Chapter 3
In India, the first polished stone tool (mainly flakes) was discovered as early as 1842 from the Lingsugur area of Raichur doab in Karnataka (Allchin 1960). In the subsequent research these flakes were proved to be of ‘neolithic’ affiliation. Since then such artifacts were collected in large numbers from various parts of the country. Although the present work is emphasized on such tools mainly from the eastern part of Indian territory (covering the present day states of Bihar, West Bengal, Orissa and Jharkhand), this chapter presents a brief survey of the sites yielding polished stone tools from rest of the country (excluding Eastern Indian region).

The present chapter is subdivided into two parts, viz. **a. Explored Sites** and **b. Excavated Sites** and the sites are arranged accordingly. The documentation presented here reveals that there are thousands of sites reported in this context which have yielded different varieties of polished stone tools in association with diverse kind of artifacts. The main methodology adopted in case of explored sites is documentation of district-wise distribution of the sites reported from different states. However, the excavated sites are arranged in alphabetical order. The primary objective of this is to illustrate an overview of the distribution pattern of the said tools with variegated contexts in diverse localities of India.

A brief account is as follows:

**a. Explored Sites**

The distribution of ground and polished stone tools have been considered as one of the indicators of neolithic culture. Based on their occurrences, the distribution of neolithic culture in to several provinces have been put forward by various scholars (Krishnaswami 1962; Thapar 1965, 1974, 1978, 1985, 1987; Sundara 1985; Sharma 1974, 1981; Verma 1988; Sant 1991; Singh 2002). Considering every perspective as well as the most recent data available on the subject, the distribution of polished stone tools can be identified in the following geographical regions in India:

**The Northern Region.** It covers the states of Jammu and Kashmir, Himachal Pradesh and Punjab. The region physiographically encompasses the Kashmir Himalayas along with Kashmir valley and Himachal and Uttarakhand Himalayas.

**The Vindhyan Region.** It covers the state of Uttar Pradesh. The larger Gangetic plain, including Ganga-Yamuna Doab, The Ghaghra Plains, part of Middle Ganga Plain and the
Terai, encompasses the northern part of the state, whereas the smaller Vindhya range and the Plateau region covers the southern part.

The Mid-Eastern Region. It encompasses the Saran district situated at northern part of the state of Bihar. The district is entirely made up of plains. However, several depressions and marshes have created three different physiographic divisions, i.e. alluvial plains, uplands away from alluvial plains and the riverbed diara areas.

The Central Eastern Region. It covers parts of Bihar, West Bengal and Orissa. Physiographically, the area encompasses extension of Chhotanagpur plateau with its peneplain extending to West Bengal and Orissa and part of vast gangetic plain, covering most of Bihar and West Bengal.

The North-Eastern Region. It covers contiguous states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and the Himalayan state of Sikkim. Physiographically, the region encompasses the Eastern Himalaya and the Patkai-Brahmaputra- Barak river plains. Apart from the Brahmaputra, Barak and Imphal valleys and some flat lands in between the hills of Meghalaya and Tripura, almost two-third of the area is a hilly terrain interspersed with valleys and plains.

The Central Indian Highlands. It covers the states of Madhya Pradesh and Chhattisgarh. The highlands extend from Narmada river to northern plains, bounded by Aravallis in west and Satpura range in south.

The Konkan Coast. It covers the state of Goa. It is an escarpment rising up to the Western Ghats, which separates it from the Deccan Plateau.

The Deccan Plateau and adjoining Peninsular India. It covers the states of Maharashtra, Karnataka, Andhra Pradesh, Telengana, Tamil Nadu and Kerala.

Of the geographical divisions stated above, the Mid-Eastern region and the Central Eastern region constitute different parts of Eastern India and, therefore, will be focused in the next chapter. Within the scope of present chapter, documentation pertaining to the distribution of polished stone tools in rest of the areas are presented.

The Northern Region
Jammu and Kashmir

District Baramulla
J. P. Joshi conducted explorations and located neolithic sites at Deoekampura, Kingandara, Kanispura in the district. However, no mention of polished stone tools was made in the report (IAR 1976-77: 12).

In course of exploration the Directorate of Archives, Archaeology and Museums, Government of Jammu and Kashmir, discovered two polished stone axes of the neolithic period at Tarakpora. The axes were abnormally long, polished, ground pecked and have unifacially levelled cutting edges. According to explorers, such large sized axes must have been used for digging besides serving as hoes for cultivation (IAR 1984-85: 23).


District Anantnag
Surface collection of flakes from the site of Burzahom was assumed to be waste flakes of hoes, pestles and polished celts (De Terra and Paterson 1939).

With a view to finding the geographical extent of the northern neolithic culture, identified at Burzahom, Sardari Lai and R.K. Pant explored the valley of the Jhelum river from Anantnag to Pampur and discovered nine sites. These included Begagund, Gofkral, Hariparigom, Jayadevi-Udar, Olchibag, Pampur, Panzgom, Sombur and Thajiwor - all with a neolithic assemblage closely similar to that revealed at Burzahom. Dwelling-pits were also observed at two of these sites, viz. Gofkral and Olchibag and also at Sempur. The surface collection from the sites included mace-heads, celts (Plate IVa), gritty red ware with or without mat-impressions and burnished and grey wares (IAR 1962-63: 9).

District Srinagar
A polished stone axe and a harvester were reported by B. M. Pande and S. S. Saar at Gurahoma- Sangri. Both the tools closely resembled the corresponding types found at Burzahom (IAR 1961-62: 98).

District Kathua
R. K. Pant and P. Singh explored the area flanking the river Basantar just near Samba town, and collected two sandstone mace-heads from Palth, along with a gritty red ware. The pottery is handmade, medium to thick in fabric and shows medium-grained sandy inclusions. Two stray mace-heads (Plate IVb) were also found at Diyalachak and Mananu (IAR 1968-69: 10).

**Himachal Pradesh**

**District Kangra**

G. C. Mohapatra carried out explorations in the upper reaches of the Beas River (Mohapatra 1966: 221-237; Sahni and Mohapatra 1964: 178-180). His work brought to light polished stone celts along with small chert flakes from the villages of Ror and Dibber. Thirty-one pieces of Neolithic polished stone celts and half of a ring stone were found from Ttrace IV of the River Beas. In addition, Early Sohan type pebble tools and one hundred and forty-one small flake implements of chert were also recoverd. The polished celts and ring stone being prepared out of a type of soft grey shale showed highly weathered physical condition. Despite this faulty raw material, there are some very skillfully made specimens with smotheded body and sharp working edges. All the celts belong to the pointed butt variety without faceted sides.

Another site, Baroli yielded a polished stone celt and a small flake of a silicious rock. The tools were collected from the foot of a cliff section. Similar artefacts were also reported at the ploughed fields near the Rest House and the Baroli Bazar.

In order to observe and exactly demarcate the extension of chert flake and polished stone celt industry, exploration was conducted from Haripur Bazar to Haler-Anor and Khilru. Most peculiarly excepting the sites already metioned as the places from where these industries were originally found, nowhere else the flake tools or the celts occurred.

Polished stone tools made on shale along with scrapers on pebble were reported from Dehragopipur (cited in Gupta 1967: 125).

**District Hamirpur**

A.K. Narain discovered neolithic celt at Nakara in the district (IAR 1963-64: 43).

**Punjab**
**District Hoshiarpur**

Devendra Handa explored Dholbaha, situated about 25 km north of Hoshiarpur on the banks of a mountain-brook near Siwaliks. The site yielded pointed-but variety of celts (IAR 1969-70: 30).

**The Vindhyan Region**

**Uttar Pradesh**

**District Banda**

Polished stone implements were reported mostly under pipal trees, roadside or tank bunds where they were venerated as objects of worship. The raw materials used were diorite, trap and sandstone (Cockburn 1879: 133).

Rivett-Carnac (1882: 16) discovered a number of polished and chipped celts and flakes in stratified context.

The University of Allahabad, under G. R. Sharma, carried out explorations in Banda District, Uttar Pradesh. A large number of polished stone celts with pointed butt, splayed edge, convex sides and lenticular cross-section, reminiscent of celts from Brahmagiri and Sanganakallu, were picked up from Khoh, Agarhunda (Plate IVc), Marjadpura and Chakond, all situated within a radius of 8 miles from Karvi. (IAR 1955-56:12)

P.C. Pant explored several prehistoric sites in Tahsils Banda, Karwi and Naraini. A large number of polished stone axes and a few hammer-stones were discovered from Badausa, Bhunari, Itaura, Lodhvara, Rihutia-Chak and Shahpatan and the previously-explored sites of Chakond and Khoh. It is noteworthy that the axes found at Lodhvara were ground only on their working-edges, while those at the other localities were completely ground. An example from Lodhvara hill was particularly noteworthy in that it had two small pits on either side. Similar pits are also found on a hammer-stone from Badausa. According to the explorers, the pits were meant for securing a grip while in use and not for hafting (IAR 1961-62: 56; Pant 1960: 1-29).

J. N. Pandey discovered Neolithic-celts, made of basalt, celts and pounders from Pahara near Bharatkup Railway Station. (IAR 1969-70:37)
G. R. Sharma explored the valleys of Paisuni and its tributaries and discovered sites assignable to various cultures from the Stone Age to the Early Historical times. Neoliths such as celts, adzes, hammer and pounders on basalt were picked up from Naraini and Ranipur Khaki. Besides, sites with neolithic vestiges were also located at Jamua, Jamshot, Pawari on Koilaharia and Khajuri on the Belan (IAR 1975-76: 43)

**District Kanpur**

M. M. Nagar reported yielded a polished stone axe and some Sunga and Kushan sculptures from the site of Musanagar. From the same site B. B. Lal collected sherds of Northern Black Polished Ware (IAR 1955-56:69).

Later the area was further explored by the State Archaeological Organization, Government of Uttar Pradesh, under Rakesh Tewari. They conducted village-to-village exploration in Musanagar area of the Ghatampur and Bhoganipur tehsils. Of the sites discovered, the site of Machaila yielded polished stone celt. (IAR 1992-93:95) In addition, a solitary find of polished stone axe from a place located below a banyan tree was collected from Pratappur. Besides, the site also yielded sherds of NBPW, black-slipped and red wares (IAR 1992-93:93).

**District Azamgarh**

M.K. Dwivedi explored the area of Lalgunj tehsil of the district and reported neolithic implements from the site of Badegaon (IAR 1998-99: 167).

**District Chitrakoot**

Sangeeta Chakraborty and Nayan Anand Chakraborty reported neolithic celt, adze, pestles on green schist from the site of Banarighati (IAR 2000-2001: 120).

**District Allahabad**

Two neolithic celts from Jamuna Jamasot were reported by State Museum, Lucknow (IAR 1958-59: 76)

G. R. Sharma conducted field work in the Belan Valley and the adjoining regions of the Vindhysas and brought to light quite a large number of neolithic sites. In course of his explorations, basalt celts were recovered from Chorabana and Chaukatha-Gaura (northern Meja), Jamua on the Lapari and the Taradaha on the Belan (IAR 1969-70: 37).
J. N. Pandey reported a large number of celts, adzes and pounders from Bhikhampur and Purawa Tarauha near Bharatkup. The tools in all the cases were made on basalt. Another site, Panchoha is located on the right bank of the Belan near Deoghat bridge and yielded neolithic celts along with microliths, including crested-ridged flakes and sherds of the coarse red and black-and-red wares (IAR 1970-71:36).

The site at Sinduria in the Son valley yielded one fragmentary ground and polished celt and a muller. Another broken neolithic celt was picked up from Mahalpur in the Rihand valley (IAR 1977-78:56).

The department of Ancient History, Culture and Archaeology, Allahabad University, explored some sites ranging between Lower Palaeolithic to Megalithic period. Of these sites, Ayodhya, located on the Belan yielded Neolithic celts along with microliths. Taradaha, Galdahawa, Amilia, Khajuri Khurd, in the Belan and Pipraon and Bafariacha in the Lapari valley yielded a Neolithic assemblage comprising polished celts, corded and rusticated ware, bone arrow-heads, microliths and hammer stones (IAR 1982-83:92).

District Jhansi

R. Singh of the Deccan College Post-graduate and Research Institute explored the valley of the Shahzad, a tributary of the Betwa. He discovered the site of Rajgha on the left bank of the river. The site yielded an unfinished celt and a large number of dolerite pebbles scatter. According to the explorer, it might represent a factory site (IAR 1959-60: 48).

District Unnao

K. K. Tripathi of Sagar University discovered a neolith at Daudhiakura (IAR 1978-79: 102).

District Mirzapur

Many polished stone tools on diorite were found in deep riverine near the Kon village. Apart from these, palaeoliths were also found from the area (Cockburn 1894: 21).

R. C. Singh of the Department of Archaeology, Government of Uttar Pradesh discovered Neolithic celts from the sites at Darwan, Khoradih and Lusa (IAR 1978-79: 24). From another site Nai Dih at Bichchhi, he reported a broken polished stone celt, microlithic tools and pottery with husk-marks. Besides, Northern Black Polished Ware, black-slipped and
red wares, broken terracotta animal figurines were also found. In addition, stray polished stone celt occurrences were reported from Agori, Barank, Bijauli, Chatara, Deori, Kamauiji, Kandakot, Laseda, Orgai and Pali (IAR 1979-80: 78).

B. B. Misra conducted extensive exploration in the south-western parts of the district (south-western parts of Robertsganj and western part of Duddhi sub-divisions) and adjoining eastern regions (Deosar and Singrauli sub-divisions) of District Sidhi, Madhya Pradesh, bounded by Kaimurs in the north, the river Mear (Mayar) in the south, Kanhar in the east and Gopad in the west. Two neolithic sites, Sinduria on the Son and Mahalpur on the Rihand have yielded neolithic material including celts made on basalt. Microliths were also collected from these sites (IAR 1981-82: 44).

Polished stone celts along with microliths were picked up from Shiva Pahari. Apart from these, the site also yielded fragments of medieval sculptures and remains of temples (IAR 1983-84: 89).

The State Archaeology Department, Government of Uttar Pradesh, under the direction of Rakesh Tewari and P. K. Singh conducted explorations in Chhanbe block in District Mirzapur. Following sites were discovered during exploration work:

Babura: Stone celt, medieval Brahmanical sculptures.

BagheraKalan: Black-and-red ware, black-slipped ware, NBPW, grey ware, stone celts, medieval Brahmanical sculptures.


Pandra Hanuman: stone celts.


The explorations were conducted in the river valleys of the Belan and Adwa in Lalganj sub-division of the district by V.D. Misra. In course of exploration, Neolithic celt made on chunk in association with cores and blade fragments made on chert and chalcedony; handmade pottery of thick red ware with concentration of rice husk were reported from the site of Dhendhi (IAR 1999-2000: 190)

**District Lalitpur**
A. P. Singh of U.P. State Archaeological Organization reported stone celts, black-and-red ware, black-slipped ware, red ware and medieval sculpture from a village named Asora (IAR 1990-91: 73).

**District Sultanpur**

G. C. Singh, R. K. Srivastava and K. K. Singh, under the direction of Rakesh Tewari of Uttar Pradesh State Archaeological Organization, carried out debris clearance work with a view to expose the buried temple at the village Sanichara. The work mainly revealed remains of an early medieval temple. During the course of clearance a few antiquities were also found which included four inscribed stone slabs, an image of Yamuna and a stone celt. Besides these, two copper coins of Muslim period and a few broken sculptures were also found (IAR 1990-91: 79). According to Tewari (1993: 159), context of the stone celt indicates the presence of a Neolithic site in the vicinity of the present site and the celt might have been transported from there to Sanichara.

**District Mahoba**

In the course of village-to-village survey, Regional Archaeological Unit, Jhansi, Government of Uttar Pradesh, undertook exploration in Jaitpur and along the Gunchhi river in district Mahoba. Neolithic celts along with ruins of medieval temple were reported from the sites of Ghatera, Ghisalli and Indora. From the sites of Mahewa and Paharia, such celts were collected in association with black-and-red ware, black slipped ware, NBPW, red ware and iron slag. At the site of Jaitpur, celts were found associated with microliths and medieval sculptures (IAR 1998-99: 188).

**The North-Eastern Region**

**Arunachal Pradesh**

**District Lohit**

A stone adze in the Abor village was discovered by O’ Callaghan. It was made on trap. The scholars suggested that the Abors used this for curative purpose and not as axes (cited in Banerji 1924-25: 102).

B. P. Bopardikar discovered for the first time a few neolithic implements (amongst which was a shouldered celt) (Plate Va) on the high terraces at Chamba, Glow, Kale and Teehun.
In addition, choppers, a proto-handaxe, cleavers, scrapers, flakes and cores were also found. The tools were highly rolled and weathered and were made of locally available metamorphic rocks, such as meta-dolerite, gneisses and schists. Since the terraces were covered with dense vegetation, the natural section and tool-bearing deposits were rare (IAR 1969-70: 30).

**District Upper Subansiri**

B.J. Das carried out exploration in and around 20 sq km area of Daporijo proper including the villages of Nima and Dolam, Sikarijo, Ligo, Old Ligo, Manga and Dan areas. Neolithic tools were found from all those sites. Both in typology and raw material, these tools were different from those recovered earlier from Parsi Parlo in Kamla Valley (IAR 1993-94: 3). Further explorations in the same area brought to light total eleven neolithic tools. Almost all were highly weathered and made of soft clay stone. Typologically these tools belonged to the neolithic axe group (IAR 1996-97: 2-3; Ashraf 1998: 64-76).

**District Lower Subansiri**

Neolithic celts were reported from Kamla valley of the district. Later, in 1982-83 and 1983-84 systematic investigations were carried out by A. A. Ashraf who discovered a neolithic site at Parsi Parlo which yielded polished stone axes (Ashraf 1998:64-76).

S.K. Mittra reported stray neolithic tools from places like Miyan, Toon and Tona (IAR 2000-2001: 3).

**District Tirap**

As early as 1867, John Lubbock reported the discovery of celt from Namsang in the district. In 1870 three more celts were discovered from the same area. Besides that, faceted tool, rounded butt axe, two long implements were discovered in course of time.

**District Siang**

One polished chisel and one stone adze were reported from the district.

**Assam**

**District Kamrup**
Numerous polished stone celts were found from Rani and Kamakhya areas in the district. The specimens were made on slaty shale, clay and shale and exhibited no conspicuous patination (Goswami and Bhagawati 1959: 312).

**District Guwahati**

Dilip K. Medhi and S. N. Rajaguru in the course of their reconnaissance around Guwahati discovered a piece of a neolithic celt in a colluvial reddish soil derived from weathering of the gneissic rock (IAR 1977-78: 77).

**District Cachar**

H.C. Sharma and A. A. Ashraf explored the area around Langting and Maibong) in the valley of the river Langting. Besides discovering stone tools and pottery, they also surveyed the Quaternary formations in the North Cachar Hills to understand the background of Quaternary geology of the stone age site at Daojali Hadin. The area around Daojali was re-surveyed. Surface collection in and around the area brought to light double shouldered axe and broken celts of non-shouldered variety. A good number of potsherds, predominantly of cord-impressed type, were also collected from the surface. Besides, stone implements and potsherds were also unearthed from stratified context on the eastern flank of the site exposed by Langting-Haflong road. An exposed section of 10 m stretch was further scooped out to get a clear picture of the material in-situ in the section. The section exhibited four layers, upper three of which were implementiferous. All these layers belonged to the single culture deposit of ceramic-neolithic phase which yielded celts, grinding stones, cord-impressed pottery etc. The raw materials for polished celts included slaty shale, sandstone and fossil wood. (IAR 1990-91: 2; Goswami and Sharma 1962: 63).

