sumatrana.
21. Podocarpus australis.
22. Tarrietia argyrodendron.
23. Messua ferrea.

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LIST OF PLANTS ON LAWN *A*,—*Contd.*

24. Pittosporum ferrugineum.
25. Bassia longifolia.
26. Phœnix sylvestris.

LIST OF PLANTS ON LAWN *B*.

1. Michelia champaca alba.
2. Wormia suffruticosa.
3. Bouea macrophylla.
4. Pierardia dulcis.
5. Sandoricum indicum.
6. Durio zibethinus.
7. Garcinia mangostana.
8. Cocos nucifera.
9. Mimusops elengi.
10. Pterocarpus indicus.
11. Artocarpus polyphema.
12. Fagrœa peregrina.
13. Amherstia nobilis.

LIST OF PLANTS ON LAWN *C*.

1. Verschaffeltia splendida.
2. Syenchanthus fibrosus.
3. Seaforthia elegans.

LIST OF PLANTS ON LAWN *C*,—*Contd.*

4. Hyophorbe Verschaffeltii.
5. Catakidozamia Hopei.
6. Do. Macleayana.
7. Cycas circinalis.
8. Biota orientalis.
9. Araucaria excelsa.
10. Eucalyptus Gunnii.
11. Kigelia pinnata.
12. Canarium rufum.
13. Lagerstrœmia reginæ.
14. Cinnamomum spurium.
15. Laföensia microphylla.
16. Ficus australis.
17. Do. retusa.

LIST OF PLANTS ON LAWN *D*.

1. Grammatophyllum speciosum.
2. Cupressus funebris.
3. Kentia McArthuri.
4. Sabal umbraculifera.
5. Carludovica palmata.
6. Phœnix Hanceana.
7. Corypha Gebanga.
8. Cyrtostachys rendah.

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LIST OF PLANTS ON LAWN *D*,—*Contd.*

9. Oncosperma fasiculata.
10. Licuala longipes.
11. Arenga saccharifera.
12. Phœnix dactylifera.
13. Livistona chinensis.

LIST OF PLANTS ON LAWN *E*.

1. Cupressus funebris.
2. Pavetta montana.
3. Elæis guineensis.
4. Ixora Dixiana.
5. Cassia auriculata.
6. Latania aurea.
7. Bougainvillea speciosa.
8. Pandanus javanicus variegatus.

LIST OF PLANTS ON LAWN *F*.

1. Semecarpus anacardium.
2. Melia azedarach.
3. Eucalyptus corymbosa.
4. Macadamia ternifolia.
5. Nephelium lappaceum.
6. Trevesia palmata.

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LIST OF PLANTS ON LAWN *F*,—*Contd.*

7. Spathodea campanulata.
8. Cassia Roxburghii.
9. Brownea grandiceps.
10. Flacourtia ramontchi.
11. Cinnamomum cassia.
12. Eugenia rosea.
13. Eugenia purpurea.
14. Tamarindus indicus.
15. Jonesia asoca.
16. Stevensonia grandifolia.
17. Vanda Lowii.
18. Vanda Batemannii.
19. Rhopaloblasta hexandra.
20. Areca malaiana.
21. Oreodoxa regia.
22. Calophyllum inophyllum.
23. Ravenala madagascariensis.
24. Cananga odorata.
25. Solanum arboreum.

LIST OF PLANTS ON LAWN *G*.

1. Melaleuca leucadendron.
2. Sindora siamensis.
3. Garcinia dulcis.

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LIST OF PLANTS ON LAWN *G*,—*Contd.*

4. Achras sapota.
5. Sabal Adansoni.
6. Eleocarpus serratus.
7. Artocarpus Blumei.
8. Poinciana regia.

LIST OF PLANTS ON LAWN *H.*

1. Artocarpus lancifolius.
2. Brownea coccinea.
3. Fagrœa auriculata.
4. Bouea microphylla.
5. Pithecolobium lobatum.
6. Cassia fistula.
7. Kigelia pinnata.
8. Adenanthera bicolor.
9. Dyera costulata.
10. Kibessa azurea.

