

Administration Report
Of the Forest Dept.
of the Madras
Presidency
1920-21

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FOREST DEPARTMENT

OF THE

MADRAS PRESIDENCY

FOR THE

YEAR ENDING 31ST MARCH 1921

1920-1921

MADRAS

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ANNUAL ADMINISTRATION REPORT OF THE FOREST DEPARTMENT

FOR THE

YEAR ENDING 31st MARCH 1921.

FIRST CIRCLE.

CHAPTER I.—CONSTITUTION OF STATE FORESTS.

1. ALTERATION IN AREA.

Reserved forests and reserved lands.—Taking only the area of the divisions now comprising the *First Circle*, the year opened with 2,125 square miles of reserved forests and 400 square miles of reserved lands. Fifty-six square miles of reserved lands were transferred to reserved forests and 7 square miles excluded at settlement and by rectification of area. The balance of reserved forest and reserved lands on the 31st March 1921 were 2,181 and 337 square miles respectively.

2. FOREST SETTLEMENT.

2. 55,843 square miles were notified under section 16 of the Forest Act, while 338.6 remained under settlement. Of the latter 75.192 square miles comprising the Coringa extension reserve was actually settled, but the reservation took effect in the following year.

3. DEMARCATION.

3. Sixteen miles were demarcated. Ninety-eight miles were specially repaired at a cost of Rs. 611, while 2,992 miles were repaired by subordinates free of cost. The total length of line demarcated at the close of the year, was 4,027 miles.

4. FOREST SURVEYS.

4. None were made by the Government of India. Local surveys of areas under working plans were carried out by the Range officers. The reference maps were maintained in all districts except in *Ganjām*. The printing of the special reference maps prepared by the late Forest Map Officer has not yet been completed.

CHAPTER II.—MANAGEMENT OF STATE FORESTS.

1. REGULATION OF MANAGEMENT.

5. *Preparation and control of working plans.*—No new working plans were prepared or sanctioned. In *Ganjām* the 2 square miles of reserved land which was notified under section 16 of the Forest Act, was absorbed into the working plan area as they were extensions to the main reserves. Thus the area under working plans at the end of the year was 1,508 square miles against 1,506 at its commencement. Mr. Minchin's plan for the reserved forests of Ghumsur was still in the press though its prescriptions are being carried out from 1919-20. Mr. Minchin's interim working plan for Berhampur range continued to be in force. *Vizagapatam*—The plan drawn up by Mr. Raju Nayakar for 62 square miles of forest in Palakonda range remained unsanctioned pending inspection of the forests in question by the Conservator. In the case of Peddapalli forests and the eight reserves of the Golconda taluk of Sarvasidhi range, sheep and buffaloes were admitted into the reserves during the grazing season 1920-21 under the sanction of the Chief Conservator of Forests. *Gōdāvari*

செப்பனிருபவர் பெயர்
செப்பனிருவதற்காக எடுத்தல்
கொள்ளப்பட்ட நாள்
செப்பனிரு முடிந்த நாள்
செப்பனிரு முடிந்த
மு. பா. எ. கையொப்பம்
கையொப்பம்

First Circle.

Lower.—The working plans of the Coringa and the Kaudikuppa reserves were ordered to be revised after the Conservator inspected the forests in February 1921 and issued instructions indicating the lines on which the revised plan should be drawn up. Statistics are being collected for the preparation of a working scheme for certain reserves in Polavaram range.

2. COMMUNICATIONS AND BUILDINGS.

6. Twenty-eight miles of new roads were constructed at a cost of Rs. 9,685 and 131 miles repaired at a cost of Rs. 4,636. All the existing roads were maintained in repair. The important roads that were taken up or completed were—*Ganjām*, Balinkia rest-house road, Budili-Ballabadi road, Kukuluba-Gayagonda road, Kon-drai-Koradabadi road and cart-track from the Mohirigodo road to Kondalabondo. The first bridge over Odanginalla was completed. *Vizagapatam*—Kakarlakonda-Venkatapuram road, Kondasantha-Tadiparti road, road in Peddapalli West reserve and Makkipeta fire line road. The construction of the Polla-Donubai road was not continued as the original alignment was reported bad. *Gōdāvari Upper*—Yotapaka-Tunikicheruvu road, Katukapalli to Madhavaraopeta road, Narasingapeta to Bodanur road. In accordance with the wishes of the Agency Commissioner the alignment of a road from Sukkumamidi to Tondrika was taken up. No new works were undertaken in *Gōdāvari Lower* or *Kistna*.

7. *Buildings.*—Rs. 14,959 were spent on the maintenance of existing buildings. Rapid progress was made in the construction of the saw-mill buildings at Russell-konda. Work on all the various buildings was carried out simultaneously in order to utilise to the full extent the labour supply available. The other important works that were carried out were:—*Ganjām*—Inspection bungalow at Balinkia, quarters for the Range officer, Majjogoda, *Vizagapatam*—Rest-house at Golugonda, *Gōdāvari Upper*—rest-house at Tunikicheruvu and Range officer's quarters at Chintur and a number of subordinates' quarters in *Gōdāvari Lower* and *Kistna*.

8. The digging of two wells in connexion with the saw-mill scheme at Russellkonda was undertaken on sites selected by Captain Irwin. One is for the Mill Superintendent's bungalow and the other is alongside the saw-mill. Though the season was unusually dry, a copious supply of excellent water is reported to be available in both the wells. The Tummalapalem canal in *Kistna* continued to be under the control of the Forest department and was kept in repair.

3. PROTECTION OF FORESTS.

(a) General protection.

9. The number and classification of forest offences reported during the year are compared in the following statement with those of the previous year and the average of the three preceding years:—

Cases.	Injury to forests by fire.		Unauthorized felling.		Unauthorized grazing.		Other offences.		Total.		Average for three years ending 1919-20.
	1919-20.	1920-21.	1919-20.	1920-21.	1919-20.	1920-21.	1919-20.	1920-21.	1919-20.	1920-21.	
Cases taken to court.	4	1	345	201	53	47	40	33	412	352	404
Cases compounded.	4	5	1,118	829	283	203	139	129	1,844	1,186	1,260
Cases undetected.	117	178	33	40	5	6	..	2	185	227	183
Total	125	184	1,496	1,170	341	256	179	164	2,441	1,765	2,247

New cases of the year.—Except under "injury by fire" the figures show a decrease compared with those of the previous year, the chief reason for the fall being that the period of the report is one of nine months. The increase under "injury by fire" is ascribed to the unusually bad fires due to the exceedingly severe hot weather which characterised this year. *Ganjām* suffered most in this direction and *Gōdāvari Upper* next. The 'felling' cases and the 'grazing' cases compared with the proportionate figures of last year remain practically the same.

Cases old and new dealt with during the year.—The percentage of cases convicted was greater than in the previous year and the punishments awarded by the Magistrates were generally adequate. But the compensations awarded to the department were reported inadequate in some cases in *Ganjām*. Protection from theft in parts of *Kistna* appears to be bad. Beyond the usual notice of warning published in the district gazettes to the villagers against setting fire to the reserved forest, no other special steps were taken, such as suspension of privileges or closure of reserves to grazing, enhancement of grazing fees and so forth. In *Ganjām* the conduct of village officers when taking into their custody seizures in forest offences was not satisfactory and their conduct had to be reported to the Collector and the Divisional officer.

10. Rs. 25 was granted to subordinates and informers as rewards.

(b) Protection from fire.

11. Form 72 shows the area attempted to be protected and that actually protected. Out of the total area of 2,181 square miles of reserved forest, no fire protection was undertaken in about 10 per cent of the area. Of the area subjected to fire protection about 10 per cent was burnt.

In the unprotected areas in *Ganjām* there were 26 fires extending over an area of nearly 60 square miles. The fire season was an unusually severe one and in spite of satisfactory fire protection works carried out before the fire season started, the area burnt was excessive. The khond in *Ganjām* who is ever ready to render every assistance in extinguishing fires is equally ready to set the forest on fire to serve his own purpose, viz., to drive out game and reduce cover, and he took full advantage of the abnormal dryness of the forest. Khond shikaries were also responsible for 16 fires covering an area of nearly 50 square miles in partially protected areas, viz., the whole of the Chokkapad reserve and the major portion of the Rambha and Darpangia reserves. The offenders in three of these fires were detected red-handed. Those concerned in one case were convicted and sentenced to two months' rigorous imprisonment, one case was withdrawn as the offender decamped to Assam and the third case was awaiting trial at the close of the year. As a punishment the question of suspending some of the privileges allowed to the Khonds in Chokkapad reserve is under consideration. *Gōdāvari Upper*. The early burning system was introduced in this division and 258 square miles of reserves were treated in this way. The results are reported to have been particularly satisfactory in Bhadrachallam range as there was not a single fire in the whole area of 58 square miles early burnt. In the other three ranges the results were also good as only 19.32 square miles suffered from subsequent fires out of 200 square miles treated under this system, i.e., less than 10 per cent. It is too early to base any conclusions on the above figures as the fire season was not nearly over by 31st March 1921 and as there were fires subsequent to that date in the early burnt areas. The remaining area, i.e., 327 square miles of the reserves was protected by fire lines as usual and most of the fires recorded occurred here and covered an area of about 107 square miles. As in *Ganjām* the fires are attributed to the unusually dry condition of the forest owing to the failure of rains and the exceedingly severe hot weather experienced this year. The total area actually protected was 151,093 against 516,659 acres in the previous year. The fires in *Vizagapatam*, *Gōdāvari Lower* and *Kistna* were as usual comparatively small in extent. In *Lower Gōdāvari* where there are practically no *Bassia latifolia* trees inside the reserves about 1½ per cent of the forests are burnt annually, a very different state of affairs from what occurs in *Upper Gōdāvari* and other *Bassia* infested districts. The severity of the fire season will be seen from the fact that by the end of March 103,184 acres had been burnt in excess of the total area burnt during the whole of the previous year. The District Forest Officer, *Ganjām*, states that so far as "Sal is concerned regeneration under four inches in height the base is killed outright above ground level. Saplings lose their leaves up to a height of 10 feet. The former soon over-putting forth vigorous ground shoots, which in two months attain almost the same height as the original stem."

The average cost of special and general protection was Rs. 11-14-6 per square mile attempted and that of early burning in *Gōdāvari Upper* was Rs. 7-1-5 per square mile. The number and origin of fires are compared in Appendix A.

(d) *Protection against injuries from natural causes.*

13. Nothing of importance was done.

4. SILVICULTURE.

(a) *Natural reproduction.*

(a) *Natural reproduction.*

14. In *Ganjām* natural regeneration of sal was good in clear felled coupes. *Gōdāvari Lower*.—In 1917 Mr. Seager reported that self sown casuarina were germinating freely in compartments II, III and IV of Kandikuppa plantation, which had been previously clear felled. In May 1919 they were enumerated with the following results:—

Compartment.	Sal.	Casuarina.
II	10	10
III	10	10
IV	10	10

	I	..	..	..	..	..	Rs.	
	II	..	..	..	..	..	1,246	
	III	..	..	..	..	..	984	
	IV	..	..	..	..	..	782	
	V	..	..	..	..	..	1,705	
		..	..	..	..	..	733	
	Total	..	..	..	..	..	5,400	

In December 1920 there were 1,596 seedlings in coupes I and 8,424 seedlings in coupes I to V against 5,400 in 1919 and in coupes VI to X there were 1,346. Owing to the failure of the monsoon there were no seedlings of 1920. As the above coupes had been clear felled during the past 8 years and no replanting done it seems to prove clearly that casuarina, at any rate in this area, is reproducing naturally. The water level is very near the surface and that probably accounts for the existing regeneration. In the coastal areas of *Kistna*, *Avicennia officinalis* was affected by the drought. In coupes I and II of Nachugunta and the closed area of Yelichitladibba which are under the constant influence of tides regeneration is excellent and the struggle between *Avicennia officinalis* and *Rhizophora macronata* for the mastery of the land is interesting. *Dendrocalamus strictus* has been seeding and dying for the last three years in Gokavaram and Peddapur ranges of Lower Gōdāvari and in Narasapatam range of Vizagapatam. It has not been dying in Polavaram range of Lower Gōdāvari or in the Upper Gōdāvari forests and only on the fringe of the Rāmpa forests. The District Forest Officer, Ganjam reports that he has seen some *Dendrocalamus strictus* flowering but only on a very small scale so far.

Curiously enough *Bambusa Arundinacea* which has been seeding and dying for several years past in the south of the Presidency has not been doing so here.

(b) Artificial reproduction.—

15. In Vizagapatam there are

(b) Artificial reproduction—Regular plantations.

15. In *Vizagapatam* sandal reproduced well in Madalammakonda reserve where there are now two to three hundred plants. In Narasapatam range it is also said to be reproducing well. In the Weld reserve in *Kistna* red sanders was tried over an area of 5 acres partly by dibbling and partly by planting. Basket planting was found to be fairly successful but the cost was prohibitive. An area of 43 acres in *Gōdāvari* Upper was clear felled for taungya sowings in the ensuing rains. All the useful timber was collected and sold, the rest was burnt on the area itself. The *Koyas* in the vicinity have been given these areas for cultivation and for sowing teak with the field crop during the coming rains.

16. *Cultural operations*.—*Ganjām*.—The growth of *Pterocarpus santalinus* in the Napier's Park continued to be satisfactory. An attempt was made in the Rambha Ravine coupe over an area of about 20 acres to regenerate artificially teak, *Pterocarpus marsupium*, *Gmelina arborea*, *Eugenia jambolana*, *Pterocarpus santalinus*, *Cedrela Toona* and *Terminalia tomentosa*, most of the seeds being raised in nursery beds at Balinkia, but the failure of rains caused a certain amount of mortality among the young plants. However sāl has sprung up naturally over the greater part of the area originally planted with other species. *Vizagapatam*.—Sandal was sown in Donabai, Madatammakonda, Peddapalli East and West, Venkatapuram, Kodavati-pudi, Karaka, Pedimikonda and Arlova reserves. *Gōdāvari Upper*.—Out of 400 sandal seedlings surviving last year in Pegha reserve, most of them died during the long hot weather this year. A fire in the sandal area also destroyed a good number of the seedlings. Elsewhere the season proved unfavourable for regeneration, either the seed did not germinate at all or the seedlings died very early for want of rains.

(c) *Operations for improvement of growing stock.*

17. In *Ganjām* extensive improvement fellings were carried out under Mr. Minchin's working plan. They are detailed under the next heading "Exploitation." In *Gōdāvari Upper* improvement fellings were also carried out on 40 acres in Sitarampuram reserve and 30 acres in Tunikicheruvu reserve by removing all the useless crooked trees and those that were interfering with the growth of the more valuable species. Some creepers and climbers were cut as usual by subordinates in all divisions.

5. EXPLOITATION.

(a) *System of Management.*

(i) MAJOR PRODUCE.

18. The different silvicultural systems in force were—

Clear or regeneration fellings.—These were carried out in *Ganjām* as prescribed in the two felling series of the Plains Sal Timber Working circle and also in the Ravine Working circle. The areas concerned were cleared of all refuse by burning during February and March after the clear felling was completed. Undesirably vigorous switch growth was then cut back with the result that at the beginning of the growing season an even aged regeneration consisting partly of coppice shoots and partly of seedlings began to come up. Thirty-eight acres of casuarina plantation in *Gōdāvari Lower* and 1,433 acres in *Kistna* were clear felled.

Selection fellings—Ganjām.—All mature trees over 4½ feet in girth at breast height and all dead and dying trees were felled in the Dhimirijoli reserve and carted to Kussellkonda saw mill depot. Four thousand and three hundred logs or 64,836 cubic feet were exploited in this way in one-half of the reserve, the other half being left over for 1921-22. *Gōdāvari Upper.*—These fellings were confined to unreserved lands which are under the control of the forest department and trees of above the prescribed minimum girth were felled. Sixty-three thousand four hundred and four cubic feet of timber were extracted as against 87,465 in the previous year.

Improvement fellings.—These were carried out in the Plains Sal Timber Working circle and in the Ravine Working circle. *Ganjām.*—The work was carried out as follows:—First, mature trees fit for the saw mill were extracted departmentally. Next, trees to be retained were marked with tar numbers. After this had been done the balance of the growth was sold standing to contractors. This method worked satisfactorily and resulted in a certain amount of revenue being derived from the material which it would have been difficult to sell had the whole operation been done departmentally. Thinnings were also carried out over 75 acres in Plains Sal Pole Working circle in Bontha range and also in certain old fuel coupes in Russellkonda range.

Simple coppice and coppice with standards.—The fuel coupes in all the divisions were worked under these systems; the areas exploited being 9 and 1 square miles respectively against 10 and 2 square miles in the previous year.

Unregulated fellings.—These were as usual confined to the unreserved lands and to the Rampa forests in *Lower Gōdāvari*.

(ii) MINOR PRODUCE.

First
Circle.

19. *Bamboos and miscellaneous produce.*—Three methods of extracting were in vogue, viz., departmental collection, leasing the right of collection and collection on permits. The first method was resorted to only to meet the petty requirements of the department, for repairs to rest-houses, etc. Bamboos and other important produce including tanning barks were leased out to contractors. The right to collect seigniorage from purchasers at certain shandies for minor produce purchased from hill tribes was leased in *Vizagapatam*. The offer for tangedu-bark was low and the sale was therefore postponed.

Permits were given for extraction of all produce from the agency tracts in *Gōdāvari Lower* and from some of the forests in the *Upper* division which were not leased out.

Strychnos nux vomica was separated from other minor produce and leased out separately on a three-year lease in *Kistna*. In *Vizagapatam* and the two *Gōdāvaris* the produce was sold only for one year pending the formation of separate agency divisions. The existing lease in *Ganjām* expires at the end of 1922-23.

Fodder grass and hay.—Fodder grass in the coast forests of *Kistna* was leased out. In *Gōdāvari Lower* the removal of fodder grass was permitted on permits, no contractors having come forward to undertake the removals on contract.

The Military Department continued to make hay in *Kistna* paying a royalty of Rs. 2 per ton.

(b) Agency of Exploitation.

(i) DEPARTMENTAL AGENCY.

20. The outturn of major produce by departmental agency is compared below with that of last year :—

	Timber in thousands of cubic feet.	Fuel in thousands of cubic feet.	Bamboos.	Minor produce.
1919-20*	216	779	Rs. 18,819	Rs. 7,506
1920-21	420	245	405	876

* Includes Karnool.

The quantity of major produce exploited was 16 per cent of the total outturn and chiefly consisted of timber felled in *Ganjām* for the saw mill at Russellkonda and selection fellings of ebony logs in *Upper Gōdāvari* for supply to Delhi.

The buildings for the saw mill at Russellkonda are under construction and as soon as they are completed and the saw mill established, the timber extracted will be converted there into different sizes and disposed of by special agency. The decrease in the outturn of fuel and miscellaneous produce is due to the transfer of the *Kurnool* divisions from this circle.

(ii) BY PURCHASERS.

21. *Major produce.*—The clear and improvement fellings referred to in paragraph 18 supra and the fellings in fuel coupes, were carried out by contractors.

The quantity of major produce and the value of minor produce removed by purchasers during the year are compared with those of the preceding year in the following abstract :—

	Timber in thousands of cubic feet.	Fuel in thousands of cubic feet.	Bamboos.	Grass and grazing.	Other minor produce.
1919-20*	665	3,707	Rs. 1,15,283	Rs. 1,55,075	Rs. 2,85,856
1920-21	478	2,783	1,11,766	46,968	63,171

* Includes Karnool.

FOREST DEPARTMENT

The figures for 1920-21 represent nine months and exclude the *Kurnool First Circle* divisions; hence the apparent decrease. Actually there was an increase in the value of bamboos removed this year due to the increased demand for sugarcane props. The removal of the *Kurnool* divisions chiefly accounted for the decrease under *grass and grazing* and the high prices that ruled for tanning barks in the previous year accounts for the very large difference under *minor produce*.

(iii) & (iv) BY RIGHT HOLDERS AND UNDER PRIVILEGES AND FREE GRANTEES.

22. The quantity and value of forest produce removed under this head were as follow :—

	Timber in thousands of cubic feet.	Value.	Fuel in thousands of cubic feet.	Value.	Bamboos.	Grazing.	Other minor produce.	Total outturn.
Right holders	42	Rs. 1,960	96	Rs. 1,001	Rs. 237	Rs. 592	Rs. 260	Rs. 4,040
Free grantees	61	2,464	..	..	53	12,375	40	14,932

Rights.—They were enjoyed in *Ganjām* and *Gōdāvari Upper* under the conditions allowed at forest settlement. The estimated value of produce enjoyed was Rs. 4,040 against Rs. 31,880 in the previous year. The difference is due to exclusion of the *Kurnool* divisions.

Free grantees.—Such grants were made chiefly for rebuilding houses destroyed by fire. The estimated value of all grants was Rs. 14,932 against Rs. 16,371 in the previous year.

(c) Outturn and sources of forest produce.

23. The total outturn from all classes of forests by all agencies is compared with similar details of last year in the following statement :—

	Timber in thousands of cubic feet.	Fuel in thousands of cubic feet.	Bamboos.	Gross value of minor produce including grass and grazing.
1919-20*	971	4,847	Rs. 1,85,115	Rs. 4,86,337
1920-21	1,001	3,074	1,12,461	1,24,160

* Includes Karnool.

The total number of cattle for which grazing was provided was 263,611 against 221,100 in the previous year.

CHAPTER III.—FINANCIAL RESULTS.

24. The following statement compares the financial position of the year with that of the previous year and the average of the preceding quinquennium :—

	1920-21.	1919-20.	Average of the previous quinquennium.
Revenue	Rs. 4,25,555	Rs. 5,16,711	Rs. 4,93,370
Expenditure			
Refunds	14,080	6,958	7,529
A.—Conservancy and works	2,48,771	1,52,461	1,26,432
B.—Establishments	2,79,061	2,92,537	2,55,483
Total	5,36,912	4,51,956	3,89,444
Surplus	1,11,357	+ 64,755	+ 1,03,926

First
Circle.

The results show a deficit of over a lakh of rupees. It is expected that the saw mill at Russellkonda will start working in January 1922 and that the financial position will then be appreciably improved. About three lakhs of rupees worth of timber is reported to be awaiting conversion and sale at the Russellkonda saw mill depot.

Forty-two per cent of the revenue was derived from *major produce*, 40 per cent from *minor produce*, 11 per cent from *grass and grazing* and seven per cent from *miscellaneous items*. Of the expenditure 23 per cent was spent on the exploitation of forests, 39 per cent on their upkeep and improvement and 38 per cent on *miscellaneous items*. The revenue outstanding at the end of the year was Rs. 22,146 of which Rs. 9,034 fell due within the year.

The estimated value of the produce at sale depots was Rs. 7,821. The important variations under 'Revenue' and 'Expenditure' are explained below.

RECEIPTS.

(i) By Departmental Agency.

Timber—86,020.—The decrease occurred in *Ganjām* and *Upper Gōdāvari*. In the former division it was due to an unusual revenue last year from the supply of sleepers to Messrs. Bird & Co., and in the latter division, the timber collected departmentally in four ranges was not sold for want of bidders.

(ii) By purchasers.

Timber + 14,483.—Due to increased demand for timber of valuable species from Rampa and the unreserves in *Lower Gōdāvari*.

Bamboos + 24,999. The abnormal demand for sugarcane props in the two *Gōdāvari* divisions contributed to the increase.

Minor produce—33,530.—This was due to the very exceptional prices realized last year for tanning barks.

(iii) *Miscellaneous (including confiscated drift and waif wood)*—11,131.—The decrease is accounted for by the adjustment of the value of an elephant transferred to the Agency Department in *Vizagapatam* and the credit of the contribution made by the zamindar of Vallur for the construction of a road in *Kistna* in last year's accounts, and the less revenue realized from driftwood in *Lower Gōdāvari*.

EXPENDITURE.

No correct comparison can be made as the period dealt with is nine months against 12 of the previous year. Under A. *Conservancy and works* there was an increased expenditure of Rs. 91,310. This was chiefly incurred in *Ganjām* on felling timber for the saw mill and on the construction of the saw mill buildings. The introduction of the early burning system of fire protection in *Upper Gōdāvari* also contributed to the increased expenditure to some extent.

The expenditure under B. *Establishments* shows a decrease of Rs. 13,476 but the expenditure was only for nine months.

CHAPTER IV.—RESEARCH AND EXPERIMENTS.

25. *Research*.—Nil.

26. *Experiments*.—In *Ganjām* the experiments in connection with seasoning timber of various species at Russellkonda were continued. A sample of *Bauhinia Vahlia* fibre was sent to the Superintendent, Vizagapatam Jail, who made two sample ropes from it. These were sent to the Director of Industries, Madras, along with a small sample of the raw fibre. His tests indicated that there was little prospect of being able to use the fibre commercially and supported the popular belief that the fibre is much stronger when wet than when dry.

CHAPTER V.—ADMINISTRATION.

27. *Tours*.—The charge of the Circle was held by—

Mr. C. M. Hodgson from 1st July 1920 to 10th October 1920.

Mr. A. A. F. Minchin from 11th October 1920 to 8th January 1921.

Mr. H. Tireman from 9th January 1921 to 28th January 1921.

Mr. J. S. Scot from 29th January 1921 to 31st March 1921.

The touring of the Conservators was below normal owing to there being so many changes of officers in the short period of nine months. Mr. Hodgson inspected the Weld reserve in *Kistna*. Mr. Minchin visited Russellkonda and inspected the saw-mill buildings and some of the sal areas being worked under the new working plan. Mr. Scot made a detailed inspection of the Coringa reserve and extension in *Lower Gōdāvari* and issued instructions regarding the preparation of a working scheme.

The Chief Conservator of Forests visited Russellkonda and inspected the saw-mill buildings under construction and also visited some of the sal areas being worked under the new plan.

All the District Forest officers in this Circle except the District Forest Officer, *Upper Gōdāvari*, spent more than the prescribed minimum period in camp. The shortage in this case was only three days and was due to three of the camping months having been eliminated from the period.

28. *Inspections*.—The Conservator inspected the District Forest offices of *Ganjām*, *Gōdāvari Lower* and *Kistna* and the results were generally satisfactory.

29. *List of offices audited*.—The accounts of *Vizagapatam*, *Gōdāvari Upper* and *Kistna* were audited by the Local Fund staff of the Accountant-General's office and the general results were reported to be satisfactory.

30. *Vernacular Training School*.—The school was held in Goomsur, *Ganjām*, for the fourth time and 35 subordinates were trained. The permission applied for by the Conservator, Bihar and Orissa, for getting his Forest Guards trained in this school was granted by the Government of Madras and five of his subordinates were accordingly admitted during this session. The school started on 6th January 1921 and closed on 18th June 1921.

31. *Health of the establishment including an account of measures of sanitation and casualties*.—*Ganjām*, *Upper Gōdāvari*, and some of the agency portions of the other divisions continued to be unhealthy. Fifteen subordinates in *Ganjām* and 30 in *Upper Gōdāvari* went on sick leave; one subordinate was murdered, 19 died of fever, one of cholera and one of beri beri. The case of murder was that of a Forest Guard in *Kistna* district who was murdered along with a coolie in the Tadikalapudi reserve for trying to drive to the cattle pound a herd of cattle found illicitly grazing in the reserve. The case was tried in the Sessions Court but the accused was acquitted as there was insufficient direct evidence.

CHAPTER VI.—GENERAL.

32. *Formation and management of panchayats (to include forest village system)*.—In *Kistna* division, three reserves of 3,186.89 acres were managed by eight panchayats. The District Forest Officer reports that he inspected them in January 1921 and found them worked satisfactorily except that in certain parts, the forests were overgrazed. No panchayats were in existence in the other divisions of this circle.

The forest village system is not in force in the circle.

33. *Measures for improving local supplies and facilities (includes water-supply, fuel, manure leaves, etc.)*.—*Ganjām*.—Permission was granted to one Mahadeva Patro of Payalpada to dig a channel 50' × 4' × 4' and to construct a tank inside the Dhumi Dhumi reserve on condition that he should not bund up the water to the detriment of the people living lower down and that he should permit people possessing grazing permits to water cattle in the tank. The Khonds of Siddapodoro were given permission to repair a tank situated south of their village on condition that they should allow the use of the water by the people and cattle of Siddapodoro. *Vizagapatam*.—A tank was deepened at the top of Panchadarla reserve and a well sunk by the side

First
Circle.

of the Makarapalem path in Peddapalli East reserve. Permission was given to one Ramachandra Bavajee to construct a shed by the side of the well on the Lambasingi Ghat road and he has promised to live there and build a small masonry reservoir for storing water for travellers and cattle. *Kistna*.—Veerakunta in Yerraguntapalli reserve was repaired at a cost of Rs. 100 and the small tanks near the Palace bungalow were repaired at a cost of Rs. 30. A few small tanks and wells were also repaired by the subordinates.

The wants of the people in the matter of fuel were fully met in all the divisions and there were no complaints. The demand for manure leaf was practically nil.

34. *Timber Transit Rules*.—*Ganjam*.—Under the District Forest Officer's orders all the tanna stations were closed between the 10th and 15th October 1920 but the Timber Transit Rules themselves had not been cancelled or modified antecedent to the above closure. The question of reopening some of the tanna stations is under correspondence with the Chief Conservator.

The rules are reported to have worked satisfactorily in the other divisions of this circle.

35. *Jungle tribes*.—These are found in all the divisions of this circle except *Kistna*. The District Forest Officer Mr. Wimbush writes as follows about the relationship of the Khonds to the Forest Department:—

"The relationship of the Khonds to the Forest Department would appear to resemble that of thoroughly spoilt children.

"In the form of rights, so far as Chokkapad reserve is concerned, and as concessions elsewhere, the Khonds are permitted to remove from the forests, free of charge, practically every necessity of life for themselves and their cattle.

"In return for these privileges they are expected to help the Forest Department to protect the forests in every way and more particularly from fire.

"As regards the amenities of life as opposed to its necessities, there are two things without which the Khond cannot be happy—one is shikar and the other mohwa flowers in due season.

"For the practice of the former which is illegal in reserved forest, and for the collection of the latter, a rank growth of grass and shrubs under the trees of the forest is a distinct handicap.

"The simplest way to remove this handicap is to burn the forest. Like other spoilt children, the Khond is in no way averse to doing what he knows he should not do, provided he has a reasonable, sporting chance of escaping detection and avoiding punishment. Unfortunately, he is well aware that his object can be attained with the greatest of ease and with the minimum of risk to himself. He knows, in fact, that he may even gain a certain amount of 'kudos' over the business if he plays his cards skilfully. What he does, therefore, is this:—During the clearing of fire lines he works willingly and creates a very good impression and earns a certain amount of money. Later on, probably about noon on a day in the hottest weather, he arranges for fires to be lighted inside the fire lines in five or six places almost simultaneously.

"By evening the local forest guards will have seen one of these fires and will arrive at the village demanding help to put it out.

"The Khond, with his tongue in his cheek, will turn out his village and take a number of men to help in extinguishing the fire. In the meantime the other fires will have got beyond all control and in due course the District Forest Officer will receive a report saying that the Khonds rendered every assistance and were of great help to the department but that unfortunately, say 6,000 acres of forest were burnt.

"The above is the impression which the present writer has formed of the Khond after a brief acquaintance with him, covering some three months of the worst fire season that he has ever experienced. The writer is open to conviction that the impression is a false one."

The writer of this report is new to the circle but would find it difficult to believe that the Khonds of *Ganjam* can compete in devilry with the Chenchus of *West Kurnool*. *Pizagapatam*.—The hill tribes availed themselves of the privileges conferred upon them and there were no complaints. The scheme proposed by Mr. Latham some four years ago for forming a settlement at Busilikota in Sinivaram reserve by inducing the *Bhagotas*, to return on free forest lease, is approaching realization. Fifteen

families came there during the year under report. The *Koyas* and *Reddis* of the *First Godavari* divisions continued to be serviceable as usual. They were employed on the general fire protection of forests as well as on the construction of roads and buildings, on demarcation works, etc. They were granted rewards in addition to the usual wages for the successful protection of forests from fire and were also allowed the concession of free grazing and free removal of forest produce for their domestic and agricultural requirements. The only trouble with the *Koyas* and *Reddis* is due to their drunkenness during the mohwa flower season and unfortunately that coincides more or less with the fire season.

36. *Mining and quarrying*.—*Lower Godavari*.—The District Board Engineer was permitted to open a new iron ore quarry in the Kogida forest reserve for quarrying 300 units of metal required for departmental works. *Kistna*.—a prospecting licence for minerals was issued by the Collector to one R. Seshayya Nayudu of Bezvada. A sum of Rs. 770 was realized from rough stone quarried from reserved and unreserved lands. No mining or prospecting licences were issued in the other divisions of the circle.

37. *Line stock*.—(a) *Elephants*.—The two baggage elephants in *Upper Godavari* were in good condition. They were also utilized in dragging 24 logs felled departmentally from the forest to the cart-track.

(b) *Other animals*.—These exist only in *Ganjam*. There were six buffaloes with the exploitation range officer at the commencement of the year. Fifteen buffaloes were purchased during the year making the total 21. Of these one was sold leaving a balance of 20. These were used for dragging timber. The range officer in charge of saw-mill buildings at Russellkonda purchased 22 buffaloes and six bullocks for carting materials and 10 buffaloes confiscated in a forest offence were also transferred to him. Two of these were released to the accused and two died. In addition one other buffalo died. The balance at the end of the year was 47 buffaloes and six bullocks.

38. *Veterinary establishment*.—Nil.

39. *Civil suits*.—Both the suits referred to in last year's report are still pending. The appellant concerned in the driftwood appeal case preferred a second appeal to the High Court of Judicature, Madras, and the case stood posted to 18th April 1921. The civil suit filed by the Proprietor of Gangole Estate in the court of the Government Agent, Godavari, and transferred to the court of the Agency Commissioner, Waltair, for delivery of certain portions of Kovvada and Kopalli reserves was still pending disposal. In *Kistna* a suit was brought by the quarry contractor for the recovery of seigniorage on the metal and gravel quarried in South Vallur zamindari lands for the Yagaram-Ramasingavaram road and it was pending decision in the Ellore Principal District Munsif's Court.

40. *Control of unreserved lands by the Forest Department*.—In *Ganjam*, the Revenue Department and the Forest Department are jointly responsible for the protection of unreserves but hitherto the Forest Department controlled the removal of forest produce. The felling of most of the large timber has been completed under the contract to supply Messrs. Bird & Co., Calcutta, with sleepers. No such fellings are now going on. *Upper Godavari*.—the unreserved lands in this division are under the control of the Forest Department and the local supply of timber, fuel, etc., is met from these lands. Timber of prescribed dimensions is extracted under definite sanctioned schemes and sold in auction. *Kistna*.—The management of unreserved lands in the division with the exception of about 6,000 acres of Kone unreserve held by the Forest Department as grazing area pending its assignment, is vested in the Revenue Department. There is an area of 1,000 acres of unreserved land adjoining the Upputeru river containing mangrove growth. At the request of the Revenue Department it was first taken up for management by the Forest Department and divided into ten fuel coupes of 100 acres each. One coupe was leased out for Rs. 565 in 1920-21 but subsequently the Conservator refused to accept the responsibility unless the area was formally handed over to the Forest Department, so the area was handed back to the Revenue Department.

D. T. BARRY,

Acting Conservator of Forests, First Circle.

5th August 1921.

ANNUAL ADMINISTRATION REPORT OF THE FOREST DEPARTMENT

FOR THE

YEAR ENDING 31st MARCH 1921.

SECOND CIRCLE.

CHAPTER I.—CONSTITUTION OF STATE FORESTS.

1. ALTERATION IN AREA.

Reserved forests.—There has been an aggregate diminution in area of 3 square miles through the disafforestation of certain areas in the *Guntūr* division for assignment for cultivation and in the *West Kurnool* division in order to remove the boundaries from the close proximity of villages. *Second Circle.*

There was no other alteration in area during the period under report, but the disafforestation of three reserves aggregating about 4 square miles in the Bellary district in order to provide for extension of cultivation is contemplated.

2. *Reserved lands.*—There was no alteration during the period, the areas under settlement at the beginning remained undisposed of at the close.

2. FOREST SETTLEMENT.

3. The Daroji tank-bed and the enclosures of three reserves in the *Bellary* and in one reserve in the *Guntūr* divisions were under settlement during the period but remained incomplete at the end. Rupees 2,344 were paid for the acquisition of the enclosures referred to in *Bellary*.

3. DEMARCATION.

4. Eleven miles of new lines were cut in the *Bellary* division and four in the *East Kurnool* division. In either case the demarcation was for the purpose of excising areas disafforested.

Thirty-three miles in the *Bellary* division and six miles in the *Guntūr* division were permanently demarcated at Rs. 1,700 and 65 respectively.

Elsewhere the work was restricted to maintenance, most of it by the departmental subordinates without extra cost. The proposal to demarcate the common boundary between the Cuddapah and Anantapur districts was dropped as unnecessary.

4. FOREST SURVEYS.

5. (a) The Survey of India Department carried out operations in the *Guntūr* district where 26 reserves aggregating 562.50 square miles were surveyed on the 2"=1 mile scale and 11 reserves aggregating 50.44 square miles on the 1"=1 mile scale. The officer in charge writes "The areas consisted of low and undulating hills, covered with partly open and partly dense scrub jungle without heavy timber. The survey was for the most part easy, planetable traversing being only necessary in the flatter and more densely covered area." These surveys are classed as "Ordinary not paid for by the Forest Department."

6. (b) Local Forest officers surveyed coupes, enclosures and other minor items.

7. (c) Reference maps were maintained and posted to date.

CHAPTER II.—MANAGEMENT OF STATE FORESTS.

I. REGULATION OF MANAGEMENT.

Second
Circle.

8. (a) *Preparation and control of regular working plans.*—The District Forest Officer of the Bellary district had a working plan for the Daroji tank-bed under preparation and submitted it to the Conservator after the close of the period under report.

The working plans for the Kalyandrug and Madakasira ranges in the Anantapur district were revised by the District Forest Officer during the period. The former revision received final approval during the period and the latter immediately after its close. These two plans, which cover 90½ and 87½ square miles respectively, are simple ones prescribing fire protection, regulation of grazing and dibbling of sandal seeds in selected areas.

The revision of the Gooty range working plan in the same district is in progress and is promised by the District Forest Officer at an early date.

No new working plans were prepared or under preparation in the Guntūr district but that for the Bellapalli Reserve and the Guttikonda II block of Vinukonda range submitted in the previous year was sanctioned tentatively for a period of three years.

In the East Kurnool division a preliminary scheme for the extraction of bamboos and firewood for the Cumbum range was prepared but was returned for the preparation of a working plan for the whole division.

No new plans were submitted or under preparation for the West and South Kurnool divisions.

Plans are required for the Yerramalais and the Terai forests of the West division and also a revision of that for Veldurti reserve which has lapsed and in the South division the Owk working plan requires revision.

2. COMMUNICATIONS AND BUILDINGS.

(a) Roads and bridges.

9. During the nine months under report Rs. 2,335 were spent on the construction of 27 miles of new communications against Rs. 2,833 for precisely the same aggregate length in the preceding twelve months.

No new work was undertaken in Bellary, Anantapur and West Kurnool divisions. The chief works undertaken were: a road from Nallamadugupenta to Chinna Mantrala for 4½ miles in East Kurnool for Rs. 564 and 1 mile and 6 furlongs of the road from Obalesunipenta to Perikalapenta in the South Kurnool division constructed at a cost of Rs. 599.

The other new works consisted of minor export roads, bridle-tracks and foot-paths.

10. Rs. 10,207 were spent on the repair and maintenance of 148 miles of existing communications against Rs. 8,817 for 150 miles in the previous 12 months.

The only items calling for notice are the sums of Rs. 1,050, Rs. 2,200 and Rs. 650 contributed respectively by the East, South and West Kurnool divisions towards the upkeep of local fund roads in which the Forest Department is interested.

(b) Rivers.

11. Nothing was done or required.

(c) Buildings.

12. The total expenditure on new buildings was Rs. 12,139 as against Rupees 10,901 and the repairs consumed Rs. 11,039 against Rs. 7,965. The increase is attributed to the rise in the price of labour and materials and in respect to the cost of maintenance also to the raising of the pay of bungalow watchers.

No new works were undertaken in the Bellary division. The chief works elsewhere were—

- (1) Part construction of a Range office at Gooty in the Anantapur division.
- (2) Completion of a Range office at Bapatla.
- (3) Completion of subordinates lines at Srigiripad.

(4) Construction of subordinates lines at Remidicherla. The last three all in the Guntūr division. Second Circle.

(5) Part construction of a rest house at Yeguvacherlapalli in the East Kurnool division.

(6) Part construction of a rest house at Yerragondapalem in the same division.

(7) Beginning a rest house at Obalesunipenta in the South Kurnool division.

(d) Miscellaneous.

13. The expenditure on new works was Rs. 1,488 with Rs. 1,097 for repairs against Rs. 291 and 571 respectively in 1919-20.

The expenditure was entirely on wells.

The expenditure on all these heads would have been considerably greater but for the financial stringency that dictated retrenchment.

3. PROTECTION OF THE FORESTS.

(a) General protection.

14. The number of cases reported during the 9 months under report was 5,009 against 5,519 in the previous 12 months. At the same average rate the figures for a complete 12 months would be 6,679 or an increase of 21 per cent.

There is an increase in all divisions, amounting 50 per cent in West Kurnool if the undetected cases are left out of account. The increase is slight in the Anantapur, East Kurnool and Guntūr Districts. But the last-named returns by far the heaviest figure—1,868 cases (including 35 undetected) for a period of nine months.

15. The increase is generally attributed to the bad season and this is probably as correct as such estimates of causes generally are. It seems to the Conservator very doubtful that any definite cause can be given for the rise and fall in cases, which probably vary in different parts of the same district through entirely different factors. It is to be remembered that probably not more than 1 in 10 cases is actually detected or at least reported. Bearing this in mind it is easy to imagine a dozen different causes which might lead to variation in a given beat, section or range.

The increase in the number of pending cases at the close of the period, 1,671 against 1,469 is probably an approximately correct reflex of the general increase in reported cases.

16. There were no particularly important or sensational forest cases.

It is to be noted however that assaults on forest subordinates were rather a feature of the period in the Anantapur district and one forest guard there was murdered. The case is still under enquiry by the police.

In one case three employees of the Military Grass Farm severely assaulted a ranger and a forester who detected them at illicit practices. On the case against them being prosecuted they were sentenced the first to four months' rigorous imprisonment and a fine of Rs. 200; the other two to one month's rigorous imprisonment and a fine of Rs. 100 each.

In the case pending in the Bellary division at the beginning of the period the Forest subordinates, against whom there was a counter charge, were acquitted.

In the Palnad range of the Guntūr division the adverse season resulted in a strong movement to defy the Forest laws. The small Forest staff found itself more or less helpless in the face of organized unlawfulness which had been fomented by the preaching of 'Non-Co-operators.' As this disturbance began only just before the close of the period and ripened after its close and is still being dealt with, it can only be reported on in detail in the next report.

17. The District Forest Officers generally are satisfied with the sentences inflicted by Magistrates, with the exception of that of West Kurnool, who considers them to be lenient.

18. Rewards to subordinates and others who assisted in the detection of forest offences to the extent of Rs. 147 were disbursed.

(b) Protection from fire.

Second
Circle.

19. No very satisfactory review of fire protection can be made in this report as it is for a period of only nine months and terminates in the middle of the fire season and no comparison can be made with the figures of the last report as that covered a full 12 months.

The total area attempted in the Circle amounts to 2,773,515 acres against 2,533,831 acres.

20. There are three systems of protection in vogue.

Special protection under which fire lines are traced and burnt.

Early burning which was started last year under the instruction of Mr. C. M. Hodgson and which was continued on a larger scale (837,032 acres against 489,620 acres) in the period under report. This method is confined to the three divisions of the *Kurnool* district. Under this system comparatively small patches of forest are burnt over early in the year when comparatively little damage is done and this prevents the spread of fire over vast areas later on in the fire season. The method is reported to have yielded good results.

General protection which is carried on only by supervision of the general staff as well as special fire patrols but without the burning of fire traces.

(c) Protection against cattle.

21. The several District Forest Officers give such little information in their reports on this subject, presumably because the figures are for nine months instead of a full year, that without local knowledge the writer of this report is unable to throw any light on or amplify the figures appearing in the forms. Owing to a bad season and scarcity, areas hitherto closed were thrown open in the *Bellary* and *Anantapur* divisions.

(d) Protection against injuries due to natural causes.

22. Beyond a little clearing of prickly-pear in one reserve of the *Anantapur* district, nothing under this head was done.

4. SYLVICULTURE.

(a) Natural reproduction.

23. The stereotyped statements which are of no value are reproduced in all district reports. The only points of interest are—

(1) Sandal is reported to be spreading by naturally sown seeds in the *Anantapur* district.

(2) In *Guntur* the great shortage of *Hardwickia binata* seeds is ascribed to the unusually severe lopping of that species owing to the adverse season.

(b) Artificial reproduction.

24. No new regular plantations were started during the period. The previous plantations are reported to be thriving.

(c) Cultural operations.

25. Sandal seeds were dibbled over about 20 acres in all in seven reserves in the *Anantapur* district. In the same district red sanders and *Pongamia glabra* were dibbled in the *Muchukota* reserve. These operations were entirely unsuccessful owing, it is stated, to the very dry season. In *Bellary* a small quantity of sandal seeds were sown in the *Somalapuram* reserve and all germinated, but nothing is stated as to the further fate of the seedlings. In the *Guntur* district sowings of *Hardwickia binata*, *Acacia arabica* and sandal and a few other species are reported to have been unsuccessful owing to the abnormal heat and drought and to bad supervision by Range officers; sowings of *Avicenna officinalis* (Mada) in the mangrove forests under the *Repalli* working plan are stated to be successful and the seedlings are doing well. All sowings in the *Kurnool East* division of *Cassia auriculata* and

of unspecified species in "Emergency coupes" failed owing to drought. In *Cumbum* reserve the sowing of "Ramanah" grass (*Isthænum laxum*) from *Bellary* was quite successful.

A similar lack of success with sowings of timber species is reported from the *West* and *South Kurnool* divisions.

(d) Operations for the improvement of the growing stock.

26. Beyond a little climber cutting in *East Kurnool* division by the subordinates nothing was done in this direction.

5. EXPLOITATION.

(a) System of management.

(i) Major Forest Produce.

27. The following statement shows the various methods and the areas under each adopted in the working plans:—

System.	Area sq. miles.	Per cent.
1. Clear felling	4	0.2
2. Coppice with standards	110	6.3
3. Improvement fellings	209	12.0
4. Selection	86	4.9
5. No definite system	1,341	76.6
Total	1,750	100

In *East Kurnool* division there is no area under working-plan, but there is a tentative scheme for 147.34 square miles which appears to be a sort of cleaning, dead and dying trees only being removed.

(2) Minor forest produce.

28. Bamboos were sold standing by compartments to contractors. Other items of minor produce are also removed for the most part, under leases. In the *Nallamalai Hills* of *Kurnool*, however, the collection is quasi departmental, as it is collected by *Chenchus*, who are paid by the department.

(b) Agency of exploitation.

(i) DEPARTMENTAL AGENCY.

Major produce.

29. The extraction by departmental agency in all the divisions except *Kurnool East* and *West* is insignificant. It was done for departmental purposes and in *Guntur* to clear an area for experimental purposes.

In *East* and *West Kurnool*, 83 per cent and 50 per cent respectively of the total yield of major produce was worked out departmentally through the agency of the *Chenchus*. This working is rather with the object of providing labour for these men than for sylvicultural or revenue purposes.

Minor produce.

30. In the *Nallamalai Hills* of the *Kurnool* division, bamboos and minor forest produce are collected departmentally through the agency of the *Chenchus*. Besides this only seeds for departmental use for artificial regeneration were collected departmentally.

(ii) BY PURCHASERS.

Major produce.

31. With the exceptions noted in the last section, timber and fuel is extracted by contractors who purchase coupes standing.

No useful comparison with the previous years working is possible as the period under report is for nine months only. In *Guntur*, there was a considerable falling

Second
Circle.

off in the extraction of fuel, about 35 per cent. This is not explained by the District Forest Officer who merely reports that it was due to the less number of coupes and trees in tank beds sold.

32. Minor produce.—Owing to a rising demand for nux vomica this article of minor produce, which had previously been clubbed together with a number of other items, was sold separately. Comparison of the results is not possible since the precise proportion borne by this item in the general sales is not known and, moreover, in past years only a small proportion of the available supply was collected.

From 1921-22 the lease for this produce has been sold in all the divisions but *West Kurnool* for a period of three years, each division forming a single unit. In the three *Kurnool* divisions the lease is not for collection but for the right to buy at fixed rates the seeds collected by the Chenchus.

33. There was a great falling off in the demand for the bark of *Cassia auriculata*; not only were prices all round less than in the previous two or three years but they were so low in some cases that the sales were cancelled as it was thought preferable to give the areas a rest rather than accept such trifling sums. The leases for this article were for one year only.

34. The Military grass farms made hay in the *Bellary*, *Anantapur*, *South* and *West Kurnool* divisions, paying seigniorage to the department at Rs. 2 per ton. The right to make hay in half a dozen reserves of the *Bellary* district was leased to Mr. Howes for Rs. 350. Elsewhere in open areas the local villagers were allowed to cut and remove grass free of charge.

35. For other items, grazing, manure leaves, stone, etc., permits were issued as usual.

(c) *Outturn and sources of forest produce.*

36. It is not possible to make a useful comparison with past years owing to the alteration in the period of report. The Military grass farms extracted the following quantity of hay:—

	Tons.
Bellary	606
Anantapur	1,400
South Kurnool	766
West Kurnool	287
Total	3,059

This appears to be considerably less than in past years and is due partly to the abnormally unfavourable season and partly to the fact that extraction was not complete at the close of the curtailed period under report.

(iii) *By RIGHT AND PRIVILEGE HOLDERS.*

37. The existing rights are those possessed by the Chenchus of the *Guntur* and *Kurnool* districts to the usufruct of tamarind trees at a nominal rate, to other minor produce, materials for huts free and to free grazing. In *West Kurnool* the value of the latter privilege is estimated at Rs. 4,666.

In *South Kurnool* the trustees of the Ahobilam temple have a right to timber, fuel, bamboos and fibre free for the construction of huts for those visiting the temple. The value of the produce actually utilized by the temple authorities during the period is valued at Rs. 52.

(iv) *By FREE GRANTEES.*

38. Free grants were made of produce for the rebuilding of houses burnt down to a total value of Rs. 6,754.

CHAPTER III.—FINANCIAL RESULTS.

39. Owing to the change in the period of the report and to the reorganization into six circles no comparison with past financial results can be made.

The following statement gives the results of the nine months under report for each of the six divisions and the net financial result of the previous twelve months:—

District.	1920-21 (nine months).			Total expenditure.	Net result.	1919-20 (12 months). Net result.
	Revenue.	Expenditure A.	Expenditure B.			
	RS.	RS.	RS.	RS.	RS.	RS.
Bellary	1,29,040	11,891	44,381	56,182	+	72,858
Anantapur	2,25,121	13,423	51,199	64,523	+	1,60,899
Guntur	1,39,136	13,197	49,383	66,180	+	64,256
East Kurnool	65,275	26,877	42,674	69,551	+	4,276
South Kurnool	84,638	21,894	54,487	76,381	+	17,657
West Kurnool	1,29,527	47,257	65,059	1,12,316	+	8,211
Total	7,64,740	1,37,952	3,07,783	4,45,135	+	3,19,605
					+	6,72,193

40. Of the revenue—

13.5 per cent. was derived from major produce,
7.5 " from bamboos,
33.5 " from grass and grazing,
81 " from the minor forest produce, and
14.5 " from miscellaneous sources.

100.

Of the expenditure, exploitation claimed 16 per cent, upkeep and improvements 64.0 per cent and miscellaneous 20 per cent.

There has been a falling off in revenue during the period under report. This is due mainly to the want of demand for tanning barks already referred to.

There has been a considerable rise in expenditure in spite of cutting down works owing to financial stringency. This increase is due partly to the rise in prices and partly to the increase and pay of all ranks.

CHAPTER IV.—RESEARCH AND EXPERIMENTS.

41. Experiments with *Cassia auriculata* cultivation have been stopped in all divisions but *Anantapur*, where they are concentrated in the Golla reserve. These were described in detail in the Administration Report for 1919-20 for the old Central Circle and only a brief reference is necessary here. Methods I and VI (broadcast sowing without disturbance of the soil and dibbling of seeds under shelter of trees the soil being dug up to a depth of 6 inches with a spike or crow-bar) have been discontinued as the results showed no promise.

The other four methods have been kept up and the seedlings are reported to be "doing remarkably well, many of them have died out owing to the continued drought, but, on the whole, there is a large percentage still to be found." The rainfall during the period under report has been miserable—the nine months, which should bring practically the whole of the year's precipitation, yielded but 9.81 inches of which 7.89 fell in August and September and .6 was the maximum in any other month; there being no fall at all in December, February and March.

The following compares the number of seedlings as the result of the last countings mentioned in last year's report and the last of the current year:—

Method.	Area of plot.	Seedlings in June 1920.	Seedlings in February 1921.	Remarks.
	ACRE.			
II	1/8	592	573	6" high, doing well.
III	1/8	18,040	8,522	Many 12" to 18" high, healthy and established.
IV	1/3	11,519	7,443	Many 10" to 19" high, healthy and established.
V	1/8	26,394	6,205	Many 12" to 20" high, exceptionally healthy.

Second
Circle.

Ten new plots covering an area of 30 acres were instituted in August and September 1920 and dealt with as follows:—

Plot No. 1— $3\frac{1}{2}$ acres.—Three furrows ploughed $2\frac{1}{2}$ feet apart. Seeds sown at six seers per acre in the middle furrow and covered by a furrow on either side. Cost Rs. 1-4-0 per acre. Enumeration in February 1921 on $1/10$ acre gave 1,681 seedlings averaging 4".

Plot No. 2— $3\frac{1}{2}$ acres.—Furrows $2\frac{1}{2}$ feet apart. Seven seers of seeds per acre sown in one furrow and covered by the next. Cost Rs. 2 per acre. Enumeration of $1/10$ acre in February 1921 gave 568 seedlings averaging 4".

Plot No. 3—2 acres.—Sown broadcast, then close ploughed in one direction; five seers of seed per acre. Cost Rs. 2 per acre. Enumeration of $1/10$ acre in February 1921 gave 1,894 seedlings averaging 6".

Plot No. 4— $3\frac{1}{2}$ acres.—Two furrows ploughed side by side. Six seers of seed per acre sown in the furrows and covered by ploughing a furrow on the outer side of each. Cost Rs. 2 per acre. Enumeration of $1/10$ acre in February 1921 gave 1,036 seedlings averaging 4".

Plot No. 5— $3\frac{1}{2}$ acres.—Same as plot No. 3 but seven seers of seed per acre. Cost Rs. 1-12-0 (?) per acre. Enumeration of $1/10$ acre in February 1921 gave 1,921 seedlings averaging 6".

Plot No. 6—4 acres.—Similar to plot No. 2 but furrows 10 feet apart and two seers of seed per acre. Cost As. 4-6 per acre. Enumeration of $1/10$ acre in February 1921 gave 115 seedlings averaging 4".

Plot No. 7—4 acres.—Similar to plot No. 1 but two seers of seeds per acre. Cost As. 8 per acre. Enumeration of $1/10$ acre in February 1921 gave 197 seedlings averaging 4".

Plot No. 8—1 acre.—Similar to plot No. 4 but two seers of seeds per acre. Cost As. 8 per acre. Enumeration of $1/10$ acre in February 1921 gave 381 seedlings averaging 4".

Plot No. 9—2 acres.—A single furrow ploughed and sown with two seers of seeds per acre, a second furrow alongside is ploughed to cover the first. Cost As. 4 per acre. Enumeration of $1/10$ acre in February 1921 gave 157 seedlings averaging 4".

Plot No. 10—3 acres.—Twelve seers of seeds sown broadcast on undisturbed soil. This failed entirely.

42. The experiment initiated and reported on last year with the object of ascertaining the best age at which the bark of *Cassia fistula* should be exploited was continued in the *Anantapur* division. Of the 117 trees cut back for coppice in the first block, 18 died and the remainder thrown out, shoots of which some are now 8 feet high with a girth of 5". Two hundred and seventy-one more trees were cut back in the second block.

43. The experiments connected with Red shumac from *Anogeissus latifolia* were discontinued. The experimental tapping of *Boswellia seriata* in the *South Kurnool* division is being continued. No results can be expected yet.

Experiments in thinning the teak plantation made in the *West Kurnool* division in 1906-07 were started.

CHAPTER V.—ADMINISTRATION.

44. The outstanding feature of the period was the sanction for the creation of two new circles in the Presidency. This necessitated the redistribution of the divisions and the creation of the II Circle with headquarters at Bellary consisting of six divisions, three each from the old Northern (three *Kurnool* divisions) and Central Circles (*Guntur*, *Anantapur* and *Bellary* districts). The new circle was instituted on 5th February 1921, but the first month was occupied in organizing an office staff and preliminary work. The six divisions continued to be controlled by the Conservators of the new first and third circles and were handed over on 1st March 1921. A list of officers who held charge of the circle and districts will be found in Appendix C.

45. *Health and Sanitation*.—The Conservator Mr. A. B. Jackson was unfortunately prostrated with enteric just before the close of the period and had to proceed on leave from 1st April.

Second
Circle.

On the whole, the health during the period under report has been fair. There were two deaths from malaria, two from consumption and one from dropsy. Several officers have suffered from malaria and had to be granted leave. Guinea worm is prevalent in *Guntur* and *Kurnool*.

The question of good quarters and the general sanitation and proper water-supply at forest centres in the Nallamalla Hills of the *Kurnool* district requires attention and should receive careful consideration as soon as the financial conditions improve. All wells should be draw wells and not accessible to men or animals as a preventive against guinea worm.

46. *Touring*.—No touring was done by the Conservator during the short period after the formation of the circle, but all the divisions were visited by one or other of the Conservators before the reorganization and all the offices except that of the *Guntur* district were inspected.

The District Forest Officers, *Bellary*, *Guntur* and *East Kurnool* spent less than the proportionate number of days on tour for the nine months under report. It is understood that this had been made up during the ensuing three months.

All the range offices were inspected by the District Forest Officers either during nine months under report or immediately after.

AUDIT OF THE DISTRICT FOREST OFFICE.

47. *Accounts*.—Only the offices of the *Anantapur* and *South Kurnool* divisions were audited by the Assistant Inspector of Local Fund Accounts during the period. The results in either case were satisfactory.

48. *Recruitment*.—Nil.

49. *Vernacular Training School*.—None was held within the circle, the candidates from *Bellary*, *Anantapur* and *Guntur* divisions being deputed to the school held at Cuddapah in the third circle and those from the *Kurnool* district to that at Russellkonda in the first circle.

