Chapter I

Imperial Gaze through the Native Forests:
Exploration and Documentation of Travancore Forests

Travancore was a princely state situated at the south western extremity of Indian Peninsula between the 8th and 10th degrees North latitude. It was bounded in the north by the territory of the Cochin Raja, in the south and the west by seas and in the east it was separated from Tinnevelly by a range of lofty hills covered with jungles\(^1\) which was known as the Sahya Mountains. Its shape was triangular with the apex towards the south. Its two sides of which the western side was rather long, ran in a northern and north-western direction. The greatest length from north to south was 174 miles and width near the northern boundary was 75 miles.\(^2\)

For administrative convenience the state was divided into four divisions and thirty two taluks. The taluks varied in extent from 612 sq. miles (Thodupuzha) to 47 sq. miles (Paravur). As per the Census of 1881, the population was 24,01,158, which was distributed over 6,731 sq. miles of the country.\(^3\) The density of population varied greatly in different taluks. As the conditions of existence were more conducive along the sea coast the population in the coastal area was much denser. The first census of Travancore was taken by Messrs Ward and Conner. The language chiefly spoken was Malayalam which claimed 80.69%. Tamil came next with 18.31% and the other languages made up a total of 1%. More than 50% of the population was engaged in agriculture. The chief article of export was copra. The other export items were arecanut, ginger, pepper, coffee, tea, cinchona, jaggary etc. Travancore did not

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3 Ibid.
export any rice as the rice grown in the state was often insufficient for the native population.\(^4\)

**Fig. 1.1**

**Map Showing the Administrative Units of Travancore, dated nil**


\(^4\) Ibid., p. 3.
General Description of Travancore Forest

The topography of Travancore was ideal for the natural regeneration of plant life due to the wide ranges of elevation, temperature, and rainfall. This resulted in the existence of vast natural forests in the state, a treasure house of biodiversity. Before the advent of the Europeans the utility and commercial viability of only a few trees such as teak, anjily etc., were known to the natives. The situation was completely changed with their arrival. How their gaze penetrated into the nook and corner of the wild forest is of course, a matter of concern. They, through their system of knowledge making, documentation, itinerant science, law etc., revealed the wilderness of Travancore, and transformed it into a ‘modern’ forest in every sense. Their travelling gaze helped them to explore the vast forest area and with their knowledge system, they found out the utility of each and every forest species. Their method of documentation helped them in preparing important reports and by means of law they finally tamed the wild.

Travancore was one of the most picturesque portions of India as is evident from the words of Lord Curzon, as mentioned in Nagam Aiyya’s Travancore State Manual:

“Since I have been in India I have had a great desire to visit the state of Travancore. I have for many years heard so much of its exuberant natural beauties and its Arcadian charm. Here nature has spent upon the land her richest bounties.”

The first authentic description of Travancore was done by Lieutenants Ward and Conner in their Memoir of the Survey of Travancore and Cochin States. They surveyed the country from 1817 to 1820. According to them:

“the whole country presents a ground of green and is for a considerable part of the year, form the abundance of moisture,

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6 They were officers of the Madras Infantry who had undergone training in surveying at Madras.
covered with a rich verdure, but it is too woody to admit of much extent of pasturage.”

Later, a more detailed description of the Travancore forests was made by T. F. Bourdillion in his *Report on the Forests of Travancore* completed in 1893. According to him 50% of the total land area of Travancore was forest. The total area of Travancore was 7,000 sq. miles among which 3,500 sq. miles were forest. He says:

“Travancore has been a country of forests from the earliest times. Nature had fitted it for the production of vegetation of all kinds by the character of its climate, by the warmth of its atmosphere, and by the almost perennial moisture which prevails. Probably nowhere in the world are the conditions of growth due to heavy rainfall and heat, so favorable as in Travancore, and consequently we find the ground completely covered with trees or shrubs, wherever it is not cleared for cultivation.”

According to Horsley, the total limit of Travancore was 6,653 sq. miles of which the greater portion consisted of hills. These were covered with dense and impenetrable forests which were lost to human industry. He further attested that with the exception of mountains, woody and watery parts, only less than two-thirds remained applicable to the purpose of profitable cultivation or pasturage.

According to *The Citizen*, dated 27/09/1923,

“the Travancore forest was not a streak of shrubs just at the foot of the Ghats but it was also an endless woody expanse, ocean like. They were famous for their royal teak as well as different kinds of

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8 Bourdillion was the Forest Conservator of Travancore during the period 1891 - 1909 and is often regarded as the Father of the Travancore Forest Department.
9 T.F. Bourdillion, op. cit., p. 11.
reeds. This encouraged the enthusiasm of the colonial rulers for further exploration of Travancore forest with a view to exploit its resources such as reeds for pulp, grasses for oils, soft woods for matches and chests etc.”

Douglas Hamilton has given a beautiful description of the Anamalai hills. This hill is divided into the higher ranges and the lower ranges. The lower ranges contained the famous teak forests. It was covered with dense forests containing very valuable timber. On the other hand the high ranges contained extensive open grassy hills, and valleys with Shola forests similar to those on the Neilgherries and Pulnies. N. Parameswaran, in his book *Vanasmaranakal* (Forest Memoirs) has very beautifully described the forest of Travancore, particularly that of the Shendurney forest. According to him the thickest forest of Travancore was that of the Shendurney valley. One side of the Shendurney hills was very terrible and the other side was extremely beautiful. The Shendurney forest was an immense treasure house which replenished the coffers of the Maharaja of Travancore from time to time. The total area of the valley at the time of the preparation of the working plan for this forest was shown to be 73 sq. miles and 188 acres. In Travancore, the higher hills were covered in their recesses, glens and dusky base by dense forests. The entangled foliage of the trees in these forests was often impervious. On approaching the sea, this lofty and over spreading luxuriance gradually subsides. The extensive woods were decorated with ample and varied foliage, which were slightly deciduous. The larger trees were hung with creepers, canes, reeds and shrubby plants. The richest and fine vegetation could be seen throughout the greater part of the sylvan labyrinth.

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12 He was a Ranger in the Forest Department of Travancore.
14 Ibid., p. 29.
16 Ward and Conner, op. cit., p. 40.
17 Ibid.
Fig. 1.2

Forest map of Travancore dated nil.


Note: This Map is in sync with the Bourdillion Report regarding the extent and coverage of forests in Travancore.
Bio-diversity

N. Parameswaran mentioned in his work that the Shendurney forest was full of rare species of flora and fauna which could not be found in any other part of the world. The area attracted foreign traders\(^\text{18}\) due to its Kulavu-Karanjili Trade. For example, rich traders from Madras such as Arumukha Swami Nadar, Chokkalinga Nadar, Kaliyappa Nadar etc., earned lakhs of rupees by trading Kulavu\(^\text{19}\) and Karanjili\(^\text{20}\) from Shendurney forests.\(^\text{21}\) These trees were in great demand in Tamil Nadu. The ball shaped pieces, which were red in color carved out from Kulavu and Karanjili, were largely used for the construction of houses.\(^\text{22}\) Besides Kulavu and Karanjili other rare species of trees found in this forest region were Shenkurunji, Gandhakali etc.

