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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue DEPARTMENT

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GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

1852/1.

20th November 1878, No. 1,852.

Read the following papers :—

No. 216. Proceedings of the Board of Revenue, dated 27th August 1878, No. 2,400.

Read the following letter from R. W. BARLOW, Esq., Acting Commissioner of the Nilgiris, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Ootacamund, 12th August 1878, No. 107 :—

I HAVE the honor to submit, for the orders of the Board and Government, the report of the Forest Commission appointed in Government Order, Revenue Department, No. 82, of the 16th January last.

2. Mr. Johnson, the late Acting Assistant Commissioner, who attended the meetings and tours whenever the Acting Commissioner was unable to do so, concurs in the report.

3. A copy of this report and minute of dissent have been forwarded to Government direct for information.

P.S.—The map of the Paranganad Division will be forwarded in a few days. The map of the Todanad Division and a key map of the Nilgiri Hills, showing the position of each nad or division, are sent under a separate cover.

ENCLOSURE No. 1.

From the Forest Reserve Commission appointed under G.O., dated 16th January 1878, No. 82, to the Acting Secretary to the Board of Revenue.

WITH reference to G.O., No. 82, dated the 16th January 1878, directing that a Commission be formed to go through the divisions of Todanad, Paranganad, and Kunda of the Nilgiri District for the purpose of selecting and reporting on the forests to be reserved in each, we have the honor to report that we have inspected the whole of the woodlands in the two first-named divisions, and beg to submit the conclusions at which we have arrived regarding them.

We have postponed the examination of the Kunda Division until after the south-west monsoon, as there are no applications for waste lands in that division, we considered it advisable to dispose of the other portions of the Hills first.

2. In making our selection of the forests to be reserved, we have been guided by the following considerations :—

(1.) Water-supply.
(2.) Fuel-supply.
(3.) Shelter and pasturage for Toda Buffaloes.
(4.) Supply of moss for Cinchona plantations.

3. As regards the first point, without considering the possible effect of trees on rainfall and climate, we have considered as beyond dispute the facts that woodlands exercise a most beneficial effect in the retention of water and the regulation of the supply, and that any extensive denudation near the sources or along the courses of streams must of necessity be followed by destructive floods and equally fatal droughts.

The accompanying maps show that very nearly every shola is close to a stream, and on this consideration alone we think that only a very small portion of the woodland remaining in Todanad and Paranganad should be given over to the planter's axe.

4. For fuel, the public will have in future to depend mainly on Australian plantations; only such sholas as are within six or eight miles of the settlements and within easy access of roads could be utilized for firewood.

5. The sholas in the immediate neighbourhood of Todamunds we consider should be retained in the hands of Government; we have not therefore recommended any so situated being made available for sale.

6. As regards moss for the Cinchona plantations, the Superintendent states that all the sholas in West Todanad within a radius of about six miles of the plantations do not produce more than enough moss for the Nedivattam and Pykara gardens.

We are not however of opinion that any *wholesale* reservation should be made on this account; if the Superintendent's statement is correct, and so large a tract of woodland is required for the production of moss, then the Government plantations can serve no useful

purpose as models, or as encouragement for the growth of the bark, for no private proprietor could command the requisite supply of moss. It appears, moreover, still to be a moot point whether coppicing is not as advantageous as mossing, and for purposes of experiment a much smaller area of Cinchona than is now under cultivation would suffice.

7. We have taken aesthetic considerations into account only where we found sholas in close proximity to main lines of communications; in all such cases we consider that the woods should be reserved.

8. The first division inspected was Todanad; this is the largest of the nads, and in its western part contains more wood than the others, excepting portions of the Kundas.

9. The Todanad boundary extends from the crest of the Hills over the Ouchterlony valley on the west, northwards down to the Moyar at the Mysore and Wynaad tri-junction, thence eastwards for about eighteen miles along the Moyar river, then southwards from the river to the Orange valley, and on to the Rallia plantation, four miles west of Kotagiri, then westwards along the high ridge above Wellington to the settlement near Dodabet. The boundary then runs from the other side of the settlement near Fair Lawns along the Avalanche road for some distance, then westwards along the high Eramaibettu and Betmand ridge to Mukurti and Nilgiri Peak.

10. The area within these limits is about 306 square miles, of which 159 square miles are on the plateau; the northern slopes from the Nedivattam Cinchona plantations to the Orange valley and the tract between the foot of the slopes and the Moyar (measuring 147 square miles) form the remaining portion of this division.

11. Regarding the Moyar valley tract, we would not propose to reserve anything there; the country has a most evil and well-deserved reputation for extreme unhealthiness, and extensive clearings of the scrub and jungle would be beneficial; the growth on the stream margins should alone be left intact.

12. The village of Masnagudi on the Mysore road lies in this tract, also the Government Sandalwood plantations, four or five coffee estates, and a few hamlets; the portion of this tract lying to the east of the Segur road is almost altogether uncultivated and uninhabited; the remains of some deserted villages there seem to show that the country was once not so unhealthy as it now is.

13. The northern slopes are for the most part unculturable, being precipitous, rocky, and not well wooded: the only trees are on the margins of ravines, and these should as usual be reserved, but with these exceptions any applications for land either on the slopes or in the valley might be unreservedly complied with.

14. The Todanad plateau, extending as it does for more than thirty miles from east to west, presents in its different parts great variety of woodland aspect; the western portion is fairly covered, while the country east of the Segur road is absolutely bare of wood, if we except a few small sholas on the main road to Kotagiri and adjoining the Todamunds by Kukalbetta.

15. The very small extent then of wood that still remains in East Todanad should be strictly reserved; it covers not more than 500 acres.

16. Regarding West Todanad, a portion adjoining the Ootacamund settlement and extending to Sandy Nullah, Brier Shola, Governor's Shola, and Fair Lawns, has been given up for public recreation purposes (G.O., No. 7, dated 4th January 1878); it is for the most part bare; the few small sholas in it must be reserved.

17. North of this tract and between the Pykara road and the northern crest of the Hills are the villages of Sholur, Kalhatti, &c., and the Densandle Tea Estate; the unoccupied land in this part is fairly wooded, and some of the sholas are very fine; on every account it seems advisable that nearly all of them should be reserved; they are at the sources of two large streams flowing into the Moyar and into the Bhavani; they are within easy reach of the settlement; there are several Badaga villages and Todamunds near them, and they are the only sholas from which moss can be obtained for the "wood" Cinchona plantations when the Pykara river is in flood. We have marked off three of these sholas which can with the least disadvantage be made available to applicants.

18. The tract adjoining the above on the west contains the Pykara and Nedivattam Cinchona plantations and the Glenmorgan Estate; there is but little woodland unoccupied here, and almost the only good shola left is about to be put up to auction on Mr. Shubrick's application. There is one other fine shola at the crest which has been applied for but it should not be granted as it immediately adjoins the Cinchona gardens and is close to the Pykara river; the other small sholas are all on streams.

19. The next section of West Todanad lies south of the road between Pykara and Nedivattam, and west of the Pykara river, its southern extremity being Mukurti Peak; it takes in both sides of the Vellangiri range of hills and a large portion of it is occupied by the Tea plantations under the care of Mr. Teare.

The outer limits of these estates, acquired under eight applications, embrace an area of 4,076 acres, but nearly the whole of the forests within them have been cut out as

reserves—1,273 acres in all. We think that a small portion of these woodlands may be granted to the proprietors of the estates, and have marked on the map those we propose to give.

There are a few good sholas near to Nedivattam, and some to the south of Mr. Teare's southernmost estate, but these are all immediately at the heads of streams on which the whole of the Ouchterlony valley is dependent for water, and we were credibly informed that even now the supply of water there during two or three months of the year is barely sufficient for pulping and other purposes.

We are of opinion therefore that all the woodlands on the western crest excepting the portions marked off in the map and surrounded by Mr. Teare's plantations should be strictly reserved.

There are also a few small sholas on the eastern slopes of the Vellangiri range, all at the heads of tributaries of the Pykara river; these should also be reserved.

20. Eastwards from and near Mukurti Peak is some extent of scattered forest, each piece at the head of a small stream, and as the basin in which these sholas are situated forms the source of the Pykara river, this tract should be reserved.

21. The Pykara valley is curiously bare of any growth. Between the river and the Pykara road are some good sholas, but on account of their proximity to the main road and in consideration of the requirements of the Todamunds in and near them, we cannot recommend that any of them should be made available for sale.

22. Between the Pykara river and Governor's shola there is no woodland of any extent; the small scattered sholas should, we think, be reserved.

23. The neighbourhood of Krurmund is fairly wooded; while proposing to reserve the greater part of the woodland in that direction, we have marked off some which might with comparatively small disadvantage be made available for sale under the Waste Land Rules.

24. The last and most important section of Todanad to be considered is the south-eastern portion, from the Krurmund river on the west to Nanjanad and Governor's shola on the east, and from the Krurmund road on the north to the Kunda boundary on the south. This tract contains more and finer woodlands than any other part of Todanad, and inasmuch as it lies within comparatively easy distance of the Ootacamund settlement, the sholas on it are of special value; some of them have been acquired and the wood felled; the bared hill side so prominent on the south-west of the station over Nanjanad is the result of an application of the late Mr. McIvor's which forms the subject of Board's Proceedings, 6th November 1875, No. 3,045.

25. The sholas in the western portion of this tract are at the sources of the main stream and the affluents of the Krurmund river, a very important tributary of the Pykara; the rest of the sholas are in basins from which rise many small water-courses, which join and flowing southwards under the black bridge on the Avalanche road form an important affluent of the Kunda river.

26. In consideration of the importance of keeping the sources of water-supply protected, we feel bound to recommend that nearly the whole of the woodlands here should be reserved, and we think that if those sholas which we have marked off, as to be considered available for sale, be cleared, the limit has been reached to which denudation can be carried without great disadvantage.

