RAICHUR DISTRICT

CHAPTER I

GENERAL

THE district of Raichur has a hoary past. It has had an eventful and rich history beginning from the days of the Mauryan king Ashoka. A number of inscriptions, rock edicts and other records, temples, forts and battle-fields bear testimony to this fact. Lying between two important rivers, the Krishna and the Tungabhadra, this potentially rich tract had been a bone of contention between kingdoms. In the recent past, it was a part of the princely State of Hyderabad, and since the 1st November 1956, it is a constituent district of the Mysore State.

Origin of name

The district derives its name from its headquarters town, Raichur (Rayachooru in Kannada), as do most of the other districts also in the State. Though many of the villagers round about still call the place by the earlier form of the name which is Rachooru, however, in modern times, it has come to be generally written and pronounced in Kannada as Rayachooru. The name of this place, which is of considerable antiquity, can be traced back to the twelfth century at least. As Dr. P. B. Desai has pointed out,* the Raichur fortress was one of the fortresses conquered by the Hoysala king Vishnuvardhana. This is evident from at least three of the Hoysala inscriptions in Kannada. In the earliest of these three inscriptions, which was found at Hulikere in Belur taluk of Hassan district (numbered Belur 193 in *Epigraphia Carnatica*, Vol. V, Part I, 1902) and which belongs to the year 1161 A.D. and to the reign of Hoysala Narasimha I, mention is made of the Perddore (the Krishna river) as the northern boundary of Vishnuvardhana's kingdom and of Rachavoor** as one of the places conquered by Vishnuvardhana while still a youth.

**Vide* his article on the name of Raichur in the monthly, "Kannada Nudi", Bangalore, of September 1969.

**In the English translation of the inscription in the *Epigraphia Carnatica* referred to above, this place-name has been written as Rajavoor, which is obviously a mistake in that context.

The second of these inscriptions, which was discovered at Hatna in Nagamangala taluk of the present Mandya district (numbered Nagamangala 70 in *Epigraphia Carnatica*, Vol. IV–Part II, 1898) and which is dated 1178 A.D. when Hoysala Vira-Ballala II was ruling, refers to Permmana (*i.e.*, Permma+na*) Rachavoor as one of the numerous forts which Vishnuvardhana captured 'with a frown'. This lithic record indicates that the place was known at the time as Permma's Rachavoor, this Permma being probably a local chieftain. The third of these inscriptions, which is from Hirehalli in Belur taluk of Hassan district (numbered Belur 137 in *Epigraphia Carnatica*, Vol. V—Part I, 1902) and which is dated 1183 A.D. and is also of the reign of Hoysala Vira-Ballala II, enumerates Rachanoor as one of the places which Vishnuvardhana captured by the might of his arm.

From the context of enumeration of places in these inscriptions and other accounts of exploits of Vishnuvardhana, it becomes clear that the place referred to above as Rachavoor or Rachanoor is Raichur of the present days. 'Racha' being derived from 'Raja' (*i.e.*, king) and 'oor' meaning a place or town, Rachavoor (Racha+oor) or Rachanoor (Racha+na+oor), means in Kannada 'king's place' showing that it was already an important town in the Kannada country. By 1294 A.D., Permmana Rachavoor or Rachanoor had been shortened into Rachoor or Rachooru as is clear from a Kakatiya inscription of that year found on the fort-wall of Raichur itself. That this form of the name for the place continued during the Vijayanagara times, at least upto 1541 A.D., is known from two Kannada inscriptions of that year** found at Alampur (now in Mahboobnagar district of Andhra Pradesh) which says that king Krishnadevaraya captured Rachoor 'by his expedition in the north'. Thus, it is obvious that this historical Rachoor or Rachooru underwent a further slight change in recent times with the addition of 'ya' between 'Ra' and 'cha' (to become the present Rayachooru (Ra+ya+cha+ooru). The 'ya' here might be the second letter of the word 'Raya' meaning again king. In Hindi and Urdu, the equivalent of 'Raya' being 'Rai,' it seems to have become the practice to spell the name as Raichur in Urdu, later bringing that usage into vogue in English as well.

It is narrated that a chieftain, on witnessing a strange spectacle of a rabbit turning on a dog that pursued him and tearing the latter (dog) to pieces at this spot, thought that the scene of this heroic and unusual action was a fit place for building a fort, and accordingly constructed a formidable fort and named the place as 'Naichur' which, in Kannada, connotes the idea of the

*This being a possessive case suffix in Kannada.

**_Ibid_ Dr. P. B. Desai's article.

dog being torn to pieces. The present name, Raichur, is said to have been derived from that 'Naichur'. But this kind of story is repeated in respect of many forts. It is also said that 'Rai' meaning stone in Telugu, with 'ooru' (town), gave rise to 'Rajooru', that is, a town of stones (because of rocks in the vicinity), which became Rayachooru or Raichooru. These and such other stories can be said to be only conjectures, in view of the clear historical evidence about the name already explained. It appears that Raichur had been once renamed Ferozenagar by a Bahmani Sultan, but the appellation did not stick on to it and it continued to be called by the old name only.

Location

The district, which is situated in the north-eastern part of the Mysore State, falls within the northern *maidan* region, the chief characteristics of which are large expanses of treeless plains, black soil with a bare hillock here or a boulder there and some lower belts following the main rivers. It lies betwen 15° 09′ and 16° 34′ north latitude and 75° 46′ and 77° 35′ east longitude and in between two major rivers, namely, the Krishna and the Tungabhadra, as already stated. The general slope of the district is from the north-west towards the south-east, its average height above the mean sea-level being just 1,311 feet.

General boundaries

The district is bounded on the north by the district of Gulbarga, on the west by the districts of Bijapur and Dharwar, on the east by the district of Mahboobnagar of Andhra Pradesh, and on the south by the districts of Kurnool, also of Andhra Pradesh, and Bellary. The two rivers, the Krishna and the Tungabhadra, form the entire northern and southern boundaries of the district.

Area and population

The geographical area of the district, according to the Central Statistical Organisation of the Government of India, is 14,013 sq. kilometres, which works out to 5,410 sq. miles. But the reporting area of the district for land utilisation purposes, as worked out by the Commissioner for Survey, Settlement and Land Records in Mysore, Bangalore, is 14,007.9 sq. kilometres or 5,435.5 sq. miles. This slight difference is due to the different methods employed by them in measuring the area. The population of the district, according to the 1961 census, was 11,00,895. In terms of area, the district occupies the third place among the districts of the State, while in respect of population it occupies the tenth place. It accounts for 7.36 per cent of the total area and 4.66 per cent of the total population of the State in 1961 ; the density of population then worked out to 202.51 per square mile or 77 per square kilometre and this was much below the State average, which was 319 per square mile or 123 per square kilometre, and the lowest next only to North Kanara district.

