THE LAND

A. Physico - Orographical Features

The Cuddapah district lies between 13°43' and 15°14' of Northern Latitude and 77°29' and 79°29' of the Eastern Longitude. It is surrounded by the districts of Kurnool on the north, Nellore on the east, Chittoor on the south and Anantapur on the west in Andhra Pradesh.

The main physical features of the district are determined by its hill ranges. There are four principal hill ranges. They are the Velikondas on the east, the Palakondas on the south, the Erramalais on the west and the Nallamalais on the north. These hill ranges form a part of the central portion of the Eastern Ghats and find a mention in the Puranas as 'Kulapurvata' with the rest of the Eastern Ghats.

A glance at the physical map (fig. 1) of the district tells that the Erramalais and the Nallamalais enclose Kudair plain on the western side, the Erramalais and Gochachalams or Palakondas bound the Pulivendula valley on the south, the Velikondas and the Velikondas and the Cheyyair valley in Rajampet taluk and the Velikondas and the Nallamalais give out the Badvel-Sidhout valley in a broader perspective. This system of hill ranges part themselves from the orographical knot at what may be called the Cuddapah outliers at the southern tip of the district near Belapalle pass south of Rajampet.

The interior region with these enclosures exhibit a series of features. The mountains for the most part ridged roughly in parallel lines or in great domes encircled by scarped ridges of plateau or are scarped with long lines of precipitous cliffs with gentle slopes. The hills are flat topped and scarped or are parts of flat domes. The ridges are seldom irregularly serrated. These are the general features of the district.
PHYSICAL MAP OF CULDAPAH DISTRICT

Fig. 1
Velikondas

The Velikondas of the Eastern Ghats run northwards from the Balapalle knot travelling through the eastern borders of Rajampet, Sidhout and Bedvel taluks. They form the boundary line between the Cuddapah districts and the littoral district of Nellore. It is nearly crescent in shape. Among the hills, mention must be made of Bedvel-Chitvol valley. It is ribbed up its middle by further minor ridges, which, however, are broader and loftier in a south direction and eventually become one with the outer mountains. The highest peak located in this range, near Collapeta is 2,700', though generally, the hills rise between 1,500' to 2,000' above sea level (Chandra Sekhar; 1964; iv).

Some of the hills are surrounded by thick under growth consisting of primieval forests.

Palckondas

The second hill range called akonda or ezhachalans formed of a massive quartizes interbedded with slates and lavas also shoot forth into the district from the southern knot near Balapalle pass. This range divides itself into two near the Emanuelpalle pass of Sidhout taluk. One branch runs northwards and merges with the Hallamalais while the other proceeds westward. The western spur forms the boundary line between the Cuddapah and the Rayachoti taluks. Further running westward this provides a dividing line for the Pulivendla taluk of Cuddapah district and Kadiri taluk of Anantapur district. It forms a very fine scarp overlooking the Anantapur-Chittoor basin. It is in this range that a magnificent gorge, near Gondi, is situated.
The range encloses Oottimitta hollow with the Velikondas on the east. The Cheyyanir basin and Belapalle valley are also enclosed by the long westerly up sloping and the southerly continuation of the Gulchervu range of Palakondas which end in the sacred hills of Tirupati and the Velikondas on the East.

Erramalais

The Cuddapah hill systems have also a subsidiary hill ranges. These are called the Erramalais. They divide the boundary between the Pulivendla taluk, Kamalamapuram and Jammalamadugu taluks. The red granite rocks, absolutely denuded of growth in most parts present a desolate appearance of red in contrast to the black-cotton fields that they overlook. These hills are named so because of their colour; Erra in Telugu is red in English. These are mostly composed of low lying plateau lands, wholly eroded topped with quartzite ranges.

Nallamalais and Lankanmalais.

The northern fork of hill ranges called the Nallamalais and Lankanmalais run northward along the boundary line dividing Cuddapah and Sidhout taluks and thence to proddatur to emerge into the Kurnool district. These are formed of quartzites. Shale is exposed along the course of the Sagiluru.

