

PART V.

FOR MEMBERS OF THE RESERVE.

Form of Certificate of Efficiency.

I hereby certify—

- (1.) That *A. B.*, No. was duly enrolled in the Muster Roll of the Reserve of the Hongkong Volunteer Corps on the day of 1 , and is actually a member of the Reserve on this date.
- (2.) That during the twelve months ending on the day of 1 , he attended
- (3.) That he was present [*or absent from stating circumstances*] the last Annual Inspection of the Corps.
- (4.) That he is possessed of a suit of service uniform.

(Signed.) *Lieut.-Colonel,*
*Commandant.*HEAD QUARTERS,
HONGKONG, April, 1 .Regulation
41.

THE SEVENTH SCHEDULE.

RETURNS AND REPORTS.

The following Returns and Reports will be rendered by the Commandant, on the dates shown, to the General Officer Commanding or to such Officer as he may appoint:—

No.	Nature of Return.	When Due.	Remarks.
1	Annual Return of Corps..	1st January.	For Transmission to the Governor.
2	Return of Guns, Arms, Accoutrements, etc.....	Do.	Do.
3	Annual Abstract of Receipts and Expenditure	15th January.	Do.
4	Inspection Return	After Annual Inspection.	Do.
5	Nominal Roll of Efficient	To accompany Annual Training Report.	Do.
6	Report on Gun and Musketry Practices	Do.	Do.
7	Report on Revolver Practice	Do.	Do.
8	State of Corps	Do.	Do.
9	Monthly Return	1st of each month.	Do.

GOVERNMENT NOTIFICATION.—No. 317.

The following Report of the Superintendent of the Botanical and Afforestation Department for 1898 is published.

By Command,

Colonial Secretary's Office, Hongkong, 3rd June, 1899.

J. G. T. BUCKLE,
for the Colonial Secretary.

No. 24.

BOTANICAL AND AFFORESTATION DEPARTMENT,
HONGKONG, 13th May, 1899.

Sir,—I have the honour to submit the usual annual Returns and my Report on the work of this department for 1898.

STAFF.

2. The Assistant Superintendent was absent on leave from February 19th, 1898, to February 17th, 1899, during which time I performed his duties (in addition to my own) without remuneration.

3. The first clerk, HUI WA, was detected of embezzlement and he absconded in June; in November he was apprehended, convicted, and sentenced to imprisonment. He was succeeded by the second clerk, Mr. WONG KWONG-MING, whose place was filled by Mr. WONG LUN-I.

4. The Head Forester, Mr. LOA QUAI, resigned on April 15th in order to commence business on his own account. He was succeeded by the second forester, Mr. SUEN TUNG. Both these men had been trained from boys in the department.

5. There was an aggregate of 380 days sickness amongst the Chinese staff of 53. Leave of a few days each was granted to 30 of the men.

6. We continue at a great disadvantage by the large number of changes in the coolie ranks of the staff, and also by the impossibility of obtaining any men who have previously had any experience of garden or forestry work; our supplies have to be drawn from the class of coolies ordinarily employed as earth coolies.

There were 18 changes of men during the year. I am frequently applied to by members of the community for gardeners to fill places, but as we cannot secure a sufficiency of trained men for ourselves it is impossible to provide any for others, however much I should wish to do so.

REVENUE.

7. The receipts were:—

From Plant Sales	\$674.46
„ Loan of Plants.....	202.02
„ Forestry Products	444.51
Total.....	<u>\$1,320.99</u>

BOTANIC GARDENS.

IMPROVEMENTS.

8. The old Aviary which I mentioned in my last Report as being dilapidated and unsuitable has been removed, and a new and larger one has been constructed on its site. The new one is 60 feet long by 28 feet wide; it is divided into seven distinct compartments, each one having a yard enclosed with wire netting nine feet in height, and an enclosure at the back for shelter and shade for the birds during rain and sunshine. The floor is raised about two feet from the ground. The roof is flat except that of the two end compartments, which is a ridge, and the middle one, which is a semi-circle, the highest part being 15 feet from the floor. The wire netting is stretched over bar and angle-iron framework. The back which affords shelter for the birds is constructed of brickwork. There is no woodwork except the divisions within the brickwork shelters, so that the structure will require only very trifling expenditure to maintain it, and it is, also, proof against rats and other vermin, which were very troublesome in the old structure.

