CHAPTER - II

G E O G R A P H Y

INTRODUCTION:

The characteristic geographical features of the study area, such as physiography, climate, etc., are dealt with in this chapter for a clear and proper understanding of the nature of the terrain.

PHYSIOGRAPHY:

The terrain around Chetput is characterised by mature topography and this is due to prolonged subtropical denudation. The hard and resistant rocks comprised of enderbite constitute the hills that are perched on the plains.

The physiography of the area can be described under three divisions on longitudinal basis. They are the western, central and eastern divisions. Longitude 79° 20' may be regarded as the boundary between the western and central divisions and longitude 79° 25' may be considered as separating the central from the eastern division. Each division can be subdivided
into northern, central and southern zones for convenience of description on the basis of latitudes. Latitude $12^\circ 25'$ can be regarded as the line demarcating the northern from the central zone and latitude $12^\circ 20'$ as the boundary between the central and southern zones. The physiographic divisions and zones are shown in Fig. 3.

**Western Division:**

The northern zone of the western division is an undulating peneplain. The hills are scattered on the plain (Plate I, Fig. 1) along its north western portion around Devikāpuram, but low mounds often punctuate the plains.

In the central zone of the western division, a row of hillocks occurs along the western portion (Plate I, Fig. 2) and the remaining part is a rolling plain dotted with tanks.

The southern zone of the western division is a rolling plain characterised by scattered low mounds all over the plain. Varāha Nādi from east of Tāyanūr
INDEX TO THE HILL PEAKS WITH THEIR LOCAL NAMES

(Δ 447) NEDUNKUNAM MALAI
(Δ 258) KAMMANT āNGAL MALAI
(Δ 391) ANNAMANGALAM MALAI
(Δ 282) KANNAALAM MALAI
(Δ 221) KRISHNA GIRI MALAI
(Δ 268) RANGANATHASWĀMI MALAI
(Δ 281) PERUMPUGAI MALAI

(Δ 339) DURGA MALAI
(Δ 440) NADUPATTU MALAI
(Δ 209) TURAMPŪNDI MALAI
(Δ 349) KUMARATATTU MALAI
(Δ 290) PERIYA MALAI
(Δ 204) CHINNA MALAI
in the southern direction and takes an easterly trend near Tepalai and flows into the southern zone of the central division.

**CENTRAL DIVISION:**

The northern zone of the central division is diversified by hills and plains. Nedunkunam malai ($\Delta 447$ m.) and Kammantangal malai ($\Delta 258$ m.) are prominent ones (Plate I, Fig. 3). Their slopes are much dissected by wet weather rills and are covered with talus. Besides these there are several scattered inselbergs adjacent to these hills and they are aligned in a NE-SW direction.

The central zone of the central division is characterised by two prominent hills called Annamangalam malai ($\Delta 391$ m.) (Plate II, Fig. 1), and Kannalam malai ($\Delta 282$ m.) along its south eastern portion. The remaining part is punctuated by low mounds and plains.

The southern portion of the southern zone of the central division is mostly hilly (Plate II, Fig. 2). The peaks range in height from 209 M. to 440 M. Krishna
Giri (Δ 221 m.) occurs as an isolated inselberg on the plain east of this hilly terrain. Varāha Nadi has a meandering course in the central portion of this zone and the adjoining fields to its north are mostly under cultivation.

**EASTERN DIVISION:**

The northern zone of the eastern division is a flat plain dotted with tanks. The plains are mostly under cultivation. Knolls and low mounds are rare.

The central zone of the eastern division is characterised by two conspicuous hills called Kumaratattu malai (Δ 349 m.) and Periya malai (Δ 290 m.) (Plate II, Fig. 3) along its eastern portion. The rest of the terrain is comprised of scattered mounds on the plains.

Along the south western portion of the southern zone of the eastern division, Perumpugai malai (Δ 281 m.) is very conspicuous (Plate II, Fig. 4). Its western slope is steeper than the eastern slope. In the northern portion several mounds and low hillocks occur on the plains around Chinna malai (Δ 204 m.). Varāha
PLATE -- II

Fig. 1. Panoramic view showing Annamangalam malai in the central zone of the central division.

Fig. 2. Panoramic view of the hilly terrain in the southern zone of the central division.

Fig. 3. Panoramic view of Kumaratattu malai and Periya malai in the central zone of the eastern division.