27. If our propositions with respect to Todanad be accepted, the proportion of reserves to the whole extent of woodlands on the plateau will be as follows:—

	ACRES.
1. Total area of Todanad	101,760
2. Area of Government forests	11,700
3. Area of forest proposed to be reserved	10,800
4. Area of forest proposed to be made available for sale ...	900

We thus recommend that nine-tenths of the whole be reserved; and in making this recommendation we wish to add our opinion that this is the *minimum* extent that should remain in the hands of Government. There can be no doubt that denudation is in the highest degree detrimental to the regulation of the water-supply, and that the clearing of each shola, however small, does some harm; in this view we think it would be better even that *all* the remaining woodlands on the plateau should be reserved than that the area we now propose to give up for planting should be extended.

28. The Paranganad Division, which we next inspected, extends from Todanad on the west to Kallar, Rungasami's Peak, and Moyar on the east, and from the Moyar on the north to the Coonoor river on the south.

It embraces, exclusive of Coonoor and Kotagiri settlements, 91 square miles of plateau and 40 of slopes.

29. Nearly the whole of the plateau is absolutely bare of woodland of any kind; in every direction nothing but cultivated and fallow valleys and rocky unculturable hill sides meet the eye. At the crest and on the slopes alone a few sholas remain.

30. The woodland in the valley of the Coonoor river above the ghaut, Government have already ordered to be strictly reserved, and the large sholas commencing near Lady Canning's Seat and clothing both sides of the Burliar stream, should also for obvious reasons be reserved; the clearance of these would probably result in the destruction of portions of the ghaut, and in all communication with the Hills being interrupted after every heavy fall of rain.

31. In the valleys of Saint Catherine and Kotagiri streams there is hardly any woodland left.

Near Kilkotagiri and Kodanad a very few fine sholas remain; we are of opinion that too much has already been cleared and granted for clearing in this direction; the reasons that induced Government to direct that all the remaining woodlands in Mekanad should be strictly reserved, apply with even greater force to the Paranganad Division, and whatever still remains should be reserved.

32. There are one or two points to which we would, in conclusion, request the attention of Government. Of these, the first in importance is the desirability of very largely extending the Government plantations on these Hills; there can be no doubt that in every direction forest has been felled without any regard to ultimate consequences, and that, however much we may now class as "Reserve," the process of denudation will go on as surely as ever, even if more slowly; we saw numerous instances of sholas partially destroyed by fires, and this cause of destruction will continue to operate.

We are of opinion that the Government should without delay proceed to apply the remedy for the acknowledged evils resulting from extensive clearings; we think that judgment in the selection of sites and care and liberal outlay for the first three years are all that are required to ensure success; and when successful, such plantations must give a very considerable direct return, besides conferring indirect benefits, the extent of which it would be difficult to estimate.

33. Regarding the demarcation and survey of the woodlands which the Government may decide are to be reserved, we would suggest that this be deferred until the question of grazing and other communal reserves has been definitely decided; if a number of small pieces of shola and swamp are now permanently demarcated and surveyed, and it be afterwards determined to reserve also the interlying plots of grass, then considerable expense will have been unnecessarily incurred and much time wasted. One of our members dissent from this suggestion. Memorandum of dissent is attached.

34. We regret we have been unable to submit our report earlier; each member of the Commission had his own ordinary duties to attend to, and it necessarily often happened that those duties prevented one of our members from proceeding on inspection, and the others had to wait till his services were again available.

(Signed) R. W. BARLOW, Acting Commissioner,
(,,) J. G. CLOETE, Lt.-Col. Dy. Supdt., Revenue Survey, } Members of the Forest Reserve Commission.
(,,) N. J. JAGO, Major, Deputy Conservator of Forests,

ENCLOSURE No. 2.

MEMORANDUM.

Paragraph 33.—I am of opinion that the forest reserves should be marked *at once* and not be delayed till the question of grazing and other communal reserves has been decided, which will probably take a considerable time. Half the difficulties of the land question and fraudulent occupation of forests have arisen from the delay and uncertainties antecedent to obtaining land in fair course. I propose with the consent of my colleagues on the Committee when settling the Kundas that we mark on the sketch maps what we *reserve* instead of what we recommend to be available for public occupation. In the divisions already settled, my difficulties as Commissioner are great till stones are put round what is considered *forest* to be reserved. It is, in my opinion, of the first importance that applications for land should not be delayed for an indefinite period, and though I now know that the Commission has decided that certain forest is available for occupation, still as regards the rest the question constantly arises *what is forest*. The gradations between forest and light forest and scrub are numerous, and difficult to be decided, and opportunities for fraud can only be put a stop to either by demarcating all reserved forests distinctly as soon as possible, or by holding the Waste Land Rules in abeyance in frequent cases for some time to come. The latter course I most strongly deprecate.

OOTACAMUND,
26th July 1878.

(Signed) R. W. BARLOW,
Acting Commissioner.

(True Copy.)

(Signed) J. G. CLOETE, Lieut.-Col.,
Depy. Supt., Revenue Survey.

ENCLOSURES Nos. 3 and 4.—Maps.

THE report of the Forest Reserve Commission will be submitted for the orders of Government with reference to the Government Order quoted.

2. The examination of the Kunda Division has been deferred until after the south-west monsoon; and the reservation of the whole extent of woodland remaining in Mekanad has already been directed. The report deals with the other two divisions, and the Commissioners state that in making their recommendations they have been guided by a consideration of the water and fuel supply, the requirements of the Todas for pasturage and of the Government for growing Cinchona. The area of Todanad is 300 square miles, of which 150 are on the plateau; the Commissioners do not propose to make any reservation in the Moyar valley tract and on the northern slopes except the ravines and growth on the margins of streams; they think that the woodlands in that portion of the division east of the Segur road should be strictly reserved, and most of the forest to the west of it; they have marked some sholas in the tract between the Pykara road and the northern crest of the Hills, on the western crest adjoining some Tea plantations, and in the neighbourhood of Krurmund, as available for disposal to applicants, and do not recommend the alienation of any further extent of woodlands; in fact, they are of opinion that nine-tenths of the whole area of forest be reserved.

3. As regards Paranganad they state that nearly the whole of the plateau is absolutely bare, at the crest and on the slopes alone a few sholas remaining; they are opposed therefore to any extensions of clearance in this direction.

4. The importance of extending the Government plantations with a view to counteract the effects of denudation, which must continue to a certain extent notwithstanding the reservation suggested, is also prominently brought to notice.

5. A majority of the Commissioners would defer the survey of the woodland reserves until the question of grazing and other communal reserves has been settled to obviate the expense which may be entailed in revising demarcation already completed; Mr. Barlow however dissents from this proposal, and considers that the reserves should be marked at once, it being extremely desirable to put an end to the uncertainty which now exists as to the tracts which are available for occupation with the least possible delay.

6. The Board concur in the recommendations as to the reserves to be formed and the expediency of extending the Government plantations, and think with Mr. Barlow that the demarcation should be carried out at once and maps prepared and made available for the public.

(True Copies and Extract.)

(Signed) C. A. GALTON,
Acting Secretary.

No. 217. MINUTE BY HIS GRACE THE GOVERNOR.

THE question actually awaiting orders on this report is a very small one *per se*. The report does not deal with Kundanad, and the question of reserves of grazing land is not yet before Government. The whole question of reservation on the Nilgiris is therefore not yet in complete form or ready for decision; the actual question at issue therefore is only whether 900 acres or some larger quantity out of 11,700 of forest remaining in Todanaad shall be opened to applicants. The Commissioners who were chosen with full knowledge and concurrence of all Members of Council have done their work in a careful and painstaking manner, carrying out most fully personal investigation of all doubtful parts, and for the careful manner in which they have so far done their task they certainly deserve acknowledgment from Government. They have not hesitated to give the reasons which have influ-

enced their decision, and although different persons may attribute greater or less weight to the several reasons assigned of—

Water supply.
Fuel supply.
Todas pasture.
Cinchona moss.

there is no doubt all deserve consideration, and it would be a shortsighted and mistaken policy to ignore the consideration of any one of them.

I am quite prepared to support the Commissioners' decision, believing they have in no degree gone too far in the direction of reservation; and I should not have added any further remark, but that there seems to me a danger that this question of reservations may be discussed upon too narrow a base.

The value of the European climate of the Nilgiris to Southern India service whether Covenanted, Uncovenanted or Military, cannot be overrated. Anything which should prejudicially affect that climate would be to Southern India a national misfortune. Such a climate with ready access has saved and will save the health and the lives of many valuable officers and thus money to the State.

The Moyar and Bhavani, embracing as they do the Nilgiris whence they derive almost their entire supply, water no inconsiderable area of land in Coimbatore and form an important feeder of the Cauvery. The water-retaining power of the Hills is most important as determining the length of time through which these streams will flow with sufficient volume. Anything which lessens that retaining power will diminish the value for cultivation of the water-supply, although the same volume of water be sent down in a year. If a crop requires ten weeks' irrigation, with a certain daily quantum of water per acre to mature it, it will not be matured at all if it receives a double quantity per acre daily for five weeks and the supply be then exhausted.

There is no doubt that a dense growth of wood checks evaporation, keeps the ground cool, protects banks of streams from erosion, and binds soil upon steep slopes whence, if bare, it would be washed away.

The Nilgiri area is not very large, a little over 700 square miles. When first ascended by Europeans, I gather its condition to have been that the Hills of the plateau were covered with grass interspersed with wood. The hollows and ravines nearly all occupied by strips of wood, or sholahs; the very steep and precipitous slopes by which the plateau is separated from the plains, and the few ravines by which access existed, being filled with dense forest and the whole surrounded by a wide belt of jungle or forest. Then the heated air of the plains had to pass on its way to the plateau over miles of cool forest, and was cooled and filtered, as it may be termed, by its contact with them.

Now the surrounding belt of jungle has been very much reduced, in some parts swept away. The ravines of the Coonoor, Segur, Kotagiri and other Ghats, &c., have been stripped of their forest clothing and much of the slopes have been also denuded, while a very large extent of shola on the plateau has vanished. How far the climate of the Hills has been thereby affected, can probably never be correctly ascertained, for it is only a long series of careful and minute observations which will eliminate the effects of special and accidental causes, and those do not exist from an early date; but there are facts which suggest that it may have been affected, *e.g.*, diminished water-supply in springs around Ootacamund, the reported gradual advance of the whiteants towards Kotagiri, of the striped squirrel towards Ootacamund.

Vide Dr. Gordon's report.

