

Appendix M.

REPORT ON THE BOTANICAL AND FORESTRY DEPARTMENT FOR THE YEAR 1912.

Botanic Gardens.—The weather during the first three months of the year was very unfavourable to flowering plants and trees, particularly the winter flowering annuals. Only 40 hours of sunshine were registered during January against an average of 150 hours.

The third quarter of the year was exceptionally free from wind and rain storms, much to the benefit of all the trees, particularly the young street trees.

The most noticeable trees and plants which flowered during the year were *Bauhinia Blakeana*, *Bauhinia variegata*, *Rhododendron indicum*, *Dombeya calanthus*, *Brunfelsia calycina*, *Poinsettias* and *Brunfelsia Hopeana*. *Phaius grandifolius* made a very fine show in the open ground and in pots.

The *Bromelia* hedge inside the wall running down Garden Road was removed, as it had become unsightly, and replaced with plants of *Hibiscus Lambertianus*, which are doing well.

Spaces where trees had been removed in the gardens were filled with *Bauhinia Blakeana*, *Cassia siamea*, *Spathodeu nilotica* and others. A row of *Cassia Fistula* was planted between the trees forming the *Grevillea* Avenue, and when they have grown sufficiently, the *Grevilleas*, which have been irreparably damaged by typhoons, will be removed.

The *Amaryllis* bulbs are improving every year, and the richly-coloured flowers make a fine show in the Old Garden.

Many of the *Agaves* on the Lower Terrace flowered during the summer months, the flower spikes going in some cases to a height of 25 feet. These plants are of great interest to most of the visitors to the Gardens.

The two useful creepers, *Bignonia venusta* and *Antigonon leptopus*, flowered magnificently in various places on walls and fences.

The whole of the turf on the Upper Terrace was taken up and relaid, as it had become uneven.

The groups of *Lycoris aurea* flowered well, and those on grass bank in the New Garden made a fine show, being visible from the Albany Road.

The Orchids in the Plant Houses and Pot Nursery were repotted, and have since greatly improved.

The beautiful scarlet orchid, *Renanthera coccinea*, flowered well on several of the large trees, to which it firmly attaches itself.

A number of *Nepenthes* (Pitcher Plants) were raised from cuttings, and hung in wooden baskets from the roof in No. 9 House.

The bank above the College Gardens entrance was planted up with *Hydrangeas*, which will be seen from the Upper Albert Road when in flower.

The seedling *Gloxinias* were a great success, and many of the beautifully shaded and also "self" colours were much admired by visitors.

The Roses in pots and beds were exceptionally good, chiefly owing to the absence of storms which damage them whilst in bud.

A great deal of labour was expended in supplying the plants in pots, beds, and a large number of young trees with water during October and November, but the effect of the drought was not felt so much as was anticipated.

A stand of cement and green tiles was placed under those seats in both Old and New Gardens standing on the grass under shade trees, and has much improved the appearance of the Gardens, as formerly the turf surrounding the seats was much worn and ragged.

The walks were repaired where necessary, and the one leading from the Bandstand to the large Plant House was entirely taken up and relaid with cement granite.

The surface of the Nursery Yard near the Office was concreted, and small brick divisions erected to accommodate the various sizes of flower pots. This will greatly facilitate work and enable the yard to be kept clean and tidy.

Arrangements were made on two occasions during the summer months for the band of the K.O.Y.L. Infantry to give concerts in the Gardens, but unfortunately the weather was too wet on the dates appointed.

Fourteen persons were arrested and convicted for disorderly conduct and theft of plants and flowers.

Government House Grounds.—The large *Camellia* in the centre of the walk near the main entrance was taken up and planted elsewhere. This plant was always in the way when any large function was on at Government House.

Several young plants of *Camellia* were planted on the side of the new tennis lawn, and at the top of the small bank near the stables.

The large *Banians*, in front of the house, were cut back, and the grass immediately below them repaired where required. The large *Eugenia* at the corner of the new lawn was treated in a similar manner and the bare patches beneath it planted with Blue Grass.