Fig. 4. Panoramic view of Perumpugai malai and the surrounding hills in the southern zone of the eastern division.
Nadi drains the western and southern parts of the plains. Several tanks perched on the plains in the vicinity of the stream facilitate cultivation of the plains.

Thus the physiographic features around Chetput indicate that the terrain has received the stamp of maturity owing to subaerial weathering and denudation.

**WEATHERING:**

The hills around Chetput have been weathered to a depth of 3 to 4 meters. The major part of the hills and inselbergs in the study area is comprised of the acid members of the Charnockite series and dark grey granodiorite gneisses as they have withstood weathering to a great extent. Granite is another rock type that has resisted weathering. In places, dolerite dykes and the basic members of the Charnockite series exhibit spheroidal weathering. Red soil, which is mostly loamy in nature, is the final product of weathering.

**DRAINAGE:**

In the thesis area the main river Varāha Nadi (or Sankarāparani River) originates from Periya eri
(Lat. 12° 20'; Long. 79° 19') situated in the central zone of the western division. Several small rivulets are present in the entire thesis area. During most part of the year they are dry except during the rainy seasons (October and November). These rivulets are the chief suppliers of water to several man-made tanks distributed uniformly throughout the thesis area. Using the slope gradient, several earthen bunds have been raised to 2 to 7 meters. The sparse irrigation is mainly from these tanks.

The southern zones of the western, central and eastern divisions of the thesis area are irrigated by Varāha Nadi in addition to the several small earthen tanks with earthen bunds. Starting from Periya eri Varāha Nadi flows southwards till Tenpalai (Lat. 12° 16'; Long. 79° 20') and takes an almost east-west trend upto Chellapirātti (Lat. 12° 17'; Long. 79° 25') and then flows again southwards towards Gingee. From Gingee it again takes an east-west trend flowing towards east. A small river called Tondi river originates from Melolakkūr and flows in the southern direction towards Aviyūr.
WATER SUPPLY:

Water supply for irrigation and domestic purposes is mainly from dug-wells. The depth at which the water table occurs varies from 10 to 15 meters.

CLIMATE:

Healthy climate generally prevails around Chetput. This is due to the dry nature of the climate. The climate has the traits of As' of Koppen's system.

RAINFALL:

Rain occurs during the months of August, October and November. The average number of rainy days in a year is 53 and the average annual rainfall is 106 centimeters.

HUMIDITY:

Chetput and its surroundings are normally dry for a major part of the year. During the months of August, October and November, the humidity is moderate.
TEMPERATURE:

39° C is the maximum temperature reached during the month of May and 18° C is the lowest temperature attained during the month of February.

WINDS:

Winds blowing during April to September change directions during day and night. During daytime the winds blow from south-west direction and at night-time the winds blow from south-east direction. The month of September is the most gruesome season of the year as the air remains mostly still with only light variable winds. From October to February, north-east winds blow bringing north-east monsoon. From February, the wind shifts its direction and blows from the west. The hottest season begins with the land breeze blowing from the west. The months of April and May are the hottest months. From June, south-west winds start blowing, bringing the south-west monsoon. The air is cool and pleasant during the months of June, July and August.
CYCLONES:

Cyclonic storms generally occur when the monsoon changes. They normally occur during the months of May, October and November. Crops and minor irrigation works are sometimes destroyed by cyclones.

FLORA:

Forests occur in the study area. They are of the mixed type in which the evergreen type occur in large numbers than the desiduous one.

In the mountainous part in the central and eastern divisions, a variety of plants occur. They include grasses like Perotis latifolia, Trachys mucronata, Oropetium thomemum, Tragus racemosus, etc.; herbaceous plants such as Euphorbia cristata, Chlorophytum, Buettneria herbacea, etc.; climbers like Viscum capitellatum, Loranthus longiflorus, etc. and shrubs such as Helictres, Cassia glanea, Breynias, Acacia, Phyllanthus polyphyllus, Memcoylon, etc. Yams such as Discorea tomentosa and Opposilifolia are common. The roots of these two yams are edible and are used as jungle food.
Climbers like Cleome viscosa, Vilis quadrangularis, Tylophora asthmatica, Sarcostemma brevistigma, etc., occur in the scrub jungles.

In the reserve forests, trees such as Thurinji, Velvelam, Karungai, Vengai, etc., are present.