These considerations do not induce me to urge that 100 acres more or less of reserve forest is of any real importance to the district, but cause me to think that the time has come when all remaining forest should be at present reserved absolutely.

It is not, I find, easy to ascertain accurately how much of the Nilgiris was forest naturally, but we do know that much has gone without authority, and we do know that 50,000 acres of land has been granted for coffee, tea, and cinchona estates; and as the tea cultivation in grass is only now a new experiment, and planters have invariably sought for shola land, and obtained it freely, this 50,000 acres may be assumed to have been principally forest and shola land and has been granted and cleared in about thirty years.

The Hills comprise a little over 700 square miles. To assume that half this quantity was forest or shola will probably be in excess of rather than under the facts; the 50,000 acres represent 78 square miles, or nearly $\frac{1}{4}$th of the whole wood covered area. When so large an inroad has been made upon the forest and wood, and the surrounding forest area of the Wynad and Coimbatore have been also so largely trenched upon—about 180 square miles of forest land in Wynad having been alienated during the last twenty years—I cannot refrain from recording my conviction that Government should now hold its hand, that the revenue or other advantages to be derived from further clearing in the Nilgiri bear no proportion to the possible injury to the State; and while I do not for a moment contend that cultivation within reasonable limits and bounds honestly adhered to cannot be combined with all that is needed for the fullest extent of forest conservancy in this district, I think it is necessary that Government should decide to give no further grant and permit no further alienation of forest or shola whatever in the Nilgiris, until the whole district has been reported on, the general question of reservation, whether forest or grazing land, considered, and future policy decided.

(Signed) BUCKINGHAM AND CHANDOS.

9th October 1878.

No. 218. MINUTE BY THE HON'BLE SIR W. ROBINSON, K.C.S.I.

THE (sholah) small woodland question on the Hills is of very considerable importance to planting industry on the plateau—more especially towards the western part of the Todanaad and in the Kundah Districts—where, outside the limits of these sparse woodland, nothing naturally grows save the coarsest herbage on a close, cold and peaty soil of low quality and devoid in a great measure of *humus*, and otherwise wanting in the qualities which constitute a good planting soil; besides being situated under an inclement and somewhat repellant climate during many months of the year.

What is called grass land on the Hills (more especially west and north-west of the Dodabetta Ranges, and in Todanaad and Kundanaad) presents no doubt to the practical agriculturist (Company-manufacturers and land-jobbers of course excluded) a uninviting aspect. It is in a great measure untried for the purposes of higher agriculture; nature has done nothing with it in past centuries to encourage planters, and Government and other pioneers of cinchona planting, &c., have wisely avoided the bleak grass downs of the western plateau in their industries. And where the limits of sholah land have been transgressed by the agents of Government near Neddivattam, &c., the experiment has not been eminently successful. Some further experiments are in course at Neddivattam, which have been transferred to a Company in England before marked success has been established, and so on. One thing is certain, that before all things the planter desires sholah land, and we may very fairly take it for granted that he knows his own business better than Government bureau men.

Every acre therefore of sholah land which is foreclosed to industry by needlessly obstructive reservations is so much lost to the planting interests of the country, if it be deemed wise to encourage the investment of capital in the more precarious tracts of the Hill plateau. If this be desirable, sholah land, so far as our present knowledge goes, gives that fair promise of returns which should not be denied to industry; while we know likewise that its investment on grass land

is probably very precarious and must certainly prove very costly in the long run. So-called reservations of sholah land ought therefore to be very limited, and only put in operation near stations and where rare and special considerations obviously ought to prevail. This is not the character of the Commission's generalizations in this matter—a feature which should lead to their rejection in the main.

Then as to the sholahs themselves—these patches of woodland—generally thin green lines in the upper stages of the natural drainage of mountain sides—consist in the main of aged trees—many in a decrepit condition with much useless brushwood about them; trees of slow growth, which have long passed that stage, when continuance adds naturally either to the growth or value of the timber they contain, whatever that may be (as a rule small indeed as respects these Hill sholahs) for purposes of man. As a rule a stationary condition—perhaps one of decay—is the characteristic of every sholah on the Hills—and I have little doubt that an unprejudiced scientific and practical Forester would come to the conclusion that so far as true forestry and the interests of the country are concerned, the time has more than come when almost every tree which our sholahs contain should at once give place to fresher and more useful forestry or to plantation industry from a mere arboricultural point of view. I confess that I should not expect to find a really scientific person and well-wisher to human industry in this country, holding that a well-managed cinchona forest or a wall-sheltered tea garden, with plantations of Australians around it, would prove a ruinous or evil substitute for any sholah on the plateau within which industry could be carried on. As regards adaptability for plantation purposes it might almost be said that really plantable *downs* is almost limited to sholah land towards the west of the plateau, and that cleared sholahs conveniently form the proper nucleus of a cinchona or tea estate.

N.B. Our Commission consists of the Commissioner, who probably discloses large knowledge of the matter, a Survey Officer, and a Soldier-forester who has no high scientific acquirements and no wide observation.

The Commissioners inform us as to the considerations which guided their thoughts on reservation in paragraph 2 of this report. As regards water-supply:—the non-notice by them of the unfailing south-west Trade, whose burden of moisture is discharged in these high ranges, irrespective of their top-dressing of verdure, ⅔ths of which even in the Todanaad is coarse grass is remarkable. And the silence they observe as to spring-generating and distributing contour of the plateau, were doubtless oversights on their part. But probably Government will see that these are the true climatic and distributory factors with which we have to do; and that neither of them is influenced by a sparse distribution of narrow streaks and small patches of woodland over the wide areas of mountain peak and slope. The only fact which the Commission notice is that narrow strips of wood are sparsely generated along the higher margins of the mountain torrents, where they take their rise on the Hill sides. They notice also the absence of wood in the valleys; for the Pykara river and in fact all the larger streams on the Hills run harmlessly in open and almost woodless valleys until discharged over the precipitous scarps of the plateau into the low country at the foot. Absence of wood is the natural characteristic of the Hill river drainage, and the small exceptions need not be reserved in traverse of natural conditions. The Commission seem to be deeply impressed of the assumed functions of these sparse torrent-side streaks of woodland as retainers and regulators of floods and droughts in the country, but when I find that even the Todanaad Division—where they naturally most prevail—possesses a plateau area of 102,000 acres (159 square miles), of which 12,000 acres or 10 per cent. of the whole area only are woodland—a large portion of which from its inaccessible and rocky character, *ex. gr.*, along the face of the Makurty and Nilgiri Peak Ranges, can never be sought for cultivation—I must confess that irrespective of my personal scepticism as to the exaggerated influence of woods on rainfall, &c., &c., I think that the sentiments, stated in paragraph 3 of the report, are strained, unscientific and inexact in no small measure; and that the conclusions deduced from the assumptions are unreasonable, if not mischievous. I would reject them and leave the sholahs as a rule to be sold

in common with grass land, merely stipulating that a fair proportion of the latter should be taken up and opened in connection with the adjacent sholah and that plantations of timber shall be formed as part of the estate.

As regards No. 2. *Fuel supply*:—Under the peculiar adaptation of rapidly-growing Australian woods to the Hill plateau, no justification can be urged for keeping superannuated and stationary (if not deteriorating) old sholahs standing to the obstruction of agriculture. There is no objection to reserving sholahs within six or eight miles of the station of Ooty for fuel or any other purpose—if it only be a reasonable purpose—but this should be the limit. All beyond a restricted area round stations should be available for human industry. Within eight to ten years a fuel forest can be created of Australian wood on any part of the Hills, and ten years will not add 10 per cent. to the quantity or quality of wood produced in any of our indigenous sholahs. In fact that period will rather be one of even more serious dilapidation as respects their indigenous woodlands.

As regards Toda sholah reserves I am quite at one with the Commissioners. Every sholah which the indigenous nomadic tribes of the Hills can reasonably desire to have reserved for their use in the Todanaad and Kundanaad Division should be so reserved and be continued to them on most liberal terms; but the claims will be small, for a Toda-*mund* needs but shelter on the margin of well-situated but generally small sholah and the race is not on the increase.

Again, I think however that the Commissioners are out of proportion. The simple fact is that on the very uncertain plea of their being waste—though by no means poorly stocked as cattle runs—we are assuming the extensive downs and prescriptive grazing lands of the nomadic tribes on the Hills and selling them as private property in the main to foreign immigrants and land-jobbers—with probably the inevitable result of improving the Todas, ere many of their generations pass, off the Hills. It is as difficult perhaps to deal equitably with this question on the Hills as it has been in America and in some of our Colonies, and probably the same results as respects the tribes, which we too readily ascribed to imported vices, &c., are before us. This, however, I do not mean to discuss here; but the Commissioners' scruples as to the rights of the indigenous races in their relation to the sholah question alone, partake of the character of tithes of mint and cummin, while their grazing grounds are passing away from them under the Government auctioneer's hammer. I would direct the Toda-mund sholahs to be most carefully reserved and avoid generalizations on this small basis.

The area of sholah land in the Paranganaad or eastern division of the Hills—91 square miles equal to 58,240 acres of plateau area—is not shown in the report; but it is relatively very limited indeed, and to it the considerations of paragraph 2 applies, I conceive, even in the Commissioners' minds in a very small degree indeed, if at all. While I deprecate interference with the ordinary clearances required by advancing agriculture, and admit that shortsighted policy in this respect will be a drawback to the country even in this more advanced tract (Paranganaad) of the Hill plateau, I yet admit that towards the eastward the grass land is of quite a different character, and though inferior to sholah land is still culturable, as evidenced by the fact that nearly the whole of the indigenous agriculture on the Hills lies in that direction. The Commissioners' exaggerations may therefore prove less mischievous here than in the western districts of the plateau, Todanaad and Kundanaad; and I have not the same strong objection to their character as affecting the district, but I would apply the same rule as to treatment of sholahs in Paranganaad Division as I have proposed for the Todanaad District.

2nd October 1878. (Signed) W. ROBINSON.

No. 219. MINUTE BY THE HON'BLE W. HUDLESTON, C.S.I.

THE point on which orders are required is a narrow one, even from Sir W. Robinson's point of view.

The Commissioners have not dealt with the Kundanad.

