SOCIAL ORBIT

Annnual Refereed Social Science Journal

ISSN 2395-7719

Volume 6
2020

FAROOK COLLEGE P.O., KOZHIKODE
KERALA-INDIA
www.farookcollege.ac.in

Social Orbit

ISSN 2395-7719
Reg. No: KER/ENG/2015/02488

EDITORIAL BOARD

BOARD OF ADVISORS

Editorial

For quite some time, we have been thinking seriously of publishing Social Orbit theme/issue-based making it more focused and discursive. Several factors – owing to the infirmity in our state of infancy – have held us back from achieving this cherished goal. Now, it is time to choose the ideal path – to become focused and thematic – and to provide micro-level data/knowledge, streamline the results of latest researches in the academic domain, discuss recent trends in social science research, and promote amateur/professional scholars through publication. As a beginning, the present volume of the journal is devoted to archaeology which contains articles on varied topics reflecting recent and ongoing research in this field. Selection of archaeology as the central theme is important because it is a highly promising discipline for its scientific precision and multi-disciplinary value. Its contribution to social science is remarkable and things have developed in such a way that none of the disciplines are able to exist without the epistemological and methodological support of field archaeology.

Indian Archaeology had its beginnings and initial roots in the colonial past and had served as a powerful tool in legitimizing colonial authority. Through the discovery of antiquarian remains, including prehistoric traces and early-historic structures, through area-wise surveys and field-level explorations, and proceeding with the task of creating a classified/catalogued data-base, colonial archaeology, at the hands of the administrator-scholars, slowly advanced to undertake excavations over prehistoric/historic sites enabling them to contribute substantially to early Indian history – all of which helped to strengthen the colonial power structure built upon the claim of the re-discovery of Indian past, salvaging the nation from age-old 'itihasa-purana tradition'. Despite this Orientalist bias, colonial structure served as the fundamental ordering for the future system and contributed substantially to the disciplinary foundations of Indian archaeology. Political decolonization had its inevitable [manifold] impact; the foremost being diversification of interest in themes and methods – all of which led to uncovering voluminous data and great sophistication in field techniques. Notwithstanding the politicization of archaeology in recent times, mainly with the Ayodhya issue, the advances it had made are tremendous. Thus, from subterranean sites to buried/ruined structures, inland towns to cross-country trade routes, coastal stations to under-water residues, and distinct artifacts to unique cultural systems – the achievements of Indian archaeology is quite remarkable.

Archaeology in Kerala also had its foundations in the colonial past, which of course catered to colonial interests, and which sought to salvage the land from legendary history – represented by 'traditional sources' – and develop scientific history – from 'other sources – as Logan tried to explain it. The search for 'true' sources led to a sweeping hunt for 'material remains' – from ruined structures and scattered objects, or human footprints found in the form of prehistoric art. But the shortage of huge structural remains (palaces, temples, forts, towns), unlike in other areas, and the presence of innumerable, unidentifiable [megalithic] residues, created much confusion among colonial administrator-scholars. In fact colonial historiography was forced to delve much on European travel accounts as a substitute [primary] source for overcoming this difficulty. Despite having laid the early foundations, and encouraging the budding native scholars, colonial archaeology failed to assert itself in Kerala – in fact, they could not solve existing 'problems' or explain the historical context of the numerous funerary edifices. But, taking cue from

the colonial legacy, and following the tools and methods the west had introduced through colonial scholarship, academicians of the post-colonial era, though with a slow start, succeeded in addressing select problems (like at Porkalam) and explaining historical gaps through archaeological inputs (like at Pattanam). Overcoming the initial lethargy and institutional/infrastructural disabilities, archaeology in Kerala recorded a leap forward in recent times under the guidance of professional, trained hands, having theoretical, methodological and multidisciplinary perspectives. Although Kerala failed to develop a prestigious institution of the M.S. University type, and a breakthrough excavation as in the case of Keezhadi, the leading role played by several institutions - the Archaeology Department of Kerala University, Kerala Council for Historical Research and Archaeological Survey of India (Trissur Circle) - along with the outcome of excavations at Pattanam, Ummichipoyil, Anakkara and similar sites, have instilled great enthusiasm in academic circles.

Notwithstanding the popularity gained over the years, theoretical and methodological advances made, and impressive discoveries done, Indian archaeology has started witnessing certain obnoxious tendencies. Intense politicization bordering on communal appeal, coupled with the negative impact of globalized liberal economy, has created a situation in which research and publication has been badly hit. Steady withdrawal of the state from the academic sector, leading to reduction of state funding for education, and indiscriminate policy of privatization – all have been transforming research into a commercial enterprise advancing in tune with the interest of the market forces. Researchers and academic institutions are forced to depend on private agencies for raising funds – who in turn are certainly driven by profit concerns – and projects which do not have either market/tourism value or do not uphold a cause for 'national' self-esteem are often disregarded. Due to the rising communal passion there is also a tendency to encourage the study or salvage/restoration of [Hindu] temples/religious structures alone. Equally unfortunate is the growing bureaucratic attitude of encouraging face-lifting/restoration work of ruined structures, instead of promoting site excavation, which is very often outsourced to private companies. Thus, when galloping privatization is combined with a surging communalist trend, things develop extremely critical. This is because several sub-fields like maritime/underwater archaeology, ethno-archaeology, landscape archaeology, environmental archaeology, rescue/salvage archaeology, etc. etc. are still in its infancy in India and needs strong state support. Prehistoric/Historic archaeology also has to tread a long path in order to address several, serious, historical issues.

