GOVERNMENT NOTIFICATION.—No. 136.

The following Report of the Acting Superintendent of the Botanical and Afforestation Department, or 1885, is published for general information.

By Command,

FREDERICK STEWART,
Acting Colonial Secretary.

Colonial Secretary's Office, Hongkong, 17th April, 1886.

No. 2.

BOTANIC GARDENS, 12*th February*, 1886.

SIR,—I have the honour to submit the Annual Report of this Department for the year 1885.

2. *Botanic Gardens.* Apart from the general work of maintenance, few improvements or alterations have been attempted this year. The only alteration of note is the conversion of the grass plot on the west of the Fountain Terrace into beds, with the ultimate intention of making it a rose-garden. The natural soil has been taken out and replaced with a compost suitable for growing foreign roses, which we hope to grow, either on their own roots, or budded or grafted on native stocks.

The roses in the New Garden have been failing for some years back owing to the unfavourable nature of the soil, and from natural exhaustion. When the new plants are thoroughly established, it is intended to clear the old rose ground and plant it with palms. We have received many additional species of this highly ornamental and interesting class of plants within the last few years, sufficient I think to enable us to extend the Palm Plot over the old rose ground till it joins the Conifer Plot. Palms and Conifers will then be the special features of the New Garden.

3. Our immunity from typhoons this year has been favourable to the vegetation of the Gardens. These storms periodically destroy many of the new introductions before they gain sufficient strength to become inured to their new position. The Gardens still suffer, however, from a limited water supply; our means being hardly sufficient to enable us to employ the required number of water carriers. This want has been strongly felt for the last two years, owing to the extension of the New Garden and the large increase of nursery plants that are propagated for sale.

4. The exceptionally heavy rain-storm of the 12th and 13th of June last, was severely felt in the Gardens. Several land-slips took place in the most picturesque parts of the New Garden where many tons of earth, together with the surface vegetation, were precipitated from the faces of the steep banks that bound the northern sides of the upper and lower walks which lead to the Glenealy Ravine. Several large Pine trees were carried down with the soil, and large gaps were made in the parapet walls both on the upper and lower walks.

A large quantity of soil and rock fell upon the Camellia Bed on the lower walk, crushing most of the plants beyond recovery.

It will be years before the yellow unsightly gaps can be again clothed with the luxuriant mass of ferns and other plants that contributed so much to the beauty of this part of the Garden. The same storm did more than usual damage to the walks in both Gardens and at Government House. The yearly expenditure in repairing walks is large in proportion to the extent of the ground. This is partly owing to the steep gradients and to the non-adhesive nature of the gravel at our disposal; and I am afraid that retrenchment in this matter cannot be effected to any appreciable extent, till funds are available to concrete the walks that ramify the steep parts of the Garden.

5. Many interesting plants have been added to our collection during the past year: notably a number of Succulents and Bromeliads from Kew; Cape bulbs and Ferns from the Botanic Gardens, Natal; Indian plants and named varieties of Crotons from the Botanic Gardens, Calcutta; Seeds of important economic plants from the Botanic Gardens, Jamaica; and a number of Orchids from Manila.

A detailed list of contributors and recipients is cited farther on.

6. The new plant houses enable us to give more satisfactory results than was previously the case in growing sub-tropical plants and plants requiring shade, but the want of a properly constructed house with a heating apparatus, is greatly felt for growing many of the beautiful plants which we receive from time to time from strictly tropical regions. The unsatisfactory condition of our Orchids shows this defect very clearly; most Orchids, as is generally known, require to be dealt with in a special manner, and must, as a rule, be subjected to conditions that necessitate a special house or compartment for their cultivation. It is to be hoped that the time is not far distant when we shall have an Orchid House worthy of the Gardens, and of the Colony.

