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Archaeological heritage in Karnataka with particular reference to Geographical setting

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Abstract

Karnataka has given extremely rich evidence for archaeological remains. The landscape of Karnataka seems to have been suitable for human habitation from the pre-historic through the proto-historic and historic period as evidence for all the three phases is available almost all over the state. In this paper the geographical landscape of Karnataka has been discussed. The drainage of Karnataka is based on three notable rivers - Krishna on the north, the Kaveri on the south, the two Pennars (North Pennar and South Pennar) and the Palar on the east. The drainage of Karnataka is mentioned as settlements from the neolithic period onwards are located close to the rivers and rivers played a crucial role in sustaining human habitation. Similarly, Karnataka enjoys the benefit of numerous mountain ranges. Mountains are a source of economically viable rocks and minerals. There is evidence for the exploitation of metals and minerals since prehistoric period. Other important geographical aspects which may have had a bearing on the historical development such as soil types, flora and fauna, climate, etc. have been examined.

Key words: *landscape, rivers, mountains, metals and minerals*

The discipline of archaeology is extremely relevant for the Deccan, especially Karnataka as this region has a rich assemblage of antiquities ranging from pre-historic through the proto-historic to early historic period. The antiquities first attracted the attention of the British officers in the nineteenth century who perhaps realized their significance and thus brought to light a potentially rich source for the reconstruction of the past. It was Robert Bruce Foote who established the presence of very large number of ground stone axes in the Karnataka region, in the valley of the river Krishna and its tributaries. Due to his efforts it has now become the best documented of the neolithic groups. Ash-mounds, an integral feature of the neolithic culture complex in Karnataka were first noticed by Col. Colin Mackenzie. They were explored, excavated and analysed by amateur archaeologists and other scholars, prominent among them being Newbold, Cole, Knox and Fawcett, Sewell, Longhurst, Captian Leonard Munn and Sir Leonard Woolley. A large number of megalithic monuments were identified for the first time by British officers in the course of explorations. They not only faithfully recorded the details of megaliths and funerary appendage but some of them like Colonel Meadows Taylor undertook their scientific investigation and analysis. Furthermore, British officers were perhaps the first to take note of some of the finer aspects of human workmanship such

as paintings executed in rock-shelters. Some of the chance discoveries of the Britishers proved to be of immense significance. For instance, C. Beadon, a mining engineer, prospecting for gold in District Raichur, discovered at Maski, the famous Asokan edict which mentioned the name Asoka as its author. Consequently the importance of the site was recognised and it attracted further archaeological attention.

Aim

The aim of the paper is to discuss in detail the geographic conditions in Karnataka and its possible link with the establishment and sustenance of archaeological settlements. Karnataka has given rich evidence for human habitation from the pre-historic, through the proto-historic and early historic period. Karnataka is immensely rich in natural resources particularly perennial rivers and their numerous tributaries, fertile soils, rocks bearing minerals, forest cover, etc. There is sufficient evidence to show that these resources were being exploited since a very long period. For instance, many ancient metal workings have been located which testify to the fact that mineral ore was being sourced. How far did the local environment facilitate human habitation? Did the local resource base fulfill the basic subsistence needs of various settlements? What bearing did the local geographical lay-out have on the over-all socio-economic conditions? These are some of the issues which the author has tried to examine in this paper.

Methodology

Archaeological data is the primary evidence for the history of Karnataka till the early centuries of Christian era as the literary sources are few. A detailed review of archaeological settlements is undertaken specially with respect to the location, resource utilization, etc. The primary sources used to closely study the geographical setting are the District Gazetteers which provide a very clear and detailed account. The author also undertook a field-survey to have first-hand account of the settlements and the immediate surrounding.

Geographical Setting and Archaeological Settlements

Karnataka shares border with more than one state. The state of Maharashtra adjoins northern Karnataka. Maharashtra stands out as a large but fairly homogeneous region (15^{o} 44' - 21^{o} 40'N and 73^{o} 15' - 80^{o} 33' E). Andhra Pradesh and east Karnataka share a common border. The Andhra Plateau (12^{o} 14' - 19^{o} 54 N and 76^{o} 50' - 81^{o} 50' E) covering a major part of Andhra Pradesh, is spread over 2,04,882 km^2. Tamil Nadu and Kerela, on the south of Karnataka, are spread over an area of 74,254 km^2. This region occupies a significant position as it is a connecting link between the Western coast and Coromandal coast ((Singh:1971:698, 821, 851). Though these neighbouring states share some common features with Karnataka, it is the rivers which tie them more closely to each other as some of the important rivers originate in neighbouring states and flow in Karnataka or vice-versa. The drainage of Karnataka is based on three notable rivers - Krishna on the north, the Kaveri on the south, the two Pennars (North Pennar and South Pennar) and the Palar on the east. Along with the three great river systems, Godavari and its tributeres also

flow through the state in the north. Few streams unite in the Sharavati and flowing down the Ghats in the falls of Gersoppa join the Arabian sea.

