FRESH LIGHT ON THE UPPER PALAEOLITHIC FROM THE EASTERN GHATS, ANDHRA PRADESH. $^{\rm 1}$

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INTRODUCTION

Palaeolithic research in India is over a century old. As a result of active research, especially during the last two decades, the existence of Lower, Middle and Upper palaeolithic assemblages in almost all the major geographical regions of the sub-continent has been clearly established (Misra and Bellwood 1985). However, a review of past research on the Upper Palaeolithic shows that it is best represented in Andhra Pradesh, Karnataka, Maharashtra, Madhya Pradesh, Uttar Pradesh, Bihar, and some parts of the Thar desert (Murty 1979). South coastal Andhra Pradesh in particular appears to have offered very congenial habitats for terminal Pleistocene human groups.

Between 1976 and 1981, in the course of my doctoral research, I explored the valley of the Gunjana River, a tributary of the Cheyyeru, in Cuddapah District, southern Andhra Pardesh. 21 Palaeolithic sites were discovered, of which 10 produced Upper Palaeolithic assemblages (Raju 1981, 1983, 1985a, 1985b). Realising the potential of the region I extended my explorations beyond the plains of the Gunjana into the Velikonda Range, a part of the Eastern Ghats. These explorations have resulted in the discovery of further Upper Palaeolithic sites in the Kalletivagu Valley, and along the top of the Velikonda Range in the Cuddapah-Nellore border area. These sites, to my knowledge, are some of the richest of this cultural phase in the sub-continent.

THE PHYSIOGRAPHICAL SETTING

The Kalletivagu River, a tributary of the Penneru, originates in the Velikondas in Cuddapah District at an altitude of about 1000 m. The Velikonda Range marks the eastern limit of the Deccan Plateau. The river flows through a longitudinal valley in a NW-SE direction for about 40 km, and ultimately joins with the river Penneru at the Somasila Pass ($14^{\circ}27'30''N; 79^{\circ}17'28''E$). Throughout its course it is joined by a number of small mountain streams and freshets and is flanked on either side by the Velikonda Hills, which range in altitude from 500 m to over 1000 m.

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The vegetation cover in this region is of tropical deciduous type, and consists of woodland and savanna woodland in the higher ranges and valleys, and of shrub or degraded savanna and discontinuous thorny thickets on the lower slopes and plains. The geological formations include the Archaean, Purana, Cuddapah and Kurnool super-groups; the main rock formations are quartzite and shale, and the mantle is predominantely red loam and red sandy soil. The region is fed by both the south-west and the north-east monsoons, and has an average annual rainfall of 700 mm. The Kalletivagu also has several deep pools which retain water throughout the year, and there are many natural springs in the hills. The rich resources, including wild vegetable foods, honey, fish, turtles and a variety of avifauna, continue to support communities of Yanadis and Gollas, traditional fisher-hunter-gatherers and pastoralists.

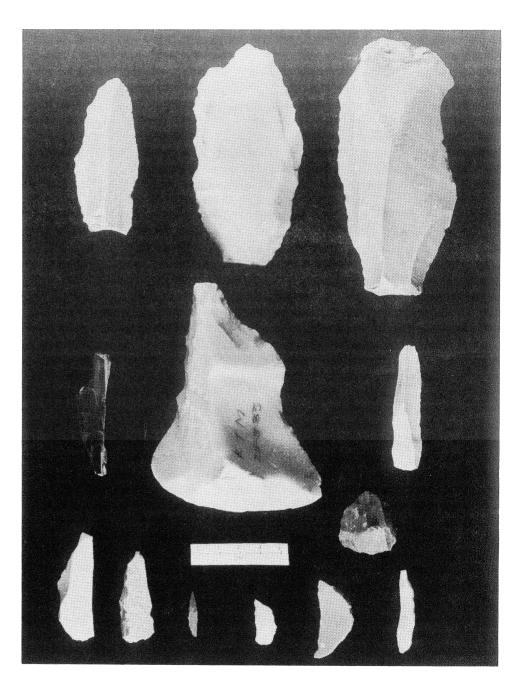
THE SITES

In all, 16 find spots have been discovered at six main locations in the valley, and there are also three hill-top locations (Table 1). Kutalamarri is a settlement of 20 households of Yanadis, traditional fisher-hunter-gatherers, and the archaeological site lies 500 m SSW of the village. Thousands of fresh artefacts, including blades, flakes, flake cores, blade cores, scrapers and choppers, all made on fine quartzite, are here exposed due to denudation of the topsoil. A small 50 cm-square trial excavation at an undisturbed spot revealed seemingly in situ material between 20 and 45 cm below the surface.

