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No. 151. Read the following letter from J. R. COCKERELL, Esq., Commissioner of the Nilgiris, to the Hon. R. A. DALYELL, Acting Secretary to Government, Revenue Department, dated Ootacamund, 15th July 1873, No. 30:—

I HAVE the honour to submit the Annual Report, for the past official year, of the Superintendent of the Botanical Gardens on the Nilgiri Hills.

2. In G. O., No. 379, dated 26th March 1872, Financial Department, the sum of Rs. 1,200 was sanctioned for metalling the approach to the garden at Ootacamund, and providing the entrance with gates and railings. In the statement attached to his report, Mr. Jamieson shows an expenditure of Rs. 175 out of this sum. The money was laid out in improving the approach to the gardens. The metalling of the approach with black metal cost another sum of Rs. 236-5-0. The work was done by the Municipal Manager. Shortly after I took charge of the office of Commissioner in June last year, I found that the gates and railings had been ordered from England. There was no record of the order in the office. £70 had been remitted for the gates and railings. The manufacturer addressed me stating the sum sent was insufficient. I directed him, in reply, to forward the gates and railings as soon as possible. They have now arrived, and will shortly be erected. The cost-price is £105, charges for freight and landing and transmission by rail to Pothanore amounted to Rs. 199 more, paid out of the funds unexpended in the budget-allotment for the past year; and there is the cost of carriage from Pothanore still to be paid, and the cost of putting up. The latter cost will be rather heavy, as the rails are only three feet high, and must be mounted on cut-stone. I shall shortly address to Government a separate communication upon the subject.

3. The next item in the accounts submitted by Mr. Jamieson, which requires remark, is the expenditure on the repair of the fern-house. This house was washed down by the heavy rains in November 1871. It has been re-erected in a solid manner with brick in chunam. Previously the structure was of brick in mud. The work was completed by the end of April 1872.

4. The roof of the Superintendent's house was leaky. In the year under report, the roof has been retiled, under Mr. Jamieson's own supervision, at a cost of Rs. 200. The work has been very well and cheaply done. The building is now in a substantial state.

5. The Superintendent reported that the Burliar garden required thinning and weeding. This has been carried out at a cost of Rs. 190. The rare trees were over-shadowed by jack, and the garden was full of coffee. The jack have been cut down, and the coffee-trees removed.

6. The report details the improvements that have been made during the year under report on the rough ground in front of the Ootacamund gardens. This ground was extremely neglected and rugged in appearance. It has been drained and planted up with ornamental trees at a cost of Rs. 300.

7. The herbarium and the seed-house at the Ootacamund gardens wanted furnishing. Mr. Jamieson desired seed-cases of a description which could not be procured on the spot, and I therefore ordered them from the Department Public Works Workshops in Madras at a net cost of Rs. 408. The carriage will be additional. Further, I purchased at an auction at Madras, through Messrs. Franck,

three almirahs for the herbarium. The hitherto cost of the furniture in the above houses has been Rupees 618. The houses have yet to be supplied with chairs, book-cases, etc.

8. The Superintendent's report details the improvements that have been effected in the laying out of the gardens in the year under review.

9. Mr. Jamieson refers, at paragraph 28, to the Ipecacuanha plants at Burliar. He recommends that 100 healthy plants should be obtained from Kew or from Bengal, and propagated in the Burliar gardens under a Native of experience. The Ipecacuanha does very well at Burliar, and, if the Government thought proper, a considerable plantation of the creeper could be formed there without difficulty.

10. In G. O., Revenue Department, dated 9th January last, No. 24, Rs. 3,500 are allotted towards the cost of a new conservatory in the Ootacamund gardens. Some time ago Captain Morant, the District Engineer, and I decided that an iron and glass building we selected out of a number in an English pamphlet of specifications of these structures would be suitable; but the cost in England we found to be £1,000, and Captain Morant was of opinion that this sum would be doubled before the conservatory was erected out here. As such an expensive building seemed out of the question, I addressed Mr. Chisholm, the Government Architect, requesting him to furnish a suitable plan for a conservatory. I annex his letter on the subject. I beg I may be instructed whether I am to proceed in the matter, procure a proper estimate from Mr. Chisholm, and have the work carried out by him or by the District Engineer.

ENCLOSURE No. 1.

Report on the Progress and Condition of the Government Botanical Gardens, Ootacamund, for the Year 1872-73.

DURING the past year various alterations and improvements have been made in the gardens, with the view of rendering them as attractive and useful as possible.

2. Of the new works completed during the year, the most important are the reclaiming and planting the piece of waste land to the left of the bridge, near the entrance to the gardens, with ornamental trees and shrubs.

3. The construction of the new seed-house and herbarium at the entrance-gate necessitated the remodelling of the ground and shrubberies immediately around the buildings. The old seed-house and cooly-lines that stood here have been removed, and the ground they occupied cleared of rubbish, levelled, and planted with English grass. Here a winding walk has been formed round a group of rocks and roots of trees, amongst which are planted quick-growing shrubs, hardy flowering, and Alpine plants.