The new tennis lawn having become very unsightly, the turf was removed and the ground dug to the depth of 2 feet and exposed to the sun and rain. A new lawn was formed later with fresh turf, but the result has not been satisfactory, the turf apparently gets too much shade, and the drain-pipes from the house which run along a little way below the surface do not improve the soil.

All banks were kept clear of undesirable undergrowth and a sharp lookout kept for tins and other receptacles which might contain water and allow mosquitoes to breed.

Vacant places in the bamboo hedge were filled with *Chrysalidocarpus*, and a line of this palm was planted to divide the Plant Compound from the coolie quarters.

The trees near the entrance from the Lower Albert Road were cut back, to give more growing space to the *Bauhinias* planted beneath them.

The walks were repaired where necessary with disintegrated granite.

Mountain Lodge Grounds.—Extensive alterations were carried out under the direction of His Excellency Sir Henry May.

A number of large Chinese Palms were removed from the beds in front of the house, and the bare spaces filled in with Blue Grass.

The plants in the bed at the bottom of the large retaining wall were all taken up and entirely re-arranged, and the shape of the bed altered to enable the turf in front to be kept in a straight line.

A path was made up the side of the small mound west of the house, and a space cleared for a seat about half way up, by the side of the path.

The conifers on the bank east of the tennis lawns were thinned, so that the flowering plants among them could be plainly seen.

The *Hydrangeas* and other plants in the valley were kept clear of weeds and the soil about them loosened.

All undergrowth near the house, which might shelter the breeding-places of mosquitoes, was cut as required.

The bamboo fences were repaired and the walks relaid with disintegrated granite as required.

Blake Garden.—The trees and shrubs were pruned, staked and kept in order as required.

The banks of turf and Blue Grass were weeded and repaired.

A great deal of wanton damage was done by visitors of the coolie class and the amount of fencing has been gradually increased to protect the plants.

Peak Garden.—The *Privet* hedge which surrounds the well was replanted and a fence erected to protect it from damage.

The plants of *Ficus* on the walls were kept in order and protected with wire-netting.

The grass on the two small lawns were cut and kept clear of weeds.

West End Park.—The barded wire fences, which were erected to prevent coolies from making paths across the grass, were kept in good order and increased.

The *Azaleas* planted on the slopes flowered well.

The Camphor trees were treated with Jeyes' Fluid when necessary to keep off the attacks of white ants.

All the undergrowth was cleared and the *Mimosa* taken up by the roots, and afterwards burned on the rocks in the Park.

King's Park.—A large number of Chinese Palms, planted during the last three years, are doing well, and also the *Eucalyptus* and other trees, which receive constant attention.

The large patches of *Lantana* are kept down as far as possible by gangs of women working under the supervision of the Park Keeper.

A number of Chinese Palms were scorched by grass fires.

Colonial Cemetery.—The trees and shrubs were washed with Carbolineum where necessary to keep off the attacks of white ants. Pruning was carried on, and plants which were obstructing the view of headstones were removed.

A large number of graves were covered with good turf.

The walk leading from the main entrance to the fountain was relaid with disintegrated granite.

Royal Square Garden.—One of the *Bauhinias* in a circular bed was removed and replaced by a more shapely plant.

Cannas were removed from the two corner beds to make room for the shrubs.

Government Pavilions.—The grass on the banks and lawns was weeded and cut and *Hydrangeas* and other plants kept in order.

Government Civil Hospital.—These grounds were placed under this Department on the 1st January last.

The lawns were given a thorough weeding and kept constantly cut, and are now slowly improving.

Shrubs and palms were planted in suitable places, chiefly at the edges of the lawns.

The whole of the bank under the pine trees was planted with *Poinsettias*. These will be visible from the windows of the various wards.

The bamboo hedges were pruned as required, and the creepers on the fences and walls trained and kept in good order.

