Southern Neolithic Cultures in India

The first discoveries of ground stone implements in India are more than a century old. Captain New Bold’s discovery of ash mounds at Kudatini and Kupgal in 1836, and William Fraser’s discovery of Neolithic settlements at ‘North ill’ of Bellary town and Kupgal near sanganakallu have created an inquisitiveness in Robert Bruce Foote, who after 1885 discovered nearly 200 Neolithic sites in Deccan and South India. The notable work of Foots fall in the districts of Hydrabad, Mahabubnagar, Kurnool, Cuddapah, Anantpur and Guntur of Andhra Pradesh, Richur, Chitradurga, and Bellary of Karnataka, North Arcot, Salem, Tiruchinapalli and Dharmapuri in Tamilnadu. Since Foote’s work in many parts of the country particularly in Deccan and south India, Ground stone implements were collected in large quantities. But it was not until 1947 that the conscious attempt was made to determine the chronological and cultural contents of the ground stone industries. Wheeler’s excavations at Brahmagiri (1948: 181-310) have placed the Neolithic industries of the Deccan in a chronological perspective.

Wheeler’s excavation of Brahmagiri provided the necessary stimulus, where after, Neolithic sites one after the other was excavated in quick succession in different parts of South India. Such of the excavated sites include Sanganakallu (Subba Rao, B: 1948; Ansari, Z.D.
and Nagaraja Rao, N.S. 1969); Nagarjunakonda (soundarajan, 1958; 48-113, R. Subrahmanyam at. Al. 1975); Piklihal (Allchin, F.R.1960); Utnur (Allchin, F.R.1961), Maski (Thapar, B.K.1975: 4-142); Kesarapalle (Ferkar, H.1962); T.Narsipur (Seshadri, M.1971), Veerapuram (Sastry, T.V.G. et. al. 1984); Dalamalai and Totarapalli (Narasimhaiah, B. 1980) etc. The evidence furnished by these exactions has gone a long way to add to our knowledge of the life and times of Neolithic in South India.

Regarding the origin of Neolithic in India, Wheeler contended that it holds origins to South-East Asian and Chinese influences. The remarkable view was given support by a similar contention of Worman. Wheeler (1949) stressed on the East Asiatic Origin to India Neolithic. Dani (1960) demonstrated that the Indian Neolithic did not belong to a unitary cultural complex. He made it amply clear that at least two strains went into the make up of the India Neolithic phase. Krishnaswamy (1960:125-64) rightly stressed on the recognition of several cultural zones in trying to prepare a distribution pattern for the India Neolithic. Allchin, F.R. (1960:127), however, believes in South Indian Neolithic cultures characterized by pointed butt axes and grey pottery may have had origins traceable to the Neolithic and Chalcolithic Cultures of West Asia. But Allchin does not enlighten us the route followed by the
influence to spread. We do not get continuity in the geographical
distribution of pointed but axes in the wide area aspiring Deccan from
the Indo-Iranian border lands (Sankalia, H.D.1964 271-72). Discounting
the land route, the alternative would be to think in terms of sea route
across the Arabian Sea. If sea route is to be followed we should expect
in India as exact replica for one or the other of the Neolithic cultures of
West Asia. But such has not been documented on archaeological
record. On the other hand, if the land route were followed, the Neolithic
Cultures of the Deccan should have been transmitted by the Indus or
post-Indus traditions. But not many Harappan influences are to be
found in the cultural make up of the South Indian Neolithic (Sankalia,
H.D.1974: 271-72). Somewhere we discount extra-Indian original for
the Neolithic of South India, we have to provide satisfactory proofs for
independent origins of farming either in Deccan or South India. Thaper,
B.K. (1965) of the opinion that Southern Neolithic originated in the
region itself. According to him, Neolithic blade industry is derived from
pure microlithic series. He also wishes to find out “Whether there was
any continuation series into the southern Neolithic complex”. In this
content, Sundara’s (1983) recent theory is worth nothing. According to
that theory, Sundara tried to find out aceramic meolithic stage similar to
that of West Asia.
As Shevrory hills in Tamilnadu, and Maski and Sanganakallu in Karnataka witnessed Early Neolithic stage characterized by coarse gritty pottery, limited number of ground stone axes with microlithic tools from Nagarjunkonda in lower Krishna Valley and Deilmálai, and Togerapalli in the upper Kavery Valley. According to him the mature Neolithic stage was developed at Krishna-Tungabhadra doab because of the fusion of Deccan Chalcolithic cultural traditions into the aceramic and early Neolithic traditions. This stage he attributed to mature Neolithic found at Narargunakonda (Phase II) or the sites similar in nature elsewhere. Though this theory is appearing, it is still at a hypothetical stage and needs much survey and digging. In spite of all these theories we have to confess that we know very little about the beginnings of agriculture in the Deccan and South India.

3.1. Site from Southern Neolithic

Studies in the southern Neolithic culture from 1821 and 1916, nearly 300 southern Neolithic sites were reported from different sectors of South India (Krishna 1931; Munn, 1934; Foote 1916). Neolithic research gained momentum again in the 1940s. Several important and significant excavations were carried out during the second half of the 20th century (Subbarao, 1948; Wheeler, 1947-48; Thapar, 1957; Allchin, 1960, 1961; Rami Reddy, 1978; Paddayya, 1993a and 1993b;
Continuing survey and systematic documentation of material culture sites have now realized in a listing of more than 800 Neolithic sites in the four southern states of Andhra Pradesh, Karnataka, Tamil Nadu and Maharashtra (Korisettar et.al. 2002). Andhra Pradesh records the highest number of sites and Tamil Nadu, the least. The Rayalaseema (Parts of South-west Andhra Pradesh and mid-east Karnataka) and the western parts of the former Nizam’s dominion constitute the core area of ashmound tradition of early Neolithic culture of South India. These three states constitute the southern Neolithic Province and the Rayalaseema represents the hub of its development. The earliest stages of Neolithic culture are well represented by the excavated sites in the latter region. Evidence from the coastal states of Goa and Kerala as well as the coastal districts of Karnataka and Maharashtra is however scanty and scattered.

A general picture of cultural development of the period from early 3rd millennium B.C. to 1st millennium B.C. has been reconstructed based on the excavations of select sites in the each of these states (Allchin and Allchin, 1982; Murthy, 1989).

Here, I have selected Sanganakallu a important Neolithic excavated and well dated site as a core area and its surrounding sites,
within 50 km radius as peripheral area that include the sites of Brahmagiri and Palavoy which are also excavated.

**Brahmagiri**

Brahmagiri site is found in the granitic region, rising some 600 feet above the plain, within the Molakalmuru Taluk of the Chitaldurg (Chitradurga) District in the northern extreme of Karnataka State. The Brahmagiri excavations revealed a continuous occupation from the Upper Neolithic through the Early Historic (Figure 3.1.1).