Articles of this volume while reflecting such passions, hopes as well as anxieties, represent some of the best attempts to posit the promising and boundless possibilities of archaeology. Pursuing sincere and constructive research and promoting quality publication is the only means to salvage the discipline from the pitfalls of the emerging academic culture vitiated by the interference of market/communal forces. As a social science discipline archaeology has special relevance; by acknowledging its multidisciplinary value, it has the potential to enrich other disciplines. The rise of public archaeology has opened up new possibilities for the conservation of antique structures/monuments and, despite its un-academic focus, the growth of tourism culture has extended hope and promise for the protection of heritage monuments/sites. However, history in particular needs the epistemological support of archaeology for providing it solid material inputs, which is but dependant on the bright future of this vulnerable discipline.

Contents

© 2020. *Social Orbit* ISSN 2395-7719, Vol.6, pp.09-45

Pre-Urban Harappan Phase in Gujarat: An Assessment *

Rajesh S.V. & Abhayan G.S.
Assistant Professors
Department of Archaeology, University of Kerala
Kariavattom Campus, Thiruvananthapuram, Kerala, India
Email:rajeshkeraliyan@yahoo.co.in; abhayangs@gmail.com

Abstract

The Urban Harappan Phase (c. 2600-1900 BCE) was evolved from various regional Chalcolithic cultures emerged in different parts of the Greater Indus region between c. 5000-2600 BCE. In Gujarat, the earliest evidence for the regional Chalcolithic communities occurs around c. 3900 BCE at Loteshwar. Archaeological investigations till date resulted in the discovery of 30 Pre-Urban Harappan sites in different regions of Gujarat. The present paper discusses the features of the Pre-Urban Harappan Phase in Gujarat with the help of material data available from these sites.

Keywords: Pre-Urban Harappan, Gujarat, Excavation, Exploration, Ware, Tradition, Culture, Assemblage

Introduction

The term Pre-urban Harappan represents the period which precedes the Urban or Mature Harappan period at sites like Mohenjo Daro, Harappa, Chanhu Daro, Dholavira and Kalibangan (Possehl, 1992: 118). The term Pre-Urban Harappan is roughly equivalent to the terminologies Pre-Harappan, Proto-Harappan, Antecedent Harappan, Early Harappan and Regionalization Era. The terms Antecedent Harappan or Proto-Harappan, which are used to represent the early occupation at Kalibangan, are not properly defined. The term Pre-Harappan is commonly applied to represent those material remains which are found stratigraphically below the Mature Harappan cultural relics. According

* Acknowledgement: Sincere acknowledgements are due to the University of Kerala for its constant support. The authors are thankful to Prof. P. Ajithprasad, Prof. K. Krishnan, Prof. K.K. Bhan, and Prof. V.H. Sonawane, Department of Archaeology and Ancient History, the Maharaja Sayajirao University of Baroda for their help and support. We are also thankful to the institutions like Gujarat State Archaeology Department, Archaeological Survey of India, KSKV Kachchh University, and Deccan College Postgraduate and Research Institute, Pune for their support in various stages of this piece of work.

to Mughal (1970: 5-6; 1990: 181), the term Pre-Harappan is misleading because it creates the impression that chronological gap exists between the Pre-Harappan period of the first half of the third millennium BCE and the Mature period of Harappan culture belonging to the latter half of the third millennium BCE (middle of the fourth millennium BCE). Therefore, based on radiocarbon dates and commonalities and differences in artefacts, Mughal used the term Early Harappan to represent materials found stratified below the Mature Harappan remains at Kot Diji, Amri, Kalibangan and in the pre-defence levels of Harappan and related material discovered at other sites assignable to the first half of the third millennium BCE. Similarly, the formative early period of the Indus Civilization (c. 5500-2600 BCE) is denoted by Shaffer (1992) as the Regionalization Era. In the Regionalization Era, the inhabitants of the Greater Indus Valley and adjacent areas developed their subsistence systems, technological know-hows, interregional interaction networks, and social hierarchies essential for the emergence of urban state-level society (Kenoyer, 1991, 1994).

Pre-Urban Harappan Phase in Gujarat

Till the second half of the 1980s, there was very little evidence for the Pre-Urban Harappan sites in Gujarat. But the excavations and explorations in different regions of Gujarat in the following period, relative and absolute dates from various sites, and reanalysis of ceramics from previously excavated sites provided evidence for the existence of various cultures/traditions mainly represented by the ceramics known as Anarta tradition, Padri Ware, Early Harappan Burial/Pre-Urban Harappan Sindh Type Pottery, Pre-Prabhas Assemblage, Reserved Slip Ware, and Black and Red Ware. Except the Pre-Urban Harappan Sindh Type Pottery, none of the ceramic types of this period from Gujarat showed clear technological and stylistic similarities to the Pre-Urban Harappan ceramics or later ceramics of the Indus Valley proper (Sonawane and Ajithprasad, 1994; Ajithprasad, 2002). In Gujarat, Pre-Urban Harappan phase can be dated between c. 3900-2600 BCE. Material remains from various sites show that regional cultures/traditions in Gujarat during this period, maintained interaction networks with one another as well as with cultures in the Indus Valley proper (Bhan, 1994; Kenoyer, 1997; Kenoyer and Meadow, 2000; Ajithprasad, 2002; Possehl, 2002).

Pre-Urban Harappan Sites in Gujarat

Archaeological excavations and explorations of various organizations like Archaeological Survey of India, State Archaeology De-

partment – Gujarat, The Maharaja Sayajirao University of Baroda – Vadodara, University of Kerala – Thiruvananthapuram, Deccan College Postgraduate and Research Institute – Pune, Bombay University, Krantiguru Shyamji Krishna Verma Kachchh University, University of Pennsylvania - USA, and Spanish Council for Scientific Research – Barcelona resulted in the discovery of thirty Pre-Urban Harappan sites in Gujarat (Table 1). South Gujarat has not revealed any Pre-Urban Harappan sites till date. The majority of the sites are reported from North Gujarat (14), followed by Kachchh (11) and Saurashtra (5), respectively. Among the 30 reported sites, 13 are excavated to various degrees (Figure 1). Details of the excavated sites are given in the following paragraphs.