The bio-diversity of these forests can be better explained in the words of Bourdillion himself. According to him:

“In spite of the only moderate fertility of the soil the trees attain a great height, while the flora contains an unusual number of species. Instead of finding 4 to 5 chief trees and 6 to 8 less abundant ones, as would be the case in a European forest, our forest often contain over a hundred different species varying in every conceivable manner. Such a variety is in a way an advantage, because a greater amount of timber can be grown on a given area if the species are different, than if all the trees are the same.”\(^\text{23}\)

The Travancore forest was rich with great varieties of poon, anjily or wild jack, wild mango tree etc. There were also wide varieties of black, red, and iron wood

\(^{18}\) Traders hailed from places other than Travancore.

\(^{19}\) Trade name: Piney, also called chukkanna-payin locally.

\(^{20}\) Karanjili is called kalpine locally.

\(^{21}\) N. Parameswaran, op. cit., p. 30.

\(^{22}\) Ibid.

\(^{23}\) T.F. Bourdillion, op. cit., p. 11.
trees. Many lactescent species yielding gamboges,24 dragon blood25 and various kinds of aromatic gums were met with amongst the species of resin trees.26

The Shendurney forest was covered with different kinds of trees. According to the measurement of the trees, a forest was divided into six classes. In the working plan report of the Shendurney forest, it was said that an ideal forest should contain a large number of small trees of class VI, a smaller number of class V, still a fewer of class IV and so on with class I containing the smallest number of all. Such forests would yield a steady and equal supply of timber year after year.27 However, in Shendurney forest, the first class trees were excess in its proportion and the class VI trees were found deficient in number which meant that mature trees were not removed at proper time to make room for the smaller ones.

According to Ramanatha Ayer, the floral belt of Travancore contains the aristocracy of noble trees which supplied the most valuable timber, the best Indian fruits and other valuable products.28 Teak thrived on the western slopes of these hills. About 8,000 logs were exported every year to countries beyond the confines of the Indian Empire.29 The dammar, nuxvomica and banyan trees were widely distributed in the country. The laurel and the graceful peepal were found everywhere. The blackwood and Persian lilac grew extensively in the Ashambu hills and the forest glades of Camp Gorge. Cotton propagated everywhere from the sea level up to 3,000 ft. height.30 Jack fruit, mango, gallnut, gooseberry, palm tree etc. were also found to be plentiful. Anjily grew in the open forest. Cedar was found on the banks of rivers. Cinnamon was common on hill slopes. Ebony was largely collected at the Shencottah depot.31 The forest everywhere was intersected

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24 Gamboge is a resin from the trunk of Garcinia harburyi.
25 Dragon blood is a bright red resin that is obtained from different species of a number of distinct plant genera. This has been in continuous use since ancient times as varnish, medicine, incense and dye.
26 Ward and Conner, op. cit., p. 41.
29 Ibid.
30 Ibid.
31 Ibid., pp. 50 - 51.
by bewildering and deceitful paths, chiefly made by wild animals like the elephants and buffaloes. These traces were sometimes used to travel to the top of the highest hills.\footnote{Ward and Conner, op. cit., p. 43.}

Parameswaran has also given a detailed account of wild animals which he came across, and different species of snakes. He described more than once, his experience of meeting tigers on his way. He has beautifully detailed his experience of an encounter with a tiger he met, which had a body length of 8 ft.\footnote{N. Parameswaran, op. cit., p. 25.} The forest and hills of Travancore were the abode of the best sport, especially in the shape of ‘large game’, which could not be found anywhere else in India. Travancore forest provided habitat for elephants, tigers, wild oxen, deer, monkeys, bison, sambhur, leopards, porcupine, bears, horned antelopes, jungle fowl, ibex etc.\footnote{S. Ramanatha Ayer, op. cit., p. 54.} Wild animals were met in the adjournments of the hills and were of different species, such as the tiger, panther, cheetah, tiger cat, elephants, buffaloes, wild hog, deer, porcupine, \textit{chingalum}, alligators, etc.\footnote{William H. Horsley, op. cit., p. 41.}

Parameswaran in his work has mentioned a snake known as \textit{Kozhipoovan}\footnote{The vernacular name might represent dark variety of Cobra or even king cobra (Ophiophagus Hannah).} which once came across his way. It was 16 ft. long and 14 inches thick. Its body was completely black and above its neck there was a dark and smooth piece of growth which seemed like a flower, as the one seemed on top of the head of a cock. From this flower the snake got its name. They prey upon cockerels, goats etc. It was so poisonous that no living being would survive its bite or its poisonous breath.\footnote{N. Parameswaran, op. cit., p. 34.} \textit{Karinagam} was another rare species of snake found in the Shendurney valley. Its body was of blue-black colour and often reached a length of 6ft. There was a crescent shaped growth which was ivory in colour above its neck and white lines were scattered around its body. Whenever it came across people, it would stand erect on its tail and begin to spray poison. There were small types of snakes
in the same species called *Karivazhala* and *Valakazhappan.* S. Ramanatha Aiyer stated that the state was the seat and centre of snakes, and they were held in great veneration by the people of the country.

*Chenathandan* was another kind of snake which attained a length of 12 ft. It moves very slowly. The author remarks that one of his Anglo-Indian friends had a belt made up of the skin of *Chenathandan.* Boa Constrictor belonging to the python family was commonly seen in the forests of the Devicolam Division. This was the biggest among the snakes. It is often very difficult to distinguish it when it lies dormant under a huge tree since it would resemble the branch or root of the tree. It is said that once a Boa Constrictor came down upto the Tuet depot in Kollam along with the timber brought down from Pampa basin in a barge. The men on the barge could not recognize the presence of the snake though it travelled with them so long.

**Elucidation of Travancore Forest Based on the Reports of Bourdillion and Others**

Bourdillion was appointed the Forest Conservator of Travancore on 14 June 1891. He was entrusted to write a report on the Travancore forests at the recommendation of the Forest Commission of 1884. He was appointed in June, 1886 to commence his work and it took about three and a half years to complete it. Bourdillion’s report was accepted as one of the most important authoritative documents on Travancore forest after the memoir of Ward and Conner. He had described the forest area river by river, detailing the character of the forests.

He classified the forests of Travancore into four broad categories:

1. Heavy moist forest of evergreen trees:

   This class of forest once extended all over the low country of northern Travancore and consisted of the following species: ebony, *kambagam,*

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38 Ibid., pp. 34 - 35.
40 N. Parameswaran, op. cit., p. 35.
41 Ibid.
42 T. F. Bourdillion, op. cit., p. 18.
anjily, jack, white cedar, red cedar, punna, mango, redwood, nutmeg, cinnamon, pala etc.

2. Land originally covered with moist forest but now over-spread with shrubs of various ages:

This type of forest land was widely used for cultivation as it did not consist of any valuable trees. Some of the trees found here were vaga, vattakanni, clerodendrum, roxburghi etc.

3. Deciduous forests with grass growing under the trees:

This class of forest was found abundantly in southern Travancore. It covered the ridges and higher ground. Though the number of tree species grown there were less, the value of the existing species were very high. The most important trees found here were teak, blackwood, sandalwood, irul, venga, mulluvenga, venteak, thambavu, pera, nelli, etc.