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**Fig. 3.1.1 Stratigraphic of Brahmagiri**
The upper levels designated as the Andhra Culture included Rouletted Ware in association with red pottery decorated with criss-cross yellow paintings. Below this was the Megalithic phase characterized by cist-burials, well polished Red and Black Ware and Red Slipped Ware. Beneath the Megalithic phase was the deep stratified deposit of stone axes, burials in crude handmade urns, microliths of quartz, agate, and occasional copper and bronze objects. He also observed an "overlap" between Megalithic and Early Historic phases (Fig.3.1. stratigraphic). In addition there was overlap between Neolithic pottery types and "Megalithic" pottery types, although Wheeler downplayed this fact, in part because of his belief that the megalithic burial tradition must have been introduced by immigrant-invaders (Wheeler 1948: 203; 1959: 164-7). This excavation provided a relative chronological sequence of "cultures," although Wheeler had to rely on guesswork for assigning absolute dates. He only allowed a very limited time span of one millennium for the development of these cultures. The Neolithic culture was dated to the early part of the first millennium B.C. with the megalithic beginning in the third century B.C., his immigrant culture driven south as part of the historical expansion of the Mauryan empire, transformed into the Andhra Culture in the beginning of first century A.D. Subsequent work and radiometric dating were to seriously revise these dates. Despite his mistakes, Wheeler's chrono-stratigraphic
approach to excavation provided inspiration to the coming generations of archaeologists, who pursued similar excavation programs on a number of southern prehistoric sites from the late 1950's through the 1970's.

The lithic finds from Brahmagiri are mainly confined to Period I. The microlithic industry is crude in the extreme and rarely exhibits any attempt at retouching. While there is a crescent, but, there are no lunates, trapezes or scrapers, in contact to the Mesolithic industries. The majority of the tools are double-edged blades in jasper without retouch, a few of which have serration on one edge. Finished microliths to the extent of ten percent were recovered from Sub-period I A, while 90 percent were recovered from Sub-period I B. The technique of the serration, though known from the earliest level of the site, was not widely applied. The serrated blade shows no sign of gloss on the serrated or unserrated edges and is restricted to the lower level of Sub-period I B. There is also a crested-ridge flake. The exact character of Brahmagiri microlithic industry is hard to determine, as fluted cores, corresponding to the parallel-sided blades, are absent.

Of the stone axes of the pointed-butt type (Figure 3.1.2), fifteen complete and twenty-nine broken specimens were found in Period I, in various stages of chipping, pecking, grinding and polishing. The
majority of the axes were obtained from the lower levels, with a unique stone adze from the higher levels of Sub-period I B. Again, the axes fall into two groups, one with flattened lenticular section, restricted the lower levels, and the other with ovoid section, present throughout the Period. The other lithic tools in this Period are saddle-querns, rubbers and spheroid balls.

Fig.3.1.2 Types of Stone Axe: Brahmagiri

Pottery was all handmade, crude, coarse fabric with a thin slip of clay. It was grouped into two broad wares 1A and 1B. The 1B ware was
confined to urns-burial, of mottled grey colour, with a coarse texture a conspicuous micaceous inclusions in ware 1A there are two categories, (a) painted pottery and (b) incised pottery. The painted pottery had either a red or buff slip. The red slipped pottery was burnished and salt-glazed. The painted decoration, when present, was applied after firing with ochre. The incised pottery bears designs of a herring-bone or criss-cross patterns. The painted pottery has two varieties (a) red burnished slipped ware with purple painted designs and (b) red, burnished slipped ware with purple paint and unburnished buff slipped ware. Although Wheeler argued strongly that the Neolithic represented a distinct people from the subsequent “megalithic people”, the ceramic sequence at Brahmangiri in fact shows the indistinctness of his “Megalithic” horizon, since the earliest levels with Megalithic also contain his Neolithic types and the later megalithic levels incorporate “Early Historic” types, thus suggesting an evolutionary sequence of ceramic technology and style.

Palavoy

The village of Palavoy (140 39’ Lat. 770 12’ E. Lon.) is about eight kilometers to southeast of Kalyandurg town from right on the southern side of Kalyandurg – Dharmavaram road in Anantapur district
of Andhra Pradesh and is about 40 kilometers south of Bellary – Sanganakallu complex of sites.

Geologically the site of Palavoy is situated in the archaean complex. The principal rock types belonging to Dharwarian age consist of dolerite schists, gueise, gneise, amphibolite and epidiorites. Environmental setting of the site is Savanna environment.

In the excavations a sequence of 14 layers was found. These could be divided into three cultural periods, namely Palavoy I, II, and III. Palavoy I was designated as pre-Neolithic, and this comes from layer 14 consisting of brownish red murum. Palavoy II comprising layer 11 to 9 represents the Neolithic period and Palavoy III has been called post Neolithic, it represents layers 8 to 2 (Figure. 3.1.3).

The Neolithic culture designated here as Palavoy II and represented in layers 11 to 9, is separated from Palavoy I by a gap of two sterile layers. It is characterized by pecked and ground stone, and blade industries, bone tools, a copper objects, pottery, terracotta and clay objects, burials and human skeletal remains, animal remains and plant remains.

The physiographical and geological features have remarkably contributed to the establishment of Neolithic settlements at Palavoy. The Neolithic folk living in the open on the flat terraces made by
leveling the tops of the granite hills. The occupation was however not confined to the enclosed areas within hills only but also extended to the slopes and plains at the feet of the hills. There is no clear picture of the plans of the Neolithic houses in view of the limited nature of the excavations at the sites hitherto dug in the south. The only floor at Palavoy with many as 30 postholes is traced over layer 11, in trench 1, mound I. The postholes, roughly circular with a diameter of 8 to 20 cm. and depth of 8 to 48 cm., suggest a circular to rectangular plan of the house with mud walls and probably thatched roof. The postholes yielded considerable quantities disintegrated

![Figure. 3.1.3 Stratigraphic of Palavoy](image-url)
wood of Acacia or Dalbergia species indicating their use as posts in house constructions. The floor is made of pale brown soil mixed with sand. Several circular to rectangular plans of various sizes of naturally placed or at times intentionally put huge granite boulders were noticed on the slope and top of the Palavoy hill. The roofs of these houses were probably conical.