LIST OF PLANTS ON LAWN *J.*

1. Loxococcuus rupicola.
2. Rhopalostylis Baueri.
3. Archontophœnix Cunninghami.
4. Archontophœnix Alexandræ.

LIST OF PLANTS ON LAWN *J*,—*Contd.*

5. Areca catechu.
6. Areca alba.
7. Dictyosperma rubra.
8. Dictyosperma McArthuri.
9. Cyrtostachys rendah.
10. Calyptrocalyx spicata.
11. Oreodoxa regia.
12. Oreodoxa oleracea.
13. Euterpe oleracea.
14. Acanthophœnix crinita.
15. Acanthophœnix rubra.
16. Hyophorbe amaricaulis.
17. Hyophorbe Verschaffelti.
18. Synechanthus fibrosus.
19. Areca lutescens.
20. Arenga saccharifera.
21. Caryota urens.
22. Stevensonia grandifolia.
23. Phœnix zeylanica.
24. Phœnix dactylifera.
25. Phœnix Hanceana.
26. Phœnix reclinata.
27. Phœnix acaulis.
28. Phœnix sylvestris.

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LIST OF PLANTS ON LAWN *J*,—*Contd.*

29. Phœnix rupicola.
30. Elæis guineensis.
31. Orania macroclada.
32. Caryota furfuracea.
33. Caryota Cumingii.
34. Sagus Rumphii.

LIST OF PLANTS ON LAWN *K*.

1. Phytelephas macrocarpa.
2. Cocos plumosa.
3. Cocos nucifera.
4. Cocos australis.
5. Livistona Hoogendorpii.
6. Livistona humilis.
7. Livistona olivæformis.
8. Corypha umbraculifera.
9. Sabal glaucescens.
10. Sabal princeps.
11. Chamaedorea elegans.
12. Licuala acutifida.
13. Martinezia caryotæfolia.
14. Borassus flabelliformis.
15. Latania Loddigesii.

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List of Plants on Lawn *K*,—*Contd.*

6. Hyphaene thebaica.
7. Raphia ruffia.

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1. Durio zibethinus.
2. Antiaris toxicaria.
3. Castilloa elastica.
4. Dichopsis gutta.
5. Sarcocephalus esculentus.
6. Caryophyllum aromaticum.
7. Camphora officinarum.
8. Cinnamomum zeylanicum.

LIST OF PLANTS ON LAWN *L*.

1. Brownea coccinea.
2. Hymenœa verrucosa.
3. Ravenala madagascariensis.
4. Jonesia asoca.
5. Arenga saccharifera.
6. Pierardia dulcis.
7. Sagus lævis.
8. Victoria regia.
9. Nelumbium speciosum.

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LIST OF PLANTS ON LAWN *M*.

1. Ficus retusa.
2. Spathodea campanulata.
3. Amherstia nobilis.
4. Allamanda Schottii.
5. Ipomea arborea.
6. Dacrydium Horsfieldii.

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Appendix B.

LIST OF PLANTS IN MEDICINAL GARDEN MARKED *K*.

Systematic Name.	*Local Name.*	*Native Country.*
1. Artanthe elongata,	... Matico,	... C. G. Hope.
2. Borago officinalis,	... Borage,	... Europe.
3. Carica papaya,	... Papaw,	... Columbia.
4. Cephaelis ipecacuanha,	Ipecacuanha	... Brazil.
5. Cinnamomum camphora,	... Camphor,	... Asia.
6. Chavica betel,	... Betel pepper,	... Java.
7. Cola acuminata,	... Kola-nut,	... Africa.
8. Croton tiglium,	... Croton oil tree,	... East Indies.
9. Datura stramonium,	... Thorn apple,	... Trop. America.

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Appendix B,—Continued.

10.	Dracæna Draco,	Dragon's blood,	......
11.	Elettaria cardamomum	Cardamum,	India.
12.	Gendarussa vulgaris,	Gendarussa,	Malaya.
13.	Guaiacum officinale,	Lignum vitæ,	West Indies.
14.	Jatropha curcas,	Physic-nut,	East Indies.
15.	Lawsonia inermis,	Henna,	Egypt.
16.	Piper cubeba,	Cubebs,	Java.
17.	Ricinus communis,	Castor oil,	East Indies.
18.	Smilax sarsaparilla,	Sarsaparilla,	Do.
19.	Uncaria gambir,	Gambier,	Malaya.
20.	Zingiber officinalis,	Ginger,	E. & W. Indies.

Appendix C.

LIST OF PLANTS PRODUCING FIBRES.

Systematic Name.	*Local Name.*	*Native Country.*
1. Bœhmeria nivea, ...	Rhea or China grass, ...	China.
2. Bromelia pinguin, ...	Pinguin fibre, ...	West Indies.
3. Bombax malabaricum,	Malabar silk cotton tree, ...	East Indies.
4. Cannabis sativa, ...	Hemp, ...	Do.
5. Crotalaria juncea, ...	Sun hemp, ...	Do.
6. Eriodendron anfractuosum, ...	Silk cotton tree,	Trop. America.
7. Furcræa gingantea, ...	Mauritius hemp,	S. America.
8. Fatsia papyrifera, ...	Rice paper plant,	China.