4. The main walk from the gate to the conservatory, which, during the prevalence of the monsoons, was always wet and sloppy, and very disagreeable to pedestrians, has been greatly improved by being thoroughly metalled and covered with broken quartz to the depth of three inches. The walk is now rendered firm and enjoyable in all weathers.

5. As the ground near the gateway is the chief point of vision in the gardens, several trees and shrubs that destroyed the continuity of the vista have been removed. By this means the confined and close appearance of this part of the garden has been removed. There is now a much greater breadth of lawn, and from many points extensive views of the upper garden can now be obtained.

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6. In remodelling the lower part of the garden, new planting was of necessity resorted to. In this attention has been directed to the due admixture of different varieties of trees, and, as trees differ very much in character and habit, and exhibit a wonderful amount of variation,—certain trees producing foliage of a pale green, others have a dark and sombre appearance,—so that when grown up they may be expected to greatly enhance the beauty of the sloping lawns of the gardens.

7. The rows of flower-beds on each side of the main walk have been filled with a variety of ornamental foliaged plants of a decided colour, which contrast with the green sward, and, to further improve the effect, small specimen shrubs have been planted between each bed.

8. Considerable improvement has been effected in the general appearance of that part of the garden known as the Band-stand terrace by covering the parapet wall, skirting the ornamental pond, with plants of a hardy and free-growing creeper (*Dolichos lignosus*). This creeper has almost entirely covered the white wall, and forms a very beautiful hedge,—much more pleasing to the eye and more in harmony with the rest of the garden than the naked masonry.

9. Much remains to be done to improve the upper garden: many old and decaying trees require to be removed and replaced by healthy ones. The turf of the slopes is also much in need of renovating. I may here remark that the mowing machine, which was purchased last year, has done its work most satisfactorily, and has enabled me to keep the lawns more tidy and neat. By its use the sole of the turf has not only been much improved, but considerable saving in labour has been effected in comparison with the use of grass-knives.

10. During the past year great attention has been paid to the propagation of new and valuable plants. Our nurseries are well stocked with young fruit-trees, ornamental shrubs, and flowering plants. I report with pleasure that the demand for these plants have much increased. In the course of the year there were sent out from the gardens 3,940 timber-trees, 148 fruit-trees, 6,142 shrubs and flowering plants, and 3,706 packets of vegetable and flower-seeds. I attribute this success, in a measure, to greater attention being now paid to the introduction of novelties and useful plants, and also to our stock of garden-plants having become more widely known in India through the medium of the catalogue published last year, which has been extensively circulated.

11. During the year many valuable additions have been made to the stock of plants in the gardens; the most important I would note as follows:—

12. *Fruit-trees.*—That the Nilgiris possess rare facilities for the cultivation and bringing to perfection most of the fruits to be met with in Europe cannot be denied; for, on the slopes of the Hills, we can command the utmost diversity of climate and soil. With the object of a further development of the products of these Hills, I procured from England this year upwards of sixty varieties of fruit-trees, namely, twenty-four of the best varieties of apples, twenty-four of pears, also several cherries and figs; these have all been grafted, and are now growing freely, so that many of them will be ready for distribution this planting season.

13. *Strawberries.*—I have much pleasure in stating that the introduction of strawberries from Australia has been attended with success. The case of strawberry plants, presented to the gardens by Sir William McArthur, has been extensively propagated. The twenty-six healthy plants which we had in March last year have now been increased to 800, all healthy and growing vigorously. Two of the varieties fruited in January last, namely, Duc de Malakoff and Cockscomb; the fruit was much larger and greatly superior in flavour than any I have hitherto seen on the Hills. If those that have not yet fruited turn out as well as the two named, a very valuable addition will have been made to the fruits of the Nilgiris. As the stock of these plants can now be increased to any extent, the public can be supplied with plants on application. The cultivation of the strawberry like that of many other plants here is capable of very much greater development, and I have no doubt that, if more attention was paid to the cultivation of varieties suited to the climate, the selection of proper soils and the proper season for dividing and planting and to irrigation during dry weather, fruit could be produced throughout the year equal, if not superior, to that grown in England.

14. *Potatoes.*—The following kinds have been introduced this season :—Early Race-horse, Early Coldstream, Prince of Wales' Kidney, and King of the Earlies. These varieties have been proved in England to be excellent croppers and of 1st-class quality. If distributed amongst native cultivators, they will, in the course of time, help to improve the quality of that valuable esculent. The composition of the potato varies considerably according to the soil in which it is grown, and various other circumstances. The native cultivator on the Nilgiris, with indomitable repugnance to any change of method, invariably grow them in the worst possible soils, namely, those which are naturally wet and heavy ; ground occupied with the same crop for many years consecutively does not produce tubers of such good quality as when cropped alternately with other vegetables. In cultivating the potato it is also of the greatest importance to have a change of sets grown in a different soil and locality to those in which potatoes have been produced for a number of years.

