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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue DEPARTMENT

G.O. No.	<i>Revenue</i> 1284	Press.
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Dated	29. 8	10.3.1984

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PROCEEDINGS OF THE BOARD OF REVENUE, dated 20th January 1881.

Read the following letter from Colonel R. H. BEDFORD, Conservator of Forests, to C. G. MASTER, Esq., Secretary to Government, Revenue Department, dated Ootacamund, 30th November 1889, No. 969 :—

I have the honor to inform you that I have lately completed a tour of inspection in the Madaga Forest Division.

2. I met Mr. Gasa, the District Forest Officer, at Goodalore at the south of the Cambum Valley and I inspected the forest tracts to the south and west of that valley which had not been inspected during my last two visits. A contemplated trip up to the forests of the "High-waving" Mountain and the sources of the Vaigai and Shuala Rivers was, however, interrupted by heavy north-east monsoon weather.

3. The object of my visit this year was chiefly in connection with the newly-marked out forest reserves, and a special report has been already submitted to Government on this subject or together with the report of the Reserve Commission, so it is only necessary here to briefly record what has been done.

4. The area of the hills and forests of this district has been calculated by measurements of 1875 and 1,025 square miles, the proposed reservation an area of about 305 square miles, so that the proposed reservation is about 30 per centage to the whole forest of about 27 or a little more than one-fourth.

5. The area proposed for reservation has been divided into blocks, and the following is a list of these reserves together with some sholas already under reservation and the sholas of the Upper Palnis:—

	No.	Block.	Area in Square Miles.		No.	Block.	Area in Square Miles.
Hills to east south, and west of Cumbum Valley.	1	Warsanad Valley ..	45-95	The Sirumalais ..	19	Sirumalais ..	30-68
	2	Eranakankur ..	1-78		20	Mudimadu ..	2-51
	3	Vandamarai ..	42-34		21	Alagar M. ..	20-47
	4	Pennagudi ..	6-65	The detached hills north or Madure exclusive of Sirumalais ..		Six existing Railway and three proposed ..	13-69
	5	Kallangudi Valley ..	13-79			Two Kirsiluvu Reservoirs ..	5-47
	6	Chetty-Palayam Day ..	1-60			Three other small lakes belonging to the same Conservancy ..	
	7	Kundamarayam Day ..	2-43			The shade of Upper Palanis, &c. ..	5-62
	8	Ambavari Ar. ..	3-93				
	9	Sengulvaray Ar. ..	8-14				
	10	Paini Ar. ..	7-43				
The Higher and Lower Paini Hills and the Uggamallays.	11	Pambari Valley ..	21-23				
	12	Kudra Ar. ..	15-72				
	13	Koolal ..	15-97				
	14	Micralhanady A. ..	10-20				
	15	Pambookal Ar. ..	1-53				
	16	Sannervathu Kadu ..	3-85				
	17	Kazhen Kadu ..	1-63				
	18	Vennillay ..	1-50				

6. Six of the reserves (i.e. 1, 2, 5, 6, 7, and 8) are entirely the property of Zemindars, No. 1 belongs to the Gaudamanayakanur Estate, No. 2 to Yarasamayanayakanur, Nos. 3, 4, 5, 6, 7, and 8 to Bodinayakanur, in all aggregating 7,154 square miles.

They will have to be dealt with under the Forest Act, but they are the most important of all the reserves as the water-supply of the Vaigai River and it may be said the future welfare of the district depend upon the upkeep of the forests contained within them.

7. I enclose a rough sketch map of the district showing the position of the twenty-one proposed reserves. I would suggest that an outline of this, much reduced, say to one-eighth or even one-sixteenth, should be prepared in the Survey Office for publication with this report, as an eye-sketch of all the reserves of the district is very important to the Revenue and Survey Departments and others as well as to this department.

8. The present Forest establishment in this division will have to be considerably increased when the reserves have been sanctioned.

9. There is at present no timber whatever in depôts in the division.

10. Since my last tour Mr. Cass has been over all his forests, and for the last seven or eight months his time has been chiefly taken up with the Reserve Committee work; he also had charge of the Trichinopoly plantation until February, when he was relieved by Mr. Hadfield.

11. The small plantations call for little remark and are all in good condition; beyond the cost of weeding and removing creepers, &c., there has been no expenditure in the teak plantation. The *Eucalyptus* plantation on the Higher Palnis has grown much and is greatly improved, and the thinnings out of it have supplied all the requirements of the station of Kodaikānal so that there has been no felling in the sholas.

12. All boundary disputes in the district have been decided, and the suits filed on both sides are now being disposed of.

13. Every effort has been made to check smuggling and conserve the forest tracts, and numerous parties have been convicted of forest offences and punished; the gall-nuts have been collected departmentally, which saves much damage to the trees.

14. The departmental collection of the gall-nuts (*Persea chebula*) lately sanctioned by Government will add much to the revenue by facilitating conservation. The collection of gall-nuts has been collected (a pothie = 240 lb.); the expenditure was roughly Rs. 2,000; the total collection will probably be 550 pothies or about 132 tons and the total expenditure about Rs. 2,400; the market-rate is at present low, but it is calculated that at least Rs. 8 per pothie will be realized, so that the receipts will be about Rs. 4,400 against an expenditure of Rs. 2,400.

15. The following is an abstract statement showing the receipts and expenditure in this division since my last report:—

Months.	Receipts.			Disbursements.		
	Madura Range.		Total.	A. Conservancy and Works.		Total.
	Rs.	A. P.		Madura Range.	Periyakulam Range.	
1	2	3	4	5	6	7
September 1879	534	3 7	534 12 1	140	3 11	140 3 11
October	507	0 5	1,108 10 0	66	11 0	124 5 11
November	439	3 3	725 1 2	97	15 4	99 0 6
December	571	11 3	866 4 9	70	11 6	72 8 3
January 1880	516	0 0	1,519 7 8	61	13 11	138 19 2
February	571	3 7	988 2 5	63	3 7	173 13 11
March	1,416	5 3	1,916 10 0	80	12 7	118 11 6
April	1,177	1 1	5,373 1 0	27	3 9	49 0 0
May	945	4 4	1,658 13 10	103	19 6	75 15 1
June	540	7 7	931 1 3	104	7 7	344 10 5
July	391	1 10	5,101 2 9	111	15 5	306 7 5
August	903	6 8	942 9 10	123	1 4	360 12 4
September	495	1 0	1,177 6 2	123	0 0	918 12 4
Total	13,825	0 5	18,774 2 9	1,277	0 7	20,051 0 7

DISBURSEMENTS—(Continued).

Months.	B. Establishments, &c.			Total.			Grand Total.
	Madura Range.	Periyakulam Range.	Madura Range.	Periyakulam Range.	Other Establishments.		
	7	8	9	10	11		
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
September 1879	156 12 0	225 3 0	297 4 11	626 7 4	237 11 0	1,560 7 3	
October	172 1 0	231 1 8	238 12 0	355 7 7	342 2 3	1,239 8 10	
November	175 11 9	255 7 5	276 11 1	354 7 11	320 2 11	1,261 5 11	
December	164 4 0	218 10 8	225 2 5	331 2 11	323 12 3	1,143 2 9	
January 1880	139 14 3	233 10 10	351 13 2	372 5 0	569 5 10	1,184 7 0	
February	139 5 10	220 10 3	372 9 3	394 6 11	614 6 11	1,281 8 5	
March	179 3 0	224 0 5	253 16 7	342 13 3	587 12 5	1,199 10 0	
April	433 7 4	225 2 7	210 15 4	278 3 5	633 5 4	1,213 0 3	
May	297 12 7	429 2 6	192 10 6	73 12 1	579 5 0	1,257 9 7	
June	201 4 0	323 6 10	401 14 2	773 13 11	622 13 6	1,785 8 7	
July	234 12 6	245 3 0	413 1 6	637 13 3	365 8 9	1,656 8 5	
August	273 3 4	273 2 7	337 18 10	505 1 3	592 12 0	1,570 11 3	
September	273 3 4	273 2 7	259 5 6	594 1 3	598 0 0	1,795 6 3	
Total	2,270 12 8	3,147 1 9	3,543 0 5	6,935 2 4	7,912 8 7	17,423 13 4	
Add book adjustment made during the above period						45 2 6	
Total						17,468 16 0	

16. The receipts are Rs. 21,589 against an expenditure of Rs. 17,515, but in the latter the expenditure on the gall-nut collections is included, which has not yet been received by the sale of the produce.

No. 969-A.

FORWARDED to Government, through the Collector of Madura and the Board of Revenue, with reference to Rule VIII embodied in G.O., No. 1,662-A, dated 18th November 1875, Revenue Department.

COMMISSIONER (Signed) R. H. BEDDOME, Colonel, Conservator of Forests.

30th November 1880.

No. 416.

FORWARDED to the Board of Revenue. The undersigned has no remarks to make.

MADURA, (Signed) E. J. SPORES, Collector.

4th December 1880.

Enclosure No. 1.—Sketch.

SUBMITTED to Government.

2. The Board are glad to learn that the felling of sholas in the north-eastern Kodakānal on the Palnis has been ceased by the production of *Eucalyptus* fuel. The departmental collection of forest produce is no doubt advantageous in saving the produce-bearing trees from wanton destruction.

3. The Board recommend that the sketch referred to in paragraph 7 of the Conservator's letter be sent to the Superintendent of Revenue Survey with instructions to prepare the outline map as proposed by Colonel Beddome.

(The Copy and Extract.)

Acting Sub-Secretary.

To the Secretary, Government, Revenue Department, with sketch.

By the Secretary, Government, Revenue Department.

Encd. A. S. B. 1880.

No. 626.

PROCEEDINGS OF THE BOARD OF REVENUE, dated 9th April 1881.

Read the following letter from Colonel R. H. BEDDOME, Conservator of Forests, to C. G. MASTER, Esq., Secretary to Government, Revenue Department, Fort St. George, dated Cotacamund, 20th November 1880, No. 924.

I HAVE the honor to forward the report on the Madura District Forest Reserves with documents as shown below, submitted by the Forest Reserve Committee:

1. Letter, No. 261-A, from Major J. C. Walker, to the Conservator of Forests.
2. Do. No. 292, from the Deputy Conservator, on Special Duty, to the Conservator of Forests.
3. Madura District Forest Committee Report.
4. Memorandum by Major Walker on the proposal to reserve all sholas on the Palni Hills.
5. Memorandum by the District Forest Officer on the same subject.
6. Twenty-four tabular statements giving full particulars of the twenty-four proposed reserves.
7. Fifty-nine depositions regarding claims and objections, &c.
8. Twenty-one sketches giving boundaries, list of earnings, &c., of each reserve.
9. Ten maps of Madura District showing position of all reserves, hills, &c.

2. This district is very different to Tinnevely, where the forests are all situated on one continuous chain of ghats; hill tracts and consequently the forests are scattered all over the district; besides the Palni Mountains, Higher and Lower, and the Sirumalais, there are hill tracts on the south, east and west of the Ombum Valley, and various blocks of hills near Madura, Dindigul and Tylur; it has consequently been found necessary to propose a considerable number of reserves.

3. The district has, roughly speaking, a forest area of about 1,698 square miles, out of which the Committee propose to form twenty-one reserves, aggregating 300 square miles.

4. They divide the forests into four blocks as follows:

No. 1 Reserve, area 45.95 square miles, is entirely the property of the Gandamanayakanur Zemindar; but, as these forests protect the headwaters of the Vaigai river, it is the most important of all the reserves with reference to the future welfare of the district.

No. 2 Reserve, area 1.78, is entirely the property of the Yerakanayakanur Zemindar, and is very important as protecting a great portion of the water-supply of the Sharly river.

No. 3 Reserve, area 42.94 square miles, is all Government property, and includes besides some valuable timber forest at the south of the Ombum

- * No. 1. Warasanad Valley.
- " 2. Yerakanayakanur.
- " 3. Vanathi Palni.
- " 4. Saranganur.
- " 5. Bodinayakanur.

No. 4 Reserve, area 5.66 square miles, at the south of the Ombum Valley, all Government property, contains valuable forest.

No. 5 Reserve, area 16.79 square miles, is the property of the Bodinayakanur Zemindar, very important as protecting the water-supply of many feeders of the Vaigai river.

5. 1st. — The hills to the east and south of the Ombum Valley and the Bodinayakanur Ghats at the extreme north-west corner of the valley, aggregating about 2,34 square miles, out of which Reserves Nos. 1 to 5, with a total area of 130.11 square miles, are proposed.

Board of Revenue,
MADRAS.

THE SECRETARY TO GOVT.,
REVENUE DEPARTMENT.

Dated January 20th.

Printed in.

Received

PROCEEDINGS, 20TH JANUARY 1881, No. 85.

JANUARY.

No. 85.

Madura Forests.—Submitting to Government with remarks, and endorsement of Collector of Madura forwarding Inspection Report of Conservator of Forests on —

6. 2nd.—The Higher and Lower Palni Mountains and the Uggamalais, aggregating about 600 square miles, out of which Reserves Nos. 6 to 18,* with a total area of 104.81 square miles, are proposed, all Government property, except 10.02 square miles of forest belonging to Bodinayakanur and a small amount belonging to Ayagudi.

No. 6 Reserve, area 1.60 square miles, entirely the property of the Bodinayakanur Zemindar, slopes at the south-west corner of the Palnis, valuable in connection with the water-supply of the District.

- * No. 6. Chethuparai Odai.
- 7. Kundamarian Odai.
- 8. Amburiviar.
- 9. Sengalvariar.
- 10. Pambur.
- 11. Pambur and Vilpati.
- 12. Kudraar.
- 13. Kukul.
- 14. Maruthanagar.
- 15. Pambodukkar.
- 16. Sengayathukadu.
- 17. Karandakadu.
- 18. Vennilal.

No. 7 Reserve, area 2.49 square miles, entirely the property of the Bodinayakanur Zemindar, situation and condition the same as the last.

No. 8 Reserve, area 5.93, all the property of Bodinayakanur, situation and condition the same as two last.

Nos. 9 to 16, with areas as per margin,* are all Government property, and are situated on the slopes of the Higher and Lower Palnis, and are important for the water-supply as well as for building timber and fuel.

No.	Square Miles.
9	8.14
10	7.45
11	21.23
12	15.72
13	15.07
14	10.20
15	8.25
16	3.56

No. 17 Reserve, area 4.69 square miles, northern slopes of the Palnis, chiefly Government property, but including a small portion of the forests belonging to the Ayagudi

Zemindar, important in connection with the water-supply.

No. 18 Reserve, area 7.50 square miles, chiefly Government property, but a portion belongs to the Ayagudi Zemindar, situation and condition similar to No. 17.

Besides these thirteen reserves it is also proposed to reserve the sholas on the Higher Palnis and Uggamalais, aggregating 3.62 square miles.

of mountains and a portion of the spur generally called the Munjalalais; the extensive denudation, which has already taken place on the slopes of these hills, has resulted in disastrous floods, and it is of very great importance to reserve the existing forest and improve it, and to attempt the reforestation of the denuded tracts by the exclusion of cattle, goats, and fire.

