CHAPTER 2

PHYSIOGRAPHY AND VEGETATION
General Note

The district derived its name from Guntur, its headquarters town. The name Guntur is said to have been derived from 'Gunta' meaning 'Pond'. The original village was situated on a 'Gunta' (Pond) and hence it was called Gunta uru (Pond village) or Guntur. Another etymological explanation is that the village was on a 'Kunta', a local unit for measuring land and it came to be called Kunta uru or Guntur. The Guntur district was first formed in 1794 A.D. with 14 taluks. It was restructured in 1904. In 1970, the taluk of Ongole, part of Bapatla (Chirala) and Narasaropet, were transferred to newly formed Prakasam district. The taluk of Palnadu was divided into Macherla, Gurajala and Piduguralla. Now the district comprises three revenue divisions and 57 revenue mandals.

Guntur, one of the 9 coastal districts of Andhra Pradesh, lies between 15° 18' and 16° 50' of the northern latitudes and 79° 10' and 80° 55' of the eastern longitudes. It occupies an area of 15,032 square kilometers. The district is bounded on the north by Krishna and Nalgonda districts, south by Prakasam district, west by Mahaboob Nagar and Kurnool districts and east by Bay of Bengal. The district is over arched by Krishna river on west, and north. Guntur district occupies 13th position in area in the State and 3rd position in coastal districts.

Topography

The district can broadly be divided into three regions.

1. The delta region comprising the eastern coastal part.
MAP OF INDIA SHOWING THE POSITION OF GUNTUR DISTRICT.
FIG. 2

MAP OF GUNTUR DISTRICT
2. The stony uplands and hills consisting of the southern and western part of the country.

3. The open plains covering the rest of district abounding in black cotton soils.

Hill ranges and Elevation

The principal hill ranges of the district are the Nallamalais, the Venkatayaplam range and the Kondavedu hills.

1. The Nallamalai off-shoots

The lofty Nallamalais of the Kurnool district with their 'U' shaped terminal off-shoots skirt the Palnadu area. The highest point on the range is known as 'Swamikonda' or 'Vamaikonda' (605 m), a flat-topped hill on the Macherla-Yerragondapalem range. The other peak of appreciable height in this stretch is Kakirala Konda (590 m). A north-western edge of the Nallamalai off-shoot runs in an easterly direction along the Krishna river until it reaches Mallavaram.

Another ridge of the Nallamalais runs in an easterly direction with its off-shoots bordering Vinukonda. Most important of the hill streams draining these slopes is the Kandaleru, which joins Gundlakamma, the principal river traversing this area.

2. The Venkatayapalem range

The next important hill range is Venkatayapalem named after a village in Sattenapally range and is composed of slates and quartzites. Its highest point is "Maidarsal" (447 m). At Narasaraopet, where the borders of Palnadu, Vinukonda and Sattenapalle converge a continuous chain of hills tapering gradually towards the Krishna river is in evidence.
3. **The Kondavedu range**

The Kondavedu range near Narasaropet is composed of granite rock and extends about 19 kms, registering a maximum height of 523 m. A few kilometers to its west is the isolated hill of Yellamanda (489 m), otherwise known as 'Kotappa Konda'.

**Geology**

The Geology of the district consists of various types of rocks which ranges from the Archaean to the recent. From the point of distribution of various rock types the district can broadly be divided into three parts from west to east. In western part are found the rock formations of the upper Cuddapah system and the Palnadu series. The slates, phyllites and the quartzites form a series of parallel hill ranges trending roughly in a north-east, south-west direction. The Palnadu formation constitute a gently undulating terrain without any significant relief. Palnadu series forms shales, lime stones and quartzites. The younger rocks of the Cuddapah system are exposed near Vinukonda. The granite is now considered responsible for the copper and lead mineralisation in Agnigundala area.

Palnadu lime stone is found extensively in Piduguralla, Pachepalli and Gurazala areas.

**Mineral resources**

The district contains immense reserves of cement grade lime stone, iron ores, copper and lead minerals. Agnigundala and Karempudi are very familiar for copper and lead ores. Gondwana granite stones are useful in building construction. Palnadu lime stone was utilized for the construction of stupas during the Buddhist period.
Soils

The soils of Guntur district can broadly be divided into 4 types as following.

1. **Red Gravelly Soils**

   The red gravelly soils are essentially found over the area covered by the Archaean formation which occupy the major portion of the district. Macherla and Vinukonda ranges mostly have red gravelly soils.

2. **Black Cotton Soils**

   These are present generally in the deltaic area on the banks of the Krishna and also in northern parts of Sattenapalle and Macherla range, where these are derived by the weathering of the lime stone. These have been formed due to the former existence of large and thick forest when a more moist climate prevailed.

3. **Sandy Alluvial Soils**

   These are found along the sea coast and in the area covered by some of the Gondwana rocks. Kankar or calcareous nodules occur in the soils at several places in the district.

4. **Saline Swampy Soils**

   These are present in the areas where tidal waves penetrate into the coast. These are characterised by mangrove vegetation. Repalle, Kothapalem, Sarlagondi and Nizampatnam have these soils.

River system

The important rivers that traverse the district are the Krishna, the Chandra vanka and the Naguleru.
The Krishna

The Krishna, one of the mighty rivers in peninsular India rises about 64 kms from the Arabian sea in the Western Ghats, north of the hill station of Mahabaleshwar in Mahararastra state. Taking a south-easterly course through the States of Mahararastra and Karnataka, it forms the border between the districts of Mahaboob Nagar and Kurnool and enters the Guntur district at the South-Western portion of Macherla range near the Ganikonda hills at an elevation of roughly 182 m above sea level. It then placidly traverses along the ancient Buddhist Shrine of Nagarjuna Konda. It encompasses a sizeable island to the east of which the mighty Nagarjunasagar dam has been constructed. It joins the sea at Hamsaladivi and Nachugunta in Krishna district.

2. The Chandra Vanka

The Chandra vanka is an important tributary of the Krishna. It rises in the Mutukur extensions of the eastern Nallamalais near the south-west corner of Macherla range. The stream continues to run north wards and then joins the Krishna river.

3. The Naguleru

Another tributary of the Krishna is the Naguleru, which rises in the Nallamalais off-shoots near the Nayakurali pass in Vinukonda range. It contacts initially Karempudi and then flows north wards across Macherla range over a distance of 32 kms till it joins the Krishna near Ramapuram.

Other Minor Streams

Gundlavagu near Durgi, the Gadivagu near Gurazala are the other minor hill streams and rivulets in the district.
Climate

The climate of the district is invariably hot in summer. The year may be divided into four seasons. These are:

1. December - February : Winter season
2. March-May : Summer season
3. June-September : South-west monsoon season
4. October-November : North-East monsoon season

April and May are the hottest months with a mean daily maximum of 44.5°C and mean daily minimum of 21-23°C temperature. Rentachintala is one of the hottest places in India, recording a maximum temperature of 49°C on 18th May 1948 and the lowest temperature recorded is 10°C at the same place on 31st December 1936. The average annual rainfall in the district is 728.8 mm.