7. Nearly all the shrubs and trees that were planted on the ground that has been recently added to the New Garden have made vigorous growth. Many of them yield valuable economic products, and deserve special mention, being new introductions to Hongkong that seem to be well adapted for cultivation here. The most important are: *Styrax Benzoin*, which yields the resin called 'Benzoin'; *Bassia butyracea*, the indian butter tree or 'Phulwara'; *Cæsalpinia coriaria*, 'Diva Diva,' the pods of which are used for tanning purposes; *Musa textilis*, Manila Hemp; *Manihot glaiziovi*, a rubber producing plant; *Chrysobalnus Icaco*, the Cocoa plum, the oil from the kernels of this fruit being used in medicine; *Brya Ebenus*, West Indian Ebony; *Bursera gummifera*, which produces gum mastic; *Brosopus juliflora*, the pods of which are used in Jamaica for feeding cattle; *Pavetta indica*, the leaves and roots of which are used in medicine, and the root is also used for making knife handles.

8. A number of the 'Tree Tomatoe,' *Cyphomandra betacea*, were planted this year in the Vegetable Garden. This plant seems likely to do well in Hongkong; its worst enemy is a species of red ant which burrows under the ground and attacks the plant at the junction of the root and stem. The first lot of this plant that was raised last year was killed by the ants. An additional lot of seeds, however, was sent by the Director of the Botanic Gardens, Jamaica, and extra precautions were taken to protect the plants. We have now a number of strong plants from five to seven feet high, which I expect will yield a crop this summer. We have also a reserve stock of the plant for sale, and distribution. Respecting the merits of the 'Tree Tomatoe' Mr. MORRIS, Director of the Botanic Gardens, Jamaica, writes, 'The fruit should be eaten when ripe only; then it is most refreshing. For cooking take out all the seeds, remove the skin, cut in half and stew as nectarines or peaches.'

9. Another plant of considerable interest, *Vitis Martinii*, a new tuberous rooted vine from Cochin-China, fruited this year in Hongkong for the first time. The seeds were procured from the Botanic Gardens, Saigon, in 1883. The seedlings were planted out the same summer and made several shoots, each of which died down in the winter. They began to make fresh shoots about the middle of April, 1884, and grew well during the summer, but showed no inclination to flower; and again died down in the winter. Last summer they started vigorously and showed flower about the end of May. Many of the bunches however failed to develope fruit, owing apparently to imperfect fertilization, but there was a good average crop of bunches on the canes irrespective of the failures. The fruit was ripe in October; many of the bunches weighing a pound each. The berries, when ripe, are jet black, and rather under the average size of ordinary grapes. The seeds are large in proportion to the size of the berry. The flavour is a peculiar blending of sweetness and acidity, very pleasant, but tending, in my case, to leave a curious smarting sensation on the tongue; others might not find this peculiarity at all objectionable. The flavour might be altered as is well known, by varying the mode of cultivation, but the size of the seeds is likely to prevent the grape becoming popular as a table fruit; it may, however be very well adapted for a wine producer. A number of seedlings of this vine were distributed amongst residents of the Colony, but I learn that none of these plants have fruited. A few remarks as to the mode of cultivation may therefore be useful. The tubers should be planted at a distance of twelve feet apart in well manured soil, taking care to keep the manure near the surface, as the tubers take a horizontal direction and do not penetrate the soil to any great depth. When the shoots appear in the spring, it is well to cut off all the weak ones, leaving only four strong canes; these should be trained along a trellis or a wall, as the case might be, leaving a width of three feet between the canes. All the lateral branches should be pruned back to within one bud of the main rod, except those laterals that show bunches; but it will be found that very few bunches will be developed on the lateral shoots, most of the bunches springing directly from the main rods; but in the case of a bunch springing from a lateral branch, the branch should be stopped at the second bud above the bunch. The laterals might be allowed to grow till they are two feet long. It will then be seen if they are likely to throw out bunches or not. If not, prune them back as described, and also pinch back all subsequent growth as it appears. It may be found necessary to thin out the leaves to allow the sun to get at the bunches, but in doing this great care should be taken not to break or otherwise injure the leaf directly above the bunch. If this leaf happens to be accidentedly removed, the bunch below it will ripen immaturely and soon shrivel up. It is an advantage to thin out the bunches, leaving a space of fifteen or eighteen inches between them. It is also advantageous to thin the berries, leaving hardly one half of the original quantity on each bunch; but I am afraid this process would prove impracticable if the vine were extensively grown, owing to the labour it would entail. After the fruit is gathered, the vines require no farther attention till spring. By way of experiment one lot of plants was allowed to grow at will. Some of them threw up as many as a dozen suckers and produced laterals in profusion, but they all failed to flower. Another lot was transplanted into well-manured ground just as the crowns began to push in the spring; they too failed to flower, and presented rather a sickly appearance during the summer.