The Sagiluru basin of Sidhout taluk, and much smaller Thummalera basin form beautiful regular development of longitudinal valleys in between the parallel line of the Nallamalais and Velikondas. They also enclose the kundair plains with the Erramalais on the west. The height of these hills, generally, ranges from 2,000' to 3,000' above sea level.
E. Geology

The rock beds of Cuddapah have folded into a crescentic shape basin along the middle of the East Peninsula with its concave side facing the east. This basin is known as 'Cuddapah basin' after the place name. The 'Cuddapah basin' occupies an area of 15,500 sq. miles covering the whole of Cuddapah district, a major part of Kurnool district and trespassing into the other adjoining districts.

The Cuddapahs are essentially a succession of quartzitic sandstones or quartzites and slates or schists the latter frequently associated with limestone (Pascoc: 1905: 356).

The geological formations in the Cuddapah district with the descending order of their antiquity (Jhanwar 1964: LXIII ff) are as follows:

1. Superficial deposits
   (alluviums, gravels, soils etc.)

2. Kurnool group
   (Quartzites, shales or slates and traps)
   Cuddapah group
   (Quartzites, dolomites, shales or slates and traps)

3. Crystallines
   (Gneisses, granites, traps etc.)
   Dharware
   (Schists, quartzites)

Archaean group:

The oldest rocks in the Cuddapah district are the Bharwarias, a group made up partly of basic igneous rocks and partly of un fosiliferous sedimentary rocks. They contain schists and quartzites.
The major part of Reayachoti taluk is occupied by a complex group, gneisses and schists of Archaean age which are many times traversed by dolerite dykes.*

Granite bodies:

There are coarse, fine, soft and harder types of granite. The softer coarser type gets easily weathered while the harder formations form isolated hillocks in Reayachoti area.

The remaining rocks on the upland south of Guvvalacherru are the breciated rocks. These generally consist of amorphous quartz much seamed with oxide of iron, as also with strings of more compact siliceous matter and they are mostly of dirty white colour.

Cuddapah group

The rocks of Cuddapah group are well developed in the Cuddapah district. They are divided into four series, after King (1872: 41) as shown below:

<table>
<thead>
<tr>
<th>Series</th>
<th>Height (ft)</th>
<th>Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Krishna</td>
<td>2,300</td>
<td>Krishna quartzites</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kolamala shales</td>
</tr>
<tr>
<td>Mallamalai</td>
<td>3,400</td>
<td>Irlakonda quartzites</td>
</tr>
<tr>
<td>Cheyyair</td>
<td>10,900</td>
<td>Cumbum slates</td>
</tr>
<tr>
<td>Papagani</td>
<td>4,300</td>
<td>Bairenkonda quartzites</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tadpetri shales</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pulivellda quartzites</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vempalle dolomites, mudstones</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gulcherru quartzites</td>
</tr>
</tbody>
</table>

* Dr. Vydayanthan of Andhra University collected a few Neolithic axes made on dolerite dykes, from Reayachoti taluk.
The lower three series are in full force in Cuddapah district whereas the upper most risings series is perhaps not represented (Jhaover 1964).

Papagani Series:

The Papagani series named after the river in the gorge (Gandi) of which they are best exposed are found only in the west. This group consist of two stages: the lower being Gulchervus or Gavulachervus and the upper Vempelles. The Gavulachervus consist of conglomerates, quartzites and sandstones with thin intercalation of shales. They are grey, red, buff or dirty white in colour. They are fine to coarse grained, sometimes flaky and gritty. The sandstones are generally, quartzitic and contain pebbles of jasper* and veins of quartz derived from the Varanarian Krishman; 155: 184). The type locality near Gulchervu the attain a maximum width of 5 to 6 km. and are as high as 60 meters. They present a fine scarp in the area between Gulchervu and Papagani looking like a fort wall.

The upper stage Vempelles, consist mainly of dolomites of different colours and sandstones and layers of rocks belonging to crypto-cryotexting group. They are well exposed from Gulchervu to Parapatle and beyond. The hills composed of these rocks have rounded tops and exhibit a contoured appearance due to differential weathering of the individual rock beds. They contain the veins of Barytes and few of crosoite asbestos.

