



## PROTOHISTORIC CULTURAL PHASES IN TELANGANA STATE: AN OVERVIEW

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**Abstract:** *The present paper is about an overview of Protohistoric cultural phases in the present Telangana state in southern India portraying the settled way of life of early human population practicing agriculture and animal husbandry along with ceramic production. We find permanent settlements in the form of villages and subsequent development into Iron Age Megalithic culture. Beginning of permanent settlements during Neolithic period was, in a broad socio-cultural point of view, spread across three micro-regions, i.e., the Godavari valley comprising the districts of Adilabad, Karimnagar, Warangal, Medak, Nalgonda, Hyderabad and Khammam; the Tungabhadra valley of Gadwal taluk and Krishna valley in the Alampur and Kalvakurthi taluks of Mahabubnagar districts respectively. However, the sites located in the first micro-region did not show the evidence of ash mound tradition, denoting the middle stage of southern Neolithic culture (e.g., Polakonda C<sup>14</sup> 1405±124 BCE or calibration of 1700-1415 BCE), whereas the second micro-region is characterized by the presence of ash mounds, e.g., Utnur, Manchanpalli, Ieeja and Talmari-Kutukunuru, belonged to the early stage of southern Neolithic culture of the period between 2920-2535 BCE (Utnur 2295 ±155, 2555±113 and 2040±113 BCE: Allchin 1961), whereas, the sites in the third micro-region located in the Krishna valley belonged to the Neolithic-Chalcolithic stage of both middle and later stages of southern Neolithic culture, and the overall picture of Neolithic culture can be broadly identified as early Neolithic, Neolithic (with stages I to IV) and Neolithic-Chalcolithic culture followed by Iron Age Megalithic culture broadly classified into habitation sites, habitation-cum-burial sites and burial sites based on their location alongside the drainage system of Godavari river 115 (of 6, 15 and 94 respectively), in the Krishna drainage system 396 (of 15, 111 and 270 respectively), etc. The habitations are found away from hills but invariably close to water sources,*

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*whereas, the habitation-cum-burial sites can be distinguished as a separate variety. However, those found close to water sources and the cemeteries are connected to habitations lying either at the foot-hill region or on the terrace of low-lying hill or hillocks with numerous large sized burials.*

**Keywords:** *Agro-pastoralists, Symbiosis, Mortuary practices, Cinder mounds, cattle-pens, Utilitarian, Crypto-crystalline, Accumulation, Sarcophagi and Spatio-temporal context.*

## Introduction

In view of cultural progress the Protohistoric period can be considered as an important time period as it lies between the barbaric and illiterate phase of Prehistory and literate phase of Early History of human past. The southern peninsula, especially the whole region of erstwhile Andhra Pradesh, Karnataka and Tamil Nadu forms the best example in this regard due to emergence of early human groups in the form of sedentary villages during Neolithic-Chalcolithic periods that subsequently developed into yet another advancement during Iron Age Megalithic period and have been collectively designated to Protohistoric phases even though both exhibit rudimentary architectural features and lack of language, but was contemporary to the Harappan Civilization and Deccan Chalcolithic Cultures in a spatio-temporal context. Neolithic culture is marked by material culture (pecked and ground stone and blade tool industry, pottery, domestication of plant and animals supplemented by fishing, gathering and hunting) occupying granite terrain fitted with hills and hillocks, and gone through a Chalcolithic phase representing the continuity of similar way of life but usage of copper tools and objects, and as such it cannot be distinguish much from its preceding stage of life. Whereas, the next period of life, Iron Age Megalithic culture is represented by the construction of mortuary burials and limited number of habitations as their fundamental and significant identity in entire south India. The Neolithic-Chalcolithic cultures, are well documented by the research works of several individual scholars (Allchins 1968 and 1983; Sundara 1968, 1971b; Subbarao 1958;

Nagaraja Rao 1971; Murty 1989:65-81; Paddayya 1973; Ravikorisetar et.al 2002:151-238; Krishna Sastry 1983 and Venkatasubbaiah 2007) and the life ways of these pastoral-cum-agricultural communities have been visualized through several stages of variability, i.e., Phase I (2500-1800 BCE), Phase II (1800-1500 BCE) and Phase III (1400-1050 BCE: Murthy 1989:65-81).

However, more recently it has been proved that the early stage of this cultural period being assigned to third Millennium BCE known through Watgal excavations giving rise to prevalence of Neolithic-Chalcolithic (for details see Devaraj et.al 1995: 57-74) and was subsequently succeeded by Iron Megalithic Age predominantly known by the practice of erecting burials in different forms through ritualistic performance with district material culture being interred in them as per the cultural progress.

The Neolithic period represents the cultural development of food-producing economic way of life with permanent settlements and sedentary way of life (a revolutionary process through incipient agriculture and pastoralism which include all possible processes of taming animals and domestication of plants as an act of symbiosis), either of which followed the other, projected to utilize all naturally available resources in a region to a maximum amount of socio-economic benefit more particularly in the succeeding Megalithic period with mortuary practice of building burial monuments. The present paper is an overall attempt to visualize the eastern expansion of southern Neolithic agro-pastoral groups into Telangana which, by and large, shows similar characteristic features in

the settlement and subsistence pattern, however certain intrusive elements have been pertinent due to either introduction of new material culture like copper /bronze, pottery, technology, etc., or cultural traditions like burial practices, art and architectural features, etc. The present study demonstrates a comprehensive picture of the first farming communities in the semi-arid climatic conditions show the way to have set foundation for the present day village life in the area concerned.

**The Study Area**

The present State of Telangana (Fig.2.1a & b) lies between 17° 36' - 18° 00' North Latitudes and 78° 47' 60" - 79° 30' East Longitudes with an area of 1, 14,800 sq. kilometres, situated in the central stretch of Eastern seaboard of Indian Peninsula forming part of Deccan plateau and physiographically it forms a continuous Maidan part of Karnataka plateau composed of Archaean gneisses characterized by rounded hills, rolling plains, broad open valleys and heaps of rocks and boulders. The northern section, along the lower Godavari trough, was the fault preserved with a belt of Gondwanas. It is drained not only by two major rivers, the Godavari (79%) and the Krishna (69%) but also many minor rivers that flow comprises Manair, Bhima, Dindi, Kinnerasani, Manjeera, Munneru, Moosi,

Penganga, Praanahita, Peddavagu and Taliperu. Geographically the region is divided into two main parts, the Eastern Ghats and the plains, dotted with low depressions bordered by the states of Maharashtra, Orissa, Chhattisgarh to the north, Karnataka to the west, and Andhra Pradesh to the south and east and experiencing a semi-arid climate with predominant hot and dry climate reaching peak in May with an average high temperature of 42 °C (108 °F), whereas, the monsoon arrives in June and lasts till September with about 755 mm (29.7 inches) of precipitation. A dry and mild winter starts in the late November and lasts until early February with little humidity with an average temperature range between 22–23 °C (72–73 °F) and receives an annual south-west monsoon rainfall between 900 -1500 mm over the northern and 700 – 900 mm in the southern regions. Various soils abound the region comprising chalkas, red sandy, dubbas, deep red loamy and very deep black cotton that facilitates house gardens of mangoes, oranges and flowers. About 45 % of the forest area of erstwhile Andhra Pradesh State covers five districts of Telangana i.e., Adilabad, Karimnagar, Warangal, Khammam and Nalgonda. The central Deccan Plateau with dry deciduous forest covers much of the state including Hyderabad and its vegetation context comprises woodlands of *Hardwickia binata*

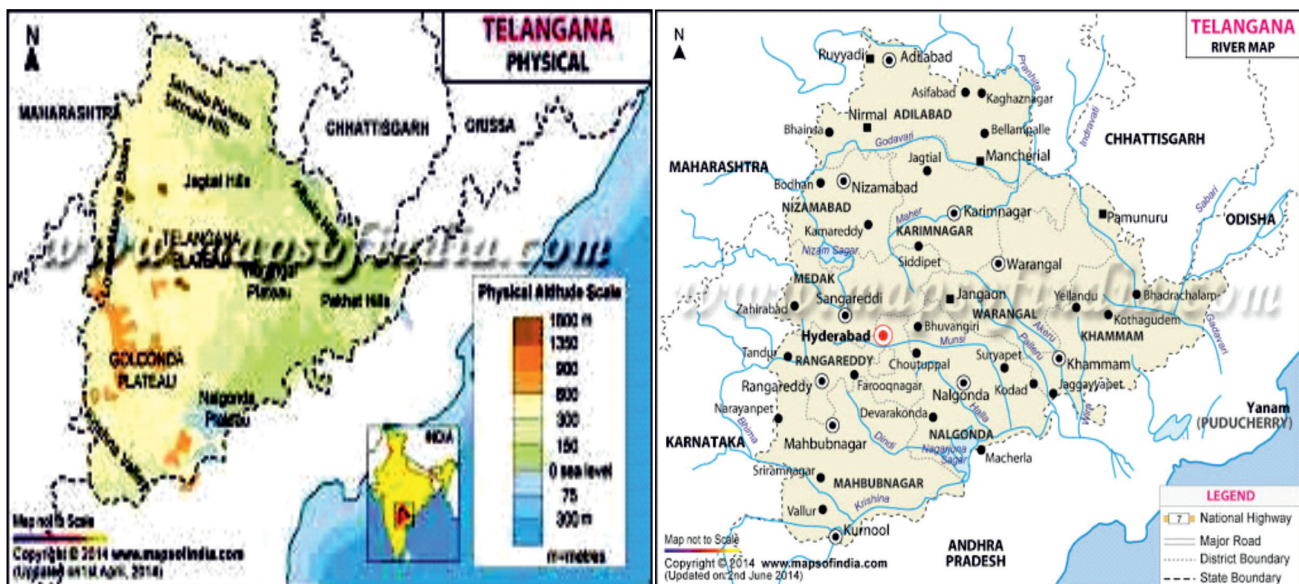


Fig. 2.1: a) Physiography and b) Drainage Map of Telangana State.

and *Albizia amara*. Over 80 % of the original forests have been cleared for agriculture, timber harvesting, or cattle grazing, but large blocks of forest can be found in Nagarjunasagar-Srisailem Tiger Reserve and elsewhere. The more humid Eastern Highlands with moist deciduous forest covers the Eastern Ghats lying in the eastern part of the state.

### Neolithic Culture

The overall total of Neolithic settlements accounts to 78 sites (for details see Ravi korisetar et al 2002:Appendix III:436-457; Sarma 2003: 88-106; Krishna Sastri 1983:19-49; Subramanyam 1997:49-52; Varaprasada Rao 2002:25-27: Indian Archaeology A Review for the years 1958-59:10-11;1959-60:12;1961-62:2-3;1962-63:2; 1963-64:4; 1964-65:1,4; 1965-66:4; 1967-68:2,5; 1968-69:1-2;1982-83:1;197071:1-2;1971-72:2-3; 1973-74:5; 1974-75:3-4; 1975-76:5; 1976-77:8; 1977-78:11-13;1978-79:3; 1982-83:8; 1983-84:5;1984-85:6; 1987-88:3,7,8; 1988-89:2,101;1989-90:2;1991-92:3; 1992-93:5;Annual Reports of Departement of Archaeology and Museums for the years 1960,1982-83:3;1985-86:12;1986-87:3,12;1987-88:3-4,134; Journal of Andhra Pradesh Historical Research Society 1971-72:48 and 1972-73:48) which are distributed 7 in Adilabad, 8 in Karimnagar, 42 in Mahabubnagar, 5 in Nalgonda, one each in Hyderabad and Khammam districts, 6 in Medak and 8 sites in Warangal districts were located through explorations conducted by various scholars (Fig.2.2). Some of the important sites that had undergone trial and major excavations are dealt in the text which include Budigapalli, Thogarrai and Kadambapur in Karimnagar district; Peddabankur, Polakonda, Kalakonda and Devaruppala in Warangal district; Chinnamaruru, Peddamaruru, Kudaveli, Karpakala, Utnur and Ieeja in Mahabubnagar district.