Prabhas Patan/Somnath

The archaeological site at Prabhas Patan/Somnath, locally known as Naghera in the Gir Somnath district, was first reported in 1938 by Father Heras of Bombay University. The excavations at the site in 1955-56 and 1956-57, by the Department of Archaeology, Saurashtra and the Maharaja Sayajirao University of Baroda, under P.P. Pandya and B. Subbarao, respectively revealed six periods beginning from Post-Urban Harappan to Medieval. To understand the cultural chronology of the site, re-excavations were conducted in 1971-72, 1975-76 and 1976-77 at the site by the Department of Archaeology, Saurashtra and Deccan College Postgraduate and Research Institute, Pune under J.M. Nanavati and H.D. Sankalia. The site revealed a sequence of five cultural periods datable from 3000 BCE - 600 AD. The importance of the site lays in the fact that for the first time it unveiled the existence of two regional Chalcolithic traditions in Gujarat, namely Pre-Prabhas Assemblage (3000 - 2500 BCE) and Prabhas Ware (2300 - 1750 BCE) (IAR 1955-56, 1956-57; Nanavati et al., 1971; Dhavalikar and Possehl, 1992; Rajesh et al., 2018).

Surkotada

In 1970-71 and 1971-72, J. P. Joshi of Archaeological Survey of India undertook excavations at Surkotada in Kachchh district, Gujarat, which brought to light remains of Urban Harappan artefacts of a period divisible into three sub-periods namely, Period IA, Period IB and Period IC (Joshi, 1990). The site also revealed Pre-Urban Harappan Sindh type pottery from some of the burials (Joshi, 1990). Based on the radiocarbon dates, Period IA can be dated to 2888-2045 BCE, Period IB to 2391-2036 BCE and Period IC to 2135 to 1684 BCE (Possehl,

1994). This fortified settlement consists of a citadel, lower town, and a cemetery to the south-west. The most discussed point about Surkotada is the occurrence of a few bones of the so-called horse (?). At Surkotada, the cemetery is located 300m northwest of the citadel. Four graves were excavated at the site, and they were pot burials and secondary in context. The ceramics of these graves comprised of Harappan Red Ware, painted Black on Red Ware, and Cream Slipped Ware with paintings. On the basis of pottery from the cemetery and radiocarbon dates, Possehl (1997: 81-87) chronologically placed the cemetery of Surkotada to the later portion of Pre-Urban Harappan (Amri/Nal or KotDijian) or the transition between the Pre-Urban Harappan and the Urban Harappan (IAR 1970-71, IAR 1971-72, Joshi, 1966: 62-69, 1972a: 21-35, 1972b: 98-144, 1979: 59-64, Joshi, 1990, Bokonyi, 1997: 297- 307, Meadow and Patel, 1997: 308-315).

In 2015, researchers from University of Kerala visited Surkotada and while returning, remains of a human skull were noticed outside the boundary of this protected site, on the wayside. During close observation, a highly disturbed and exposed human skeleton was noticed along with 4 bowls and 2 pots. It was also observed that the disturbed 'burial pit' was plastered with lime. Some of the bones were 'in situ' in nature. The probable reconstruction was done afterwards on the basis of bone placement and collection sequence. The skeleton was in crouched position, lying on the left side, with folded legs and facing the south side. The head was on the eastern side and the leg on western side. The right hand rested a little further from the body. The AMS dating of a sherd (bulk sherd organics) from the associated burial pottery yielded the date 4590+/-30 BP (Cal BCE 3378 to 3331) as per the report from Beta Analytic Inc., USA. Based on this date, the present Surkotada burial and associated burial pottery can be dated to the second half of the fourth millennium BCE, i.e., Pre-Urban Harappan Phase (Mushrif-Tripathy et al., 2018).

Nagwada

During 1985-86 to 1989-90, the Maharaja Sayajirao University of Baroda carried out excavations at the Harappan settlement locally known as Godh in the Nagwada Village of the Surendranagar district. The 1m thick deposit revealed four structural levels of the Harappan period divisible into two Periods IA (layer 5) and IB (layer 1-4). A few burials, both inhumation and symbolic, represented Period IA and the ceramics associated with the burials showed affinity to the Pre-Harappan pottery from Amri, Nal and Kot Diji. The first phase of structural

activity in the site was marked by post-holes that went into natural soil in the fifth layer. Rectangular structures made of undressed stones were observed in the second phase and rectangular structures of moulded mud bricks represented the third phase. Rectangular structures constructed out of rubble stones were observed in the fourth phase. Classical Harappan ceramics were less in quantity in comparison to the Anarta pottery; white painted Black and Red Ware was also encountered. The site revealed the evidence for craft activities like shell working and stone bead making. An inscribed steatite seal/pendant, terracotta sealing, female figurine, agate weights, gold beads and copper celts were the noteworthy findings. The 2∑ 14C date for the Period IB is 2470-2033BCE (IAR 1985-86, 1986-87, 1987-88, 1988-89, 1989-90; Hegde et al., 1988: 55-65, 1990: 191-195; Ajithprasad and Sonawane, 2011).

Dholavira

Dholavira, excavated in 1989-90 to 2004-2005 by R.S. Bisht of the ASI, is one among the five largest Harappan cities in the subcontinent and is located in the Bhachau taluka of the Kachchh district. Ruins of the site are spread over an area of about 72 hectares on the Khadir Island. Two seasonal water channels, Manhar and Mansar, are flowing on the south and north of the walled settlement. The site is remarkable for its exquisite planning, monumental structures, aesthetic architecture, efficient water harvesting system and funerary architecture (Bisht, 2015).