The pecked and ground stone industry unlike the blade and microlithic industry is remarkably well represented at Palavoy. Eighty-four specimens were recovered from the excavations. Igneous rocks, both basic and acidic, comprising fine-grained basalts to medium to coarse – grained dolerites and epidiorites, granites, granodiorites, etc. were the most favored materials for the manufacture of artifacts of this industry at Palavoy. All these rocks are locally available in the vicinity of the site. The dolerite and epidiorites were must have been the chief source for making tools at this site and granites and granite gneisses were employed in making rubbing stones, hammer stones, querns, etc. The manufacturing techniques consisted of flaking pecking and grounding. These were employed either individually or in combination with each other in the preparation of a tool. Two broad categories of artifact types-the edge tools consisting of axes, adzes, chisels, wedges, chopper-chopping tools and scrapers, ring stones, anvils, etc.
The blade industry from the stratified deposits of Palavoy though poorly represented. The surface sites are however very rich in blade and blade tools. The artifacts, chiefly made of chert and less commonly of chalcedony, quartz, jasper etc., consist of blades, backed blades, obliquely blunted blades, truncated blades, lunates, trapezes, points, borers, and scrapers. The industry is based on the crested guiding ridge technique.

Besides the bone tools comprised scrapers, chisel, blades, punch and points are another significant feature of this period.

The ceramic industry consisting of blotchy grey, dull red, burnished and unburnished grey ware and painted red wares demonstrates a much-advanced skill. The blotchy grey and dull red wares are the most common and painted red ware which is most uncommon. The blotchy grey and dull red wares are mostly hand-made and painted red wares were manufactured with the help of some kind of mould. The fabric is very thin and fine. The most common types are globular pots, bowls and dishes.

The painted designs are confined to the surface of the pots usually on their neck and shoulder, sometimes on rim and occasionally on the interior of the neck. The designs consists of a simple bound, a band with vertical strokes above or below it, two parallel bands joined by vertical
strokes, a zig-zag, a lattice designs and sometime with chevrons and lattice design. Occasionally, a lopped with several vertical strokes.

The economic life of the people ranges from hunting activities to primitive agriculture. Several terrace-like flat spaces on hill slopes and top at Palavoy habitational places were apparently used for some kind of patch agriculture. But no evidence of cultivated grains was obtained at Palavoy. However, the presence of querns and rubbers, indicate the practice of agriculture. Further, direct evidence for the practice of agriculture is provided by the discovery of charred grains of horsegram (Dolichos biflorus, Urali) from Tekkalakota (Sankalia 1964; Nagaraja Rao and Malhotra 1965) and finger millet (Eleusin Coracana, ragi) from Hallur (Nagaraja Rao 1966; Vishnu-Mittre 1971), and the proximity of these sites to Palavoy. The domestic species comprise cattle including larger bovines (Bos bubalis and Bos indicus), Sheep/Goat (Caprines), Canines and hogs. Majority of the bone belong to cattle. Most of the bones from the habitation deposits are charred, and show cutting or chopping marks on their surfaces. They must have domesticated cattle both for their milk and meat.

The evidence of the disposal of the dead at Palavoy came to light from trench 1, habitational area I in the form of four infant burials. All urns are of grey ware, urns consisting of a single pot covered with an
ordinary or lipped bowl, or two pots kept face to face. The urns were kept vertically as in Tekkalakota II and I. But unlike at these sites, the dead were buried outside the house but within the vicinity of the habitation areas and no burial goods were provided.

Radiocarbon dates for the southern Neolithic culture are available from sites of Utnur (2160 ±150 B.C), Tekkalakota (Between 1780 and 1540 B.C). Hallur (1710 ±105B.C and 1585 ±105 B.C), Sanganakallu (1590 ±110, 1550 ±100 and 1585 ±105 B.C), T. Narsipur (1805 ±100 B.C and 1495 ±100 B.C) and Bainapalli (1485 ±100 B.C).

It can be seen from the above dates that the southern Neolithic culture existed between 2000 and 1000 B.C. Majority of these sites evidences like painted pottery and copper occurred in the late levels. Similarly, at Palavoy, painted pottery, which figured in all levels, is more predominant in the upper from which copper was also known. In this site, the carbon date between 1800 and 1500 B.C. for the Palavoy Neolithic culture as well.

In short, the Palavoy Neolithic people were living quite a different way of life compared to their predecessors of late Stone Age. Many features such as round or rectangular houses, terrace agriculture, hunting activities, domestication of cattle, the use of saddle querns and rubbing stones as well as axes, ring stones, etc. are characteristic of this culture.
Palavoy ashmound

Four ashmounds (Figure. 3.1.4) are located along the western foot of a large conical peaked granite hill with deposits between the mounds and the hill identified as Neolithic habitation deposits (Rami Reddy 1978: 25-6, 30).

Here as at several other ashmound sites Rami Reddy seems to have mistaken the highly vitrified dung lumps for iron slag. This site was explored during the survey work of Ramy Reddy (1978), who also undertook excavations with others from Deccan College of the northernmost ashmound (Rami Reddy 1976; 1977). The ashmounds are numbered from north to south. At ashmound two the lower northern edge of the ashmound was exposed down to the level artificial platform.
which had been prepared before the dung accumulated. To the east of the main circular peak of ashmound II.

This site was also significant in the Iron Age, as there are several megalithic monuments here, including graves along the foot of the hill both north and south of the ashmound group (Rami Reddy 1978: 37). A large standing stone (menhir) is located to the south and west of ashmound II by about 210 meters.

Sanganakallu

The village is situated 5 km northeast of Bellary town, the district headquarters. Three hills namely Sannarachamma, Hiregudda, Chaudamma gudda constitute a chain of granite hills to the north of the village on top, which the archaeological sites are situated. Of these, Sannarachamma hill was excavated earlier (Subbarao 1947,1948; Ansari and Nagaraja Rao 1969) (Figure. 3.1.5). The excavations here have revealed evidence for Phases II and III of Allchin and Allchin (1982). The complex of hills is surrounded by a rolling plain characterized by a savanna environment with the *Acacia-Albizia amara* vegetational series, although most of the region is now under cultivation. The local soils on the plains range from reddish to light/medium black soils and are derived from the granite. Neolithic habitation deposits on the Sannarachamma hill is the largest and occupies a flat terrace on top of
the hill encircled by granitic torso. Towards the west of the cluster of ashmounds there is evidence for less intense occupation, which includes a number of stone built structures with ground stone tools and occasional pottery, the habitational soil being very thin.

Figure. 3.1.5 General view of Sanarachamma gudda site.

Figure. 3.1.6 View of dolerite dyke.
There is an extensive dyke running through Hiregudda and there is evidence for the manufacture of flaked and ground stone tools from this dolerite rock (Figure 3.1.6). In addition there are numerous rock bruising on the dyke. The depictions include cattle and human figures (see Gordon 1951; Allchin and Allchin 1995). There is a group of three ashmounds at the eastern foot of Hiregudda, known as Kupgal ashmounds (Mujumdar and Rajaguru 1966).

