GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—the following Report on the Progress and Condition of the Government Botanical Gardens and Parks, Nílgiris, for the Official Year 1884-85.

I have the honor to forward to you herewith my Annual Report on the progress and condition of the Government Botanical Gardens and Parks on the Nílgiris for the year 1884-85.

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I. STAFF OF OFFICERS.—The staff of officers remains the same as it was in 1883-84. From Mr. Jamieson, the Curator, to the lowest subordinate, all have shown the greatest care and diligence in their work.

With respect to Mr. C. McDonald, the Overseer for general works, and Mr. T. Burrows, the Overseer for the propagating houses and nurseries, I wish to point out that their pay is very inadequate for the responsible duties which they have to perform. Mr. McDonald receives only Rs. 35 per month while Mr. Burrows receives only Rs. 25. The duties they both have to perform require far more skill and intelligence than that required of a Sub-overseer in the Cinchona Plantations, yet the latter get Rs. 50 a month. I would urge the claims of these men.

With respect to the writer in the office, Ramanjulu Naidu, I have the same to urge. His duties are more arduous and his responsibility is greater than what is required of the second clerk in the office of the Cinchona Department, yet he receives Rs. 50 a month, while Ramanjulu Naidu gets only Rs. 30.

II. Season.—The weather during the past year was, with the exception of the months of October and November, unusually dry, and little or no planting could be attempted till the end of the former month. In October no less than 22·84 inches of rain were registered. More than half of this fell in two days, and the wash, which this heavy fall occasioned, was very great. The winter was comparatively mild and little harm was done by frost.

III. General condition of the Gardens and Parks or improvements which have been made in them during the year.—(1.)—Ootacamund— (*a*) *Government Gardens.—Upkeep.*—During the past year considerable alterations and improvements have been made in these gardens. The ground on either side of the entrance gate, and which for the last few years it would have been unwise to attempt to decorate, owing to the incomplete state of the works which were being carried on immediately about them, has been defined and will shortly be planted with shrubs and trees. The upper part of the gardens, which lies between Government House and Garden Cottage and bounded below by the new road, has been entirely re-made and planted with grass and shrubs. This portion of the gardens had always been in a rough and untidy condition and was last year rendered still more unsightly by the greater part of the turf having been removed for the purpose of grassing the parapet of the new road. The right-hand bank of this road on approaching Government House is so steep that no grass can be grown upon it and it will always remain as an ugly cliff of bare earth, unless something is done to hide it. I would recommend that these portions of the road should be built up with a loose revetment, similar to that which fronts the entrance at Government House. The cost of such a revetment would not be great and it would prevent the possibility of any landslips taking place. Such a revetment, too, could be covered with succulents or creepers. All the lawns in the gardens have now been levelled and the grass upon them is being gradually brought into better order. Last year the grub of the cockchafer did a good deal of mischief to the grass, but this was remedied by top-dressing the injured portions with manure in the early spring. Now that the floor of the garden has been put to rights, I hope next year to re-establish the flower beds and shrubs which, during the time that the alterations were going on, had to be removed. The bund of the tank below the band-stand gave way during the heavy storm which occurred in October last. The destruction of the bund was due partly to the tank having been dredged too deeply and partly to trees having been planted upon it. The depth of the tank has now been lessened and made uniform and the bund has been restored and strengthened. Provision has been made for putting up a fountain next winter in this tank opposite to the band-stand.

I propose next year to commence making improvements which are much wanted in the upper part of the gardens.

Kitchen Garden and Herbaceous Ground.—Owing to the large number of works to be carried out during the past year, I regret to say that I found it quite impossible to do anything in the way of getting up either an experimental kitchen garden, or a garden for the cultivation of local wild herbaceous plants.

Nurseries.—The out-door nurseries have been quite filled with plants raised for the purpose of filling up the old demolished sholahs in the upper part of the gardens, and with plants raised from the seed which had been sent to us by various donors.

Next year I propose adding largely to these old nurseries in order to accomodate our constantly increasing stock of plants.

Forest of Blue-gum trees.—The forest of blue gums lying north of Government House and which formerly belonged to the Forest Department has been annexed to these gardens (*vide* G.O., No. 3002, dated 15th July 1884).

Buildings.—The conservatory on the lawn facing the entrance gates is in a very bad state of repair and will not last many years longer. To repair it thoroughly would cost a large sum of money, while all the plants which it now contains would have to be removed during the time that it was under restoration. I would, therefore, recommend that this house should be allowed to remain as it is until no longer serviceable and that it should then be pulled down and rebuilt on some other part of the gardens. If this building was removed from its present site there would be a continuous stretch of lawn from the entrance to the gardens to the band-stand tank.

The other conservatories and buildings are all of them in a fair state of repair.

(*b*) *Government House Garden.*—All works connected with the buildings of the Government House and adjoining offices having been completed, it was possible last spring to begin gardening operations. The lawns at the back of the house have been improved, while the slopes in front, below the new terraces, have been cleared of scrub and re-grassed. This part of the ground has also been planted with clumps of trees and shrubs; the former with the view of eventually taking the place of those which now exist and which, I am sorry to say, are in such an unhealthy state that they will not last many years longer.

A neat and spacious green house has been built for the purpose of growing decorative plants, with which it will be gradually furnished. The remaining parts of these gardens are being prepared for their adornment during the present year.

(*c*) *Stonehouse Park.*—The grass land immediately about the new building was cleared of weeds and such trees as were either dying or as obstructed views were cut down and others planted in more suitable places. The trees owing to the lateness of last year's season were not planted till October; they were, however, well established in baskets before being put out and afterwards carefully protected during the spring droughts. They are now for the most part doing well; a few of them have been destroyed by cattle, which either strayed or were deliberately sent by the villagers of Old Ooty to graze in the park at night; and until it can be afforded to fence the whole of the land, young trees and shrubs will always be liable to damage from this source. Nothing has yet been done in the way of planting shrubs immediately about the new buildings as the surrounding ground is still in the hands of the Public Works Department. All building operations, however, will shortly be finished, so that this year we may hope to get this portion of the park planted up also.

(*d*) *Church Hill Park.*—During the past year the usual upkeep and nothing more has been carried on.

(*e*) *Crewe Hall Estate and adjoining Grounds.*—Nothing during the past year was done to ornament these grounds owing partly to finding it difficult to provide the necessary labor and partly to the consideration that it would be of little use to do anything in the way of planting until a substantial fence had been placed all round the ground, as these estates have, during the last two years, become a common grazing ground for bullocks, sheep and goats. During the present year, I hope to see it fenced and planted.

2. Coonoor—(*f*) *Sim's* Park.—The upkeep has been satisfactorily maintained. Some damage was done to the roads, paths and bridges during the heavy rains of last autumn, but nothing more than could be repaired by the laborers employed in the park. A bridle road is being made through the new sholah which was last year annexed to the park. This will afford a pleasant ride for such as desire to pass from Coonoor to Wellington. It was first proposed to make this into a carriage instead of into a bridle road; but the cost of the former proposal was found to be too great to be incurred at present and the idea was therefore abandoned. All the more important trees and shrubs have been labelled.

New Nurseries.—These are intended chiefly for raising a stock of sholah trees which grow on the Coonoor ghât and have been made upon the abandoned tennis ground.

3. Barliyar—(*g*) *Experimental Garden.*—This garden was of late years becoming overgrown with worthless coffee, oranges, pomeloes, &c., and which were cramping many of the more valuable trees. I have had all these cleared away, and I have also cleared of secondary jungle, about an acre of ground, which had hitherto been left uncultivated. This will give a sufficiency of room for planting out new introductions for some years to come. Most of the trees are flourishing; they have all been identified, and I have ordered that they shall have a zinc tally, with a number punched on it, attached to each. This, in the hot climate of Barliyár, will be more lasting than the usual painted label, and it will at the same time be much more economical.

4. Kalhatti—(*h*) *Experimental Garden.*—Nothing of any importance has been carried out during the year in this garden. The *Cinchona morada* and *verde* seedlings which were put out last year have done very badly; the dry climate evidently did not suit them. In my last year's report I stated that I doubted if it was worth the while of Government to continue the cultivation of this garden, and I am now still more of the opinion that it is not.

IV. Proposed new Garden at—(*i*) *Gúdalúr.*—In connection with the proposed establishment of a garden at Gúdalúr, I have been in communication with the Karistan of the Raja of Nilambúr, who owns all the land in that neighbourhood, and I find it would be possible to acquire a plot of ground on a lease not exceeding 99 years at the very moderate rate of 8 annas an acre per annum. I would propose that 5 acres of ground be taken up on a lease of not less than 50 years.

(*k*) *Calicut.*—With respect to the establishment of a garden at Calicut, I have written to the Collector of Malabar, Mr. Logan, asking him kindly to ascertain what suitable ground could be acquired, and when I hear from him, I will go to Calicut and select that which seems to me the best site. I think that as in the case of the garden at Gúdalúr, 5 acres of land will be sufficient.

V. Proposed Museum of Natural History in Ootacamund.—In my report of last year, I asked if Government would be inclined to sanction the establishment of a small museum in Ootacamund, which should contain typical collections of objects of interest to those living on the Nílgiri plateau and in the Wynaad, and I further stated that I thought such a museum should take in all the chief branches of Natural Science —Botany, Zoology, Geology, Mineralogy and Ethnology. Government, in paragraph 12 of their G.O., dated 20th October 1884, No. 1155, Revenue, reviewing my report approved of the suggestion and they accordingly requested me to work out the details of the scheme in communication with the Superintendent of the Government Central Museum, Madras, the Conservator of Forests, Northern Circle, and the Collector of the Nílgiris.

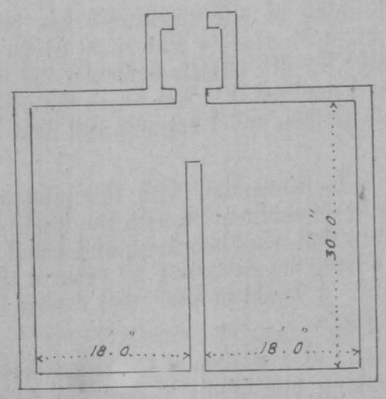
Owing to the absence from the Hills of one or other of the above appointed Committee, no meeting was held until the 18th of last month. I then explained what I considered should be the scope of the museum, and I produced a plan of a building which I thought would be sufficiently large to contain all such collections as might be acquired during the first few years of the museum's existence, and I pointed out that the building, which I proposed, would admit of being indefinitely extended. With respect to the scope of the museum, I urged upon my colleagues that it would be desirable that at first the collections should be confined to such objects only as would be of interest to the ordinary well-educated and intelligent resident, European or Native, and that complete collections of everything existing in the district which would be serviceable only to specialists should be allowed to stand over to a future day. These propositions, however, met with their most decided disapproval. They were unanimous in thinking that the scope which I proposed was far too narrow, and that instead of commencing with a small building and adding to it as occasion might require, a large museum should be built at once, which would accommodate a perfect collection of all natural history objects.

Seeing that we were of such very opposite views as to what ought to be done, I asked Doctor Bidie, Mr. Burrows and Mr. Gamble to put upon paper the views which they had advanced in the discussion. This they have kindly done, and I annex a copy of the report which they have drawn up on the subject.

Report by Doctor Bidie, Mr. Burrows and Mr. Gamble.

In accordance with the order of Government conveyed in paragraph 12 of G.O., Revenue Department, No. 1155 of 20th October 1884 (Board's Proceedings, No. $\frac{3903}{\text{Forest } 393}$ of 17th November 1884), we met at Mr. Lawson's office on the 18th August 1885.