Roadside Banks and Rockeries.—The rockeries at Glenealy were kept clear of weeds, and the plants which had died were replaced.

A small rockery was made at the top of Battery Path.

Several large tree ferns were planted on a bank above Robinson Road where there had been a landslip.

Old and unsightly growths of *Alpinia* were cut out.

Flowering trees were planted near roads in various places.

District Officers' Quarters, Taipo.—The upper part of the grounds which was in a very neglected condition was taken in hand and laid out under the supervision of this Department.

The undergrowth was cleared and the trees thinned by coolies working under an officer of this Department and a large number of pine tree seeds sown to fill up the banks.

The plateau to the west of the quarters was laid out with lawns and shrubberies, and the walk at the western end diverted so as to allow a sufficient area for a tennis court.

The grounds were visited by the Superintendent from time to time, and slight alterations made.

Lower Albany Nursery.—All the level ground was laid out with annuals, *Russelia* and other flowering shrubs.

The banks were cleared of undergrowth, and planted with *Poinsettias* and *Antigonons*.

Signal Hill.—An effort is being made to cover the unsightly wall with *Ficus* and *Vitis*, but the plants have made little progress, and have been blown down on several occasions.

University Bazaar.—About 1,400 plants were lent under instructions from His Excellency the Governor to the Committee for use in making a roof garden.

Herbarium.—Small collections of local plants were added and several specimens presented by Mr. C. T. Bowering, Wenchow.

Mr. S. T. Dunn has kindly examined and named the Hongkong collection of *Milletias*.

Specimens of plants from which drugs are derived were lent on exhibition to the Medical Congress held in January. At the close of the Congress, the Tung Wa Hospital Committee presented a collection of the vegetable drugs exhibited by them.

Six specimens of the Kwangtung flora were presented by Professor Mell of Canton.

Dr. Voretzsch sent specimens of orchids collected in various parts of the island for identification.

Specimens of 209 species of Kwai Chau plants were purchased from Mr. Souvey of the Mission Etrangères.

An alphabetical list of specimens in the herbarium was made out.

FORESTRY.

Demarcation.—All numbers of forestry blocks and paths were repainted, also those on the graves.

Formation of Pine Tree Plantations.—The two areas felled near the Aberdeen Paper Mills and west of the village, were sown with pine tree seeds.

The newly sown pine seedlings were thinned and transplanted during every spell of wet weather.

The bare places at 9A & 9B on the low hills near the south face of the Kowloon tunnel were planted with some 10,000 Banian trees

At the same place about 175,000 pits have been sown as an experiment with seeds of broad-leaved trees, such as *Rhodomyrtus tomentosa*, *Melastoma sanguineum*, *Melastoma candidum*, *Psidium Guajava*, *Rhus hypoleuca*, *Mallotus paniculatus* and *Lucæna glauca*.

For next year's planting in 9A & 9B on bare ground some 60,000 or 70,000 seedling pines were raised in the nursery near the south face of the tunnel.

Approximately 65,000 pits were dug for planting during 1912.

In 5B, on the spur of a hill between Wongneichong Gap and Deepwater Bay, 200 *Azaleas* were planted on the suggestion of His Excellency the Governor.

The plantations above and below Taipo Road having become too thick a considerable quantity of trees were felled to enable the rest to mature.

The whole of the pine seedlings at 6E, Aberdeen, were closely inspected, and any which had failed to germinate were replaced with young trees from other pits.

300 pounds of pine seeds were obtained from cones which were collected.

Care of trees in plantations.—Creepers covering trees were cut in plantations above and below Taipo Road, Bowen Road, Aberdeen New Road, and other parts of the Colony.

The pine tree caterpillars, which fortunately made their appearance only in small numbers on trees at Kowloon, were collected and destroyed whenever possible.

Trees which had died, badly damaged by fire in Plantations or by the roadside, were removed.

Protection from fire.—Fire barriers were cleared to the extent of 212,213 feet at a cost of \$458.61 and a new barrier measuring 770 feet was made at a cost of \$2.38.