8. 4th.—The Karandamalais, the Alagar Covel Hills, and other detached hills north of Madura and about Iylur, aggregating about 86 square miles, out of which two Reserves, Nos. 20 and 21, aggregating 46.72 square miles, are proposed.

No. 20, *Mudimalai*, area 9.51, a hill tract now under the Jungle Conservancy Department, all Government property.

No. 21, *Alagarmalai*, area 20.37 square miles, all Government property, hill tracts, reservation important for climatic reasons, as well as fuel demand for the future.

is all important for the future welfare of the Madura District, and, if it cannot be carried out, the water-supply may be most seriously affected at no very distant date, and the results might be most disastrous.

No. 2 Reserve includes 1.73 square miles belonging to the Zemindar of Perasakanayakanur; Nos. 5, 6, 7, and 8 include 23 to 24 square miles belonging to the Bodinayakanur Zemindar.

Reserves Nos. 17 and 18 include a small amount of land belonging to the Ayagudi Zemindar.

The reservations of Nos. 2, 5, 6, 7, and 8 are not nearly so important as that of No. 1; still I consider the future welfare of the district will not be secured unless these reserves are carried out.

10. What is necessary is that these forests shall not be cleared for coffee, tea, chincona or other cultivation; there is, however, no objection to their being worked as forests for timber or fuel up to their annual reproduction.

7. 3rd.—The Sirumalais, aggregating about 138.72 square miles, out of which a Reserve, No. 19, *Sirumalai*, of about 41.22 square miles, all in Government limits, is proposed; this reserve takes in all the eastern and southern slopes of this block

of mountains and a portion of the spur generally called the Munjalalais; the extensive denudation, which has already taken place on the slopes of these hills, has resulted in disastrous floods, and it is of very great importance to reserve the existing forest and improve it, and to attempt the reforestation of the denuded tracts by the exclusion of cattle, goats, and fire.

9. It will be noticed that Reserve No. 1 includes 45.95 square miles of forests belonging to a Zemindar (Gandinayakanur); this reservation, however,

11. The question of insisting on the up-keep of private forests is a difficult one to deal with; the proposed Forest Act does not empower Government (as similar legislation does in Europe) to inform these landed proprietors that they must keep up their forests as woodlands, because the welfare of the country depends upon such up-keep. It only empowers Government to declare such forests reserved, and to administer them as such by their own agency upon paying such annual sum as may be agreed to; now directly Government steps in compensation out of all proportion to the value, or supposed loss of revenue is certain to be asked. The denudation of mountain forests for coffee has already been most lamentable, and this cultivation has been proved to be of a most ephemeral nature, and really little more permanent than the Kumeri of the Hill tribes, vast tracts of estates being already deserted all over the country, and the fine forest thereon utterly destroyed for the sake of a few years' revenue; so that, if the future be considered, there is no loss of revenue from not being able to sell forest for coffee clearings, but really a vast gain by keeping up the tracts as forests, the one is sacrificing the capital for a small sum down and a few years' interest, the other is a permanent annual revenue always likely to increase as population increases and communications are opened out; this has already become apparent to the Travancore Government, and they are alarmed at the way in which their forests have disappeared only to be deserted and turned into grass land or unhealthy thorny scrub, and they have determined to give up no more forest for coffee; coffee cultivation is at present at a great discount, and land is not generally being taken up for this purpose and estates are unsaleable, except as gold fields where that ore exists; so it is not probable that land in any of these tracts under notice would be now in demand for coffee, but this would not prevent the proprietors from asking compensation on this score; the payment of an annual compensation by Government would not be a very satisfactory arrangement, and it would be most difficult to fix the amount; considering the immensity of the interests concerned, and that the duration of the time is unlimited, the State should certainly be prepared to purchase these forests outright at a price that would tempt the proprietors, or they might be put under a certain usufruct as to timber and other forest produce; in any case it is impossible that Government can allow the forests which protect the sources of the rivers to be destroyed.

12. Major Walker proposes that, pending the demarcation and survey of the reserves proposed on the Lower Palnis, that all the remaining forest there shall be considered "protected" and under the charge of the Forest Department, and that in the meantime no durkhasts shall be attended to. I agree with this, as until the reserves are surveyed, it is impossible to estimate what area should be protected and kept up as forests and what area be given up to cultivation.

13. Major Walker dissents from the others of the committee on the question of the reservation of the sholas on the Higher Palnis and writes a memorandum on the subject; he thinks that they should be given up for cultivation to encourage the settlement of Europeans; he doubts their influence in a climatic view, or that they protect the water-supply; he thinks they are dying out, and that the canopy of foliage is too dense to allow seedlings to germinate or flourish.

14. The local forest officer (a forester of great ability) also writes a memorandum on the subject; he points out that there are only nine sholas of any size (say more than 10 acres), and that the total area is only a little over 3 square miles, and that each one protects the source of some important stream, and he thinks that, if they were thrown open, they would be destroyed and soon abandoned by the resident natives on the upper plateau. I should be exceedingly sorry to see these few sholas on the Higher Palnis disappear; the whole plateau is naturally very devoid of woodland, large tracts being sheer rock with the thinnest covering of soil and grass. I do not agree with Major Walker that the sholas are dying out, and the theory that the canopy of foliage is too dense to allow seedlings to grow and flourish is altogether erroneous, as it has constantly been proved by experiment that most of these evergreen shola trees will

not grow except under dense shade and ample protection from wind, all attempts to raise them under careful garden cultivation and in rich soil being utter failures. The question of damage by fires will, of course, receive more attention when the Forest Act becomes Law, and we have larger establishments and more means at our disposal, but my experience both on the Nilgiris, Palnis, and our other Western highlands goes to prove that sholas do not suffer much from fire when they are quite isolated from Burgher or other villagers, and when no roads go through them they often get singed on their outskirts, and when (once in seven or eight years) the stems of the Acanthaceae bushes (*Strobilanthes*) die out, or the reed bamboos die, fire sometimes sweeps in, but the damage is very temporary, and they soon recover, the dense evergreen growth effectually resists fire; sholas with a cart road through them or sholas close to Burgher villages (as is the case with many on the Nilgiris) are subject to quite different conditions; in the former the cartmen and other travellers camp there for the protection they afford; they cut much wood and light large fires, which constantly spread, and great damage is done; in the latter a constant hacking away of wood is carried on and fire is encouraged to prepare the way for temporary cultivation.

15. The sholas on the Higher Palnis are few and far between, and should, I think, be all strictly reserved.

13. The question of grazing dues throughout the mountain forest of Madura requires the orders of Government, and I trust that a fee of three, if not four, annas per head may be sanctioned.

17. The Madura Forest Establishment will require a considerable increase when the reserves are sanctioned and demarcated; the collection of hill produce, lately sanctioned by Government, is already augmenting the revenue considerably, and this will continue to rise when the Forest Act enables us to check smuggling.

ENCLOSURE No. 1.

From Major J. C. WALKER, Deputy Conservator of Forests, on Special Duty, to Colonel R. H. REDDOME, Conservator of Forests, dated Madura, 2nd October 1880, No. 261-A.

I have the honor to submit the report of the Madura District Forest Committee, together with the usual enclosures, as per margin. I regret to have to state that matters have not gone so smoothly here as in other districts.

As per list attached

2. The Collector, Mr. H. J. Stokes, served personally on the Committee on the Upper Palnis and in the Cumbum Valley, and Mr. Gass and I fully understood, concurred in, and approved of all that was proposed, and was in all respects satisfied with the Committee's action. It would now appear that he has changed his views.

3. For the work on the Lower Palnis and in the Palai, Dindigul, Melur, and Madura Taluks he deputed the Acting Sub-Collector (Mr. O. Kough), whose views were throughout in accordance with those of the two forest members of Committee, and who will, I feel sure, vouch for the care with which our proposals were framed and inquiries conducted.

4. On our return to Madura, the Collector resumed his seat on the Committee and has virtually repudiated his Sub-Collector's action with regard to important issues on the Lower Palnis, declining to forward a memorandum by me on the subject, which met with the approval and concurrence of the Sub-Collector, and, in a modified degree, of Mr. Gass as member of the Committee.

5. Both the Local Forest Officer and I have experienced great difficulty in obtaining necessary information called for through the Collector from the Tahsildars, and those officials have, as a rule, not even deemed it their duty to pay us ceremonial visits of respect.

6. I regret extremely to have to bring these facts to notice, but consider it due to myself to do so, leaving it for the Collector to make such comment as he may think fit.

7. The friction which has taken place would, I submit, point to the advisability of the Collector either serving throughout on the Committee of his district, or deputing another officer to do so. There could then be no chance of misunderstanding or misinterpreting his views.

8. It is only by Mr. Gass and I having modified our views very considerably that we have been able to draft a joint report at all, and the Collector informs me that he will append a qualifying Minute.

ENCLOSURE No. 2.

From H. A. GASS, Esq., Deputy Conservator of Forests, on Special Duty, to Colonel R. H. REDDOME, Conservator of Forests, dated Madura, 10th November 1880, No. 292.

The large maps forwarded with the Report of the Forest Committee to you are the original ones, and the Acting Deputy Superintendent of Revenue Survey here says he has no time to prepare copies of them for record in the Madura Forest Office. I have the honor to request therefore you will get the same copied for me in Madras at the Central Survey Office.

2. Of the maps sent to you, sheets 9 to 18 refer to the Madura Division; the remaining 1 to 8 sheets were handed over to the Deputy Superintendent here by Major Walker, and are now returned to me by that officer. I request therefore you will send them to their proper destination, which is, I believe, the Central Revenue Survey in Madras.

ENCLOSURE No. 3.

The Madura District Forest Committee assembled at Shembaganur on the Palni on the 3rd May 1880, and during that month and early part of June completed the selection of tracts to be reserved on the Upper Palnis, camping at Maryan Shola, Fort Hamilton, Kakkai, and Pamburai. The Cumbum Valley was visited during the latter part of June, our camp being at Pertyakulam, Chinnammannur, Cumbum, and Gadalur, and selections there and in Palai and Vaidan completed in July.

In August, the selections on the Lower Palnis, and Palai and Dindigul Taluks including the Sivumalais, were completed, the Committee camping at Neutral Saddle, Madurai, Pandigudi, Kankadai, Periyar, and Pachalur (all on the Lower Palnis), Dasariyatti, Palai, and Vaidan, Kumbal (Palni Taluk), Malaiyur and Gopuramalai (Sivumalais), Dindigul, Vettlatopacatti, and Kanaveyattal (Dindigul Taluk).

Nattam and Chetrapatti in the Melur and Madura Taluks were visited in the first week of September, and the selections completed by the 8th of that month.

1. The District Collector served on the Committee on the Upper Palnis and in the Cumbum valley, deputing the Sub-Collector (Mr. Kough) as his representative. Mr. Kough in May, and both then and subsequently rendered every assistance in supplying maps, &c. His Assistant Mr. O. Neill and Head Surveyor Mr. Band worked with the Committee throughout and prepared the full sketches which accompany this report (under the instructions of the Deputy Conservator on special duty), an arduous duty performed to our entire satisfaction.

2. The circumstances of this district differing widely from those of the North or South Coimbatore necessitated an entirely different procedure in the selection of proposed reserves. Both in Tinnevely and South Coimbatore (Anamalais) the forests are in one block extending along the line of ghats and cultivation where it exists is limited to the lower slopes excepting in the case of comparatively limited areas under coffee. It was therefore practicable to restrict the number of reserves in Tinnevely to five and in South Coimbatore to three, the upper portion of the mountains in the former district forming really one continuous reserve (proposed) protecting the headwaters of all the rivers of the district.

In Madura the hills and forests are scattered all over the district, and cultivation everywhere intervenes even on the plateau of the mountains. The forests on the main line of the Western Ghats from Pertyakulam to Gadalur are limited and of comparatively little importance with respect to the water supply, the hills rising abruptly on the Madurai side to the crest where the watershed forms the Travancore boundary. It is on the spur which runs out more or less at right angles, e.g., the Palnis and the mountainous range at foot of the Cumbum and Varsanad valleys, and detached ranges such as the Sivumalais and Nattam Hills that the district mainly depends for its supply of water, timber, and firewood. Selection of tracts to be reserved has been found under the above circumstances by no means easy, the more so, as we have still no indication of the views of Government as to what should and what should not be classed as "Reserved Forest," or on what principle the remaining forest is to be dealt with.

3. The Committee have, however, selected and indicated on the ground and maps twenty-one tracts which they propose should be reserved. The area of these tracts aggregates 281.69 square miles, and they may be divided into and treated as four blocks or series, viz.:-

- (i.) The forests at the foot of the Cumbum and Varsanad valleys protecting the headwaters of the Vaigai and its tributaries and containing the finest timber in the district and the forests of the Kotagudi valley in the Bodinayakanur Estate.
- (ii.) The sholas on the upper plateau, the Tambirankanal (250 acres) on the Agamalais and forests on the slopes of the Palnis (Upper and Lower) protecting feeders of the Vaigai and Amaravati rivers and capable of furnishing an adequate supply of timber for local demands.
- (iii.) The Sirmalai, Manjamalai, and Perumalai Forests.
- (iv.) The detached hills known as Mudimalai, Karandimalais, Alagarmalais, Nedumalais, &c., in the Dindigul, Melur, and Madura Taluks.

4. In the Varsanad, Cumbum, and Kotagudi valleys we propose to constitute five reserves (with an area by map measurement) of 119.11 square miles, including the Higher Waking Mountain, covered with forest in which the Surudi river takes its rise; portion of a tract formerly in dispute with the Varsakanyakanur Zemindari, but recently demarcated by the Revenue Survey Department as within the limits of that Zemindari, and a fine tract of forest adjoining the Gudar Ghat road to Pinnedur protecting the Vairavanur and Suranganur. The whole base of the latter falling within British Territory was at first included in the reserve, but as G.O. of the 7th October 1880, No. 1313, directs the Travancore-British boundary to be altered at this point, the boundary of the reserve now follows the ridge, and the Suranganur river rising in what is now Travancore territory, passes through the reserve only. In Varsanad we propose the reservation of the whole southern end of the valley, which is covered with a dense forest from a point known as Topemalai on the boundary of No. V Reserve in Tinnevely to that marked Rajshole on the Ordnance Sheet Map. The whole of this tract with an estimated area of 45.55 square miles is in the Gandamanyakanur Zemindari, Government having quite recently (G.O. of the 1st July 1880, dated 4th August 1880) decided on taking no further action in claiming it as British territory. In Kotagudi valley we propose the reservation of all the forests left at the upper end of the valley.

5. On the Upper Palnis we propose eight reserves, on the slopes towards the Periyakulam and Palni Taluks. Of these five blocks with an approximate area of 67.59 square miles are Government forests and three blocks aggregating 9.62 square miles within the limits of the Bodinayakanur Zemindari. The Committee also propose to reserve all the sholas on the Palnis and the

* Total area 3.62 square miles.

fine sholas on the Agamalais (a spur of the Palnis),* but to this action, one of our members records a Minute of dissent which, with remarks by the local Forest Officer in which the Collector concurs, is appended to this report.