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History of the district as an administrative unit

The district of Raichur was a part of the Hyderabad State till the re-organisation of States on 1st November 1956. The recorded history of the district is traced to as far back as the third century B.C. The fact that three minor rock edicts of Ashoka are found in this district, one at Maski in the Lingsugur taluk and the other two near Koppal, prove that this area was included in the dominions of the great Mauryan king Ashoka (273-236 B.C.). At that time, this region was under the governance of a Viceroy or *Mahamatra* of Ashoka. Early in the Christian era, the district appears to have been a part of the kingdom of the Satavahanas. The Vakatakas, who reigned during the 3rd and 4th centuries A.D., seem to have held sway over Raichur for sometime, after which it appears to have been included in the Kadamba dominions. The next dynasty of importance, which ruled over this region, was that of the Chalukyas of Badami. According to an inscription from Aihole, Pulikeshi-II, having defeated the Pallavas, occupied this area and made it a province in his empire under the governance of his son Adityavarma. Later, the whole of the present Raichur district was included in the dominions of the Rashtrakutas, who rose to power in the eighth century, as could be gathered from the inscriptions of that period found in this district. According to an inscription from Manvi taluk, one Jagattunga, a subordinate ruler under the Rashtrakuta king Krishna-II, was ruling the province of *Adedore Eradusavirapranta, i.e.,* the area constituting the present Raichur district. Nripatunga, a Rashtrakuta king, has described Koppal in his Kannada work, *Kavirajamarga,* as "the great Kopana-nagara".

Numerous inscriptions of the Chalukyas of Kalyana, found in the various parts of the district, testify to the fact that this region was under their sway for a considerable length of time between the 10th and 12th centuries A.D. It is learnt from an inscription found at Naoli in Lingsugur taluk that during the reign of Chalukya Vikramaditya-V, the *Adedore-pranta, i.e.,* the Raichur region, was being ruled by his younger brother Jagadekamalla-I. Another inscription from Maski describes the place as a capital and makes a reference to the reign of Jayasimha. There were, however, frequent wars between the Chola kings of the south and the Chalukyan kings of Kalyana for supremacy over the Raichur region and the territory had passed into the hands of the Cholas for a brief period. The Haihayas and Sindas also seem to have ruled some parts of this region for sometime. Later, after the fall of the Chalukyas, Raichur passed into the hands of the Kalachuri kings. Then came the Kakatiyas in the 13th century. From an inscription on the fort-wall of Raichur, referred to earlier, it is learnt that the original fort was built by one Gore Gangayya Reddy, a general of the Kakatiya queen Rudramma Devi of Warangal, in 1294 A.D., at the instance of the latter.

An object of dispute

The Hoysalas also exercised sovereignty over Raichur for several years during the twelfth century. The three inscriptions relating to the times of two Hoysala kings referred to earlier clearly indicate that Raichur was under the occupation of Vishnuvardhana. The Yadavas of Devagiri also held sway over the region for some time. Later, during the Vijayanagar rule, Raichur had become an object of constant dispute between the Vijayanagar kings and the Bahmani Sultans of Gulbarga and the Adil Shahs of Bijapur. Often did it become a battle-field between the parties and changed hands frequently. However, during the period of the first dynasty (the Sangama dynasty) of Vijayanagar, Raichur formed a part of Vijayanagar empire for a long period notwithstanding the periodic fights between the contestents. It was one of the strongest frontier forts of the Bahmani kings towards the close of the 15th century, after which it was incorporated in the Adil Shahi kingdom of Bijapur. Again, under Krishnadevaraya, Raichur gained great eminence. In the historic battle of Raichur of 1520 A.D. between Krishnadevaraya and the Adil Shahi Sultan of Bijapur, the latter's army was routed by the Vijayanagar forces and Raichur was recaptured. However, after the fall of Vijayanagar in 1565, Raichur again fell into the hands of the Muslims and later became a part of the dominions of the Nizam of Hyderabad. Under a treaty entered into in 1853 by the Nizam with the East India Company, the district of Raichur was assigned to the British ; but it was later on restored to the Nizam under another treaty concluded in 1860. (For more details, please *see* Chapter II.)

Territorial adjustments

Till 1905, the tract lying between the two rivers, the Krishna and the Tungabhadra, *i.e.*, the Raichur doab region, consisted of two districts, *viz.*, Raichur and Lingsugur. The Raichur district consisted of the taluks (tahsils) of Raichur, Yadgir, Yergera, Deodurg, Manvi, Alampur and Gadwal, while the taluks of Lingsugur, Kushtagi, Gangavati Sindhanur, Shahpur and Shorapur constituted the Lingsugur district. Besides, the taluks of Koppal and Yelburga, which were jagirs of Sir Salar Jung, constituted a separate Jagir district. In 1905, the Lingsugur district was abolished and the Yergera taluk was divided between the adjoining taluks of Raichur, Manvi and Deodurg. The taluks of Shahpur, Shorapur and Yadgir were transferred to the Gulbarga district. All the taluks which formed the Lingsugur district, were added on to the Raichur district. The Raichur district thus came to have then the following nine taluks, *viz.*, Raichur, Manvi, Deodurg, Sindhanur, Gangavati, Kushtagi, Lingsugur, Alampur and Gadwal.

Anegundi, in Gangavati taluk, was a *Samsthana* under the Raja Saheb of Anegundi. Similarly, Gurgunta in Lingsugur

taluk was also a *Samsthana*. They were amalgamated with the Hyderabad State after the Police Action, in 1948.

The abolition of the jagirs in Hyderabad State in 1949 resulted in the conversion of jagir taluks of Koppal and Yelburga into regular taluks and their inclusion in the Raichur district. Further territorial adjustments were made at the time of the States' Re-organisation in 1956, when the taluks of Gadwal and Alampur were transferred to Andhra Pradesh. Thus, in its present form, the Raichur district comprises the following nine taluks, namely, Raichur, Manvi, Deodurg, Lingsugur, Sindhanur, Kushtagi, Koppal, Yelburga and Gangavati. For administrative convenience, the district has been divided into three revenue sub-divisions, each consisting of three taluks, as follows :—

1. *Raichur Sub-Division*
   - Raichur
   - Manvi
   - Deodurg
2. *Lingsugur Sub-Division*
   - Lingsugur
   - Sindhanur
   - Kushtagi
3. *Koppal Sub-Division*
   - Koppal
   - Yelburga
   - Gangavati

The reporting area, for land utilisation purposes, of the several taluks, the number of villages in each taluk and the population of each taluk are given in the following table :—