4. Rocky land covered with short grass: Bourdillion considered this class of forest as worthless as far as its timber was concerned.

Thus, owing to the favourable climatic conditions, Travancore had diverse species of plants in abundance. About 592 varieties of timber trees and 3,538 flowering plants, shrubs etc., were identified by Bourdillion. The most valuable tree found in Travancore forests was teak. It grew in abundance in the interior forests and less in easily accessible areas. Its value increased year after year as its number decreased every year, which increased the difficulty of procuring it.

**Forest near the Mahendragiri Peak**

This area was drained by the Hanuman Nadhi. As estimated by Hayne of the British Forest Department, the Mahendragiri hills consisted of a forest area of 6 ¼ sq. miles. Bourdillion reported it to be a wrong estimate and according to him it consisted of 15 sq. miles or 10,000 acres. Out of this 15 sq. miles, about 8 sq.

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43 Ibid.
44 Ward and Conner, op. cit., p. 41.
45 Nadhi is the Malayalam word for river.
46 T.F. Bourdillion, op. cit., p. 20, para. 132.
miles of tract consisted of the fourth class forest. About 6 sq. miles belonged to the third class forest and only one sq. mile belonged to the original forest, most of which had been cleared for coffee cultivation. There were two or three coffee estates in the North Western corner of these hills which once yielded a very high crop.\textsuperscript{47} No regular working plan was ever prepared for this forest until the beginning of the twentieth century. In the second half of the twentieth century, a fuel Working Circle was created within the reserve known as Mahendragiri Fuel Working Circle and a working plan was prepared for the same.\textsuperscript{48} Owing to the denudation of the slopes the runoff of the rains are high Col. Cambell Walker, the Conservator of Forests of the Madras Presidency at Courtallum, in 1886 complained to Bourdillion that these hill forests had largely deteriorated and no proper steps had been taken for conserving them.\textsuperscript{49} A change in the management had been effected during his time. This forest area which was earlier under the Dewan Peishkars of the south, was transferred to the charge of the conservator of forest. When the conservator took charge of this tract, felling of timber, system of cultivating the lower slopes and burning of wood for charcoal were all stopped.\textsuperscript{50}

The principal trees found in this forest were tamarind, teak, blackwood, vekkali, vaga, venteak etc.\textsuperscript{51} Other important trees used as firewood were, odai, usil, vadathale, athi, malankarai, kottei, vanderlei, virali and naragam.\textsuperscript{52} People living on the outskirts of this forest, from both the British territory and Travancore, depended on these trees for firewood, leaf manure and grazing. Therefore, Bourdillion reported that it would be impossible to close the whole area at once. Another difficulty in closing the area was that it would incur a lot of money by increasing the number of guards. His suggestion therefore was to close and reserve the forest phase by phase. When the growth on the reserved portion had reached a

\textsuperscript{47} Ibid., para. 137.
\textsuperscript{48} Letter No. 843, dated 24/06/1925, from Dhanukoti Pillai, Conservator of Forest in Travancore to the Chief Secretary regarding Working Plan of the Mahendragiri Fuel Working Circle, Development File No. 476/26, B - 55.
\textsuperscript{49} T.F. Bourdillion, op. cit., pp. 21-22, para. 146 - 151.
\textsuperscript{50} Ibid., p. 22, para. 148.
\textsuperscript{51} Ibid., para.140.
\textsuperscript{52} Letter No. 843, dated 24/06/1925, op. cit.
fair height, fire wood collectors would be cautiously admitted and another part of the hill would be closed. Nonetheless, he suggested that grazing and collection of manure leaf should be strictly prohibited.\textsuperscript{53}

**The Forest Area Drained by the Palli or Vadasheri River**

The forest area drained by the River Vadasheri was only a small area of 38 sq. miles and included all classes of forests. It consisted of 2 sq. miles of heavy forest, 6 sq. miles of coffee estates, plantain gardens, and secondary growth, 20 sq. miles of dry grass forest and 10 sq. miles of rock and short grass. There were three coffee estates in this area: the Kunimutti Chola estate, the ‘black rock’, and the ‘olivers’.\textsuperscript{54} Teak and blackwood were the principal trees of this forest area. The former was mainly kol-teak\textsuperscript{55} which seldom grows more than 20 ft. in height, 6 inches in diameter and begin to branch within 5 ft. of the ground. They grow abundantly and sometimes extend over a large area inhibiting the growth of every other tree in its way. Blackwood trees were found abundantly here and were of excellent quality. The zone of blackwood tree was above that of teak. The main timber depot here was the Virappuli depot.\textsuperscript{56}

The other trees which were found in these forest regions were *venga*, *vekkali*, *thembava*, and *kongu*. Though the available quantity of *venga* was small it attained a good girth in this forest region. Due to poor soil conditions, *vekkali* never attained a large size but was found in abundance on the slopes of Poyuga Mala. Owing to indiscriminate felling, *thembava* found in the grass forest was scarce in this region during the visit of Bourdillion. *Kongu* was a valuable tree found in the moist forest which had been felled largely for cultivation. Therefore, at the time of Bourdillion’s visit, this tree was found only on the bank of rivers or in places where it was difficult to access.\textsuperscript{57} Other trees such as *venteak*, *kadamba*, *meili*, *mullu venga*, *thanni* were also common in this region. *Filicium decipiens*,

\textsuperscript{53} T.F. Bourdillion op. cit., p. 22, para. 152 - 153.
\textsuperscript{54} Ibid., p. 23, para. 157.
\textsuperscript{55} Kol-teak is teak that grows in unfavourable situations and which never attains large dimensions.
\textsuperscript{56} T.F. Bourdillion, op. cit., para. 158 - 159.
\textsuperscript{57} Ibid., para. 160 - 63.
seen in the Peermade plateau and not elsewhere in Travancore, was found here. It grows only in dry climates.58

According to Bourdillion, the forest on the Palli River had been heavily worked in the former years, and most of the timber brought to the depot was felled beyond its limits. He further stated that in 1886 the custom was that the Conservator engaged two or three contractors to fell and saw timber in the forests, and to bring them to the depot, where it was sold at fixed rates, and the practice continued. The returns varied between Rs. 9,000 to Rs. 12,000 a year and the total expenses amounted to about half of the receipts. The timbers mostly brought to the depots were teak, kongu, venga, and thembava.59

**Forests on the Basin of River Parali or Thamravarnni**

The Parali River originates in the mountains, north of Mahedragiri and flows through a wild tract.60 The total forest area in the river basin consisted of 71 sq. miles. They were divided into 10 sq. miles of moist forest, 16 sq. miles of secondary forest, coffee estates, and Hillmen’s clearing, 30 sq. miles of grass forest with large tree growth, and 15 sq. miles of rock and grassland.61 This forest was partly under the Virappuli Aminadar and partly under the Kalkolam Aminadar.62 The area being well suited for coffee cultivation was opened for the same purpose. The government sold about 6,000 acres for coffee cultivation. In the beginning there were about 10 to 12 estates. Later the area under coffee cultivation shrank, and these areas were planted with tea.63