The excavator identified seven stages of cultural change at the site. The first settlement that was raised at the site in stage I was a fortress now lying buried in the citadel mound and in stage II, a residential area was added to the north of the walled settlement. Stage III was the most creative and important phase during which the fortress was made into a formidable castle and another walled subdivision, viz. bailey, was added to it from the west. In the north, the residential area of stage II was cleared of its structures for carving out a ground. Further north, an extensive walled town, i.e., the middle town, was founded. Reservoirs were created on the south, west and north of the built-up divisions. An outer fortification was also constructed during this stage. During stage III, the settlement was damaged by a natural catastrophe and repairs were undertaken and the lower town was added. Stage IV belonged to the Classical Harappan phase and almost all the salient features of the city planning were maintained along with the monumental structures such as the gateways, fortification, and drainage system. Stage V is

characterised by the general decline, particularly in the maintenance of the city, was followed by temporary desertion of the site. The Stage VI is a state of transformed Harappan Culture, i.e., the Post-Urban Harappan phase. Domestic buildings were laid out in a different planning and probably, after a century the Post-Urban Harappans of Stage VI abandoned the settlement. The newcomers of stage VII did not use the Classical Harappan ceramics. They built their houses in the circular form and no planning as such was followed. The site was never occupied once the people of Stage VII left (Bisht, 2015).

The funerary structures which were found in a cemetery that lay to the west of the city are also remarkable for the density of structures. The excavations also brought to light the existence of large tumuli, which were circular in the plan and these hemispherical structures were made of mud bricks. The site has yielded an inscription widely known as the signboard made up of ten large-sized signs of the Indus script and a fragment of a large slab engraved with three large Indus signs. Apart from the huge amount of Chalcolithic pottery, human and animal figurines, chert blades, stone weights, copper objects, steatite seals, terracotta sealings, beads of semiprecious stones, and drill bits were also unearthed from the site. According to the excavator, the seven cultural stages of Dholavira can be dated between 3500 - 1700 BCE (Bisht, 1989a: 397-408, 1989b: 265-272, 1991: 71-82, 1994, 1997: 107-120, 1998-99: 14-37, 2000: 11-23, 2004: 35-48, 2006: 283-338, 2010: 75-76; 2015; IAR 1989-90, 1990-91, 1991-92, 1992-93, 1993-94, 1996-97, 1997-98, 1998-99, 1999- 00, 2000-01).

Padri

During 1990-91 to 1995-96, Deccan College, Pune excavated the Chalcolithic mound at Padri, locally known as Kerala noDhoro, located in the Talaja taluka of the Bhavnagar district. The site revealed a four-fold cultural sequence, i.e., the Pre-Urban Harappan (Padri Ware), Urban Harappan (Phase I and II), Post-Urban Harappan and Early Historic. Period I was represented by the remains of a mud pressed structure, Padri Ware, Sorath Harappan sherds, and steatite beads. The 14C dates for the Pre-Urban Harappan phase at Padri go back to the fourth millennium BCE (3800 BCE). The Urban Harappan period yielded a large amount of fine painted and coarse pottery, which is similar to Rangpur IIB and Rojdi B, and 14C date for the uppermost levels of this Phase is 2300 BCE. Period III yielded ceramics akin to Rangpur IIC, and Early Historic period was marked by Red Polished Ware (IAR 1990-91, 1991-92, 1993-94, 1995-96; Shinde, 1991: 87-89, 1992a:79-

86, 1992b: 55-66, 1998: 173-182, 2006: 151-158; Shinde and Kar, 1992: 105-110; Shinde and Thomas, 1993: 145-147; Pathak, 1992: 87-89; Bhagat, 2001;Shirvalkar, 2008; Rajesh, 2011).

Loteshwar

In 1990-91, the Maharaja Sayajirao University of Baroda, and in 2009-10, under the direction of P. Ajithprasad of the Maharaja Sayajirao University of Baroda and Marco Madella of CSIC, Barcelona, Spain, carried out excavations at Loteshwar in the Sami taluka, the Patan district. The site, locally known as Khari-no-Timbo, is located on a high sand dune close to the left bank of Khari Nadi, tributary of the Rupen River. The excavation revealed a habitation deposit of1.8 m in thickness divisible into two periods. Period I belong to the Mesolithic culture and Period II to the Harappan-affiliated Chalcolithic culture. Period Iwas represented by a 1 m thick habitation deposit of microlith-using community. The occupational debris of the Microlithic period included both geometric and non-geometric tool types, lithic debitage, grinding/pallet stones, hammerstones, and animal bones. One human skeleton belonging to this period was unearthed from one of the trenches. The Chalcolithic period was represented by the Anarta pottery, a few Harappan sherds, blades, beads, bangle pieces of shell and copper, copper punch (?), grinding/pallet stones, hammerstones, terracotta pellets, terracotta female figurine (?), and spindle whorls. No structural remains were unearthed from the site and an important feature noticed at the site was the occurrence of a large number of pits, which were dug during this period. Their size is about 2 m in diameter and 0.5 m to 2 min depth in diameter, and they were filled with ash, charcoal, pottery, animal bones, and microliths. This period also revealed one human burial. The earliest14C date for the Mesolithic occupation at the site is7300 BCE and the Chalcolithic deposit can be dated between 3700 - 2200 BCE (IAR 1990-91; Mahida,1992, 1995: 85-87; Patel, 1992; Brahmbhatt, 2000; Ajithprasad, 2002: 129-158; Yadav, 2005; Patel, 2008:123-134, 2009: 173-188; Rajesh, 2011; Rajesh et al., 2013b: 10-45).