However, the present author's explorations as part of ICHR research project added few more sites, i.e., two in Adilabad district; six sites

(recently discovered) at Manopad (Figs.2.3,2.4 & 2.5: Neolithic habitation and material culture), Chinnapotulapadu, Amaravayi, Gokulapadu, Uppala and Inagandla, in Mahabubnagar district; three sites in Karimnagar district (Sarma 2003) at Uligeppalle(AAR 1980-81:8), Chandrayanipalle (AAR 1983-84:11), Cheruvugattu (AAR1985-86:8), Lingasanipalli (AAR 1979-80:18) and five sites in Mahabubnagar district (Subramanyam 1997; Varaprasada Rao 2002);one site in Warangal district(Sarma 2003) at Tadipalli(AAR 1986-87:2) and four other sites in Nalgonda district(Sarma 2003, IAR 1961-62:96;IAR 1958-59:9-10); one site (Sarma 2003) in Hyderabad district; one site in Khammam district (Thimma Reddy and Murty 1988:21); at Mantoor (AAR1983-84:4), Paladugu(AAR 1986-87:10) and four other sites in Medak district(IAR 1959-60:1-2). In wide cultural perspectives, the Neolithic culture in the region, can be divided mainly into three stages, the early Neolithic, Neolithic and late Neolithic or Neolithic-Chalcolithic as given below:

### Early Neolithic

Peddabankur is the only site in Telangana which represent the levels of early Neolithic in which only stone artefacts like fluted cores, with pointed flat or chisel ends, along with crescents or lunates, parallel-sided blades, leaf points besides a unique arrow-head of milky quartz found in a thin gravel layer capping the natural morrum-bed. This implementiferous layer was sealed by a thick deposit of black cotton soils of 45 cm. associated with highly weathered and fragile pottery of dull red ware which does not indicate a true Neolithic horizon but an early stage of Neolithic period in the region. However, rich evidence of ground stone tools suggest Neolithic period and the absence of true pale grey, brown and black wares of typical Neolithic in the sterile soil cap indicate an early stage which is well compared to Sanganakallu in Karnataka and Nagarjunakonda in Andhra Pradesh. Thogarrai and Peddabankur stand as best exmples of factory sites discovered over a granite outcrop and the collection

include large number of unfinished ground stone tools made on dolerite besides a good number of fashioned axes and adzes. At Kadambapur besides several neolithic axes found in the slopes of granite hills and hillocks, abutting the river Maneru, many rock shelters and caverns along with a few hand made grey ware, etc. However, a number of grinding grooves noticed over the granite outcrops suggestive of typical Neolithic activities found at Oklahoma, Devaruppla, etc.

### Neolithic

This stage is noticed at Polakonda in the Godavari valley and at several sites in Krishna-Tungabhadra doab, e.g. Peddamarur, Chinnamarur, Pragatur, Seruopalle, Pallapadu, Budidapadu, Chagatur, etc. In the Godavari valley of the present region, Polakonda stand as a best example of this stage in Telangana. The Neolithic habitation here is two metre thick and the ceramic assemblage consisted of grey (Fig.2.6: a Neolithic grey ware pot), pale grey, blotchy brown, pale red and small fragments of black ware. The pottery from the early levels is more gritty and distinguished by low firing by leaving a thick black core. A few sherds showed decoration of incisions of oblique slashes, chevrons, and cord and finger-nail impressions. The neolithic phases at this site may correspond to Phase II, sub-period II of Sanganakallu. As such the cultural sequence of the Neolithic culture at Polakonda belonged to four stages, i.e.

Stage-I is characterized by fresh stone axes, and flakes, associated with pale grey, blackish grey, reddish brown and small quantities of burnished ware. No red ochre or pre-firing purple pottery was noticed in this stage. The stone blade industry is scanty and also the knowledge of metal. Absence of floors and rarity of beads, etc. suggestive it as the early stage of Neolithic;

Stage-II is represented at Utnur, Maski, -I, the lower Neolithic of Piklihal and parts of Brahmagiri which is characterized by ground stone axe industry, a rudimentary flake-blade tradition, domestication of cattle, sheep, goats, etc. The pottery consists of handmade grey, brown, buff

and less amount of black or red burnished ware, slipped with purple painted decoration. Black-on red ware appears first time on the scene. There are a few terracotta figurines of humped cattle and birds as at Piklihal, Sanganakallu, besides rock paintings and brushings. Post-holes and rammed earth floors in various levels suggest that the structures were made of perishable material but no traces of definite house plans and building material. Copper has already been introduced representing the evidence of a rod of indetermined use. Stone beads made of amethyst, carnelian, agate, chalcedony, and coral shell, glass, etc. are prolific. Animal remains of fresh water mussel, common rat, short-horned humpless cattle, buffalo, sheep and goats were also discovered. Domestication of these animals demonstrates a pastoral economy in the early stage but later on there was a development of food production;

Stage-III is marked by mud-floors and circular hutments, bronze and copper objects, crude microliths of jasper, flint, agate, common opal, and other locally available raw materials (like that of represented at Brahmagiri-I (a and b), Tekkalakota-I, T.Narsipur-I and Nagarjunakonda) besides hand-made pottery of coarse and burnished grey ware with types like simple globular, perforated and spouted vessels, with occasional painted sherds and incised wares. Burials of infants, with bodies folded-up, packed into pots. The inhumation and extended burials, the process of excarnation and secondary burials and double burials represent different modes of the disposal of the dead;

Stage-IV is marked by the specialized types of copper implements, and profuse blade industry. Pottery consists of burnished grey ware, burnished brown and black ware, coarse dull red and painted wares akin to the Jorwe fabric, prolific stone axe and blade industry. The latter is marked by parallel-sided blades and lunates. Copper objects constitute double-edged axes and fish hooks. House floors were paved with locally available schists of Gondwana formation. This stage has similarity to that of Tekkalakota-II, Payampally and Hallur-

II of period I. It is also marked by urn-burials found at Tekkalakota, Hallur and Brahmagiri in the Krishna-Tungabhadra region in Karnataka, Daimabad and Nevasa of Deccan Maharashtra and Nagarjunakonda of Krishna valley in Andhra Pradesh. In a broad socio-cultural point of view, the Neolithic culture in the region constitutes three categories of sites located in three micro-regions, i.e. (i) In the Godavari valley comprising the districts of Adilabad, Karimnagar, Warangal, Medak, Nalgonda, Hyderabad and Khammam; (ii) In the Tungabhadra valley of Gadwal taluk and (iii) Krishna valley in the Alampur and Kalvakurthi taluks of Mahabubnagar district respectively. However, the sites located in the first micro-region did not show the evidence of ash mound tradition, hence belong to the middle stage of southern Neolithic culture (e.g., Polakonda C<sup>14</sup> 1405±124 BCE or calibration of 1700-1415 BCE), whereas the second micro-region is characterized by the presence of ash mounds, e.g., Utnur, Manchanpalli, Ieeja and Talmari-Kutukunuru, belonged to the early stage of southern Neolithic culture of the period between 2920-2535 BCE (Utnur 2295 ±155, 2555±113 and 2040±113 B.C.: Allchin 1961), whereas, the sites in the third micro-region located in the Krishna valley belonged to the Neolithic-Chalcolithic stage of both middle and later stages of southern Neolithic culture.

Settlement pattern studies forming one of the core concepts in archaeology investigates the areas of human occupation. The possible characters of settlement pattern studies provide insights into a broad spectrum of human behaviors that were influenced by cultural and ecological factors. This holistic approach is applicable to the Neolithic culture in the region as they perhaps spend the wet season in upland villages along the rivers, foothill regions, on granite-terrains and the dry season in cattle camps either in forest zones or in the plains, away from settlements. In the former they sustain mainly on meat, grain and other foraging-gathering material and in the latter on fishing, hunting and cattle, sheep or goat milk. The ecological setting of these Neolithic

settlements may be similar to the present day semi-arid climate, characterized by thorn and scrub jungles and interspersed by grass lands. The prolific collection of stone axes at several sites appears to indicate that they were used for felling trees and the area must have been thickly covered with jungle during neolithic times. Semi-arid climatic condition was evidenced by the presence of some plant remains such as Acacia, Dalbergia and Zizyphus ('Thumma' and 'Ber' or 'Regu' in Telugu). This has the support of the evidence of similar species at Maski and Hallur (teak) and Zizyphus from Kodekal.

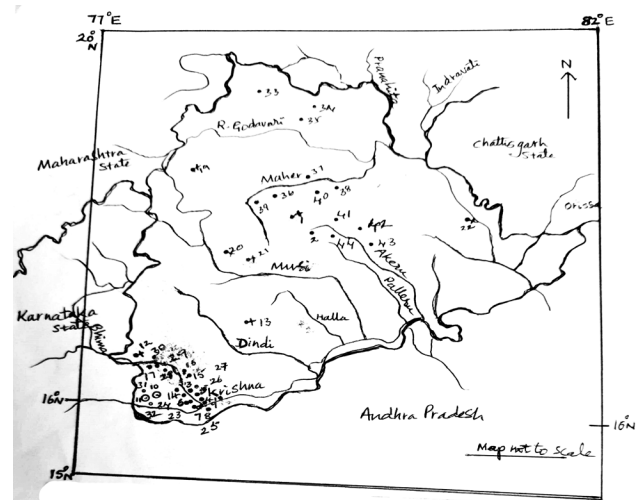


Fig. 2.2: Distribution of Neolithic-Chalcolithic and Megalithic site in Telangana



Fig. 2.3: Neolithic habitation at Manopad



Fig. 2.4: Neolithic material from Manopad on surface (Rubble stone, Chert nodules, broken quern, potsherds)



Fig. 2.5: Neolithic material from Manopad (Muller and Rubble stone)



Fig. 2.6: A Neolithic pot from Polakonda (Courtesy IAR 1976-77, Plate.II B)

### Neolithic-Chalcolithic

The cultural pattern of Proto historic period, i.e. the Neolithic-Chalcolithic culture, reveal a three phases as mentioned above represent the earliest settlements on top of granitoid hills or on naturally formed terraces above them or leveled on hillsides or between hillocks and some of the best- documented sites are found in Karimnagar district in the middle Godavari valley (Krishna Sastry 1983:19-50) and at Utnur (Allchin 1961) in the Tungabhadra valley and also drained by small tributaries, streams and springs. Mention may be made of other settlements on banks of Maneru river, e.g. Thogarrai, Kadambapur, Peddabankur and on Peddavagu river, e.g., Budigapalli, Polakonda, Devarapalli and Kolakonda. Settlements of Phase-II show more or less similar occupation pattern but structural activity within settlement became more apparent with mud-plastered walls, circular wattle-and-daub huts on wooden frames and plastered floor. Whereas, Phase-III being culturally designated to Neolithic-Chalcolithic, due to proliferation of copper and bronze objects for the first time even though the evidence of metal smelting is not found. An important enigma of Neolithic culture of South India being the attachment of Neolithic settlements that began in the phase-I, which continued in the succeeding phase geographically confined only to the south, south western region of Telangana (e.g., Utnur, Allchin 1961) and discontinued in phase-III which may be considered as the process of socio-economic variation in a spacio-temporal perspective. As such settlements during phase-I and Phase-II are limited in extent whereas in Phase-III, there was an expansion of settlements due to development of agriculture along with domestication of cattle occupying along the banks of rivers and their tributaries and in certain areas even occupying the seasonal streams, etc.

### The Cultural Component

Pottery forms the principle cultural material either for self use or commodity of trade,

consists of coarse fabric of handmade variety in the first phase of habitations, eg. Utnur, Ieeja, Peddamarrur, Chinnamarrur, Polakonda, etc. but later on, due to improvement in manufacturing technique and necessity turn-table, beater and anvil techniques (indicated by striation marks and uneven thickness of body) were preferred in the second phase and slow-wheel was introduced in the subsequent Chalcolithic phase. Apart from regular shaping methods employed there was an application of secondary devices such as handles, lips and spouts. The technique of surface treatment, burnishing and application of slip were the principle criteria in the recognition of various ceramic fabrics i.e., red ware (both burnished and slipped), grey ware (burnished and slipped), brown ware (burnished and slipped), buff ware, dull red ware, buff ware (burnished) and black ware (burnished) and black-on-red ware of black painted designs in the form of lines, strokes, bands executed before firing which occur only in red ware akin to Jorwe at Polakonda, which is found less in quantity from sites located in the Tungabhadra valley, the southern extremity of early Neolithic settlements with ash mound tradition. The application of other pattern of decoration, i.e., incisions, finger tip & mat impressions, perforations and paintings proposes to a simple bonfire kiln (mixing a lot of fuel and pots on bare ground) technique of firing the Neolithic pottery but it seems there existed specific kilns for

this purpose, e.g. Polakonda (Krishna Sastry 1983:37) made of thick walls of clay. Due to adoption of manufacturing technique and firing, the brown and black ware of Chalcolithic phase evolved into pure black-and-red ware in the later stage of Neolithic culture in the region. The vessel forms in phase-I basically comprising bowls, dishes, basins, vases and pots but the introduction of secondary devices in phase-II resulted in the production of new vessel forms, i.e. channel spouted bowls (Allchin 1962b:221-24), cups, lotahs, jars, goblets, bases, lids, etc. As such, all the pottery forms are utilitarian type for cooking, serving liquids (derived from cereal food) for

drinking, carrying and serving, etc.