The site at Mallemadugu is still buried, and fresh artefacts have been exposed through quarrying activities. Marlabailu is a hamlet of Gollas, traditional sheep-goat pastoralists. The main site here is situated 300 m south of the hamlet at the foot of a hill range. Small freshets originating from these hills have removed the top soil and exposed the fresh artefacts. This site appears to be an occupational-cum-manufacturing camp, as artefacts of all stages of manufacture are exposed on the eroded surfaces. These include cobbles, pebbles, nodules, cores, blades, flakes, scrapers, backed blades, bored stones, hammerstones and grindstones. At Peddayapalli, small gullies cutting across the gently sloping valley along the right bank of the Kalletivagu have exposed the artefacts. At Palamanirevu the artefacts occur mostly on the surface, again on the right bank of the Kalletivagu. Damancherla is a very large site extending to several hectares, in a similar situation to Marlabailu. Large backed blades, very fine blades on quartzite and lydianite, flakes, cores, scrapers, choppers, hammerstones and grindstones occur on the eroded red loam surfaces.

The artefactual occurrences on the hill tops consist of numerous blades, flakes, blade tools and cores made on fine quartzite and vein quarts and all occur on the surface. These find spots may represent temporary work stations visited on hunting expeditions. Many natural springs and a few rockshelters assuring water and shelter occur at these higher elevations.

LOCATION	ALTITUDE IN M.	NO.OF FIND SPOTS	EXTENT OF ARTEFACT SPREAD	SURFACE/BURIED	ARTEFACTS
KUTALAMARRI 14 ⁰ 14' 20" N 79 ⁰ 24' 36" E	232	2	20,000m ² 10,000m ²	Buried, partly eroded	Cores, blade scrapers, points bored stones.
MALLEMADUGU 14°17' 10" N 79°24' 30" E	220	2	600m ² 30m ²	Buried, exposed due to quarry-ing.	Same as above.
MARLABAILU 14°20' 20" N 79°20' 42" E	149	5	1000m ² 300m ² 30m ² 50m ² 40m ²	Buried, partly eroded	Cores, blades, flakes, scrapers, backed blades, bored stones, grindstones.
PEDDAYAPALLI 14°23' 20" N 79°19' 00" E	111	2	20,000m ² 100m ²	Surface, eroded	Same as above.
PALAMANIREVU 14°26' 00" N 79°18' 40" E	68	3	1000m ² 1200m ² 1200m ²	Surface	Cores, blades, flakes, scrapers, points.
DAMANCHERLA 14°16' 24" N 79°20' 42" E	147	2	20,000m ² 10,000m ²	Buried, partly eroded	Cores, blades flakes, scrapers, points, backed-blades, bored stones, grind-stones.
GUNDALAKONA NADDI 14°14' 00" N 79°27' 00" E	610		3000m ²	Surface	Bored stones, flakes, blades, cores, scrapers, points.
GUNDALAKONA TALANADI	760		5000m ²	Surface	Same as above.
PASUPUPEDALA NADDI	915		300m ²	Surface	Same as above.



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 $\underline{\text{Figure 1}}.$ Upper Palaeolithic artefacts from the Eastern Ghats, Andhra Pradesh.

DISCUSSION

Looking at the composition of the artefactual assemblages, the backed blades which predominate in the Gunjana Valley and Renigunta sites are either sparse or absent at some Kalletivagu sites. For instance, they are not found at Kutalamarri and Mallemadugu, although they do occur in small numbers at Marlabailu, Peddayapalli and Damancherla. However, I have designated all these sites as Upper Palaeolithic on the basis of the very fine blade element (Figure 1), and the presences of bored stones and grindstones, neither of which have been reported so far from Middle Palaeolithic contexts in India. As this is only a preliminary investigation, and as no biological remains have been recovered and dated, it is impossible to comment further on dating.

As the region still has a 70-100% vegetation cover, it is impossible to know the total number of sites present at this stage. It was only possible to cover the ground which was relatively free of vegetation. It is likely that there are many more sites/occurrences. It is interesting to note that T.S.R. Murty (1973) and H.N. Singh $\underline{\text{et}}$ $\underline{\text{al}}$. (1968) have reported a total of 84 Early and Middle Stone Age sites along the various tributaries of the Penneru River in Nellore District. Although no details of the artefact assemblages or the natures of the sites are given in the reports, they surely indicate the potentiality of the region for Palaeolithic research. It further seems not unreasonable to speculate that some of these sites may belong to the Upper Palaeolithic.

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