Through the Parali River, timber was floated to a great distance.64 The principal trees found in its basin were teak and blackwood. Teak found here was moderate in quantity and was of medium size. Fine quality blackwood of large dimension was found here. Venga of good size was also found but according to

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58 Ibid., pp. 23 - 24, para. 164 - 165.
59 Ibid., p. 25, para. 174.
60 William. H. Horsley, op. cit., p. 47.
61 T.F. Bourdillion, op. cit., para. 179.
62 Ibid., p. 27, para. 187.
63 Ibid., p. 26, para. 182.
64 Ward and Conner, op. cit., p. 28.
Bourdillion, it was heavily felled by the contractors. Similarly fine quantity Kongu was also scarce due to extensive felling.\textsuperscript{65} Other trees found in the region were \textit{thembava, nanga, ebony, mullu venga, kadamba, meili, venteak, anjily} etc.\textsuperscript{66} The regular working of this forest near the Virapuli depot yielded about 1,000 \textit{candies} per annum. It resulted in the exhaustion of timber in the accessible regions and new tracks were required to obtain timber from the interior forests. According to Bourdillion new bandy tracts could certainly bring more timber to market.\textsuperscript{67}

\textbf{Forests on the Basin of River Neyyar}

The Neyyar issues from the foot of the Augasteesuer hills and escapes the wilder tracts.\textsuperscript{68} The area that lies in the course of river Neyyar is located between the Chottupara ridge and the Variattu mala ridge.\textsuperscript{69} The area drained by the Neyyar extended to 60 sq. miles of forest land which was divided as 4 sq. miles of moist forest, 20 sq. miles of secondary forest, abandoned coffee estates, and Hillmen’s clearings, 24 sq. miles of third class forest comprising grassland and large trees and 12 sq. miles of fourth class forests.\textsuperscript{70} This forest area contained no valuable timber except \textit{venga}. There were no roads into the forest as a result of which no trees were felled here. The other trees found were jack, red wood, and \textit{enna}. \textit{Enna} yields the gurjun oil largely used for rheumatism.\textsuperscript{71} During rainy season timber was floated down from the hills through the Neyyar.\textsuperscript{72} About 2,000 acres of forest land here was sold for coffee cultivation. As the forest here was very poor it was not recommended for reservation.\textsuperscript{73}

\textsuperscript{65} T.F. Bourdillion, op. cit., para. 180.
\textsuperscript{66} Ibid.
\textsuperscript{67} Ibid., p. 27, para. 189.
\textsuperscript{68} William. H. Horsley, op. cit., p. 48.
\textsuperscript{70} T.F. Bourdillion., op. cit., para. 224.
\textsuperscript{71} Ibid., p. 32, para. 230 - 225.
\textsuperscript{72} William. H. Horsley, op. cit., p. 48.
\textsuperscript{73} T.F. Bourdillion, op. cit., para. 229 - 230.
Forest on the Basin of River Kotha

The Kotha River flows South West through a wild and woody country. The catchment area of the river was estimated at 99 sq. miles which was divided as 30 sq. miles of moist forest, 20 sq. miles of coffee estates, Hillmen’s clearings, paddy fields, and secondary growth. Park land forest with large trees and grass consisted of 30 sq. miles and useless land of rock and short grass consisted of 19 sq. miles. According to Bourdillion, “in the Mottachi valley, and on the outer slopes of the rocky ridge that encloses the Kotha on its western side, most of the timber had been felled and very little original forest now remains except at high elevations. At one time Kongu and Anjily were abundant and was of very large size.” Venga which was once in abundance in the region was found to be scarce due to excessive fellings. Thembava was common and grew particularly tall and straight. About 5,000 acres of land were sold for coffee cultivation within this forest limit. Bourdillion does not recommend the reservation of any tract in the Kotha river basin because the forest land there intersected with the cultivation by the Hillmen at certain places.

Forest Adjoining River Karamana

The Karamana River has its source on the north-western side of Augateesuer peak and flows its early course through a very woody and uneven country. The main branch of the Karamana river, the Kaviar, drains the forests lying west of Nachiar mottai. The forest limits of the river was estimated as 72 sq. miles which was divided as 5 sq. miles of moist forest, 20 sq. miles of secondary forest, 35 sq. miles of grass forest, and 12 sq. miles of rock and useless land. This forest area resembled the area drained by river Neyyar. To Horsley, the total distance traversed by this river in all its windings was about 41 sq.

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75 T.F. Bourdillion, op. cit., p. 28, para. 197.
76 Ibid., p. 29, para. 201-206.
77 Ibid., p. 30, para. 212.
80 T.F. Bourdillion, op. cit., p. 33, para. 234.
miles.\textsuperscript{81} Venga and thembava were the only valuable trees found here. Teak was quite absent. Blackwood though occasionally found, was scarce. Timber in this forest which was spread over the intermediate tracts above the valley was scarce.\textsuperscript{82} About 3200 acres of land were sold for coffee cultivation and there were seven large estates. Later coffee was abandoned and 300 acres were planted with tea.\textsuperscript{83} The animals of these forests included elephants, several kinds of tigers, different species of monkeys, among which singalums were the most prized, elks, buffaloes, deer, porcupines, bears, goats, wild boar etc.\textsuperscript{84}

Timber operations of the area, according to Bourdillion, were as follows:

“The Southern portion of this forest has been worked for thembava which was sawn up and carted out, but the venga at the time of my visit had not been touched. Through the grass enormous numbers of seedlings of both venga and blackwood were visible, showing that the latter must at one time have been plentiful, though scarce now. The Northern part of this forest has been worked from Vithara (Viddiryaloor), a bandy tract running for a considerable distance due South from the 23\textsuperscript{rd} mile stone, and both venga and thembava have been cut”.\textsuperscript{85}

In the cultivated lands, cocoa and arecanut can be found growing abundantly along with mango and jack trees.\textsuperscript{86} River Karamana was used for floating timber of all descriptions.\textsuperscript{87}

\textbf{Forest on the Catchment Area of River Paloda}

River Paloda or Vamanapuram was used for floating timber or bamboos as far as Paloda or even a little higher. Nevertheless the quantity of timber floated

\textsuperscript{81} William. H. Horsley, op. cit., p. 48.
\textsuperscript{83} T.F. Bourdillion, op. cit., para 235 - 238.
\textsuperscript{84} Ward and Conner, op. cit., p. 59.
\textsuperscript{85} T.F. Bourdillion, op. cit., para. 239.
\textsuperscript{86} Ward and Conner, op. cit., p. 48.
\textsuperscript{87} William. H. Horsley, op. cit., p. 48.
through this river was less because the timber was too heavy for floating. Due to this reason, the logs were sawn and conveyed by cart to Trivandrum.\textsuperscript{88} The forest area in the course of the river was situated between the Ponmudi ridge and Kottamala ridge.\textsuperscript{89} The forest area here was 143 sq. miles, of which 23 sq. miles were covered with moist forest, 40 sq. miles of secondary forest, hill cultivation, and paddy fields, 70 sq. miles of grass forest growing under large trees and 10 sq. miles of rock and useless land.\textsuperscript{90} The principal trees found here were \textit{venga}, \textit{thembava}, and white \textit{marutha}. One of the special trees found here was \textit{Humboldtia alata} which according to Bourdillion was confined exclusively to the valleys of Paloda and Kulathuppura rivers, and was not found elsewhere in the world.\textsuperscript{91}