On the Lower Palnis five tracts with an aggregate area of 27.2 square miles and a few of the larger sholas have been selected as suitable for reservation. They are all Government Forests. The Committee would have recommended much more extensive reservation on these hills, both on account of climatic consideration and value of the forests, but refrained, owing to the scattered nature of the cultivation and uncleared putta holdings, the situation and extent of which is only locally known, which precludes the reservation of large compact blocks.

The Deputy Conservator on Special Duty has recorded a special memorandum on this point which met with the concurrence of the Acting Sub-Collector as member of the Forest Committee. As the memorandum deals with questions outside the scope of this report, we do not consider it advisable to submit it *in extenso*. Major Walker summarized his views as follows:-

- (i.) That all forests on the Lower Palnis, not selected for reservation, be considered for the present as "protected" and under charge of the Forest Department.
- (ii.) That the boundaries of all the existing holdings be cleared and got ready for demarcation and survey (in accordance with orders already issued by the Collector), pending which, no durkhasta be complied with.
- (iii.) That immediately the demarcation, survey and settlement are completed, certain blocks from the "protected" forests be set apart for cultivation and transferred from time to time to the Revenue Department, further blocks being made available from the Forest to the Revenue Department, further blocks being made available from the Forest to the Revenue Department.
- (iv.) The Forest Department to have complete control over the protected forests as such, and all puttas, leases, &c., within these limits to be transferred to them. Should the above not be approved of, he considers that further tracts on the Lower Palnis should be reserved necessitating detailed local inquiry into the extent and nature of putta holdings, on any of which the forest is still standing.

The Madura Forest Officer concurs with Major Walker, but the Collector strongly objects to any cessation of, or check on, the grant of land on durkhast, and considers that all land excluded from reservation is, and should be, available for the extension of cultivation. He is not averse to further reservation, though he questions its necessity. The whole question is an important and wide one, and will probably be best dealt with by itself when Government decide and issue instructions as to the constitution and classification of unreserved forests. On this subject see G.O., No. 296, of 8th March 1880.

6. We propose to class as reserved forests the whole eastern and southern slopes of the Sirmalais, making the ghât road to the Malaiyur coffee estates the northern boundary and including a portion of the Manjamalai spur. The area will be about 39.89 square miles, but portions of the lower slopes and detached hills should, the Committee are of opinion, be eventually excluded from reservation and classed as Village Jungle. The whole of the plateau and western slopes have been decided to belong to the Ammayanayakanur Zemindari, and we do not think it necessary to interfere with them, although no opportunity should, we think, be lost of acquiring control over them either by purchase or lease. The Sirmalai slopes are singularly bare of timber or even firewood especially on the north-eastern extremity, and the tree growth is steadily deteriorating owing to the incessant depasturing of cattle and goats and the fires which rage over the whole tract. The effects of the denudation of the slopes is graphically described by the Collector in his remarks on Colonel Beddome's inspection report for 1879 (G.O., No. 844, dated 21st July 1880), and the Committee can fully endorse his remarks and those of the Conservator both as regards the damage likely to result from torrents and disastrous landslips and the necessity of conserving and increasing the supply of timber and firewood for the important towns, Madura and Trinagui, situated at either end of this range.

7. The above remarks apply equally to the forests or jungles of the fourth series situated in the Dindigul, Melur, and Madura Taluks. The Committee propose to retain the existing "firewood reserves" with an estimated area of 18.16 square miles and to constitute the Mudimalai and Alagar Hills reserved forests, making the total area of this series 46.71 square miles in seven blocks. The Mudimalai area (9.31 square miles) which formerly formed part of the Shengurchy Zemindari is situated in the Dindigul and Melur Taluks, 6 miles south-east of the line of Railway from Trinagui to Dindigul, and is fairly wooded.

The Alagarmalai (area 20.37 square miles) is in the Melur and Madura Taluks. Madura town is only about 10 miles distant from its southern extremity, which has naturally long since been denuded for the firewood supply of that place. The supply is now chiefly drawn from the north-

* Area 5.47.

westerly slopes (where there are two jungle conservancy reserves which we propose to include in the reservation now proposed), Tambulimalai and the Katchakutti jungles on the southern slopes of the Sirmalais. Adequate administrative arrangements should, of course, be made by the Forest Department to prevent any abrupt curtailment of the firewood supply of Madura Town.

8. The following tabular statements exhibit in an abstract form the area of cultivation dependent on the rivers and streams which take their rise for the most part within the proposed reserves, and the proportion of reserved to total forest area, &c. They lay no claim to accuracy, but have been compiled with sufficient care for our present purpose:-

ABSTRACT Statement showing the area and assessment of irrigated cultivation under the principal rivers in the Madura District and the proposed Forest Reserves in which head-water are chiefly situated.

Names of Rivers.	Chief Tributaries.	Area of Cultivation.	Annual Assessment.	Taluk in which Cultivation is situated.	Proposed Reserves in which head-waters are situated.
		ACRES. CANT.	RS. A. P.		
Vaigai River	Manjalur Shurlyar Sinnakollur Kallur Perabur Vengannathi Uppur Kotagudiam	96,819	0 2 103 11 6	Periyakulam Dindigul Madura Sivagangai Ramanad	Reserves Nos. 1 to 5
Shunmuganathi River	No detailed information regarding this river, which flows direct into the Amaravati river, can be supplied, as none of the statements called for from the Palni Taluk have been received as yet.				

Summary showing the Approximate Area of Reserves in Blocks, and the proportion of the proposed Reserve Forests to the total Area Forests in the Madurai District.

Series	Locality.	Reserves included in each locality.	Total Area of locality.	Total Area of Reserves included in each locality.	Proportion of total Forest Area in each locality.	Area of existing Firewood Reserves and Shola's on Palms.	Proportion of proposed Reserve Forest to total Forest Area of the District.
I	Varanad, Cumbum, and Kotagudi Valleys.	1. Varanad; 2. Yersakanayakanur; 3. Vampathiparai; 4. Suranganur; 5. Kotagudi Valley.	273.42	110.11	.42	Forest Department. 1. 1.38 square miles. 2. 2.10 3. 3.44 4. 2.07 5. 2.10 6. 1.55	1
II	Upper and Lower Palms and Agamallais.	6. Chothuparai Odai; 7. Kunda-mayan Odai; 8. Amburasi; 9. Sengalmanur; 10. Pambaur; 11. Pambur Valley; 12. Kudraur; 13. Kuka; 14. Marothanathi; 15. Pamburkallur; 16. Seroovathukadu; 17. Kanienkadu; 18. Vennillai; 19. Sirumallais and No. I, Firewood reserve.	599.93	108.81	.17	Jungle Conservancy. 1. 1.85 square miles. 2. 3.62	27
III	Sirumallai, Manjimalais, and Perumallais.	20. Mudamallai; 21. Alagamallais and Nos. 2, 3, 4, 5, 6, Forest Department, Firewood Reserves, and Nos. 1 and 2, Jungle Conservancy, Firewood Reserve.	138.72	41.22	.20	Shola's on Palms and Agamallais. 3.62	
IV	Mudamallai, Karadammallais, Alagamallais, Nedumallais, &c.		85.91	46.72	.54		
		Total	1097.98	305.48		29.93 square miles.	

9. We proceed to lay before Government the circumstances of the proposed reserves as a whole, and analyze briefly the claims and objections recorded with regard to them as detailed further on for future guidance in the event of the reservations being approved of.

(i.) *Private forests, &c., within the limits of proposed reserves.*—These comprise—

(a.) The Zemindari forest belonging to Jandamanayakanur in one block of 45.95 square miles, a tract in Yersakanayakanur to which we have alluded in paragraph 4, estimated at 1.78 square miles, and those of the Balinayakanur Zemindari in four blocks aggregating 22.81 square miles, and Ayakudi on the Lower Palms in Reserves Nos. 17 and 18. It was considered absolutely necessary to include these portions of the Ayakudi estate, but as they are of no great extent, probably about eight square miles, it might be found possible to purchase them from the Zemindar.

(b.) *Putta holdings within the reserve boundaries.*—The Committee considered the reservation and the protection of the Zemindari forests indicated matter of great importance. Situated as they are on the head waters of the principal river of the district (the Vigar) and its tributaries, their destruction could not fail to affect injuriously the interests of the State and public at large. Complete control to prevent not only alienation and clearing, but certain though gradual deterioration is necessary, and the Committee understand that Government are now considering how this may best be secured without injustice to the proprietors.

The details of (b) putta holdings within the proposed reserve boundaries are given further on in dealing with each reserve separately. They are not numerous as the Committee endeavoured to avoid including private lands as much as possible, and are as a rule situated outside the survey limits of cultivation. The circumstances of each must, the Committee think, be considered separately, and the tracts acquired or demarcated out of the reserve as deemed best by the Local Revenue and Forest Officers. The former course commends itself generally to the Committee and the compensation to be granted should not, they think, prove prohibitive, especially if other land of equal or greater extent be allotted outside. The matter of puttas for Cardamom cultivation in the reserved (or any) forests (under the Forest Department) appears to demand special consideration and orders, as also that of the so-called Puliady puttas (which give the right to the Tamarind tree on certain areas) of which there are 18 in the Vannathiparai, No. III Reserve, and 20 in the Surmananur, No. IV Reserve, and 13 in No. X Pambaur Reserve.

ii. *Rights of Way.*—There have been carefully recorded and will be found detailed in respect of each reserve. Their existence is of course inimical to efficient protection and no conservancy, although they may to some extent be utilized as inspection paths and fire traces. The great roads of the Palms on which there is considerable traffic present of course the greatest obstacles to strict conservancy, but on the other hand it is very important to preserve and improve the forests in the neighbourhood of such roads both in the interests of the scenery and for the protection of the roadway. Bridges and culverts from damage by landslips, torrents, &c. Mere paths into the forests, which it is proposed to reserve, do not, of course, constitute rights of way, and even in the case of thoroughfares, it may be found feasible to reduce the number as now claimed without any serious inconvenience or hardship by restricting traffic at certain seasons at any rate to the most direct and convenient routes.

iii. *Rights to Pasturage.*—The Committee find that, in this district as in others this is the most difficult question to deal with, and presents, we may say, the gravest objection on the part of the people to the constitution of the Reserved Forests.

We have throughout endeavoured to explain that the area available is less than sufficient

I did not.
(Signed) H. J. STOKES,
Collector.

both for the Government Reserves and the real requirements of the people, but far from being convinced by our arguments, they state broadly that even the whole is insufficient and virtually

object to the closing against cattle and fire of any portion of the forests. The right or privilege of depasturing cattle and sheep over all the waste lands of the Crown is in fact too general and of too long standing to admit of the people regarding any circumscription of it as other than a real hardship and injustice.

At the same time no individual or community has even advanced an exclusive claim to such pasturage as against other individuals or communities of the State. All freely admit that the right or privilege has been and is being enjoyed by all without reference to the situation or local circumstances of any particular village.

The Committee have ever, when endeavoured to exclude from reservation sufficient areas for pasturage, and as at present advised the, hope that the provision as now made may prove ample even should no portion of the Reserved Forests be available for grazing at any time. A reference to the number and nature of the dispositions recorded will show how thorough the inquiry has been in this respect, although several villages, including some of the most important, failed to appear and many were represented by the Government Village officials only.

In the case of the Cumbum Valley, however, to desire to place on record that our knowledge as to how far the depasturing and breeding of cattle for sale is carried on, their numbers, and to what extent dependence is placed on the adjoining Travancore Forests and open grass lands is very limited, and it may therefore be found necessary or expedient to leave to those who are grazing, portions of the area which it is now proposed to constitute reserves in this locality. The Collector supplies the following data taken from his last returns of the number of cattle and goats in the Periyakulam Taluk; the number of the former is 115,074 and of the latter 20,684, which shows the magnitude of the industry and interests affected.

We are fully alive to the fact that young forests cannot be raised on the hill sides, reaped in the face of cattle grazing and its attendant fires, but it may be found advisable to restrict the rapid encroachment and extension of forests to small areas, in such conservancy be found to trench upon the land and hardly in those who earn their livelihood by feeding and rearing cattle for the market.

The foregoing remarks apply especially to the Cumbum Valley. Elsewhere the Committee are of opinion that ample areas are left available.

We concur generally in the views of the Coimbatore District Committee (G.O. No. 1,812, dated 2nd August 1879) as to the advisability of ploughing cattle being depastured wherever possible on the assessed village waste or panchayat lands, and their manure, &c., utilized and not wasted. We see no objection to levying a fee on cattle depastured on "Government waste land on the hills," as has been done in South Coimbatore, and would fix the maximum rate for the present at Annas 3 per head as recommended by the Tinnevely District Committee.

The rate in the adjoining Travancore Territory is, we believe, the same. It will of course be necessary to make adequate arrangements not to levy this fee on cattle merely passing through the Government Forests to those of the Travancore State.

IV. *Rights to cut Timber or Fuel*.—Claims to cut timber and fuel were generally advanced, and we consider that arrangements should be made to ensure an adequate supply, and that the proposed constitution of reserves should in no way interfere with the rights or privileges of the people as regards firewood, and firewood for agricultural purposes, &c. These will, for the most part, be satisfied from the unreserved or village forests when constituted.

V. *Rights to gather Minor Forest Produce or make Charcoal*.—Not a single claim for gathering minor forest produce was advanced. The recent orders of Government having special reference to this district (G.O. No. 879, dated 23rd July 1880) prescribe a definite course of action in this respect. It is believed that there are really no hill tribes properly so-called, but many be found their privilege to collect will, if it would appear, be gladly conceded to them, and their doing so encouraged by the Forest Department, as in the case of the few Pulliar Members of a pseudo-hill tribe resident at Vannathiparai in the Cumbum Valley. No claims to make charcoal were advanced. This industry has for years been carried on in places designated from time to time by the Forest Department, and all that appears necessary is to improve on the present rude method of burning it, and teach the people to turn out a better article with a more economical use of firewood. In concluding the general portions of this report the Committee would respectfully reiterate the remarks of the Coimbatore District Forest Committee of 1878 (vide paragraph 31 of their report) as to the absolute necessity of adequate and properly paid and supervised Forest establishments. The constitution of so-called reserves is, we consider, worse than useless unless their proper protection and improvement be guaranteed. That this cannot possibly be done with the existing establishments and rates of pay must be patent to all, and is doubtless well known to the Board and Government.

10. In the accompanying twenty-one tabular statements and twenty-one sketch maps we record details as regards situation and boundaries and the claims and objections raised in respect of each reserve. Depositions in respect to each reserve are also herewith sent, and with them the report is complete. There has been some delay in getting it ready, but it was quite unavoidable as the report could not be despatched without the maps and the numerous areas that had to be ascertained. It will be seen from the maps that the preparation of them has been a very laborious work and could not be hurried on. The maps were received a few days ago and no time has been lost in forwarding the report.