15. *Spanish Chesnut.*—Of this valuable tree there are now several hundred healthy young plants in the garden nurseries raised from seed which I brought from England in December 1868. They have thriven remarkably well in the garden-soil ; many of them have attained a height of 8 feet. Dr. Jameson of the Saharunpore Garden reports that this tree is now grown extensively on the Himalayas, and chesnuts have become a regular article of commerce in the bazaars of Deyrah and Landour, and are sold at from 1 to 2 Rs. per lb. As this tree is not only valuable for its fruit, but is an exceedingly handsome tree for avenues or lawns, it could be employed with advantage in planting in this Station. It succeeds best in deep sandy soils or sandy loams, resting on a dry sub-soil. In the young state they are apt to throw out lateral branches, but a clear stem can be preserved by a regular system of pruning.

16. *Eucalypti.*—Through interchaugc with other establishments, I have been able to secure a very large number of the different Australian Eucalypti and Acacias for the gardens this season, and it will be interesting to watch their growth and note their adaptability to certain soils and situations. The stringy bark (*Eucalyptus obliqua*) has shown itself here to be one of the most eligible trees yet introduced for avenues on account of its umbrageous habit and rapid growth, and for several months in the year the foliage is very striking, particularly when young, resembling very much the young growth of wild Cinnamon, one of the prettiest of our jungle-trees. A quantity of the seed of this Eucalyptus has been supplied to the Forest Department, also several hundred plants to the Municipality for planting in the Station. Next year I will have a large quantity of seed of this tree for distribution to persons who may want it.

17. *Ficus macrophylla.*—Of this magnificent Australian tree, three dozen plants have been raised from seeds presented to the gardens by H. B. Grigg, Esq. In Australia this tree makes remarkable growth, and attains enormous dimensions ; some have been measured with trunks 40 feet in circumference, and its roots form wall-like abutments, extending from the tree over a large area.

18. *Bulbs.*—A splendid assortment of these gay flowering plants have been added to our stock this year, comprising sixty new Gladiolus (the gardens now possess upwards of 100 varieties of this beautiful plant, some of which flowered in the garden this year, and were very much admired), fifty bulbs of Liliums, twelve Dahlias, eight Cyclamens, six Amaryllis, three plants of the white Cape Lily (*Agapanthus umbellatus*), and several others. These plants were purchased from Messrs. Sutton and Sons, and arrived here in excellent condition. They were packed in deal-wood cases amongst charcoal. As bulbous rooted plants associate when planted by themselves, a piece of ground will be devoted to this purpose next year, so as to bring each class of plants as much together as possible.

19. *Ferns.*—During the year our extensive collection of these beautiful plants has been largely augmented by the introduction of many new and rare species from different parts of the world, notably a magnificent specimen tree-fern (*Dicsonia Antartica*). This fern is abundant in the humid forests of Tasmania, South-East Australia, and New Zealand, and attains a height of from 30 to 50 feet. For this valuable plant we are indebted to Major Beddome, who presented

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it to the gardens on his return from Australia in the month of November last. I have been very successful during the past two years in rearing these graceful plants from spores ; and as I think every one of the existing ferns are worthy of cultivation, I hope to raise a number of plants every year of those varieties which are more or less adapted to our climate.

20. *Climbers.*—Two new varieties of Passion-flower,—one Tacsonia and three hybrid Clematisis,—have been established in the gardens during the year. These rapid-growing plants, from their profusion of blossom and their utility in covering disagreeable objects, as well as the assistance they afford in producing a picturesque and natural appearance, are particularly useful when grown on shrubs and trees in prominent places ; they occupy little space, and make a nice break in the green when in flower.

21. *Geraniums and Roses.*—Of these popular and showy flowers many new and striking varieties have been added to the garden-collection during the year I have been successful in raising a large number of new Geraniums from seeds received from England and the Continent.

22. *Seeds.*—A large supply of vegetable and flower-seeds was obtained from England this year, purchased from Messrs. Sutton and Sons of Reading, and in most cases have germinated freely, and given general satisfaction to the public. Many old varieties of herbaceous and perennial plants that had in the course of time died out have been renewed in the gardens by means of getting seeds from England.

23. By the introduction and propagation of the many valuable varieties of fruit-trees, shrubs, and flowering plants noticed in this report, the gardens are becoming daily more useful to the public. I think a Botanic Garden need not step beyond introducing and testing useful trees and putting them in the way of the public ; private enterprise and capital must do the rest. If the cultivation of fruits on these Hills was taken up by energetic and experienced persons, when the railway comes to the foot of the Hills, the produce of their gardens would find a ready market in the low country.

24. *New Buildings.*—The seed-house and herbarium at the entrance-gate are now completed. The seed-cases which arrived a short time ago from Madras will be fitted up as speedily as possible, and the seeds and office transferred to the new buildings.

25. *Herbarium.*—The furniture in this building is now complete, and when filled with a carefully arranged collection of botanical specimens, will be a source of attraction to those interested in the flora of the Hills. I have not yet received Major Beddome's collection of specimens. I hope he will be able to furnish the herbarium with a small collection of specimens, illustrating the flora of the Nilgiris and the principal economic plants of the Madras Presidency. The time I had to spare during the year was devoted to the collection of Nilgiri ferns ; these have been arranged according to "Beddome's Ferns of Southern India," with notes of the locality in which they are found. It would be interesting to have in this room a small collection of gums, resins, fibres, etc., yielded by plants indigenous to the Madras Presidency, they would serve to illustrate more fully the application of vegetable substances. Such a collection would supply a great desideratum, and could not fail to be interesting and attractive to the public.