CHAPTER VI.—GENERAL.

(i) FORMATION AND MANAGEMENT OF PANCHAYAT.

50. The number of panchayats (105) at the beginning of the period remained unaltered at its close but three were dissolved and two new ones created in the *Bellary* district and one new one in *South Kurnool*.

The panchayat management cannot be said to be satisfactory and six in the *Anantapur* district have recently been proposed for dissolution by the Collector. The working is reported to be particularly bad in the *Guntur* division.

It is to be feared that too often the panchayat powers are used in the interest of the wealthier and more influential people and to the detriment of the poorer classes. In the *Guntur* district the people themselves have asked that panchayat management should cease. It has been represented to the Conservator by a responsible Indian gentleman, a member of the Legislative Council, that it is hopeless to expect purely forest panchayats to work satisfactorily under existing conditions and that it is only when the forest management is one of a number of other items of administration that success may be hoped for. I give this opinion as it is an independent one and not based on theoretical foundations.

(ii) MEASURES FOR IMPROVING LOCAL SUPPLIES AND FACILITIES.

51. A few wells and ponds were repaired and facilities were afforded to private parties who desired to construct or repair others.

In *Anantapur* new fuel coupes were opened where there was a demand to be met.

In *East Kurnool* small timber is cut and collected for sale at fixed rates to the public. In the same division and in *West Kurnool* "emergency coupes" are worked by Chentsus and the yield is available for the surrounding population at low rates. There is insufficient demand to absorb the yield, but as these coupes are instituted mainly with the object of providing labour for the Chentsus they are being continued.

Elsewhere the existing prescribed coupes (not always sold for lack of demand) are found sufficient.

(iii) TIMBER TRANSIT RULES.

52. The rules for *Guntur* and *Kurnool* are reported to have worked well and no new ones have been proposed. There are no such rules in *Bellary* and *Anantapur*. Only one point has been raised and that by the railway authorities in regard to the responsibility of the railway authorities under the Act. This is in correspondence with the Railway management.

(iv) JUNGLE TRIBES.

53. There are none in the *Bellary* and *Anantapur* divisions.

In *Guntur* the attempt to localize Chentsus in definite forest villages failed on account of the persuasion of the ordinary ryot population, it is reported, through their apprehension of the loss of the services of these junglemen, which they find useful in many ways, licit and illicit.

In *South Kurnool* the Chentsus are few in number and comparatively innocuous in character. They are employed as watchers and fire patrols of the Forest Department and for felling by the coupe contractors. In the other two divisions of *Kurnool* these people have given immense trouble during the past. Strong measures were taken during the period under review by a specially organized police force under Mr. W. H. Pitt, Superintendent of Police. In these operations the Local Forest Officers gave very considerable help which has been gratefully and gracefully acknowledged by Mr. Pitt.

This commendating report was specially communicated by the Conservator who requested the District Forest Officers to convey his congratulations to the officers concerned as publicly as possible. These officers have been noted for promotion.

The result of the operations was that all or nearly all the leaders and known depredators among the Chenchus (not invariably Chenchus themselves) were apprehended and incarcerated or otherwise disposed of. The hopes that this would prove a complete and immediate culmative have not altogether been justified, for since the close of the period under report a looting raid by a gang of ten or so took place.

The District Forest Officer, *West Kurnool*, is also Special Chenchu Officer.

(v) THINNING AND QUARRYING.

54. No activities on a large scale are reported. In *Bellary* the mining for manganese has ceased and the actual mineral extracted and left unremoved a couple of years back could not be sold owing to its poor quality.

In *Anantapur* prospecting licences for barytes and asbestos were granted, a general licence for prospecting for minerals over an area of 880 acres was granted in the *Guntur* division.

In *West Kurnool* three licences for mining barytes were granted for unreserved lands and 205 tons of mineral were exploited.

In *South Kurnool* a similar licence was granted but no work was done.

(vi) LIVE STOCK.

55. (a) *Elephants*.—Two baggage elephants are maintained in the *West Kurnool* division. Their condition is reported to be satisfactory.

(b) *Other animals*.—Two new bullocks were purchased in the *West Kurnool* division and there were twelve in all at the close of the period. Of these six have been declared unfit for further use by the Assistant Veterinary Inspector and will be disposed of. The five donkeys on the books of the *East Kurnool* division at the beginning of the year were sold for Rs. 35 as they are no longer required.

(vii) VETERINARY ESTABLISHMENT.

56. There is no special Forest Veterinary establishment in the Circle, the services of the officers of the Veterinary Department being called in as required.

(viii) SUITS.

57. There were no suits during the period.

(ix) CONTROL OF UNRESERVED LANDS BY THE FOREST DEPARTMENT.

58. There were no such lands under the control of the Forest Department.

BELLARY,
28th July 1921.

C. E. C. FISCHER,
Acting Conservator of Forests, Second Circle.

ANNUAL ADMINISTRATION REPORT OF THE
FOREST DEPARTMENT

FOR THE

YEAR ENDING 31st MARCH 1921.

THIRD CIRCLE.

CHAPTER I.—CONSTITUTION OF STATE FORESTS.

1. ALTERATION IN AREA.

1. *Reserved forests*.—Owing to the redistribution of divisions on the creation of *Third Circle*, two new Circles during the year, a comparative statement of areas is impossible.

There have been slight alterations in all the divisions but *North Cuddapah*, the result on the whole being a slight decrease owing to disafforestation to provide for expansion of cultivation exceeding afforestation.

The major items were the final reservation of about three square miles in *West Cuddapah*, the disafforestation of the Duggarazpatam reserve in *Nellore* division (a former Casuarina Plantation) and of parts of three reserves in the *Chingleput* division for cultivation. In the aggregate there is a decrease for the Circle of about two square miles.

2. *Reserved lands*.—Insignificant additions were made during the period under report, owing to the notification under Section 4 of enclosures in the reserves of several districts.

A little over three square miles were removed by final reservation, mainly in *West Cuddapah* division.

2. FOREST SETTLEMENT.

3. Of the 30 blocks pending settlement at the beginning of the period under report, 11, with an aggregate area of 3.2 square miles, have been finally settled.

One has been dropped as the cost of acquisition was not justified by its value from the forest point of view and 18, aggregating 11.9 square miles, are still pending.

Five new blocks aggregating .6 square mile were taken in hand so that there were 23 blocks of an aggregate area of 12.5 square miles pending on 1st April 1921. The amount spent on acquisition was Rs. 2,866.

3. DEMARCATION.

4. Only one mile of new line (in the *Chittoor* district) has been cleared, but considerable progress has been made in nearly all the districts in the more permanent demarcation of boundaries previously cleared. In many cases this work is hampered by the fact that the original demarcation was wrong, which necessitates careful investigation both in the field and of the original maps and settlement records.

5. In the *Nellore* and *Chingleput* Divisions demarcation by means of trench and mound was in force until recently, but the poverty of these forests does not justify the very high expenditure and, moreover, such boundary marks are not more lasting than the normal cleared lines and cairns. The latter method has been reintroduced, therefore, nearly everywhere.

Owing to financial conditions elaborate cairns have been replaced by simple stone pillars where the absence of rock in the vicinity makes the erection of cairns a costly addition.

Third
Circle.

The disafforestation of parts of reserves for the extension of cultivation and other purposes has necessitated the demarcation of new boundaries.

6. It is alleged that 5,233 miles have been cleared by forest subordinates without direct expenditure. Though, no doubt, considerable work has been done, it would be unsafe to accept the figures too confidently.

4. FOREST SURVEYS.

7. The Survey of India Department surveyed nine reserves of an aggregate area of 72.38 square miles on the 2" = one mile and five reserves amounting to 13.78 square miles of the 1" = one mile scale in the *Nellore* district.

Further work in that district and also in *Cuddapah* is to be undertaken in the ensuing year.

8. (a) *Local surveys*.—The year's coupes, road alignments and other items of minor survey work were effected by the local forest officers and draftsmen of the District Forest offices.

(b) The prescribed *reference maps* have been maintained and posted for the period under report.

CHAPTER II.—MANAGEMENT OF STATE FORESTS.

1. REGULATION OF MANAGEMENT.

(a) *Preparation and control of regular working plans.*

9. In *North Cuddapah* a working plan for the whole division was under preparation and has not yet been completed.

The revision of the improvement and fuel working plan for the Kodur and Balapalli ranges of *South Cuddapah* was sanctioned during the period.

Mr. Sundaram Ayyar's working plan for the Palakonda Hills in *West Cuddapah* was submitted by the District Forest Officer just after the close of the period under report.

The revised working plan for the *Nellore* range of the *Nellore* district was sanctioned during the period.

No new plans were sanctioned in the other divisions.

A preliminary report for a revision of the Sriharikota reserve in the *Nellore* division was submitted to the Conservator and it will be discussed with the District Forest Officer in the field.

The proposals for the revision of the Chandragiri range working plan in the *Chittoor* division were discussed in the forests and the plan is now under preparation.

Practically all the existing working plans of the *North Vellore* division require revision. Unfortunately, this is at a moment when a District Forest Officer of four years' experience of the division is about to be transferred and is being replaced by one who does not know the forests.

2. COMMUNICATIONS AND BUILDINGS.

(a) *Roads and bridges.*

10. During the nine months under report the expenditure on new works was Rs. 9,056 as against Rs. 9,479 during the preceding 12 and on repairs Rs. 10,671 against Rs. 12,768.

11. The chief items of new works were—
Construction of a cart road from Umethala to Kambampenta in the *South Cuddapah* division, for a length of nearly four miles. In *Chittoor* the Nagapatla-Bhakarapet Road was continued, but the actual length completed during the period has not been stated.

Third
Circle.

12. The *Tramway* materials at Sriharikota have been in use since 1887 with very inadequate renewals. They are used in connexion with the fuel coupes and are leased out to the lessees who purchase the coupes standing. A complete overhaul is necessary and a very large proportion of the stock will require renewal.

A complete stock-taking and preparation of an indent for new material has been ordered.

(b) *Rivers.*

13. No work was done or required.

(c) *Buildings.*

14. The cost of new buildings and the maintenance of existing ones (including the pay of watchers) during the nine months under review was Rs. 12,469 and Rs. 13,206 respectively against Rs. 26,795 and Rs. 14,958 during 1919-20.

The decrease under new works is due to retrenchment on account of financial conditions, several items having been postponed.

15. The most important new buildings constructed were—

North Cuddapah division—

- (1) Subordinates' quarters of Mallepalli.
- (2) Part construction of Range officer's quarters at Badvel.

South Cuddapah division—

- (1) Range quarters and office at Chitvel.
- (2) Reconstruction of the Bodedulabhavi rest-house which had been gutted by fire.
- (3) Completion of a rest-house at Thummalabilu.
- (4) Completion of subordinates' lines at Gadela and Desichettipalli.

Just before the close of the year the subordinates' lines at Papanasam were also burnt down. The two fires referred to are ascribed to malicious incendiarism by dismissed subordinates—

Nellore division—

- (1) Completion of range quarters at Kavali.
- (2) Beginning of subordinates' lines at Gudur.

Chingleput division—

- Completion of a Range office at Sriperumbudur.

Chittoor division—

- (1) Part construction of Range office at Bhakarapet.
- (2) Part construction of Range office at Mamandur.
- (3) Completion of the new rest-house at Mamandur.
- (4) The acquisition and improvement of a circuit house at Palmaner.

North Vellore Division—

- Subordinates' lines at Arungaldrug.

(d) *Miscellaneous.*

16. The cost for the nine months of new works and repairs was Rs. 2,165 and Rs. 460 respectively. The corresponding figures for the previous twelve months being Rs. 2,237 and Rs. 914.

The expenditure was entirely on the digging of new wells or the repairs of existing sources of water-supply.

3. PROTECTION OF FORESTS.

(a) *General protection.*

17. The total number of cases reported during the nine months under report is 6,829. In the same proportion the returns for twelve months would be 8,439 as against 6,368 for the previous twelve months or an increase of 33 per cent.

There is an increase in every division, but it is only 4 per cent in the *Chittoor* division. In that division there is an actual decrease in the cases of injury by fire (all undetected) and in unauthorized felling. There is an increase in illicit grazing

Third
Circle.

and an increase of over 200 per cent in miscellaneous cases. The former is probably due to the recent enhancement of the grazing fees in the district and the latter to infractions of the Timber Transit Rules which, though sanctioned late in 1919, did not come into full force till after 1st March 1920 when tannadars were first appointed.

The increase in *North Cuddapah* (46 per cent) is stated to be due more to the fact that a number of petty cases, which would normally never be reported, were charged by subordinates anxious to show up well in the eyes of a new District Forest Officer.

No explanation is offered in *South Cuddapah* for an increase of 33 per cent, nor have the figures been analysed by the District Forest Officer so that it is not possible to state whether the increase is specific or general.

The increase of 91 per cent in the *West Cuddapah* division is stated to be due to unemployment owing to the failure of the monsoon, the better control of forest guards who have replaced watchers and to direct control of the patrol party by the District Forest Officer.

In *Nellore* the increase is 15 per cent. As it is mainly in cases of unauthorized felling, it is probably due to the unfavourable season.

The District Forest Officer, Chingleput, has not attempted any explanation for an increase of 29 per cent.

In *North Vellore* there is an increase of 31 per cent which is ascribed to a special system of patrol.

18. The efficiency of the special patrols is marred and the extension crippled, however, by the fact that foresters and forest guards may not be granted travelling allowance. The members of these patrols are expected to spend several days away from their headquarters and it is clear that some extra expense, besides discomfort and sometimes danger, is incurred, and it seems unfair that they should not be reimbursed. As revenue is derived from the activities of these patrols, partly in compounding fees and partly from increased direct revenue, reasonable daily or other allowance granted would be much more than covered by the increased revenue.

A tendency towards the rescue of cattle seized is reported from *West Cuddapah*.

19. Rewards aggregating to Rs. 721 were disbursed to subordinates and others who gave assistance in detection.

(b) Protection from fire.

20. It is not possible to give an adequate account of the operations since the period under report terminated in the middle of the fire season and for the same reason no comparison with the previous year can be made.

Fire protection continues to be a difficult problem in the *Cuddapah* district and more especially in the Seshachallam Hills of the *South Cuddapah* division, which contain valuable red sanders forests. A conference on the subject was held and eventually an officer (Mr. J. S. Scott) was placed on special duty to submit definite proposals. His report on the *South Cuddapah* forests was submitted in January and after visiting the locality in March the writer of this report submitted it with remarks to the Chief Conservator after the close of the year.

21. The order of Government (last paragraph of section 3 of G.O. No. 259, dated 15th February 1921) on the forest administration report for 1919-20 was specially brought to the notice of all Collectors. Some, especially those of Chittoor (Mr. H. T. Reilly) and of Nellore (Mr. J. F. Hall), personally and by the issue of a general order to their subordinate officers, have endeavoured to give effect to the desire expressed. Admonition and advice by the Revenue Department will have much more effect than if made by the Forest Department since the officers of the latter are believed to be acting under prejudice.

22. Two large fires in the Seshachallam Hills were undoubtedly originated through the carelessness of forest subordinates when fire tracing. Another large fire near by was equally undoubtedly due to incendiarism.

In the *Chittoor* district a number of fires occurred in the Horsleykonda reserve under such conditions as can leave no doubt that they were intentional. The inspiration to burn probably arose from closing certain reserves during

forest and when the herdsmen lop and fell trees to provide browsing and also in futile revenge for the enhancement of grazing fees. Proposals have been made to still further enhance the grazing fees for this reserve as a deterrent to further incendiarism.

23. There was no change in the system of fire protection.

In the *North Vellore* Division as an experiment one coupe in a teak area was burnt over as early as the grass could be got to burn. (More than one attempt had to be made). It is reported that teak seedlings survived this early burning and were saved from the very much more damaging fire that might have occurred had the grass been allowed to dry up.

(c) Protection against cattle.

24. In the *Nellore* and *Chingleput* divisions the Kancha system was continued for the regulation of grazing and is reported to have worked well on the whole. In *Nellore* the Kanchadars in some cases have complained of the increasing closed area (worked coupes) attached to kanchas which they must protect. They are allowed to cut the grass in these areas, but, the increased growth of grass due to continuous closure offers considerable temptation to illicit grazing and to the straying of cattle, so that the duties of the kanchadars become more onerous and they have to spend more on the maintenance of fences.

The grazing fees in the *Chittoor* Division were raised during the year and this is reported to have had a marked beneficial effect on the incidence of grazing. This is so no doubt if the actual figure of cattle for which license fees were paid is accepted as the number that entered the forests, but as it has been shown that there has been an increase in the number of cases of unauthorized grazing the probability is that the decrease in incidence is more apparent than real.

In the Madanapalli Range of *Chittoor* Division seventeen reserves were closed to grazing for four months of the hot weather. The reason for this closure is that there is no grass in the forest at that time and the graziers make it a practice to lop and fell trees for fodder.

During the period the District Forest Officer, *North Vellore*, submitted a grazing scheme for a part of the division but this was returned for the further consideration of certain points.

25. There has been a proportional increase in the number of cattle impounded of about 20 per cent. This increase is in all districts except *North Cuddapah* and *Chingleput* where there are small decreases. The districts which accounted for about $\frac{2}{3}$ of the increase are *Chittoor* and *North Vellore*, in both of which special patrol parties have been at work.

26. There was little change in the area opened and closed to grazing beyond those noted above. The biggest increase was in *North Vellore*, where about 25 square miles were closed under the scheme by which catchment areas and others which it is necessary to protect are gradually being closed at the rate of four reserves a year.

(d) Protection against injuries from natural causes.

27. *Strobilanthes* (*Stenosiphonium*) is overgrowing the worked fuel areas in the Balapalli Forest of *South Cuddapah* and the adjoining Mamandur Forests in the *Chittoor* Division. The pest will have to be taken in hand as reproduction suffers to a certain extent.

The same species is coming up on areas in the Horsleykonda Reserve of the *Chittoor* Division which have been cleared of *Lantana*. It is proposed, therefore, to encourage the growth of tree species in every way, by dibbling and planting if necessary, of all areas from which *lantana* is removed. Rs. 1,500 were spent as the first uprooting of *lantana* over 200 acres in this reserve.

28. In the *Nellore* district, the growth of *Loranthus* on the Nux Vomica tree has been neglected in the past. This parasite undoubtedly diminishes the production of fruit. Orders have been issued for experimental working in order to arrive at the probable cost of extermination so that a scheme may be laid down in the revision of the working plan.

Third
Circle.

29. In some of the fodder reserves of the *Nellore division* steps have been taken to remove prickly-pear and other useless thorny species so as to increase their productiveness in grass. These operations have cost considerably more than was estimated or intended and the matter will be enquired into at the Conservator's next visit.

30. Sambar are doing considerable damage to the stems of *Chloroxylon Swietenia* in the Balapalli forests of *South Cuddapah* and the Mamandur forests of *Chittoor*. It is difficult there to find a single stem over 3 inches in diameter from which a large proportion of the bark has not been rubbed off by these animals. This leads to unsoundness and it is rare that a single sound tree is found of even pole size. It has been ordered that this species should not be reserved when marking for improvement fellings.

31. A certain amount of climber cutting and prickly-pear clearing was done in several divisions but nothing on an organized, or large scale.

Experiments are being carried out in *South Cuddapah* with a view to ascertaining whether thorny climbers can be eradicated with a solution of arsenic.

(4) SYLVICULTURE.

(a) Natural reproduction.

32. The problem of natural regeneration continues to evade solution with most species and it appears more and more certain that concentrated artificial regeneration must be resorted to wherever the forests are to be worked commercially, with the exception of bamboo forests.

Sandal is another exception, natural reproduction being good in nearly every locality where this species has once got a footing.

In some of the *North Vellore* riverside plantations, the natural reproduction of *Inga dulcis* and of *Hardwickia binata* is reported to be very promising.

(b) Artificial reproduction.

33. There were no new regular plantations but the existing riverside plantations in *North Vellore* were tended and blanks supplied with new seedlings.

The usual more or less casual sowings were undertaken, but, with the exception of one species, with the usual lack of success, the seedlings, it is reported, in most cases succumbed during the hot weather.

The exception is sandal which seems to thrive in almost any and every locality.

The dissemination of this species is receiving special attention in the *Chittoor Division* where small areas of from 1 to 2 acres have been walled in and dibbled with sandal seeds over widespread areas. Eventually these patches will serve as centres of distribution of seeds by natural agencies—mainly birds.

(c) Cultural operations.

34. No operations coming under this head were carried out other than those mentioned above.

(d) Operations for the improvement of the growing stock.

35. Thirteen coupes of an aggregate area of 1,203 acres were worked in *South Cuddapah* under a system of improvement fellings with a view to the preservation and increase of red sanders. It is somewhat doubtful that any real improvement results. It is not usual for seedlings of the species to appear owing to these operations. It is true that coppice shoots spring up but the most abundant reproduction that waits upon these operations is that of thorny climbers like *Pterolobium*, *Mimosas* and *Acacias*.

A certain amount of weeding to free the better species was also carried out.

In the *Nellore Division* the Kollurpad plantation was thinned to improve the existing crop and to induce the natural regeneration of *Albizzia Lebbeck*.

Improvement fellings were carried out, to favour the stock of red sanders, in two coupes in Mamandur in the *Chittoor Division* of a total area of 200 acres. A further operation required in this area is the removal of extra stems and forked stems left at the time of the first operation.

In the Palmaner Range of the same division operations were undertaken for the freeing of the tops of sandal saplings.

A similar operation was carried out in the plantations of *North Vellore*.

In all divisions the worked fuel coupes were fenced with thorns and in the *South Cuddapah* and *Chittoor divisions* some of the coupes worked under the timber improvement system were walled in.

5. EXPLOITATION.

(a) System of management.

(i) MAJOR FOREST PRODUCE.

36. The following statement shows the systems of management under which the forests for which working plans have been prepared are worked :—

System.	sq. MILES.	Percentage.
Clear felling	1	0.11
Pure coppice	143	15.90
Coppice with standards	241	26.81
Improvement fellings	135	15.02
Not subjected to any definite system	379	42.16
Total	899	100

37. The greater part of the areas worked under the coppice with standards system will be converted to pure coppice as in most cases the present growing stock, the locality and the demand indicate this system as preferable.

The forests worked under the system of improvement fellings are those of *Cuddapah* and *Chittoor* in which red sanders is the principal species and those of the hill forests of *North Vellore*.

As stated later it is doubtful that this is the best method of treatment for these forests, especially the red sanders tracts.

The areas under no definite system include areas closed to grazing or reserved for grazing only.

(ii) MINOR FOREST PRODUCE.

(1) Bamboos.

38. The bamboo blocks were leased as usual wherever demand arose.

(2) Miscellaneous.

39. Owing to the inquiry for nux vomica and to the present lack of organization of the collection and want of knowledge as to quantities that exist, it was decided to separate this product from all others and lease its collection separately by unit of whole divisions. The sales for the collection for 1921-24 were widely advertised throughout India, but it must be admitted that, in spite of inquiries from other provinces, the response was disappointing and the results of the sales not quite up to anticipations.

The lease is for three years, this period being adopted so that lessees on so large a scale can satisfactorily organize their collections and also to make allowance for the possibility of a bad-fruited year. The season of 1920-21 was not a good one, there being little fruit in many localities. In the past only a fraction of the yield was collected. In many localities though the lease of nux vomica was included in the general leases of minor forest produce, the lessees did not collect the seed, the fruit being left to rot on the ground.

The rather sudden rise in price during the past two years owing, it is understood, to the wide demand for strychnine for the preparation of preventive insect poisons for use in agriculture, has stimulated interest.

Third
Circle.

The rapidity of the rise is illustrated by the fact that seed collected departmentally in the *Nellore division* fetched an outside price of Rs. 30 for 500 lb. in 1918, whereas in February of 1921 Rs. 147 were realized for the same quantity and it is believed that the price has risen since.

40. On the other hand, there has been a distinct and serious fall in the demand for tanning barks. Owing to the losses sustained by the contractors who had paid large sums for the leases of collection of *Caesia auriculata* bark when there was abnormal demand, rebates of 15 per cent were sanctioned. For the same reason several contractors defaulted and considerable sums were found irrecoverable and had to be written off.

With the exception of *North Cuddapah* where a lease for two years expiring in July 1922 was granted the leases for the present have been restricted to one year and the bids have not been very satisfactory. Till the market has been stabilised the leases should be restricted to one year. The question of the period of the leases for this produce as well as the unit of area for which leases should be granted is under investigation.

The question of tanning barks is not parallel with that of nux vomica, however, since the former is used extensively locally in the tanneries found in most divisions, whereas nux vomica is either exported out of India in the raw state or converted on a commercial footing and not required locally at all.

41. Grass was exploited for hay-making by the Military Grass farms in the *North* and *West Cuddapah* divisions and in the *Chittoor* and *North Vellore* districts. One hundred and twenty-nine and 484 tons respectively were extracted from the two first-named divisions; the two latter have not quoted separate figures. The rate of seigniorage paid to the forest department is Rs. 2 per ton. It is proposed to raise this to Rs. 2-8-0 in future as the present rate does not represent the true value.

No departmental hay-making was attempted.

Grass was removed free by villagers in most of the divisions, but in *South Cuddapah* (and eventually throughout that district) it is proposed to levy an annual fee of 8 annas on each regular grass-cutter so as to bring the collections under control in connexion with the protection of the forests from fire.

In the *Nellore district* grass may be removed from the closed areas attached to 'kanchas' in consideration of their general protection. In the *Veligondas* of the same division free removal of grass by adjoining villagers is permitted in consideration of the general protection of the forests.

Permits were issued for grazing, the collection of manure leaves, thatching grass and minerals.

(b) Agency of Exploitation.

(i) DEPARTMENTAL AGENCY.

(1) Major Produce.

42. There was no systematic working by departmental agency. The quantities that were collected were either for use in departmental works and when clearing boundaries.

The exceptions are—

- (1) The extraction of dead or dying trees in the Kodur and other plantations.
- (2) In *Nellore* the collection of fuel felled in a *Sriharikota* coupe by a contractor but left lying at the expiration of the lease.
- (3) The felling of two or three areas in *Chingleput* for which no sale standing had been secured.

The quantities in all these cases are insignificant.

2. Minor Produce.

43. With the exception of small quantities for departmental use, bamboos were extracted by lessees.

44. In the *Sriharikota* Range of the *Nellore division* nux vomica, sarsaparilla roots, canes, tamarind and a few other items of lesser importance are collected departmentally by the agency of the local *Yenadis*.

Owing to special efforts 515 candies of 500 lb. of nux vomica were collected during the year. This is the produce of highest value and more attention was paid to this than other items. As a consequence, the collection of other items fell off somewhat, but as the difference of value is enormously in favour of nux vomica and a much greater quantity than previously was collected, the policy was undoubtedly right.

Small quantities of divi-divi pods and a few other items from the river-side plantations of *North Vellore* and small collections of *Butea Frondosa* pods and beeswax for the medical stores, in several divisions were made departmentally.

(ii) BY PURCHASERS.

45. With the small exceptions noted above the vast majority of both major and minor produce was extracted by purchasers.

(iii) RIGHT HOLDER AND PRIVILEGES.

46. There are no holders of rights.

In *North Cuddapah* a concession to graze cows, sheep and buffaloes free over an area of 820 acres in the *Lankamallai* reserve has been granted to the people of *Jangalapalli* and *Velugalapalli*.

In the same division the people of *Chennapalli* and *Goppavarampalli* are allowed to graze three hundred head of cattle in the *Chennupalli* reserve at the privileged rate of 1 anna per head.

In the *North Vellore* division the Malayalees were allowed to graze their cattle at a rate of 3 annas per head in the *Thellai* reserve which is closed to the cattle of others.

(iv) Free grantees.

47. Free grants of forest produce were made in most of the districts to re-build houses burnt by fire.

In the *Nellore division*, free grants were also made for the building of huts in the *Kavali Criminal Settlement*.

	Timber in thou- sands of cubic feet.	Value. Rs.	Fuel in thou- sands of cubic feet.	Value. Rs.	Bamboo number in thousands.	Value. Rs.	Grass and grazing.	Other minor produce.	Total value. Rs.
Right holders	..	..	..	..	..	..	136	..	Rs. 136
Free grantees	..	7,618	..	25	25	176	219	752	8,790
Total	..	7,618	..	25	25	176	355	752	8,926

(c) Outturn and sources of forest produce.

48. In view of the redistribution of area and the change in the period of report, it is not possible to make any comparison with the past. The actual figures will be found in the appended forms and commentary would be useless.

CHAPTER III.—FINANCIAL RESULTS.

49. As the period under review is one of 9 months only no general comparison with the past year is possible. Even an analysis of the results of the 9 months can hardly be profitable since the season at which revenue and expenditure occur do not correspond closely. There was insufficient time to extract figures for similar periods and only one District Forest Officer that of the *Chittoor district* (Mr. Littlewood) has given the figures for the corresponding period of 9 months. For the sake of completeness the figures for the *Chittoor district* are quoted comparing the 9 months from July to March in 1919-20 and 1920-21 and separately the figures for other divisions.

It is not possible to make a circle average comparison since the constitution of the circle has changed.

ANNUAL REPORT OF THE

Chittoor division.

Major head.	9 months, 1919-20.		9 months, 1920-21.		Excess in favour of year.
	Rs.	P.	Rs.	P.	Rs.
Revenue	1,14,271		1,30,774		16,503
Expenditure					
Expenditure A	30,679		37,093		6,414
Expenditure B	39,299		63,717		24,418
Total expenditure	69,978		1,00,810		30,832
Net surplus	44,293		29,964		-14,329

Divisions.	Revenue.		Expenditure A		Expenditure B.		Total expenditure.		Net results.	
	1919-20, 12 months.	1920-21, 9 months.	1919-20, 12 months.	1920-21, 9 months.	1919-20, 12 months.	1920-21, 9 months.	1919-20, 12 months.	1920-21, 9 months.	1919-20, 12 months.	1920-21, 9 months.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Cuddapah North.	48,865	56,544	24,045	14,955	43,227	39,786	67,272	51,691	-18,408	-19,147
Do. South.	50,956	30,594	37,273	19,142	55,781	53,768	93,054	81,415	-42,098	-50,721
Do. West.	95,942	65,611	37,009	19,142	43,447	43,358	80,406	62,500	+14,586	+3,111
Nellore	261,136	178,140	23,217	22,565	68,751	65,413	91,968	87,978	+106,164	+90,162
Chingleput	59,701	58,864	24,405	19,216	39,547	37,972	63,952	67,188	-4,251	-1,176
Vellore North	133,261	107,859	21,017	14,920	34,748	32,943	58,765	47,863	+74,596	+69,976

The decreased net revenue or increased deficit in every division is due in part to the raising all round of salaries, and to the increased cost of labour and material. This is by no means compensated by the increase in the value of forest products or in the enhanced grazing fees and, as pointed out, the value of tanning bark has actually fallen considerably. Further the rebates granted on the leases of *Cassia auriculata* bark collected in previous years fell mostly on the expenditure of the 9 months under report.

In addition, in the Nellore and Chingleput districts more Kancha areas remained unsold involving a loss of revenue on the one hand and an increase in charges on the other, as extra watchers have to be entertained for the protection of such unsold areas.

50. The only further analysis possible in the circumstances detailed is for the Chittoor division for which the figures of the corresponding months are available. The variations in revenue from removals by departmental agency are trifling.

There is an increase of Rs. 15,400 in grazing revenue which is due to the rate having been raised from 3 to 8 annas, the actual figures being Rs. 39,325 against Rs. 23,934.

The revenue from minor forest produce fell by Rs. 4,000 owing to contractors of tanning bark having defaulted.

Under V (a) there is an increase of Rs. 2,160 due to higher rates of compound- ing fees in grazing cases, corresponding with the rise in the grazing fees.

In expenditure there is an increase of Rs. 6,414 under sub-head A and Rs. 24,400 under sub-head B. The former is due to the rise in prices and extra salary to watchers and the latter to the raising of salaries all round, including arrears payments.

CHAPTER IV.—RESEARCH AND EXPERIMENTS.

51. *Red sanders*.—Several experiments to arrive at a knowledge of the sylviculture of *Red sanders* are in course of observation but are mostly of too recent a date to afford any conclusive information as yet. It is rather astonishing to find that so little is on record about the requirements of this important species. It would appear that the predominance of *Red sanders* in some localities is due directly to the occurrence of fire since it is more resistant than any of the woody species that it comes into competition with. On the other hand, repeated fires undoubtedly lead to eventual unsoundness, so that fire protection is necessary, but it should be accompanied by tending to assist *Red sanders* against its competitors.

The two observations in *South Cuddapah* detailed in last year's report were continued. It was then remarked that the experiments should 'be continued for another year to give definite results' but I consider that at least another two years from now, and probably longer, will be required to give any trustworthy information.

A similar experiment has been started during the period under report in the Chittoor division.

Seven plots have been laid out and will be treated as follows:—

Plot 1—to be protected against fire but otherwise left alone.

Plot 2—to be burnt over early every year and then protected for the rest of the year but otherwise left alone.

Plot 3—to be protected against fire; grass and weeds to be cut back every year.

Plot 4—to be protected against fire; grass to be uprooted in alternate strips, the others being left untouched.

Plot 5—to be protected against fire; grass to be uprooted in alternate strips and the whole plot to be sown broad cast with *Red sanders* seeds.

Plot 6—to be protected against fire; grass to be uprooted in alternate strips and the whole plot to be dibbled with *Red sanders* seeds as soon as the seeds are ripe.

Plot 7—to be treated as plot 6, but *germinated* seeds to be used.

Some minor experiments on *Red sanders* are also under observation in *North Cuddapah*.

52. *Sandal*.—The attempted introduction of this species in the Nellore division shows no great promise. As the cost is small it will be continued.

The experiment referred to last year in obtaining regeneration by root shoots in the Reddigunta reserve of the Chittoor division is said to be very successful and the District Forest Officer writes 'there cannot be much doubt now that sandal root shoots can and do establish themselves under such conditions'. But this had already been amply established long ago elsewhere. This indicates that there is insufficient dissemination of information and that the publication of forest intelligence requires organization.

An interesting experiment suggested by Mr. A. B. Jackson in 1919 has been carried out in the Horsleykonda reserve to verify whether sandal is perforce a semi-parasite. There being a dense growth of sandal saplings on a tank dam seated on bare rock, all other growth was removed and as the dam has been completely isolated there can be no connexion with growth beyond the dam. After two years the plants are perfectly normal. A more detailed account will be sent to 'the Indian Forester' for publication.

53. *Miscellaneous*.—A few other experiments are under observation but as no results can be expected as yet, it would serve no good purpose to detail them here.

54. Experience has shown that experiments instituted by Divisional officers, however valuable the results are likely to be, generally remain under observation only so long as the officer who started them remains in the district and are neglected or lost sight of altogether thereafter. With this in view the Conservator has invited the Divisional officers to send him particulars to be recorded in an experiment register in the Conservator's office. Reports will then be called for periodically, so that the experiment will be kept alive until they have achieved its purpose.

CHAPTER V.—ADMINISTRATION.

CHANGES IN DISTRIBUTION.

55. The most important change during the year was the creation of two new Conservatorships for the Presidency. This necessitated alterations in the circle charges. In consequence the old Central circle has disappeared and has been distributed partly to the Second and partly to the Third circles. The latter, which comprises the three Cuddapah, the Nellore, Chittoor, North Vellore (transferred from the former Southern circle) and Chingleput divisions, may be taken as the heir of the Central circle.

Third
Circle.

It has been decided to remove the headquarters of the circle from the Presidency town for several reasons. Temporarily the headquarters of the Conservator are located at Chittoor though the office remains in Madras for lack of accommodation elsewhere. This arrangement has not given rise to any serious inconvenience.

Proposals for the permanent location of the headquarters were submitted after the close of the period under report.

56. The new circle was formed from the 4th February when the writer of this report assumed charge, but the three divisions of the old Central circle (Bellary, Anantapur and Guntur) were not handed over to the new Second circle till the 1st March and the North Vellore division was taken over from the old Southern Circle on the 17th February.

This redistribution and reduction in the area of the circle will enable the Conservator to exercise a much closer control (a very necessary improvement) and to become more intimate with the forests and the conditions of his charge.

The next step that is required is the subdivision of the Nellore district into two Divisional charges. A report and proposals will be made as soon as the Conservator is able to visit that district.

Re-distribution of and increase in the number of ranges is also a necessary improvement and the subject is under investigation.

57. *Health and sanitation.*—With the exception of officers whose duty takes them to the notoriously unhealthy localities the health of the establishment has been fair. In the *Chingleput* division both the health and casualties are reported to be 'satisfactory'.

The definitely unhealthy places are—the Mamandur forests of the *Chittoor* district, the Seshachalam of *South and West Cuddapah*, the Nallamalais of *North Cuddapah* and Sriharikota in the south of the *Nellore* division.

For the Seshachalam and the Nallamalais, where lower subordinates are expected to live in a number of localities scattered over a wide area, no definite sanitary measures are possible at present, but it is proposed to construct good habitations for them, clear wide belts around their dwellings and construct good draw-wells. In these areas the wells are usually accessible by steps; an obviously insanitary arrangement and particularly objectionable in localities where the *Guinea worm* is prevalent. All existing step wells must be converted into draw-wells.

58. Special measures to improve health conditions are contemplated or under execution at Mamandur.

Quarters are under construction for the ranger and his staff. It had been proposed to locate these buildings on the Parakalatippa hillock. This is an excellent site from the sanitary point of view but the situation being lonely, inside the jungle and away from all other habitation, it was pointed out at the inception of the scheme in 1918 that no ranger would willingly occupy the quarters with his family. The objection was over-ruled, and the building begun. In 1919, however, the matter being again represented, the then Conservator ordered the conversion of the proposed quarters into a rest-house and the building was completed accordingly as such. The subordinates lines constructed on the same hillock have never been occupied as residences.

The present village of Mamandur is irretrievably infected with malaria and will always form a focus of infection for the staff so long as it remains in its present location. It is proposed to move the whole village to a new site and to lay it out on a properly devised and sanitary plan and to burn out the old insanitary huts and middens.

At the same time, the noxious tank near by must be either drained or improved; the former will prove, probably, the simplest and cheapest.

The great difficulty is the water-supply as all present sources except the filthy tank referred to are apt to dry up completely during the hottest months. The other sources are two wells, the Thumbarakona river and a large tank about three-fourth of a mile north of the village, which is also a source of irrigation.

It has been proposed to construct a reservoir at a point about one and one-fourth miles from the site of the new range quarters and lead the water by a gravity pipe line close to the new site. It is hoped to be able to store a sufficient supply to carry over the hot weather. The Forest Utilisation Officer has been requested to investigate

and he has promised to visit the locality as soon as possible. Meanwhile a trial trench has been dug at the site of the proposed dam to test the sub-soil and arrive at the depth of the necessary foundations. Third Circle.

It was hoped that the difficulty might be solved by railing in a supply periodically in water tank trucks from Renigunta and storing water in a cistern near the railway line. The railway authorities, however, have stated that the supply at Renigunta is insufficient.

59. Sriharikota presents a different problem as there is no shortage of water. The solution here is probably the filling in of small water holes and resorting to tube wells. It is not only malaria that is to be combated here, but also the filaria of elephantiasis and blackwater fever. The question will be investigated by the Conservator at his next visit and the advice of the medical authorities will be sought. It is feared that financial stringency may preclude the early accomplishment of the scheme.

60. The casualties reported during the period are two clerks, three foresters, two forest guards, one tannadar and three fire patrols. All are said to have succumbed to malarial fever.

61. *Tours and inspections of officers—Conservator.*—Owing to several changes in the officers holding charge of the circle (old Central) and the re-distribution the number of days spent on tour by the Conservator (122 days in the nine months) was not what it would have been under normal conditions.

All the divisions were visited at least once except *North Cuddapah*.

All the Divisional offices except *Chittoor* and *North Vellore* were inspected during the period under report. Both the latter were inspected soon after.

62. *Deputation.*—Mr. J. S. Scot, Deputy Conservator of Forests, was placed on special duty to report on the measures to be adopted for the fire protection of the *Cuddapah* forests. He was engaged on this deputation from 3rd January 1921 to 15th February 1921. His report has been dealt with elsewhere.

63. *District Forest Officers.*—All officers except those of *West Cuddapah* and *Chingleput* toured for more than the proportional prescribed number of days. It is understood that the small shortage (two and four days respectively) has been made up during the three ensuing months.

64. Out of 32 ranges 12 only were inspected during the nine months under review; most of the remaining 20 have been inspected within the following three months.

65. *Audit of District Forest Office accounts.*—With the exception of *Chittoor* and *North Vellore* all the offices were audited by the Assistant Inspector of Local Fund Accounts. The results were generally satisfactory.

66. *Recruitments.*—Mr. B. K. Roy, Assistant Conservator of Forests, joined the department on 10th January and was posted for training under the orders of Mr. F. R. Madan, Deputy Conservator of Forests in the *Nellore* division.

67. *Vernacular Training School.*—The school was again held in the *North Cuddapah* division. It has been proposed that it should be permanently located in that division.

As the session of the school does not terminate until four months after the close of the period under consideration a detailed review will form the subject of a special report in due course.

The school opened with 30 students, but one was sent down owing to ill-health and another was dismissed for misdeeds done before joining the school and discovered afterwards.

CHAPTER VI.—GENERAL.

(i) FORMATION AND MANAGEMENT OF PANCHAYATS.

68. Pending the orders of Government on the report of the officer placed on special duty early in the period under review to examine and report on the question of Forest Panchayats no material change has been effected since the last Administration Report.

Third
Circle.

Two Panchayats in *West Cuddapah* were fused into one to facilitate administration.

One new panchayat was formed in the *Nellore* district and the establishment of another is under contemplation.

Two new panchayats were inaugurated in the *Chittoor* district.

With the exception of that for the Karedu reserve in the *Nellore* district, which has been reported on favourably throughout its existence, all panchayats are reported to have worked indifferently or badly. The present system of management appears to offer little hope of improvement. As the whole question is under review, however, and a new departure is under contemplation probably it will be kinder and no less profitable to draw a veil over this subject.

(ii) MEASURES FOR IMPROVING LOCAL SUPPLIES AND FACILITIES.

69. A few wells were repaired and deepened in the three *Cuddapah* divisions and in *North Vellore*.

Ryots were encouraged and given facilities to repair or make tanks or wells in reserved forests.

70. In most localities the existing fuel coupes are found sufficient, indeed, in many cases there were no offers for some of the coupes put up for auction.

In *West Cuddapah* and *Chittoor* some new coupes were marked out and worked, in the latter division with the special idea of providing fuel for jaggery boiling.

71. There is little demand for manure leaves and no special measures were required. In *Chingleput* two working circles have been formed for the supply of manure leaves; one of these was sold during the year and the other remained unworked for lack of demand.

(iii) TIMBER TRANSIT RULES.

72. It is reported that the rules have worked satisfactorily in the divisions in which they are in force and have helped materially in reducing theft. There is still considerable theft in and illicit export of sandal wood from the *Chittoor* district and more stringent rules are required. The District Forest Officer's attention has been drawn to the Sandal Wood Transit Rules recently sanctioned for the *South Kanara* district and he has been directed to submit proposals on the model of these rules.

(iv) JUNGLE TRIBES.

73. As in previous years the collection of minor forest produce in *Sriharikota* in the *Nellore* district was made departmentally through the Agency of the local *Yanadis*. Of late years many of these men have been driven away through the tyranny of the local *Beddies* or enticed away to the fuel plantations near *Madras*.

It is proposed to induce re-immigration in order to collect the minor produce more completely and to provide labour for the fuel coupes, which are never worked fully according to the working plan prescriptions.

The *Malayalees* of *North Vellore* are a recent addition to the circle. Proposals are being made for the better management of the forests in which they live by obtaining their co-operation.

(v) MINING AND QUARRYING.

74. The mica mining having now passed out of the control of the Forest department there is no important transaction to report under this head.

There was a little mining of soap-stone and fire-clay in one or two localities and general quarrying for metal and stone elsewhere.

(vi) LIVE-STOCK.

75. The stock of the circle was increased by 33½ per cent by the purchase of a bullock for watering purposes at *Palmaner* in the *Chittoor* district. The other three members of the animal staff are made up of two buffaloes at *Horsleykenda* in the same district and one buffalo at *Kambakkam* in the *Chingleput* district; all four are required for the same purpose.

(vii) VETERINARY ESTABLISHMENT.

76. The live-stock maintained and its general condition has demanded neither a permanent veterinary establishment nor recourse to temporary assistance.

(viii) SUITS.

77. In the *Pamuleru* suit referred to last year the defendant was adjudged insolvent by the District Court of *Cuddapah* and an Official Receiver has been appointed to his estate. The question of recovery of the amount due by him to Government is still under consideration.

The *shrotriendar* of *Putlampalli* in *West Cuddapah* has appealed against the adverse decision of the District Judge to the High Court. The case is pending and so is the recovery of costs by Government.

In the *Nellore* district the *Pamur* estate suit referred to last year is still pending the supply of maps by the Survey of India.

The *Jagirdar* of the same estate has recently put in a claim to a portion of the *Udayagiri Veligonda B* block. The claim is pending investigation.

The appeal against the decision of the *Nellore* District Judge to the High Court by the *Raja of Venkatagiri* in respect of the *Nandanavanam A* block reserve was decided in favour of Government.

The result of the appeal of the zamindar of *Bangaripaliam* referred to last year is still awaited.

(ix) CONTROL OF UNRESERVED LANDS BY THE FOREST DEPARTMENT.

78. The only lands coming under this classification are the *Meyyur* plantation and the *Walajabad* tope in the *Ohingleput* district both of which are leased to Forest panchayats.

C. E. C. FISCHER,
Acting Conservator of Forests, Third Circle.

Third
Circle.

ANNUAL ADMINISTRATION REPORT OF THE FOREST DEPARTMENT

FOR THE
YEAR ENDING 31st MARCH 1921.

FOURTH CIRCLE.

CHAPTER I.—CONSTITUTION OF STATE FORESTS.

I. ALTERATION IN AREA.

Reserved forests and reserved lands.—The area of reserved forests in the Circle *Fourth Circle.* as at present constituted decreased from 2,727 square miles to 2,711 square miles, chiefly owing to the transfer of the Forests in the Tanjore district to the control of the Collector, and the area under reserved lands increased from 43 to 44 square miles; thus the department had control over an area of 2,755 square miles at the close of the year.

II. FOREST SETTLEMENT.

2. The reservation of two small blocks of an area of 0.28 square mile took effect during the year.

III. DEMARCATION.

3. Three miles of boundaries in South Salem division were finally demarcated, leaving 48 out of 5,173 miles yet to be done.

IV. FOREST SURVEYS.

(a) *By the Survey of India Party.*

4. No survey was undertaken.

(b) *By Madras Survey.*

5. Work in connexion with the Revenue resurvey was completed in the Tiruvannamalai and Gingee ranges of South Vellore division; the outer boundaries of the reserves in Kallakurichi, Tirukoilur and Vriddhaohalam taluks in East Salem were surveyed; while in South Salem, the party was engaged in the survey of the Class V Forests in the Musiri taluk.

(c) *By Departmental Survey.*

6. Coupe surveys were carried out departmentally in all divisions.

CHAPTER II.—MANAGEMENT OF STATE FORESTS.

I. REGULATION OF MANAGEMENT.

Preparation and control of regular working plans.

7. *Preparation.*—No working plan was sanctioned during the year.

The working plan for the Class II Forests of Gingee range has not reached this office and the proposals are apparently under revision by the District Forest Officer, South Vellore, to whose control Gingee range has now been transferred. The working plan for the Reserved Forests of Udayarpalayam taluk, which was submitted

Fourth Circle.

(c) Protection from cattle.

17. The number of cattle impounded shows an increase in South Vellore, Central Salem and East Salem divisions. This increase is due to the successful working of paper system, to the vigilance exercised by the police, and to the interest taken by the panchayatdars in the Tiruvannamalai range.

Details are given in Appendix B.

The incidence of grazing fell during the period under report from 1.68 to 5.20 acres per cow unit and this is doubtless due to the issue of large numbers of grazing fees prevalent in all the divisions as in one range at any time there was negligence in the issue of permits.

(d) Protection against injuries from natural causes.

18. *Prickly pear*.—About 115 acres in coupe XVII in Marappur reserved forest in the East Salem division were cleared at a cost of Rs. 192.

The regrowth in the plateau and the Upper slopes of the Chinnars were cleared within their respective village limits by the Malayalies free of cost.

Lantana.—The plant seems to be getting established even on the plains. It was uprooted by the Malayalies wherever met with within the sandalwood areas in South Vellore; in West Vellore, eradication was continued in the same range over an area of 230 acres; in North Salem, only an area of 11 acres was cleared and no information is given as to the result of the operations in previous years; in South Salem, the pest is reported to be spreading in the unreserves on the Pachamalais.

Creeper cutting.—This was undertaken in all sandal areas.

Loranthus.—*Loranthus* is reported to have interfered with young sandal trees in Karavalli reserved forest on the Namakkal-Kollimalais, causing the death of the trees, but as a rule is not common.

Bison and Sambar.—These are doing much damage to the young sandal saplings in West and South Vellore divisions and also to other species planted in the Amerdi plantation in South Vellore.

4. SYLVICULTURE.

(a) Natural reproduction.

19. *Sandal*.—Natural reproduction of sandal is fair throughout. In the Tiruvannamalai-Javadis of West Vellore division, seedlings that came up after the rains did not survive the summer except those under the shelter of bamboo clumps. The seeding of the sandal in West Vellore is reported to be poor.

20. *Bamboos*.—*Bambusa arundinacea* flowered universally and regeneration is plentiful.

Hardwickia binata.—Regeneration of "acha" in North Salem is satisfactory. Coppice regeneration in the fuel coupes is, as usual, good. Regeneration of *Butea frondosa* in Elavambadi and Kallavi reserves, of *Chloroxylon swietenia* in Morappur reserve, of *Acacia leucophloea* in Annapalayam, of *Mallotus philippinensis* in Nochi-kuttai and its extension and of *Acacia ferruginea* in Thunbal and its extension is reported to be specially noteworthy in East Salem as they form fine patches of 'seedling crops' (*sic*) in the area.

General.—It is almost certain that the reports under this head refer really to advance growth and not to the regeneration of the year.

(b) Artificial reproduction.

21. The only regular plantation in the circle is at Amerdi in the South Vellore division. Twenty acres were planted with *teak*, *sissoo*, *red sanders*, *Hardwickia binata* and *Terminalia tomentosa*. Seeds of *Cedrela Toona* and *Gmelina Arborea* were also sown. The result is the same as in the previous years. Transplants did not fare well generally—only 50 per cent. is expected to prove successful. Only *Dalbergia sissoo* has established itself well; also *red sanders* in the elevated localities. No fresh area was cleared for planting during the next year as the operations are proposed to be carried out in the blanks covering about 25 acres in the previous plantations.

Taungya plantation.—The only plantation under the head is the small area of 6 acres in Pakkam reserve where *teak* has been put out in a locality which does not suit it. Another plot of 2 acres was sown with 29½ measures of *teak* seeds in pits along with the *castor* seeds sown in between the lines of *teak*. The germination is said to be good, but the shade of the *castor* is reported to interfere with the growth of the *teak* plant. The District Forest Officer proposes to substitute other suitable species and introduce *bamboos* along the bank of streams.

Cultural operations.—Regeneration operations in sandal areas were undertaken, but the general result of sandal sowing is a failure all over the circle. In some cases this is due to late sowing, in others, and more often, the seeds are eaten by rodents and only a few of the survivors have been able to survive the hot weather. It is proposed to treat the seeds with red lead in future.

(2) Operations for improvement of the growing stock.

22. Tending was undertaken in all the sandal coupes; cutting of climbers and creepers was also undertaken generally when marking standards.

Improvement fellings involving cutting back of hollow, crooked and useless species interfering with the growth of better species were undertaken in West Vellore division in four coupes, viz., Poongulam coupe III, Chelkal coupe III, Kottur coupe III and Mambakkam coupe I at a cost of Rs. 422. The area gone over is 110 acres, the number of trees extracted being 772. In the East Salem division, improvement works such as cutting of creepers, girdling of inferior species and cutting back ill-grown trees were undertaken over an extent of 600 acres in coupe II of Tagarai Hill Timber Working Circle, XXV Tagarai South Working Circle and coupe XX of Kanai Working Circle of Kallakurichi range at a cost of Rs. 208. It is probable that the removal of nothing but dead material and creepers from these areas is all that should be done.

V. EXPLOITATION.

(a) System of Management.

23. The total area under working-plan during the period was 1,794 square miles and various silvicultural systems in force are detailed below:—

	Area in square miles.	Percentage to the total area under Working-plan.
Clear fellings	2	0.11
Simple coppice	109	6.07
Coppice with standards	789	43.98
Selection fellings	272	15.16
Improvement fellings	332	18.51
Pastoral methods	207	11.54
Forests for which working-plans have been prepared but are not subject to any definite system of working.	83	4.63
Total	1,794	100.00

* Area cleared to be disafforested.

(b) Exploitation by departmental agency.

24. The chief item of departmental extraction was sandalwood. A quantity of 237 tons was sold against 281 tons in the previous year, the average rate being Rs. 1,595 per ton against Rs. 1,402 in the last year and against Rs. 1,418 in the year previous to the last. One of the Mysore Government representatives again attended our sales.

Minor forest produce.—About 296 quarters of tamarind, 28 quarters of lichens and also certain other petty items were collected departmentally from some of the unsold areas in Denkanikota range. These together with the stock collected in the previous year comprising chiefly seeds of *Cassia tora*, gallnuts, lichens, *Pongamia* seeds, tamarind, honey and wax were sold for Rs. 1,090, the cost of collection being Rs. 435.

Fourth
Circle.

Hay.—Out of Rs. 6,208 due from the Military Department on account of supplies made last year Rs. 5,944 was collected during the period; the balance is pending settlement of some differences in the weight acknowledged.

Manure leaves.—An experimental manure leaf plot was opened in Jadaya-gounden reserved forest of Atur Range, East Salem Division. A plot of 20 acres was worked. Five hundred and twenty head loads or 260 cwt. were extracted at a cost of Rs. 79 of which 220½ cwt. were sold for Rs. 81.

(c) *Exploitation by purchasers.*

25. *Timber fuel and bamboos.*—No comparison between the figures for the nine months under report and those of the corresponding period of last year has been found possible as the latter are not available consequent on the readjustment of all the Divisions in the Circle.

Grazing.—Of the total area of reserved forests and reserved lands, 87.47 per cent was open to grazing against 88.51 in the previous year. The incidence of grazing in the several districts of the Circle is given below:

Divisions.	Acres.	Cow units.	Number of cows per cow unit.
South Vellore	259,200	71,718	3.61
West Vellore	235,520	67,000	4.13
East Salem	306,566	43,001*	7.12
North Salem	302,980	32,770	9.22
Central Salem	240,000	56,152	4.35
South Salem	198,400	35,718	5.49
Total	1,541,760	266,439	5.20

* Does not include cattle under the forest village system in Chitteri and Atur Ranges.

The number of cattle grazed during the year shows a reduction of 44,596 cow units and the area open to grazing a decrease of 26,875 acres. The decrease in the number of cattle is attributed to the increased rates for grazing fees generally and to the heavy mortality of cattle in Salem district. The decrease in area is chiefly due to the elimination of areas relating to Tanjore forests and to the area disafforested in South Vellore. The number of animals permitted to graze was 831,597 against 886,549 in the previous year. The revenue from grazing was Rs. 164,231 against Rs. 1,60,476 in the previous year. The increase is small.

Minor produce.—The value of minor produce leased out during the year was Rs. 1,34,864. There was a considerable decrease in the amount realized for tanning barks.

(d) *Exploitation by right-holders.*

26. The rights admitted at Settlement in *Trichinopoly (South Salem)* are reported to have not been availed of during the year.

(e) *Exploitation of free grantees.*

27. The quantity and value of produce removed under the head was as follows:—

	Timber in thou- sands of cubic feet.	Value.	Fuel.		Bamboo. Value.	Grazing.	Other minor forest produce.	Total.
			In thou- sands of cubic feet.	Value.				
Right holders	..	Rs. ..	..	Rs. ..	Rs. ..	Rs. ..	Rs. ..	Rs. ..
Free grantees	..	..	..	..	..	..	..	..
Grants at reduced rates	..	..	..	..	..	..	..	..
Total	17	1,758	1	78	13	..	..	1,844
		1,758		78	13			1,844

CHAPTER III.—FINANCIAL RESULTS.

28. The following statement compares the financial results of the period under report with that of the corresponding period of last year:—

	1920-21— 1st July 1920 to 31st March 1921.	1919-20— 1st July 1919 to 31st March 1920.
	Rs.	Rs.
Revenue	9,73,747	9,88,880
<i>Expenditure.</i>		
A. Conservancy and Works including refunds	2,24,431	2,28,811
B. Establishment	3,01,988	2,31,287
Total expenditure	5,25,519	4,60,128
Surplus	4,48,228	5,28,752

The revenue remained practically the same during the two periods, the decrease being only Rs. 19,268. The same applies to the expenditure under A. Conservancy and Works, the decrease being Rs. 4,463. The expenditure under B. Establishment increased by Rs. 69,803 due to the grant of temporary additions of pay to the subordinates.

Under revenue 57.72 per cent was from major produce; 37.58 per cent from minor produce and 4.70 per cent from miscellaneous items.

Under expenditure 7.09 per cent was on exploitation; 45.21 per cent was on upkeep and improvement of forests, and 47.70 per cent on other miscellaneous items.

The important variations are explained below:—

RECEIPTS.

(i) *By departmental agency.*

Sandalwood.—Rupees 50,151. The quantity of sandalwood sold during the year was 41 tons less than in the previous year. The decrease is due to the fact that about 15 tons in West Vellore did not reach the sale depot in time for the sale and to the poor yield in East Salem Division where the second rotation of working has commenced on the Chitteri hills.

Minor produce. + Rs. 4,915. The value of hay sold during last year was adjusted during the current year; also minor forest produce collected in North Salem last year was sold during the year.

(ii) *By purchasers.*

Fuel. + Rs. 99,968. The increase is chiefly due to the realization in East Salem of the value of land and growth in 'Class IV' reserves of old Cuddalore range.

Bamboos. —24,964. This is chiefly in Salem divisions due to fall in prices consequent on the flowering of bamboos.

Minor produce. —54,433. Due to very low prices realized for barks consequent on the slackness in the hide trade.

Miscellaneous. V (a) + Rs. 8,870. The increase is due to larger amount of compounding fees realized in South Vellore and South Salem.

V (b)—Rs. 13,290. The decrease is due to the transfer to the correct heads of amounts credited to this head in East Salem in the previous year.

EXPENDITURE.