The other hilltops also have Neolithic sites. On the Choudammagudda hilltop there is a large scatter of Neolithic surface finds on the artificial terrace surfaces. There is also a small denuded ashmound situated at the shoulder of the hill overlooking the village of Sanganakallu. This appears to have been sporadically occupied, probably a seasonal occupation. On Hiregudda hill there is an area of deeply stratified cultural deposit (Fig. 1), west of this area were light scatters of lithics and pottery.

Sanganakallu was a ‘factory’ site located near the source of basalt or trap rock, from which the axes and other tools were made, it was possible to collect a large number of axes in all stages of manufacture. The main types of tools are axes, chisels, picks, fabricators, pounders, discs, hoes and mace heads made of dolerite dyke.
Neolithic pottery is represented by Phase II with two subperiods. Subperiod 1 is ‘True Neolithic’ characterised by coarse brown and black pottery with a dominance of pale grey ware. Subperiod 2 pottery is represented by pale grey ware along with the dominant brown and black wares. A few sherds with violet and purple paintings on a dull background were also found. In general the Neolithic pottery is crude and coarse in fabric all of which is handmade, some show burnished surfaces (Subbarao 1948; Ansari and Nagaraja Rao 1969).

**Grinding Grooves**

The evidence to show how the axes were ground, particularly their edges, was first noticed by Foote (1887; 1914: 92, 1916: 87 and 117) in the form of rock grooves on the ‘North hill’ of Bellary town, east of Helalagundi (Halalagondi) in Alur taluk of Kurnool district and at Pullayyagudda in the former Hyderabad state. Similar grooves were found by De Terra (1942) on a quartzite boulder at Burzahom in Kashmir, and later by Subbarao (1949: 144) at the southern foot of Sanarachamma hill on an exposed boulder in the open fields (Figure 3.1.6.).
The grinding groove was found on the northern slope of the Uravakonda pointed hill on the surface of a big granite boulder around which more than half a dozen saddle querns were laying. Four more such grooves were found on the eastern slope of the Havaligi hill and a few on the western slope of the Lattuvaram hill, both, in the administrative jurisdiction of Uravakonda independent sub-taluk of Anantapur district. Three similar grooves, measuring 25 to 40 cm. long and 2 to 4 cm. deep, were noted at the western foot of the Palavoy hill close to the north of ashmound 1 on the top and western slope of a big granite boulder.

At all these localities, a number of water ponds and springs around, in the vicinity of grinding grooves, were also observed. This indicates that the Neolithic man had made use of this pond water and some sand-like abrasive while rubbing the axes.
In 1891 Fred Fawcet, Hubert T. Knox and Robert Sewel, in one of their “excursions” to the ‘Kupgal’ hill stumbled on a rock picture on the perpendicular face of the eastern end of the trap dyke. They examined the whole hill and discovered very interesting rock bruishings all along the trap dyke (Fugure 3.1.7). These bruisings are lightly bruised on black diorite. They selected the black diorite boulders of the trap dyke to show their drawings in good relief. Today these (including old and new) are to be found all along the length of the dyke across the hill for nearly 200 meters.

The trap dyke at Kupgal runs in a N.W. by W. directing across the northern end of ‘Kupgal hill’ locally called Vittalappagutta. Foote located them on the north side of the hill on the trap dyke “which has
weathered much more slowly than the surrounding granite and stands in a conspicuous low cliff.” Probably Fawcet when he refers to the “east end of the trap dyke” refers to the same low cliff, where some graffiti can still be found. On the other hand Francis has located them “high up among the dark rocks which form the crest of the trap dyke on the northern end of the hill”. Thus it can be seen that the graffiti are located all along the length of the dyke, at varying heights.

The best representative and well-preserved group is to be found right on the crest of the hill on the steep face of the dyke, which is nearly 500 feet above the surrounding plain. This group is located just north of the reverted terraces and other traces of old habitation referred to by Foote. Here all the earth has been washed away and now they find them on confused piles of perfectly bare boulders.

Another good group is to be found just away from this at the foot of the hill, where the dyke comes down.

The technique consists of striking or bruising or etching lines with a sharp pointed stone. Hence they are not deep but only look white on account of the black colour of the face of the rock on which they are bruised. There is no evidence of any iron tool being used, as it would have left deeper impressions. This also accounts for the fact that many
of them have faded away. Only those which are not directly exposed to
the forces of Nature have survived.

The figures are made in two forms: (1) The drawing in outline,
and (2) Drawings in full, where the whole space is also made white. But
most of them are in outlines. The human figures appear either in stick­
like convention or in outline. Most of the figures belong to the former
category. The important animals depicted are oxen with prominent
humps and very long horns (different from the existing breeds),
buffaloes, dogs, antelopes, deer, leopard, elephants and peacocks.
Besides there are many composite scenes which may be mostly hunting
scenes.

Ashmound

The Sanganakallu area includes a range of Neolithic site types,
which provide a perspective on the diversity within a local settlement
pattern. The three hilltop sites, Sannarasama hill, Chaudammagudda and
Hiregudda (Kupgal hill, or the ‘Peacock Hill’ of Foote 1916) are all
inter-visible, and contemporary occupants would certainly have been
aware of each other and able to communicate through displays or
signals. This intervisibility seems to imply that these different categories
of sites in close proximity should be seen as part of a local settlement
system, perhaps of a socially integrated group. The Kupgal ashmounds
are not visible from any of the hilltop sites, but must have been known, and perhaps served as important gathering places on ceremonial occasions when the dung accumulation was burnt. Both Hiregudda and Sannarasama hill represent permanent communities, with deeply stratified habitational sequences that yielded plant remains. Choudammagudda (CDM; Subbarao's [1947] “Saudamma Hill”). There is a large quantity of