Appendix C,—Continued.

9. Pandanus utilis,	... Sugar mat palm,	Madagascar.
10. Phormium tenax,	... New Zealand flax,	New Zealand.
11. Paritium elatum,	... Cuba bast,	... Cuba.
12. Sanseviera Zeylanica,	Bow-string hemp,	Ceylon.

Appendix D.

LIST OF PRINCIPAL FRUITS IN THE EXPERIMENTAL NURSERY.

Systematic Name.	*Local or Common Name.*	*Native Country.*
1. Achras sapota,	... Chiko,	... Trop. America.
2. Ægle marmelos,	... Bael fruit,	... East Indies.
3. Ananassa sativa and var. (6)	... Pine apple,	... West Indies.

Appendix D,—Continued.

	Systematic Name.	*Local or Common Name.*	*Native Country.*
4.	Anona reticulata,	Custard apple,	Do.
5.	Do. cherimolia,	Cherimoyer,	Do.
6.	Do. muricata,	Sour sop,	Do.
7.	Do. montana,	Mountain custard apple,	Do.
8.	Artocarpus incisa,	Bread fruit,	Malaya.
9.	Do. integrifolia,	Jack fruit,	Do.
10.	Do. echinatus,	Monkey Jack,	Do.
11.	Do. polyphemia,	Tampang,	Do.
12.	Averrhoa bilimbi,	Blimbing,	India.
13.	Do. carambola,	Carambolla,	Do.
14.	Aberia caffra,	Kei apple,	C. G. Hope.
15.	Carica papaya,	Papaya,	S. America.

Appendix D,—Continued.

16.	Carica papaya candamarcensis, ...	Mountain papaya,	East Indies.
17.	Citrullus vulgaris, ...	Water melon, ...	India.
18.	Citrus aurantium, ...	Orange, ...	Do.
19.	Do. var. bergamia,...	Bergamot orange,	Do.
20.	Do. var. bigaradia,...	Bitter or Seville orange, ...	Do.
21.	Do. var. melitense,...	Blood orange, ...	......
22.	Do. var. decumana,	Shaddock, ...	India.
23.	Do. var. limetta, ...	Sweet lime, ...	Do.
24.	Do. var. medica, ...	Citron, ...	Persia.
25.	Do. var. tangerina,...	Tangerine orange,	New Africa.
26.	Do. var. major, ...	Mandarin orange,	China.
27.	Chrysophyllum cainito,	Star apple, ...	West Indies.
28.	Chrysobalanus icaco,	Cocoa plum, ...	T. America.
29.	Cookia punctata, ...	Wampee, ...	China.

Appendix D,—Continued.

Systematic Name.	*Local or Common Name.*	*Native Country.*
30. Cyphomandra betacea,	Tree tomato,	Peru.
31. Cynometra cauliflora,	Nam-nam,	East Indies.
32. Detarium senegalense,	Senegal plum,	Senegal.
33. Diospyros discolor,	Mabola,	Malaya.
34. Durio zibethinus,	Durian,	Do.
35. Davidsonia pruriens,	Queensland plum,	Queensland.
36. Eriobotrya japonica,	Loquat,	Japan.
37. Eugenia brasiliensis,	Brazil cherry,	Brazil.
38. Eugenia magnifica,	New Caledonian apple	New Caledonia,
39. Ficus carica,	Fig,	S. Europe.

Appendix D,—Continued.

40.	Flacourtia sepiaria, ...	Rukum, ...	Tropics.
41.	Do. rukam, ...	Rukum, ...	Do.
42.	Grias cauliflora, ...	Anchovy pear,...	Jamaica.
43.	Jambosa vulgaris, ...	Rose apple, ...	Malaya.
44.	Lancium domesticum,	Dukoo, ...	Do.
45.	Malpighia urens, ...	Barbados cherry,	Barbados.
46.	Mammea americana,	Mammee apple,...	West Indies.
47.	Mangifera indica, ...	Mango, ...	India.
48.	Do. caesa, ...	Benje, ...	Malaya.
49.	Do. foetida, ...	Bachang, ...	Do.
50.	Monsteria deliciosa,...	Monsteria, ...	S. America.
51.	Musa sapientum, ...	Banana or pisang,	Tropics.
	Do. (12 var.)	....	Malaya.
52.	Nephelium lappaceum,	Rambutan, ...	Do.
53.	Do. litchi, ...	Litchee, ...	China.

Appendix D,—Continued.