The region of Karnataka can be divided between the forested Malnad in the west and the more open country of the Maidan in the east. Maidan can be further divided between North Maidan and South Maidan. Karnataka plateau with its Malnad rim and Maidan character is diversified by the Krishna and Cauvery river systems, rainfall variability resulting in varying patterns of land use and settlements. The vast Maidan, so named after its relatively low and subdued relief, is divided into north and south, largely owing to cultural differentiations, the former is mostly drained by the Krishna and the latter by the Cauvery system. Malnad in Kannada means "hilly country" as *Male* stands for "hill" and *Nadu* for country. The Malnad stretches in a continuous belt trending NNW-SSE. The topographical features of the Malnad also vary greatly from North to South. In the North, it attains a height of 450 mt. to 600 mt. and south of this it descends and is just an upraised part above the general level of the plateau. The South attains a height of 900 mt. - 1200 mt. in a large tract, especially along the western rim just above the coastal plain. Some of the parts of this area attain considerable height as the Bababudan hills (1,913 mts.). This part serves as watershed for the two different drainage systems and the rivers have, finely dissected the area giving a picturesque hill-and-valley terrain (Singh:1971:794, 814).

North Maidan is a landscape of monotonous seemingly endless plateau covered with rich black cotton soil, of large open treeless fields. The general elevation is about 600 mt. with broad flat bottomed valleys, ranging upto 450 mt. Southern half of the area lies on Peninsular gneiss with NNW-SSE belts of Dharwar Schists. To the north of Dharwar and Peninsular gneisses, sedimentary rocks such as sandstone, limestone and mudstone of Cuddapah formations are found in a continuous line in the west and Kurnool formations in the east. The remaining area is capped with Deccan trap. South Maidan is a plateau region studded with bare granitic boulders and hills. The region has a relatively moderate climate with greater variability of rainfall, the drier parts lie around Chitradurga, in the extreme east near Kolar and around Srirangapatam. The region is very rich in mineral deposits, particularly in iron ore, manganese, gold, etc. (Singh:1971: 817, 819).

1. North Maidan - The region of North Maidan has emerged as probably richest in the remains of the neolithic period. In North Maidan there appears to be a concentration of neolithic sites on the banks of river Krishna and its tributaries, notably the Bhima, the Tungabhadra and the Malaprabha. The important excavated neolithic settlements that are situated on river banks are Maski (on Maski nullah, a tributary of Tungabhadra), Hallur (on Tungabhadra), as well as a large number of explored sites. Proximity to the rivers must have fulfilled not only the basic needs of man concerning subsistence but would have facilitated traffic as well. Along with fertile plains drained by rivers neolithic man inhabited granitoid hills. Notable settlements such as Tekkalakota, Piklihal, are located on terraces at different levels of the hillocks or at the foot of hills. The large number of sites and extensive

pottery suggest that neolithic settlements were perhaps thickly populated. A crucial factor that was probably responsible for sustaining the large population was the resource base that man could effectively exploit as per his needs. The evidence of large number of animal bones indicates that pastoralism was an important economic activity. The presence of certain animals such as Deer and Snail indicates that the vegetation must have been thick. The animal bones comprised those of Cattle, Sheep, Goat, Swine, Canine, fresh water Mussel, Gasterpoda, Snail and Fowl. The charring of bones suggests that they were roasted. Cattle and other domesticated animals such as Sheep and Goat would have provided not only meat but also milk which in turn was used in various ways. Similarly the flesh of animals like Swine, fresh water Mussel, Gasterpoda, Snail and Fowl might have been consumed. Alongside domestication of animals hunting seems to have continued and augmented the food supply. The animals that were commonly hunted included the Antelope, Deer or Stag with horns, Soft Tortoise, Rodents (Squirrels or Gats), Gazalle, Monitor Lizard, etc. The evidence of terracottas, rock paintings, engravings and bruisings, indicated that some other animals and birds such as Horse, Snake, Boars, Peacock, Pegion were known to the neolithic man. Certain tool types of the period are suggestive of hunting activity. Tools such as axes and spears must have been of great help in hunting operations. Spherical and spheroid balls were probably used as sling stones or bolas employed as missiles for killing fast moving game. The evidence of copper Fish hooks from Hallur and Tekkalakota indicated fishing activity.

There are several indications that small scale horticulture rather than agriculture was practised. The fertile plains drained by rivers were ideal for agricultural activity. The fact that agriculture, even though on a small scale, was being practised is further proved by plant remains such as millet from Hallur and horsegram, wood of the date palm and charred grains *(Dolichos lablab)* from Tekkalakotta. It is a possibility that Cattle were used for agricultural operations. The food produced by way of domestication of animals, hunting and agriculture, might have been further suplemented by forest produce. The subsistence economy was further reinforced by various kinds of crafts. Two gold ornaments were reported from Tekkalakota thereby indicating that gold was being prospected and exploited during this period. The source of gold was not very far from Tekkalakota. The famous Kolar gold mines were only 200 miles south. Ancient gold workings have been reported in the Dharwar bands near Maski and Hutti mines which were 40 miles north. The craft of mat making was perhaps known, for at Hallur a base fragment of a thick jar had impressions of a fine reed mat. Reed is known to grow on the river banks and Hallur is a riverine settlement.

