

it in 1769 and demanded from the Poligar a peishkush of Rupees 15,000, and as this was not punctually paid he captured the Poligar and his five sons in 1776 and sent them prisoners to Seringapatam. The eldest son was taken by the English troops at the siege of Seringapatam in 1792 and set at liberty. He returned to Ratnagiri and captured the place, but was soon driven out and died a year or two afterwards without issue. His brothers were all hanged by Tippu Sultán and the family became extinct.

The town is situated at the foot of the rock, and at one time had a wall and ditch which have been removed recently. There are some fine wells with steps of cut stone, but there is little else of interest. The taluq Cutcherry was built early in the century and is of the old square standard with a court-yard in the centre. In 1866 a Subsidiary Jail was built here. A fine view is obtained from the summit of the rock. To the east of the town is a large tope of tamarind trees, and some carefully tended gardens.

2. *Ratnagiri* (population 1,355,) is not a very important town and is chiefly remarkable for its fortified rock, which in former times must have been impregnable.

3. *Amrapúr*, (population 2,774). Here on Fridays there is a large market. According to local tradition the ancient name of the place was Nadimépalli, (middle village) because it lay midway between the two towns of Pylagiri and Kottacotta which were built by Hotail Naik. The old site is about half a mile to the west of Amrapúr. The main street is broad, but the rest of the town confined and ill-ventilated. In the vicinity are some of the finest "dopair" gardens in the district.

CHAPTER III.

CLIMATE AND RAINFALL.

Climate.—Rainfall.—Direction of wind.—Range of Thermometer.—The seasons.—Unusual storms.—Famines.—Table of the state of each season since 1800.

Climate and Rainfall.—The climate of Bellary is characterized by extreme dryness in consequence of the air passing over such an extent of heated plains. Less rain is supposed to fall at Bellary than at

any place in south India. The quantity of moisture in the air as indicated by the hygrometer is exceedingly minute, though the air is remarkable for its transparency. More rain falls in the taluqs bordering on the Túngabdra and in the hilly country round Pennakonda.

Rainfall.—Rain-gauges are kept at all the taluq head quarters but till very recently the returns furnished by the Tahsildars were manifestly incorrect, and cannot be relied on. The fall of rain is also registered at the Garrison Hospital, and in the Office of the Superintending Engineer. A statement is appended showing the total yearly rainfall in the district for the last 16 years. Fuller particulars of the rainfall throughout the district will be found in one of the appendices :

Year.	Rain.	Year.	Rain.	Year.	Rain.	Year.	Rain.
A. D.		A. D.		A. D.		A. D.	
1854-55.	15·1	1858-59	21	1862-63	21·7	1866-67	16·8
1855-56.	17·6	1859-60	13·2	1863-64	13·7	1867-68	13·9
1856-57.	20·4	1860-61	16·1	1864-65	18·1	1868-69	20·1
1857-58.	15·5	1861-62	17·1	1865-66	15·6	1869-70	21·6

From the situation of the district almost in the centre of the Peninsula, it benefits by both monsoons and yet does not get the full force of either. From the commencement of November to the end of May rain rarely falls, though sometimes in April and May there are violent thunder-storms and much atmospheric disturbance. In the first week in June the south-west monsoon is looked for, and with the first few heavy showers the hot weather is at an end. About 12 inches of rain fall in this month and July. Towards the end of September the wind veers round to the north, and about the middle of October the district is visited by the north-east monsoon. The average rainfall is 7 inches, and the rain lasts generally for three weeks.