Fortunately the weather during the time of the Tsing Ming and Chung Yeung Festivals was wet, and no serious fires occurred.

The Honourable the Registrar General kindly allowed 10 District Watchmen to assist the Forest Guards and Foresters in watching the various cemeteries and isolated graves.

Altogether 29 fires were reported during the year. The largest were at 6D, Aberdeen, 7G, Tai Ho Wan and 7E, Telegraph Hill.

Forest Guards Services.—Forestry Offences were about the same as last year. The number of cases was about 60% more than the previous year, and the number of convictions about 50% greater. See Tables II & III.

A few weeks previous to the Chinese New Year, several of the Forest Guards were badly assaulted. The Chinese make a practice

of cutting the New Year Flower, *Enkianthus quinqueflorus*, in large quantities for sale in the streets. As the wild flowers in the Colony had been badly damaged throughout the year, it was decided to stop the cutting as much as possible, and a number of persons were with much difficulty arrested, and in each case a conviction was obtained.

Many of the Wyndham Street flower sellers and their agents were also arrested and convicted for being in unlawful possession of flowers and ferns taken from Crown land.

Timber felling.—The only timber now felled is a proportion of trees in plantations which have been too thick, or those which have been badly damaged by fire or insect pests.

The total revenue derived from this source was \$1,976.90.

Planting and care of Roadside Trees.—Approximately 1,051 young trees were planted in the streets and roads and on banks in Hongkong and Kowloon. The varieties used were *Camphors*, *Albizzias*, *Poinciana* and *Aleurites*.

The majority of the larger street trees were pruned to keep them in good shape and clear of telephone wires and street lamps.

All the young and newly planted trees were staked, guarded, and closely watched for insect pests.

The amount spent on the general upkeep of these trees was \$51.90.

Forestry Paths.—The cost of the general upkeep of these paths amounted to \$268.40.

Clearing Undergrowth around Houses.—An area of approximately 3,208,479 square feet of undergrowth was cleared in various parts of Hongkong and Kowloon, Police Stations and other public buildings in the New Territories at a cost of \$961.91.

For the Public Works Department an area of approximately 1,962,010 square feet was cleared to enable surveys and general measurements to be made, at a cost of \$522.55.

In addition 1,025,600 square feet were cleared for and the cost borne by the Military Authorities.

Commercial Investigations.—A quantity of Camphor Oil was sent to the Director of the Imperial Institute, who is submitting samples to several firms in England. The Camphor Oil manufactured in Hongkong is of good quality, and there is a probability of considerable trade being done in this product.

Reports on the following products were received from the Director of the Imperial Institute:—

1. Chinese Gall Nuts.
2. Peppermint Oil.
3. Sandalwood Oil.
4. Camphor Oil.
5. Andropogon (Citronella) Oil.
6. Rose Oil.
7. Oil of *Artemesia vulgaris*.
8. Mixed essential oil :—U I Yau & Tau Kau Yau.

Local Crops.—The first and second rice-crops were fair only.

Lichis were plentiful and cheap.

Presentations to Gardens.—The following persons presented seeds and plants :—Superintendent, Royal Botanic Gardens, Calcutta; Superintendent, Botanic Garden, Sibpur; Government Botanic Gardens, Saharanpur; United States Department of Agriculture; Botanic Gardens, Durban; and Messrs. M. H. Logan; F. Franceschi; R. T. Baker; H. Green; Cheung I; A. Milroy; W. R. Price; E. D. Merrill; Jos. Clemens; H. Humphreys; A. E. Rowrie; J. Barton; F. Soares; L. Gibbs; Captain Hodgins; Dr. Voretzsch and Miss Wallace.

Mr. O. Sakai presented a Korean stork and Mr. T. Hunter a Chinese stork.

Mr. V. B. de Souza and Mr. J. Ross presented Chinese pheasants.