The Horticultural Press has already suggested that this vine should receive the attention of vine growers in the wine producing countries of Europe where the phylloxera has denuded the vineyards of the old class of vines. There being no phylloxera in Hongkong, I cannot say whether the dreaded insect would spare this vine; but in view of the wonderful improvements that have been and can be brought about by skilful and persistant cultivation, it is not unreasonable to surmise that this new vine may ultimately become a wine producer. It is easily cultivated, and seems to be well adapted for a tropical climate, or a climate in which the resting season is comparatively cold and the growing season hot.

10. The plant which yields the Chinese Star-anise is still growing well in the garden, but has not yet flowered; when it does so, specimens will be submitted to the authorities at Kew for the determination of an interesting scientific question that has not yet been settled.

11. The vote placed at the disposal of this department to enable journeys of botanical research to be made in China has not been used this year; as in the first half of the financial year the hostilities between France and China greatly enhanced the danger of travelling in the interior, and Mr. FORD'S absence on leave during the latter half of the year precluded the possibility of any lengthened journey being made while there was only one European left to attend to the duties of the department. But in view of the understanding that it is one of the chief duties of the department to constantly endeavour to add to our knowledge of the flora of China, I have, in my spare time, made frequent journeys to the hills on the mainland adjacent to Hongkong, and have been fortunate in finding several plants new to science. In reference to these plants Mr. W. T. THISELTON DYER, C.M.G. the Director of the Royal Botanic Gardens at Kew writes to say, 'Some of the plants you have collected prove to be of extraordinary interest and quite new; Mr. HEMSLEY has described some of the novelties in the *Journal of Botany*; one of the *Aristolochias* has been named after you.'

12. China is unquestionably a rich field for botanical research, and it is to be regretted that the Chinese Authorities have no organized means, in the way of a National Botanic Garden, of cultivating and distributing their innumerable vegetable products. Botanic Gardens of other countries would gratefully exchange the valuable economic plants at their disposal for Chinese novelties, and the benefit would be mutual. We have not received one plant from a Chinese source this year. Hongkong would be a convenient station for reciprocating favours from Chinese who might be disposed to introduce some of the resources of foreign horticulture, or agriculture, into China. We are gradually accumulating a large variety of plants of commercial value, a portion of which we would gladly distribute amongst any of our Chinese friends who might be inclined to favour us with some of the interesting vegetable novelties of the Celestial Empire.

13. The 'Rhea' or 'China Grass,' *Boehmeria nevia*, seems to be exciting considerable interest amongst planters as a textile, and enquiries as to its cultivation and the means of procuring it have recently been made by local agents and by correspondents at a distance.

Living plants can be procured in quantity from squatters on the island and from adjacent villages on the mainland. The Chinese cultivate it on patches of the richest soil they can find, and supply it with strong manure water from their cesspools, from the time the shoots appear till they are nearly ripe.

Several correspondents have asked for seeds of the plant, but I may here mention that none of the squatters whom I have consulted on the subject have ever raised it, or seen it raised from seed, though it is possible to raise it in this way. The favourite Chinese method is to divide the roots into small clumps about four or five inches square and plant them out in prepared ground at a foot apart. In this way a crop can be got off the plants the first year. Seedlings would probably take several years before they reached a yielding condition. The plants are usually divided and planted out in February, but this can be done in a climate like that of Hongkong, at any season, if the plants are duly watered.