A. *Conservancy and Works.*

The chief variations are an increase of Rs. 50,000 under A-VII (a) which represents expenditure by the Forest Engineer on the road works in the Javadis and the credit to A-VIII (b) of Rs. 20,000 by recovery of the amount adjusted last year as compensation for the Tirumalavadi mita in North Salem.

B. *Establishment.*

The increase is explained at the commencement of this chapter.

CHAPTER IV.—RESEARCH AND EXPERIMENTS.

Fourth
Circle.

29. *Sandal*.—Ranger P. A. Krishnaswami Mudaliyar continued on special duty till the end of the year recording notes on the areas under special observation in the North Salem division in connexion with spike disease—his notes were irregular and his reports when not confined to facts were full of theories for which he was quite unable to produce any evidence. Briefly, it may be stated that there has been no recrudescence of spike in the area in the southern part of the Thali reserve which was cleared of both *Zizyphus Oenophia* and sandal in 1914 and 1915, and till the end of the year the same has been the case at Mukkankere and Nelkuntthi where the diseased sandal alone has been taken out in 1920-21, but the disease is spreading towards Mukkankere from the Ojjanhatti area which we are clearing of spiked trees as quickly as we can—they run however to thousands and labour is somewhat scarce. The above are all in North Salem.

In West Vellore at Nellivasal, a year after the last lot of spiked trees was removed, there has been one fresh tree attacked in September 1920 and the tree has been uprooted, and the area is being carefully watched. It was here that Mr. P. M. Lushington caught an attack just starting and directed the removal of spiked sandal and all *Zizyphus Oenophia*, *Cipadessa fruticosa*, *Dodonaea viscosa* and *Argyrea cuneata* in 1917.

As regards spread of the disease, the observation areas show that up to 31st March 1921, out of 444 sandal enumerated in the Jewlagiri bungalow observation area 392 have shown spike and 205 are dead—similar figures for the "Cairn 53" area are 512 enumerated, 148 spiked and 55 dead (of which 47 at least were spiked trees).

So far no sandal known to have been "spiked" has been alleged to recover except one tree (No. 45 of "Cairn 53" area) which is now healthy, but which no gazetted officer saw diseased.

The experiments to see whether sandal is an obligate parasite, have been continued in South and West Vellore. In the case of the trees trenched near Komattiyeri, they show no difference from their neighbours. It is possible that the trenches here are not deep enough in view of what is noted later about seedlings. At Melpat where four trees are under observation, the report states "three are pronounced to have no healthy appearance and the remaining one is fairly healthy."

It was found that the experiments with seedlings at Komattiyeri were vitiated by the fact that the protective hedge of *Jatropha curcas* and a *Nux vomica* tree growing close by had sent their roots under the trench and had been parasitized, the trench has since been deepened and the roots removed.

Myrobalans.—Specimens of varieties have been sent to the Imperial Forest Botanist for identification from East Salem.

30. *Yield of leaf manure*.—An experimental cutting over 20 acres in East Salem gave an outturn of 520 head loads of 56 lbs. each; this is enough to manure about 5 acres of rice land; it is doubtful if the results are worth much as it was reported that there was difficulty in selling the produce, amongst other reasons, because it contained thorns which are never taken by the ryots as the leaves are generally trodden into the fields with bare feet.

CHAPTER V.—ADMINISTRATION.

31. The following changes took effect during the year:—

- (1) Consequent on the creation of two additional forest circles in the Presidency, North Vellore division was transferred to the new Third Circle and Madura and Tinnevely to the new Fifth Circle, but the financial control relating to the transferred districts remained with the writer of this report up to 31st March 1921.
- (2) A rearrangement of all the divisional charges came into effect on 1st July 1920; the new and old charges affected are detailed below:

Old:	Forest area in square miles.	New.	Forest area in square miles.
North Salem	...	North Salem	521
South Salem	...	Central Salem	412
Trichinopoly	...	South Salem	339
West Vellore	...	West Vellore	383
South Vellore	...	South Vellore	483
South Arcot	...	East Salem	589
	837		
	559		
	310		
	328		
	417		
	275		

The Cuddalore Range charge was abolished with effect from 1st March 1921. Fourth
Circle.
The charge of the circle was held by the following officers during the year under

report:	Mr. B. F. Rigold	1st July 1920	to	17th October 1920
	Mr. H. C. Bennett	18th October	to	25th "
	Mr. J. S. Scot	26th "	to	4th November "
	Mr. H. A. Latham	5th November,	to	31st March 1921

32. *Tours*.—The touring of the District Forest Officers, South and West Vellore and Central Salem, fell short of the minimum, while that of the remaining District Forest Officers exceeded the minimum. The short touring is chiefly due to the change of the period of the administration report from the forest to the financial year.

33. *Inspections*.—By *Conservator—office*.—East Salem District Forest office was the only office inspected during the year and the result was satisfactory. North Salem and West Vellore offices were inspected after the close of the year.

Forests.—After the writer took charge of the circle on return from leave, he inspected the forests in the North Vellore division in November and December 1920 and a portion of the Pachamalais in the South Salem division in January 1921, and some of the forests in the Shevaroy's West and Cauvery Ranges in the Central Salem division and the forests in the North Salem division in February and March 1921. Inspection notes were written and submitted to the Chief Conservator in respect of his inspections for North Vellore, Central and North Salem divisions.

By District Forest Officers.—None of the range offices were inspected during the year as these inspections were usually done towards the end of the old forest year. Instructions had been issued to them to spread over the inspections over the year, but perhaps not in time for effect to be given to them.

The sandal sale depot at Vellore was inspected by the District Forest Officer, South Vellore, during the year while that at Tiruppur was done after the year. None of the District Forest Officers except West Vellore, inspected the sandal "forest" depots when the operations were going on; the need for such inspections was pointed out to them at the end of February 1921.

34. *Audit of accounts by the Itinerating staff of the Accountant-General's office*.—The accounts of the West Vellore and South Salem divisions were audited during the period under report and the results were pronounced to be satisfactory. The accounts of East, Central and North Salem divisions were audited after the close of the year.

35. *Vernacular Training School*.—The school commenced work on 1st February 1921 with 29 students (5 Foresters and 24 guards) in the North Salem division under the charge of Ranger C. H. Ashe, who had to proceed to Coonoor for anti-rabic treatment on the 7th February. Ranger Salisbury took charge of the school on 21st February 1921; T. Kesavalu Nayudu, the Assistant Instructor, holding charge in the interim. The Assistant Instructor T. Kesavalu Nayudu was obliged to go on sick leave from 24th February 1921 to 25th March 1921 and during his absence Supernumerary Ranger K. R. Subramanian acted as Assistant Instructor from 8th March 1921.

The Conservator inspected the school while at work in March 1921.

36. *Health of the establishment including an account of the measures to improve sanitation, and casualties*.—(a) The circle, as at present constituted, consists mostly ranges of hills which are notoriously malarious especially in the hot weather and the health of the establishment has been far from satisfactory involving much dislocation of work.

(b) *Sanitation*.—The Government have sanctioned as an experiment the proposal of the District Forest Officer, South Vellore, to advance Rs. 720 to 24 Foresters (recoverable in 12 instalments) for the purchase of camp cots with mosquito curtains and steps are being taken for their purchase and supply.

Casualties.—Malaria levied its usual toll during the period under report, the victims being one forester, one range clerk, five guards and three watchers. A Forest Guard is reported to be missing in Chengam range, West Vellore division, and rumour has it that he has been murdered on account of the enmity that existed between him and the villagers consequent on his detection of offences against them. Investigation by the Police is said to have given no results, but no formal report on the matter has been received yet.

CHAPTER VI.—GENERAL.

(1) FORMATION OF, AND MANAGEMENT BY, PANCHAYATS (TO INCLUDE FOREST VILLAGE SYSTEM).

(a) Formation and Management of Panchayats.

37. *Formation*.—Panchayats are at work in all the divisions of the circle except in North Salem and West Vellore. In South Vellore, three new panchayats were formed for the Poomalai reserve during the period under report.

Management.—Except in the Tiruvannamalai Range in South Vellore Division, the panchayatdars appear as a rule to neglect their duty, and illicit removals of firewood and manure leaf are common as also in some places goat browsing. More personal attention from the Revenue Divisional Officers and Tahsildars appears to be required before the Panchayatdars will attend to what is required of them. It is believed that the special officer appointed last year to enquire into the working of such areas has reported, but no orders on the matter have been received.

(b) Forest Village System.

The Forest Village system sanctioned for the Tiruvannamalai Range in South Vellore division is giving good results. The protection of the village grazing blocks is improving and the ryots appreciate the system.

38. (2) *Measures for improving local supplies and facilities for obtaining Forest Produce*—include water-supply, fuel, manure leaves, etc.

(a) IMPROVEMENT OF WATER-SUPPLY IN STATE FORESTS.

(1) Boring operations.

In South Vellore, no work was done during the period under report beyond fitting the bore hole at Veerappanur with a pump.

In West Vellore, the tube well at Kavalur has not been completed and the lining of the pipe and the setting up of the installation are still in progress.

Fresh operations in this direction have, for the present, been suspended as ordered in Chief Conservator's Proceedings No. 353, Routine, dated 10th March 1921.

(2) As regards improvement of water-supply in grazing grounds, it is reported that no measures were found necessary in South and West Vellore or in the East and South Salem divisions. In Central and North Salem divisions, where it is reported, that steps are needed, no operations were undertaken during the period under report owing to want of funds. In East Salem division, general permission was given to graziers to take the cattle to the neighbouring reserves or grazing blocks for watering purposes. Five bunds were constructed during the year in Kuttady reserve more however with a view to prevent erosion than to hold up water. In Karungal reserve, Chitteri Range, where 372 bunds have already been constructed these are said to "hold up water for a while". Separate reports received from the District Forest officers in this connexion were considered and it does not appear that anything appreciable can be done to improve the hot weather water-supplies at anything like a reasonable cost.

It is reported from the South Salem division that the panchayatdars of Puliur reserve, constructed a tank 36' x 32' x 16' at a cost of Rs. 300 within the reserve and that the tank was full of water.

39. (b) *The supply of forest produce to meet the wants of the people was, as usual, attended to by coupe contractors.* The District Forest Officer, South Vellore, reports that the action on the part of the Co-operative Department in Tiruvannamalai in working some of the coupes actually reduced the price of fuel in that town. The price of fuel in Salem town rose during the year owing to shortage in the supply of wagons by the South Indian Railway and increase in freight charges, but is still not so expensive as in Madura and Trichinopoly.

40. (c) *Supply of manure leaves*.—No operations were undertaken to encourage the growth of manure leaf species.

The experiment referred to in the last year's report to test the yield of manure leaf per acre was started in an area of about 63 acres in the Jadayagounden reserve of Atur range, East Salem division, the area being divided into three plots, the first of which 20 acres in extent was worked over and gave an outturn of 520 head loads equivalent to 1½ cart loads per acre. One acre of wet cultivation apparently requires six to seven cart loads of leaf manure, so, five acres of forest growth will have to be sacrificed for each acre of wet cultivation and there is nothing like that area of reserved forest to provide leaf.

In South Salem division as a result of closer and stricter supervision over reserves closed to manure leaves by the employment of patrol gangs consisting of reliable and honest subordinates, the stealthy removal from reserves was reduced and the ryots along the foot of the Pachamalais are reported to have used cumbu and cholam stalks as a substitute for green leaf manure. The Agricultural Department was addressed by the District Forest Officer after the close of the year and the officers of that department have kindly consented to tour in the localities affected, with a view to instruct and advise the ryots.

It is quite possible that artificial manures combined with such materials as the cholam and cumbu stalks and perhaps old cotton stems would suit the rice cultivation.

41. (3) *Timber and sandalwood transit rules*.—There are no timber transit rules in force in this circle. There has been no change in the sandalwood transit rules.

42. (4) *Jungle tribes*.—The Malayalee hill village system continued to work well on the Chitteris in the East Salem division and on the Javadis of the South Vellore division and on the Javadis of the Chengam range and on the Yelagiris of Alangayam range in the West Vellore division, while in the Tiruppattūr range the Malayalees withdrew with a few exceptions; some of these appear to have realized that they lose by doing so and have expressed a desire to join in again. The papers show that it is costing them nearly Rs. 1,400 per annum and a good deal of inconvenience.

In South Vellore, a Malayalee who was caught red-handed stealing sandalwood was prosecuted and sentenced to pay a fine of Rs. 30. It is also reported that the Malayalees have used the knives, which they were allowed to carry to cut creepers and climbers, for lopping the top of branches of the bamboos to feed their cattle with in the summer, and that warnings and fines have not produced any marked effect.

During the period under report, the District Forest Officer, South Vellore, realizing that many of the Malayalees were paying usurious interest and were deeply in debt has tried to establish a Co-operative Society which was registered at Komattiyeri through the assistance of the Co-operative Department, and it is hoped that its activities will improve their condition by the purchase of their produce and the sale to them of articles they do not produce themselves.

Steps were also taken in that division to send the vaccinators to the hills and hundreds of Malayalees are reported to have been treated with the result that small-pox which levied a heavy toll in 1919-20 did not play such havoc among them.

In the South Salem division, the Malayalees on the Namakkal-Kollimalais were allowed the exclusive right to graze their cattle in the reserves, and a portion of the grazing fees collected from them was refunded in return for the fairly good protection afforded by them to the forests.

43. (5) *Mining and quarrying*.—A licence was issued by the Collector of North Arcot to Messrs. Gaudart & Co. of Pondicherry to prospect for metals, such as gold, copper and other minerals, except those reserved under the mining rules, in the Ponnaiar reserved forest in West Vellore division and an application by the same company for a mining lease for iron ore in Kanjamalai reserved forest in Central Salem division is under correspondence.

44. (8) *Civil suits—East Salem*.—The appeal against the judgment in the law suit between the department and the mittadar of Sekkadipatti regarding the ownership of the Neyyamalai hill adjoining Pungamaduvu reserve was decided in favour of the mittadar.

Fourth
Circle.

The appeal preferred by the claimants of Anna and Tirthagiri blocks against the decision of the Forest Settlement Officer, which was pending in the District Court, Salem, was decided against Government.

45. (9) *Control of unreserved lands by the Forest Department.*—The Land Revenue Administration of Javadi Hill villages in the Tiruppur taluk continued under the District Forest Officer, West Vellore, and the Collector states that the administration is satisfactory and recommends its continuance for another year from 15th September 1920. The total land revenue collection during the period under report was Rs. 4,158-2-4 against Rs. 4,140-14-2 in the previous year.

The unreserves on the Pachamalais and Kollimalais continued to remain under the partial control of the Forest Department; it has since been decided that the control over these unreserves by the Revenue Department should be left undisturbed.

H. A. LATHAM,
Conservator of Forests, Fourth Circle.

ANNUAL ADMINISTRATION REPORT OF THE FOREST DEPARTMENT

FOR THE

YEAR ENDING 31ST MARCH 1921.

FIFTH CIRCLE

CHAPTER I.—CONSTITUTION OF STATE FORESTS.

1. ALTERATION IN AREA.

1. *Reserved forests.*—There is only a slight alteration in area; 169 acres in *North Coimbatore* and 3 acres in *Madura* were disafforested.
2. *Reserved lands.*—No change.

2. FOREST SETTLEMENT.

3. The settlement of the four blocks in *Tinnevely* district shown as pending in the last report has not been completed. A notification under section 4 of the Forest Act was published for the formal extinction of the eight unlocated rights which escaped notice at settlement in Guttialathur reserve of *North Coimbatore* district and the settlement of these rights was done by the Revenue Divisional Officer, Gobichetti-palayam, but his final report has not been received.

3. DEMARCATION.

4. Twenty-seven miles of new boundaries were demarcated in *Kollegal* district at a cost of Rs. 640 and a small length (half a mile) in *Madura* district at a cost of Rs. 99.

In *Kollegal*, eight miles of old boundaries were repaired. In *Madura*, the demarcation of the common boundaries between the zamin and state forests, and of the enclosures in certain reserves were carried out. In *Tinnevely*, the demarcation of Kalakad-Singampatti boundary commenced last year is still in progress; while the outer boundary of an estate in a reserved forest was cleared to a distance of one mile and two furlongs.

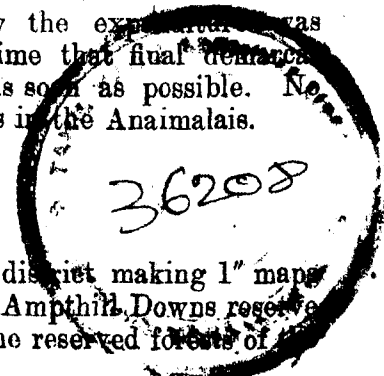
5. The usual reclearing of boundaries by subordinates free of cost was carried out in all the districts. In *South Coimbatore* district 23½ miles of Coimbatore-Cochin and Malabar district boundary were cut and burnt in the course of fire protection works.

6. The total length of the boundaries remaining to be permanently demarcated is said to be 285 miles, most of this length being in *Kollegal* and *North Coimbatore* districts, but district forest officers have given no details and the question will be looked into. In the latter district no permanent demarcation was done during the period under report, though there was a length of 101 miles to be done. It is reported by way of explanation that owing to economy the expenditure was restricted to urgent and important works only. It is high time that final demarcation was completed; steps will be taken to get it done as soon as possible. No progress has been made with demarcation of planters' estates in the Anaimalais.

4. FOREST SURVEYS.

(a) *By the Survey of India Party.*

7. One party has been at work in *South Coimbatore* district making 1" maps of the hilly tracts of Udamalpet range. In *Madura*, the Amphih Downs reserve of Kodaikanal range was surveyed and the resurvey of the reserved forests of Cumbum valley has been commenced.



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(b) Local Surveys.

Fifth
Circle.

8. Surveys of coupes, forest enclosures, regeneration area and other minor works of a like nature were as usual done by the local forest officers and draughtsmen in all the districts.

9. Reference maps.—These are reported to have been maintained and posted up to date in all the districts.

CHAPTER II.—MANAGEMENT OF STATE FORESTS.

I. REGULATION OF MANAGEMENT.

(a) Preparation and control of regular working-plans.

10. In *Kollegal*, the revision of the Arupalayam working-plan has not been completed. The selection of areas to be worked was made during the year and the working was done in the manner outlined for the revision of the plan. The two areas of sandalwood, viz., Bailur and Maleswarannalai working circles, were not worked under the prescriptions of the sanctioned plan owing to the prevalence of spike disease, and the spiked and dead trees and stumps only were extracted.

11. The revised plan for the Godaipalayam fuel working circle of *North Coimbatore* district prepared by the District Forest Officer and sent up for sanction was not approved, but returned for further revision. The sandalwood working-plans have lapsed, but, in view of the prevalence of 'spike', it is not proposed to introduce new plans at the present time. And the sandalwood area is being worked under temporary working schemes.

The fuel working circles were worked under simple coppice instead of under coppice with standards as prescribed in the working-plan and the clearing of prickly-pear in coupes was stopped. The improvement fellings in two coupes prescribed for the year under the sanctioned working-plan of the Mettupalayam range was not carried out, as the fellings in two other coupes of the previous year left in arrears had to be done. It is reported that the arrear coupes are being worked and the working will shortly be brought up to date.

12. Work continued under the Mount Stuart working plan in *South Coimbatore*, but the prescriptions in full were not carried out, due to the imperfect methods of extraction, labour difficulties and accumulation of old stock. The latter is being worked off and the labour question is being dealt with and on the way to be solved. When this has been effected, we shall be able to deal with 200 acres of regeneration a year under the Mount Stuart working-plan and also to deal with the 4,500 acres of evergreen forest in Karian shola, which will make a compact block of nearly 17,000 acres in the immediate vicinity of Mount Stuart.

The four coppice with standard series on the Anaimalais outer slopes, Pollachi range, are being embodied in a revised working-plan and two more series are being added. They are to be worked in the future as simple coppice for fuel and special attention will be given to their improvement. The new working-plan for these will be ready in 1921-22.

Felling in coupe XIV of Punzhi working circles was worked departmentally instead of being sold standing to contractors and this proved satisfactory. The working-plan stands in need of revision in many particulars, but it will pay better to devote our attention to the more valuable forest near Mount Stuart first, as this is only a low grade timber forest.

13. In *Madura*, no new plans were attempted for want of necessary staff. The prescriptions of the plans are being fairly followed, though the working is behindhand in almost every range. The District Forest Officer is devoting his attention to bring up the plans up to date. The shola forests of the High Way Mountain were again examined to see if they were worth an effort being made to deal with them, but the result of the inspection only confirmed Mr. P. M. Lushington's opinion that they are of too poor a type, and too far from any market to be dealt with at present.

14. No new plans were made in *Tinnevely* and the rotation of practically all existing ones expired some time ago and extra coupes have been added to extend the rotations, which in practically all cases were too short. More will be said next

year on this subject as revised plans will be made in as many ranges as possible by then. The Chief Conservator visited the district during the year and made preliminary proposals for making a start with opening up the great shola forests in the Ambasamudram range. Since the close of the year under report action has been taken on these suggestions, and there will be a good deal to be said on this subject in next year's report.

2. COMMUNICATIONS AND BUILDINGS.

(a) Roads and Bridges.

15. The following are the details for the new works:—

	M.	F.
Construction of roads	9	1
Inspection path	5	5
Alignment of roads	38	5
Total	53	3

the total cost being Rs. 11,728.

16. In *Kollegal* Gundal valley road to a distance of two miles and four furlongs was constructed at a cost of Rs. 1,809.

North Coimbatore.—The road from about the 16th mile on the Geddesal-Bailur road to the proposed special camp above Geddesal was extended by two miles during the year, at a cost of Rs. 4,022, which completed it, the total cost being Rs. 6,993. Rupees 318 were spent on metalling the Bargur ghat road.

In *South Coimbatore* no new important works were carried out, but the existing transport routes were maintained. The plans and estimates for the Mount Stuart ghat road as far as Top Slip prepared by the Forest Engineer Mr. Marshall were sent up for sanction. The bullock tramway continued to work during the year and the quantity of timber transported during the period under report was 11,292 and 7/32 ton miles against 8,080 and 3/16 ton miles in the previous year. The average load was considerably shorter than in the previous year. No comparison with other methods of transport can however be made as the tramway is the only means of extraction between the coupes worked and the beginning of the carting road to the plains. The bull tracks on each side of the metals were levelled down and all overhanging growth along the line was cleared. The result has been a great improvement in the conditions under which the cattle work. Consequently the cattle finished the year's work in remarkably good condition.

In *Tinnevely* the construction of the road to coupe No. 1, Kalakad Working Circle to a length of one mile two-and-a-half furlongs was done. It is reported that this work has more than paid itself by the increase in the amount realized for the coupe.

(b) Buildings.

17. The total expenditure on new works during the period under report was Rs. 8,777 and on repairs Rs. 11,528.

18. The important works carried out were—

In *Kollegal*.—The construction of the rest-house and out-houses at Cowdali (not completed) and subordinates' quarters at Lingamankarai (not completed).
South Coimbatore.—Completion of the construction of subordinates' lines at Dhalli and Muttithorai and of a double kraal in Ayerangal. And in *Madura* completion of the construction of subordinates' lines at Puthur and the rest-house at Rajadani.

The dealing with construction work in districts has frequently been most unsatisfactory with the results that long periods of time are taken over works during which time rates rise and complications ensue and one or even more supplemental estimates are rendered necessary. Instructions have been issued to try and remedy this unsatisfactory state of things.

(c) Miscellaneous works.

19. Under this head the expenditure on new works was only Rs. 637, of which Rs. 386 was spent in *Madura* for sinking three wells.

In *South Coimbatore* the depths prescribed by the water diviner in the wells at Top Slip, Mount Stuart and Anaiyadi were reached and apparently no perennial source of water was tapped. Hence the wells were not further deepened but further action has since been taken in this matter and the final results will, it is hoped, prove satisfactory. A scheme for damming the *Tunacadvu* river and pumping up water for the reservoir so formed, was investigated by the Forest Engineer but this scheme, it is hoped, will not be found to be necessary if the wells prove to be a success.

20. An attempt to diminish the feverishness of Mount Stuart and Attakatti was made by the clearing of a wide belt of land of all growth around both settlements and by filling in stagnant pools and by covering periodically with a film of kerosine oil where found necessary. It cannot however be said that these measures have met with conspicuous success as there has been fever at both settlement this hot weather.

21. Telephone.—The line between Anaimalai, Sethumalai and Mount Stuart in *South Coimbatore* is reported to have worked well.

3. PROTECTION OF FORESTS.

(a) General protection.

22. The total number of new cases during the period under report was 2,685. As the report is for a period of nine months ending 31st March 1921 and as there was interchange of districts owing to the formation of new circles, no useful comparison can be made with the figures of the previous year. Of these 2,685 cases, only 2,473 were detected and these together with the 1,007 cases pending at the close of the previous year made 3,480 cases to be dealt with. (Two thousand three hundred and twenty-seven cases were disposed of, leaving a balance of 1,153 at the close of the year.)

23. The number of cases taken to court was 1,530 out of which conviction was secured in the case of 693 and 22 were acquitted. The percentage of acquittals being 3; 815 cases are pending disposal by the court.

24. The number of cases compounded in the several districts of the circle and the amount of compounding fees collected are shown below:—

District.	Number of cases compounded.	Amount of compounding fees collected.
Kollegal	...	...
North Coimbatore	190	1,650
South Coimbatore	331	3,000
Madura	169	2,366
Tinnevely	170	3,118
	641	3,071
Total	1,501	13,205

25. The patrol gangs in *Kollegal* is reported to have continued to work and added to the efficiency of protection. In *Madura* a special patrol party of one forester and six forest guards has been organized from 1st February 1921 in Cumbum range as the ordinary protective establishment is not able to put down timber-theft in the range.

26. A reward of Rs. 37 was paid for detection of cases in *Kollegal*, *South Coimbatore* and *Madura* districts.

(b) Protection from fire.

27. Special protection.—In the *North Coimbatore* district a trial of early burning was carried out for the first time. Fifteen square miles of forests were burnt in *Satyamangalam* Range at a cost of Rs. 211-8-0 and 20 square miles in *Talamalai* Range at a cost of Rs. 178-8-0. The work is reported to have been carried out satisfactorily.

In *Kollegal*, early burning of about 3,000 acres of grassy areas was done for the first time for the protection of the neighbouring sholas in the *Doddasampagai* reserve. It is reported that this was successful so that there was reduction in the number of fires under general protection.

Apart from these two instances there was no change in the system of fire protection. I hope to have more to say about this system next year.

28. The area shown as attempted to be specially protected was 308,929 acres and the total cost therefor was Rs. 15,026. 14,732 acres under special protection were burnt. So the percentage of successful protection was 95.2. The major portion of the area burnt was in the *Madura* district (10,291 acres). The District Forest officer says that the unsatisfactory result of protection was mainly in the sholas of the *Amphill Downs* reserves and this is bound to occur as long as the burning of grass is allowed under G.O. No. 912, dated 23rd April 1915; and that a revised scheme for the better fire protection of this reserve is under investigation. The pine plantations at *Kodaikanal* were successfully fire protected under an improved system of fire protection. The fire protection was fairly successful in *Kollegal*, *North* and *South Coimbatore* districts.

29. General protection.—The area under general protection was 1,654,822 acres, the area burnt 30,714 acres and the percentage of successful protection was 98.1. The major portion of the area burnt was in *Kollegal* (12,273). The District Forest Officer, however, says that the protection was more satisfactory than in the previous year during which 18,135 acres were burnt. No useful comparison can however be made with the cost or results of the previous year as the period under report ends in the middle of the fire season.

30. There were on the whole 237 fires both in the areas under special and general fire protection and the total area burnt was 4,146 acres.

(c) Protection against cattle.

31. Two thousand three hundred and sixty eight square miles (or 74.3 per cent) of the total area was open to grazing of all animals except goats and an additional small area—5 per cent—was open to all animals except browsers (sheep and goats).

32. Incidence of grazing.—In *Kollegal* the incidence is roughly 6.7 acres per cow unit on an average. It is, however, reported that many thousands of acres in the higher and steeper slopes in the *Doddasampagai* and *Madeswarammalai* reserves and a less extent in other reserves are out of reach of cattle and if allowance be made for this fact the incidence is probably double.

In *South Coimbatore* the incidence of grazing is 24.1 acres per cow unit when calculated from the area open but this includes much shola forests and grass hills of the Upper *Anaimalais* where cattle are seldom taken for grazing.

In *Madura* the average grazing incidence was 7.5 acres per cow unit. The other two districts do not report the incidence.

33. The number of cattle impounded during the period under report was 10,822 against 15,912 in the previous year and 14,423 the average for the past three years. The decrease is mainly due to the fact that the present report covers a period of nine months only.

34. Introduction of the Forest village system.—*Kollegal*.—The revision of the scheme referred to in the last report is still under preparation. But it is reported by the District Forest Officer that the scheme as it is generally understood would not suit this division.

(d) Protection against injuries due to natural causes.

35. Spike disease of sandal.—In *Kollegal* the spike is reported to have done considerable damage in the sandalwood areas. The spike isolation line around the infected area was given up being ineffective to check the spread of spike. It is however reported that there is no sign of its spread to other areas. The cutting of climbers in all sandal trees in about 900 acres was done. In *North Coimbatore* it is spreading in most of the sandalwood areas. In *Tinnevely* it is reported that the spike has established itself in *Ambasamudram* range on "*zizyphus oenophia*" and "*Dodonaea viscosa*" but has not appeared in the sandalwood area.

Fifth
Circle.

36. *Prickly-pear, Lantana and Strobilanthes*.—These are the chief pests in the several districts of this circle.

As regards prickly-pear its eradication in the poor forests in which it occurs is too costly to be profitable. The operation was confined to a small area of 71 acres in *Madura* at a cost of Rs. 91 and of 45 acres in *Tinnevely* done by the subordinates free of cost.

Lantana has got such a grip in the Mount Stuart forests in *South Coimbatore* district that dealing with it has been restricted to regeneration areas where only it can be effectively dealt with. The same system is being adopted in those localities where it is really harmful. In *Madura* there are large areas covered with this pest but nothing has been done to check its spread. The uprooting of *lantana* in fuel coupes of *Tinnevely* was done by subordinates free of cost.

Strobilanthes in fuel coupes was cut and burnt in *Tinnevely*.

37. *Weeds and climbers—South Coimbatore*.—Weeding in the 1919 regeneration area and in the rosewood regeneration area of 1920 was carried out. Climber cutting and weeding were also done in the worked coupes to help the coppice shoots. *Tinnevely*.—Weeding and climber cutting in the fuel working circles were done by subordinates, girdling and cutting of undesirable species such as "*Xanthophyllum*, *Mallotus*" etc., trees in the experimental areas at *Kannikatti* and *Kodamady*, cutting of overhanging bamboos in the *Kariar* teak plantation, weeding in *Kodamady* plantation and pruning of teak seedlings transplanted in coupes I and II of *Vadagarai-Melpidagai* were also undertaken.

38. *Damage by animals—South Coimbatore*.—Considerable damage was caused in the regeneration plots in Mount Stuart forests by bison, sambar and elephants. The latter damaged also the teak plots in *Ayerangal* working circle. Rats ate neem seeds sown in the *Udamalpet* fuel coupes. *Madura*.—Some damage was caused to the pine plantations at *Kodaikanal* by sambar and deer. In *Tinnevely* the damage caused to the sandalwood and other saplings in *Alagar Koil Valley* by elephants continued. Sambar and other deer caused great damages to the saplings and small trees in the felled coupes in *Srivilliputtur* and *Ambasamudram* ranges.

39. The severe frost in *Madura* between November 1920 and March 1921 caused considerable damage to the *acacia decurrens* seedlings in the *Kodaikanal* plantation.

4. SYLVICULTURE.

(a) Natural reproduction.

40. *South Coimbatore district*.—In the Mount Stuart forests natural reproduction is impeded by the dense growth of weeds so that recourse has been had to secure regeneration by the concentrated method of clear felling and dibbling. In the fuel coupes also as has been mentioned in the next paragraph reproduction can be secured by efficient weeding. *Tinnevely district*.—Teak reproduction is said to be satisfactory in the felled coupes in several working circles and of other superior species in the *Srivilliputtur* range. Sandal reproduces freely in the same range but requires tending. In the evergreen forests *Balanocarpus*, *Gluta Travancorica*, *Mesua ferrea* and *Aglaia barberi*, reproduce themselves to some extent but the regeneration of these forests is being taken in hand as mentioned below. Natural regeneration of *Acacia planifrons* is fair in the *Kaliavur* forest. *Madura district*.—Coppice regeneration is generally satisfactory throughout the district but that from seeds is not so. *North Coimbatore*.—Rosewood reproduces itself well by root suckers in the *Minchiguli* valley but does not get much forwarder owing to the dense growth of grass. As this locality will grow very fine rosewood further inquiry will be made to see how it can be assisted. Sandal reproduces itself well by root suckers but the country is afflicted with spike. Other species give some regeneration, but it is a poor forest country, the soil being poor and the rainfall insufficient to produce anything but small timber except in the *Minchiguli* neighbourhood.

Kollegal district.—Sandal regeneration is satisfactory, but here again spike prevails. *Hardwickia binata* regeneration is fair, but the same conditions as regards soil and climate prevail generally as in *North Coimbatore* and there is little demand for timber.

(b) Artificial reproduction.

41. At Mount Stuart in *South Coimbatore* 10 acres were cleared for regeneration by dibbling and were sown with *Pillamarudu*, *Terminalia paniculata* and rosewood, the greater portion with seeds of the former species. The original working plan only contemplated regeneration of teak, but as it was considered advisable to try other species as well, the two abovementioned species were selected. Now regeneration of teak by this method had been carefully tested and proved to be successful, and when extending the system to untested species the precaution ought to have been taken of either limiting the area sown with *pillamarudu* to a small trial area, or of sowing teak seeds along with it, so that in the event of there being a failure of the *pillamarudu* we should at any rate have a crop of teak seedlings to carry on with. As this was not done we got nothing on this plot, as the *pillamarudu* did not germinate. The seed were either bad, or had been collected when unripe. The rosewood germinated over about 8 acres but have been considerably damaged by bison and sambar. They grow extremely slowly at first and have to be weeded for years. This plot of 8 acres will however be carefully tended until the trees are safe from weeds and animals so that the cost of this operation may be ascertained for future guidance. There is a sprinkling of teak seedlings on the rosewood area which have come from seeds that were in the ground and which have taken advantage of the weeding to make head-way. We shall continue to introduce other species by this method, but until it is proved that they can be successfully sown by themselves, they will be sown along with teak, the seedlings of which will be pulled up when the others are established, or left if the others fail. The *pillamarudu* plot in question was sown with teak in March 1921.

A test experiment was made in the *Ayerangal* working circle—one of the old coppice with standard series of the outer *Anaimalais* slopes forests—with propagating neem, *Albizia amara* and *Lebbek* by mound sowings in order to fill up blanks in the coupes. These experiments have proved to be successful. The chief cause of blanks however is due to lack of proper weeding. The old time-expired working plan provided for weeding but it is only during the last few years that this important prescription received attention, and then it had to take the form of dealing with *lantana*. Teak seeds were successfully dibbled in to increase the number of valuable future standards, but now it has been decided to reserve all these series for fuel and the method of treatment has been changed to simple coppice and only good fuel species will be artificially introduced. Our experiments in weeding show that we can get plenty of seedlings where this operation is properly carried out, while in some of the coupes the coppice growth is so vigorous that no help is required. The mound sowings will be introduced only where they are required, and where it is proved that they will succeed. A revised working plan for these series for the *Pollachi* range is now being made and two new series added to meet the demand and these new operations will be embodied in it whereby these portions of the forest should be greatly improved. In *Tinnevely* district experiments have been made for some years past with the regeneration of some of the evergreen species in the *Ambasamudram* range, but unfortunately the officers who interested themselves in these useful experiments did not put a definite account of them on record with reference to how we should proceed to deal with the regeneration of shola forests as a whole. It is a pity that this was not done as these experiments have been carried out for a number of years and we have now come to the stage at which shola forests have to be regularly dealt with. A start has since been made and the result of the initial regular operations on an extended scale will be reported on next year. In the year under report seeds of *Gluta Travancorica* were dibbled in an area of 12 acres in *Kannikatti* and in a similar area at *Kodamadi*. In the former area 575 measures were sown and in the latter 266, the germination is said to be 50 per cent, the seedlings are doing well and are from 9" to 12" in height. About one thousand *Hopea* seedlings were planted out in suitable localities during the year.

One hundred and ninety measures of teak, 130 of vengai, 46 of tamarind, 62 of *Terminalia paniculata* and 11 measures of sandal were sown in the *Kadayanallur* and *Kuttalam* working circles, but the District Forest Officer does not report with what result. Two hundred teak seedlings, 1,000 *Albizia Lebbek* and 200 *Eugenia Jambolana* seedlings were obtained by sowings in *Valiyur* reserve. Fifteen acres of *Kalakad* working circle were sown with teak, *Pterocarpus marsupium* and *Terminalia arjuna*

Fifth
Circle.

from which 700 seedlings were secured. *Acacia planifrons* seeds were sown in certain areas of the Kaliavur and Vallanad reserves, 62,000 cashew nuts and 39,000 palmyra nuts were dibbled in the Oneil extension and Lushington series, but the results are not given by the District Forest Officer.

In the *Madura* district 20.25 acres of teak were planted at Vannathiparai at the head of the Cumbum valley. This area will be increased as we can obtain sufficient labour as there is a compact block of 2,000 acres to be planted.

One hundred acres of *Acacia decurrens* were planted alongside the pine plantations on the Kodaikanal plateau but were a failure. This is said to be due to the frost but it is likely as not to have been due to insufficient care being taken with the planting. It will be tried again in order to fill up the gaps amidst the straggling pine plantations so as to make a compact block that can easily be protected from fire.

In *North Coimbatore* district cultural operations were confined to the shola tract at Ainagiri in order to extend the sholas and to dibbling of sandal seeds. Experiments have been made with a number of species at Ainagiri and some success has been obtained and more will be said on the subject next year after the area has been inspected. Sandal dibblings over 202 acres were carried out but for one reason or another put forward the result was such a failure that the resultant seedlings are said to have cost over Rs. 2 each.

In *Kollegal* district sandal and other seeds were dibbled to some extent, but generally speaking nearly all the seedlings died in the hot weather. Such operations except where it is proved by limited experiments to be likely to be successful are a waste of money and will be discontinued.

(c) Operations for the improvement of the growing stock.

42. *South Coimbatore*.—Improvement fellings were carried out in coupe XIV of Punachi working circle. Little good is said to have resulted from such operations which is doubtless due to the rapid growth of inferior species compared to the ones which it is desired to help. The working plan requires revision and more modern methods prescribed.

In *Madura* thinnings of *Albizia amara* coppice shoots were carried out in coupe III Sirumalai 'S' series and in coupe I of the Pannamalai series. The cutting of creepers on standards and other useful trees was carried out by subordinates.

In *Kollegal* the cutting of climbers on sandal was carried out.

5. EXPLOITATION.

(a) System of management.

(i) Major forest produce.

43. The total area under working plan during the year was 1,087 square miles and the various sylvicultural systems in force were as set forth below.

Sylvicultural system.	Area in square miles.	Percentage of total area under each sylvicultural system.
Selection method	76	7.00
Simple coppice	395	36.34
Coppice with standards	321	29.53
Unregulated fellings	261	24.01
Forests for which working plans have been prepared but not subjected to any definite system of working	34	3.12
Total	1,087	100.00

44. Selection fellings were carried out in *Kollegal* and *South Coimbatore*, simple coppice in all the districts and coppice with standards in *Kollegal*, *Madura* and *Tinnevely*. The unregulated fellings were in *North Coimbatore* and refer to the extent representing the area of lapsed Working Plans.

45. A small area of 19 acres was clear felled in *South Coimbatore* for regeneration works and clearings were also carried out around Mount Stuart and Attakatti settlement for sanitation purposes.

(ii) Minor Forest Produce.

46. (i) *Bamboos*.—Twelve bamboo coupes of 25,031 acres in *North Coimbatore*, Fifth Circle 3 of 2,279 acres in *South Coimbatore*, and 5 of 19,326 acres in *Madura* were leased out to contractors. In *Kollegal* bamboos continued to be removed under the unregulated permit system as there was no demand for the located coupe fellings.

47. (ii) *Miscellaneous produce*.—The right to collect all other minor produce was as usual sold to contractors.

Free removal of fodder grass was permitted in *Kollegal* from areas where there was no fire in the previous year. Seven hundred and three tons of fodder grass were removed on permits in *North Coimbatore*.

In *Madura* stones, thorns and earth were removed to a limited extent on permits.

Grazing was as usual controlled by permits. 241,359 animals were permitted to graze in reserved forests on payment and the total revenue realised was Rs. 110,879.

(b) Agency of Exploitation.

(i) Departmental Agency.

48. *Major produce*.—The extraction of timber was as usual mainly by departmental working. Sandalwood extraction also was carried out departmentally. So also the drag poles and agricultural implements in *North Coimbatore* for sale to the public.

49. *Minor produce*.—Collection of honey and wax was undertaken departmentally in *Kollegal* for supply to Medical Stores and so also the seeds required for sowing.

(ii) By purchasers.

50. *Major produce*.—The fuel coupes in all the districts were sold to contractors. The right to collect spokes and felloes from tops and branches of felled trees in a timber coupe in *South Coimbatore* was also leased out to a contractor.

51. *Minor produce*.—Twelve bamboo coupes in *North Coimbatore*, 3 in *South Coimbatore* and 5 in *Madura* were leased out to contractors; so also the other minor produce in all the districts. The right to collect dried and seeded bamboos in Udampalpet range of *South Coimbatore* were sold to a contractor.

(iii) By right and privilege holders and free grantees.

52. The following statement shows the quantity and estimated value of produce removed by right and privilege holders and free grantees.

	Timber in thousands of cubic feet.	Value.	Fuel in thousands of cubic feet.	Value.	Bamboos in value.	Grazing.	Other Minor produce.	Total.
		Rs.		Rs.	Rs.	Rs.	Rs.	Rs.
Right holders.	2	306	3	897	81	894	881	2,140
Free grantees					1		42	

53. (1) *By right and Privilege holders*.—In *North Coimbatore* 2,480 bamboos were removed by right holders. In *Madura* concession to quarry stones and road materials free of charge from the unreserved lands and reserved forests, granted to departments of Government and local bodies was continued.

Date and palmyra leaves valued at Rs. 881 were removed by right holders in *Tinnevely*.

54. *Free grantees*.—Four hundred bamboos were granted free of cost in *North Coimbatore* for rebuilding houses burnt by fire. In *Madura* free grazing in the Amphill Downs reserve was allowed as usual; and for the reconstruction of houses destroyed by fire, palmyra leaves to the value of Rs. 42 and 119 c. ft. of timber valued at Rs. 30 were granted by the Revenue authorities. In *Tinnevely* free grant of timber and fuel worth Rs. 577 was made from the unreserves. In *South Coimbatore* 44 palmyra trees and 1 cart load of jungle wood posts, 3 cart loads of bamboos and some posts aggregating in value to Rs. 133 were granted for rebuilding houses destroyed by fire.

Fifth
Circle.(c) *Outturn and sources of forest produce.*

55. The total outturn of *Major Produce* and the total value of *minor produce* from all classes of forests by all agencies during the period under report with similar details of the previous year are shown in the subjoined statement.

Agency of exploitation.	Timber and sandalwood in thousands of cubic feet.		Fuel in thousands of cubic feet.		Bamboos in value.		Minor produce including grazing in value.	
	1919-20.	1920-21.	1919-20.	1920-21.	1919-20.	1920-21.	1919-20.	1920-21.
By Government agency ..	24	51	18	15	Rs. 425	Rs. 131	Rs. 670	Rs. 253
By purchasers ..	[71]	225	[14]	3,381	[318]	13,810	[502]	1,95,116
By right and privilege holders.	[372]	..	4,605	..	22,712	..	2,45,016	..
By free grantees ..	[279]	..	[278]	..	17,031	..	[1,84,212]	..
	6	2	..	3	..	31	866	881
	[6]	..	..	..	..	1	[648]	..
	..	..	..	..	..	..	[1,126]	..
	..	..	..	..	..	..	[846]	..
Total ..	474	278	4,523	3,399	23,137	13,273	2,48,276	1,97,865

* The figures in brackets denote the proportionate amounts for 9 months in 1919-20 and are given for purposes of comparison with the figures for the period under report.

56. *By Government agency.*—The decrease under *timber* was mainly in *South Coimbatore* due to the fact that there was no felling in coupe II of Mount Stuart Working Circle. The small increase under *fuel* was in *Kollegal* and it represents the quantity confiscated to Government owing to its non-removal by the coupe contractor. The decrease under *bamboos* was due to a less quantity used for departmental works. The increase under other *minor forest produce* was in *Kollegal* owing to the departmental collection of honey and wax and in *South Coimbatore* due to better prices obtained for elephant tusks.

57. *By purchasers.*—The decrease under *timber* was in *South Coimbatore* due to there having been no sale of the right of felling and removal by contractors as was in the previous year. The small decrease under *fuel* also was in *South Coimbatore* due to the non-sale of two fuel coupes during the period under report. The decrease under *bamboos* was in *North Coimbatore* (but the reason for this has not been explained by the District Forest Officer). The increase under *minor forest produce* and grazing is mainly in *South Coimbatore* due to the revenue from tanning stuffs having been credited to forest remittances instead of to Military Accounts during the previous year.

58. The figures under *right and privilege holders* and *free grantees* are fluctuating and call for no remarks.

CHAPTER III.—FINANCIAL RESULTS.

59. The subjoined statement compares the revenue and expenditure of the period under report with those of the corresponding period of the previous year. The average of the preceding quinquennium is also shown therein.

	1920-21 (for 9 months ending 31st March 1921).	1919-20 (for 9 months ending 31st March 1920).	Average of preceding 5 years.
Revenue	Rs. 10,19,340	Rs. 9,77,129	Rs. 7,51,032
Expenditure			
Refunds	6,178	6,364	3,030
A. Conservancy and Works	2,02,234	2,26,433	2,11,083
B. Establishment	3,17,920	2,45,134	2,61,779
Total expenditure	5,26,332	4,80,931	4,95,892
Surplus	4,93,108	4,96,198	2,55,140

Notes.—For purposes of comparison the actuals for the 9 months of the previous year (1919-20) have been shown in this statement.

Fifth
Circle

60. Of the total receipts of the period, 63 per cent were from major produce.

10 " minor produce.
11 " grazing.
11 " miscellaneous items.

Of the expenditure on A. Conservancy and Works, 23 per cent was spent on exploitation, 28 per cent on upkeep and improvement, and 49 per cent on miscellaneous items.

61. There was an increase in the gross revenue over that of the corresponding period of the previous year and over the average of the preceding five years.

The increase under revenue was mainly under the sub-heads of I (a) *Timber*, I (d) *Sandalwood* and V(b) *Other sources*, due to a larger sale of timber in *South Coimbatore*, to better prices realized for sandalwood in *North Coimbatore*, and to the arrear collection of estate rents and to the sale of five elephants in *South Coimbatore*, respectively. All the districts showed surplus in the year's transactions.

62. The outstandings of revenue at the end of the period was 2,47,051-9-5, of which Rs. 64,369-0-3 fell due in the period under report. The estimated value of timber and other produce at the sale depots at the close of the period under report was Rs. 1,03,740 against Rs. 1,55,566 at its commencement.

63. The expenditure under "A. Conservancy and Works" was less than that of the corresponding period in the previous year, due mainly to a less amount spent in sandalwood operations, road and building works and as compensation for lands and rights. There was increase under "B. Establishments" and this was due to the increased cost of pay and allowances of the establishment.

CHAPTER IV.—EXPERIMENTS AND RESEARCH.

64. *South Coimbatore.*—A small area was sown with *Terminalia tomentosa*, *Lagerstromia lanceolata*, *Xylocarpus* and *Pterocarpus marsupium*, the seeds germinated well but the crop was destroyed by the trampling of bison. This experiment would have given us useful information but it will be repeated in the regular regeneration areas in the future.

The first batch of selected 'Terminalia tomentosa' logs will be despatched to Messrs. W. W. Howard Bros. & Co., as a trial in July 1921. We have no seasoning plant at Mount Stuart and although only first class logs are being sent they are not seasoned, so the effort is somewhat of a venture, the result of which will be anxiously looked forward to. If it succeeds we can send regular supplies, but if Messrs. W. W. Howards Bros. & Co. say that it must be seasoned first, then we shall have to consider the question of a local seasoning plant and saw mill. With the increase of labour which we hope to be able to procure when the coolie lines are erected we shall be able to greatly increase our output of timber and also to take up the working of Karian shola—4,500 acres—which will be easily exploitable. This increase of output may then justify the erection of a saw mill, for besides these areas we have others, both deciduous and evergreen, which, although they are more difficult of exploitation, yield fine timber.

In the meantime Messrs. W. W. Howard Bros. & Co. are being asked if they can dispose of *Terminalia paniculata* which is akin to *Terminalia tomentosa*, *Adina cordifolia*, a timber specially mentioned recently in Mr. Troup's lecture before the Society of Arts, *Albizia lebbek* and its kindred species *Albizia odoratissima*. The Kolar authorities will be asked whether they will take *Anogeissus latifolia* and other such species of which we can make a regular supply from these forests.

Tinnevely district.—Inquiries will be made as to which of the shola species will be useful for railway sleepers so that the information may be available as soon as possible with reference to the schemes for working these forests. We shall, when the working is developed, have large supplies of timber to deal with and it is hoped that, with the help of a saw mill and plant for treating sleepers, we shall be able to do something useful to assist the sleeper problem.

North Coimbatore.—The experiments here took the form of trials with early burning to assist fire protection. The results are said to be satisfactory but more will be said about them next year.

CHAPTER V.—ADMINISTRATION.

Fifth
Circle.

65. The four circles of the Presidency were rearranged and formed into six circles with effect from 1st February 1921. A list of officers in charge of the circle and of the several divisions is appended to this chapter.

1. HEALTH OF THE ESTABLISHMENT AND SANITATION.

66. The health of the establishment in *Tinnevely* is reported to have been fairly good throughout the year and there were no casualties.

In Kollegal.—The health of establishment was far from satisfactory. Almost every forester and several forest guards and three rangers went on leave through ill-health; so also two range clerks and a District Forest office clerk. There were five deaths among forest guards.

North Coimbatore.—It was not so bad as it was in 1919-20 except for the death of two foresters—one died of heart failure and the other of enlarged spleen. Only two foresters and two peons had to go on sick leave.

South Coimbatore.—Mount Stuart and Attakatti have as usual been very malarial during the hot weather; measures taken to combat this disease have only been fairly successful. One range clerk and two watchers died of malaria. Many subordinates had to be granted leave on account of malarial fever.

Madura.—Health conditions are reported to have not been satisfactory. Plague was severe in two of the ranges and in the town for some time. Most of the subordinates in Cumbum range were laid up with malarial fever and the casualties were two forest guards and two watchers.

2. TOURS.

67. His Excellency the Governor visited the forests of *South Coimbatore Division* during the year under report.

The Chief Conservator visited the *Kodaikanal range* of the *Madura district* during August last and inspected the forest.

The Conservator of forests inspected the Mount Stuart forests of *South Coimbatore district* and also the forests in Cumbum and Kodaikanal ranges of *Madura district*.

The total number of days spent in camp was 214.

District Forest Officers.—All District Forest Officers spent more than the prescribed period on tour except *Tinnevely* District Forest Officer who spent 132 days during the period under report.

3. INSPECTIONS.

68. *Conservator of Forests*.—During the period under report only the *Madura District Forest office* was inspected.

District Forest officers' inspections of range offices.—Two out of the four ranges in *North Coimbatore*; three out of four in *South Coimbatore*, one out of six in *Madura* were inspected by the respective District Forest Officers during the period under report, the results being reported to be fairly satisfactory. None were inspected in *Kollegal* and *Tinnevely* districts.

4. AUDIT OF DISTRICT FOREST OFFICE ACCOUNTS.

69. The accounts of *Madura* and *Tinnevely* District Forest offices were audited by the Assistant Inspector of Local Fund Accounts and the results are reported to be satisfactory. The accounts of other districts were not audited during the period under report.

5. VERNACULAR TRAINING SCHOOL.

70. A school conducted in Tamil was opened from 1st February 1921 in *North Coimbatore Division* with 28 students (eight foresters and 20 forest guards) from *Kollegal*, *North Coimbatore*, *Central* and *South Coimbatore divisions*. M.R.Ry. R. Guruswami Ayyar, ranger, first grade, was appointed as senior instructor and M.R.Ry. K. Kunhiraman Menon as Junior Instructor and the school is in progress.

Fifth
Circle.

LIST OF OFFICERS IN CHARGE OF THE CIRCLE OFFICE AND THE DIVISIONAL OFFICERS.

CIRCLE CHARGE.	
Mr. C. E. C. Fischer	From 1st July to 19th December 1920.
Mr. H. F. A. Wood	From 29th December 1920 to 31st March 1921.
DISTRICT CHARGE.	
Kollegal	Mr. W. H. Woodhouse Adolphus, Extra Assistant Conservator throughout the period.
North Coimbatore	Mr. C. Due. Pre. Thornton, Deputy Conservator of Forests, throughout the period.
South Coimbatore	Mr. J. S. Scot, Deputy Conservator of Forests, from 1st July to 26th October 1920. Captain W. G. Dyson, M.C. Deputy Conservator of Forests, from 27th October to 31st March 1921.
Madura	Mr. S. V. Devadason, Extra Assistant Conservator of Forests, from 1st July up to 22nd October 1920. Mr. K. A. Chengappah, Extra Assistant Conservator of Forests, from 23rd October 1920 to 31st March 1921.
Tinnevely	Mr. W. C. Hart, Extra Assistant Conservator of Forests, from 1st July to 31st October 1920. Mr. D. T. Barry, Deputy Conservator of Forests from 1st November 1920 to 31st March 1921.

CHAPTER VI.—GENERAL.

1. FORMATION AND MANAGEMENT OF PANCHAYATS.

71. No new panchayats were formed during the year. In *Kollegal* no area has been handed over for panchayat management and it is reported that the villagers are not at present ready for the formation of the forest village and panchayats.

North Coimbatore.—The management of the Andiyur village panchayat (2,520 acres of unreserved land) is reported to be still unsatisfactory. The Collector has already recommended its dissolution and deferred final orders pending orders on Mr. Bles' report.

South Coimbatore.—The panchayats in Dharapuram taluk were inspected by the District Forest Officer and the result was very satisfactory. And fresh agreements have been executed by the panchayatdars for three years from 1920-21.

Madura.—Of the six reserves in class V, four of 9,655 acres continued to be under panchayat management and the question of handing over the other two reserves is under correspondence with the Revenue authorities. There is also proposal for handing over Kodimangalam block B and a portion of Vikramangalam reserve for panchayat management and this awaits Chief Conservator's sanction.

The panchayat management is reported to have been fairly satisfactory.

In *Tinnevely*, the four panchayats continued to work during the period under report.

2. MEASURES FOR IMPROVING LOCAL SUPPLIES AND FACILITIES.

72. *Manure leaf supply*.—The limited demand in *Kollegal* was as usual met from private forests and unreserves. No action to encourage the growth of manure-yielding trees and shrubs was found necessary. In *Madura* steps are taken by the Revenue officials to encourage the growth of leaf manure by the ryots themselves on the patta lands and so nothing was done by the Forest Department. In *Tinnevely* permits for the removal of manure leaves were continued to be issued from the reserves of Nanguneri range.

Fifth
Circle

73. *Supply of fuel and Agricultural Implements, etc.*—In *Kollegal* and *Madura* the supply of fuel was attended to by the coupe contractors in accordance with the terms of their agreements so also the supply of agricultural implements in *Kollegal*. In *Tinnevely* the issue of permits for babul trees of agricultural implements was continued as usual. In *South Coimbatore*, spokes and felices were made out of top ends of trees felled in timber coupes and sold. Drag poles also were collected and sold.

The important question of increasing the fuel supply for *Madura* town is receiving special attention. It is hoped that the question may be solved by inducing private people to undertake the growing of casuarinas but the department may have to undertake small operations to show the way and prove to be a profitable undertaking. It is hoped that a special officer will be appointed shortly to make enquiries as to suitable land available for the purpose in the *Ramanad* district and that progress will have been made in the matter in time to be reported on next year.

In *Tinnevely* where the fuel question is at present also difficult private enterprise has resulted in a start being made with casuarina growing and progress in this direction will be watched and helped as far as possible. The scheme for the future working of the shola forests should place a considerable quantity of fuel on the market but a good deal has to be done before it can be made available.

In *South Coimbatore* the increasing demand is being met in *Pollachi* range a new felling series has been added to the four existing ones and another will be added next year. If more are found then to be required they can be arranged for as there is forest available.

74. *Water-supply in grazing grounds.*—In *Kollegal* there is not much difficulty for water for cattle except in a few reserves where the question of improving the existing wells or tanks is under investigation. Nothing was done in *North* and *South Coimbatore* and *Madura*. In *Tinnevely* no expenditure was incurred on this account as no hardship was felt in the matter.

3. TIMBER TRANSIT RULES.

75. There was no change during the period under report. The rules are reported to have worked satisfactorily in all the districts.

Sandalwood transit rules for *Kollegal* and *North Coimbatore* districts are also reported to have worked well.

4. JUNGLE TREES.

76. *Kollegal*.—The seven sholaga Settlements continued to supply labour for the department. The areas under the occupation of sholagas is reported to be 711 ~~acres~~ but the actual extent under occupation was not determined by a resurvey of these settlements.

North Coimbatore.—The two schools opened for the benefit of the sholagas were continued at a cost of Rs. 980-5-1. Opportunities were taken to employ hillmen in the department, one has been confirmed as a Forester in the last grade. Many are employed as forest guards, beat and longbow watchers and as fire patrols.

South Coimbatore.—All the mulcers and Kadirs in the *Mount Stuart* forests are employed on forest works and they are supplied with rice at cheaper rates.

In *Madura* some Paliyans are being encouraged to settle in the *Vannathiparai* teak plantation so as to secure more labour, by a free lease of land for cultivation purposes.

5. MINING AND QUARRYING—Nil.

6. LIVE-STOCK.

77. *Elephants.*—*South Coimbatore* is the only district where there are live stock. The number of elephants at the commencement of the year was 22 twelve were captured during the period and one was born. Out of these 35, five were sold for Rs. 14,875 and eight died, thus leaving a balance of 22 valued at Rs. 75,500, at the close of the period. The cause of death in most cases was general debility resulting from attacks of internal parasites. The elephant camp has been in use for many years and has since been moved to a new healthy site. There are a number of urgent

demands for elephant capturing operations have been put forward such as for *Mettur*, *Fifth Circle*, *palayam* in *North Coimbatore* district, *Vannathiparai* in *Madura* and at *Gundal* in *Kollegal*. A considerable number could be caught at these centres but lack of *Kumakis* has prevented operations being started.