**Manipur**

**District Chandel**

R. Singh of the Manipur State Archaeology collected a neolithic celt from the site of Machi in the district (IAR 1983-84: 169).

**District Bishenpur/Bishnupur**
The Department of Archaeology, Government of Manipur in collaboration with the Department of History, University of Manipur, explored a neolithic site at Naran Siena and collected two neolithic celts from Sarangthem Tombi Singh (IAR 1995-96: 58; Singh 1993) (Plate Vb).

Meghalaya

District Khasi Hills
Two stone implements, one in-situ and the other, a shouldered celt on slate were recovered from a Khasia near Nangho on the Shilong-Guwahati road (Cockburn 1879: 133). Two shouldered stone implements were reported from the area. According to the explorer, the distribution of these types of tools in places along the route of Khasia migration would tend to confirm the possible relationship between the Khasis of Assam and some ancient tribes of Burma (Dasgupta 1913: 292).

H. C. Sharma discovered a neolithic site on the left bank of the river Wah Umium near Barapani (Plate Vc), yielding tools such as axes, adzes, points, scrapers and a good number of waste flakes and chips. The artefacts, found on the surface, were exposed in the course of ploughing surface alluvial soil deposited on the laterite. The raw materials used for manufacturing the tools include phyllite and shale which belong to the Shillong series and are locally available. It is worth mentioning here that this was the first site to be discovered in the district. D. K. Medhi and Zahid Husain also explored the site and collected two finished celts, five unfinished celts, two broken unfinished celts, eleven blades, eleven scrapers, thirteen waste flakes, one core and two microliths (IAR 1979-80: 60).

The Department of Art and Culture, Government of Meghalaya reported the discovery of a neolithic site, situated at about 15 km north of Shillong. During the preliminary exploration, some crude prehistoric stone artefacts were collected. No details of the stone tools were mentioned in the report. Another neolithic site situated at a distance of about 7 km south of Shillong was also explored. The site yielded forty prehistoric stone tools of different types (IAR 1999-2000: 230).

District Jaintia Hills
L.S. Rao discovered the sites of Pynthorangtein and Riat Turein in Jowai tehsil of the district. The former yielded neolithic artefacts such as adzes, axes, chisel and grinding stone. In case of the latter, a solitary partially polished faceted celt was recovered from the surface of a low hillock on the right bank of Myntdu river from secondary context (IAR 1992-93: 75).

Explorations conducted by Dilip K. Medhi brought to notice about ten different sites yielding one and a half dozens of neoliths and as many as twenty megaliths in an area extending from the small township of Hamren, towards the Jayantia Hills upto Kanduli via Amlong and Umchera and upto Nongjirong via Rongphongbong. The sites included Uzandonka, Hamren, Amlong, Omnam, Umchera, Umnar, Badong, Rongchek, Umticho and Nongjirong. The neoliths were categorized as edge-ground, fully ground and flaked and ground variety including the shouldered or tanged celts, triangular and quadrangular ones, besides axes, adzes and chisels (IAR 1995-96: 128).

**District Garo Hills**

M. C. Goswami found near Rongram two broken pieces of ring-stones and a bone, besides seventy-five celts of various shapes (IAR 1963-64: 4). He further explored the Rongru hill area, bounded by the Chitra streamlet and Chitra abri (hill), Dipu abri and Rongram Chimbima and collected as many as two hundred ninety-four neolithic implements. The implements included: celt, axes, hoes, quite a large number being shouldered; adzes, hammerstones, and chisels (IAR 1964-65: 4) (Plate VIa). He also discovered the sites of Rangigir, Selbalgiri and Thusekgiri (Plate VIb), situated in the Arbela range in north-western part of the Garo Hills. Nearly eight hundred stone implements of various categories were collected. The specimen from Thusekgiri was a chipped stone axes of dolerite. All the implements were heavily weathered. Typologically, these showed similarity with the Hoabinhian tools of South-East Asia. Other tools discovered from the site were: (i) flattish axes of lenticular section, ground at the working-edge, on the under-surface; (ii) crudely-shouldered axes and (iii) nearly cylindrical-shaped chisels. All of these were made of dolerite (IAR 1965-66: 6). He also explored the sites of Matchakolgiri, Ganolgiri, Rongram, Rengchangiri, Rongru Abri and Chitra Abri. These sites yielded neolithic stone axes and adzes, grinding tone and pottery. The pottery finds from the sites consisted of only sherds. In some cases, stone axes and potsherds have been found lying side by side.
By and large, the pottery was handmade and was predominantly grey in colour (IAR 1966-67: 3). The raw material for the celts were fine-grained granite. Most of the celts were of chipped variety without polish and some were partly chipped and partly ground. However, only one specimen of polished tool was found (Goswami and Sharma 1962: 68). In addition, he also noticed two tool-bearing sites within the limits of Selbalgiri (Plate VIc), a Garo village. Of these, the first one termed as Selbalgiri-1 was a dome-shaped hillock. On account of erosion and agricultural operations a large number of potsherds and six stone axes could be collected from the surface. Selbalgiri-2 was situated at a distance of about 2 km. to the south-west on a ridge. On the eroded gravelly surface of its slope numerous stone tools of various types and pottery were found. The collection consisted of five handaxes, two picks, five discs, one hundred and fifty-eight chipped celts, one hundred and fifty-two ground celts, thirty-two shouldered-celts, five awls, one hundred and fifty-eight scrapers, twenty borers, sixty-six blades, twenty-six large knives, seven knife-blades, one hundred and forty-one points, twelve spear-heads, thirty arrow-heads, one fabricator, two wedges, one hinge-flake, two chisels, fifty-three cores, twenty-seven hammer-stones, twenty-two microliths (seven parallel-sided bladelets and fifteen points) and seventeen hundred and twenty-two waste-flakes (Sharma and Sharma 1955-56: 4; IAR 1967-68: 7).

In course of explorations under taken by the Department of Anthropology, University of Guwahati, a stone age site was located at Thebronggiri. A large number of tools consisting of crudely flaked axes, knife-blades, microliths, arrow-heads, points, cores and hammers were collected from the site (IAR 1968-69: 3). They also discovered chipped and ground celts and flakes, blades and arrow-heads, in association with a crude, hand-made pottery from the sites of Selbalgiri, Locality 3 (Mokbol-Chiring), Michimagiri and Michimagiri, Locality 1 (IAR 1969-70: 1).

Asok K. Ghosh and Tundra Basu reported isolated ground and polished stone celts from the Rongram valley, near Rongram. These surface finds were discovered on the flat-topped hill. From field observations it appears that these tools might have been turned up by the jhooming operation. In the course of further exploration in the same region a site was located in the vicinity of Thebronggiri. It yielded large number of chipped celts, hammerstones, blanks,debitages etc. It appeared that this was a factory site where suitable rock fragments were collected and knapped for making tools. It was presumed that the
chipped celts were finally ground on the stone boulders lying near the stream (IAR 1971-72: 36).

T. C. Sharma and H. C. Sharma explored a site yielding a large number of palaeolithic and neolithic tools on the ridges of the Arbella range around Waribokgiri (IAR 1974-75: 36).

Dilip K. Medhi discovered two neolithic sites. Of these, the one at Gawak Abri yielded finished and unfinished artefacts. Another site near Selbalgiri and south-west of the confluence of the rivers Selbal and Rongram also yielded finished and unfinished tools belonging to the neolithic times (IAR 1979-80: 59). He further discovered a neolithic site at Rongru Abri. The site yielded a large quantity of ground and polished celts along with crude handmade pottery. A few chipped celts and scrapers have also been found on the bed of the dry gullies cut through the thick silt of the terrace (IAR 1981-82: 52).


G.C. Chauley carried out explorations along the Rongram-Ganol river valley and discovered altogether five Stone Age sites, exposed due to cutting were found with large quantity of stone axes. Collection from the sites included chipped stone axes, scrapers, points, blades, cores along with ground and polished stone axes (IAR 1998-99: 120).

The Department of Art and Culture, Government of Meghalaya, reported the site of Asanangre-Rongram which yielded forty-five prehistoric stone artefacts consisting of flake stone axes, scrapers, points, borers, blades, choppers, etc. (IAR 1999-2000: 230).

**Nagaland**

**District Tuensang**

In course of exploration the Department of Art and Culture, Government of Nagaland collected a few neolithic stone celts and terracotta objects at Chungliyimiti and Changsang (IAR 1980-81: 44).

**District Kohima**

A.K. Sharma located a mound in village Sachema. Celts and neolithic hand-made black coarse pottery was collected from the mound. The settlement appears to have been fortified with stone rubbles creating zig-zag lanes and by-lanes. At Kigwema, 16 km south of Kohima from where neolithic celts, pestles and pounders were recovered earlier, eight well
burnished hand-made gourd-shaped jars of different sizes were found. They are made of Kaolin and are very thin, light and sturdy (IAR 1991-92: 82).

**District Mokokchung**

Under a research project entitled "Archaeological Exploration in Nagaland", T.C. Sharma and associates carried out explorations in the Changki and Chungliyimti areas of Mokokchung and Tuensang districts respectively. Chungliyimti yielded polished Neolithic celts, potteries, grinding stones, stone rubbers and pestles, stone ear-rings, whorls made of stone, all found on the eroded surface of the hill slopes. The celts found at the site were of shouldered type, indicating grinding technique. The spindle whorls were made of sandstone. The grinding stone, mullers and pestles were of various sizes and shapes and made of a very fine variety of sandstone. The pottery was hand-made of coarse variety, made of gritty tempering material and ill-fired (IAR 1991-92: 83).

**District Phek**

T. C. Sharma conducted exploration in the Phek-Wazheho area bordering Myanmar and Manipur. The explorations resulted in the discovery of neolithic sites near Phek Basa and Shatuza villages as well as in Wazheho cement factory area. Surface collection from these sites included ground polished stone tools made of olive green chert, large quantity of pottery and some grinding stones. The pottery was crude and hand-made, of clay mixed with stone grits and sand. The cord impressed grey pottery was the dominant ceramic type of the area (IAR 1994-95: 59).

**District Naga Hills**

Four celts were collected of which one was made of Jade or Serpentine and another of a sort of marble or limestone (Barrow 1872).

Two celts, one shouldered and the other in square shape were colected. Of these, the raw material for the second one was a white stone with pale green veins resembling serpentine. According to the explorer, the second specimen was perhaps hafted to a crook with cane rope in the fashion of hafting a hammer (Hutton 1924).
A neolithic adze, slightly shouldered, was discovered at Nichuguard at the foot of the Naga Hills. The raw material of the tool was fossil wood which was available in the Dimapur area (cited in Hutton 1926: 133).

**Tripura**

**District West Tripura**

During a geological investigation at Tripura in 1980-83, about half a dozen rich implementiferous sites in the Khowai and Haora valley were located in the district. About seven hundred stone implements were collected from the sites like Teliamura, Jirania, Sonai Bazar, Mohanpur, Bishalgarh, Agartala etc. TeliaMura cultural materials included ground stone axes, adzes, points, scrapers, points, grinding stones and pebble halves. From five rich sites of Sonai Bazar area adzes, ground axes, tiny impressed potsherds, hammer stone and fossil wood artifacts were found along with other cultural objects. The artifacts collected from Sonaram area comprised of ground stone axes, adzes potsherds etc. According to the explorers, tool tradition of Tripura predates the neolithic culture of other sites in this region (Ramesh 1986: 289-310).

**Sikkim**

**Districts East and North Sikkim**

N. R. Banerjee discovered stray, undocumented polished stone axes from an area extending from the Dang valley in Bhitari to the Central Himalayan region in Sikkim. Except the one from Katukisewar, all conformed to the eastern neolithic types and typological distribution showed an infiltration from Assam. According to the explorer, smaller axes were used for breaking clods for agricultural purposes whereas, the chisels were used for chiseling woods (Banerjee 1971: 149).

K. D. Banerjee carried out exploration with a view to ascertain prehistoric potentialities of the Sikkim region which had remained unattended so far. Exploration was first conducted in North Sikkim (Plate VIIa) along the river Tista and its tributaries from Lachen and Lachung in the north to Kikchu in the south. A variety of polished neolithic tolos were recovered from Djangu area on the right bank of the Tista. The other sites yielding similar variety of tools included Barpak, Gnon, Gor-terang, Gytong, Lingden, Lingdong, Lingthen,
Linkyong, Manshitang, Sangdong, Sankalong and Terang. The tool types included two harvesters, one knife, seven axes, thirteen adzes, and three single-and double-perforated celts. Almost all the tools were made on shale except a few which were knapped on fine-grained basalt. Both medium and small varieties, with square or rounded butts and rectangular or ovoid cross section, have been found. Majority of the tools have been ground and polished all over the body while few only at the lower half. Special mention may be made of beautiful single-eyed harvester and a Hunan knife. A polisher having three concave working sides and a perforation on the top was recovered from a village north of Chungthan on way to Lachen. It is interesting to note that except the polisher no tool was recovered from the area north of Mangan.

A short exploration in East Sikkim around Pakhyong yielded neolithic tools from Pakhyong and Shamsing. The local population has a magical concept about such tools. These are considered as source of betterment of material life. Locally these are called vajra-dunga, meaning lightening stones due to the fact that they are generally found after the rainy season in terraced fields. Pottery was significantly absent on the sites explored as in such a landscape one does not expect proper earth for the manufacture of pottery. Even the present population of North Sikkim does not use any pottery. According to the explorer, the collections from Sikkim revealed south Chinese influence (IAR 1980-81: 63).

The Central Indian Highlands

Madhya Pradesh

District Sidhi

G. R. Sharma explored the valleys of Lilji and Gupta-Godavari in the district. Apart from these valleys, the tributary nullahs of the river Son including Ankara, Bari Naki, Bira Khand, Jokhaha, Kharbara, Khudheri, Phulwaria and Podarahia were also subjected to extensive explorations. The work brought to light a number of sites showing neolithic affinity. For example, the sites of Rampur and Nakjar Khurd yielded two neolithic celts on basalt in the Son valley. Another site Kunjhun, on the right bank of the Son, yielded corded ware comparable to that from Koldihwa on the Belan, together with a mace-head and microliths. The site at Kunjhun was heavily eroded, retaining only basal layers of the neolithic culture (IAR 1975-76: 25).
A team of the Department of Ancient History, Culture and Archaeology, University of Allahabad, explored the Middle Son valley under the general direction of G.C. Pande and discovered the site of Bamhari. Cord impressed pottery, rounded celts, ring stones, along with large sized basin-shaped querns, and mullers were collected. Neolithic celt and ring stones were collected from Dhodauhi (IAR 1982-83: 58-59).

**District Datia**
D. Dayalan reported a neolithic celt from a village named Gujjara in the district (IAR 1991-92: 126).

**District Mandla**
V.D. Jha conducted explorations in the district and collected unfinished neolithic implements from village Sarwahi. Stone-block with graffiti marks were also noticed at the site (IAR 1996-97: 64).

**District Rewa**
Archaeological explorations in the Tons valley by the Department of Ancient History, Culture and Archaeology, University of Allahabad, brought to light a neolithic site in the district named Babupur-1. On the Kharari nala near Babupur village the site yielded triangular neolithic celt and Kotia type pottery (IAR 1997-98: 111).

**District Khargone**
The Prehistory Branch, Nagpur, of the Survey under S.K. Mittra explored the site of Ghatwarya, which yielded a broken ground and polished neolithic celt on basalt (IAR 1997-98: 125).

**District Chhatarpur**
Krishna Kumar carried out explorations in the valley of river Khudar, a tributary of the Kon and located nine stone age sites near Beniganj, Jatkara, Khajuraho and Sakera. Of these, the site at Jatkara yielded some neolithic axes and adzes with pointed butts and a few fragments of sling-balls and some pieces of mace-heads showing incomplete hour-glass section. In addition, the site also yielded a unifacial chopper on a granite pebble and an unfinished handaxe on a limestone flake, both belonging to the early stone age, a dozen
levalloisian flakes and various scrapers belonging to the middle stone age and hundreds of late stone age artefacts (IAR 1965-66: 21).

**District Jabalpur**

Five celts along with two perforated stones were reported from the district (Carey 1866: 35).

K. D. Bajpai while conducting excavation at the site of Tripuri reported four neolithic implements from the surface (IAR 1966-67: 18).

Chandrashekhar Gupta carried out exploration in Jabalpur district and discovered a neolithic oval ringstone of black beasalt having blunt perforations on both the flat sides and fragmentary head of lion from the site of Kunda (IAR 1983-84: 51).

**Chhattisgarh**

**District Bastar**

The Prehistory Branch of the Survey discovered a few neolithic implements from Ambaguda, Balipara (Bhond), Kalipur, Parpa and Tutiodeoda. The site at Tudideoda yielded one small ground celt in situ in the uppermost part of lateritic gravel (IAR 1979-80: 36). In addition, celts were also recovered from the sites of Mothe and Borai (IAR 1981-82: 29).

V.N. Misra and M. Lai in course of their exploration located several stone age sites in the Abujhmar region. A few ground stone celts and pestles were found on a ground in the forest about 500 m east of the Lanka village (IAR 1982-83: 36) (Plate VIIb).

**District Raigarh**

A. K. Sharma undertook photo documentation of two painted rock-shelters at village Ongna, 6 km from Dharamjayagarh in the district. A large number of stone artefacts were noticed scattered in front of these rock-shelters. The assemblage included large sized scrapers, flakes and cores of quartzite and microliths made up of milky quartz, chalcedony, chert and carnelian. Apart from these, a broken ring stone of coarse grained sandstone, and a broken piece of celt, fully grounded and polished, made up of limestone, were also recovered. (IAR 1990-91: 40)

**The Konkan Coast**
Goa
In the adjoining regions of Goa, a pointed butt-end of Neolithic polished stone axe of ovaloid cross section was reported from Surla village in the upper reaches of the river Mandvi (Sundara 1968).

P. B. S. Sengar and S. S; Gupta discovered a few neolithic implements, including polished stone celts, chisels and hammar stones, from a limited area in the vicinity of Arali village (Plate VIIc). The site is on an elevated plateau towards north-west of the village showing crushed rocks and thrust valleys on the estuary of river Sal. In the adjoining area, a large number of rectangular and a few circular stone-heaps were noticed (IAR 1979-80: 15).

The Deccan Plateau and adjoining Peninsular India

Maharashtra

District West Khandesh
S. A. Sali discovered several ancient sites in the district, mostly on the banks of the Tapti and its tributaries. Neoliths were found in association with microliths and black and red ware from a large number of sites, viz. Shahadav Anturli, Dahidula Xhurd, Veka, Nalayak, Budruk, Bhondgaon, Chikse, Thalner Lekurwali, Hagri Pada, Chinchoda, Varul, Kolda, Kothali, Lonkhed, Pimplod, Sakri, Hatnur, Bhortek, Mudavad, Vadhoda and Dliadne (IAR 1957-58: 24).

The Prehistory Branch, under Dr. R.V. Joshi explored a 25-mile long stretch of the Tapti valley between Prakasha and Ukai. An interesting collection of flakes of a hard trap possessing columnar joints was made from the cultivated fields at Vajpur and Kothali. However, no regular tools were found at either place. The flakes from Vajpur (Plate VIIIa) had a heavy greyish yellow patination and included parallel-sided flake-blades with tiny, plain and obtuse-angled striking-platform and showed a primary longitudinal flaking. Also with them were subtriangular flakes and struck cores. The flakes from Kothali consisted of subtriangular, ovoid and long flake-blades, concave scrapers and a few core-remnants, a few of them showing a slight retouch. According to the explorer, they are comparable with those from Phases I and II of Sangankallu and might represent remnants of neolithic factory-sites. (IAR 1958-59:25)
District Pune
S. B. Deo and Z. A. Ansari discovered a chalcolithic site with polished stone axes and hammer-stones at Chandoli. The associated pottery was mainly of the Nasik-Jorwe type (IAR 1957-58: 67).