Moti Pipli

In 1992-93, the Maharaja Sayajirao University of Baroda conducted an excavation at Moti Pipli in the Radhnapur taluka of the Banaskantha district. The site locally known as Shakatri Timbo is situated next to a large inter-dunal depression known by the name Shakatri Talav. The excavation at the site of 600 m × 120 m in size yielded a 90 cm thick habitational deposit of the Mesolithic, Harappan-affiliated

Chalcolithic, and Historic periods. The Chalcolithic period has a deposit of about50 cm, and it was concentrated in the southern part of the mound. No structural remains were unearthed from the site. The ceramics from the site include Gritty Red Ware and Fine Red Ware of the Anarta tradition, Black and Red Ware and the Pre-Harappan Burial pottery similar to those from Amri, Nal, Kot Diji, and Balakot. Other antiquities found in the excavation constitute copper/bronze nail, folded strip of copper, fish hook, chert blades, beads of chalcedony, steatite, lapis lazuli, terracotta, shell and faience, terracotta lumps, and triangular cakes. The artefacts of late Early Historic (5th - 6th centuries CE) and late Medieval period were also unearthed from the site in a limited quantity (IAR 1992-93; Majumdar and Sonawane, 1996-97: 11-17; Majumdar, 1999, 2006: 159-166).

Santhli

In 1993-94, the Maharaja Sayajirao University of Baroda carried out an excavation at Santhli, locally known as Gachi no Thumdo (Santhli II), in the Radhanpur taluka of the Banaskantha district. The site measuring 120 m × 90 m revealed a 40 cm habitation deposit belonging to two cultural periods. Period I at the site is Mesolithic, having a 25–30cm deposit and Period II is Chalcolithic of a 10-15cm cultural deposit. Mesolithic artefacts of geometric and non-geometric nature, including lunates, triangles, trapezes, crescents, points, backed blades along with blade cores, flake cores and lithic debitage, were excavated from the site. A number of small pieces of flat sandstone slabs or pallet stones were also unearthed from the site. This level also yielded a large quantity of skeletal remains of the animals. Period II was represented by a few ceramic sherds, stone and shell beads, shell bangles, and two inhumation burials. One of them was a double burial and associated with five ceramic vessels of different shapes. The second burial was of a child, also associated with a few vessels. The noteworthy feature of the site is the lone presence of Pre-Urban Harappan Burial pottery types (IAR1993-94; Majumdar, 1999; Ajithprasad, 2002: 129-158).

Datrana

During 1993-94 and 1994-95, the Maharaja Sayajirao University of Baroda and in 2010-11 under the direction of P. Ajithprasad of the Maharaja Sayajirao University of Baroda and Marco Madella of CSIC, Barcelona, Spain, carried out excavations at Datrana (Mounds II, IV and V) in the Santalpur taluka of the Banaskantha district. The spread of artefacts consisting of stone blades, lithic debitage and a few potsherds covered an area of about 50 hectares. Mound IV, locally known

as Hadkawalu Khetar, revealed a total habitation deposit of 75–90 cm incorporating two cultural periods, Period I being Mesolithic and Period II being Chalcolithic. The Chalcolithic period was represented by long crested ridged blades, prismatic blade cores, stone beads and rough-outs, copper punch point, and ceramics. The ceramics from the mound include Pre-Prabhas, Anarta and Pre-Urban Harappan Sindh Type pottery. The occurrence of the Anarta and Pre-Urban Harappan Sindh Type pottery in the upper level close to the surface indicates that the Pre-Prabhas pottery-using community were the earliest Chalcolithic inhabitants at the site. Datrana V, locally known as Patelno Khetar, revealed a cultural deposit of 70 - 90 cm belonging to the Mesolithic and Chalcolithic periods. The Chalcolithic deposit of 15 - 20 cm thick revealed Pre-Urban Harappan Sindh Type pottery and long chalcedony blades. Datrana II, locally known as Ravechi Matano Timbo, revealed a single period of the Chalcolithic occupation. The habitation deposit in this mound was confined to pits of different dimensions; the large stone with a diameter of about 2 m and a depth of 1 m, while the smaller ones measured about half a meter. The pits yielded Sorath Harappan pottery analogous to the Rojdi A and B types. One of the pits yielded a number of Lustrous Red Ware bowls and dishes. Most of the pottery recovered from another pit was of the Anarta tradition. Another interesting find was that of a pottery kiln stacked with Sorath Harappan pottery (IAR 1993-94; Ajithprasad, 2002; Rajesh et al., 2013:181-209; Rajesh et al., 2018).

Mathutra

In 1994-95, Abhijit Majumdar of the Maharaja Sayajirao University of Baroda conducted a trial excavation at Mathutra I (Madhavya no Timbo). The excavation in the northern part of the mound revealed that the spread of pottery was mainly on the surface except disc bases of bowl and pot and a grinding stone that were found buried in the trench. The shreds showed affinity to the Pre-Urban Harappan Burial pottery. The excavation at the centre of the mound revealed three vessel bases associated with human teeth. The surface finds from the site include Anarta pottery and Post-Urban Harappan ceramics (Majumdar, 1999).

Ranod

Vaharvo Timbo in the Ranod village is a large oblong sand dune by the side of a very large inter-dunal depression on its north-east. There are three sand dunes and Vaharvo Timbo is the largest and richest among these in terms of artefacts exposed on the surface. A few potsherds found in the surface collection were un-diagnostic and non-

descript. Although too fragmentary, they are closer to the Anarta pottery of North Gujarat. Besides, a number of animal skeletal remains, especially long bones and horn-cores of wild bovids and cervids, were found at the site. Many of the bones showed silicification suggesting substantial antiquity. During 2011-12, under the direction of P. Ajithprasad of the Maharaja Sayajirao University of Baroda and Marco Madella of CSIC, Barcelona, Spain, carried out an excavation at the site. The excavation revealed artefacts of the Mesolithic period and an Early Harappan child-burial. Pre-Urban Harappan Sindh type ceramics were used as burial goods (Mushrif-Tripathy et al., 2014: 45-51; Madella et al., 2018).