Systematic Name.	*Local or Common Name.*	*Native Country.*
54. Nephelium longan, ...	Longan, ...	China.
55. Do. mutabile,	Polesan, ...	Malaya.
56. Olea europea, ...	Olive, ...	Europe.
57. Passiflora quadrangularis, ...	Grenadilla, ...	West Indies.
58. Do. laurifolia, ...	Water lemon, ...	Do.
59. Do. macrocarpa,	Gigantic grenadilla, ...	Do.
60. Persea gratissima, ...	Avocarda pear, ...	Trop. America.
61. Phœnix sylvestris, ...	Wild date, ...	India.
62. Pierardia dulcis, ...	Rambe, ...	Malaya.
63. Psidium cattleyanum,	Guava, ...	West Indies.
64. Do. guava, ...	Do. ...	Do.

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Appendix D,—Continued.

65.	Psidium acre,	Guava,	West Indies.
66.	Roupellia grata,	Cream fruit,	Do.
67.	Sarcocephalus esculentus,	Negro peach,	T. Africa.
68.	Vitis vinifera,	Grape vine,	Asia Minor, &c.
69.	Do. martenii,	Saigon vine,	Saigon.
70.	Vangueria edulis,	Voa-vanga,	Madagascar.

Appendix E.

LIST OF PRINCIPAL PLANTS PRODUCING INDIA RUBBER, GUMS AND RESINS.

	Systematic Name.	*Local Name.*	*Native Country.*
1.	Acacia arabica,	Gum Arabic,	Arabia.
2.	Acacia catechu,	Cutch,	East Indies.
3.	Aleurites vernicifera,	Chinese varnish tree,	China.
4.	Artocarpus Blumei,	Gutta tarrap,	Malaya.
5.	Butea frondosa,	Bengal kino,	East Indies.
6.	Castilloa elastica,	Panama rubber,	Panama.
7.	Chilocarpus sp.,	Gutta sp.	Pérak.
8.	Dammara orientalis,	Dammara,	Malaya.
9.	Dichopsis gutta,	Gutta percha,	Do.
10.	Dryabalanops camphora,	Sumatra camphor,	Sumatra.

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Appendix E,—Continued.

11.	Dyera costulata,	Gutta Jelutong,	Malaya.
12.	Eucalyptus rostrata,	Red gum S. Australia,	Australia. Queensland.
13.	Do. homostoura,	Spotted gum,	Australia.
14.	Do. globulus,	Blue gum,	Brazil.
15.	Hevea brasiliensis,	Para rubber,	Africa.
16.	Landolphia Watsonii,	African rubber,	Do.
17.	Do. Kirkii,	Do.,	Do.
18.	Do. Petersonii,	Do.,	Trop. America.
19.	Manihot glaziovii,	Ceara rubber,	
20.	Payenia Learii,	Gutta sundek,	Malaya.
21.	Pterocarpus marsupium,	Kino,	East Indies.

Appendix E,—Continued.

	Systematic Name.	*Local Name.*	*Native Country.*
22.	Styrax benzoin,...	... Benzoin, ...	Malaya.
23.	Vahea gummifera, ...	Madagascar rubber, ...	Madagascar.
24.	Willoughbeia firma ...	Gutta gegrif, ...	Malaya.

Appendix F.

LIST OF THE PRINCIPAL PLANTS PRODUCING OILS AND DYES.

	Systematic Name.	*Local Name.*	*Native Country.*
1.	Anacardium occidentale, ...	... Cashew nut, ...	West Indies.
2.	Andropogon nardus,	Citronella oil grass,	India.

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Appendix F,—Continued.

3.	Bixa orellana,	Arnatto,	Trop. America.
4.	Cæsalpinia coriaria	Divi-divi,	East Indies.
3.	Do. sappan,	Sappan-wood,	Do.
6.	Croton tiglium,	Croton oil tree	Do.
7.	Elæis guineensis,	Oil palm,	Africa.
8.	Dipterocarpus lævis,	Wood oil tree,	Malaya.
9.	Fibraurea tinctoria,	Dye root	Do.
10.	Garcinia gambogea,	Gamboge,	India.
11.	Do. morella,	Ceylon gamboge,	Ceylon.
12.	Hæmatoxylon campechianum,	Log wood,	S. America.
13.	Indigofera tinctoria,	Indigo,	East Indies.
14.	Lawsonia inermis,	Henna,	Egypt.
15.	Lonchocarpus sp.,	Yorubo indigo,	West Indies.
16.	Melaleuca leucadendron,	Kayu puteh oil,	Malaya.

Appendix F,—Continued.

