CHAPTER X

SUMMARY AND CONCLUSIONS
The area covered in the present study includes the western part of Kurnool district and the entire Anantapur district. Its importance lies in the rich archaeological remains which attracted the attention of some geologists and amateur archaeologists since the middle of the last century.

Captain Meadows Taylor and Robert Bruce Foote were mainly responsible for the early discoveries of the relics of pre-historic man in this part of the Peninsula. The former had recorded a large number of megalithic monuments in the fifties and sixties of the last century in Rayadurg and Dharavaram taluks in Anantapur district, and Adoni taluk in Kurnool district; while the latter beginning from 1865 had collected a large number of antiquities belonging to Late Stone Age, New Stone Age and Megalithic Culture. However, no systematic exploration and study of this area had been done.

After these initial discoveries no work was done in this area, though in its neighbourhood, particularly in Karnataka, considerable evidence of the neolithic culture was brought to light. The present work was undertaken with the aim of conducting an intensive and systematic exploration of the region to reconstruct its pre-historic cultures against the background of the available evidence from North Mysore.

Explorations were carried out by the writer during 1965-66. These brought to light 14 late stone age sites, 35 neolithic sites, 14 assemblages, one iron-smelting site and a large number of various types of megalithic monuments at 17 places. This list includes some of the known sites also since the aim was to make the account
geographically comprehensive. Subsequently, an excavation was
planned and carried out on two of the mounds at Palavoy in
Kalyandrug taluk of Anantapur district in 1967.

The sites are geographically distributed in the northernmost,
northern and central divisions respectively consisting of Adoni
and Alur; Urvakonda; Gooty and Tadipatri; Anantapur; Dharmavaram;
Kalyandrug and Rayadurg taluks. In the southern division only in
Kediri taluk a late stone age site was found. Other taluks com-
prising Hindupur, Penukonda and Madakasira have not revealed any
remains of pre-historic man. However future work in these taluks
might yield the remains of early man.

The sites are either at the feet, slopes and tops of
castellated granite hills, or in isolated fields, or sometimes,
on the river banks. The river bank sites are mostly on the Tunga-
bhadra.

A study of the archaeological materials collected from the
surface of several sites and from the excavations at Palavoy un-
folded a sequence of three distinct cultures: Late Stone Age
(Palavoy I), New Stone Age (Palavoy II) and Iron Age (Palavoy III).
These cultures could be reconstructed with the help of stratigra-
phy, techniques, typology and state of preservation of the arti-
facts. Besides, below the neolithic levels at Palavoy were found
heavily patinated trap flakes showing striking affinity to those at
Sanganakallu, which depict Levallois type technique. As at Sanganak-
allu, the upper portion of this flake industry yielded a few
microliths of chert and quartz similar to those of the Late Stone
Age of our region. However, the exploration in the region did not
yield any finds of Early and Middle Stone Age cultures though
Robert Bruce Foote had found a solitary cleaver of quartzite on
the Vidupanakallu West Hill from where relics of neolithic man were also found by both Foote and the writer. Future investigations may however yield Early and Middle Stone Age tools in smaller areas are taken up for intensive exploration.

The earliest remains of man in the region are artifacts of the Late Stone Age culture. These were found on the surface of 14 sites mentioned earlier and stratigraphically confirmed by the discovery of a Pre-Neolithic period at Falavoy. Among the explored sites of this culture (Fig. 2) eight are located in the Kurnool district and the remaining six in Anantapur district. Seven of the former sites are located on the bank of Tungabhadra while the remaining one, namely, Kolimigundla, is located on an open strip of rocky waste land with a sparse growth of stunted shrubs about half-a-kilometer south of the village. Of the six sites in Anantapur district, three are situated on perennial rivers or streams, while of the remaining three one each is situated on the bank of a seasonal stream, a small rocky hill and in a field respectively.

From the above account of the distribution of the microlithic sites it can be concluded that the Late Stone Age man in South-Western Andhra Pradesh mostly lived along river banks in an arid to semi-arid environment. This kind of ecology is, however, comparable to that of Balia Nadi in Singrauli Basin, Birbhanpur in West Bengal, sites on the river Sanjay in Bihar, along the Mahi and Sabarmati in Gujarat, those on the Sagileru in Cuddapah and Kurnool districts and locality-3 in Chittoor district. The location of some sites away from river banks shows that the Late Stone Age Man used these as camp sites and the food economy might have been different from that of the river bank sites.
The chief raw material for the preparation of artifacts of Late Stone Age is chert of various colours though other rocks like chalcedony, agate, quartz, jasper, etc. were also employed in small quantity. These occur in the form of water-worn pebbles of various sizes in the case of river bank sites while on other sites the materials occur in the shape of nodules which appear to have been imported from distant places.

The Late Stone Age industry is based on blade production. Blade tools were produced by the technique of steep retouch.

Typologically the Late Stone Age industry is characterised by flakes, blades and microliths including backed blades, obliquely blunted blades, truncated blades and lunates. Other finished tools are points, borers, scrapers and notched flakes. The industry is basically non-geometric in character.