14. The sale of plants has been continued throughout the year. The total number sold being 2,169. The demand is not so large as might be anticipated, owing, no doubt, to a considerable number of the residents in the Colony being unaware that plants can be bought at the Gardens.

15. An interesting Amaryllidaceous plant, *Agave Geminiflora*, flowered during the year. The spike was twenty-five feet high and produced about two thousand flowers, but all the ovaries dropped off before the seed ripened. The plant still looks healthy and it will be interesting to find whether it will survive the strain of flowering, seeing that its attempt at reproduction has proved abortive.

16. The collection of animals has this year been augmented by two additional species of deer. The male and female deer which we have had for some time mated this year, and the doe gave birth to a young one which has grown well, and looks in healthy condition.

One of the Silver Pheasants and a Mandarin Duck were stolen, and one of the large Owls which has been in the Garden for many years was found dead in the cage; it was wounded in several places, having evidently been killed by some person of barbarous disposition who had poked it to death through the bars of the cage with a stick, or some sharp pointed instrument.

The Officers of H.B.M.S. "Flying Fish" have quite recently presented us with a fine young specimen of the Cassowary, *Cassuarius becaurunculatus*, a bird belonging to the *Struthionideae* or Ostrich family. It was procured I believe from the Moluccas.

17. The arrangement of the Herbarium being now complete, the work in this branch of the department has been confined to keeping the specimens in good condition, and augmenting the collection with new discoveries, and duplicates for exchange. The collection is accessible to the public, and any one who is studying the flora of South China will find the Herbarium of great assistance.

18. Correspondence has been dilligently carried on with kindred establishments, and with private persons who are interested in matters upon which it is in our power to give information.

19. The names of the principal contributors to the Gardens are as follow :—

Anderson, Lieut.-Colonel D. G.; seeds.
Armstrong, J. M.; plants.
Blackhead Smith, Mrs.; seeds.
Boehmer, Louis, Yokohama; plants.
Botanic Gardens, Brisbane, J. Pink, Director; plants.
" Jamaica, D. Morris, M.A., Director; seeds.
" Calcutta, Dr. G. King, LL.D., Director; plants.
" Durban Natal, J. M. Wood, Curator; seeds, plants, &c.
" Townsville, A. M. Anderson, Superintendent; plants.
" Royal Kew, Sir J. D. Hooker, K.C.S.I., &c., Director; plants and seeds.
Bunting, Isaac, Yokohama; plants.
Cooper, W. M. Ningpo; seeds and plants.
Coxon, Mrs. A.; plants and seeds.
Curtis, C. Penang, Forest Department; plants and seeds.
Cundall, C. H., Manila; plants and seeds.
Dehra Dun, Forest School, India; seeds.
Franco, P. M.; seeds.
Hance, Dr. H. F., Canton; seeds.
Hughes, J. I.; one deer.
Indian Forest Department; seeds.
Macgowan, Dr. F. Wenchow; plants.
Nicholl, Mrs. Amoy; seeds.
Pickford, C. R. B., Cebu; plants.
Piercy, Mrs.; plants.
Police Department; one Pheasant.
Queensland Acclimatation Society; seeds.
Romano, A. G.; plants.
Swalemen, Van Der, Ghent Belgium; seeds.
Whitehead, F. H.; one Deer.
Wing Kee; one Owl and two Storks.
Woodin, E. L.; plants and seeds.