Staff.—The Superintendent, Mr. W. J. Tutchter, proceeded to England on a year's leave on April 9th, 1912. The Assistant Superintendent, Mr. H. Green, acted as Superintendent during his absence.

Mr. Wong Shiu Ki, 5th. Grade Clerk in this Department, absconded at the end of March.

Mr. Mak Kun was transferred from the Harbour Office to this Department as 5th Grade Clerk on May 16th, 1912.

H. GREEN,
Superintendent.

2nd April, 1913.

Table I.

RAINFALL, 1912.
Botanic Gardens.

DATE.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.	inch.
1.....	...	...	.82	...	3.45	.74	.02	...	.10	...	...	.22
2.....	..	...	.08	...	.02	1.36	...	...	.08	...	...	2.40
3.....	...	...	...	...	.03	.76	.02	.11	.06	...	...	.95
4.....	...	...	...	.06	.01	1.12	.02	.81	...	...	...	.70
5.....	.01	...	...	.82	.42	.75	...	.53	.01	...	...	.70
6.....	...	...	...	.01	.84	3.06	.02	.05	.34	...	...	...
7.....	...	...	...	...	...	.82	...	...	.02	...	...	...
8.....	.02	...	...	.21	.14	1.50	.15	.03	...	...	...	...
9.....	1.09	...	...	...	...	.03	.02	.07	...	...	...	...
10.....	...	...	...	.01	.02	.07	...	.75	...	...	...	...
11.....	...	...	.01	.04	..	.03	.10	.04	...	...	...	...
12.....	...	...	...	.50	...	.11	...	...	...	...	...	...
13.....	.02	.55	...	...	...	.23	.54	...	...	...	...	...
14.....	.21	...	.13	...	.03	.95	.58	.82	...	...	...	...
15.....	.07	.06	.04	...	.05	.58	.31	6.00	...	...	.01	...
16.....	.12	.84	.05	...	.01	.02	.03	1.97	...	...	...	...

Table I,—Continued.

DATE.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
	<i>inch.</i>	<i>inch.</i>	<i>inch.</i>	<i>inch.</i>	<i>inch.</i>	<i>inch.</i>	<i>inch.</i>	<i>inch.</i>	<i>inch.</i>	<i>inch.</i>	<i>inch.</i>	<i>inch.</i>
17.....	.03	.28	...	...	...	.30	.33	...	...	...	...	.06
18.....	.03	.02	...	...	...	.21	.03	...	.01	.02	...	.15
19.....	.36	.03	...	...	...	...	...	...	.02	...	...	...
20.....	...	...	...	...	...	.05	...	...	1.90	...	...	...
21.....	...	...	...	...	...	1.32	...	.30	2.05	...	...	...
22.....	.22	.70	.75	...	.34	.27	...	.97	...	...	...	.11
23.....	...	...	...	...	.03	.05	.52	1.22	.05	...	...	.03
24.....	.71	...	.06	...	...	...	2.56	.32	.18	...	...	.01
25.....	.08	...	.36	...	...	.04	.36	1.51	...	...	...	...
26.....	.20	...	.03	.09	...	.02	.01	.78	.03	.02	...	...
27.....	.08	.02	1.14	.01	...	.02	1.38	.06	...	...	.11	...
28.....	...	.08	...	...	.30	...	.05	...	...	...	.28	1.56
29.....	.02	.05	...	...	...	.06	...	...	...	...	.04	...
30.....	.01	...	...	...	.09	.02	...	...	...	...	...	.01
31.....	...	...	.35	...	.03	...	...	.11	...	...	...	...
Total.....	3.28	2.63	4.36	1.75	5.81	14.49	7.00	16.45	4.85	.04	.44	6.27

Total for the year 67.37 inches Average for the last ten years at the Botanic Gardens 86.77 inches.
 Total rainfall registered at the Hongkong Observatory for the year 59.96 inches.

Table II.
FOREST GUARDS SERVICES: OFFENCES.