The Pre-Neolithic period (Palavoy I) which comes from the upper portion of layer 14 touching the sterile layers from Palavoy yielded flake cores, flakes, blades, an obliquely blunted blade and a scraper. This industry though poor in quantity and types is strikingly similar to that from the surface. This microlithic industry overlies the patinated flake industry found in the basal zone of layer 14. To say when this new industry arrived at and from where we do have no direct evidence. Both the Pre-Neolithic industries of Palavoy are devoid of pottery.

From the nature and distribution of late stone age sites, raw materials and typo-technological aspects it appears that the culture originated locally probably from the patinated trap flake industry.

The next and better known period is the Neolithic Culture
equivalent to Talavoy II. This culture has been found at 35 sites of which four are located in Adoni and Alur taluks of Kurnool district and the rest in Anantapur district. In Anantapur district, the sites are concentrated in Uravakonda and Kalyandrug taluks touching Mysore State on the west and south, while in the other taluks like Dharmavaram, Rayadurg and Anantapur only stray sites have been found. Two of the former sites are on the bank of Tunga-bhadra river while the remaining are situated at the feet, slopes and tops of castellated granite hills which possess natural rock shelters, open spaces covered by granite boulders, and natural water-cisterns quite suitable for habitations. The granitoid hills in this region as well as in the neighbouring Bellary and Raichur districts are traversed by several trap dykes, which rise mostly in the form of crests and ridges. The close association of New Stone Age sites and granitoid hills indicates that the neolithic man preferred to occupy the granite hills not only for his habitation but to exploit the trap dykes to manufacture the pecked and ground stone tools which formed the chief artifacts of his technology. Thus the physiographical and geological features have remarkably contributed to the establishment of neolithic settlements in our region. This phenomenon is also seen in Bellary and Raichur districts because the physiographical features of these areas are largely similar to those of Anantapur and Kurnool districts.

The evidence of this culture from the surface of several sites consists of pecked and ground stone and blade industries, ceramics and beads.

The chief raw material for the manufacture of pecked and ground
stone tools consist of dolerite/basalt and other rocks like epidote, granite, granite, granodiorite, diorite, greenstone, pegmatite, schist, quartz, sandstone and granite gneiss. The tools of this industry exhibit three techniques, namely, flaking, pecking and grinding for different purposes at different stages in the manufacture of a tool. The most important tools of the industry are 'axes' and hence some scholars even named the whole culture as "Polished Stone Axe Culture". Other types are adzes; chopper-chopping tools; core scrapers; chisels; flake tools including points, borers and scrapers; picks; rubbing stones; saddle querns; axe hammers; hammer stones; sling stones; ring stones; anvils and a few miscellaneous tools. These tools occur in large quantities at the sites of Katasadavudi Hill, Velpamsadugu, Budagavi Hill, Gulepalyam, Hulikal, Hevaligal, etc.

The blade and microlithic industry is similar to that of late stone age in all respects except one, namely the presence of crested guide ridge technique in this period. Also the proportion of finished tools (11.36%) in this industry is slightly less than half of that in the Late Stone Age (23.53%), whereas the blade element is relatively more (25.97%) than that of the latter industry (18.53%) indicating the predominance of blade element in the technology. Besides crested guide ridge flakes, trapezes characteristic of this culture are absent in the Late Stone Age.

The chief ceramics consist of handmade unburnished and burnished blotchy grey and dull red wares and a small quantity of black-on-red ware. The most common forms are globular pots of various sizes. Other shapes include spouted pots; basins; lugs; ladles and handles of pots; bowls; lipped vessels; carinated pots with high cylindrical neck. The decoration consists of horizontal
bands in ochre paint, impressed, perforated and incised designs. Designs in black paint consist of simple horizontal and vertical bands, and short strokes on the rim, lattices, loops, chevrons or sometimes a broad horizontal band from which are suspended several vertical zig-zag bands on the external surfaces of pots.

Objects of ornaments in the form of beads of steatite and a few of agate, carnelian and chert occurred.

All these traits have been found in the excavations at Palavoy. The Neolithic Culture designated here as Palavoy II, and represented in layers 11 to 9, is separated from Palavoy I by a gap of two sterile layers. The excavations showed that the people lived in small circular or rectangular huts with walls of mud and roof probably of thatch. Later people of this culture knew the use of copper. Painted pottery handmade with the help of mould, is in large quantity (10.69%) and occurs in all the strata of this period. The characteristic pot types of Jorwe and Revasa are absent in this ware and so it appears to be of local origin.

Bone tools comprising scrapers, blades and points occurred in this period. The first mentioned type of tools resembling ground stone axes in shape, size and technique of manufacture has been found for the first time in Neolithic levels in India. Other finds from this period include several unbaked clay objects and a grey ware disc whose significance has already been discussed earlier. The occurrence of four vertical child urn-burials indicates the belief of these people in future life. The dead were buried outside the houses. The people of this culture domesticated *Bos indicus* (ox) and *Bos bubalis* (buffalo), sheep and goat, hog and dog. The large number of bones particularly of cattle showing splitting,
cutting and chopping marks and charring condition throws light on the food economy of the people. These animals appear to have been domesticated for their milk and meat. Some of the cattle bones particularly joints showing heavy marks of concussion (for details see pages 315-6) indicate that these animals were used for heavy and prolonged draft-work in agricultural operations. This is also indicated at Sangenakallu.