Dhaneti

Dhaneti is an Early Harappan Burial site located in the Bhuj taluka of the Kachchh district, Gujarat. The site was excavated in 2016-17 and 2017-18 by the Maharaja Sayajirao University of Baroda. Extended inhumation and symbolic pot burials are reported from the site. The pot-burial seems to have an elaborate oval plan with an east-west oriented oblong pit at the centre of a stone circle. The burial goods from the site include vessels similar to Pre-Urban Harappan Sindh type ceramics, Classical Harappan pottery, Reserved Slip Ware and shell bangles. The Reserved Slip Ware unearthed from the burials of Dhaneti are not reported from the Early Harappan ceramic assemblages of the Indus Valley proper. This site can be relatively dated between c.3000 to 2600 BCE (Ajithprasad, 2018).

Juna Khatiya

The Department of Archaeology, University of Kerala in association with KSKV Kachchh University conducted excavations at Juna Khatiya, probably the largest Pre-Urban Harappan (c. 3200-2600 BCE) cemetery discovered so far in India, in Khatiya village in Lakhpat taluka of Kachchh district. The site measuring close to 16 hectares was discovered in 2016 by a team of archaeologists from the University of Kerala. More than five hundred suspected burials have been identified at the site based on surface indicators. An area of around 50x50m was excavated horizontally in 2019-20 (Location 1 and Location 2) and 2020-21 (Location 3) and unearthed more than 75 burials of various characteristic features. Many burial structures are disturbed by erosion, soil removal, canal construction and agricultural activities. The majority of the burials are made of sandstone blocks. The shape of the burial structures varies from rectangular to oval or circular. The size of the stones and construction style are drastically different in these buri-

als. The burial goods include large number of ceramics, shell bangles, beads of shell, faience, and steatite, and a few stone blades (Gadekar et al., 2021).

Pre-Urban Harappan Cultures/Ceramic Traditions in Gujarat

The Pre-Urban Harappan period in Gujarat was represented by cultures/traditions namely, Anarta Tradition, Padri Ware, Pre-Prabhas Assemblage, Unique Ceramics of Surkotada, Pre-Urban Harappan Sindh Type Ceramics, Reserved Slip Ware, and Black and Red Ware.

Anarta Tradition: A few ceramics of the Anarta tradition were encountered during the excavations of Lothal in 1955-62 (Rao, 1979, 1985) and Surkotada in 1970-72 (Joshi, 1990) and at Lothal it remained unnoticed for a long time while at Surkotada though not in the name of Anarta, its presence was noticed by the excavator. These ceramics were also present at Zekhda in North Gujarat (Momin, 1983). The Anarta ceramics were first recognized as a regional Chalcolithic ceramic type in 1985 during the excavations at Nagwada, where it was found along with the Urban Harappan artefacts (Hegdeet al., 1988). Its independent existence was noticed at Loteshwar (Khari no Timbo) in 1990-91 by The Maharaja Sayajirao University of Baroda (Mahida, 1992; Sonawane and Ajithprasad, 1994) (Figure 2). Later excavations in various sites like Moti Pipli (Majumdar and Sonawane, 1996-97; Majumdar, 1999), Datrana (Ajithprasad, 2002), Shikarpur (Bhan and Ajithprasad, 2008, 2009), Kanmer (Kharakwal et al., 2012), Dholavira (Shinde, 1998; Bisht, 2000), and Bagasra (Sonawane et al., 2003) showed its presence. The explorations in various parts of Gujarat showed its presence in more than 100 sites (Ajithprasad and Sonawane, 1993; Majumdar, 1999).The ceramics of Anarta tradition include Gritty Red Ware, Fine Red Ware, Coarse Red Ware, Burnished Red Ware, Burnished Black/Gray Ware, Black and Red Ware, and Reserved Slip Ware. The vessel shapes include pots, basins, dishes, lids and dish on stands. The majority of the vessels are hand/turn table made and are slipped and burnished on both surfaces. The designs on the sherds include pre-firing incisions and painted designs (Ajithprasad, 2002; Yadav, 2005; Rajesh et al., 2013). Ajithprasad and Sonawane (2011) points out that some of the Anarta vessels in form and the scheme and style of painted decorations share common features with the Pre-Urban Harappan ceramics from Jalilpur (Mughal 1970), Ravi Phase ceramics from Harappa (Kenoyer and Meadow, 2000), Pre-Urban Harappan levels at Kalibangan (Lal et al. 2003; Lal et al. 2015), Bhirana (Rao et al. 2003, Rao et al. 2004), Girawad (Shinde et al. 2008), and Baror (Sant et al. 2005).

Bhan (2010) also suggested some similarities in decorations and vessel shapes of Anarta tradition and ceramics of Rehman Dheri (Durrani, 1988; Durrani et al., 1991), Siah II (de Cardi, 1965), Karela-1 (Dangi, 2009), and Kheima Kheri-2 (Dangi, 2009). Similarly, some similarities are noticeable in the Anarta ceramics and Padri Ware in certain shapes and decorative patterns (Shinde and Kar, 1992; Sonawane and Ajithprasad, 1994; Shinde, 1998; Bhagat, 2001; Ajithprasad, 2002; Shirvalkar 2008). Though there are similarities in certain vessel shapes and decorative patterns, differences also exist between the two. At Padri, the majority of the Anarta vessel shapes are absent and the surface treatment of most of the vessels are also different. Though some ceramics from Ghaggar basin look similar in shape to Anarta ceramics, many a times fabric and surface treatment of the same is different. As per the chronometric dates from Loteshwar (Ajithprasad, 2002; Patel 2008, 2009), Bagasra (Sonawane et al., 2003; Chase, 2007), Surkotada (Joshi, 1990), Kanmer (Kharakwal et al., 2012), Lothal (Rao, 1979, 1985), and Nagwada (Hegde et al., 1988), Anarta tradition can be dated in between c. 3900 BCE to 1600 BCE (Rajesh et al., 2013).