Cheyvar Series:

This series, named after the river, are well exposed on the Cheyvar

* These pebbles served as a source of raw material for H.C.A. industry in Pulivendul region.
river. It is well developed in two areas, one in the Penner valley on the north west and the other on Cheyyair itself from Halapala on the south east. In the north western area the lower division, called Pulivendales, consists of quartzites, sandstones, grits, flags, pebbly beds and conglomerates. The pebbles and conglomerates are, to some extent, derived from the old beds of the Vempelles (Krishnan 1956: 131). Shale formations are well represented near Pulempet.

The upper division in the north west is called the 'Redpatri stage'. This forms a thick sequence in which shales predominate with thin strata of siliceous limestone, chert, jasper and intrusive basic silts. They appear southwards in the form of a slate band with the limestone under the quartzites of Pallakonda Hills.

Kallamalai Series:

These series take their name from the Kallamalai hills. They cover a great part of Pedvel and surround taluks in the Cuddapah district. They are well developed in the eastern part of the basin. The lower beds of these series are Pallakonda quartzites. They cover the Cheyyair beds of the Pulivendla valley. Their continuity in Kundair valley is hidden by a strata of the Kurmooll series (Jhaanwar; 1964: L-III) and towards the east of it they form Kallamalai and eastern flanks of Pallakonda Hills.

The upper beds of these series are composed of shales (cumulus shales) with intercalated strata of dolomite lime stones and quartzites.

The Cuddapah system, in this district, is followed by the Kurmooll group comprising of four formations as shown below (Dac; 1872: 39-40).

2. Panyan formations — Ranya quartzites.


4. Benganpalle formation — Benganpalle sandstones.

The Cuddapah town stands on a wide plain underneath of which, seen in the wells, are reddish purple and chocolate coloured calcareous shales. These are called andyal shales. They are seen in up to the middle of Kundalir valley and repose on but gradually down into pale, grey, and dark limestone flags. The beds of these are called the 'Roilakuntla limestone'. The latter dip or rise up gently to the south of Cuddapah and to the west of the town in a narrow belt and through Kamalapuran, croddatur enter the Roilakuntla taluk whence they are named.

Next follow the Panyan quartzites which do not occur in this district in any importance (Jhaver; 1964; LXXII).

The next lowest is thin band of non-calcareous shales of various colours. These are exposed near the 'Adras-Dhobey railway line about 14 km. northwest of Cuddapah. These are underlain by Hariji limestones known as famous 'Cuddapah slabs'.

The lowest series of alluvial known for its diemodiferous conglomerates are not represented in this district.

Recent Deposits:

The recent deposits include the laterite gravels, alluvial deposits, the cotton soil and to some extent the blown sands.

Laterite gravel occurs in small thin spreads in the central part of Rayaseoti taluk (Foste; 1916; 196). Foste collected palaeoliths from these gravels.

The general gravel formations coated by sandy silts of various
colours are exceptionally well preserved in the Sagaroru valley.

The alluvial deposits are mainly of two kinds, a hard calcareous clayey drift with bands of boulder conglomerates and shingle and a set of softer, some that sandy loams. The upper alluvial deposits occupy a large part of the middle of the Kundair valley and nearly the whole of Cuddapah plain. They are covered up by extensive patches of cotton soil in the wide valley west and north of Kullivandla.

Mound sands are accumulated along Ponmar, Papagnhi and Cheyyair.

Soils

Soils are the products of weathered rocks.

The soils of this district have been classified by Raychoudhary* into two main classes - Red ferrigenous soil and patches of black soil. Each of them are further divided into i) Clay, ii) Loam and iii) Sand.

1. i) Red Clay

This soil is not of much consequence in this district. It extends over very small areas. It occurs near Kodur in Rajampet taluk. Sajja is grown in this soil.

ii) Red Loam

This soil is found over extensive areas of Rajampet and Dadvel taluks. The eastern portion of Cuddapah taluk almost parallel along the Lankamalei belt shows red loam. This is of high agricultural value and all varieties of crops and fruit trees in general and the Anaboshahi grapes in particular can be grown in this soil.

iii) Red Sand

This is the most unproductive soil. It occurs widely in Rajampet

* Chandrasekhara quote Raychoudhary in his Hand book on Cuddapah district census, 1964: VI: Chapter I.
taluk making it the home of constant famines.