20. The following are the chief recipients : —

Acclimatization Society Queensland; seeds.
Adams & Son, Messrs. New Zealand; seeds.
Bell Irving, Mrs.; plants.
Blackhead Smith, Mrs; plants.
Botanic Gardens, Adelaide; seeds.
" Brisbane; seeds and plants.
" Calcutta; seeds and plants.
" Ceylon; seeds.
" Jamaica; seeds.
" Melbourne; seeds.
" Natal; seeds and plants.
" Singapore; seeds and plants.
" Sydney; seeds.
" Townsville; seeds.
" Trinidad; seeds.
" Royal Kew; seeds, plants and herbarium specimens.
Cameron, Mrs.; plants.
Crawford, Mrs.; plants.
Crow, W. E.; plants.
Cundall, C. H. Manila; plants.
Curtis, C.; plants and seeds.
Faber, Rev. E.; plants.
Franco, P. M.; plants.
Gordon, Major-General, A.H.A.; plants.
Grossman, C. F.; plants.
Hance, Dr. H. F. Canton; plants and herb, specimens.
Hargreaves, Rev. G. Canton; plants.
Ladies Recreation Club, plants.
Maries, C. C. India; seeds.
Moin, E. M. A. India; seeds.
Piercy, Mrs.; plants.
Police Department; plants.
Romano, A. G.; plants.
Silva, J. M. A.; plants.
The Governor of Macao, seeds.
The Maharaja of Durbingah; seeds.
The Spanish Consul; seeds.
Thomson, Dr. J. C. Canton, plants.
Tripp, H. J. H.; plants.
Vyvyan, C. B.; seeds.
Wing Kee; plants.
Woodin, E. L.; seeds and plants.

21. During the year we received :—

789 Plants.
291 Packets of seeds.
10 Wardian Cases.
4 Animals.
60 Herbarium specimens.

22. Irrespective of the plants that were sold during the year we sent out :—

2,202 Plants.
221 Packets of seeds.
14 Wardian Cases.
22 Herbarium specimens.

23. The Library has been increased by the following additions :—

A journey of Exploration through Western Ssu Ch'un.
Botanical Magazine for part of 1885.
Decandolle's Monographiae Phanerogamarum, 4 vols.
Franchet's Plantae Davidianæ, first part.
Gardeners Chronicle for 1885.
Journal of Botany for part of 1885.
Loureiro's Flora Cochinchinensis.
New Commercial Plants and Drugs by Thomas Christy, F.L.S., F.S.C.L. presented by the Author.
Report of the Acclimatization Society Queensland for 1884.
Report on the Arboriculture of the assigned districts, India for 1884.
Report on the Botanic Gardens Adelaide for 1884.
" " " " Calcutta " 1884–85.
" " " " Ceylon " 1884.
" " " " Natal " 1884.
" " " " Singapore " 1884.
" " " " Trinidad " 1883.
" " Royal Botanic Gardens Kew for 1883.
" " Horticultural Gardens Lucknow for 1884-85.
" " Public Gardens and Plantations, Jamaica, for 1884.
" " Establishment of a Botanic Garden and Arboretum at Montreal.
" by Mr. Hosie on a journey through Central Ssu Ch'un.
" of the Royal Society of Tasmania.
" on the Experimental Garden, Silam, North Borneo for 1884.
First Annual Report on the Forest Department, Stra Settlements, 1885.
Progress Report of Forest Administration in Ajmere-Merwa
" " " " 1883-84-85.
" " " " in Assam for 1883-8
" " " " in British Burma 1 1883-84.
" " " " in British India 1 1883-84.
" " " " in the Central Pr vinces for 1884-8
" " " " in Coorag for 1883-8
" " " " in Hyderabad Assign Districts for 1884-8
" " " " in the Punjab f 1884-85.
Progress Report of Forest Administration in the Nort Western Provinces and Oudh for 1883-84.
Annual Administration Reports of the Forest Departmer Madras Presidency for 1883-84.
Progress Report of the Forest Survey Branch for 1883-8
Siebold's Flora Japonica, 2 vols.
Succinct Notes on some plants from New Guinea and description of hitherto unrecorded Paupin Orchids, b Baron von Muller, K.C.M.G. &c.