District Nagpur
Ajay Mitra Shastri discovered early historical remains at Adam and Nandpur in the district. Adam, a known Satavahana site from where a Roman coin was found earlier, yielded neolithic celts, carnelian beads, brick structures, storage jars in red ware, skin rubbers, black-on-red ware and legged querns (IAR 1975-76: 36).

District Bhandara
C. Gupta explored Arjuni and Pauni Tehsils in the district. At Arjuni on way to the Mahadeva temple on the hillock which also has a medieval fort, a crude neolithic celt was found. Similar neoliths have also been reported earlier from Pauni. At Pauni, a good number of four-legged querns, bead polishers, beads of semiprecious stones and terracotta and structural remains were noticed. The legged-querns, which numbered several hundred, are generally broken into two halves. Most of the querns were rectangular in shape, but some are of square and apsidal shapes. They were made of different types of stone, viz., sandstone, quartzite, trap etc. (IAR 1989-90: 58).

District Ahmednagar
Situated on the left bank of the river Pravara, a tributary of the Godavari, the 20-ft. high mound of Daimabad yielded a variety of ground and polished stone axes. The exploration work was carried out by M. N. Deshpande. The associated assemblage included microliths and cores and decorated and plain pottery, ‘proclaiming chalcolithic character’ of the site (IAR 1958-59: 15).

In course of his explorations in Rahuri and Parner Taluks, B. P. Bopardikar discovered a ‘neolith’ from Vajewade (IAR 1960-61: 19).

District Chandrapur
L. K. Srinivasan reported a few crude neolithic implements from the site of Sirocha (IAR 1958-59: 18).
District Solapur
Shobhana Gokhale reported a stone mace-head, one neolithic axe and black-and-red pottery from Narayana-chinchali in the district (IAR 1967-68: 35).

District Dhule
Neolithic flakes and hammer-stones were collected at Bhamer. Besides, the site also yielded chalcolithic habitation remains with microliths and black-on-red and burnished grey wares (IAR 1960-61: 26).

In course of his exploration at cliff-sections of the feeders of the Tapti, S. A. Sali collected hammer-stones and saddle-querns along with typical painted wares, including the jorwe ware, besides the burnished grey and the coarse gritty wares, microliths, flakes of hard basaltic trap, animal bones etc. from a number of sites containing chalcolithic habitational remains. These included Amaltha, Bahyana, Baldana, Bhadne, Bhadvad-Khurd, Kandhra, Kaotho, Nyahali, Osrel, Saitana, Vaindana and Yesar. At Amaltha were also found black-and-red and red wares of the early historical period (IAR 1961-62: 32).

Karnataka

District Tumkur
I. K. Sarma reported remains of ash-mounds at Gangdananahalh which yielded black-and-red ware and red-slipped ware from the exposed cuttings. The lower levels contained ash, neolithic grey ware as well as a ground stone axe, pounders, bones etc. Herur, another site close to the village Buddinne revealed scouraceous ash deposits. Black-and-red and grey wares and ground stone pounders were collected from the cut-sections. The ash mound site Jalagaradibba at Honudike was associated with ancient gold workings. At the eastern extreme of the mound there was a ruined brick temple where an inscribed slab of the time of Sripurusha (AD 726-799) referred to ten gifts of gold to goddess Ponmiduki. The material collected from the mound included neolithic dull grey, burnished grey, and black-and-red wares along with ground stone-axes and pounders (IAR 1980-81: 63).

District Chitradurga
G. C. Chauley and K. Venkateswara Rao located a number of rock-shelters in Barlagondi hill at Chadravalli. A few ground stone axes in different stages of manufacture, stone balls
and a human skull, found buried in association with an axe, and potsherds of the neolithic times, were recovered from the shelters (IAR 1977-78: 27).

District Bidar
R. M. Shadakshariah noticed the Neolithic sites at Gorchincholli and Nagoor. However, no mention of polished stone tools was made in the report (IAR 1977-78: 26).

District Bangalore
M. V. Visvesvara collected a few neolithic axes near the locality known as Muthyala Maduvu (IAR 1979-80: 101).

District Bijapur
A. Sundara during his concurrent explorations discovered neolithic tools, mostly axes, made on fine-grained black trap from several sites in the district (Plate VIIIc). These included Dulakheda, Ingalgi, Jirankalgi, Indi, Gugihal, Kenginal, Masali Khurd, Anachi, Hathalli, Nagarhalli, Baglur, Baur, Bilebhavi, Gundaknal, Hulagbal, Ingalgeri, Kaldevanhalli, Kumshi, Mailesvara, Minajgi, Talikot, Bilei, Asangi Chimmad, Hanagandi, Hippargi, Jagdal, Kalhalli, Konnur, Shirguppi, Terdalm, Gugalamanam, Terdal, Hire Bevanur and Sitimani. These were found in association with microliths and the painted black-on-red pottery characteristic of the chalcolithic cultures of the Deccan and a thick grey ware similar to that found at Brahmagiri and Bahalalong (IAR 1957-58: 39; IAR 1958-59: 28; IAR 1960-61: 32). According to him, all these were Chalcolithic habitation-sites. Other chalcolithic sites discovered by him included Balganur, Padeknur, Vanhalli, Lingadhalli, Belvad, Chokavi, Gadisommal, Navadagi, Hirur, Hoshalli, Gotkhindki, Bhantnur, Lakkundi, Karognur, Tumgi, Almel, Gundigi, Kumshi, Baglur, Nandgeri, Sungthan, Khainpur, Bankalgi, Moratgi, Huvinhalll and Ghandliavate (IAR 1959-60: 37). In addition, he also discovered the sites of Akkaragal and Bachinmaradi which yielded neolithic/ chalcolithic grey ware and polished stone axes, besides early historical remains (Sundara 1968: 3-23; IAR 1975-76: 21).

K. Paddayya discovered ash-mounds at Budihal. The site yielded ground stone celts, hammer-stones, rubber-stones and querns, blade tools of chert, fluted cores, crested-ridge flakes, and parallel-sided blades. The associated ceramics comprised of pinkish-red ware,
grey ware of Brahmagiri type, black-painted red ware, comparable with A3 variety at Piklihal, and a solitary sherd of cream-slipped ware, reminiscent of cruder fabric from Navdatoli. In addition, the well-known ash-mounds at Budihal, Kodekal, Mallur and Thandroid Thanda were also visited. The recovered artifacts included ground stone celts, grey, pinkish-red wares, and black-painted red ware, hammer-stones and rubber-stones and blade tools of chert with such types as fluted cores, crested-ridge flakes, parallel-sided blades and scrapers etc. (IAR 1965-66: 32).

**District Gulbarga**

K. V. Soundara Rajan and A. Sundara surveyed the chalcolithic mound at Urchan, discovered in 1958 by the latter, and collected neoliths, microliths, pottery, a long spiral copper bead, a fine dark brown blade of jasper and a grey potsherd indicating the use of the paring technique. In addition, fluted cores, parallel-sided blades of chalcedony and sherds of the jorwe ware, red polished ware, black- and-red ware, russet-coated painted ware and beads of lapis lazuli and glass were also found (IAR 1960-61: 65).

The ashmounds at Benkanhalli, Thandroid Thanda, Hanamsagar-Kodekappah, Mallur, Rajan Kallur and Kupi yielded stone axes along with rubbers, grinders, hammers and worked bone chisels, microliths including flakes, backed blades, lunates, points, cores and pottery of grey and buff wares (Allchin 1963).

A. Sundara discovered neolithic-chalcolithic sites yielding flakes of black trap with occasional ground surface along with parallel-sided blades, black-painted red ware, comparable to that of Brahmagin I A and grey ware etc. at Budihal and Hunsgi in the district (IAR 1965-66: 32). He further explored Balachakra which yielded neolithic/chalcolithic grey ware and polished stone axes, besides early historical remains (IAR 1975-76: 21).

A neolithic-chalcolithic site with three different localities at Benkanhalli already known for its ash-mound both near Shahpur in the district were explored by K. Paddayya. The former yielded grey and pinkish-red wares, ground stone celts and blade tools on chalcedony, agate and chert, whereas the latter brought to light fluted cores, parallel-sided blades, lunates and scrapers on chert and chalcedony (IAR 1965-66: 33). His further explorations in the Taluks of Shorapur, Shahpur and Jewargi brought to light neolithic habitational sites at Bijaspur, Birnur, Budnal, Kupi, Wadgiri and Yerkanhal. The
antiquities from these sites include both pottery and stone tools. The pottery as usual is of blotchy grey fabric. A few sherds of black-painted red ware, resembling those reported from Piklihal and other neolithic sites, were also found. At Kannekolur, small quantities of Jorwe Ware were also noticed. Simple and carinated bowls are the only shapes available. Two more ash-mounds one at Mallur and the other at Tirth were discovered. The antiquities recovered on and around these mounds are similar to those of the habitation sites mentioned above (IAR 1966-67: 28). Paddayya’s further explorations along the Hunsgi river valley brought to light the sites of Benkanhalli and Wajal. These sites, representing the remains of southern Neolithic culture, yielded red ware, animal bones and artefacts of the pecked and ground stone and blade tool traditions (IAR 1981-82: 26-27). Another neolithic habitational site was discovered about a km west of the village Hunsgi. The finds included pottery of red and grey fabrics, polished stone axes and adzes, hammerstones, rubberstones, saddle-querns, and artifacts of chert blade industry. Besides, it also yielded fragments of scoriaceous slag similar to the material comprising the ash mounds of south India (IAR 1982-83: 35-36). As part of his comprehensive study of the archaeological sites of the Hunsgi-Baichbal valleys, Paddayya brought to light several new sites. Two ashmounds were discovered lying about a km southwest of the village of Bohnal. Cultural materials comprising polished stone tools, greyish and red pottery, chert artifacts and animal bones were found at both of these localities. Fresh explorations at the previously known ashmounds of Budihal, Kakkera, Thanmadi Thanda, Malnur and Kodekal revealed extensive habitation area around the ash formations (IAR 1989-90: 37). Of these sites, Budihal was subjected to extensive explorations. Three ash mounds each surrounded by neolithic habitation deposit were located. Barring the medieval deposit around ash mound II, the site has produced rich quantities of neolithic cultural material comprising red and grey pottery, polished stone axes and other edge-tools, large number of rubberstones, hammer and querns, and a rich assemblage of chert blade-tools. In the course of these intensive surveys an extensive workshop of chert blade industry was discovered on the western side of the Budihal ash mound site. It produced rich amount ofdebitage, chert nodules, and hammerstones. According to him, these surface surveys conclusively proved that the Budihal site was not a mere ash heap but represented a regular pastoral settlement of the south Indian neolithic culture (IAR 1990-91: 29).
S.G. Ghatapanadi carried out exploration of a Buddhist site located on the top of a hillock, about 2 km away from the village, Gurusanagi on the right bank of the River Bheema. The survey brought to light the structural remains of a Buddhist stupa, along with a polished limestone implement. The latter, according to him, was possibly an axe of the neolithic period (IAR 1982-83: 40).

The Bangalore Circle of the Survey undertook exploration in the submersible area under the Bhima (flow) project at Sannati under the guidance of K.P. Poonacha. The exploration laid bare stray neolithic axe along with middle palaeolithic tools, temples (eighth-twelfth century AD), stepped-well (eighth-ninth century AD) and inscription from a village named Sirwal (IAR 1991-92: 46).

**District Raichur**

Forty neoliths were collected from Rawalconda. From another site, Bellamur-rai-guda hill more than one hundred and forty neolithic artifacts including celts, pottery etc. was collected from all directions (Munn 1927-28: 25-32). The other sites which yielded neolithic artifacts in the district along with rock-shelters and rock-bruised graffiti included Billamaryangudda, Watgal, Anandgal, Maski, Redalkundi, Goarkal, Kodekal, Nawalkal, Lingsugur, Mudgal, and Matbal (Munn 1935: 225-50).

Yazdani collected celts, chisels, crushers and hammers in considerable numbers from the eroded gullies at Maski (Yazdani 1935-36: 22-24).

K. M. Ahmad discovered about twenty-four sites in the district. In addition to stone axes, the sites also yielded hammers, flakes of chalcedony and chert and cores of different varieties. Of the sites, the one lying to the north-east of the hills in a horse-shoe shaped valley yielded neoliths along with objects of later date (Ahmad 1935-36: 28).

The ashmounds at Hire-Benkal, Chikka-Benkal, Sivapur, Piklihal, Lingsugur, Yerguunte, Kurkundi, Wandalli, Gaudur, Manvi, Sirwar and Budinni yielded stone axes along with rubbers, grinders, hammers and worked bone chisels, microliths including flakes, backed blades, lunates, points, cores and pottery of grey and buff wares (Allchin 1963).

A. Sundara discovered at Chikrampura a rock-shelter with paintings in red ochre of deer, bull, etc., similar to those at Anegondi. In front of the rock-shelter was located a chalcolithic site which yielded neolithic implements, such as ground stone axes, hoes, fluted cores and blades, and coarse-textured grey ware similar to those from Maski, besides
a few red-slipped coarse micaceous ware (IAR 1961-62: 102). He further discovered neolithic-chalcolithic sites yielding parallel-sided blades, flakes of black trap, occasionally with ground surface, black-painted red ware, comparable to that of Brahmagin I A and grey ware etc. at Gorkul, Karadiguda and Avaragera (IAR 1965-66: 32). Another site, Malkhed yielded discovered a few fragmentary polished stone axes and neolithic grey ware (IAR 1968-69: 68). The area of Arahalli provided evidence of two neolithic and one megalithic burial-cum-habitation sites. However, no mention of polished stone tools was made in the report (IAR 1972-73: 36).

P. B. S. Sengar, A. J. Nambhiraju, Basheer Khan and H. K. Manik of the Prehistory Branch of the Survey, carried out exploration in the district and collected neolithic implements along with microliths from the cultivated fields in the vicinity of Betudur, Kakargal and Ramdrug. They discovered mesolithic and neolithic sites at Mallapur and Rampur. Besides, microliths were recovered from the stratified deposit of red soil and neolithic implements from the surface. Further, three neolithic ash-mounds were located in the vicinity of Gorkal. The surface collection included ground stone axes, long and short blades of chert, sling stones of various sizes, grinding stones and sherds of burnished grey and black wares. The other two mounds, under seasonal cultivation, also yielded neolithic implements, pottery and microliths (IAR 1977-78: 30).

**District Belgaum**

A. Sundara located neolithic-chalcolithic sites at Dyaganhatti and Konnur. According to him, the latter site possibly represented an ash-mound. Characteristic grey, blackish-grey and pinkish-buff wares, some micaceous and some with incised decorations, flakes of black-trap, parallel-sided blades of chalcedony, chert fragments of slick stones, saddle-querns of granite and bones were recovered from the surface of the mound. The occurrence of finely-retouched lunates, a trapeze and a small piece of black-painted red ware of the Jorwe fabric are noteworthy (IAR 1963-64: 23). He further discovered sites with similar assemblages at Nesur, Saptasagara, Satti, Shegunashi, Exsamba, Kalloolh, Sadalaga, Haravgeri, Kuden, Mugalkhod, Sasalhatti and Yebrati (IAR 1965-66: 32). Other sites, Hole-Alur on the Malaprabha, already noted for the occurrence of Early Stone Age tools, and at Belavanki (four different sites), Kowjageri and Basarkod laid bare grey ware sherds of Brahmagiri fabric. At Hole-Alur was found a few parallel-sided blades, a crested-ridged
flake, and at Belawanki a polished working edge of an axe. On the other sites were noticed a few parallel-sided blades and microliths, usually of chert. Another site Yadwad yielded a fine polished stone axe of pointed butt-end, ovoid in section (IAR 1966-67: 27).

**District Bellary**

The district was first explored by Foote. In his work, he described at length the settlements at Kupgal, Sanganakallu and other sites of the districts. He thought the site of Kupgal to be the largest Neolithic settlement in India on account of the large collection, which he made, of Neolithic axes and other implements and microliths. After him, it was B. Subbarao who carried out extensive explorations and published the first interim report about the district. (Subbarao 1947: 209-223)

B. K. Gururaja Rao came across a neolithic site at Hulakundi, from where Bruce Foote had reported neolithic grinding-grooves. A scraper worked all over and ground, an incompletely-worked crude axe and a few half-worked implements were found from there (IAR 1959-60: 72).

The site of Patpadu yielded a ground stone axe along with cores, blades and flakes of typical neolithic blade industry and a sherd of coarse perforated neolithic pottery (Allchin 1962: 223).

The ashmounds at Kupgal, Sanganakalllu, Halakundi, Lingadahalli, Kanchagara, Bellagallu, Kurikuppa, Suguru, Kakbella, Gudikllu, Nimbapuram and Kudatini yielded stone axes (Plate IXa) along with rubbers, grinders, hammers and worked bone chisels, microliths including flakes, backed blades, lunates, points, cores and pottery of grey and buff wares (Allchin 1957; 1963).

S. R. Rao explored the right bank of the river Tungabhadra near Hampi and discovered a Neolithic-chalcolithic site, yielding handmade pottery, lipped bowls of burnished grey ware, stone axes in various stages of manufacture and stone pounders (IAR 1975-76: 19).

K. Venkateswara Rao collected a few fluted cores in jasper and polished stone axes, made on basaltic dyke from the foot-hill of Sukradappana-gudda at Nittur (IAR 1977-78: 25).

D. B. Krishna and G. B. Patil reported neolithic tools from a site named Rangapuram, on the bank of the river Tungabhadra (IAR 1979-80: 102).
C. B. Patil discovered neolithic sites at Chanduru, Hirekal, Hosahalli, Rayapuram and Samjivarayanakote which yielded ground and polished tools and burnished grey ware (IAR 1981-82: 93).

During the course of village-to-village survey, W.V.S. Narasimham (IAR 1987-88: 33; IAR 1993-94: 56) recorded following sites:

Daroji: Parallel-sided blades, pecked and ground stone tools, medieval temple and sculptures.
Rajapuram: Handaxes (?), microliths, fragmentary pecked and polished axe, neolithic pottery and rock paintings.
Danapura: neolithic celt; a few microlithic tools on chert and a faded rock painting.
Ingaligi: A small pecked celt; a disturbed ash mound; two stone inscriptions in Kannada; two hero-stones and loose sculptures (medieval period); and iron slag pieces.

He further discovered stray neolithic celt and a few muller stones; inscriptions and naga stones of late Chalukyan period; inscriptions and loose sculpture of Vijayanagara period from the site of Tulahalli (IAR 1995-96: 31). He also neolithic implements along with microliths, cist-burials, herostones, inscriptions and loose sculptures (Vijayanagara and post-Vijayanagara period); iron smelting activities from a village named Halasagara (IAR 1996-97: 41).