The woodland in Mekanad has been already reserved.

Pharunganad is nearly bare of wood and Sir W. Robinson himself does not press for relinquishment there.

It is only then as regards the Todanad that a decision has to be arrived at.

G.O., No. 1,852, dated 20th November 1878. The Commissioners propose to reserve nothing in the Moyar Valley tract except the growth on stream margins.

As regards the 159 square miles' portion of this Nad on the plateau which includes acres 11,700 of forest, they propose to reserve acres 10,800, and to leave acres 900 available for applications for planting purposes.

Their proposals are influenced by considerations of —

Water-supply.
Fuel-supply.
Toda pastural needs.
Moss supply for Cinchona plantations.

I fully concur in opinion with Sir W. Robinson that the utmost consideration should be shown for the needs of the Todas, and I would prohibit absolutely all incursion on the sholah tracts which are used by them.

The question of moss for the Cinchona plantations is an important one; but although moss is the natural covering of old Cinchona trees in their original *habitat*, and the exclusion of the direct action of the sun on the bark is probably of great importance for the more abundant secretion and retention of the alkaloids, I do not think that it would be essential to maintain woodlands in their primeval condition for this purpose alone.

Fuel-supply, I think, will be provided far more effectually by the rapid growth of Australian trees than by the sholas.

There remains the question of water-supply, and here I am as I always have been unable to concur with Sir W. Robinson in considering the growth of wood along the streams to be a matter of no moment whatever. I do not wish to urge the argument of trees inducing increased rainfall; but I have no doubt whatever that in mountain tracts they do induce the deposit of the contents of the clouds passing along their sides, that their shade lessens evaporation from the surface of streams, that their roots do check percolation and thereby usefully prolong the service of the reservoir which supplies the plains. From this point of view then I consider it of great importance that the streams in their higher reaches and at the sources should not be denuded of wood and shade, and I do not consider that a tea shrub plantation will answer the purpose now served by the sholahs. But I am willing to admit that Cinchona trees might probably replace sholah growth without detriment, and if stipulations can be enforced which should secure this substitution, I think they would deserve consideration in view to a modification of the proposals for reservation; otherwise I am not prepared to say that the Commissioners go too far in this direction, and in any case I think they are in no way deserving of the somewhat contemptuous condemnation with which Sir W. Robinson would treat them.

(Signed) W. HUDLESTON.

7th October 1878.

No. 220. ORDER THEREON, 20th November 1878, No. 1,852.

Forests, No. 15.

In view of the circumstances brought to light in the foregoing report and otherwise forced on the notice of Government, His Grace the Governor in Council resolves to direct that no applica-

tion for Forest or Shola land be entertained on the Nilgiris until the whole district has been reported on, and the general question of land reservation, whether forest or grass land, been considered and future policy decided. Any such applications addressed to the Commissioner will be registered for future disposal.

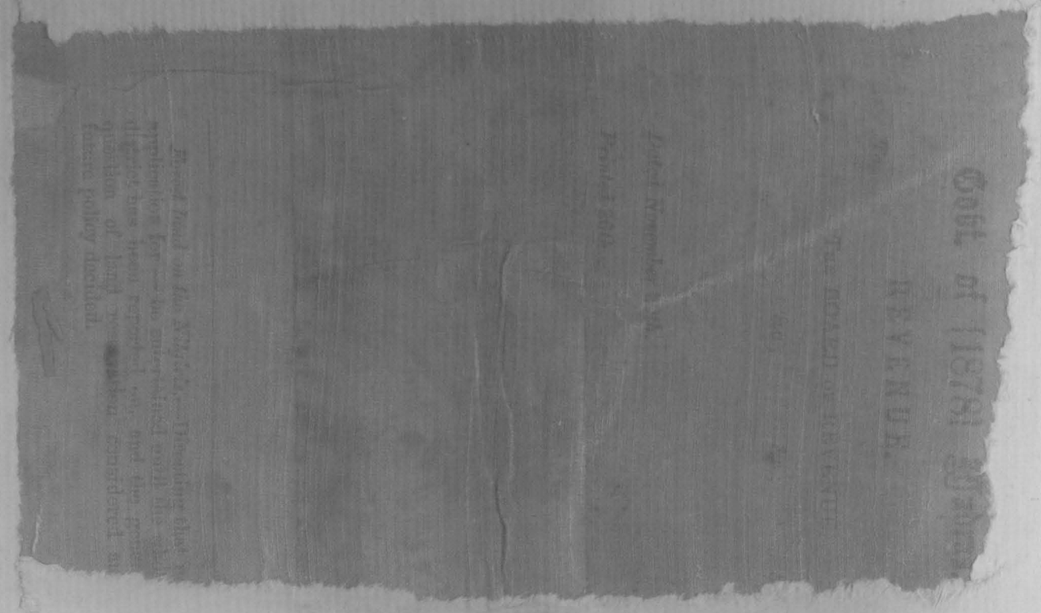
2. With reference to the remarks of the Committee in paragraph 16, the Government observe that the proposal to reserve certain land for recreation purposes was "deferred for further consideration."

Paragraph 2, G.O., 4th January 1878, No. 7.

G.O., 20th July 1878, No. 1,106.
G.O., 6th September 1878, No. 1,457.

Orders have recently been issued for extension of Government plantations on the Nilgiris as recommended.

(Signed) L. A. CAMPBELL,
Under-Secretary to Government.



1852
7

No. 2,400.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 27th August 1878.

Read the following letter from R. W. BARLOW, Esq., Acting Commissioner of the Nilgiris, to C. A. GALTON, Esq., Acting Secretary to the Board of Revenue, dated Ootacamund, 12th August 1878, No. 107 :—

I HAVE the honor to submit, for the orders of the Board and Government, the report of the Forest Commission appointed in Government Order, Revenue Department, No. 82, of the 16th January last.

2. Mr. Johnson, the late Acting Assistant Commissioner, who attended the meetings and tours whenever the Acting Commissioner was unable to do so, concurs in the report.

3. A copy of this report and minute of dissent have been forwarded to Government direct for information.

P.S.—The map of the Paranganad Division will be forwarded in a few days. The map of the Todanad Division and a key map of the Nilgiri Hills, showing the position of each nad or division, are sent under a separate cover.

ENCLOSURE No. 1.

From the Forest Reserve Commission appointed under G.O., dated 16th January 1878, No. 82, to the Acting Secretary to the Board of Revenue.

WITH reference to G.O., No. 82, dated the 16th January 1878, directing that a Commission be formed to go through the divisions of Todanad, Paranganad, and Kunda of the Nilgiri District for the purpose of selecting and reporting on the forests to be reserved in each, we have the honor to report that we have inspected the whole of the woodlands in the two first-named divisions, and beg to submit the conclusions at which we have arrived regarding them.

We have postponed the examination of the Kunda division until after the south-west monsoon; as there are no applications for waste lands in that division, we considered it advisable to dispose of the other portions of the Hills first.

2. In making our selection of the forests to be reserved, we have been guided by the following considerations:—

(1.) Water-supply.
(2.) Fuel-supply.
(3.) Shelter and pasturage for Toda Buffaloes.
(4.) Supply of moss for Cinchona plantations.

3. As regards the first point, without considering the possible effect of trees on rainfall and climate, we have considered as beyond dispute the facts that woodlands exercise a most beneficial effect in the retention of water and the regulation of the supply, and that any extensive denudation near the sources or along the courses of streams must of necessity be followed by destructive floods and equally fatal droughts.

The accompanying maps show that very nearly every shola is close to a stream, and on this consideration alone we think that only a very small portion of the woodland remaining in Todanad and Paranganad should be given over to the planter's axe.

4. For fuel, the public will have in future to depend mainly on Australian plantations; only such sholas as are within six or eight miles of the settlements and within easy access of roads could be utilized for firewood.

5. The sholas in the immediate neighbourhood of Todamunds we consider should be retained in the hands of Government; we have not therefore recommended any so situated being made available for sale.

6. As regards moss for the Cinchona plantations, the Superintendent states that all the sholas in west Todanad within a radius of about six miles of the plantations do not produce more than enough moss for the Nedivattam and Pykara gardens.

We are not however of opinion that any *wholesale* reservation should be made on this account; if the Superintendent's statement is correct, and so large a tract of woodland is required for the production of moss, then the Government plantations can serve no useful purpose as models, or as encouragement for the growth of the bark, for no private proprietor could command the requisite supply of moss. It appears, moreover, still to be a moot point whether coppicing is not as advantageous as mossing, and for purposes of experiment a much smaller area of Cinchona than is now under cultivation would suffice.

7. We have taken æsthetic considerations into account only where we found sholas in close proximity to main lines of communications; in all such cases we consider that the woods should be reserved.

8. The first division inspected was Todanad; this is the largest of the nads, and in its western part contains more wood than the others, excepting portions of the Kundas.

9. The Todanad boundary extends from the crest of the Hills over the Ouchterlony valley on the west, northwards down to the Moyar at the Mysore and Wynaad tri-junction, thence eastwards for about 18 miles along the Moyar river, then southwards from the river to the Orange valley, and on to the Rallia plantation, four miles west of Kotagiri, then westwards along the high ridge above Wellington to the settlement near Dodabet. The boundary then runs from the other side of the settlement near Fair Lawns along the Avalanche road for some distance, then westwards along the high Eramaibettu and Betmand ridge to Mukurti and Nilgiri Peak.

10. The area within these limits is about 306 square miles, of which 159 square miles are on the plateau; the northern slopes from the Nedivattam Cinchona plantations to the Orange valley, and the tract between the foot of the slopes and the Moyar (measuring 147 square miles) form the remaining portion of this division.

11. Regarding the Moyar valley tract, we would not propose to reserve any thing there; the country has a most evil and well deserved reputation for extreme unhealthiness, and extensive clearings of the scrub and jungle would be beneficial; the growth on the stream margins should alone be left intact.

12. The village of Masnagudi on the Mysore road lies in this tract, also the Government Sandalwood plantations, four or five coffee estates, and a few hamlets; the portion of this tract lying to the east of the Segur road is almost altogether uncultivated and uninhabited; the remains of some deserted villages there seem to show that the country was once not so unhealthy as it now is.