The compartments are fairly filled with birds, but there is still room for further contributions, which would be thankfully received.

The aviary is a source of great interest to large numbers of visitors.

PLANT SHADING.

9. A section of WALTER & Co.'s wood roller blind shading was obtained from England for trial. It was fixed over a part of No. 10 plant-house, and it is successful, but it remains to be proved whether it will ultimately prove more economical than drill shading which is used rather extensively.

The first cost of the lath shading deters me from using it generally.

10. The success which has followed the new split bamboo roof in place of reed shading over plant-house No. 3 justifies the construction of similar roofs over houses Nos. 1 and 2 as soon as there is an opportunity for doing so.

FLOWER BEDS AND BORDERS.

11. The various beds, &c. have been kept well filled and maintained. About 12,000 plants are used annually for this purpose only.

WATER SUPPLY.

12. During periods of drought, like that of the 1898-99 dry season, much inconvenience is experienced in that portion of the garden which is supplied from the Tytam water-works system when the water is turned on for only an hour or less, as it is impossible to accumulate in so short a time sufficient water in the tanks for our requirements, consequently water has to be carried at much expense from Glenealy. If there is any probability of similar scarcity of water in future, it would be of advantage to the gardens and the water-works to conduct, by means of a small pipe from Glenealy to a point near the nursery, the water which at present runs to waste down the Glenealy nullah.

NOTES ON PLANTS.

13. *Hippeastrum*.—(Amaryllis). Named kinds of plants and plants raised from Veitch's select strain now flower freely; they are an immense improvement on the older varieties, which are being discarded now that there are sufficient of the superior kinds.

14. *Nepenthes ventricosa*, Blanco. In 1896 I was supplied with cuttings from the Philippine Islands by Mr. C. CUNDALL, of Manila, and Mr. H. HUMPHREYS, of Hongkong, of a pitcher plant which were struck and produced pitchers in 1898. A plant was sent to Kew in 1897 and it was there found on comparison with dried specimens to be *N. ventricosa* described by Blanco in 1837. It is a valuable acquisition in cultivation, and it appears that it had not previously been introduced in a living state to England.

15. *Lantana sp.* var. Drap d'or. This is a dwarf variety with beautiful bright-yellow flowers obtained from Messrs. J. VEITCH & SONS, Chelsea. It thrives well here and is a useful addition.

16. *Derris Fordii*, Oliver. When this flowered last year it was a picture of beauty, the colours of the flowers, which were produced in the greatest profusion, are white and red.

The plant was discovered by myself on the Lienchau river in the Kwangtung province in 1887, and then introduced to Hongkong. It is well worth cultivating in tropical countries.

17. *Rourea santaloides*, W. & Arn. This is a lovely plant when in bloom, which when cultivated as in these gardens is immensely improved in the quantity of flowers it bears to any wild specimens I have seen of it. It is indigenous to this island.

18. *Rhodoleia Championi*, Hook. Until last year it was not known that this beautiful tree existed in a wild state in any part of the world with the exception of four trees on one of the hills of Hongkong. It is of a genus which has only two known species, the one of Hongkong and another, *R. Teysmanni*, Mig., found in Sumatra. Last year Dr. A. HENRY sent as a donation about 1,174 species of dried plants which he had collected while at Mengtze in Yunnan. I found amongst them specimens of this hitherto extremely rare tree.

The specimens before me are marked on Dr. HENRY'S labels as being from two different places, one of them being 5,000 ft. and the other 8,000 ft. above sea level, and are marked as 40 ft. and 50 ft. as the height of the trees respectively.