The upper hills covered with heavy forest, were partly sold for coffee cultivation and what was left was too steep and inaccessible for working.\textsuperscript{92} The construction of roads from Shencottah to Trivandrum which passes through Paloda and a branch through Vithira to serve the coffee estate, made the forest area accessible for the timber merchants. Regarding the timber here, Bourdillion remarks that:

\begin{quote}
when I was speaking to some ryots in Paloda in 1887, one of them said to me, before the Shencottah road was cut venga, kongu, and thembava were so abundant that we could not see the sky for the branches of the trees, but now we cannot get any of these woods, they have all been cut down and taken away to Trivandrum.'\textsuperscript{93}
\end{quote}

Bourdillion further claimed that the timber operations had ruined the forests and warned that further operation should be done only with caution and in combination with conservancy. He also suggested areas for reservation.\textsuperscript{94}

\begin{footnotes}
\item[88] T.F. Bourdillion, op. cit., para. 245.
\item[90] T.F. Bourdillion, op. cit., para. 246.
\item[91] Ibid., p.35, para. 251
\item[92] Ibid., para. 255.
\item[93] Ibid., p. 36, para. 259.
\item[94] Ibid., p. 37, para. 261.
\end{footnotes}
The felling and delivery of timber here was not properly supervised by the Forest Department. The contractors cut the timber according to their wish, sawn them and transported the wood to Trivandrum. *kongu, venga* and *thembava* were the trees operated on and occasionally a few logs of blackwood were brought in.95

**Forest on the Basin of Ayyur or Itthikkara River**

The forests of the Ithikara basin were under the charge of the Nedumangadu *Aminadar* who resided at Trivandrum.96 The forest area amounted to about 39 sq. miles. The character of the forest here was very good, the soil being moist and the proportion of heavy jungle was larger than the secondary forest.97 The tracts of the hills were covered with forests consisting of lofty trees, bamboos, rattan etc.98 Among the 39 sq. miles of forest, heavy forest consisted of 12 sq. miles, secondary forest consisted of 3 sq. miles and grass land with large trees consisted of 24 sq. miles. There was a conspicuous absence of useless land here.99 Teak and blackwood were very rarely found in this forest. Among the valuable trees *thembava* was found in abundance along with *venga,anjili* and *kongu*. In some parts of the forest *menteak* and *meili* were found. *Kodagapala* a small medicinal tree, was found in this forest in considerable abundance.100

This forest had been worked either for Quilon or Shencottah depots. At both these places as *thembava* was not valued, it wasn’t frequently felled. The timber worked out here were that of *venga, kongu, anjily* and *menteak*. As this forest was under the management of Nedumangadu *Aminadar*, no Forest Officer supervised the felling of timber here and the contractors worked at their own will. Watch stations at Ayyur and Nelamayilam maintained a certain check on the passage of timber. People who wanted other wood than those in demand could fell

95 Ibid., para. 263.
97 T.F. Bourdillion, op. cit., p. 38, para. 270.
98 Ward and Conner, op. cit., p. 67.
99 T.F. Bourdillion, op. cit., para. 269.
100 Ibid., para. 270 - 273.
it by obtaining a permit and paying a fixed rate per candy of wood.\textsuperscript{101} The only path through this basin was the cart road from Nelamayilam to Madathurakani and all the timber that went by road was conveyed en-route.\textsuperscript{102}

**The Forest Region in the Kallada Basin**

The Kulturppura\textsuperscript{103} or Kallada River was the third largest in Travancore. It was formed by the junction of four large streams and four distinct valleys. The forest in the Kallada basin especially in Quilon, contained a wide variety of timber and in the opinion of Ward and Conner teak was scarce here.\textsuperscript{104} The total forest land in this river basin amounted to 293 sq. miles consisting of 180 sq. miles of heavy forest, 40 sq. miles of secondary forest, 60 sq. miles of grass land with large trees and 13 sq. miles of useless lands.\textsuperscript{105} Bourdillion in his reports claims that:

“Before the commencement of the coffee enterprise the 4 valleys which I have described must have been covered by one unbroken sheet of forest, stretching from the Peramukotta station in the South up to the Nedumpara station, and beyond it in the North, but, within the last 20 years, this continuous expanse of noble trees has been broken by clearings in all directions. The forest lies chiefly in one large block which extends from the East nearly as far as the main road from Trivandrum to Shencottah. To the west of this road there were also large patches of forest, notably one that stretches from Kulatthuppura North-West to the Kallada river. The rest of the country, West of the main road, is occupied by grass forest, which also occurs in patches within the large block of moist forest.”\textsuperscript{106}

He gave an idea of the forest here, by providing a detailed description of the forest in each of the four valleys.

\textsuperscript{101} Ibid., p. 39, para. 278 - 279.
\textsuperscript{102} Ibid., para. 280.
\textsuperscript{103} Modern Kulathupuzha, which is in the district of Kollam in Kerala.
\textsuperscript{104} Ward and Conner, op. cit., p. 81.
\textsuperscript{105} T.F. Bourdillion, op. cit., p. 41, para. 293.
\textsuperscript{106} Ibid., para. 294.
Kulathuppura and Chenthroni Valleys

In the Kulathuppura valley, the principal trees found were *kongu* and *anjili*, both of which were once found in considerable abundance but was later rendered scarce due to their great demand for boat making. Teak was entirely absent in this valley and was found occasionally in the Kallada valley. However, to Ward and Conner, there was a hill, three and a quarter miles north-west of Kulathupura, named Tavancode or Takemalay. This hill was covered with forests, from which teak and other valuable timbers were felled. They also attested that in Kottarakkara district through which Kulathupura river flows, teak was the most valuable timber and was found in abundance.\(^\text{107}\) Blackwood was found in some places. The other valuable trees found in the forest were *puthankolli*, *iluppa*, *punna*, redwood, *pangu*, white cedar, *enna*, black *kongu* etc.\(^\text{108}\) The whole of the Kulathupura valley practically remained under no supervision of any kind at the time of the visit of Bourdillion. Therefore the timber felled and removed were often more than the quantity paid for and prescribed in the permit.\(^\text{109}\)

Similar trees were met with outside the Kulathuppura valley and also in the Chenthroni valley. The Chenthroni valley lies to the north of the Kulathupura valley, and is separated from it by the Churutta ridge. This valley once completely under forest was cleared for coffee or tea cultivation.\(^\text{110}\) The wild animals found here were elephants, royal tigers, cheetahs, hyenas, jackals, wild buffaloes, spotted deer, etc. Among birds, peacock and wild fowls were abundant.\(^\text{111}\) In the Kulathuppura valley, there was a good cart road which left the Trivandrum- Shencottah road, a mile north of Madathurakkani, and was running for about 12 miles to the east, crossed the Pinamanar by a fine wooden bridge of

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\(^{107}\) Ward and Conner, op. cit., p. 97.