2. South Maidan - It seems that megalithic culture flourished in South Maidan and certain areas such as Kolar and Mysore are particularly rich in the vestiges of megalithic period. Many of the important excavated settlements of the period were located on river banks, such as Brahmagiri and Chandravalli close to Chinnahagari, T. Narasipur on the left bank of the river Kaveri, Muttalavadi on the left bank of river Kaveri,etc. However, many of the megalithic sites were also situated

at foothills. The discovery of large number of megalithic monuments particularly in districts Kolar and Mysore and that of abundant pottery, is suggestive of dense population. The large population seems to have derived its sustenance from the locally available resources. Agriculture must have been an important economic activity as the region enjoyed the benefit of fertile soils and rivers. The use of iron tools and implements such as chisels, sickles, axes, hoe, must have aided agricultural activity. People in all probability were familiar with the cultivation of crops like rice as indicated by the discovery of rice husk at Jadigenahalli and Doda Kadattur. Agriculture might have become an important economic activity but it seems that hunting and domestication of animals continued. Iron spearheads, arrowheads and stone balls (both spherical and spheroid) were the equipment used in hunting operations. The wide range of iron artifacts i.e. weapons, tools and implements noted at various sites like Jadigenahalli, T. Narasipur, suggest that megalithic folk had become fairly proficient in the exploitation of iron ore. Iron ore deposits are known to occur in districts Chitradurga, Mysore, Kolar and Tumkur, which fall in South Maidan. Similarly, gold is reported from districts Chitradurga, Kolar and Tumkur (Gazetteer of India,Chitradurga District:14-15;Gazetteer of India,Kolar District:17; Gazetteer of India,Tumkur District:14-15). At Brahmagiri in district Chitradurga gold beads were found. Interestingly, in district Chitradurga there is evidence for old workings of gold at Halekal, Honnemaradi, Kotemaradi, (Gazetteer of India,Chitradurga District:14).

3. Malnad - In this region climatic conditions are cool and rains are heavy. Rain is received both during south-west monsoon and north-east monsoon. The area is drained by a large number of rivers such as Netravati, Gurpur, Gongolli, Sitanadi, Swarnanadi, Tunga, Bhadra, Tungabhadra, Sharavati, Kumudvati and Varada. The stretch of Malnad is notable for the cultivation of cash crops like cashew, pepper, cardamom and cinnamon. Cool climate and heavy rains are to an extent responsible for thick forest cover. Forests are source of commercially valuable products such as Teak, Ebony, Bamboo, Sandalwood, etc. Resource base of the area is further enriched by the availability of minerals which include quartzites, laterite, granite, shale, limestone, soapstone, gold, garnet and iron, among others. Vadgaon-Madhavapur, Banavasi and the surrounding early historic sites are in the Malnad area. Favourable climate and availability of resources were major factors behind a reasonably big population and over all prosperity which reflected itself not only in major settlements such as Vadgaon-Mahavapur and Banavasi but also in a large number of other sites of the region. Incidentally these sites have yielded not only typical pottery but also permanent brick structures, pottery, terracottas, ornaments, sculptures, coins, thereby suggesting that early historic culture was spread across a large area. Banavasi was a major early historic centre and is particularly noteworthy for the Roman antiquities. Banavasi was a reputed trading station of the period and found mention in the works of classical writers. Ptolemy (150 A.D.) refered to it as Banaouasei. Of the many commodities Rome showed interest in buying mention can be made of pepper. Malnad and South Kanara are known to grow pepper in large quantities (Murthy:1996:20).

Conclusion

The above mentioned facts establish beyond doubt that Karnataka is fairly rich in resources of various types. Water resources such as tanks, wells, ponds, irrigation channels, streams, rivers facilitate the growth of thick vegetation which in turn provides safe sanctuary to various types of fauna. Abundant water supply makes it easy for the farmer to irrigate his land. Further, water bodies not only support an extensive fishing industry but are successfully harnessed to produce hydro-electric power. Karnataka has large number of mountains which are the home of numerous rivers, valuable minerals and economically useful rock types. Infact, these minerals and rock types since ancient times, have been put to various uses, so much so that the first evidence for the use of iron in the country comes from Hallur in Karnataka. Further, the easy availability of building stone has encouraged the construction of some of the most imposing temples since earliest times. Dharwar schists were used for ornamental structures in the temples of Halebid and Belur (Singh:1971:799). Some of the mountains have beautiful water falls (Gagana Chukki and Bara Chukki in Biligirirangan range) while others have notable religious centres (the summit of Indragiri has the statue of Gomateshwara and is a reputed religious centre).

Karnataka is well provided with natural resources of various types but the distribution of these natural resources is not uniform, with some areas being rich in forest and faunal wealth (Malnad) while others being more suitable for agriculture (Maidan). The abundance and the unbalanced distribution of these resources have influenced the course of historical development.

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