Sl. No.	*Name of taluk*	*Area in*		*No. of inhabited villages*	*Population (as per 1961 Census)*
		Square kilometres	*Square miles*		
1	2	3	4	5	6
1.	Deodurg ..	1,540.1	594.6	167	1,03,855
2.	Gangavati ..	1,331.0	513.9	136	1,13,258
3.	Koppal ..	1,404.0	542.1	138	1,30,571
4.	Kushtagi ..	1,387.5	535.7	164	1,05,947
5.	Lingsugur ..	1,914.5	739.2	182	1,35,253
6.	Manvi ..	1,940.9	749.4	159	1,23,677
7.	Raichur ..	1,521.6	587.5	152	1,74,355
8.	Sindhanur ..	1,626.0	627.8	127	96,957
9.	Yelburga ..	1,412.3	545.3	139	1,17,022
	Total ..	14,077.9	5,435.5	1,364	11,00,895

Each of these taluks has been further sub-divided into revenue circles or hoblies and there are, in all, 56 such hoblies in the district as shown below:—

Sl. No.	*No. of hoblies*	*Name of hoblies*	*Taluks to which attached*
1	2	3	4
1.	4	Deodurg	Deodurg taluk
		Gabbur	,,
		Jalhalli	,,
		Arkera	,,
2.	8	Gangavati	Gangavati taluk
		Venkatgiri	,,
		Kanakgiri	,,
		Naoli	,,
		Karatgi	,,
		Hulihaidar	,,
		Siddapur	,,
		Marli	,,
3.	4	Koppal	Koppal taluk
		Alawandi	,,
		Erkalgad	,,
		Hittanhal	,,
4.	4	Kushtagi	Kushtagi taluk
		Hanamsagar	,,
		Gudadur	,,
		Tawargera	,,
5.	4	Lingsugur	Lingsugur taluk
		Mudgal	,,
		Maski	,,
		Gurgunta	,,
6.	9	Manvi	Manvi taluk
		Hirekotankal	,,
		Kurdi	,,
		Kallur	,,
		Sirvar	,,
		Malat	,,
		Kavital	,,
		Pamankallur	,,
		Halapur	,,
7.	6	Raichur	Raichur taluk
		Yergera	,,
		Gillesugur	,,
		Kalmala	,,
		Chandarbanda	,,
		Devarsugur	,,

1	2	3	4
8.	14	Sindhanur ..	Sindhanur taluk
		Gorebal ..	,,
		Jalihal ..	,,
		Gunjalli ..	,,
		Turvihal ..	,,
		Gudur ..	,,
		Kuntagi ..	,,
		Balganur ..	,,
		Valkamdinne ..	,,
		Baderli ..	,,
		Hedginhal ..	,,
		Jawalgera ..	,,
		Salgunda ..	,,
		Huda ..	,,
9.	3	Yelburga ..	Yelburga taluk
		Kuknur ..	,,
		Bandi ..	,,

Natural divisions

The whole of the district lying, as it does, between the two great rivers, the Krishna and the Tungabhadra, is generally referred to as the Raichur doab. Roughly, the western portion of the district is a plain country, bleak in aspect and scanty of vegetation, while the eastern portion has a few hillocks and scrub jungles. This latter portion has an undulating surface with a soil of red colour, while the plains of the western portion contain good black alluvial soil.

Hills

There are no continuous ranges of hills worth mentioning in this district. There are, however, a few clusters to the east and south of the district. One range extends from the north-west of Raichur towards Yergera for about fifteen miles, another runs in the Raichur and Manvi taluks for about ten miles and a third extends south of Raichur towards Alampur in Andhra Pradesh. Most of these hill clusters are made up of granite rocks. The scenic aspect of these granitic hills is not very picturesque, since they are bare of vegetation. Some of them have fantastic shapes, piled up in heaps of all sizes and are difficult of ascent. In several places, a high rock is supported only by a couple of small boulders under it. There is another chain of small hills in Kushtagi taluk, originating from the Badami group of hills in Bijapur district and running into Gangavati taluk. This chain is locally called Yemme-gudda. The granitic rocks of the district decompose by exposure, and the decomposed soil is sandy and does not possess the fertility of the black soils.

The hill ranges of the district belong neither to the Eastern Ghats nor to the Western Ghats, but represent erosional remnants of an uplifted plateau and are mostly made up of metamorphic schists and granitic gneisses of pre-cambrian age. Among the important hill-peaks in the district may be mentioned the Jagadgudda (2,101 feet), 20 miles east of Kushtagi, Morigudda (1,992 feet), 16 miles south-east of Sindhanur, Nishanigudda (1,933 feet), seven miles north-east of Kanakgiri, Durgadagudda (1,911 feet), one mile south-east of Sindhanur, and Mallabad peak (1,762 feet), four miles south of Raichur, as also the Manvi (1,836 feet) and Masarkal (1,774 feet) peaks.

Topography

The undulating black cotton soil strips, cut by numerous nalas, characterise the region of the Dharwar schists, which is now practically denuded of trees and presents a monotonous landscape, while the gneissic region is generally more or less broken and covered with a thin mantle of red loamy soil. Gneissic hills, wherever they occur, form bold reliefs in the landscape. The sedimentary formations, which cover a small belt of the region adjoining the confluence of the Krishna and the Tungabhadra rivers, occupy more or less flat plateaus.

Regionally viewed, the hills in the area present some structural features which are of interest in relation to the geology of the area: (1) Taking the most south-westerly group, the hills of Karigudda, Manvi and Rabbankal show a continuity along roughly north-west south-east directions; (2) from Sirvar and Yermasagar, running in a roughly south-east direction, may be recognised the hills of Madhugiri, Neermanvi, Gorkal, Kurvi and the one two miles west of Kamalahatti; (3) between Masarkal and Gabbur, a number of gneissic hills are seen at Kakargal, Jinnapur, Hungundabad, Ramdurg, Jagatkal, Khardigud, Maladkal and Gabbur. The hills around Uttanur are seen to be in line with the south-western group of hillocks in the above area. In the schist band itself, the isolated hills of Ganekal and Nilagal, as also the hill-clusters around Kalmala and Kallur, are seen to be situated in the same north-west and south-east disposition as that of the group of gneissic hills enumerated above; and (4) the hills around Raichur, which constitute a prominent landmark in the area, may also be seen roughly to display north-west and south-east trends.

Rivers

The only two rivers of importance in this district are the Krishna and the Tungabhadra, which form the entire northern and southern boundaries of the district, respectively. They have been associated from time immemorial with religious and cultural activities and have several famous shrines on their banks. Picturesque spots on their banks have been also abodes of spiritual *sadhana*. In the historical and cultural development of the country, the great rivers have played a vital role. Legend

and tradition have sanctified these perennial sources of water, which have given an immense impetus to civilisation and prosperity of the land. These beneficent rivers have exercised a strong influence on the life and imagination of the people.