(Signed) H. A. STORES,
Collector of Madura.

(Signed) J. C. WALKER, Major,
Deputy Conservator of Forests,
on Special Duty.

(Signed) H. A. GASS,
Deputy Conservator of Forests.

MADURA,
2nd October 1880.

ENCLOSURE No. 4.

MINUTE by Major CAMPBELL WALKER, Deputy Conservator of Forests, on Special Duty, on the proposed reservation of all sholals on the Palni Hills.

I must reluctantly dissent from the majority of the Committee on the matter of the proposed Reservation of the Palni Hill Sholals, i.e., evergreen forests scattered in clumps over the upper plateau, and on isolated hills such as Gramal Mahai.

I cannot bring myself to believe that the reservation of all these sholals is either necessary or expedient.

I grant that the existence even of the smallest of them may and doubtless does exercise some influence on the rainfall, or still more on the storage and permanence of the water supply, and that the total area of woodland on the Upper Palnis is very small, but I think the influence of many of the sholals must be infinitesimal—it is notorious that there is no water either taking its rise in or flowing through many of them—and that the best means of increasing the area of woodlands is to encourage the settlement of European capitalists who would certainly form plantations, and not to shut them out by reserving all the existing wooded area, a certain proportion of which is absolutely necessary in pioneering tea or cinchona planting.

2. Moreover, careful observation and conversations with the oldest inhabitants goes far to convince me that the sholals are dying out, and their area being yearly encroached upon and circumscribed by fire.

The trees found in them are of little or no value except as firewood. The old trees are, therefore, allowed to remain standing until they die off, forming a dense canopy under which no seeds can germinate nor saplings flourish.

There is therefore no young growth coming on except where gaps may be formed by felling or the death of old trees, and unfortunately the fires which rage over the whole plateau once or twice a year then find a ready entrance, and accelerate the destruction of the sholal.

3. There can, to my mind, be no doubt of the damage done by those fires—not only to the outskirts but even inside the sholals where they now seem to penetrate. Several instances presented themselves to the Committee beyond Fort Hamilton and in the Pimpriat and Kakai districts. Whether the felling the grass is more general and the fire itself more intense than it used to be, when probably fewer cattle were depastured on the hills, I cannot say, but that the fires now do great damage and are gradually destroying the sholals is, I think, certain. We certainly cannot prevent the fires under the existing regulations and system of cattle grazing which encourages the growth of long coarse grass which has to be burnt, and therefore grows coarse and longer and more inflammable. Still less can we fire-ban and protect all the sholals which yield us little or nothing in the shape of direct revenue in return.

4. The best means of checking fires are to my mind the encouragement of settlers who would break up the land into blocks; and the encouragement and enforcement by regulations of more enlightened ideas as to grazing.

The latter question is scarcely pertinent to this minute, and I need only state that I would not hesitate to insist on the penning or paddocking of cattle on comparatively small areas so that they should effectually eat and trample down the long coarse grass, leaving a very superior description, short and sweet, fertilised by their manure and not burnt over every year.

But in order to initiate this or any other improvement the presence of enlightened European landholders is necessary.

5. The great benefit to the State of opening out and utilising such a splendid plateau as the Upper Palnis must be patent to all. I hold very strongly that every improvement should be given to the capitalist, European or Native, to develop such hill ranges, employ labor and grow tea, coffee, cinchona or breed good cattle and sheep and in dealing with forest reservations.

I think it is our duty to consider this as well if not more than the requirements or privileges of the ryots who certainly do not contribute much to developing the resources of the country. It has been advanced that this is going beyond the scope of our instructions. I cannot see it. Our instructions are to designate what should, in our opinion, be classed as reserved forests and maintained as perpetual forest. In order to do so we ought, it seems to me, to consider the effect of such reservation in all its bearings, and I think we ought to be very certain of our position ere we recommend any measures which would virtually close the hills against capital and improvement. I think everything should be done to encourage settlers, and that any action tending in the opposite direction is impolitic and contrary to the best interests of the country. I held the above views when I served on a Commission on the Nilgiri Waste Land Rules in 1875, and I am very sorry to see from recent orders that all the sholals remaining on the Nilgiris and Kondahs are to be reserved. I sincerely trust this course may not be adopted here.

6. It is of course very difficult for any individual or Committee to say which sholal should and which should not be reserved, and it is much easier to say "unreserve them all," but I do not think it is necessary to do so.

The case of the slopes, or forests, on the plateau of the Lower Palnis is to my mind widely different. It is clearing the slopes which causes the water to run off rapidly, resulting in disastrous floods succeeded by long draughts becoming more disastrous and of longer duration year by year as the hill sides are denuded and ravaged by fire until the soil itself is washed away and nothing but bare rocks left.

The forest bath on the lower slopes and Lower Palnis is of considerable value as forest, and the latter is still of sufficient area to exercise a very decided influence on the climate and water supply of the surrounding country. I do not hesitate, therefore, to recommend considerable reservations there and the strictest prevention of fire and cattle grazing, &c.

7. But with regard to the sholals, granted that we should reserve some for aesthetic reasons and supply of firewood, e.g., the Perambakanal and Tiger Sholah (on Lower Palnis) near Shembaganur, the Kodakanal from which the settlement takes its name, Gundur and perhaps Kikkil, the Aga Malai sholals, I would throw open all the others under the Waste Land Rules, enabling proceeds of the sale of the sholals only to the Forest Department to enable it to plant if necessary, or at all events to protect and improve what is classed as reserved or protected forests; encourage settlers and the depasturing of cattle on a rational system, grazing dues being levied from all but the hill villagers having vested privileges, and devoted to the suppression or at least the limitation of fires.

8. By some such means, in my humble opinion, there would be much more likelihood of seeing the extent of woodlands increase and exercise a real influence on the climate and perhaps the rainfall than by any arbitrary reservation of sholals until they die out or are destroyed by the fires. I, therefore, dissent from the recommendation of the Madras District Forest Committee to class all the "sholals" on the Palnis as reserved, as I am by no means convinced that the existence of most of them has any effect either on the climate, rainfall, or permanence of the water supply, and such a step seems to me in other respects contrary to the teachings of political economy and the interests of the State.

(Signed) J. C. WALKER, Major,
Dy. Conservator of Forests, on Special Duty.

ENCLOSURE No. 5.

Note by the Deputy Conservator of Forests, Madras Division, on the Minute of the Deputy Conservator of Forests, on Special Duty, regarding the reservation of the Sholals on the Upper Palnis.

The reservation of all the sholals on the Upper Palnis is not so formidable a question as any one unacquainted with their number and extent might believe. There are only nine sholals of any size, that is to say of more than 10 acres or so.

Of this number, I believe that every sholah protects the sources of at least one important stream, and some of them of several.

The larger sholals not already included within proposed reserve limits are as follows:—

- (1.) *The Tiger Sholah*.—One mile from Shembaganur and through which the Battagunda ghât road runs for about two miles. This should be reserved, to which Major Walker agrees, vide paragraph 7 of his Minute.
- (2.) *The Perambakanal Canal*.—Mentioned by Major Walker in his minute, lying on the Periyakulam ghât road close to Shembaganur falls within the proposed Pambaur reserve.
- (3.) *The Porappai Sholah*.—The Porappai rises in this sholah; this river forms the beautiful cascade near Shembaganur and is the main source of the Vilpatty valley river, known as the Kinnarai Aur, which joined with the river which flows through the Pambaur Valley, becomes the Shannaganathi river in the plains.
- (4.) *Pambaur Canal*.—A small sholah of some 5 acres in which the Pambaur rises.
- (5.) *The Kodakanal Sholah*.—Should of course be reserved. This sholah is one of the principal attractions of the Kodakanal settlement. The streams rising in this sholah keep up the supply of water in the Kodakanal lake.
- (6.) *Gundur and Muniam Sholals*.—These lie close together and should be reserved as they will probably be required by the Forest Department for firewood purposes. They are distant about two miles from Kodakanal.
- (7.) *Gundur Series of Sholals*.—Some five or six in number. They are all situated in a large basin five miles from Kodakanal in which the Gundur rises. This river is the main source of the Shannaganathi river.
- (8.) *Sundanan Sholah or Doctor's Delight*.—About six miles from Kodakanal a favorite resort of visitors to Kodakanal for picnics, &c. Several streams rise here, which flow into the Kullar.
- (9.) *Fort Hamilton Sholah*.—About eight miles from Kodakanal; the upper portion of this sholah only belongs to Government, the lower belongs to the Bodirayakanur Zemindari, and is included within the proposed Amburuvu Aur Reserve. A large stream called the Peri or Berojan Aur rises in this sholah.

X. *The Marian Sholah*.—about fifteen miles from Kodakanal. This is the only sholah in this direction and is the only and a very favorite camping ground. Several minor streams flowing into the Chotheppur Odai take their rise here.

The remaining patches of sholah are not numerous and are so small, 2, 3, 4 acres and so on, that it is quite unnecessary to detail them.

I agree entirely with Major Walker as to the principle of encouraging settlers, &c., but I do not think the reservation of the Upper Palni sholals is ever likely to prove itself a hardship to strangers, as the essential conditions for opening new ground are here so badly fulfilled that none are likely to settle when elsewhere more favorable localities may be found, and the only possible effect of the reservation will be the exclusion of the villagers of the upper Palni villages who, if allowed, would cultivate for a few years only and then abandon the land.

The probable gradual destruction of the sholals by fire is a more serious question, and although I believe the danger to be great, still I think that steps may be taken to guard against it.

The necessity for reserving some of the sholals is admitted on all hands and the difficulty arises as to which should be reserved and which left out. Considering the small and the very small number of sholals left on the upper plateau, I am certainly in favor of reserving all.

(Signed) H. A. GASS,
Deputy Conservator of Forests,
Madras Division.

I concur.

(Signed) H. J. STOKES,
Collector.

ENCLOSURE No. 6.—Twenty-four Tabular Statements.

ENCLOSURE No. 7.—Fifty-nine Depositions.

ENCLOSURE No. 8.—Twenty-one Sketches.

ENCLOSURE No. 9.—Ten Maps.

ENCLOSURE No. 10.—List.

No. 935.

FORWARDED to the Secretary to Government Revenue Department, through the Board of Revenue, with reference to paragraph 3 of the G.O. No. 1,145, of the 20th July 1878, Revenue Department.

OOTACAMUND,
20th November 1880.

(Signed) R. H. BEDDOM, Colonel,
Conservator of Forests.

With the foregoing letter the Conservator forwards with his observations a report submitted under G.O., dated 20th July 1878, No. 1,145, by the Forest Committee regarding reserves proposed to be maintained in the district of Madras.

2. The Committee was composed of the Collector (Mr. H. J. Stokes) whose place was taken at times by the Sub-Collector (Mr. R. R. R. R.), Major Campbell-Walker, and Mr. Gass of the Forest Department. The services of Major Clay, Deputy Superintendent of Revenue Survey, and of some of his subordinates were placed at the disposal of the Committee for survey work connected with the forest selections.

3. The forest lands of the district are computed to occupy an area of about 1,098 square miles, of which the Committee propose to conserve 284.69 square miles, and also certain sholals on the Palnis and Agamalais. The contemplated reserves are

classified in series according to the locality in which they are situated, and each series is subdivided into smaller reserves amounting (exclusive of sholahs) to twenty-one in number. The conservancy of so many petty forests will necessarily be attended by considerable trouble and expense, but this is said both by the Committee and the Conservator to be unavoidable owing to the physical distribution of the forests in Madura, which, unlike those in Coimbatore and Tinnevely, are not confined to the slopes of a single ridge but are spread over several detached ranges of hills.

4. On some points the opinions of the members of the Committee appear to have differed, and, in his letter to the Conservator, Major Campbell-Walker states that the Collector intended to append a minute of dissent; this, however, does not appear to have been done. The Board agree with the majority of the Committee and the Conservator as to the inexpediency of deforesting the Upper Palnis and would preserve the sholahs strictly.

5. With reference to Colonel Beddome's remarks at paragraph 11 of his letter as to State control over private forests, it is observed that this subject was very fully discussed in the local Legislative Council when the Forest Bill was being drawn up, and the Government have taken such power of control as was thought necessary and desirable in the circumstances of the country.

(True Copies and Extract.)

[Signature]
Acting Secretary.

To the Secretary to Government, Revenue Department,
with twenty-four tabular statements, fifty-nine depositions,
twenty-one sketches, ten maps, and one List, to be returned

Copy to the Conservator of Forests.
Collector of Madura.

Revenue 1881 24/4
1881

Board of Revenue,
MADRAS.

TO
THE SECRETARY TO GOVT.
REVENUE DEPARTMENT.

Dated April 9th.

Printed by

Received

20/4/81

PROCEEDINGS, 9th April 1881, No. 626.

Order 19/4/81 in 115

APRIL

No. 626.

Forest Reserves in Madras District.—Sub-
mitting to Government, with remarks, report
on —

With a doc

REVENUE DEPARTMENT

No. 578

From

Board of Revenue No 85

Dated 10 Jan 7 1881

FOR ORDERS:

*Nothing appears
to call for remark
except the
inclusion of the
Board in para 3*

*Having regard to
the primary importance
of*

Current No

FOR ORDERS.

Proposed by Forest
Inspector to
Madura Forest
Commissioner

Madura Forest

I have kept this
hoping the Report
on the Madura Re-
serve will be avail-
able. I now hear
it is on its way
up. It will be for
the disposal of the
Forest Dept.

1881
No 578

Forest No. 10

Forest No. 10 (13)
Draft of Report on the
Madura Forest Reserve

C. No 578 { Prop. Bd. of Rev. of 25
January 1881 No 85

C. No 5784 { do do of 9th
1881 No 626.

The Madura Forest
Commissioner covers an area
of about 1078 square
miles of which the
Commissioner proposes to reserve 30.48
square miles equal to 27
of the total Forest area
of the District. The con-
templated reserves are
very numerous but they
appear to be unsuitable
as the forests are of the
Madura unlike those in
Chalore or Simeville are
not confined to the slopes
of a single ridge but
spread over the whole
District.

Having regard to
the primary importance
of

of protecting the head
waters of the Vaigai and
Amaravati rivers and
to the necessity of in-
creasing the supply of
timber and firewood
for Madras & Dindur-
ghul. The Govt see
no reason to question
the propriety of the
Committee's proposals.
Their selection of re-
serves is accordingly
approved and under
the instructions con-
veyed in para 17 of
G.O. 2nd August 1879
of 1612 demarcation
and survey will fol-
low in due course.

The necessary measures for at-
tending to the increasing
of the portions belonging to Govt
at the same time as
the Reserves Law
will be dealt with
when the Forest Bill
comes on.

I am not sure about
this. The Govt. strongly object
to the prohibition absolutely of
timber operations in the forest.
I think it will be difficult to require
that the local forest officer
consulted in each case, or
group of cases. This detail
legislation is completely beyond
us.

Too sweeping. It will be
sufficient to require that
the local forest officer
shall be consulted in each
case or group of cases &
his detailed objections are
fully weighed.