Mr. Lawson submitted to us his proposed plan of a museum building, 30 feet × 36 feet, without offices of any kind. We considered that such a small house would not meet the intention of Government, nor suffice for the objects of a provincial museum, as understood by us, viz, that it should contain such a representative collection of local specimens as would make it at once attractive and instructive to the public, for whose benefit it would be started and maintained. We are of opinion that it would be quite insufficient to hold the collections which would adequately represent the Botany, Zoology, Geology, Mineralogy and Ethnology of this interesting district, and that it would be necessary to provide a room of larger size for the exhibits as well as a work room for an Assistant in charge, who might very usefully be a taxidermist such as Dr. Bidie thinks could be found for a comparatively small monthly salary. We are informed that a local museum was once before started in Ootacamund and proved a failure, because it was not established on a scale or managed in a manner to make it interesting and useful to the public.



Mr. Gamble represented that in order to make an interesting show of the woods, fibres, oils, barks, fruits and other vegetable products of botanical or economic interest in the district, considerable space would be wanted, for the district and Wynaad contained such a varied flora ranging in level from that of the sea to over 8,000 feet and in comparative moisture from 23 inches (Coimbatore)* to 112 inches (Calicut).* He would hope that the museum might be made the means of fostering the use of indigenous timbers for building and construction, and of bringing to more general local notice woods and forest products of economic value. Government is always sending specimens to Exhibitions abroad and at the Presidency and it often happens that products while known at a distance are little known in their own home. The collection that would show all that it is right to exhibit would be by no means one of so little amount as Mr. Lawson seems to think. Nor is the zoological field less rich or varied.

* The nearest place on either side of which he could find record.

Dr. Bidie pointed out that a collection of birds, of which the most common and most interesting should be stuffed and exhibited with their eggs and nests, would take considerable space, more especially as in such a district as this the game birds, always interesting where there is a large European community, are mostly of comparatively large size. So, too, a collection of the mammalia would be incomplete and devoid of interest if the game of the district were not well represented, and even such large animals as the bison and sambur would require to be shown and prove most interesting to visitors, for few people have any idea of their size, especially of that of the former. The reptiles, land shells and fish would also take up a good deal of room and so would the insects, if properly shown. Altogether he considered the space proposed to be quite inadequate to represent the branches of natural science which it is proposed to illustrate, not to mention economical products.

Mr. Burrows, while agreeing in the opinions of Doctor Bidie and Mr. Gamble, considered that in order to make a museum in Ootacamund a useful and successful institution and to ensure its permanency, it should be so arranged and managed as to prove an attraction to the public and a credit to the station. It should be accessible both to mere visitors and to learners and should be one of the public institutions of Ootacamund. In this we were all agreed. Ethnological collections, it was thought, in a district where there are several aboriginal races who might be likely to decrease in numbers rather than increase and to change perhaps their mode of life, would also be of real interest and require some space and some care in arrangement.

Then there would be a necessity for a series of specimens properly representative of the coffee, tea, cinchona, fibre and other industries of the district and Wynaad, and though Mr. Lawson thought that a small box of a few feet square would properly represent all that was useful to show as regards coffee, the rest of the meeting did not agree with him and thought that unless such subjects were thoroughly and well, perhaps even copiously, represented as regards the soil, growth, varieties, diseases and products of manufacture, the collection would be of but little interest and planters would not care for it.

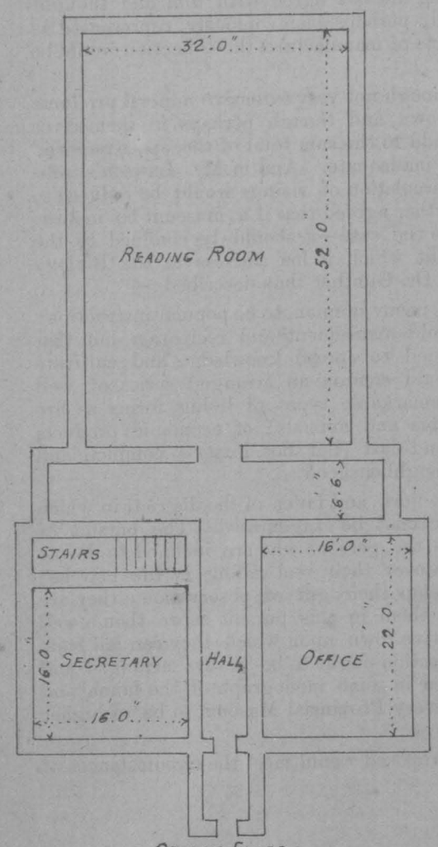
Then the Gold-mining industry and the various though not very extensive mineral products including the building stones, &c., require to be shown, and though perhaps in themselves they would not take up much room, yet they would add to the sum total of the space required and for this a wall space of 130 feet would be totally inadequate. And in Mr. Lawson's proposed room with three-feet cases, the space for the circulation of visitors would be reduced to merely 12 feet × 6 feet in each room. We were further agreed that if a museum be instituted in Ootacamund—as all were of opinion should be the case—it should be confined to the display of local products, and its aim should be that which in his address to the Biology section of the British Association at Swansea in 1880, Dr. Günther thus described :—

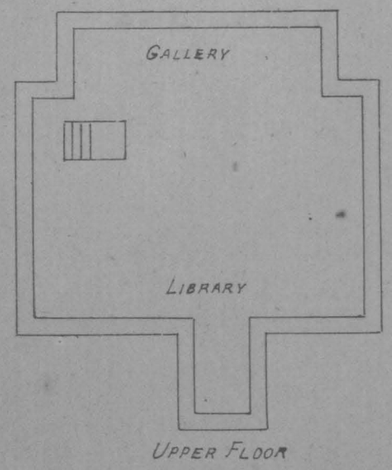
"The principal aim of a Provincial Museum ought, in my opinion, to be popular instruction. I do not mean that it should be merely a place for mild amusement and recreation, but that it should rank equal with all similar institutions destined to spread knowledge and cultivate taste among the people. To attain this aim it should contain an arranged series of well preserved specimens representing as many of the remarkable types of living forms as are obtainable; a series of useful as well as noxious plants and animals; of economic products derived from the animal and vegetable kingdoms; and last (but not least) a complete and accurately named series of the flora and fauna of the neighbourhood.

"The direct benefit of a complete collection of the flora and fauna of the district, in which the Provincial Museum is situated, is obvious and cannot be exaggerated. The pursuit of collecting and studying natural history objects gives to the persons who are inclined to devote their leisure hours to it, a beneficial training for whatever their real calling in life may be; they acquire a sense of order and method; they develop their gift of observation; they are stimulated to healthy exercise. Nothing encourages them in this pursuit more than a well named and easily accessible collection in their own native town upon which they can fall back as a pattern and an aid for their own. This local collection ought to be always arranged and named according to the plan and nomenclature adopted in some monograph of the fauna and flora of the country; and I consider its formation in every Provincial Museum to be of higher importance than a collection of foreign objects."

No such small room as that which Mr. Lawson proposed would meet the circumstances of the case as thus defined.

We are strongly agreed that if a museum is started it should be in a building worthy of it; that it should be constructed at once of sufficient size, but that cabinets might be made by degrees as collections were available. Dr. Bidie gave it as his opinion, in which Messrs. Burrows and Gamble were disposed to agree, that a building of the style of the Nilgiri library would probably prove sufficient if rearranged as regards the rooms. There should be a work room for the assistant in charge and a store and packing room at any rate. The library was visited in order to see what the size and arrangements were and a rough plan is given opposite. The arrangement seems well suited to a museum, the light is good and there is no reason why the large room should not have the gallery continued round it so as to display cases for insects, &c. Such a building would, of course, cost a great deal more than Mr Lawson's proposed one, but it is our opinion that if the museum is not a good one, in a suitable building, contributors will not be easily persuaded to assist, its permanency will be doubtful, and it will not be, what it should be, a place of instruction to the public. Mr. Lawson's scheme would practically merely add a small museum to his office. Government has fine sites now for such a building in and about Stonehouse Park and the Government Gardens, quite near to Mr. Lawson's office, and if only the funds can be provided and the building started at once under the auspices of His Excellency the Governor, we feel sure it will be a success. The great interest taken by the native community in such institutions and especially in the fauna of the country is well known from the statistics of the Museums of Calcutta and Madras and of the Calcutta Zoological Gardens, and we feel sure that our Ootacamund Museum (which it may be hoped will prove a model for similar museums in other groups of districts such as were recommended by the Government of India in recent orders) will prove equally attractive.





We would remark that it may possibly be considerably utilized in assisting the work of technical education for which the Director of Public Instruction is, we believe, now preparing a scheme under the orders and approval of Government.

There should be in the museum a small library of works of local interest, and the maps of the district should be exhibited on the walls for easy reference.

The orders of Government desire us to "work out the details of the proposed Museum with Mr. Lawson," but as we differ at the very outset from Mr. Lawson in our conception of what the museum should be, we are forced to submit this note, which we do through Mr. Lawson in order that he may obtain the orders of Government on the first point which has to be considered—the size, arrangement and scope of the proposed museum.

I have said above that I disagree with the views put forward by Dr. Bidie, Mr. Burrows and Mr. Gamble, and I therefore now pass on to point out what I conceive to be some of the more important errors of judgment contained in their report. Mr. Gamble thinks that all woods which grow in the country from Coimbatore to the uttermost parts of the Wynaad would prove of interest and instruction to the public,

and that therefore all these should be exhibited; and he says, what is no doubt perfectly accurate, that such a collection would occupy a very considerable space. I dissent to Mr. Gamble's assertion that such a collection would be of great interest to anybody and for the following reason. Of the larger number of trees which grow in the above-mentioned district very little is known about the value of their timber, and to exhibit woods simply because they are woods without giving any information respecting them would be useless. I should prefer that at first a collection should be exhibited of such woods only about which we already possess some knowledge, and that the remainder should be added as Mr. Gamble or others become better acquainted with their properties. Again, with respect to the exhibition of fibres, oils, barks, fruits, &c., which it would be possible to bring together during the next few years, they would, I am persuaded, occupy a much smaller amount of room than is supposed by Mr. Gamble.

Dr. Bidie seems to me to err in wishing to see a Provincial Museum established upon the scale of a Metropolitan Museum. I would leave out for the present at any rate all such large animals as the elephant, the bison and the sambur, not because I think they would be of no interest to the public, but because they would take up room which could be more profitably utilized. I would observe again that all reptiles, with the exception of a very few, when prepared for exhibition pack into a very small compass. With respect to land shells and insects, except in the case of the more noticeable and commonest species, it is a mistake to keep them constantly exposed to the light, as they rapidly fade. They ought to be preserved in shallow glazed cases; and a complete collection of these branches of zoology would probably occupy no more room than what is represented by a couple of ordinary chests of drawers.

Mr. Burrows thinks that to insure the permanency of the museum it should be arranged and managed so as to prove an attraction to the public and a credit to the station, and to this end he would desire, with his colleagues Dr. Bidie and Mr. Gamble, to have a considerable space put at his disposal for the purpose of exhibiting specimens of the different aboriginal races who live upon the Hills, and who they say are likely to decrease in number and to change their mode of life.

I presume by this that they would exhibit specimens of Todas, Kurumbas, Kotas, Irulas and other tribes, together with the ordinary implements which they use in domestic life. Such a collection would no doubt be exceedingly interesting, but yet the interest be out of all proportion to the cost of establishing it. I would therefore let this branch of ethnology stand over to a future day like the elephant and the bison.

With respect to the room which would be required for exhibiting the chief points of interest connected with the coffee and tea industries they were shocked at the smallness of the amount which I proposed to allow. They would have everything copiously represented, while I would limit the quantity of each object to the smallest dimensions, compatible with its being instructive to the sightseer. Instead of a barrel of coffee, I would exhibit a pint of the berry in a bottle; and instead of a chest of tea, I would exhibit a quarter of a pound in a tray.

Next they quote an extract from Doctor Günther's well-known and admirable address on the subject of provincial museums and then say that "no such small room as that which Mr. Lawson proposed would meet the circumstances of the case as thus defined." This is quite true, but as the rooms which I proposed were never intended to hold complete collections, but only such as might be acquired during the first few years of the museum's existence, the observation is beside the mark. And, again, Dr. Günther is writing of what should be done in a country, the natural history of which is fully known, and where monographs of the different branches of natural history have been already drawn up; but this is not the case in India.