Neolithic cultural stage is distinct by pecked and ground stone tool industry based on the processes of flaking, pecking, grinding (granite outcrops served for the purpose of grinding edge tools: grinding grooves are reported from Kadambapur) and polishing consists basically edge tools (Figs. 2.7 & 2.8) axes, adzes, axe-hammers, chisels, picks, fabricators, shoe-last celts) and non-edge tools (querns, rubbers, pounders, anvils, hammers, sling balls, mace-heads). However, tools like chopper-chopping tools, axe-hammers, core scrapers and flake tools can be considered as by-products. The raw material used in the manufacture of edge tools is principally dolerite, trap, occasionally and granite. Whereas, non-edge tools were invariably made on rocks such as dolerite, diorite, granite, etc. whichever locally available. While discussing the functional analysis of edge tools Subbarao (1958) assumed that the axes were used for felling, split or break the wood, adzes for dressing the wood, picks for digging, chisels for cutting slots in the wood and shoe-last celts or hoes for tilling or loosening soil similar to that of plough share for weeding shrubs, grasses and breaking up clods of earth and hence been described as a multi-purpose tool (Paddayya 1990:285-290). At Somasila near Siddheswaram gorge of Krishna valley, a new variety of tools comprising disc-cum-axes, disc-knives and crescentric or lunate-shaped choppers with sharp, horizontal cutting edge and triangular axes were from surface and have been interpreted as missiles for chasing animals or tree felling, dressing of wood in order to bring a lot of wooded zones under cultivation according to Subramanyam (1997:72).

Blade tool industry (Fig. 2.9) is the second stone industry of Neolithic period characterised by the manufacture of three main groups of tools, i.e., flakes, blades and cores. Its typology is based on the preparation of fluted cores by the application of crested guiding ridge technique and retouch of blades in order to convert them into several sub-types. These tools are principally





Fig. 2.7: Neolithic chisels, rubbers and bored stones



Fig. 2.8: Neolithic axes



Fig. 2.9: Neolithic Blade tools and Disc beads

divided into simple and finished tools; the former sub-types consists of retouched blades, retouched flakes, backed blades, pen knives, lunates, points, borers, burins, scrapers, blunted blades, etc., and used flakes, used blades, crested guide flakes, core rejuvenation flakes, plunged flakes, chips, flake cores, asymmetric flakes and cores, worked pieces, notched flakes and waste products as latter. The geometric tools i.e., lunates, pen-knife blades, crescents, trapezes and triangles might have been composed in wooden handles and used in the form of knives, sickles, etc., whereas, the saw-edged blades might have been used bare handed. Water-worn pebbles of chert and quartz, crypto-crystalline form of quartz, carnelian, crystalline form of chalcedony, agate, carnelian, etc. have formed the chief raw-material.

The other important material culture consists of copper and terracotta objects and bone tools. The evidence of copper in the form of rings, toe-rings, bangles, antimony rods, coiled wire, parers, axe or celt, beads, needles, twisted wire, armllets, etc. (eg. Polakonda: IAR 1975-76:5; Pagidigutta (IAR 1978-79:65) referred as the objects of exchange. Bull figurines, humped bulls, male and female figurines, beads, etc., (eg. Chagatur: IAR 1977-78:11), etc. Bone tools as part of another tool technology consists of points, scrapers, axe-heads, chisels, pins, blades, borers, etc. which are basically made on splinters of long bones of bovine species. The technology is similar to that of pecked and ground stone tools which include the process of splitting, cutting, blunting, roughening and grinding. The aesthetic sense of these populations can be distinguished into two types of skills, first is self decoration and second is artistic decoration. The former is attested by the manufacture of beads made of semi-precious and other crypto-crystalline stones, i.e, steatite, paste, chalcedony, carnelian, shell, faience, terracotta in different shapes of disc, bicone, truncate, barrel, cylindrical, prismatic, globular, spherical etc. They also produced red ochre paintings at on the walls of rock shelters at Regonda, etc. (see Chandramouli 2014:219).

The evidence of ash mounds, either associated with the habitations or lying away from the settlements form an integral part of Neolithic culture, especially the sites in the Tungabhadra valley have been variously interpreted by scholars (for details of general discussion on the origin of ash mounds and possible implications see Paddayya 1991-92:573-626; Paddayya 2000-2001:189-225) as cattle pens, periodic burnings of cow-dung accumulations associated with habitations, garbage places, ritual burnings, stockades of cattle and camp sites of Neolithic period (Allchin 1963 and Foote 1916), iron smelting places of megalithic period (Rami Reddy 1990: 85-99; Sundara 1971: 308-314) as well as industrial activity areas of the historical period. However, these mounds have limited extent in the present region and are found at Manchanpalli, Utnur, Talmari-Kutukunuru and Ieeja in Mahabubnagar district but did not found in the northern and south-eastern Neolithic settlements. These village settlers believed in the survival of life after death and hence buried their fellow beings inside and outside their dwellings but later on practiced a separate cemetery especially in the Chalcolithic phase. These are categorized into A. Extended and fractional burials within the habitations, either inside or outside the dwellings at Chinnamarrur; B. Urn burials (eg. Chinnamarrur, Ieej, etc.); C. Pit-burials (consists of animal skeletal remains along with grave goods, eg. Chagatur, etc. and cemeteries built far away from the habitations as noticed at Chinnamarrur (Subramanyam 1997).

The geographical spread of these agro-pastoral communities have been seen as the permanent settlements in relation to surrounding landscape. It eventually reflected in their socio-economic panorama as part of cultural phenomena through temporal process. In this regard selection of space played a dominant role in view of constructing their hutments, domestication of animal folk involving the activities like tethering, grazing, milking, etc., procuring and storage of raw material for stone tool and pottery manufacturing, etc. Sites located in the granitic terrain are found

at the foothill regions and between hillocks, where springs supplied regular water flow for both men and animals in the first phase in which pastoralism was a major economy supplemented by incipient agriculture (through application of digging sticks adorned with bored stones as weights. These places helped in hunting wild animals, gathering of naturally available fruits, vegetable matters and tubers, etc. and fishing of aquatic fauna. In the second phase settlements are located on the banks of rivers and their tributaries occupying elevated grounds with thick soil cover useful for agriculture and for all other economic activities and in the third phase settlements are found even on the small streams, nullahs and affluents of tributaries due to increase in population and hence acquisition of large tracts of land for agriculture was a requisite which had direct impact on settlements size.

The Neolithic-Chalcolithic populations built houses either oval or circular at the beginning they made use of the support of natural boulders in order to support the thatched roofs with wooden post. The walls were erected with lime or cow dung plastered wattle-and-daub over piled up mud. House floors were made with stone rubble and plastered superficially with cow dung. Evidence of Post-holes suggest that these people acquired the suitable wooden posts from the dry deciduous forests in the nearby hills or hillocks as a specific activity while collecting the forest products as an subsidiary economy and it also indicates that they had enough knowledge about the environment around their settlements, especially date-palms from which leaves (mat-impressed potsherds are found invariably from all neolithic sites in South India) were used and perhaps grass was also collected from surrounding savanna grasslands.

The subsistence pattern of Neolithic-Chalcolithic people of the region was primarily domestication of animals, in which pastoral activity formed part, and agriculture became the main occupation when population increased, thus transforming completely from the hunter-gatherer stage to self-sufficient food production.

The stone equipment of ground stools such as mullers, querns, grinders, rubber stones indirectly support the evidence of plant foods perhaps millets, pulses and cereals like horse gram, ragi, millets like, pulses like green gram, etc. Other than this the abundant animal bones, exhibiting cut and chop marks or in a charred condition, indicate a non-vegetarian diet including roasted meat and marrow. The domestic cattle, buffalo, fowl, goat, deer, gazelle, spotted deer, wild boar, pig, fish, molluscs were consumed. Bones of the cattle predominate. On the whole the food habits suggest rearing of large herds of cattle; practice of agriculture and hunting, gathering and fishing. A remarkable feature of some of the Neolithic sites in the region is the presence of ash mounds. The exact purpose of ash mounds is intriguing and scholars differ as to the reason for the accumulations. According to them they are the results of cattle pens regularly burnt and re-used; heaps of cow dung burnt periodically; or accumulation of cinder from furnaces.

The Neolithic-Chalcolithic populations in the region vary on the basis of two cultural traditions, viz. Ash mound versus Pastoralism and secondly, Non-Ash mound versus Agriculture. As such, cattle domestication fulfilled several purposes as secondary products like milk, meat and cow dung as plastering material for house floors and animal sheds, etc. were generated along with bones, hair and hides. Cattle were also used in agricultural operations. Similar economy was prevalent at all Neolithic-Chalcolithic settlements but to a lesser extent where plant domestication was given much priority by utilizing cow dung as manure as witnessed in the Neolithic-Chalcolithic settlements in the Tungabhadra valley.

It is rather difficult to determine whether these agro-pastoral communities continuously occupied their settlements. However, the distribution pattern invariably show different geographical setting which suggest either an year round or seasonal occupations, like ash mounds located on hill-tops and foot-hill regions, which formed grazing ground for their livestock. They may

have shifted their settlements according to their economic activities like procuring raw material for pottery, stone and blade tool manufacturing and other daily activities like cooking, gathering, hunting, storing and carrying agricultural operations. This suggests a strong social structure inter-linked with division of labor within a single settlement or between settlements as a nexus, because of different categories like small hamlets, small and big villages and regional centers. Hence, the present day villages, social structure and economic activities among the population engaged in dry farming based on seasonality of cultivating millets, pulses and cereals based on south-west monsoon rainfall supplemented by gathering fruits, berries along with cultivating vegetables, etc., and performing festivals in connection with agricultural production and cattle fertility are not different from the Neolithic-Chalcolithic times. These formed a major social gathering where an exchange of information and material was possible.

The survival of Neolithic and Chalcolithic settlements (Fig.2.2) was owing to the occurrence of suitable geographical and climatic (Fig.2.1) conditions as the region generally falls west to east and south-west to north-east with major slopes towards the major river system of Godavari, Krishna and Tungabhadra with many tributaries (see Fig.2.2), hence emigration of people from the adjoining Karnataka region was possible from west to east through river system. The area traversed by sandy soils of granite-gneiss complex experiencing less rainfall covered the discontinuous thorny thickets, tropical thorny thickets of Albizzia-amara-Acacia series belonging to Dry deciduous forests supplied fire-wood and other wood for other purposes. The outcrops of dolerite-dykes, traps served as the places of factory sites (e.g. Peddabankur and Thogarra) for the manufacture of pecked and ground stone tools and calcareous nodules consists of silicious matter for manufacturing blade tools and other tools composed out of them were useful in reaping crops, etc. and pastoral economy supplemented by

hunting and gathering. Their movement towards further east are traced along the banks of rivers, tributaries and their affluents with black painted red ware. This tradition was a regional outcome as a regional variant but not due to the influence of Deccan Chalcolithic due to lack of land route with settlements showing the existence of similar pottery. The Chalcolithic phase in the region would define owing to the presence of copper as an intrusive element mostly in the form of finished objects and reached the Neolithic settlements. However, it did not change the picture of their economy and these agro-pastoral communities had gone through a system of economic pursuits leading to population growth that established in the first formative period by the introduction of iron in the first millennium BCE. The settlements were inter-linked that ultimately resulted in many regional centers for marketing the products. All these are the result of both internal and external cultural processes within the region and outside the regions as the basic causative factors predominately due to ash mound activity, ceramic industry, Stone industries of both pecked and ground and blade tools, pattern of settlements according to variation in landscape, pastoral and agricultural activities and other domestic and ritual activities tied with social organization as a result of the first social revolution by domestication of plants and animals which ultimately led to the birth of horticultural and pastoral society, the former is the branch of agriculture concerned with the raising of plants and the latter raising of livestock as a sort of animal husbandry, the care, tending and use of animals such as cattle, sheep/goats, pigs, fowls, etc. which include a mobile aspect of moving the herds in search of fresh pasture and water. Pastoralism comprised composition of herds, management practices, social organization and all other aspects vary between areas and between social groups.