The following table shows the rainfall month by month for the last three years as measured at the Civil Dispensary and at the Garrison Hospital in the fort. At the hospital the rain-gauge is to some extent sheltered by the rock.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	
1868.	Hospital ..	..	1.0	1.52	.69	2.70	3.74	2.85	9.01	2.10	.47		24.08
	Dispensary ..	..	1.0	1.52	.69	2.10	3.77	3.84	7.64	2.10	.47		22.18
1869.	Hospital ..	..	.01	.48	.98	.50	.98	7.11	2.11	2.08	.26	.41	15.01
	Dispensary ..	..	.01	.48	.90	.59	.98	7.11	2.11	2.18	.26	.41	15.12
1870.	Hospital ..	.02	..	.01	1.27	4.41	.7	2.41	2.09	2.52	..		13.43
	Dispensary ..	..	..	.01	1.62	4.45	.74	1.70	1.95	3.12	.93	..	14.51

The difference in 1870 is so marked as to lead to the belief that in one place at least, the fall has not been properly measured.

Direction of Wind.—From March to October the wind blows generally from the south-west, and west, and during the rest of the year it blows pretty steadily from the north-east and more rarely from the east. In January and February there are often sudden variations, and the wind changes rapidly from one quarter to another. During the months of March, April and May a steady hot wind blows from the west, even at night.

Range of Thermometer.—It is only within the last three years that any registered observations have been taken at Bellary. The mean temperature of each month is shown below. The results have been obtained by taking the average of the mean temperature of each day in the month:—

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.
1868.		88	86	92	96	84	83	81	79	82	79	79
1869.	80	85	91	95	93	89	83	79	82	82	81	81
1870.	80	83	89	93	91	83	80	82	81	78	...	...

The Seasons.—The cool season begins in the month of November at the close of the north-east monsoon. During this period the wind is steady from the north-east and the weather is extremely pleasant. In the early mornings the thermometer is often as low as 62°, but the usual daily range is from 67° to 83°. The atmosphere is clear and the nights very cool. Towards the end of February the weather begins to get hot and early in March the country presents

an altered appearance. As the month advances the hot west winds set in, vegetation disappears, all the grass is burned up, and the country resembles a dreary waste. In the black cotton country the soil, baked as hard as a stone, is split in all directions by cracks and fissures from one to three feet in depth. In the other taluqs dust-storms are of frequent occurrence. The atmosphere glows intensely, and the glare increased by the white and sparkling nature of the ground is most distressing. The tanks rapidly dry up and expose beds of slime and decomposing mud. The nights are generally calm, and the atmosphere is stagnant and oppressive to a degree. Towards the end of May the heat, both night and day, is almost insupportable. At midnight even the thermometer sometimes marks 100° Fahr., and glass and wood crack simply from the heat. In the day-time the house can be cooled by cuscus tatties, but after sunset the hot wind usually fails. At the end of the month or in the beginning of June, heavy ink-black clouds begin to gather in the south-west, and generally after a few days of oppressive stillness, the approach of the monsoon is heralded by two or three violent thunder-storms. These cool and refresh the air, and the hot weather is at an end.

The interval between the two monsoons is generally very pleasant. The days are cloudy, and the air fresh and agreeable. September is usually close and oppressive, and this lasts till the rain falls. On the whole, from its elevation above the sea-level and from other natural causes, the climate of Bellary is better than that of most of the other districts in the Presidency. For three months of the year the heat is excessive, but the remaining nine months are comparatively cool and pleasant.

It may not here be out of place to bring together some facts relating to the seasons of distress and famine which have from time to time visited the district.

With the exception of a passing notice of a series of bad seasons culminating in a most disastrous year in 1751, the earliest famine of which we have any record was in 1792 and 1793.

1792.—With regard to this latter famine Colonel Monro writes :—
 “Had the officers of Government lowered the assessment, its effects would probably only have been felt so long as it lasted, but as they raised it cent. per cent. wherever there was a crop, this addition to the high prices necessarily ruling rendered grain so dear that very little could be purchased by the lower classes and great numbers of

them perished in consequence." Rice sold for two, and cholam (the staple food of the agricultural classes) for six seers for the Rupee.