With their report Dr. Bidie, Mr. Burrows and Mr. Gamble give a plan for a building such as they think would be suited for the purpose of a provincial museum when finally stocked with its complete collections. To this plan I object, first, that it is unsuited in its construction and that it is wasteful of its space; secondly, that the cost of the building would be excessive; and thirdly, even if the two former propositions could not be proved, I object most strongly to the principle that we, who live now and as yet know most imperfectly all of the branches of the natural history of our district and therefore cannot possibly be fully acquainted as to the amount of room

which will be required when our knowledge of them is more perfect, should saddle our successors with a building that may prove eventually to be inconvenient in construction or size.

It seems to me that it would be far better that we should begin with a small building of a construction of such a sort as is acknowledged by all authorities to be free from any radical defect, and which at the same time is capable of indefinite extension, than that we should block up all possibility of escape if our big building should prove faulty.

It was prominently stated at the meeting of the Committee, though this is not alluded to in the report, that one great advantage of expending a large sum of money upon a big building would be that, if hereafter the museum should fall into bad management, it would be more difficult for a hostile Government to abolish it than would be the case if its initial cost was less. To this I have to remark that I do not believe that any Government would be hostile to any well-managed museum, even if it was a small one, and that if it is not well managed, then the more hostile the Government is to it the better. Doctor Bidie, Mr. Burrows and Mr. Gamble say it is their opinion that, "if the museum is not a good one, in a suitable building, contributors will not be easily persuaded to assist, its permanency will be doubtful and it will not be what it should be, a place of instruction to the public. Mr. Lawson's scheme would practically merely add a small museum to his office." I entertain no doubt about being able to get plenty of assistance from contributors, even though they should be informed that their benefactions would be housed in a four-thousand-rupee museum and not in one which would cost forty thousand.

With respect to such a museum as I propose to build being merely an annex to my office, I would observe that it is true that I stated the museum should be in close proximity to the Government Gardens, inasmuch as I would, if Government approved, assume the chief control over its management. It seems to me that the Director of the Government Gardens will be always the person resident in Ootacamund, who is most likely to have had a previous training in the management of museums. But as to its being merely an addition to my office, such a preposterous notion never for a moment entered into my head. Of what possible use could collections of animals, of minerals and of Todas be in the office of the Government Botanist? An office collection of vegetable products brought together for the purpose of enabling the head of the department to identify and name specimens of plants or plant produce must be kept solely for that purpose and be absolutely distinct from all such collections as may be provided for the public entertainment.

This last point is one upon which I must particularly insist, as I find that in this country there are still those who think that the two purposes may be fitly combined. An office collection ought to contain every thing that may be required for thoroughly identifying any vegetable product that may be sent from any part of India, while the provincial museum should contain, as I said in my last year's report, such specimens only as would be illustrative of its particular district. So far then as the botanical part of the provincial museum goes, it would be the overflow of the office collection.

Whether or no a museum of natural history would subserve the purposes of technical education, I am not able to forecast; but I do not see that any relation necessarily exists between such a museum and a school where the principles or the art of manufacturing goods is to be taught, though of course with all their aspirations in the matter of technical education I fully sympathise.

Having now criticised the above report, I pass on to offer a plan for a museum and a scheme for its management, which I think will be found much more suitable than those proposed by Dr. Bidie, Mr. Burrows and Mr. Gamble, and one which I think might serve as a model for all future Provincial Museums in the Presidency.

The objects for which specimens from the different branches of natural history are collected are three, viz:—

(1) Collections made for the instruction of students in schools and colleges.
(2) Collections made for the use of specialists.
(3) Collections made for the instruction of the general public.

The first consists of a comparatively small number of carefully collected specimens, which are intended by the teacher to illustrate his lectures. Each teacher will make his own selection, and any collection, made for him by another person, will be

comparatively worthless. With a collection of this sort, neither a Provincial nor a Metropolitan Museum has anything to do.

The second ought to take in every species and variety of all groups of plants, animals, minerals and geological objects which are to be found in the district. They should be so arranged that any specialist, wishing to study them, may have easy access to them. These, however, should not be exhibited to the general public, to whom the great majority of the specimens would be not only of no interest, but by their number would serve only to bewilder them. Complete collections of birds, shells, butterflies, beetles, for instance, should be packed in cabinets and not stuffed and arranged, as too often used to be done, in cases, occupying the greater part of the body of the museum.

The third kind of collection, viz., that which may be profitably exhibited for the instruction of the general public, is a small one when compared with that which is required for the specialist. Only those objects which are met with more or less in every day life should be exhibited—these ought to be carefully chosen, so as to show the chief points of interest about them, and they ought to be accompanied with descriptions clearly describing what these points of interest are.

Any museum then, which is established, should be so arranged as to meet the wants of the specialist and the general public, and certain definite rules have been adopted by all who have had experience of museums in England. These rules are—

(1) The construction of the building ought to be such that there will be, in those rooms which are furnished with glazed cases, no cross lights passing through them.

(2) The construction ought to be such that as much as possible of the wall and floor space of the museum may be available for cases and cabinets.

(3) The building ought to be of an unpretentious character, and free from all useless ornamentation. This, too, in order that money may not be lavished upon what is useless, but be wholly expended upon the, by no means uncostly, furniture and upon the collections.

(4) The building should be so arranged that it may be added to whenever occasion may require.

Now the plan which I offer below is the simplest expression of what a museum can be, which shall fulfil all the conditions enumerated above. Each block forms a perfect museum and consists of two oblong-rooms each lighted by four large windows on one side only. The whole of the remaining walls are available for cases, while in the centre of each room there is space for glazed counters for the exhibition of objects of interest to the general public; again underneath these cases there is room for the drawers and cabinets, which would contain the collections provided for the specialists. Whenever one block of buildings becomes overcrowded, all that is necessary in order to increase the accommodation is to break an opening in the blind end of the block and add a second series of rooms to this end; and this it is evident may be repeated indefinitely. All museums in this country ought to be built facing north and south.

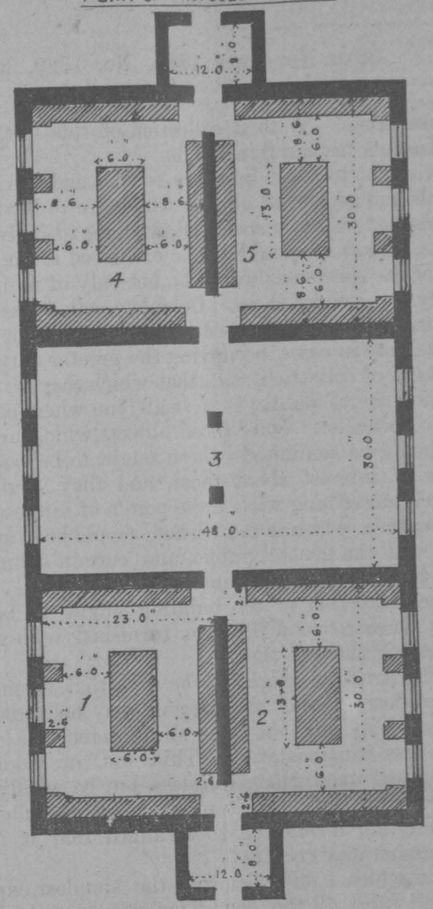
Management.—This is what I venture to say will be found the greatest difficulty attending the successful establishment of provincial museums. It is not reasonable to expect that Government or Municipalities will go to the expense of providing highly-trained Curators. Nevertheless if the museums are not supervised by persons who have had some training, they will inevitably be a failure. To guard against this I throw out the following suggestion.

The Apothecaries, who are attached to dispensaries in provincial towns, have often, I believe, a considerable amount of leisure time and they have all of them had a scientific education. Might not some of these, who have shown a predilection for the study of natural history, receive some special instruction in the management and arrangement of museums under the direction of the Superintendent of Central Museum at Madras, and then, by adding a small increment to their salaries, obtain the services of these gentlemen? This, it appears to me, would be the most economical and not an unsatisfactory way of attempting to dispose of the difficult question of supervision.

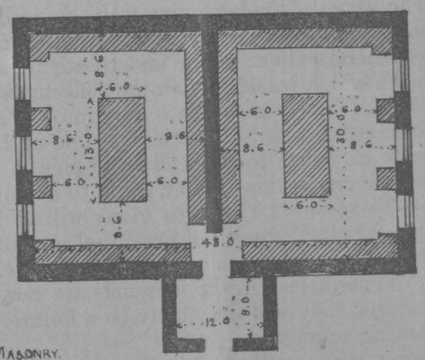
All such specimens as require, for their mounting or preparation, the hand of an expert, would be most conveniently obtained from the Central Museum of the Presidency, or from any person in the neighbourhood who may make taxidermy his profession. By this arrangement a permanent taxidermist could be dispensed with.

The provincial museums ought not to be regarded as distributing bodies, though, of course, they should be able to supply things special to their district, when called upon to do so by the Superintendent of the Central Museum at Madras.

PLAN OF PROPOSED MUSEUM



No. 2.



No. 1

NOTE. BLACK DENOTE MASONRY.
HATCHING DE... CASES.

SCALE 20 FT. = 1 INCH

NOTES ON THE PLAN.

In plan No. I is the kind of building which I propose should be put up to begin with. It contains two rooms, each 30 feet × 23 feet, and the walls to the spring of the roof 13 feet. In the plan only three windows are shown, there ought to be four each 4½ × 9 feet.

No. II represents the Museum when fully completed in future years.

The arrangement of the specimens would be as follows:—

In room .. ..
1. Botany.
2. Zoology.
3. Large specimens, *e.g.*, elephant, bison, &c., mounted on stands, and not enclosed in cases.
4. Ethnology.
5. Geology and Mineralogy.

The cost of building No. I would be about Rs. 5,000, and to fit it up properly with cases would cost at least another Rs. 2,000.

Lastly, no institution of this kind can be expected to keep up uniform excellence unless it is from time to time inspected by a superior officer, and I would, therefore, suggest that it might very properly become a part of the duties of the Superintendent of the Central Museum to inspect and report from time to time upon all the provincial museums in the Presidency.

The views which I have expressed above, respecting the structure, arrangement and management of museums are not crude notions. They are the views of all who in England have given to this subject their serious attention, and are the outcome of those numerous meetings and discussions which took place at the British Association and elsewhere during the last decade.

VI. HERBARIUM.—The number of plants contained in the herbarium has been considerably increased during the past year, partly through collections made by myself in different parts of the Presidency and partly by collections sent by others. The thanks of Government are especially due to the following gentlemen for gifts of plants.

(1) *Mr. Gamble, Conservator of Forests, Northern Circle*, has been the chief contributor. The specimens which he has presented to the herbarium rank with the finest I have ever seen, for not only have they been superbly dried, but they always contain just those portions of the plant which are essential for its proper illustration. I am indebted also to Mr. Gamble for much information concerning the plants, which he has sent, in their living state, and I am still further indebted to him for having named certain genera for me with which he was himself specially well acquainted.

(2) *Mr. Talbot, Deputy Conservator of Forests in the Bombay Presidency*, for a very interesting collection of plants which he had made in the Northern Concan. The flora of this region, owing to its contiguity to the Madras Presidency, has a special interest for us. Mr. Talbot's plants have been well preserved and for the most part named.

(3) *Mr. J. Cameron, Curator of the Lal Bagh, Bangalore*, has sent several collections of plants growing in his neighbourhood.

(4) *Mr. Bourdillon*, for a selection of plants made in the neighbourhood of Trivandrum.

(5) *Mr. Hollingsworth, Apothecary and Assistant to the Professor of Chemistry in the Presidency College*, for specimens of named rare and critical species from the neighbourhood of Ootacamund and Madras.