2. 1) Black Clay

This is the most superficial soil in the district occupying 23.7\% of the total classified area of the district. It is found mainly in the black cotton plains in Jamalaasadugu, Pulivendula, Proddatur and emalapuram and to a small extent in Cuddapah taluk all along the Kundair river, western portions - hajipet, Chennur, Pondinamari and Vellur firkas. It is found in small patches in Rajampet firkas and also Rayachoti and Lakkireddipalle firkas.

The black clay attains its development to the south of Jamalaasadugu and Proddatur taluks where it reaches to a depth of 20'.

It retains moisture for a long period and then wet it "exceedingly niry and tenaceous". Its origin is stated to be "largely an aqueous deposits of lacustrine origin".

ii. Black loam

This is an alluvial soil, which varys in texture and colour. It occurs in almost all over the district.

iii) Black Sand

This is not of much importance as its extent is very limited in the district. However, it occurs in Jamalaasadugu taluk on the sloppy plains and a poor harvest is reaped.

3. Drainage

The principal river in the Cuddapah district is Ponmar or Ponneru with the northern and southern slopes draining into it through its important tributaries, Sagiheru, Kundair, Chitrovati, apagami and Cheyyar.
Ponnoru:

The Ponnoru rises in Annapur. After passing through Anantapur district it enters the Cuddapah district near Tallaproddatur in Jamnalaladugu taluk. It cuts through the Aravandals near Gandikota forming a magnificent gorge; this scenic beauty attracts people from all over the district. After Jamnalaladugu taluk it flows in a south eastern direction and receives Papagiri; a little further on, Kundair near Kamalapuram. The famous Vaishnava temple at Papagiri lies on the bank of this river. By passing Cuddapah taluk it enters Sibhout taluk where Nagileru and Cheyyair join this river. After receiving Cheyyair it bends towards Sellore district making its way through another gorge near Sonsila on the Sellore district border.

Nagileru:

This river originates near Jambum in Kurnool district. It enters Badvel taluk near Banjaspalli and runs southward in an almost straight line dividing Badvel Valley into two halves. It is fed by several streamlets at Tambalepalli, Vedanuru, Kendipalli and so on. It joins Ponnoru in Sibhout taluk. This river has cut through the shales belonging to the Vallanmalai series which is noticed at many places on its river bed and also its tributaries. The valley traversed by this river is rich in prehistoric relics.

Kundair:

The Kundair takes its course in Kurnool district and enters the Cuddapah district at the northern tip of Jamnalaladugu taluk. The Upperavag and hollowagu, in Proddatur taluk, drain into this river. The Kundu then courses southwards and joins Ponnoru. Kundair is very fast flowing river and is known for its sudden floods.
Chitravati:

This river rising in Dhamavaram taluk of Anantapur district runs about 16 miles in Cuddapah district before joining Penneru near Gundem.

Papagami:

The river takes its source in Mysore State. After passing through Chittoor district it enters Rayachoti taluk in Cuddapah district. It cuts the Palekonda Hills forming a spectacular gorge near Gandi. Sir Thomas Munro seems to have been immensely impressed by this gorge. There is a story prevalent about his visit to this place and grant of land to the deity Hanuman. It joins Penneru two miles northeast of Kamalapuram.

Cheyyair:

The Cheyyair river fed by the waters of Mandavya, the Bahuda, and the Pincha joins Penneru in Sidhout taluk.

The Mandavya river rises at Chinnamandlem in Rayachoti taluk. It flows by the side of Veeraballi and passes through Gandikota gorge another beauty spot in the district. It joins Cheyyair near Balarajupalle on the border of Raajampet and Rayachoti taluks.

The Pincha originates in Chittoor district, courses through Rayachoti taluk where it is joined by another tributary Bahuda near Rayavaram. Thus conjoined, the river is afterwards called Cheyyair. The Cheyyair thus receiving the waters of the three tributaries runs through the Balarajupalle gorge. The rest of the course is in Raajampet taluk.

Most of the rivers are dry during summer presenting a desolate appearance with wide sandy belts, boulders or shingle with a ribbon of water. The banks along most of the rivers are brought under irrigation.
in the wells dug into the river beds.

