

## Annual Report on the Botanic Gardens, Singapore, for the year 1901.

### The Weather.

The year 1901 was very dry since only 78.36 of rain fell in the Gardens. March had the smallest fall 3.93, and June the greatest 9.67. The effect on the vegetation was not very marked, although it is usual for a dry year to be a heavy seed bearing year.

### Staff.

The Director went on long leave on March the 17th, on which date I took over charge of the Department. There were several changes in the staff owing to the dismissal of ZAIN ABDUL RASIP, the Chief Mandor of the Economic Garden, for carrying on an illicit sale of Para Rubber seeds. This man had for twelve years borne an excellent character, and had also acquired a considerable knowledge of Economic plants and their uses, and the loss of his services to the Department, at a time when it was undermanned, was felt acutely. His place was filled by MOHAMED HANIF, the Mandor from the Upper Gardens, who in turn was replaced by an entirely new, and of course untrained, man from outside. This fact emphasizes the long felt need of apprentices who could fill the places of trained men who leave the service. In connection with the subordinate staff, I am glad to record the sanction by Government of a Scheme for the improvement of their positions, which will result, I hope, in making them as a body contented, and promote the interests of themselves and the Department.

2. The coolies have on the whole worked fairly well, but, as reported last year, the class of labour is not what it used to be; the fact is that the coolies, as soon as they have picked up a smattering of Malay and the rudiments of their work, leave the Gardens for private employment or to labour on Public Works, with the result that the work of the Gardens has to be carried on with quite untrained men. There has been an unusual number of Beri-beri cases amongst them, no less than 29 cases having occurred, generally of a mild character. Three cases were however fatal. In May the number of cases were so numerous, and in one or two cases so serious, that I reported the matter to the Principal Civil Medical Officer who had the Coolie Lines disinfected, and gave general instructions as to treatment.

### Visitors.

3. The number of Visitors was about the same as in the previous year, when the number was abnormal owing to the many Mail passengers who visited the Gardens. Several eminent men of science, chiefly Germans and Americans, also visited the Gardens, in several cases staying for some months studying questions of Economic Botany.

4. The Regimental Bands played in the Gardens from time to time, attracting enormous crowds of people, especially on the occasion when the massed bands of the 3rd, 13th, and 16th Regiments of Madras Infantry gave a performance in November.

5. It will be a question in the near future whether the Gardens, or at least that portion round the Band-Stand, are not too small to accommodate such large numbers of people.

### Aviaries.

6. The aviaries and animal enclosures have for some time required overhauling; the latter are, I regret to say, practically beyond repair. In the early part of the year the Public Works Department prepared a series of plans of enclosures for the better accommodation of the animals. The buildings thus designed would have placed the Zoological Department in a very efficient state, but the scheme was thrown out by the Legislative Council, and Government gave orders for the disposal of all the larger animals.

7. The following additions were made to the collection during the year:—Two Wa-Was (*Hylobates lar.*) presented by Miss Edith Abrams, one Javanese squirrel

(*Sciurus bicolor*.) presented by Mr. F. W. Christian, three Pythons (*Python reticulatus*) presented by Messrs. Romenij, Branagan, and F. Teng Quee respectively, one flying fox with young, presented by Mr. Lim Koon Yang; one Binturong (*Arctictis binturong*) presented by D. H. Wise, Esq., one Christmas Island Pigeon (*Carpophaga Whartonii*) presented by M. Hellier, Esq., one young red Civet cat and one long tailed monkey, presented by R. Shelford, Esq., Sarawak, two storks presented by Madame Gorski, and two young monkeys and three parrots from the Andamans. One young Berok (*Macacus nemestrinus*) was born in the Gardens. A female Rhinoceros procured by the Austrian Consul was deposited in the Gardens; it is intended for the Zoological Gardens at Vienna and will be shipped there in the coming spring. A female specimen of the rare "Sapi-Utan" (*Anoa depressicornis*) was obtained from Celebes by the Museum authorities.

8. The following animals died during the year. One (*Python curtus*), one Eagle, three Phalangers, two Kijangs, one wild cat, three Christmas Island Pigeons one deer, and one black swan.

#### Upkeep and Buildings.

9. The chief work under this head has been the erection of a new plant house near the potting shed. It consists of seven long tables of coral 48 feet long. It has a ridge and furrow roof, covered with Bertam chicks obtained in Penang, and supported by steel rafters on brick pillars; it is a most substantial, structure and will last for years. It has been filled with a miscellaneous assortment of plants, chief of which are a named collection of our various palms, some of the rare ferns, and some of the most recent introductions from Kew. All the plants have thriven well in it. The roof of the small nepenthes house has been entirely renewed, as also a very large part of the Aroid and Begonia house. The work of keeping up of the beds, borders and shrubberies has perhaps taken up a greater amount of time than usual, as a special effort was made to render the gardens more bright and attractive with flowering plants.

10. The drives and paths have been repaired where necessary. Of the former, the drive from the main entrance to the deer enclosure was entirely remetalled during the year.

11. The bamboo hedge surrounding the western part of the gardens and that from the office to the main entrance, are not in a very creditable state, owing partly to their being under trees, and the soil being poor, but also to the constant breaking through by syces, native soldiers, etc. I should be glad to see the hedge replaced by a low wall surmounted by an iron railing similar to that in front of the Lunatic Asylum.

#### Plants and Seeds. (Exchanges)

12. Exclusive of the large consignments of plants and seeds (chiefly guttas and Rubbers) and the monthly supply of seeds from Messrs. Carter & Co., we have received during the year one hundred and sixty plants and one hundred and eight bags or packages of seeds. The following is a list of contributors:—

The Royal Gardens, Kew. The Botanic Gardens, Buitenzorg, Calcutta, British Guiana, Saigon, Saharanpur, Madagascar. Messrs. Rauch, Von Pustau, Arden, and Schlechter. The Government Horticultural Gardens, Nagpur. The Tokio Plant and Seed Co. The Agri-Horticultural Society of India. Messrs. Herb & Wulle, Naples.

13. Seven hundred and sixty-nine plants and eight hundred and four packages of seeds were sent to forty-two Institutions and individuals.

14. Amongst the most useful plants introduced during the year were the true West African Rubber (*Funtumia elastica*), about 100 plants of which were raised from seed supplied by Mr. S. ARDEN, and some thousands of Gutta Sundik (*Payena Leerii*) supplied from Buitenzorg. From Kew came several species of *Landolphia* (the African Rubber plant) including two new species, *Garcinia Kola*, from old Calabar, and *Mimusops Schimperii* (the *Persea* of ancient writers), from Madagascar. From the same establishment came a collection of miscellaneous plants of striking interest chiefly selected by the Director Mr. H. N. RIDLEY. The Rt. Rev. Bishop HOSE kindly presented a set of 25 varieties of hybrid *Rhododendrons* which he obtained at Kew.

#### Plants in Flower.

15. Most of the plants mentioned in former Reports have flowered during the year and the following for the first time. *Kigelia pinnata* (T. Africa) *Exostemma cariboeum* (W. Indies) *Brunfelsia nitida* (T. America) *Bulbophyllum grandiflorum* (New Guinea.)