**FAUNA:**

The fauna around Chetput consists of cattle, sheep, pigs, rabbits, peafowl and jungle fowl. The cattle are mainly employed in agriculture for ploughing the fields as they are of inferior breed. Krumba and Semmeri are the two varieties of sheep. Pigs are common. Rabbits are not very common. Peafowl and jungle fowl are rare. Leopards which were once common in the forests are no longer present.

**HUMAN GEOGRAPHY:**

In the hilly areas in the central and eastern divisions the population is comparatively lower than those of the plains. The density of population is about 190 persons per square kilometer. At Chetput, the population is 5,583. The people around Chetput are
indigenous Hindu Dravidians and their chief occupation is agriculture. Krishna Giri hill is famous for its historic fort.

The important villages in the thesis area are Desūr (Lat. 12° 26' N; Long. 79° 29' E), Kunnagampūndi (Lat. 12° 23' N; Long. 79° 29'E), Vedāl (Lat. 12° 22' N; Long. 79° 29' E), Nerkunam (Lat. 12° 22' N; Long. 79° 30' E), Melolakkūr (Lat. 12° 20' N; Long. 79° 30' E), Aviyūr (Lat. 12° 18' N; Long. 79° 29' E), Illodu (Lat. 12° 19' N; Long. 79° 25' E), Pennagar (Lat. 12° 20' N; Long. 79° 27' E), Kallapuliyyūr (Lat. 12° 23' N; Long. 79° 26' E), Nedunkunam (Lat. 12° 28' N; Long. 79° 23' E), Devanūr (Lat. 12° 22' N; Long. 79° 23' E), Valatti (Lat. 12° 21' N; Long. 79° 23' E), Ammamangalam (Lat. 12° 20' N; Long. 79° 24' E), Melachcheri (Lat. 12° 17' N; Long. 79° 24' E), Sirukadambūr (Lat. 12° 15' N; Long. 79° 25' E), Sevalappurai (Lat. 12° 17' N; Long. 79° 22' E), Mēḷmalayānuṟ (Lat. 12° 20' N; Long. 79° 20' E), Eyyal (Lat. 12° 24' N; Long. 79° 20' E), Nambedu (Lat. 12° 29'N; Long. 79° 18' E), Tāyanūr (Lat. 12° 20' N; Long. 79° 19' E), Tempāḷai (Lat. 12° 16' N; Long. 79° 20' E), Mānandal (Lat. 12° 19' N; Long. 79° 18' E), Kaplambādi (Lat.
12° 22' N; Long. 79° 16' E), Mettuvalāmūr (Lat. 12° 25' N; Long. 79° 16' E) and Devikāpuram (Lat. 12° 30' N; Long. 79° 15' E).

ACCESSIBILITY:

There are a few well-developed roads in the thesis area fit for all seasons. At Chetput there are two main roads, one more or less in the north-south direction and the other roughly in the east-west direction. The road in the north-south direction connects Chetput to Ārani, located north of the study area, and Gingee in the south. At Gingee there is a main road in the east-west direction connecting Gingee to Pondicherry, situated east of the thesis area, and to Krishnagiri located south of the thesis area. The road in the east-west direction at Chetput connects Chetput to Vandavāsi situated north of the study area and to Polur located west of the study area.

On the Chetput-Vandavāsi road there is a branch road extending northwards to Sattattāngal located north of the thesis area and another branch road extending southwards to Desūr in the northern zone of the
eastern division. The road in the east-west direction at Chetput passes only through the northern zones of the eastern, central and western divisions.

On the Chetput-Gingee main road there are two well-metalled branch roads, one extending in the south-west direction connecting Chetput to Pennātūr situated west of the thesis area and the other in the east-west direction connecting Valatti to Avalūrpettai situated west of the thesis area. On the Valatti-Avalūrpettai road there is a branch road running north from Melmalayannūr joining Chetput-Pennattūr road. There are branch roads also running north-west from Kaplambādi joining the main road at Tālankunam, the main road itself running from Edappattu to Avalūrpettai via Tālankunam.

Apart from these few well-metalled roads there are many mud roads and cart-tracks connecting the villages. The interior portions of the hills are approachable only by foot path.

COMMUNICATION:

At Chetput and in the villages mentioned under human geography, postal facilities are present.