**District Mandya**

M. V. reported neolithic tools and pottery from a locality called Dhanuskote (IAR 1979-80: 102).

**District Dharwad**

M. S. Nagaraja Rao reported ‘neolithic tools’, probably of the chalcolithic complex, from a number of sites, viz. Jallapur, Channur, Mannur, Tallihalli, Kadarmandalgi and Tadao (IAR 1958-59: 32). He collected fifteen polished stone axes from the site Hadargeri. The tools were associated with thick and coarse grey ware of Brahmagiri and a few black-painted red sherds. Another site, Mudunur yielded polished stone axes along with the grey ware (IAR 1959-60: 38). His further explorations in the district brought to light some polished stone axes from a number of early historical sites located at Aderkatti, Battur, Holalapur, Hullur, Jirmadapur, Lakshmeshwar, NaveBavnur, Nittur, Shankhadal and
Yevatti. Other associated assemblages reported from the sites included black-and-red ware, red-slipped ware and the russet-coated painted ware and areca-nut-shaped beads (IAR 1961-62: 34).

He provided a brief description of the neolithic axes reported from the following sites: Hallur. Altogether 35 axes were collected from the site. All the tools were made of fine-grained black trap. Most of them have pointed butt and a sharp polished working edge. Mudenur. A celt of black trap, conical in shape and having a ponted butt end was collected from the site. The working edge was well polished and the sides had pecking marks. Part of the working edge was broken. Some lime encrustation was found on one side. It was plano-convex in section. Nadiharalahalli. Total 5 specimens of celts were found from the site which are made on black trap and were polished. Hadarageri. 15 stone axes, all made on black trap, were collected. Of the 15 specimens, there was one hoe and one adze. The rest was represented by varieties of axes. Madapur. One pointed butt fragment of a polished stone axe was found. Niralgi. The following specimens were found from the site: a. An axe, plano-convex in section, with a pointed butt and a polished working edge which was blunted. b. A discoid, probably a reused tool, the working edge of which was made sharp by alternative flaking. One of the sides was beveled. It had a polished surface. Battur. A small axe of trap was collected from the site. It was ovoid in section with a pointed butt, sharp and well-polished working edge, a corner of which was mutilated. According to him, all the above sites were of chalcolithic affiliation wherefrom the polished stone specimens were collected (Nagaraja Rao 1963: 154-164; 1963: 55-77).

A. Sundara discovered neolithic-chalcolithic sites at Hirehal and Puradken. The sites yielded sherds of grey ware of Brahmagiri fabric including a painted specimen; fragments of parallel-sided blades and a few flakes of black trap with polished surface. At the same site he also noticed a habitation-site of the megalithic culture yielding the usual black-and-red ware (IAR 1964-65: 31; IAR 1965-66: 32). He also discovered the sites of Mannur, Menasgi, Nidagundi, Nidagundikop and Savadi which yielded stone axes, microliths on chert including parallel-sided blades and fragments of grey ware of the Brahmagiri fabric. His further explorations in the district brought to light a number of neolithic and megalithic
sites on the banks of the Malaprabha river and its tributaries, Bennihalla and Jaulhalla. At Ara-shangodi, Bhairanahatti, Halgop, Kurgovinkop, Lingadhal and Shirol, neolithic grey ware of Maski fabric, fragmentary ground stone axes, parallel-sided blades and fluted cores of chert and, occasionally, lime-encrusted bones of animals were found. Megalithic Black-and-red Ware and a plain red ware together with disturbed burials were also noticed at Kurgovinkop (IAR 1968-69: 23). Another two sites, Benkankop and Surkod were reported to have yielded neolithic implements. However, no detail of the recovered material was mentioned in the report (IAR 1969-70: 29).

The Department of Archaeology, Mysore, during a village-to-village survey discovered sites yielding Early Stone Age and neolithic implements at Wargund and Gudisagar (IAR 1967-68: 36).

**District Mysore**

Two axes were reported from the confluence of the Kaveri and Kapila, to the south of Kandanakoppal by C Krishnamurthi (IAR 1958-59: 32).

M. Seshadri, while excavating the site T. Narsipur in the district, surveyed the area of upper Kavery valley and reported a number of polished stone axes (Plate IXb) from the river-section (IAR 1958-59: 33). He also reported pointed butt-end axes, adzes, axe-adzes, chisels, fabricators and pounders at the site of Brahmagiri. The axes were probably used loose in hand or hafted to a handle (Seshadri 1960: 378-386).

C. Krishnamurthi discovered neolithic remains at Boodi-Tittu, Sivakalli, Komaranapura, Purani, Telnur, Palya, Kuttalavadi, T. Narsipur, Mettalavadi, Hemmige and Hosahalli. Antiquities from the site comprised of pottery including burnished brown, red and black-and-red wares and microliths. The pecked and ground stone tools were made on trap and comprised various types of butt ended axes, adzes, chisels, rubbers and balls. In addition, crude imitations of trap tools were also found. It is worth noting that trap was not local to the area. Based on this fact and the absence of waste flakes, the explorer opined that the tools were actually imported from somewhere else (IAR 1960-61: 28; Krishnamurthy 1971: 4-12). He discovered another neolithic site at Yechangalli which yielded ground stone axes and brown burnished hand-made pottery (IAR 1963-64: 26).

Allchin reported broken ground axe, a chert blade, a part of head rest and pottery assignable to the upper neolithic of Piklihal from the site of T. Narsipur (Allchin 1966: 58).
K. V. Soundara Rajan carried out a trial dig in an open field at Budhitittu, located on the southern bank of the river Swarnamukhi. The area yielded remains of occupation belonging to degenerate stage of the neolithic culture. Thick burnished grey and brown wares, along with a limited quantity of megalithic black-and-red ware, were obtained from the dig. No neolithic celts were found from the excavation, although quite a few were collected from the surface (IAR 1968-69: 24).

**District North Kanara**

K.G. Bhatsoori under village-to-village survey of antiquarian remains discovered a neolithic axe for the first time from the district. The site from where the axe was picked up was Anmod which lies under the jurisdiction of the Supa taluk. The basalt axe, measuring 24x7x3 cm, was kept in a Shiva-Devi temple (IAR 1985-86: 45; Bhatsoori 1990)

L.S. Rao conducted investigations of prehistoric sites in the west coast region. The area lying in-between Karwar in north and Bhatkal in south was intensively surveyed. The investigation revealed that the mesolithic and neolithic artefacts occur on top of the lateritic hills. The artefacts of mesolithic period included points, scrapers, borers, flakes, blades, cores, fluted cores, etc. Out of the finished artefacts points predominate. In addition, a few neolithic celts (Plate IXc) and a macehead made on trap were also collected from the same horizon. The sites from where neolithic artefacts were piced up included Kumta and Nilakonda (IAR 1992-93: 47-48; Rao 2004).

A.K. Sharma explored a Neolithic site named Anshi. Shale as raw material for fabricating Neolithic tools was found exposed on the bank of a rivulet. From this area two broken pieces of Neolithic tools were also collected (IAR 1992-93: 46).

**District South Kanara**

S. R. Rao discovered neolithic pottery and stone implements from Honavar and Gokarna. At Honavar, ground stone axes were picked up near an ancient Siva temple. He also discovered a Neolithic site at Guddey Mardi near Shimoga (IAR 1968-69: 24).

A few Neolithic celts were found from the site Kotatattu in Udipi taluk, while digging a foundation. Later the site was also explored by L.S. Rao. A solitary neolithic implement collected from Kotatattu was in the form of a saddle fragment. Previously also the area yielded Neolithic artifacts (IAR 1993-94: 62).
In 1987, Vasant Shetty drew the attention of scholars to the occurrence of neolithic axes in the southern coastal region. According to him, one Ramesh Achar collected a neolithic axe of dolerite from a field situated along the slopes of a hillock on the northern bank of the river Sita near the village Bandi Math. Subsequently he also brought to light a few more neolithic axes. Of these, a highly polished axe, measuring about 25.5 cm in length, found on the river Suvarna near village Haradi. In 1989, two axes were found while digging earth at Kotatattu. The dolerite axes were without polish. Another axe was collected while excavating an elevated area near Sri Vani High School in Naduru (Vasant Shetty 1987, 1991; Patil 2004-05: 167-169).

**District Kolar**

S. R. Rao discovered three neolithic-cum-megalithic sites and a few megalithic sites. Of these, the section exposed in the pits of the mound at Banahalli revealed a 2-m. thick deposit above the natural soil, containing ground, chipped and polished stone axes, pale and burnished grey ware and a coarse red ware. The megalithic black-and-red ware and iron objects were found in the upper part of the deposit. In addition to this open air deposit, several rock shelters were there which revealed undisturbed ancient habitational deposit. These included a large quantity of neolithic handmade pottery and stone implements. Another site, Doda Kadattur was an open-air site with a couple of rock-shelters yielding neolithic tools and pottery. Dwelling pits formed the most important feature of this settlement. Some of them have been opened up by the villagers to collect stone axes, which were available in large numbers. Other contents of the pits comprised burnt rice husks and ash. The walls of some of the pits showed traces of mud plaster. Fully-ground stone axes of pointed-butt type, triangular axes with ground edges, axe-hammers with a plano-convex cross-section and blunted butt-end were among interesting tool types obtained from the site. The ceramics comprised of a pale grey ware, an ill-fired coarse and gritty red ware, megalithic black-and-red ware and a coarse red ware. The site of Hosokote yielded megalithic black-and-red ware, a few patinated flakes of basalt and fragment of a ground stone-axe. The surface finds collected from Kendatti included burnished grey ware and coarse red ware vessels, ground stone axes, both with pointed and blunted butts, axe-hammers, mullers and pounders. Another neolithic-cum-megalithic settlement was found
at Tekal at the foot of a hill with a 2m thick occupation debris of the megalithic period. It yielded a polished stone-axe and a few sherds of the pale grey ware (IAR 1967-68: 37).

C. Krishnamurthi discovered two neolithic sites at Budikote and Banahalli yielding ground stone tools, burnished grey, red, and black wares (IAR 1972-73: 27). At Gangasandra he discovered a neolithic factory site where the raw material used for the tool making was dolerite (IAR 1974-75: 20).

G. S. Narasimhan discovered neolithic sites at Arabikotanur, Paparajanahalli and Terahalli yielding handaxes, buff ware, grey ware, red ware and both burnished and unburnished grey ware. Besides, three more sites at Dhanamattanahalli, Kuppalli and Naganala yielded neolithic handaxes with a blunt butt and lenticular section (IAR 1981-82: 93).

**District Shimoga**


The Department of Archaeology and Museums, Karnataka, explored neolithic sites yielding characteristic grey ware and polished stone-axes at Anaveri and Nagasamudra (IAR 1974-75: 18).

K. P. Poonacha in course of his explorations in the Tungabhadra, the Tunga, the Bhadra, the Kaveri, the Hemavati and the Kumudwati valleys, discovered sites at Sasivchalli, Naga Samudra, Holehatti and Holebenavalli. The sites yielded neolithic, megalithic and historical cultural remains. Neolithic pottery in the above sites included brown-and-black and black wares (IAR 1980-81: 30).

A rare find of engravings on a neolithic axe from Hasudi was reported by Sundara (2006: 3-5). The engraving depicted a bull in outline with its head turning backwards.

**Andhra Pradesh**

**District Srikakulam**

S. Krishan Rao explored the region, which is mostly covered by forests and hilly tracts inhabited by different tribal groups, to study the prehistoric sites located in the valleys of Nagavali and Vamsadhara Rivers and their tributaries. The sites of Dasarathiguda, Ippamanuguda, Nayuduguda, Sattinaguda, Rupabhadra, Siripur, Kolasingu,
Ramachandrapuram were explored in the river valley of Vamsadhara and Mahendratanaya. The collection from the sites included microliths made on quartz and chert, chisels and also flakes, cores, saddle querns, rubbers, and maceheads. Mesolithic tools and neolithic ground and polished tools and carnelian beads of various shapes, viz. barrel, spherical and round, along with unburnished coarse and thin red ware found at Banjaripeta, Addakulaguda, Kurumpeta, Burjaivalasa, Artam, Gucchimi, Bottadivalasa, Nimmalapadu, Chellivalasa and Damanu Konda. A trial trench in the eroding section at Bottadivalasa revealed neolithic urn burial. The neolithic material included two hoes, ground and polished rectangular tools, microliths and hand-made pottery of both thick coarse and thin red ware (IAR 1983-84: 5)

**District Nalgonda**

A general survey of the area was carried out by P. Sreenivasachar in and around the site of Yelleswaram. The explorations brought to light microliths and polished stone axes, besides several inscriptions assignable from the Chalukyan period down to the thirteenth century A.D. (IAR 1957-58: 9)

S. N. Raghunath discovered neolithic sites at Babusahibgudem and Namula, about 32 and 26 km. respectively from Sariapet. Both the sites yielded unpolished celts. No ceramic sherds were reported (IAR 1961-62: 96).

**District Kadapa**

An ancient mound at Peddamudiyam has brought to light two neolithic implements, stone utensils and pottery (Ramayya 1904-05: 38-42).

M. Venkataramayya collected a stone mace-head and sherds of the black-painted red ware as also the megalithic black-and-red ware from Chilamukuru, the site of Chalukyan temples (IAR 1962-63: 65).

I. K. Sharma located an extensive ancient site yielding tools of the early and late stone ages in the Kanyatirtham area near the Peddandluru village. Besides, he also collected: neolithic polished stone axes; microliths; and sherds of a black-painted red ware and a coarse hand-made grey ware (IAR 1962-63: 65). His further explorations in the area (Sharma 1967) brought to light three Neolithic sites, black-on-red pottery was the most important feature associated with these sites.
Explorations carried out in the central Pennar basin of the district by P.C. Venkata Subbaiah have made known 32 sites associated with ‘artefacts of the pecked and ground tool industry’. These included Akkempeta, Balijapalli, Boditippenapadu, Chapadu, Chinnamudiyam, Dannawada, Gadeguduru, Gudemcheruvu, Idamadaka, Inagaluru, Jangalpalli, Kambaladinne, Koduru, Kottagundavarpalii, Kottapalli, Koranguntapalli, Madhavapuram, Mylavaram, Nidivelagala, Paluru, Ramireddipalli, Sambaturu, Tippaluru, Tondaladinne, Ulimella, Upapurapalli, Vaddirala, Veparala, Veduduru and Vellala. According to the explorer, almost all of these sites are single cultural sites and are confined to the black soil belt. The artefacts of the pecked and ground tool industry were fashioned on a wide range of rocks. The edge tools were invariably made of dolerite and the non-edge tools were made of rocks such as granite, diorite, and sandstone. Most of these raw materials were locally available in the form of hills or veins intruding into them. Flaking, pecking, grinding and overall polishing were the basic manufacturing techniques employed in the industry. The collection comprised axes, adzes, hammerstones, anvils, slingstones, querns, rubberstones and flake-blades. The ceramic industry mainly consists of the red and the grey wares, with the buff, black and tan varieties forming the minor wares (IAR 1986-87: 7; Venkatasubbaiah 1988: 79-84; Venkatasubbaiah et al. 1992: 54-59).

**District Nellore**

A neolithic site comprising polished stone axes was discovered by N. Isaac at Kurichedu (IAR 1959-60: 67).

**District Krishna**

At the site of Donabanda, H. Sarkar discovered neolithic implements with the associated pottery and megaliths, besides pottery-types comparable with those from the historical levels of Nagarjunakonda. On the bank of the river Munneru, the site Mungasala also yielded a neolithic implement along with pottery of the early historical period. Two polished neoliths were recovered from the surface of the extensive mound of Kesarapalli. Both the specimens were without any pointed butt and were roughly trapezoid in outline (IAR 1961-62: 1; Sarkar and Khare 1966:72)

T.V.G. Sastri found a neolithic celt from a field to the north-west of the village Akiripalli (IAR 1969-70: 1). He further reported another ground stone axe of trap and pottery
comprising black-and-red and rouletted wares from the vicinity of the famous Buddhist site at Allur (IAR 1974-75: 5).

C. L. N. Sastry and P. Seetharama Murthy in their village to village survey for antiquarian remains in the district discovered the site of Bobbellapadu which was associated with Neolithic cultural remains (IAR 1977-78: 1). He also discovered the sites of similar nature at Atukuru and Kodavatikallu.

**District Guntur**

A celt was recovered from the stupa mound at a short distance from the Amaravati stupa itself (Rea 1908-09: 88).

Varieties of Neolithic implements in finished and unfinished stages and flakes of basaltic and other soft materials were found particularly on the high ground to the south-east of the Nallarallabodu hill by Soundara Rajan. According to the explorer, the industry was associated with bits of copper and, therefore, chalcolithic in nature (Soundara Rajan 1958: 49).

H. Sarkar while excavating the site of Nagarjunakonda undertook an exploration of the less-known sites in the district in order to compare their contents with those of the well-known site of Nagarjunakonda. The 9-metre high mound at Chebrolu in the vicinity yielded northern black polished ware, black-and-red ware and a black-slipped ware, besides neoliths (IAR 1960-61: 1).

A neolithic implement was reported from the site of Syamarajapuram on the Buggavagu, about 44 km. from Nagarjunakonda. The site also laid bare evidence of Megalithic cist-burials (IAR 1961-62: 1).

I. K. Sarma collected pebble tools and bifacial handaxes of the Lower Palaeolithic Age and neolithic axes from the fields at Muttayapalem (IAR 1976-77: 1).

G.V. Srinivasarao in course of explorations in the Gundlakamma river basin discovered neolithic, megalithic and early historical remains at Gokanakonda. Another site Mulakalura also yielded polished celts, burnished grey ware, steatite beads, and painted pottery of an early historical period (IAR 1984-85: 4).

**District Anantapur**
M. Venkataramayya reported polished stone axes and sherds of megalithic black- and-red ware, rouletted and russet-coated painted wares along with black-painted red ware around the lower fringes of a hill known as Durgamkonda at the site of Kambaduru (IAR 1962-63: 65).

The Department of Archaeology, Government of Andhra Pradesh, discovered a disturbed mound yielding ground celts of neolithic complex at Timmapuram (IAR 1964-65: 1).

V. R. Reddy of the Deccan College Post-graduate and Research Institute, Pune discovered twenty neolithic sites and two ash-mounds. Further, eleven sites reported earlier by Foote, were revisited for making fresh collections. These included Akkammakonda, Andepalli, Budagavi Hill, Buthamahal Hill, Chinna- Dandukonda, Donekal North-east, Gadekal South-west, Gadekal North-west, Gulapalyam, Havaligi, Hulikal, Idukal, Kalyandrug Fort, Karakumukkala, Katamadevudu Hill, Kunduripi, Lattavaram Hill, Mallapakonda, Mallapuram, Mallipalli, Mudigal, Peddadandukonda, Pallavoy, Pillalapalli, Rayadurg, Udupanakal West, Uravakonda, Vajrakarur, Vantareddipalli, Velpumadugu, Vidupanakal Fort, Vitlampalli and Yatakal. More than sixteen hundred implements comprising celts in various stages of manufacture, adzes, axe-hammers, chisels, hammer-stones, grooved hammer-stones, fabricators, pounders, hammer-ram-rubbing stones, rubbers, slings, scrapers and flakes were collected. In addition, a thousand microliths were also obtained from these sites. The pottery associated with these tools consisted mainly of grey ware, both burnished and unburnished, and ranging in colour from pale to dull-grey (IAR 1965-66: 1).

I. K. Sarma of the Archaeological Survey of India, located an extensive ancient site eastward of Tadpatri railway station on the right side of the Anantapur road. The site yielded ground stone axes, fluted cores and short blades of chert, jasper and crystal along with handmade painted black-and-red ware, plain coarse red ware, besides the usual neolithic burnished grey ware (IAR 1973-74: 1).