(14)
3. The Govt. ^{approve the} are in
favor of strictly re-
serving the few Sholas
that still remain on the
Higher Pulins, the area
over which protection
is required being so
restricted that the
performance of Major
Walker's remarks, the
dissenting member
of the committee, while
discussing this subject
is greatly lessened.

4. Major Walker's pro-
position is set out in
para 12 of the letter
of the Conservator of Forests
of 20th Nov. 1880, 18934
and approved. The Govt.
will issue the necessary
orders on this point.

5. The Super. Re-
survey will prepare
an outline map as sug-
gested by Colonel Bell
done in para 7 of

Letter of 30th Nov 1889
Sept 69

6. Requirements of the
Court in passing in
closure (B.) regarding
the necessity of providing
sufficient pasturage
to meet the requirements
of the cattle-breeders in
the Cumbum valley may be taken into
not be lost sight of.

~~As in the former~~
The Govt sanction
a grazing fee of 2 annas
per head per annum
for cattle on Govt waste
land on the hills, the
grazing of sheep & goats
being confined to the
hill slopes. The rights
of the villagers to cut
timber and fuel will
be strictly observed
and arrangements made
accordingly. The Govt
note that in the
opinion

vide para 13 of 2nd
Aug 79. & 1st
The Govt the first for
head minimum rate being
inclosed of current at 2784
lms (Batalone) support this
vide para 16 of letter in cur
rent at 2784.
vide also orders passed on
same subject on 11th June 1889
para 2 of 11th Feb 79
at 257. also Chas also remarks
in para 16 & 18 in letter
inclosed in the 1st of 79.

Note. Notice has not
been taken of the friction
reported by Major Walker
between the families of
vide enclosure 1st to current
N. 2784 - vide also 1st of June
21 - 2nd Aug 79 & 1st 1889

- 13. The O.D. on 2 of Dec 1889 with no result of.
- 21. The O.D. on 2 of Dec 1889 with no result of.
- 7. The O.D. on 2 of Dec 1889 with no result of.

Sept 17/9/89

opinion of the committee
there are really no hills
there, properly so called
except at Tanathiparai
in the Cumbum valley.
Should it appear that
others exist their presump-
tive rights will be res-
pected. E. J. W.

[Signature]

Recd
27/8

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

29th August 1881, No. 1,284.

READ THE FOLLOWING PAPERS:—

No. 428. Proceedings of the Board of Revenue, dated 20th January 1881, No. 85.

Read the following letter from Colonel R. H. BEDDOME, Conservator of Forests, to the Secretary to Government, Revenue Department, dated Ootacamund, 30th November 1880, No. 969:—

I HAVE the honor to inform you that I have lately completed a tour of inspection in the Madura Forest Division.

2. I met Mr. Gass, the District Forest Officer, at Goodalore at the south of the Cumbum Valley, and I inspected the forest tracts to the south and west of that valley which had not been inspected during my last two visits. A contemplated trip up to the forests of the "High-waving" Mountain and the sources of the Vaigai and Shurla Rivers was, however, interrupted by heavy north-east monsoon weather.

3. The object of my visit this year was chiefly in connection with the newly-marked out forest reserves, and a special report has been already submitted to Government on this subject together with the report of the Reserve Commission, so it is only necessary here to briefly record what has been done.

4. The area of the hills and forests of this district has been calculated by map measurement to be about 1,098 square miles; the Reserve Committee has selected for reservation an area of about 305½ square miles, so that the proposed reserves bear a percentage to the whole forest of about 27 or a little more than one-fourth.

5. The area proposed for reservation has been divided into twenty-one blocks, and the following is a list of these reserves together with some of the tracts already under reservation and the sholas of the Upper Palnis:—

No.	Block.	Area in Square Miles.	No.	Block.	Area in Square Miles.
1	Warsanad Valley	45.95	19	Sirumalai	39.69
2	Erasakanayakanur	1.78	20	Madinai	3.51
3	Vanathiparai	42.94	21	Alagar Malai	20.37
4	Surangan Ar	5.85	22	Six existing Railway Fuel Reserves	12.69
5	Kotagudi Valley	13.79	23	Two Firewood Reserves taken up with Alagar Malai belonging to Jungle Conservancy.	6.47
6	Chotipalay Oday	2.69	24	The sholas of Upper Palnis, &c.	3.53
7	Kundumaryan Oday	2.19			
8	Ambuvani Ar	5.03			
9	Seengalvaray Ar	8.14			
10	Pamb Ar	7.43			
11	Pambur Valley	21.23			
12	Kudra Ar	15.73			
13	Kookal	15.97			
14	Maruthanady Ar	12.99			
15	Pamboskal Ar	1.25			
16	Seravattin Kadu	3.56			
17	Kanien Kadu	4.69			
18	Vennillay	7.50			
					305.43

6. Six of these reserves (i.e., 1, 2, 3, 6, 7, and 8) are entirely the property of Zemindars, No. 1 belonging to the Gandamanyakanur Estate, No. 2 to Erasakanayakanur, and 5, 6, 7, and 8 to Bodinayakanur, in all aggregating 71½ square miles. They will have to be dealt with under the Forest Act, but they are the most important of all the reserves as the water-supply of the Vaigai River and it

may be said the future welfare of the district depend upon the upkeep of the forests contained within them.

7. I enclose a rough sketch map of the district showing the position of the twenty-one proposed reserves. I would suggest that an outline of this, much reduced, say to one-eighth or even one-sixteenth, should be prepared in the Survey Office for publication with this report, as an eye-sketch of the reserves of the district is very important to the Revenue and Survey Departments and others as well as to this department.

8. The present Forest establishment in this division will have to be considerably increased when the reserves have been sanctioned.

9. There is at present no timber whatever in depôts in the division.

10. Since my last tour Mr. Gass has been over all his forests, and for the last seven or eight months his time has been chiefly taken up with the Reserve Committee work; he also had charge of the Trichinopoly plantation until February, when he was relieved by Mr. Hadfield.

11. The small plantations call for little remark and are all in good condition; beyond the cost of weeding and removing creepers, &c., there has been no expenditure in the teak plantation. The *Eucalyptus* plantation on the Higher Palnis has grown much and is greatly improved, and the thinnings out of it have supplied all the requirements of the station of Kodaikānal so that there has been no felling in the sholas.

12. All boundary disputes in the district have been decided, and the suits filed on both sides are now being disposed of.

13. Every effort has been made to check smuggling and conserve the forest tracts, and numerous parties have been convicted of forest offences and punished; the gall-nuts have been collected departmentally, which saves much damage to the trees.

14. The departmental collection of the gall-nuts (*Terminalia chebula*) lately sanctioned by Government will add much to the revenue besides facilitating conservancy. Up to the 1st of November 180 pothies had been collected (a pothie = 240 lb.); the expenditure was roughly Rs. 2,000; the total collection will probably be 550 pothies of about 60 tons and the total expenditure about Rs. 2,400; the market-rate for the article is at present low, but it is calculated that at least Rs. 8 per pothie will be realized, so that the receipts will be about Rs. 4,400 against an expenditure of Rs. 2,400.

15. The following is an abstract statement showing the receipts and expenditure in this division since my last report:—

Months.	RECEIPTS.			DISBURSEMENTS.	
	Madura Range.	Periyakulam Range.	Total.	A. Conservancy and Works.	
				Madura Range.	Periyakulam Range.
1	2	3	4	5	6
September 1879	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
October	564 8 7	525 12 1	1,089 10 8	140 5 11	405 2 4
November	507 5 5	1,122 10 0	1,629 5 5	66 11 0	124 5 11
December	480 2 2	723 4 2	1,203 6 4	97 15 4	89 0 5
January 1880	571 14 3	506 4 9	1,077 19 2	70 14 5	72 8 3
February	512 5 0	1,540 7 8	2,052 12 8	81 13 11	135 10 2
March	574 3 7	932 3 8	1,506 6 5	83 3 7	173 13 11
April	1,456 14 2	1,019 2 10	2,475 16 12	80 12 7	118 11 6
May	478 14 6	1,175 13 4	1,653 28 0	27 8 0	49 0 0
June	512 0 10	945 4 10	1,457 5 0	107 10 0	73 15 1
July	546 7 7	831 1 5	1,377 8 2	104 11 7	314 19 5
August	391 1 10	1,101 6 0	1,492 7 10	221 13 6	309 7 5
September	303 6 8	842 8 10	1,145 15 8	102 1 4	360 12 5
Total	495 1 9	1,177 6 2	1,672 8 11	86 0 1	618 14 8

Months.	DISBURSEMENTS—(Continued)					
	B. Establishments, &c.			Total.		Grand Total.
	Madura Range.	Periyakulam Range.	Madura Range.	Periyakulam Range.	Office Estab. Payment.	
	8	9	10	11	12	
September 1879	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
October	156 12 0	220 5 0	297 4 11	625 7 4	637 11 0	1,549 7 3
November	172 1 0	231 1 6	236 12 6	335 7 7	642 2 3	1,236 5 10
December	178 11 9	255 7 5	275 11 1	354 7 11	630 2 11	1,261 5 11
January 1880	154 4 0	218 10 8	225 2 5	291 2 11	623 12 8	1,343 2 0
February	169 14 3	233 10 10	254 12 2	372 5 0	560	1,184 7 0
March	189 5 10	220 10 2	272 9 5	294 8 1	614 3 11	1,251 8 5
April	179 3 0	224 0 6	353 15 7	342 12 0	587 14 5	1,190 10 0
May	193 7 4	235 2 7	216 15 4	274 2 7	626 14 4	1,112 9 3
June	207 12 7	429 2 6	491 14 2	773 12 11	613 13 5	1,738 8 7
July	181 4 0	328 6 10	413 1 6	637 14 3	605 8 9	1,656 8 6
August	234 12 6	285 5 0	337 13 9	646 1 5	593 12 0	1,576 11 3
September	175 5 5	275 2 7	259 5 6	394 1 3	598 0 0	1,749 6 9
Total	2,270 13 8	3,147 1 9	3,548 0 5	6,925 2 4	7,912 5 7	17,498 11 4
Add back adjustment made during the above period						45 2 0
Total						17,543 11 4

16. The receipts are Rs. 21,589 against an expenditure of Rs. 17,543, but in the latter the expenditure on the gall-nut collections is included, which has not yet been recouped by the sale of the produce.

No. 969-A.

FORWARDED to Government, through the Collector of Madura and Board of Revenue, with reference to Rule VIII embodied in G.O., No. 1,600 A, dated 19th November 1875, Revenue Department.

OOTACAMUND,
30th November 1880.

(Signed) R. H. BEDDOME, Colonel,
Conservator of Forests.

No. 416.

FORWARDED to the Board of Revenue. The undersigned has no remarks to make.

MADURA,
4th December 1880.

(Signed) J. STOKES,
Collector.

ENCLOSURE No. 1.—Sketch.

SUBMITTED to Government.

2. The Board are glad to learn that the felling of sholas in the neighbourhood of Kodaikānal on the Palnis has been stayed by the production of *Eucalyptus* as

fuel. The departmental collection of forest produce is no doubt advantageous in saving the produce-bearing trees from wanton destruction.

3. The Board recommend that the sketch referred to in paragraph 7 of the Conservator's letter be sent to the Superintendent of Revenue Survey with instructions to prepare the outline map as proposed by Colonel Beddome.

(A true Copy and Extract.)

(Signed) E. GIBSON,
Acting Sub-Secretary.

No. 429. Proceedings of the Board of Revenue, dated 9th April 1881, No. 626.

Read the following letter from Colonel R. H. BEDDOME, Conservator of Forests, to C. G. MASTER, Esq., Secretary to Government, Revenue Department, Fort St. George, dated Ootacamund, 20th November 1880, No. 334:—

I have the honor to forward the report on the Madura District Forest Reserves, with documents as shown below, submitted by the Forest Reserve Committee:—

1. Letter, No. 261-A, from Major J. O. Walker, to the Conservator of Forests.
2. Do. No. 292, from the Deputy Conservator, on Special Duty, to the Conservator of Forests.
3. Madura District Forest Committee Report.
4. Memorandum by Major Walker on the proposal to reserve all sholais on the Palni Hills.
5. Memorandum by the District Forest Officer on the same subject.
6. Twenty-four tabular statements giving full particulars of the twenty-four proposed reserves.
7. Fifty-nine depositions regarding claims and objections, &c.
8. Twenty-one sketches giving boundaries, list of cairns, &c., of each reserve.
9. Ten maps of Madura District showing position of all reserves, hills, &c.

2. This district is very different to Tinnevely, where the forests are all situated on one continuous chain of ghats; hill tracts and consequently the forests are scattered all over the district; besides the Palni Mountains, Higher and Lower, and the Sirumalais, there are hill tracts on the south, east and west of the Cumbum Valley, and four blocks of hills near Madura, Dindigul and Iyur; it has consequently been found necessary to propose a considerable number of reserves.

3. The district has, roughly speaking, a forest area of about 1,098 square miles, out of which the Committee propose to form twenty-one reserves, aggregating 306½ square miles.

4. They divide the forests into four blocks as follows:—

No. 1 Reserve, area 45.95 square miles, is entirely the property of the Gandamanayakanur Zemindar; but, as these forests protect the headwaters of the Vaigai river, it is the most important of all the reserves with reference to the future welfare of the district.

No. 2 Reserve, area 1.73, is entirely the property of the Yerasakanayakanur Zemindar, and is very important as protecting a great portion of the water-supply of the Shurly river.

No. 3 Reserve, area 42.94 square miles, is all Government property, and includes besides some valuable timber

- * No. 1. Wanasand Valley.
- " 2. Yerasakanayakanur.
- " 3. Yamaschi Peak.
- " 4. Surasheer.
- " 5. Bodinayakanur.

No. 4 Reserve, area 5.93 square miles, at the south of the Cumbum Valley, all Government property, contains valuable forest.

No. 5 Reserve, area 13.79 square miles, all the property of the Bodinayakanur Zemindar, very important as protecting the water-supply of many feeders of the Vaigai river.

5. 1st. — The hills to the east and south of the Cumbum Valley and the Bodinayakanur Ghats at the extreme north-west corner of the valley, aggregating about 273½ square miles, out of which Reserves Nos. 1 to 5,* with a total area of 110.11 square miles, are proposed.

6. 2nd. — The Higher and Lower Palni Mountains and the Uggamalais, aggregating about 600 square miles, out of which Reserves Nos. 6 to 18,* with a total area of 104.81 square miles, are proposed, all Government property, except 10.02 square miles of forest belonging to Bodinayakanur and a small amount belonging to Ayagudi.

No. 6 Reserve, area 1.69 square miles, entirely the property of the Bodinayakanur Zemindar, slopes at the south-west corner of the Palnis, valuable in connection with the water-supply of the district.

No. 7 Reserve, area 2.49 square miles, entirely the property of the Bodinayakanur Zemindar, situation and condition the same as the last.

No. 8 Reserve, area 5.93, all the property of Bodinayakanur, situation and condition the same as two last.