24. The Garden staff has worked fairly well throughout the year, but a high standard of efficiency is not to be expected. The ordinary Chinese Gardener has no knowledge of the physical laws that govern the actions of vegetable life, although they cultivate many of the plants of their native country with wonderful success; but in dealing with foreign plants that require to be carefully studied till the conditions necessary for their acclimatization are understood, they show little interest. They in fact frequently neglect such plants, unless a rule of thumb practice can be laid down for their guidance. It is a hard matter to interest a Chinese Gardener in an experimental attempt to propagate or cultivate a plant which must be subjected to a process different to that which he has been accustomed to practise. This class of men could hardly be expected to understand an explanation of the physical laws that bear upon horticulture as a science; but Mr. FORD has endeavoured for some years back to procure a better class of workmen by training up boys as apprentices, and educating them upon a broader principle than that usually followed in China; but although this system has been fairly satisfactory in one or two cases, it has not been wholly successful. The training which the boys receive sharpens their intelligence and gives them educational advantages that make them aspire to a position more lucrative and, from their point of view, more dignified than that of a "fa-wong." Several promising lads have left in this way just as they were begining to be useful. This of course is very disappointing, and I am afraid that no other result can be anticipated in future, unless the intelligence of the trained apprentices is remunerated at its market value.

25. *Government House.*—A number of plants, chiefly Palms and Arvids, were planted out on the bank below the northern side of Government House. The fence which supports the creepers on the top of the bank has been extended for seventy yards farther on the walk, and the plants on the older portion have all been cut back and replaced with a view to more uniformity. Were the necessary funds available, great improvements could be effected on the ground just within the wall at the eastern bend of Upper Albert Road. The appearance of this part is a constant eye-sore, owing to the rough nature of the ground and the constant litter of bamboo leaves. The bamboo is very effective in isolated clumps, but its predominance in a garden or pleasure-ground is objectionable from an artistic point of view and injurious to the developement of the other trees and shrubs that were planted with the intention of contributing to and improving the general effect.

AFFORESTATION.

26. The planting of China Pines was commenced on December 3rd, 1884, and completed on the 16th of May, 1885. They were planted in the following localities:—Kowloon, North of Butts; Observatory; Black Mountain; Aberdeen Hills; Mount Kellet; and below Mount Gough Road. The total number planted is 342,302.

27. A number of seedling Pines were raised in sites in the following localities:—Mount Davis, Mount Kellet, the New Military Sanitarium, and Saiwan, 204,837 plants being successfully raised. A large number of sites, probably one fifth of those made on the southern side of Mount Kellet, were unproductive. The soil in this locality is rather variable, and the failures chiefly occur on the steep slopes where the grass is scanty. Where the ground is covered with a fibrous carpet of grass roots, the rain, as it rushes down the slopes, is absorbed in sufficient quantities to saturate the soil and render it suitable for the reception and subsequent developement of the young tree; but where the ground has been denuded of its herbage by the irrepressible grass cutter with his blunt sickle, which does not cut but uproots the grass, the young tree is sorely handicapped in the struggle for existence.

28. 150 Catties of Pine seeds were sown broadcast on the hill south of the Little Hongkong estuary. A large number of seedlings have sprung up, but in rather irregular patches. It would be premature however, to pronounce upon the issue of this experiment at present. The result will be more apparent next year.

29. Some Bischoffias and Camphors were planted on Mount Davis. Camphors and Cork Oaks were also planted on the hills above the Powder Magazine. These have all done well.

30. Fourteen species of Eucalyptus were raised in various quantities and planted out in the following localities:—New Military Sanitarium; above Powder Magazine; and at Sòkonpò. The total number planted being 16,398. Each species was planted in a clump, and marked with a ticket to enable us to identify the different kinds, and note their relative adaptability to the soil and climate of Hongkong. This comparison has been very interesting, and will be valuable in enabling us to select the most suitable kinds in future. The three species that are conspicuously superior to the others, and which may be considered an unqualified success, are *E. robusta*, *citriodora*, and *tereticornus*. The next in order are:—*marginata*, *platyphylla*, *corymbosa*, *resinifera*, and *haemastoma*. These five kinds have not done so well on the exposed hills near the Military Sanitarium as the three first mentioned kinds, but they have succeeded very well at Sòkonpò where the position is more sheltered; and I have no doubt that they will succeed in many of the unexposed parts of the island. Other four species, namely: *Stuartiana*; *siderophloia*; *Microcorys*; and *maculata* have grown moderately well. The percentage of deaths is small, but the growth is slow and weakly. They evidently required a richer soil than the above mentioned sorts. The two species that have been least successful are *pilularis*, and *hemephloia*. A large proportion of both kinds have died, and those that have survived have not a promising appearance.