(6) *Mr. Wedderburn, Assistant Collector*, for plants gathered in the neighbourhood of Devála and the Wynaad.

(7) *Captain Quentin Agnew*, for plants collected in the neighbourhood of Madras and also for a few collected about Quetta.

(8) *Sir Joseph D. Hooker, Director of the Royal Gardens, Kew*, for another consignment of named specimens from Dr. Wight's herbarium which was forwarded by him to Madras, and consisting chiefly of orders belonging to Calycifloræ and Corollifloræ. All these have been arranged and interpolated with those received the year before. This collection is now as extensive as it is valuable, and has been of great assistance to me in identifying the plants of the country.

The room, in which the herbarium is at present accommodated, is becoming inconveniently crowded, and I would therefore ask to be allowed to convert the old cinchona laboratory into a new repository for it. This building is dry and roomy, and the alterations which would be requisite would not be costly.

If Government approve of this suggestion, I will send in plans and estimates at once, as the alterations ought to be carried out during the next dry season.

VII. LIBRARY.—Only Rs. 42-15-3 were expended upon books last year, as it was thought that if the proposal to transfer the Madras herbarium to Ootacamund is carried out, a considerable saving might be effected by transferring also such botanical works as relate to purely descriptive botany.

VIII. NOTES ON SOME OF THE MORE INTERESTING PLANTS WHICH HAVE BEEN INTRODUCED OR GROWN IN THE GARDENS DURING THE YEAR.

I. Erythroxylon Coca.—Two big bushes of this plant exist at Barliyár where they grow freely, but fruit sparingly. About 60 young plants have been raised from seed and a large number of cuttings were put down during the winter, but these have not done well. It may be taken as certain that *Erythroxylon coca* will thrive well in many

parts of Southern India, and that it may be easily propagated from seed, but that it will be profitable for the European planter to grow it upon a large scale is a matter upon which I entertain much doubt. Vast tracts of country in South America are cultivated with this plant, and an almost unlimited quantity of leaves may be obtained from that country for the purpose of manufacturing the valuable alkaloid *Cocaine*. Last winter this alkaloid is said to have fetched 2*s*. 6*d*. per grain. At this price, could it have been maintained, its cultivation would have been productive of enormous profits, but the price has since declined to 7*d*. per grain, and it is very unlikely that even this sum will be realized much longer. In this opinion Mr. Thiselton Dyer concurs, and he moreover wrote a short time ago to caution me against being too sanguine that the cultivation of Coca would be a commercial success, or advising me at any rate to discount very largely the reports which had been spread abroad about it.

Mr. Hooper has analysed three samples of the leaves taken from the bushes at Barliyár. In his first attempt to isolate the alkaloid in a crystalline state he was unsuccessful; in his second attempt he succeeded in obtaining the alkaloid as crystalline, but with an admixture of some acrid principle which rendered it useless as an anæsthetic; his third attempt ended in complete success, and the alkaloid manufactured by him has been used and approved of by Dr. Brockman in his surgical ophthalmic operations. Surgeon-General Doctor Furnell reports that the simple chewing of the leaves is productive of relief in cases of spasmodic bronchial coughs, and suggests that *Cocaine* should enter into the composition of cough lozenges. Mr. Hooper's analyses show that the leaves of the bushes grown at Barliyár are very rich in the alkaloid, as he extracted from them $\frac{1}{2}$ per cent.

2. *Erythroxylon monogynum*.—The leaves of this plant are said to have been largely eaten during the famine by the natives of several districts where it grew wild in abundance, and it was thought probable that the leaves of this plant might be found to contain an alkaloid with properties similar to that which is obtained from the *Erythroxylon coca*; and Dr. Cornish just before he left India wrote to ask me to have the subject investigated. As the plant does not grow upon these Hills, I applied to Mr. Gamble for his assistance, and he has sent me several small consignments of the leaves, which had been collected and dried by Mr. Higgins, Deputy Conservator of Forests in the Cuddapah District. These consignments I handed over to Mr. Hooper, who, after his analyses of them, reports that they contain no anæsthetic property at all analogous to that which is found in *Erythroxylon coca*; but that they do contain a bitter and a tonic principle which may have mitigated the pangs of starvation.

3. *Taraxacum officinale*.—Sir Joseph D. Hooker in the Flora of British India observes that—"It is remarkable that this common Himalayan plant should not be found in the Khasia or Nílgiri mountains even as a garden escape." This reproach to these Hills is now removed, and the aggressive dandelion may be found advancing in all directions about Ootacamund. It bids fair to cover our lawns with its yellow blossoms as in England, while in the deeply tilled soil of the cinchona estates such an abundance of it with roots 18 inches long could be collected as would supply the wants of all the Medical Departments in India.

4. *Medicinal Rhubarb*.—There are a few plants of this herb in the gardens at Ootacamund and in Sim's Park at Coonoor, but they have not thriven as well as could be wished. I shall try this plant under varying conditions during the next year in the hope of obtaining better results.

5. *Hyoscyamus*.—This valuable medicinal plant, which can be grown very well upon these Hills, has not been raised in any quantities on account of all demand for it having ceased.

6. *Eucalyptus Globulus and other species*.—During the year 20 lb. of the oil of the leaves of the *Eucalyptus globulus* were sent to the Madras Medical Department. The last consignment was sold at the rate of Rs. 3-3-0—5 shillings per pound being the wholesale English quotation.

The processes required for the manufacture of the oil are very simple and inexpensive, and I think it is a pity that those who have large plantations of these trees should not endeavour to utilize them for this purpose as well as for fuel. The way to extract the oil is as follows:—

The young shoots, having perfectly matured but not old leaves, are passed through an ordinary chaff-cutter and cut into chips not exceeding one inch in length; the smaller the chips the more readily is the oil extracted from them. These chips are then macerated in water over night and put the next morning into a still, which is kept boiling, till the greater part of the fluid has past over as vapor. This is then shaken up with a little common salt to cause the complete separation of the oil from the water; the oil is then decanted from the water and passed through a sheet of filtering paper, when it is ready for sale.

Instead of passing the leaves through a chaff-cutter, it would be better to pass them through some crushing machine, as the object is to smash up the hard cells, which surround the cavities into which the oil is passed by the secreting cells. I do not know of such a machine, but I should think that some modification of the old-fashioned mangle would prove effective.

Eucalyptus obliqua, *E. siderophloia*, *E. piperita*, and other sweet-smelling varieties, all of which are said to yield valuable oils, grow freely on these Hills; they are much more beautiful in their general aspect and their timber is greatly superior to that of the *E. globulus*.

7. *Rhus glabra*.—This is a febrifuge yielding plant, the seeds of which were sent from Kew. The seeds have germinated.

8. *Ipecacuanha*.—I regret to have to report that I lost a considerable number of *Ipecacuanha* plants during the last year. This was owing to my having forced the stock too rapidly during the winter. The number of plants, however, is being again increased as fast as possible and special care will be taken to prevent the recurrence of last year's catastrophe. I have been much disappointed with the growth these plants have made at Barliyár during the past year. That the Ipecacuanha will eventually prove a success I entertain no doubt, but I have to confess that I have still a good deal to learn about the best ways of cultivating it.

9. *Joannesia* (*Anda*) *Gomesii*.—This is a handsome tree, growing to the height of 50 or 60 feet and belongs to the natural order *Euphorbeacæ*. It is a native of Brazil where the bark is said to be used "as a certain remedy for diarrhœa brought on by cold," while the seeds are reported to possess powerful but safe purgative properties. I received seeds of this tree last autumn from Mr. Cameron, Curator of the Lal Bagh, Bangalore, who writes word that it flourishes well there. The seeds have germinated and young plants raised from them.

10. *Acacia homalophylla*.—This is the tree which produces the Australian violet wood. A small specimen fruited sparingly for the first time last year in the Government Gardens in Ootacamund. The climate here, however, seems to be rather too cold for its full development, but I should think that at elevations ranging from three to four thousand feet it would thrive well and might prove an important addition to our timber trees.

11. *Box*.—This at an elevation from 5,000 to 7,500 grows more vigorously than I have ever seen it do in Europe, and I have planted a small plot of ground near the Jail on the Dodabetta estate with the view of finding out if it may not be profitably grown to supply the wood engraver's trade.

12. *Castilloa elastica*.—The few plants of this rubber yielding tree, which were put out two years ago at Barliyár, are growing grandly.

Last winter I went down at the request of Major Campbell Walker, Conservator of Forests, Southern Circle, to inspect the nursery of Castilloas which had been formed in Mr. Ferguson's garden and to advise how they might be best increased. I found the plants in beautiful condition and growing vigorously and I was able to take from them about 150 excellent cuttings. These I planted myself in pots and plunged them in beds of soil which were also made under my direct supervision, and I gave minute instructions as to how they should be treated. Since that time it has been reported—*vide* G.O., No. 766, dated 25th June 1885, relating to a letter from Major Campbell-Walker—that although my instructions had been followed carefully, not a single cutting took root.

This is odd, for when the same instructions are carried out in the Government Gardens at Ootacamund the failures are less than 5 per cent. of the cuttings planted. The failure at Calicut would appear to have been due to a want of judgment in watering the cuttings in their early stage, before the cut ends had calloused over.

When the side shoots are used as cuttings, difficulty has often been experienced in getting the plants raised from these to form a leader and grow upright; they generally sprawl along the ground. To obviate this it is only necessary to cut the young plants back to about a foot from the ground when side shoots will be formed, any of which will of themselves produce a leader.

13. *Ceara.*—This fruits freely at Barliyár and the seed appears to be eaten by birds and deposited in the neighbouring jungle, for young plants have been found growing where they never had been planted by man. If this is so, we may look forward to the Ceara rubber tree becoming a denizen of our ghât forests.

14. *Mangosteens.*—These fruited very well last year at Barliyár and are again this year promising to yield a large crop. The Mangosteen is an extremely beautiful tree and gives a very dense shade. It ought to be grown all over the Presidency.

15. *Litchi.*—This too fruited freely last year at Barliyár; it grows readily from seed and like the Mangosteen deserves to be better known than it is at present.

16. *Carob tree.*—This thrives well both at Barliyár and at Kalhatti, but in both places the trees bear staminate flowers only.

17. *Acacia decurrens.*—This tanning yielding acacia is being grown successfully at Coonoor by private persons, and, I believe, also by Mr. Gamble. It grows fairly well at Ootacamund, but does not fruit. This is due probably to the wet gloomy weather coming at the time when it begins to flower. I have seen it growing magnificiently on the Palni hills where it flowers and fruits freely.

18. *Mahogany.*—Two casks of mahogany seed which had been received by the Kew authorities from Jamaica have just arrived in excellent order. I have distributed all but a few pounds of it; the greater amount going to the Forest Department and to the Agri-Horticultural Gardens at Madras.

19. *Edible Prickly-pear from Cyprus.*—Living specimens were sent to the Government Gardens at Ootacamund by the Director of Agriculture and Revenue Settlement last winter. The fruit had been highly recommended by Dr. Bonavia, Civil Surgeon, Etawah, North-Western Provinces, who thought it might be advantageously grafted upon the wild worthless prickly-pear of the plains. The plants arrived in fair condition and have been planted out at Kalhatti where they are doing so well that it does not seem at all likely that it will be ever necessary to have recourse to grafting them upon the wild plants.

20. The following plants mentioned in my last year's report are all doing well:—

Rhus vernicifera or the Japan Lacquer plant.
Rhus succedanea or the Japan wax plant.

Quilaja saponaria.—The latter was put out last year in the Government Gardens at Ootacamund. It was untouched by the winter frosts and is now more than six feet high.

The *Kumera Aracha* and *Cochin-China tuberous rooted vine* have also been planted out and are doing well.