26. *Library.*—As a library is an almost indispensable adjunct to a Botanic Garden, I hope Government will be pleased to sanction a small sum for the purchase of a few standard Botanical works ; they will be valuable for reference and assistance in correctly naming and identifying the plants which are cultivated in the gardens. It is also desirable that we should get a few of the leading horticultural periodicals ; they contain a vast amount of valuable information regarding the introduction and cultivation of new plants and horticultural matters generally.

27. Burliar Garden.—A large number of young plants of the different varieties of tropical fruits and spices cultivated in this garden have been propagated during the year and distributed in different districts in the Presidency. The coffee-bushes and under-growth have been removed, new walks and nurseries formed to provide as much space as possible for the propagation of plants.

28. *Ipecacuanha.*—The plants continue to make satisfactory progress, but our stock-plants are so few in number that their propagation is consequently very slow. I think it very desirable that the cultivation of this plant should be encouraged and fostered in suitable localities in the Presidency. I feel confident that, with care and attention, they could be successfully cultivated at Burliar. I would recommend that 100 healthy plants be obtained from England or Bengal. A temporary propagating house might be erected and an experienced propagator placed in charge, and, with careful cultivation and a regular system of propagation, the experiment would result in success.

29. *Coco (Erythroxylon coco).*—When in Madras I obtained two of these plants from the Superintendent of the Horticultural Gardens. They promise to grow well at Burliar. This remarkable plant is, at the present time, extensively cultivated in Bolivia for the sake of its leaves which are chewed with a minute quantity of an alkaline paste made from the ashes of the Quinoa. The most remarkable feature in the use of this nervous stimulant is the power of long continued endurance it is said to confer upon the human frame; the labourer often working twelve hours without any other sustinence.

30. *Vanilla.*—In the Spring of this year I planted large quantities of Vanilla plants around the stems of trees and on rocks where they are making rapid growth. I have never been so fortunate (when visiting the garden) as to find this plant in flower; but it seems to flower freely. As this plant will not bear fruit, unless the flowers are fertilised by the hand or by insect-agency, a native could be taught to fertilise them at the proper stage. If this were done, I have no doubt but fruit would be obtained in abundance.

31. Kulhutty Garden.—This nursery-garden has been entirely over-hauled since last year. A number of jungle and exhausted fruit-trees have been felled, and the nurseries well stocked with young plants. These nurseries now contain several thousands of young plants of the finer varieties of oranges, apples, pears, etc., which can be supplied to the public at much cheaper rates than formerly. This garden is very useful for raising vegetable and flower-seeds. The climate being drier, seeds ripen much better than at Ootacamund. I also propagate here from cuttings large numbers of the more tender varieties of flowering plants which do not succeed in Ootacamund, and which we would otherwise have a difficulty in supplying.

32. *Collecting of new Plants.*—In March last, by the kindness of Government, I was afforded the opportunity of visiting the Flower-show in Madras, whereby I gained much valuable information in the cultivation of European and other plants to meet the peculiar exigencies of the climate, and also secured a number of new plants for our garden. It is desirable that the Superintendent of a Botanic Garden be acquainted with the vegetation of the country, more especially that part in which he is located, whereby he might discover plants for interchange with other gardens, and add to the collections of the one immediately under his care, to see them in their native habitat, to provide for them the various requisites for their successful culture, and to discriminate between the known and the unknown; in fact, a Botanic Garden in this country to be useful should be able to maintain an experienced collector in the field throughout the year. As I have no Assistant who knows plants sufficiently well to distinguish one from the other, I am anxious to make a tour in Wynaad, and also visit the Carcoor and Sisparah ghauts for the purpose of collecting plants and seeds, the autumn of the year being the best season for this purpose. With the permission of Government, I should like very much to visit these districts in the month of November or December next. I feel certain that a number of new and interesting plants would be secured to supply the increasing demand for rare and new plants. They would also be useful for interchange with other establishments in England and the Colonies.

33. In concluding this report, it is satisfactory to state that the various alterations and improvements that have been made in the gardens during the last two years have received the general approval of visitors; this is evident from the increased interest now taken in the gardens. In carrying out improvements my main object has been to avoid all unnecessary alterations, and render them as accessible and attractive as possible, and to increase the facilities for the inspection of plants by the public. A great deal still remains to be done in the gardens to afford instruction to those who are interested in horticulture, especially in the correct labelling of the various collections of trees and shrubs. I am having a number of strong Teak-wood labels prepared which will be fixed to the plants as early as possible.

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34. The Overseer, Mr. Stevenson, has carried on the works entrusted to his charge satisfactorily; much of his time is wasted going to and from Ootacamund for his meals. He is compelled to lodge in Ootacamund, as there is no proper residence in the gardens for him. I have received great assistance in the office and seed-house from M. Ramanjulu Naidu in the efficient discharge of his duty. T. Burrows, the Apprentice, also deserves commendation for the aid he has given me in propagating and despatching plants.

35. During the year living plants were sent in wardian cases to Sir William McArthur (Australia), to the Agri-Horticultural Society's Gardens, Madras, to the Royal Botanic Garden, Calcutta, and to several private individuals in Bombay and other parts of the country.