31. The plantations of 'Cassia Lignea' that were made on the hills north of Aberdeen would probably have been in a thriving condition by this time but for the persistence of the Chinese in breaking

off the leaves and branches of the plants. They appear to attach some importance to the plant as a medicine, and despite the vigilance of the Forest Guards, they succeed in keeping the plants in an almost leafless condition. Even in the Botanic Garden, where the plants are protected by iron tree-guards and wire netting, they have killed several plants by persistently defoliating them and wrenching off the branches.

32. 10,000 young Camphor trees were raised during the season in Kowloon nursery, and will be planted out as soon as the weather is suitable.

33. Preparations were made in the nursery at Sòkonpò for raising a similar quantity of Camphors next summer, but Camphor seeds are very scarce this year, and the price has risen four hundred per cent. I have therefore decided to sow the ground with Pine seeds instead.

34. Upwards of one thousand young trees have this year been destroyed by grass fires. We have not been able in any of the cases to ascertain the cause of the fires.

35. The Forest Guards made twenty-two arrests during the year; twenty of the offenders were fined or sentenced by the Magistrates to terms of imprisonment. The fines varied from five dollars to fifty cents and the terms of imprisonment from three days to three weeks.

36. The number of arrests is very inconsiderable in proportion to the actual damage done to the plantations. The Forest Guards have frequently complained of being intimidated by bands of wood-cutters. The villagers at Aberdeen are notorious for their wood stealing propensities and the Forest Guards dread having to enforce their authority in that quarter. A few months ago one of the guards, while trying to arrest three men who were stealing trees from the enclosed plantation at Aberdeen, was attacked and severely cut about the hands with a knife. The men escaped.

The area of planted land is yearly becoming more extensive, and the trees, as they increase in size, are becoming more valuable, and consequently more liable to be stolen. If wood stealing is not already a profession in the Colony it is likely to become one. This consideration points to the advisableness of repressing the destroyers of our incipient forests with a strong hand. A coolie who is fined a small sum for having cut down a bundle of small trees has no reason to consider himself harshly dealt with. He may have been cutting trees with impunity for six months, and in this case he will probably have philosophy enough to look upon the fine as a kind of tax, and simply return to his wood-cutting vocation with a resolution to be more careful in avoiding the Forest Guards in future.

But the loss to the Government will not be compensated by a trifling fine, if the Colony has been ruthlessly deprived of what might have become valuable forest trees at some future date.

Considering the extent of the ground now planted, and the difficulty of walking over it, it is not surprising that two Forest Guards find it difficult to repress tree cutting. Both the men are Chinese and are consequently more likely to be intimidated, or induced to connive at an offence which it is their duty to repress than,—for instance, Indian watchmen.

If it is agreed that the plantations should be more effectively protected, I think it would be well to increase the number of Forest Guards, and endeavour, as far as possible, to modify the danger of the men being improperly influenced in the discharge of their duty by employing Indians instead of Chinese as Forest Guards.

37. The planting operations for the year are tabulated as follow :—

TREES PLANTED.	
Pinus sinensis,	342,302
Aleurites vernicia,	40
Bamboos,	30
Bischoffia javanica,	1,069
Camphor trees,	847
Cedrela Tuna,	55
,, australis,	21
Cork Oaks,	190
Eucalyptus, 14 species,	16,408
Ficus retusa,	4
Melia Azedarach,	2,354
Jambosa vulgaris,	18
SOWN IN SITES.	
Pinus sinensis,	204,838
Aleurites vernicia,	5,000
TOTAL,	573,176

I have the honour to be,
Sir,
Your most obedient Servant,

A. B. WESTLAND,
Acting Superintendent Botanical and Afforestation Department.

The Honourable THE ACTING COLONIAL SECRETARY.
&c., &c., &c.

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