*Kupgal Ashmound.*

Located northeast of Sangankalu village and directly south of Srivaram village (a Boya community) these ashmounds are named in consistency with earlier workers. Two of these ashmounds are extant while a third has apparently been destroyed by the development of a small road, quarrying and plowing. There appears to be some habitation perhaps between 50 and 100 cm thick originally located west of Ashmound (Figure 3.1.8) designated 1 and excavated by Majumdar and Rajaguru (1966), third one is now extinct ashmound. This area now a ploughed field and it is unlikely that intact contexts could be found here. A small remnant of other ashmound was located on the north-east facing slope of the Kupgal hill (Hire-gudda) west of these ashmounds, as were three or four small habitation terraces with thin artifactual catter and quern stones.
An erosional run-off gulley west of ashmound, due to quarrying activities, a section was exposed which exhibited the habitation deposits. These deposits visible as a gray layer in the gully section directly overaly the red, sandy, granite-derived sterile soil. There was no evidence in this exposure for the dark 'palaeosol' horizon nor did the pebble layer report by Majumdar and Rajaguru (1966) as underlying Ashmound I. This calls into question whether the layer they found was in fact natural; alternatively it might be seen as an artificially silt-clay layer built up to level the site before camping and penning was carried as it known at Kudatini and Utnur (Korisetar et al 1999). This has important implications for interpreting these deposits in terms of environmental conditions, as Mujumdar and Rajaguru have done. The "gravelly detritus as parent material" recorded beneath this "dark brown
soil" is mysterious as it overlies a layer that is probably granite-derived sandy soil (that is probably equivalent to the sterile layer in the gully exposure) and includes dolerite flakes. It is not clear how a layer of coarse pebbles could have accumulated atop a natural, sandy granite derived soil by natural processes. This takes on importance in the interpretation of the date of the dolerite/greenstone flakes as they simply predate the platform at this particular ashmound and could therefore be early Neolithic in date. Indeed, these flakes resemble debitage from Neolithic Celt manufacture. Medium black soils now under cultivation surround these ashmounds. Kupgal hill (Hire-gudda), with a large dolerite dyke raises directly to the west of this site. This dyke turns southward and extends into the plain south of the ashmounds.

3.2. Features of Southern Neolithic

The study of South India Neolithic as did by Allchin, shows that the Neolithic of South India underwent a long evolutionary process culminating in the beginning of the urban centers in the first millennium B.C. This long process of evolution which covered a time span of over 1500 years was divided by him into three phases, the early Neolithic, the mature Neolithic and late Neolithic (Allchin, F.R.B. 1968: 161-170). Each of these temporal divisions is characterized by certain distinctive features of its own. The present writer while appreciating the three-fold
division proposed by Allchins, tried to project the cultural attributes of Neolithic in south India more comprehensively to suit all the available excavated data.

**Early Phase**

The early Neolithic phase of south India is represented by utnur, Kedekal, Brahmagiri is and early phase of piklihal. At Brahmagiri a stratigraphic gap separates the early and late phases of the Neolithic. The settlements are confined to tops of lowlying granetoid and schistose hills surrounded by vast stretches of fertile black cotton soils. The sites selections seem to have been prompted by availability or raw material, cultivable plots and fodder for domestic animals. The settlements were very small in extent and one such at Utnur measured 180’ x 180’ m. The information about the structural activity is scanty and basing on a group of postholes at Utnur, it is inferred that light super structures were raised on wooden posts.

The pottery is handmade and consists of both coarse and fine fabrics. There was a liberal admixture of mica and clay used for pottery manufacture. There was a wide range of surface colors – red grey, pale grey, buff, brown and black. Sherds of the finer fabric were generally slipped and furnished and sometimes even painted in red ochre and black. The pre-fired black-on-red ware is very limited and the painted
motives include horizontal or vertical bands, criss-crosses and wavy lines. A solitary example from Brahmagiri contains 'Highly conventionalized plant design (Wheeler, R.E.M.1948).

The red ochre paintings were usually post fired in nature, recovered in large numbers. At Utnur it occupied 40% of the total grey ware. The painted motifs constitute horizontal or vertical strokes, mostly executed on the top or the edge of the rim. There was only a limited number of post-forms-wide mouthed globular vessels with out-turned or flared rims, bowls with convex and straight profiles and dishes of various dimensions. Piklihal and Utnur provide yet another rare example of bowl/dish with multiple legged stand. The lugs and handles occur in a limited quantity. Ground stone implements and stone blades form the stone tool assemblage. These are crude and unsophisticated and seem to have been made on a locally available raw material. Brahmagiri has yielded. Kodekal has one edge ground are where us Utnur is devoid of any few specimens from the surface. Piklihal has 9 edge tools from this phase. The edge tools of the early tradition fall in axe group and the absence of special tools like adzes, chisels and picks is noteworthy.

The chipped industry of this period was limited and comprise of 'rudimentary flake or blade tradition'. At Brahmagiri 9 out of 89 specimens recovered belong to this phase. The crypto-crystalline silica
material was the chief raw material here. Utnur has 34 specimens made on quartz or other similar materials. Kodekal produced as many as 202 specimens number of tools from Piklihal is not known. The finished tools include blade backed blades scrapers and points which were crudely fabricated. The absence of retouch was an important feature of the industry.

Information about the disposal of the dead is scanty though there is every reason to expect systematic buries practices in this period. Of all the sites, only one instance was recorded at Utnur wherein an infant was buried in a pit in frontal position.

The economy of the period was a mixed one and included both food collection and food production. Hunting and fishing played an important role. Though there is no direct evidence of plant cultivation, the presence of querns, mullers suggests some sort of cereal and grain processing activity. Utnur abounds in cattle bones. However, the remains of deer and goat were also obtained at Utnur. More and above Utnur, Kodekal, has produced unmistakable evidence of the dog, owl, fish fowl and wild animals like gazelle, spotted dear, baraisngh, monitor lizard. Bhahmgiri and pikkihal have produced similar evidences. The domestication of cattle and other animals was once again confirmed in
the terracotta figurines found at Piklihal and Utnut. Some rock bruisings at Piklihal give the evidence of cattle.

*Mature Phase*

Around 1800 B.C. there appeared a sudden change in the Neolithic culture of South India, which resulted in the dispersal, and diversification of the culture emanating from Raichur and Bellary doab. This change might be due to the movement of the goods if not people, possibly from Western Deccan. Though the impact of the movement and consequent introduction of metal and other techniques is considerable. It could not mould the basic economic structure of the Neolithic society. The regions to which the culture spread include the upper Krishna basin in the north, Tungabhadra basin in the west, Kaveri and Kapila rivers in the south and lower Krishna basin in the east (Paddayya, K. 1973). The carbon dates also give testimony of the later settlements in the 4 regions mentioned. The fundamental features of the phase are revealed in Brahmagiri Ib, Maski Ia, Piklihal upper Neolithic, Sanganakallu Iia, Palavoy Iia, Hallur Ia, T. Narsipur Ia, Tekkelakota Ia, Hemmige Ia and Paiyampalls early phase.
A change in the settlement pattern is evidenced in this period. The tops and the slopes of lying garneted and Schistose Mountains those were hitherto habitudinal grounds for the early Neolithic settlements preferably by the side of a perennial rivers. Hallur, T, Narsipur and Hammige may be cited as examples of this kind.