36. Many interesting donations have been made to the gardens during the year. The following are worthy of special notice:—By Colonel C. Denison, a large and very valuable collection of Indian and Australian ferns; Major Beddome, a collection of Australian tree and shrub-seeds; also a splendid specimen tree-fern; Colonel Boddam, an assortment of flower-seeds and bulbs; Colonel Benson, Rangoon orchids and seeds; E. G. C. Brace, Esq., Picotee and Melon-seeds; H. B. Grigg, Esq., two varieties of Ficus and Eucalyptus seeds; Superintendent, Horticultural Gardens, Madras, flower-seeds, plants of Imantophyllum and Clivia nobilis; Dr. King, a large collection of European tree and shrub-seeds; Captain Onslow, several species of orchids; Major Penny, two Burmese creepers; E. B. Thomas, Esq., Hop and fruit-tree seeds.

(Signed) A. JAMIESON.
Superintendent Government Botanical Gardens.

Ootacamund,
3rd June 1873.

Table showing the Distribution of Plants and Seeds from the Government Botanical Gardens, Ootacamund, for the year 1872-73.

Month.	Fruit-trees.	Timber-trees.	Flowers and Shrubs.	Packets of Seeds.	Value.		
					Rs.	A.	P.
April 1872	.....	.....	205	209	112	15	0
May ,, ...	.....	.....	423	383	165	0	0
June ,, ...	.....	136	689	392	289	2	0
July ,, ...	56	721	734	303	381	5	3
August ,, ...	37	1,752	972	398	490	9	0
Sept. ,, ...	8	71	1,573	344	380	7	0
October ,, ...	.....	24	577	441	301	1	8
Nov. ,, ...	.....	24	490	289	190	9	4
Dec. ,, ...	.....	.....	22	116	71	1	0
Jan. 1873	.....	1,200	86	258	113	4	0
Feb. ,, ...	47	12	172	173	119	8	0
March ,, ...	.....	.....	199	400	175	4	6
Total...	148	3,910	6,12	3,706	2,790	2	9

Ootacamund,
15th May 1873.

(Signed) A. JAMIESON,
Superintendent Government Botanical Gardens.

STATEMENT of Receipts and Charges of the Government Botanical Gardens on the Nilgiris during the official year 1872-73.

Receipts.	Amount.			Total.			Charges.	Amount.			Total.		
	RS.	A.	P.	RS.	A.	P.		RS.	A.	P.	R.	A.	P.
Cash in hand on the 1st April 1872	.....			633	4	8	Purchase of seeds	[illegible]	13	0			
Sale of plants and trees	2,545	8	7				Do. of tools	142	8	0			
Received from the Commissioner from Rs. 1,200, sanctioned in G. O., No. 379, of 26th March 1872	175	0	0				Peon's clothing	47	13	0			
							Postage on banghies and letters...	24	12	0			
							Packing of seeds and plants	116	8	[illegible]			
Received from Commissioner amount sanctioned in G. O., No. 874, of 5th July 1872... ..	500	0	0				Carriage of do.	115	8	6			
							Repair of fern-house, etc.	342	5	[illegible]			
Received on account of Superintendent and Establishment's salary, etc., (net)	4,215	9	0				Do. of Superintendent's bungalow ...	200	0	0			
							Do. of tools	30	10	0			
Amount drawn for improvements, etc., in the gardens and repairing Superintendent's house.	500	0	0				Stationery	52	11	0			
							Municipal assessment	24	0	[illegible]			
Amount drawn for weeding Burliar gardens. ...	150	0	0				Printing catalogues	42	12	0			
Do. for purchase of tools	100	0	0				Exchange on cheques, etc.	29	9	10			
Lease of Burliar gardens	224	0	0				Sundries	43	9	8			
Amount received from the Commissioner on account of the gardens for almirah	408	0	0				Pay of Superintendent and allowance	2,175	9	0			
							Pay of Office Establishment	1,032	0	0			
Do. do. Wardrobes ...	139	0	0				Working charges of Ootacamund gardens ...	3,359	3	8			
Railway charges	48	8	0				Do. of Coonoor do. ...	150	0	0			
Table	20	0	0				Do. of Kulhutty do. ...	202	5	6			
Cooly hire of man in charge of the furniture ...	2	8	0				Improvements in Burliar gardens	190	0	0			
							Reclaiming and planting waste land near gate and metalling main entrance-walk	300	0	0			
							Amount paid for almirah, wardrobes, etc., by the Commissioner	618	0	0			
				9,028	1	7					9,647	11	7
							By Balance...	.....			13	10	8
Total, including the balance...	.....			9,661	6	3	Total...	.....			9,661	6	3

OOTACAMUND,
3rd June 1873.

(Signed) A. JAMIESON,
Superintendent Government Botanical Gardens.

METEOROLOGICAL Observations made on the Government Botanical Gardens, Ootacamund, from 13th November 1872 to 31st March 1873.