Nos. 9 to 16, with areas as per margin,† are all Government property, and are situated on the slopes of the Higher and Lower Palnis, and are important for the water-supply as well as for building timber and fuel.

No. 17 Reserve, area 4.69 square miles, northern slopes of the Palnis, chiefly Government property, but including a small portion of the forests belonging to the Ayagudi Zemindar, important in connection with the water-supply.

No. 18 Reserve, area 7.50 square miles, chiefly Government property, but a portion belongs to the Ayagudi Zemindar, situation and condition similar to No. 17.

Besides these thirteen reserves it is also proposed to reserve the sholas on the Higher Palnis and Uggamalais, aggregating 3.62 square miles.

of mountains and a portion of the spur generally called the Muniamalais; the extensive denudation, which has already taken place on the slopes of these hills, has resulted in disastrous floods, and it is of very great importance to reserve the existing forest and improve it, and to attempt the reforestation of the denuded tracts by the exclusion of cattle, goats, and fire.

8. 4th. — The Karandamalais, the Allagar Covil Hills, and other detached hills north of Madura and about Iyur, aggregating about 86 square miles, out of which two Reserves, Nos. 20 and 21, aggregating 46.72 square miles, are proposed.

No. 20, Mudimalai, area 9.51, a hill tract now under the Jungle Conservancy Department, all Government property.

No. 21, Alaghamalai, area 20.37 square miles, all Government property, hill tracts, reservation important for climatic reasons, as well as fuel demand for the future.

9. It will be noticed that Reserve No. 1 includes 45.95 square miles of forests belonging to a Zemindar (Gandamanayakanur); this reservation, however, is all important for the future welfare of the Madura District, and, if it cannot be carried out, the water-supply may be most seriously affected at no very distant date, and the results might be most disastrous.

No. 2 Reserve includes 1.78 square miles belonging to the Zemindar of Yerasakanayakanur; Nos. 5, 6, 7, and 8 include 23 to 24 square miles belonging to the Bodinayakanur Zemindar.

Reserves Nos. 17 and 18 include a small amount of land belonging to the Ayagudi Zemindar.

The reservations of Nos. 2, 5, 6, 7, and 8 are not nearly so important as that of No. 1; still I consider the future welfare of the district will not be secured unless these reserves are carried out.

10. What is necessary is that these forests shall not be cleared for cultivation, chinchona or other cultivation; there is, however, no objection to their being worked as forests for timber or fuel up to their annual reproduction.

11. The question of insisting on the up-keep of private forests is a difficult one to deal with; the proposed Forest Act does not empower Government (as similar

legislation does in Europe) to inform these landed proprietors that they must keep up their forests as woodlands, because the welfare of the country depends upon such upkeep. It only empowers Government to declare such forests reserved, and to administer them as such by their own agency, upon paying such annual sum as may be agreed to; now directly Government steps in compensation out of all proportion to the value, or supposed loss of revenue is certain to be asked. The denudation of mountain forests for coffee has already been most lamentable, and this cultivation has been proved to be of a most ephemeral nature, and really little more permanent than the Kumeri of the Hill tribes, vast tracts of estates being already deserted all over the country, and the fine forest thereon utterly destroyed for the sake of a few years' revenue; so that, if the future be considered, there is no loss of revenue from not being able to sell forest for coffee clearings, but really a vast gain by keeping up the tracts as forests, the one is sacrificing the capital for a small sum down and a few years' interest, the other is a permanent annual revenue always likely to increase as population increases and communications are opened out; this has already become apparent to the Travancore Government, and they are alarmed at the way in which their forests have disappeared only to be deserted and turned into grass land or unhealthy thorny scrub, and they have determined to give up no more forest for coffee; coffee cultivation is at present at a great discount, and land is not generally being taken up for this purpose and estates are unsaleable, except as gold fields where that ore exists, so it is not probable that land in any of these tracts under notice would be now in demand for coffee, but this would not prevent the proprietors from asking compensation on this score; the payment of an annual compensation by Government would not be a very satisfactory arrangement, and it would be most difficult to fix the amount; considering the immensity of the interests concerned, and that the duration of the time is unlimited, the State should certainly be prepared to purchase these forests outright at a price that would tempt the proprietors, or they might be purchased subject to a certain usufruct as to timber and other forest produce; in any case it is impossible that Government can allow the forests which protect the sources of the Vaigai to be destroyed.

12. Major Walker proposes that, pending the demarcation and survey of the reserves proposed on the Lower Palnis, that all the remaining forest there shall be considered "protected" and under the charge of the Forest Department, and that in the meantime no durkhasts shall be attended to. I agree with this, as, until the reserves are surveyed, it is impossible to estimate what area should be protected and what area be given up to cultivation.

13. Major Walker dissents from the others of the committee on the question of the reservation of the sholahs on the Higher Palnis and writes a memorandum on the subject; he thinks that they should be given up for cultivation to encourage the settlement of Europeans; he doubts their influence in a climatic view, or that they protect the water supply; he thinks they are dying out, and that the canopy of foliage is too dense to allow seedlings to germinate or flourish.

14. The local forest officer (a forester of great ability) also writes a memorandum on the subject; he points out that there are only nine sholahs of any size (say more than 10 acres), and that the total area is only a little over 3 square miles, and that each one protects the source of some important stream, and he thinks that, if they were thrown open, they would be destroyed and soon abandoned by the resident natives on the upper plateau. I should be exceedingly sorry to see these few sholahs on the Higher Palnis disappear; the whole plateau is naturally very devoid of woodland, large tracts being sheet rock with the thinnest covering of soil and grass. I do not agree with Major Walker that the sholahs are dying out, and the theory that the canopy of foliage is too dense to allow seedlings to grow and flourish is altogether erroneous, as it has constantly been proved by experiment that most of these evergreen sholah trees will not grow except under dense shade and ample protection from wind, and attempts to raise them under careful garden cultivation and in rich soil being utter failures. The question of damage by fires will, of course, receive more attention when the Forest Act becomes law, and we have larger establishments and more means at our disposal, but my experience both on the Nilgiris, Palnis, and our other western highlands goes

to prove that sholahs do not suffer much from fire when they are quite isolated from Burgher or other villages, and when no roads go through them, they often get signed on their outskirts, and when (once in seven or eight years) the stems of the *Acanthaceae* bushes (*Strobilanthus*) die out, or the reed, bamboo die, fire sometimes sweeps in, but the damage is very temporary, and they soon recover, the dense evergreen growth effectually resists fire; sholahs with a cart road through them or sholahs close to Burgher villages (as is the case with many on the Nilgiris) are subject to quite different conditions; in the former the cartmen and other travellers camp there for the protection they afford; they cut much wood and light large fires which constantly spread, and great damage is done; in the latter a constant hacking away of wood is carried on and fire is encouraged to prepare the way for temporary cultivation.

15. The sholahs on the Higher Palnis are few and far between, and should, I think, be all strictly reserved.

16. The question of grazing dues throughout the mountain forest of Madura requires the orders of Government, and I trust that a fee of three, if not four, annas per head may be sanctioned.

17. The Madura Forest Establishment will require a considerable increase, when the reserves are sanctioned and demarcated, the collection of hill produce, lately sanctioned by Government, is already augmenting the revenue considerably, and this will continue to rise when the Forest Act enables us to check smuggling.

ENCLOSURE No. 1.

From Major J. C. WALKER, Deputy Conservator of Forests, on Special Duty, to Colonel E. H. REDDOME, Conservator of Forests, dated Madura, 2nd October 1880, No. 261-A.

I have the honor to submit the report of the Madura District Forest Committee, together with the usual enclosures, as per margin. I regret to have to state that matters have not gone so smoothly here as in other districts.

As per list attached.

2. The Collector, Mr. H. J. Stokes, served personally on the Committee on the Upper Palnis and in the Cumbum Valley, and Mr. Gass and I fully understood, concurred in, and approved of all that was proposed, and was in all respects satisfied with the Committee's action. It would now appear that he has changed his views.

3. For the work on the Lower Palnis and in the Palni, Dindigul, Melur, and Madura Taluqs he deputed the Acting Sub-Collector (Mr. C. K. K. K.), whose views were throughout in accordance with those of the two forest members of Committee, and who will be in touch for the future with which our proposals were framed and inquiries conducted.

4. On our return to Madura, the Collector resumed his seat on the Committee and has virtually repudiated his Sub-Collector's action with regard to important issues on the Lower Palnis, declining to forward a memorandum by me on the subject which met with the approval and concurrence of the Sub-Collector, and, in a modified degree, of Mr. Gass, a member of the Committee.

5. Both the Local Forest Officer and I have experienced great difficulty in obtaining necessary information called for through the Collector from the Tahsildars, and those officials have, as a rule, not even deemed it their duty to pay us ceremonial visits of respect.

6. I regret extremely to have to bring these facts to notice, but consider it due to myself to do so, leaving it for the Collector to make such comment as he may think fit.

7. The friction which has taken place would, I submit, point to the advisability of the Collector either serving throughout on the Committee of his district, or deputing another officer to do so. There could then be no chance of misunderstanding or misinterpreting his views.

8. It is only by Mr. Gass and I having modified our views very considerably that we have been able to draft a joint report at all, and the Collector informs me that he will append a qualifying Minute.

ENCLOSURE No. 2.

From H. A. GASS, Esq., Deputy Conservator of Forests, on Special Duty, to Colonel E. H. REDDOME, Conservator of Forests, dated Madura, 11th November 1880, No. 261-B.

The large maps forwarded with the Report of the Forest Committee to you are the original ones, and the Acting Deputy Superintendent of Revenue Survey here says he has no time to

prepare copies of them for record in the Madura Forest Office. I have the honor to request therefore you will get the same copied for me in Madras at the Central Survey Office.

2. Of the maps sent to you, sheets 9 to 18 refer to the Madura Division; the remaining 1 to 8 sheets were handed over to the Deputy Superintendent here by Major Walker, and are now returned to me by that officer. I request therefore you will send them to their proper destination, which is, I believe, the Central Revenue Survey in Madras.

ENCLOSURE No. 3.

The Madura District Forest Committee assembled at Shembaganur on the Palnis on the 5th May 1880, and during that month and early part of June completed the selection of tracts to be reserved on the Upper Palnis, camping at Maryan Shola, Fort Hamilton, Kudal, and Pamburai. The Cumbum Valley was visited during the latter part of June, our camp being at Periyakulam, Chinnammanur, Cumbum, and Gudalur, and selections there and in Varsanad were completed in July.

In August, the selections on the Lower Palnis, and Palni and Dindigul Taluks, including the Sirumalais, were completed, the Committee camping at Neutral Saddle, Muliar, Tandigudi, Kannakadu, Periyur, and Pachalur (all on the Lower Palnis), Dasaripatti, Palai, and Valan Kombai (Palni Taluk), Malaiyur and Gopuramalai (Sirumalais), Dindigul, Vettlatopampatti, and Kallavoiputti (Dindigul Taluk).

Nattam and Chetrapatti in the Melur and Madura Taluks were visited in the first week of September, and the selections completed by the 8th of that month.

1. The District Collector served on the Committee on the Upper Palnis and in the Cumbum valley, deputed the Sub-Collector (Mr. Kough) as his representative elsewhere. Major Clay (Acting Deputy Superintendent of Revenue Survey) was attached to the Committee in May, and both then and subsequently rendered every assistance in supplying maps, &c. Sub-Assistant Mr. O. Neill and Head Surveyor Mr. Band worked with the Committee throughout and prepared the hill sketches which accompany this report (under the instructions of the Deputy Conservator on special duty), an arduous duty performed to our entire satisfaction.

2. The circumstances of this district differing widely from those of Tinnevely and South Coimbatore necessitated an entirely different procedure in the selection of proposed reserves. Both in Tinnevely and South Coimbatore (Anamalais) the forests are in one block extending along the line of ghats and cultivation where it exists is limited to the lower slopes, excepting in the case of comparatively limited areas under coffee. It was therefore practicable to restrict the number of reserves in Tinnevely to five and in South Coimbatore to three, the upper portion of the mountains in the former district forming really one continuous reserve (proposed) protecting the headwaters of all the main rivers of the district.

In Madura the hills and forests are scattered all over the district, and cultivation everywhere intervenes even on the plateau of the mountains. The forests on the main line of the Western Ghats from Bodinayakanur to Gudalur are limited and of comparatively little importance with respect to the water-supply, the hills rising abruptly on the Madura side to the crest where the water-shed forms the Travancore boundary. It is on the spurs which run out more or less at right angles, e.g., the Palnis and the mountainous range at foot of the Cumbum and Varsanad valleys, and detached ranges such as the Sirumalais and Nattam Hills that the district mainly depends for its supply both of water, timber, and firewood. Selection of tracts to be reserved has been found under the above circumstances, by no means easy, the more so, as we have still no indication of the views of Government as to what should and what should not be classed as "Reserved Forest," or on what principles the remaining forest is to be dealt with.

3. The Committee have, however, selected and indicated on the ground and map twenty-one tracts which they propose should be reserved. The area of these tracts aggregates 284.69 square miles, and they may be divided into and treated as four blocks or series, viz.:-

- (i.) The forests at the foot of the Cumbum and Varsanad valleys protecting the headwaters of the Vaigai and its tributaries and containing the finest timber in the district and the forests of the Kotagudi valley in the Bodinayakanur Estate.
- (ii.) The sholas on the upper plateau, the Pambirankanal (250 acres) on the Agamalais and forests on the slopes of the Palnis (Upper and Lower) protecting leaders of the Vaigai and Amaravati rivers and capable of furnishing an adequate supply of timber for local demands.
- (iii.) The Sirumalai, Manjamalai, and Perumalai Forests.
- (iv.) The detached hills known as Mudimalai, Karandamalais, Alagarmalais, Nedumalais, &c., in the Dindigul, Melur, and Madura Taluks.

4. In the Varsanad, Cumbum, and Kotagudi valleys we propose to constitute five reserves (with an area by map measurement) of 119.11 square miles, including the Higher Waving Mountain, covered with forest in which the Suruli river takes its rise; portion of a tract formerly in dispute with the Varsakanayakanur Zemindari, but recently demarcated by the Revenue

Survey Department as within the limits of that Zemindari, and a fine tract of forest adjoining the Gudalur Ghat road to Pirmedur protecting the Vairavanur and Suranganur. The whole basin of the latter falling within British Territory was at first included in the reserve, but as G.O. of the 7th October 1880, No. 1,313, directs the Travancore-British boundary to be altered at this point, the boundary of the reserve now follows the ridge, and the Suranganur river rising in what is now Travancore territory, passes through the reserve only. In Varsanad we propose the reservation of the whole southern end of the valley, which is covered with a dense forest from a point known as Topemalai on the boundary of No. V Reserve in Tinnevely to that marked Rajabode on the Ordnance Sheet Map. The whole of this tract with an estimated area of 45.95 square miles is in the Gandamanayakanur Zemindari, Government having quite recently (G.O., No. 917, dated 4th August 1880) decided on taking no further action in claiming it as British territory. In Kotagudi valley we propose the reservation of all the forests left at the upper end of the valley.