13. The northern slopes are for the most part unculturable, being precipitous, rocky, and not well wooded; the only trees are on the margins of ravines, and these should as usual be reserved, but with these exceptions any applications for land either on the slopes or in the valley might be unreservedly complied with.

14. The Todanad plateau extending as it does for more than thirty miles from east to west presents in its different parts great variety of woodland aspect; the western portion is fairly covered, while the country east of the Segur road is absolutely bare of wood, if we except a few small sholas on the main road to Kotagiri and adjoining the Todamunds by Kukalbetta.

15. The very small extent then of wood that still remains in East Todanad should be strictly reserved; it covers not more than 500 acres.

16. Regarding West Todanad, a portion adjoining the Ootacamund settlement and extending to Sandy Nullah, Brior Shola, Governor's Shola, and Fair Lawns, has been given up for public recreation purposes (G.O., No. 7, dated 4th January 1878); it is for the most part bare, the few small sholas in it must be reserved.

17. North of this tract and between the Pykara road and the northern crest of the Hills are the villages of Sholur, Kalhatti, &c., and the Densandle Tea estate; the unoccupied land in this part is fairly wooded and some of the sholas are very fine; on every account it seems advisable that nearly all of them should be reserved; they are at the sources of two large streams flowing into the Moyar and into the Bowani; they are within easy reach of the settlement; there are several Badaga villages and Todamunds near them, and they are the only sholas from which moss can be obtained for the "Wood" Cinchona plantations when the Pykara river is in flood. We have marked off three of these sholas which can with the least disadvantage be made available to applicants.

18. The tract adjoining the above on the west contains the Pykara and Nedivattam Cinchona plantations and the Glenmorgan Estate; there is but little woodland unoccupied here, and almost the only good shola left is about to be put up to auction on Mr. Shubrick's application. There is one other fine shola at the crest, which has been applied for but it should not be granted as it immediately adjoins the Cinchona gardens and is close to the Pykara river; the other small sholas are all on streams.

19. The next section of West Todanad lies south of the road between Pykara and Nedivattam, and west of the Pykara river, its southern extremity being Mukurti Peak; it takes in both sides of the Vellangiri range of hills and a large portion of it is occupied by the Tea plantations under the care of Mr. Teare.

The outer limits of these estates, acquired under eight applications, embrace an area of 4,076 acres, but nearly the whole of the forests within them have been cut out as reserves—1,273 acres in all. We think that a small portion of these woodlands may be granted to the proprietors of the estates, and have marked on the map those we propose to give.

There are a few good sholas near to Nedivattam, and some to the south of Mr. Teare's southernmost estate, but these are all immediately at the heads of streams on which the whole of the Ouchterlony valley is dependent for water, and we were credibly informed that even now the supply of water there during two or three months of the year is barely sufficient for pulping and other purposes.

We are of opinion therefore that all the woodlands on the western crest excepting the portions marked off in the map and surrounded by Mr. Teare's plantations should be strictly reserved.

There are also a few small sholas on the eastern slopes of the Vellangiri range, all at the heads of tributaries of the Pykara river; these should also be reserved.

20. Eastwards from and near Mukurti Peak is some extent of scattered forest, each piece at the head of a small stream, and as the basin in which these sholas are situated forms the source of the Pykara river, this tract should be reserved.

21. The Pykara valley is curiously bare of any growth. Between the river and the Pykara road are some good sholas, but on account of their proximity to the main road and in consideration of the requirements of the Todamunds in and near them, we cannot recommend that any of them should be made available for sale.

22. Between the Pykara river and Governor's shola there is no woodland of any extent; the small scattered sholas should, we think, be reserved.

23. The neighbourhood of Krurmund is fairly wooded; while proposing to reserve the greater part of the woodland in that direction, we have marked off some which might with comparatively small disadvantage be made available for sale under the Waste Land Rules.

24. The last and most important section of Todanad to be considered is the south-eastern portion, from the Krurmund river on the west to Nanjanad and Governor's shola on the east, and from the Krurmund road on the north to the Kunda boundary on the south. This tract contains more and finer woodlands than any other part of Todanad, and inasmuch as it lies within comparatively easy distance of the Ootacamund settlement, the sholas on it are of special value; some of them have been acquired and the wood felled; the bared hill side so prominent on the south-west of the station over Nanjanad is the result of an application of the late Mr. McIvor's which forms the subject of Board's Proceedings, 6th November 1875, No. 3,045.

25. The sholas in the western portion of this tract are at the sources of the main stream and the affluents of the Krurmund river, a very important tributary of the Pykara; the rest of the sholas are in basins from which rise many small water-courses, which join and flowing southwards under the black bridge on the Avalanche road form an important affluent of the Kunda river.

26. In consideration of the importance of keeping the sources of water-supply protected, we feel bound to recommend that nearly the whole of the woodlands here should be reserved, and we think that if those sholas which we have marked off, as to be considered available for sale, be cleared, the limit has been reached to which denudation can be carried without great disadvantage.

27. If our propositions with respect to Todanad be accepted, the proportion of reserves to the whole extent of woodlands on the plateau will be as follows:—

	ACRES.
1. Total area of Todanad	101,760
2. Area of Government forests	11,700
3. Area of forest proposed to be reserved	10,800
4. Area of forest proposed to be made available for sale ...	900

We thus recommend that nine-tenths of the whole be reserved; and in making this recommendation we wish to add our opinion that this is the *minimum* extent that should remain in the hands of Government. There can be no doubt that denudation is in the highest degree detrimental to the regulation of the water-supply, and that the clearing of each shola, however small, does some harm; in this view we think it would be better even that *all* the remaining woodlands on the plateau should be reserved than that the area we now propose to give up for planting should be extended.

28. The Paranganad Division, which we next inspected, extends from Todanad on the west to Kallar, Rungasami's Peak, and Moyar on the east, and from the Moyar on the north to the Coonoor river on the south.

It embraces, exclusive of Coonoor and Kotagiri settlements, 91 square miles of plateau and 40 of slopes.

29. Nearly the whole of the plateau is absolutely bare of woodland of any kind; in every direction nothing but cultivated and fallow valleys and rocky unculturable hill sides meet the eye. At the crest and on the slopes alone a few sholas remain.

30. The woodland in the valley of the Coonoor river above the ghaut, Government have already ordered to be strictly reserved, and the large sholas commencing near Lady Canning's Seat and clothing both sides of the Burliar stream, should also for obvious reasons be reserved; the clearance of these would probably result in the destruction of portions of the ghaut, and in all communication with the Hills being interrupted after every heavy fall of rain.

31. In the valleys of Saint Catherine and Kotagiri streams there is hardly any woodland left.

Near Kilkotagiri and Kodanad a very few fine sholas remain; we are of opinion that too much has already been cleared and granted for clearing in this direction; the reasons that induced Government to direct that all the remaining woodlands in Mekanad should be strictly reserved, apply with even greater force to the Paranganad Division, and whatever still remains should be reserved.

32. There are one or two points to which we would, in conclusion, request the attention of Government. Of these, the first in importance is the desirability of very largely extending the Government plantations on these Hills; there can be no doubt that in every direction forest has been felled without any regard to ultimate consequences and that, however much we may now class as "Reserve," the process of denudation will go on as surely as ever, even if more slowly; we saw numerous instances of sholas partially destroyed by fires, and this cause of destruction will continue to operate.

We are of opinion that the Government should without delay proceed to apply the remedy for the acknowledged evils resulting from extensive clearings; we think that judgment in the selection of sites and care and liberal outlay for the first three years are all that are required to ensure success; and when successful, such plantations must give a very considerable direct return, besides conferring indirect benefits, the extent of which it would be difficult to estimate.

33. Regarding the demarcation and survey of the woodlands which the Government may decide are to be reserved, we would suggest that this be deferred until the question of grazing and other communal reserves has been definitely decided; if a number of small pieces of shola and swamp are now permanently demarcated and surveyed, and it be afterwards determined to reserve also the interlying plots of grass, then considerable expense will have been unnecessarily incurred and much time wasted. One of our members dissent from this suggestion. Memorandum of dissent is attached.

34. We regret we have been unable to submit our report earlier; each member of the Commission had his own ordinary duties to attend to, and it necessarily often happened that those duties prevented one of our members from proceeding on inspection, and the others had to wait till his services were again available.

(Signed) R. W. BARLOW, Acting Commissioner,
(„) J. G. CLOETE, Lt.-Col., Dy. Supdt., Revenue Survey, } Members of the Forest Reserve Commission.
(„) N. J. JAGO, Major, Deputy Conservator of Forests,

ENCLOSURE No. 2.

MEMORANDUM.

Paragraph 33.—I am of opinion that the forest reserves should be marked *at once* and not be delayed till the question of grazing and other communal reserves has been decided, which will probably take a considerable time. Half the difficulties of the land question and fraudulent occupation of forests have arisen from the delay and uncertainties antecedent to obtaining land in fair course. I propose with the consent of my colleagues on the Committee when settling the Kundas that we mark on the sketch maps what were *reserve* instead of what we recommend to be available for public occupation. In the divisions already settled, my difficulties as Commissioner are great till stones are put round what is considered *forest* to be reserved. It is, in my opinion, of the first importance that applications for land should not be delayed for an indefinite period, and though I now know that the Commission has decided that certain forest is available for occupation, still as regards the rest the question constantly arises *what is forest*. The gradations between forest and light forest and scrub are numerous, and difficult to be decided, and opportunities for fraud can only be put a stop to further by demarcating all reserved forests distinctly as soon as possible, or by holding the Waste Land Rules in abeyance in frequent cases for some time to come. The latter course I most strongly deprecate.

(Signed) R. W. BARLOW,
Acting Commissioner.

OOTACAMUND,
26th July 1878.

(True Copy.)
(Signed) J. G. CLOETE, Lieut.-Col.,
Depy. Supt., Revenue Survey.

1859/9

ENCLOSURES Nos. 3 and 4.—Maps.

THE report of the Forest Reserve Commission will be submitted for the orders of Government with reference to the Government Order quoted.