The information about structural activity is clearer in this phase. The structures were raised on wooden posts supported possibly by conical thatched roof. The uneven ground was leveled and rammed either by red morum pebble chips or by both. The leveling process at times continued for two or three times at Sanganakallu. At Tekkelakota, lime plastered floors exist. The walls were raised by mud and supported by wood or bamboo screen. The stone wall for certain height and later followed by mud well was also noticed at Tekkelakota. The houses were circular in shape and the large post and smallest houses measure 5.5 m x 5 m 3.3 m x 3m respectively. Hearth formed a common feature inside the structure and at Tekkelakota and Sangankallu, ‘bin rests’ were also recorded. The cultural materials recovered from the structures include pottery; ground stone celts, chipped, querns, mullers, pounders etc.

The ceramic products changed considerably in this period. The pottery was predominantly handmade at least in the early centuries of the phase, but however, in the closing centuries, there occur specific
evidences for the introduction of turntable. The red, black and chocolate
whereas decrease gradually and finally disappear. The brown ware
occurs abundantly along with grey were. Buff ware, however, persisted.
In the surface treatment, there appears degeneration as unslipped and
unfurnished shreds begin to occur in large numbers. Most of the shreds
were made on gritty core and finished by uneven firing. This has
resulted in steep rise in blotchy shreds. The other feature was the prolific
use of anvil and dabber in the preparation of the pots. Looting the rim
portions to body of the pot after they were made separately was another
feature. The pot forms of early tradition continued with an exception to
legged vessels bowls with exerted or out-turned rims, dished basins and
lids. The handles and lugs occurred in large numbers. Tabular spouts,
channel spouts and lipped bowls occurred for the first time. Hallur,
T.Narasipur and Hemmige provide terracotta ‘head rests’, yet another
new features of the period, for which there are no parallels in India

Regarding the painted were, black painted red ware of earlier
tradition discontinued from all the sites expects Palavoy where the same
continued till the end of Neolithic age. The red ochre painted ware
however continued without a by change either in decorative motifs or in
painted designs. Incised, finger tipped and appliqué proliferate. By the end of the period there occur brown-and-black wares.

The ground stone tools are extensively prepared and this was stratigraphically documented at Brahmagiri where out of 15 complete and 29 broken edge tools, 14 complete and 25 edge tools were from this phase. Palavoy, Sanganakallu and Pikiilhal were the other sites where prolific occurrences of edge tools were recorded. The sites like Hallur, T.Narasipur, paiyampalle and Hemmige though rich in ground stone tools, were devoid of raw material and unfinished tools in the strata. This led the excavators to think in terms of trade contact with the tool breeding centers. Adze and chisel, which generally considered as carpenter’s tools are found for the first time in the stone assemblage.

The differential distribution pattern as evidenced in the ground stone tools in the early phase and the succeeding phases is also apparent in a stone blade assemblage also. Here also Brahmgiri provides an important piece of evidence and 80 out of 89 microfiches recovered are from this phase only. Not only at Brahmgiri, at several other sites like Piklihal, Tekkelakota, Hallur, Sangankallu, Hemmige this is represented by large number of microliths. T.Narsipur, Palavoy and Paiyamapple, the chipped stone industry was very limited and it might be due to the paucity of suitable raw material. Maski produced long blades measuring 78
to 5.5 cms. Blades were the dominant feature of the industry. Other tool types include scrapers, points, lunates and trepazes. The created guiding ridge technique was known.

The information about the disposal of the dead is prolific in this phase. The dead buried either in urns or in pits. The infants were buried in urns preferably under the house floors. The urns meant for this purpose were free from decorations. The skeletons of the infants were tightly folded in an embryonic posture to fit the restricted space inside the pots. The funerary offerings were very rare and only at Brahmgiri a bronze rod and a ground stone tool were recorded.

The adults were buried in oblong pits usually outside the house. At Tekkelakota these pits were roughly measured 1.60 m long, 0.45 cms broad and 20-40 cms deep. In the pit burials two kinds of burials, two kinds of burials were prevalent viz., complete inhumation and fractional burial. In the former the dead were buried in extended position whereas in the latter the bones were collected and arranged in anatomical position. The skeletons lay to their back with a tilt of the head either to right or left. The orientation was South North but not in all cases. At Tekkelakota adults were buried in a single pit, and this event is attributed by the excavator to communal burial. Some of the burials at Tekkelakota were covered from head to the extremities by flat granite
boulders. The funerary offerings varied. These include globular vessels, lipped bowls, spouted bowls, metal implements, ground stone tools and microliths.

Copper was introduced in this period and reached all the sites. However, its impact on the Neolithic economy and culture was very little and hence Neolithic folk of this period mainly persisted on stone and bone implements. The smelting of metal appears to be unknown as none of excavated sites gave any evidence about it. The finished state of the implements might suggest that the tools reached south India either by trade or cultural exchange. Palavoy provides the earliest evidence of copper in South India and the 14 carbon date obtained here is 1965 ± 105 B.C. (Reddy, V.R. 1976: 119).

The other sites of the same region give younger dates for this event at least by 150 years. At Hallur, earliest date is 1710±105 B.C. T.Narsipur 1805±105 B.C. If an average date is taken into consideration, 1800 B.C. would suit the occasion. The copper tool types of this phase were very limited and include chisels, Celts, rods etc. Added to copper, there were evidences for gold ornaments from T.Narsipur and Hallur.

The economy of the people was mainly based on food gathering and food production. Hunting and fishing still played an important role. The wild animals that were hunted include spotted deer, rat, antelope,
hog and gazelle. Shell fish was another dietary feature of the people. Added to these, the remains of domestic animals like ox, bufalow, sheep, goat, were also recorded in this period. Hallur provides the earliest evidences for cultivation of Ragi (Eleurine coracans) while Takkalakota provides the evidence for horse gram (doliobs biglorus). Evidence of both these specie besides that of green gram (Phaseolus rediatus) was also found at Paiyampalli in Tamilnadu (Rao, S.R. 1967-68:26-30).

*Late phase.*

Around 1400 B.C. or so, there appeared yet another cultural movement possibly from northwest. This is represented by Jorwe culture, which along with its wheel thrown black painted red sherds and other cultural traits intruded into South Indian Neolithic culture. The main features of the movement are recorded in Tekkalakota Ib, Piklihal late levels of upper Neolithic, Brahmgiri late levels. Sanganakallu II, T.Narsipur Ib, Hemmige Ib, Paiyampalle Ib, and IIb of Palavoy.