\(^{108}\) T.F. Bourdillion, op. cit., para. 298.


\(^{111}\) Ward and Conner, op. cit., p. 98.
600 ft. There were also other cart roads and bridle paths reaching the estates.\textsuperscript{112} In the Chentroni valley there was an old cart road even before the Shencottah cart road was constructed. It was through this road that a considerable portion of the produce was carried on pack bullocks up to the Umiyar (Manimuttar) and by the Alvakkuricchi gap to the village of the same name in Tinnevelly.\textsuperscript{113}

**Aryankavu Valley and Chalakkara Valley**

The forest here was of a large size and the soil was of good quality. They consisted of very large trees usually found in the moist forest. In the grass forests, teak and blackwood were found. In perspective of Ward and Conner, the hills of Aryankavu were covered with forest containing some teak.\textsuperscript{114} *Irul* which was otherwise absent in South Travancore was seen in this forest. *Vekkali* a very useful tree was also found here.\textsuperscript{115} The main cart road from Trivandrum reached its highest point at the Aryankavu pass and the village of Puliyara where there was a timber depot. There were also other cart roads that connected the different estates with the main road.\textsuperscript{116} The greater part of this forest was covered with grass forest containing good teak, blackwood, *venga, thembava, irul* and *vekkali*. Good trees were getting scarce due to large fellings. *Kongu* of good dimensions were found on the river banks. *Anjili* was scarce here. To the north of the Chentroni valley, is that of Aryankavu, which is drained by the Karuthaurutty River. According to the working plan report of Shencottah Division for the period of 1945-46 most of the forest in this region had been cleared for cultivation.\textsuperscript{117}

The moist forest in Aryankavu and Chentroni valleys and the neighbourhood of Kulatthuppura were worked for Kongu for the Puliyara depot. Teak, blackwood and *venga* were cut on the hills near the Ottakkal for the same depot. The timber merchants and contractors of Quilon cut *anjili* planks.

\begin{itemize}
  \item \textsuperscript{112} T.F. Bourdillion, op. cit., p. 42, para. 305.
  \item \textsuperscript{113} Ibid., p. 43, para. 315.
  \item \textsuperscript{114} Ward and Conner, op.cit., p. 97.
  \item \textsuperscript{115} T.F. Bourdillion. op.cit., p. 45, para. 325.
  \item \textsuperscript{116} Ibid., p. 44, para. 319 - 320.
  \item \textsuperscript{117} *Working Plan Report of the Shencottah Division*, op. cit., p. 39.
\end{itemize}
thembava, and mulluvenga from the Ottakkal forest, teak from the Chalakkara valley, white cedar from the Chenthroni valley, venteak planks, anjili, and kongu from the Kulathuppura valley, and blackwood, kongu and venga, from the forests to the west of Kulathuppura. Kongu for Trivandrum depot was also felled from Motha, a short distance to the west of Madathurakkani. Thus all these depots depended on the same forests for timber.\textsuperscript{118}

The Forest Area drained by River Shencottah

This forest area was drained by the Shencottah and Churanda Rivers which were the tributaries of the Thamravarnni, the chief river in Tinneveli.\textsuperscript{119} This forest consisted of 20 sq. miles, of which 4 sq. miles were heavy moist forest, 4 sq. miles of secondary forest, 5 sq. miles of grassland with trees, and 7 sq. miles of useless land. As far as the character of the forest was concerned it was very poor.\textsuperscript{120} The principal tree found here was teak, primarily kol-teak. Vekkali, venga, blackwood, meili, and vaga were abundant. If planted, sandalwood was found to thrive well here.\textsuperscript{121} In this forest, about 500 to 600 acres were opened for coffee cultivation and there were five or six estates. The area was under the supervision of the superintendent of Puliyara. These forests yielded a large quantity of charcoal which became a constant source of conflict between the Forest departments of Travancore and Tinnevely. As the rate charged for charcoal in Travancore was low with respect to that of Tinneveli, export of it from Travancore was prohibited. This resulted in the smuggling of a large quantity of charcoal from Travancore daily.\textsuperscript{122}

In Puliyara there was a large depot, from which timber felled in Travancore and brought by cart, was sold to the value of over lakhs of rupees per annum to merchants in Tinnevelly. The timber offered for sale here was almost entirely kongu and venga, along with some teak. Two species of vaga were used

\textsuperscript{118} T.F. Bourdillion, op. cit., p. 46, para. 336.
\textsuperscript{119} Ibid., p. 47, para. 341.
\textsuperscript{120} Ibid., para. 342.
\textsuperscript{121} Ibid., para. 344.
\textsuperscript{122} Working Plan Report of the Shencottah Division, op. cit.
for bandy wheels, and poles. The forest was well supplied by roads. The cart roads from Trivandrum to Shencottah and Tinnevelly passed through this region. Besides, there were also a number of bridle paths.

**Forest in the Catchment of River Achencovil or Kolakkada**

The hilly tracts in this valley, east of the meridian of Kodumon was deep forest consisting of teak, blackwood, *anjily* and different kinds of other timbers. The forest area drained by river Achencovil was 189 sq. miles which was divided into 70 sq. miles of heavy forests, 40 sq. miles of secondary growth, 59 sq. miles of grass forest and 20 sq. miles of useless lands. The catchment area of the main rivers and the streams formed an extensive patch of evergreen forests. The Achencovil River was situated at the head of one of the largest and most beautiful wooded valleys and its tract produced large quantities of fine teak. The most important characteristic of this area was that it was most salubrious for the growth of teak. *Irul* was also found in abundance in the grass forest. *Anjili* was very scarce and if it was found by the merchants, it would be readily cut down because of the high value of *anjili* boats. *Kongu* boats were also in demand but the tree was not felled as much as it was too heavy to float. *Kongu, venga* and *thembava* were often cut and sawn up as pieces and taken by carts to a point on the river where large boats could come and fetch them. *Venga* trees were often found with incisions on the bark made for the extraction of kino. Apart from these trees, the other useful trees found here were *manjakadamba, meili, puyam, vekkali* etc.

The management of the forest was under the Assistant Conservator of Forest who resided at Konniyur. An important characteristic of the forest was that it had a river well suited for floating timber. Later due to the scarcity of bamboos heavy timbers were not exported through the river. Thomas, the

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123 T.F. Bourdillion, op. cit., p. 48, para. 348 - 349.
124 Ward and Conner, op. cit., p. 117.
125 T.F. Bourdillion, op. cit., p. 50, para. 361.
126 Ward and Conner, op.czit., p. 123.
Assistant Conservator of Forest estimated that the number of teak logs taken out from this valley annually was 4,000 teak and 1,000 logs of other woods. The extensive felling of first or second class teak reduced their number and much of the teak timber brought down every year were immature logs which would have grown larger if left for twenty or thirty years more. Bourdillion recommended the reservation of this entire valley. Ward and Conner recorded that besides teak, other trees found in this region were blackwood, *anjili*, *venga* etc. Both teak and *anjili* at that time were felled by government and other trees were rented to the natives. According to them, a large portion of the forest tracts in the valley was unexplored due to want of guides, and the danger and difficulty of penetrating into such wild extensive regions.