Certain important inter-site and intra-site processes would be realized among the Neolithic communities which include the food processing activity as we come across a number of grinding

grooves at the settlements located in the granite terrains where these grooves were perhaps used for both polishing the axes and grains which are found at sites like Thogarrai, Kadambapur, etc. Whereas, at several riverine sites broken querns were found with thin sections which might have got exhausted due to prolonged use, hence suggest that the thick slabs of schists, granite were transported through cattle to settlements from resource areas in the vicinity or from far away places where such material was available. Similarly raw material for pottery manufacturing, blade tools, beads, etc. This also suggest that the movement of populations helped for the exchange of information, material and other things suggest a composition of socio-cultural activities functioned in a Neolithic cultural system as a whole. Certain elements reached the region from adjoining nuclear zone of Tungabhadra-Krishna river valley which could be visualized as external influence in view of pottery production, metal objects, burial practices, etc. New element appear in the second phase is the perforated and spouted vessels and pots with roughened outer surface, infiltration of a few copper and bronze objects whose frequency increased by the end of the phase due to increased cultural interactions and flow of goods between the regions while procuring raw materials such as steatite, gold, limestone and crops like millets, cereals and pulses. However, painted sherds with ochre paintings after firing found at Polakonda appears to be an infiltration of tradition from Maharashtra which are akin to Jorwe fabric. Ash mounds formed an integral part of Southern Neolithic culture connected to pastoral activity as well as part of accumulation of refuse matter from regular domestic activities like potsherds, broken stone tools, etc. Bones of this species dominate the faunal remains and overwhelmingly even in the form of rock art around the Neolithic settlements that inhabited the granite terrain as well as the assemblage of terracotta figurines. Allchin (e.g., Utnur habitation-cum-ash mound site in Mahabubnagar district 1961) acknowledged that the formation of ash mound is understood

as mean of protecting cattle from diseases (for example if pens are set on fire periodically in order to drive them through burning fires), and also inclined to the view that fires were meant of ritual events and each Neolithic settlement with an ash mound had symbolic meaning as well as to make people to gather on specific occasions. Perhaps the ash mound sites confined to south-western region of Telangana indicate that this tradition was more prolific during the first and second phase and perhaps ceased in the third phase as the cow dung value had been realized by the growing populations who demonstrated hoe in the red soils which were not so fertile between granite hillocks and dolerite-tipped light ploughs in the black soils regions for intensive cultivation and mixed farming among the riverine sites.

Further more, the expansion of settlements in the riverine zones suggest intensive exchange activities due to movement of population as part of their socio-cultural, religious and economic activities. This resulted in specialization of craft production during the course of Neolithic period, leading to increase in social differentiation as indicated in the burial practices of infants buried within the house in big urns, adults in an extended posture perhaps both male and females in different mode of disposal or in a separate cemetery, e.g. in Chinnamarur. During the terminal phase between 1400-1100 BCE, there was a transition from Neolithic-Chalcolithic to Chalcolithic-Megalithic marked by regular habitation without ash mounds, large production of pottery from turn-table to wheel made, settlement size, copper objects, etc., which is noticed at Neolithic-Chalcolithic-Megalithic site, Peddamarur, Chinnamarur located on the Krishna river which may be assigned to period C further extension of the preceding phase but iron in the form of agricultural tools, domestic objects and implements were encountered and hence assignable to megalithic culture, however, usage of copper increases suggest the adoption of iron technology by the Chalcolithic community.

Another remarkable feature has been the improvement of grey and brown ware and by

the end of this cultural phase it emerges as a true black and red ware may be a local innovation. This can be seen in the form of new shapes of pottery, i.e., lid with finial, hour glass type stand, etc. Apart from usual pottery black-on-red ware and black and grey wares witnessed a remarkable improvement perhaps due to introduction of slow wheel with the production of new shapes, i.e., water-pitchers, bowls with ring base, especially the burial pots, especially at Ramapuram, adjoining Mahabubnagar district located towards south. Other important material culture include copper objects, i.e celts, chisels, tongs, razor or scraper, coiled wires/beads, needles, bangles, copper bells with bird-finial, armlets, antimony rods, parers; beads of semiprecious stones, shell, terracotta, steatite and paste; terracotta objects of human figurines, bull figurines, animal heads attached to shoulders of pots and vases; iron objects(found both in burials within the habitation and cemetery), i.e.,spear-head, arrow head, razor, scraper or cobbler's tool, nail like objects, a parasu like object, tripod, spindle whorls along with three triangular anthropomorphic figures. The cist burials were of two types, 1.transected and twin cists and in one of the cists had a complete skeleton with legs flexed along a bow-like iron object and in another pit burial an extended skeleton was kept on ash-bed and interred as witnessed at Chagatur (Fig.2.11),Peddamarur (Fig.2.12), Uppalapadu(Fig. 2.13), etc.

### **Iron Age Megalithic Culture (Post-Neolithic-Chalcolithic Culture)**

The term 'megalithic' applied to a particular type of burial or burial complex is a misnomer but it stands as an adequate term to define the comprehensive and complex sepulchral monuments that are found in different geographical and ecological zones of South India. Majority of these monuments denote the post-Neolithic culture in which metal objects of iron are encountered purely based on surface indicators. In Telangana State, the credit of reporting the existence of megalithic monuments for the first time goes to Meadows Taylor through

his monumental work on 'Megalithic Tombs and other Ancient remains in the Deccan (1941) and he published his observations pertaining to the 'Distribution of cairns, cromlechs, kistavens and other Celtic, Druidical and Scythian monuments in the Dekhan' in the Transactions of the Royal Irish Academy, Vol. XXIV:1862, p. 331 (Deo 1973:2). His work on Iron Age Megalithic was not merely antiquarian in nature but an example of systematic study which raised various questions pertaining to the origin, authorship and chronology of the monuments. Mention may be made of other personalities who took keen interest in studying the megalithic monuments in the region are William King, Mulhern, Vanstavern, Wakefield, Yazdani (1934-5), Khan, etc. In fact, the early notice of megalithic monuments in the region was done by Walker and reported by Taylor during the 19<sup>th</sup> century and Bell and Captain Doria opened two tombs and found charins of iron and a brass bell with an iron tongue (Taylor 1862). Subsequently, in the year 1935, the excavation of two more burials was taken up under the supervision of Mackenzie (Yazdani 1934-5) under the then auspicious Archaeology Department of HEH The Nizam's Dominions, Hyderabad. Near about a decade later Krishnaswamy (1949) and Gururaja Rao (1972) classified the monuments in to 5 and 9 types respectively based on the super structure and inner feature of these monuments which led possible to a marked change in the typological and methodological application of study of these monuments during the later part of 20<sup>th</sup> century in the post-independence period through out South India at a regional level.

Recently the real momentum of studying the distribution, typology, chronology and characteristic feature of this culture has been done by Mohanty and Selvakumar (2002: 313-352). But this kind of approach was first attempted by Murti (1994) on the comprehensive analysis of all aspects of this culture by classifying a total of 1,993 sites (at present the number may be more than 2500) can be considered one of the bold attempts. According to him these were broadly

classified into habitation sites, habitation-cum-burial sites and burial sites based on their location alongside the drainage system of Godavari river 115 (of 6, 15 and 94 respectively), in the Krishna drainage system 396 (of 15, 111 and 270 respectively), etc. The habitations are found away from hills but invariably close to water sources. Whereas, the habitation-cum-burial sites can be distinguished as a separate variety although they are found close to water source and the cemeteries are connected to the habitations lying either at the foot-hill region or on the terrace of low-lying hill or hillock with large size of burials and many in number. At certain sites the burials are found just in front of the habitation lying in a plain area where rock out crops can be found and hence might have been exploited by megalithic group for the erection of burials. One of the specific character of this cultural sites, sometimes, being the composition of more than 500 burials commonly located on rocky high grounds proximity to hillocks and their location suggests that the custom of burying dead did not happen at once and indicate a continuous process for several centuries and hence one can find the material culture belong to later period, especially the early historic (for site details see Ghosh 1989; Krishna Sastry 1983; Murthy et.al. 2003; Rao 2002; Subramanyam 1997 and Venkatasubbaiah 2014:179-202). The burial-typology noticed in the present region comprised 1. Pit circles, 2. Cists, 3. Dolmenoid cists, 4. Cairn circles, 5. Stone circles, 6. Dolmens, 7. Urn burials, 8. Menhirs and 9. Anthropomorphs. The number of monuments erected at each site vary according to the duration of the site and availability of raw material but it might have been rather delineated the social status of the community because each monument requires considerable labour and finance.

Some of the important Megalithic sites that had undergone for trial or major excavations in the present Telangana State are (Fig. 2.2), i.e., Peddabankur, Kadambapur, Singapur, Mallangur in Karimnagar district; Kaparalaguru, Janampeta, Dongatogu in Khammam district; Hashmatpet,

Maula Ali, Lingampalli, etc. in Hyderabad and Rangareddy districts; Budigapalli, Valasagattu, Ramunipatla, Mandlapalli, Pullur in Medak district; Serupalli, Uppalapadu, Gondimalla, Peddamarur, Chinnamarur, Chagatur, Makthal, Mudumala, Erladinne, etc. in Mahabubnagar district; Yelleswaram, Raigir, Narketpalli, Vellatur, Nagaram, Mudigonda, Valigonda, Devarkonda, etc. in Nalgonda district; Pochampadu, Armur, Malur, Yellareddipet, etc. in Nizamabad district; Kolakonda, Polakonda, Dornakal, Mungapet, Gangasanipalli, Tummanapalli, Chinna Torru, etc. in Warangal district and Megalithic burials with cup marks at Murari Doddi, Mudumala (Mahabubnagar district), Waragal (Medak district). The total number of megalithic sites in Telangana (Krishna Sastry 2003: 107-122) goes to 140 and some more sites might have been added since then: Karimnagar (14), Khammam (3), Hyderabad (6), Rangareddy (3), Medak (13), Mahabubnagar (54), Nalgonda (29), Nizamabad (4) and Warangal (14).

### Material Culture

Pottery was found both in habitations and burials, and mainly comprised black-and-red ware, black polished red ware, coarse red ware and all black ware. It is a most important item of grave goods that can be classified into two groups: coarse and unpolished receptacles like urns, well fired and finely polished or burnished smaller bowls, vessels, lids, pots, storage jars, etc. The other important burial form in order to place the ashes along with bones, probably after cremation, in the burial pit is that of Sarcophagus noticed in cairn circles or pit circles in several megaliths from Mahabubnagar and other districts. They are mostly found in the form of a tub having rows of legs at the bottom with a lid and in this regard the elephant-shaped sarcophagus that was the best example comes from Yelleswaram. The most common types are oblong tubs with apsidal ends, vertical walls, bulging bodies and thickly grooved rims. Three types of Sarcophagi were found at Peddamarur in Mahabubnagar district and one is

barrel-shaped, pentagonal in cross-section, flat at both narrowing ends and a door measuring 2cm X 17 cm, was provided slightly above the base with a door slab. The second one is fusiform or spindle-shaped one with pointed ends. The distribution pattern of Sarcophagi in burials has a limited extent in South India including Telangana, cist-circles in Mahabubnagar district (at Peddamarur (Figs. 2.12 & 2.15), Serupalli, Uppalapadu (Figs. 2.13, 2.16 & 2.18) in chambered cists, cists and pit circles), in Khammam (at Dongatogu and Janampet in cist burials and stone-circles). The black and red ware is invariably found associated with burials characterized by uniform fine fabric, burnished but always plain. It is wheel made and the fabric ranges from medium to fine. They appear to have been fired under reduction process, probably by the inverted method. The vessels have a glossy slip and a few are salt glazed. While black and red ware and black slipped ware are represented in the form of smaller pots of various shapes, the red ware, besides a few small pots, are found in the form of ring stands, globular pots and storage jars. There are tulip-shaped lid-cum-bowls, basins, jars, etc. The black ware include ring stands, mostly squat with an hourglass section, conical bowls, gourd-shaped flasks, lids, dishes, platters, straight-sided miniature pots, perforated pots, etc.