This period had witnessed drastic changes in the ceramic industry. The grey and pale grew wares decreased considerably and way to brown, dull red and brown and black wares. The coarse gritty fabric was more prolific. The red ochre painted wares of earlier tradition either diminished or completely vanished from the ceramic products. Wheel
made sherds, found prolific though there occur handmade sherds along with the wheel made black painted red ware of Jorwe fabric occurred from all the sites in a limited quantity. The painted designs include horizontals or vertical bands, crises-crosses, etc. The pot forms of the previous phase continued besides new introductions like globular vassals with out-cut rims, tabular long spouts etc. The ground stone tools and microliths exist as in the previous phase. Beads also occur without much variation either in the raw material or in shapes. However, the new introduction was terracotta heads at Brahmgiri and Tekkelakota with 2 and 5 respectively.

The copper objects were prolific when compared to the preceding phase. These were small in size and comprise both rods and pins. At Piklihal a broken miniature copper bowl occurred whereas Tekkelakota there were four objects viz., a spiral, a wire, a rind and a nail head. Hallur has produced three objects of which one was a fish hook, while remaining two were miniature axes. At Brahmgiri a bronze ring was recorded. Paiyampalle is the only site where not even a single copper bit was recovered. The significant feature of the phase is the absence of evidences for smelting of metal.

As for the disposal of the dead, the traditional method of previous phase continued. The new evidences were double and multiple pot
burials. In the double pot burial, the pots were kept mouth to mouth and generally infants were buried in extended posture. The funerary offerings were very rare. Hallur, Tekkelakota, Palavoy, T.Narsipur and Brahmigiri have preserved very good examples of this kind. In a multiple pot burials at Tekkelakota, four urns were used. The Skelton that was buried in this burial was kept in North South orientation. Rich funerary offerings were recovered from this burial which includes nine pots of various dimention. At T.Narsipur a skeleton is found in a cradle shaped pit covered either side by two post holes. These post holes must have belonged to a roof over the burial. At another instance at T.Narsipur, the skeleton is found without ankles, which was interpreted by the excavator as a deliberate act upon the people to keep the spirit within the grave.

The economy of the period mostly depended upon the production of food grains and domestication of animal. However, there are evidences of hunting and fishing. The faunal remains of ox, sheep, goat, buffalo, dog or ragi and horse gram as evidenced in the previous phase seems to have continued in this phase also. Besides these, Paiyampalle provided yet another evidence of the cultivation of green gram (Phaselus radiatus)
Ashmound Tradition

Ashmound are unique to the Southern Neolithic and have been the subject of much debate for over 150 years when they were first noticed. It was Col. Colin Mackenzie, the first Surveyor General of India who discovered few of these features including the Kudatini ashmound during the preparation of topographical maps of parts of Karnataka and Andhra Pradesh in the early 19th century which was followed by a few more in the Shorapur Doab by Col. Meadows Taylor in the 1850s. But it was Robert Bruce Foote who not only discovered a number of ashmounds and Neolithic habitation sites in the Bellary–Anantapur region but was also the first among those who have strived to find out the age and origin of these features. Many views are propounded about the origin and age of these ashmounds. Their association has been drawn from Neolithic cattle dung heaps by scholars to cremation grounds of rakshasas or demons of Hindu epics like Mahabharata in the local legends and myths. They have been thought to result from industrial activities like iron-smelting, gold smelting, brick making and pottery making activities. Cole has argued that the ashmounds are in fact geological deposits like kankar formations, limestone slag and volcanic ash. They have also been linked to the mass satis committed by women during the Vijayanagar period. But all these
theories have now been put to rest by many-repeated analysis, which have proved beyond doubt that these ashmounds are results of repeated or periodic burning of large quantities of cow-dung during the Neolithic period.

The Ashmound Tradition was a distinctive archaeological culture of northern and eastern Karnataka, and parts of southwestern Andhra Pradesh, dated broadly between 2800 cal. BC and 1200 cal. BC (Allchin and Allchin 1982; 1997; Devaraj et al. 1995; Korisettar et al. 2000). Drawing on recent fieldwork by Dorian gave recent archaeobotanical analyses (Fuller 1999; 2001a; 2001b; Fuller et al. n.d.), in this study several issues regarding the contributions of pastoralism and cultivation to the subsistence economy and the permanence and seasonality of different categories of South Indian Neolithic sites.

The Ashmound Tradition can be distinguished from other regional varieties of India’s Southern Neolithic by the presence of the distinctive ashmound sites (Allchin 1963; Paddayya 1973; 1992; Korisettar et al. 2000). These sites are mounds of dung ash up to 8 meters in height, which were formed through the episodic burning of large quantities of accumulated dung (Figure 3.2.1). That these mounds resulted from the accumulation of cattle dung was proposed by Foote (1887a; 1916), and subsequently supported by the studies of Zeuner
(1959), Allchin (1954; 1960; 1961; 1963a), and Mujumdar and Rajaguru (1966). The presence of Neolithic material in and around the mounds established their general period, and a few mounds have since provided congruent radiocarbon dates (Paddayya 1971; 1992; 1993b). The chemical make-up of the mounds is similar to that of modern cattle dung ash (Zeuner 1959; Allchin 1963), and they were shown to contain grass phytoliths, as would be expected in the dung of grazing animals (Zeuner 1959; Mujumdar and Rajaguru 1966; also Kajale and Eksambekar 1997). These animals must have been primarily cattle, as cattle dominate all Southern Neolithic bone assemblages, with only trace presence of caprines and wild fauna (Alur 1969; 1971; 1990; Paddayya 1975; Badam 1984; Thomas and Joglekar 1994; Paddayya et al. 1995; Joglekar in press;). In addition, at the site of Utnur actual cattle hoofprints were preserved in a pen-like enclosure sealed by the ashmound layers (Allchin 1963). A similar pen enclosure has been revealed at Budihal (Paddayya 1998). The suggestion that the ashmounds were slag or other materials from metal working and of Iron Age date, a hypothesis which was popular in the early part of this century (see Allchin 1963a), has been promoted recently by two authors (Rami Reddy 1976; 1977; 1978; 1990; Sundara 1971c; 1975: 178; 1987); however, these arguments are completely unconvincing and have been adequately laid to rest elsewhere (Allchin 1963a; Paddayya 1992;
Thus we can take as given that cattle were penned at ashmound sites during some portion of the Neolithic period. These sites are associated with varying amounts of archaeological material adjacent to the ashmound.

**Figure 3.2.1.** General view of ashmound from Kuditini.

In addition to the ashmounds, there are additional habitational sites. These sites are characterized by archaeological strata containing pottery, lithics, animals bones, and other finds, as well as structural features, including post-hole defined dwellings and pits (e.g. Wheeler 1948; Subbarao 1948; Allchin 1960; Nagaraja Rao and Malhotra 1965; Ansari and Nagaraja Rao 1969; Deveraj et al. 1995). Flotation carried out at these habitation sites has provided evidence for the reliance of cereals and pulses, including predominantly two pulses and two millet-grasses that were native to the Indian peninsula (Fuller 1999; Fuller 1987).
The vast majority of these habitation sites are located on the tops of castellated granite hills (tors) that rise in clusters above the flat plains of the south-central Deccan. By contrast many ashmounds are located on the plains, and in many cases near the bases of hills. A few non-ashmound habitation sites are known that do not occur on hills, such as Watgal (Deveraj et al. 1995).