Village or District.	Block.	Compartment.	Reports of							
			Pine tree stealing.	Pine tree branches stealing.	Pine tree needles stealing.	Brush-wood stealing.	Grass cutting.	Wild flowers stealing.	Roots stealing.	Cattle grazing in plantations.
Victoria,	1	A.B.C.D.E.F.G.	6	6	3	46	9	22	2	<i>Nil.</i>
Wongneichong,	2	A.B.C.D.E.F.G.	9	10	6	26	8	2	3	<i>Nil.</i>
Shankivan,	3	A.B.C.D.E.F.G.	8	1	2	15	13	4	<i>Nil.</i>	1
Tytam,	4	A.B.	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	2	1	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>
Stanley,	5	A.B.C.F.	3	1	2	3	<i>Nil.</i>	5	2	<i>Nil.</i>
Aberdeen,	6	A.B.C.D.E.F.	11	1	1	11	4	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>
Pokfulum,	7	A.B.C.D.E.F.G.	7	1	7	12	12	8	1	3
Kowloon,	8	A.B.C.E.	1	1	<i>Nil.</i>	5	6	2	1	2
Harbour Belt,	9	A.B.C.	2	5	6	<i>Nil.</i>	12	2	<i>Nil.</i>	7
Cheungshawan,	10	...	<i>Nil.</i>	<i>Nil.</i>	4	<i>Nil.</i>	1	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>
Kowloon Reservoir, .	11	...	<i>Nil.</i>	<i>Nil.</i>	3	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>	<i>Nil.</i>
Total for 1912,			47	26	34	120	66	45	9	13
Total for 1911,			103	43	4	129	285	<i>Nil.</i>	<i>Nil.</i>	3

Table III.

POLICE COURT RESULTS.

<i>Cases.</i>	1912.	1911.
50 cents to \$1 fine, - - - - -	53	10
\$2 " - - - - -	60	10
\$3 " - - - - -	41	29
\$4 to \$5 " - - - - -	29	22
\$10 to \$25 " - - - - -	10	6
\$30 " - - - - -	1	0
2 days' imprisonment, - - - - -	4	0
3 " " - - - - -	16	0
5 to 7 days' " - - - - -	74	42
8 to 14 " " - - - - -	33	15
15 to 31 " " - - - - -	3	4
6 weeks' " " - - - - -	3	0
6 strokes of the birch, - - - - -	1	0
Discharges, - - - - -	26	28
Withdrawals, - - - - -	3	0
Bail forfeiture, - - - - -	1	0
Personal bond for \$25, - - - - -	2	0
Total, - - - - -	<u>360</u>	<u>166</u>

Table IV.

NURSERIES.

Locality.	Expenses.
	\$ c.
Kang Hau, - - - - -	390.60
East Point, - - - - -	74.40
Kowloon Tsai, - - - - -	1,079.20
Total, - - - - -	\$ 1,544.20

Table V.

Revenue.	1912.	1911.
	\$ c.	\$ c.
Timber Sales,	1,976.90	4,694.90
Loan of Plants,	307.44	360.72
Sale of Old Tools,	5.50	3.48
Interest on Current Account,	15.07	4.17
Total,.....\$	2,304.91	5,063.27

Table VI.

COMPARATIVE STATEMENT OF REVENUE AND EXPENDITURE
FROM THE YEAR 1903 TO 1912.

Year.	Total Expenditure.	Total Revenue.	Percentage of Revenue to Expenditure.
	\$ c.	\$ c.	%
1903	31,924.04	2,311.58	7.24
1904	49,688.98	25,201.44	50.72
1905	46,670.14	3,468.94	7.43
1906	46,796.19	6,898.64	14.74
1907	44,131.14	7,730.52	17.52
1908	48,973.20	11,586.43	23.66
1909	43,694.46	11,441.51	26.12
1910	41,707.95	13,230.59	31.72
1911	45,750.85	7,769.82	16.98
1912	39,865.18	2,304.91	5.78