7. OTHER ANIMALS.

78. There were 67 other animals at the commencement of the period. One she-buffalo was purchased for Rs. 102 to feed a young elephant with milk. This buffalo was subsequently sold for Rs. 105. There were no other purchases. Three died, thus leaving a balance of 64 valued at Rs. 4,440 at the end of the period.

79. *Semi-wild cattle capturing operations* in *Tinnevely*.—An attempt was made to capture the semi-wild cattle in *Vallanad* reserved forest by driving them into two stockades constructed at a cost of Rs. 503. Thirty-six cattle were captured and sold for Rs. 651. The cost on coolies engaged in driving them was Rs. 258.

8. VETERINARY ESTABLISHMENT.

80. The Assistant Veterinary Inspector at *Mount Stuart* is in charge of the live-stock. One jamadar was entertained under proper sanction during the period under report to assist the Veterinary Assistant as part of the live-stock goes to *Punachi* range during the hot weather.

The Inspector of Live-stock is reported to have inspected the animals on several occasions.

9. CIVIL SUITS.

81. *North Coimbatore*.—A suit was filed in the *Erode* District Munsif's Court against *Ellappa Chetti* of *Bhavani* for the evacuation of the minor produce godown at *Bhavani* and decree was obtained in favour of the department.

Madura.—A coupe contractor has filed a suit claiming damages for some discrepancy of the area of the coupe sold to him and delay in marking standards. The suit was allowed and the result awaited.

10. CONTROL OF UNRESERVED LAND BY THE FOREST DEPARTMENT.

82. There was no control over unreserved land. The transfer of working-plan tank beds in *Tinnevely* to the Revenue department was completed during the period under report.

H. F. A. WOOD,
Conservator of Forests, Fifth Circle.

30th July 1921.

ANNUAL ADMINISTRATION REPORT OF THE FOREST DEPARTMENT

FOR THE

YEAR ENDING 31st MARCH 1921.

SIXTH CIRCLE

INTRODUCTION.

1. When, in February 1921, the Presidency was divided into six forest circles; the VI Circle was stated to comprise the two divisions in *South Kanara*, the two in *Malabar* and the *Nilgiri* division. It had, however, been intended that it should also comprise that part of the *Central Coimbatore* division which lay in *Malabar* district, the Sholakarai reserved forest of the Attapadi range, and the whole of the Bolampatti and Erode ranges or the whole of the division with the exception of the Mettupalaiyam range. Proposals were submitted for putting the latter range under the administration of the *North Coimbatore* division, and, pending receipt of sanction to these, it was arranged that the Conservator of the V Circle should administer it, the Conservator of the VI Circle undertaking the administration of the rest of the *Central Coimbatore* division. As, at the end of the year, sanction had not been received, it was decided that, in order to avoid confusion, this report should deal with the whole of the *Central Coimbatore* division and not only with the area under my administration.

Sixth Circle.

2. Under the proposals referred to, the *Central Coimbatore* and the two *Malabar* divisions are to be called the *Palghat*, *Nilambur*, and *Wynaad* divisions, but as they had not been sanctioned at the end of the year, the old nomenclature has been adopted in this report.

CHAPTER I.—CONSTITUTION OF STATE FORESTS.

1. ALTERATION IN AREA.

3. *Reserved forests*.—A few acres were added during the year. The disforestation of 3,000 acres in the *Nilgiris* and minor area rectifications reduced the total area from 2,034 to 2,029 square miles.

4. *Reserved lands*.—486 acres were notified as reserved lands. The area at the close of the year was 162 square miles.

2. FOREST SETTLEMENT.

5. Small extensions to the existing forests in *North Mangalore*, *The Nilgiris* and *Central Coimbatore* were finally settled, while 76 square miles remained under settlement.

3. DEMARCATION.

6. No new method of demarcation was introduced. Twenty-eight miles were demarcated: of these, thirteen miles in *North Malabar* and 4 in *South Malabar*, which were originally treated as demarcated and the demarcation of which was found defective, were re-cleared and permanently demarcated. Eleven miles of new boundaries were demarcated in *Central Coimbatore*; nineteen miles were specially repaired in *North Mangalore* and *The Nilgiris*. The usual re-clearing of boundaries, free of cost, by subordinates was carried out. The total length of boundaries demarcated at the close of the year was 5,878 miles; 84 miles remain to be demarcated.

4. FOREST SURVEYS.

7. None were made by the Survey of India Department. The departmental surveyors and draftsmen surveyed the year's coupes, areas for reservation in *South Mangalore* and the rights of way and water in Mudumalai forest in *The Nilgiris*. The reference maps were maintained.

CHAPTER II.—MANAGEMENT OF STATE FORESTS.

1. REGULATION OF MANAGEMENT.

South
Circle.

8. *Preparation and control of working plans.*—No new working plans were sanctioned during the year, but the new working plan for the Nilambur teak plantations and adjoining forests was almost completed and is now in the press.

The prescriptions of existing working plans were, with small exceptions, worked up to.

Most of the working plans in the Circle are out of date, and there are large areas especially in *South Kanara* for which entirely new plans are required, but, with the present depleted staff, no progress is possible.

2. COMMUNICATIONS AND BUILDINGS.

9. *Roads and bridges.*—Rupees 54,370 were spent on new works and Rs. 14,348 on repairs. The only important new works were those connected with the Chenai Nair forest and comprised the straightening and reconstruction of the road from Olavakode railway station to the Dhoni depot at the edge of the forest (5 miles), and the construction of a road from the Dhoni depot to the forest station on the Sappal ridge. Rupees 36,684 were spent on the former and Rs. 9,803 on the latter; neither was quite completed at the end of the year. A few new cart-tracks were constructed in *North* and *South Mangalore*.

10. *Buildings.*—Rupees 22,510 were spent on new works and Rs. 4,040 on repairs. The most important works were the new circuit house at Nilambur on which Rs. 6,871 were spent during the year and which has now been completed at a cost of Rs. 13,847 and a rest-house and out-houses at Talagam in *Central Coimbatore* division. Progress was made on the construction of subordinates' lines in *North* and *South Mangalore* and *North Malabar*.

11. *Miscellaneous.*—The only important work was the construction of a pipe line for the supply of water to the forest station at Sappal in the Chenai Nair forest. Rupees 1,602 were spent on this during the period under report and the work has since been completed at a total cost of Rs. 10,010. The water is brought in pipes from a perennial stream about a mile away and it will now be possible to house large numbers of coolies in a healthy situation with water running past their doors.

No progress was made on the project for improving the Nilambur river owing to the objections of the riparian owners. I understand that work on the improvement of the Paishwani river in *South Mangalore* was begun by the Public Work Department, but I have received no report as to what was done.

3. PROTECTION OF FORESTS.

(a) General protection.

12. The following statement shows the number and classification of forest offences reported during the period of nine months as compared with three-fourths of those of the previous year and of the average of the three years ending with 1919-20:—

Cases.	Injury to forests by fire.		Unauthorized felling.		Unauthorized grazing.		Other offences.		Total.		Three-fourths of the average for three years ending with 1919-20
	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	1919-20	1920-21	
Cases taken to court.	10	10	211	155	70	91	34	40	325	296	267
Cases compounded.	23	21	158	792	267	325	148	128	1,106	1,266	1,187
Cases undetected.	92	106	2	6	..	..	..	..	94	112	104
Total ..	125	137	371	953	337	416	182	168	1,525	1,674	1,558

NOTE.—The figures for 1919-20 are three-fourths of the number reported during that year.

The undetected cases were mostly those in which incendiarism is assumed. *South Circle.* There was an increase in grazing offences in *South Mangalore* and *The Nilgiris* and in unauthorized fellings in the latter. The increase in *South Mangalore* is attributed to the enhancement of grazing fees as a preliminary to the introduction of the forest village system; the result of the enhancement being that the people refrained from purchasing permits and resorted to illicit grazing.

13. There were no cases of importance. The percentage of cases prosecuted was 19 and the percentage of convictions in prosecuted cases was 85.5. The amount of compounding fees realized was Rs. 10,509.

14. Rewards aggregating Rs. 50 were granted to informers and subordinates in *South Mangalore* and *Central Coimbatore*.

(b) Protection from fire.

15. In accordance with recent orders, the period dealt with under this head is the calendar year 1920. No fire occurred from July to December, and those which occurred in the first half of the year were dealt with in the last annual report from which the following information is extracted for easy reference. There was no change in the system of *special protection* except that in *The Nilgiris* the outer fire lines of the Mudumalai working circle were converted from covered to open lines. The area over which protection was attempted was 881.67 square miles, and the area burnt was about 102.55 square miles; the percentage of success was thus 88.37. The area over which *general protection* was attempted was 780.76 square miles, the area actually protected being 775.55 square miles and the percentage of success 99.33.

16. The results of fire protection for the circle as a whole were bad. Sixty-five thousand, nine hundred and forty acres under special protection were burnt over as against 13,412 in the previous year. Nearly the whole of this increase occurred in *North Malabar* (30,050 acres against 974) and *The Nilgiris* (31,543 against 2,503). Disastrous fires occurred in these two districts, most of which are stated to have crossed outer boundaries. In *The Nilgiri district* it is reported that rains up to the end of January and mists to an even later date prevented the thorough fire tracing of the lines in good time. A sudden dry period ensued and caused the grass to dry rapidly. For want of labour, the fire tracing thereafter progressed slowly, and before it could be completed the fires swept in. Presumably similar condition prevailed in the adjacent tracts of *North Malabar*.

17. In Appendix A, and Form No. 72, the figures given in last year's report have been adopted. They are not strictly accurate as they include expenditure incurred in November and December 1919 on clearing fire lines, but calling on the District Forest Officers for the actual figures would delay the submission of this report and the expenditure is small and probably much the same as that incurred last November and December.

(c) Protection against cattle.

18. There was an increase in the areas closed to grazing from 403 to 414 square miles. The increase was due to the closure of areas under regeneration in *North* and *South Mangalore* and of coupes in *Central Coimbatore*. 34.3 per cent of the total area was open to all animals except goats, and 46.2 per cent was closed to sheep.

The incidence of grazing has not been mentioned by District Forest Officers.

19. The number of cattle impounded during the nine months was 2,721 against 2,769, three-fourths of the figures of 1919-20. Compared with three-fourths of the average for the three years ending 1919-20, the number of cattle impounded increased by 158.

(d) Protection against injuries from natural causes.

20. There is nothing to report. Such operations as uprooting of *lantana* and removal of *Ioranthus* previously dealt with here have been reported on under the heading "operations for the improvement of the growing stock" as they seem to fall more naturally under that heading.

I. SYLVICULTURE.

(a) Natural reproduction.

21. None of the District Forest Officers have reported on the seeding of the various deciduous species. The season was a bad one as regards the seeding of most of the evergreens, though *Artocarpus hirsuta* is reported to have seeded well in North Malabar.

The first systematic fellings to be undertaken in evergreen forests in this part of India were carried out in the Chenat Nair forest. Natural reproduction here is prolific and it is hoped that when the correct method of removing the old crop has been discovered, a new crop produced naturally will take its place. The first fellings were too severe, the trees were felled green and great damage was done to the seedling growth by the fall of the dense crowns; further, the trees were badly felled, in any direction which suited the fellers, with the result that when the logs were dragged more damage was done. It remains to be seen whether the seedlings were destroyed or merely cut back; in the latter case they will shoot up again. The method of felling now tentatively adopted is to girdle everything except the trees which it is desired to retain for the provision of shade to the seedlings in the hot weather; it is hoped that the latter will establish themselves in one or at most two years when the whole crop will be removed. Felling the girdled trees should not do much damage especially if care is taken to fell them all in the same direction in order to minimise damage during dragging. As a result of the girdling, the young seedlings are already putting on good growth.

(b) Artificial reproduction.

22. *Regular plantations*.—Two hundred and seventeen acres in South Malabar were planted during the year with teak, 10 acres with *Terminalia tomentosa*, *Dalbergia latifolia* and *Lagerstræmia lanceolata* and about 2 acres with *Dalbergia latifolia*. One hundred and sixty-three acres were clear felled and prepared for planting during 1921-22.

23. *Taungyas*.—Fifty-seven acres in Karadka reserved forest in South Malabar were sown at the end of the previous year and at the beginning of the period under report with *Bombax malabaricum*, *Acrocarpus fraxinifolia*, *Hopea* and *Mangifera indica*. *Hopea* and *Acrocarpus* failed but mango was successful to the extent of 60 per cent; the result of the sowing of *Bombax malabaricum* has not been reported. In The Nilgiris, seeds of Aini (*Artocarpus hirsuta*) were dibbled over an area of $3\frac{1}{4}$ acres in the old 'tuckle' at Benne.

24. *Cultural operations*.—In North and South Malabar, sowings of *Hopea parviflora*, *Mangifera indica*, *Artocarpus hirsuta*, and *Vateria indica* commenced just before the beginning of the year were continued and the following areas had—at the end of the year—been sown in the South division. *Hopea* 320 acres, *Mangifera* 197 acres, *Vateria* 246 acres and *Artocarpus* 188 acres. In the North division, 348 acres were sown with *Hopea*, *Artocarpus* and *Vateria*, the total area sown in the two divisions thus being 1,299 acres.

Failures of *Hopea* were replaced by transplanting seedlings found in the forest, and as far as this species is concerned, the operations have been very successful, the average percentage of seedlings which have withstood the past hot weather ranging from 60 to 80; some of the seedlings are said to be 9 inches high. The other species were not so successful, porcupines being responsible for a good deal of damage to *Artocarpus* and *Mangifera* seeds, and many of the *Vateria* seedlings having died in the hot weather. The percentages of success are reported to be *Mangifera* from 10 to 48, *Artocarpus* from 30 to 70, and *Vateria* from 25 to 50.

The sowing of *Hopea* and other species in Chenat Nair forest referred to in last year's report was an almost total failure, due chiefly to too much exposure by weeding late in the season, and also to the depredations of rats and porcupines.

(c) Operations for the improvement of the growing stock.

25. The chief operations were the usual thinnings in the Nilambur teak plantations, where the work is somewhat in arrears owing to the paucity of officers, thinnings

in a few teak plantations in North Malabar where the work is also in arrears, improvement fellings in North and South Malabar, clearing *Loranthus* off the teak trees in South Malabar and eradicating lantana over small areas in North Malabar.

Climbers were cut over an area of 222 acres in Central Coimbatore.

5. EXPLOITATION.

(a) System of Management.

(i) MAJOR FOREST PRODUCE

26. The chief items of interest were the commencement of the systematic exploitation of evergreen forest in the Chenat Nair reserved forest and the visit to the circle of Mr. C.S. Martin, the Consulting Forest Engineer to the Government of India. The road from Olavakode to Dhoni depot at the foot of the Chenat Nair forest was completed and slides and dragpaths constructed; the expenditure on the two last named during the year was Rs. 7,601. About 900 tons of timber were felled, and about 700 tons extracted to the depot at Olavakode. No machinery has yet been employed, the logs being dragged by manual labour aided by block and tackle from the stump site to the nearest dragpath along which they are dragged by buffaloes to the slides down which they run to the Dhoni depot, and are thence carted to Olavakode. An agreement was entered into in March with Messrs. John Taylor & Sons' Committee, Oorgaum, that the whole outturn of the forest up to the end of September 1921 should be purchased by the Kolar Gold Mines. This was done with a view to getting unknown evergreen species thoroughly tested and obtaining a market for them. Mr. Martin visited Chenat Nair and made a tour through the Attapadi and Silent valleys. He has since submitted a report showing that, with properly organized logging methods and machinery, the working of these forests is likely to prove a very profitable undertaking.

27. The different sylvicultural systems in force were—

Clear fellings.—Eighty-three acres of teak plantation, 72 years of age, and 80 acres of natural forests were clear felled for the formation of teak plantations in South Malabar, the former yielding just over 2,000 tons of teak timber and the latter 1,500 tons of timber of various species. In North Malabar, 30 acres were clear felled for the formation of a plantation of teak, *Dalbergia* and *Pterocarpus Marsupium*.

Uniform method.—The operations in the Chenat Nair forest referred to above come under this head; preparatory and seeding fellings are unnecessary owing to the fact that the young crop is already on the ground.

Selection method.—Two hundred and sixty seven acres in North and South Malabar and certain unspecified areas in North Malabar were felled under this method.

Improvement fellings.—Fellings of this nature were made in North and South Malabar, The Nilgiris and Central Coimbatore over an aggregate area of 834 acres. The fellings in the first two divisions were done chiefly in the interests of young *Hopea*.

Simple coppice and coppice with standards.—About 2,382 acres were worked under the former method and about 614 acres under the latter.

Unregulated fellings.—These were confined to unreserved lands. About 415 qrs. of sandalwood were felled from unreserved lands in South Malabar and The Nilgiris.

(ii) MINOR FOREST PRODUCE.

23. *Bamboos and miscellaneous produce*.—The chief method of exploiting these was farming the right of collection. In South Malabar, bamboos were extracted for floating timber, and in the Mudunalai range of The Nilgiris, miscellaneous produce was collected departmentally. Permits in other localities were issued for the removal of bamboos, grass, reeds and stone for local consumption. The right of collecting the seeds of nux vomica in South Malabar was leased out. In other divisions, this produce has been leased out since the end of the year.

Fodder grass and hay.—Fodder grass in the forests of Bolampatti and Erode ranges in Central Coimbatore was leased out. No hay was made.

Grazing.—Was, as usual, regulated by the issue of permits. The revenue realized during the period under review was Rs. 36,211.

(b) Agency of exploitation.

(1) DEPARTMENTAL AGENCY

State
Circle

23. The quantity of *major produce* exploited was 20 per cent of the total outturn, the chief works being the selective fellings in *North and South Malabar*, the fellings in the *Nilgiris* teak plantations and natural forests, the improvement fellings in Madumalai forests and fuel fellings in the exotic plantations in *The Nilgiris*, the extraction of timber from the Chenat Nair forest in *Central Coimbatore* and the extraction of sandalwood in *South Malabar* and *The Nilgiris*.

The chief item of *minor produce* removed departmentally is elephant tusks.

(ii) By purchasers.

30. *Major produce*.—The extraction of timber from the Chedleth coupes in *North Malabar* and most of the coppice fellings were carried out by contractors.

(iii) and (iv) By right holders and under privileges and free granters.

31. The quantity and value of forest produce removed under this head are given below :—

	Timber in thousands of cubic feet.	Value.	Fuel in thousands of cubic feet.	Value.	Bamboo.	Grazing and fodder.	Other minor produce.	Total value.
Right holders	16	RS. 6,310	..	..	RS. 52	RS. 710	RS. 734	RS. 6,310
Free granters	2	265	..	..	..	..	..	1,781

(c) Outturn and sources of forest produce.

32. The total outturn of *major produce* and the value of *minor produce* extracted from all classes of forests by all agencies during the period under review were as shown below :—

	Timber in thousands of cubic feet.	Fuel in thousands of cubic feet.	Bamboo.	Gross value of minor produce including grass and grazing.
1920-21	1,231	2,828	RS. 20,304	RS. 75,300

No useful comparison can be made between the outturn of the period under report and that of the previous year as the former is only nine months and the labour entailed in extracting the figures of the corresponding period of 1919-20 would be very great.

The total number of cattle for which grazing was provided in the various classes of forests was 115,229.

CHAPTER III.—FINANCIAL RESULTS.

33. The revenue and expenditure for the nine months from 1st July 1920 are compared below with the figures for the same months of 1919-20.

	1920-21.	1919-20.
Revenue	RS. 8,36,671	RS. 10,77,956
Expenditure—		
Refunds	1,992	2,273
A. Conservancy and Works	5,28,099	4,19,792
B. Establishments	2,85,869	1,87,074
Total	8,15,960	6,09,139
Surplus	20,711	4,68,817

Seventy-seven per cent of the revenue was derived from *major produce*, 6 per cent from *minor produce*, 5 per cent from grazing and 12 per cent from miscellaneous sources.

Of the expenditure, 53 per cent was incurred on exploitation, 26 per cent on the upkeep and improvement of the forests, and 16 per cent on miscellaneous items.

The revenue outstanding at the close of the period under report was Rs. 3,72,559.

34. The decrease in revenue is chiefly due to the fall in the price of timber which seriously affected the revenue in *South Malabar*. The rise in expenditure under A is chiefly due to the expenditure on exploiting the Chenat Nair forest in *Central Coimbatore*, while increases in rates of salary account for the rise of expenditure under 'B. Establishments'.

CHAPTER IV.—RESEARCH AND EXPERIMENTS.

35. 1920 was a bad year for the seed of most of the evergreen species and in consequence, the Research officer was not able to do much work in connexion with the growth of young evergreen seedlings.

Certain sample plots for the study of increment were taken over from the Dehra Dun office in the divisions of *South Malabar*, *Tinnevely* and *South Cuddapah*, while one was taken over from the District Forest officer of *South Malabar*. Other sample plots for the study of the increment of *Hopea parviflora* were opened in the latter division.

Experimental work was conducted at Dhoni, Nilambur, Nedungayam, and various places in the neighbourhood of Parappa in *South Malabar*. At Dhoni, the work consisted of nursery experiments on the germination of seed and growth of seedlings, and of sowing various species in the forest; this latter work was not carried out on the right lines and for the most part resulted in failure. At Nilambur and Nedungayam, experiments were undertaken to ascertain whether *Hopea parviflora* and *Artocarpus hirsuta* could be raised as an underwood in the teak plantations; chiefly owing to bad seed they were a failure.

The Research Officer's report is silent on the subject of experiments in raising boxmaking species which were to have been conducted in the natural forests near Nedungayam.

In *South Malabar*, the experiments were on *Hopea parviflora* and consisted of various degrees of removing deciduous cover over young *hopea*, attempts to ascertain the best method of inducing natural reproduction, where this is absent, attempts to ascertain the best method of artificial reproduction, transplanting seedlings of various ages, and experiments on the coppicing power of the species. At this early stage, there are naturally no results to record.

CHAPTER V.—ADMINISTRATION.

36. *Tours*.—The Conservator of the Western Circle visited all the divisions. All District Forest Officers spent more than the prescribed number of days on tour except the District Forest Officer of *South Malabar* who for a considerable period was in additional charge of *The Nilgiris*.

37. *Inspections*.—The District Forest Offices of *South Malabar*, *The Nilgiris* and *Central Coimbatore* were not inspected owing to the change in the "forest" year which was effected too late to allow of arrangements being made for their inspection. The same reason accounts for the failure to inspect eight range offices.

38. *List of offices audited*.—The accounts of the offices of *North Malabar*, and *North and South Malabar* were audited; the results were satisfactory.

39. *Vernacular Training School*.—There was no school in this Circle, the school belonging to the old Western Circle being located in North Coimbatore.

40. *Health of the establishment*.—This was much as usual, two men dying of malaria in the Attapadi range. Towards the end of the year, a sanitary party visited Dhoni in *Central Coimbatore* with a view to improving the sanitation of the locality by conducting anti-malarial measures. This place is notorious for malaria, and in order to safeguard the establishment in future, quarters are in course of construction

South
Circle.

on the top of the adjoining Sappu ridge which, it is thought, will be free from *anophytes*. An extensive clearing of undergrowth was made round the range quarters at Kargudi in *The Nilgiris* to improve health conditions. A similar clearing was ordered at Nedungayam in *South Malabar*, but owing to the ranger's stupidity was carried out only on one side of the road, the dense jungle on the other side although only a few yards from his house being allowed to remain.

CHAPTER VII. GENERAL.

(i) FORMATION AND MANAGEMENT OF PANCHAYATS (TO INCLUDE FOREST VILLAGE SYSTEM).

41. In *North Mangalore*, a panchayat working a reserved forest of 89 acres was dissolved owing to bad work. Two others working unreserved lands have not been reported on by the Revenue Divisional Officer. Proposals in this division as well as in *South Mangalore* for the formation of further panchayats are pending my local inspection. In *Central Coimbatore*, the areas under panchayat management were the same as in the previous year. In the Erode range, the management except in two cases is reported to have been bad and in the Attapadi and Bolampatti ranges not very satisfactory.

There are no panchayats in the remaining divisions.

42. The Forest Village System was in force only in the Mettupalaiyam range of *Central Coimbatore* where it is reported to have worked fairly satisfactorily.

43. In *North and South Mangalore*, notices were published stating that adjoining villagers would be held responsible for protection of the forests, but they do not appear to have had any effect on the fires. No punitive action was taken. In *Central Coimbatore*, similar notices were issued, and there was no need to take punitive action. In *North Malabar*, no notices were necessary while the District Forest Officers of *South Malabar* and *The Nilgiris* have not referred to the subject.

(ii) MEASURES FOR IMPROVING LOCAL SUPPLIES AND FACILITIES.

44. No such measures appear to be called for in *The Nilgiris* or *North and South Malabar*. In *North and South Mangalore*, proposals for allotting areas to be managed by panchayats for the supply of leaf manure are under consideration. In the latter division, a contract has been entered into for the purchase of fuel in the forest coupes and its sale at fixed rates at Mangalore in order to reduce the retail price of fuel in that town recently very high. In *Central Coimbatore*, the existence of numerous fuel coupes provides sufficient facilities.

No measures for the improvement of water-supply appear to be called for as the rainfall is copious over practically the whole circle.

(iii) TIMBER TRANSIT RULES.

45. These are reported to have worked satisfactorily.

(iv) JUNGLE TRIBES.

46. There is nothing of any importance to report.

(v) MINING AND QUARRYING.

47. Permission was granted to prospect for mica in the Mudumalai forest of *The Nilgiris*. The result has not yet been reported.

(vi) LIVESTOCK.

(a) Elephants.

48. There were 102 elephants in stock at the beginning of the year, eight were captured and one was born in captivity. Two died and ten were sold, the number in stock at the end of the year being 99. The elephants were on the whole kept in good condition. I took some to the Silent Valley in March for the carriage of kit and found that they improved very much in condition from the change and excellent feeding there available; as many as possible therefore will be sent to the locality next hot weather.

(b) Other animals.

49. There were 139 buffaloes and 10 bullocks on hand at the beginning of the year; two buffaloes and three bullocks died or were otherwise disposed of and four bullocks were purchased, leaving 137 buffaloes and 11 bullocks on hand at the end of the year. The buffaloes were chiefly employed in the Chenat Nair forest for dragging timber, and at Nilambur for carting bamboos and dragging saplings.

(vii) VETERINARY ESTABLISHMENT.

50. A Veterinary Assistant was appointed for charge of the live stock in *South Malabar*, the establishment now consisting of the Inspector of Live Stock at Calicut, with an Assistant at Gudalur for charge of *The Nilgiris* and *North Malabar* stud, and another at Nilambur.

(viii) CIVIL SUITS.

51. There were no suits of importance. The two referred to in last year's report in *North and South Malabar* are still pending.

(ix) CONTROL OF UNRESERVED LANDS BY THE FOREST DEPARTMENT.

52. There is nothing to report.

H. TIREMAN,
Conservator of Forests, Sixth Circle.

ADMINISTRATION REPORT OF THE MADRAS FOREST COLLEGE,
COIMBATORE, FOR THE PERIOD FROM 1ST JULY 1920
TO 31ST MARCH 1921.

CHAPTER I.

CONSTITUTION.

Mr. Cowley-Brown, the permanent Principal of the College, proceeded on leave on 12th July 1920, and his place was taken by the writer of this report. His leave has recently been extended on medical certificate.

Senior Instructors.—Mr. C. C. Wilson (the writer of this report) was the First Senior Instructor from 1st to 11th July 1920. Mr. J. H. Longrigg remained as Senior Instructor throughout the year.

Junior Instructors.—Messrs R. B. Cornwell and Abdul Karim, Extra Assistant Conservators, were on the College staff throughout the year. Mr. M. R. Sundaram Ayyar, Extra Assistant Conservator, joined the College on 7th July 1920 and remained as Junior Instructor throughout the balance of the year.

The two posts of Sub-Assistant Surgeon were held by Messrs J. E. D'Cruz and V. Ramakrishna Ayyar. They joined duty at the College on 20th October 1920 just before the beginning of the touring season, and were relieved of their duties on 28th February 1921 when the students returned to headquarters.

These two officers delivered lectures in First Aid and Camp Hygiene in camp. First Aid lectures were delivered in headquarters to the students of the Senior division by the Medical Officer in charge of the Lawley Road Dispensary.

Instructions in Physical training, Gymnastics and Drill were as usual given to the students of both the divisions by the College Havildars. In addition to the ordinary bi-weekly drills during the year under review the students did Physical training every day for 15 minutes before lectures started, with beneficial results.

Board of Visitors.—Mr. S. Cox, O.I.E., I.F.S., the Chief Conservator of Forests, Madras, was ex officio President of the Board of Visitors throughout the year.

The following officers were on the Board :—

Mr. H. A. Latham	...	...	...	From 5th November 1920 to 31st March 1921.
Mr. H. F. A. Wood	...	...	...	From 20th December 1920 to 31st March 1921.
Mr. A. B. Jackson	...	...	...	From 3rd January 1921 to 31st March 1921.
Mr. C. M. Hodgson	...	...	...	From 1st July 1920 to 10th October 1920.
Mr. H. Tireman	...	...	...	From 9th January 1921 to 31st March 1921.
Mr. C. E. C. Fischer	...	...	...	From 1st July 1920 to 19th December 1920 and from 4th February 1921 to 31st March 1921.
Mr. B. F. Rigold	...	...	...	From 1st July 1920 to 16th October 1920.
Mr. A. A. F. Minchin	...	...	...	From 11th October 1920 to 8th January 1921.
Mr. J. S. Scott	...	...	...	From 19th October 1920 to 3rd January 1921 and from 29th January 1921 to 31st March 1921.
Mr. H. C. Bennet	...	...	...	From 1st July 1920 to 7th November 1920.

It is hardly necessary to point out that quite half of these officers had nothing to do with the College during the short periods of their acting appointments.

CHAPTER II.

EXAMINATIONS.

The students of the 1919-21 division were examined in First Aid at the end of March 1921. Major Forrest and his Assistant Dr. Peters conducted the examination. Out of the 23 students who sat for the examination 17 earned the St. John's Ambulance Certificate for proficiency in First Aid.

The 1920-22 division began with 37 students on the rolls as per list attached. This number was reduced to 34 before the close of the year, two having been sent down for incapacity and one having died in the Coimbatore General Hospital of long standing malaria.

The periodical and half-yearly examinations held at intervals during the year showed, on the whole, that both this Junior division and the Senior division were making satisfactory progress.

The final examinations were not held during the portion of the year that is included in this Administration Report; those held in June 1920 have already been reviewed in last year's Administration Report, and those held in June 1921 will be reviewed in the 1921-22 report.

CHAPTER III.

ADMINISTRATION.

Board of Visitors.—During the year under review the Board of Visitors did not meet, as this report covers only the period from 1st July 1920 to 31st March 1921.

Of the many subjects discussed at the last Board of Visitors, meeting held in June 1920, the most important,—and one which has been pending for years,—was that relating to the shortage of water. It is much to be regretted that in spite of the fact that this subject has been in the Agenda papers of the past seven years consecutively, and that the importance, and the necessity for a speedy settlement, of this matter has been emphasised year after year, the College is still without an adequate water-supply.

Cost of education.—The cost of education to the Madras Government has been rising steadily since the opening of the College. At present each student costs Rs. 7,213 for his two years' course. This includes interest on capital cost of the buildings and estate, as well as all annual charges incurred including stipends and travelling allowance paid by the Madras Government to the Probationary Rangers; it does not include stipends paid by Native States and other Provinces as these are not a charge against the Madras Government. In cases in which students from Native States and other Provinces pay tuition fees, these have been deducted from the general expenditure. A graph showing the variation in cost per student since the opening of the College is appended (vide Appendix IV). The black line shows the cost as above; the dotted line shows the cost *excluding* all stipends and all tuition fees; it was prepared in this form at the request of the Inspector-General of Forests, for facility of comparison with other similar figures.

The cost is considerable and every effort is being made to reduce expenditure to the minimum consonant with efficiency. Apart from any such possible reduction it may be pointed out that the tuition fees paid by Native States and other Provinces are very inadequate. They pay Rs. 1,800 for the two years' course and in addition to this pay on an average some Rs. 1,500 in stipends and travelling allowance to each Probationary Ranger, making a total cost to them including the tuition fees of Rs. 3,300 per student; whereas the cost per student to the Madras Government is, as shown above, Rs. 7,213.

Touring.—The camping during the year under review has been in accordance with the sanctioned programme. Apart from this there have been several one day excursions. These were to the fuel forests at Mettupalaiyam, the coppice with standard working circle at Walayar, the timber sales at Pollachi, and the Magistrate's Court in Coimbatore, the object being to give the junior students some idea of the practical working of the silviculture and range administration which they were being taught in the lecture room during their first long headquarter term.

In November the seniors camped at Kottattiyeri and studied sandalwood and in December at Nilambar where they studied the silviculture of teak. The juniors spent those months in Nilambar and Nedungyam studying the teak plantations and timber deposits, and the timber culture forests.

In January and February the seniors camped at Ilom where they studied the evergreen forests and the modern methods of extraction which are now being introduced there; the juniors in the meantime returned to their old camp at Kargudi in the Nilgiri Wyal where they spent a very profitable six weeks learning fire-protection, scientific improvement of hill-cultures, assisting in the capture of elephants, bridging streams, etc.

As usual all operations on tour have been recorded in the College journals, extracts or specimens, relative to works of direct value to the district being communicated to the Forest Department through the Conservators.

The thanks of the Government to the District Forest officers of the districts visited and to their subordinates for the trouble taken to render the touring comfortable and just, and for their cooperation and assistance.

While at Nilambar and Nedungyam the students were examined in swimming. Out of 62 students 48 passed the test.

The Senior Provincial Service class from Dehra Dun under Mr. Bourne visited the College in February and were as usual accommodated in the hostels.

Health.—The College camping is of necessity in feverish places but on the whole the health of the College has been very satisfactory. It is with deep regret that I have to record the death at the Government Hospital, Coimbatore, of one junior division student, by name Venkatarammann, one of the most promising of the junior division students. He died in the middle of March of acute and long-standing malaria. He had not had much fever while at the College, but he had suffered from it severely previously and had been greatly weakened and pulled down by it. He was a very promising young ranger and his death is a loss to the department.

This sad event serves to point a useful lesson by emphasizing the great importance of the medical examination which is insisted upon before accepting students at the College. The life is a hard one and the forests are unhealthy; only a man of sound constitution can expect to make good as a Range officer.

With the exception of the most serious cases all were treated by the College sub-assistant surgeons in camp and by the Medical officer in charge of the Common dispensary in headquarters.

One of the College havildars by name Govindaswami died of paralysis at the Coimbatore Government Hospital in March.

Conduct and discipline.—The discipline at the College has during the past year been satisfactory and the general tone has been good. Two students of the senior division had to be dismissed for grave misdemeanour. They have, however, owing to the clemency of the Chief Conservator been permitted to return at the beginning of next year.

Apart from this the conduct of both years has been good. On the whole the students have shown themselves to be self-respecting, courteous and manly young men.

CHAPTER IV.

THE GASS FOREST MUSEUM, COLLEGE AND STUDENTS' LIBRARIES.

The Gass Forest Museum.—Mr. G. Viswanatha Ayyar, the Curator, was in charge of the Museum throughout the year.

The Herbarium catalogue was brought up to date and has now been printed and copies supplied to all Forest officers in the Presidency.

The question of the extension of the Museum which has been considerably discussed of recent years has to be dropped for the present owing to the prevailing financial stringency.

Many contributions were made during the year which included timber, bark, and botanical specimens; an exhibit of rubber; the skin of a hamadryad; etc., etc., and the College is indebted to the donors.

FOREST DEPARTMENT

The number of visitors to the Museum during the nine months of the year (1st July 1920 to 31st March 1921) was 15,395 as compared with 14,589 for the corresponding period of last year, and 14,046 for a similar period in the previous year.

The Museum is therefore obviously becoming more popular as it becomes more widely known.

We are endeavouring moreover to make it instructive and to supply useful information to all inquirers.

We are continually receiving timber and botanical specimens for identification, and inquiries are frequently made on a variety of different subjects, and we do our best to satisfy all those who apply to us.

General library.—One hundred and eighty-eight books were added to the General Library, of which 84 were presented by the following:—

Mrs. A. W. Lushington.

H. C. Bennett, Esq.

Students' library.—Forty-three books were added to the Students' Library, of which 28 were presented by the following:—

Mr. and Mrs. Cowley-Brown.

H. C. Bennett, Esq.

The thanks of the College are due to the above ladies and gentlemen.

CHAPTER V.

SUPERVISION, WATER-SUPPLY, PLANTING, ROADS, BUILDINGS, ETC.

Supervision.—Mr. Saiyid Fakr-ud-din Sahib, a retired Subadar of the 77th Mappilla Infantry, who was Estate Overseer, resigned the post at the end of October and his place has been filled by the appointment of Mr. A. Marudhaichalam Pillai, the College Storekeeper.

Water-supply.—Of the three projects sanctioned for increasing the College water-supply:—

- (1) construction of rain-water tanks,
- (2) erection of a windmill and pump over the nursery well, and
- (3) connecting the municipal well with the College well.

the first has been completed; but it has so far benefited us little.

Item (2) has been kept in abeyance pending the result of connecting up the College and municipal wells.

This, the third item above, is in process of completion. There seems little doubt that after the work of connecting the municipal well with the College well has been completed, the College will have a very fair supply of water, except for drinking purposes as the water of the municipal well has been condemned as unfit for human consumption. The execution of this most important work has been long delayed by the Public Works department and even now it is very uncertain when it will be completed. It was put in hand in November last and rapid completion was promised. However progress during the past month or six weeks appears to be nil. And this is in spite of the resolution of the Board of Visitors in June 1920 to the effect that the work was of great urgency!

Roads.—No new roads were constructed during the year. All the existing roads were kept in repair.

Buildings.—Improvements to the Provincial officers' quarters were completed by the Public Works Department.

Necessary repairs to buildings under the control of the Principal were executed.

Students' Club.—The Students' Club which was opened last year by His Excellency Lord Willingdon has become a centre of social life, and now that it has been furnished, attracts the students in increasing numbers.

We are endeavouring to make them manage the club themselves, with varying success.

CHAPTER VI.

GENERAL.

Stock-taking.—The stock of the College was checked in detail in July 1920 by the staff of the College and the irregularities brought to notice were set right.

Establishment.—The work of the office establishment was on the whole bad. A recent inspection of the office has brought to light many grave irregularities, and steps are being taken to correct and prevent these in future, and to punish those who are to blame.

This state of things is largely due to the fact that there is only one highly paid clerk on the establishment, namely the Manager. He is, of course, unable to cope with all the work himself, and does not seem to have been able to get the required results from the low-paid assistants he has had. Now that their pay has been slightly raised it is hoped that a better class of man will be attracted with beneficial results. The conduct of the subordinate establishment has been satisfactory.

The work done by Havildars Kadir Bateha and the late Havildar Govindaswami Pillai in camp is worthy of all praise.

Both the Engineering Instructors Messrs. R. B. Cornwell and Abdul Karim and one Havildar were deputed in July to the Sappers and Miners School of Field Engineering in Bangalore to undergo a short refresher course, with good results.

Athletics.—In Athletics the past year has on the whole been a successful one. The Marathon race was won by N. S. Poonacha, a junior student in the very good time of 45 minutes for 7½ miles; the cup for this race presented by the late Risaldar Major Amir Mahomed Khan was won by the junior division.

The College was unfortunate in the annual sports in not improving on any of the College records. One man sprained his knee, another had no one to push him and get the best out of him. The times were however on the whole good and the competition keen.

The Victor Ludorum Challenge Cup presented by Mr. Richmond was won by senior student S. Ramalingam.

The College Hockey team got well together early in the season and succeeded in winning three out of their six matches. We were however unfortunate in losing one of the best of the team before the tournament; he had his leg broken in a Hockey Match in which the play had become most lamentably rough, and the result was that he could not play in the tournament. However the College had a great fight with the winners early on in the tournament and thoroughly enjoyed the game.

In the inter-divisional Hockey match the juniors won the Challenge Cup presented by Mr. Cowley Brown after a good game by five goals to nil.

All the staff have taken part, to the best of their ability, in the College Athletics, regularly throughout the year, and this has no doubt done a lot to encourage the students to make themselves proficient, and to stimulate their keenness.

Mr. Cornwell was the Vice-President of the Athletic Club and under his supervision the Athletics were managed with efficiency.

MADRAS FOREST COLLEGE, COIMBATORE,
30th July 1921.

C. C. WILSON,
Principal.

APPENDIX I.

List of students admitted for 1920-22 course at the Madras Forest College, Coimbatore.

Name of student.	Circle or State to which attached.
1. P. Gopalan	Northern Circle.
2. B. Kotilingam	Do.
3. A. Tirupathi Rayadu	Do.
4. N. Rajagopala Chetti	Central Circle.
5. J. B. Rodrigues	Do.
6. A. R. Venkataramanan	Southern Circle.
7. M. S. Krishnaswami	Do.
8. V. Chokkayya Pillai (since sent down)	Do.
9. P. Sithapathy Ayyar	Western Circle.
10. M. M. Mandanna	Do.
11. A. K. Kunhumni Nayar	Do.
12. M. V. Ganesan	Do.
13. N. S. Poonacha	Coorg.
14. M. B. Ayyanna	Do.
15. H. Wijesinghe	Ceylon.
16. V. Ramalingam	Do.
17. M. B. K. Molagoda	Do.
18. D. A. Aberyaratne	Do.
19. S. C. Ramalingam	Do.
20. M. G. Joshi (since sent down)	Bombay.
21. G. V. Moghe	Do.
22. G. R. Kelkar	Do.
23. S. R. Punde	Do.
24. J. K. Bodas	Do.
25. K. Gopalakrishna Rao	Do.
26. G. A. Wagle	Do.
27. B. R. Ananda	Central Provinces.
28. L. S. Chati	Do.
29. A. Narayana Rao	Do.
30. Zafar Ali (since sent down)	Do.
31. Hans Raj Dutt	Do.
32. M. Hans-ud-din Khan	Hyderabad.
33. M. Abdul Hamid	Do.
34. Balakrishna Das	Keonjhar, Orissa.
35. M. Waris Hussain	Rewa, Central India.
36. S. Hebbar Koni	Private student.
37. K. A. Bandari	Do.

APPENDIX II.

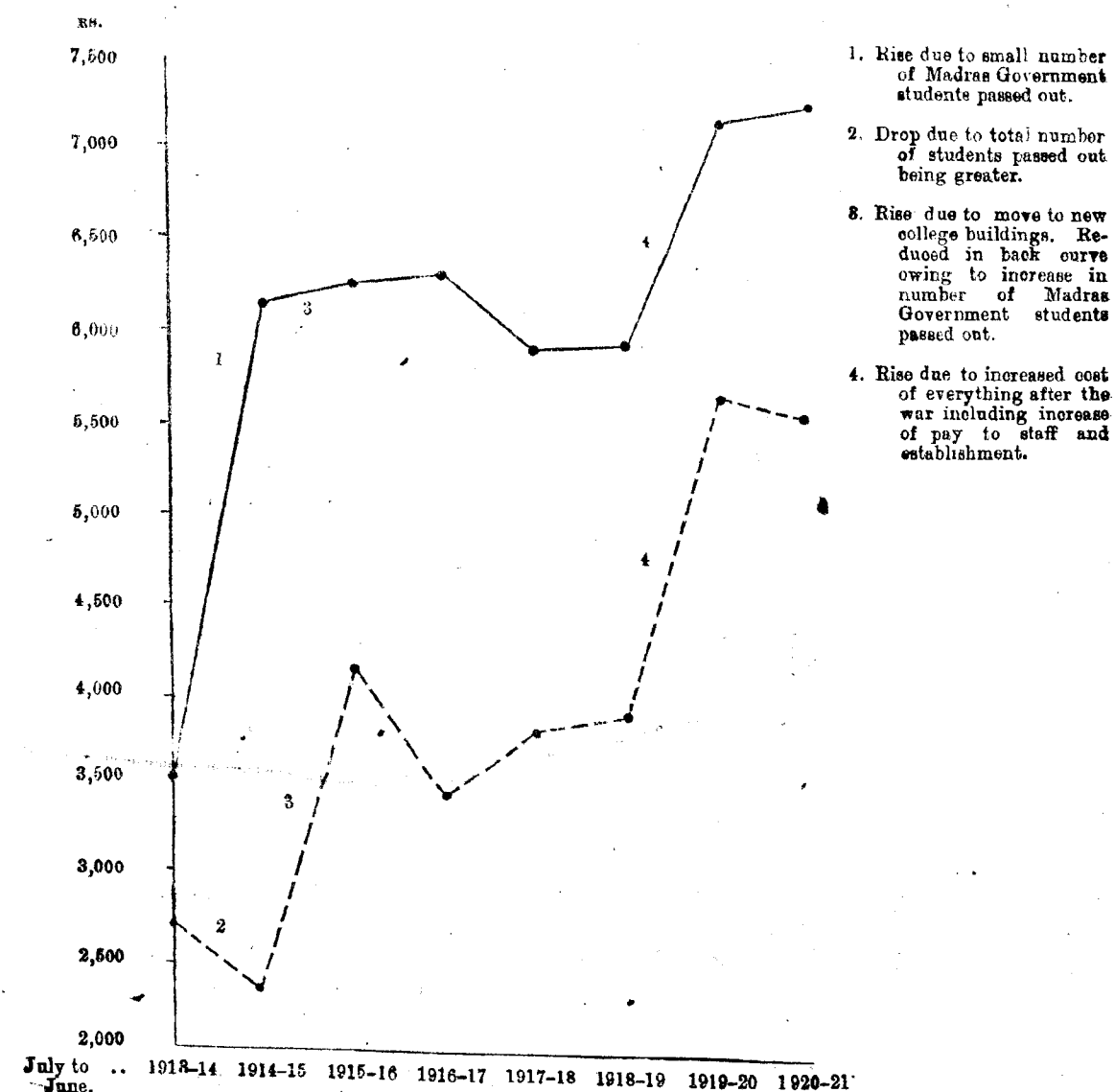
Summary of revenue and expenditure for the year 1920-21.

(July 1920 to March 1921).						Amount.		
Receipts—						Rs. A. P.		
I (b) ...						133	8	0
II (d) ...						157	6	3
V (b) ...						26,406	0	4
Receipts total ...						26,696	14	7
Expenditure—								
A. Conservancy and Works.								
A. VI. C. ...						20,271	14	4
A. VII. A. ...						2,913	8	4
A. VII. b. ...						989	12	3
A. VII. c. ...						1,598	6	0
A. VIII. e. ...						3,450	9	4
A. VIII. g. ...						1,565	10	0
A. IX. d. ...						1,400	8	10
Total A ...						32,190	5	1
B. Establishment.								
B. i. b. ...						38,214	10	8
B. i. c. ...						21,707	13	9
B. i. d. ...						4,979	0	1
B. i. e. ...						4,644	5	9
B. ii. b. ...						5,333	4	9
B. ii. c. ...						5,760	5	1
B. ii. d. ...						1,105	4	10
B. iii. b. 2. ...						12,996	10	10
Total B ...						94,735	7	0
Total A and B ...						1,26,925	12	10

APPENDIX IV.

ADMINISTRATION REPORT.

Cost per student for the two years' course at the Madras Forest College.



1. Rise due to small number of Madras Government students passed out.
2. Drop due to total number of students passed out being greater.
3. Rise due to move to new college buildings. Reduced in back curve owing to increase in number of Madras Government students passed out.
4. Rise due to increased cost of everything after the war including increase of pay to staff and establishment.

TABLE OF CONTENTS.

	PAGE
Appendix A.—Abstract of fires	i & ii
Do. B.—Comparative statement of impounded cattle	iii
Area of reserved forests and reserved lands (No. 65)	iv & v
Appendix to Form No. 65 classification of forests	vi
Progress made in, and the expenditure incurred on, forest settlements (No. 66)	vi to viii
Record of demarcation and maintenance of boundaries (No. 67)	ix & x
Progress made in working-plans (No. 69)	xi & xii
Communications and buildings (No. 70)	xiii & xiv
Register of breaches of Forest Rules (No. 71)	xv to xviii
Area of forest tracts protected from fire (No. 72)	xix to xxi
Area closed and open to grazing (No. 73)	xxii & xxiii
Return of grazing in the State forests (No. 74)	xxiv to xxix
Artificial reproduction (No. 75)	xxx to xxxii
Statement showing the outturn of timber and fuel and agency of exploitation (No. 76)	xxxiii to xxxix
Outturn of minor forest produce (No. 77)	xl to xliii
Account of timber, etc., in depots and sold locally (No. 78)	xliv to xlvii
Statement showing the value of timber and other produce at sale depots (No. 79)	xlvi & xlix
Summary of revenue and expenditure (No. 80)	i to iv
Summary of the above prepared in the Chief Conservator's office	lvi & lvii
Outstanding and liabilities on account of contractors and disbursers (No. 81)	lviii
Revenue received and outstanding on account of revenue (No. 82)	lix
Statement of financial results (No. 83)	lx
Statement of elephants, etc. (No. 84)	lxi & lxii
Abstract of value of stores, tools and plants (No. 85)	lxiii

APPENDICES.

APPENDIX A.—Comparative statement of number and origin of fires that occurred during 1920-21.

District.	A. Fires caused by accident or through carelessness in burning fire holes.										B. Fires entering the forests by crossing exterior fire lines.										C. Fires beginning inside the reserves or fire-traced areas.										Total.	Causes unknown.	Total of A, B and C and causes unknown.
	By workmen engaged in the forests or by purchasers of forest produce and by day outers.		By villagers, travellers, etc., passing through the forests.		By lightning or by fire balloons.		In order to obtain new grass.		In order to turn out game or to reduce cover.		Maliciously fired.		Total.		Total of A, B and C and causes unknown.																		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)								
First Circle.																																	
Gaujam ..	1	26	13	12,868	1	1,200	9	1,453	..	..	..	4	2,050	29	68,550	4	700	47	64,013	15	4,602	76	81,466										
Vizianagaram ..	1	3	4	11	6	48	7	644	..	..	..	10	447	1	30	..	150	24	1,168	12	3,013	29	1,188										
Godavari, Upper ..	1	800	23	32,868	1	400	4	2,271	..	..	..	..	..	10	23,968	1	170	16	22,859	24	2,810	52	81,772										
Do. Lower ..	..	..	1	180	..	40	12	2,270	..	..	..	..	..	..	..	..	18	18	2,810	24	2,810	38	5,465										
Kistna ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	47	8	47										
Total ..	3	328	41	45,867	9	1,738	32	6,588	..	..	..	14	2,527	40	91,078	6	850	100	98,581	61	27,715	195	167,321										
Second Circle.																																	
Bellary ..	..	..	..	..	..	649	3	850	11	1,901	..	25	11,506	1	17	..	63	311	1,901	36	50,184	107	62,085										
Anantapur ..	..	..	10	3,187	8	..	6	142	1	1,700	..	..	12,506	..	2	..	40	16,175	5	721	52	10,867											
Guntur ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	142	..	..	..	..											
Karnool, East ..	..	..	..	20,370	3	2,780	1	450	6	325	..	3	1,020	4	1,500	..	884	17	2,620	20	14,510	44	40,144										
Do. South ..	..	..	1	90	..	..	..	605	..	..	..	..	..	7	9,710	..	..	12	10,815	1	18	14	10,835										
Do. West ..	..	..	..	..	..	..	..	..	..	..	..	32	13,508	12	11,327	7	617	93	34,412	124	55,835	231	134,423										
Total ..	..	..	18	24,177	11	3,428	14	1,777	18	3,426	..	32	13,508	12	11,327	7	617	93	34,412	124	55,835	231	134,423										
Third Circle.																																	
Cuddapah, North ..	..	..	2	515	1	8	4	152	..	..	..	5	3,323	..	1	..	12	2	3,482	6	6,976	28	10,979										
Do. South ..	1	4,000	1	3,000	..	..	2	1,340	..	..	..	5	146	..	2	..	10	9,086	3	1,443	37	10,979											
Do. West ..	1	20	3	1,040	2	46	2	76	..	..	..	37	10,000	..	4	..	40	12,170	5	2,625	24	12,555											
Nellore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..											
Chingleput ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..											
Chittoor ..	1	16	3	206	4	240	6	74	1	..	..	25	9,367	1	20	..	36	276	9	3,701	40	9,818											
Yellore, North ..	2	15	1	37	..	1	1	2	..	1	..	..	..	..	10	..	12	12	276	9	3,701	40	9,818										
Total ..	6	4,050	10	6,130	7	283	16	1,643	1	1	..	73	23,483	1	20	17	9,282	115	34,717	25	11,910	158	55,807										

(*) Includes areas burnt in unprotected forest tracts.

(†) Inserted in the Chief Conservator's office.

ANNUAL REPORT OF THE

APPENDIX B.—Comparative statement of impounded cattle during 1920-21.

District	Number of cattle impounded.		Average for three years ending 1919-20.
	1919-20.	1920-21.	
First Circle.			
Ganjam	1,780	890	1,804
Vizagapatam	561	1,027	765
Godavari, Upper	936		634
Do. Lower	288	284	577
Kistna	3,235	3,675	3,732
Total	6,803	6,887	7,492
Second Circle.			
Bellary	6,431	5,498	6,632
Anantapur	8,441	5,964	10,898
Guntur	19,931	17,758	21,771
Kurnool, East	6,200	5,415	5,156
Do. South	3,556	10,888	3,221
Do. West	6,836	6,933	6,850
Total	51,495	52,476	58,568
Third Circle.			
Cuddapah, North	2,169	1,570	1,772
Do. South	2,921	1,636	1,685
Do. West	8,449	6,953	7,842
Nellore	8,793	7,855	8,423
Chingleput	4,894	3,540	3,655
Chittoor	11,120	9,909	9,461
Vellore, North	5,418	6,993	5,935
Total	42,864	38,455	38,675
Fourth Circle.			
Vellore, South	6,400	6,443	6,721
Do. West	3,319	2,563	3,092
Salem, East	4,181	4,926	4,486
Do. North	814	483	806
Do. Central	1,803	2,715	2,486
Do. South	7,866	8,892	6,148
Total	* 24,183	21,042	23,737
Fifth Circle.			
Kollegal	3,886	2,438	2,421
Coimbatore, North	3,662	2,556	3,796
Do. South	587	300	585
Madura	5,218	3,811	4,869
Tinnevely	2,569	1,717	2,761
Total	15,912	10,822	14,422
Sixth Circle.			
Mangalore, North	436	342	416
Do. South	406	587	439
Malabar, North	52	15	71
Do. South	258	Nil	327
The Nilgiris	268	330	486
Central Coimbatore	2,274	1,447	1,729
Total	3,692	2,721	3,418
Grand total, Presidency	144,849	131,403	141,313

* Increase of 70 is due to revised figures from the divisions as reconstituted.

Appendix A.—Comparative statement of number and origin of fires that occurred during the calendar year 1920-21—cont.

District.	C. Fires beginning as in the reserves or fire-traced areas.									
	Owing to carelessness or accident					By intention or fire				
	A. Fires caused by accident or through carelessness in burning fire lines.	B. Fires entered by crossing exterior fire lines.	By workmen engaged in the forests or by purchasers of produce and by hay cutters.	By villagers, travellers, etc., passing through the forests.	By railway engines.	In order to burn or to reduce grass.	In order to burn or to reduce grass.	In order to burn or to reduce grass.	In order to burn or to reduce grass.	In order to burn or to reduce grass.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
<i>Fourth Circle.</i>										
Vellore, South	..	..	..	..	..	..	..	..	..	..
Do. West	..	..	..	..	..	..	..	..	..	..
Salem, East	..	..	..	..	..	..	..	..	..	..
Do. North	..	..	..	..	..	..	..	..	..	..
Do. Central	..	..	..	..	..	..	..	..	..	..
Do. South	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..	..
<i>Fifth Circle.</i>										
Kollegal	..	..	..	..	..	..	..	..	..	..
Coimbatore, North	..	..	..	..	..	..	..	..	..	..
Do. South	..	..	..	..	..	..	..	..	..	..
Madura	..	..	..	..	..	..	..	..	..	..
Tinnevely	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..	..
<i>Sixth Circle.</i>										
Mangalore, North	..	..	..	..	..	..	..	..	..	..
Do. South	..	..	..	..	..	..	..	..	..	..
Malabar, North	..	..	..	..	..	..	..	..	..	..
Do. South	..	..	..	..	..	..	..	..	..	..
The Nilgiris	..	..	..	..	..	..	..	..	..	..
Central Coimbatore	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..	..
Grand total for 1920-21	..	..	..	..	..	..	..	..	..	..
Grand total for 1919-20	..	..	..	..	..	..	..	..	..	..

* Includes the number of fires not under special protection.

ANNUAL FORM No. 85.

Forest Department, Madras Presidency.

Area of reserved forests and reserved lands during 1920-21

Districts.	Area of reserved forests.						Area of reserved lands.						Total area of reserved forests and reserved lands in square miles.
	Area on 1st July 1920.		Added during the year.	Excluded during the year.	Area on 31st March 1921.		Area on 1st July 1920.		Added during the year.	Excluded during the year.	Area on 31st March 1921.		
	Acres.	Equivalent in square miles.			Acres.	Equivalent in square miles.	Acres.	Equivalent in square miles.			Acres.	Equivalent in square miles.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
<i>First Circle.</i>													
Ganjap	398,955	623	1,280	..	400,235	(m) 628	1,347	2	..	(n) 1,350	87	..	506
Vinagapatnam	196,907	308	84	..	196,991	308	1,413	2	..	(o) 1,413	14	..	310
Godavari, Upper	340,080	531	84,375	..	374,455	585	193,778	303	..	(p) 1,668	247	..	832
Do, Lower	255,409	399	..	..	255,409	399	58,811	92	..	(q) 1,638	55,088	87	486
Kistna	169,196	264	..	..	169,196	264	381	1	..	(r) 3,758	381	1	266
Total	1,360,527	2,125	35,739	..	1,496,268	2,132	255,738	400	..	46,062	215,686	397	2,319
<i>Second Circle.</i>													
Bellary	365,786	572	..	..	365,786	572	1,899	3	..	..	1,899	..	373
Anantapur	477,770	747	..	..	477,770	747	..	..	..	..	..	..	747
Guntur	612,280	800	..	(4) 663	611,557	799	..	..	..	..	..	..	789
Kurnool, East	620,784	970	..	..	620,784	970	..	..	..	..	..	..	970
Do, South	486,664	761	..	..	486,664	(2) 760	..	..	..	..	..	..	760
Do, West	548,664	857	..	(6) 1,187	547,867	853	..	..	..	..	..	..	853
Total	3,011,788	4,707	..	1,850	3,009,018	4,703	1,850	3	3	..	1,902	3,001,013	4,754
<i>Third Circle.</i>													
Cuddapah, North	381,229	586	..	..	381,229	586	324	1	..	..	324	..	586
Do, South	295,503	433	..	..	295,504	432	111	..	..	..	50	..	432
Do, West	473,010	748	(6) 1,771	(4) 3	480,778	751	(2,284) (1) -5	4	..	(5) 1,771	268	1	751
Nellore	460,332	715	(6) 37	(4) 676	459,461	718	6,823	11	1	(6) 67	6,784	11	719
Chingleput	132,217	207	(6) 41	(7) 273	130,073	203	37	..	..	(7) 3	..	..	203
Chittoor	528,313	821	..	(4) 2,178	528,313	823	3	..	..	..	..	..	823
Vellore, North	233,247	458	(6) 163	(4) 123	233,287	458	169	..	..	(8) 163	..	..	458
Total	2,369,851	4,015	(6) 2,020	(4) 2,980	2,368,698	4,013	(6) -5	16	12	(9) 2,055	7,591	12	4,025

(a) Less than half a square mile.