	Systematic Name.	*Local Name.*	*Native Country.*
17.	Moringa pterygosperma,	... Ben oil tree,	... Trop. Asia.
18.	Opuntia cochinillifera,	Cochineal plant...	Trop. America.
19.	Plumiera lutea,	... Frangipanni,	... Do.
20.	Pogostemon patchouli,	Patchouly,	... East Indies.
21.	Ricinus communis	... Castor oil tree, ...	Do.
22.	Sesamum orientale,...	Gingelly oil plant,	Do.
23.	Samecarpus anacardium, ...	... Marking nut,	... India.
24.	Stillingia sebifera,	... Tallow tree,	... China.
25.	Uncaria gambir,	... Gambier,	... Malaya.

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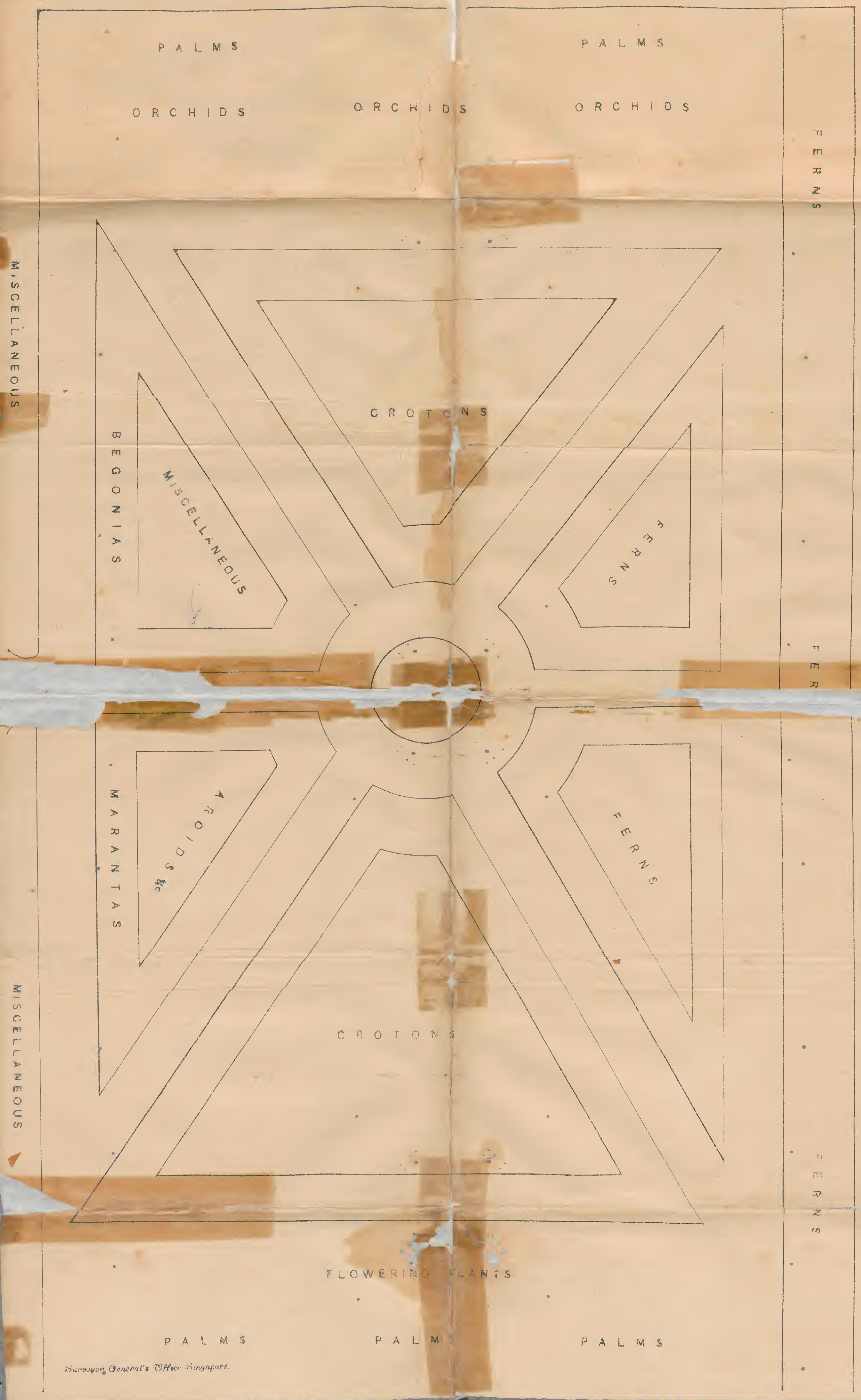

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