Padri Ware: The Padri Culture, identified in the 1990s from the excavations at Padri Gohilini village, includes the ceramic types like Padri Ware (thick and thin variety), Pink Slipped Painted Ware, White Lustrous Ware, Bichrome Ware, Red Painted Ware, Plain Handmade Ware and White Painted Ware (Figure 3). The Padri Ware was also found occurring in eleven explored sites in Bhavnagar district (Rajesh 2011). Shinde and Kar (1992) and Sonawane and Ajithprasad (1994) found some similarities in the painted ceramics of Anarta Tradition found in Loteshwar in North Gujarat and Padri Ware. Shinde (1998), based on the observations of Padri Ware made by Bisht, mentions some resemblance between Bichrome Ware at Padri and ceramics found in the Pre-Urban Harappan levels at Dholavira. Shirvalkar (2008) found similarities in the making technique, painted decorations, paint colour, and vessel shapes like bowls, basins and globular pots of Padri Ware and Anarta ceramics. Some vessel types of Anarta tradition show similarities to Padri Ware in certain vessel shapes like medium sized pots with flaring rim and constricted neck, hand/turn table making, painted decorations and paint colour. At the same time lot of differences are also present. The Anarta vessels like Red Ware pots with mat surface, blunt carinated basins and sharp carinated bowls are absent in Padri Ware. Incised decorations are present on Anarta ceramics while they are completely absent in the Padri Ware. Based on chronometric and

relative dates, the Padri Ware can be dated between c. 3800-1600 BCE (Rajesh, 2011; Rajesh and Krishnan, 2017).

Pre-Prabhas Assemblage: The Pre-Prabhas assemblage, first reported from Prabhas Patan/Somnath, consists of handmade ceramics, chalcedony blades with crested guiding ridges, faience and steatite beads, and fragment of clay plaster with reed impressions. Archaeological work in north Gujarat revealed the presence of this assemblage together with Pre-Urban Harappan Sindh ceramics at Datrana XI; along with Anarta and Pre-Urban Harappan Sindh ceramics at Datrana IV (Figure 4), and along with Anarta pottery at Datrana V. Explorations in Kachchh during 2016 also revealed the presence of Pre-Prabhas Assemblage together with Anarta ceramics and Pre-Urban Harappan Sindh Types at Janan (Gadekar et al., 2018, Rajesh et al. 2018). The ceramics of this assemblage is characterised by handmade pottery including Redware, Incised Red Ware, Black and Red Ware and Gray Ware and vessel shapes in the same include wide mouthed jars, deep/shallow basins, flat bottomed basin with flaring sides and incised rims (IAR 1971-72; Dhavalikar and Possehl, 1992). The diameter of the rims of the vessels from the site indicated the presence of medium sized vessels in the site. Miniature and big vessels are completely absent there. Only four sherds from the site showed the presence of one pre-firing perforation on each of them. The majority of the vessels from the site are slipped on both surfaces, and burnishing is also visible on both the surfaces of many vessels. The decorations on the ceramics are pre-firing geometric and natural incisions and impressions. These decorations are confined to the external surface of the ceramics, and a noteworthy feature of the assemblage is the complete absence of painted decorations. Apart from Somnath in Saurashtra, Datrana IV, V, and XI in North Gujarat and Janan in Kachchh, none of the sites in Gujarat revealed the presence of Pre-Prabhas ceramics, which are totally different from the ceramics of other Chalcolithic cultures/traditions. A few incised ceramics from the Mesolithic levels at Langhnaj (Sankalia, 1965) show certain similarities with the ceramics of Pre-Prabhas Assemblage. Ceramics with some similarities to the pre-Prabhas incised Red Ware fabric and incised decorations are reported from Bagor (Ajithprasad, 2010; Rajesh, 2011). Based on the radiocarbon dates, the Pre-Prabhas Assemblage in Gujarat can be dated from c. 3300 to 2600 BCE. (Rajesh et al., 2013, 2018).

Unique Ceramics of Surkotada: Exploration of Surkotada in 2015 by the Department of Archaeology, University of Kerala resulted in the

discovery of a unique set of ceramics (Figure 5) in association with a burial. Two bowls and two pots were kept near the head and two bowls were kept near the knee of the skeleton. The hand or slow wheel made vessels are coarse in nature. These red ware vessels have smoke clouding on the surfaces. Among the two pots, one has some similarities to the pots of Anarta tradition. The vessels are devoid of decorations except shallow grooves near the rim margins of bowls. Based on bulk sherd organics dating of Beta, the unique burial pottery from Surkotada can be dated to the second half of the fourth millennium BCE (Cal BCE 3378 - 3331), i.e., Pre-Urban Harappan Phase (Mushrif-Tripathy et al., 2018).