Iron objects are another important item of goods found in burials which include both domestic and agricultural tools and weapons. The latter include knives, daggers, wedge-shaped blades, lances, javelins, spearheads, battleaxes, often with barbs, arrowheads, both socketed and tanged, swords, etc. Whereas, the objects for household utility and agriculture include flat axes, hatchets, chisels, mattocks, tripods, point-based vessels, lamps, hooks, knives, sickles, billhooks, drill-bits, spades, hanging saucer lamps, rods with rounded heads, horse bits, frying pans, ladles and bells, for example from sites like Peddamarur (Fig. 2.17).

Copper and gold objects are rarely found in burials. However, they occur as ferrules or casings

for the weapons like daggers, bells and cups. From a pit circle at Maula Ali in the Hyderabad district, a copper bell with an iron tongue was found. Excavations revealed that a metal cup of 79 per cent copper and 21 per cent tin was found in a cairn circle and at Hashmatpet, three bronze ferrules were found. A copper band came from Raigir (Krishna Sastry 2003:134). Gold objects are rarely found in burials. However, a pit burial from Kadambapur contained two spiral ear rings. From Polichetticheruvuguda fold ear rings were found in a cist burial.

Beads in large numbers as well as variety are found in both burials and habitations made of gold, silver, copper and semi-precious stones such as carnelian, jasper, agate, serpentine, lapis lazuli, quartz, amethyst, glass, terracotta, shell, bones, etc. Beads of terracotta are found at Kadambapur, Pochampad, etc.

Rock paintings consisting of human figures, armed persons, animal riders, weapons, hills, floral designs, dancing humans, etc. were also found in the study area. At Pullur in Medak district abutting the burial site of 50 cists and pit circles, is a cavern and the rear walls of the cavern contained a series of red ochre paintings of deer, human figures. The sites which gave the evidence of red ochre paintings belong to Megalithic period at Regonda (circle with a trident symbol, horse riding warriors, etc) and Budigapalli (circle with a trident symbol, horse riding warriors, one humped bull, etc.) in Karimnagar district. Painted petroglyphs are found at Ramachandrapuram (Fig. 2.10) in Khammam district depicting animals, human figures, hand figures, reptiles, geometric figures, female genital organs, hoof prints, paw prints of animals, cupule marks along with a circle with a trident symbol in one of the rock shelters. The other important sites in Telangana are Mudumala in Mahabubnagar district, Sivaru Venkatapur in Medak district and at Bandala and Narsapur in Warangal district (for details of all these sites see Chandramouli 2014: 207-230).

An interesting aspect of megalithic cultural study initiated by Prof. K.P. Rao (2009:4-6)

comes from menhirs and stone circles at Mudumala located one kilometre from the banks of river Krishna in Gudebellore mandal of Mahabubnagar district. It is based on the pattern of arrangement of burial structures denoted the importance of archaeo-astronomy followed by the megalithic people. He noticed two kinds of menhirs arranged in different rows along with stone circles, taller ones ranging from about ten to fourteen feet in height and shorter ones hardly one to two feet from the ground. According to him the taller menhirs are concentrated in a central area where the temple of Thimmappa is located which does not possess a sculpture but only a rough stone worshipped as Thimmappa. The menhirs are found arranged in a circular fashion and the gaps between tall menhirs are filled by horizontal stone blocks. A total of three rows of such circles are arranged in concentric formation. The other taller menhirs scatter lies on the western and south-western sides of the stone circle and as these rows are usually known as alignments and avenues are found oriented in different directions. After his consistent study on several occasions he came to the conclusion that the rows of menhirs align with the rising and setting Sun on the days of solar significance. Thus one row aligns with the rising Sun on summer solstice (June 21) and another row aligns on the evening of the same day. Similarly on winter solstice (December 22) also other rows are aligned in the morning and evening. He presumes that on the days of solstice a total number of four rows are aligned to the Sun and thus it appears that the arrangement of menhirs had been regulated as per the astronomical observations of the megalithic seers there. As the above mentioned periods are clear harbingers of seasonal changes, these alignments were arranged to help in working out the calendar, especially for agricultural operations. He explains that further more interesting was a constellation of stars depicting Ursa Major, marked by a group of cup-marks on a stone located about half a kilometre south-west from the central stone circle discussed above. A total of 31 cup-marks are clearly noticed



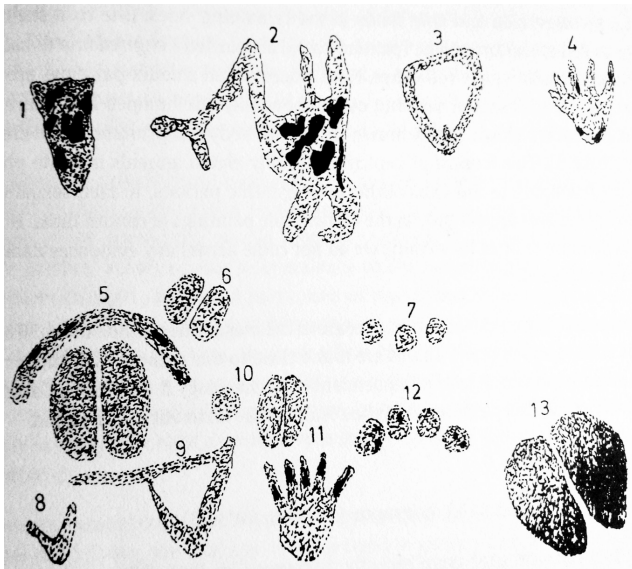


Fig. 2.10: Painted Petroglyphs from Ramachandrapuram (Megalithic period)

on a stone located amidst stone circles and smaller menhirs. But a group of seven cup-marks were found relatively well marked and slightly deeper resemble the Ursa Major constellation which is known as *Saptarshi Mandal* in Indian tradition and thus at this site the two dots representing the two stars, as mentioned above confirms the identification of this depiction as that of Ursa Major. He finally concludes that it is perhaps the earliest sky map found in South Asia and the discovery indicates the advancement of ancient megalithic communities in studying astronomy.

### Subsistence Pattern

The material culture from Megalithic habitations and burials suggest both pastoralism and agriculture played a vital role during this period as well. Bones of cattle, sheep/goat, buffalo, pig, horse, dog, fowl and fish had been formed their dietary items. The evidence of plant remains obtained from the megalithic levels at Veerapuram (Kajale 1984) includes kodo millet (*Paspalum scrobiculatum*), barley (*Hordeum vulgare*), hyacinth bean (*Lablab purpureus*), horsegram (*Macrotyloma uniflorum*), blackgram (*Vigna mungo*), common pea (*Pisum sativum*) suggest that millets, cereals and pulses formed their major food materials for which they utilized domestic

equipment such as saddle querns, pestles and grinding stones in the process of vegetarian items. The agricultural implements, made of iron, found in both habitations and burials such as sickles, axes, ploughshares, hoes, etc. suggest the use of advanced technology in the field agriculture and water management for irrigation to which the evidence of rice substantiate. The agricultural production may have been little more when compared to the preceding Neolithic-Chalcolithic period, hence it is deduced that the economy of the Megalithic period was predominantly cattle-pastoralism and multi-crop farming and had been succeeding from the preceding culture. Their dietary requirements were supplemented by wild game, birds, and aquatic fauna. Remains of blackbuck (*Antilope cervicapra*), sambar (*Cervus unicolor*), chital (*Axis axis*), hare (*Lepus sp.*), porcupine (*Hystrix indica*) fowls (*Gallus gallus*), turtle (*testudo graeca*) and molluscan shells (*pila globosa*) from Veerapuram and other sites located in the Krishna valley clear indications. The bone points, iron arrowheads, spearheads, spikes, lances, javelins recovered from Yelleswaram suggest that hunting also contributed a lot to their subsistence economy of the megalithic populations.

Wheeler (1948) was the first to put the Protohistoric periods of South India into temporal context and suggested that the megalithic culture survived between 200 BCE and 50 CE. However, subsequent research work indicated an early date for the Megalithic context which succeeded the Neolithic-Chalcolithic horizons in many parts of South India. The following C<sup>14</sup> dates, i.e. Polakonda, 185 BCE-35CE (calibrated); Satanikota, 235-575 CE and 540-635 CE (calibrated); Veerapuram, megalithic deposits 2150± 150 (200 BCE) from layer 12; 2950± 140 (1000 BCE) from layer 13 and 2970± 150 (970 BCE) from layer 14 and 3240± 140 (1290 BCE) from layer 15, 1255-815 BCE calibrated. On the basis of the above dates, a time bracket approximately ranging from the first millennium BCE to the beginning of early historic (300 CE) may be suggested for the Iron Age Megalithic

culture in Telangana. However, recently an early date (2795 BCE and 2145 BCE., on the basis of Thermoluminescence OSL:Thomas 2008:781-790) has been postulated by Rao (2010:102-111) from the excavation of Megalithic burial at Gachibowli suggesting a nomadic character of megalithic folk inhabiting the northern part of Telangana and in due course of time the movement of megalithic folk towards south along and across the plain areas as well as river courses made them to settle permanently by acquiring arable land through their iron technology and the area might have served better for process of iron smelting.

### Conclusion

The present region witnessed the emergence of agro-pastoral communities during the first phase of Southern Neolithic culture, e.g. Utnur and other ashmound sites which perhaps passed through second and third cultural phases, between 2500-1100 BCE. Although we don't have many C<sup>14</sup> dates to substantiate this hypothesis, however, the material culture and introduction of copper support this presumption. During this period several internal processes took place and external influences brought several changes within the Neolithic cultural horizon that transformed the society into Chalcolithic and Megalithic due to improvement in all spheres of socio-cultural, religious and economic activities which was more socio-cultural rather than ecological. The end of Neolithic occurred around 1100 BCE. The major modification in the subsistence activities and the role played by Neolithic populations resulted in the act of improvement in the origin of new social structure, pattern of organization due to cultural contacts and migration of population belonging to later cultural traits like that of megalithic society from the adjoining areas.

From the available data it is known that the megalithic population flourished the present area due to its rich resources. The occurrence of vast number of burials in the hilly or rocky terrain suggest that preference was given to these tracks as they served for cemetery and by

inhabiting such areas made them to construct bunds across water sources in order to divert water for agricultural purposes. Habitations close to river course indirectly helped the megalithic populations to construct irrigation tanks across small streams or channels of water from nearby hills. Moreover, the selection of such hill or rocky terrain fulfilled their ceremonial purposes at the time of disposal of the dead. The occurrence of sarcophagi in the burials suggest that the method and custom of cremation reached in the later period due to movement of people and cross-cultural contacts in view of advanced agricultural system and occupation of the major part of the society, hence large tracts of land was brought under cultivation with their iron technology. The variability of burials indicated heterogeneity of custom; however no variation in the usage of goods interred in them. Since, C.3000 BCE, the environment in the plateaux of Telangana can be visualized with the inception of agro-pastoral village economy of Neolithic-Chalcolithic culture which subsequently entered into Iron Age Culture in the then existing ecosystem. The process of expansion and establishment of village system into forested zones, however, was the result of usage of iron tools that intensified the conversion of large tracts of land into agricultural fields.