These two specimens and our own are all slightly different in both foliage and inflorescence, but possibly not of sufficient difference to constitute them more than varietal differences.

19. *Illicium verum*, Hook, f. Although so long ago as in 1888 when Sir JOSEPH HOOKER was able to figure the star anise plant, and to describe it under the above name, from plants which I had sent to Kew, and which proved that up to that time *Illicium religiosum*, Sieb, had always been wrongly credited as being the source of star anise of commerce, I notice that the French in Tonkin, where the plant is largely cultivated, appear to be still unaware of the fact, as the Tonkin newspapers still refer to it under the wrong name, and the same mistake is made in English literature in China. Sir JOSEPH HOOKER wrote fully on this plant under Tab. 7,005 in the *Botanical Magazine* for 1888.

20. *Strawberries*.—It may be useful to record here the great success achieved by a Chinese grower at Wongneichung, from whence a very liberal supply of excellent fruit has been sent to the market this year, and which was sold at prices which should encourage extended cultivation for market supply.

INTERCHANGE OF PLANTS AND SEEDS.

21. The chief donors were :—

Acclimatizing Association, South California.	Dammann & Co., Italy.
Botanic Gardens, Bangalore.	Henry, Dr. A.
" " Baroda, India.	Hillier, H. M.
" " Brisbane.	Hodgins, Capt.
" " British Guiana.	Humphreys, H.
" " Grenada.	Koebele, A., Honolulu.
" " Nagpur, India.	Lawford, Vincent, R.N.
" " Penang.	May, C.M.G., Hon. F. H.
" " Royal, Calcutta.	Péché, G., Moulmein.
" " " Kew.	Roebelin, C.
" " " Sibpur, Calcutta.	Stephens, M. J. D.
" " Singapore.	Stephens, Mrs. S. R.
" " Sydney.	Treseder & Co., Truro.
Brown, Miss, Amoy.	Veitch, J. & Sons., London.
Cundall, C. H., Manila.	Walker, Capt., Foochow.

22. The following were the principal recipients :—

Atkinson, Dr.	Botanic Gardens, Royal, Calcutta.
Barton, J.	" " " Kew.
Bathurst, Capt.	Imperial Department of Agriculture, Barbados.
Botanic Gardens, Penang.	Cundall, C. H., Manila.

PLANT SALES.

23. The sum of \$674.46 was taken for 2,959 plants sold, a small decrease on the figures for 1897 owing to sales to places out of Hongkong being discontinued as the resources for propagating and cultivating are not more than enough to supply local requirements.

LOAN OF PLANTS.

24. The number of plants lent to the public for decoration purposes was 3,898, for which \$202 was charged, a very slight decrease on the previous year.

RAINFALL.

25. The rainfall recorded at the gardens was 65.99 inches in comparison with 110.27 of the previous year. The daily figures are given in Appendix A.

HERBARIUM AND LIBRARY.

26. We are indebted to Dr. A. HENRY, F.L.S., for a fine collection of 1,174 dried species of plants which were collected in Yunnan. These have all been poisoned, as well as other collections, but there has been no time to mount and incorporate them in the completed specimens.

27. Annual Reports, Bulletins, &c. have been received from the following Botanic Gardens and places :—

Amsterdam, British Guiana, Calcutta, Ceylon, England, Jamaica, Colonial Museum, Haarlem, Missouri, Mysore, Natal, New South Wales, Kew, Rio de Janeiro, Saharunpur, Trinidad ; the Agricultural Departments of Brisbane, Cape of Good Hope, Sydney, United States of America, University of California, Zanzibar, and Agri-Horticultural Society, Madras. Forest Administration in India from Ajmere Merwara, Bengal, Burma, Central Provinces, Coorg, Lower Provinces, Madras, North-West Provinces and Punjab.

28. The following works have also been added to the library :—

Presented :—

Natal Plants, by Medley Wood.

Hooker's Icones Plantarum, by Bentham Trustees through Sir W. T. Thiselton-Dyer.