2. The examination of the Kunda Division has been deferred until after the south-west monsoon, and the reservation of the whole extent of woodland remaining in Mekanad has already been directed. The report deals with the other two divisions, and the Commissioners state that in making their recommendations they have been guided by a consideration of the water and fuel supply, the requirements of the Todas for pasturage and of the Government for growing Cinchona. The area of Todanad is 305 square miles, of which 159 are on the plateau; the Commissioners do not propose to make any reservation in the Moyar valley tract and on the northern slopes except the ravines and growth on the margins of streams; they think that the woodlands in that portion of the division east of the Segur road should be strictly reserved, and most of the forest to the west of it; they have marked some sholas in the tract between the Pykara road and the northern crest of the Hills, on the western crest adjoining some Tea plantations, and in the neighbourhood of Krurmund, as available for disposal to applicants, and do not recommend the alienation of any further extent of woodlands; in fact, they are of opinion that nine-tenths of the whole area of forest be reserved.

3. As regards Paranganad they state that nearly the whole of the plateau is absolutely bare, at the crest and on the slopes alone a few sholas remaining; they are opposed therefore to any extensions of clearance in this direction.

4. The importance of extending the Government plantations with a view to counteract the effects of denudation, which must continue to a certain extent notwithstanding the reservation suggested, is also prominently brought to notice.

5. A majority of the Commissioners would defer the survey of the woodland reserves until the question of grazing and other communal reserves has been settled to obviate the expense which may be entailed in revising demarcation already completed; Mr. Barlow however dissents from this proposal, and considers that the reserves should be marked at once, it being extremely desirable to put an end to the uncertainty which now exists as to the tracts which are available for occupation with the least possible delay.

6. The Board concur in the recommendations as to the reserves to be formed and the expediency of extending the Government plantations, and think with Mr. Barlow that the demarcation should be carried out at once and maps prepared and made available for the public.

(True Copies and Extract.) J. G. Cloete
Acting Secretary.

To the Secretary to Government, Revenue Department,
with two maps to be returned.

Copy to the Commissioner of the Nilgiris.
„ „ Superintendent, Revenue Survey.
„ „ Conservator of Forests.

Exd. W. J. Lewis.

Revenue Department.

Minute by His Grace the Governor.

The question actually awaiting orders on this report is a very small one *per se*. The report does not deal with Kundanaad, and the question of reserves of grazing land is not yet before Government. The whole question of reservation on the Nilgiris is therefore not yet in complete form or ready for decision; the actual question at issue therefore is only whether 900 acres or some larger quantity out of 11,700 of forest remaining in Todanaad shall be opened to applicants. The Commissioners who were chosen with full knowledge and concurrence of all Members of Council have done their work in a careful and painstaking manner, carrying out most fully personal investigation of all doubtful parts, and for the careful manner in which they have so far done their task they certainly deserve acknowledgment from Government. They have not hesitated to give the reasons which have influenced their decision, and although different persons may attribute greater or less weight to the several reasons assigned of—

Water supply.
Fuel supply.
Toda pasture.
Cinchona moss.

there is no doubt all deserve consideration, and it would be a shortsighted and mistaken policy to ignore the consideration of any one of them.

I am quite prepared to support the Commissioners' decision, believing they have in no degree gone too far in the direction of reservation; and I should not have added any further remark, but that there seems to me a danger that this question of reservations may be discussed upon too narrow a base.

The value of the European climate of the Nilgiris to Southern India service whether Covenanted, Uncovenanted or Military, cannot be overrated. Anything which should prejudicially affect that climate would be to Southern India a national misfortune. Such a climate with ready access has saved and will save the health and the lives of many valuable officers and thus money to the State.

The Moyar and Bhavani, embracing as they do the Nilgiris whence they derive almost their entire supply, water no inconsiderable area of land in Coimbatore and form an important feeder of the Cauvery. The water-retaining power of the Hills is most important as determining the length of time through which these streams will flow with sufficient volume. Anything which lessens that retaining power will diminish the value for cultivation of the water-supply, although the same volume of water be sent down in a year. If a crop requires ten weeks' irrigation, with a certain daily quantum of water per acre to mature it, it will not be matured at all if it receives a double quantity per acre daily for five weeks and the supply be then exhausted.

There is no doubt that a dense growth of wood checks evaporation, keeps the ground cool, protects banks of streams from erosion, and binds soil upon steep slopes whence, if bare, it would be washed away.

The Nilgiri area is not very large, a little over 700 square miles. When first ascended by Europeans, I gather its condition to have been that the Hills of the plateau were covered with grass interspersed with wood. The hollows and ravines nearly all occupied by strips of wood, or sholahs; the very steep and precipitous slopes by which the plateau is separated from the plains, and the few ravines by which access existed, being filled with dense forest and the whole surrounded by a wide belt of jungle or forest. Then the heated air of the plains had to pass on its way to the plateau over miles of cool forest, and was cooled and filtered, as it may be termed, by its contact with them.

Now the surrounding belt of jungle has been very much reduced, in some parts swept away. The ravines of the Coonoor, Segur, Kotagiri and other Ghats, &c., have been stripped of their forest clothing and much of the slopes have been also denuded, while a very large extent of shola on the plateau has vanished.

Revenue Department.

1878.

Board of Revenue,

MADRAS.

To

The Secy. to Government,

Revenue Department.

Dated August 27th.

Printed September 9th.

Read 14th September.

Proceedings, 27th August 1878, No. 2,400.

Read 13/9/78 and enclosure

August

No. 2,400.

Pol 1602 to Nilgiris

Forest Reserve Commission.—Submitting to Government, with remarks, reports of the —.

How far the climate of the Hills has been thereby affected, can probably never be correctly ascertained, for it is only a long series of careful and minute observations which will eliminate the effects of special and accidental causes, and these do not exist from an early date; but there are facts which suggest that it may have been affected, *e.g.*, diminished water-supply in springs around Ootacamund, the reported gradual advance of the whiteants towards Kotagiri, of the striped squirrel towards Ootacamund.

Vide Dr. Gordon's report.

These considerations do not induce me to urge that 100 acres more or less of reserve forest is of any real importance to the district, but cause me to think that the time has come when all remaining forest should be at present reserved absolutely.

It is not, I find, easy to ascertain accurately how much of the Nilgiris was forest naturally, but we do know that much has gone without authority, and we do know that 50,000 acres of land has been granted for coffee, tea, and cinchona estates; and as the tea cultivation in grass is only now a new experiment, and planters have invariably sought for shola land, and obtained it freely, this 50,000 acres may be assumed to have been principally forest and shola land and has been granted and cleared in about thirty years.

The Hills comprise a little over 700 square miles. To assume that half this quantity was forest or shola will probably be in excess of rather than under the facts; the 50,000 acres represent 78 square miles, or nearly $\frac{1}{9}$th of the whole wood covered area. When so large an inroad has been made upon the forest and wood, and the surrounding forest area of the Wynad and Coimbatore have been also so largely trenched upon—about 180 square miles of forest land in Wynad having been alienated during the last twenty years—I cannot refrain from recording my conviction that Government should now hold its hand, that the revenue or other advantages to be derived from further clearing in the Nilgiri bear no proportion to the possible injury to the State; and while I do not for a moment contend that cultivation within reasonable limits and bounds honestly adhered to cannot be combined with all that is needed for the fullest extent of forest conservancy in this district, I think it is necessary that Government should decide to give no further grant and permit no further alienation of forest or shola whatever in the Nilgiris, until the whole district has been reported on, the general question of reservation, whether forest or grazing land, considered, and future policy decided.

(Signed) BUCKINGHAM AND CHANDOS.

9th October 1878.

1852/11

REVENUE DEPARTMENT.

MINUTE BY THE HON'BLE Sir W. ROBINSON, K.C.S.I.

THE (sholah) small woodland question on the Hills is of very considerable importance to planting industry on the plateau—more especially towards the western part of the Todanaad and in the Kundah Districts—where, outside the limits of these sparse woodland, nothing naturally grows save the coarsest herbage on a close, cold and peaty soil of low quality and devoid in a great measure of *humus*, and otherwise wanting in the qualities which constitute a good planting soil; besides being situated under an inclement and somewhat repellant climate during many months of the year.

What is called grass land on the Hills (more especially west and north-west of the Dodabetta Ranges, and in Todanaad and Kundanaad) presents no doubt to the practical agriculturist (Company-manufacturers and land-jobbers of course excluded) a uninviting aspect. It is in a great measure untried for the purposes of higher agriculture; nature has done nothing with it in past centuries to encourage planters, and Government and other pioneers of cinchona planting, &c., have wisely avoided the bleak grass downs of the western plateau in their industries. And where the limits of sholah land have been transgressed by the agents of Government near Neddivattam, &c., the experiment has not been eminently successful. Some further experiments are in course at Neddivattam, which have been transferred to a Company in England before marked success has been established, and so on. One thing is certain, that before all things the planter desires sholah land, and we may very fairly take it for granted that he knows his own business better than Government bureau men.

Every acre therefore of sholah land which is foreclosed to industry by needlessly obstructive reservations is so much lost to the planting interests of the country, if it be deemed wise to encourage the investment of capital in the more precarious tracts of the Hill plateau. If this be desirable, sholah land, so far as our present knowledge goes, gives that fair promise of returns which should not be denied to industry; while we know likewise that its investment on grass land is probably very precarious and must certainly prove very costly in the long run. So-called reservations of sholah land ought therefore to be very limited, and only put in operation near stations and where rare and special considerations obviously ought to prevail. This is not the character of the Commission's generalizations in this matter—a feature which should lead to their rejection in the main.

Then as to the sholahs themselves—these patches of woodland—generally thin green lines in the upper stages of the natural drainage of mountain sides—consist in the main of aged trees—many in a decrepit condition with much useless brushwood about them; trees of slow growth, which have long passed that stage, when continuance adds materially either to the growth or value of the timber they contain, whatever that may be (as a rule small indeed as respects these Hill sholahs) for purposes of man. As a rule a stationary condition—perhaps one of decay—is the characteristic of every sholah on the Hills—and I have little doubt that an unprejudiced scientific and practical Forester would come to the conclusion that so far as true forestry and the interests of the country are concerned, the time has more than come when almost every tree which our sholahs contain should at once give place to fresher and more useful forestry or to plantation industry from a mere arboricultural point of view. I confess that I should not expect to find a really scientific person and well-wisher to human industry in this country, holding that a well-managed cinchona forest or a wall-sheltered tea garden, with plantations of Australians around it, would prove a ruinous or evil substitute for any sholah on the plateau within

N.B. Our Commission consists of the Commissioner, who probably disclaims large knowledge of the matter, a Survey Officer, and a Soldier-forester who has no high scientific acquirements and no wide observation.

which industry could be carried on. As regards adaptability for plantation purposes it might almost be said that really plantable *humus* is almost limited to sholah land towards the west of the plateau, and that cleared sholahs conveniently form the proper nucleus of a cinchona or tea estate.