1803.—The next visitation was in 1803. The seasons of 1801 and 1802 were very unfavorable, and in 1803 the scarcity almost amounted to famine. Colonel Monro in a letter to the Board stated, "the season is worse than has ever been known before, worse even than in 1792." Prices rose from 200 to 300 per cent., and the ryots in large bodies emigrated. Though the famine was even more severely felt near Kurnool and in the Nizam's territories, Colonel Monro was induced to suspend all duties on the importation of grain, and to impose an *ad valorem* duty of 3 per cent. on all grains sent beyond the Túngabadra. This state of things continued in 1804 when heavy rain fell, and the ryots were again enabled to commence cultivation and procure fodder for their cattle.

1833.—This was the year of the Guntoor famine, when in that district alone, 150,000 persons out of a total population of 500,000 perished from starvation. The rains failed in September and October 1832, and prices at once rose 200 per cent. The Collector reported the season to be "beyond all comparison the worst that has ever been known." There were grain riots in the garrison towns of Gooty and Bellary, and more than 12,000 people died from cholera, which spread rapidly all over the district. Transit and import duties on grain from foreign countries were suspended, and a large expenditure on public works sanctioned.

1854.—The next period of scarcity was 1854, but on this occasion happily the distress was confined to the Bellary district. The rains of June and July 1853 were very scanty, and the north-east monsoon completely failed. The rain-fall throughout the year was only 6.45 inches, and the grain-harvest was in consequence lamentably deficient. Unfortunately the district had sustained previous disasters which diminished its means of meeting a deficient harvest. The damage done to its great tanks and irrigation works by the storm of May 1851 had only just been repaired, and in 1852 and the early part of 1853 the crops were extensively injured by unseasonable falls of rain. The cholam crop, which furnishes the principal food of the district, was especially injured by the rains of January and February, and the extent to which the general harvest fell short became afterwards apparent in the small stock of old grain which the district contained to meet the wants of the disastrous year 1854.

At the beginning of that year prices were double the ordinary rates. The drought continued through the earlier months of the year and fodder failed. Mr. Pelly wrote: "One-third of the cattle throughout the district have perished (representing an estimated loss of $13\frac{1}{2}$ lakhs), and even this computation is moderate. In the northern and central taluqs which suffered most from the drought it would not, I believe, exceed the truth to say that four-fifths of the cattle have perished. In some villages they have entirely disappeared, and as, besides the direct loss of capital, this calamity has also raised the markets by increasing the difficulty and expense of importing grain, it has had a most unfavorable effect in augmenting the general distress." In July the Collector reported that work must be found for the distressed population, and he estimated that a monthly outlay of four lakhs would be required till December. The Police were strengthened throughout the district to keep down crime, and European officers and overseers were sent up from Madras to superintend the public works which were hastily commenced. "About sixteen lakhs of Rupees were expended on this account during the year, and the number of people employed on these works varied from 9,000 in January to 97,000 in July, from which date they steadily decreased. At one time however 8 per cent. of the population were receiving charitable assistance in this form. It was estimated that the whole of the work performed on this occasion cost about three times what it could have been executed for in the ordinary manner, so that about two-thirds of the outlay incurred should be debited to charity." There are no data for forming an estimate of the loss of life by starvation, but there is reason to suppose it was not large. The Court of Directors thus summed up the results of the year: "Mr. Maltby estimates the actual and prospective loss in direct revenue at 10 lakhs of Rupees. Nearly fourteen lakhs have been spent in providing work for the poor by which 300 miles of road have been constructed, the actual value of which is estimated at 5 lakhs, thus making the loss to the State, in this single district in this one year about 19 lakhs of Rupees. The loss of produce you consider cannot be estimated at less than 33 or 34 lakhs of Rupees and that occasioned by the destruction of cattle at $13\frac{1}{2}$ lakhs."