Krishna river

The Krishna seems to have been serving as an artery of commerce since ancient times. The river must have been navigable a long way inland during the early centuries. Dr. Pandurangarao Desai is of the opinion that Ptolemy referred to this river, at least in its lower course, as Maisolos, which name has survived in the modern Masulipatam. He also says that the river Krishna is typical of the Deccan rivers; its maximum flood discharge is said to be almost double that of the Nile river, while in summer it dwindles down to a mere 100 cusecs. But all the same, it is a perennial river and has been the source of livelihood for a number of villages and towns on its banks. The bed of the river is rough and stony. It has low banks and is about half-a-mile wide. It has a few islands in it and when the river is in flood, it is difficult for the inhabitants of the island villages to communicate with the people of the mainland. In the rainy season, when the river generally overflows its banks, its waters enrich the soil with a rich deposit of natural manure and there is a luxuriance of crops on these lands.

The Krishna is also called Hire-hole (big or great river) in the region, and old Kannada inscriptions mention it as Perddore with the same meaning. The river has its source in the Western Ghats north of the Mahabaleshwar hill station. In its upper course, it rushes through deep and narrow gorges. While flowing through the broken ridges of the Dharwars in the Deccan proper, it receives many streams. It enters the Raichur district to the north of Uppinhal village in Lingsugur taluk and flows for a distance of about 104 miles in the district. There is a steep drop in the level of the river in its course through this district, as much as 300 feet, in a distance of about three miles. The river Bhima joins this river to the north of Kadlur in Raichur taluk. About 15 major and 21 minor streams and nalas also flow into the river along its course, important among them being the Hutti nala (30 miles), Chiksugur nala (22 miles), Ramdurg nala (20 miles), Mandargi nala (19 miles), Kodihal nala (17 miles), Ramanhal nala (16 miles), Hirebudur nala (15 miles) and Timmapur and Budadipad nalas (14 miles each). The river leaves the district north of Budadipad village in Raichur taluk and enters Andhra Pradesh.

Its mythical association

There have been ample references to the Krishna in the old literature of the country. The Puranas speak of the Krishna as Krishnavenya or Krishnavena. The Jatakas know it as Kanhapenna and in the Hathigumpha inscription of Kharavela,

it is mentioned by the name of Kanhapemna*. According to the Skanda Purana, which has a 'Krishna Mahatmya', this river 'was brought to the earth from the heavens'. The Padma and Brahma Puranas also narrate the 'merits' and benefits that accrue to those who live in the vicinity of the banks of this river and speak of it as the mother of rivers and as the fountain-head of holy places. She is described as the Ganga of South India.

A legend says that in the early part of the Kaliyuga, some *rishis* were greatly depressed by the decrease of righteousness and increase of evil deeds. They approached the resourceful Narada who assured them that a remedy would be found to help the good and the saintly. Narada conveyed the grievances of the *rishis* to his father, Brahma. The latter created a number of *teerthas* and also requested Vishnu to go to the assistance of the *rishis*. Then, Vishnu created the Krishna out of his own body. Meanwhile, the king of Sahya mountain had come to know that a holy river was to be created on the earth. He wanted to have the privilege of giving rise to such a sacred river so that he may attain salvation. Hence he did severe penance praying that that river may be born on the Sahyadri. His prayer was granted and, accordingly, the Krishna appeared on this mountain.

Tungabhadra

The Tungabhadra is formed by the union of two rivers, *viz.*, the Tunga and the Bhadra, both of which rise at Gangamula in the Varaha Parvata of the Western Ghats. This is also a perennial river, very deep in certain places and almost unfordable even in the dry season. This river enters the district near Kesalapur village at the south-western tip of Koppal taluk. The general slope of the land in the district being north-west to south-east, the Tungabhadra has a large number of rivulets and streams serving as tributaries, as compared to the Krishna. But none of these streams is of any great importance by itself and they generally go dry during the summer.

Old Kannada inscriptions have hailed the river as the Ganga of South India. In the past, notably during the days of Vijayanagar kings, it had been dammed at several places for purposes of irrigation and, in this district also, anicuts of large blocks of stones were constructed in several places in Koppal and Gangavati taluks. Canals were laid along both sides of the river. Most of these canals had been silted up and the water courses were in a dilapidated state. If kept in constant repair, these canals can serve as effective means of irrigation for the cultivation of rice and sugarcane, in places not benefited by the recent Tungabhadra Dam at Munirabad. The Tungabhadra river also is reputed as one of the important rivers of South India.

*Immortal India, Vol. IV, by J. H. Dave, Bharatiya Vidya Bhavan, Bombay, 1961, pp. 42 to 44.

The river which forms the southern boundary of the district, flows for a distance of about 130 miles along the district touching the taluks of Koppal, Gangavati, Sindhanur, Manvi and Raichur and leaves the district to the south-east of Talamari village in Raichur taluk. As stated above, a number of streams and nalas flow into the river along its course in the district, the more important among them being the Maski nala (70 miles), Hirehalla (50 miles), Alawandi nala (20 miles), Sindhanur nala (50 miles), Siddapur stream (32 miles), Marli stream (26 miles), Inchnal nala (50 miles), Kanakgiri nala (32 miles), Nandihal nala (26 miles) and Kapgol nala (24 miles).

Its mythical association

There are several references to the river Tungabhadra in the Puranas. It was popularly known, especially in the Ramayana, by the name Pampa. Tungabhadra is mentioned in the Bhagavata. The origin of the river is also mentioned in the Tungabhadra Mahatmya of the Brahmanda Purana. It is said that Hiranyaksha seized the earth and hurled it down into the water, whereupon the gods and goddesses complained to Lord Vishnu, who, assuming the form of Varaha or Boar, destroyed the demon with his tusks and lifted up the earth which was submerged in water. The perspiration arising from the exertion of the Varaha trickled down its tusks on the Varaha-Parvata and gave rise to two rivers, that from the left tusk being the Tunga and that from the right tusk, the Bhadra.

In the Maheshvara-khanda of the Skanda Purana, Nandikeshvara tells Markandeya Maharshi that "some people attain salvation on the banks of the Ganga, some on the banks of the Saraswati, some on those of the Krishnaveni and the rest on those of the Tungabhadra". The Matsya Purana, again, enumerates Tungabhadra as one of the sacred rivers issuing from the Sahya mountain. The Mahabharata mentions the Tunga along with the Jahnavi (the Ganga) and the Krishnaveni (the Krishna) as a sacred river.

Water drainage

While the Krishna river flows in the district in a general west-north-east and east-south-east direction till it meets the Tungabhadra in Andhra Pradesh, the Tungabhadra has a north-west direction as it touches the western portion of the district. After flowing in this direction for about ten miles, the Tungabhadra turns eastwards, and making a loop near Kurnool, it flows north-east again, to join the Krishna at Arlapadu in Andhra Pradesh. The drainage is mainly towards the Tungabhadra. Two distinct systems of tributaries feed these two rivers; the group flowing into the Krishna has a north to north-east course and that emptying into the Tungabhadra a south to south-east disposition.