Rao (2018) in his recent study on Megalithic monuments in Telangana and Andhra Pradesh gives an interesting information about the megalithic culture in view of iron technology, archaeo-astronomy, unique burials found in the districts of Khammam and Warangal districts by giving names of such sites at Albaka, Bowenpally, Gajagirigutta (Fig.2.24: Cist and skeleton aligned to North along with burial furniture of red ware and black and red ware pottery), Kistapuram, Konasamudram, Padugonigudem, Tottigutta along with some of the excavated sites which include Dongatogu, Gachibowli, Janampeta, Kaperlaguru, etc (Rao 2018:130). As mentioned above the evidence and interpretation of archaeo-astronomy (Fig. 2.19: stone with cup-marks depicting Ursa Major at Mudumal) at a megalithic

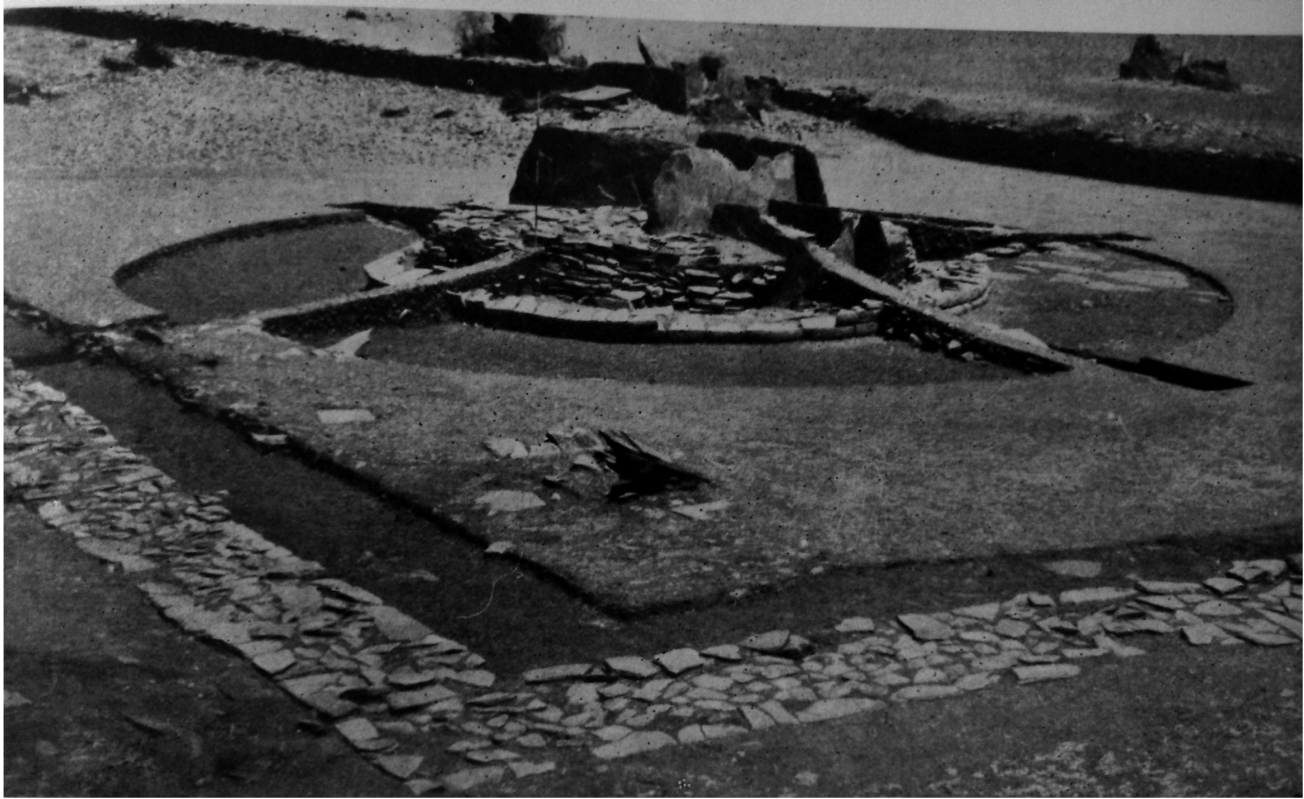


Fig. 2.11: Chagatur Megalithic cist with passage and enclosed wall  
(courtesy IAR 1977-78:Plate VA)



Fig. 2.12: Peddamarrur, Exposed Cist-circle, Megalith I  
(Courtesy IAR 1977-78: Plate VIB)



**Fig. 2.13: Uppalapadu: Interments of Megalithic pit burial**  
(Courtesy IAR 1977-78, Plate VIA)

site, Mudumal (Fig.2.20: rows of Menhirs at Mudumal) in Mahabubnagar district by Rao (2009) is an interesting addition to the knowledge of South Indian Megalithic culture. He (2018: 132-133) came across unique type of megalithic monuments in the districts of Khammam and Warangal at Padugonigudem and Kistapuram where more than 1000 burials are found at each site. The specific features found at these sites being the trimmed stone circles (Fig.2.21: A dolmen enclosed by trimmed stone circle at Padugonigudem), anthropomorphic statues (Fig.2.22a, asexual anthropomorphic statue and 2.22b: female anthropomorphic statue at Padugonigudem) and stone sarcophagi (Fig.2.23: stone sarcophagi with a lid at Kistapuram), hence Rao identified this group of megalithic sites in this part of Telangana region as a separate megalithic complex which are rare and not found in other regions (Rao 1991:363-369). However, the initial discoveries of anthropomorphic figures were made at

Albka, Malur, Katapur (Mulheran 1868:116-117), Mungapet and Kaperlaguru (William King 1877:179-182) and later on by Rao (1988:25-26; 2014:172-178) at Dongatogu and Tottigutta, who described the general features (for details see Rao 2018:136) of these human statues representing asexual and female characters (cross menhirs), the best examples of earliest stone carving tradition in India (Rao 1993:664-67). In near future such kind of sites may come to light from other parts of South India which may throw more light on the significance and belief system apart from their usual social-economic and religious practices during Iron Age megalithic period.

In view of the characteristic feature of megalithic culture of peninsular India in general and Telangana in particular, Kennedy (1975) expressed that the megalithic builders were varied and belonged to a heterogeneous population as that of present South India. Hence, there existed a complex of interrelationship



Fig. 2.14: Kadambapur: Excavated Megalith-III with interments (Courtesy: IAR 1977-78: Plate IIB).



Fig. 2.17: Iron Tools from Peddabankur



Fig. 2.15: Peddamarrur: Exposed Megalith III (Courtesy: IAR 1977-78, Plate.VIIB)

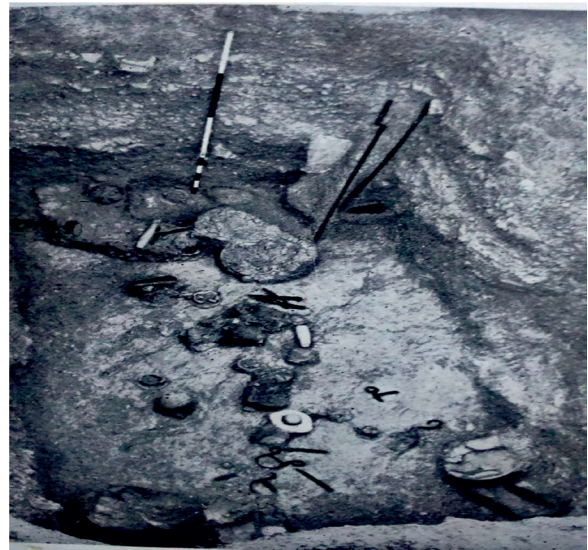


Fig. 2.18: Uppalapadu: Interments of Megalithic pit burial (Courtesy IAR 1977-78, Plate VIIIA)

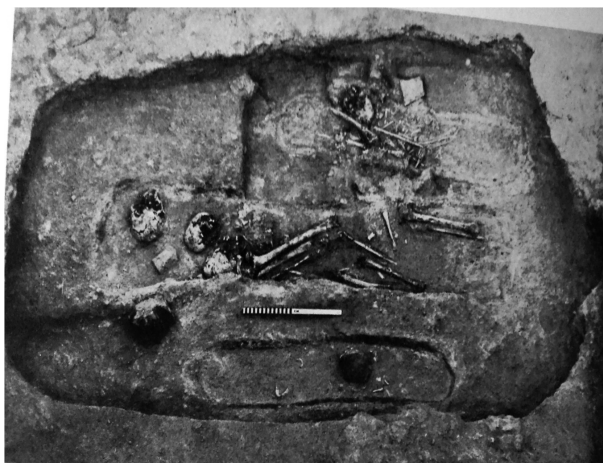


Fig. 2.16: Uppalapadu: Exposed wooden coffin with interments in a Megalith (Courtesy IAR 1977-78, Plate VIIA)

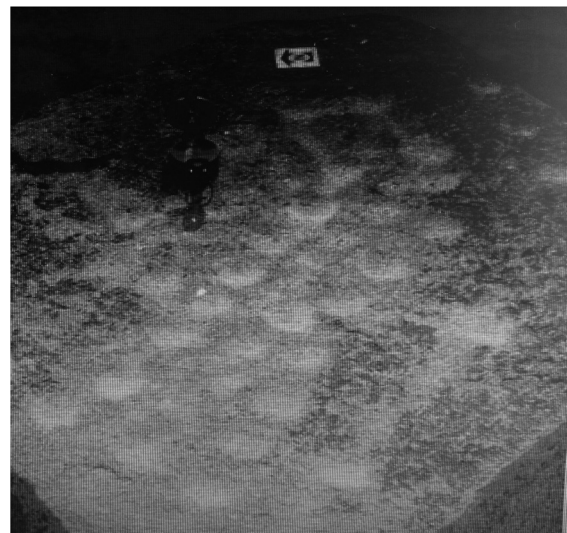


Fig. 2.19: Stone with cup-marks depicting Ursa Major at Mudumal (After Rao 2018)



**Fig. 2.20: Rows of Menhirs at Mudumal  
(After Rao 2018)**



**Fig. 2.21: A Dolmen enclosed by Trimmed stone circle at Padugonigudem  
(After Rao 2018)**



**Fig. 2.22a: Asexual anthropomorphic statue at Padugonigudem  
(After Rao 2018)**



**Fig. 2.22b: A Female anthropomorphic statue at Padugonigudem  
(After Rao 2018)**



Fig. 2.23: Stone Sarcophagi with a lid at Kistapuram (After Rao 2018)

among these groups, i.e., major groups living in permanent settlements, whereas, marginal groups moving away engaged themselves on herding practices supplemented by other social activities as a result of interaction with the neighbouring settlements, exchange of goods, social gathering in connection with religious and economic pursuits, etc. Ray (1994) has suggested that the archaeological data from Telangana and Andhra Pradesh indicate the inclusion of certain prestige items such as pearls, conch shells, gold, iron and bronze, implements and horses (e.g., Pochampad: Krishnasastri 1983) in exchange networks and equally plausible was the evidence of agricultural products and salt. Hence, Iron Age Megalithic culture in the Telangana region can be broadly divisible into two cultural phases, as the occupational floors of megalithic and early historic layers noticed at several sites, e.g. Peddabankur, Peddamarur and Chinnamarur (Megalithic/Early Historic), suggests, that the former being the pre-Mauryan and the latter post-Mauryan periods in which several developmental

process took place with the inception of intensive cultivation, mineral processes, development of trade, commerce and market places, development of language and script, coinage, market places, etc.

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## Appendix

### \*\*Major\*/Minor Excavations of Neolithic and Chalcolithic and Megalithic sites in Telangana:

(AAR = Annual Archaeology Report; Bur.RW=Burnished Red ware; Bur. GW = Burnished Grey ware; GW=Grey ware; Bu.W=Buff ware; B-on-RW=Black-on-Red ware; Br.W= Brown ware; B&RW=Black-and-Red ware, CRW= Coarse Red ware, BW= black ware, BSW=black slipped ware, PGW= Pale grey ware; Bl.GW=Blotchy Grey Ware.; DRW=Dull Red Ware; APJA= Andhra Pradesh Journal of Archaeology, etc: After Venkatasubbaiah 2014:502-6)

1. **\*Budigepalle**, a Neolithic-Chalcolithic and Early Historic mound located between granite hills in Karimnagar district. A trial excavation led to the discovery of a hearth in the lowest levels along with pottery, beads and stone tools (N.R.V.Prasad 1978:25; Krishna Sastry 1983:26-27);
2. **\*Chinnamarur**, a Neolithic habitation located on the left bank of river Krishna in Mahabubnagar district, revealed in Period-I the Neolithic stone foundations of circular hutments, fractional burials; Period II -belongs to Neolithic-Chalcolithic phase with a copper fish hook along with cultural material of previous phase, urn burials, hutments in circular or apsidal in plan with post-holes, pottery kilns, terracotta beads, animal figurines, etc. The Chalcolithic cemetery here yielded seven extended skeletons having toe rings and bangles of copper in some of them and beads (G. Krishnam Raju 1988, AAR for 1978-79, Dept. of Archaeology and Museums, Hyderabad, p-7-10; Subramanyam 1997: 55-56);
3. **\*Chagatur**, a Neolithic-chalcolithic-Megalithic mound located on the left bank of river Tungabhadra in Mahabubnagar district, revealed three cultural periods, i.e Period-I: Neolithic-Chalcolithic with pottery and stone tools, post-holes of semi-circular hutments along with plastered floors and burnt clay and an antimony rod of copper; Period-II: heralds the dawn of iron age with Neolithic-chalcolithic overlap (N.R.V.Prasad 1988, AAR for 1978-79, Dept. of A&M, Hyderabad, p-3-4.; Subramanyam 1997:56-57);
4. **\*Polakonda**, a habitation (Neo./Meg.) located over a slope terrace at the foot of Kommulagutta hill in Warangal district. With a deposit of 2 m. thick gave rise to ceramic assemblage of handmade GW, PGW, blotchy Br.W, Bu.BW and Pale red ware, etc. A few sherds showed incised oblique, zig-zag, chord and finger nail impressions without painted pottery. (Krishna Sastry 1983:26,37: 1405+124 BC. Calibrated to 1700-1415 BC.)
5. **\*Utnur (an ashmound site)**, lies 3 km. west, south-west of Ieeja in the Mahabubnagar district and the

ash mound is located to the north-west of the village. Excavations (Allchin 1961) revealed five major burnings besides smaller ones. In Period IA it was occupied by cattle-keepers by creating pens to their beast, used pottery, stone tools and lived in huts built of reeds, branches, etc. In Phase IC there is evidence of a post-stockade with hoof-impressions, probably consists of two concentric rings and in subsequent periods II to IV showed general elaboration of post-stockade constructions. In the last phase there is evidence of ash wall connected to a thorny fence. A radio-carbon date of 2160 BC.  $\pm$  150 years has been obtained for the early phase of IB but further dates, i.e. 2295+155 BC. Calibrated to 2920-2535 BC; TF-167:2555=113 BC. Calibrated to 2555-2285 BC.; TF-168: 2040+113 BC. Calibrated to 2550-2185 BC. have dated back the Neolithic culture still to an early period in the region. Grey ware with pre-firing ochre paintings form an important element akin to Brahmagiri (Subramanyam 1997:63; Sarma 2003:103).