1866.—The season of 1865 was unfavorable, and when the early rains of 1866 failed, the pressure of high prices began at once to be felt. In July 1866, 7,000 persons were relieved in the town of Bellary by Sakri Karadappa, a merchant, and his example was

followed by others in different parts of the district. The value of this local charity was, as far as could be officially ascertained, Rupees 48,000. Subscriptions were received from Madras in August, small at first, but subsequently largely increased as the necessities of the district became known. 21,700 was the largest number of people employed at any one time, including women and children. The men were paid 3 Annas, the women 2 Annas and the children $1\frac{1}{2}$ Anna per diem till December, when it became possible to reduce the rates. Relief houses were opened in all the taluqs, and relief works set on foot, chiefly roads connecting the head station of one taluq with the adjoining one. The total expenditure was Rupees 4,47,540. In famine *relief*, Rupees 1,06,793 was expended in 234 relief houses established to supply the aged, sick and infirm with cooked food. 134,433 persons were thus relieved from July 1866 to May 1867. In famine relief *works* a number varying from 3,300 to 21,700, or an average daily number of 13,950 persons were employed. In November the Honorable R. S. Ellis was sent up as Special Commissioner, and he visited many of the distressed taluqs. Cholera was very prevalent both in 1865 and 1866, and in many villages the panic was so great that the corpses remained unburied.

Great Storms and Hurricanes.—1804.—In 1804 in October, at the break of the south-west monsoon the district was visited by a series of terrific storms. In a letter written to the Board soon afterwards Colonel Monro gave it as his opinion that not less than 1,000 tanks had been breached and 800 channels and wells utterly destroyed. He estimated that seven lakhs of Rupees would be required to make good the damage.

1851.—On May 6, 1851, a storm swept through the district in the direction of north-west to south-east, entering the district in the Hospett taluq. The storm was accompanied by torrents of rain which produced a general inundation and destroyed, or otherwise injured, all the communications of the country and all the works of irrigation within its influence. Several of the finest tanks in the district were completely destroyed as reservoirs. "The bunds of these works that had stood the usual rain of centuries and that might have challenged the whole of India to produce their like in strength and careful construction, were over-topped by the waters which broke through them leaving large chasms from 10 to 420 yards in length. Daroji tank sustained two breaches, one 160 and the other 80 yards in length. The bund of Singanamalla was in perfect order and had

effectually resisted the heavy flood of 1804. But in 1851 it suffered severely, the chasms in its embankments extending altogether 842 yards. The estimate for its repair was Rupees 60,000. The total number of tanks breached or seriously damaged amounted to 253 with a Revenue on their irrigable area of Rupees 2,69,285. The Board estimated that the emergent repairs alone would cost 2 lakhs. From the over-flowing of the rivers the channels of irrigation on their banks suffered severely. Many were entirely obliterated, and from the same cause a great extent of valuable land was rendered useless, the best soil having been washed away from its surface and sand deposited. Whole villages were swept away and many of the ryots ruined by the loss of their cattle and other property. The large towns of Guliem and Nagaradona were destroyed, and the loss of life was very large.

In the following table, an attempt has been made to show the climatic characteristics of each Revenue year since the cession. In another column the prevalence of particular diseases is noted :—

FASLI.	RAINFALL.	PREVALENCE OF DISEASE.	REMARKS.
1210	Season good.		
1211	Average.		
1212	Below the average.		
1213	Rainfall deficient.....	.....	Scarcity amounting to famine.
1214	Heavy floods in October.		
1215	Rain seasonable & abundant.		
1216	Good season.		
1217	Below the average.		
1218			
1219			
1220			
1221	Scanty south-west monsoon. Good rain in Oct.		
1222	Good south-west monsoon. No rain in September.		
1223	Average monsoons. Season fair.		