5. On the Upper Palnis we propose eight reserves, on the slopes towards the Periyakulam and Palni Taluks. Of these five blocks with an approximate area of 67.59 square miles are Government forests and three blocks aggregating 9.62 square miles within the limits of the Bodinayakanur Zemindari. The Committee also propose to reserve all the sholas on the Palnis and the fine sholas on the Agamalais (a spur of the Palnis), but to this action, one of our members

* Total area 9.62 square miles.

records a Minors of dissent which, with remarks by the local Forest Officer in which the Collector concurs, is appended to this report.

On the Lower Palnis five tracts with an aggregate area of 27.2 square miles and a few of the larger sholas have been selected as suitable for reservation. They are all Government Forests. The Committee would have recommended much more extensive reservation on these hills, both on account of climatic consideration and value of the forests, but refrained, owing to the scattered nature of the cultivation and uncleared putta holdings, the situation and extent of which is only vaguely known, which precludes the reservation of large compact blocks.

The Deputy Conservator on Special Duty has recorded a special memorandum on this point which met with the concurrence of the Acting Sub-Collector as member of the Forest Committee. As the memorandum deals with questions outside the scope of this report, we do not consider it advisable to submit it *in extenso*. Major Walker summarized his views as follows:—

- (i.) That all forests on the Lower Palnis, not selected for reservation, be considered for the present as "protected" and under charge of the Forest Department.
- (ii.) That the boundaries of all the existing holdings be cleared and got ready for demarcation and survey (in accordance with orders already issued by the Collector), pending which, no dakhats be complied with.
- (iii.) That immediately the demarcation, survey and settlement are completed, certain blocks from the "protected" forests be set apart for cultivation and transferred from the Forest to the Revenue Department, further blocks being made available from time to time at the discretion of the Collector.
- (iv.) The Forest Department to have complete control over the protected forests as such, and all puttas, leases, &c., within these limits to be transferred to them. Should the above not be approved of, he considers that further tracts on the Lower Palnis should be reserved necessitating detailed local inquiry into the extent and nature of putta holdings, on many of which the forest is still not standing.

The Madura Forest Officer concurs with Major Walker, but the Collector strongly objects to any cessation of, or check on, the grant of land on dakhast, and considers that all land excluded from reservation is, and should be, available for the extension of cultivation. He is not averse to further reservation, though he questions its necessity. The whole question is an important and wide one, and will probably be best dealt with by itself when Government decide and issue instructions as to the constitution and classification of unreserved forests. On this subject see G.O., No. 290, of 8th March 1880.

6. We propose to class as reserved forests the whole eastern and southern slopes of the Sirumalais, making the ghat road to the Malaiyur coffee estate the northern boundary and including a portion of the Manjamalai spur. The area will be about 39.89 square miles, but portions of the lower slopes and detached hills should, the Committee are of opinion, be eventually excluded from reservation and classed as Village Jungle. The whole of the plateau and western slopes have been decided to belong to the Ammayapayakanur Zemindari, and we do not think it necessary to interfere with them, although no opportunity should, we think, be lost of acquiring control over them either by purchase or lease. The Sirumalai slopes are singularly bare of timber or ever firewood especially on the north-eastern extremity, and the tree growth is steadily deteriorating owing to the incessant depasturing of cattle and goats and the fires which rage over the whole tract. The effects of the denudation of the slopes is graphically described by the Collector in his remarks on Colonel Biddons's inspection report for 1879 (G.O., No. 87, dated 21st July 1880), and the Committee can fully endorse his remarks and those of the Conservator

both as regards the damage likely to result from torrents and disastrous landslips and the necessity of conserving and increasing the supply of timber and firewood for the important towns, Madura and Dindigul, situated at either end of this range.

7. The above remarks apply equally to the forests or jungles of the fourth series situated in the Dindigul, Melur, and Madura Taluks. The Committee propose to retain the existing "firewood reserves" with an estimated area of 18.16 square miles and to constitute the Mudimalai and Alagar Hills reserved forests, making the total area of this series 46.71 square miles in seven blocks. The Mudimalai area (9.51 square miles) which formerly formed part of the Shangurthy Zemindari is situated in the Dindigul and Melur Taluks, 6 miles south-east of the line of Railway from Trichinopoly to Dindigul, and is fairly wooded.

The Alagarmalai (area 28.67 square miles) is in the Melur and Madura Taluks. Madura town is only about 10 miles distant from its southern extremity, which has naturally long since been denuded for the firewood-supply of that place. The supply is now chiefly drawn from the north-

* Area 6.47.

western slopes (where there are two jungle conservancy reserves which we propose to include in the reservation now proposed), Tembulimalai and the Katchakutti jungles on the southern slopes of the Sirumalais. Adequate administrative arrangements should, of course, be made by the Forest Department to prevent any abrupt curtailment of the firewood-supply of Madura Town.

8. The following tabular statements exhibit in an abstract form the area of cultivation dependent on the rivers and streams which take their rise for the most part within the proposed reserves, and the proportion of reserved to total forest area, &c. They lay no claim to accuracy, but have been compiled with sufficient care for our present purpose:

ABSTRACT Statement showing the area and assessment of irrigated cultivation under the principal rivers in the Madura District and the proposed Forest Reserves in which head-waters are chiefly situated.

Names of Rivers.	Chief Tributaries.	Area of Cultivation.	Annual Assessment.	Taluks in which Cultivation is situated.	Proportion of reserved to total forest area in each locality.
		ACRES. CENTS.	RS. A. P.		
Vaigai River	Munjalur Shariyaur Sinnakottai Kallar Pambaur Veeraganathi Oppaur Kotagudi	86,813 0	9,02,165 11 6	Periyakulam Dindigul Madura Sivaganga Ramanad	Reserves Nos. 1 to X.
Shammuganathi River	No detailed information regarding this river, which flows direct into the Amaravathi river, can be supplied, as none of the statements called for from the Palni Taluk have yet been received as yet.				

Statement showing the Approximate Area of Reserves in Blocks, and the proportion of the proposed Reserved Forests to the total Area of Forests in the Madura District.

Series.	Locality.	Reserves included in each locality.	Total Area of Reserves in each locality.	Proportion of reserved to total forest area in each locality.	Area of existing Firewood Reserves and Sholais on Palnis.	Proportion of proposed Reserved Forest to total Forest Area of the District.
I	Varasand, Chumbam, and Kotagudi Valleys.	1, Varasand; 2, Yesasanayakamur; 3, Vannathiparai; 4, Suvangamur; 5, Kotagudi Valley.	273.43	42	Forest Department. 1, 1.33 square miles. 2, 2.10 " " " " " " 3, 3.44 " " " " " " 4, 2.67 " " " " " " 5, 2.10 " " " " " " 6, 1.65 " " " " " "	1.33 square miles.
II	Upper and Lower Palnis and Agamallais.	6, Chothuparai Ghat; 7, Kundamayan Ghat; 8, Amburuvannur; 9, Sengalvarai am; 10, Pambaur; 11, Pambaur Valley; 12, Kudra am; 13, Kakkal; 14, Maroodanathi am; 15, Pambaur; 16, Serevathukadu; 17, Kamenkadu; 18, Vemillai.	143.61	17	Jungle Conservancy. 1, 1.85 square miles. 2, 3.52 " " " " " "	1.85 square miles.
III	Sirumalais, Madamalai, and Perumallais.	19, Sirumalais and No. 1, Firewood reserve.	41.22	29	Sholais on Palnis and Agamallais. 3.62	3.62
IV	Madamalai, Karandamallais, Alagarmallais, Nedumallais, &c.	20, Madamalai; 21, Alagarmallais and Nos. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.	85.91	54		
			3.62			
			1097.98			22.38 square miles.

9. We proceed to lay before Government the circumstances of the proposed reserves as a whole, and analyze briefly the claims and objections recorded with regard to them as detailed farther on for future guidance in the event of the reservations being approved of.

(i.) *Private forests, &c., within the limits of proposed reserves.*—These comprise—

(a.) The Zemindari forest belonging to Vandamanayakanur in one block of 45.95 square miles, a tract in Yersakanayakanur to which we have alluded in paragraph 4, estimated at 1.78 square miles, and those of the Bodinayakanur Zemindari in four blocks aggregating 22.81 square miles, and Ayakudi on the Lower Palnis in Reserves Nos. 17 and 18. It was considered absolutely necessary to include these portions of the Ayakudi estate, but as they are of no great extent, probably about eight square miles, it might be found possible to purchase them from the Zemindar.

(b.) *Putta holdings within the reserve boundaries.*—The Committee consider the reservation and the protection of the Zemindari forests indicated matter of great importance. Situated as they are on the head waters of the principal river of the district (the Vigar) and its tributaries, their destruction could not fail to affect injuriously the interests of the State and public at large. Complete control to prevent not only alienation and clearing, but certain though gradual deterioration is necessary, and the Committee understand that Government are now considering how this may best be secured without injustice to the proprietors.

The details of (b) putta holdings within the proposed reserve boundaries are given further on in dealing with each reserve separately. They are not numerous as the Committee endeavoured to avoid including private lands as much as possible, and are as a rule situated outside the survey limits of cultivation. The circumstances of each must, the Committee think, be considered separately, and the tracts acquired or demarcated out of the reserve as deemed best by the Local Revenue and Forest Officers. The former course commends itself generally to the Committee and the compensation to be granted should not, they think, prove prohibitive, especially if other land of equal or greater extent be allotted outside. The matter of puttass for Cardamom cultivation in the reserved (or any) forests (under the Forest Department) appears to demand special considerations and orders, as also that of the so-called Puliahy puttass (which give the right to the Tamarind produce over certain areas) of which there are 18 in the Vannathiparai No. III Reserve, and 20 in the Suranganar, No. IV Reserve, and 13 in No. V Pambai Reserve.

ii. *Rights of Way.*—These have been carefully recorded and will be found detailed in respect of each reserve. Their existence is of course inimical to efficient protection and fire conservancy, although they may to some extent be utilized as inspection paths and fire traces. The ghāt roads of the Palnis on which there is considerable traffic present of course the greatest obstacles to strict conservancy, but on the other hand, it is very important to preserve and improve the forests in the neighbourhood of such roads both in the interests of the scenery and for the protection of the roadway, bridges, and culverts from damage by landslides, torrents, &c. Mere paths into the forests, which it is proposed to reserve, do not, of course, constitute rights of way, and even in the case of thoroughfares, it may be found feasible to reduce the number as now claimed without any serious inconvenience or hardship by restricting traffic at certain seasons at any rate to the most direct and convenient routes.

iii. *Rights to Pasturage.*—The Committee find that in this district as in others this is the most difficult question to deal with, and presently, we may say, the gravest objection on the part of the people to the constitution of the Reserved Forests.

We have throughout endeavoured to explain that the area available is more than sufficient both for the Government Reserves and the real requirements of the people, but far from being convinced by our arguments, they state broadly that even the whole is insufficient and virtually

object to the closing against cattle and fire of any portion of the forests. The right or privilege of depasturing cattle and sheep over all the waste lands of the Crown is in fact too general and of too long standing to admit of the people regarding any circumscription of it as other than a real hardship and injustice.

At the same time no individual or community has even advanced an exclusive claim to such pasturage as against other individuals or communities or the State. All freely admit that the right or privilege has been and is being enjoyed by all without reference to the situation or local circumstances of any particular village.

The Committee have everywhere endeavoured to exclude from reservation sufficient areas for pasturage, and as at present advised they hope that the provision as now made may prove ample. Should no portion of the Reserved Forests be available for grazing at any time. A reference to the number and nature of the depositions recorded will show how thorough the inquiry has been in this respect, although several villages, including some of the most important, failed to appear and many were represented by the Government village officials only.

I did not

(Signed) H. J. STOKES,
Collector.

In the case of the Cumbum Valley, however, we desire to place on record that our knowledge as to how far the depasturing and breeding of cattle *for sale* is carried on, their numbers, and to what extent dependence is placed on the adjoining Travancore Forests and open grass hills, is very limited, and it may therefore be found necessary or expedient hereafter to throw open for grazing, portions of the area which it is now proposed to constitute reserves in this locality. The Collector supplies the following data taken from his last returns of the number of cattle and goats in the Periyakulam Taluk; the number of the former is 114,074 and of the latter 20,084, which shows the magnitude of the industry and interests affected.

We are fully alive to the fact that young forests cannot be raised or the hill sides reclothed in the face of cattle grazing and its attendant fires, but it may be found advisable to restrict the rigid conservancy and extension of forests to smaller areas if such conservancy be found to trench injuriously and hardly on those who earn their livelihood by feeding and rearing cattle for the market.

The foregoing remarks apply especially to the Cumbum Valley. Elsewhere the Committee are of opinion that ample areas are left available.

We concur generally in the views of the Coimbatore District Committee (G.O., No. 1,612, dated 2nd August 1879) as to the advisability of ploughing cattle being depastured wherever possible on the assessed village waste or pughat lands, and their manure, &c., utilized, and not wasted. We see no objection to levying a fee on cattle depastured on "Government waste land on the hills," as has been done in South Coimbatore, and would fix the maximum rate for the present at Annas 3 per head as recommended by the Tanjavely District Committee.

The rate in the adjoining Travancore Territory is, we believe, the same. It will, of course be necessary to make adequate arrangements not to levy the fee on cattle merely passing through the Government Forests to those of the Travancore State.

IV. *Rights to cut Timber or Fuel.*—Claims to cut timber and fuel were generally advanced, and we consider that arrangements should be made to ensure an adequate supply, and that the proposed constitution of reserves should in no way interfere with the rights or privileges of the people to cut firewood, and firewood for agricultural purposes, &c. These will, for the most part, be supplied from the reserved or village forests when constituted.

V. *Rights to gather Minor Forest Produce or make Charcoal.*—Not a single claim to collect minor forest produce was advanced. The recent orders of Government, having special reference to this district (G.O., No. 870, dated 23rd July 1880), prescribe a definite course of action in this respect. It is believed that there are really no hill tribes properly so called, but should any be found their privilege to collect will, it would appear, be gladly conceded to them, and their doing so encouraged by the Forest Department, as in the case of the few Puliahy Members of a pseudo-hill tribe resident at Vannathiparai in the Cumbum Valley. No claims to make charcoal were advanced. This industry has for years been carried on in places designated from time to time by the Forest Department, and all that appears necessary to improve the present rude method of burning it, and teach the people to turn out a better article with a more economical use of firewood. In concluding the general portions of this report the Committee would respectfully reiterate the remarks of the Coimbatore District Forest Committee of 1873 (*vide* paragraph 31 of their report) as to the absolute necessity of adequate and properly paid and supervised Forest establishments. The constitution of so-called reserves is, we consider, worse than useless unless their proper protection and improvement be guaranteed. That this cannot possibly be done with the existing establishments and rates of pay must be patent to all, and is doubtless well known to the Board and Government.