21. *Waras.*—I was asked last year by Mr. Thiselton Dyer to obtain information for him about this dye. This I have done, and from specimens which I sent to Kew *waras* turns out to be the produce of *Flemingia Grahamiana* and *F. congesta.* With respect to the distinctive characters of these two species, I pointed out that after studying the plants in their living condition, I did not think them sufficiently constant to allow of the two species being kept separate, and in this opinion both Mr. Thiselton Dyer and Professor Oliver now concur. The *waras* yields a beautiful dye when applied to animal substances such as silk or wool, but it is inferior as a dye when used for the purpose of coloring vegetable products such as cotton or linen. Mr. Thiselton Dyer has kindly obtained for me a London expert's opinion upon the value of *waras* and I regret to say that it is not such as is likely to lead one to believe that it will ever become an object of commercial interests. I may mention that when I was in Madras last winter, I saw at the Agri-Horticultural Garden's flower-show a specimen of *waras* in a native dyer's collection which was being exhibited, and from which it would appear that *waras* is not unknown as a dye in India.

22. Mr. T. Hanbury has sent some three hundred packets of seeds from his garden in Italy. Most have germinated, and I shall hope to report upon the more interesting species next year.

IX. Receipts and Expenditure.—*Receipts.*—The receipts for the last year amounted to Rs. 2,077-12-1 and were derived from the following sources:—

		Rs.	A.	P.
Sale of plants and seeds for the—				
Government Gardens	in Ootacamund	1,792	2	10
Do.	in Barliyár	175	14	9
Do.	in Kalhatti	14	8	0
Do.	in Jalap tubers	7	14	0
Do.	in Blue-gum oil	87	4	6
	Total ...	2,077	12	1

The budget estimate was Rs. 4,300. There has therefore been a decrease in the receipts of Rs. 2,222-3-11, or less than half of what was expected has been realized. This is due partly to the small demand there was during the year for plants and partly to a large number of plants having been distributed gratis, which in former years would have been paid for.

Expenditure.—The total expenditure for the year has been Rs. 24,574-12-7 and is detailed thus:—

		Rs.	A.	P.
Government Gardens,	Ootacamund	18,597	9	6
Do.	Barliyár	488	5	2
Do.	Kalhatti	334	14	0
Medicinal Gardens ...	... ...	315	4	4
Sim's Park ...	... ...	1,820	8	5
Stonehouse Park ...	... ...	962	4	3
Church Hill Park ...	... ...	97	13	0
Upper Norwood ...	... ...	1,958	1	11
	Total ...	24,574	12	7

The budget estimate was Rs. 25,450-8-0; a saving therefore has been effected of Rs. 875-11-5

X. Miscellaneous information.—(1) *Catalogue of Plants.*—A list of all the plants, which have been identified in the several Government Gardens, has been made. But no catalogue of them has been printed, but if Government should approve, this might be done next winter.

(2) *Establishment of a stall at weekly markets for the supply and wants of the local planters, gardeners, &c.*—This was proposed two years ago, but it does not now seem necessary to establish such a stall, as everybody, from the European residents to Badaga and Canarese gardeners, apply direct to the office at the Government Gardens for all such seeds and plants as they may require.

(3) *Value of Nilgiri peat as fuel.*—During the past year I have paid some attention to the manner in which peat is formed on these Hills and have experimented upon it, with the view of finding out what its value as a fuel may be. The peat on these Hills is formed entirely from plants belonging to the sub-kingdom *Phanerogamia* such as sedges and other marsh loving plants. There are no mosses which enter into its composition as is commonly the case in the northern and more temperate regions.

The value of the peat as a rule is very inferior to that found in northern countries, and this is apparently due not to any inherent badness of the plants which go to form the peat, but to the great admixture of inorganic substances which are blended with it. The cause of this admixture is due to the amount of soil which every year is carried down from the Hills during floods and spread over the surface of the peat forming swamps. There is, however, some which is very good, notably that which is commonly sold as fuel in Ootacamund by General Baker. This is little if at all inferior to the peat, which is obtained from the bogs of England, Scotland or Ireland. But of this good quality there is, so far as my investigations have gone, a very limited quantity.

(Signed) M. A. LAWSON,
Director.

Return of Seeds, Plants, &c., distributed from the Government Botanical Gardens, Ootacamund, Barliyár and Kalhatti, during the Official Year ending 31st March 1885.

Months.	Fruit Trees.		Timber Trees.		Ornamental Shrubs and Herbaceous Plants.	
	Number of Plants.	Value.	Number of Plants.	Value.	Number of Plants.	Value.
1	2	3	4	5	6	7
		Rs. A. P.		Rs. A. P.		Rs. A. P.
April 1884	..	..	72	18 0 0	285	36 9 0
May ,,	..	..	12	3 0 0	51	12 1 0
June ,,	9	3 4 0	302	53 8 0	680	108 2 0
July ,,	40	10 0 0	191	49 6 0	341	65 12 0
August ,,	8	2 0 0	20	5 4 0	137	34 2 0
September ,,	41	6 8 0	..	..	132	38 11 0
October ,,	30	6 4 0	66	22 8 0	235	57 14 0
November ,,	138	34 8 0	64	16 12 0	670	45 14 0
December ,,	..	..	120	34 8 0	162	18 8 0
January 1885	..	..	..	..	88	20 12 0
February ,,	10	2 8 0	..	..	1,158	77 2 0
March ,,	..	..	149	38 8 0	32	10 14 0
Total ..	276	65 0 0	996	241 6 0	3,971	526 5 0

Months.	Vegetable Flower and other Seeds.		Bouquets and Cut-flowers.			Sundry Receipts.	Total.
	Number of Packets.	Value.	Number of Bouquets.	Number of Cut-flowers.	Value.		
8	9	10	11	12	13	14	
	Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
April 1884	204	62 0 6	..	3	3 15 0	9 5 9	129 14 3
May ,,	279	73 5 0	9	17	21 6 0	8 2 0	117 14 0
June ,,	266	53 12 0	4	10	17 15 9	17 14 0	254 7 9
July ,,	205	62 11 9	3	4	8 14 0	48 12 3	245 8 0
August ,,	170	39 4 6	..	3	3 4 0	79 10 6	163 9 0
September ,,	105	22 12 3	2	28	32 10 0	35 4 9	135 14 0
October ,,	257	63 3 9	4	11	16 4 0	67 1 6	233 3 3
November ,,	118	38 15 9	..	6	0 12 0	42 8 0	179 5 9
December ,,	77	17 10 0	3	..	4 8 0	16 12 6	91 14 6
January 1885	22	7 5 0	2	1	4 4 0	17 7 6	49 12 6
February ,,	93	47 9 9	..	..	..	50 11 0	177 14 9
March ,,	183	78 1 6	1	5	14 2 0	69 8 4	211 1 10
Total ..	1,979	566 11 9	28	88	127 14 9	463 2 1	1,990 7 7

Meteorological Observations from April 1884 to March 1885, on the Government Botanical Gardens, Ootacamund.

Months.	Rainfall.	Days with Rain.	Days without Rain.
	Inches.		
April 1884	3·35		
May ,, ...	5·20	7	23
June ,, ...	5·14	12	19
July ,, ...	1·87	16	14
August ,, ...	6·88	12	19
September ,, ...	3·03	21	10
October ,, ...	22·84	17	13
November ,, ...	10·22	25	6
December ,, ...	4·89	21	9
January 1885	...	9	22
February ,, ...	...	...	31
March ,, ...	·27	...	28
Total ...	63·69	4	27
		144	221

Ootacamund,
5th September 1885.

(Signed) M. A. LAWSON,
Director.

Statement showing the Receipts of the Government Botanical Gardens and Parks for the Official Year ending 31st March 1885.

——	Actuals, 1883-84.	Budget Estimate, 1884-85.	Actuals, 1884-85.
Government Gardens, Ootacamund.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Sale of seeds, plants, &c.	2,185 15 4	3,000 0 0	1,792 2 10
Government Gardens, Barliyár.			
Sale of plants, fruits, &c.	134 14 0	600 0 0	175 14 9
Government Gardens, Kalhatti.			
Sale of plants, &c.	92 4 0	50 0 0	14 8 0
Government Medicinal Gardens, Ootacamund.			
Sale of jalap tubers, &c.	688 13 0	650 0 0	7 14 0
Total ...			1,990 7 7
Add value of drugs supplied to the Indian Medical Department, Madras	...	...	87 4 6
Grand Total ...	3,101 14 4	4,300 0 0	2,077 12 1

Ootacamund,
15th September 1885.

(Signed) M. A. LAWSON,
Director.

Statement of Expenditure on the Government Botanical Gardens and Parks, Nílgiris for the Official Year ending 31st March 1885.

Particulars.	Actuals, 1883-84.	Budget Estimate, 1884-85.	Actuals, 1884-85.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Pay of Curator	3,600 0 0	3,600 0 0	3,600 0 0
Travelling allowance of Curator	155 0 0	..	..
Pay of Curator's office establishment	552 0 0	552 0 0	550 7 10
Total ..	4,307 0 0	4,152 0 0	4,150 7 10
Government Gardens, Ootacamund.			
Overseer and fixed cooly establishment	1,665 12 6	1,728 0 0	1,693 3 11
Temporary establishment	6,116 6 9	3,000 0 0	2,995 2 4
Acclimatization of foreign plants (G.O., No. 874, dated 5th July 1872).	699 8 10	500 0 0	500 0 0
Labelling of plants	53 2 0	550 0 0	415 14 11
Construction of cooly lines (G.O., 5th May 1884, No. 1848). ..	911 9 2	1,879 0 0	1,831 10 2
Contingencies	2,525 11 9	1,000 0 0	1,447 7 5
New works, Drainage	..	1,477 8 0	1,424 10 7
Horticultural implements	..	700 0 0	712 7 7
Painting of the conservatory green house and repairs to propagating house.	..	600 0 0	593 9 8
Cutting down and uprooting Eucalyptus and Acacia on the northern slope of the garden.	..	520 0 0	519 14 6
Purchase of meteorological instruments	..	200 0 0	108 3 0
Herbarium establishment	..	792 0 0	776 0 0
Purchase of cabinets and materials	..	800 0 0	785 15 4
Library	..	1,200 0 0	42 15 3
Repairs of certain damages done to the Gardens (*vide* G.O., No. 5719, dated 17th December 1884).	..	..	599 15 0
Total ..	11,972 3 0	14,946 8 0	14,447 1 8
Government Gardens, Barliyár.			
Temporary establishment	346 5 8	490 0 0	488 5 2
Government Gardens, Kalhatti.			
Temporary establishment	193 0 0	340 0 0	334 14 0
Government Medicinal Gardens, Ootacamund.			
Temporary establishment	317 1 6	350 0 0	315 4 4

STATEMENT of Expenditure on the Government Botanical Gardens and Parks, Nílgiris, for the Official Year ending 31st March 1885—(*Continued*).

Particulars.	Actuals, 1883-84.	Budget Estimate, 1884-85	Actuals, 1884-85.
Sim's Park, Coonoor.	RS. A. P.	RS. A. P.	RS. A. P.
Temporary establishment and contingencies	1,732 3 5	* 2,072 0 0	1,820 8 5
Stonehouse Park, Ootacamund.			
Temporary establishment	591 7 0	1,000 0 0	962 4 3
Church Hill Park.			
Temporary establishment	72 8 0	100 0 0	97 13 0
Upper Norwood.			
Temporary establishment and contingencies	1,000 4 6	2,000 0 0	1,958 1 11
Total ..	20,532 1 1	25,450 8 0	24,574 12 7

* Including amount sanctioned in G.O., No. 843, dated 14th July 1884.

(Signed) M. A. LAWSON,
Director.

OOTACAMUND,
15th September 1885.

LIST of those to whom seeds or plants have been distributed during the year 1884-85.