The Commissioners inform us as to the considerations which guided their thoughts on reservation in paragraph 2 of this report. As regards water-supply:—the non-notice by them of the unfailing south-west Trade, whose burden of moisture is discharged in these high ranges, irrespective of their top-dressing of verdure, $^{19}/_{20}$ths of which even in the Todanaad is coarse grass is remarkable. And the silence they observe as to spring-generating and distributing contour of the plateau, were doubtless oversights on their part. But probably Government will see that these are the true climatic and distributory factors with which we have to do; and that neither of them is influenced by a sparse distribution of narrow streaks and small patches of woodland over the wide areas of mountain peak and slope. The only fact which the Commission notice is that narrow strips of wood are sparsely generated along the higher margins of the mountain torrents, where they take their rise on the Hill sides. They notice also the absence of wood in the valleys; for the Pykara river and in fact all the larger streams on the Hills run harmlessly in open and almost woodless valleys until discharged over the precipitous scarps of the plateau into the low country at the foot. Absence of wood is the natural characteristic of the Hill river drainage, and the small exceptions need not be reserved in traverse of natural conditions. The Commission seem to be deeply impressed of the assumed functions of these sparse torrent-side streaks of woodland as retainers and regulators of floods and droughts in the country, but when I find that even the Todanaad Division—where they naturally most prevail—possesses a plateau area of 102,000 acres (159 square miles), of which 12,000 acres or 10 per cent. of the whole area only are woodland—a large portion of which from its inaccessible and rocky character, *ex. gr.*, along the face of the Makurty and Nilgiri Peak Ranges, can never be sought for cultivation—I must confess that irrespective of my personal scepticism as to the exaggerated influence of woods on rainfall, &c., &c., I think that the sentiments, stated in paragraph 3 of the report, are strained, unscientific and inexact in no small measure; and that the conclusions deduced from the assumptions are unreasonable, if not mischievous. I would reject them and leave the sholahs as a rule to be sold in common with grass land, merely stipulating that a fair proportion of the latter should be taken up and opened in connection with the adjacent sholah and that plantations of timber shall be formed as part of the estate.

As regards No. 2. *Fuel supply*:—Under the peculiar adaptation of rapidly-growing Australian woods to the Hill plateau, no justification can be urged for keeping superannuated and stationary (if not deteriorating) old sholahs standing to the obstruction of agriculture. There is no objection to reserving sholahs within six or eight miles of the station of Ooty for fuel or any other purpose—if it only be a reasonable purpose—but this should be the limit. All beyond a restricted area round stations should be available for human industry. Within eight to ten years a fuel forest can be created of Australian wood on any part of the Hills, and ten years will not add 10 per cent. to the quantity or quality of wood produced in any of our indigenous sholahs. In fact that period will rather be one of even more serious dilapidation as respects their indigenous woodlands.

As regards Toda sholah reserves I am quite at one with the Commissioners. Every sholah which the indigenous nomadic tribes of the Hills can reasonably desire to have reserved for their use in the Todanaad and Kundanaad Division should be so reserved and be continued to them on most liberal terms; but the claims will be small, for a Toda-*mund* needs but shelter on the margin of well-situated but generally small sholah and the race is not on the increase.

Again, I think however that the Commissioners are out of proportion. The simple fact is that on the very uncertain plea of their being waste—though by no means meanly stocked as cattle runs—we are assuming the extensive downs and prescriptive grazing lands of the nomadic tribes on the Hills and selling them as State property in the main to foreign immigrants and land-jobbers—with probably the inevitable result of improving the Todas, ere many of their generations pass,

1852/12

off the Hills. It is as difficult perhaps to deal equitably with this question on the Hills as it has been in America and in some of our Colonies, and probably the same results as respects the tribes, which we too readily ascribed to imported vices, &c., are before us. This, however, I do not mean to discuss here; but the Commissioners' scruples as to the rights of the indigenous races in their relation to the sholah question alone, partake of the character of tithes of mint and cummin, while their grazing grounds are passing away from them under the Government auctioneer's hammer. I would direct the Toda-mund sholahs to be most carefully reserved and avoid generalizations on this small basis.

The area of sholah land in the Paranganaad or eastern division of the Hills—91 square miles equal to 58,240 acres of plateau area—is not shown in the report; but it is relatively very limited indeed, and to it the considerations of paragraph 2 applies, I conceive, even in the Commissioners' minds in a very small degree indeed, if at all. While I deprecate interference with the ordinary clearances required by advancing agriculture, and admit that shortsighted policy in this respect will be a drawback to the country even in this more advanced tract (Paranganaad) of the Hill plateau, I yet admit that towards the eastward the grass land is of quite a different character, and though inferior to sholah land is still culturable, as evidenced by the fact that nearly the whole of the indigenous agriculture on the Hills lies in that direction. The Commissioners' exaggerations may therefore prove less mischievous here than in the western districts of the plateau, Todanaad and Kundanaad; and I have not the same strong objection to their character as affecting the district, but I would apply the same rule as to treatment of sholahs in Paranganaad Division as I have proposed for the Todanaad District.

2nd October 1878. (Signed) W. ROBINSON.

1852/13

REVENUE DEPARTMENT.

MINUTE BY THE HON'BLE W. HUDLESTON, C.S.I.

THE point on which orders are required is a narrow one, even from Sir W. Robinson's point of view.

The Commissioners have not dealt with the Kundanad.

The woodland in Mekanad has been already reserved.

Pharunganad is nearly bare of wood and Sir W. Robinson himself does not press for relinquishment there.

It is only then as regards the Todanad that a decision has to be arrived at.

G.O., No. 1,852, dated 20th November 1878. The Commissioners propose to reserve nothing in the Moyar Valley tract except the growth on stream margins.

As regards the 159 square miles' portion of this Nad on the plateau which includes acres 11,700 of forest, they propose to reserve acres 10,800, and to leave acres 900 available for applications for planting purposes.

Their proposals are influenced by considerations of —

Water-supply.
Fuel-supply.
Toda pastural needs.
Moss supply for Cinchona plantations.

I fully concur in opinion with Sir W. Robinson that the utmost consideration should be shown for the needs of the Todas, and I would prohibit absolutely all incursion on the sholah tracts which are used by them.

The question of moss for the Cinchona plantations is an important one; but although moss is the natural covering of old Cinchona trees in their original *habitat*, and the exclusion of the direct action of the sun on the bark is probably of great importance for the more abundant secretion and retention of the alkaloids, I do not think that it would be essential to maintain woodlands in their primeval condition for this purpose alone.

Fuel-supply, I think, will be provided far more effectually by the rapid growth of Australian trees than by the sholahs.

There remains the question of water-supply, and here I am as I always have been unable to concur with Sir W. Robinson in considering the growth of wood along the streams to be a matter of no moment whatever. I do not wish to urge the argument of trees inducing increased rainfall; but I have no doubt whatever that in mountain tracts they do induce the deposit of the contents of the clouds passing along their sides, that their shade lessens evaporation from the surface of streams, that their roots do check percolation and thereby usefully prolong the service of the reservoir which supplies the plains. From this point of view then I consider it of great importance that the streams in their higher reaches and at the sources should not be denuded of wood and shade, and I do not consider that a tea shrub plantation will answer the purpose now served by the sholahs. But I am willing to admit that Cinchona trees might probably replace sholah growth without detriment, and if stipulations can be enforced which should secure this substitution, I think they would deserve consideration in view to a modification of the proposals for reservation; otherwise I am not prepared to say that the Commissioners go too far in this direction, and in any case I think they are in no way deserving of the somewhat contemptuous condemnation with which Sir W. Robinson would treat them.

(Signed) W. HUDLESTON.

7th October 1878.

1852
14

Dear Hankin

It is understood that Mr Grace desires the accompanying paper to stand as a minute on the Proceedings of Government and a printed copy is accordingly forwarded for approval & remarks.

I have put-in it a memorandum

I recently obtained
from the Survey
office at Ootacamund
the area
shewing the area
of the Wynaad District
& its plateau & slopes
etc. The figures
are believed to be
very nearly accurate.
I am
Yours faithfully
A. Maclennan
6 Dec 78. Kotmoor

obliged by the memo
of 8th inst. duly
received & I
am sorry I am
unable to state the amount
given in Ootacamund
Valley - as the memo
seems expunged &
small. — My

57,000 acres of land
Letter from Superintendent
Revenue & Forest
Matters

20/12

Nilgiri District

1874

Area of plateau	490	Square Miles
" " Slopes	115	" "
" " Ouchterlony Valley	35	" "
" " Segur & Mayar "	100	" "
Total	740	Square Miles

Occupied Lands on Puttu and other Tenure

	Acres	
Puttu Lands	85040	
Quit Rent – Freehold (I) Topa Ryots – Waste Land Ryots (II) and Squatter tenure	19040	(Of which 12,700 is under Waste Land Ryots)
Total occupied Land	104080 Acres	
=	162½ Square Miles	

Of the occupied Lands about 500 acres are in Ouchterlony Valley and perhaps 2000 on the Slopes.

The puttu Lands near Moonagudi in the Segur Valley have been excluded from Survey.

On the plateau there are about 97,000 acres of occupied land of which about 83,000 acres is puttu land, and 14,000 on other tenures.