The watershed of the area is roughly the 1,300 feet contour and corresponds generally with a high ground on which the Raichur-Lingsugur road is laid. To the east of the railway line, the watershed continues in the same direction. The streams to the south of this water-parting, flow into the Tungabhadra and those to the north join the Krishna. On an average, the sub-soil water in the district is struck at 30 to 40 feet from the ground level.

Geology*

The main rock types occurring in the Raichur district may be arranged in the following sequence :—

1. *Dharwars.*—Quartzites, quartz schists, quartz porphyrites, diabasic schists, ferruginous quartzites, chlorite, talc and talc-chlorite schists ;

2. *Peninsular gneissic complex.*—Pink and grey gneisses ;

3. *Dykes.*—Dolerite and epidiorite dykes ;

4. *Kaladgi Series.*—Pebble beds, sandstones and conglomerates ; and

5. *Soils.*—Reddish, light green, reddish-brown and black soil.

Dharwars

The Dharwar series of rocks occur in the form of three small but prominent bands—the Kushtagi band, the Maski band and the Raichur band. Minor patches are also to be seen in Gangavati, Yabbalu, Ullanur, Timmapur, Valkamdinne, Ganekal and Yermaras. The rocks constituting the Kushtagi and Maski bands, as also the minor patches, consist of metamorphic series, namely, chlorite schists, talc schists, banded ferruginous quartzites, hornblende schists, diabasic schists and amphibolites with their intrusives like quartz reefs and veins. The rocks constituting the Raichur band consist of chlorite, hornblende and diabasic schists and their reconstituted varieties. Quartz reefs and quartz veins occur in plenty in the Maski band, much more so than in the Kushtagi band. They occur in parallel lines in the schist members and conform to the strike and dip of the schist rocks. The quartz reefs can be broadly classified into three groups : (1) white quartz reefs, (2) slate-blue quartz reefs, (3) pale-blue and white quartz reefs. Of these three, the slate-blue quartz is of great importance on account of its auriferous nature. These auriferous quartz veins are mostly confined to the hornblende schists. The Hutti Gold Mine is situated in the Maski band.

*A fairly detailed and exhaustive report on the geology of Raichur district has been published in the journals of the Hyderabad Geological Survey, Vol. II, Part I and Vol. III, Part I.

The white quartzites occur associated with quartz schists and ferruginous quartzites while the pale-blue quartz reefs are mostly confined to the diabasic trappoid schists of the Maski band. These two latter varieties are not gold-bearing.

Peninsular Gneissic Complex

The gneissic rocks can be broadly divided into two types—the grey variety and the pink variety. Generally, the northern and the southern portions of the district consist of the pink variety while the middle portion consists of the grey variety. In certain places, however, there is an intermingling of both varieties.

Dykes

In the eastern portion of the district are seen a large number of dykes which are mostly doleritic in composition.

Kaladgi Series

The Kaladgi series of rocks occur over an area of about ten miles in the north-western portion of Kushtagi taluk. These rocks consist of alternate layers of conglomerates and sandstone laid almost horizontally over the denuded surface of the gneisses. Another series of rocks consisting of rounded pebbles of quartzites occur loosely spread over an area of about two miles near Kachapur and Gundsagar. On account of the situation of this pebble-bed at the same level as the Kaladgi conglomerates, it is surmised that these rocks are derived from the Kaladgi series.

Soils

The reddish sandy soil is confined to the zones of the pink gneisses in the neighbourhood of Gangavati, Kushtagi, Mudgal, Jalhalli, Deodurg and Sirvar. The light grey loamy soil, which is developed where the grey granitoid gneisses occur, is found near Kavital and certain ohter places. The reddish brown soil is confined to the areas where the diabasic schists and basic dykes occur. Such soil is to be found in the neighbourhood of Chikhesrur and other localities. The major portion of the district comprises black cotton soil, occurring both near the hornblende schists and the gneisses and also sometimes far away from the place of origin.

Minerals

As in other parts, the Dharwar rocks of the district are fairly rich in economic minerals. Important among them are gold, iron, copper, galena, quartz, mica, feldspar, ochres, ilmenite, building stones and laterite brick earth.

Gold

The Raichur district contains fairly good deposits of gold. Next to Kolar, this is the only other district now producing gold in the State. The occurrence of gold in this district is mostly confined to the Maski band of the Dharwar schist rocks. The gold-mining industry in the district seems to have been carried on even in very old times as evidenced by the numerous old workings found scattered all along this band. There appears to have been fairly intensive prospecting done for gold in those early

days. But, as we know, the ancient mining activities were limited upto the water zone. The modern gold mining industry, started in the year 1889 at Hutti by an English Company called the Deccan Mining Company, carried on the work not only in Hutti, but also in places like Tupdur, Topaldoddi, Wandalli, Chincherki, Udbal, Deodurg and Hunkuni. Many of these mines had to close down later on for reasons of finance and other economic considerations. The year 1947 saw the resumption of the work in the Hutti mines by the Hyderabad Gold Mines Company Limited (now redesignated as the Hutti Gold Mining Company), and since then the gold mining industry in this area has been getting on well.

Iron

Iron ore of low and medium grades occurs near Rajavoli as lateritic segregations of ferruginous minerals, along the Kushtagi band of the Dharwar schists and near Jadagudda hill.

Copper

The occurrence of copper is reported in the old iron workings near Machnur in the form of cupric oxide and basic carbonate and also near Mandargi, Chikhesrur and Hirehesrur.

Galena

Galena occurs in the vicinity of Mudbal in quartz veinlets.

Mica

The occurrence of mica in pegmatite is reported near the following places, namely, Yabbalu village, Sindhanur, Harbal, Hanchnal and also south of the main road leading from Tawargera to Kushtagi.

Quartz

A number of white quartz reefs, suitable for glass and ceramic industries, occur at several places in the district. The more important reefs, which are in close proximity to the railway line, are located at Sultanpur, in the Jagarkal and Mallapur area, between Valkamdinne and Bichal and also at Yedaknur and Induvasi. Quartz of good quality is also found near some abandoned gold mines in Hutti, Uddinhal and Sangapur areas.

Feldspar

Potash feldspar occurs in the neighbourhood of Parthipalli, Turkandona, Matmari and a few other places, all situated within an area of about five miles from Matmari railway station.

Ochres

All along the flanks of the ferruginous quartz bands of the hills west of Nandihal and also on the eastern slope of Kalmangi hill, hematitic ochres occur in large quantities.

Ilmenite

Black sand containing ilmenite occurs along the bank of the Krishna river in the northern portion of Lingsugur taluk. The average content of titanium in the sand is just over six per cent.

Saline Efflorescence

Deposits of saline efflorescence occur along the junction zone of the Dharwar formations and the peninsular gneissic rocks in the eastern portions of the district, while saline salts are found in Sindhanur, Lingsugur, Manvi and Raichur.