Buck, Mr. E.C., Simla.
Bleehynden, Mr. R., Calcutta.
Bourdillon, Mr. T.F., Trevandrum.
Cherry, Mr. J.W., Salem.
Collector of Malabar, Calicut.
Chaplain of Wellington, Wellington.
Cameron, Mr. J., Bangalore.
Director, Government Cinchona Plantations, Ootacamund.
Director, Department of Agriculture and Commerce, North-Western Provinces and Oudh.
Edmiston, Mr. W.L., Kótagiri.
Fergueson, Mr. T.J., Calicut.
Fisher, Mr. W.R., Dehra Dún.
Gamble, Mr. J.S., Ootacamund.
Groves, Mr. F.A., Coonoor.
Griffith, Mr. T.R., Kótagiri.
Hooker, Sir. J.D., Kew.
Harvey, Messrs. A. and F., Virdupati.
Hamlin, Mr. E.H., Ootacamund.
Hadfield, Mr. G., Nilambúr.
Murray, Mr. G., Hosúr.
Morgan, General, Ootacamund.
Sheldrick, Mr. H., Nellakóta.
Sullivan, Honorable H.E., Ootacamund.
Sinclair, Mr. H.G., Guynd.
Schmid, Mr. T.W., Kótagiri.
Woodrow, Mr. G.M., Poona.

LIST of those who have been benefactors to the Gardens during the year 1884-85.

Abboy Naidu, T., Madras.
Agricultural Reporter to the Government of Madras, Madras.
Bourdillon, Mr. T.F., Trevandrum.
Cameron, Mr. J., Bangalore.
Duff, The Right Honorable Grant, Ootacamund.
Director, Government Cinchona Plantations, Ootacamund.
Fergueson, Mr. T.J., Calicut.
Griffith, Mr. T.R., Kótagiri.
Gamble, Mr. J.S., Ootacamund.
Hanbury, Mr. T., Italy.
Morgan, Mr. R., Calicut.
Superintendent, Agri-Horticultural Gardens, Madras.
Superintendent, Government Botanical Gardens, Calcutta.
Stone, Mr. O., Wellington.
Superintendent, Royal Botanical Gardens, Shibpur.

ORDER—dated 30th November 1885, No. 1329, Revenue.

Miscellaneous.

The Director submits his report for the year 1884-85 on the progress and condition of the Government Botanical Gardens and Parks on the Nílgiris.

2. *Season.*—The season was not generally favorable to horticultural operations, though the total rainfall was as much as 63·69 inches, the fall of the previous year having been 50·05. The weather was unusually dry up to October, when as much as 22·84 inches were registered in this one month, which caused some injury owing to the amount of wash occasioned. The winter was a mild one, with no severe frost.

3. *Botanical Gardens, Ootacamund.*—Considerable improvements were made during the year in the gardens, the upper part of which, lying between Government House and the Garden cottage, was entirely re-made and planted. The suggestion of the Director that the right-hand bank of the road, leading to Government House, should be built up with a loose revetment is approved. Nothing has yet been done towards the establishment of an experimental kitchen garden. The nurseries have been filled up with plants, raised for the purpose of replanting the demolished sholahs in the upper part of the gardens, and for experimental purposes. It seems the best course to permit the conservatory, facing the entrance gates, to remain standing as long as it is serviceable; when this is no longer the case, it will, as suggested by the Director, be pulled down and rebuilt in some other more convenient spot. The other buildings in the garden are reported to be in a good state of repair. Almost the whole allotment for the construction of cooly lines (Rs. 1,879) was expended. Opportunity was taken, when repairing the bund of the tank below the bandstand, which gave way during the heavy rain in October, to lessen the depth of the tank and strengthen the bund. A fountain will be constructed in the tank during the cold weather.

4. A list of all the plants, which have been identified in the several Government gardens, is reported to have been made. The catalogue should be printed as soon as possible.

5. *Government House Gardens.*—Satisfactory progress was made in clearing the scrub and regrassing the slopes in front of the house, and a green-house was built for the purpose of growing decorative plants.

6. *Stonehouse Park.*—The trees planted in October 1884 are reported to be doing well, though some destruction was caused during the year by cattle. It will not be feasible to enclose the park during the coming year with fencing and such other precautions against cattle, as are possible, should continue to be taken.

7. *Sims' Park.*—The usual necessary repairs were carried out during the year and a new bridle-path is now being made through the sholah, which was added in the previous year to the park. The path will be a great convenience for persons going to and fro between Coonoor and Wellington.

8. *Barliyár.*—Much useful work appears to have been carried out in the experimental garden to which about one acre, which has been cleared of useless overgrowth, has been added. Most of the trees in the garden are reported to be flourishing.

9. *Kalhatti.*—The Director states that the year's experience in this garden has confirmed his opinion that it is not worth the while of Government to continue operations here. In a recent order, the Government have called upon the Director to report upon various localities suggested as suitable for the establishment of Botanical Gardens, and upon receipt of his reply, final orders will be passed regarding the further maintenance of the Kalhatti garden. A garden should, no doubt, be established at Gúdalúr and also at Calicut. It is noted that the Director intends visiting the latter place for the purpose of choosing a suitable site.

10. The subject of the proposed museum for Ootacamund, dealt with at considerable length by the Director, should have furnished matter for a separate communication. The report now under review should have been confined to recording the salient features of progress during the year. The Government agree with the Director in considering that the cost of the building proposed as a museum by Dr. Bidie, Mr. Burrows, and

Mr. Gamble would be excessive, and for this reason, if for no other, their proposal must be negatived. The Director should obtain and submit plans and an estimate for the building suggested by him, when final orders upon the subject will be passed. A definite site for the building should be selected, which need not, necessarily, be in immediate proximity to the Government Gardens. The essential point in the building should be its ready adaptation for extension. The Government are much indebted to the Collector, Dr. Bidie and Mr. Gamble for the trouble they have taken in discussing the question which was submitted to them. Financial considerations, however, prevent the Government from sanctioning the erection, at present, of such a spacious building as that suggested by them.

11. The number of plants in the Herbarium, owing to the kindness of various contributors, considerably increased during the year. The Government are much indebted to the various gentlemen who kindly forwarded specimens to Mr. Lawson. Sanction is accorded to the suggested alteration of the old cinchona laboratory and its use, in the future, as a building for the accommodation of the Herbarium. Plans and estimates should be submitted as soon as possible.

12. *Special Products.*—It seems clearly established that the *Erythroxylon coca* will thrive very well and can be easily propagated from seed in many parts of Southern India. The price of the alkaloid manufactured from this plant has however declined from 2*s.* 6*d.* to 7*d.* per grain during the year, and it seems very doubtful whether its cultivation here could ever be a commercial success. The alkaloid has been successfully manufactured from the plant by the Government Quinologist and used and approved of by Surgeon-Major Drake-Brockman in his ophthalmic operations. The analyses made show that the trees grown in Barliyár are particularly rich in the alkaloid. Specimens of the *Erythroxylon monogynum* which is common in many districts of the Presidency and which has been used, at times of scarcity, as an article of food, were analysed and found to contain no anæsthetic property analogous to that met with in *Erythroxylon coca* but to possess a bitter and a tonic principle, which would mitigate the pangs of hunger.

13. In the review on the report for the previous year, it was noticed that no information was afforded regarding *Taraxacum*, medicinal rhubarb, and *Hyoscyamus*. The Director now reports that the *Taraxacum officinale* is advancing in all directions about Ootacamund. It is unnecessary to pay any further attention to its special cultivation. The plants of the herb producing the medicinal rhubarb have not thriven as well as could be wished. Mr. Lawson promises to make further experiments regarding them. The *Hyoscyamus* can be grown easily on the Hills, but the demand for the plant has ceased.

14. The report contains very interesting information on the processes required for the manufacture of oil from the various varieties of Eucalyptus. The consignment of oil from the leaves of *Eucalyptus globulus*, which was sent to the Madras Medical Department, was sold at the rate of Rs. 3-3-0 per lb., 5 shillings per lb. being the wholesale English quotation. The medicinal use of the oil, made from the various varieties of the Eucalyptus, is, it is believed, rapidly spreading. A paper on the uses and virtues of the oil extracted from the Eucalyptus was recently widely circulated by the Director of Agriculture.

15. The experiments made in the growth of Ipecacuanha during the year were not successful. The number of plants is, however, being increased, and, with further experience, the Director has no doubt that the cultivation of the plant will prove a success.

16. Seeds of the *Joannesia* (*Anda*) *Gomesii* received from the Curator of the Lâl Bagh, Bangalore, were planted during the year and young plants raised; the bark of the tree is said to contain useful medicinal properties. A valuable timber tree, the *Acacia homalophylla*, which produces the Australian violet wood, fruited for the first time during the year. It would probably thrive well at elevations between three and four thousand feet. The *Castilloa elastica* continues to grow very well at Barliyár. The Ceara plants fruit freely and young plants are now found growing where they

must have been sown by birds, and it may from this be hoped that the tree will become a free grower in the ghât forests.

17. The mangosteen, *Garcinia Mangostana*, and litchi, *Nephelium litchi*, fruited freely in Barliyár: both these trees, which are so valuable for their fruits, should be widely cultivated. There is no doubt they would succeed admirably in many parts of the Presidency. A good report is given of the following:—*Rhus vernicifera*, *Rhus succedanea*, *Quillaja saponaria*, *Kumera aracha* and the Cochin China tuberous-rooted vine. The report contains some useful notes on *waras*. The dye was not very favorably reported on when tried in England by Mr. Thomas Wardle (G.O., 25th September 1885, No. 1096).

18. The receipts for the year amounted to Rs. 2,077-12-1, compared with Rs. 4,300, the estimate in the budget for the year. The decrease is accounted for by the gratis distribution of plants which, had the practice of former years been followed, would have been sold. The expenditure amounted to Rs. 24,574-12-7, or Rs. 875-11-5 below the estimate. The saving occurred, principally, in the allotment made for the purchase of cabinets and materials; on the whole, the budget allotments were closely followed.

19. *Miscellaneous.*—There seems to be no object, at present, to be gained by the establishment of a seed stall for seeds in the market at Ootacamund. It is well known that seeds are offered for sale at the Government gardens. The remarks of the Director regarding Nílgiri peat have been noted with interest.

20. His Excellency in Council has much pleasure in again congratulating the Director on the progress made during the year, and notes the remarks he has made in appreciation of the services of the subordinates employed.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secretary to Government.

To the Director of Government Cinchona Plantations, &c.
„ the Director of Revenue Settlement and Agriculture.
„ the Board of Revenue.
„ the Accountant-General.
„ the Superintendent, Government Central Museum.
„ the Surgeon-General with the Government of Madras.
„ the Public Works Department.
„ the Financial Department.
„ the Honorary Secretary, Agri-Horticultural Society, Madras.
„ Deputy Surgeon-General G. Bidie, M.B., C.I.E.
„ the Honorary Secretary, Wynaad Planters' Association.
„ the „ Nílgiri „
„ the „ Yercaud „

Exd. W. H. French.

200 Copies.

P. W. D.

Govt. of [1885] Madras.

REVENUE.

Issued

Recd. Encl.

G.O., 30th November 1885, No. 1329.

NOVEMBER.

Government Botanical Gardens and Parks.

Reviewing annual report of — for 1884-85.

With order

No. 413. Director's office
Ootacamund — Jany 86.

From,

M. A Lawson Esq
Director Govt. Cinchona Plantation
Garden & Park.
Nilgiris

To, The Executive Engineer
P. W. Department
Nilgiris

Sir,

In enclosing a Rough sketch of the proposed museum, I have the honor to request that you will be kind enough to have a proper plan prepared, together with an estimate of the same, in accordance with G. O. No. 1329 d/ 30th November 1885, Revenue para 10, of which I enclose a copy for reference and return.

I have &c

(Signed) M. A Lawson
Director

(True copy)
(Sgd) A C Smith Major R.E.
Executive Engr.

(True copy)
C. Beatty. Colonel R.E.
Supt. Engineer

No. 111 dated 14th Jany 1886.

Comd. to the Supdg. Engr: IV circle.