6. **IAR 1958-59: 11-Excavation at Yelleswaram\***, Dist. Nalgonda: continued (1957-58, p. 9) at the temple-site, was carried down the natural soil. Well below the surface, in deposits evidently belonging to the Satavahana period, were found, among other antiquities, red- and black-slipped pottery, terracotta figurines and lead coins. Further below were found three megalithic burials with the typical pottery. One of them was composed of five slabs, one at the bottom and four placed vertically to form an oblong cist without any capstone. Inside the cist were found two human skulls and other bones and around it a jar with red slip outside and a black-slipped bowl; IAR 1961-62: 2-3: Excavation at **Yelleswaram\***, Dist.Nalgonda(IAR 1961-62:2-3):The Department of Archaeology, Government of Andhra Pradesh, continued (1960-61, p. 3) the Excavation at Yelleswaram under Shri Abdul Waheed Khan. The work was confined this season to the south-western corner of the valley, where a dolmenoid cist, a few urn-burials of the megalithic complex; IAR 1963-64:3-Excavation at **Yelleswaram\***, Dist. Nalgonda- The Department of Archaeology, Government of Andhra Pradesh, under Shri Mohammad Abdul Waheed Khan, continued (1961-62, p. 2) excavation at Yelleswaram. In the course of the work four types of burials were identified: (i) dolmenoid cists; (ii) cists with port-holes; (iii) cairn-circles; and (iv) urn-burials. The megalithic Black-and-red Ware with its concomitant iron industry was duly attested in these burials. Of unusual interest among these was a cairn-circle containing two skeletons, placed one over the other (pl. VI A). The grave furniture for this inhumation included a perforated stand, a dish and a lid (pl. VI B). The excavation revealed six Periods, of which Period I was megalithic

in cultural content.; IAR 1964-65:1-4:Excavation at Yelleswaram,Dist,Nalgonda- The Department of Archaeology, Government of Andhra Pradesh, under Shri Mohd. Abdul Waheed Khan, resumed (1963-64, p.4), excavation at Yeleswaram for the fourth season. More megalithic burials of the types of dolmenoid cists, cairn-circles, and urns were excavated. These yielded pottery of the megalithic Black-and-red Ware, red and all-black wares and iron implements like sickles, lances, swords, javelins, daggers, etc.

7. **IAR 1963-64: 1: Excavation at Pochampad\***,Dist. Adilabad-With a view to salvaging the antiquities from the area likely to be submerged by the dam across the Godavari,the Department of Archaeology, Government of Andhra Pradesh, under Shri Mohd.Abdul Waheed Khan, conducted a small-scale excavation at Pochampad. In the course of preliminary exploration, cairn-circles, cists and a rectangular platform, perhaps foreposing the dead body, were located on the right bank of the Godavari. As a result of excavation, three burials were exposed. One of these, marked by a double circle of stones on surface, showed a 1-8-m. deep pit, rectangular on plan and with a north-south orientation. Within the pit and at different levels were found pottery of the megalithic Black-and-red Ware and all-black and red wares. Besides, iron objects comprising lances, javelins, daggers, sickles and cross-strapped hatchets were also obtained. Surface-exploration nearby also yielded microliths including parallel -sided blades, points, lunates, etc.; IAR 1964-65: 1: Excavation Pochampad-The Department of Archaeology, Government of Andhra Pradesh, continued (*Indian Archaeology* 1963-64—*A Review* 1, p. 1) its excavation at Pochampad, a megalithic site on the right bank of the river Godavari. The excavated burials included cairn-circles, cists and platforms. The cairn-circles were found to entomb rectangular pits, oriented north-south, in which were deposited pots of the Black-and-red Ware and other associated all-black and red wares and iron implements such as lances or javelins, daggers with copper hilts, sickles and axes. An interesting find of the latter category was a strapped axe resembling a modern sandal. In addition, terracotta figurines of diminutive size and archaic features were also obtained from the excavation.; IAR 1966-67: 1: excavation at Pochampad, Adilabad Dist.-The Department of Archaeology and Museums, Government of Andhra Pradesh, under Shri Abdul Waheed Khan, conducted excavation at Pochampad, during the course of which five megalithic burials were exposed. One of the burials consisted of a single circle of closely-planted, untrimmed granite boulders, measuring 10.06 m in diameter, with a very heavy scatter of rubble in and around the boulders and extending to the centre. A

1'5-m deep pit seems to have been cut partly into the natural soil. In the southwestern quadrant, just beneath the ancient ground level, a skeleton of a horse, probably interred as a final offering before the end of the ritual, was exposed. It is also probable that the horse was buried along with the master as in the Scythian burials in Central Asia. The grave-pit was found to be roughly oblong on plan, oriented east-west and measured 2-16 m in length and 1-68 m in breadth. The bottom of the pit was levelled up by a 15 cm thick deposit of earth. Of the grave goods, the distinctive megalithic pottery, viz. the Black-and-red, red and all-black wares, represented by such shapes as dishes, stands, pots and bowls, etc., were seen huddled up along the northern and southern margins of the pit. Overlying the pottery in the central area were two skeletons, one each of a male and a female, placed in an extended position, oriented from east to west. Most of the bones were found in a disarticulated position. The maxilla and the mandible with their teeth intact, were turned partly to right. An ivory comb was seen underneath the skull. The ribs and the vertebrae, the pelvic girdle, right tibia and fibula, carpals and metacarpals were found mixed up. The burials seem to be secondary. Iron implements, such as a sickle, a chisel and a triangular object of an indeterminate use were found in between the tibiae. Sometimes, the animal bones were also interred as primary offerings over the rugged floor before pottery was placed.

8. **IAR 1977-78: 11-12 - Excavation at Chagatur**,Dist. Mababunagar-The Department of Archaeology and Museums, Government of Andhra Pradesh, carried out excavation at Chagatur situated in between the rivers Krishna and Tungabhadra, as a result of which three cultural periods were brought to light. Period I is represented by structures built of shale stone blocks. The ceramic industry of the Period is represented by red polished, black-and-red, black and red wares. Noteworthy antiquities of the Period include: terracotta male and female figurines, handmade and double-moulded; beads of terracotta, shell, stone; discs or spindle whorles of stone; ornaments in gold and silver; stylus or antimony rod in ivory. Period II is also marked by structures built of shale stone blocks. The structures of this Period are built over those of the earlier ones. The ceramic industry of the Period is represented by dull red and red wares, the types represented being conical bowls and spouts of sprinklers. Other finds recovered from the occupation debris include: beads and bangles of shell and terracotta; and iron objects like sickle, nail, etc. A megalithic burial site with dolmenoid cists with or without passage and stone-circles, was noticed about half a kilometre west of the above excavated site. One of the burials was excavated.

The excavation revealed that the cist was made of four orthostats, arranged in clockwise pattern. The cist is divided by a transeptic slab into eastern and western halves. Both the chambers are further sub-divided into northern and southern halves. The northern halves are provided with benches supported by vertical slabs. The chamber has a flooring-slab, over which a skull, some skeletal remains and a few red ware bowls were placed in the ashy deposit. A sprinkler in black polished ware and a few deep bowls in red ware were encountered in the southern halves. The port-hole on the southern orthostat of the cist is provided with a passage on the exterior, flanked by slabs and the front closed by another slab. The passage chamber too yielded fragments of skeletal remains and red ware sherds. There is one more port-hole on the southern orthostat, just below the above one, corresponding to the height of the bench inside. The orthostats are supported from outside by a platform of shale slabs, and the structure is enclosed by dressed stone-circle, and further enclosed by a rectangular chamber of rubble stone masonry (pl. V A) with an entrance on the south. Interesting feature of the burial (pl. V B) are four huge stone-slabs, erected on all the cardinal directions and occurrence of skeletal remains and megalithic red ware sherds outside the cist. Another note worthy feature is that the orthostats are decorated with bruised trident across the circle and endless cord design and rows of deep grooves. The most important find from the burial is a memorial stone, depicting the foot-prints exposed at the level of the stone bench.

9. **IAR 1977-78: 11-13: Excavation at Peddamaruru,** Dist. Mahabubnagar- The Department of Archaeology and Museums, Government of Andhra Pradesh, carried out excavation at the habitation site and also megalithic burials in the vicinity. Excavation at the habitation site revealed two periods of occupation. Period I, probably belonging to the Megalithic Culture or the early historical times, is marked by the occurrence of successive floorings, the earlier ones of rammed *kankar* and the latter floorings of shale slabs, circumscribed by post-holes, indicating the house patterns. The pottery of the Period consists of red polished, tan, black-and-red and black-polished wares. The buff ware is also represented by a few sherds. The common types are vase with beaded and flanged rim, deep bowl, dish, lid and narrow-necked vase with flanged rim. The antiquities recovered from occupational deposit of the Period include: pear-shaped and tabloid beads of terracotta; beads of jasper, carnelian, rock-crystal; bangles of shell, carved with round pellets and copper bangles, decorated with beaded design; and iron objects including arrowhead, spearhead, sickle and dish. Period II, assignable to the Satavahana

times, is marked by profuse usage of shale stone for constructions. The ceramic industry is dominated by red polished and coarse red wares. Other finds of the Period include: beads of terracotta, jasper, carnelian, rock-crystal; bangles of shell and copper; iron objects including socketed hoe and knives; and an oval-shaped stoneplaque, depicting a lion standing on a lotus with raised forepaw and tail curving upwards on the obverse, and the reverse divided into two panels by a wavy line enclosed by two bands, multiple arched-hill in the top panel and a lotus in the lower. Excavation of the two megalithic burials from Group I, which is 2 km north of the village, revealed that the type represented is a port-holed cist with passage, bound by stone-circle. The port-hole and the passage are towards the south. The excavated burials in Group 2, lying 3 km south-west of the village, showed interesting features. Megalith I is a cist, transeptic into three chambers (pl. VII B) by two upright north-south oriented slabs. The port-hole is in the southern orthostat, leading internally to the central chamber and externally to an oblong passage closed by a slab in the front. The transeptic slabs, too, are provided with port-holes. The eastern chamber (2.35 X 0.65 m) was tightly packed with pieces of shale slabs, quartzite and red clay up to a depth of 35 cm, below which only small chips of shale and rubble of quartzite packing was encountered. The funerary deposit, underlying the above packing, consisted of charred bones in urns, forty vases of Black-and-red Ware, black, red and coarse red wares, a small sickle of iron and two rock-crystal beads. The central chamber yielded more than twenty-five vases in Black-and-red Ware, red, coarse red and polished red wares and a sarcophagus. Fragments of charred bones and calcined skull pieces were noticed along with some pots inside the sarcophagus. Removal of the flooring slab in between the eastern and central chambers revealed a burial-pit in the centre of the cist, yielding urns with bone pieces, ring-stands in black ware, a vase in redware, a dish in Black-and-red Ware and a miniature pot in black ware. The western chamber, too, yielded a large number of vases and human bones at a depth of 1.35 m. The cist is encircled by horizontally paved large and medium-sized slabs, the outer edges of which are trimmed into semicircular shape, so that they make a neat circle. The intervening space between the cist and the circle is filled with pieces of shale slabs. Megalith II is a cist-burial (pl. VI B), the orthostats of which are arranged in contra-clockwise pattern. The port-hole, on the southern orthostat, closed externally by a slab, leads to a passage-chamber. The cist is transeptic into two chambers by a vertical slab. The floors of the chambers are provided with slabs. The eastern chamber yielded four skulls, long bones, iron objects such as two rings, a spatula-like implement and a nail rivetted to a copper

ring in the shape of spindle whorl, usual megalithic pottery, a terracotta figurine of buffalo besides a sarcophagus (pl. VIII B). The sarcophagus, covered with a lid, has two rows of six legs each and decorated with an applique band of finger impressions below the rim. It yielded a few bones only. The western chamber contained a single skull, separately interred with three longer bones and two terracotta sarcophagi, besides pottery. Of the two sarcophagi, the one pentagonal in cross-section and truncated barrel-shaped, yielded a few fragments of charred skull bones, and the other one, decorated with double rows of multiple concentric lines, had a few bones and fragmentary skull, probably of a child. Megalith III is a single-chambered cist, the orthostats of which are arranged in clockwise pattern. The port-hole on the southern orthostat opens to a passage-chamber. The cist is encircled by horizontally-paved slabs. The cist had no flooring-slab. But the funerary deposit was placed on the bed-rock itself. The interments include: eight skulls, few long bones and iron objects such as chisel, knives and triangular blade, probably used as arrowhead, besides usual megalithic pottery. Megalith IV is a pit-burial but with a passage-chamber on the south, enclosed by double stone-circles of shale boulders. The skeletal remains were noticed at a depth of 1.80 m, deposited over the bed-rock. The pottery recovered is very scanty and damaged with the exception of a miniature pot in black ware.