Flora British India, Parts XXIII and XXIV completing the work. From Sir W. T. Thiselton-Dyer.

Purchased :—

Flora Capensis, Part IV. Vol. VI and Part I. Vol. VII.

Gardeners' Chronicle, 1898.

Journal of Botany, 1898.

Botanical Magazine, 1898.

FORESTRY.

29. Appendix B gives the kinds and quantities of trees planted, the localities where they were placed, and the approximate area occupied by them. The total number of trees planted is 33,923 ; they were planted in 17 different localities ranging over places as far as to Repulse Bay and Tytam Tuk.

THINNING OF PLANTATIONS.

30. The particulars are given in Appendix C. 16,491 trees were removed from eight localities, about half of the number being felled in Kowloon. These thinnings realised \$444.51 net.

LANTANA.

31. This plant has established itself at the West end and in the Happy Valley. Nearly all of it on Crown lands was cut down during 1898 to keep it in check, as it is a troublesome weed when it encroaches on plantations.

PROTECTIVE SERVICE.

32. Illicit tree cutting has again been brought within reasonable limits. The total number of trees cut and reported is 686. The number of convictions obtained by the forest guards was 51. There are, however, always a large number of cases of trees cut where the culprits are undetected. The convictions are mostly for cutting pine trees for firewood. Remembering that there are only five forest guards for the whole Island and Kowloon, the protection of the vast number of trees in existence must be considered as being very economically managed: In Hongkong alone, without Kowloon, there are nearly 30 square miles to protect.

FIRES.

33. Grass fires as a rule occur only during the dry season. In the year under review there were 11 between January 1st and June 14th, and 16 between October 20th and December 23rd. Trees to the number of 3,285 were destroyed by 10 of these fires, the other 17 fires did no damage to trees, grass only and small shrubs being burnt by them.

The Police at the stations nearest to the scenes of the fires, and forest guards were instrumental in extinguishing the fires, and I have again to acknowledge the valuable services rendered by the Police Department in this work, as also in notifying me of the occurrence of fires.

The fire lines, of which there are about 50 miles in the Colony, consist of lines from 10 to 15 feet wide of the earth cleared—most of them annually—of all grass and vegetation. These lines of bared earth in most cases where fires reach them are effective in checking their progress, but in some instances when strong winds occur at the time of the fires pieces of ignited material are carried over the lines and start fires where they fall. It will be necessary to increase the width of the lines in some places where vegetation has become dense.

Unfortunately it is impossible to discover how or by whom fires have originated, but I have no doubt that in nearly all cases it is by the carelessness of people using matches, and I have good reasons for thinking that Europeans and natives alike are responsible for such thoughtlessness.

Appendix D. supplies particulars of grass fires.

I have the honour to be,

Sir,

Your most obedient Servant,

CHALES FORD,

Superintendent,

Botanical and Afforestation Department.

HON. J. H. STEWART LOCKHART, C.M.G.,

Colonial Secretary,

&c.,

&c.,

&c.

Appendix A.

RAINFALL OBSERVATIONS MADE AT THE BOTANIC GARDENS, DURING 1898.

RAIN GAUGE 306·8 FEET ABOVE MEAN SEA LEVEL.