Building and ornamental stones

Various types of granites, gneisses and dyke-rocks occurring in the district serve as good material for building and constructional works and also for road metal. The granite quarries are found mostly at Raichur and Manvi. The gneisses occurring at Lingampalli, Raichur and Munirabad have proved to be of great economic value. The slaty hornblende schist occurring along the north-eastern slopes of the Nandihal hill produces thin slates and slabs. The thick slabs are used for flooring purposes. The sandstones occurring near Hanamsagar also make good slabs for building purposes and milestones. Some varieties are also suitable for carving purposes.

Soapstone

Deposits of soapstone are noticed at the following places in the district: (*a*) about half-a-mile to the east of Edlapur by the side of Tawargera-Maddur road; (*b*) about three furlongs to the south-east of Kadlur village in a cultivated land covered with black cotton soil; and (*c*) about two miles to the east of Budigumpa on the Lakshmigudda hillock in Gangavati taluk. The deposits run here in a north-south direction for about a furlong and are somewhat harder than the types found in other places.

Brick earth

A gritty type of murram earth, useful for making bricks and tiles, occurs near Maski and Kavatgi.

Forests

Except, perhaps, the banks of the two major rivers, the whole of the district is practically devoid of forest vegetation. The rainfall is inadequate and erratic. There are no distinct hill ranges owing to the geological formation of the land. The dry tropical climate is also not helpful to forest growth. Added to all this, whatever forest cover the district possessed in the remote past, has been destroyed by man in his persistent effort to clear such land for the cultivation of his foodgrains, for the grazing of his cattle and for collecting fuel and timber. The process of erosion in this district has also had its part to play in the gradual desiccation and deterioration of the top and sub-soils. The water table has gone down considerably.

The forests in Raichur district, as they exist to-day, are of the mixed dry deciduous type, consisting of open scrub jungle, full of weeds and bushes, except in a few parts where some timbers of economic value are grown. The conditions of drought and extreme heat of the summer season preclude any active and profitable regeneration of forests. The area of forest land is only about four per cent of the district's total area, as against the

minimum of 33-1/3 per cent desirable according to the national forest policy. The belts of vegetation that can, if at all, be called forests are confined to the upper and lower reaches of the rivers and are to be found in the taluks of Manvi, Lingsugur, Kushtagi, Deodurg and Sindhanur. The taluks of Koppal and Yelburga are entirely devoid of forest land, while Gangavati and Raichur taluks cannot lay claim to any appreciable areas under forest. The total forest area in the district in 1968-69, including protected and unclassified forests, was about 1,63,103 acres. Of this, about 20,000 acres were covered under the mixed dry deciduous forests. In general, the forest area is very much understocked.

Flora

The weeds and climbers found in the forests of the district are not of any great economic value. Even different types of grass grown are not of the nutrient type for the cattle and, therefore, are more useful for thatching roofs of village houses. The minor forest produce consists of *Tarwad* bark, *Tupra* (beedi) leaves, Rousa grass, *Sharifa* or *Seetaphal*, honey and wax, soapnut and tamarind. The most common shrubs are the *Bel Palas* (Butea superba), *Dikmali* (Gardenia gummifera), *Gotti* or *Challe* (Zizyphus xylopyra), *Sharifa* or *Seetaphal* (Anona squamosa) and *Tarwad* or *Tangadi* (Cassia auriculata) and are mostly used for fencing the fields. The following are the main tree species found in the district, all of which have been classified generally as belonging to the third class :—

Cassia fistula ('*Kakke*' or '*Amaltas*').—The wood of this species is durable. The pulp of the fruit of the tree is used for preparing laxatives.

Acacia arabica ('Jali' or 'Babul').—The wood of this tree yields a gum and is of pale-red colour, turning darker on exposure. It becomes very durable when seasoned in water. The wood is used for preparing spokes for wheels of country-carts, rice-pounders and wooden ploughs.

Tamarindus indica ('Imli' or 'Hunise').—The tamarind fruit is mostly used in culinary requirements. The seeds are also roasted and eaten by the villagers. The heartwood of the tree is very hard and durable. The wood is used as fuel and also for preparing cart-wheels and the like.

Pongamia glabra ('Honge' or 'Karanji').—The wood of this tree, though tough, is light. When cut, it presents a white colour but turns yellowish on exposure. The honge seeds are used for extracting oil, which is used for burning lamps, and also for medicinal purposes; the oil-cake is used as manure. The *honge* leaves are also used as green manure.

Wrightia tinctoria ('Hale' or 'Pala-Kordsha').—The wood of this species is highly valued by the rural population on account of its ivory-white colour. It is used for making toys. The leaves of this tree turn black when dried and afford a kind of indigo called pala-indigo.

Butea frondosa ('Palas' or 'Muttaga').—A kind of red gum is obtained from the bark of this tree. The flowers are used to prepare a red juice which is sprinkled on relations and friends during the *Holi* festival. The wood of this tree is of little value.

Anogeissus latifolia ('Tirman' or 'Dindiga').—The tree is mostly used as fuel and for making charcoal. The heartwood of the tree is small, purplish-brown and very hard. The sapwood is yellowish in colour. The wood has a tendency to split while seasoning. The gum of this tree is used by calico printers for dyeing purposes.

Albizzia amara ('Chujjalu').—The heartwood of this tree is purplish-brown and is very hard and durable. The wood is generally used for preparing country-carts and agricultural implements.

Chloroxylon swietenia ('Huragalu').—This is also called the Indian satin-wood because of its softness. It has a fine satiny lustre and is well adapted for delicate cabinet work, in carpentry and turnery.

Pterocarpus marsupium ('Bijasal' or 'Honne').—The wood of this tree is close-grained and its colour is of reddish brown. It is tough, strong and durable. It seasons well and takes a good polish. The wood is used for making of furniture, country-carts and agricultural implements.

Hardwickia binata ('Karachi' or 'Kammara').—This is one of the most durable timbers and is used in construction work. The heartwood is close-grained, dark and ringed with purple. When cut, the wood of this tree becomes very hard. The young shoots and leaves are used as fodder.

Terminalia tomentosa ('Nallamaddi' or 'Matti').—The wood of this tree is very durable and is largely used as fuel. It yields a gum which is said to be used as an incense and cosmetic. Its bark is used for tanning purposes.

In addition to the above species, *Celastrus sengalersis, Sapindus emarginata, Acacia sundra, Zizyphus xylopyra, Dodonea viscosa, Ficus bengalenisis* and *Dalbergia latifolia* are also found in the district to a little extent.

Not so important as the above are the *Bhilava* or *Geru,* the *Chinangi,* the *Bagi* and the *Kempukaira* found in the forests of the district.