P. B. S. Sengar, Basheer Khan, A. J. Nambhiraju and O. B. Kho bragade of the Prehistory Branch, Archaeological Survey of India discovered neolithic habitation sites at Dayyalankuntapalle, Hampapuram (Gollapalle) and Krishnamareddipalle. The sites yielded plenty of pecked and ground stone tools in various stages of manufacture along with a large number of microliths and handmade pottery of thick fabric (IAR 1977-78: 1).
District Kurnool

B. Raja Rao discovered a number of neolithic celts and a few pieces of the megalithic black-and-red ware from the sites of Hattibellagallu and Kuppagallu (IAR 1958-59: 11).

A. P. Khatri reported a large number of neolithic tools from the top of the Sannarasamma hill, near Sanganakallu, about 3 miles north-east of Bellary. The collection included a few new types of neolithic celts along with axe-like cores bearing a superficial resemblance to Acheulian handaxes. According to the explorer, the importance of this discovery lies in the fact that such cores are found at the flint-factory sites at Sukkur and Rohri in Sind (IAR 1959-60: 11).

I. K. Sharma located ancient mounds at Budidepadu and Penchikalapadu, both yielding neolithic implements like celts, chisels, etc. along with microliths and sherds of the burnished grey and black-painted red wares (IAR 1962-63: 2). His further exploration in the district brought to light a broken neolith along with microlithic fluted cores, blades and waste flakes, black-painted red ware and middle Stone Age tools from the site of Gaddamankampalli. Besides, neolithic ground stone axes were also found from Mettupalle. In addition, microlithic fluted cores, finished ribbon-flakes on chert, jasper and quartz, black-painted red ware and the megalithic Black-and-red Ware were also reported from the site. Another site, Sivavaram laid bare neolithic ground stone axes, microlithic fluted cores, blades on chalcedony exhibiting the crested guiding-ridge technique, black-painted red ware, burnished grey ware and the megalithic black-and-red ware (IAR 1963-64: 4).

K. Raghavachari discovered at Pusalpadu an extensive neolithic site lying adjacent to megalithic burials. The site was further explored by M. Venkataramayya who picked up stone mace-heads, polished stone axes, sherds of burnished grey and black-painted red wares and the megalithic black-and-red ware, besides a good number of steatite discular beads (Plate Xa) (IAR 1962-63: 67).

V. R. Reddy explored the western part of the District and discovered neolithic sites at Adoni, Chetnepalli and Hattibelagallu. Of these, the sites at Adoni and Hattibelagallu had also been visited by Foote, but at the former site he could not collect any neolithic implement. The present exploration, however, yielded plenty of neolithic implements in various stages of manufacture. At the same site, a large number of blades and microliths were also found (IAR 1964-65: 3).
S. R. Rao undertook intensive survey at important painted pottery yielding sites including Patapadu, Pusalapadu, Singanapalli, Sivavaram and Ramapuram. The sites yielded painted pottery and neolithic implements in large quantities. The ground survey revealed that unlike other neolithic and neolithic-chalcolithic settlements which are found in rock-shelters and on terraces of castellated hills, the painted pottery sites of the district were large open-air settlements situated far away from the hills. The specimens from the site of Singanapalli yielded a jasper axe with sawn margins (IAR 1967-68: 3-5; Sarma 1967-68: 1-15).

R. V. Joshi re-surveyed the entire cave-complex at Billa Surgam. Several tools on dark quartzite were found in the cultivated fields. The tool repertoire consisted of a variety of scrapers on flakes and blade-flakes, points and a few fluted cores. A group of tools on doleritic rocks comprised those of picks, adzes, axes and steep core-scrapers. Some tools were generally found to be patinated. Besides, microlithic blades and blade-cores were also found (IAR 1970-71: 3).

A rare type of ground stone double-edged axe with sawed sections and longish socket, transversely cut for the wooden haft was collected from the ancient mound at Kudavelli by G. Lakshminarayana. According to the explorer, the tool type was a rare example, akin to a 'pick-axe' but is of dolerite with polished edges, revealing its prolonged use (IAR 1978-79: 92).

R. S. Pappu located a neolithic site near Muravkonda village. The habitational deposit (0.50 to 0.75 m thick) resting on the yellowish sub-recent silt yielded polished axes, rubber-stones, querns, mullers, a few potsherds and animal bones (IAR 1980-81: 3).

Ismail Kellellu in course of his explorations in Yemmiganur tehsil brought to light an extensive protohistoric and early historical site at Nandavaram. The archaeological remains such as ash, charcoal, bones, pottery, beads made on terracotta, steatite, shell and semiprecious stones and a neolithic celt were found lying scattered in an area of about 5 hectares. Ceramics from the site included slipped and unslipped varieties of red ware, black ware, and black-and-red ware. He further discovered in the same tehsil an ashmound in association with a habitation site at a small village called Tsalla Kudlur (locally known as Kulur). The other two ashmounds, viz., Gudekallu and Suguru in this tehsil noticed earlier by Robert Bruce Foote were without any habitation deposit nearby. Besides grey ware, dull
red ware, red ware, black ware, Russet-coated painted ware and Black-and-Red ware, a 
fragment each of a ring stone and a neolithic celt were collected in addition to the shell 
bangles, terracotta beads and iron objects (IAR 1992-93: 2). Late he also located an 
extensive site about 2.5 km west of the village Kanakavidu. The surface finds comprised 
of pottery in red ware and grey ware; all the above types in red ware, black ware, black-
and-red ware of early historical period; a neolithic celt in dolerite; a few shell bangles; 
animal bones and carnelian beads (IAR 1996-97: 1).

District Mahbubnagar

The ashmounds at Uthnur, Machanpalli and Talmari-Kutukunru track yielded stone axes 
along with rubbers, grinders, hammers and worked bone chisels, microliths including 
flakes, backed blades, lunates, points, cores and pottery of grey and buff wares (Allchin 
1963).

T. V. G. Sastri discovered neolithic axes, chisels, leaf-shaped points and awls at Velaturu 
in Taluk Kolhapur (IAR 1967-68: 5).

I. K. Sharma conducted explorations in the submersible area under Srisailam and brought 
to light following sites attributed to the Neolithic Culture: Karpakala, Kudavelli, 
Sheikpalli, Malleswaram, Velaturu, Gumakonda, Rameswarpuram and Rangapur. 
However, materials associated with the Neolithic cultural remains were not mentioned in 
the report (IAR 1976-77: 5).

The Department of Archaeology and Museums, Government of Andhra Pradesh, explored 
around the village Aija and reported an ash-mound containing polished celts, adzes and 
stone axes. The associated pottery was represented by globular pots, dishes, bowls, and 
storage jars treated with black polish (IAR 1980-81: 7)

District Prakasam

I. K. Sharma discovered an extensive neolithic site in Kanigiri town within the granatoid 
hills (Kanigiri Kondalu) in an area locally known as Boggula Gonde. The site brought to 
light an extensive habitational deposit with profuse quantities of hand-made neolithic 
pottery, ground stone tools, steatite disc beads and microlithic blade industry of chert, 
jasper and chalcedony. A few caves and rockshelters yielding ground stone axes (Plate 
Xb), mace-heads, querns and flake tools were also reported (IAR 1973-74: 6).
During the course of exploration around Kanigiri, the Department of Archaeology and Museums, Government of Andhra Pradesh, brought to light two neolithic sites. Of the two sites, one was located 1 km away from the hillock and the other close to the town. The latter site rises to a height of about 50 cm to 1-00 m from the ground level, yielding neolithic tools and pottery consisting of burnished grey, red and buff wares. Types recovered are globular and lipped vessels (IAR 1974-75: 3).

D. Hanumantha Rao discovered an extensive site belonging to the neolithic/chalcolithic period in the U-shaped valley of Sannakonda near Guntupalli. The site yielded ground stone tools, handmade pottery, mostly of coarse red and grey wares, beads of steatite and a splayed out axe type of copper celt. Megalithic cairn-circles were also noticed (IAR 1974-75: 3). He also discovered another neolithic site at Chollavidu, situated at the confluence of the Rallavagu nullah with the Gundlakamma river (IAR 1978-79: 25).

C. L. N. Sastry and P. S. Murthy, in their village to village survey discovered the following sites which were associated with Neolithic cultural remains: Boggukonda (Kukutapalli), Elchur, Guntupalle, Konidena and Medarametla (IAR 1977-78: 1).

R. V. Siva Sarma discovered the neolithic sites of Bobbepalle and Dronadula (IAR 1978-79: 2).

**District Vishakhapatnam**

Dr. Thimma Reddy of the Department of Anthropology, Andhra University discovered Stone Age sites near and around Aganampudi, Bhimnipatnam, Boyapalli, Gangavaram, Gollapeta, Lankelapalem, Madhuravada, Mangalapalem, Marripalem, Paravada and Tanam. Ground and polished implements like axes, chisels, microliths, mace-heads, saddle-querns etc. occurred in the neolithic culture-assemblage along with coarse red ware (IAR 1973-74: 8).

Naseem Ammer explored the hill ranges of the Eastern Ghats in the district. The region is drained by Sarada, Gostani, Gambheeram, Varaha and several other streams. About twenty-four neolithic sites have been reported which were grouped under (a) Coastal, (b) Inland and (c) Hilly sites. The sites at Madhurawada, Paradesipalem, Boredupalem Marikavalasa, Vadapalem, and Rishi Konda, in Madhurawada basin, constituted coastal sites. Of these sites Paradesipalem, Boredupalem, Marikavalasa yielded rich evidence of neolithic cultural remains.
At the site of Paradesipalem, an urn burial in east-west orientation having grave goods was exposed from Locality I. Stone alignments of rectangular and square type were exposed from Locality II. Locality III lies north of Locality II wherefrom microliths, polished stone tools and potsherds were collected.

Two distinct neolithic horizons, characterizing Phase A and Phase B have been noticed at Paradesipalem and Museulavada. Phase A was observed between 50-60 cm below surface while Phase B was observed between 30-40 cm below surface. The material remains included ground and polished stone tools, microliths, pottery, carnelian beads, other objects besides the evidence of floor.

Other sites explored in this area included: Dibbapalem, Mamidilova, Gudilova, Lankelapalem, Saravanipalem, Narapadu, Koduru, Dibbalapalem, Musalavada, Gnavaram, Boreddupalem, Marikavalasa, Madhurawada, Vadapalem, Rishi Konda, Madhayakadamam, Pappalavanipalem, Bheemandrapalem and Sontyam (IAR 1983-84: 7).

S. K. Rao reported the discovery of a site containing evidence of mesolithic-neolithic remains near Peda Tadvadav. The site remains comprising of microliths, fluted cores, mace-heads, ground stone tools, potsherds, etc. Evidence about the neolithic comprises of ground mace-heads, saddle querns and grinders. The raw material was mainly chert although quartzite was also used. Three ground tools were found out of which two were unfinished while the third—an axe was broken (IAR 1989-90: 8).

**District East Godavari**

A small shouldered celt was found near the surface of the river. In addition, microliths including crescents, knife-blades, triangles, flakes, core, core-scrapers etc. were also found (Cammiade and Burkitt 1930: 327).

K. Thimma Reddy and P. Vijaya Prakash carried out archaeological explorations in the Rajahmundry lateritic area on the low lying hillocks on the left side of the Godavari river and discovered the site of Vemagirigutta. Trial excavations in three localities revealed material belonging to the mesolithic, neolithic and megalithic periods. The neolithic material comprised of the broken ground and polished axe pieces, ribbon blades and cores, besides pottery. The pottery was dominated by a coarse red ware besides thin red, red slipped and red and-black wares. A good number of fluted cores and beads on semiprecious stone and a polished broken axe made on dolerite were found (IAR 1989-90: 1).
M. Kasturi Bai carried out explorations in the Eleru river valley. The exploration brought to light eight neolithic sites which were distributed on the river Eluru and two of its tributaries, viz. the Madigedda and the Madieru. The sites yielded pecked and ground stone axes, blade and ceramics of a coarse gritty red ware. Altogether twenty-six tools were collected from eight sites. These were made of Charnockites, Khondalite and sand stones which were locally available in the area. The edge tools consisted of a round butt axe, adzes and small celts. The non-edge tools comprised perforated stones and rubber stones (Kasturi Bai 1992: 92-95).

**District Warangal**
The Department of Archaeology and Museums, Government of Andhra Pradesh, carried out preliminary exploration inside a rubble built medieval fort on the hill which yielded grey and dull red wares of the neolithic affiliation. Other remains including several axes were noticed on the slope and plains of the Peddagutta hill on the south and by the side of the channel dug by the Public Works Department behind the Peddagutta hill, locally known as Kommulagutta (IAR 1975-76: 5).

**District Khammam**
Explorations conducted by the Department of Archaeology and Museums, Andhra Pradesh, in village Vairadhara Annavaram, yielded evidence pertaining to different cultural periods. These included sherds of neolithic pottery, stone axes, megalithic black-and-red ware and urn burials. Besides, early historical black and red ware sherds in both plain and slipped varieties were also noticed (IAR 1987-88: 3).

**Telengana**

**District Medak**
During the course of explorations in hill-slopes and surrounding fields in Kondapur, I. K. Sharma discovered burnished grey and coarse red wares, besides ground stone axes among which was a hoe from the granitic outcrops (IAR 1970-71: 64).

**Tamil Nadu**

**District Coimbatore**
V.N. Srinivasa Desikar discovered two neolithic implements, a celt and a hammer-stone in the vicinity of an urn-burial site at Sircarsamakkulam. The celt had a triangular outline and an almost oblong transverse section (IAR 1957-58: 38).

At Pushpattur, a neolithic celt was picked up from the bank of river Amaravati (IAR 1960-61: 18).

**District Madurai**

B.K. Gururaja Rao and K.V. Raman brought to light two small finely-polished stone celts, trapezoidal in shape and roughly oblong in transverse section and a broken hammer-stone from Kollanpattarai. A similar celt was found at Karuppannaswamikoilmedu in Karuvelampatti (Plate Xc) (IAR 1957-58: 38; Raman 1970: 499-509).

K. V. Raman explored the valleys of the Marattar and Vaigai and reported a neolithic celt and pottery of a late date at Karuvelampetti. Another site, Kodangipatti, on the bank of the Teni, laid bare a few neolithic celts with pointed butt and oval cross-section (IAR 1960-61: 18).


**District Villupuram**

M. Nambirajan reported the occurrence of neolithic celts, black-and-red ware, and sarcophagus along with a temple of late Chola period at the site of Gengapuram (IAR 1999-2000: 153). He also reported similar occurrence from the site of Solankunam (IAR 2000-2001: 117).

**District Salem**

A. V. N. Sharma explored the adjacent bed of the Cauvery near Kaliammankoil which yielded four neolithic celts (IAR 1961-62: 26)

The Department of Ancient History and Archaeology, University of Madras, explored neolithic sites at Bargur in Taluk Krishnagiri, and Mulavi in Shevaroy hills near Yercaud. No mention of polished stone tools has been made in the report (IAR 1962-63: 13).

K. R. Srinivasan picked up a pointed butt-end neolithic celt made on Salem hornblendic gneiss and a typical neolithic handmade lipped bowl of burnished grey ware and painted with ochreous band from Semmali tank near Tarkadu-Periyatanda (IAR 1972-73: 62).

**District South Arcot**

The Department of Ancient History and Archaeology, University of Madras, explored Sengamedu and discovered some urn-burials without the bounding stone circles and a finely-polished neolithic celt with a pointed butt (IAR 1961-62: 26).

**District North Arcot**

Ten specimens were reported on a stone table under a tree in the village of Tullet (Cockburn 1879: 142).

S. R. Rao discovered a neolithic site at Thalatapamalai near Paiyanampalli village in Taluk Tirupathur. A preliminary survey of the site brought to light six rock-shelters and three terraces with occupation-debris yielding the grey ware and ground stone axes, pounders, querns, mullers, mace-heads and several other stone artefacts. According to the explorer, the neolithic folk apart from inhabiting the rock-shelters, also lived in open-air sites at the foothills and on the terraces (IAR 1963-64: 19).

B. Narasimhayya brought to light a neolithic site at Tirumalai which yielded celts and a core of the Deccan trap (IAR 1965-66: 24).

While excavating the site of Paiyampalli, the Excavations Branch of the Survey, under Shri S.R. Rao, conducted a preliminary ground survey of the 'U'-shaped valley, flanked by the hills Talatappamalai and Vontigudda. This brought to light a large number of rock-shelters, formed by massive boulders juxtaposed against one another at different levels on the hillslopes. Of these, five were found to contain 0.50-m. to 1-m. thick habitational deposit, yielding neolithic and megalithic pottery and stone tools (IAR 1967-68: 29).

In the course of exploration, the Department of Ancient History and Archaeology, University of Madras, discovered the sites of Kallarimalai near Rajakkal and Appukallu...
which yielded neolithic celts and habitation deposit of the megalithic and later times (IAR 1975-76: 39).

H. Telagu of the Southern Circle of the Survey reported sites along the foot of the Jawadi hill range in Chengam Taluk, yielding polished stone axes at Kilasilambadi, Kilvilampuchchi, Kuttathur, Palaya Talur and Urkkavundanur (IAR 1977-78: 50). Another site at Kolundampattu in Chengam Taluk, yielded finished as well as unfinished tools of the pecked and ground stone industry (IAR 1978-79: 21). He also discovered sites at the foot-hills of Kattukollai and Dadi hills respectively. These included Lagattupallam and Ambur which yielded stone axes, chisels, mullars or hammer-stones, sling balls, besides borers and scrapers. Another site was noticed at Pannagaram associated with grey ware and tools; the mound here, having a deposit of 1 to 1.50 m, extends over an area of about 8 hectares. (IAR 1980-81: 65)

L. K. Srinivasan and Shivananda collected fragments of polished stone axes from Siyamangalam from the slopes of the hill, situated near Avanibhajana Pallava rock-cut temple at Siyamangalam. Besides, a few sherds of coarse red ware were also picked up from the same site (IAR 1977-78: 82; Shivananda 2001-02: 148-149).

I. K. Sarma found megalithic black-and-red, red-slipped and russet-coated painted wares, besides a few handmade coarse grey and black-burnished grey wares at Kailasagiri. In addition, the site also yielded neolithic ground stone axes and grinders (IAR 1978-79: 100). K.V. Raman conducted explorations in some parts of Vellore and Gudiyattam taluks of the district. This revealed fragments of Neolithic celts from the site of Chennarayanapalli. Besides, black and red ware, black ware and red slipped ware of coarse variety were also collected from the site (IAR 1983-84: 77).

**District Dharmapuri**

B. Narasimhayya explored a site yielding neolithic axes and pottery at Togarapalli in Krishnagiri Taluk. A number of megalithic cairn circles and a few hero-stones were also found at the same place (IAR 1966-67: 21). He discovered another two sites, viz. Alampuram and Venkatasamudram in Taluk Harur. These sites yielded hand-made burnished grey and red wares, bearing post-firing ochre painted designs and pointed-butt ground axes. He also collected a number of pointed-butt ground axes at the top of Battalamalai hill (IAR 1970-71: 34). Other sites discovered by him included Gollapalli,
Pannimaduvu, Dailmalai and Mullikadu as well as factory sites at Kappalavadi and Barugur. The Neolithic tools mostly made of dolerite with a few exceptions like hornblende gneiss, granite and syenite were found at Mullikadu (22 axes), Dailmalai (11 axes) and Togarapalli (9 axes). Based on the occurrence of microliths along with Neolithic artefacts, he has divided the Neolithic into five phases: Pre-Neolithic stone industry - 3500 BC; Pre-pottery Neolithic culture - 3000-2800 BC, Neolithic culture, phase I - 2800-2200 BC, phase II - 2200-1800 BC and phase III - 1800-500 BC. The occurrence of large quantities of polished stone axes and microliths in the same stratigraphic position as the sites situated in the plains and the absence of ceramics from the hill top sites, made him to believe that there could be a pre-pottery Neolithic phase. As far as the ceramic assemblages are concerned, according to him, red ware was dominant in both the first and second phases. The third phase was represented by grey ware and stone blades in large quantities (Narasimhaiah 1980).