FASLI.	RAINFALL.	PREVALENCE OF DISEASE.	REMARKS.
1224	Rainfall abundant & seasonable. Grain cheap.		
1225			
1226	Failure of rain.		
1227	Early rains deficient. Unusual rain and storms in October.	.....	Immense damage to tanks.
1228	Heavy rain in both monsoons.	Cholera, 5,000 deaths...	First appearance of cholera.
1229	Rain deficient.....	Cholera, 6,000 deaths in 3 months.	
1230	Rain scanty in June, but a fair north-east monsoon.		
1231	Season fair.		
1232	Good south-west monsoon. Total failure of later rains.		
1233	Both monsoons failed. Great distress.	.....	Famine anticipated, relief works commenced.
1234	Average season.		
1235	Abundant rain in both monsoons.	Cholera and fever.....	Tungabadra anicut breached.
1236	Season very bad.		
1237	Heavy and continuous rains.	.....	Dry crops spoiled.
1238			
1239	Unusual storms.....	Cholera very bad.	
1240	.....	Cholera increased in western taluqs.	
1241	Early rains deficient, abundance in September and October.		
1242	Both monsoons failed. Great drought.	.....	Worst year yet known. Grain rose 300 per cent.
1243	Seasonable and abundant rains.		
1244	Both monsoons partially failed. Season below the average.	7,000 deaths from fever.	

FASLI.	RAINFALL.	PREVALENCE OF DISEASE.	REMARKS.
1245	Season very favorable.....	.....	Prices fell 50 per cent.
1246	South-west monsoon failed. Abundant rain in Sept. and Oct.		
1247	Season fair. The north-east monsoon abundant.	7,500 deaths from cholera.	
1248	Both monsoons failed. Great distress.	.....	"Almost a famine year."
1249	A particularly good season		
1250	South-west monsoon failed, but the later rains were abundant.		
1251	Season favorable and rainfall plentiful.	Cholera and fever very bad.	
1252	Commenced unfavorably. Severe storms in Nov.	5,000 deaths from cholera. Cattle disease prevalent.	
1253	Rainfall small and unseasonable.	Cholera and murrain on the decrease.	
1254	Both monsoons failed.....	Fever, cholera & murrain very prevalent.	
1255	Season again very bad.....	18,000 deaths from cholera.	
1256	A good south-west monsoon, but a total failure of later rains.		
1257	Rainfall deficient.....	Murrain among cattle.	
1258	Rain deficient.....	Cholera and murrain very bad.	
1259	Rainfall abundant, but unseasonable.	Murrain.	
1260	Season good. Severe storms in May.	Cholera and murrain severe.	
1261	Generally favorable.....	Cholera on the decrease.	
1262	Both monsoons were plentiful. Heavy rain in Sep.	Cholera.	
1263	Monsoons totally failed. A most disastrous season.	.....	"A famine year."
1264	Failure of the rains till October.	.....	Famine continued.

FASLI.	RAINFALL.	PREVALENCE OF DISEASE.	REMARKS.
1265	South-west monsoon failed, but abundant rain fell in September.		
1266	Both monsoons were abundant.	Cholera, fever and murrain prevalent.	
1267	Rainfall deficient.....	Murrain very bad. A little cholera.	
1268	North-east monsoon failed almost entirely.	Cholera prevalent.	
1269	Rain scanty.....	1,000 deaths from cholera.	
1270	Both monsoons unusually favorable.	1,500 deaths from cholera.	
1271	Season good.....	Cholera very bad.	
1272	The rainfall was heavy, but unseasonable.	Fever and cholera.	
1273	An average season.....	Fever and cholera prevalent.	
1274	South-west monsoon very good, but the later rains failed.	5,000 deaths from cholera.	
1275	The season began well, but the later rain entirely failed.	Fever and cholera very bad.	Distress anticipated.
1276	South-west monsoon failed. Great distress. Heavy rain in October.	20,000 deaths from cholera, and fever very bad.	Famine.
1277	Rainfall seasonable tho' scanty.	Fever.	
1278	Season above the average.	Fever and some cholera. Much murrain.	
1279	A very good season.....	Fever.	