Octacamund
5 November 1878

The question actually awaiting orders on this report is a very small one *per se*

The report does not deal with Kondahmad, and the question of reserves of grazing land is not yet before Government. The whole question of reservation on the Nilgiris is therefore not yet in complete form or ready for decision - the actual question at issue therefore is only whether 900 acres or some larger quantity out of 11,700 of Forest remaining in Todamad shall be opened

to

to applicants. The Commissioners who were chosen with full knowledge and concurrence of all members of Council have done their work in as careful and painstaking manner - carrying out most fully personal investigation of all doubtful points and for the careful manner in which they have so far done their work they certainly deserve acknowledgment from Government. They have not hesitated to give the reasons which have influenced their decisions, and although different persons may attribute greater

or

2

or less weight to the several reasons assigned of —

Water Supply
Fuel Supply
Toda pasture
Cinchona trees

there is no doubt all deserve consideration, and it would be a short sighted and unwise policy to ignore the consideration of any one of them.

I am quite prepared to support the Commissioners decision believing they have in no degree gone too far in the direction of reservation; and I should not have added any further remark, but that there seems to me a danger that this question of reservations

May

may be discussed upon
too narrow a base.

The value of the European
Climate of the Nilgiris to
Southern India Service
whether Covenanted Un-
Covenanted or Military
cannot be overrated. Any
thing which should pre-
judicially affect that cli-
mate would be to South-
ern India a National Mis-
fortune. Such a climate
with ready access has
saved and will save
the health and the lives
of many valuable officers
and thus money to the
State.

The Wynaar and Bowany
Embracing as they do the
Nilgiris

Nilgiris whence they de-
rive almost their entire
supply, water no inconsider-
able area of land in Coim-
batore and form an im-
portant feeder of the
Cauvery. The water-retain-
ing power of the Hills is
most important as de-
termining the length of
time through which
these streams will flow
with sufficient volume -
Any thing which lessens
that retaining power will
diminish the value for
Cultivation of the water
supply although the same
volume of water be sent
down in a year. If a
crop requires 10 week irri-
gation

irrigation, with a certain daily quantum of water per acre to mature it. it will not be matured at all if it receives a double quantity per acre daily for 5 weeks and the supply be exhausted.

There is no doubt that a dense growth of wood checks evaporation keeps the ground cool protects banks of streams from erosion, and binds soil upon steep slopes whence if bare it would be washed away.

The Nilgiri area is not very large, a little over 200 square miles.

When first ascended by Europeans I gather its condition to have been that the plateau was grass interspersed with wood. The hollows & ravines nearly all occupied by strips of wood, or sholahs ~~ravines from the plains~~ the only very steep and precipitous slopes, & the few ravines by which access existed being filled with dense forest and the whole surrounded by a wide belt of jungle or forest. Then, the heated air of the plains had to pass on its way to the plateau over miles of cool forest, and was cooled and filtered as it may be termed by its contact with them.

Now the

surrounding belt of jungle has been very much reduced, and in some parts swept away - The ravines of the Coonoor, Segur, Kotagherry & the ghauts have been stripped of their Forest Clothing, and much of the slopes have been also denuded - While a very large extent of Shola on the plateau has vanished - How far the climate of the Hills has been thereby affected, can probably never be correctly ascertained - for it is only by a long series of careful and minute observations which will eliminate the effects of special and accidental causes, and these do not exist from an early date, but there are facts which suggest that it may have been affected - eg diminished water supply in springs around Cotacamund

Vide Dr Gordon's report

The gradual advance of the white ants towards Kotagherry of the Striped Squirrel towards Cotacamund

These considerations do not induce me to urge that 100 acres more or less of reserve forest is of any real

real importance to the district, but cause me to think that the time has come when all remaining Forest should be at present preserved absolutely -

It is not I find easy to ascertain accurately how much of the Nilgiris was Forest naturally, but we do know that much has gone without authority, and we do know that 50,000 acres has been granted for Coffee, tea, & Cinchona Estates, and as the Tea cultivation in graps is only now an experiment, and planters have invariably sought for Sholas land, and have obtained it freely - this 50,000 acres may be assumed to be principally Forest & Shola land - and has been granted and cleared in about 30 Years

The plateau comprises a little over 700 square miles To assume that half this quantity was Forest or Shola will probably be in excess of rather than under the facts - the 50,000 acres represent 78 square miles, or nearly 1/4 of the whole wood covered area - When so large an increase

has been made upon the
forest and wood, and the
surrounding Forest area
of the Wynaad and Coimba-
tore have been also so
largely trenched upon, I
cannot refrain from re-
cording my conviction
that Government should hold
that the revenue to be de-
rived from further clear-
ing in the Nilgiri, [illegible]
bear no proportion
to the possible injury to the
state, and while I do not
for a moment contend
that cultivation within
reasonable limits and bounds
honestly adhered to cannot

be

about 140 square miles of Forest land
in Wynaad having been
eliminated during the last
20 years

be combined with all that
is needed for Forest Conser-
vancy in this district. I think it is neces-
sary that Government
should decide to give no
further grant and permit
no further alienation of
Forest or Shola whatever
in the Nilgiris, until the
whole district has been
reported on and the gene-
ral question of reservation
and future policy decided.

9/10

Rev No 4146/78

1852
20

The point at St. orders are required is a rainee out - even from Dist. P. point of view - The forward? have not dealt with the boundary road -

The woodland in Kuka - road has been already reserved -

Pharmagavad is nearly barren of wood this D.R. himself did not press for relinquishment - It is only thus as regards the Dindi road that a decision [illegible]

... giv. Trust or Woodland reservation.

G.O. No 1852, of 20th Nov. 1878

G.O. No 1852 of 20 Nov 1878

G.O. 20/11/78 No 1852

No 217 -

Rec'd Dec. 1852 Sept. Mar 1853

he arrives at.

Reference to respect of Eleven Estates in the Sungei valley east & west to Semangko

As regards the 159 sett. portion of this Estate on the plateau. It includes Acres 11,700 of Forest, the respective leaves Acres 10,800. and to learn Acres 900. available for application for planting purposes.

This superficies is influenced by considerations of

Water supply
Fuel supply
Soda pastural mud.
Grass supply for cinchona &c.

I fully concur in opinion

No 217

Like Lieut. Bell's treatment considerations with the view of the Govt. & Govt. profiting absolutely all in connection with the Cinchona tracts &c. are worthy them.

Reference of those for the Cinchona plantations is an important one. but altho' Ayer is the natural growing ground Cinchona trees in their original habitat & the exclusion of the direct action of the sun on the bark is probably of great importance for the more abundant secretion & retention of the alkaloids I do not think that it will be essential to maintain woodlands in this primeval condition for this purpose alone. Fuel supply I think will be provided for more

G.O. No. 1852 & 20 Nov 1878

effectually by the rapid growth of Australian trees than by the Sholas.

There remains the question of water supply & here I must always have been unable to concur with his [illegible] in considering the growth of wood along the streams to be a matter of no moment [?]. [illegible] urges the argument of forests inducing increased rainfall. But there is no doubt whatever that in mountain heights they do induce the deposit of the contents of the clouds passing along their sides. That their shade lessens evaporation from the surface of streams. That their roots do check percolation & thereby steadily prolong the flow of the reservoirs &c. supplies the plains - From this point

.219.

of view then I consider it of great importance that the streams in their higher reaches &/at the sources should not be denuded of wood & shade, & I do not consider that a Tea Shrub plantation will answer the purpose now served by the Sholas. But I am willing to admit that Cinchona trees might probably replace Shola growth to little detriment if stipulations can be enforced &c. &c. to ensure this substitution. I think they wd. deserve consideration in reference to a modification of the proposals for reservation. Otherwise I am not prepared to say that the Committee go too far in this direction & in any case I think they are in no way deserving of the somewhat contemptuous condemnation to which they [illegible] —

[illegible signature]

No 217-

For orders

Boards Pgs: 27th Augt. 78 No: 2400.

The notes of the Members on the copy of the Report already seen by them are also put up.

Ask Minute
4/10. CM

The Report of the Nilgiri Forest Reserve Committee is forwarded by the Board who support all the recommendations made in it.

2. It is to be borne in mind that the separate question of the reservation of the grazing lands & swamps has still to be decided (G.O. 26th July 78 No 3109)

3. The

Committee to
[illegible] to address
state that certain
land
[illegible] has been given
up for public
Recreation purposes"
[illegible] herewith in F.O.
4th Jan 78 No: 7
"the final decision"
was postponed
"for further consideration".

4. Lastly the
Board are not
aware that
the Government
have asked both
General Hearne
the Receiver of the
copy of this Report
& special

+ in the F.O. on Col. Baldwin's
inspection Report of the Hills
F.O. 25th July 78 No: 106.

& in F.O. 6 Sept. 78 No: 145

the Plains - from the first
219

No 217

instructions to
prepare & submit
proposals for planting
up portions of the
Hills.

5. In the data on
which their conclusions
are based the
Committee assume
that shoals sold
will be felled, but
they forget that
this must be done
to plant-up again.
In the case of
Cinchona the best
plantation is likely
to be as attractive
to, & retentive of
moisture as the
natural woodland.

Lal

G.O. No. 1852 dt 20 Nov 1878

Orders

Nilgiri Forest Reserves

Report of Commissioner

No 4146

C24-9-78
R 2-10-78
Rec 2-10-78

No 217

L.D. 1852 1852/79

d/20 November 1878

Board's Proc dt:
27th Aug. 78 No 2400
Nilgiri Forest Reserve.
Commissioner.

In view of the circumstances brought to light in the foregoing Report & ~~the~~ subsequent ~~report~~ Report of the Notice of Government to ~~the Governor~~ Appeal the Governor in Council desires to direct that no application for forest protection should be entertained in the Nilgiris until the whole District has been reported on & the General Question of land Reservation, whether forest or grass land

1852
30

been considered
& future policy
decided. ×

2. With reference
to the Remarks of
the Committee in
para 16 the Govr
observes that
the proposal to
reserve certain
Land for Recreation
purposes was
deferred for further
consideration.

3. Orders have already
been already issued
for the Extension
of Government
Plantations on the
Nilgiris as recommended
by Lord

Ld. Cod
when such applications
are received by the Commr
will be referred for
future Disposal.

from 2. f.o. 4r
Jany 78 No: 7.

to 20 Jany 78 No: 116
f.o. 6r Feby 78
No: 1167

To the Board of Revenue and
the Commissioner of Nilgiris
21 The Commissioner of Forests

7

L.C.

Kelgiri Foresto
& Thelas to be
Reserved