Plant remains like Zizyphus, Acacia or Dalbergia species reveals that the people lived in an arid climate.

The stratigraphical break between the Pre-Neolithic and Neolithic levels represented by two sterile layers indicates that the neolithic people occupied the site long after the disappearance of Late Stone Age Culture from this site. The actual date from which the site was occupied by the neolithic people will be known only when carbon-14 determinations for charcoal samples are available.

The last period is represented by Iron Age which is designated as Post-Neolithic period (Falavoy III) at Falavoy. This is known from various types of megalithic monuments like port-hole cists, dolmens, circles and menhirs from 17 sites. Majority of these are associated with neolithic settlements, while a few like those at Thimmaganipalli are a little away from them. Megalithic black ware, black-and-red ware, red ware, chocolate-slipped ware and coarse grey ware were found at these sites. The common shapes are shallow dishes, bowls, basins, vessels with concave neck, carinated pots, ring stands, globular pots of big and small sizes and a wide trough. The decoration consists of incised and impressed which occur chiefly on the exterior of red ware pots. Graffiti marks in the form of arrowheads or squares occur on the external
surface of pots of black-and-red and red wares. Besides, discs of red and black wares were also found.

These evidences can be compared to those from the Post-Neolithic period at Palavoy. This period designated as Palavoy III includes layers 8 to 2. Among these, layers 7 and 2 consist of vitrified ash deposits. These two layers have been separated by a fairly thick deposit of four layers (layers 3 to 6) each sealed by a floor. A similar floor occurs below layer 7. The deposits of all these layers differ strikingly in composition and contents from the strata of the earlier two periods. The arrangement of the vitrified ash lumps as seen in the section recalls the shape of a number of small-sized kilns or ovens. The finds from this period are iron-ore and slag pieces, an iron nail and a ring and typical megalithic pottery of black-ware, black-and-red ware, red ware and chocolate-slipped ware. Domestication of cattle, sheep and goats is known from this period. This period directly succeeds the neolithic but the date for it is not yet available. However on the basis of our observations of the vitrified ash deposits and the archaeological evidence comprising the above, these are thought to be the result of iron-smelting by Post-Neolithic communities. This has been supported further by the occurrence of iron ore and slag pieces on and around the ashmounds, megalithic monuments in the close vicinity and an iron-smelting site as at Mudigal. Further the geographical distribution of ashmounds in South-Western Andhra Pradesh shows that they occur mostly by the side of neolithic settlements and megalithic monuments. This is clear when we look at the iron ore distribution map of South India which shows that these ashmounds are located in areas where iron ores could be easily procured for smelting activities. Thus, our observations and archaeological
evidence from the excavations do not add to the theory that the cow dung was seasonally burnt by the neolithic pastoralists for some kind of ritual purposes. However, to confirm our evidence at Palavoy, we suggest further excavation of some more ashmounds.

Conclusions:

The writer's investigations for the relics of early man in South-Western Andhra Pradesh brought to light a succession of three distinct cultures: Late Stone Age, New Stone Age and Iron Age. These three periods can be correlated to Pre-Neolithic period (Palavoy I), Neolithic Period (Palavoy II) and Post-Neolithic Period (Palavoy III) discerned in the ashmound excavations at Palavoy.

The earliest remains of man were found in the form of deeply patinated basaltic flake industry confined to the lowermost portion of layer 14 exhibiting Levallois-type technique. These flakes antedated the Late Stone Age culture.

The Late Stone Age culture is known from the surface of several sites in our region. On the basis of our evidence from the upper portion of layer 14 in the Palavoy excavations we can say that this culture is chronologically anterior to the Neolithic Culture of the region. The number of sites is too small to known the full distribution of this culture in the region.

Both patinated flake industry and microlithic industry are strikingly similar to those found at Sanganakallu.

The Neolithic Culture is fairly wide-spread in the region particularly in the west and south-west parts touching the Mysore State. This culture is represented in layers 11 to 9 in Palavoy excavations. There is no direct proof to say that this culture has
immediately succeeded that of the Late Stone Age because in the excavations at Falavoy we found a stratigraphical break of sterile layers between this (Falavoy II) and the Pre-Neolithic period (Falavoy I). However, on the basis of the radiocarbon dates available for neolithic sites in South India, the Falavoy Neolithic Culture may be dated generally between 2200 B.C. and 1000 B.C., and more precisely between 1800 and 1500 B.C. More specific dating will be possible when C-14 dates for Falavoy itself are received from the laboratory.

The Iron Age remains have been found to be very extensive in the region. There is a sudden follow-up of this culture with that of the Neolithic. The period is represented in layers 8 to 2 in ash mound excavations at Falavoy. On the basis of the archaeological finds from the excavations the writer contributes to the view that the cause or causes for the formation of vitrified ash deposits lay in the activity of iron-smelting by Post-Neolithic communities.