(b) Transferred to reserved forests.

(c) Leased forests.

(d) Excluded at settlement.

(e) Notified under section 26 of the Forest Act.

(f) Rectification of area.

(g) The correct area was 760.43 square miles, which has now been taken as 750 square miles as the fraction is less than $\frac{1}{2}$ square mile.

(h) Discontinued for grant to depressed classes for cultivation.

(i) Discontinued on account of inconvenience caused to adjoining villagers owing to the close proximity to village sites.

(j) Notified under Section 16.

(k) Disforested.

(l) Area given up as unnecessary.

(m) Refined figure.

Area of reserved forests and reserved lands during 1920-21—cont.

Districts.	Area of reserved forests.						Area of reserved lands.						Total area of reserved forests and reserved lands in square miles.
	Area on 1st July 1920.		Added during the year.		Excluded or transferred to other districts.		Area on 31st March 1921.		Added during the year.		Excluded during the year.		
	Acres.	Equivalent in square miles.	Acres.	(4)	Acres.	(5)	Acres.	Equivalent in square miles.	Acres.	(10)	Acres.	(11)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Fourth Circle.													
Vellore, South ..	309,508	483	..	..	309,172	481	349	1	9	..	458	1	482
Do, West ..	244,858	383	..	..	244,858	353	42	..	..	..	42	..	383
Salem, East ..	376,575	588	..	..	367,778	575	7,456	12	..	..	7,456	12	587
Do, North ..	333,775	521	..	..	333,775	521	..	..	18	..	18	..	521
Do, Central ..	263,546	412	..	..	263,724	412	7,818	12	344	..	7,884	12	424
Do, South ..	216,898	339	..	..	216,898	339	11,812	15	533	..	12,051	15	358
Total ..	1,744,960	2,726	233	..	1,735,295	2,711	27,066	43	804	412	27,868	44	2,755
Fifth Circle.													
Kollegal ..	467,703	731	..	..	467,703	731	..	..	..	..	..	..	731
Coimbatore, North ..	686,829	917	..	..	686,670	916	..	..	..	..	..	..	916
Do, South ..	290,388	454	..	..	290,388	454	..	..	..	..	..	..	454
Madurai ..	422,332	650	..	..	422,349	650	..	..	..	..	..	..	650
Tinnevely ..	271,874	425	..	..	271,874	425	1,302	2	..	..	1,302	2	427
Total ..	2,099,166	3,187	..	..	2,038,984	3,186	1,302	2	..	..	1,302	2	3,188
Sixth Circle.													
Mangalore, North ..	232,059	362	8	..	232,976	360	8	..	..	..	..	..	360
Do, South ..	278,800	436	2,091	..	280,891	439	..	..	..	..	..	..	439
Malabar, North ..	168,424	263	..	..	168,424	263	..	..	..	..	..	..	263
Do, South ..	92,231	144	..	..	92,231	144	12,851	20	..	..	12,851	20	151
The Nilgiris ..	298,679	467	77	..	293,818	412	48,318	77	486	..	49,757	78	494
Coimbatore, Central ..	231,769	362	35,705	..	233,784	412	(A) 2,851	1	..	..	(A) 2,851	4	412
Total ..	1,301,962	2,034	41,725	..	1,299,124	2,030	55,063	101	486	92	56,454	102	2,132
Grand total, Presidency ..	12,028,224	18,794	79,802	..	12,048,195	18,895	351,265	565	1,309	42,651	319,913	509	19,325

NOTE—The changes in the opening balance are due to the adjustment of divisions—

(a) Sixty acres of Kangiruppu II hit (East Salem) omitted to be included in the previous return, has been added now, and .92 or 1 acre shown in excess in the previous year was omitted in this return so as to tally with the areas of reserved forests in B. P. No. 154, dated 10th November 1916.

(b) Changes in areas necessitated during settlement.

(c) Disforested.

(d) Less than a square mile.

(e) Area of Tanjore Forests handed over to the Collector.

(f) Transferred to reserved forests.

(g) Transferred to Central Coimbatore.

(h) Transferred to Mangalore, South.

(i) Transferred to the Nilgiris.

(j) Rectification of area.

(k) Toda patta lands.

Progress made in forest settlements during the year 1920-21—cont.

Forest district.	Name of forest.	Area in square miles.			Cost during the year.		Entire cost per square mile of area finally settled.	Government notification of settlement.	
		Finally settled during the year.	In hand at commencement of the year.	Taken in hand during the year.	In forest accounts.	In other accounts.		Number.	Date.
Bellary	Baroji tank-shore	0.072	..	..	2,341	..	..	..	..
	Addition of enclosure in Jagadigutta, Srinakatta and Sag reserves.	0.0015	..	..	..	..	..	..	..
Guntur	Addition of enclosure in Nizampatnam reserved forest.	..	0.002	0.0015	2,344	..	..	..	..
Total ..									
Cuddapah, North.	Dasaripalli	0.027	..	..	162	..	..	..	..
	Kalasipalli extension	0.02	..	..	38	..	..	..	..
	Dasaripalli extension	0.002	..	..	..	..	..	278	30th Aug. 1920.
	Lankamalai extension	0.002	..	..	..	..	..	223	5th July 1920.
	Lankamalai	0.005	..	..	..	..	..	278	30th Aug. 1920.
	Chitval extension B	0.015	..	..	..	..	..	..	..
	Cheyararam extension	0.005	..	0.047	555	..	..	..	..
	Chitval	..	..	..	..	..	..	..	..
	K. Divangamavalu Reserved Forest	..	0.038	..	..	..	..	181	1st June 1920.
	Seshachalam Bellanadurga Reserved Forest.	2.76	..	..	..	..	..	..	..
Cuddapah, West.	Addition to Palkonda extension-Pattampalli shrotriam.	0.040	..	..	34	..	..	..	..
	Fields of Hasanapuram village within Palkonda R.F.	0.009	..	..	5	..	..	..	..
	Fields of Vanginalla within Palkonda extension C.	0.005	..	..	..	..	..	..	..
	Fields of Hasanapuram village within Palkonda extension C.	0.012	..	..	..	..	..	..	..
	Fields of Gopangudi village within Idupulapaya R.F.	0.007	..	..	..	..	..	..	..
	Fields of Gavalcheruvu village within Idupulapaya R.F.	0.004	..	..	..	..	..	..	..
	Fields of Chidambapalli village within Idupulapaya R.F.	0.004	..	..	..	..	..	..	..
	Fields of Gandharvipenta village within Idupulapaya R.F.	0.031	..	..	..	..	..	..	..
	Fields of Brahmana Prangudi-palli within Idupulapaya R.F.	0.002	..	..	..	..	..	214	30th June 1920.
	Do. do.	0.0049	..	..	..	..	..	..	..
Neilore	Fields in Machilapalli within Karanahalli extension	0.045	..	..	168	..	..	..	..
	Fields in Chintarajupalli in Vontimitta extension R.F.	0.025	0.015	0.002	..	..	..	222	7th July 1920.
	Addition to Y. Basavi R.F. Do. Tammachanta, West.	0.005	0.005	..	..	..	..	364	26th Nov. 1920.
	Do. T. Madhachanta, Do. Chintarajupalli extension.	0.015	..	..	767	..	..	364	Do.
	Do. Veligandla	0.015	0.015	..	..	..	..	169	11th June 1920.
	Rapur Veligandla A-1 extension	0.017	..	..	..	..	..	314	6th Oct. 1920.
	Kattankolattur extension II.	0.041	0.005	..	437	..	..	..	..
	Tirukalibandram extension II.	..	..	0.012	..	..	..	..	..
	Addition to Santhapur extension A.	..	..	0.006	..	..	..	..	..
	Edammar reserve extension.	..	..	..	..	..	..	227	7th July 1920.
Vellore, North.	Asomundi	0.25	..	..	..	..	..	..	..
	Total ..	3.2079	11.9150	0.005	2,866	..	..	..	..

* Dropped.

ANNUAL REPORT OF THE

Appendix to Form No. 65.

Details of classification of forests in the several districts in the Presidency.

District.	Area of reserved forests.	Details of classification in square miles.					
		I	II	III	IV	V	VI
Ganjam	656	329	230	(a)	7	..	..
Vizagapatam	308	211	72	(a)	7	18	..
Godavari (Upper)	585	217	368	..	..	..	..
Do. (Lower)	399	84	171	..	78	66	..
Katna	264	25	86	(a)	3	157	..
Bellary	572	38	257	13	128	138	..
Guntur	799	..	..	5	700	24	..
Anantapur	747	..	306	..	389	52	..
Kuranoel (East)	970	178	135	..	231	128	..
Do. (South)	760	281	287	..	199	2	..
Do. (West)	855	487	298	(a)	64	6	..
Cuddapah (North)	596	568	..	3	25	..	..
Do. (South)	462	431	..	..	29	..	..
Do. (West)	751	270	225	1	212	43	..
Nellore	718	172	164	4	326	62	..
Chingleput	203	..	40	..	146	17	..
Chittoor	825	267	331	1	17	209	1
Vellore (North)	458	67	320	4	7	59	2
Do. (South)	481	31	394	..	4	50	11
Do. (West)	383	23	342	..	..	7	10
Salem (East)	675	316	134	..	54	61	..
Do. (North)	521	..	418	..	103	..	..
Do. (Central)	412	87	214	1	90	20	..
Do. (South)	339	203	55	..	74	7	..
Kollegal	731	513	141	..	43	4	..
Coimbatore (North)	915	873	43	..	12	5	..
Do. (South)	454	(a) 875	82	..	..	..	..
Madura	660	247	390	..	..	14	..
Tinnevely	425	196	197	..	14	6	12
Mangalore (North)	360	276	35	1	48	..	..
Do. (South)	439	254	67	..	118	..	..
Wynaad	263	226	37	..	..	..	..
Nilambur	(a) 140	129	11	..	..	..	..
Palghat	(a) 412	157	168	..	63	14	..
The Nilgiris	(a) 412	337	57	4	12	..	..
Total ..	18,821	7,953	6,365	37	3,120	1,290	43

- (a) Less than one square mile. (b) Includes 27 square miles of leased forests (Tekkadi forests).
(c) Three reserves with an area of 10 square miles have since been added and have not yet been classified.
(d) Two square miles of forests in scattered bits not classified.
(e) The difference of 4 square miles between the area given in the statement and that in Form 65 has not been explained.

NOTE.—The disposal of class VI reserves in West Vellore, East Salem, South Salem and Tinnevely Divisions is under correspondence with local officers. In the case of Trichinopoly and South Arcot reserves now included in East and South Salem Divisions, the disposal is pending completion of survey.

ANNUAL FORM NO. 66.

Forest Department, Madras Presidency.

Progress made in forest settlements during the year 1920-21.

Forest district.	Name of forest.	Area in square miles.			Cost during the year.		Entire cost per square mile of area finally settled.	Government notification of settlement.	
		Finally settled during the year.	In hand at commencement of the year.	Taken in hand during the year.	In forest accounts.	In other accounts.		Number.	Date.
Ganjam	First Circle.	sq. mls.	sq. mls.	sq. mls.	Rs.	Rs.	..	..	..
	Block I, Part of Galleri extension No. I.	0.057	..	..	..	..	..	..	..
	Block II, Galleri extension No. I.	0.168	..	..	..	..	..	..	..
	Block III, Galleri extension No. I.	0.029	..	..	..	..	..	200	21st June 1920.
	Block IV, Galleri extension No. I.	1.060	..	..	..	..	..	..	..
Vizagapatam.	Block V, Kullada extension No. I.	0.685	..	..	..	..	..	..	..
	Chendragiri extension (Kut-nikuppa bit A/2)	..	0.105	..	6	1,961	..	..	..
	Madalammakonda extension block I.	0.056	..	..	28	..	..	365	4th Dec. 1920.
	Dharakonda extension block I.	0.078	..	..	..	..	..	50	28th Jan. 1921.
	Nugur	..	240.610	..	..	..	..	..	..
Godavari, Upper.	Cherla	53.710	..	..	..	..	..	174	22nd May 1920.
	(a) 2.450	..	..	..	..	..	..	..	..
	Coringa extension	..	75.192	..	..	..	..	..	..
	Birampalli	..	(b) 4.300	..	..	..	..	..	..
	Vemulakonda	..	2.804	..	..	..	..	..	..
Godavari, Lower.	Palam	..	5.244	..	..	..	..	..	..
	Kurupudi	..	2.082	..	..	..	..	..	..
	..	..	2.315	..	..	..	..	..	..
Total ..	..	55.843	334.353	..	34	1,961	..	..	..
		(a) 2.450	(b) 4.300	..	..	..	..	..	..

ANNUAL REPORT OF THE

FOREST DEPARTMENT

Progress made in forest settlements during the year 1920-21—cont.

Forest district.	Name of forest.	Area in square miles.			Cost during year.		Entire cost per square mile of area finally settled.	Government notification of settlement	
		Finally settled during year.	In hand at commencement of year.	Taken in hand during year.	In forest accounts.	In other accounts.		Number.	Date.
Fourth Circle.									
Vellore, South.	Malayalam	..	(a) 0.40	..	..	..	..	..	Chief Conservator's Proceedings No. 489 Mis., dated 27th Aug. 1920.
	Santavai	..	0.15	..	..	..	..	..	
	Erailur	..	..	0.0072	..	..	..	..	
West, Vellore.	Kavuthimalai	..	..	0.0062	..	..	..	..	Chief Conservator's Proceedings No. 10 Mis., dated 8th Jan. 1921.
	Varanapatti extension	..	0.97	..	..	..	..	..	
East, Salem.	Araam and Tirthagiri	..	5.92	..	..	..	..	..	..
	Pallipatti extension	..	5.77	..	..	..	..	..	
North, Salem.	Pennagavaram extension	..	..	0.0280	..	..	..	..	414 Mis. 12th Aug. 1920. (G.O. (Engl.) No. 1437 Mis., 5th Aug. 1920.
	Kavaramalai	0.01	0.01	..	..	..	..	..	
Central, Salem.	Sholapadi A extension	0.27	0.27	..	..	..	..	..	Chief Conservator's Proceedings No. 8, dated 8th Jan. 1921.
	Jerngumalai	..	11.91	..	..	..	..	410	
South, Salem.	Kanjari extension	..	..	0.3812	..	..	..	..	11th Aug. 1920.
	Methalamalai	..	0.01	..	..	..	..	412	
	Vegpadi	..	..	..	..	..	..	..	
	Vedambiam	..	..	..	..	..	..	..	
	Vanjarai	..	..	..	..	..	..	..	
	Perishola	..	(b) 18.87	..	..	..	..	..	
	Atturamalai	..	..	..	..	..	..	..	
Total		0.28	42.41	0.4226	..	..	..	..	
Fifth Circle.									
Tinnevely.	Karumandiamman Shola and Mahendragiri estates.	..	0.16	..	..	..	..	..	..
	Mullkadu block	..	1.48	..	..	..	..	..	
	Hare Island for Tuticorin harbour.	..	0.22	..	..	..	..	..	
	Punnadi Island for Tuticorin harbour.	..	0.16	..	..	..	..	..	
Total		..	2.02	..	..	..	..	..	
Sixth Circle.									
Mangalore North.	Naravi extension No. VIII	0.012	0.012	..	..	..	..	33	14th Mar. 1921.
	Aranbi addition No. I	0.12	0.12	..	..	..	..	234	6th July 1920.
The Nilgiris.	Mudumalai	..	74.69	..	..	..	..	..	..
	Addition to Kalhatti	..	0.17	..	..	..	..	..	
	Do. to Wenlock downs.	..	0.23	..	..	..	..	..	
	Do. to Nedugula	..	..	0.06	..	..	..	..	
	Do. to Nudukaduhalla.	..	..	0.27	..	..	..	..	
	Do. to Attukkadu Shola.	..	..	0.05	..	..	..	..	
	Do. to Doddakavu	..	..	0.08	..	..	..	..	
Coimbatore, Central.	Do. to No. III to Kodanad Valley Shola.	..	..	0.13	..	..	..	..	
	Addition No. II to Madamad.	..	..	..	..	..	..	..	
	Thamburatti Pottai addition No. I.	(c) 0.014	0.11	0.16	..	..	..	363	29th Nov. 1920.
	Nellimalai addition No. I	0.003	0.003	..	115	..	..	307	1st Oct. 1920.
Total		0.147	75.236	0.76	115	..	..	..	..
Grand total, Presidency		59.477	474.196	1.782	5,353	1,961	..	..	..
(a) Figures furnished in the last year's return was wrong.									

(a) Figures furnished in the last year's return were wrong.

(c) Rectification of area at settlement.

(b) Correct area as per settlement.

ANNUAL FORM No. 67.

Forest Department, Madras Presidency.

Record of demarcation and maintenance of boundaries during 1920-21.

District.	Length of boundaries artificially demarcated during the year.	Length of previously existing boundaries repaired.	Length of previously existing boundaries not repaired.	Total length of artificially marked boundaries at the close of the year.	Length of boundaries still to be demarcated at the close of the year.	Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year.	Expenditure on demarcation during the year.	
								On new work.	On repairs.
<i>First Circle.</i>	MILES.	MILES.	MILES.	MILES.	MILES.	MILES.	MILES.	RS.	RS.
Ganjam	{	74	{	1,368	..	80	1,448	(b) 15	159
Vizagapatam ..	{	(a) 1,294	{	564	..	19	583	(a) 16	106
Godavari, Upper ..	16	(a) 555	..	(d) 484	..	151	686	378	(b) 20
Do. Lower	..	(c) 468	..	723	..	51	774	..	(b) 724
Kistna	{	(a) 723	{	547	..	40	587	..	(b) 106
		(a) 420							396
Total	16	(a) 556	112	3,886	..	341	4,027	(b) 15	737
		(a) 2,992						(a) 16	(b) 920
								396	
<i>Second Circle.</i>									
Belhary	{	(d) 1,375	{	1,504	(a) 11	..	1,515	..	1,715
Anantapur	{	(a) 129	{	1,787	..	(a) 34	1,821	..	1,118
Guntur	{	(d) 1,041	598	1,309	..	..	1,309	..	65
Kurnool, East ..	{	(a) 148	1,303	611	1	48	660	47	..
Do. South	4	(d) 6	..	28	..	5	637	..	..
Do. West	{	(f) 45	328	916	..	100	(f) 1,016	..	492
		(d) 582							
		(f) 45							
		(a) 604							
		(d) 280							
		(a) 308							
Total	4	4,498	2,257	6,759	12	187	6,958	47	3,390
<i>Third Circle.</i>									
Cuddapah, North ..	..	(b) 228	332	566	..	13	579	..	..
Do. South	..	(b) 287	39	326	..	40	366	..	..
Do. West	..	(b) 354	1,045	1,399	..	22	1,421	..	30
Nellore	..	(b) 610	(a) 14	1,958	..	84	2,042	44	1,230
Chingleput	..	(b) 1,362	..	854	..	..	854	209	1,180
Chittoor	1	(b) 860	131	1,446	..	60	1,506	10	1,036
Vellore, North ..	..	(b) 194	..	1,069	1	11	1,081	..	91
		(b) 41							
		(b) 1,273							
		(b) 1,072							
		(a) 3							
Total	1	5,468	2,143	7,612	1	230	7,843	263	3,567

- Note for First Circle.
- * Less than one mile.
 - (a) Cleared by subordinates free of cost.
 - (b) Cost of works other than boundaries of forests finally notified.
 - (c) Cost of cutting lines preliminary to permanent demarcation.
 - (d) Revised figures furnished by the District Forest Officer.
 - (e) Cleared by hill tribes for fire protection, the cost being debited to A-VIII (f).
 - (f) Transferred from columns Nos. 6 to 7 (ridge line between Anantapur and Cuddapah ordered by Chief Conservator to be unnecessary).
- Note for Second Circle.
- (b) Decrease of two miles due to disafforestation of a portion of Gani reserved forest.
 - (c) Boundary between disafforested and remaining portions of reserves.
 - (d) Length of boundaries cleared by subordinates free of cost.
 - (e) Do. do. at cost.
 - (f) Do. by panchayatdars free of cost.
- Note for Third Circle.
- (a) Deduction owing to disafforestation.
 - (b) Cleared by subordinates free of cost.

ANNUAL REPORT OF THE

Record of demarcation and maintenance of boundaries during 1920-21—cont.

District.	Length of boundaries artificially demarcated during the year.	Length of previously demarcated boundaries repaired.	Length of previously demarcated boundaries not repaired.	Length of boundaries of artificially demarcated villages at the close of the year.	Length of boundaries still to be demarcated at the close of the year.	Length of natural boundaries not requiring artificial marks.	Total length of boundaries at the close of the year.	Expenditure on demarcation during the year.	
								On new work.	On repairs.
<i>Fourth Circle.</i>	MILES.	MILES.	MILES.	MILES.	MILES.	MILES.	MILES.	RS.	RS.
Vellore, South ..	..	{ (a) 921 }	..	215	..	15	930	..	40
Do. West ..	..	592	37	629	..	13	642	(e) 100	20
Salem, East ..	..	1,119	102	1,221	..	5	1,226	..	33
Do. North ..	..	424	60	484	..	116	590	..	15
Do. Central ..	(b)	205	424	629	..	15	743	38	18
Do. South ..	3	205	76	281	48	..	1,032	(d) + 49	164
Total ..	3	{ (a) 1,206 }	638	1,941	48	164	5,173	158	272
<i>Fifth Circle.</i>									
Kollegal ..	27	{ (a) 8 }	..	200	183	87	479	640	36
Coimbatore, North ..	..	{ (a) 496 }	83	579	101	89	769	..	3
Do. South ..	..	{ (a) 128 }	76	228	..	72	300	..	16
Madura ..	..	{ (a) 1,020 }	538	1,558	1	178	1,737	165	224
Tinnevely ..	..	..	491	491	..	14	505	..	97
Total ..	27	{ (a) 1,818 }	1,186	3,065	285	440	3,790	805	402
<i>Sixth Circle.</i>									
Mangalore, North ..	..	18	{ (d) 1,216 }	1,228	..	103	1,331	..	52
Do. South ..	..	..	{ (d) 1,130 }	1,135	45	101	1,282	..	(i) 66
Malabar, North ..	(a) 13	{ (c) 136 }	981	1,206	2	36	1,244	1,041	..
Do. South ..	(a) 4	{ (c) 87 }	60	131	20	65	203	565	142
The Nilgiris ..	..	{ (c) 93 }	1,492	1,511	..	299	1,810	..	36
Central Coimbatore ..	11	{ (c) 52 }	519	607	16	50	733	890	667
Total ..	28	{ (b) 253 }	5,107	5,878	84	641	6,606	1,996	1,041
Grand total, Presidency.	79	20,077	11,805	31,961	439	2,046	34,507	3,742	10,32

Owing to readjustment of divisions the figures given by the District Forest Officers have been accepted.

Note for Fourth Circle. (a) Deduction is due to disafforestation.
(b) Less than half a mile.
(c) Cost of cutting lines and erecting cairns on the delimitation of hill villages of Pudurud in the Javadis.
(d) Amount spent on the demarcation of proposed Paithar block.
(e) Less than a mile.
(f) Cleared by subordinates free of cost.
(g) Cleared for fire protection, the cost being debited to A-VIII (f).
(h) Repairs to cairns.
(i) Added to tally with Accountant-General's audited figures.

Note for Fifth Circle. (a) Included in column 4 of the last year's return.
(b) Cleared for fire protection, the cost being debited to A-VIII (f).
(c) Cleared by subordinates free of cost.
(d) Transferred to Mangalore, South.
(e) Transferred to Central Coimbatore.
(f) Erroneously shown in column 6 of the last year's return.
(g) Cost of building cairns.
(h) Erroneous debits relating to A.I. (b) and VIII (f).
(i) Cost of preliminary demarcation.

Note for Sixth Circle. (a) Included in column 4 of the last year's return.
(b) Cleared for fire protection, the cost being debited to A-VIII (f).
(c) Cleared by subordinates free of cost.
(d) Transferred to Mangalore, South.
(e) Transferred to Central Coimbatore.
(f) Erroneously shown in column 6 of the last year's return.
(g) Cost of building cairns.
(h) Erroneous debits relating to A.I. (b) and VIII (f).
(i) Cost of preliminary demarcation.

FOREST DEPARTMENT

ANNUAL FORM No. 69.

Forest Department, Madras Presidency.

Progress made in working-plans during 1920-21.

District.	Areas for which working-plans have been completed and approved by the Chief Conservator.		Areas for which working-plans are being compiled or have been compiled but not sanctioned.		Areas for which working-plans have still to be taken in hand.	Areas for which working-plans are not at present required.	Total forest area as per Form No. 65.
	At commencement of the year.	During the year.	At commencement of the year.	Taken in hand during the year.			
<i>First Circle.</i>	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.
Ganjām ..	624	2	62	..	42	18	626
Vizagapatam ..	186	..	..	..	420	..	535
Godavari, Upper ..	166	..	..	..	167	..	333
Do. Lower ..	292	..	..	..	..	24	264
Kistna ..	240	..	..	..	..	..	..
Total ..	1,507	2	62	..	569	42	2,132
<i>Reserved lands.</i>							
Vizagapatam ..	..	..	..	..	..	(a) 2	2
Godavari, Upper ..	..	..	..	..	..	247	247
Do. Lower ..	..	..	..	..	..	1	1
Kistna ..	..	..	..	..	..	..	..
Total ..	..	..	..	..	..	250	337
<i>Second Circle.</i>							
Bellary ..	51	..	88	..	290	143	572
Anantapur ..	386	14	..	49	298	(a) 3	747
Guntur ..	..	22	237	..	537	..	799
Kurnool, East ..	147	..	176	..	647	..	970
Do. South ..	679	..	81	..	..	327	780
Do. West ..	456	..	..	2	..	..	655
Total ..	1,719	36	582	51	1,772	543	4,703
<i>Reserved lands.</i>							
Bellary ..	..	..	2	..	..	1	3
<i>Third Circle.</i>							
Cuddapah, North ..	{ (a) 49 }	..	17	..	(b) 533	..	596
Do. South ..	{ (a) 107 }	..	..	..	..	366	462
Do. West ..	{ (a) 11 }	..	..	..	..	650	752
..	35	..	27	38	2	..	729
Nellore ..	12	(b) 83	{ (a) 230 }	..	894	128	203
Chingleput ..	{ (a) 185 }	..	{ (b) 83 }	..	..	19	825
Chittoor ..	83	..	95	176	521	..	458
Vellore, North ..	410	..	2	..	..	46	..
Total ..	816	83	253	214	1,450	1,209	4,025
<i>Fourth Circle.</i>							
Vellore, South ..	* 415	..	..	..	* 66	..	* 481
Do. West ..	383	..	64	..	..	105	833
Salem, East ..	406	..	216	..	209	..	621
Do. North ..	96	..	..	..	149	..	412
Do. Central ..	263	..	19	2	45	42	339
Do. South ..	231	..	..	..	..	..	..
Total ..	1,794	..	299	2	469	147	2,711

Note for First Circle.—(a) Leased forests not requiring working-plans.
Note for Second Circle.—(a) Tentative for Tadapalli reserve forest cancelled.
Note for Third Circle.—(a) Area cancelled or disafforested.
(b) Area for which working-plans have been sanctioned during the year.
Note for Fourth Circle.—* Compared with the last year's return, the changes in the figures furnished by the District Forest Officers are due to re-adjustment of Forest Divisions.
(f) Details are not given for 44 square miles of reserved land.

Progress made in working-plans during 1920-21—cont.

District.	Areas for which working-plans have been completed and approved by the Chief Conservator.		Areas for which working-plans are being compiled or have been compiled but not sanctioned.		Areas for which working-plans have still to be taken in hand.	Areas for which working-plans are not at present required.	Total forest area as per Form No. 65.
	At commencement of the year.	During the year.	At commencement of the year.	Taken in hand during the year.			
Fifth Circle.							
	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.
Kollegal ..	53	..	22	..	180	496	781
Coimbatore, North ..	330	..	30	..	556	..	916
Do. South ..	92	..	..	..	334	..	427
Madurai ..	361	..	..	..	297	12	669
Tinnevely ..	233	..	..	..	16	* 175	(a) 425
Total ..	1,069	..	52	..	1,383	684	3,159 (d) 2
Leased forests.							
Coimbatore, South ..	27	..	..	..	..	..	27
Total ..	1,087	..	53	..	1,383	684	3,186 (d) 2
Revered forests.							
Sixth Circle.							
	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.
Mangalore, North ..	{ (a) 358 } 3	..	..	..	5	..	359
Do. South ..	{ (a) 436 } 3	..	..	..	..	..	439
Malabar, North ..	178	..	..	..	85	..	263
Do. South ..	7	..	..	..	..	37	140
The Nilgiris ..	{ (b) 107 } 44	..	96	..	..	349	412
Central Coimbatore ..	{ (b) 165 } 44	..	..	..	..	105	412
Total ..	1,251	..	96	..	182	491	2,026
Revered lands.							
The Nilgiris ..	75	..	..	..	1	(c) 6	82
Leased forests.							
Malabar, South ..	24	..	..	..	..	..	24
Total ..	..	..	..	..	..	..	..
Grand total, Presidency.	8274	121	1,344	267	5,899	3,374	19,279 (d) 46

* Note for Fifth Circle.—* Revised area furnished by the District Forest Officer.

Note for Sixth Circle.—

(a) Transferred to South Mangalore.

(b) Transferred to Central Coimbatore.

(c) Includes four square miles of reserved land.

(d) Details are not given for 2 square miles of reserved land in the Tirunelveli district and 44 square miles of reserved land in the fourth circle.

ANNUAL FORM No. 70.

Forest Department, Madras Presidency.

Communications and Buildings during 1920-21.

District.	Roads (including bridge-paths and culverts).				Buildings.		Other works.	
	New works.		Repairs.		Cost of new works.	Cost of repairs.	Cost of new works.	Cost of repairs.
	Length.	Cost.	Length.	Cost.				
<i>First Circle.</i>	M. F. CH.	RS.	M. F. CH.	RS.	RS.	RS.	RS.	RS.
Ganjam	6 1 1	4,349	49 5 5	1,884	55,256	(a) 3,045 1,342 + 39	77	5
Vizagapatam	10 6 0	1,608	17 6 0	535	974	(a) 1,738 940	50	38
Godavari, Upper ..	9 1 0	2,143	6 0 0	277	2,430	(a) 1,776 775	..	..
Do. Lower	..	..	47 2 0	1,796	2,569	(a) 3,184 1,729	..	..
Kistna	2 2 0	1,585	10 4 0	144	2,931	(a) 318 75	..	136
Total	28 2 1	9,685	131 1 5	4,536	64,190	14,959	127	239
<i>Second Circle.</i>								
Bellary	..	..	..	..	..	(a) 734 604	577	22
Anantapur	..	..	5 4 7	408	2,048	(a) 1,002 1,328	..	40
Guntur	11 0 0	730	4 6 0	467	1,367	(a) 171 835	558	..
Kurnool, East	14 1 0	979	43 3 0	1,963	2,507	(a) 844 909	253	15
Do. South	1 6 0	509	72 2 0	{ (b) 2,593 2,200 }	400	3,038	..	385
Do. West	0 6 0	(a) 27	23 4 0	{ (b) 1,926 650 }	5,817	(d) 655 (a) 2 837	..	634
Total	27 5 0	2,335	148 3 7	10,207	12,139	11,039	1,488	1,397
<i>Third Circle.</i>								
Cuddapah, North ..	2 1 6	1,180	15 1 0	585	1,133	(a) 323 554	474	27
Do. South	7 13 1	3,883	42 0 1	3,512	4,591	(a) 1,098 287	494	11
Do. West	3 1 7	1,351	7 4 5	1,370	1,724	(a) 275 693	166	..
Nellore	13 0 50	187	2 0 40	148	2,108	(a) 627 1,035	354	109
Chingleput	3 6 0	451	14 9 0	1,917	..	(a) 396 1,317	434	207
Chittoor	16 4 0	1,989	21 4 0	2,573	2,011	(a) 3,843 1,214	199	12
Vellore, North	1 0 0	15	29 0 0	556	962	(a) 949 646	44	24
Total	48 1 64	9,056	182 2 45	10,671	12,469	13,206	2,165	460

Note of First Circle. { * Added to agree with the Accountant-General's figures.
(a) Cost of establishment.

Note of Second Circle. { (a) Represents establishment charges.
(b) Amount of contribution paid to Local Fund roads.
(c) Cost of alignment of six furlongs of roads.
(d) Cash recovery.

Note of Third Circle.—(a) Cost of establishment.

Communications and Buildings during 1920-21—contd.

District.	Roads (including bridle-paths and culverts)				Buildings.		Other works.		
	New works.		Repairs.		Cost of new works.	Cost of repairs.	Cost of new works.	Cost of repairs.	
	Length.	Cost.	Length.	Cost.					
	M. F. Ch.	Rs.	M. F. Ch.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
<i>Fourth Circle.</i>									
Vellore, South ..	1 5 0	(a) 9	2 2 0	{ 771 (d) 1 }	86	{ 1,004 (b) + 772 (c) + 261 (d) - 134 }	117	{ 33 (d) + 1 }	
Do. West ..	..	(a) 53	26 6 0	{ 585 (d) - 43 }	1,006	{ 968 (b) + 241 (c) + 62 (d) - 79 }	816	..	
Salem, East ..	..	..	0 8 0	{ 50 (c) - 3 }	..	{ 788 (b) - 8 (d) - 10 }	..	29	
Do. North ..	..	..	18 4 0	{ 220 (d) - 10 }	1,338	{ 313 (b) - 110 (c) + 1 }	..	..	
Do. Central ..	..	..	12 6 0	{ 271 (c) - 2 }	..	{ 1,207 (b) + 500 (c) - 1 }	14	..	
Do. South ..	4 0 0	830	13 0 0	{ 310 (c) - 2 (d) + 277 }	1,567	{ 3,075 (b) - 356 }	..	413	
Forest Engineer ..	38 0 0	(f) 1,56,290	11 0 0	{ 3,075 (d) + 277 }	..	..	..	..	
Total ..	43 0 0	1,37,712	94 0 0	{ 4,788 (d) + 278 (c) - 58 (d) - 58 }	3,867	7,016	947	476	
<i>Fifth Circle.</i>									
Kollegal ..	16 6 0	2,014	56 7 0	1,616	1,880	{ 379 (b) 436 }	141	84	
Coimbatore, North ..	3 0 0	4,170	113 0 0	8,180	542	{ 2,380 (b) 108 }	14	26	
Do. South ..	..	(c) 704	38 2 0	{ 5,130 (b) 453 (c) 6,894 (d) 1,127 (d) - 91 }	4,501	{ 1,451 (b) 216 (c) - 5 }	96	119	
Madura ..	32 3 0	810	127 4 0	{ 1,127 (b) 1,706 (d) - 91 }	1,424	{ 1,927 (b) 1,706 (d) + 22 }	386	10	
Tinnevely ..	1 2 0	2,326	..	383	430	{ 1,828 (b) 506 }	..	10	
Forest Engineer ..	..	{ (e) 1,427 (d) 277 }	..	..	..	..	..	..	
Director ..	..	..	..	(c) - 11	..	..	..	(a) - 11	
Total ..	53 3 0	11,728	410 5 0	24,086	8,777	11,328	637	238	
<i>Sixth Circle.</i>									
Mangalore, North ..	3 0 0	1,316	25 0 0	528	1,849	{ 261 (b) 88 (d) - 7 (c) - 50 }	48	39	
Do. South ..	5 0 0	679	9 0 0	494	420	{ 294 (b) 231 (c) 776 (d) 470 (d) 1,222 (d) 118 }	..	73	
Malabar, North ..	(f) ..	110	110 0 0	2,447	2,691	{ 231 (b) 776 (c) 470 (d) 1,222 (d) 118 }	512	14	
Do. South ..	5 0 0	550	49 0 0	2,063	7,024	{ 776 (b) 470 (d) 1,222 (d) 118 }	285	97	
The Nilgiris ..	..	..	66 0 0	3,868	136	{ 470 (b) 1,222 (d) 118 }	287	74	
Central Coimbatore ..	11 0 0	51,715	5 0 0	4,964	10,490	{ 1,222 (d) 118 }	1,799	110	
Total ..	24 0 0	54,370	264 0 0	14,348	22,510	4,340	2,911	407	
Grand total, Presidency ..	224 3 0	2,24,886	1,160 3 58	66,936	123,952	31,588	8,276	2,967	

(a) Cost of alignment.
(b) Cost of establishment.
(c) Insurance charges.
(d) Added or subtracted to tally with Accountant-General's audited figures.
(e) Cash recovery of service payments.
(f) Rs. 1,720 wrongly shown by the Accountant-General under A-VII (b) has been included.

Abstract.

	New works.	Repairs.	Total.
Roads and bridle-paths ..	1,37,712	5,008	1,42,720
Buildings ..	3,867	4,044	7,911
Other works ..	917	2,807	3,724
		261	10,883
		96	1,423

(a) Cash recovery of service payments.
(b) Cost of establishment.
(c) Expenditure on improvement to tram line.
(d) Added or deducted to tally with Accountant-General's audited figures.
(e) Includes expenditure on the investigation of the new Mount Stuart Ghat Road, water-supply scheme, etc.
(f) Less than a mile.
(g) Erroneously debited to A VIII (f) in the audited figures.

ANNUAL FORM No. 71.

Forest Department, Madras Presidency.

Register of breaches of Forest Rules during 1920-21.

District.		Cases pending from 1919-20.	New cases of the year.					Total cases.	Disposed of during the year.						Cases pending at close of year.
			Injury to forest by fire.	Unauthorized felling.	Unauthorized grazing.	Other offences.	Total new cases of the year.		Convictions.		Acquittals.		Total.		
									Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
First Circle.															
Ganjam ..	A ..	71	..	71	4	3	78	149	111	343	13	213	124	556	25
	B ..	85	..	190	16	7	218	303	212	687	26	166	238	843	65
	C ..	..	58	20	..	..	78	..	..	..	..	..	..	..	..
Total ..		156	63	281	20	10	374	452	323	1,030	39	389	362	1,390	90
Visagapatam.	A ..	25	..	82	5	2	89	115	82	269	7	28	89	287	26
	B ..	13	..	153	41	21	215	228	176	500	7	29	183	529	45
	C ..	..	29	3	..	..	32	..	..	..	..	..	..	..	..
Total ..		39	29	238	46	23	336	343	258	769	14	57	272	816	71
Godavari, Upper.	A ..	14	1	3	..	2	6	20	9	12	3	7	12	19	8
	B ..	16	..	68	..	4	62	78	47	144	22	65	69	209	9
	C ..	..	50	..	..	..	50	..	..	..	..	..	..	..	..
Total ..		30	51	61	..	6	118	98	56	156	25	72	81	223	17
Godavari, Lower.	A ..	24	..	36	1	12	49	73	40	80	6	27	46	107	27
	B ..	58	..	212	14	19	285	341	219	618	12	24	231	542	110
	C ..	..	38	1	..	3	42	..	..	..	..	..	..	..	..
Total ..		80	38	249	16	74	376	414	259	698	18	51	277	649	137
Kistna	A ..	35	..	109	37	14	160	195	161	620	18	56	179	676	16
	B ..	26	..	216	132	38	386	412	255	564	79	214	334	778	78
	C ..	..	3	16	6	..	25	..	..	..	..	..	..	..	..
Total ..		61	3	341	175	62	571	607	415	1,184	97	270	613	1,454	94
Total, First Circle.	A ..	170	1	301	47	33	382	552	403	1,314	47	331	460	1,646	102
	B ..	196	5	829	203	129	1,166	1,382	909	2,413	146	488	1,055	2,901	307
	C ..	..	178	40	6	3	227	..	..	..	..	..	..	..	..
Grand Total, First Circle.		366	184	1,170	256	165	1,775	1,914	1,312	3,727	193	819	1,505	4,546	409
Second Circle.															
Bellary ..	A ..	28	1	59	47	8	115	143	101	347	13	23	112	370	31
	B ..	136	..	227	280	29	536	672	384	950	79	365	463	1,315	209
	C ..	..	107	5	1	1	114	..	..	..	..	..	..	..	..
Total ..		164	108	291	328	38	765	815	485	1,297	90	388	575	1,685	240
Anantapur.	A ..	91	1	168	56	4	229	320	216	603	26	83	242	688	78
	B ..	85	1	353	151	9	514	599	469	857	34	115	603	972	96
	C ..	..	53	20	..	..	73	..	..	..	..	..	..	..	..
Total ..		176	55	541	207	13	816	919	685	1,460	60	198	745	1,665	174
Guntur ..	A ..	411	..	242	264	20	526	937	527	1,815	17	54	544	1,869	393
	B ..	424	..	631	614	62	1,307	1,731	1,080	3,377	12	32	1,092	3,409	689
	C ..	..	1	31	..	3	35	..	..	..	..	..	..	..	..
Total ..		835	1	904	878	85	1,866	2,668	1,607	5,192	29	86	1,636	5,278	1,082

A = Cases taken to Court. B = Cases compounded. C = Cases undetected.
* Revised figures furnished by the District Forest Officer.
† The variations between the closing balance of last year and these figures are due to transfers from B to A.

Register of breaches of Forest Rules during 1920-21—cont.

District.		Cases pending from 1919-20.	New cases of the year.					Disposed of during the year.						Cases pending at close of year.	
			Injury to forest by fire.	Unauthorized felling.	Unauthorized grazing.	Other offences.	Total new cases of the year.	Total cases.	Convictions.		Acquittals.		Total.		
									Cases.	Persons.	Cases.	Persons.	Cases.		Persons.
Second Circle—cont.															
Kurnool, East.	{ A .. 40 B .. 27 C .. 142	..	27	41	..	68	108	87	210	115	100	355	8		
		..	142	91	2	255	281	179	423	65	199	238	622		
Total		102	9	172	122	2	305	395	257	653	81	314	977	57	
Kurnool, South.	{ A .. 12 B .. 24 C .. 41	..	78	29	4	111	128	103	339	5	20	108	350	15	
		..	155	75	6	236	259	209	476	17	79	235	555	25	
Total		36	41	279	104	10	434	385	312	808	31	99	905	40	
Kurnool, West.	{ A .. 58 B .. 98 C .. 13	..	194	49	19	262	320	224	570	8	67	232	643	88	
		..	369	126	32	518	616	546	1,327	30	166	576	1,493	40	
Total		(a) 153	13	580	177	51	821	936	764	1,303	44	233	808	2,136	128
Total, Second Circle.	{ A .. 640 B .. 829 C .. 224	2	768	486	65	1,311	1,951	1,258	3,911	89	332	1,388	4,273	613	
		224	1,318	1,827	140	3,336	4,165	2,852	7,419	255	956	3,107	8,366	1,068	
Grand Total, Second Circle.		1,469	227	2,767	1,816	192	5,069	6,116	4,110	11,321	335	1,318	4,445	12,639	1,671
Third Circle.															
Cuddapah, North.	{ A .. 10 B .. 69 C .. 22	1	51	4	..	56	66	49	184	10	19	59	293	7	
		..	247	54	27	328	397	263	479	36	95	299	574	98	
Total		79	23	317	60	27	427	463	312	663	46	114	858	777	105
Cuddapah, South.	{ A .. 21 B .. 9 C	1	117	78	8	204	225	80	191	103	371	183	562	42	
		..	78	32	..	119	118	101	252	4	12	105	274	14	
Total		30	1	195	110	8	314	344	181	439	107	382	288	836	56
Cuddapah, West.	{ A .. 125 B .. 94 C	5	184	72	11	252	377	163	381	79	99	202	483	176	
		..	370	225	17	613	767	547	1,183	57	258	604	1,441	108	
Total		219	6	563	298	28	865	1,034	710	1,567	95	357	808	1,924	278
Nellore.	{ A .. 144 B .. 325 C .. 21	..	107	115	4	226	370	145	481	33	58	178	530	192	
		..	879	594	5	888	1,213	660	1,848	96	203	766	2,051	467	
Total		490	..	615	619	9	1,144	1,583	805	2,329	129	261	934	2,590	649
Chingleput.	{ A .. 63 B .. 91 C	..	147	54	2	203	266	227	550	6	9	233	559	33	
		..	312	371	..	683	774	642	836	44	105	656	941	88	
Total		154	1	460	425	2	886	1,040	839	1,386	50	114	919	1,500	121
Obittoor.	{ A .. 50 B .. 97 C	..	129	147	67	345	398	147	381	136	204	272	585	121	
		..	342	294	125	761	858	733	1,297	27	158	800	1,455	58	
Total		147	40	476	447	191	1,157	1,251	880	1,678	192	362	1,072	2,040	179
A = Cases taken to Court.															

A = Cases taken to Court.

B = Cases compounded.

C = Cases undetected.

* The variations between the closing balance of last year and that figures due to transfer from B to A.

† Cases withdrawn by District Forest Officer.

(a) The difference due to 27 cases relating to reserved forests of 1919-20 wrongly shown as pending at close of the year and to three cases relating to unreserved lands omitted in the return of 1919-20.

Register of breaches of Forest Rules during 1920-21—cont.

Register of breaches of Forest Rules during the year.															
District.	Cases pending from 1919-20.	Injury to forest by fire.	New cases of the year.					Disposed of during the year.						Cases pending at close of year.	
			Unauthorized felling.	Unauthorized grazing.	Other offences.	Total new cases of the year.	Total cases.	Convictions.		Acquittals.		Total.			
								Cases.	Persons.	Cases.	Persons.	Cases.	Persons.		
Third Circle—cont.															
Vellore, North.	A ..	48	278	218	3	499	517	241	682	18	53	279	715	263	
	B ..	191	208	376	5	979	1,170	263	2,990	26	71	989	2,161	181	
	C ..	..	2	..	..	26	..	..	..	..	..	..	..	..	
Total ..	239	24	878	594	8	1,504	1,717	1,224	2,752	44	124	1,288	2,876	449	
Total, Third Circle.	A ..	431	993	688	95	1,733	2,214	1,072	2,833	334	813	1,406	3,646	836	
	B ..	876	2,326	1,856	279	4,561	5,338	3,909	7,995	330	902	4,239	8,897	999	
	C ..	21	86	9	2	131	..	..	..	..	..	..	..	..	
Grand Total, Third Circle.	1,368	95	3,405	2,553	276	6,329	7,482	4,981	10,828	664	1,715	5,645	12,543	1,837	
Fourth Circle.															
Vellore, South.	A ..	57	170	59	8	236	257	124	357	7	41	264	618	28	
	B ..	274	951	275	28	1,257	1,511	865	1,957	(a) 121	215	989	2,233	542	
	C ..	..	20	..	2	32	..	..	..	..	..	..	..	..	
Total ..	331	12	1,344	325	38	1,511	1,818	1,122	2,664	131	287	1,253	2,851	565	
Vellore, West.	A ..	50	13	28	11	162	182	100	242	1	16	104	258	128	
	B ..	72	285	96	5	387	460	267	577	(2) 28	72	325	949	64	
	C ..	..	10	..	3	31	..	..	..	..	..	..	..	..	
Total ..	152	18	408	124	20	570	691	467	1,119	32	88	499	1,207	192	
Salem, East.	A ..	326	672	185	29	777	1,105	474	1,224	16	103	497	1,397	606	
	B ..	274	497	89	3	502	776	535	1,260	(a) 27	54	562	1,264	214	
	C ..	..	4	..	..	19	..	..	..	..	..	..	..	..	
Total ..	600	15	983	274	26	1,298	1,879	1,009	2,194	50	167	1,059	2,661	820	
Salem, North.	A ..	20	20	5	5	29	49	40	150	2	4	42	154	7	
	B ..	30	168	43	5	216	246	167	368	(a) 19	69	186	437	80	
	C ..	..	..	..	..	43	..	..	..	..	..	..	..	..	
Total ..	50	44	188	46	10	288	295	207	518	21	73	228	591	67	
Salem, Central.	A ..	333	189	24	1	214	547	446	204	5	24	453	928	94	
	B ..	379	708	133	6	842	1,221	680	1,681	(a) 25	60	685	1,741	536	
	C ..	..	..	..	..	29	..	..	..	..	..	..	..	..	
Total ..	712	29	892	157	7	1,085	1,768	1,106	2,585	32	84	1,138	2,669	630	
Salem, South.	A ..	458	369	80	12	461	919	458	1,200	22	62	480	1,582	439	
	B ..	478	952	211	31	1,194	1,672	1,156	2,414	(a) 21	45	1,178	2,459	496	
	C ..	..	39	7	3	60	..	..	..	..	..	..	..	..	
Total ..	936	11	1,350	298	46	2,715	3,591	1,613	3,934	43	107	1,656	4,041	935	
Total, Fourth Circle.	A ..	1,274	1,433	370	57	1,863	3,137	1,775	4,687	65	250	1,840	4,937	1,229	
	B ..	1,507	3,469	847	82	4,398	5,905	3,749	8,527	244	556	3,993	9,083	1,012	
	C ..	..	73	7	8	214	..	..	..	..	..	..	..	..	
Grand Total, Fourth Circle.	2,781	129	4,975	1,224	147	6,475	9,042	5,524	13,214	309	806	5,838	14,020	3,309	

a = Cases undetected.

R = Cases compounded.

C = Cases undetected.

A = Cases taken to Court.

The difference between column 2 and the closing balance of last year is due to (i) transfer of cases from B to A.

(ii) readjustment of Forest Divisions.

(iii) Exclusion of 95 cases relating to Tanjore.

(a) Cases withdrawn.

Register of breaches of Forest Rules during 1920-21—cont.

District.	Cases pending from 1918-19.	New cases of the year.					Disposed of during the year.						Cases pending at close of the year.
		to injury forest by fire.	Unauthorized felling.	Unauthorized grazing.	Other offences.	Total new cases of the year.	Convictions.		Acquittals.		Total.		
							Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
Fifth Circle.													
Kollegal { A ..	52	1	1	10	1	13	67	166	7	11	59	207	6
{ B ..	27	..	124	35	2	160	221	100	12	38	212	529	16
{ C ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	79	20	125	55	22	238	292	267	29	139	271	736	21
Coimbatore, North. { A ..	38	..	22	11	2	53	66	383	1	7	46	390	30
{ B ..	40	..	238	69	14	321	367	331	24	52	355	697	12
{ C ..	..	31	..	20	..	51	..	..	..	..	..	..	..
Total ..	74	31	260	100	16	419	433	378	1,028	25	59	401	1,087
Coimbatore, South. { A ..	22	..	29	8	11	46	70	54	203	1	9	55	212
{ B ..	45	..	..	..	..	..	..	..	..	..	..	..	..
{ C ..	(a) + 2	..	124	13	42	179	226	169	403	17	45	185	453
Total ..	69	7	153	21	54	234	296	223	611	18	54	241	665
Madurai { A ..	514	1	463	123	21	608	1,122	377	1,630	6	50	388	1,680
{ B ..	55	..	137	92	16	215	300	170	456	28	80	198	739
{ C ..	..	99	..	..	..	99	..	..	..	..	..	..	102
Total ..	(b) 569	100	600	215	37	952	1,422	547	2,086	34	130	581	2,216
Thiruvallur { A ..	29	1	123	36	18	178	207	165	599	7	13	172	35
{ B ..	187	1	436	163	43	643	841	1,498	20	46	661	1,544	169
{ C ..	..	22	7	1	..	30	..	..	..	..	..	..	..
Total ..	216	24	566	200	61	851	1,047	806	2,067	27	59	833	204
Total, Fifth Circle. { A ..	515	3	838	191	53	885	1,530	693	2,981	22	126	715	815
{ B ..	362	1	1,055	392	136	1,588	1,950	1,501	3,458	111	321	1,612	838
{ C ..	..	184	7	21	..	212	..	..	..	..	..	..	..
Grand Total, Fifth Circle. { A ..	1,007	188	1,704	504	189	2,685	3,480	2,194	6,419	133	441	2,327	1,158
{ B ..	..	..	..	..	..	..	..	..	..	..	..	..	..
{ C ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sixth Circle.													
Mangalore, North. { A ..	35	8	40	5	6	59	94	51	70	15	29	66	28
{ B ..	40	10	219	63	3	295	335	210	494	47	73	287	48
{ C ..	..	9	..	..	..	9	..	..	..	..	..	..	..
Total ..	75	27	259	68	9	363	429	261	564	62	102	353	76
Mangalore, South. { A ..	69	1	51	28	9	87	158	97	203	30	70	127	29
{ B ..	71	9	209	36	45	358	429	322	460	70	168	392	37
{ C ..	..	50	1	..	..	51	..	..	..	..	..	..	..
Total ..	140	60	261	121	54	496	585	419	663	100	238	519	66
Malabar, North. { A ..	1	..	..	..	1	2	..	6	..	..	2	6	2
{ B ..	..	..	7	..	27	34	34	32	36	..	32	36	..
{ C ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	1	2	7	..	28	37	36	34	42	..	34	42	..
Malabar, South. { A ..	9	..	..	..	8	8	17	14	32	2	5	16	1
{ B ..	18	..	3	..	21	24	42	36	115	6	6	42	..
{ C ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	27	..	3	..	29	32	59	50	147	8	11	58	..
The Nilgiris { A ..	16	1	18	25	10	54	70	61	177	6	7	66	4
{ B ..	37	..	75	64	18	155	195	152	385	21	38	173	22
{ C ..	..	33	..	..	..	33	..	..	..	..	..	..	..
Total ..	53	34	94	89	28	245	265	213	562	27	45	239	26
Central Coimbatore. { A ..	29	..	46	36	6	87	120	93	221	3	35	224	21
{ B ..	61	2	278	103	14	395	458	330	765	29	157	429	29
{ C ..	..	12	5	..	..	17	..	..	..	..	..	..	..
Total ..	90	14	329	139	20	501	574	423	986	32	160	524	50
Total, Sixth Circle. { A ..	159	10	155	91	40	296	456	315	739	54	112	372	83
{ B ..	227	21	792	325	128	1,266	1,498	1,112	2,255	243	440	1,355	138
{ C ..	..	106	6	..	..	112	..	..	..	..	..	..	..
Grand Total, Sixth Circle. { A ..	386	137	953	416	168	1,674	1,948	1,427	2,994	99	554	1,727	221
{ B ..	..	..	..	..	..	..	..	..	..	..	..	..	..
{ C ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total, Presidency. { A ..	3,349	26	4,268	1,878	533	6,520	9,882	5,519	18,435	602	1,250	6,121	3,748
{ B ..	3,997	29	10,318	4,940	1,791	16,116	20,113	14,038	32,038	1,329	3,063	16,361	4,752
{ C ..	21	905	343	46	17	1,311	..	..	..	..	..	..	..
Grand Total, Presidency. { A ..	367	960	14,974	6,863	1,444	28,947	29,982	16,561	48,473	1,931	5,653	21,482	8,600
{ B ..	..	..	..	..	..	..	..	..	..	..	..	..	..
{ C ..	..	..	..	..	..	..	..	..	..	..	..	..	..

A = Cases taken to Court. B = Cases compounded. C = Cases undetected.
 † The variations between the closing balances of last year and these figures are due to transfers from B to A.
 (a) Cases in which District Forest Officer had not passed orders last year.
 (b) Particulars of offences in unreserved lands have not been furnished.

ANNUAL FORM No. 72.

Forest Department, Madras Presidency.

Area of forest tracts protected from fire during 1920-21.

District.	Forest tracts.	Area protected during the previous year.	During the year under report.			Cost during the year under report.
			Area attempted to be protected.	Fires.	Actually protected.	
First Circle.						
Ganjam	Special protection	ACS. 45,772	ACS. 46,839	ACS. 1,675	ACS. 45,164	RS. 2,883
	General do.	219,709	220,039	41,607	178,432	2,009
	Total, Ganjam	265,481	266,878	43,282	223,596	4,892
Vizagapatam	Special protection	51,833	52,212	112	52,071	443
	General do.	112,881	112,653	1,941	111,612	194
	Total, Vizagapatam	164,714	164,865	1,183	163,683	637
Godavari Upper.	Special protection	516,639	532,269	81,175	451,093	10,156
	General do.	159,680	152,683	3,212	149,424	3,421
Godavari, Lower.	Special protection	81,710	82,668	244	82,324	777
	Total, Godavari, Lower.	232,390	235,204	3,456	231,748	4,198
Kistna	Special protection	11,710	14,220	41	14,179	257
	General do.	30,727	32,811	..	32,811	804
	Total, Kistna	42,437	47,031	41	46,990	1,061
Total, first Circle.	Special protection	779,054	802,177	86,246	715,931	17,160
	General do.	445,027	448,672	42,832	405,179	5,995
	Grand total	1,224,081	1,250,848	129,138	1,121,110	23,155
Second Circle.						
Bellary	Special protection	25,470	71,134	21,071	50,063	1,265
	General do.	43,935	215,183	31,014	184,169	..
	Total	69,405	286,317	52,085	234,232	1,265
Anantapur	Special protection	129,442	138,426	13,286	125,140	640
	General do.	209,021	339,344	5,797	333,547	..
	Total	338,463	477,770	19,083	458,687	640
Guntur	Special protection	(a) 512,175	511,567	142	511,425	..
	General do.	..	..	..	..	..
	Total	512,175	511,567	142	511,425	..
Kurnool, East.	Special protection	82,288	15,596	..	15,596	90
	Early burning	107,892	299,520	1,600	297,920	4,158
	General protection	391,568	305,657	1,020	304,647	..
Total	581,748	620,783	2,620	618,163	4,248	
Kurnool, South.	Special protection	185,812	147,987	10,509	137,478	6,008
	Early burning	908,619	215,658	29,525	186,123	2,608
	General protection	120,778	123,024	110	122,914	..
Total	306,619	486,664	40,144	416,520	8,616	
Kurnool, West.	Special protection	35,123	42,838	9,550	33,288	1,349
	Early burning	75,109	321,859	365	321,494	3,504
	General protection	9,168	26,717	420	26,297	18
Total	119,700	390,414	10,335	380,979	4,871	
Total	Special protection	458,465	415,981	54,416	381,565	9,352
	Early burning	489,620	837,032	31,490	805,542	9,870
	General protection	1,385,746	1,520,502	38,503	1,481,999	18
Grand total	2,333,831	2,773,515	124,409	2,649,106	19,040	
Third Circle.						
Cuddapah, North.	Special protection	170,231	275,000	10,773	264,227	5,916
	General do.	48,708	55,090	154	54,936	..
	Total	218,939	330,090	10,927	319,163	5,916
Cuddapah, South.	Special protection	170,819	218,072	17,143	200,929	3,710
	General do.	38,747	45,231	8	45,223	..
	Total	209,566	268,303	17,151	246,152	3,710

(a) This was omitted to be shown in the return for 1919-20.