DATE.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1, .....	.07	...	...	...	1.20	.02	1.27	.08	...	...	.02	...
2, .....	...	.16	...	.01	.50	...	.34	.26	.98	.03	.16	...
3, .....	.01	1.40	.04	...	...	.06	.39	.03	1.02	.62	.38	...
4, .....	...	...	...	...	...	.76	.04	.06	.06	3.78	.10	...
5, .....	.07	.01	.03	...	...	.01	.13	2.43	...	.41	.01	...
6, .....	.54	...	...	...	.02	.88	...	.39	...	...	...	...
7, .....	.17	...	.01	.04	...	3.43	...	.01	...	.01	...	...
8, .....	...	...	...	.13	...	1.08	.07	...	...	...	...	...
9, .....	...	...	...	.02	...	...	.50	...	...	.12	...	...
10, .....	...	...	...	.87	...	...	.36	.12	...	1.09	...	...
11, .....	...	...	.01	.03	...	...	.10	.05	2.32	1.88	.06	...
12, .....	...	...	...	...	.02	...	...	.06	.56	.67	...	...
13, .....	...	...	...	...	1.57	.05	...	.54	.01	...	...	...
14, .....	...	...	...	...	.31	.04	...	2.16	...	...	...	...
15, .....	.34	.01	...	...	.44	...	.16	.01	.07	...	...	...
16, .....	.10	...	...	...	.06	1.25	...	...	.29	...	...	...
17, .....	...	...	...	...	...	.65	.23	.38	.21	...	...	...
18, .....	.03	.20	...	...	...	.05	.03	1.18	...	...	...	...
19, .....	.12	.13	...	...	.06	.18	...	.15	...	...	...	...
20, .....	...	.09	...	...	...	1.17	.06	...	...	...	...	...
21, .....	...	.34	...	.03	...	.53	.12	...	...	...	...	.03
22, .....	...	.17	...	.09	.19	.11	.03	...	...	...	...	...
23, .....	...	...	...	2.04	.03	.94	1.10	...	...	...	...	...
24, .....	.01	.02	...	.04	...	.66	.64	...	...	...	...	...
25, .....	...	...	...	...	.44	.97	.03	2.21	.34	...	...	...
26, .....	...	...	.09	...	...	.19	.16	1.59	.05	...	...	...
27, .....	...	.09	.06	...	...	.29	...	1.43	.61	...	...	...
28, .....	...	.36	...	.01	...	.45	2.27	.16	.05	.36	...	...
29, .....	...	...	...	.05	...	.12	.20	.05	...	.02	...	...
30, .....	...	...	...	...	...	.13	.85	...	.33	...	...	...
31, .....	...	...	...	...	...	...	.01	...	...	...	...	...
Total,.....	1.46	2.98	.24	3.36	4.84	14.02	9.09	15.35	6.90	8.99	.73	0.3

Total inches for the year=65.99. Observations made at 10 a.m.

CHARLES FORD,
*Superintendent,
 Botanical and Afforestation Department.*

Appendix B.

STATISTICS OF PLANTING OPERATIONS.

LOCALITY.	Pinus Massoniana.	Cunninghamia sinensis.	Camphor.	Bamboo.	Albizia Lebeck.	Melaleuca Leucadendron.	Miscellaneous.	Tristania conferta.	Area in Acres.	Grand Total of Trees.
Repulse Bay,	6,451	...	...	...	...	...	...	...	5 $\frac{1}{4}$	6,451
Tytam Tak	7,280	276	...	...	...	...	...	354	6 $\frac{1}{2}$	7,910
Aberdeen,	2,880	54	65	...	...	...	...	...	2 $\frac{1}{2}$	2,999
Pokfoolam,	1,968	...	120	...	...	...	...	...	1 $\frac{3}{4}$	2,088
Aplichau,	1,386	416	536	...	650	...	...	3,510	5 $\frac{1}{4}$	6,498
Mount Davis,	1,145	...	...	...	...	...	...	...	1	1,145
Mount Kellett,	558	...	...	58	...	1,698	...	...	2	2,314
Kennedy Town,	846	...	838	...	12	465	53	...	1 $\frac{3}{4}$	2,214
West Point,	1,088	...	249	...	...	...	...	...	1	1,337
Waterfall Bay,	326	...	...	...	...	...	...	...	$\frac{1}{4}$	326
Connaught Road, .....	...	...	...	...	...	...	17	...	...	17
MacDonnell Road, .....	...	...	...	...	...	...	4	...	...	4
Wongneichung, .....	...	...	...	40	...	...	...	...	...	40
Chamberlain Road, .....	...	...	...	309	...	...	...	...	...	309
Garden Road, .....	...	...	...	196	...	...	35	...	...	231
Bowrington, .....	...	...	...	18	...	...	...	...	...	18
Magazine Gap Road, .....	...	...	...	...	...	...	22	...	...	22
Total,.....	23,928	746	1,808	621	662	2,163	131	3,864	27 $\frac{1}{4}$	33,923

CHARLES FORD,
Superintendent,
Botanical & Afforestation Department.