**(IAR 2008-09:1-3) conducted excavations at the Megalithic sites of Vadinapalli** (locally known as Vajenapalli), Nimalipuri and Vellaturu, in the Mellacheruvu mandal of the Nalgonda district; photo documentation of the site of Shobhanadrigudem in the same mandal and explorations in the Guntur district, as salvage work in the areas which were to go under submergence of the Pulichintala Irrigation Project on the River Krishna. In all, there are 886 megalithic burial sites in the twin-sites of Vadinapalli (VNP) and Nimalipuri (NMP) of which three hundred sixty at VNP and five hundred and twenty-six at NMP. These megaliths located amongst thick shrubs, were extensively surveyed and recorded. The megalithic burial monuments mainly comprise of cist-chambered tombs, with or without capstones, with or without cairn-filling or boulder circle surrounding them, simple cairn circles, subterranean cists covered with massive capstones, with port-holes, transeptal cists, cist within cist, and stone circles with broken orthostats used in place of stones. Due to the paucity of time, effort was made to excavate at least one example from each type, if not more. The results unearthed, varied considerably between different types. In VNP, of the megalithic monuments numbered between 1 and 360, Megalith nos. 4, 5A, 6, 20 and 293 were taken up for excavation and in NMP, of the megaliths numbered between 1 and 526, Megalith no. 6 was taken up for excavation.

Megalith no. 6, at the site of NMP is a freestanding cist burial without any surrounding boulder circle. The four orthostats arranged in the typical swastika pattern enclose a chamber, which has the dimensions of 1.88m on the longer east-west axis and 1.40m on the shorter north-south axis. The internal height of the chamber is 0.70m on the western side and 0.80m on the eastern side, from the surface to the basal stone slab, which has the dimension of 2.0m x 1.40m. The eastern orthostat has a port-hole above the ground level, having a diameter of 0.45m, without any passage from the outer periphery. The port-hole in this case is pear/ghata-shaped, with the narrower end opened to the sky. The filling inside the chamber comprises earth of the surrounding type as well as black cotton soil. At the base of the chamber is a slab over which are placed pots, medium and small-sized, some of them tripods. The pottery comprises red wares and black-and-red wares. The red wares are plain and mostly ill-fired but the black-and-red ware has a distinct polish on them. The pottery, in general, has a profusion of graffiti on them. The pottery shapes comprise small vases, some of them tripods, small matkas, bowls with wide mouth, with or without carination. Megalith no. 4 at the site of VNP is a cistburial comprising four orthostats arranged in the svastika pattern with a port-hole on the eastern orthostat encircled by a boulder with cairn packing. This burial monument has a cist within the main cist, which is placed centrally along with skeletal remains on its either sides. All the three interments within the main cist chamber are oriented in the west-east direction. In the first stage of excavation, after opening the main cist, the centrally placed main cist within it was enclosed by boulders. The four orthostats arranged in the typical exposed. This chamber, measuring 0.84 m east-west and 0.60 m north-south, has an arrangement of a wide-mouthed shallow bowl (or dish?) placed over a few boulders together with a couple of long and short bones. In the second stage of excavation, the space to the left of the central cist-chamber, abutting the southern orthostatic was exposed. This is used for articulated secondary burial of an adult, laid with the head towards the west, set in a somewhat crouching position, facing north. Efforts to articulate the skeleton have not been correctly made as erroneous bones have been used in different positions. The skeletal remains are directly placed over the basal stone slab, which forms the floor of the entire cist. Above the skeletal remains is an arrangement of six cobbles surrounding a wide-mouthed, shallow bowl of black-and-red ware. In the third or final stage of excavation, the narrow strip to the right of the central cist, abutting the northern orthostatic, was exposed. A skull, crushed badly, perhaps due to the overlying earth pressure, was found placed to the west abutting the western orthostatic. This too is placed directly on the basal stone slab. The outer, bigger cist tomb measures 1.55m east-west and 1.35m north-south. The height of the eastern orthostatic is 1.46m from the top to the

bottom and that of the western one is 1.45m. The port-hole on the eastern orthostatic has a diameter of 45cm. The complete burial monument is encircled by a boulder which measures 6.25m along the longer east-west axis. The pottery comprises black-and-red ware and red ware. Megalith no. 6 at the site of VNP is a burial of the subterranean type, covered with a 28cm thick massive capstone, measuring 2.10m east-west and 1.95m north-south. The burial monument is enclosed within a roughly circular boulder enclosure measuring 6.05m on the west-east longer axis and 5.05m on the north-south shorter axis. On removing the capstone, a subterranean chamber made by the swastika type arrangement of four free-standing orthostats standing on a basal slab was exposed. As in the case of most burial monuments at the site, this one also has a port-hole on the eastern orthostatic, this one being a subterranean one. The chamber measures 1.60m east-west and 0.90m north-south. The height from the base to the top of the chamber on the interior is 1.25m on the western side and 1.35m on the eastern side. The port-hole on the eastern orthostatic, which measures 30cm in diameter, is partially covered by a stone slab, placed horizontally with filling covering the porthole. Upon clearing the mud filling from within the cist burial, an arrangement of pottery comprising large bulbous vases, dishes, squatted bowls, handi, straight-sided bowls and lota was found arranged in tiers. Atop this arrangement were a few horizontally placed long bones. The pottery repertoire comprises red ware, black-and-red ware and black ware. Almost all the vessels bear graffiti. This megalith is the only burial amongst the excavated lot which yielded iron implements. To begin with, the megalith builders placed a celt, a chisel and a razor on the basal slab. A small black bowl and a lota were placed atop the implements. Then the pots were arranged tier-wise inside the chamber. By the side of the iron implements was arranged a lump of black cotton soil. Megalith no. 20 is a burial comprising four orthostats arranged in the swastika pattern with a port-hole in the eastern orthostatic having a diameter of 40cm. The port-hole was subsequently filled up by rubble and earth filling. The burial monument is encircled within a boulder circle with cairn-filling. The boulder circle has a diameter of along the east-west axis and 6.70m along the north-south. The chamber of the cist tomb measures 1.57m on the east-west axis and 1.18m on the north-south. The chamber has a depth of 1.00 m on the west and 1.14 m on the east. The chamber filling comprises earth mixed with potsherds from the habitation. An iron nail was also found from the filling. The sherds have the usual shapes like vases, handis, bowls, dishes, etc., as recovered from the neighboring megaliths. The repertoire is made up of black-and-red ware as well as black ware. As prevalent at the site, on the basal stone slab is placed arrangements of skull, long bones, pebbles and pottery. On the portion abutting the southern orthostatic is an elaborate arrangement comprising

cobbles and small vases, globular and shallow, over which are placed few long bones. On the north-west corner is an arrangement of pottery comprising dishes and vase fragments together with long bones. The pottery recovered from these arrangements comprises lota, small globular bowls and small dishes in black-and-red ware and red ware. Megalith no. 5A, like many other such burials at the site of VNP, measures about 1.00-2.00m. On excavating one, it was found that this is a child burial. The burial monument comprises four upright orthostats, again arranged in the swastika pattern, encircled by a pebble circle with a diameter of 1.90m on the east-west axis and 2.35m on the north-south. The cist chamber measures 45cm east-west and 23cm north-south. The interior of the 20cm deep chamber is filled up with earth. The basal slab has an arrangement of a crushed baby's skull along with bone pieces, potsherds and earth, all combined together. No pottery remains apart from the ones crushed along with the skull could be found. Megalith no. 293 at the site of VNP is a burial comprising a circle made of slanting vertical slabs in place of boulders or stones. The excavation revealed that the megalithic folk might have followed the practice of constructing burials much in advance of receiving the skeletal remains. Since this burial appears to be totally unused, it did not reveal any grave goods or skeletal remains. It, however, bore evidence of certain activities which might have been performed during the construction of the burial. Two charred post-holes were discovered, which might have been used to erect shades while work was on. The site at Vellaturu houses a total of 44 megalithic monuments. The geography and the geological position of the site provided the megalithic architects with more rock slabs to be used as orthostats, rather than boulders, for constructing boundaries of the tombs. In all, the site yielded twelve oblong cists; ten svastika patterned cists enclosed within a circle, mostly made of pieces of stone slabs, usually with capstones; ten svastika-patterned cists with or without capstones and essentially without any enclosure and twelve svastika-patterned semi-subterranean cists enclosed within covered slab circles, the central cists also bearing capstones. Of these, few had passage ways. Although four megaliths were taken up for excavation, due to time constraint, only two could be excavated in detail. Of these, Megalith no. 21 is an open oblong cist within a stone circle, which yielded a crushed pot placed on the basal slab, without any skeletal remains. Megalith yielded a lid made of red ware, placed on the basal slab. Megalith nos. 20 and 34 are of a different type which has been reported for the first time from this site. Megalith no. 20 is a covered swastika cist burial, encircled by a vertical slab circle, covered by capstones. A paved passageway from the south connects to the southern orthostat. As it appears, this megalith is a twin-burial, encircled by a vertical slab circle with a diameter of 7m. The burial chamber is constructed by placing four

freestanding orthostats in the swastika pattern, making a squarish central chamber measuring 1.11m north-south and 1.60m east-west with a depth of 2.25m. On the outside of the stone circle composed of vertical slabs pebbles are strewn in the form of a rough circular paving, which has a diameter of 10.3m. The southern orthostatic has a port-hole, having a diameter of 40cm, placed 1.15m below the covering capstone. A stone-paved passage, as in any other megalithic burials, could have been made with many beliefs, but the entire range of activities using the port-hole must have been a one-time affair, after which it was covered by the huge capstone measuring 2.4m x 2m x 2m. After the construction of the swastika cist and the passageway, the vertical stone slab circle must have been erected, that was then covered by huge capstones at the last stage of construction. Just abutting the slab circle, on the exterior is found a red ware pot, placed inside the passageway. The

burial is divided into two halves by a partition slab and the two halves have separate basal slabs, thus making it a double burial. The funerary remains include crushed pots of red ware, black ware and black-and-red ware, long bones, crushed skull remains of an infant and skulls of adults. Megalith no. 34 is of a similar type, though devoid of a passage. The vertical slab circle, in which the slabs are covered, has an ovoid appearance and measures 5.55m east-west and 6.00m north-south. It encloses a swastika cist measuring 2.35m east-west and 2.35m north-south. This too has a port-hole on the southern orthostatic. This is a transeptal cist and the funerary remains comprise skulls and long bones, all thrown in a very haphazard manner into the cist. The type of megalithic burial monuments described above has not yet been reported from any other site in the country. To demarcate it from the vertical slab circle variety, it has been termed as a "covered" vertical slab.