Area of forest tracts protected from fire during 1920-21—cont.

District.	Forest tracts.	Area protected during the previous year.	During the year under report.			Cost during the year under report.
			Area attempted to be protected.	Fires.	Actually protected.	
<i>Third Circle—cont.</i>						
Cuddapah, West.	Special protection	ACS. 198,104	ACS. 211,496	ACS. 6,916	ACS. 205,579	RS. 3,621
	General do.	103,379	259,284	9,939	259,346	62
	Total	301,483	470,780	16,855	464,924	3,683
Nellore ..	Special protection	145,247	149,184	..	149,184	1,249
	General do.	..	..	..	..	..
	Total	145,247	149,184	..	149,184	1,249
Chingleput..	Special protection	25,453	25,523	..	25,523	1,436
	General do.	106,690	104,553	..	104,553	..
	Total	132,143	130,076	..	130,076	1,436
Chittoor ..	Special protection	105,392	120,694	6,032	114,661	2,894
	General do.	409,063	407,621	3,864	403,737	..
	Total	515,055	528,314	9,916	518,398	2,894
Vellore, North.	Special protection	38,260	31,038	1,169	29,919	487
	General do.	243,418	252,197	665	251,632	..
	Total	281,678	283,235	1,784	281,551	487
Total ..	Special protection	854,374	1,031,056	41,038	990,022	19,213
	General do.	959,635	1,145,976	14,550	1,129,426	62
	Grand total	1,814,009	2,177,031	55,588	2,119,448	19,275
<i>Fourth Circle.</i>						
Vellore, South.	Special protection	150,608	150,998	1,955	99,943	491
	General do.	190,917	193,280	1,418	191,862	..
	Total	341,525	344,278	3,373	290,905	491
Vellore, West.	Special protection	94,726	103,762	971	102,791	602
	General do.	141,001	140,872	2,639	178,233	..
	Total	235,727	244,634	3,610	281,024	602
Salem, East..	Special protection	150,033	150,332	316	150,017	988
	General do.	172,103	173,096	1,940	172,006	(a) + 196
	Total	322,136	323,428	2,256	322,023	1,177
Salem, North.	Special protection	76,304	74,850	533	74,317	1,493
	General do.	253,489	258,919	1,172	257,768	..
	Total	329,793	333,769	1,705	332,085	1,493
Salem, Central.	Special protection	106,606	107,026	2,227	104,799	941
	General do.	147,170	147,919	603	147,416	(a) + 225
	Total	253,776	254,945	2,830	252,215	1,166
Salem, South.	Special protection	127,875	127,875	784	127,091	668
	General do.	100,814	100,814	..	100,814	..
	Total	228,689	228,689	784	227,905	668
Total ..	Special protection	695,120	704,843	6,785	699,058	6,599
	General do.	1,010,494	1,014,924	6,775	1,008,149	..
	Grand total	1,705,614	1,719,767	13,560	1,707,207	6,599
<i>Fifth Circle.</i>						
Kollegal ..	Special protection	38,380	38,380	805	38,075	3,178
	General do.	107,478	425,613	12,273	413,840	..
	Total	145,858	464,003	13,078	451,915	3,178

...the first season owing to change in the "year" under

Area of forest tracts protected from fire during 1920-21—cont.

District.	Forest tracts.	Area protected during the previous year.	During the year under report.			Cost during the year under report.
			Area attempted to be protected.	Fires.	Actually protected.	
<i>Fifth Circle—cont.</i>						
Coimbatore, North.	Special protection	ACS. 10,271	ACS. 11,581	ACS. 174	ACS. 11,407	RS. 983
	General do.	562,418	575,081	9,907	565,174	2,419
	Total	572,689	586,662	10,081	576,581	3,402
Coimbatore, South.	Special protection	47,233	47,350	910	46,440	1,309
	General do.	187,787	200,993	1,432	199,661	..
	Total	235,020	248,343	2,342	246,001	1,309
Madurai.	Special protection	162,868	175,930	10,291	165,639	5,170
	General do.	243,996	246,423	4,323	242,100	(a) — 33
	Total	406,864	422,353	14,614	407,739	5,137
Tinnevely.	Special protection	33,979	35,688	3,052	32,636	4,389
	General do.	204,167	206,712	2,779	203,933	(a) + 30
	Total	238,146	242,400	5,831	236,569	4,419
Total	Special protection	292,731	308,929	14,732	294,197	15,026
	General do.	1,608,846	1,654,822	30,714	1,624,108	2,419
	Total	1,901,577	1,963,751	45,446	1,918,305	17,445
<i>Sixth Circle.</i>						
Mangalore, North.	Special protection	31,695	33,496	235	33,711	751
	General do.	198,953	198,533	956	197,608	383
	Total	230,648	232,029	1,240	231,319	447
Mangalore, South.	Special protection	103,938	107,342	2,792	104,550	1,400
	General do.	170,629	171,458	1,956	169,502	104
	Total	274,567	278,800	4,748	274,052	833
Malabar, North.	Special protection	138,622	139,596	30,060	109,546	5,884
	General do.	104,027	105,076	21	105,055	3,753
	Total	242,649	244,672	30,081	214,601	9,637
Malabar, South.	Special protection	74,154	76,657	31,543	45,114	5,274
	General do.	114,203	102,103	342	101,161	3,512
	Total	188,357	178,760	35,885	146,275	8,786
The Nilgiris.	Special protection	114,203	102,103	342	101,161	3,512
	General do.	116,627	129,666	426	129,240	1,155
	Total	230,830	231,769	768	230,401	4,667
Coimbatore, Central.	Special protection	114,203	102,103	342	101,161	3,512
	General do.	116,627	129,666	426	129,240	1,155
	Total	230,830	231,769	768	230,401	4,667
Total	Special protection	566,639	564,270	65,633	498,337	21,011
	General do.	486,003	499,687	3,337	496,350	2,435
	Grand total	1,052,642	1,063,957	68,970	994,687	23,446
Total, Presidency.	Special protection	3,615,983	3,827,265	268,845	3,558,410	87,361
	General do.	5,885,751	6,281,932	126,771	6,155,211	8,629
	Early burning	489,820	837,032	31,490	805,542	9,870
	Grand total, presidency	10,028,354	10,946,229	427,106	10,509,163	105,860

(a) Added or subtracted to tally with Accountant-General's audited figures.
 * Cost of fire-tracing Mysore-South Kanara boundary.
 † Cash recovery of service payments.

REMARKS.—The period excludes the most dangerous part of the fire season owing to change in the "year" under report.

(a) Expenditure incurred for clearing top lines.
 (b) Deductions to tally with the audited figure of Accountant-General.

ANNUAL FORM No. 75.

Forest Department Madras Presidency.

Area closed and open to grazing during 1920-21.

District.	Closed to all animals.		Open to grazing			
			Of all animals (except goats).		Of all animals except browsers (sheep and goats).	
	Whole year.	Part of year.	Whole year.	Part of year.	Whole year.	Part of year.
FIRST CIRCLE.						
Reserved forests.						
	SQ. MTS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.
Ganjām	86	..	539	..	..	..
Vizagapatam	18	..	281	..	9	..
Godavari, Upper	..	..	585	..	..	..
Do. Lower	21	..	378	..	..	..
Kistna	52	8	204	..	..	..
Total	177	8	1,687	..	9	..
Reserved lands.						
Vizagapatam	..	..	2*	..	..	..
Godavari, Upper	..	..	247	..	..	..
Do. Lower	..	..	87	..	..	..
Kistna	..	..	1	..	..	..
Total	..	..	337	..	..	..
SECOND CIRCLE.						
Reserved forests.						
Bellary	45	..	..	527	..	..
Anantapur	86	1	659	1	..	..
Guntur	110	..	399	..	290	..
Kurnool, East	123	189	658	..	..	..
Do. South	551	..	209	..	..	..
Do. West	166	..	689	..	..	..
Total	1,081	190	2,215	400	527	290
Reserved lands.						
Bellary	8	..	..	..	..	..
Total	8	..	..	..	..	..
THIRD CIRCLE.						
Reserved forests.						
Cuddapah, North	75	..	521	..	..	..
Do. South	92	..	370	..	..	..
Do. West	64	..	637	..	..	..
Nellore	222	458	38	..	..	..
Chingleput	83	..	14	105	..	..
Chittoor	162	123	510	..	..	..
Vellore, North	127	8	323	..	..	..
Total	825	589	2,493	105	..	..
Reserved lands.						
Cuddapah, North	..	..	1	..	..	..
Do. West	1	..	..	..	..	..
Nellore	11	..	..	..	..	..
Total	12	..	1	..	..	..

* Leased forests.

FOREST DEPARTMENT

Area closed and open to grazing during 1920-21—cont.

District.	Closed to all animals.		Open to grazing			
			Of all animals (except goats).		Of all animals except browsers (sheep and goats).	
	Whole year.	Part of year.	Whole year.	Part of year.	Whole year.	Part of year.
FOURTH CIRCLE.						
Reserved forests.						
	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.
Vellore, South	77	..	404	..	..	..
Do. West	15	..	368	..	..	..
Salem, East	108	..	467	..	..	..
Do. North	49	..	472	..	..	..
Do. Central	37	..	369	..	..	..
Do. South	48	(b)	291	..	..	..
Total	340	..	2,371	..	..	..
Reserved lands.						
Vellore, South	(b)	..	1	..	..	..
Do. West	(b)	..	12	..	..	..
Salem, East	..	..	(b)	..	..	..
Do. North	6	..	6	..	..	..
Do. Central	..	..	19	..	..	..
Do. South	..	..	..	..	..	..
Total	6	..	38	..	..	..
FIFTH CIRCLE.						
Reserved forests.						
	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.
Kollegal	82	..	649	..	..	..
Coimbatore, North	40	..	877	..	14	..
Do. South	260	..	190	..	..	2
Madura	101	..	359	..	1	..
Tinnevely	301	28	93	..	15	2
Total	774	28	2,368	..	15	2
Reserved lands.						
Tinnevely	2	..	..	..	..	..
Total	776	28	2,368	..	15	2
SIXTH CIRCLE.						
Reserved forests.						
	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.	SQ. MLS.
Mangalore, North	10	..	..	..	349	..
Do. South	8	..	..	..	431	..
Malabar, North	57	..	..	..	206	..
Do. South	144	..	..	..	..	..
The Nilgiris	23	7	389	..	..	..
Coimbatore, Central	136	..	269	..	..	..
Total	378	7	658	..	986	..
Reserved lands.						
Malabar, South	20	..	73	..	..	..
The Nilgiris	9	..	..	..	..	..
Total	29	..	73	..	..	..
Grand Total, Presidency	3,627	822	12,541	506	1,537	292

(a) Represents area closed out for cultivation.

(b) Below one square mile.

At enhanced or special rates.						Grazing on payment					
Districts.	Buffaloes.	Cows and bullocks.	Goats and sheep.	Other animals.	Fees received.	Buffaloes.	Cows and bullocks.	Goats and sheep.	Other animals.	Fees received.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
FIRST CIRCLE.											
Reserved forests.					Rs.						Rs.
Ganjara ..	..	(a) 879	..	..	..	7,920	34,763	5 146	..	9,502	
Vizagapatam ..	(b) 31	(b) 554	(b) 394	..	440	899	13,382	5 521	..	2,896	
Godavari, Upper ..	..	..	..	..	203	..	..	..	..	..	
Do. Lower ..	(c) 1,470	(c) 706	..	..	1,368	..	..	..	..	37	
..	(d) 6,302	(d) 4,186	..	..	4,197	..	..	..	..	..	
..	(e) 319	(e) 5,155	(e) 2,250	..	1,140	5,004	16,786	5 12,379	..	6,206	
Kistna ..	..	(d) 1,553	..	..	..	..	..	..	..	1,100	
..	..	..	..	..	..	..	..	..	..	156	
..	..	..	..	..	..	..	..	..	..	541	
Total ..	8,122	15,913	5 2,644	..	10,348	13,883	64,532	5 13,046	..	18,604	
Reserved lands.											
Godavari, Upper ..	..	..	..	..	..	..	..	..	..	..	
Do. Lower ..	..	..	..	..	..	..	..	..	..	41	
Total ..	..	..	..	..	..	..	..	..	..	41	
Unreserved lands.											
anjam ..	..	..	..	..	..	..	..	..	..	69	
Godavari, Lower ..	(b) 8,329	(b) 5,946	..	..	5,651	..	..	..	..	1,418	
Kistna ..	..	..	..	..	..	1,344	345	5 100	..	578	
Total ..	8,329	5,946	..	..	5,651	1,344	345	5 100	..	578	
Grand Total ..	16,451	15,959	5 2,644	..	15,999	15,227	65,277	5 13,146	..	19,182	
SECOND CIRCLE.											
allary ..	(a) 422	2,475	1,090	..	3,864	7,146	32,465	60,417	..	14,431	
..	..	..	..	..	..	..	..	..	..	1,567	
antapur ..	(b) 2,927	64,229	76,639	..	51,201	..	..	..	Fodder grass.	7,126	
..	(c) 3,464	43,234	48,309	..	55,737	(1) 1,415	3,153	25,503	Panchayat fees.	937	
..	..	..	..	..	..	..	..	..	Fodder grass.	2,799	
..	..	..	..	..	..	..	..	..	Panchayat fees.	4,434	
untar ..	..	..	..	..	..	..	..	..	Kancha rent.	(2) 6,693	
..	..	..	..	..	..	..	..	..	Fodder grass.	1,139	
..	..	..	..	..	..	..	..	..	Duplicate certi-	5,432	
..	..	..	..	..	..	..	..	..	cate fees for lost	7	
..	..	..	..	..	..	..	..	..	permits.	..	
arnool, East ..	(d) 1,202	16,721	..	..	28,123	(3) 1,582	17,739	15,173	Permit fees.	99	
..	..	..	..	..	..	..	..	..	..	13,849	
Do. West ..	(a) 40	8,900	..	..	..	..	..	..	Fodder grass.	230	
..	(4) 217	1,265	..	..	8,980	(3) 5,016	26,288	34,883	Panchayat fees.	2,325	
Do. South ..	(e) 2,032	16,531	746	..	593	..	..	..	..	25,627	
..	(4) 213	203	18,787	..	14,686	..	(6) 2,033	342	..	390	
..	..	..	551	..	221	..	..	..	..	2,204	
Total ..	10,517	1,62,968	1,46,122	..	1,63,405	15,159	81,678	1,34,518	..	89,284	
Notes for First C. —											

ates for First Q. —

$S = \text{Shen.}$

C = GOTH.

* Sale-proceeds of fodder grass.

(1) The full rates are 6 annas per buffalo, 3 annas per cow or bullock and 1 anna per goat.
(2) The enhanced or special rates are 10 annas per buffalo, 5 annas per cow or bullock and 2 annas per goat.

(2) The enhanced or special rates are :—(a) 8 annas per cow or bullock and 1 anna 6 pies per sheep.

(c) 12 annas per buffalo, 8 annas per cow or bullock and 2 annas per sheep.

(3) The privileged rates are:—
 (a) 8 annas per buffalo, 4 annas per cow or bullock and 2 annas per sheep.
 (b) 12 annas per buffalo, 6 annas per cow or bullock and 3 annas per sheep.
 (c) Re. 1 per plough bullock.

(3) The privileged rates are:—

(f) 1 anna per buffalo, 2 annas per cow or bullock, 1 anna per sheep.

① 1 anna per buffalo, cow or bullock, 1 anna per sheep.

[illegible]

Notes for Second Circle—(1) Full rates As. 8 per buffalo, As. 4 per cow and As. 2 per sheep.

(2) This includes an amount of Rs. 1,437 collected in 1919-20.

(3) Full rates As. 12 per buffalo, As. 8 per cow and As. 4 per sheep.

(4) Difference of fees collected between the enhanced rate for permits issued in 1919-20 at old rates.

(5) Collection from Panchayatdars.

(6) Sugali cattle Rs. 1 per cow and As. 8 per sheep.

The enhanced rates are :—(a) Rs. 2 per buffalo, Re. 1 per cow and As. 8 per sheep.

(b) Re. 1 per buffalo, As. 8 per cow and As. 4 per sheep

(c) Rs. 1-8-0 per buffalo, As. 12 per cow and As. 6 per sheep.

(d) Rs. 2 per buffalo and Re. 1 per cow.

(c) As. 12 per buffalo, As. 8 per cow and As. 4 per sheep.

NOTE.—According to this statement the number of animals licensed to graze on payment are 25,676 buffaloes; 244,686 cows and bullocks and 280,444 sheep. These figures do not agree with the figures given in the abstract printed at p. XXIX of the appendices.

Return of grazing in the

Grazing on payment.

Grazing on payment.

District.		At enhanced or special rates.					At full rates.				
		Buffaloes.	Cows and bullocks.	Sheep.	Other animals.	Fees received.	Buffaloes.	Cows and bullocks.	Sheep.	Other animals.	Fees received.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
THIRD CIRCLE.						RS.					RS.
Cuddapah, North ..	..	(a) 8,326	..	..	..	8,326	5,011	12,977	50,787	..	9,074
Do. South ..	..	(a) 2,217	..	..	..	2,217	484	17,077	14,130	..	257
Do. West ..	(a) 3	{ (a) 7,326 (a) 292	..	..	..	7,443	2,792	26,498	70,855	..	4,821
Nellore ..	(c) 21	(a) 918	(a) 88	..	..	993	..	..	..	..	10
Chingleput ..	..	..	..	..	..	..	..	..	..	..	12,647
Chittoor ..	(b) 1,278	(A) 61,065	(a) 23,958	..	..	39,300	..	..	10	..	12
Vellore North ..	(h) 403	(h) 32,468	(h) 21,551	..	..	22,800	80	912	..	..	1,288
Total ..	1,795	115,648	48,577	..	..	81,169	8,337	58,061	135,782	..	1,268
FOURTH CIRCLE.											
Vellore, South ..	{ (a) 40 (b) 182 (c) 77 (d) .. (e) .. (f) 272 (g) 2	{ 1,545 19,420 5,393 2,316 595 20,050 5,136 9,467 2,296	{ 3,184 6,887 3,098 1,598 541 2,412 ..	..	{ 1,206 11,619 5,660 2,348 523 10,737 3,022 9,467 574	{ 89 3,528 1,638	{ 7,950 16,877 10,174	{ 5,432 1,249 5,141	..	{ 2,038 4,695 2,550 ..	
Do. West ..	(h) 261	31,345	2,741	..	18,662	13	1,950	..	..	..	3,004
Salem, East ..	(c) 113	6,194	3,755	..	5,223	..	..	..	..	..	298
Do. North ..	(d) 574	31,455	535	..	16,242	..	..	..	..	..	1,600
Do. Central ..	(f) 189	32,154	15,288	..	19,985	..	..	..	..	..	393
Do. South ..	(h) 3	13,498	2,944	..	5,421	..	..	..	..	..	6,886
Deduct value of permits exchanged by Permit issuing officers.	{ (a) 3 (h) 21	{ 487 12,174	{ 1,617 21,762	..	{ 488 12,992	{ 375	{ 8,500	{ 6,135	..	{ (m) 47 2,319 (n) 10,290 4 123	
Total ..	1,707	194,176	67,062	..	1,27,270	5,644	45,051	17,357	..	37,028	

Notes.—(1) The full rates

* The rates shown

Notes.—(1) The full rates are 6 annas per buffalo; 3 annas per cow, bullock or other animal and 1½ annas per sheep.
(2) The privileged rates are 1 anna per cow; 6 pies per sheep in North Cuddapah, 1½ annas per cow in West Cuddapah.

(a) Rupees 2 per buffalo; 1 rupee per cow, bullock or other animal, 8 annas per sheep.
(b) Penning licence fee.
(c) Value of fodder grass.
(d) Annas 6 per cow.
(e) Panchayat fees.

(f) Rupees 1-8-0 per buffalo.
(g) Kancha rent.
(h) Rupee 1 per buffalo, 8 annas per cow and 4 annas per sheep.
(i) Royalty on hay.

* The rates should be specified at the foot of the statement.

Rate of enhanced fees are as follows:—
(a) Cow annas 6, buffalo annas 12 and sheep annas 3.
(b) Cow annas 8, buffalo 1 rupee and sheep annas 4.
(c) Cow annas 12, buffalo Rs. 1-8-0 and sheep 6 annas.
(d) Cow 1 rupee.
(e) Panchayat amount.
(f) Cow annas 8, buffalo annas 12 and sheep annas 3.
(g) Cow annas 4.
(h) Cow annas 9, buffalo Re. 1-2-0 and sheep As. 4-6.

(i) Grazing assessment of hill villages of Salem district including Cheteri hills and Atur Kalroyans.
(j) Amount realized in Kodiakadu and Talainayar reserved forests
(k) Grazing lease amount.
(l) Cow annas 8, buffalo annas 12 and sheep annas 4.
(m) Grazing assessment collected for the reserves of Atur Kalroyans of East Salem division collected in Central Salem.
(n) Grazing revenue collected by revenue officials.

State forests during 1920-21—*cont.*

Number of animals.						Grazing fee. Number of animals.													Grand total of value at full rates.
At privileged rates.						By right under settlement.						During pleasure of Government or otherwise than under settlement.							
Buffaloes.	Cows and bullocks.	Sheep.	Other animals.	Fees received.		Buffaloes.	Cows and bullocks.	Sheep.	Other animals.	Value of fees at full rates.	Buffaloes.	Cows and bullocks.	Sheep.	Other animals.	Value of fees at full rates.	Total value of fees at full rates.			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)		
				Rs.	P.					Rs.					Rs.	P.	Rs.		
..	500	150	..	23	70	..	..	..	..	..	190	45	850	..	169	152	17,918		
..	..	..	..	..	..	..	723	..	..	136	..	..	..	..	..	..	7,214		
..	200	..	..	19	38	..	..	..	..	..	..	..	..	..	..	..	21,428		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	74,464		
..	..	..	..	..	..	..	..	..	..	..	..	81	..	..	15	15	25,736		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	39,721		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	26,443		
..	500	150	..	..	108	..	723	..	..	136	130	126	850	..	174	174	2,12,924		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	30,119		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	27,327		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	37,088		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16,242		
..	..	..	..	..	..	..	..	..	..	..	..	150	..	..	28	28	27,564		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25,961		
..	..	..	..	..	..	..	..	..	..	..	..	150	..	..	28	28	1,64,321		

Return of grazing in the

Grazing on payment.

District.	At enhanced or special rates.					At full rates.				
	Buffaloes	Cows and bullocks	Goats and sheep	Other animals	Fees received.	Buffaloes	Cows and bullocks	Goats and sheep	Other animals	Fees received.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Fifth Circle.										
Kollegal ..	(a) 2,522	(a) 55,450	() 2,348	..	Rs. 50,824	..	..	..	..	..
Coimbatore, North ..	(a) 4,891	(a) 67,584	(a) 19,193	..	(e) 13	..	..	..	..	..
Do. South ..	(a) 130	(a) 5,021	(a) 174	..	(e) 2,654	..	..	..	..	..
Madura ..	(c) 72	(c) 18,035	(c) 11,131	..	(f) 1,994	..	..	..	..	..
Tinnevely ..	(a) 271	(a) 5,981	(a) 2,511	..	(f) 575	110	5,830	13,947	..	2,444
Total ..	7,910	1,72,930	49,957	479	1,08,436	110	5,830	13,947	..	2,444
Sixth Circle.										
<i>Reserved forests.</i>										
Mangalore, North ..	(a-1) 1,506	13,918	..	..	5,823	..	..	..	..	..
Do. South ..	(a-1) 2,546	17,145	..	..	8,621	..	..	..	..	..
Malabar, North ..	(b-1) 2,332	4,569	..	..	4,587	..	..	..	..	..
The Nilgiris ..	..	(b-1) 521	..	..	260	11,905	17,778	S 1,840	..	7,078
Central Coimbatore ..	(e-1) 166	(g-1) 2,598	S 527	..	2,821	..	..	..	..	(e-1) 111
..	(d-1) 30	6,324	S 1,900	..	1,931	..	..	..	..	(e-1) 2,791
Total ..	6,580	50,672	5,356	..	27,511	11,921	17,825	1,840	..	11,782
<i>Reserved lands.</i>										
The Nilgiris ..	..	(b-1) 820	..	..	319	118	708	..	..	301
Total, VI Circle ..	6,580	51,292	5,286	..	27,831	12,039	18,533	1,840	..	12,083
Grand total, Presidency ..	44,360	7,16,015	3,09,738	479	5,27,132	56,855	2,71,437	3,16,960	..	2,94,720

Full rates:—As. 6 per buffalo, As. 3 per cow or bullock and As. 1-6 per sheep in Tinnevely and As. 4 per cow limit in Madura.

- (a) Re. 1 per buffalo, As. 8 per cow or bullock and As. 4 per sheep.
 (b) Rs. 2 per buffalo and Re. 1 per cow or bullock.
 (c) Rs. 1-4 0 per buffalo, As. 10 per cow or bullock and As. 8 per sheep.
 (d) As. 8 per buffalo, As. 4 per cow or bullock or other animals and As. 2 per sheep.
 (e) Sale proceeds of fodder grass.
 (f) Revenue from reserves handed over to panchayat management.
 (g) Revenue by lease of the right to graze in Kama-kattiparamba reserved forest.
 (h) Added to tally with Accountant-General's audited figures.
- Full rates.—Buffaloes As. 6 each, cows and bullocks As. 3 each and sheep As. 1-6 each.
 (a-1) As. 10 per buffalo and As. 6 per cow.
 (b-1) Re. 1 per buffalo, As. 8 per cow and As. 4 per sheep.
 (c-1) Revenue from forests handed over to panchayat management.
 (d-1) Calves half rates.
 (e-1) Fodder grass.
 (f-1) 3,525 cows for 2 days at As. 6 per 100 per diem, Rs. 26 and 14,000 sheep for 2 days at As. 3 per diem, Rs. 52.
 (g-1) Re. 2 per buffalo, Re. 1 per cow and As. 8 per sheep.
 (h-1) As. 8 per buffalo, As. 4 per cow and As. 2 per sheep.
 (i-1) Elephant.

State forests during 1920-21—cont.

State forests during 1920-21—cont.										Grazing free. Number of animals.									
Number of animals.																			
At privileged rates.					By right under settlement.					During pleasure of Govern- ment or otherwise than under settlement.					Total value of fees at full rates.		Grand total of value at full rates.		
Buffaloes.	Cows and bullocks.	Goats and sheep.	Other animals.	Fees received.	Buffaloes.	Cows and bullocks.	Goats and sheep.	Other animals.	Value of fees at full rates.	Buffaloes.	Cows and bullocks.	Goats and sheep.	Other animals.	Value of fees at full rates.	Total value of fees at full rates.				
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)		
				RS.	RS.					RS.					RS.	RS.	RS.		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	30,847		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	44,271		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3,390		
..	..	..	..	..	..	..	..	..	..	..	245	2,901	315	28	894	..	25,182		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8,083		
..	..	..	..	..	..	..	..	..	..	..	245	2,901	315	28	894	..	1,11,773		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5,823		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8,021		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4,054		
..	3,525	S 14,000	..	78	1,973	..	..	..	..	..	80	..	..	..	..	..	10,352		
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12,546		
..	3,525	14,000	..	78	1,978	..	..	..	..	..	80	..	..	..	..	..	41,306		
..	..	..	..	..	..	..	..	..	..	..	1,716	..	..	..	..	..	1,254		
..	3,525	14,000	..	78	1,973	..	..	..	..	..	1,790	..	..	..	..	..	42,650		
7,420	60,989	19,008	..	8,398	16,887	1754	3,143	5,700	..	5,795	7,714	58,078	1,421	29	14,211	13,809	3,57,745		

Abstract of animals permitted to grazing on payment in reserved forests and reserved lands in the Presidency.

Circle.	Buffaloes.	Bullocks and cows.	Sheep.	Other Animals.	Total.
First Circle ..	39,098	140,300	21,248	..	200,646
Second ..	30,421	335,051	386,724	..	762,196
Third ..	10,132	174,212	184,509	..	368,853
Fourth ..	7,351	239,227	85,019	..	331,597
Fifth ..	8,026	178,810	51,044	479	241,559
Sixth ..	18,952	73,354	21,126	..	113,432
Grand total ..	113,980	1,150,954	752,970	479	2,018,083

ANNUAL REPORT OF THE

ANNUAL FORM No. 75.

Forest Department, Madras Presidency.

Area under artificial reproduction, 1920-21.

District.	Area in acres.				Expenditure during the year.		Total expenditure from commencement.		Revenue during the year.	Total revenue from date of creation of plantation.
	On 1st July 1920.	Added during the year.	Excluded during the year.	Area on 31st March 1921.	Creation.	Upkeep.	Creation.	Upkeep.		
FIRST CIRCLE.										
A.—Regular Plantations.										
Vizagapatam ..	51	..	..	51	..	..	2	42	55	3,707
Godavari, Lower ..	152	..	38	114	..	98	31,150	15,573	3,311	77,832
Kistna ..	34	5	..	39	98	114	1,755	7,618	84	3,653
Total ..	237	5	38	204	98	212	32,887	23,233	3,453	85,192
B.—Taungya Plantations.										
Ganjam ..	2	..	..	2	..	..	3	..	..	..
Godavari, Upper ..	..	43	..	13	235	..	235	..	..	..
Total ..	2	43	..	15	235	..	238	..	..	..
C.—Cultural Operations.										
Ganjam ..	91	20	..	111	75	586	..	75	694	..
Vizagapatam ..	45	6	23	58	37	..	(a) 224	..	..	..
Godavari, Upper ..	109	22	105	22	79	..	(a) 101	..	..	..
Do. Lower ..	2,502	51	..	2,553	131	..	2,808	1,032	..	..
Kistna ..	1,475	279	1,552	162	147	58	(a) 579	(a) 58	..	(b) 719
Total ..	4,222	378	1,784	2,815	400	614	3,785	1,784	..	719
Grand total ..	4,161	426	1,822	3,065	794	856	33,911	25,017	3,453	85,911
SECOND CIRCLE.										
A.—Regular Plantations.										
Bellary ..	679	..	..	679	..	..	9,423	53,086	..	6,674
Guntur ..	618	..	(c) 79	539	..	..	(d) 18,221	(d) 13,781	(e) 1,343	(d) 18,332
Kurnool, East ..	130	..	..	130	..	..	38,471	26,045	..	..
Do. West ..	1,430	..	..	1,430	..	1,430	2,92,264	66,872	705	18,603
Total ..	2,787	..	79	2,708	..	1,430	3,58,369	1,69,784	2,048	43,509
B.—Taungya Plantations—Nil.										
C.—Cultural Operations.										
Bellary ..	6,790	..	..	6,790	..	..	27,581	3,006	..	..
Anantapur ..	148	(e) 50	(e) 58	140	52	80	343	80	..	..
Guntur ..	..	..	..	..	48	..	1,814	8	..	..
Kurnool, East ..	437	99	..	536	286	..	10,945	3,561	..	..
Do. South ..	527	..	..	527	146	..	5,309	1,755	..	..
Do. West ..	5,096	212	..	5,302	..	446	23,475	3,142	..	..
Total ..	12,992	361	58	13,295	632	526	69,888	11,556	..	..
Grand total ..	15,779	361	137	16,003	632	2,016	4,28,257	1,81,111	2,048	43,509
THIRD CIRCLE.										
A.—Regular Plantations.										
Cuddapah, North ..	10	..	..	10	..	..	560	..	..	..
Do. South ..	38	..	..	38	..	3,310	23	3,997	1,705	5,138
Do. West ..	..	..	..	..	..	..	..	..	..	..
Vellore ..	1,730	..	(f) 50	1,680	..	4	1,56,709	17,254	12,379	2,84,745
Chingleput ..	..	..	..	..	..	25	..	..	..	..
Chittoor ..	61	..	..	61	..	..	..	..	..	..
Vellore, North ..	310	15	..	325	842	367	..	2,038	..	51
Total ..	2,149	15	50	2,114	846	4,763	1,81,579	1,63,640	15,431	3,82,096
(a) Excludes expenditure on ..										

(a) Excludes expenditure on areas abandoned.
 (b) Revised figures furnished by the District Forest Officer.
 (c) Casuarina plantation filled over during the year.
 (d) Revised figures (due to wrong totals adopted in 1919-20).
 (e) Dipping of sandal seeds.
 (f) Sold.

FOREST DEPARTMENT

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Area under artificial reproduction, 1920-21—cont.

District.	Area in acres.				Expenditure during the year.		Total expenditure from commencement.		Revenue during the year.	Total revenue from date of creation of plantation.
	On 1st July 1920.	Added during the year.	Excluded during the year.	Area on 31st March 1921.	Creation.	Upkeep.	Creation.	Upkeep.		
THIRD CIRCLE—cont.										
B.—Taungya Plantations—Nil.										
C.—Cultural Operations.										
Cuddapah, North ..	ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.	RS.	RS.
Do. South ..	..	51	..	51	136	..	136	..	..	..
Do. West ..	..	..	..	..	..	..	..	..	..	..
Nellore ..	527	..	110	417	..	..	2,767	..	..	..
Chingleput ..	..	..	..	..	..	..	..	..	..	..
Chittoor ..	3,484	1,071	16	4,539	1,604	363	2,820	1,178	..	..
Vellore, North ..	1,537	..	..	1,537	..	..	938	154	..	579
Total ..	5,548	1,122	126	6,544	1,740	363	6,662	1,332	..	579
Grand total ..	7,697	1,137	176	8,658	2,586	5,126	1,88,241	1,64,972	15,431	3,82,675
FOURTH CIRCLE.										
A.—Regular Plantations.										
Vellore, South ..	72	29	..	92	385	125	2,924	693	786	5,640
B.—Taungya Plantations.										
Vellore, South ..	6	2	..	8	..	..	50	..	..	..
C.—Cultural Operations.										
Vellore, South ..	19,925	3,202	..	23,127	72	..	1,213	..	..	..
Do. West ..	991	150	..	1,141	12	..	137	..	..	..
Salem, East ..	13,037	882	..	13,919	130	104	3,182	3,533	..	..
Do. Central ..	1,233	330	..	1,563	168	128	9,794	403	..	..
Do. South ..	302	..	..	302	..	..	68	..	..	..
Total ..	35,488	4,564	..	40,052	382	232	14,389	3,936	..	..
Grand total ..	35,568	4,586	..	40,152	767	357	17,363	4,629	786	5,640
FIFTH CIRCLE.										
A.—Regular Plantations.										
Coimbatore, South ..	64	28	11	81	243	387	1,369	775	..	..
Madura ..	1,329	120	..	1,446	1,947	267	64,548	8,703	212	9,524
Tinnevely ..	5,358	4	..	5,362	27	446	7,920	3,248	2,491	21,880
Total ..	6,748	152	11	6,889	2,217	1,100	73,837	12,726	2,708	31,404
B.—Taungya Plantations.										
Tinnevely ..	23	..	..	23	..	..	47	138	..	..
C.—Cultural Operations.										
Kollegal ..	352	21	10	363	186	..	1,008	196	..	..
Coimbatore, North ..	828	216	..	1,044	698	71	2,843	798	..	..
Do. South ..	10	30	..	40	45	48	223	170	..	..
Tinnevely ..	4,381	218	..	4,599	131	306	5,778	6,733	50	155
Total ..	5,577	485	10	6,052	1,055	425	9,847	7,897	50	155
Grand total ..	12,348	637	21	12,964	3,272	1,525	83,731	20,761	2,758	31,559
SIXTH CIRCLE.										
A.—Regular Plantations.										
Mangalore, South ..	52	..	..	52	..	..	10,357	..	..	516
M. Labar, North ..	379	..	..	379	451	423	15,989	21,026	3,837	14,661
Do. South ..	6,798	83	..	6,881	11,153	6,603	5,75,596	5,73,589	3,32,214	39,00,505
The Nilgiris ..	1,743	..	..	1,743	..	614	6,462	3,14,766	30,685	8,57,915
Total ..	8,972	83	..	9,055	11,604	7,640	6,08,404	9,09,881	3,66,880	47,78,597

NOTE.—The changes in the opening balances are due to readjustment of Divisions.

* Revised figures furnished by the District Forest Officer with the remark that some of the plantations shown in the previous year's return exist only on paper.

(a) Due to adoption of the correct area of Vannathiparai tank plantation.

(b) Amount pertaining to areas excluded from the plantations in 1919-20 have been deducted.

Area under artificial reproduction, 1920-21—*cont.*

District.	Area in acres.					Expenditure during the year.		Total expenditure from commencement.		Revenue during the year.	Total revenue from date of creation of plantation.
	On 1st July 1920.	Added during the year.	Excluded during the year.	Area on 31st March 1921.		Creation.	Upkeep.	Creation.	Upkeep.		

SIXTH CIRCLE—*cont.*B. *Taungya Plantations.*

	ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.	RS.	RS.
Mangalore, South ..	50	7	..	57	36	..	37	..	..	..
Malabar, North ..	635	..	..	635	..	9	..	10,896	..	..
The Nilgiris ..	32	..	..	32	..	262	504	4,433	..	..
Coimbatore, Central.	54	..	..	54	..	129	..	129	..	..
Total ..	771	7	..	778	36	400	541	15,457	..	..

C. *Cultural Operations.*

	ACS.	ACS.	ACS.	ACS.	RS.	RS.	RS.	RS.	RS.	RS.
Mangalore, North ..	586	223	226	583	1,157	14	1,571	14	..	..
Do. South ..	640	429	..	1,069	2,484	..	4,024	..	..	..
Malabar, North ..	4,590	12	..	4,602	149	74	4,804	8,598	..	..
The Nilgiris ..	45	..	..	45	37	..	327	..	..	..
Coimbatore, Central.	399	464	280	553	2,551	17	4,074	1,197	..	..
Total ..	6,260	1,128	506	6,882	6,378	105	14,700	9,809	..	..
Grand total ..	16,003	1,218	506	16,715	18,018	8,145	6,23,646	9,31,647	3,66,636	47,73,597
Grand total, Regular Plantations ..	20,965	276	178	21,062	15,160	15,330	12,58,000	12,75,257	3,91,057	53,21,438
Taungya Plantations ..	802	52	..	854	273	400	877	15,595	..	..
Cultural operations ..	70,087	8,038	2,484	75,641	10,647	2,296	1,18,571	30,318	60	1,453
Grand total for the Presidency †	91,854	8,365	2,662	97,557	26,069	18,025	13,77,448	13,31,176	3,91,107	53,22,891

* Excludes Rs. 2,005 relating to areas abandoned.

† Revised figure.

ANNUAL FORM No. 76.

Forest Department, Madras Presidency.

• Outturn (in thousands of cubic feet solid) of timber and fuel during the year 1920-21 and agency of exploitation.

Outturn (in thousands of cubic feet solid) of timber and fuel

Output (in thousands of cubic feet solid) of timber and fuel.															
Division.	Timber in the rough logs.					Timber in the rough poles.					Sawn or square timber.				
	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(In thousands of cubic feet.)															
Ganjam	122	74	2	..	288	135	34	..	28	197	..	..	..	..	4
Vizagapatam ..	1	..	..	..	1	..	1	..	..	1	..	..	..	..	..
Godavari, Upper ..	6	..	..	..	6	3	..	..	..	..	..	..	..	..	..
Do. Lower ..	1	33	..	..	34	..	..	..	..	..	..	..	..	..	..
Kistna	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	200	107	2	..	309	138	35	..	28	201	..	..	..	4	4
First															
I. Reserved															
Ganjam	3	10	1	..	23	5	2	..	9	16	..	..	..	..	..
Vizagapatam ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Godavari, Upper ..	46	1	..	..	47	2	3	..	..	5	..	..	..	..	..
Do. Lower ..	..	222	11	..	263	1	..	..	..	1	..	17	..	..	17
Kistna	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total	49	242	13	..	353	8	5	..	9	22	..	17	..	..	17
Grand total ..	249	349	15	..	612	146	40	..	37	223	..	17	..	4	21
II. Leased															
III. Reserved															
IV. Unreserved															
Bellary	..	..	3	..	3	..	..	..	..	..	..	..	..	..	..
Anantapur ..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..
Guntur	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kurnool, East ..	3	..	..	..	..	2	..	..	..	..	..	..	..	..	..
Do. South ..	2	18	..	..	20	1	35	..	..	2	7	..	1	..	8
Do. West ..	21	..	1	..	25	4	..	2	1	36	7	..	..	..	27
Total	29	18	5	..	52	7	35	2	1	45	24	..	1	..	35
SECOND															
I. Reserved															
Bellary	..	..	..	..	..	..	22	8	..	30	..	..	..	..	..
Anantapur ..	..	87	1	..	88	..	..	..	..	..	..	..	..	..	..
Guntur	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kurnool, East ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. South ..	..	18	2	..	20	..	..	..	..	..	..	..	..	..	..
Do. West ..	..	78	..	..	78	..	..	..	..	..	..	..	..	..	..
Total	..	183	3	..	186	..	22	8	..	30	..	..	..	..	..
Grand total ..	29	201	8	..	238	7	57	10	1	75	24	..	1	..	35
III. Reserved															
IV. Unreserved															
Cuddapah, North ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. South ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. West ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nellore	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chingleput ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chittoor	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Vellore, North ..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..
Total	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..
THIRD															
I. Reserved															

REMARKS.—The figures are actuals except in the following cases:—

- (1) *Gungam*—Unreserved lands—Column 3.—This includes an estimated quantity of 5,511 cubic feet arrived at by conversion of value at 20 cubic feet per rupee realised by the Revenue department.
- (2) *Gontkari, Lower*—Unreserved lands—Column 3.—This includes 28,000 cubic feet of timber obtained by conversion of sale amount into cutturn at one cubic foot for one anna.
- (3) *Kistak*—Unreserved lands—Estimate calculated at one cubic foot per anna on the value realised and two annas per cubic foot in case of palmiya trees granted free.

Note for the First Circle.

Bellary—(1) Figures in column 4 under 'Reserved' *Note for Second Circle.*

(2) Figures in column 8 under 'Reserved Forests' are estimates calculated at 6 cubic feet per tree (palmrya) for As. 1 for I class timber and As. 2 for II class timber by converting the money value of timber at 1 cubic foot for Rs. 2-8-0 and column 28 at 20 cubic feet for column 9 by converting the money value at 20 cubic feet Anantapur.—Figures shown are estimates money value of timber is converted into cubic feet at Rs. 2-8-0 per 20 cubic feet and for fuel at Rs. 1-4-0 for 45 cubic feet.

Gunter. - Figures in columns 18 and 28 have been estimated by converting the money value of timber and fuel at 1 cubic foot for an anna. The figures in column 27 by adoption of a conversion factor of 1.00 unit of money value of timber and fuel at 1 cubic foot.

Karnool, South.—Figures shown under "Government" under 'other items' are estimates, a cart-load=20 cubic feet. Under 'Reserved Forests' are actuals; whereas the figures shown estimate 1 cart-load=20 cubic feet. Under 'Unreserved lands' figures given are

FORM No. 76.

Madras Presidency.

during the year 1920-21 and agency of exploitation.

Miscellaneous.					Total timber.					Fuel.					Total outturn.
Government. (17)	Purchasers. (18)	Free-grantees. (19)	Right-holders. (20)	Total. (21)	Government. (22)	Purchasers. (23)	Free-grantees. (24)	Right-holders. (25)	Total. (26)	Government. (27)	Purchasers. (28)	Free-grantees. (29)	Right-holders. (30)	Total. (31)	
..	..	..	..	..	327	108	2	32	469	198	213	..	89	500	989
..	..	..	..	..	1	1	..	..	2	6	134	..	..	149	142
.. 2	..	..	..	.. 2	11	..	..	..	11	..	..	..	..	..	11
..	..	..	..	..	1	33	..	..	34	15	1,545	..	..	1,560	1,594
..	1	..	..	.. 1	.. 1	1	..	..	1	7	439	..	..	446	447
2	1	..	..	3	840	143	2	32	517	226	2,331	..	89	2,346	3,163

Forests—Nil

Lands--Nil.

Land.

..	..	18	..	..	18	8	21	..	..	18	12	..	..	12	30
23	..	14	..	1	38	71	18	..	1	90	13	61	..	74	164
..	..	..	..	..	..	1	239	41	..	281	1	103	..	104	385
..	..	39	17	..	56	..	39	17	..	56	..	43	..	43	99
23	71	17	1	112	80	335	59	10	434	19	402	..	7	428	912
25	72	17	1	115	420	478	61	42	1,001	245	2,733	..	96	3,074	4,075

Case 1:11-cv-00001 Document 1-1 Filed 01/26/12 Page 1 of 1

CIRCLE.
HORACE.

Forests,
()

2	24	4	..	30	72	77	12	1	162	1,389	687	..	154	2,180	2,34
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Forests—N

Lands—Ni

Lands.

..	..	..	..	..	..	22	8	..	59	..	109	..	..	109	14
..	..	..	..	..	..	87	1	..	88	..	72	..	..	72	14
..	57	20	..	77	..	57	20	..	77	..	8	..	..	3	3
..	8	19	..	27	..	8	19	..	27	..	53	..	..	53	14
..	..	..	..	..	..	18	2	..	20	..	59	..	..	59	14
..	..	..	..	..	..	78	..	..	78	..	..	..	..	..	..
..	65	39	..	104	..	270	50	..	829	..	392	..	..	392	7
2	89	43	..	134	72	347	62	1	482	1,389	1,029	..	154	2,572	3,0

CIRCLE.
Forests.

Foresta.

1	38	1	..	38	3	34	1	..	38	18	1	..	918	1
3	34	..	..	31	1	30	..	..	31	5	..	..	1,833	9
1	30	..	..	1	1	..	..	..	1	36	..	..	1,797	8
1	..	..	..	1	..	1	..	..	1	9	..	..	104	1
..	1	..	..	20	..	20	..	..	20	51	..	..	820	8
..	20	..	..	5	1	..	5	..	6	1	..	..	125	1
..	..	5	..	..	..	..	..	..	..	..	..	..	..	..
6	118	7	..	131	7	118	7	..	132	115	5,588	..	5,793	5,5

Note for the Third Circle.

Quddaph, North.— { Reserved forests—Actuals.
Unreserved lands—Estimated at 1 cubic feet of timber for one anna and 1 cubic foot of fuel for 2 pies.

Cuddapah, North.—Unreserved lands—Estimated at 1,000,000 acres of land.

Chinglegut—Reserved Forests.—Timber and fuel by Government Agency and by purchasers are actuals. The value realised.

Chittoor.—All figures in this statement except those under Parohasers, Timber and fuel against unreserved lands are estimates calculated on the money value obtained from sale of trees on darkhast and waste lands at 1 anna per cubic foot of timber and 3 pies per cubic foot of fuel.

Vellore, North.—Timber estimated at 2 annas per cubic foot and fuel at one anna per cubic foot.

Output (in thousands of cubic feet solid) of timber and fuel

Division.	Timber in the rough logs.					Timber in the rough poles.					Sawn or square timber.				
	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(In thousands of cubic feet.)															
THIRD															
II. Leased															
III. Reserved															
IV. Unreserved															
Caddapah, North	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. South	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. West	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nellore ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chingleput ..	..	..	13	..	13	..	..	..	..	..	..	..	..	..	..
Chittoor ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Vellore North ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	..	13	..	..	13	..	..	..	..	..	..	..	..	..	..
Grand total ..	1	13	..	..	14	..	..	..	..	..	..	..	..	..	..
FOURTH															
I. Reserved															
Vellore, South ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. West ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Salem, East ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. North ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. Central ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. South ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..
II. Leased															
III. Reserved															
IV. Unreserved															
Vellore, South ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. West ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Salem, East ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. North ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. Central ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. South ..	..	..	..	..	..	..	..	2	..	2	..	..	..	..	..
Total ..	..	..	..	..	..	..	..	2	..	2	1	..	..	..	1
Grand total ..	1	..	..	..	1	..	..	2	..	2	1	..	..	..	1
FIFTH															
I. Reserved															
Kollegal ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Coimbatore, North	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. South ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Madura ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tinnevely ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	8	23	1	..	32	1	21	..	..	22	27	..	..	..	27
II. Leased															
Coimbatore, South ..	11	..	..	..	11	..	..	..	..	..	..	..	..	..	..
III. Reserved															
IV. Unreserved															
Kollegal ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Coimbatore, North	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Madura ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tinnevely ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	..	18	1	..	19	..	..	..	..	..	..	..	..	..	..
Grand total ..	19	41	2	..	62	1	21	..	..	22	27	..	..	..	27

Note for the Fourth Circle.
 Note.—Removals by Government Agency—actuals.
 (Sandalwood—factor of conversion 1 ton = 40 cubic feet.)
 Free grantees—actuals.
 Purchasers—timber and fuel.—Estimate quantity calculated upon money value generally at 1 anna per cubic foot for timber and 6 pies per cubic foot for fuel.
 Note for the Fifth Circle.
 Reserved and leased forests.—The figures given are actuals.
 Unreserved lands.—Estimate based on money value collected.

during the year 1920-21 and agency of exploitation—cont.

Miscellaneous.					Total timber.					Fuel.					
Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	Total output.
(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
(In thousands of cubic feet.)															
CIRCLE—cont.															
Forests—Nil.															
Lands—Nil.															
Lands.															
..	3	..	..	3	..	3	..	..	3	..	75	..	..	75	7
..	4	..	..	4	..	4	..	..	4	..	4	..	..	4	16
..	13	..	..	13	..	13	..	..	13	..	144	..	..	144	12
..	40	23	..	63	..	40	23	..	63	..	61	..	..	61	12
..	8	11	..	19	..	16	11	..	27	..	68	..	..	68	9
..	185	2	..	187	..	185	2	..	187	..	152	..	..	152	38
..	107	4	..	111	..	107	4	..	111	..	40	..	..	40	15
..	355	40	..	395	..	368	40	..	408	..	544	..	..	544	95
6.	478	47	..	525	7	486	47	..	533	115	6,132	..	..	6,247	6,780
CIRCLE.															
Forests.															
3	4	..	..	7	3	4	..	..	7	3	162	..	..	165	16
8	..	..	..	8	4	..	..	..	4	..	18	..	..	18	3
..	..	..	..	..	..	..	..	..	..	..	180	..	..	180	14
3	..	..	..	3	3	..	..	..	3	1	55	..	..	56	6
1	..	..	..	1	..	..	..	..	..	..	348	..	..	348	36
..	..	..	..	1	1	..	..	..	1	2	116	..	..	118	1
10	4	..	..	14	11	4	..	..	15	6	869	..	..	875	60
Forests—Nil.															
Lands—Nil.															
Lands.															
..	57	6	..	63	..	57	6	..	63	..	47	..	..	47	1
..	11	1	..	12	..	11	1	..	12	..	9	..	..	9	2
..	28	4	..	32	..	28	4	..	32	..	286	1	..	287	3
..	35	1	..	36	1	35	1	..	36	..	27	..	..	27	1
..	94	..	..	94	..	94	..	..	94	..	35	..	..	35	1
..	148	3	..	151	..	148	3	..	151	..	178	..	..	178	3
..	373	15	..	388	1	373	15	..	388	..	577	1	..	578	9
10	377	15	..	402	12	377	15	..	402	6	1,446	1	..	1,453	1,8
CIRCLE.															
Forests.															
1	..	..	..	1	1	..	..	..	1	11	122	..	..	133	1
..	..	..	..	..	9	..	..	..	9	..	561	..	..	561	5
..	5	..	..	5	25	5	..	..	30	..	177	..	..	177	2
..	7	..	..	7	1	7	..	..	8	3	608	..	..	611	6
..	..	..	..	..	44	1	..	..	45	1	1,720	..	..	1,721	1,7
2	12	..	..	14	38	56	1	..	95	15	3,188	..	..	3,203	3,2
Forests.															
2	..	..	..	2	13	..	..	..	13	..	..	..	..	..	1
Lands—Nil.															
Lands.															
..	3	..	..	3	..	3	..	..	3	..	3	..	..	3	8
..	..	..	..	..	..	18	..	..	18	..	9	..	..	9	1
..	148	..	..	148	..	148	..	..	148	..	116	..	..	116	24
..	..	..	..	..	..	..	1	..	1	..	65	3	..	68	6
..	151	..	..	151	..	169	1	..	170	..	193	3	..	196	36
4	163	..	..	167	51	225	2	..	278	15	3,381	3	..	3,399	31,67

Output (in thousands of cubic feet solid) of timber and fuel

Division	Timber in the rough logs.					Timber in the rough poles.					Sawn or square timber.				
	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
SIXTH															
<i>(In thousands of cubic feet.)</i>															
I. Reserved															
Mangalore, North ..	25	..	..	..	25	..	..	..	..	..	..	..	..	..	..
Do. South ..	25	8	..	..	28	..	..	..	..	..	..	..	..	..	..
Malabar, North ..	..	..	..	..	..	11	..	..	..	11	20	34	..	..	54
Do. South ..	84	..	..	..	84	9	..	..	..	9	..	..	..	..	..
Nilgiris, The ..	..	..	..	..	..	2	..	..	..	2	..	..	..	..	..
Coimbatore, Central ..	27	17	..	..	44	..	..	..	..	..	..	..	..	..	..
Total ..	161	25	..	..	181	22	..	..	..	22	20	34	..	..	54
II. Leased															
Malabar, South ..	158	1	..	..	159	5	..	..	..	5	..	..	..	..	..
III. Reserved															
Nilgiris, The ..	..	..	..	..	..	..	..	..	..	..	33	..	..	..	33
IV. Unreserved															
Mangalore, North ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Do. South ..	2	158	..	5	160	..	..	..	..	..	..	..	..	..	..
Malabar, North ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Nilgiris, The ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Coimbatore, Central ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	2	153	..	5	160	..	..	..	..	..	..	..	..	..	..
Total VI Circle ..	321	174	..	5	500	27	..	..	..	27	53	34	..	..	87
Grand Total, Presidency ..	620	778	54	5	1,457	181	118	12	38	349	115	51	1	4	171

Note for Sixth Circle.

REMARKS.—The figures are actuals except in the following cases:—

Factor of conversion.

Mangalore, North—Output under "Purchasers" unreserved lands.	Timber.—The sale amount is converted into yield, the factor of conversion being 16 cubic feet per rupee.
Mangalore, South—Output under all agencies except "Government".	Fuel.—The sale amount is converted into yield, the factor of conversion being three pies per cubic foot.
Malabar, North—Output under "Purchasers". Unreserved lands.	Timber.—Estimate based on money value collected at four annas per cubic foot.
Nilgiris, The—Output under "Purchasers". Unreserved lands.	Fuel.—Estimate based on money value collected at two annas per cubic foot.
Malabar, South—Reserved forests.	Timber.—Output under "Government". The sale amount is converted into yield at one anna a cubic foot.
Reserved forests.	Timber.—Output under "Government". One log = 20 cubic feet.
Reserved forests.	Timber.—Output under "Government". One set of spokes and felloes = 5 cubic feet.
Reserved forests.	Fuel.—Output under "Government"—Calculated at $\frac{1}{2}$ cubic foot for karias and 6 cubic feet per coconut tree.
Leased forests	Timber.—Output under "Government". 1,000 cubic feet.
Do. Under Purchasers ..	Timber.—Output under "Government". 5,000 cubic feet.
Fuel—Output under "Government" ..	Actuals based on standard cubical contents.
	One set of spokes and felloes = 5 cubic feet.
	Calculated at $\frac{1}{2}$ cubic foot per kari.

during the year 1920-21 and agency of exploitation—cont.