Fauna

The scantiness of vegetation accounts for almost a total absence of denizens of the forest that can be said to belong to the big game variety. The presence of tigers in this area has almost been unknown, though a member or two of this species are said to be found, rather rarely, in one or two rocky hills in the forest belts. An occasional leopard may also be seen far from human habitation in one or the other of the rocky hills. It would not be incorrect to say that even this animal is now almost extinct. The hyena is to be found not infrequently. It is locally called the *Kattegarka.* Wolves are found in the craggy portions of the hills. Curiously enough, there are not many jackals. As winter sets in and there is a welcome nip in the air, herds of small deer appear as from nowhere in the rolling plains. As in the other dry parts of India, this district abounds in snakes, scorpions and lizards. The deep fissures that mark the cracking of the black soil in the summer season offer a welcome home for the big variety of scorpions, as also the beds of unfrequented boulders and stones. The cobra, as everywhere else, is a terror. The other poisonous variety of snake is the Russel's viper which is also found all over the district. Small water snakes inhabit the sparse patches of water. A peculiar variety of snake with heads at both ends called *Mannumukka-havu* is also found. Among the game birds, partridge and quail may be seen near the tanks in the winter time. Along the rivers and streams may be seen the wild duck, teal and water fowl.

The more important among the domesticated animals are the buffalo, the cow, the sheep, the goat and the donkey. A large number of the cattle belong to the Khillar breed. Considering the aridness of the area, the milk-yield of the cattle is fairly heavy. There is a fairly large population of horses and ponies of an indeterminate breed. The poultry consists mostly of the country variety though the poultry wing of the Animal Husbandry Department in the district has been doing active propaganda for the propagation of improved breeds like the White Leghorn and the Rhode Island Red.

Climate

The climate of the district is characterised by dryness for the major part of the year and a very hot summer. The low and highly variable rainfall renders the district liable to drought. The year may be divided broadly into four seasons. The hot season begins by about the middle of February and extends to the end of May. The south-west monsoon season is from June

to end of September. October and November are the post-monsoon or retreating monsoon months and the period from December to the middle of February is the cold season.

Rainfall

The district has only two raingauge stations with data extending to about 80 years. Rainfall data for a few years only are available for 11 more stations in the district. The statement of rainfall of the two stations and for the district as a whole is given in table 1 at the end of this chapter, while tables 3 and 4 give the talukwise monthly rainfall for the years 1962 and 1968, respectively. The average annual rainfall in the district is 601.6 mm. (23.68″). The region around Lingsugur gets the least amount of rainfall in the district while towards the south as well as the east, rainfall increases. During the south-west monsoon months, viz., June to September, the district receives about 71 per cent of the annual rainfall, September being the month with the highest rainfall. In the post-monsoon months of October and November also, the district receives some rain. The variations in the annual rainfall from year to year are large as is the case in the neighbouring districts. During the fifty-year period from 1901 to 1950, the district experienced the highest rainfall amounting to 207 per cent of the normal in 1916; 1941 was the year with the lowest annual rainfall in the same fifty-year period which was only 52 per cent of the normal. In 12 of the fifty years, the rainfall in the district was less than 80 per cent of the normal. Considering the district as a whole, there were three occasions when two consecutive years had rainfall less than 80 per cent of the normal. Even three such consecutive years have occurred at Raichur and Lingsugur. It will be seen from table 2 that in 43 out of 50 years, the rainfall in the district was between 400 and 900 mm. (15.75″ and 35.43″).

On an average, there are 41 rainy days (*i.e.*, days with 2.5 mm—10 cents—or more of rain) in a year in the district. As in the case of the amount of rainfall, this number is least at Lingsugur and higher at Raichur.

The highest rainfall in 24 hours recorded in the district was 158.7 mm (6.25″) at Raichur on 31st October 1916.

Temperature

The only meteorological observatory in the district is at Raichur. The data of this observatory may be taken as representative of the conditions in the district. December is the coldest month with the mean daily maximum temperature at 29.3°C (84.8°F) and the mean daily minimum at 17.7°C (63.9°F). The nights are generally cool in the season, but day temperatures sometimes reach 35° to 38°C. The period from about the middle of February to May is one of continuous rise in

temperatures. May is the hottest month, the mean daily maximum temperature being 39.8°C (103.7°F). The heat is oppressive till the onset of the south-west monsoon by about the first week of June. Thereafter the weather becomes slightly cooler and continues to be so till the end of the south-west monsoon season. Day temperatures show a slight increase in October. From November, both day and night temperatures gradually decrease till December.

The highest maximum temperature ever recorded at Raichur was 45.6°C (114.1°F) on 23rd May 1928 and the lowest minimum was 10.0°C (50.0°F) on 14th January 1899 and 13th December 1945.

Humidity

The district on the whole has a dry climate, the period from November to May being the driest part of the year. Even during the south-west monsoon period, the humidities are not very high.

Cloudiness

Skies are moderately to heavily clouded in the south-west monsoon months. In the post-monsoon months, clouding is somewhat less. Clear or lightly clouded skies are common in the rest of the year.

Winds

During the south-west monsoon season, winds are stronger than in the rest of the year when westerly to south-westerly winds prevail. In the post-monsoon and the cold seasons, winds are light and wind directions variable in the mornings, but in the afternoons, the winds strengthen and blow from directions between north-east and south-east. In March and April, winds are as in the cold season. In May, the winds are stronger than in March and April and blow from directions between south-west and north-west in the mornings while in the afternoons the directions of the winds are variable.

Special weather phenomena

Being well inland, the district is seldom affected by full-fledged cyclonic storms. In the post-monsoon months, some of the depressions from the Bay of Bengal, after becoming diffuse on crossing the eastern coast of India, pass westwards across the district or its neighbourhood. In association with such diffuse depressions, strong winds and widespread rain occur in the district. Thunderstorms are frequent in the period from March to June and in September and October. Dust-raising winds and occasional dust-storms occur in April and May. Hail is rather rare.

Tables 5, 6 and 7 give the temperature and humidity, mean wind speed and special weather phenomena, respectively, as recorded at the meteorological observatory at Raichur.

TABLE I

Normals and extremes of rainfall in Raichur district

Station	*No. of years of data*		*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sep.*
1	2		3	4	5	6	7	8	9	10	11
Raichur	50	a	3.1	7.1	4.1	15.0	26.4	96.8	117.9	117.9	154.9
		b	0.2	0.5	0.5	1.3	2.4	6.6	8.8	8.0	8.9
Lingsugur	31	a	2.3	1.3	5.3	18.8	39.1	64.0	66.0	99.8	131.8
		b	0.2	0.2	0.5	1.6	3.3	5.3	6.0	6.4	7.4
Raichur District		a	2.7	4.2	4.7	16.9	32.7	80.4	91.9	108.9	143.3
		b	0.2	0.3	0.5	1.5	2.9	5.9	7.4	7.2	8.1

Table I (Contd.)