Month.	Monthly Mean of dry Bulb.				Monthly Mean of wet Bulb.				Maximum observed during the Month.	Rain-fall.		Days with Rain.	Days without Rain.
	7 A.M.	2 P.M.	5 P.M.	Daily Mean.	7 A.M.	2 P.M.	5 P.M.	Daily Mean.		Inches.	Cents.		
November 1872	52·07	59·03	54·17	54·20	52·11	59·16	56·04	55·14	64·13	6	·04	10	8
December ,, ...	51·03	66·09	59·01	58·20	47·00	62·05	55·21	54·21	70·15	2	·53	7	24
January 1873	54·12	72·15	59·24	61·26	43·07	60·13	50·17	50·30	74·24	.....	.....	.. ...	31
February ,, ...	54·23	68·23	59·16	60·20	48·09	61·14	53·12	54·01	70·17	3	·39	7	21
March ,, ...	56·23	73·06	63·26	67·16	48·20	64·21	55·08	55·28	73·26	.....	·15	1	30
Annual mean	53·53	67·71	58·96	60·20	61·33	61·33	53·92	53·78	70·19	.....	.....	.....	.....
Total....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12	·11	2	114

OOTACAMUND,
15th May 1873.

(Signed) A. JAMIESON,
Superintendent Government Botanical Gardens.

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ENCLOSURE No. 2.

From R. F. CHISHOLM, Esq., F.R.I.B.A., Consulting Architect to Government, to the Chief Commissioner of the Nilgiri Hills, dated Royapettah, Madras, 30th April 1873, No. 345.

I HAVE the honour to forward you a plan of a conservatory which it is proposed to erect in the Botanical Gardens at Ootacamund.

2. At the Hon. Mr. Sim's request I met Mr. Jamieson on the 4th March last, and ascertained from him all necessary particulars. He thought that, as regards size, a covered space 100'×60' would be sufficient; this would give an area of 6,000 superficial feet. The circular house I propose will give somewhat less than this, but still I think sufficient.

3. I have adopted the circular form partly from economical considerations and partly because the interior will be architecturally effective.

4. The house consists of a dead wall suitably ornamented and decorated for the height of 15 feet; above this the walls and roof consist entirely of light wooden frame-work filled in with glass. The roof will be 80 feet across without intermediate supports.

5. The entrances will be through the walls. The inside of the house will have a small fountain in the centre surrounded by a gravel wall. Above this gradually rising to the outside the flowers will be arranged on either side of circular promenades connected by stone-steps. Inside nothing will be visible but flowers and light frame-work.

6. I estimate the cost of the structure roughly at Rs. 12,000.

No. 152. ORDER THEREON, 20th August 1873, No. 875.

Miscellaneous.

THE Government consider the state of the gardens satisfactory and such as to testify to the superintendence having been careful and intelligent.

2. The success which has attended the introduction of the Australian Strawberry and the Spanish Chesnut is very encouraging, and there appears reason to hope that the latter may hereafter prove a useful addition to the food-resources of the people.

3. The Superintendent's remarks in last year's report on the successful cultivation of the Ipecacuanha plants in the Burliar gardens were communicated to the Government of India, with a request that a further supply of plants might be sent when available, and their attention will be again requested to the subject.

4. With reference to paragraphs 26 and 32 of the Superintendent's report, the Government remark that Mr. Jamieson should submit, through the Commissioner, in a definite form, any proposals he may desire to make for utilising his own special knowledge, or promoting the success of the gardens.

5. The plan for a new conservatory will be considered in the Public Works Department, and it is observed that these reports are not intended to raise questions on which orders are required.

6. The Government presume that the details of the current expenditure receive from time to time the attention of the Commissioner.

(True Extract.)

(Signed) R. A. DALYELL,
Acting Secretary to Government.

To the Commissioner of the Nilgiris.
,, the Inspector of Forests
,, the Board of Revenue.
,, the Public Works Department.

Exd. F. R. Bantleman.

22-6-17

V. de Chos, 032/72

Commissioner's Office

No 30 Ootacamund 15th July 1873

From.

J. R. Cockerell Esq
Commissioner
Nilgiris.

To.

The Secretary to Government
Revenue Department
Ootacamund

Sir.

I have the honor to submit the Annual Report for the past official year of the Superintendent of the Botanical Gardens on the Nilgiri Hills.

2. In Government Order No 379 dated 26th March 1872, Financial Department, the sum of 1200 Rupees was sanctioned for metalling the approach to the Garden at Ootacamund and providing the entrance with gates and railings In the statement attached to his report Mr Jamieson shows an expenditure of Rupees 175 out of this sum. The money was laid out in improving the approach to the Garden. The metalling of the approach with black metal cost another sum of Rupees 236-5-0. The work was done by the Municipal Manager. Shortly after I took

charge

charge of the office of Commissioner in June last year I found that the gates and railings had been ordered from England. There was no record of the order in the office. 70 £s had been remitted for the gates and railings. The manufacturer addressed me stating the sum sent was insufficient. I directed him in reply to forward the gates and railings as soon as possible. They have now arrived and will shortly be erected. The cost price is 105 £s, charges for freight and landing and transmission by rail to Pothanore amounted to Rupees 199 more, paid out of the funds unexpended in the Budget allotment for the past year and there is the cost of carriage from Pothanore still to be paid and the cost of putting up. The latter cost will be heavy as the Rails are only 3 feet high and must be mounted on cut stone. I shall shortly address Government a separate Communication upon the Subject.