(Signed) J. J.

S. E. IV Circle.

1886.

P. W. DEPARTMENT.

Current No. 2097.

From

The Supg: Engr. IV Circle

ENCLOS.—

No. 81 E.W.
Dated 16th March 1886.
Received 17th ———

SUBJECT.

Requesting instructions as to whether detailed plans and estimates should be prepared for the Museum at Ootacamund.

DISPOSAL.

C
No. 1123 Dated 19th March 1886

Referred to the Revenue Department for favor of information whether the submission of detailed plans and estimates is desired

Recd 19-3-86. Sd/ J. Shawdenwar
Secy to Govt.

Rev. 2315/86.

2nd Part
2097 P.
3267

No: 81
E.W.

Supg: Engineer's Office, IV Circle
Coimbatore, 16th March 1886

From,

The Superintending Engineer
IV Circle

To,

The Chief Engineer
P.W. Department

Sir,

I have the honor to enclose copy of a letter No. 413 of - January 1886 from the Director of Cinchona plantations, and to request instructions whether detailed Plans and Estimates should be prepared for a Museum at Ootacamund.

2 The approximate cost of a new building for a Museum on the Plan No. 1 given in G.O. No. 1111 W of 14th Jany. 1886 is Rs 5200. This has been calculated by the Executive Engineer Nilgiris at the rate of Rs 2-8- per square foot on the plinth area.

3 The Director proposes that the building

building should be a plain structure of brick in mortar, without any decorations.

3 The Executive Engineer reports that the site for the proposed Museum has not been finally settled, but Mr. Lawson states that the site will be on Government land in any case.

I have the honor to be
Sir
Your most obt servt

P. Beatty - Colonel RE
Supy: Engineer II Circle

ABSTRACT.

No: 1123 C, Dated 19th March 1886.

Referred to the Revenue Department for favor of information whether the submission of detailed plans and Estimates is desired.

19-3-86. (Sd:) J. Shaw Stewart. Col: R.E. Secy: to Govt: P.W.D.

RECEIVED 29 APR 86 REVENUE DEPARTMENT

Mis: No: 2429.

Detailed plans and estimates should be submitted.

Sd/ illegible
ag: Secy: to Govt:

Cotacamund,
21-4-86.

To
The P.W. Deptt: with 2 Engl: papers retd:

B. No 111 W. of 14. 1. 86
No 1123 C. " 19. 3. 86

Public 3267

(1886.)

REVENUE DEPARTMENT.

P. No. C 20 2097

No. 2315.

From The Supg: Engineer, Fourth Circle.

No 76 Dd/ May 3. 1886.

Dated 16th
Received 18th
Rd: 20th
Enclosures 1
Rect 1/5
} April 1886.

Enc: 2

No. 81
Ew.

SUBJECT.

Regesting instructions as to whether detailed Plans and Estimates should be prepared for the museum at Cotacamund.

Ist Issue Card. 1.5.6

No 76 Dated May 3. 1886
P.W.D.

Memorandum.

Endorsement on the Revenue Dept. Mis No 2429 of April 21. 1886.

With adverteence to letter from the Supty Engineer IV Circle No 81 Ew. of 16 March 1886, the undersigned has the honour to state that it is the desire of the Government that Mr Lawson

be furnished with
detailed plans and
estimates for a museum
at Ootacamund.

3.5.86
Ex

No 76 Dat May 3. 1886.

No 1111 Wd/14.1.86.
" 1123 Cd/19.3.86

S E. IV Circle
Dispd 8/5/86

C. No. 8720

P. W. Secretarial.

Note by Budget Section.

Work: Constructing a Museum at Ootacamund

Remarks and References.

Fund: Provincial
Service Head: Civil... Building
Departmental Head: Engineering Works
Amount of Estimate ... ... Rs. 6410
Expenditure in previous year ... ,, "
Allotment in current year ... ... ,, "
Balance required to complete ... ,, "

Total Rs. ... 6410

Note of available funds.

The balance of the reserve with the Government is Rs 4111 only. The Estimate may therefore be sanctioned and ordered to be included in the Budget for 1887-88. The Supt. Engineer also has included the work in his Circle budget for 1887-88.

Budget Clerk.

12-11-86

MWS.
13.11.86.

Rs 6410

IV

Constructing a Museum at Dotacamund.

A specification should be called for from the Executive Engr. before the Estimate is sanctioned.

In the mean time the plans & Estimate can be submitted to Govt. in the Revenue Dept. for approval.

The question of site has to be considered; the S.E. should report on this point.

Accts.
13.11.86.

As regards funds see note at comp S.

Note by Budget Section.

Public Works Department.

Current No. 8720

Letter No. 419 S.E.

Dated the 7th November 86

From the S.E. IV Circle

NOTE OF REMARKS.

1. In obedience to E.W.'s memorandum No. 78 D of the 3rd May 86 the accompanying plans and estimate are submitted for constructing a Museum at Dotacamund. The estimate amounts to Rs. 6410.

2. The proposed building is to consist of a lobby or front room, 12 ft. x 16 ft., and two main rooms, each being 30 ft. x 18½ ft. These two rooms are connected with one another by an archway at one end of the partition wall running between them. The lobby receives an arched doorway in front and an arched window in each side wall; and by an archway in the rear wall it opens into the two main rooms. Each of the two main rooms receives three windows, somewhat larger than those of the lobby, in its outer side wall, and what

may be termed, a dead archway in its rear wall. These two archways are to be at first filled up with brick-in-mud- and no doubt are introduced in obedience to the instruction conveyed in G.O. No. 111 W. of the 14th January 86 to the effect that:-

"The essential point in the building should be its ready adaptation for extension."—

The simple lines of the whole design will readily permit the proposed building being extended at any future time after its construction — should it be desired to do so.

3. The masonry is to be of brick-in-mortar; the flooring is to be of concrete, 6 inches thick, coated with Portland cement; and the roofing is to consist of Nilgiri tiles laid — &c — upon battens resting supported on teakwood purlins and rafters (principal). The total depth of the foundation is to be 3 feet — 1½ ft. of brick-in-mortar resting on a concrete sub-stratum 1½ ft. deep. — The trial-pit shows that clay is met with at a depth of 2½ feet.

4. The scantlings of the roof timbers are safe. — The rates are fair.

5. The plans and estimate are countersigned by the Government Botanist and Director of Cinchona Plantations.

BPH
11/11/86

For orders -
It will be seen from my Budget remarks put up, that no funds are at present available for

for the work.

The question of site has to be determined. That selected by the Director is on the open ground in front of the Crewe Hall buildings, & appears blue on, * or very near, the spot now occupied by the Secretariat Tennis ground.

Ch
12.11.86

P.S. Before the estimate can be sanctioned, it must go to Govt in the Revenue Dept for approval.

—

Dw
W

1047

No 4046 of 17 Nov 86

Sir

The undersigned does not consider the site selected by Mr Lawson is the best that can be found. The building as designed is not ornamental, the trial pit shows that the soil is not favorable for buildings, and it is on or close to a Tennis ground. For a sum of over 60000 it should be spent on a museum, it would be better to spend a little more in securing a sightly situation, which, it is thought, would be best located on the Monuments Mound Hill.

Dw
13/11/86.

Ew
No 4049 of 17.11.86

× Forwarded to the Rev. Dept, with reference to P.W.D. no.

× The above note & S.C.'s letter (G. No. 8720 Fourth Circle) No. 419 dtd 7. 11. 86 with 6 enclos out of which two are plans relative to an estimate for amounting to Rs 64000 for constructing a Museum at Ooty —

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following papers :—

From Colonel J. BEATTY, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Malur, 7th November 1886, No. 419 E.W.

With reference to G.O., No. 111 W., of 14th January 1886, paragraph 10, and your memorandum, No. 76 D., of 3rd May 1886, I have the honor to forward, for sanction and provision of funds, a plan and estimate, amounting to Rs. 6,410, for constructing a museum at Ootacamund, together with report, specification, site-plan, and duplicate abstract of the estimate.

2. These have been approved and countersigned by the Government Botanist and Director of Cinchona Plantations, and the site shown in the tracing is the one selected by Mr. Lawson ; but it is not clear whether Government has yet given their sanction to the open ground opposite Crewe Hall being applied to this purpose.

Note by the Chief Engineer, Public Works Department.

No. 4046.

The undersigned does not consider the site selected by Mr. Lawson is the best that can be found. The building as designed is not ornamental, the trial pit shows that the soil is not favorable for building, and it is on or close to a Tennis ground. If a sum of over Rs. 6,000 is to be spent on a museum, it would be better to spend a little more in providing a sightly construction, which, it is thought, would be best located on the Mountstuart Hill.

(Signed) J. O. HASTED, Colonel, R.E.,
Chief Engineer, P.W.D.

17th November 1886.

No. 4047 C., Public Works.

Forwarded to the Revenue Department, with advertence to Proceedings in that department, No. 1329, dated 30th November 1885, and No. 2429, dated 21st April 1886.

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

17th November 1886.

To the Revenue Department.

GO., dated 15th January 1887, No. 240, Revenue.

Read—again Mis. G.O., dated 25th November 1886, No. 7144, forwarding to the Government Botanist, for remarks, in reference to the note of the Chief Engineer, Public Works Department, papers regarding the construction of a museum at Ootacamund.

Read—also the following letter from the Government Botanist and Director of Cinchona Plantations, dated 14th December 1886, No. 526.

With reference to G.O., No. 7144, dated the 25th November 1886, Revenue, enclosing note from the Chief Engineer, No. 4046 C., of the 17th November 1886, (which, together with the plan of the museum and other papers, I herewith return), I have the honor to say that although I could have wished that the museum should be situated nearer to the Government gardens than is now proposed by the Chief Engineer, it seems necessary that the site on Mountstuart Hill should be adopted on account of the bad nature of the soil in the other two sites.

2. With respect to spending a little more money for the external ornamentation of the building, I have no doubt that this is desirable, as the plan which I originally devised was of the plainest possible description, because if the museum had been placed upon one of the sites originally intended, but now condemned, its ugliness would have been hidden by trees and shrubs.

Order—dated 15th January 1887, No. 240, Revenue.

The Government in this department do not consider it necessary to spend on the construction of the museum a larger sum than was originally estimated for. The plan now submitted is therefore approved and transferred to the Public Works Department.

2. As regards site, it will, in the opinion of His Excellency the Governor in Council, be advantageous to have the museum near the gardens. It is suggested that the question of utilising the ground to the east of the "channel" on the plan may be considered in the Public Works Department. A piece of land in this locality was, it is observed, acquired from Mr. V. Tiruvengadasami Mudaliyar in 1883.

(True Extract.)

(Signed) J. F. PRICE,
Ag. Secy. to Government.

No. 284 C., Public Works.

Referred to the Superintending Engineer, IV Circle, for favor of report on the site to the east of the channel.

2. The return of these papers is requested.

(By Order.)

25th January 1887. (Signed) W. L. C. BADDELEY, Captain, R.E.,
Under Secy. to Govt., P.W.D.

From Colonel J. BEATTY, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 9th February 1887, No. 65 E.W.

As directed in your endorsement, No. 284 C., of 25th ultimo, I have the honor to report that there is no objection to the "ground to the east of the channel" shown in the site-plan being selected for the Ootacamund museum, and the estimate requires no alteration. I therefore return the papers unaltered.

ORDER—dated 3rd March 1887, No. 647 W., Public Works.

The estimate, amounting to Rs. 6,410, for constructing a museum at Ootacamund, on the site to the east of the channel, is sanctioned, and a sum of Rs. 1,000 is appropriated for the work from the Provincial reserve with the Government. The balance of the estimate will be provided in 1887-88.

2. This sanction has been registered as Provincial No. 189 W. of 1886-87 and classified as Civil Buildings, Original Works.

(True Extract.)

Captain, R.E.,
Under Secy. to Govt., P.W.D.