Appendix C.

SALE OF FORESTRY PRODUCTS.

LOCALITY.	Quantity.	Amount realized.
Pine Trees.		\$ c.
Aberdeen,	4,187	64.86
West Point,	71	1.11
Kowloon,	7,893	221.57
Little Hongkong,	2,884	72.69
Pokfoolam,	12	0.86
Sookunpo,	1,401	25.22
Wongneichung,	43	15.76
	16,491	402.07
Tree Prunings,	64,948 catties.	26.47
Brushwood,	53,369 "	15.97
Total Revenue for Forestry Products,.....		444 51

CHARLES FORD,
Superintendent,
Botanical & Afforestation Department.

Appendix D.
STATISTICS OF GRASS FIRES.

Date.	LOCALITIES.	Number of Fires.	Number of Trees destroyed.
1898.			
January	10 Mount Kellet,	1	13
"	11 Cape Collinson,	1	...
"	26 Tytam Tuk,	1	1,350
February	11 Wong Ma-kok,	1	...
"	13 Wanchai Gap,	1	40
"	13 Shek-o,	1	...
"	14 Aberdeen Road,	1	...
"	14 Repulse Bay,	1	...
"	19 Mount Davis,	1	...
April	11 Telegraph Bay,	1	...
June	14 Mount Kellet,	1	3
October	20 Wong Ma-kok,	1	...
"	23 Mount Davis,	1	...
"	23 Pokfoolam Road,	1	...
November	9 Kai Lung Wan,	1	...
"	16 Do.,	1	...
"	23 Pokfoolam,	1	4
"	23 Deep Water Bay,	1	1,400
"	23 Aberdeen,	1	400
December	2 Stanley,	1	...
"	5 Sookunpo Hill,	1	10
"	9 Stanley,	1	...
"	10 Repulse Bay,	1	...
"	12 Tytam Road,	1	40
"	12 Tytam Tuk,	1	25
"	22 Kai Lung Wan,	1	...
"	23 To Ti Wan,	1	...
	Total,	27	3,285

CHARLES FORD,
Superintendent,
Botanical & Afforestation Department.

GOVERNMENT NOTIFICATION.—No. 318.

The following is published.

By Command,

J. G. T. BUCKLE,
for the Colonial Secretary.

Colonial Secretary's Office, Hongkong, 3rd June, 1899.

Government of China.

SANTU DISTRICT.

LOCAL NOTICE TO MARINERS, No. 2.

{ Black 6-foot Nun Buoy
placed to mark the
"Kaiser" Rock, off Crag
Island, Samsah Bay.

Notice is hereby given that the "Kaiser" Rock, situated to the westward of Crag Island (青山) Samsah bay (三沙灣) has been marked by a black 6-foot Nun Buoy, without cage, instead of red and black chequered 6-foot Nun Buoy, without cage, as previously notified.

The Buoy is moored close to the Rock in about seventeen fathoms at low water of ordinary spring tides on the following bearings: N. W. point of Crag Island, E. $\frac{1}{2}$ N.
S. W. " " " " S. E. by E.

The local fishermen say that the Rock dries at extraordinary low water. At an ordinary low water of spring tides about four to five feet will be found.

Vessels should not pass to the southward of the Buoy.

DIRECTIONS.

The S. W. point of Crag Island in line with N. E. point of Cone Island (伽來山) leads about $1\frac{1}{2}$ cables to the northward of the Buoy in deep water.

EDWARD STEVENS,
Harbour Master,
Foochow.

Approved:

P. VON TANNER,
Commissioner of Customs.

Custom House,
Foochow, 24th May, 1899.