3. The next item in the accounts submitted by Dr Jamieson which requires remark is the Expenditure on the repair of the Fern House. This House was washed down by the heavy rains in November 1891. It has been re-erected in a solid manner with brick in Chunam. Previously the structure was of brick in mud. The work was

was completed by the end of April 1892.

4. The roof of the Superintendents House was leaky. In the year under report the roof has been relaid under Dr Jamieson's own supervision at a cost of Rupees 200. The work has been very well and cheaply done. The building is now in a substantial state.

5 The Superintendent reported that the Burlier Garden required thinning and Weeding. This has been carried out at a cost of Rs 190. The Rare trees were overshadowed by jack and the Garden was full of coffee. The jack have been cut down and the coffee trees removed.

6. The Report details the improvements that have been made during the year under report on the rough ground in front of the Botanical Gardens. This Ground was Extremely neglected and rugged in appearance. It has been drained and planted up with ornamental trees at a cost of Rupees 300.

7. The Herbarium and the Seed House at the Botanical Gardens wanted furnishing. Dr Jamieson desired seed cases of a description which could not be procured on the spot and I therefore ordered them from the P.W. workshops in Madras at a net cost of Rs 408.

The

The carriage will be additional. Further I purchased at an auction at Madras through Messrs Franck three Almirahs for the Herbarium. The hitherto cost of the furniture in the above Houses has been Rupees 618. The Houses have yet to be supplied with chairs, book cases &c.

8 The Superintendent's Report details the improvements that have been effected in the laying out of the Gardens in the year under Review

9 Mr Jamieson refers at para 28 to the Ipecacuanha plants at Burliar. He recommends that 100 healthy plants should be obtained from Kew or from Bengal and propagated in the Burliar Gardens under a native of Experience. The Ipecacuanha does very well at Burliar and if the Government thought proper a considerable plantation of the creeper could be found there without difficulty.

10. In Government Order, Revenue Department dated 9th January last No 24, 3500 Rupees are allotted towards the cost of a new Conservatory in the Ootacamund Garden. Some time ago Captain Morant, the District Engineer and I decided that

that an iron and glass building, we selected out of a number in an English pamphlet of specifications of these structures, would be suitable; but the cost in England we found to be 1000 Ls and Captain Morant was of opinion that this sum would be doubled before the Conservatory was erected out here. As such an expensive building seemed out of the question I addressed Mr Chisholm the Government Architect requesting him to furnish a suitable plan for a Conservatory. I annex his letter on the subject. I beg I may be instructed whether I am to proceed in the matter, procure a proper Estimate from Mr Chisholm and have the work carried out by him or by the District Engineer.

I have the honor to be
Sir
Your Most obedt Servt

H. B. Cull

7. G.D

Pr Commissioner.

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21t

G.O. 9 January 1873 Nos 49-50.

Reve 1873 Dept.

From No. 2101.

The Commissioner
Nilgiris

To

The Secretary to Govt
Revenue Dept
Ootacamund

Dated 15th July 1873
Received 16 [illegible]
No. 30
Inclosures 2

[illegible]
intended to raise questions
[illegible]

Nos. 151-152

Submitting the annual Report of the Superintendent of the Botanical Gardens on the Nilgiri Hills for the official year 1872-73

G.O. 20 Aug/73 No. 875

C. 12 Aug. 73 R. 19 Aug.

17 23t

Statement of Receipts and Charges of the Government Botanical Gardens on the Nilgiris during the official year 1872-73.

Receipts	Amount			Total		
Cash in hand on the 1st April 1872	"	"	"	633	4	8
Sale of Plants and trees	2545	8	7			
Received from the Commissioner, from Rs 1200 sanctioned in G.O. No 379 of 26th March 1872	175	"	"			
Received from Commissioner, amount sanctioned in G.O. No 874 of 5th July 1872	500	"	"			
Received on account of Supt and Establishments Salary &ca (net)	4215	9	"			
Amount drawn for Improvements &ca in the gardens and repairing Superintendents house	500	"	"			
Amount drawn for weeding Burliar Gardens	150	"	"			
do for purchase of Tools	100	"	"			
Lease of Burliar Gardens	224	"	"			
Amount received from the Commissioners on account of the Gardens - For Almirah	408	"	"			
do do Wardrobes	139	"	"			
Railway charges	48	8	"			
Table	20	"	"			
Cooly hire of man in charge of the furniture	2	8	"	9028	1	7
Total including the Balance				9661	6	3

Charges	Amount			Total		
Purchase of Seeds	407	13	"			
do of Tools	142	8	"			
Peons clothing	47	13	"			
Postage on Banghies and Letters	24	12	"			
Packing of Seeds and Plants	116	8	8			
Carriage of do	115	8	6			
Repair of Fern House &ca	342	5	9			
do of Superintendents Bungalow	200	"	"			
do of Tools	30	10	"			
Stationery	52	11	"			
Municipal assessment	24	"	"			
Printing catalogues	42	12	"			
Exchange on cheques &ca	29	9	10			
Sundries	43	9	8			
Pay of Superintendent & allowance	2175	9	"			
Pay of Office Establishment	1032	"	"			
Working charges of Ootacamund Gardens	3359	3	8			
do of Coonoor do	150	"	"			
do of Kulhutty do	202	5	6			
Improvements in Burliar Gardens	190	"	"			
Reclaiming and planting waste land near Gate and metalling main Entrance walk	300	"	"			
Amount paid for Almirah, wardrobes &ca by the Commissioner	618	"	"	9647	11	7
By Balance				13	10	8
Total Rs				9661	6	3

Government Gardens
Ootacamund
3rd June - 1873

for Commissioner

A. Jamieson
Supt Govt Botanical Gardens

m No 2 5.5.73 19 25t

No 345

Consulting Architect's Office
Rayapettah 30th April 1873.