10. In the accompanying twenty-one tabular statements, and twenty-one sketch maps we record details as regards situation and boundaries and the claims and objections raised in respect of each reserve. Depositions in respect to each reserve are also herewith sent, and with them the report is complete. There has been some delay in getting it ready, but it was quite unavoidable as the report could not be despatched without the maps and the numerous areas that had to be ascertained. It will be seen from the maps that the preparation of them has been a very laborious work and could not be hurried on. The maps were ready a few days ago and no time has been lost in forwarding the report.

(Signed) H. J. STOKES,
Collector of Madurai.

(Signed) J. C. WILKINSON, Major,
Deputy Conservator of Forests,
on Special Duty.

(Signed) H. A. GASS,
Deputy Conservator of Forests.

MADURAI,
2nd October 1880.

ENCLOSURE No. 4.

MINUTE by Major CAMPBELL WALKER, Deputy Conservator of Forests, on Special Duty, on the proposed reservation of all sholahs on the Palni Hills.

I must reluctantly dissent from the majority of the Committee on the matter of the proposed Reservation of the Palni Hill Sholahs, i.e., evergreen forests scattered in clumps over the upper plateau, and on isolated hills such as Perumal Malai.

I cannot bring myself to believe that the reservation of all these sholahs is either necessary or expedient.

I grant that the existence even of the smallest of them may and doubtless does exercise some influence on the rainfall, or still more on the storage and permanence of the water supply, and that the total area of woodland on the Upper Palnis is very small, but I think the influence of many of the sholahs must be infinitesimal—it is notorious that there is no water either taking its rise in or flowing through many of them—and that the best means of increasing the area of woodlands is to encourage the settlement of European capitalists who would certainly form plantations, and not to shut them out by reserving all the existing wooded area, a certain proportion of which is absolutely necessary in pioneering tea or chinchona planting.

Moreover, careful observation and conversations with the oldest inhabitants goes far to convince me that the sholahs are dying out, and the area being yearly encroached upon and circumscribed by fire.

The trees found in them are of little or no value except as firewood. The old trees are, therefore, allowed to remain standing until they die off, forming a dense canopy under which no seeds can germinate nor saplings flourish.

There is therefore no young growth coming on except where gaps may be formed by felling or the death of old trees, and unfortunately the fires which rage over the whole plateau once or twice a year then find a ready continuance, and accelerate the destruction of the sholah.

There can, to my mind, be no doubt of the damage done by these fires—not only the outskirts but even inside the sholahs where they now seem to penetrate. Several directions presented themselves to the Committee beyond Fort Hamilton and the Pambur and Kodakal directions. Whether the fire is more general and the fire itself more intense than it used to be, when probably fewer cattle were depastured on the hills, I cannot say, but that the fires now do great damage and are gradually destroying the sholahs is, I think, certain. We certainly cannot prevent the fires under the existing regulations and a system of cattle grazing which ensures the growth of long coarse grass which has to be burnt, and therefore grows coarser and longer annually. Still less can we fire-trace and protect all the sholahs which yield us little or nothing in the shape of direct revenue in return.

The best means of checking fires are to my mind the encouragement of settlers who would break up the land into blocks; and the encouragement and enforcement by regulations of more enlightened ideas as to grazing.

The latter question is scarcely pertinent to this minute, and I need only state that I would not hesitate to insist on the penning or paddocking of cattle on comparatively small areas so that they should occasionally eat and trample down the long coarse grass, leaving a very superior description, short, sweet, fertilised by their manure and not burnt over year by year.

But in order to initiate this or any other improvement the presence of enlightened European landholders is necessary.

The great benefit to the State of opening out and utilising such a splendid plateau as the Upper Palnis must be patent to all. I hold very strongly that every inducement should be given to the capitalist, European or Native, to develop such hill ranges, employ labor and grow tea, coffee, chinchona or breed good cattle and sheep; and in dealing with forest reservations, I think it is our duty to consider this as well if not more than the requirements or privileges of the ryots who certainly do not contribute much to developing the resources of the country. It has been advanced that this is beyond the scope of our instructions. I cannot see it. Our instructions are to designate what should, in our opinion, be classed as reserved forests and such reservation in all its bearings, and I think we ought to be very certain of our position ere we recommend any measures which would virtually close the hills against capital and improvement. I think everything should be done to encourage settlers, and that any action tending in the opposite direction is impolitic and contrary to the best interests of the country. I held the above views when I served on a Commission on the Nilgiri Waste Land Rules in 1875, and I am very sorry to see from recent orders that all the sholahs remaining on the Nilgiris and Kodaikals are to be reserved. I sincerely trust this course may not be adopted here.

6. It is of course very difficult for any individual or Committee to say which sholah should and which should not be reserved, and it is much easier to say "unreserve them all," but I do not think it is necessary to do so.

The case of the slopes, or forests, on the plateau of the Lower Palnis is to my mind widely different. It is clearing the slopes which causes the water to run off rapidly, resulting in disastrous floods succeeded by long droughts becoming more disastrous and of longer duration year by year as the hill sides are denuded and ravaged by fire until the soil itself is washed away and nothing but bare rocks left.

The forest both on the lower slopes and Lower Palnis is of considerable value as forest, and the latter is still of sufficient area to exercise a very decided influence on the climate and water supply of the surrounding country. I do not hesitate, therefore, to recommend considerable reservations there and the strictest prevention of fire, cattle grazing, &c.

7. But with regard to the sholahs, granted that we should reserve some for aesthetic reasons and supply of firewood, e.g., the Perambur and Tiger Sholah (on Laws ghat) near Shembaganur, the Kodakal from which the settlement takes its name, Gandur and perhaps Kakkal, the Aga Malai sholahs; I would throw open all the others under the Waste Land Rules, crediting proceeds of the sale or lease of the sholahs only to the Forest Department to enable it to plant if necessary, or at all events to protect and improve what is classed as reserved or protected forests; encourage settlers and the depasturing of land on a rational system, grazing dues being levied from all but the hill villagers having vested privileges, and devoted to the suppression or at least the limitation of fires.

8. By such means, in my humble opinion, there would be much more likelihood of seeing the extent of woodlands increase and exercise a real influence on the climate and perhaps the rainfall than by any arbitrary reservation of sholahs until they die out or are destroyed by the fires. I, therefore, dissent from the recommendation of the Madras District Forest Committee to class all the "sholahs" on the Palnis as reserved, as I am by no means convinced that the existence of most of them has any effect either on the climate, rainfall, or permanence of the water supply, and such a step seems to me in other respects contrary to the teachings of political economy and the interests of the State.

(Signed) J. C. WALKER, Major,
Dy. Conservator of Forests, on Special Duty.

ENCLOSURE No. 5.

NOTE by the Deputy Conservator of Forests, Madras Division, on the Minute of the Deputy Conservator of Forests, on Special Duty, regarding the reservation of the Sholahs on the Upper Palnis.

The reservation of all the sholahs on the Upper Palnis is not so formidable a question as any one unacquainted with their number and extent might believe. There are only nine sholahs of any size, that is to say of more than 10 acres or so.

Of this number, I believe that every sholah protects the sources of at least one important stream, and some of them of several.

The larger sholahs not already included within proposed reserve limits are as follows:—

(1.) *The Tiger Sholah*.—One mile from Shembaganur and through which the Butlagur ghat road runs for about two miles. This should be reserved, to which Major Walker agrees, vide paragraph 7 of his Minute.

(2.) *The Perambur Canal*.—Mentioned by Major Walker in his minute, lying on the Periyakulam ghat road close to Shembaganur falls within the proposed Pambur reserve.

(3.) *The Parappur Sholah*.—The Parappur rises in this sholah; this river forms the beautiful cascade near Shembaganur and is the main source of the Vilputty valley river, known as the Kinnarai Aar, which joined with the river which flows through the Pambur Valley, becomes the Shummaganathi river in the plains.

(4.) *Punnitulan Canal*.—A small sholah of some 5 acres, which the Pambur rises.

(5.) *The Kodakal Sholah*.—Should of course be reserved. This sholah is one of the principal attractions of the Kodakal settlement. The streams rising in this sholah keep up the supply of water in the Kodakal lake.

(6.) *Gandur and Munagan Sholahs*.—These lie close together and should be reserved as they will probably be required by the Forest Department for firewood purposes. They are distant about two miles from Kodakal.

(7.) *Gandur, Series of Sholahs*.—Some five or six in number. They are all situated in a large basin five miles from Kodakal in which the Gandur rises. This river is the main source of the Shummaganathi river.

(8.) *Sundanah Sholah or Doctor's Delight*.—About six miles from Kodaikanal a favorite resort of visitors to Kodaikanal for picnics, &c. Several streams rise here, which flow into the Kullar.

(9.) *Fort Hamilton Sholah*.—About eight miles from Kodaikanal; the upper portion of this sholah only belongs to Government, the lower belongs to the Bodinayakanur Zemindari, and is included within the proposed Amburavi Aur Reserve. A large stream called the Peri or Berejani Aur rises in this sholah.

(10.) *The Marim Sholah*.—about fifteen miles from Kodaikanal. This is the only sholah in this direction and is the only and a very favorite camping ground. Several minor streams flowing into the Chothapanni Odai take their rise here.

The remaining patches of sholah are not numerous and are so small, 2, 3, 4 acres and so on, that it is quite unnecessary to detail them.

I agree entirely with Major Walker as to the principle of encouraging settlers, &c., but I do not think the reservation of the Upper Palni sholahs is ever likely to prove itself a hardship to strangers, as the essential conditions for opening new ground are here so badly fulfilled that none are likely to settle when elsewhere more favorable localities may be found, and the only possible effect of the reservation will be the exclusion of the villagers of the upper Palni villages who, if allowed, would cultivate for a few years only and then abandon the land.

The probable gradual destruction of the sholahs by fire is a more serious question, and although I believe the danger to be great, still I think that steps may be taken to guard against it.

The necessity for reserving some of the sholahs is admitted on all hands and the difficulty arises as to which should be reserved and which left out. Considering this and the very small number of sholahs left on the upper plateau, I am certainly in favor of reserving all.

(Signed) H. A. GASS,
Deputy Conservator of Forests,
Madura District.

I concur.

(Signed) H. J. STOKES,
Collector.

Enclosure No. 6.—Twenty-four Tabular Statements.

Enclosure No. 7.—Fifty-nine Depositions.

Enclosure No. 8.—Twenty-one Sketches.

Enclosure No. 9.—Ten Maps.

Enclosure No. 10.—List.

No. 935.

FORWARDED to the Secretary to Government, Revenue Department, through the Board of Revenue, with reference to paragraph 3 of the G.O., No. 1,105, of the 20th July 1878, Revenue Department.

OCTACAMUND,
20th November 1880.

(Signed) R. H. BEDDOME, Colonel,
Conservator of Forests.

With the foregoing letter the Conservator forwards with his observations a report submitted under G.O., dated 20th July 1878, No. 1,105, by the Forest Committee regarding reserves proposed to be maintained in the district of Madura.

2. The Committee was composed of the Collector (Mr. H. J. Stokes), whose place was taken at times by the Sub-Collector (Mr. Kough), Major Campbell-Walker, and Mr. Gass of the Forest Department. The services of Major Clay, Deputy Superintendent of Revenue Survey, and of some of his subordinates were placed at the disposal of the Committee for survey work connected with the forest selections.

3. The forest lands of the district are computed to occupy an area of about 1,098 square miles, of which the Committee propose to reserve 284.69 square miles, and also certain sholahs on the Palnis and Agamalsia. The contemplated reserves are classified in series according to the locality in which they are situated, and each series is subdivided into smaller reserves amounting (exclusive of sholahs) to twenty-one in number. The conservancy of so many petty forests will necessarily be attended by considerable trouble and expense, but this is said both by the Committee and the Conservator to be unavoidable owing to the physical distribution of the forests in Madura, which, unlike those in Coimbatore and Tinnevely, are not confined to the slopes of a single ridge, but are spread over several detached ranges of hills.

4. On some points the opinions of the members of the Committee appear to have differed, and, in his letter to the Conservator, Major Campbell-Walker states that the Collector intended to append a minute of dissent; this, however, does not appear to have been done. The Board agree with the majority of the Committee and the Conservator as to the inexpediency of deforesting the Upper Palnis and would preserve the sholahs strictly.

5. With reference to Colonel Beddome's remarks at paragraph 11 of his letter as to State control over private forests, it is observed that this subject was very fully discussed in the local Legislative Council when the Forest Bill was being drawn up, and the Government have taken such power of control as was thought necessary and desirable in the circumstances of the country.

(True Copies and Extracts)

(Signed) E. GIBSON,
Acting Secretary.

No. 430. ORDER THEREON, 29th August 1881, No. 1,284.

Forests, No. 15.

The Madura forests cover an area of about 1,098 square miles, of which the Committee propose to reserve 305.48 square miles equal to 27 of the total forest area of the district. The contemplated reserves are rather numerous, but this appears to be unavoidable, as the forests in Madura, unlike those in Coimbatore or Tinnevely, are not confined to the slopes of a single ridge but dispersed over the whole district.

2. Having regard to the primary importance of protecting the head waters of the Vaigai and Amaravati rivers, and to the necessity of increasing the supply of timber and firewood for Madura and Diindigul, the Government see no reason to question the propriety of the Committee's proposals. Their selection of reserves is accordingly approved, and, under the instructions conveyed in paragraph 17 of G.O., 2nd August 1879, No. 1,612, demarcation and survey will follow in due course. The necessary measures for at once ensuring the conservancy of the portions belonging to Government should be at once carried out. The Zemindari reserves will be dealt with when the Forest Bill becomes law.

3. The Government approve the strict reservation of the few sholahs that still remain on the Higher Palnis.

4. Major Walker's proposition as set out in paragraph 12 of the letter of the Conservator of Forests, dated 20th November 1880, No. 934, is too sweeping. It will be sufficient to require that the local Forest Officer shall be consulted in each case or group of cases and his detail objections carefully weighed. The Collector will issue the necessary orders on this point.

5. The Superintendent, Revenue Survey, will prepare an outline map as suggested by Colonel Beddome in paragraph 7 of his letter, dated 30th November 1880, No. 969.

6. The subject of remarks of the Committee in paragraph 9 (Enclosure No. 3), viz., the necessity of providing sufficient pasturage to meet the requirements of the cattle-breeders in the Oumbum Valley must be kept carefully in view.

7. The Government sanction a grazing fee of 2 annas per head per annum for cattle on Government waste land on the hills, the grazing of sheep and goats being confined to the hill slopes. The rights of the villagers to cut timber and fuel will be scrupulously respected and arrangements made accordingly. The Government note that, in the opinion of the Committee, there are really no hill tribes, properly so called, except at Vamathi Parai in the Oumbum Valley. Should it appear that others exist, their prescriptive rights will be respected.

• (True Extract.)

(Signed) C. G. MASTER,
Secretary to Government.

To the Board of Revenue,
" the Conservator of Forests,
" the Superintendent of Revenue Survey.

Ed. A. Grubert, W. J. Lewis and W. H. French.

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