To the Superintending Engineer, IV Circle, with five enclosures.
" Examiner, Public Works Accounts, with duplicate abstract estimate.
" Revenue Department.
" Newspapers.

Exd. F. R. Bantleman.
Spare Copies

1886.

P. W. DEPARTMENT.

Current No. 4448/87 20

From

Revenue Dept

ENCLOS.— 7

No. 240

+ 2 plans

Dated

Received Jan 15. 1887

" 21. "

SUBJECT.

"Museum at Ootacamund.

proving of the plan submitted
recently a— and suggesting that
the question of widening the
ground A. the east of the channel
as shewn in the plan for the site
of the museum may be considered
in the PWD

DISPOSAL.

No. 254 C. Dated 25 Jany 1887.

Referred to the S.E. IV
for report, on the site
the east of the channel.
Return of these papers
requested.

(B.O.)

(S.O.) W.S.C.B.

DJW.

following: 246-7 C of 1. 11. 86. dest 25-1-87

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1887} Madras.

PUBLIC WORKS.

Dated March, 3rd.

Read. Encl.

G.O., 3rd March 1887, No. 647 W.

MARCH.

Museum

Estimate of Rs. 6,410 for constructing a — at Ootacamund, sanctioned, and Rs. 1,000 appropriated for the work.

No. 419 Ests.

Supg. Engineers Office, 4th circle.
Camp Malwi 7th November 86.

From

The Superintending Engineer
Fourth Circle.

To

The Chief Engineer,
P. W. Department.

Sir,

Enclosures 5
1 Estimate
1 Duplicate abstt
1 Plan
1 site plan
1 Report.

With reference to G.O. No: 111 W of 14th January 1886, para 10, and your Memorandum No. 76 D of 3rd May 1886, I have the honor to forward for sanction and provision of funds a plan and estimate amounting to Rs: 6,410 for constructing a museum at Ootacamund; together with report, specification, site plan, and duplicate abstract of the estimate.

2. These have been approved and countersigned by the Government Botanist

Forwarded to the Revenue

Botanist, and Director of Cinchona Plantations, and the site shown in the tracing is the one selected by Mr. Lawson; but it is not clear whether Government has yet given their sanction to the open ground opposite Brewe Hall being applied to this purpose.

I have the honor to be,
Sir,
Your most Obedt. servant.

L. Beatty. Col: RE,
Sup.g Engineer, 4th circle.

SUPG: ENGINEER'S OFFICE
NO. 739W
27 JAN. 87
P. W. D.
FOURTH CIRCLE

P.W.Cn°. 8720 A

1139/87

Encls. 8

From,

The Supg: Engineer.
IV Circle.

To,

The Chief Engr.
P.W. Departt.

Dated 17th November 1886.
Recd 25

No. 419
E.W.
Encls: 5

Museum at Ooty.

Forwards for sanction and provision of funds an Estimate &c amounting to Rs. 6410 for constructing a —

Rev. 937/86
Rev. 1039/86

P.W. Department

Note by the Chief Engineer P.W. Dept
No. 4046 dated 17th November 1886

The undersigned does not consider the site selected by Mr. Lawson is the best that can be found. The building as designed is not ornamental, the trial pit shews that the soil is not favorable for building, and it is on or close to a Tennis ground. If a sum of over 6000 Rupees is to be spent on a Museum, it would be better to spend a little more in providing a sightly construction, which, it is thought, would be best located on the Mountstuart Hill.

(Signed) J. O Hasted Col. RE
Chief Engineer PWD

No. 4047 C dated 17th Novr. 1886

Forwarded to the Revenue

Department with advertence to the
Proceedings in that Department
No 1329 dated 30th November 1885,
and 2429 dated 21st April 886.

SUPG: ENGINEERS OFFICE
NO. 731
27 JAN. 87
P. W. D.
FOURTH CIRCLE

Encls. 1

(Signed) J O Hasted Col RE

Secretary to Govt W D

To The Revenue Dept

En: 2
P.W. 1139/87

(True Copy)

P. Pereira

Head Clerk W. Secretariat

Revenue Department.

21 JAN 7
DEPARTMENT

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Read Again Minute by H.E. dated 25th Novr 1886, No 7144, forwarding to the Govt Botanist for remarks in reference to the note of the Chief Engineer, Public Works Deptt, papers regarding the construction of a Museum at Botacamund.

Read also the following letter from the Government Botanist &c., dated 14th Decr 1886, No 526.

With reference to G.O. No 7144 dated the 25th Novr 1886, Revenue, enclosing note from the Chief Engineer, No 4046 C of the 17th Novr 1886, (which together with the plan of the Museum, and other papers, I herewith return) I have the honor to say that although I could have wished that the Museum should be situated nearer to the Government Gardens, than is now proposed by the Chief Engineer, it seems necessary

necessary that the site on Mount Stuart Hill should be adopted, on account of the bad nature of the soil in the other two sites.

2. With respect to spending a little more money for the external ornamentation of the building, I have no doubt that this is desirable, as the plan which I originally devised, was of the plainest possible description, because if the Museum had been placed upon one of the sites originally intended, but now condemned, its ugliness would have been hidden by trees and shrubs.

Order thereon, 15th Jany 1887, No 240.

The Government in this Department do not consider it necessary to spend on the construction of the Museum a larger sum than was originally estimated for. The plan now submitted is therefore approved and transferred to the Public Works Department.

2. As regards site, it will, in the

opinion of His Excellency the Governor in Council, be advantageous to have the Museum near the Gardens. It is suggested that the question of utilizing the ground to the east of the 'channel' on the plan, may be considered in the Public Works Department. A piece of land in this locality was, it is observed, acquired from Mr. V. Piruvengadacami Mudaliar in 1883.

(True Extract)

Reddiethed
Ag. Under Secretary

To
The Govt. Botanist
P. W. Department
with 7 Encs: ret'd

ck

P.W.C. No: 4444

SUPG: ENGINEER'S OFFICE
NO. 739
27 JAN. 87
P. W. D.
FOURTH CIRCLE

1139/87

P. W. Dept.
To be returned with reply.

R 21.1.87

Encl: 7
(+ 2 plans)

No 284 C of 25th Jany 1887.

Referred to the Supdg. Engineer IV. Circle, for favour of report on the site to the East of the Cleared -

The return of these papers is requested -

(By Order)

Wm Borradaile, Capt. R.E.
Under Secy. to Govt. P.W. Dept.

To The S.E. IV. Circle, with copy of memo No 4046-7 C of 17.11.86.

Referred

Enclosures Nos: 1—8 of a letter No: 65/EW of 9th Feby 1887 from the Superin:- tending Fourth Circle.

1 Chief Engineer's Endorse:- ment No: 284 C of 25th Janv: 1887, requesting to report on the site to the East of the Channel for a Museum at Ootacammnd with 7 Enclosures.

Supdgengrs: Office, 4th Circle.
Coimbatore 9th Febmary/87.

No 65/EW.

From

Colonel J. Beatty RE.,
Superint'g Engineer,
Fourth Circle.

To

The Chief Engineer,
P. W. Department.

Sir,

Enclosures 8
1 Endorsement of Govt: P.W.D. No: 284 E, dated 25th Janv: 1887.
1 Note by Govt: D.P.W. to Rev: De:- partment No: 4047 C dated 17th Nov: 186
1 Letter of E.E. to Chief Engr: No: 419/W of 7th Nov: 186.
1 Estimate
1 Duplicate abstt
1 Plan
1 site plan.
1 Report.

As directed in your Endorsement No 284 C of 25th ultimo, I have the honor to report that there is no objection to the "ground to the East of the Channel" shown in the site plan being selected for the Ootacammnd Museum, and the estimate requires no alteration.

I therefore return the papers unaltered.

I have the honor to be,
Sir,
Your most Obedt: Servant.
J. Beatty - Col: RE,
Supg. Engineer 4th circle

P.W.C. No 1139.

From,

Col. J. Beatty. R.E.
Supg Engr 4th Cir

No 1114 d/14.1.86
" 762 d/3.5.86.
" 4046.7 C d/17.11.86
" 1123 C d/19.3.86
" 284 C d/25.1.87

Dated 9th
Read 11 } February 87

No 65
P.W.
Enclo: 8.9
(+2 plans)

Museum at Ootacamund.

1-545 C 4/12-2-87

Reports that there is no objection to the ground to the east of the Channel being selected for — and the papers returned unaltered.

Returned

B & R
Works

No 647 W.

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

March 3rd 1887

READ the following

From the Supg: Engineer IV Circle N. E. No. 419 Env. dated 7th November 1886
Note by the Chief Engineer P. W. Dept. H. E. No. 4046 C dated 17th November 1886
Endorsement thereon by the Secy to Govt. P. W. D. H. E No. 4047 C dated 17th November 1886.
Proceedings of Government Revenue Dept. H. E. No. 240 d/25 January 1887
Memo to Superintending Engineer IV Circle N. E. No. 284 C d/25th January 1887
From the Superintending Engineer IV Circle N. E. No. 65. E. dated 9th February 1887.

10

The estimate amounting to Rs 6,410, for constructing a museum at Ootacamund, on the site to the east of the channel, is sanctioned, & a sum of Rs 1,000 is appropriated for the work from the Provincial Reserve with the Government. The balance of the estimate will be provided in 1887-88.

2. This sanction has been registered as Provincial No. 189 W. of 1886-87 and classified as Civil Buildings, original Works.

To
The Supg: Engr IV Circle with 5 enclos.
" Ex. P. W. Circle with the duplicate abs. estimate.
" Revenue Department.
" News Papers
(Secy: Rev: Dept for favour of countersignature)

19.2.87



To the Hon. P.P. Hutchinson

Print soon

J ~ 83/14 / 3/2/87

15 N / 3/3

Circ. 28. 2. 87. R 3 3 87

1139

Govt. of {1887} Madras.

PUBLIC WORKS.

Dated 4/3/87

Recd. Encl.

G.O., 3 March 1887, No. 647

Museum

Estte of Rs 6,410 for
Constructing a ——
at Ootacamund,
Sanctioned ~~at Rs~~
1000 appropriated for
the work.

9/6

Superintending Engineer's Office 4th Circle.
Coimbatore 31st May 1887.

No. 224
E.W.

FROM,

COLONEL J. BEATTY R. E.,

SUPERINTENDING ENGINEER,

FOURTH CIRCLE.

To, The Chief Engineer
P.W. Department

SIR,

With reference to para 2
of G.O. No. 1272 W. dated 10th inst,
I have the honor to report that
the expenditure incurred on
the proposed Museum at
Ootacamund was Rs 999 on collec-
tion of materials, which can
be transferred at full value
to the works noted below: —

Tiles — Hobart Girls' school

Bricks — Government house
and this will be done

I have the honor to be
Sir
Your Most Obt Servt
J. Beatty. Col. R.E.

Supg Engr 4th Circle

Bo hw 12 24 W 10.5.87
Bo HB3C " 26.3-87
Bo 6447 " 3.3.87
hw 284C " 25.1.87
hw 404 467 404 JC " 17.11.86
" 762. " 3.5.86
" 1123C " 19.3.86
Bo hw 111 W " 14-1.86

PWC № 4156 √

FROM

COLONEL J. BEATTY R. E.,
SUPERINTENDING ENGINEER,
FOURTH CIRCLE.

(6)

To The chief engineer,
P. W. Departt:

Dated 31st May 1887.
Recd: 2.6.87

No. 227
4W.

ENCLO:

No 157 W of 1887

Museum at Ootacamund

Informs that the expenditure incurred on the proposed — can be transferred to certain other works.

The proposed transfer should be carried out and the value, adjusted in the usual manner

W.M.
3.6.87

Jou
6/6/87.

15 11/87

D
6/6

To
The Supg Engr IV Circle
Executive of P.W. Accts

Ord 47 VI
dt 16.6.87

W.M.
6.6.

W. th order

Dw
6/6

C. 3-6-87