From

R. F. Chisholm Esqr F.R.I.B.A.
Consulting Architect to Govern^t.

To

The Chief Commissioner
Neilghury Hills

Sir

I have the honor to forward you a plan of a Conservatory which it is proposed to erect in the Botanical Gardens at Ootacamund.

At The Honorable Mr. Sims request I met Mr. Jamieson on the 4th March last and ascertained from him all necessary particulars. He thought that as regards size a covered space 100' x 60' would be sufficient, this would give an area of 6000 Supl. ft. The Circular house I propose will give somewhat less than this, but still I think sufficient.

I have adopted the circular form partly from economical Considerations and partly because the interior will be architecturally effective.

The house Consists of a dead wall suitably ornamented and decorated for the hight of 15 ft, above this the walls and roof Consist entirely of light wooden framework filled in with Glass. The roof will be 80 ft across without intermediate supports.

The entrances will be through the walls. The inside of the house will have a small

Fountain

Fountain in the Centre Surrounded by a gravel wall above this gradually rising to the outside the flowers will be arranged on either side of Circular promenades Connected by stone steps. Inside nothing will be visible but flowers & light framework.

I Estimate the Cost of the structure roughly at Rupees. 12000 " " "

I have the honor to be
Sir
Your Obedient Servant

R M Chisholm.
Consulting Architect to Governt.

1075/1873

R 1/2101/73

No 345

From
The Consulting Architt.
to Government

To
The Chief Commissioner
Neilgherry Hills

Date 30th April 1873.

Forwards plan
for Conservatory
Inclosure to letter to Govt
No 30 of 15th July 1873

Meteorological Observations made on the Government Botanical Gardens, Ootacamund

from 13th November 1872 to 31st March 1873.

Month	Monthly mean of Dry Bulb				Monthly mean of Wet Bulb				Maximum observed during the month	Rainfall		Days with Rain	Days without Rain
	7 A.M.	2 P.M.	5 P.M.	Daily mean	7 A.M.	2 P.M.	5 P.M.	Daily mean		Inches	Cents		
November 1872	52.07	59.03	54.17	54.20	52.11	59.16	56.04	55.14	64.13	6	04	10	8
December "	51.03	66.09	59.01	58.20	47.00	62.05	55.21	54.21	70.15	2	53	7	24
January 1873	54.12	72.15	59.24	61.16	43.07	60.13	50.17	50.30	74.24	.	.	.	31
February "	54.23	68.23	59.16	60.20	48.09	61.14	53.12	54.01	70.17	3	39	7	21
March "	56.23	73.06	63.26	64.16	48.20	64.21	55.08	55.28	73.26	.	15	1	30
Annual Mean	53.53	67.71	58.96	60.20	61.33	61.33	53.92	53.78	70.19	.	.	.	.
Total										12	11	25	114

Government Gardens
Ootacamund
15th May 1873

for Commissioner.

Superintendent
Govt Bot Gardens

Revenue Department.

No. 875

PROCEEDINGS of the MADRAS GOVERNMENT.

Under date the 20th August 1873

Read the following Letter from the Commissioner, Nilgiris.

Submitting the annual report of the Superintendent of the Botanical Gardens on the Nilgiris for the official year 1872/73 — N. & 15 July/73 No. 30

The Government consider the state of the gardens satisfactory and such as to testify to the superintendence having been careful and intelligent.

2. The success which has attended the introduction of the Australian strawberry and the Spanish Chestnut is very encouraging and there appears reason to hope that the latter may hereafter prove a useful addition to the food resources of the people.

The

3. The Superintendent's remarks in last year's report on the successful cultivation of the Ippecacuanha plants in the Burliar gardens were communicated to the Govt. of India with a request that a further supply of plants might be sent when available and their attention will be again ~~called~~ [illegible] to the subject.

4. With reference to paras 26 and 32 of the Superintendents report the Govt remark that Mr Jamieson should submit thro' the Commissioner in a definite form any proposals he may desire to make for utilizing his own special knowledge or promoting the success ~~adding to the efficiency~~ of the gardens.

5. The plan for a new conservatory will be considered in the Public Works Department and it is observed that these reports are not intended to raise questions on which orders are required

6. The Govt presume that the details of the current expenditure receive from time to time the attention of the Commissioner

Sd

L The Commissioner Neilgherry
Inspector of Forests
~~Board of Revenue~~
Pr Works Dept.
Plans will be sent
from Ooty —

Cap. 5/9