K. V. Raman explored the western part of the district and collected neolithic celts which were under worship from Adanur, Adiyamankottai, Akkamanahalli, Errabhayyanahalli, Mukkanur, Muttur, Nagarkudal and Puchchettayahalli. Besides, the sites also yielded sherds of black-and-red ware (IAR 1979-80: 69).

Field survey carried out in the district by K. Rajan brought to light evidence of the neolithic sites at Modur, Vedarthattakkal and Kolahattur in association with black and red ware (Rajan 1991: 37).

**District Kanchipuram**

S. V. Rao discovered a Middle Palaeolithic site at Peramanallur, yielding borers made on quartzite, points of chalcedony, fluted cores of chert and other tools in various stages of manufacturing. The site also yielded a heavily patinated polished stone axe of the neolithic culture (IAR 1978-79: 20).

G. Thirumurthy carried out explorations around Madurantakam taluk in the district and discovered a potentially important prehistoric site at the village Orathi. The finds included scrapers, neolithic hand-axes, chisels, etc. Besides, black wares, red ware, black-and-red ware assignable to megalithic period were also collected (IAR 1987-88: 102).

He resumed field exploration in the district later (IAR 1989-90: 93; IAR 1990-91: 63) and discovered following sites with neolithic implements:
Acharappakkam: wood fossils, middle palaeolithic tools, microliths; neoliths; megalithic burials of cairn circle type, early medieval habitational site; Atchiswara (Siva) temple of Pallava period and seventeenth century linga and Nandi sculpture.

Anaikunnarn: microlithic tools, neolithic tools, megalithic burials of cairn circle type, linga and nandi sculpture (seventeenth century).

Pallipettai: lower and middle palaeolithic tools, microliths, neolithic tools, megalithic cairn circles, late medieval habitation site.

Karunguli: microliths, neoliths, stone and cairn circles, dolmenoid cists, inscriptions of twelfth century, mandapa of Nayaka period, seventeenth century fort.

Nilamangalam: middle palaeoliths, microliths, neoliths, stone and cairn circles, early historical site.

Vilagam: late stone age tools, neoliths, dolmenoid cists.

Kerala

District Kollam

P. Rajendran reported the discovery of a neolithic stone axe at Mantrothuruth (Plate XIa). This was the first neolithic to be recovered from south Kerala (IAR 1989-90: 46). He also discovered similar specimens from Kunnoni in south Poonjar of Kottayam district (Rajendran and Divya 2006: 288). Neolithic axes were reported from Pulppaji and Cinneri from Wynad area (John 1975).

District Trivandrum

A stone axe of the neolithic culture was discovered by P. Rajendran and V. L. Divya from Vembayam in south Kerala. The tool was made on the locally available granite. The use mark on the tool was at the convex working edge as striations at right angle and it had no damage (Rajendran and Divya 2006: 288).

b. Excavated Sites

Adam

A polished stone celt made on schist was recovered from the chalcolithic level at the site. It was found over a mud floor adjacent to two circular pits containing ash and charcoal.
The other excavated assemblages included microliths on chert and chalcedony, copper objects and bone tools. The ceramic assemblage, typical to the Wardha-Wainganga Valley, included red ware of dull to brick red colour, black ware and black-and-red ware. The period has roughly been dated to the first quarter of the second millennium BC (IAR 1988-89: 34; IAR 1990-91: 45).

**Balijapalle**

Pecked and ground stone tools were found from the neolithic level at the site. The other excavated assemblages included pottery, microliths, disc beads and animal bones (Venkatasubbaiah and Kajale 1991: 85-97).

**Banahalli**

Polished stone axes (Plate XIb) were recovered from the neolithic cultural level of the site (Period I). The period was further sub-divided into IA and IB and celts were recovered from both of these sub-periods. From Period I, the main types of the polished stone tools included axes and adzes. Besides, saddle querns, dabbers, rubbers and burnishers were also found. The raw materials used in this context were basalt and granite. Other associated assemblages from the period included variety of microliths on quartz and chert; bone tools; handmade pottery of red, grey and tan wares which were very akin to the other neolithic sites in south India. Period IB yielded a large number of stone tools. Of these 13% were of bone tools, 34% consisted of microliths and the rest were polished stone tools. The ceramic industry from this sub-period was similar to the earlier one (IAR 1986-87: 42-45). Excavation at the site laid bare broken pieces of polished stone tools in association with hammer stone and varieties of ceramics including burnished grey and black and red wares. Underlying this deposit was a floor made up of rammed earth, stone chips and ash mixed with earth. A circular pit and post-holes dug into the natural rock were also noticed over the floor level (IAR 1980-81: 26).

**Brahmagiri**

Excavation at the site revealed three cultural periods, viz. Period I (the Brahmagiri stone axe culture), Period II (megalithic) and Period III (Andhra). Polished axes were recovered from all the three periods. Period I i.e. the Brahmagiri Stone Axe Culture was defined by
Wheeler as “a crude Chalcolithic culture extending to a maximum height of 9 feet from the natural surface.” The period was further sub-divided into IA (earlier) and IB (later). It was characterized throughout by the presence of polished pointed butt axes of trap rock. The axes were associated with numerous crude microliths of jasper, flint, agate, common opal and rock crystal, amongst which specialize types such as the trapeze, triangle and crescent were very rare or entirely absent. The pottery was invariably handmade. However, occasional sherds of painted and incised ware were also met with. A few copper objects were found from a fairly low stratum. No iron occurred in association with this culture. From the Megalith cultural level, polished stone axes and microliths were occasionally reported but clearly not in general use. According to Wheeler, “they are presumably survivals or overlaps from the previous culture (Wheeler 1948: 203). From Period III two stray examples were recovered. Altogether 15 complete and 29 broken polished stone axes of pointed butt type were recovered during excavation. They were manufactured of trap rock, and the presence of cores and flakes of this material in the occupation strata (mostly in the IA culture and low levels of IB) indicated a local industry (Wheeler 1947-48: 180-310).

**Budigepally**

The excavation at the site yielded a three-fold cultural sequence ranging from neolithic to medieval, intervened by the megalithic. Of these, polished stone celts were recovered only from the neolithic level. Apart from these, the other excavated assemblages comprised of handmade burnished grey and dull red wares and microliths such as blades, crescents etc. (IAR 1976-77: 3-4).

**Burzahom**

Polished stone axes (Plate XIc) were excavated from Period I, II and III of the pit deposits. Of these, Period I and II represented neolithic culture and Period III belonged to the megalithic culture. The frequency of polished axes was more in Period II. The raw material used in this context was Himalayan Trap. According to the excavator, the stone axes were typologically different from their southern or eastern counterparts. The overall ground and polished stone industry included polished axes, harvesters, polishers, pounders, chisels and maceheads. However, some new types including celts with flat rectangular cross-section,
longitudinally-bent body and straight cutting edge and bead-shaped mace-head with hour-glass section from Period I and shoe-last type double-edge picks, perforated picks, double-edged points from Period II were also recovered. The pottery of the neolithic Periods, I and II, was characterized by a crude hand-made ware showing grey, shades of dull-red, drab, brown, buff and burnished black surfaces. From Period III black burnished ware and red ware were recovered. Another important assemblage from the excavation was bone tool industry (Plate XII) which was characterized by very fine polish and sharp working. The tool types included short daggers, both small and large points, awls, antimony-rods, polishers or scrapers, chisels, needles with eyes and harpoons including unfinished specimens. The greatest frequency of bone tools was observed in Period II. Apart from these, a few copper objects were also recovered from Periods II and III. Excavation at the site revealed that the inhabitants of Burzahom were pit dwellers. The dwelling-pit complex, revealed three structural phases, the noteworthy feature being that the pit of each successive phase became larger in size (IAR 1960-61: 11; IAR 1961-62: 17; IAR 1964-65: 13; IAR 1973-74: 15; Kumar 2003-04: 12).

**Chandoli**

Excavation revealed that the stratigraphy of the site belonged to a single culture, i.e. chalcolithic. A polished cel of dolerite (Plate VIIIb), rather worn out due to use was recovered from the chalcolithic layers. Other associated ground stone objects included huge querns with concave top, anvils, mace-heads and hundreds of sling balls. The pottery comprised six main wares—the Jorwe, red-painted and plain grey, coarse red, Malwa, cream-slipped and black-and-red. The other finds included microliths and a variety of objects of copper, stone and terracotta, structural remains in form of large lumps of clay, postholes, evidence of lime plastered floors etc. As far as the date is concerned, the chalcolithic level of the site was corroborated with Nevasa and Navdatoli (IAR 1960-61: 27).

**Chandravalli**

The excavation yielded a large number of ground stone axes from the neolithic period (Period I). The axes were characterized by lenticular section and sharp cutting edge. The ceramic industry of the period consisted of handmade burnished grey ware with coarse
core. Besides, the period also yielded structural evidences in form of remains of huts with circular flooring and post-holes at regular intervals. Microliths were conspicuous by their absence. Further, the site also yielded polished stone axes along with a miniature *siva-linga* on *yoni* pedestal of soapstone from a pit-deposit in one rock shelter (IAR 1977-78: 27-29).

**Chinnamarur**

The site yielded polished stone celts both form neolithic and chalcolithic cultural phases. In neolithic level, a considerable number of pecked and ground stone tools were occurred. Associated ceramics included pale-grey ware painted with simple designs. Structural remains were in form of large hearth and few post-holes. Besides, a tool made of stag-horn was also encountered in this level. In chalcolithic level, axes, chisels and adzes on dolerite were found to occur with grey, burnished grey and black wares. Other excavated assemblage from this level included microliths, beads of semi-precious stones, copper objects, terracotta figurines and a large number of animal bones. Besides, it also laid bare evidence of structures in form of hut plans, floors, pottery kilns etc. (IAR 1978-79: 64-65). Besides, it also yielded a single polished stone celt form one of its burials (IAR 1979-80: 8).

**Daimabad**

Excavations at the site yielded polished stone tools (Plate XIIIa) from Period IV (Malwa culture) and Period V (Jorwe culture). The other excavated assemblage from Period IV included sherds of Malwa ware, copper tanged spearhead with mid-rib, bone points and microliths. Period V, in addition to celts laid bare black-painted Jorwe Ware, burnished grey and thick coarse gritty wares; varieties of microliths, remains of floors, postholes, terracotta animal figurines, stone mullers, querns, a thick, heavy copper bangle; beads of carnelian, agate and jasper; bone points etc. It is worth mentioning here that the last phase of excavation at the site brought to light a massive and large polished stone axe from the Jorwe level (IAR 1975-76: 31; IAR 1976-77: 34; IAR 1977-78: 36; IAR 1978-79: 46). The site also yielded a good number of polished stone tools as surface collection (IAR 1958-59: 15).

**Daojali Hading**
Excavations at the site yielded a 45cm deep single-culture stratum yielding neolithic artefacts in association with a coarse ill-fired pottery. No metal objects were found. The celts (Plate XIIIb), of which one was of shouldered variety, were recovered with bones, corn-grinders, mullers, pestles, grey coloured basket marked or cord-impressed pottery etc. While the majority of the wares were kiln-baked, a few with pale-cream cores seem to have been sun-baked. According to the excavator, the excavation at the site revealed neolithic culture of the jhum cultivators. One noteworthy finding from the western slope of the site was an iron bar celt similar to the faceted stone celt which was reported as surface collection (IAR 1962:63: 3; IAR 1963-64: 5).

**Desalpur**

Excavation at the site brought to light two cultural periods, i.e. Period I (Harappan) and Period II (early historic). Polished celts along with saddle quern and pestles were recovered from Period I. Other associated assemblages from the period included ceramics, viz. cream-slipped bichrome ware, plain as well as grey-painted black-and-red ware, typical Harappan pottery; microliths on chert and chalcedony; copper objects; jasper and terracotta weights; spherical stone balls of different sizes; terracotta triangular cakes and objects in different shapes; seal and sealings etc. The excavators, based on a comparative study of the material assigned the time range of Period I to c. 2000-1600 BC (IAR 1963-64: 10-12).

**Elchuru**

Ground stone tools along with grinders and rubbers, querns, mullers, sling balls, shell bangles, beads of steatite, carnelian and terracotta, terracotta figurines were found from the neolithic cultural period. A large number of animal bones, belonging to the species of cattle, sheep/goat, deer, gazelle, wild boar and rodents, were also found during the excavation. The ground stone tools at the site are primarily faceted in nature. Only three specimens were collected from the excavation and the surface. These three celts represented 3 different types, viz. rectangular, sub-rectangular and tongue-butted. The ceramic assemblage of the Neolithic period was mostly handmade and included the red ware, black ware, buff ware, black-and-red ware and brown ware (IAR 1988-89: 3-5; Thimma Reddy et al. 1990:83-91).
**Eran**
Polished stone tools (Plate XIIIc) from the site were encountered at the chalcolithic level which represented Period I. The period was further sub-divided into IA and IB and both the sub-periods yielded such tools in variable number. Total fourteen specimens were recovered from the site of which nine were obtained from the excavated strata and rests were collected from the surface. Other associated artifacts included beads of terracotta, carnelian, steatite, shell, jasper, agate and paste; terracotta animal figurines; copper objects; stone rings, pestles, ground hammer stone and querns; pottery discs; numerous microliths including cores etc. The ceramic industry in IA comprised of white painted black-and-red, Malwa, fine black-and-grey and coarse black wares. Those from IB included Kayatha lustrous red, handmade thick black shining ware, black ware and incised ware (IAR 1963-64: 15-16; IAR 1964-65: 16-17; IAR 1987-88: 76-78).

**Ganduluru**
Excavations at the site yielded two phases of neolithic culture and polished stone celts in variable proportions were recovered from both of these phases. The Phase I was characterized by dwelling pits of various sizes and shapes. From inside the pits household objects were recovered. These included a fragmentary quern, several mullers, pounders, belt hammers, a few stone axes, microliths, dabbars, clay and steatite beads and one terracotta lamp. The pottery was handmade with coarse fabric. Several ground stone-axes along with querns and pounders were found from Phase II. This phase revealed evidence of house floors. On the surface of the large floor a number of fragmentary pots, animal bones, mullers and stones have been found (IAR 1982-83: 2-3; IAR 1983-84: 1-2).

**Garapadu**
Excavations at the site yielded a good number of polished stone axes and adzes from the neolithic cultural period. Other excavated assemblages included pottery comprising handmade coarse red ware, buff ware (sometime burnished), burnished grey/black wares and coarse black-and-red ware; microliths; mullers, querns and pounders of stone; steatite beads; a large number of bone implements etc. Ten dwelling pits of different sizes were encountered in the period which was either used for dwelling or storage purposes. In addition, post holes in circular fashion were also found (IAR 1993-94: 2-3).
Gorkal
This single cultural ashmound site yielded polished stone axes from the neolithic level. The other excavated assemblages consisted of grinding stones, sling balls, blades including long ones and a large quantity of charred and uncharred animal bones. The Pottery recovered from the site included handmade burnished grey, black, cream wares and plain handmade grey, red and buff wares. Some of the sherds also show decoration on them (IAR 1977-78: 30).

Gufkral
Polished stone tools (Plate XIV) of different varieties were recovered from neolithic cultural period (Period I) at the site. The period was further sub-divided into IA (aceramic neolithic), IB (ceramic neolithic) and IC (mature neolithic). From IA, polished stone celts of both finished and unfinished variety were obtained. The raw material used in this context was Himalayan trap. There were also one broken unfinished ring stone, pounders and querns, all made on sandstone. Structural remains in form of dwelling pits, similar to the site of Burzahom were found. The IB was marked by the appearance of Neolithic pottery including grey ware, sherds of rough dull red ware along with complete disappearance of dwelling pits. The excavated artifacts other than polished stone tools included one stone point, one broken ring stone, nineteen bone tools, two piercers-cum-scrapers shaped out of splinters and one spatula. The period also yielded a large quantity of charcoal and the earliest radiocarbon date for the period is 2030 BC (BS-359). In period IC, stone objects were scarce and only one unfinished celt was found. Other stone objects included querns, pounders and bells. The associated ceramic types consisted of grey ware, burnished grey ware, rough thick dull-red ware, burnished black ware and wheel-turned burnished black ware. Few sherds of red gritty ware are also present. The period yielded the largest number (forty-one) of bone tools, most of which were well-polished points (IAR 1981-82: 19-25).

Gutthurmalai
Three polished stone celts were recovered probably from the megalithic cultural level at the site. Other than these, it also yielded rich varieities of antiquities including pottery (IAR 1982-83: 71-72).
**Hallur**

The excavations at the site revealed three cultural phases the lower neolithic, free from metal and microliths (blade industry); the upper neolithic with chalcolithic elements and neolithic-megalithic overlap. Polished stone axes were encountered in all these three phases. The lower neolithic was characterized by a coarse brown-and-black, pale-grey and burnished black wares, occasionally painted with red ochre. The lithic industry comprised of only ground and pecked implements. The upper neolithic or neo-chalcolithic was marked by the sudden occurrence of a large quantity of blades of black chert and copper implements, comprising miniature double-edged axes made on flat copper sheet, and fish-hooks, besides ground stone axes. The coarse brown-and-black ware continued to be the main ceramic industry, burnished grey and the pale-grey occurring in diminishing quantities. A noteworthy feature of this phase was the occurrence of a few sherds of the black-painted red ware. A large number of steatite and shell beads were also found. A small quantity of charred grains and fragments of a neck-rest were also obtained from the deposits belonging to this phase. Structural remains in form of postholes, rammed floors, hearths etc. were also recovered. According to the excavator, presence of both cultivated and wild varieties of crops were indicative of domestication of wild species. Besides, millet and fruits of teak were also found. The overlapped phase showed occurrence of white-painted black-and-red ware and iron implements such as arrow-heads, spear-heads, etc. The neolithic stone tools and pottery also continued in use (IAR 1964-65: 31-32). The author dated the neolithic period to 1800-1500 BC whereas the neo-chalcolithic period was assigned to 1500-1000 BC. Four C-14 dates are available for these periods are 3560 +/- 105 BP, 2895 +/- 100 BP, 3280 +/- 105 BP and 3340 +/- 110 BP (Nagaraja Rao 1971).

**Hemmige**

Ground stone axes (Plate XVa) and spheroidal pounders were recovered from chalcolithic cultural level of the site. The associated assemblages included sherds of both handmade and wheelmade pottery, flat corn-threshers of quartz or granite; fluted cores and blades of black chert and occasionally crystal; a copper piece and a few spheroidal terracotta beads (IAR 1963-64: 26-27).

**Hullikallu**
A large number of polished stone tools in different stages of manufacture were recovered from the earliest levels of the site which was recognized as neolithic-chalcolithic. Besides axes, there were spheroid rubbers, anvils and fabricators. The ceramic industry of the level was characterized by unburnished grey or black, burnished grey, black, buff, pink, perforated and incised wares along with ochre painted and black-on-red painted ware. The other associated assemblages included microliths on chert and chalcedony, steatite disc beads, tabloid shell beads, carnelian beads and bone tools such as chisels, points and borers. In addition to the occurrence in stratified layers, a polished stone adze was also recovered from a burial which was used as grave good (IAR 1978-79: 62-63).