D. **Climate**

The climate of the district is hot and trying. But it differs greatly in the two natural divisions, the uplands, overlooking the Mysore Plateau, and the low lands of the district. Most of the upland region is exceptionally healthy and bracing though it is quite warm during the summer. The low land in which Cuddapah town is situated is quite hot and unhealthy. The Cuddapah town records, sometimes, the temperature up to 114°F in summer.

E. **Rainfall**

The first four months of the year are practically rainless. The advance showers of the southwest monsoon start from May. The heavier rains are received only during the months of September and October. But uncertain rain falls during August and November are also recorded. The showers brought by north east monsoon is less. On the whole the district receives an average rain fall of 27.73" which includes the extremities 47.91" in 1874 and 6.84" in 1876. Rajampet and Sidhout taluks receive maximum rain (33" and 31") while Jammalamadugu and Pulivendla taluks receive very less rain (22.62" and 21.34").

F. **Vegetation**

Important vegetation is grown in the forests. The forests, in the district, are covered by the four hill ranges which are described earlier. The forests are divided into 'Dry deciduous forests' and "Tropical Thorn forests". Thus the whole vegetation in the district fall under the above groups. The annual rainfall is insufficient for the production of large timber.

**Dry Deciduous Forests**

The dry deciduous forests form the bulk of forest tract in the
district and present considerable diversity in composition, density, and quantity. These forests have often luxuriant undergrowth of grass. The most common tree, grown in this type of forest in Cuddapah district is the uncommon red sanders (Pterocarpus Santalinus). This requires good drainage and is found chiefly on the sedimentary rocks consisting of quartzites, stratified shale, slates and lime stones requiring a hot and dry climate.

The other associates of this species are Anogeissus latifolia, Chloroxylon sweitenia, Hardwickia finata, Terminalia Chebula, Pterocarpus marsupium, Tectona grandis etc.

The undergrowth generally consists of crotons scabiosus and Euclea asiatica while in the moist localities the undergrowth is ever green with species such as Strobilanthus.

Tropical Thorn Forests

As regards the tropical thorn forests one finds that they are confined to the outer edges of the hill slopes. They are in a transitory stage and are giving way to grass lands. The names of the trees and shrubs belonging to this type are given below. Diospyros Chloroxylon (Ulinda), Naba Sufifolia (Iti), Erythroxylon Monogynum (Devadara), Minusops Indica (Fale), Strychnos Nux-Vomica (Nuchti), Strychnos Potatorum (Chilla), Eugenia Jambolana (Neredu), Pterospermum Suberifolium (Tada), Sapindus-Afromontana (Kunkudu) etc.

- Fauna

Cuddapah district, apart from umnool, is relatively the best stocked in variety and volume of the game in the state. Much work is not done in this district with regards to fauna as a whole. Therefore, the present description is restricted mainly to the game. It is classified as follows:
1) Mammals, 2) Aves.

Mammals:

These are again arranged in order of Carnivores, Ruminantia, Rodentia, pachydermata and chiroptera.

Carnivores:

The carnivores include tigers, panthers, chitas, the jungle cat, mongoose, dogs, jackals, wolves, bears and wild pigs.

The tigers are wide spread. They survive interior areas of the Nallamalais, Lankamalais, and Palakonda. The panthers also occur in, appreciably, large number in the same above forests. Frockasbury records the appearance of chitas in the southern end of the Nallamalais.

The wild cat is also found in this district. No other species of the cat family appear to exist in the district.

The mongoose and among the dog tribe the jackals (Guntanakka), and foxes (Nakka) are common in the district. Wolves (Todolu) are also reported from many parts. Wild dogs are found in quite a few localities, in the Palakonda between Vempalle and Balapalle.

The bears (Elugubantia) are confined to the eastern half of the area in the Nallamalais, Velikondas and the Palakondas. They prefer the jons of rocky hills with caverns and fair supply of fruits.

Wild pigs or the strictly porcine (Kundla, Pandi) is by no means a stranger especially in the southern half of the Palakondas and the southern extremities of Veli onda.

An interesting evidence of a scaly anteater (Ileva) is brought out from a grave yard in Cuddapah town by the Zoology department of the local Government Arts and Science College.
Ruminents:

In this order, the black-buck of the Indian Antelope which prefers to live in open plains covered with scrub or cultivation have been reported by Brackenberry*. This elegant animal has now become almost rare. The same is the case with Chinkara or Indian Gazelle. Blue-bull or Nilgai is rare in the region now.