Miscellaneous.					Total timber.					Fuel.					Total output.
Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	Government.	Purchasers.	Free-grantees.	Right-holders.	Total.	
(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
CIRCLE.															
<i>(In thousands of cubic feet.)</i>															
Forests.	6	..	..	6	25	3	..	..	28	79	364	..	..	443	474
..	..	..	..	..	25	3	..	..	28	68	41	..	..	109	187
..	..	..	..	..	31	54	..	..	85	..	..	..	..	..	65
..	1	..	..	1	93	1	..	..	94	1	..	..	..	1	95
..	..	..	..	..	2	..	..	..	2	231	12	..	..	243	245
..	..	..	..	..	27	17	..	..	44	23	1,413	..	..	1,436	1,480
..	7	..	..	7	203	61	..	..	264	402	1,830	..	..	2,232	2,496
Forests.	2	..	..	2	163	3	..	..	166	2	..	..	..	2	163
Lands.	..	..	..	..	83	..	..	..	83	..	..	..	..	..	83
Lands.	418	1	11	430	..	418	1	11	430	..	265	..	..	265	695
..	13	..	..	13	2	153	..	5	160	8	94	..	..	102	262
..	81	..	..	81	..	13	..	..	13	..	3	..	..	3	16
..	93	1	..	94	..	81	..	..	81	..	..	..	..	..	81
..	..	..	..	..	..	83	1	..	84	..	224	..	..	224	308
..	595	2	11	608	2	745	2	16	768	8	586	..	..	594	1,362
..	604	2	11	617	401	812	2	16	1,231	412	2,416	..	..	2,828	4,059
57	1,778	124	12	1,951	963	2,725	191	59	3,938	2,182	17,137	4	250	19,578	23,511

Circle.	Description of produce.	Produce removed or utilized					
		By Government agency.		By purchasers.	By free grantees.	By right-holders.	Total.
		Quantity.	Value.	Value.	Value.	Value.	Value.
First Circle	<i>Reserved Forests.</i>	NO.	RS.	RS.	RS.	RS.	RS.
	Bamboos	30,733	305	65,351	15	222	(a) 65,893
	Grazing and fodder grass ..	..	..	11,490	12,375	592	57,457
	<i>Other produce.</i>	QRS.	..	..	..	..	..
	Grass (hay, thatch, korai, etc.) ..	11,181	192	181	..	..	283
	Tamarind, soapnuts, galmuts, nux-vomica, shekol, etc.	182	75	16,180	..	250	16,505
	Horns, honey, wax, resin, gum, skins, etc.	..	..	569	..	..	569
	Tangedu, etc., barks and fibres.	516	4	1,384	..	..	1,388
	Stone, gravel, earth, etc.	79,171	68	144	..	..	212
	Leaves for platters ..	..	..	1	..	..	1
	Date and palmyra leaves, stalks, etc.	..	..	1	..	..	1
	Miscellaneous including tree-tapping and tree-owner's fees.	4	6	256	..	..	262
	Total, minor produce ..	94,364	255	18,716	..	250	19,221
	Total, Reserved forests ..	..	560	1,28,557	(a) 12,390	1,064	1,42,571
	<i>Unreserved Lands.</i>	NO.	..	..	..	..	..
	Bamboos	1,525	8	86	..	..	94
	Grazing and fodder grass ..	..	..	1,719	..	..	1,719
	<i>Other produce.</i>	QRS.	..	..	..	..	..
	Tamarind, soapnuts, galmuts, nux-vomica, shekol, etc.	42	33	..	..	..	33
	Total, Unreserved lands ..	..	41	1,805	..	..	1,846
Second Circle	<i>Reserved Forests.</i>	NO.	..	..	..	..	..
	Bamboos	1,525	8	86	..	..	94
	Grazing and fodder grass ..	..	..	1,719	..	..	1,719
	<i>Other produce.</i>	QRS.	..	..	..	..	..
	Tamarind, soapnuts, galmuts, nux-vomica, shekol, etc.	42	33	..	..	..	33
	Total, Reserved forests ..	..	41	1,805	..	..	1,846
	<i>Unreserved Lands.</i>	NO.	..	..	..	..	..
	Bamboos	11,345	92	46,329	38	15	46,474
	Grazing and fodder grass ..	..	..	647	..	..	647
	<i>Other produce.</i>	QRS.	..	..	..	..	..
	Grass (thatch, korai, etc.) ..	3,892	30	363	6	..	402
	Tamarind, soapnuts, galmuts, nux-vomica, shekol, etc.	231	183	19,933	..	..	20,116
Third Circle	<i>Reserved Forests.</i>	NO.	..	..	..	..	..
	Bamboos	1,525	8	86	..	..	94
	Grazing and fodder grass ..	..	..	1,719	..	..	1,719
	<i>Other produce.</i>	QRS.	..	..	..	..	..
	Tamarind, soapnuts, galmuts, nux-vomica, shekol, etc.	42	33	..	..	..	33
	Total, Reserved forests ..	..	41	1,805	..	..	1,846
	<i>Unreserved Lands.</i>	NO.	..	..	..	..	..
	Bamboos	11,345	92	46,329	38	15	46,474
	Grazing and fodder grass ..	..	..	647	..	..	647
	<i>Other produce.</i>	QRS.	..	..	..	..	..
	Grass (thatch, korai, etc.) ..	3,892	30	363	6	..	402
	Tamarind, soapnuts, galmuts, nux-vomica, shekol, etc.	231	183	19,933	..	..	20,116
Fourth Circle	<i>Reserved Forests.</i>	NO.	..	..	..	..	..
	Bamboos	1,525	8	86	..	..	94
	Grazing and fodder grass ..	..	..	1,719	..	..	1,719
	<i>Other produce.</i>	QRS.	..	..	..	..	..
	Tamarind, soapnuts, galmuts, nux-vomica, shekol, etc.	42	33	..	..	..	33
	Total, Reserved forests ..	..	41	1,805	..	..	1,846
	<i>Unreserved Lands.</i>	NO.	..	..	..	..	..
	Bamboos	11,345	92	46,329	38	15	46,474
	Grazing and fodder grass ..	..	..	647	..	..	647
	<i>Other produce.</i>	QRS.	..	..	..	..	..
	Grass (thatch, korai, etc.) ..	3,892	30	363	6	..	402
	Tamarind, soapnuts, galmuts, nux-vomica, shekol, etc.	231	183	19,933	..	..	20,116
Fifth Circle	<i>Reserved Forests.</i>	NO.	..	..	..	..	..
	Bamboos	1,525	8	86	..	..	94
	Grazing and fodder grass ..	..	..	1,719	..	..	1,719
	<i>Other produce.</i>	QRS.	..	..	..	..	..
	Tamarind, soapnuts, galmuts, nux-vomica, shekol, etc.	42	33	..	..	..	33
	Total, Reserved forests ..	..	41	1,805	..	..	1,846
	<i>Unreserved Lands.</i>	NO.	..	..	..	..	..
	Bamboos	11,345	92	46,329	38	15	46,474
	Grazing and fodder grass ..	..	..	647	..	..	647
	<i>Other produce.</i>	QRS.	..	..	..	..	..
	Grass (thatch, korai, etc.) ..	3,892	30	363	6	..	402
	Tamarind, soapnuts, galmuts, nux-vomica, shekol, etc.	231	183	19,933	..	..	20,116

(a) Corrected in the Chief Conservator's office.

Circle.	Description of produce.	Produce removed or utilized					
		By Government agency.		By purchasers.	By free grantees.	By right-holders.	Total.
		Quantity.	Value.	Value.	Value.	Value.	Value.
Second Circle	Bamboos	764,880	12,678	41,476	115	..	54,259
	Grazing and fodder grass ..	QRS.	..	2,54,257	..	5,067	2,59,324
	Grass (hay, thatch and grass) ..	..	..	1,162	39	..	1,201
	Tamarind, soapnuts and nux-vomica.	9,575	1,577	34,310	..	..	38,987
	Stone, gravel and earth ..	..	..	20,892	45	..	20,937
	Date, palmyra leaves and platter leaves.	..	..	908	613	..	1,521
	Manure leaves and thorns ..	..	..	1,798	..	..	1,798
	Thammari leaves ..	..	..	2,392	..	..	2,392
	Honey, wax, resin, gum, and galmuts.	..	..	1,272	..	..	1,272
	Tangedu bark, fibres, seeds, etc.	118	443	1,48,123	10	1	1,48,577
	Miscellaneous including tree tapping fees and Awaroy.	..	..	61,789	..	..	61,789
	Total ..	9,693	6,120	272,646	707	1	2,78,474
Third Circle	Bamboos	7,975	31	13,454	176	..	13,721
	Grazing and fodder grass ..	QRS.	..	2,91,812	219	136	2,92,167
	Grass (thatch, korai, etc.) ..	2,027	125	3,232	..	..	3,357
	Honey, wax, etc. ..	..	..	60	..	..	60
	Tangedu, etc., barks ..	102	240	38,300	..	..	38,546
	Date, palmyra and leaves ..	..	..	1,557	723	..	2,280
	Stones, gravel and earth ..	..	..	4,881	29	..	4,910
	Manure leaves, topi leaves etc.	..	..	3,958	..	..	3,958
	Tamarind, soapnuts and nux-vomica.	8,608	43,500	34,346	..	..	78,746
	Other miscellaneous produce including tree-owners' fees.	903	2,764	40,158	..	..	42,922
	Total ..	11,640	46,929	1,27,098	752	..	1,74,779
	Total of grass and grazing and minor produce.	NO.	11,640	46,929	3,28,910	971	136	3,76,946
Fourth Circle	Bamboos	668	330	49,553	12	..	49,896
	Grass and grazing ..	..	..	1,64,467	..	..	1,64,467
	Grass (thatch, korai, etc.) ..	..	..	1,894	..	..	1,894
	Tamarind, soapnuts, galmuts, etc.	345	558	7,336	..	..	7,894
	etc.	..	..	40,821	..	..	40,821
	Avaram, vembadam, etc., barks.	..	..	2,938	..	..	2,938
	Stone, gravel and earth ..	1,040	100	17,958	..	..	18,058
	Manure leaves, etc.	..	..	28	2	..	30
	Date, palmyra, etc. leaves ..	..	..	7	..	..	7
	Honey, wax, etc.	404	187	57,883	..	..	58,076
	Miscellaneous, including tree-owner's fees.	1,790	852	1,34,864	2	..	1,35,718
	Total ..	..	1,182	3,48,874	15	..	3,50,071
Reserved forest.							
Fifth Circle	Bamboos	6,827	131	13,810	1	31	13,978
	Grazing and fodder grass ..	..	..	1,10,879	894	..	1,11,773

Outturn of minor forest produce during the year 1920-21—cont.

Circle.	Description of produce.	Produce removed or utilized.					
		By Government agency.		By purchase.		By right-holders.	
		Quantity.	Value.	Value.	Value.	Value.	Value.
Fifth Circle—cont.	<i>Other produce.</i>	qrs.	rs.	rs.	rs.	rs.	rs.
	Grass (bhatoh, korai, etc.)	886	12	5,003	..	..	5,015
	Dammar, turmeric, pepper, cardamoms, etc.	..	..	10,287	..	..	10,287
	Tamarind, soapnuts, gallnuts, nux-vomica, shekol, etc.	..	..	17,794	..	..	17,794
	Horns, honey, wax, gum, resin, skin, etc.	41	292	6,353	..	..	6,645
	Avaram, vembadam, etc., barks and fibres.	..	..	28,173	..	..	28,173
	Stones, earth, gravel, etc.	..	..	1,050	..	..	1,050
	Manure leaves, thorns, etc.	..	..	1,221	..	..	1,221
	Date and palmyra leaves	..	..	3,516	..	881	4,397
	Miscellaneous	..	829	6,369	..	..	6,998
	Total	886	933	79,905	..	881	81,720
	<i>Unreserved lands.</i>						
	<i>Other produce.</i>						
	Miscellaneous	..	..	3,752	..	..	3,752
	Gravel, stones, earth, etc.	..	..	578	..	..	578
	Date and palmyra leaves	..	..	..	42	..	42
	Total	..	..	4,330	42	..	4,372
	<i>Abstract for the Fifth Circle.</i>						
	Bamboos	6,827	131	13,810	1	31	13,973
	Grazing and fodder grass	..	..	1,10,879	894	..	1,11,773
	Other produce	886	933	81,235	42	881	86,092
	Grand total	7,713	1,064	2,05,925	937	912	2,11,838
Sixth Circle	<i>Reserved forests.</i>	NO.					
	Bamboos	60,881	3,279	10,498	62	..	13,829
	Grazing and fodder grass	..	..	39,404	97	..	39,501
	<i>Other produce.</i>	qrs.					
	Nux-vomica	4	36	205	..	..	241
	Elephant tusks	..	2,291	..	..	..	2,291
	Vengai gum	18	232	..	..	..	232
	Thatching grass and stone metal	..	..	898	729	..	1,627
	Blue gum, leaves and seeds	29	70	315	..	..	384
	Dammar, turmeric, pepper, gallnuts, etc.	..	..	9,437	..	..	9,437
	Manure leaves	..	..	1,004	..	..	1,004
	Usufruct of trees	..	..	80	..	..	80
	Rent of trees tapped	..	..	14	..	..	14
	Bark and brushwood	..	..	237	..	..	237
	Rent of cardamom forest	..	..	680	..	..	680
	Rent of gardens, etc.	..	..	116	..	..	116
	Avaram bark	..	..	1,150	..	..	1,150
	Miscellaneous	..	..	6,948	..	..	6,948
	Total	60	2,635	21,064	759	..	24,481
	<i>Leased forests.</i>	NO.					
	Bamboos	163,523	6,141	3	..	..	6,144
	<i>Reserved lands.</i>						
	Bamboos	..	..	..	..	..	31
	Grazing and fodder grass	..	..	611	643	..	1,254
	<i>Other produce.</i>	qrs.					
	Elephant tusks	15	391	..	..	..	391
	Stone metal	..	..	10	..	..	15
	Total	15	391	10	5	..	406
	<i>Unreserved lands.</i>	NO.					
	Bamboos	594	113	187	..	..	300

Outturn of minor forest produce during the year 1920-21—cont.

Circle.	Description of produce.	Produce removed or utilized.					
		By Government agency.		By purchase.		By right-holders.	
		Quantity.	Value.	Value.	Value.	Value.	Value.
Sixth Circle—cont.	<i>Other produce.</i>	qrs.	rs.	rs.	rs.	rs.	rs.
	Tamarind, soapnuts, gallnuts, shekol, etc.	220	440	2,249	..	..	5,689
	Usufructs of trees	..	..	87	..	..	87
	Stone and gravel	..	..	279	..	..	279
	Manure leaves	..	..	6	..	..	6
	Rent of trees tapped	..	..	1,377	..	..	1,377
	Nux-vomica	..	..	1,358	..	..	1,358
	Avaram bark	..	..	105	..	..	105
	Miscellaneous	..	..	607	..	..	607
	Total	220	440	9,268	..	..	9,708
	<i>Abstract for the Sixth Circle.</i>	NO.					
	Bamboos	214,998	9,533	10,719	52	..	20,304
	Grazing and fodder grass	..	..	40,015	740	..	40,755
	Other produce	295	3,469	30,342	734	..	34,545
	Grand total	..	13,002	81,076	1,526	..	95,604
Total Presidency	<i>Abstract for the Presidency.</i>	NO.					
	Bamboos	1638,951	23,168	240,778	410	258	264,624
	Grazing and fodder grass	..	..	818,276	14,228	5,795	838,299
	Other produce	417,207	58,509	1,128,179	2,509	1,268	1,190,465
	Grand total, Presidency	..	81,677	2,187,233	17,147	7,331	2,293,388

Account of timber, fuel, bamboos and minor produce cut or collected by Government Agency and brought to depot, sold locally or otherwise disposed of during 1920-21.

Name of district.	Balance at commencement of the year in forest and sale depots.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year in forest and sale depots.
TIMBER (IN THOUSANDS OF CUBIC FEET).					
<i>First Circle.</i>					
Ganjam	76	335	411	(a) 71 (b) 20	319
Vizagapatam	1	1	2	(a) 1 (b) 1	..
Godavari, Upper	2	82	84	(a) 22 (b) 4	59
Do. Lower	1	2	3	(a) 2 (b) 2	1
Total	80	420	500	121	379
<i>Second Circle.</i>					
Bellary	..	..	..	..	..
Anantapur	..	..	..	..	..
Guntur	1	..	1	1	..
Kurnool, East	2	12	14	9	5
Do. South	3	5	8	4	4
Do. West	11	55	66	38	28
Total	17	72	89	52	37
<i>Third Circle.</i>					
Cuddapah, North	..	1	1	1	..
Do. South	..	3	3	4	..
Do. West	1	1	2	1	1
Nellore	..	1	1	1	..
Chingleput	..	..	..	..	..
Chittoor	1	..	1	..	1
Vellore, North	..	1	1	1	..
Total	3	7	10	8	2
<i>Fourth Circle.</i>					
Vellore, South	1	3	4	2	2
Do. West	2	4	6	3	3
Salem, East	..	..	..	..	..
Do. North	1	4	5	3	2
Do. Central	..	..	..	..	..
Do. South	1	1	2	1	1
Total	5	12	17	9	8
<i>Fifth Circle.</i>					
Kollegal	1	1	2	(a) 1 (b) 1	1
North Coimbatore	(d) 5	(e) 1	16	(b) 11 (c) 72	4
South Coimbatore	157	38	195	(a) 3	120
Madura	2	2	4	1	8
Tinnevely	1	1	2	1	1
Total	167	52	219	90	129
<i>Sixth Circle.</i>					
Mangalore, North	12	25	37	(a) 30 (b) 1	6
Do. South	92	27	119	(b) 106 (c) 200	82
Malabar, North	80	31	111	(a) 1 (b) 27	4
Do. South	453	258	709	(a) 2 (b) 34	480
The Nilgiris	13	35	48	18	14
Coimbatore, Central	47	27	74	18	56
Total	697	401	1,098	456	642
Grand total, Presidency	969	984	1,953	736	1,197

(a) Used departmentally.

(c) Transferred from Kollegal to North Coimbatore.

(b) Written off the accounts.

(d) Revised figure.

Account of timber, fuel, bamboos and minor produce cut or collected by Government Agency and brought to depot, sold locally or otherwise disposed of during 1920-21—cont.

Name of district.	Balance at commencement of the year in forest and sale depots.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year in forest and sale depots.
FUEL (IN THOUSANDS OF CUBIC FEET).					
<i>First Circle.</i>					
Ganjam	20	203	223	(a) 158 (b) 35	32
Vizagapatam	..	6	6	1	5
Godavari, Upper	8	13	21	(a) 11 (b) 1	9
Do. Lower	1	16	17	15	2
Kistna	..	7	7	7	..
Total	29	245	274	226	48
<i>Second Circle.</i>					
Bellary	..	4	4	4	..
Anantapur	..	1	1	1	..
Guntur	..	17	17	6	12
Kurnool, East	27	59	86	19	67
Do. South	9	9	9	9	..
Do. West	168	1,308	1,476	374	1,102
Total	204	1,389	1,593	412	1,181
<i>Third Circle.</i>					
Cuddapah, North	..	12	15	13	2
Do. South	2	5	7	4	1
Do. West	..	36	45	19	26
Nellore	9	9	13	13	..
Chingleput	4	61	65	49	2
Chittoor	..	1	1	1	1
Vellore, North	..	..	..	..	..
Total	15	115	130	98	32
<i>Fourth Circle.</i>					
Vellore, South	..	3	3	3	..
Do. West	..	3	3	3	..
Salem, East	..	1	1	1	..
Do. North	..	..	..	..	..
Do. Central	..	3	3	..	3
Do. South	..	..	..	..	..
Total	..	10	10	7	3
<i>Fifth Circle.</i>					
Kollegal	..	11	11	11	..
North Coimbatore	1	1	1	1	..
Madura	..	3	3	2	1
Tinnevely	..	1	1	..	1
Total	1	16	16	14	2
<i>Sixth Circle.</i>					
Mangalore, North	95	79	174	(b) 168 (c) 5	1
Do. South	127	76	203	(b) 95 (c) 1	107
Malabar, South	1	3	4	3	1
The Nilgiris	197	231	428	(b) 190 (c) 12	225
Coimbatore, Central	..	23	23	(a) 18	5
Total	420	412	832	493	389
Grand total, Presidency	669	2,186	2,855	1,260	1,605

(a) Used departmentally.

(b) Written off the accounts.

ANNUAL REPORT OF THE

Account of timber, fuel, bamboos and minor produce cut or collected by Government Agency and brought to depot, sold locally or otherwise disposed of during 1920-21—*cont.*

Name of district.	Balance at commencement of the year in forest and sale depots.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year in forest and sale depots.
BAMBOOS (in number).					
<i>First Circle.</i>					
Ganjām	..	18,830	18,830	(a) 18,830	..
Vizagapatam	340	1,323	1,663	(a) 623	100
Godavari, Upper	..	12,745	12,745	(a) 12,745	..
Do. Lower	502	10,705	11,207	(a) 10,607	700
Total	812	43,603	44,415	43,615	800
<i>Second Circle.</i>					
Bellary	..	..	..	..	..
Anantapur	..	..	..	..	..
Guntur	..	..	..	..	..
Kurnool, East	12,690	168,444	179,136	159,770	19,366
Do. South	30	200	230	520	..
Do. West	65,199	698,234	663,433	617,933	45,500
Total	78,299	764,868	843,669	778,223	64,866
<i>Third Circle.</i>					
Cuddapah, North	..	..	..	..	..
Do. South	..	..	..	..	..
Do. West	1,276	3,485	4,861	4,861	..
Nellore	..	240	240	240	..
Chingleput	..	..	..	..	..
Chittoor	70	1,250	1,320	700	620
Vellore, North	..	3,000	3,000	3,000	..
Total	1,446	7,975	9,421	8,801	620
<i>Fourth Circle.</i>					
Vellore, South	..	..	..	..	..
Do. West	..	..	..	..	..
Salem, East	..	..	..	..	..
Do. North	102	620	722	717	5
Do. Central	..	..	..	..	..
Do. South	..	48	48	48	..
Total	102	668	770	765	5
<i>Fifth Circle.</i>					
Kollegal	..	226	226	226	..
North Coimbatore	95	5,539	5,634	(a) 4,487	332
Tinnevely	..	1,092	1,092	1,092	..
Total	95	6,827	6,922	6,690	332
<i>Sixth Circle.</i>					
Mangalore, North	1,580	..	1,580	1,580	..
Do. South	4,147	6,149	10,596	(a) 5,444	4,764
Malabar, North	..	6	6	(a) 5	..
Do. South	404,214	204,023	658,607	(a) 204,433	419,706
Coimbatore, Central	(c) 50,370	..	..	(b) 13,616	..
.. .. .	150	4,521	4,671	(b) 20,852	..
Total	460,441	214,993	675,439	428,434	437
Grand total, Presidency	541,135	1,038,951	1,680,086	1,088,566	491,520

(a) Used departmentally.
(b) Written off the accounts.
(c) Added as per revised figures furnished by the District Forest Officer.

FOREST DEPARTMENT

Account of timber, fuel, bamboos and minor produce cut or collected by Government Agency and brought to depot, sold locally or otherwise disposed of during 1920-21—*cont.*

Name of district.	Balance at commencement of the year in forest and sale depots.	Received during the year.	Total.	Disposed of during the year.	Balance in hand at close of the year in forest and sale depots.
MINOR FOREST PRODUCE (QUARTERS OF 28 LB.).					
<i>First Circle.</i>					
Ganjām	51	381,252	381,306	(a) 381,252	54
Vizagapatam	142	279	422	(a) 232	92
Godavari, Upper	400	8,742	9,142	(a) 40	283
Do. Lower	442	4,438	4,880	(a) 22	4,335
Kistna	25	4	29	(a) 25	4
Total	1,063	394,696	395,759	391,042	4,717
<i>Second Circle.</i>					
Bellary	1,000,032	30	1,000,062	49	1,000,013
Anantapur	56	20	76	62	14
Guntur	29	8	37	33	4
Kurnool, East	1,155	7,718	8,873	3,856	5,017
Do. South	92	80	172	70	102
Do. West	9,307	1,837	11,144	10,503	641
Total	(d) 1,610,671	9,693	1,620,364	14,673	1,605,791
<i>Third Circle.</i>					
Cuddapah, North	48	1,307	1,355	1,353	2
Do. South	884	775	1,659	1,530	129
Do. West	56	40	96	91	5
Nellore	2,300	8,803	11,112	8,885	2,227
Chingleput	..	..	..	..	..
Chittoor	85	264	349	122	227
Vellore, North	929	451	1,380	1,056	325
Total	4,311	11,540	15,951	13,036	2,915
<i>Fourth Circle.</i>					
Vellore, South	217	150	367	192	185
Do. West	361	159	520	292	228
Salem, East	(e) 80	1,040	1,120	972	148
Do. North	949	346	1,295	1,223	72
Do. Central	..	56	56	19	37
Do. South	3,817	29	3,846	103	3,743
Total	5,424	1,790	7,214	2,801	4,413
<i>Fifth Circle.</i>					
Kollegal	123	17	140	53	87
North Coimbatore	(f) 266	612	878	(a) 640	190
South Coimbatore	(h) 6	3	9	3	..
Madura	..	27	27	16	18
Tinnevely	40	224	264	264	..
Total	435	883	1,318	1,033	295
<i>Sixth Circle.</i>					
Mangalore, North	1	..	1	..	1
Do. South	15,270	224	15,494	6,031	9,463
Malabar, North	1	19	20	20	..
The Nilgiris	31	44	75	(d) 33	41
Coimbatore, Central	1	8	9	5	4
Total	15,304	295	15,599	6,080	9,509
Grand total, Presidency	1,637,208	418,977	2,056,205	428,565	1,627,640

(a) Used departmentally.
(b) Includes 1,600,000 qrs. of Manganese ore.
(c) Revised figures furnished by District Forest Officer.
(d) Written off the accounts.
(e) Supplied to the Superintendent, Central Jail, Vizagapatam, for experiment.
(f) Revised figure.
(g) Includes 1,147 cubic feet Duing deficit.
(h) Less than one quarter.

Statement showing the value of timber and other produce at sale depots for the year 1920-21.

Value of timber and other produce at sale depots for the year 1920-21.									
District.	Description of timber or produce.	On hand at commencement of the year.			On hand at close of the year.			Difference in value.	
		Number.	Cubic feet.	Value.	Number.	Cubic feet.	Value.	In favour of the year.	Against the year.
First Circle.									
Gaujam	Timber	..	2,933	4,889	..	3,700	7,821	2,932	..
Second Circle.									
Bellary	Timber	..	..	..	..	..	..	..	..
	Fuel	..	..	..	..	..	..	..	..
	Minor produce ..	..	..	..	..	..	..	..	..
Anantapur	.. ..	..	..	..	..	..	..	..	..
Guntur	.. ..	..	..	..	..	..	..	..	..
Kurnool, East.	.. ..	..	..	..	..	..	..	..	..
Kurnool, South.	Timber	..	3,498	1,704	..	3,682	921	..	783
	Fuel	..	8,625	162	..	..	..	..	162
	Minor produce ..	..	..	..	..	..	..	..	..
Kurnool, West.	.. ..	..	..	..	..	..	..	..	..
Third Circle.									
Nellore	Timber	..	87	27	..	110	27	..	16
	Fuel	..	2,209	1,156	..	26,007	1,625	467	..
	Minor forest produce.	..	..	..	..	..	..	..	..
Vellore, North.	Timber	..	..	..	..	..	..	..	..
	Fuel	..	..	..	..	..	..	..	..
	Minor forest produce.	..	..	..	..	..	..	..	..
Vellore, South.	Timber	..	212	(a) 7,600	..	891	36,286	28,686	..
Vellore, West.	Timber	..	(b) 465	(b) 18,547	..	1,325	45,528	28,981	..
	Minor forest produce.	..	..	..	..	..	..	..	..
Salem, East.	.. ..	..	..	..	..	..	..	..	..
Salem, North.	Timber	..	1,073	13,675	..	1,383	24,576	10,898	..
	Bamboos	..	102	..	..	5	..	..	49
	Minor forest produce.	..	..	..	..	..	..	..	..
Central Salem.	Timber	..	..	388	..	72	77	..	311
Salem, South.	Timber	..	94	227	..	1	24	..	203
Total value.	.. ..	..	506	815	..	430	755	..	60
Fourth Circle.									
	.. ..	..	..	39,265	..	..	1,07,248	67,983	..
Fifth Circle.									
Kollegal	Timber	..	872	436	..	..	..	..	436
	Minor produce ..	..	123	244	..	..	..	..	244
Coimbatore, North.	Timber	..	5,593	1,30,209	..	3,630	87,767	..	42,463
	Fuel	..	912	57	..	440	27	..	80
	Bamboos	..	95	1	..	332	3	..	..
	Minor produce ..	..	133	..	..	..	..	..	..
Coimbatore, South.	Timber	..	..	19	..	190	28	9	..
	Minor produce ..	..	18,808	23,739	..	10,728	14,768	..	9,031
(a) Correct value ; the amount									
(b)									

(a) Correct value ; the amount given in the last return is incorrect.
 (b) Revised figures furnished by District Forest Officer.
 * Less than one quarter.

Statement showing the value of timber and other produce at sale depots for the year 1920-21---cont.

District.	Description of timber or produce.	On hand at commencement of the year.			On hand at close of the year.			Difference in value.	
		Number.	Cubic feet.	Value.	Number.	Cubic feet.	Value.	In favour of the year.	Against the year.
Fifth Circle—cont.									
Madura	Timber	..	2,228	688	..	3,009	892	204	..
	Fuel	..	239	11	..	1,400	88	74	..
	Minor produce	ans.	6	..	ans.	18	6	1	..
Tinnevely	Timber	..	971	125	..	624	136	11	..
	Fuel	..	175	18	..	1,063	41	23	..
	Minor produce	ans.	1	..	ans.	1	19	13	..
Sixth Circle.									
Mangalore, North.	Timber	..	6,863	4,374	..	1,646	2,904	..	1,470
Mangalore, South.	Timber	..	7,247	7,247	..	4,818	4,818	..	2,431
	Fuel	..	14,490	2,147	..	396	59	..	2,088
Malabar, North.	Timber	..	209	575	..	85	142	..	433
Malabar, South.	Timber	..	45,204	90,408	..	88,718	1,60,408	90,000	..
	Fuel	..	855	29	..	442	88	59	..
	Bamboos	33,561	..	2,001	53,263	..	2,125	124	..
The Nilgiris.	Timber	..	13,352	26,792	..	13,683	21,800	..	4,909
	Fuel	..	2,861	354	..	6,340	817	463	..
	Minor produce	ans.	31	391	ans.	41	400	9	..

ABSTRACT.

First Circle.	Timber	..	2,933	4,889	..	3,700	7,821	2,932	..
Second Circle.	Timber	..	3,498	1,704	..	3,682	921	..	..
	Fuel	..	8,625	162	..	..	..	..	..
	Minor produce	..	..	..	..	..	..	..	..
	Total value	..	..	1,866	..	..	921	..	945
Third Circle.	Timber	..	137	49	..	110	27	..	22
	Fuel	..	2,560	1,176	..	26,537	1,667	481	..
	Minor produce	..	..	..	..	..	..	..	..
	Total value	..	..	7,263	..	..	18,675	11,412	..
Fourth Circle.	Timber	..	2,349	38,767	..	4,629	1,07,169	68,402	..
	Bamboos	..	102	51	..	5	2	..	49
	Minor forest produce	..	..	..	..	..	..	..	..
	Total value	..	..	39,265	..	..	1,07,248	67,983	..
Fifth Circle.	Timber	..	23,572	1,55,197	..	17,991	1,03,493	..	51,704
	Fuel	..	1,317	89	..	2,903	156	67	..
	Bamboos	..	95	1	..	332	3	2	..
	Minor produce	..	..	..	..	..	..	..	..
	Total value	..	..	1,55,566	..	..	1,03,740	..	51,820
Sixth Circle.	Timber	..	72,875	1,29,306	..	111,938	2,10,070	80,764	..
	Fuel	..	18,306	2,530	..	7,173	964	..	1,566
	Bamboos	..	33,561	2,001	..	53,263	2,125	124	..
	Minor produce	..	..	..	..	..	..	..	..
	Total value	..	..	1,34,228	..	..	2,13,559	79,381	..
	Grand total, Presidency.	..	..	343,077	..	..	451,964	108,887	..

ANNUAL REPORT OF THE

ANNUAL
Forest Department

Summary of revenue of the different districts

Head of account.	First Circle.							Second	
	Direction.	Ganjam.	Vizagapatam.	Godavari, East.	Godavari, West.	Salem.	Total.	Belary.	Alantapur.
Receipts.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
I. Timber and other produce removed from the forests by Government Agency—									
(a) Timber	104	14,357	14,102	20	..	28,826	..	95	34
(b) Firewood and charcoal	..	1,927	1,858	1,311	..	4,877	..	..	..
(c) Bamboos	..	..	..	..	..	..	..	..	..
(d) Sandalwood	..	..	..	..	..	..	..	..	..
(e) Grass and other minor produce	..	..	10	..	18	..	..	..	..
II. Timber and other produce removed from the forests by consumers or purchasers—									
(a) Timber	..	9,990	959	1,311	31,570	2,087	46,202	4,119	10,861
(b) Firewood and charcoal	..	32,856	7,217	..	50,386	7,682	1,00,910	9,352	6,156
(c) Bamboos	..	4,856	14,458	17,361	67,027	5,815	1,09,817	1	255
(d) Grazing and fodder grass	1,232	3,571	3,539	6,185	14,549	12,721	40,856	26,988	56,681
(e) Other produce	..	1,316	7,616	..	20,302	8,369	41,721	60,146	1,27,416
(f) Rents for trees tapped	..	..	..	..	..	..	..	21,861	14,697
(g) Other items	..	..	..	..	..	..	..	..	..
(h) Commutation	..	..	..	..	..	..	..	..	..
III. Confiscated drift and waif-wood	..	182	..	757	1,959	..	3,650	123	126
IV. Revenue from forest not managed by Government—									
(a) Revenue from shared and private forests	..	..	..	..	..	..	..	..	..
V. Miscellaneous—									
(a) Fines and forfeitures	1	2,573	2,015	602	5,588	2,755	13,531	5,971	8,276
(b) Other sources	23	2,558	..	286	6,350	1,231	10,794	569	508
Total Receipts	1,361	82,137	35,237	44,356	2,06,257	55,811	4,25,655	1,29,040	2,25,424

Budget heads.	Fourth Circle.									Direction.
	Direction.	Forest Engineer.	Vellore, South.	Vellore, West.	Salem, East.	Salem, North.	Salem, Central.	Salem, South.	Total.	
Receipts.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
I. Timber and other produce removed from the forests by Government Agency—										
(a) Timber	..	..	..	237	..	862	..	106	1,205	574
(b) Firewood and charcoal	..	..	..	..	..	..	..	..	..	..
(c) Bamboos	..	..	..	21	..	143	..	13	315	..
(d) Sandalwood	..	..	..	..	..	380	..	..	380	..
(e) Grass and other minor produce	(a) 1,83,290	..	(a) 45,294	(a) 1,27,538	..	9	..	..	3,55,131	12,55,256
II. Timber and other produce removed from the forests by consumers or purchasers—										
(a) Timber	..	..	10	48	1,084	1,056	2,031	..	7,229	..
(b) Firewood and charcoal	..	..	7,118	1,371	7,038	2,165	5,619	14,606	37,915	10,022
(c) Bamboos	..	..	7,283	2,172	1,18,992	2,181	13,135	26,659	1,68,372	..
(d) Grazing and fodder grass	..	..	26,418	4,894	12,342	2,748	18,609	6,270	60,279	..
(e) Other produce	(b) 208	..	30,119	27,327	37,329	16,242	27,656	25,961	1,64,534	1,423
(f) Rents for trees tapped	..	..	15,815	14,847	17,972	10,426	11,095	46,799	1,16,080	..
(g) Other items	..	..	3,571	576	481	1,689	132	..	6,499	..
(h) Commutation	..	..	..	20	625	324	..	51	..	..
III. Confiscated drift and waif-wood	..	..	..	..	..	..	..	..	..	..
IV. Revenue from forest not managed by Government—										
(a) Revenue from shared and private forests	..	..	..	..	..	..	..	..	..	..
V. Miscellaneous—										
(a) Fines and forfeitures	..	..	14,079	4,516	9,963	1,472	4,506	12,476	47,961	..
(b) Other sources	(c) 68	70	467	418	11,478	806	3,920	955	4,776	(a) 5,391
Total Receipts	1,83,562	70	1,50,276	1,84,322	1,04,381	40,462	85,640	1,35,084	6,73,747	2,73,232

The revenue under direction is distributed as follows:—

II (a) Direction Rs. 83, Godavari, Lower Rs. 1,160.

V (c) Rs. 2, Ganjam Rs. 15, Vizagapatam Rs. 5.

(a) Revenue under direction, South and West Vellore, is distributed as follows:—

Salem, East, Rs. 11,395; Salem, North, Rs. 1,12,087; Salem, Central, Rs. 9,221; Salem, South, Rs. 35,053; Vellore,

(b) Vellore, West, Rs. 1,06,246; Vellore west, Rs. 89,391; Tirunelveli, Rs. 2,830 and South Cuddapah, Rs. 899.

(c) Forest Engineer, Rs. 66.

FOREST DEPARTMENT

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Form No. 80.

Madras Presidency.

for the year 1920-21.

Circle.					Third Circle.									
Guntur.	Kurcool, East.	Kurcool, South.	Kurcool, West.	Total.	Direction.	Cuddapah, North.	Cuddapah, South.	Cuddapah, West.	Nellore.	Mangalore.	Chittoor.	Vellore, North.	Total.	
Rs.	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
27	4,340	3	10,512	14,868	..	18	488	..	23	100	3	50	632	
84	275	..	2,777	3,255	..	21	378	..	32	253	1,077	47	4,440	
..	3,614	..	9,055	12,669	..	..	..	..	..	..	..	42	..	
25	3,224	..	1,558	4,782	..	..	8	..	3	43,125	450	578	47,166	
4,289	640	2,349	4,906	27,164	..	1,225	2,934	26,846	6,725	1,693	12,851	13,383	49,167	
17,782	233	19,098	4,243	56,844	..	4,664	2,428	4,620	54,023	11,062	5,406	12,040	74,233	
175	1,085	40,155	..	41,301	..	1,556	267	1,109	..	407	851	7,178	11,366	
71,766	44,527	17,111	35,590	2,52,612	..	17,712	7,078	21,409	64,551	25,667	38,333	26,433	2,02,188	
7,675	6,754	5,004	31,247	2,38,242	..	5,001	16,302	13,004	8,450	5,160	52,552	22,372	1,16,881	
4,336	733	1,837	6,439	49,603	..	464	1,869	2,333	7,339	4,010	4,566	5,633	28,286	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	
127	90	777	1,404	2,347	..	298	228	422	965	160	124	70	2,267	
..	..	..	..	..	..	..	..	..	..	..	..	..	..	
23,825	2,486	5,677	9,340	55,575	..	3,873	3,995	11,428	8,802	4,963	13,299	17,153	68,913	
770	2,135	2,035	2,830	4,564	..	403	546	539	1,299	2,989	719	2,861	9,386	
1,36,436	65,275	94,038	1,20,527	7,64,740	..	35,225	30,518	65,895	1,78,156	58,733	1,30,770	1,07,849	6,07,071	

Fifth Circle.							Sixth Circle.							
Kollegal.	North Coimbatore.	South Coimbatore.	Madurai.	Tinnevely.	Forest Eng. near.	Total.	North Mangalore.	South Mangalore.	North Malabar.	South Malabar.	The Nilgiri.	Central Coimbatore.	Forest Resear. ch. Office.	Total.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
4	598	91,612	24	27	..	82,591	13,372	29,987 (e) 338	82,764	3,13,893	6,648	1,565	..	4,50,560
142	..	..	116	59	..	317	4,647	6,941	..	369 (e) 235	30,585	537	..	43,811
..	..	..	..	9	..	9	20	768	..	6,255	..	261	..	7,311
..	1,18,868	..	3	..	..	3,74,127	1,941	3,846	..	..	..	178	..	5,98
..	46	..	42	..	..	95	400	2,295	457	..	142	1,209	3	4,50
179	3,342	6,688	11,713	17,817	..	49,787	27,345	10,369	15,588	3,527	9,711	5,242	..	71,78
2,254	19,769	9,858	49,574	1,06,206	..	1,87,661	20,372	1,526	320	6	5,103	45,820	..	72,95
2,164	8,778	4,488	2,295	1,023	..	18,748	871	749	341	3	613	8,238	..	10,81
30,847	44,271	3,390	24,288	7,593	..	1,10,389	5,823	3,021	4,587	..	9,038	12,546	..	40,01
4,659	12,746	7,406	(b) 37,169	23,652	..	87,366	4,401	4,581 (d) 1,433	3,737	2,075 (e) 27	1,392	10,101	..	27,74
76	..	..	..	..	..	76	811	355	..	..	..	..	..	1,19
242	90	152	396	214	..	1,094	243	270	89	441	38	204	..	1,28
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1,911	4,787	2,627	6,503	5,830	..	21,658	2,902	4,162	207	342	1,255	6,970	..	16,92
2,312	4,540	(a) 52,723	6,621	2,471	145	74,803	806	2,753	4,701	40,802	10,665	23,553	10	83,289
44,790	2,17,635	1,68,944	1,38,703	1,64,901	145	(d) 10,08,400	84,075	77,393	1,12,789	3,67,994	75,193	1,10,224	13	8,36,677

* Relates to Sixth Circle.

† Rs. 10,000 pertains to South Coimbatore and Rs. 28 to Sixth Circle.

(a) Includes Rs. 5,880 pertaining to South Coimbatore.

(b) Includes Rs. 1,800 pertaining to Fourth Circle.

(c) Excludes Rs. 14,875 sale-proceeds of elephants credited in the accounts of the Sixth Circle.

(d) The revenue for the Fifth Circle after making the above alterations comes to Rs. 10,19,440.

(e) Credited under 'Direction' Fifth Circle.

Summary of expenditure of the different districts for the Forest year 1920-21.

Head of account.	First Circle.							Second		
	Direction	Ganjam.	Vizagapatnam.	Coastal.	Orissa.	Nagaland.	Assam.	Direction	Bellary.	Anantapur.
I. Refunds and Drawbacks	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
II. Forests	1,584	1,455	409	4,927	6,709	11,680	334	1,089		
A. Conservancy and Works.										
I. Timber and other produce removed from the forests by Government Agency—										
(a) Timber	49,785	..	5,598	31	..	55,363	..	..	..	31
(b) Firewood and charcoal	23	..	441	99	..	663	..	..	..	..
(c) Bamboos	..	..	..	..	..	..	..	..	..	..
(d) Sandalwood	..	..	..	..	..	..	..	..	..	..
(e) Grass and other minor produce	..	17	120	40	..	177	..	..	..	10
II. Timber and other produce removed from the forests by consumers or purchasers.	5,932	4,858	3,565	13,507	1,926	29,258	1,774	2,519		
III. Confiscated drift and wailwood ..	115	..	6	323	..	944	..	..	..	9
IV. Forests not managed by Government—										
(a) Shared and private forests.	..	..	478	..	..	478	..	..	..	..
V. Rent of leased forests and payments to shareholders in forest managed by Government.	..	..	..	..	..	..	..	..	..	..
VI. Live-stock, stores, tools and plant—										
(a) Purchase of cattle	..	9	..	1,874	..	1,888	..	..	..	..
(b) Feed and keep of cattle	..	..	..	..	..	..	..	..	..	..
(c) Stores, tools and plant	11,564	421	384	1,345	7,093	2,470	23,234	243	53	
VII. Communications and buildings—										
(a) Roads and bridges	13	6,250	2,148	2,420	1,798	1,729	14,361	..	..	408
(b) Buildings	75	59,753	3,853	4,981	7,612	3,296	79,270	1,399	4,448	
(c) Other works	..	83	88	..	..	195	366	699	40	
VIII. Demarcation, improvement and extension of forests—										
(a) Demarcation	..	174	143	1,103	281	365	2,967	1,715	1,118	
(b) Cost of forest settlement compensation for land and rights.	..	1,967	27	..	..	..	1,994	2,344	..	
(c) Surveys—										
(1) Local	..	65	510	1,619	1,050	1,137	4,381	149	..	
(2) India	..	..	..	..	..	..	..	..	..	
(d) Working-plans	..	..	..	..	..	..	..	..	..	
(e) Sowing and planting	302	668	87	348	131	592	2,073	..	..	192
(f) Protection from fire	..	4,933	548	10,166	4,197	1,361	20,895	1,303	640	
(g) Other works	..	3,189	210	414	..	4,122	7,966	1,676	4,229	
IX. Miscellaneous—										
(a) Law charges	..	..	..	..	1	..	1	608	..	
(b) Grain compensation allowance.	..	..	..	..	..	..	..	..	..	
(c) Local allowance for high prices.	..	523	431	306	386	314	2,460	184	871	
(d) Other charges	14	836	..	5	..	..	..	..	..	
Total, A. Conservancy and Works ..	11,968	1,33,654	12,671	33,636	35,679	16,166	2,13,771	11,801	13,326	
B. Establishments.										
I. Salaries—										
(a) Conservators	14,731	..	..	..	..	..	14,731	..	..	
(b) Superior officers	3,165	14,986	7,247	2,375	6					

Summary of expenditure of the different districts for the Forest year 1920-21—*cont.*

[illegible]

Summary of expenditure of the different districts for the Forest year 1920-21—*cont.*

Fourth Grade.											Fifth	
Budget heads.	Direction.	Forest.	Engl. Forest.	Vellore South.	Vellore West.	Salem East.	Salem North.	Tamil Central.	Tamil North.	Total.	Direction.	Kollegal.
I. Refunds and Income.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
II. Forests.			8,186	2,111	2,198	1,397	1,400	1,608	23,160			46
A. Conservancy and Works.												
I. Timber and other produce removed from the forests by Government Agency—												
(a) Timber												
(b) Firewood and charcoal.			8	381		89		8	486			
(c) Barkhous				530	6	60			598			
(d) Sandalwood						115			115			
(e) Grass and other minor produce.			4,481	4,508	1,066	7,810	84	816	1,028	19,802	190	2,930
II. Timber and other produce removed from the forests by consumers or purchasers.												
III. Confiscated, drift and waif-wood.												
IV. Forests not managed by Government.												
(a) Shared and private forests.												
V. Rent of leased forests and payments to shareholders in forests managed by Government.												
VI. Live-stock, stores, tools and plant—												
(a) Purchase of cattle						12				12		
(b) Feed and keep of cattle.						16				16	80	
(c) Stables, tools and plant.												
VII. Communications and buildings—												
(a) Road and bridges												
(b) Buildings												
(c) Other works												
VIII. Demarcation, improvement and extension of forests—												
(a) Demarcation												
(b) Cost of Forest Settlement; compensation for land and rights.												
(c) Surveys												
(d) Working-plans												
(e) Sowing and planting.												
(f) Protection from fire												
(g) Other works												
IX. Miscellaneous—												
(a) Law charges												
(b) Grain compensation allowance.												
(c) Local allowance for high prices.												
(d) Other charges												
Total, A, Conservancy and Works												
B. Establishments.												
I. Salaries—												
(a) Conservators												
(b) Superior officers												
(c) Subordinate Forest and Depot establishments.												
(d) Office establishments												
(e) Deputation and special allowances.												
(f) Grain compensation allowance.												
(g) Local allowance for high prices.												
II. Travelling allowances—												
(a) Conservators												
(b) Superior officers												
(c) Subordinate forest and depot establishments.												
(d) Office establishments												
III. Contingencies—												
(a) Contract items—												
(1) Service postage and telegram charges.												
(2) Sundries or other contract contingencies.												
(b) Non-contract items—												
(1) Rents, rates and taxes.												
(2) Sundries												
Total, B. Establishments												
Grand Total of Expenditure, A and B.												

Summary of expenditure of the different districts for the Forest year 1920-21—*cont.*

Circle.						Sixth Circle.									
North Columba- fore.	South Columba- fore.	Madura.	Tinne- vely.	Forest Engl- mer.	Total.	Director.	North Madura- fore.	South Madura- fore.	North Mala- bar.	South Mala- bar.	The Nil- giris.	Central Columba- fore.	Forest Reserve Office.	Total.	
Rs. 785	Rs. 288	Rs. 5,962	Rs. 1,096	Rs. ...	Rs. 6,178	Rs. ...	Rs. 10	Rs. 40	Rs. 171	Rs. 254	Rs. 542	Rs. 963	Rs. ...	Rs. 1,992	
47	26,534	550	10	...	27,141	...	4,946	12,051	3,202	88,228	3,197	33,727	...	1,45,161	
10,754	...	...	260	...	13,534	...	767	2,691	350	27,568	16,667	207	...	20,332	
29	6	...	...	...	106	...	31	260	99	5	116	13	...	27,968	
8,857	1,313	3,241	3,543	...	14,587	...	2,776	2,155	564	1,631	...	2,780	...	420	
2	15	6	...	...	23	...	52	...	...	...	...	18	...	803	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
...	1,260	...	...	...	1,259	...	...	...	70	2,095	...	...	...	9,895	
...	3,353	...	750	...	4,103	...	...	282	1,718	829	1,277	265	...	70	
90,620	...	...	13	...	30,712	...	...	8,588	13,109	51,279	34,794	8,362	...	...	
747	2,488	693	567	20	6,485	...	128	1,231	1,718	5,379	722	16,105	557	2,163	
12,658	6,559	8,828	2,799	1,704	35,872	...	1,838	1,173	2,557	2,603	3,858	56,639	...	4,401	
3,395	6,233	5,296	2,763	...	20,882	...	2,191	1,057	3,136	7,800	629	11,830	...	1,12,432	
40	215	396	16	...	876	15	87	73	526	382	341	1,902	...	25,920	
3	16	415	97	...	1,207	...	52	116	1,041	707	703	390	...	68,728	
...	...	54	...	...	51	...	...	...	531	...	...	115	...	26,643	
217	...	...	...	...	222	...	...	...	...	4	1,382	1,009	...	3,908	
...	...	230	49	...	474	...	...	...	...	...	...	847	...	646	
832	447	2,839	818	...	5,180	...	1,317	2,560	1,421	17,878	940	2,163	114	2,395	
3,402	1,309	5,137	4,419	...	17,440	...	2,855	1,212	5,352	3,984	4,314	4,699	...	...	
5,417	4,488	9,058	2,784	...	22,216	...	...	376	3,664	1,124	1,829	4,467	...	20,165	
...	...	7	...	...	7	...	5	...	52	...	1	...	...	22,416	
...	...	-1,033	...	...	-1,033	...	...	...	...	...	...	...	...	11,460	
-406	-468	731	486	...	-1,291	...	-284	-455	-345	-344	-801	-292	...	58	
634	2,319	12	211	...	3,482	...	128	576	338	226	6,046	924	1,782	-2,521	
41,614	86,496	36,024	18,483	1,724	2,03,926	15	16,523	33,698	38,902	2,14,376	76,124	1,46,267	2,225	30,012	
14,490	17,488	1,321	7,501	3,838	39,263	1,750	2,514	4,663	5,251	8,603	9,469	11,339	2,530	5,28,099	
22,477	18,878	32,778	26,774	3,608	1,22,168	80	19,889	16,727	13,910	16,825	22,400	27,636	3,472	4,280	
6,373	7,535	7,501	7,432	1,812	42,559	284	5,360	5,627	5,674	7,309	7,102	6,971	1,387	48,190	
307	4,639	510	...	884	7,255	15	...	...	8,687	179	8,048	61	10	1,20,739	
...	...	...	380	...	380	...	...	...	...	1	36	...	...	39,704	
-856	-564	-1,021	-1,120	-188	-4,610	...	-655	-517	-534	-634	-728	-497	-72	16,900	
1,353	1,477	1,809	923	482	8,018	620	100	...	239	1,980	2,197	2,954	1,787	35	
5,016	4,115	6,361	4,141	794	23,547	...	1,020	908	2,333	3,926	3,464	6,302	1,203	3,667	
1,624	1,072	2,016	898	404	7,663	244	708	948	709	970	1,060	1,833	554	659	
896	981	1,939	1,469	...	12,357	51	770	977	475	691	798	464	161	13,177	
1,362	1,415	...	...	...	...	17	1,454	906	755	1,381	1,049	1,275	1,104	24,377	
20	435	...	...	309	...	...	...	5	...	...	136	105	...	7,036	
...	634	...	...	410	2,886	14	...	80	58	142	1,065	7	274	4,387	
52,971	58,105	56,507	48,038	12,735	3,17,920	3,075	34,504	33,734	39,948	41,336	55,058	58,450	19,764	7,941	
94,685	1,44,601	92,531	68,521	14,459	5,20,946	3,060	51,027	67,432	78,850	2,55,711	1,31,182	2,04,717	21,989	2,85,893	

Budget heads.	First Circle.	Second Circle.	Third Circle.	Fourth Circle.	Fifth Circle.	Sixth Circle.	Grand total, Presidency.	
							1920-21.	1919-20.
RECEIPTS.								
I. Timber and other produce removed from the forests by Government agency—								
(a) Timber	28,835	11,868	681	1,205	81,591	4,50,567	5,78,739	9,94,897
(b) Firewood and charcoal ..	4,377	2,265	4,140	315	317	43,313	55,997	88,117
(c) Bamboos		12,693	12	280	0	7,314	20,418	41,496
(d) Sandalwood				3,561,131	3,71,127	6,964	7,36,231	7,46,581
(e) Grass and other minor produce.	49	5,417	17,193	7,729	56	4,906	64,162	1,20,579
Total, I	33,252	32,188	22,026	5,069	4,07,133	5,11,564	14,55,812	19,91,684
II. Timber and other produce removed from the forests by consumers or purchasers—								
(a) Timber	46,202	27,161	49,167	37,915	49,767	71,781	2,81,996	3,89,764
(b) Firewood and charcoal ..	1,00,910	56,844	11,255	1,38,772	1,67,591	72,960	6,80,970	7,60,691
(c) Bamboos	1,09,817	31,391	11,356	69,279	18,748	50,815	2,61,326	3,98,086
(d) Grazing and fodder grass..	46,855	2,52,612	2,02,183	1,64,534	1,19,389	40,115	8,16,589	11,69,625
(e) Other produce	11,721	2,38,242	1,16,831	1,16,460	87,065	27,747	6,28,566	1,43,456
(f) Trac-owners' fees	19,116	19,503	26,286	6,499	76	1,196	1,03,076	3,280
(g) Other items							280	2,165
(h) Commutation fees				800			900	
Total, II	3,64,922	6,95,766	4,89,036	5,64,179	4,53,706	2,24,604	27,53,143	35,19,560
III. Confiscated drift and waifwood ..	3,056	2,647	2,267	1,123	1,094	1,285	11,472	19,769
IV. Revenue from forests not managed by Government.								
V. Miscellaneous—								
(a) Fines and forfeitures	13,531	55,575	53,013	47,961	21,658	15,928	2,17,656	2,52,068
(b) Other sources	10,794	4,564	9,386	4,776	74,803	83,200	1,78,061	1,70,855
Total, V	24,325	60,139	72,399	43,185	96,461	99,218	3,95,727	4,22,923
Grand Total, Receipts	4,25,555	7,64,740	6,07,071	9,73,747	10,08,400	8,36,671	46,16,184	59,58,510
EXPENDITURE.								
I. Refunds and Drawbacks	14,080	27,382	25,508	23,160	6,178	1,992	98,900	53,216
A. Conservancy and Works.								
II. Timber and other produce removed from the forests by Government agency—								
(a) Timber	55,364	5,804	58	486	27,111	1,45,151	2,34,004	1,67,999
(b) Firewood and charcoal ..	563	8,251	620	596	8	20,332	30,364	44,428
(c) Bamboos		6,009	52	115		27,958	34,134	39,407
(d) Sandalwood			299	19,802	13,534	420	34,065	34,962
(e) Grass and other minor produce.	177	3,932	5,692	341	106	803	9,448	
Total, A-I	56,104	23,996	6,721	21,343	40,773	1,93,058	3,41,905	3,33,860
III. Timber and other produce removed from the forests by consumers or purchasers.	29,258	23,812	23,219	8,528	14,587	9,895	1,11,629	1,37,359
IV. Confiscated drift and waifwood ..	914	209	4	39	23	70	1,269	1,450
V. Forests not managed by Government.								
V. Rent of leased forests by payments to shareholders in forests managed by Government.	478			38	1,250	2,163	3,929	4,601
VI. Live-stock, stores, tools and plant—								
(a) Purchase of cattle		250		12	4,103	4,401	8,766	29,318
(b) Feed and keep of cattle ..	1,883	3,273	9	16	39,712	1,19,432	1,55,326	1,50,865
(c) Stores, tools and plant	28,234	2,291	7,057	1,732	6,485	25,920	66,719	68,432
Total, A-VI	25,117	5,814	7,066	1,760	41,300	1,49,753	2,80,819	2,38,116
VII. Communications and buildings—								
(a) Roads and bridges	14,351	12,542	19,727	1,42,730	35,872	68,728	2,93,990	2,38,205
(b) Buildings	79,270	23,379	25,954	11,242	20,382	26,443	1,86,870	1,57,875
(c) Other works	388	2,585	2,625	1,423	876	3,893	41,177	14,844
Total, A-VII	93,987	38,506	48,306	1,55,395	57,129	98,674	4,91,997	4,06,924

Budget heads.	First Circle.	Second Circle.	Third Circle.	Fourth Circle.	Fifth Circle.	Sixth Circle.	Grand total, Presidency.	
	1920-21.	1919-20.	1920-21.	1919-20.	1920-21.	1919-20.	1920-21.	1919-20.
EXPENDITURE—cont.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
A. Conservancy and Works—cont.								
VIII. Demarcation, etc.—								
(a) Demarcation	2,667	3,652	3,830	478	1,207	3,008	14,242	18,116
(b) Cost of forest settlement	1,134	2,314	2,866	19,103	54	643	11,129	37,537
(c) Surveys. { (1) Local	4,381	908	1,352	2,355	223	2,395	11,614	14,618
(2) India	..	..	..	..	..	..	..	79
(d) Working plans	..	..	126	18	474	817	1,465	2,350
(e) Sowing and planting	2,073	2,738	4,726	2,545	5,130	26,165	45,429	46,116
(f) Protection from fire	20,895	18,077	20,519	4,169	17,445	22,416	1,03,521	1,14,554
(g) Other works	7,965	15,763	38,089	25,455	22,216	11,460	1,20,948	1,28,072
Total, A-VIII	32,375	43,482	71,510	15,917	46,799	66,937	2,84,020	3,61,483
IX. Miscellaneous—								
(a) Law charges	1	618	22	30	7	58	736	99
(b) Grain compensation	..	..	..	374	1,033	..	1,407	6
(c) Local allowance for high prices	2,460	1,975	1,514	2,115	1,291	2,521	11,876	94,952
(d) Other charges	967	800	627	410	3,492	10,012	16,358	21,747
Total, A-IX	1,492	497	855	2,019	1,165	7,649	3,811	1,10,804
Total, A. Conservancy and Works including refunds and drawbacks.	2,67,851	1,65,334	1,81,469	2,24,431	2,09,204	5,30,091	15,88,380	10,23,271
B. Establishment.								
I. Salaries—								
(a) Conservators	14,731	..	9,912	31,171	39,263	4,280	99,857	1,17,830
(b) Superior officers	42,127	31,482	49,034	44,332	53,916	45,190	2,09,081	3,31,274
(c) Subordinate Forest and Depot establishment	1,12,614	1,66,772	1,99,422	1,31,995	1,22,168	1,20,739	8,53,710	6,30,240
(d) Office establishment	41,240	43,929	49,999	50,583	42,559	39,704	2,38,005	2,22,969
(e) Deputation and special allowances	9,081	7,190	401	1,621	7,255	16,900	42,358	16,536
(f) Grain compensation allowance	..	..	852	5	380	35	512	63
(g) Local allowance for high prices	4,603	5,893	6,614	8,972	4,610	3,667	34,334	1,06,691
Total, B-I	2,15,185	2,43,381	3,01,492	2,50,735	2,60,931	2,26,111	14,97,685	15,25,203
II. Travelling allowance —								
(a) Conservators	1,438	489	2,251	706	2,523	959	8,366	10,958
(b) Superior officers	1,205	6,755	9,120	7,743	8,013	13,177	56,864	71,040
(c) Subordinate Forest and Depot establishments	26,374	32,118	33,620	24,920	23,547	24,376	1,61,965	1,74,057
(d) Office establishment	10,153	10,476	9,382	6,080	7,663	7,036	50,770	58,033
Total B-II	50,021	49,838	5,21,353	30,449	41,746	45,548	2,77,955	3,14,088
III. Contingencies—								
(a) Contract items—								
(1) Service postage and telegrams	4,394	3,593	3,535	4,308	12,352	4,387	66,986	32,646
(2) Sundries	8,129	9,105	1,589	7,658	..	7,941	..	58,165
(b) Non-contract items—								
(1) Rents, rates and taxes	1,076	856	1,039	1,261	2,886	246	11,586	7,498
(2) Sundries	266	1,070	583	677	..	1,636	..	7,792
Total, B-III	13,855	14,564	6,776	13,904	15,243	14,210	78,562	1,07,081
Total, B. Establishment	2,79,061	3,07,783	3,62,421	3,01,088	3,17,920	2,85,869	18,54,142	19,46,872
Grand Total, A and B:—Expenditure including refunds and drawbacks.	5,36,912	4,73,117	5,49,890	5,25,519	5,27,124	8,15,960	34,28,622	35,69,643
Surplus	—1,11,357	2,91,623	57,181	4,48,228	4,81,276	20,711	11,87,662	23,84,287
Total	4,25,555	7,64,740	6,07,071	9,73,747	10,08,400	8,36,671	46,16,184	59,53,930

Revenue received and outstandings on account of revenue during 1920-21.