Although not all ashmounds and hilltop sites can be assumed to have been contemporaneous, it is clear that they overlapped. The Ashmound Tradition can be divided into three main phases (Allchin and Allchin 1982; Possehl and Rissman 1992; Devaraj et al. 1995). The first phase can be placed between 2800 and 2300 cal.BC on the basis of a number of radiocarbon dates from different sites. Several ashmounds date to the first phase, or began to accumulate during this period, whereas there is relatively little hilltop settlement debris yet dated to this period. Non-ashmound habitation sites that have been shown to have levels dating to this period include Watgal (Deveraj et al. 1995), Brahmagiri (Wheeler 1948), and Piklihal (Allchin 1960). Other major habitation sites, including the hilltop sites at Sanganakallu and Tekkalakota begin in phase II, dated from 2300-1800 cal.BC. In many cases there is evidence for some inclusion of ashmound-like deposits (i.e. burnt dung, sometimes scoriaceous) at the non-ashmound sites,
including Brahmagiri, Sanganakallu and Hattibelagalu, but these burnt dung deposits represent inclusions in site stratigraphy of relatively small proportion. These habitation sites continue into phase III (after 1800 cal.BC) and a subsequent transitional phase to the Megalithic/ Iron Age period (from 1200 cal.BC). During phase II, ashmound sites declined. Some are abandoned, such as Utnur (Allchin 1963) while others continued, including Kupgal (Allchin 1963; Allchin and Allchin 1968) and Budihal (Paddayya 1993a; 1993b). Thus while there may have been a general trend towards the proliferation of hilltop settlements and the disappearance of ashmounds in the late third millennium BC, it is clear that these categories of sites did co-occur in some regions for sometime at least.

The ashmounds were divide as the Ashmound Tradition sites into three main categories, including the non-ashmound, usually hilltop, settlement sites, and two categories of ashmounds representing long-stay and short-stay encampments. These two categories of ashmound represent different aspects of the seasonal rhythms of transhumant pastoralists. Although there is no direct evidence for the seasonality of ashmound sites, a highly plausible seasonal cycle will be developed on the basis of the evidence for cultivars from hilltop sites. In order to relate the ashmounds and hilltop sites we must have an understanding of
the nature of pastoralism and its relationship to the plant-based facets of the economy.

**Problem of Ashmound**

Ashmound are huge mounds of burnt and vitrified ash made up of heaped of cow dung, usually located within or in the vicinity of a settlement and within the settlement itself. They have been noticed in the region of the Krishna Tungabhadra valleys comprising parts of District Belgaum, Bijapur, Gulbarga, Raichur, Bellary, Mahbubnagar, and Ananthpur. Some of the Ashmound sites are Kupgal, Sanganakallu, Halakundi, Lingadahalli, Kanchagara, Bellagallu, Nimbapuram, Kudatini, Kudachi, Budihal, Gaudur, Wandalli, Kakkera, Piklihal, Manvi, Sirwar, Budinni, Benkanalli, Kallur (all in Karnataka) and Utnur, Palavoy and Kodekal (all in Andra Pradesh).

By the early 1800s, these Deccan mounds had began to attract the attention of colonial administrators and explores in south India. Newbold (1842) recorded that locals believed the mounds to be the burnt bones of the enormous giants or 'Rakhasasa' who once inhabited the earth. Early reports on mounds by Mackernzie (Discussed in Talors 1838), Taylor (1838) and Newbold (1836,1842) set in motion a century-long attempt by various investigators, both Indian and British, to explain the origins of the enigmatic 'ash mounds' as they eventually came to be
known. Interpretations included suggestions that the mounds were natural limestone or volcanic formations, by-products of stone sort of industrial activity (glass-making, iron-or gold-smelting, brick-making, etc.) or mass funeral pyres where communal sati had been performed or bodies had been burnt after some great battle or massacre.

Later in the last quarter of the last century a professional geologist, Robert Bruce Foote (1887:259-82), who in his intensive quest for archaeological remains found ash mounds at a few places and thought that these were the result of accidental burning of cow dung by the Neolithic fold with whose remains they are sometimes associated. Foote describes some of these as CINDER CAMPS whose information in the Indian Peninsula he equates with the ZERIBA PROCESS practiced in the east Africa villages. Following Foote’s work Messrs Hubert Knox, and Fred Fowcett excavated in one of the Kupgal mounds and agreed with Foot’s observations.

After a few years Robert Sewell (1899:1-16) visited some ash mounds in Bellary district and accepted the so-called ZERIBA PROCESS, but stressed that the ash mounds were the outcome of vast funerary sacrifice of the medieval times and this was disproved by A.H.Longhurst (1912-13:145-7). Captain Leonard Munn (1927-28: 27) discovered many stone circles covered all round by identical ash at a
number of places. He also noticed at one place a circle of huge stones on the top of an ash mound. Gulam Yazdani (1935-36:20) of the former Hyderabad Archaeology Department opined that the ash mounds were the ancient gold-and iron-smelting places. This theory gained popularity when later workers such as Sir Leonard Woolley (1940:191) and K.N. Dixit supported it. In 1949 Subbarao attributed ash mounds to some industrial activity. Zeuner (1959:37-44) on the basis of his analyses of ash samples collected from a number of mounds concluded that they are of burn cow dung. From the exaction at Utnur Allchin inferred that the ash mounds were the result of ritual burning of cow dung accumulations in Cowpens by the Neolithic pastoral communities. Rami Reddy exactions at the ash mounds site of Palavoy unveiled interesting evidences comprising megalithic pottery, iron ore and slag pieces apart from two iron implements, his observations concluded that the ash mounds were probably the result of primitive iron smelting by post-Neolithic communities. Majumdar and Rajguru (1966:47-9) excavated in the Kupgal ash mounds I. Their interesting laboratory analysis of the ashes and slags indicated that cow dung was used in the burning and a temperature of 1250oc was required to change the soft cow dung ash to a vitrified type. Paddayya’s (1973) stratigraphical scraping of the ash mounds at Kodekal in the Shorapur doab yielded such evidences, which lent support to Allchin’s conclusions. While their status as ritual
formations is generally accepted, most models have assumed gradual accumulation over an extended period (e.g. Allchin 1963; Paddayya 1991-92; Korisettar et al. 2001a; Boivin 2004a; Johanson 2004).