Station		No. of years of data		Oct.	Nov.	Dec.	Annual	Highest annual rainfall as % of normal and year**	Lowest annual rainfall as % of normal and year**	Heaviest rainfall in 24 hours*	
										Amount (mm).	Date
1		2		12	13	14	15	16	17	18	19
Raichur	.. ..	50	a	84.1	30.7	3.3	661.3	188 (1916)	41 (1941)	158.7	1916 Oct. 31
			b	4.7	1.9	0.3	44.1				
Lingsugur	.. ..	31	a	72.6	36.3	4.8	542.1	156 (1903)	43 (1905)	152.4	1882 Nov. 26
			b	5.0	2.0	0.4	38.3				
Raichur District	.. ..		a	78.3	33.5	4.1	601.6	207 (1916)	52 (1941)		
			b	4.9	1.9	0.3	41.1				

(a) Normal rainfall in mm.
(b) Average number of rainy days (days with rain of 2.5 mm or more)

* Based on all available data upto 1956.
** Years given in brackets.

TABLE 2

Frequency of Annual Rainfall in Raichur district

(Data 1901—1950)

Range in mm.	*Number of years*
301—400	4
401—500	12
501—600	9
601—700	11
701—800	6
801—900	5
901—1000	2
1001—1100	0
1101—1200	0
1201—1300	1

TABLE 3

Statement showing the taluk-wise average monthly rainfall in Raichur district for the year 1962 (in millimetres)

Sl. No.	*Name of taluk*	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Total*
1.	Raichur	..	1.4	32.4	55.2	64.4	71.6	27.6	93.9	104.5	78.5	19.0	81.7	630.2
2.	Manvi	..	..	..	96.6	50.3	77.4	27.6	105.5	156.8	45.0	2.9	42.0	604.1
3.	Sindhanur	..	12.2	..	32.5	15.3	39.8	86.0	213.9	84.3	83.1	90.2	89.7	747.0
4.	Gangavati	..	..	..	59.9	9.7	90.6	29.8	110.3	90.7	176.5	72.0	56.1	695.6
5.	Koppal	..	..	..	50.8	19.1	48.2	77.5	78.2	178.4	103.3	..	68.6	624.1
6.	Yelburga	..	..	..	118.4	14.9	115.0	73.3	127.4	123.4	93.2	35.6	74.7	775.9
7.	Kushtagi	..	..	..	48.5	30.6	72.2	67.5	82.5	133.3	78.7	45.7	84.6	643.6
8.	Lingsugur	..	1.8	..	50.2	23.3	53.7	39.8	203.1	162.6	144.0	42.3	61.5	782.3
9.	Deodurg	..	..	..	45.8	12.6	88.8	62.1	167.3	157.7	34.5	23.2	75.7	667.7
10.	District Total ..	..	15.4	32.4	557.9	240.2	657.3	491.2	1182.1	1191.7	836.8	330.9	634.6	685.6

Source : District Statistical Office, Raichur.

TABLE 4

State ment showing the taluk-wise average monthly rainfall in Raichur district for the year 1968 (in millimetres)

Sl. No.	*Name of taluk*	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Total*
1.	Raichur ..	..	1.3	2.3	12.1	33.9	95.8	76.0	63.4	182.3	51.5	3.8	5.5	527.9
2.	Manvi ..	..	..	..	6.9	..	52.7	51.1	1.8	219.8	95.6	8.0	..	435.9
3.	Sindhanur ..	..	..	..	..	59.4	45.2	105.2	7.5	224.8	22.6	16.5	..	481.2
4.	Gangavati ..	..	1.7	..	8.3	42.2	104.3	95.4	2.5	130.7	127.9	35.7	..	548.7
5.	Koppal ..	..	..	..	62.7	95.3	28.5	55.7	6.1	238.2	72.6	35.3	..	594.4
6.	Yelburga ..	..	..	..	24.5	..	45.0	135.6	..	257.0	130.4	27.2	..	619.7
7.	Kushtagi ..	..	10.9	..	8.9	38.3	1.9	109.2	..	277.0	102.3	28.2	..	576.7
8.	Lingsugur ..	..	5.9	..	15.1	28.6	69.1	106.3	7.1	207.8	64.6	17.2	2.6	524.3
9.	Deodurg ..	..	10.9	..	59.2	..	73.4	243.6	15.3	207.6	91.7	27.5	..	729.2
10.	District Total ..	..	30.7	2.3	197.7	297.7	515.9	978.1	103.7	1945.2	759.2	199.4	8.1	559.7

Source : District Statistical Office, Raichur.

TABLE 5

Normals of Temperature and Relative Humidity (Raichur)

Month	Mean daily maximum temperature	Mean daily minimum temperature	Highest maximum ever recorded		Lowest minimum ever recorded		Relative humidity	
	°C	°C	°C	Date	°C	Date	0830* %	1730* %
January ..	30.4	18.2	35.6	1897 Jan. 30	10.0	1899 Jan. 14	64	33
February ..	33.3	20.2	38.3	1897 Feb. 21	12.8	1929 Feb. 1	54	29
March ..	36.9	23.3	42.8	1892 Mar. 26	16.7	1936 Mar. 6	47	29
April ..	39.1	26.1	43.3	1927 Apr. 29	16.1	1936 Apr. 1	51	33
May ..	39.8	26.2	45.6	1928 May 23	18.3	1927 May 4	57	34
June ..	35.2	23.9	43.3	1898 June 3	16.1	1896 Jun. 18	70	51
July ..	32.3	22.8	38.3	1915 July 9	17.8	1899 July 20	75	58
August ..	32.2	22.7	37.8	1915 Aug. 15	17.2	1908 Aug. 4	76	54
September ..	31.8	22.6	38.3	1897 Sep. 25	19.4	1948 Sep. 25	77	56
October ..	32.1	22.3	37.2	1920 Oct. 13	15.6	1943 Oct. 31	70	47
November ..	30.3	19.8	35.0	1920 Nov. 10	11.7	1924 Nov. 15	65	40
December ..	29.3	17.7	36.1	1899 Dec. 17	10.0	1945 Dec. 13	65	34
Annual ..	33.6	22.1					64	41

*Hours I.S.T.

TABLE 6

Mean Wind Speed in Km/hr.

Raichur

Jan.	*Feb.*	*Mar.*	*April*	*May*	*June*	*July*	*Aug.*	*Sep.*	*Oct.*	*Nov.*	*Dec.*	*Annual*
8.9	8.9	9.0	9.8	13.5	17.2	16.9	16.3	12.2	9.2	8.9	8.7	11.6

TABLE 7

Special Weather Phenomena

Raichur

Mean No. of days with	*Jan.*	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Annual*
Thunder	0.4	0.4	1.5	2.1	2.4	2.5	0.3	0.4	2.8	2.0	0.0	0.0	14.8
Hail	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Dust-storm	0.0	0.0	0.0	0.5	0.6	0.4	0.8	0.0	0.0	0.0	0.1	0.0	2.4
Squall	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Fog	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0