Outstandings and liabilities on account of contractors and disburseurs for the period from 1st July 1920 to 31st March 1921.

District.	Particulars.	Outstandings at commence- ment of year.	Value of sales and other revenue during year.	Total.	Amount realized during year.	Balance due to the department at end of year.
		RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
First Circle.						
Belgaum	Timber and other forest produce ..	.. ..	1,361 0 0	1,361 0 0	1,361 0 0	.. ..
Bijapur	Do. ..	7,168 9 7	78,864 4 11	86,032 14 6	(a) 82,137 0 0	3,098 2 6
Bijapur	Do. ..	19,341 6 0	28,986 4 8	48,327 10 8	(a) 36,237 0 0	12,090 10 8
Bijapur	Do. ..	2,617 10 0	41,918 14 3	44,536 8 3	(a) 44,266 0 0	274 14 3
Bijapur, Upper ..	Do. ..	68,072 12 0	1,43,483 8 6	2,11,556 4 0	(a) 2,06,263 0 0	5,303 4 0
Do. Lower	Do. ..	8,823 4 6	47,960 9 10	56,783 14 4	(a) 55,311 0 0	1,372 2 4
Bijapur	Do. ..	.. ..	.. ..	.. ..	(a) 23 12 0	.. ..
	Total ..	1,06,023 10 1	3,42,674 9 8	4,48,598 3 9	(a) 4,25,555 0 0	22,146 1 9
Second Circle.						
Belgaum	Timber and other forest produce ..	.. ..	.. ..	.. ..	1,29,040 6 11	.. ..
Bijapur	Do. ..	16,232 1 5	1,21,908 0 11	1,38,140 2 4	(a) 1,230 4 5	5,019 7 0
Bijapur	Do. ..	28,630 8 8	2,15,410 5 5	2,44,040 13 8	(b) 2,350 0 0	19,002 10 5
Bijapur	Do. ..	8,881 6 11	1,24,149 13 1	1,33,031 4 0	(a) 2,35,038 3 2	1,594 10 0
Bijapur, East ..	Do. ..	.. ..	65,361 7 1	65,361 7 1	(a) 1,31,436 10 0	50 0 0
Do. South	Do. ..	16,274 4 4	77,865 2 3	94,139 6 7	(a) 65,281 7 1	101 8 0
Do. West	Do. ..	15,836 12 0	1,19,847 15 5	1,35,684 11 5	(a) 30 0 0	15,166 7 3
	Total ..	85,855 0 11	7,24,542 12 2	8,10,597 13 1	(a) 34,018 14 7	40,934 10 0
Third Circle.						
Bijapur, North ..	Timber and other forest produce ..	.. ..	.. ..	.. ..	7,65,333 13 11	.. ..
Do. South	Do. ..	6,951 14 0	35,974 10 0	42,926 8 0	(a) 1,279 4 5	1,994 10 0
Do. West	Do. ..	11,959 0 6	31,851 12 6	43,810 10 10	(b) 2,850 0 0	.. ..
Bijapur	Do. ..	9,280 14 6	64,452 2 11	73,733 1 5	(a) 65,804 5 11	7,928 11 0
Bijapur	Do. ..	78,385 0 5	1,54,304 7 9	2,30,246 14 9	(b) 1,78,155 11 9	52,016 6 10
Bijapur	Do. ..	15,933 14 8	48,109 1 7	64,042 0 3	(a) 74 12 2	5,267 0 3
Bijapur, South ..	Do. ..	52,983 7 2	95,057 6 7	1,48,040 13 9	(a) 58,753 2 3	17,270 4 4
Bijapur, North ..	Do. ..	13,314 6 9	1,08,916 13 0	1,22,231 4 3	(a) 21 13 9	14,381 14 0
	Total ..	1,88,908 10 0	5,38,665 6 10	7,27,122 5 3	(a) 1,30,770 9 4	1,19,954 1 0
Fourth Circle.						
Bijapur, South ..	Timber and other forest produce ..	.. ..	.. ..	.. ..	6,07,071 10 0	.. ..
Bijapur, West ..	Do. ..	66,422 8 0	1,42,096 12 8	2,08,519 4 8	(a) 96 9 11	57,590 4 0
Bijapur, East ..	Do. ..	8,662 3 8	1,84,972 15 3	1,93,635 2 11	(a) 1,50,929 0 0	9,803 2 1
Bijapur, North ..	Do. ..	32,200 3 2	1,80,986 15 3	2,13,187 2 5	(a) 1,83,832 0 0	18,010 2 0
Bijapur, South ..	Do. ..	5,267 13 5	42,405 2 3	47,672 15 8	(a) 1,95,177 0 0	7,185 15 0
Bijapur, Central ..	Do. ..	40,227 15 8	87,981 13 8	1,08,209 13 4	(a) 40,487 0 0	24,010 13 0
Bijapur, South ..	Do. ..	34,632 0 0	1,10,587 14 5	1,45,169 14 5	(a) 84,199 0 0	10,084 14 0
Bijapur, North ..	Do. ..	.. ..	70 0 0	70 0 0	(a) 1,35,065 0 0	.. ..
	Total ..	1,87,112 11 11	9,12,613 9 6	11,00,026 5 5	(a) 70 0 0	1,26,685 5 0
Fifth Circle for 9 months.						
Bijapur, South ..	Timber and other forest produce ..	.. ..	.. ..	.. ..	85,000 5 0	3,913 0 0
Bijapur, West ..	Do. ..	14,015 0 0	74,898 5 0	88,913 5 0	(a) 4,32,080 8 6	4,285 0 0
Bijapur, East ..	Do. ..	26,974 14 3	4,10,990 10 3	4,36,965 8 6	(a) 1,99,756 7 9	92,486 3 0
Bijapur, North ..	Do. ..	50,285 1 8	2,41,906 9 5	2,92,281 11 1	(a) 1,38,903 0 0	76,455 7 0
Bijapur, South ..	Do. ..	81,364 10 1	1,82,449 14 10	2,13,814 9 11	(a) 456 1 10	69,911 15 0
Bijapur, Central ..	Do. ..	82,301 14 4	1,52,517 0 8	2,34,818 15 0	(a) 1,64,907 0 0	.. ..
Bijapur, South ..	Do. ..	.. ..	145 0 0	145 0 0	(a) 145 0 0	.. ..
Bijapur, North ..	Do. ..	.. ..	111 0 0	111 0 0	(a) 111 0 0	.. ..
	Total ..	2,53,941 8 4	10,13,108 8 2	12,67,050 0 6	(a) 10,19,542 5 3	2,47,661 9 0
Sixth Circle.						
Bijapur, North ..	Timber and other forest produce ..	.. ..	.. ..	.. ..	84,074 8 7	19,852 7 0
Do. South	Do. ..	16,615 0 6	87,311 15 7	1,03,927 0 1	(a) 77,533 15 9	30,374 14 0
Bijapur, North ..	Do. ..	8,264 9 10	79,654 4 4	87,908 14 2	(a) 1,12,644 1 9	1,68,218 2 0
Do. South	Do. ..	45,629 4 2	2,30,238 0 2	2,75,862 4 4	(a) 3,67,988 11 6	1,49,523 5 0
Bijapur, North ..	Do. ..	80,560 5 8	4,35,954 15 0	5,16,516 4 6	(a) 9 4 0	12,712 8 0
Do. South	Do. ..	18,703 6 6	69,095 3 10	87,798 10 4	(a) 75,086 2 2	17,879 0 0
The Nilgiris	Do. ..	68,161 2 11	78,951 14 8	1,37,103 1 7	(a) 1,19,234 1 4	.. ..
Bijapur, Central ..	Do. ..	.. ..	13 0 0	13 0 0	(a) 13 0 0	.. ..
Forest Research Office	Do. ..	.. ..	.. ..	.. ..	(a) 3,36,559 9 1	3,72,559 5 0
	Total ..	2,27,913 13 5	9,81,214 5 7	12,09,128 3 0	(a) 9 4 0	9,29,831 2 0
		10,49,603 11 1	45,12,719 3 11	55,62,322 15 0	(a) 46,32,991 12 8	9,29,831 2 0
Grand total, Presidency ..						

Grand total, Presidency ..

1. 22 for First Circle.	Out of total outstandings of Rs. 22,146-1-9 the amount actually due on or before 31st March 1921
2. 40 for Second Circle.	(a) Written off the accounts. (a) Written off as irrecoverable.
Note for Third Circle.	(b) Rebate sanctioned and deducted from the lease amounts of Tangedu bark leases. (b) Written off as irrecoverable.
Note for Fourth Circle.	(c) Elimination on account of erroneous demand. (c) Elimination on account of last year and the opening balance of this year is due to ~
Note for Fifth Circle.	The difference between the closing balance of last year and the opening balance of this year is due to ~ (1) Reconstitution of the divisions in the Circle. (2) Reconstitution of the divisions in the last year's return.
Note for Sixth Circle.	(1) Elimination of Rs. 692-1-2 erroneously included twice in the last year's return. (2) Elimination of Rs. 692-1-2 and Rs. 108 and odd was written off the accounts.
Note for Seventh Circle.	* Rupees 353 realised during 1919-20 and Rs. 108 and odd was written off the accounts. Norm. — Of the total outstandings of Rs. 2,47,061-9-5 the amount actually due on or before 31st March 1921 was Rs. 61,249-0-0
Note for Eighth Circle.	† Written off as irrecoverable. Norm. — One of the total outstandings of Rs. 3,72,559-5-11, the amount actually due on or before 31st March 1921 was Rs. 44,552-2-1.

ACCOUNTANT-GENERAL'S OFFICE,
MADRAS, 1st September 1920.

G. H. BAILEY,
Deputy Accountant-General.

District.	Timber and other produce removed from the forests by Government Agency.		Other revenue.		Vacation, protection and improvement of forests.	Total.	
	Receipts.	Charges.	Receipts.	Charges.		Receipts.	Charges.
<i>First Circle.</i>	RS.	RS.	RS.	RS.	RS.	RS.	RS.
Ganjam	15,712	90,134	6,473	38,808	1,12,858	82,185	2,39,800
Vizagapatam ..	57	290	36,224	37,191	13,949	36,257	51,480
Udumalpet, Upper ..	18,011	17,477	28,259	28,454	39,825	44,800	85,756
Do. Lower ..	1,424	8,743	2,06,059	66,902	18,857	2,07,480	94,502
Kistna	72	8,598	55,261	28,810	18,876	55,333	61,284
Total	33,251	1,20,242	3,92,303	1,98,225	2,04,305	4,25,553	5,92,832 (a) 14,080
<i>Second Circle.</i>							
Bellary	120	..	1,28,920	38,825	19,357	1,29,040	56,182
Anantapur	601	41	2,24,823	43,058	21,426	2,25,424	64,525
Guntur	62	93	1,30,374	43,256	22,807	1,30,436	66,180
Kurnool, East ..	10,882	8,385	54,413	41,172	19,094	65,275	69,847
Do. South	15	53	94,023	49,817	26,511	94,038	76,381
Do. West	24,528	15,424	95,989	67,336	29,556	1,20,527	1,12,316
Total	36,198	23,998	7,28,552	2,81,458	1,39,681	7,64,740	4,45,135 (a) 27,989
<i>Third Circle.</i>							
Cuddapah, North ..	39	..	35,186	38,740	19,943	35,225	58,683
Do. South	871	243	26,639	50,864	28,300	30,518	85,407
Do. West	35	..	65,700	45,395	23,182	65,805	68,467
Nellore	48,501	5,978	1,31,655	60,648	37,347	1,78,186	85,988
Chingleput	2,632	89	66,121	38,938	20,155	58,753	60,182
Chittoor	1,539	254	1,29,231	64,177	42,365	1,30,770	1,06,790
Vellore, North ..	718	157	1,07,181	30,685	20,167	1,07,849	50,859
Total	52,338	6,721	5,51,733	3,30,222	1,87,432	8,07,071	5,24,382 (a) 55,008
<i>Fourth Circle.</i>							
Vellore, South ..	1,06,353	5,616	1,05,664	24,196	(a) 1,80,287	2,12,017	2,10,099
Do. West	69,697	8,600	50,088	38,340	14,217	1,45,788	68,757
Salem, East	15,520	2,102	1,91,052	47,177	8,832	2,06,842	68,111
Do. North	1,14,537	16,869	38,037	42,031	(b) - 1,104	1,62,574	57,796
Do. Central	10,252	1,033	82,168	36,903	19,877	92,420	50,813
Do. South	25,172	1,409	1,35,672	52,336	11,996	1,60,244	66,740
Total	3,81,531	35,629	6,08,081	2,39,683	2,27,104	9,69,612	5,02,316 (a) 55,159
<i>Fifth Circle.</i>							
Kollegal	40,367	4,021	44,635	38,122	12,918	85,053	88,061
Coimbatore, North ..	2,34,357	18,894	98,574	53,067	27,668	4,32,731	1,09,697
Do. South	81,612	68,462	1,19,231	43,537	28,235	1,99,846	1,60,834
Madurai	144	4,676	1,36,810	62,403	48,546	1,86,954	1,10,624
Tirunelveli	95	2,785	1,64,863	60,589	18,377	1,64,958	81,781
Total	4,56,565	1,19,836	5,62,977	2,57,798	1,47,744	10,19,542	5,25,877
<i>Sixth Circle.</i>							
Mangalore, North ..	20,380	8,065	63,695	31,230	12,180	84,075	51,475
Do. South	48,374	37,977	84,159	19,903	10,037	77,533	67,917
Malabar, North ..	83,221	32,281	29,424	18,437	28,741	1,12,645	79,462
Do. South	3,26,761	2,07,090	47,223	9,188	40,098	3,67,984	2,56,276
The Nilgiris	37,269	68,904	57,817	29,229	21,020	75,083	1,32,182
Coimbatore, Central ..	6,750	74,015	1,12,474	29,080	1,03,023	1,19,224	2,08,118
Forest research office ..	3	21,431	10	1,010	20	13	22,491
Total	5,11,758	4,69,766	8,24,802	1,31,076	2,15,089	8,36,560	5,15,931
Grand total, Presidency.	14,51,032	776,189	31,71,448	11,88,362	11,21,822	46,23,080	25,28,695

Note for First Circle: (a) Refunds and drawbacks.

Note for Third Circle: (a) Refunds and drawbacks.

Note for Fourth Circle: (a) Includes charges incurred by the Forest Engineer on road works on the Javadis. (b) A sum of Rs. 20,000 debited to acquisition of lands in the last year's accounts on account of acquisition of lands (Thirumalavadi Mitah Forests), which was not completed was cancelled and the amount treated as recovered in the current year. (c) Refunds.

Note for Fifth and Sixth Circle: Includes refunds and drawbacks.

Note for Fourth, Fifth and Sixth Circles: The discrepancy between the figures showing revenue and expenditure in these circles given in this statement and those given in Form No. 80 has not been ascertained.

Statement of elephants and other live-stock during 1920-21.

District.	On hand at the commencement of the year.		Number received during the year.	Number disposed of during the year.	On hand at the end of the year.		Total expenditure on maintenance during the year.
	Number.	Value.			Number.	Value.	
(1) ELEPHANTS.							
First Circle.							
Godavari, Upper	2	RS. 3,700	..	..	2	RS. 3,700	RS. A. P. 1,874 3 10
Second Circle.							
Kurnool, West.	2	5,000	..	..	2	5,000	1,690 12 7
Third Circle—Nil.							
Fourth Circle—Nil.							
Fifth Circle.							
Coimbatore, South	22	75,000	13	13	22	75,500	15,765 2 6
Sixth Circle.							
Mangalore, South	12	25,500	..	10	2	10,000	5,582 8 7
Malabar, North	18	58,000	13	2	29	79,900	15,927 1 1
Do. South	21	80,200	13	10	24	92,000	88,753 2 6
The Nilgiris	51	1,20,100	4	19	36	76,700	31,438 8 9
Coimbatore, Central ..	..	..	8	..	8	27,300	788 15 6
Total	102	2,84,800	38	41	99	2,85,900	87,484 8 8
Grand total (Elephants), Presidency.	128	3,68,500	51	54	125	3,70,100	10,67,54 6 7
(2) OTHER LIVE-STOCK.							
First Circle.							
Ganjam	6	355	53	6	53	1,387	1,218 11 0
Second Circle.							
Kurnool, East	4	34	1	5	..	780	1,560 9 1
Do. West	10	a) 530	2	..	12	780	1,560 9 1
Total	14	564	3	5	12	780	1,560 9 1
Third Circle.							
Chingleput	1	35	..	..	1	35	8 14 0
Chittoor	2	70	1	..	3	122	..
Total	3	105	1	..	4	157	8 14 0
Fourth Circle—Nil.							
Fifth Circle.							
Coimbatore, South	67	4,596	1	4	64	4,440	11,303 15 6
Sixth Circle.							
Mangalore, South	12	1,015	..	..	12	1,015	2,433 5 0
Malabar, South	107	8,017	..	22	85	6,196	18,123 6 6
The Nilgiris	10	1,042	4	8	11	1,324	2,240 5 9
Coimbatore, Central ..	20	1,200	20	..	40	2,798	8,349 1 10
Total	149	11,274	24	26	148	11,328	31,146 2 0
Grand total (Other Live-stock), Presidency.	239	16,888	82	40	281	18,642	45,298 2 7

Sold for Rs. 25.

(a) Revised figures furnished by the District Forest Officer.

ANNUAL FORM No. 85.

Forest Department, Madras Presidency.

Abstract showing the value of stores, tools and plant for 1920-21.

ANNUAL REPORT OF THE

PART II.

Forest Department, Madras Presidency.

Statement of elephants gone off the list during the year 1920-21.

District.	Names.	When purchased or otherwise obtained by Government.	Age.	How disposed of.
<i>First Circle—Nil.</i>				
<i>Second Circle—Nil.</i>				
<i>Third Circle—Nil.</i>				
<i>Fourth Circle—Nil.</i>				
<i>Fifth Circle.</i>				
Coimbatore, South.	1. Amaravathi ..	Captured on 11th February 1917	23	Died on 11th Aug. 1920.
	2. Dora II ..	Do. 22nd December 1918	7	Do. 3rd Aug. 1920.
	3. Janaki ..	Do. 15th August 1919	31	Do. 5th Feb. 1921.
	4. Netaraj ..	Do. 29th September 1920	25	Do. 10th Feb. 1921.
	5. Ali ..	Do. 23rd August 1920	4	Do. 14th Oct. 1920.
	6. Varam ..	Do. 3rd August 1920	2	Do. 14th March 1921.
	7.	Do. 19th September 1920	1	Do. 6th Dec. 1920.
	8. Jumna ..	Born on 22nd September 1919	1	Do. 25th Dec. 1920.
	9. Tippi ..	Captured on 11th October 1917	9	
	10. Jane ..	Do. 19th September 1918	10	
	11. Dora I ..	Do. 24th October 1918	8	
	12. Bob II ..	Do. 13th December 1918	8	
	13. Arjuna ..	Do. 23rd August 1920	5	

<i>Sixth Circle.</i>				
Mangalore, South.	1. Emily ..	Transferred from North Malabar on 1st Dec. 1920.	41	
	2. Horatius ..	Captured in 1918	47	
	3. Lillie ..	Do. 14th October 1918	47	
	4. Sundar ..	Do. 9th July 1919	5	Transferred to North Malabar on 26th Dec. 1920.
	5. Ganesh ..	Do. 5th August 1919	13	
	6. Narayani ..	Do. 12th September 1919	18	
	7. Bhima ..	Do. 20th November 1919	15	
	8. Rukmini ..	Do. 21st December 1919	7	
	9. Mohan ..	Do. 23rd December 1919	4	
	10. Mogal ..	Born on 18th October 1919	1	Died on 31st March 1921.
Malabar, North.	1. Krishnan ..	Captured on 1st March 1919	22	Died on 18th Aug. 1920.
	2. Lakshmi ..	Do. 9th April 1920	6	Sold.
Malabar, South.	1. Kalamothi ..	Born on 6th February 1918	3	
	2. Leela ..	Captured on 4th March 1919	1	
	3. Kuroki ..	Do. 19th February 1905	23	
	4. Sankar ..	Do. 21st May 1907	18	
	5. Bhavani ..	Do. 9th April 1918	18	Transferred to Central Coimbatore on 1st March 1921.
	6. Maree ..	Do. 20th March 1905	24	
	7. Moolabaksh ..	Do. 6th April 1911	21	
	8. Kamala ..	Do. 3rd February 1912	28	
	9. Camar ..	Do. 12th February 1910	16	
	10. Halley ..	Do. 17th April 1916	19	
The Nilgiris.	1. Jamperi ..	Received from Nilambur on 20th June 1903	45	
	2. Padukani ..	Do. Chedleth on 18th January 1911	50	
	3. Damayanti ..	Captured on 21st January 1915	31	
	4. Marce ..	Do. 26th March 1905	24	
	5. Kamala ..	Do. 3rd February 1912	28	
	6. Tego ..	Do. 19th June 1905	18	Transferred to South Malabar division.
	7. Moolabaksh ..	Do. 6th April 1911	21	
	8. Savitri ..	Do. 14th May 1912	42	
	9. Bhavani ..	Do. 9th April 1913	18	
	10. Camar ..	Do. 12th February 1910	16	
	11. Halley ..	Do. 17th April 1916	19	
	12. Sankar ..	Do. 21st May 1907	18	
	13. Lakshmi ..	Received from Ganjam on 31st February 1920	45	
	14. Holhar ..	Captured on 14th February 1918	11	
	15.	Do. 31st August 1918	8	
	16.	Do. 17th February 1919	4	
	17.	Received from North Malabar on 30th November 1920	26	Sold.
	18.	Do.	3	
	19. Padukani ..	Received from South Malabar on 7th November 1910	7	

District.	Buildings.		Stores.		Totals.		Difference in Value.	
	On hand at the commencement of the year.	On hand at the end of the year.	On hand at the commencement of the year.	On hand at the end of the year.	On hand at the commencement of the year.	On hand at the end of the year.	In favour of the year.	Against the year.
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
<i>First Circle.</i>								
Direction	1	Rs. 400	1	Rs. 400	394	Rs. 4,543	371	Rs. 4,357
Banjani	119	43,082	140	48,950	3,828	6,969	4,398	6,910
Vizagapatnam	63	10,755	62	20,741	1,489	4,163	1,724	4,343
Godavari	127	29,263	128	33,449	3,644	12,471	3,664	13,247
Upper								
Godavari	149	43,073	157	45,270	2,270	4,240	2,281	4,820
Lower								
Kistna	36	4,772	36	5,706	1,537	10,165	1,824	13,954
Total	495	1,31,345	524	1,54,496	13,063	42,521	14,162	47,631
<i>Second Circle.</i>								
Direction	40	Rs. 48,719	40	Rs. 45,697	2,473	11,181	2,242	13,258
Bellary	84	47,716	82	47,676	2,859	5,874	2,850	5,763
Anantapur	28	10,434	27	12,155	3,105	7,098	2,701	7,389
Kurnool	93	62,557	91	70,180	4,381	9,834	4,740	12,237
Kurnool, East	78	92,648	70	91,817	4,371	20,756	4,957	21,692
Do. West	70	48,923	70	62,208	2,870	7,884	3,664	7,965
Do. South								
Total	346	3,09,027	330	3,19,633	20,165	62,127	20,374	68,295
<i>Third Circle.</i>								
Direction	47	Rs. 92,257	47	Rs. 21,145	1,560	3,705	1,497	3,528
Chittoor	42	81,884	53	36,216	1,494	6,496	1,814	8,539
Chittoor, North	41	14,049	84	14,016	1,983	5,583	1,869	7,360
Chittoor, South								
Chittoor, West	58	83,556	50	29,001	52,538	41,581	56,005	48,824
Nellore	24	9,202	25	10,861	2,331	4,617	2,348	3,687
Chingleput	41	24,998	41	30,565	3,620	10,880	4,015	10,648
Chittoor	38	24,723	37	19,438	1,336	3,928	1,649	4,514
Vernacular Training School					671	1,220	668	1,166
Total	300	1,63,859	287	1,61,274	65,796	79,863	70,182	85,050
<i>Fourth Circle.</i>								
Direction	53	Rs. 34,481	53	Rs. 41,555	2,356	5,766	2,404	5,843
Vellore, South	40	29,716	43	28,785	2,602	7,492	2,751	7,611
Do. West	62	33,422	62	33,588	2,249	13,885	2,205	13,836
Salem, East	61	26,986	58	26,175	2,320	37,149	2,854	32,822
Do. North	69	55,268	69	54,821	2,692	16,216	2,686	15,106
Do. Central	41	24,235	54	30,841	4,675	10,437	4,768	9,828
Do. South					878	1,911	996	1,990
Vernacular Training School								
Total	326	2,04,106	339	2,15,565	17,094	91,263	18,684	97,790
<i>Fifth Circle.</i>								
Direction	1	Rs. 57	1	Rs. 54	408	4,600	427	3,824
Kollegal	84	17,419	84	20,591	20,345	5,612	20,417	5,662
Coimbatore	78	1,04,726	77	95,427	2,475	11,180	2,856	10,537
Do. North								
Do. South	66	49,312	71	55,689	25,470	50,255	25,360	48,799
Madura	122	1,02,986	144	1,02,769	3,229	6,387	3,381	6,029
Tinnevely	112	52,673	113	52,834	1,745	4,139	1,776	4,431
Vernacular Training School					325	1,410	539	2,190
Working Plans Office					257	1,593	256	1,503
Total	413	3,27,172	420	3,26,368	64,254	86,175	64,652	88,075
<i>Sixth Circle.</i>								
Mangalore, North	49	27,836	51	29,100	749	4,735	799	4,840
Do. South	30	20,792	29	20,625	833	4,662	871	3,671
Malabar, North	85	51,822	86	55,909	2,388	3,312	2,504	6,310
Do. South	55	39,133	63	37,012	8,030	18,339	2,660	12,702
The Nilgiris	75	40,631	74	38,321	2,414	9,647	2,613	10,493
Coimbatore	53	24,562	53	24,562	2,139	22,499	2,152	22,841
Total	347	2,04,406	349	2,11,839	11,593	58,598	11,805	60,856
Grand total, Presidency.	2,229	13,39,324	2,249	13,89,545	182,816	4,32,647	190,609	4,38,796

(a) (West Kurnool.) Difference between the closing balance of 1919-20 and the present opening balance is due to the adoption of correct figures furnished by the District Forest Officer.

Note.—The difference between the closing balance of last year and the opening balance of this year is due to redistribution of districts and to revised figure furnished by District Forest Officers.

Government of Madras

DEVELOPMENT DEPARTMENT

G.O. No. 2144, 17th November 1921

Administration report Forest Department For the year ending 31st March 1921—
Reviewed.

Read—the following paper:—

Proceedings of the Chief Conservator of Forests, No. 39,
dated 17th September 1921.

S. Cox, Esq., C.I.E., I.F.S.,
Chief Conservator of Forests

Letter—from S. Cox, Esq., C.I.E., I.F.S., Chief Conservator of Forests,
to the Secretary to the Government, Development Department.
Dated Madras, the 17th September 1921.
No.—39.

I have the honour to submit the progress report of forest administration in the Madras Presidency for the year ending 31st March 1921.

In accordance with the orders of Government in G.O. No. 91, Revenue (Special), dated 18th January 1921, directing that the forest administration report should be compiled for the financial year in future instead of for the forest year, the present report has been drawn up for the period of nine months from 1st July 1920 to 31st March 1921. For this reason comparisons of the results of the past year's working with those of previous years are of little value.

2. In the following remarks I have briefly reviewed the more important facts of the administration.

CONSTITUTION OF STATE FORESTS

ALTERATION IN AREA

3. The area of reserved forests increased from 18,794 square miles to 18,825 square miles, with a corresponding decrease in the extent of reserved land from 565 square miles to 500 square miles. Five square miles were disafforested to provide for extension of cultivation in Guntur and North Cuddapah and for the removal of forest boundaries from the close proximity of villages in West Kurnool, and about 16 square miles in Tanjore were transferred to the control of the Collector. The department was thus left in charge of 19,325 square miles as compared to 19,359 square miles in the beginning of the year.

FOREST SETTLEMENT

4. Some 60 square miles of forest were finally settled under the Forest Act, of which 54 square miles are in Upper Gōdāvari division. Settlement operations remain incomplete in respect of a further area of 474 square miles, including 250 square miles in the Nugur taluk of the Bhadrachalam Agency and 75 square miles in the Nilgiri-Wynnad. Of the remaining extent 75 square miles of the Coringa extension reserve were settled during the year, but the reservation took effect only after its close. Arrangements have been made for the reservation of 37 square miles of hill-forest in the Atur taluk of the Salem district for the protection of the sources of water-supply in that locality. The Special Deputy Collector employed on the settlement completed the settlement of five blocks covering an area of 12 square miles.

DEMARCATION

5. About 80 miles of forest boundaries were demarcated during the year chiefly in the districts of Gōdāvari Upper, Kollegal, Central Coimbatore and North Malabar at a cost of Rs. 8,742 and 480 miles remained to be demarcated at the close of the year chiefly in the districts of Kollegal (183 miles) and North Coimbatore (101 miles). It would appear that the work of final demarcation in this part of the Presidency has for some time been neglected partly owing to want of money and

partly for want of staff. The Conservator of Forests, V Circle, has already taken up the question. In The Nilgiris the inaccuracy and want of definition of the very complicated forest boundaries still give a great deal of trouble. The re-examination and survey of the boundaries which were taken up by a special staff was dropped during the war before much progress had been made and the work will now have to be restarted and pushed through to completion.

The responsibilities of the department for the maintenance of forest boundaries may be appreciated when it is realized that the latter reach a length of 21,000 linear miles equivalent nearly to the mean circumference of the earth.

SURVEY

6. The Survey of India Party continued operations in the Guntur and Nellore districts and surveyed 635 square miles on the two inches scale and 64 square miles on the one inch scale. In South Coimbatore the lower Anamalai slopes in the Udumalpet range were surveyed on the one inch scale.

MANAGEMENT WORKING PLANS

7. From the figures compiled from the circle returns it appears that sanctioned working plans exist for an area of 8,395 square miles, are under preparation for a further area of 1,611 square miles and are still required for 5,899 square miles.

These figures are misleading, but it would take considerable time to supply an accurate statement. In next year's administration report it is hoped that an attempt will be made to supply accurate figures, based on a distinction between regular working plans and temporary working schemes, and between the periodical revision of existing plans and schemes and the preparation of new ones.

The inaccuracy of the figures annually printed in the administration report goes back many years and has been cumulative. The management of nearly all State forests under working is subject to a working plan, but many of these plans are so obsolete and defective that they have been discarded in favour of temporary schemes applicable to the part of the forest actually under treatment until such time as the whole working plan can be recast.

Two important working plans, that of Mr. R. Bourne for the Nilambur valley forests and of Mr. A. Minchin for the Gumsur forests, are now in the Press.

WORKS

ROADS AND COMMUNICATIONS

8. Two hundred and twenty-four miles of new roads were constructed at a cost of Rs. 2.25 lakhs, and 1,180 miles were repaired at a cost of Rs. 0.69 lakh.

The scheme of road development on the Javadi hills was pushed on and Rs. 0.87 lakh and Rs. 0.49 lakh were spent on the Amerdi-Nadanur road and on the Komattiyeri-Patrakad road respectively. Proposals have been made to Government to limit the scheme of road development on these hills, so far as the construction of expensive roads are concerned, to the completion of construction of these two works.

In connexion with the exploitation of the Chenai Nair forests the construction of the road from Olvakoḍe Railway station to the foot of the hill forest and the continuation of this road from the Dhoni depot to the forest station on the Sappal ridge were undertaken, but were not quite completed by the end of the year. Rs. 10,984 and Rs. 9,509 respectively were spent on the two works. Government have sanctioned after the close of the year the construction of the first six miles of the Mount Stuart Ghat road at a cost of about Rs. 2,02,250.

The bullock tramway at Mount Stuart by levelling down the track on each side of the metals and by the clearance of overhanging growth was put into much better working order.

BUILDINGS

9. Considerable progress was made with the construction of the saw-mill buildings at Russellkonda. Miscellaneous building works such as inspection bungalows, Range offices, Rangers' quarters and subordinate lines were carried out in various parts of the Presidency.

OTHER WORKS

10. A sum of Rs. 11,000 was spent on the construction and repair of tanks and wells and on the improvement of the water-supply in the forests. In the South Coimbatore division, the depths prescribed by a water-diviner in the wells at Mount Stuart were reached but no perennial source of water was tapped. Further investigation was postponed until a boring apparatus could be obtained.

The desirability of affording greater drinking water facilities in forest reserves was discussed in the Legislative Council meeting last year. The matter was brought to the notice of Conservators of Forests with the request that the District Forest Officers should be instructed to take action wherever hardship exists in the matter of access to water and to prevent prosecution for trespass where cattle are driven into the forests merely for watering.

LIVESTOCK

ELEPHANTS

11. The number of elephants in charge of the department at the beginning of the year was 128, including 4 baggage elephants working in Kurnool and Gōdāvari. Twenty elephants were added by capture, two were born in captivity, ten died and fifteen were sold leaving a balance of 125 elephants of the total book value of Rs. 3,70,000. The actual sale value is probably about 6 lakhs. A sum of Rs. 41,475 was realised by the sale of 15 elephants in December last: most of them were less than five years old.

There was considerable mortality among elephants in the South Coimbatore division where eight animals died from attacks of internal parasites. The Superintendent, Civil Veterinary Department, has made certain suggestions in regard to change of camping grounds and other remedies which are now under consideration.

CATTLE

12. A stud of 239 bullocks and buffaloes was maintained during the year. Forty died and eighty-two were added by purchase to the stock which stood at 281 with a book value of Rs. 13,642 at the end of the year.

FOREST CONSERVANCY

GENERAL PROTECTION

13. Stimulated by the general unrest and by the preaching of non-co-operation, the attitude of villages in some parts of the Presidency has become increasingly antagonistic to the Forest Department; and the difficulties of forest conservancy have been accentuated.

Complaints have not been confined to cases of ill-treatment, injustice and hardships or what appears to the villagers to be such; but have extended to the existence of forest reserves, and demands have been made for wholesale disafforestation and surrender of control of the forests to the villagers themselves.

With this attitude there is a good deal of sympathy on the part of some of the more educated members of the community, a fact which makes the task of the department more difficult than ever.

No experienced forest officer will dispute the fact that unnecessary cases of hardship do occur, nor that it is the duty of the department to remove them wherever brought to light; but the real difficulty is that most of the villagers' demands are destructive of the permanence of the forest and that the rules in force cannot in most cases be relaxed without injury to the permanent interests of the country.

It seems a hardship to raise the grazing fees applied to a villager's cattle or to forbid the use of a permit entitling the villager to obtain from the forest his small daily requirements of firewood. But with insufficient pasture available in the forest to maintain even half of the cattle which the villagers wish to graze and with all the evidence of forest destruction by unregulated felling before them, the Government, in the interests of future generations of villagers, must impose these and similar restrictions.

Educated opinion would perhaps more readily support the Forest Department in its efforts to preserve the forests were it more in touch with the facts; but the almost complete destruction of forest on waste land during the last 20 years, the rapid degradation of private forests, and the results which have always followed the removal of restrictions are seldom brought to notice and remain unappreciated except by the few whose business it is to note them.

More active sympathy would also be extended to the efforts of the department were there not a general idea that the State forest resources were very large and that no real harm can be done by throwing out of reservation those forests most coveted by the present generation of villagers or by relaxation of the restrictions when the demand is very great.

The truth is that the present forest resources are already insufficient to meet the wants of a vast agricultural population and that relaxation of conservancy or actual disafforestation only widens the gap between supply and demand.

The remedy for the present state of things is hard to find. A fuller knowledge on the part of the leaders of the people of the facts connected with the forests, and of the aims and objects of the forest conservancy would do much to dispel some of the antagonism and that is what the department should strive for by every means in its power.

The ideal to be aimed at is the surrender of all forests on which the villager depends for his daily wants to the management of the village itself, but such a surrender must be accompanied by some guarantee that the forests are not destroyed by the selfishness of the present generation. Public opinion is yet far from grasping the many difficulties of the case.

The results of general protection during the nine months under report were, as may be imagined, more unsatisfactory than usual and a regrettable feature was the increase of assaults on isolated and unprotected forest subordinates.

BREACHES OF THE FOREST ACT

14. The following table compares the forest offences of all kinds reported during the year with those of the previous year:—

	Injury to forests by fire.		Unauthorized felling.		Unauthorized grazing.		Other offences.		Total.		Average of three years ending 1919-20.
	1919-20.	1920-21.	1919-20.	1920-21.	1919-20.	1920-21.	1919-20.	1920-21.	1919-20.	1920-21.	
Cases taken to Court.	34	26	4,187	4,288	1,829	1,873	336	333	6,386	6,520	6,673
Cases recommended for composition.	47	29	12,941	10,313	5,528	4,950	908	794	19,424	16,115	18,578
Cases undetected.	1,214	905	342	348	154	46	17	17	1,727	1,311	1,679
Total	1,295	960	17,470	14,974	7,611	6,869	1,261	1,144	27,537	23,947	26,930

Unauthorized felling as usual forms the largest head of forest crime in all the circles, the Fourth Circle contributing 33 per cent of the total. The grazing offences have also proportionately increased notably in the Third Circle which contributed 37 per cent of the total number of offences under the head. They were most numerous in the districts of Guntur, Nellore, Vellore North, Chingleput and Chittoor. Seventy per cent of the cases that remained undetected related to offences connected with injury to forest by fire.

Of 21,482 cases disposed of during the year (including cases of the previous year) 6,121 cases were dealt with by Magistrates, 14,032 were compounded and 1,829 cases were withdrawn. Of the cases disposed of by Magistrates, 5,519 ended in conviction and 602 in acquittal. The percentage of failure in the cases brought to trial was 9.8. During the year the average compounding fee paid in respect of 14,082 cases was Rs. 12-12-11.

FIRE PROTECTION

15. In 258 square miles of reserves in Upper Gōdāvari 35 square miles of forest in Satyamangalam and Talamalai ranges in North Coimbatore and about 5 square miles of forest in Kollegal the scheme of early burning under departmental agency

SANDALWOOD

18. In the auction sale held at Satyamangalam last December, 202 tons of sandalwood were sold for Rs. 3,24,909, while in the sales held at Tirupattur and Vellore about the same time, 216 tons were sold for Rs. 3,42,562. The total average price secured was Rs. 1,593 per ton against Rs. 1,439 a ton in the preceding year. There is some reason for doubt whether these high prices will continue.

BAMBOOS

19. The revenue from bamboos showed signs of declining and this decline is likely to be accentuated during the next few years owing to the dying back of the stock on very large areas. The periodical seeding accompanied by death of the parent plant commenced some ten or twelve years ago in the Bombay forests and has been slowly spreading down the West Coast. It has now reached South Malabar and is occasioning not only loss of revenue but great practical difficulty in the matter of rafting timber to the sea coast. Similar phenomena are to be observed in the Javadi and other neighbouring hills in Salem, etc.; as well as in the Gōdāvari Agency tracts. The matter is one of considerable importance as it has already put back for ten years the opportunity for developing the bamboo pulp industry on the West Coast and may render useless the proposed detailed investigations into the bamboo pulp question in Gōdāvari. The revenue for nine months of the year under report was Rs. 2.64 lakhs as against Rs. 3.49 lakhs for the previous twelve months.

GRAZING

20. Twenty-three per cent of the total area of forests was closed to grazing either wholly (19 per cent) or part of the year (4 per cent) against 19 per cent in the previous year. The increase in closed areas occurred chiefly in the districts of Nellore and Chittoor and was due in the former division to closure of worked coupes attached to kanohas for part of the year, while in the latter division it was due to the closure of seventeen reserves in the Madanapalle range for four months of the hot weather.

To the open area of nearly 14,900 square miles, permits were issued for the grazing of 2,018,083 animals yielding an incidence of 4.71 acres per animal against 4.69 acres in the previous year. As remarked in paragraph 22 of the last year's review, some areas which are shown as open contain forests in which there is normally no grazing or which are inaccessible to cattle. It is not therefore surprising that the actual incidence in some forests is still very high. To check the excessive incidence and to reserve the available resources for the better class of cattle, enhanced rates of grazing fees were imposed in four more divisions, South Vellore, Chittoor, Vizagapatam (8 annas per cow unit) and South Kanara (6 annas). Owing to drought, seventeen closed reserves covering an area of 29,109 acres were thrown open to grazing in the Bellary district. In Anantapur all closed areas were thrown open to grazing except small extents under cultural operations. Similarly in Kurnool, closed areas have been opened to grazing in Cumbum, Markapur and Morricheru ranges. In some cases, these concessions were granted after the close of the year.

The grazing revenue realized during the year was Rs. 8,16,589 against Rs. 8,53,555.

In Nellore and Chingleput the kancha system of grazing was continued and is reported to have worked well, but it is very difficult to persuade villagers elsewhere of the advantages of the system.

HAY

21. The Military Department's operations during the year resulted in the removal of the following quantities of baled hay:—

	TONS.
Bellary	606
Anantapur	1,400
Kurnool	1,053
Osiddapah	618
Chittoor	125
North Arcot	112
Total	3,920

for which a sum of Rs. 7,840 was paid to the department.

was tried for the first time and with particular success in Upper Gōdāvari. This system, introduced by Mr. Hodgson last year in portions of the Nallamalais, was continued on a larger scale in the three Kurnool divisions and 1,305 square miles of forests were protected. The results were satisfactory; a little less than 50 square miles having been burnt.

The question of fire protection continues to be as difficult as ever in the Gōdāvari district and more especially in the Seshachalam hills. A second conference of Revenue and Forest officers discussed measures of reform and Mr. J. S. Scot, Deputy Conservator, was placed on special duty to submit definite proposals. His recommendations are under consideration and it is hoped to enlist the co-operation of the local Members of the Legislative Council in dealing with this very difficult subject.

In passing orders on the Forest Administration Report for 1919-20 Government desired that Collectors and other Revenue officers should use every opportunity of the annual jamabandi and in the course of their tours of impressing upon villagers living in the vicinity of forests the necessity of rendering prompt assistance to the subordinates of the Forest department in preventing or extinguishing fires. I have brought this suggestion formally to the notice of Collectors. Some Collectors especially those of Chittoor (Mr. T. Reilly) and Nellore (Mr. J. F. Hall) personally and by issue of a general order to their subordinate officers have endeavoured to give effect to the orders of Government. As pointed out by the Conservator of Forests, Third Circle, admonition and advice by the officers of the Revenue Department are more effective than similar endeavours made by Forest officers; but little can be done without the help and co-operation of the people themselves whose true interests are gravely affected by the wanton destruction of forest.

The total area over which special protection was attempted during the year was 5,997 square miles and the results seem to have been on the whole more satisfactory than those of last year; but no adequate account of the operations is possible as the period under report terminated in the middle of the fire-season. Conservators have been requested to deal with the subject in future for the calendar year, in order that there may be a more connected record of operations.

SUPPLY

TIMBER

16. The output of timber during the period under review was 98,450 tons against 105,800 tons in the previous year but as the figures relate to a period of only nine months and omit those of greatest activity the comparison is of no value. A somewhat interesting development was the supply of ebony logs for fittings in some of the new public buildings under construction at Delhi. Another innovation was the supply of logs of *Ternstroemia tomentosa* to Messrs. Howard Brothers and Co. who are the agents for timber to the Government of India in London. The timber of this common tree has commanded a sale in London for cabinet work at very high prices and we are attempting to develop the market.

Apart from the above and the exploitation of about 800 tons of miscellaneous timber from the Chenai Nair forest for supply to Messrs. John Taylor & Sons' Committee at Kolar, there is nothing of special interest to record.

FUEL

17. The output of fuel during the period of review amounted to 21,933 tons. There has been a slight increase in the price of fuel in some large towns due to increased cost of transport and wages or to increased demand and short supply to both. The highest prices at the close of the year were Tanjore Rs. 23.50 per ton, Madura Rs. 25 per ton, Trichinopoly Rs. 22 per ton and Tinnevely Rs. 22 per ton, the same districts in which prices ruled high last year.

The question of starting casuarina plantations in Ramnad and Tinnevely to meet the serious shortage of fuel in Madura and Tinnevely towns is still engaging the attention of the department. Should the scheme prove feasible, Government will be addressed separately on the employment of a special officer, preferably a retired officer, to investigate the scheme, as there is no permanent officer available to spare on the active list.

MOHWA FLOWERS

22. A number of inquiries have been made by commercial firms both to the Forest Department and the department of Industries on the possibility of collecting sufficient raw material for the distillation of power alcohol, a process already undertaken in Hyderabad.

The most promising field for enterprise appears to be the Agency tracts of the Northern Circars; but there are many difficulties connected with shortage of labour, with safeguarding the rights of the hillmen, and with lack of means of transport. The Agency Commissioner is undertaking further inquiries.

NUX-VOMICA

23. A keen demand for this produce has arisen of late owing to the demand for strychnine for the preparation of insecticides for use in agriculture, and prices have risen in proportion.

It was found necessary to organise the collection of this hitherto neglected product.

With the exception of a few special localities these seeds, which were clubbed with a number of other kinds of minor produce in the annual leases, were hardly exploited at all, though they are to be found in every district and are entirely absent only in the wettest and the driest tracts.

In order to regulate and stimulate the harvesting, this item was separated from the rest in the period under report and the right to collect it sold by auction by forest divisions for a period of three years.

The Agency tracts, however, were excluded from the sales as, also, the districts of Ganjam and South Kanara which had already been leased for a period of three years in the preceding year. The Shriharikota Range of the Nellore district was also excluded as there these seeds are collected departmentally.

The lease being for a period of three years the lessees are in a position to work on a satisfactory basis on a large scale and to balance an unproductive year by a good one. The results of the sales, however, failed to come up to expectations but the latter were, perhaps, too sanguine where a new enterprise was concerned. Moreover, the current leases are the first steps in the direction of establishing what is practically a new department and considerable development is anticipated.

Unforeseen problems presented themselves as the undertaking evolved and, no doubt, these reacted on the prices realised.

At the close of the period of three years when the leases will terminate the department should be in possession of a more or less complete knowledge of the yield of each locality and of the factors that influence the collection, data which are almost entirely lacking at present.

PAPER PULP

24. Further attention has been paid to the manufacture of bamboo pulp as an industrial concern and consultations on the subject have been held with the Director of Industries, Dr. Marsden and Mr. Raitt, the paper-pulp expert. A conference was also held in Madras with the Director of Industries and Dr. Marsden when the whole question was discussed. As a result of these deliberations Dr. Marsden has written a pamphlet on the subject, which is under publication by the Government of India as a bulletin of Indian Industries and Labour.

Mr. Raitt has suggested that the first step to be taken is a reconnaissance of the paper pulp resources in Madras to be conducted by an officer specially deputed for the purpose. To begin with the Upper Godavari forests were considered a possible source of supply with a collecting and manufacturing site at Rajahmundry. The publication of Dr. Marsden's pamphlet is awaited before further action is taken in the matter.

Meanwhile the finding of bamboo throughout the Godavari and Peddapur ranges may involve the temporary abandonment of the scheme especially if there are indications of the seedling spreading into the Rampa and Bhadrachalam country. The Conservator has been instructed to

REMOVAL OF PRODUCE BY RIGHT HOLDERS AND FREE GRANTEES.

25. The estimated value of forest produce removed by right holders or free grantees amounted to Rs. 52,337 against Rs. 69,228 in the previous year.

SYLVICULTURE

GENERAL

26. The chief interest in the department's work during the year centred in the teak forests at Mount Stuart where the artificial reproduction of teak and other timber trees after clear felling is being steadily worked at. The problem with regard to teak may be said to be solved; but it is undesirable for sylvicultural reasons to confine planting operations entirely to one species, however valuable and the department is endeavouring to bring up plantations of Terminalias, rosewood, and other timber trees to form groups among the teak. The difficulties are explained in the report of the Conservator of the fifth circle. Equally interesting and of great importance are the sylvicultural operations in the Tinnevely and Chenai Nair evergreen forests, referred to in the reports of the fifth and sixth circles. We have to deal in these forests with a large number of species the sylvicultural requirements of which from youth to maturity can only be ascertained by a course of close study extending over many years.

RESEARCH AND EXPERIMENT

27. Mr. K. R. Venkataramana Ayyar, Deputy Conservator of Forests, held the office of Sylviculturist from 1st July 1920 to 6th March 1921 when he proceeded on leave and was relieved by Mr. W. C. Hart. Experimental work was conducted at Dhoni, Nilambur, Nedungayam and in the neighbourhood of Parappa in South Mangalore. At Dhoni, the work consisted of nursery experiments on the germination of seed and growth of seedlings and of sowing the seed of various species in the forest under varying conditions. At Nilambur and Nedungayam experiments were conducted to ascertain whether the valuable evergreen species *Hopea parviflora* and *Artocarpus hirsuta* could be raised as an underwood to teak plantations partly with a view to improve the growth of teak and partly for the sake of having a commercially valuable industry. In South Mangalore important experiments were continued with *Hopea parviflora* to ascertain the best method of inducing natural reproduction, of obtaining artificial production and of methods of transplantation of seedlings at various ages. It is in this part of the country that we look towards the formation by natural means of large forests of *Hopea* and the permanent supply of constructional sleeper timber on a large scale.

Mr. S. W. Howard, Imperial Sylviculturist visited the Presidency in May last, and has offered valuable suggestions in regard to the lines on which research work should be carried on in this Presidency. His opinion is that research work in this Presidency has been organised so far on correct lines, but we are only at the threshold of our task.

The first Bulletin of sylvicultural research was issued early this year giving details of the work done during 1920-21.

DEVELOPMENT

28. Mr. C. S. Martin, the Consulting Forest Engineer to the Government of India, visited the evergreen forests of Malabar and Tinnevely and the teak plantations of Nilambur, and has made valuable suggestions for their exploitation.

These reports will shortly be placed before Government. Mr. Martin considers that the exploitation of the mountain forests is not only a perfectly feasible project but will, if conducted on commercial and scientific lines, bring in a large revenue to the State and provide opportunities for creating a number of forest industries suitable for the investment of private enterprise and capital.

He lays special stress on the dependence of Madras on foreign supplies for the better classes of timber and for railway sleepers in particular and on the need for developing to the full the State resources in view of the rapid devastation of forests in private ownership.

FOREST PANCHAYATS

29. Mr. Bles' report on the working of forest panchayats has been under the consideration of Government for some time past and as the system is likely to be changed, I have not thought it necessary to call for special reports from Collectors.

The Circle reports, however, show that the Conservators are dissatisfied generally with the working of the panchayats. Mr. Fischer quotes the opinion of an Indian gentleman (an M.L.C.) to the effect that it is hopeless to expect panchayats to manage forests satisfactorily unless there is a representation of all interests in the village—in fact the village panchayat to be formed under the new Village Panchayat Act. This is a point of view which will be considered in future but it is difficult to understand why a panchayat composed of members with many interests should function more efficiently than one solely composed of villagers who are directly interested in the forest.

FINANCE

30. The total gross revenue during the period amounted to Rs. 46.16 lakhs and the expenditure under A. Conservancy and Works and B. Establishments to 34.28 lakhs. The net result was a surplus of Rs. 11.88 lakhs, which was distributed over all the circles except the first which shows a deficit. The fifth circle stands first with a surplus of Rs. 4.81 lakhs, and the fourth circle next with a surplus of Rs. 4.48 lakhs. The sixth circle shows a surplus of Rs. 0.21 lakh, while in the first circle there is a deficit of Rupees 1.11 lakhs. This deficit is likely to continue until the Russellkonda saw-mill has been in operation for some time.

The expenditure under A. Conservancy and Works (Rs. 15.69 lakhs) and that under B. Establishments (Rs. 18.54 lakhs) was greater than last year for the corresponding period. The increased expenditure under the former head was due mainly to the felling of timber for the saw-mill at Russellkonda and the construction of saw-mill buildings, the exploitation of the Chenat Nayar forests in Central Coimbatore and the construction of Javadi roads, while under the latter head, the increase was due to the general rise in prices and grant of temporary additions to the pay of forest subordinates.

Since the figures reviewed above relate to a period of nine months, no useful purpose is served by comparing them with the figures of receipts and expenditure of previous years.

ADMINISTRATION

CIRCLE CHARGES

31. The outstanding feature of the Forest Administration during the year was the creation of two additional forest circles, with headquarters at Bellary and Ootacamund. In the re-arrangement of divisional charges consequent on this change, opportunity was taken to re-name some of the existing divisions to prevent confusion in correspondence—the Central Coimbatore division now included in the sixth circle being called Palghat division; the North Malabar and South Malabar divisions being called Wynad and Nilambur divisions respectively.

IMPERIAL FOREST SERVICE

32. Orders were received from the Government of India during the course of the year with reference to the recommendations of the Public Services Commission. The cadre of the service has now been raised from 43 to 61, including 7 posts of Extra Deputy Conservators which were transferred to the Imperial Service. The Secretary of State's final orders on questions of pay, pension and leave have not yet been received.

PROVINCIAL FOREST SERVICE

33. This service is in future to be known as the Madras Forest Service. No final orders have yet been received from the Government of India on the memorials submitted by the Government.

THE FOREST COLLEGE

34. Mr. C. O. Wilson acted as Principal during the absence of Mr. F. L. G. Cowley-Brown on leave. Of the 28 students passing out of the College in June 1921 five were stipendiary students from Bombay and two from Coorg, two German students and one Hyderabad student.

The general standard of education attained at the College was satisfactory and although no Honours certificate was granted, only seven students failed to take higher standard certificate.

The Hon'ble Sir Lionel Davidson, K.C.S.I. and Mr. P. H. Clutterbuck, C.I.E., C.B.E., Inspector-General of Forests, visited the College during the prize week, at which Lady Davidson presented the prizes. Sir Lionel Davidson also visited the College in the first week of June to inquire into the questions of building extension, water-supply and other matters connected with the College.

VERNACULAR SCHOOLS

35. Four schools were held as in previous years and the work turned out seems to be as satisfactory as usual. At the Goomsur school five forest guards deputed by the Government of Bihar and Orissa were trained.

GENERAL

36. I have again to acknowledge the excellent conduct and hard work of all ranks of the Department in conditions which were often very discouraging.

S. Cox,
Chief Conservator of Forests.

Order—No. 2144, Development, 17th November 1921.

The Government have read with interest the Chief Conservator's report on the administration of the Forest Department for the nine months ending 31st March 1921. The period in issue resulted in a nett surplus of 11.88 lakhs as against 24.37 lakhs in the preceding twelve months. As Mr. Cox points out in paragraph 30 of his review, comparisons of receipts and expenditure are vitiated by the difference in the period; moreover forest revenues are not realized evenly throughout the year. The most noteworthy variation relates to the Sixth Circle where the gross receipts were over two lakhs less than in the corresponding period of the preceding year in consequence mainly of a fall in the price of timber in South Malabar. It is satisfactory to be informed that this fluctuation was only of a temporary nature. It is ascribed to the fact that the Arab traders who ordinarily purchase teak at Calicut were occupied with other business transactions elsewhere and consequently postponed their usual annual visit to Malabar; when this took place subsequently the price of teak recovered and the stock on hand found purchasers.

2. The Government are in general agreement with Mr. Cox's appreciation in paragraph 13 of his review of the grave administrative difficulties created by the increasingly antagonistic attitude of the villagers towards the Forest Department. This attitude has been reflected in the discussions of the Legislative Council which have emphasized the need for systematic exposition of the aims and objects of forest conservancy. While forest officers themselves can do much useful work in this direction, the Government rely upon the recently created Standing Committee of the Legislative Council as an agency of special value for the purpose of dispelling popular misconceptions and creating a spirit of co-operation with a department which exists only for the public good but is bound to have regard to the interests not only of the present generation but also of future generations. In no branch of forest administration is co-operation more necessary than in respect of the regulation of grazing, the future of which is intimately connected with the development of forest panchayats. The Government have formulated a tentative policy on Mr. Bles' report and the further consideration of that policy will be one of the first and most important duties of the new Standing Committee.

3. A specially interesting feature of the period under report was the visit paid to the Presidency by Mr. C. S. Martin, Consulting Forest Engineer to the Government of India, whose reports on the evergreen forests of Malabar and Tinnevely are now with Government. Mr. Martin's expert knowledge and long practical experience of the modern lumbering methods followed in America give special weight to his

opinions, and his advice is likely to prove of the greatest value in the systematic exploitation of the more valuable but hitherto undeveloped forests in the Madras Presidency.

4. Progress has been made with the exploitation of the Chenai Nayar forests and with the construction of the Russellkonda saw-mill, but neither project has yet reached the stage of showing definite returns of profit. It is understood that the chartered accountants recently deputed by the Government of India to give advice in regard to the method of accounting for these and similar large schemes have made definite recommendations in regard to the form of the accounts which should be maintained and the Government anticipate that in future the Chief Conservator will be in a position as soon as the audited figures are available, to furnish clear information for each such scheme, distinguishing between capital and revenue expenditure and furnishing accurate details of profit and loss.

5. With reference to paragraph 33 of the report, while there are still certain points which must be referred to the orders of the Government of India, that authority has intimated that it is within the power of the Local Government to deal with some important issues raised in the memorials of the Madras Forest Service. On these a decision has been practically arrived at and will, it is hoped, be announced very shortly.

6. The department as a whole, including the Forest College, continued to work satisfactorily notwithstanding conditions which, as the Chief Conservator remarks, were often very discouraging. Malaria and other risks to health are unfortunately a normal incident in the life of forest officers and subordinates; but during the period under report they had also to face much organised opposition often involving physical violence and in some cases extending to murderous assaults with fatal consequences. The Government are grateful to all ranks of the department for the loyal and cheerful service which they have rendered; they are particularly indebted to the Chief Conservator, Mr. Cox, for much wise advice and for his careful supervision of the staff under his control.

(By order of the Governor in Council)

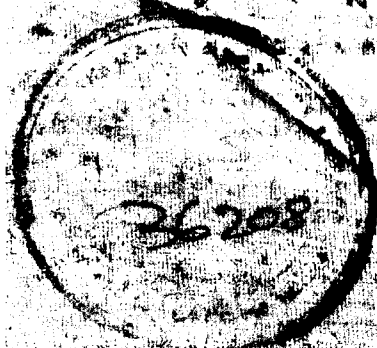
J. M. TURING,
Secretary to Government.

To the Chief Conservator of Forests.
" Accountant-General, Madras.
" Government of India, Department of Revenue and Agriculture (with C.L.).
" Inspector-General of Forests (with C.L.).
" Publicity Officer.
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