Deer, spotted deer or chital (Duppi) mostly prefer open jungles at the foot of the hills where grazing and water are available. They are seen all over the forests. Wild sheep (Konda Gorrre) also known as the barking deer are noticed in the Palakondas. Ox, goat, sheep are commonly domesticated in the district.

Rodents:

The rodents include rabbits, rats, bandicoot, squirrels and hares.

The rabbits are mainly found on the plains. Rats, mice, bandicoots and hares are very common. The Kalabar squirrels are noticed in Kedar, and Balaspalle ranges of Palakondas.

Pachydermata:

Elephants, horses, the stately sambar come under this order.

The existence of the elephants in the Palakondas has been recorded by Jean Baptist Travernier,** a French traveller who passed through the Palakondas near Balaspalle on 27th August 1652. They are extinct now. Stately sambar is another species of this group. They subsist chiefly on grass, leaves and various kinds of wild fruits. They are found in the tracts of Mallamalas, Lankamalas, Palakodas and Velikondas.

---

* Cuddapah district old Gazetteer.
** Cuddapah district Forest records.
Quadrumanes:

The order quadrumanes comprises mainly of the monkeys. Bonnet monkeys are common all over the district. Madras Langurs or the black faced monkeys are seen in largest number in Pallapalle and Kodur ranges. Loris is another species of this order.

Aves:

Partridges (Kanju), Quails (puradu), particularly the jungle bush quail, button quail, are commonly seen in the open forests in the region. The common or grey quail is said to be a visitor in the winter arriving in October and leaving by March.

The sand grouse are common near dry hills. The jungle fowls (Adavi Kodi) and Pea fowls (Nemali) are found all over the hill ranges. The spur fowls, though not common, are found in some forests.

Other game birds include doves, pigeons (pavuram). A record on Balapalle pass refers to the green and imperial pigeons and also ravine pigeons. A reference in the earlier Gazetteer is found to the lesser florican and Indian bustard the latter common in Jammalamadugu taluk. Another interesting species is the double banded plover (Rhinoptitus diterquatus) which is not known any where except in Kurnool and Nellore districts.

Among the water birds snipe, several kinds of teal (Neela konda) duck (Neela Bathu) are in plenty. Jordan's cooter, wild gees are also reported from the region. Sriveneoteswara game sanctuary records the presence of cotton teal, common teal, blue winged teal, spot bill duck, dintal duck, shoveller duck, common or fan tail snipe, pintail snipe and jack snipe.

In spite of the above voluminous game, as things stand now, the
district can only be classed a poor area for game. Factors such as the
depletion of the forests, incessant vehicular traffic to all parts of
the district, above all the indiscriminate exploitation of wild life by
poachers coupled with the settlement in the district, in recent centuries
of tribes like Sugalis, Yanadis have led to many species becoming rare
or extinct. The best stocked, in the whole of district, is the region
in and around the Velikondas and Elakondas.

II. People

The population in this district comprises of the Hindus, Muslims,
Christians and some of the scheduled castes and scheduled tribes.

The aboriginal tribes include Yerukalas, Yanadis, Sugalis, Chamahus,
Koyas, Reddioras, and some other unspecified classes. Of all the classes
Yerukalas (8,316) and Yanadis (8,062) form the bulk. The aboriginal
tribes represent 1.67% of the district population as against 4.27% of the
state. Therefore, they are quite negligible in this region.

The scheduled castes amounting to 11.07% as against 14.89% of the
state includes the Adi Andhras, Di Dravida, Arurundhatiya, Chamars, Moshi
or Muchi, Dandasi, Dombour Jambavelu, Nadas Kuruva, Mediga, Nadigadas,
Hala, Haladasu, Mundals and Choti.

The highest concentration of the scheduled castes is in the Sidinar
Taluk representing 20.13% of the general population. Then follow Rajampet
and Badvel. These people are engaged as agricultural labourers.

Hindus and Muslims form the bulk of the population in the region.
Hindus form the largest group representing 31.51% and Muslims 14% while
the Christians represent 4.47% of the total population barring the above
specified castes and tribes.