This forest area was traversed by a footpath running from Konniyur to the eastern boundary. Later a proposal was made to carry a bandy road from the Puliyara depot to the top of the pass, and down to Achencovil, in order to get timber for the depot. As the Kallar valley was also inaccessible, the opening of good paths were recommended for the efficient examination and working of the forest. The principal bullock path that connects Tinneveli was through the Achencovil pass. According to Bourdillion, though the Achencovil river was well adapted for the floating of timber, the timber resources in the basin were not fully utilised due to the poor means of roads and paths. No systematic attempts were made to open timber ways on each side of the valley which would have ultimately served the valley as a whole.

**Forest in the Vicinity of Ranni River**

The Ranni river is formed by three large rivers - the Kalar, the Kakkada river and the Valiya river. The Valiya river is formed by two small rivers - the Pamba river and the Azhutha river. The northern portion of the Konni reserve

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128 Ibid., pp. 52 - 53, para. 379 - 381.
129 Ward and Conner, op. cit., p. 142.
131 Ward and Conner, op. cit., p. 143.
was included for exploitation by the Ranni, Kakkad and Kalar rivers.\textsuperscript{133} About 487 sq. miles of forest land was drained by the Ranni river. This forest was divided into 367 sq. miles of heavy forest, 80 sq. miles of secondary forest, 20 sq. miles of grass lands and 20 sq. miles of useless land.\textsuperscript{134} Though the largest portion of this forest is comprised of heavy moist forest, Bourdillion stated that half of this forests were worthless due to its high elevation and the difficulty to access it from any quarter. In addition to this, it contained no saleable trees except \textit{karungali} and red cedar. He further added that the heavy forests in the lower elevation and in the low country were much valuable as they contained valuable trees. The secondary forest consisted of teak, blackwood, \textit{venga} etc. A good deal of land in the valley of Kakkada and the Arutha river was steep. However, the soil was good and better than that of the Kallar valley.\textsuperscript{135}

On the basin of the Azhutha river and on the Peermede plateau, about 4,000 acres of land was sold for coffee cultivation.\textsuperscript{136} The forest lying to the west of the Azhutha river, before it became reserved, was subject to shifting cultivation and to unregulated fellings of trees. In some places secondary growth had taken the place of the virgin forest.\textsuperscript{137} The forest of the Ranni river was very extensive and was covered with large forest trees. In the beginning of the nineteenth century, the timbers in demand were teak and \textit{anjili}. None of the other trees were cut at that time. But by the second half of the nineteenth century, there was a great demand for all sorts of trees.\textsuperscript{138} During the visit of Ward and Conner, they reported that teak had been felled regularly every year in the Ranni river. When Captain Robert Gordon was the Commercial Agent at Alleppey, his assistant Walcot supervised the timber collection on the Ranni river.\textsuperscript{139} Extensive

\textsuperscript{134} T.F. Bourdillion, op. cit., pp. 54 - 55, para. 391 - 400.
\textsuperscript{135} Ibid., pp. 55 - 56, para. 401 - 402.
\textsuperscript{136} Ibid., p. 60, para. 430.
\textsuperscript{137} M. O. Oommen, \textit{A Simple Working Scheme for the Exploitation for Reserved Forests in the Kottayam Division}, 1922, Development File No. 446/26, B - 55.
\textsuperscript{138} T.F. Bourdillion, op. cit., p. 60, para. 432 - 433.
\textsuperscript{139} N. N. Menon, \textit{A Working Plan for the Konni Forest Division}, op.cit., p. 41.
timber operations were carried out in various parts of the forest during monsoon season. As a result almost all the teak trees in this forest were drained and what was left belonged to the third class timber. Bourdillion recommended the reservation of the interior forest of this river as well. The management of the forest of Ranni were partly under the supervision of the Hill Aminadar of Konniyur and partly under the Aminadar of Kanjirappali. The road system in this forest area was very poor. A bandy road was made from Konniyur to Rani, but this was outside the forest line and the road itself was not completed.

Forest in the Vicinity of River Manimala

The forest area drained by the Manimala river was 168 sq. miles of which there was 16 sq. miles of moist forest in the Kuttukal valley, 110 sq. miles of secondary forest south of Peruvanthanam, 30 sq. miles of grass land, and 12 sq. miles of useless land. This forest area today comes under the Erumely Range of the Kottayam Division. As per the recent Protection Plan, the type of forest was tropical evergreen and moist deciduous inter spread with grassy paths. The most important tree found here was teak which was abundant in the south and the east of the river. In the vicinity of Erumely and Alappara, the teak trees were exceptional in their quality. Though anjili was found in this valley it was scarce. White cedar and meili were totally absent. In the region where cultivation was not started, venterak, venga, thembava, irul, and vaga were abundant. Unnam, punna, maruthy etc., formed the secondary species. The management of forest in this Division was partly under Kannyirappally Aminadar and partly under Thodupuzha Aminadar. Teak was largely felled and blackwood though felled was in a small quantity. The other timber trees were kambagam, anjili, venga etc. They were cut, sawn up, made into scantlings and sent to Kottayam where there

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140 T.F. Bourdillion, op. cit., para. 43.
141 Ibid., para, 435 - 437.
142 Ibid., p. 61, para. 444.
143 Protection Plan, Kerala Forest Department, Kottayam Division, Erumely Range, dated nil.
144 T. F. Bourdillion, op. cit., p. 62, para. 446 - 449.
145 M. O. Oommen, op. cit., Development File No. 446/26, B - 55.
146 Modern Kanjirappally, which is in the district of Kottayam in Kerala.
was a ready sale for them. None of the valleys was recommended for reservation by Bourdillion.\textsuperscript{147} Later \textit{venga} saplings from Karikkattoor reserve found a ready sale for sugar cane props at Eraviperur down the Manimala river.\textsuperscript{148} The valley was well supplied with roads. A cart road ran from Manimala to Kannyirappalli and from there to Erattupetta. Another cart road passed through Kannyirappalli and Mundakkayam, and descended to Kambam Valley in Madura. There were numerous tracks leading to cultivated areas. One of the largest tracks, half footpath and half elephant path, commenced from Manimala and then led to Erumely from where it went to the Sabarimala pagoda crossing the Azhutha river at Valavakuri.\textsuperscript{149} Besides roads, the Manimala river afforded great facility for the transport of timber.\textsuperscript{150}

\textbf{Forest on the Basin of Palayi River}

A hundred and two sq. miles of forest area was drained by the River Palayi, much of which was under cultivation. Out of this area, 5 sq. miles were the original moist forest, 52 sq. miles of secondary forest, 30 sq. miles of grass forest, and 15 sq. miles of useless land.\textsuperscript{151} The place was better suited for the growth of teak than any other place in Travancore. Due to the absence of wind the stem would grow straight and without a flaw. Timber merchants had been at work for years in this area, and teak wood was in great demand in Kottayam. \textit{Vaga} was another common tree found here. Blackwood was not common in the region while white cedar and \textit{anjili} were totally absent.\textsuperscript{152}