Inamgaon
The excavation revealed two cultural periods, represented respectively by the Malwa (Period I) and the Jorwe Wares (Period II) and ground and polished stone axes (Plate XVb) were recovered from both of these periods. According to the excavators, the axes were ground locally on huge querns, several of which were obtained from the excavation. Unlike the querns at Navdatoli or Nevasa, these were made from the local basalt and had dressed sides and flat bottoms. The excavated assemblage from the Period I comprised of only Maklwa ware in various characteristic shapes and blades. Apart from polished axes, Period II yielded a large number of blades made by crested ridge technique, a few copper objects, sherds of Jorwe ware along with grey ware and handmade wares with occasional applique and incised patterns; a variety of bone tools, bangles of shell, ivory and copper, beads of ivory and semiprecious stones, reel-like terracotta ear-studs, structural remains, charred grains identified as wheat, lentil, jowar and rice etc. Based on the occurrence of deer bones in every house, it was opined that deer was the most-hunted animal (IAR 1968-69: 18-20; IAR 1969-70: 25-26; IAR 1972-73: 36; IAR 1977-78: 40-41; Dhavalikar et al. 1988).

Kallerimalai
The excavation revealed the earliest level yielding black-and-red ware and a few ill-fired grey ware sherds resembling the neolithic pottery, besides a solitary ground and polished stone axe (IAR 1978-79: 73).

Kambarmedu
The site yielded a fragment of polished stone axe from the early level of megalithic cultural period. Other excavated assemblage included different varieties of ceramics including black-and-red ware, red ware of both slipped and unslipped varieties, etc. In addition, both hand-made and wheel made pottery was also encountered (IAR 1982-83: 72; IAR 1983-84: 78-79).

**Kanispur**

The polished stone celts (Plate XVc) were found from aceramic and ceramic neolithic levels. One stone celt was found from the aceramic level. In ceramic neolithic level, the celts occurred in association with characteristic neolithic pottery and bone tools. Evidence of circular pits was also found (IAR 1998-99: 30-47).

**Koldiha**

Ground stone axes were excavated from the neolithic and chalcolithic cultural levels of the site. The neolithic culture was represented by the presence of handmade, ill-fired dull yellowish ware along with a few sherds of red, black-and-red and net-impressed wares. The other associated assemblages included microliths on cherty materials, querns, muller, ring stones, burnt clay clods with wattle and daub impressions and remains of rice and rice-husk. Although the period yielded quite a large number of animal bones, bone tools were conspicuous by their absence. The chalcolithic period was marked by the presence of copper as well as bone tools. The occupation of this cultural level did not exhibit any marked change with the preceding neolithic period. However, it showed continuation of the life style with qualitative improvement and certain changes in subsistence. The excavated assemblages included black-and-red and black-slipped wares in greater frequency; microliths, varieties of bone tools, beads of copper, semiprecious stones, bone and terracotta, pieces of footed quern, muller, terracotta gamesmen, circular stone pieces probably used as weights, etc. The excavators ascribed the neolithic culture at the site to the first half of the second millennium BC and the chalcolithic culture to the middle of the second millennium BC (IAR 1973-74: 26-27; IAR 1975-76: 45-47).

**Kovalanpottal**
The site yielded neolithic implements in association with microliths and characteristic megalithic types of ceramics from excavated urn-burial remains (IAR 1979-80: 69).

Lahuradeva
Polished stone celts, of which one made on black basalt was found from Period II (developed farming/copper age). Ceramic industry from the period included plain and painted black slipped ware, red (pain and painted), black and red (plain and painted), black and grey wares. The most remarkable feature of this period is the construction of earthen storage bins or silos. Other associated assemblages included mullers and hammers, terracotta beads, terracotta discs, pottery discs, stone beads, bone arrow heads, points and caps, copper ring, fishhook, bangle, wires and stone anvil. Hearths, floors, post holes, burnt clay chunks with reed impressions are the representative architectural components. Two radiocarbon dates available for this period are: Charcoal BS- 1938: 1519 (1435) 1399 Cal. BC; BS-2150: 2012 (1884) 1750 Cal. BC (Tewari et al. 2005-06: 68-75).

Lakkundi
Polished stone celts were recovered from the layers two and three. Associated assemblages included megalithic black-and-red ware, black ware, red ware, micaceous grey ware of different fabrics; chert blades, fluted cores and flakes, stone and terracotta perforated beads, fossilized animal bones etc. (Gopal and Sundara 2005: 170-171).

Mahagara
This single cultural site yielded varieties of stone celts (Plate XVIa) from the neolithic cultural level. The stone axes recovered were made on basalt and in shape of rectangular or oval or rounded cross section. In addition, a few ring-stones with hour-glass perforations were also recovered. The ceramic industry of the site was represented by corded, rusticated, burnished red and burnished black wares. Of these the corded ware represented the larger percentage. The pottery on the whole was handmade and ill-fired. Other excavated assemblages from the site included structural remains demarcated by floors and post-holes of huts and pits in six different phases, saddle querns, mullers, sling balls, hammer-stones and grinding stones, arrowheads of bone, various types of microliths, shale objects, terracotta beads, perforated pottery discs, animal remains of domesticated and wild
varieties, identified as bovid, sheep, goat, pig, stag, deer, tortoise, fish, birds etc. The evidence for rice and paddy husk was found in the paste used for pottery making (IAR 1975-76: 47; IAR 1977-78: 54; IAR 1978-79: 57; Sharma et al. 1980).

**Malhar**
A celt was recovered from Period II which was marked by the presence of iron slag, iron artefacts, furnaces for iron smelting and forging. Ceramic industries of this period included black-slipped ware and grey ware in addition to black-and-red and red wares. Other excavated assemblages from this period included evidence for wattle-and-daub structures, bone tools, terracotta and stone beads, copper objects etc. Apart from the bones in large quantity, including charred and those bearing cut marks, charred botanical remains and a few microliths were also found (IAR 1998-99: 176-177).

**Malpur**
The excavation revealed a few neolithic artefacts in the form of celt, chisel, ring-stone, quern, pounder, ball, blades and scrapers. A few unfinished tools with refuse material were also found. The tools were of sandstone pebbles and a few polished ones were made on black basalt. Typologically, the artefacts resemble those found at Burzahom and Gufkral in the Kashmir valley. Only limited quantity of pottery including the sherds of hand-made red ware of medium to thick fabric which are not well-burnt were collected (IAR 1993-94: 53-54; Fonia and Chakraborty 2006-07: 167-175).

**Marakdole**
Excavation at the site revealed a single cultural stratum which was characterized by the presence of wheel made fine kaolin ware. Shouldered celts were recovered from the stratum. One interesting find from the site was a terracotta object which resembled stone axe. The time period of Marakdole was assigned to the beginning of the Christian era (Rao 1977:39-42).

**Maski**
Excavation at the site revealed a three-fold cultural sequence, ranging from chalcolithic to early historic period. No polished axes were recovered from the stratified deposits of the chalcolithic period. It is to be mentioned here that earlier excavations carried out at the site
yielded both ground and chipped varieties of stone celts, chisels etc. in association with microliths on chert (Yazdani 1936-37: 14-16). However, four polished stone axes, of which one was a surface find and the remaining three belong to superficial deposits around the excavated menhirs and the pit circle of burials, were assigned to chalcolithic period by Thapar. In this context he argued that, “The four illustrated specimens, collected from the surface, can, however, be assigned to this Period because of the undoubted association of polished stone axe industry with microliths both at Brahmagiri and Sanganakallu” (Thapar 1956: 12). All of the specimens were characterized by pointed-butt type showing lenticular or ovoid section and were prepared out of dolerite, which is profusely available in the vicinity of Raichur district. The ceramic industry was represented by dull grey ware and pinkish buff ware. The restricted presence of copper amongst an all-purpose use of stone clearly indicated the slow infiltration of the metal in an essentially Neolithic culture. Iron did not occur in this period. Despite the occurrence of post holes and rammed earth flooring in different levels of the period, no definitive evidence of house plans and building materials were encountered (Thapar 1956: 6-142).

**Modur**
Polished stone celts along with potsherds, grinding stones, rubbing stones and hammerstones were found from the neolithic level at the site. The excavators assigned the period to c. 3000-1000 BC (Sridhar and Vasanthi 2005: 108).

**Muttalavadi**
Ground stone axes were excavated at the earliest occupational level of the site, i.e. neolithic. The associated assemblages included handmade burnished grey ware, axe-hammers and a shell bead. The excavation indicated that the upper Kaveri valley was occupied only during the later phase of the neolithic period as is observed in case of T. Narasipur and Hemmige. The period was tentatively dated to about 1600 BC (IAR 1974-75: 20).

**Nagarjunakonda**
The excavation yielded about twenty-seven neolithic implements from different horizons of neolithic level. The tool types included axe, ‘shoe-last-hoes’, wedges, adzes, chisels etc.
Raw materials used were trap or basaltic rocks which were available in the vicinity. The masses to be used for the tools are, however, carefully selected and only the fine grained basalt was generally employed for good tools. A large number of quartzite flakes were recovered with neoliths of dolerite. Majority of the flakes do not exhibit any secondary retouching. The other associated assemblages included miscellaneous flake tools, typical Neolithic pottery of burnished grey ware and fragments of copper. In addition, some pits were discovered containing plenty of animal bones which were identified as those of buffalo and spotted deer. According to the excavator, the Neolithic of Nagarjunakonda is coeval with the upper levels of Sangaankallu (I, II) and the upper levels of Brahmagiri (IA, IB) (IAR 1956-57: 36; IAR 1957-58: 5; IAR 1958-59: 5; IAR 1959-60: 6; Soundara Rajan 1958: 49; Sarkar 1962: 223-227).

Naikund
The site yielded a polished stone axe on quartzite from the megalithic cultural level. Associated assemblages were characterized by typical megalithic ceramic types including black-and-red, micaceous red, plain red, painted black-on-red and burnished black wares and a large number of iron objects, viz. axes with cross-ring fasteners, hoes, nail-parers with cabled body, arrowheads, adzes, lamps with long straight handles etc. Structural remains were represented by evidence of circular hut remains. In addition, charred grains of rice, wheat, black and green gram were also found on the floor and also recovered by floatation method (IAR 1979-80: 57-58).

Narhan
A solitary polished stone, besides some stray pieces and fragments of stone were recovered from chalcolithic period at the site. The structural remains were represented by a large number of burnt lumps of clay and post-holes indicating the presence of wattle-and daub houses. Other excavated assemblages included ceramics, viz. white painted black-and-red ware in fine, medium and coarse fabrics, black-slipped ware with occasional linear paintings in white, red-slipped ware and coarse red ware; bone tools including arrowheads, both socketed and tanged, and points and pottery discs in large number (IAR 1986-87: 79; Singh 1994).
Navdatoli
Polished stone axes (Plate XVIb) were recovered from the chalcolithic level of the site. The site was essentially a single cultural one and based on the variations of ceramics the cultural deposit was divided into four periods, A - D. The other associated assemblage included microliths, rings, mace-heads, saddle-querns, rubbers, hammer-stones, round balls, copper and bronze objects, ceramics viz. BRW, black-on-red ware, white slipped ware etc.; charred grains of wheat, rice, gram, peas, moong etc., remains of houses including postholes, floors etc. According to the excavators, the chalcolithic settlement at Navdatoli might be dated to 1200- 700 BC (IAR 1957-58: 30; Sankalia et al. 1958).

Nevasa
Polished stone axes (Plate XVIIa) were recovered both from the neo-chalcolithic and historical levels. Those from the former comprised of unfinished as well as fully worked and polished axes and adzes, whereas a single chisel was recovered from the latter. According to the excavators, those tools might have been manufactured locally as at one place there were the remains of what might have been a factory, comprising anvils and partially prepared tools. The other associated assemblages included microliths, jorwe ware in different shapes, copper objects, A few beads of carnelian, chalcedony, bloodstone, faience and steatite etc. Based on its affinity with the Stone Axe Culture of Brahmagiri on the one hand and the microlithic blade-industry of Navdatoli on the other, the main polished stone tool bearing horizon was dated to about 1000 BC (IAR 1954-55: 9; IAR 1955-56: 8; IAR 1959-60: 25). According to Sankalia, the evidence for axe manufacturing is a remarkable feature of the site. This is because, it indicated that the axes and other tools found from the historic as well as the chalcolithic layers are not chance occurrence or imports from the purely neolithic cultures but played an important part in the daily life of the then people (Sankalia et al. 1960).

Pachoh
Trial excavation at the site brought to light small rounded celts on basalt from the neolithic cultural level. The associated ceramic industry was represented by corded and plain red wares which were handmade and ill-fired. Other excavated assemblages included
microliths on chert chalcedony, agate, carnelian and quartz; stone mullers, ring-stones and beads (IAR 1975-76: 47).

**Pagidigutta**
Polished stone tools at the site were encountered at the chalcolithic cultural period (Period I). Other associated assemblages included ceramics, viz. burnished grey and black-on-red wares; microliths; a number of hearths and post-holes and a copper antimony rod (IAR 1978-79: 65).

**Paiyampalli**
Excavations at the site yielded two cultural periods, viz. neolithic (Period I) and megalithic (Period II). Polished stone tools were encountered in both of these cultural periods. Ground stone implements like axes with a pointed or truncated butt, stone pounders and polishers, stone chisel and hoe were found from Period I. Generally, the axes with pointed butts formed the majority, but those with blunted or truncated butt were not rare. The mace-heads and perforated stones used as weights of digging stick were of particular interest. For domestic use and agricultural operations short blades of chalcedony, chert and quartz were used as composite tools. The waste flakes and fluted cores indicated that the blades were made locally. In addition, ceramics including terracotta beads, a terracotta figurine of long-horned variety of cattle, and hand-made grey ware, occasionally burnished and painted on the rim with red ochre were also found. Post-holes along the periphery of a few pits suggested the existence of some sort of thatched superstructure over them. Bone tools represented by awls, points and scrapers were also found in one of the dwelling-pits besides fragmentary ground axes and short blades of chert and quartz. However, during the later phase of this period absence of bone tools and an increase in number of stone blades were observed. The charred grains recovered from this period were identified as horse gram and green gram. From the megalithic cultural level, two stone axes were recovered. The ceramic industry in this period was represented by black-and-red ware, black ware and red ware. In the later level of this period, the russet-coated painted ware also made its appearance. From the enormous quantity of iron slag and ore found all over the site, it can be concluded that the megalithic people smelted iron and produced a large variety of tools and weapons locally. The tool types documented included Sickles, spears, chisels, nails.

**Palavoy**
Excavation at the site yielded ground stone axes from the neolithic cultural level. Other ground stone industry included rubbing stones, sling balls and hammer stones. An interesting find from this period were those of completely ground bone axes of unequal sizes. Other associated assemblages included handmade painted pottery and blotchy grey pottery, a large number of unbaked clay objects, a considerable number of fragmentary animal bones, some of which were charred etc. The period also yielded structural remains in form of floors and post holes (IAR 1966-67: 1-2).

**Paradesipalem**
Nine polished chisels were recovered from the neolithic level. One of the specimens was broken. Interestingly, excavated chisels from the site had red slip coating over their entire surface which was conspicuously absent in the broken one. The absence of any groove, tie mark or use-wear marks on the working edge of the tools was also noteworthy. As far as the physical attributes are concerned, the polished chisels had faceted lateral edges and three of them had faceted butts. The pottery was wheel made variety of a red ware bearing a red slip on the outer surface. Other important finds from the excavation included circular stone tablets between the postholes. According to the excavators, the site might have been used as an area to perform rituals during Neolithic times (Prakash *et al.* 1994: 267-274).

**Parsi Parlo**
Excavation at the site yielded polished stone tools in different varieties from a single cultural horizon, divisible into three phases, viz. Phase I (aceramic neolithic), Phase II (ceramic neolithic) and Phase III (ferro-lithic). Phase I was represented by scrapers and large cutting tools with the rudiments of pecked and ground techniques. Phase II was characterized by the presence of handmade pottery of either stamped or cord-impressed variety. From Phase III iron tools were recovered. The stone implements from this phase were round butted pecked and ground celts made on serpentine rock and schist. The polished stone tools found from excavation were mainly of two types, viz. celts with
lenticular cross section and quadrangular celts with rectangular cross sections. The other types found in a lesser number were hog-backed type and slender chisels of jadeite. The tools in general were mostly made of sandstone, basalt, schist, quartzite, gneiss and jadeite, the last being available in North Mayanmar and Eastern China (IAR 1983-84: 10; Ashraf 1997-98:64-76).

**Peddabankur**
A few ground stone axes were excavated from the megalithic level (Period I) of the site. Other ground stone objects from the period were saddle querns and pestles. Other antiquities obtained from the excavation included objects of iron viz. sickles, hoes, nails, spades, knives, chisels, rings, etc.; copper objects such as beads and bangles; and silver objects like spools, beads and bangle pieces; gamesmen; terracotta figurines; beads of jasper, agate, carnelian and amethyst; a hoard of silver punch-marked coins and several Satavahana coins in copper. The ceramic industry comprised of megalithic black-and-red, red polished, black polished and dull red wares (IAR 1970-71: 2; IAR 1971-72: 2-3; IAR 1974-75: 5).

**Piklihal**
Polished stone tools were recovered from lower neolithic and upper neolithic cultural levels. The stone industry was mainly comprised of axes, adzes, chisels, querns, rubbing stones, pallets, hammers and pounders. The other associated assemblages included a few copper/bronze objects, handmade potsherds, blades, evidences of basket making, mat making and bone working etc. The economy was pastoral with cattles being the mainstay. The animal remains from the site included buffalo, deer, gazelle etc. Remains of wattle and daub structures in forms of post holes, mud and cow-dung made floors were also evidenced (upper neolithic). According to the excavator, the origin of the neolithic population had some connection with the population movement from Central India. These groups practiced a pastoral economy and adopted changes on their way to North Karnataka. The excavator dated the lower neolithic to c. 2000-1250 BC and the upper neolithic to c. 1250-650 BC (Allchin 1960).

**Polakonda**
Several axes were noticed on the slope and plains of the Peddagutta hill on the south and by the side of the behind the Peddagutta hill, locally known as Kommulagutta. On the south-eastern slope of the Peddagutta hill was noticed many grooves, apparently intended for grinding and polishing stone tools. (IAR 1975-76:5). Excavation at the site brought to light stone celts from neolithic occupational level. In one of the trenches, a flooring of the neolithic occupation laid bare two unfinished axes, a polished granite ball with battering marks on one end and a boulder with flat top surface. In addition, hammerstone and an adze were also obtained. The other excavated assemblages included microlithic industry on chert, chalcedony, rock-crystal and carnelian; a few bone tools; ceramics including burnished grey, pale-grey, blotchy brown (tan), black burnished and pale-red wares; saddle querns; a small copper wire ring; post holes etc. (IAR 1975-76: 5; IAR 1976-77: 10).

**Pynthorlangtein**

The site yielded single cultural assemblage belonging to the neolithic period. Large number of polished stone tools in different stages of manufacture (Plate XVIIb) was recovered from this period. Based on this, the excavators suggested it as a factory site. Majority of the celts were chipped and a few were partly ground. The types included adzes, axes and chisels. The other associated stone tool assemblage included points, blades, scrapers, polishers, penknife, flake-blanks, cores and flakes. In addition, a few sherd of hand-made, coarse, red ware pottery with cord impression was also collected (IAR 1992-93: 75).

**Raja Nal-Ka-Tila**

Polished stone celts were found from Period II at the site. This period was marked by the appearance of iron artefacts in considerable number from lower to upper levels. The sherds of painted black-and-red ware were the representative types of this period. Bone arrowheads and points were also present in considerable number. A few stone chips and broken bladelets were also collected from the excavation. The other excavated assemblages included a few copper implements, antler, stone pestles, terracotta and stone beads, terracotta bangles etc. (IAR 1996-97: 167-171; Tewari and Srivastava 1996-97: 77-95).