The soil in this valley was very rich, and consequently the area was thickly populated. In the upper part of the valley, teak thrived well while in the lower parts, \textit{anjili} flourished.\textsuperscript{153} The Palayi river valley was under the charge of the \textit{Aminadar} of Thodupuzha. Smuggling and illicit felling of timber was a

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\textsuperscript{147} T. F. Bourdillion, op. cit., p. 64, para. 466 - 467.
\textsuperscript{148} M. O. Oommen, op. cit., Development File No. 446/26, B - 55.
\textsuperscript{149} T. F. Bourdillion, op. cit., para. 469.
\textsuperscript{150} M. O. Oommen, op. cit., Development File No. 446/26, B - 55.
\textsuperscript{151} T. F. Bourdillion, op. cit., p. 65, para. 473.
\textsuperscript{152} Ibid., para. 474 - 475.
\textsuperscript{153} Ibid., p. 66, para. 478.
\end{flushright}
regular practice here due to little supervision and the ease with which teak could be sold at Kottayam.\textsuperscript{154} Trees like teak, \textit{anjili}, \textit{venga} and other woods were brought down by the Palayi river but the quantity was very small. No recommendation for reservation was made as the amount of available land was small. Numerous cart roads connecting the forest existed there.\textsuperscript{155}

**Forest in the Vicinity of River Muvattupuzha**

About 175 sq. miles of forest area was drained by the river Muvattupuzha. Of this 50 sq. miles were heavy forest, 70 sq. miles were covered with present cultivation or abandoned clearings, 30 sq. miles of secondary forest and 25. sq miles of useless land.\textsuperscript{156} The upper valley of the river was covered with moist forest, and the hill slopes were very steep making it unsuitable for cultivation. Most of the plains were cleared for cultivation. About half of the area in the adjoining valley of the Varippura was covered with moist forest. The rest of the area was covered with secondary forest.\textsuperscript{157} Teak was abundantly found in the Arakkulam and Velliamattam valleys but was absent in the Vadakkan river basin. It was also found in considerable quantity in the Kothamangalam river basin. However, due to heavy fellings their quantity was reduced. \textit{Irul} was also found abundantly in the Velliyaamattom valley. Blackwood, venteak, white cedar, \textit{anjili}, \textit{venga}, \textit{vaga} etc. were other trees found in the valley.\textsuperscript{158}

All the moist forests, the valley of Velliyaamattam where teak grew well and some other forest areas were recommended for reservation.\textsuperscript{159} The entire forest area was under the management of the Thodupuzha Aminadar. The valleys of Thodupuzha and Mullaringadu were earlier well-supplied with teak. J.S. Vernede, Assistant Conservator of Malayattur, in his diary of 1867 admired the existence of first class fine teak in these areas and also described that there

\textsuperscript{154} Ibid., p. 67, para. 486.
\textsuperscript{155} Ibid., para., 488 - 491.
\textsuperscript{156} Ibid., p. 73, para. 538.
\textsuperscript{157} Ibid., p. 68, para. 498.
\textsuperscript{158} Ibid., p. 69.
\textsuperscript{159} Ibid., p. 74, para. 547.
was a large number of young plants that should be preserved.\textsuperscript{160} Most of the teak contractors were not efficient in carrying out their contract, resulting in the abandonment of a large quantity of teak logs in the forest for various reasons. On one occasion, Bourdillion remarked that “in Mullaringada valley there are said to be 400 large logs which we shall have to bring down ourselves, as the contractor’s elephant has died.”\textsuperscript{161}

**Forest Area Drained by the River Periyar**

According to Heather Lovatt, “the valley of river Periyar which wound its way through the hills, its bank covered with thick jungle where the only sounds were those of running water, the cry of peafowl and jungle cock and the sharp crack of bamboo, snapped off by elephants as they thrust their way through the forest.”\textsuperscript{162} The river Periyar, with the exception of only 35 miles of its total length (142 miles) passes through complete wildness.\textsuperscript{163} Bourdillion stated in his report that, “among the numerous high rocks and hills collected together in this place, it is not easy to say where the Periyar begins and where the Ranni, more especially as all this country is covered with forests of dense jungle, which no one is known to have penetrated.”\textsuperscript{164} The total forest area drained by river Periyar was 1,432 sq. miles, of which 500 sq. miles consisted of moist forest, 200 sq. miles of secondary forest, 100 sq. miles of grass forest and 632 sq. miles of useless land.\textsuperscript{165} Both banks of the river was clothed with luxuriant vegetation. The valley contained heavy timber, and even the hills and higher ground were covered with large trees mingled with grass, instead of grass alone. This kind of jungle continued all the way down the river. The character of the timber improved as elevation decreased.

\textsuperscript{160} Ibid., p. 73, para. 543.
\textsuperscript{161} Ibid., p. 74, para. 544.
\textsuperscript{163} William. H. Horsley, op. cit.
\textsuperscript{164} T. F. Bourdillion., op. cit., para. 552, p. 75
\textsuperscript{165} Ibid., para. 565, pp. 76 - 77.
Teak and Irul grew in fair abundance in the Periyar basin. Teak was found especially in the lower elevations. The greater portion of the teakwood cut down annually from the mountain was floated down through river Periyar. Blackwood was also found in the same locality. Sandalwood was entirely absent and kambagam was not found in the higher elevations. Owing to excessive felling anjili became very scarce. White Cedar, venga, venteak, shurali, poon spar, mala uram etc. were also found in this forest.

The timber felled from the Periyar forest was brought down to the depots at Kumili and Ramakkal. Important trees brought to the depot were teak, venga, and a small quantity of blackwood. Above Malayattur, some teak and blackwood were felled, but the greatest demand here was for white cedar, venteak, anjili and kambagam.

Conclusion

From the reports and surveys, it is evident that they were made purely for the commercial exploration of the Travancore forest. The Bourdillion report gives a detailed description of the Travancore forest on the basis of the rivers. It revealed the vastness and richness of the state forest and also gives a picture of the wide variety of timber trees existing in the forest. A thorough analysis of the report shows that the recommendations for reservation were purely made on those forests where valuable trees especially teak, blackwood, venga, kongu, anjili etc., were found in abundance. Other forests though they were heavy, were considered as worthless. Forests were not given due importance in accordance with the rich biodiversity present in it. The aim and the idea behind the proposed ‘conservation’ are both clearly revealed in this report.

The utilitarian aspects of the reports and surveys had brought to light the vast sylvan and other resources in the state forests. This was a world-wide agenda followed by the British to trace out the fecund forests of different regions. It was with this purpose that a separate agency for forest survey was created by the

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167 T.F. Bourdillion, op.cit., p. 92.
168 Ibid., p. 99
government in 1872 under the control of the Inspector General of Forest. They documented each and every aspect of the forest geography and appointed special utilization branches to study the utility of each and every species. They found market for even the least marketable trees which were once totally neglected. A great achievement that the British gained in the state of Travancore was that they successfully made the forest dwellers part of the Forest Department and thus avoided major conflicts from their part. They were appointed Forest Guides, and Watchers and it was with the help of these people that the British entered the interior forests of Travancore.

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