**Ramapuram**
Polished stone tools on trap and quartzite were excavated from Period I at the site. The period was sub-divided into IA, IB and IC and those tools were recovered from all the sub-periods in association with different materials. In case of IA, the celts occurred with a variety of microliths; maceheads; ceramics including handmade burnished red, grey and blackwares; and a very meagre amount of copper objects. In IB, the pecked and ground stone industry was well represented. Besides, a good number of copper objects were also found. The microlithic industry was conspicuous by their absence. The ceramic industry in both IB and IC were quite similar and were represented by black, red, and grey wares, besides typical chalcolithic black-and red-ware in addition to grey-and-brown ware which were noticed in earlier level. The sub-period IC was marked by the presence of iron which occurred in association with copper objects. This was very rich in copper objects and the iron objects were mostly recovered from the burials. Other important antiquities include beads of shell, bone, terracotta and steatite, terracotta objects, saddle querns, pestles, sling balls etc. Structural remains recovered from the period indicated that people lived in either circular or oval or apsidal shaped huts made of perishable materials in all the three sub-periods (IAR 1980-81: 3-7; IAR 1982-83: 3-6; IAR 1983-84: 3-5).

**Sanganakallu**

The ground stone axes were found from the neolithic level. The other excavated assemblages included handmade brown-and-black pottery, burnished ware, a few copper objects, hand modelled terracotta figurines, microliths on cherts and chalcedony, bone tools evidence for circular huts etc. The ground and pecked tools were categorized into edge tools, points/pointed tools, rubbers and grinders, and hammers and pounders. The animal remains from the site included cattle, sheep, goats, dog, antelope and rodents. The radiocarbon dates of the site were 1595 +/- 110, 1585 +/- 105 and 1550 +/- 105 BC, thus taking the neolithic settlement back to c. 1600 BC (Subbarao 1948: 1-62; IAR 1964-65: 29; Ansari and Rao 1969). Later excavations at the site proved it to be a vast factory site for dolerite stone axes and documented the site in much detail with respect to – a. spatial distribution and patterning of dolerite reduction areas, b. survey and recording of quarried dolerite outcrops, c. technological organization of axe manufacture and d. the chronology of axe production. The excavators, based on radiocarbon dates from stratified charcoal and seeds, suggested that the early phase of habitation during which dolerite axes were
manufactured on a limited scale terminated at around 3500 BP (Boivin et al. 2005: 59; Brumm et al. 2007: 26).

**Sarutaru**
Excavation at the site yielded polished stone tools from the neolithic cultural level. Of the nine specimens unearthed, seven were shouldered celts and the rest were round-butted axes. The associated ceramics comprised of handmade brown, buff and grey wares. According to the excavator, the technological skill exemplified by the stone and pottery industries provided evidence of a limited food producing economy in the hilly regions and possibly in the intervening patches of alluvial plains. The neolithic level of the site was assigned to the beginning of the Christian era (Rao 1977:39-42).

**Satanikota**
The site yielded evidence of a fortified township belonging to the *satavahana* period. Three neolithic celts were found in Period IIB and a few were also picked up from the surface. In addition, legged querns and mullers were also excavated from this period. The ceramic industry of the period, comparable with other *satavahana* sites, was characterized by black-and-red ware, rouletted ware, russet-coated painted ware, kaolin ware, red polished ware, chocolate-slipped ware, besides the usual slipped and unslipped red and black wares. Other excavated assemblages from the site included marbles and a few architectural fragments in stone; a ring in gold studded with a piece of lapis lazuli; rings and bangles in copper; bangle, ring, nail, spearhead, sickle, etc. in iron; bangles and rings in shell and glass; and bone points (IAR 1976-77: 3-11).

**Selbalgiri-2**
Excavation at the site laid bare three stratigraphic layers. Of these, layer 1, about 22 cm thick reddish earth mixed with a small quantity of quartz gravel yielded six stone axes, both ground and chipped, one scraper and a large number of sherds. From layer 2 were obtained a core, four hammers and several small flakes, besides pottery. In layer 3 were found numerous microliths, both geometric and non-geometric, with pottery. The tools were heavily patinated and weathered and were made on dolerite. The pottery was
handmade, coarse and gritty in fabric and grey, grey-brown or dull-brown in colour (IAR 1967-68: 8).

**Songaon**

Polished stone axes were found from Period I, i.e. Chalcolithic. Based on the habitational peculiarities this period was further sub-divided into IA, IB and IC. Ground and polished stone tool industry was reported from sub-period IB and IC (Plate XVIIc). The industry from IB was characterized by several stone querns and ground stone tools. The sub-period IC yielded chisels and celts, mostly of dolerite but one significantly of granite. The stone querns were of a huge size with the working-surface showing a depression. Associated with these were a number of pounders and rubber stones. A couple of mace-heads was also picked up from the surface of the mound. In total, fifty-seven stone tools were unearthed. Raw materials used for these included basalt, dolerite, granite, pebble of chert, quartz and quartzite. From IB, the other excavated assemblages included evidence of lime floor with brown clay ramming, postholes, ceramics of Jorwe Ware and the burnished grey ware with a sprinkling of the Malwa Ware, microliths mainly of chalcedony etc. The sub-period IC yielded remains of an extensive house, charred wheat, chalcolithic blade industry, a few black-and-red ware, Jorwe ware in a coarse surface variety, red slipped ware, burnished red ware etc. Metal was completely absent in the site. Based on both radiocarbon dates and ceramic sequences, IA was dated to 1465 BC, IB 1245 BC and IC to first millennium BC (IAR 1964-65: 26).

**T. Narsipur**

Polished stone tools were recovered from Period I which represented the neolithic phase. In addition, these were also recovered from the river-section. The associated assemblage included burnished and unburnished handmade pottery, quartz flakes, pits containing pieces of bones, charcoal and ash, post holes, remains of floors etc. From the upper level of the period wheel-made pottery, a few sherds of black painted red ware and a copper bead were found. Throughout the period a typical clay object, called by Foote 'neck rest', was common (IAR 1958-59: 33; IAR 1961-62:35; IAR 1964-65:32). The remains recovered from burials from this level were assigned to first half of the second millennium BC (Seshadri 1968-69: 55).
Tiruverkadu
A broken part of a well-finished celt was found from Period IA. The excavators assigned it to Iron Age (c. 400 BC- 200 AD). Ceramic assemblage of the period was characterized by the presence of black-and-red ware, black ware sherds and coarse red ware with painted designs. Other important antiquities from the period included a small amount of iron slags, hopscotches and pieces of terracotta lamps and knobs (IAR 1999-2000: 151-152).

Tekkalakota
Of the nineteen neolithic settlements located on the granite hills to the south of the village, two localities, designated TKT-1 and TKT-2, were excavated. One of the sections in TKT-1, revealed a 1-m. deep cultural deposit belonging to two periods. The site yielded ground stone axes along with chalcedony and chert blades from both the periods. In Period I, the ceramic industry comprised hand-made ashy grey, burnished grey, both plain/and ochre-painted and buff wares. In addition, gold ornaments (ear-ornaments or pendants), bone tools, beads of steatite and semi-precious stones, copper objects including axe, bangles, fish-hooks, poker and wires, terracotta toy bull and a small axe were also found. Besides, later excavation at the site also yielded a number of bone tools, mainly chisel-ends and points from this period along with a large quantity of charred grains, identified as horsegram. The houses were generally round, although square or rectangular structures were not wanting. Period II was marked by the presence of the orange or dull-red ware and a negligible quantity of black-and-red ware, used exclusively for burial-purposes. Wheel-made black-painted red ware also made its appearance. Apart from ground stone axes, the period yielded a few copper objects like rings and wire, remains of wattle and daub houses etc. (IAR 1963-64: 24-25). Three C-14 dates for this site are available. These include 3395 +/- 105 BP, 3465 +/- 105 BP and 3625 +/- 105 BP (Nagaraja and Malhotra 1965).

Terdal
Flakes of polished neoliths were recovered from the chalcolithic level of this single cultural site. The other excavated antiquities included stumps of burnt wooden posts indicative of structural activities; microliths comprising fluted core of chalcedony with crested guiding ridge and prepared platform and parallel sided retouched blades etc. The associated pottery was grey ware of the Maski fabric and red and grey wares of the Savalda fabric. Based on
C-14 dating for layer 2 and 3 i.e. 3615 +/- 120 BP and 3885 +/- 100 BP respectively, the upper limit of the chalcolithic culture at the site was assigned to 1200-1000 BC (Sundara: 13-30).

**Tharsa**
A flat polished stone tool along with ringstone, rubberstone, pounder etc. was found from Period I (chalcolithic-megalithic). The celt was interesting as it was almost rectangular on plan with very slight tapering towards buttend. The ceramic industry from the period included black ware, black-and-red ware, red ware, tan ware, micaceous red ware and black painted on red ware. Other excavated assemblages included Bone objects, hopscotches in stone and terracotta, spindle whorls, copper rings and bangles and terracotta beads (IAR 1989-90: 56-58).

**Theur**
The excavations carried out at the circular huts of the chalcolithic period yielded a fragmentary polished stone axe along with Saddle-querns, pounders and mullers of trap. The ceramic industry from the site comprised of black-and-red, black, coarse grey, sturdy red and coarse red wares. Other associated assemblages included stag-horns and a large number of cores, parallel-sided flakes, and waste flakes on chalcedony; copper bangles; beads of jasper, chert, shell and agate; terracotta figurines of bull and toy-cart wheels. Based on the occurrence of Jorwe ware in the third phase of the same cultural level, the excavators assigned the earliest occupation at Theur to c. 1500-1200 BC (IAR 1969-70: 28-29).

**Tokwa**
Polished stone tools were recovered from the neolithic horizon of the site. In addition, fragments of querns, mullers and hammer-stones were also found. Other associated assemblages included ceramics, viz. hand-made cord impressed pottery, rusticated ware and burnished red and burnished black sherds; variety of microliths; bone tools; beads of terracotta and semiprecious stones; grains of rice, barley, til and moong etc. (Singh 2010: 76).

**Uthnur**
The site yielded polished stone tools from the neolithic level. Nearly all Uthnur tools from excavation or surface exploration were crudely made, very highly worn and were ultimately broken into fragments. The types included axes, by product flakes, rubbers, grinders and hammers. The raw materials used for the tools were either grey gneiss or dark green hornblende schist. Both were available locally. The other excavated assemblages included animal remains of cattle and a small number of deer and goat; evidence for stockades and cattle-pens by means of successive levelling, burning and post-holes; handmade potsherds, microliths including cores, blades, backed blades, lunates, discoids, scrapers, worked quartz crystals, pebble hammer-stones etc. Radiocarbon dating of a sample from the site read 4243 +/- 155 BP i.e. 2293 +/- 155 BC. According to the excavator, this absolute chronology of the site is rather vague and occupation ended before 1250 BC (Allchin 1961).

**Vadgaon Madhavpur**

The excavation at the site yielded two neolithic celts from early historical period (*satavahana*) structural remains. According to the excavators, the site remained in occupation from about 4th-5th century BC to about 3rd century AD (IAR 1971-72: 38). Other excavated assemblages included terracotta areca-nut shaped and spherical beads; copper coins with Ujjain symbol; ivory rectangular pawns of dice; a fragment of a circular terracotta medallion; terracotta elephant heads; a silver Roman coin; potin coins etc. (IAR 1976-77: 21-24).

**Watgal**

Excavations at the site yielded fragments of celts on black basalt in association with microliths on flint, chalcedony and banded agate; whetstone, milling stone and hammerstone, both made of granite and beads of steatite and shell. It is worth mentioning here in this context that although the site evidenced the absence of complete or large fragments of stone celts, but dolerite flakes suggest they existed, since dolerite was an extensively used material for celt knapping (IAR 1988-89: 34). This site provides the earliest non-ashmound Neolithic occupation yet documented, with the earliest calibrated date from 2900-2600 cal. BC (Deavaraj *et al* 1995:60-74).
Discussion

The above database reveals that in comparison to numerous explored sites, data regarding the excavated sites are still inadequate. If one goes through the ‘Explored Sites’ segment, it will be seen that in majority of the cases, the discoveries of polished stone tools (either finished specimens or fragments or flakes) were reported as ‘discovery of neolithic sites’. However, the excavated data has proven that polished stone tools in different sites occurred in association with different chrono-cultural periods and was not limited to ‘neolithic’ period. These include ‘neolithic’ or ‘neo-chalcolithic’ (Watgal, Utnur, Tokwa, Tekkalakota, T. Narsipur, Selbalgiri-2, Sarutaru, Sanganakallu, Pynthorlangtein, Polakonda, Piklihal, Parsi Parlo, Paradesipalem, Palavoy, Paiyampally, Pachoh, Nevasa, Nagarjunakonda, Muttalavadi, Modur, Malpur, Mahagara, Koldihwa, Kanispur, Kallerimalai, Hullikallu, Hallur, Gufkral, Gorkal, Garapadu, Ganduluru, Elchuru, Daojali Hading, Chinnamarur, Chandravalli, Burzahom, Budigeppally, Brahmagiri, Banahalli, Balijapalle, Ramapuram etc.), ‘chalcolithic’ (Theur, Terdal, Songaon, Pagidigutta, Navdatoli, Narhan, Maski, Lahuradeva, Koldihwa, Inamgaon, Hemmige, Ramapuram, Eran, Daimabad, Chinnamarur, Chandoli, Adam etc.), ‘chalcolithic-megalithic’ (Tharsa etc.), ‘megalithic’ (Peddabankur, Paiyampalli, Marakdole, Naikund, Lakkundi, Kambarmedu, Hallur, Gutturmalai, Burzahom, Brahmagiri etc.), ‘iron age’ (Tiruvenkadu, Raja-Nal-ka-Tila, Malhar, Ramapuram etc.) and ‘early historical/historical’ (Vadgaon Madhavpur, Satanikota, Nevasa, Brahmagiri etc.). In addition, site like Kovalanpottal also yielded evidence of polished stone tools as part of grave goods which were excavated from an urn burial.

As far as the Northern region is concerned, the occurrences are mainly reported from the elevated areas of the Karewas (often overlooking streams and lakes), upper reaches of the Beas river valley and the nearby area of Siwaliks. Of about thirty explored site in the region, a few like Burzahom, Gufkral, Kanispur, Malpur etc. have been excavated so far. Burzahom is well-known for its developed bone tool industry and a unique pit dwelling system. Gufkral and Kanispur has provided evidence of an earlier phase of ‘aceramic neolithic’ which was not encountered at Burzahom. The subsistence economy of the first settlers were based on cereal farming and stock raising, supplemented by hunting. Evidence of domesticated floral and faunal remains suggested herd management. As far as the
chronology is concerned, ‘the available C-14 dates indicate a time bracket of c. 2400-1500
BC (uncalibrated) for Periods IB and IC, to which a century or so could be added on the
initial end of the bracket to provide for the newly discovered aceramic phase of Period IA’
(Thapar 1985:34).

In Vindhyan region, the occurrence of polished stone tools is mainly identified in the
surface explorations in the river valley areas of Belan, Adwa, Son, Rihand, Ganga, Lapari
and Paisuni rivers. Koldihwa, Mahagara, Pachoh etc. are some of the prominent excavated
sites of this region. These sites have provided a continuous sequence of transition from the
stage of incipient food gathering and selective hunting through incipient food producing to
settled village farming (Sharma 1981). Polished stone tools were mainly seen to occur in
association with the settled village farming levels. Koldihwa and the other sites in the
neighboring region have yielded evidence of wild rice (*Oryza nivera*) and bone fragments
of deer, antelope, bear and bird were found in association with domesticated rice. These
exemplify that their subsistence economy was based on domestication and cultivation
which were further supplemented by hunting-gathering. The radiocarbon dates of three
charcoal samples obtained from Koldihwa were 6570 BC, 5440 BC and 4530 BC. These
have been considered as the earliest dates of rice cultivation in the subcontinent (Sharma
et al. 1981). However, doubts have been expressed regarding such high dates and it has
been suggested that the charcoal specimens actually came from a fire-pit belonging to the
pre-Neolithic strata.

The North-Eastern region have yielded a considerable number of polished stone tool
specimens from different parts. However, ‘it is one of the least explored regions of India
mainly because of unfavourable climatic conditions with its torrential rain and
impenetrable jungles’ (Singh 2002: 138). The discoveries in this region are mainly made
from the hilly tracts in the Himalayan foothills. The excavated sites of Sarutaru, Marakdole,
Daojali hading, Selbalgiri-2 and Pynthorlangtein yielded polished stone tools from
‘neolithic’ cultural level and it was assigned to the beginning of Christian era. The
assemblages at the sites are not objectively dated. ‘Nevertheless, the Neolithic assemblage
of this region has been compared with the late Bacsonian of South-East Asia which
revealed significant influence from Sichuan and Yunan’ (Thapar 1985:44).
In the Central Indian highlands, such tools were reported in association with the early farming cultural sites spread in the river valleys of Narmada, Son, Chambal, Lilji, Gupta-Godavari, Tons, Khudar etc. Except their occurrences, the other scenarios pertaining to polished stone tools are very sketchy in this region. This is because, except the site of Navdatoli, the others were small scale vertical digs, aimed at establishing cultural sequence. Apart from this, much of the excavated works has not even been published. However, the antiquity of settled life in this part of the country is assigned to the beginning of the second millennium BC, and the radiometric dates, when calibrated, pushed it back to the last quarter of the third millennium BC (Dhavalikar 2002).

In the Konkan region, the evidence regarding polished stone tools is seemingly inadequate except surface collections of a very few tools. Although not much is known except the find spots of the artifacts, occurrence of polished stone tool in the nearby region of a workshop area certainly calls for further investigation (IAR 1979-80: 15).

In Deccan Plateau and adjoining Peninsular India, polished stone tool were found to occur in early village farming settlements belonging to different chrono-cultural periods. The beginning of using such tools were started during ‘neolithic/ neo-chalcolithic’ period. They were also found to occur in the succeeding ‘megalithic’ and ‘iron age’ periods. As far as the last phase of their occurrence is concerned, some sites have provided the evidence of their usage even during early historical/historical periods. ‘In the Allchin’s synthesis the three phases of the Southern Neolithic were bracketed between 2500 and 1000 BC (Korisettar et al. 2002:181). The early historic/historic specimens were assigned to Andhra or Satavahana cultural periods.

Considering the chrono-cultural span of the above evidences, coming from different parts of the country, it can be said that such tools were part of settled village farming communities. They subsisted mainly on food producing which was further supplemented by hunting-gathering. As information regarding the functional utilities of such tools are still not very clear, it is difficult to ascribe what exact purpose they might have served during their long survival from neolithic to the historical periods.
Finally, although the present research work is mainly concentrated on the evidences reported from the landmass falling within the territory of Eastern India (encompassing the states of Bihar, Jharkhand, West Bengal and Orissa), it was considered worthwhile to evaluate the recent evidence on this subject in the contiguous land-mass. Hence, the present chapter is presented here in order to have a better understanding of the occurrence in the neighboring regions of Eastern India.
References


Sundara, A. 1968. Protohistoric sites in Bijapur district. *Journal of the Karnatak University, Social Sciences, Dharwar,* IV: 3-23.


Plate V
Plate VI

(a) Diagrams of various stone tools.
(b) Images of stone tools with measurements shown in centimeters.
(c) Detailed views of stone tools, numbered 1 to 10.