Pre-Urban Harappan Sindh Type Ceramics: This kind of pottery was first reported during the cemetery excavations at Surkotada in 1972 (Joshi 1990) (Figure 6) and its first systematic study was conducted at Nagwada in 1985 (Ajithprasad, 2002: 144). Both inhumation and symbolic burials were noticed in Period IA of Nagwada. Red Ware, Pinkish Buff Ware and Grey Ware represented the symbolic burials (Majumdar and Sonawane, 1996-1997: 16). The major shapes in this group are large bulbous pot with narrow flat base, a short and straight neck and flat rim, flasks or beaker shaped vases with sides converging into a narrow opening, beakers with slightly flaring rim, dish on stand with upturned rim, dish with no carination and shallow bowls (Ajithprasad, 2002: 145). The bulbous pot is painted at the rim with a thick dark band and at the shoulder with horizontal and wavy lines. Pipal leaf motif on one of the large pots is an important feature. These burial ceramics resemble the vessels recovered from the Pre-Urban Harappan levels at Kot Diji, Amri, DambBhuti, Nal, and Balakot (Hegde et al., 1988: 58; Ajithprasad, 2002: 145). The subsequent excavations at Santhli, Datrana, and Moti Pipli in North Gujarat also revealed these ceramics along with Anarta pottery. At Datrana, in the upper levels, it was also found associated with Pre-Prabhas assemblage. Ajithprasad et al. (2011) also reported these ceramics from Warodra, Shapur and Lohij in Saurashtra. Burial sites such as Juna Khatiya, Dhaneti and Janan in Kachchh also revealed the presence of these ceramics. The relative time-period assigned to these burial ceramics is c. 3200 BCE to 2600BCE.

Reserved Slip Ware: The term reserved slip refers to a particular kind of surface treatment given to the pre-fired ceramics by applying two slip layers to the surface of the vessel and later by skilfully removing the upper slip through gently combing the surface, thus leaving two

contrasting colours, in either a straight or a wavy line pattern. There are different kinds of this ceramic; "Glazed" Reserved Slip Ware, "Unglazed" Reserved Slip Ware, and Periano Reserve Ware (Shinde et al., 2008: 85). Glazed Reserved Slip Ware was characterized by a well-defined, glossy and hard surface layer, whereas the surface of Unglazed Reserved Slip Ware is matt and soft (Krishnan et al. 2005: 692). Periano Reserve Ware, which is totally different from the Glazed and Unglazed Reserved Slip Ware, was first identified at Periano Ghundai by Fairservis. The surface treatment of this ware includes the application of sandy clay coating or a slip on the surface of the leather hard vessel to give the appearance of a very smooth exterior surface over which broad wavy and horizontal parallel grooves in low relief are executed (Shinde et al. 2008: 85). Glazed and Unglazed Reserved Slip sherds are reported from both Pre-Urban Harappan and Urban Harappan sites in Gujarat and its main concentration is in the Kachchh region. At Juna Khatiya, Dhaneti (Figure 7), and Dholavira it was found associated with Pre-Urban Harappan Sindh Type ceramics. The shapes of this ware include beakers, bottles, pots, dishes, and dish on stand. At this stage of research, it is very difficult to pinpoint the authors of this ware. In Gujarat, it can be dated between 3200 - 1900 BCE.

Black and Red Ware: Black-and-Red Ware ceramics are reported from most of the Chalcolithic sites in Gujarat, and it was first reported from Rangpur (Dikshit, 1950: 18-19), a Sorath Harappan site. In the Pre-Urban Harappan Phase, the Black-and-Red Ware ceramics (Figure 8) are found associated with Pre-Urban Harappan Sindh Type pottery, Pre-Prabhas Assemblage, and ceramics of Anarta Tradition. There were certain similarities and dissimilarities in the shape and fabric of Black and Red Ware in different periods and cultures/traditions. In Chalcolithic Gujarat, chronologically, it can be roughly placed between 3200 – 1000 BCE (Rajesh et al., 2016).

Origin of Pre-Urban Harappans in Gujarat

There are different views among the scholars working in Gujarat regarding the origin of the Pre-Urban Harappan regional Chalcolithic cultures/traditions of Gujarat. Due to certain similarities in vessel types or decorative patterns, few researchers connected them with the cultures/traditions found outside Gujarat (Bhan, 2010); few researchers discussed the similarities they shared with other contemporary cultures (Shinde, 1998; Ajithprasad, 2002; Shirvalkar, 2008) and some researchers proposed the concept of indigenous origin and changes over time (Shirvalkar, 2008). But there is no clear-cut evidence to support

either the indigenous or outside origin theories.

Origin from Early Food Producers in Gujarat

The earliest probable agricultural or food processing people of Gujarat may have been the Mesolithic/Microlith-using communities. The Mesolithic/Microliths yielding sites in Gujarat are more than 700 in number, and many of the sites in Gujarat were found not suitable to explain the linear model of cultural change. Certain sites showed the independent existence of microlith-using people. In a few sites of Gujarat, the Mesolithic period, which precedes the Chalcolithic period, is dated between 7000 BCE to 3500 BCE. In some sites, microliths are found associated with various phases of Harappan culture and few sites showed the presence of microliths even in the Early Historic period. Sites like Loteshwar, Moti Pipli, and Datrana IV showed the independent existence of microlith-using communities prior to the Chalcolithic level/occupation and the archaeological remains collected from the sites include microliths, broken sandstone grinding stones, and faunal remains from the Mesolithic levels. Many sites showed an unclear gap between the Mesolithic and the Chalcolithic occupations (Rajesh, 2011).

Inferences from Technological Knowhow

At Loteshwar, the blades collected from the Mesolithic and Chalcolithic levels were devoid of crested ridge guiding technique (Brahmbhatt, 2000). Similarly, crested ridge blades were not reported from the Mesolithic levels of any of the excavated sites in Gujarat. The earliest evidence for the crested ridge blades in the Chalcolithic context of Gujarat occurs in Datrana IV (c. 3300-2600 BCE), where it was found occurring along with Pre-Prabhas ceramics, Anarta ceramics, and Pre-Urban Harappan Sindh Type. Similar kinds of blades were also reported from Somnath along with Pre-Prabhas ceramics and Harappan like pottery (Dhavalikar and Possehl, 1992). Hence, from the available data, one can infer that introduction of the crested guided ridge blade technique in Gujarat is the result of the contact between Pre-Urban Harappans in Sindh and regional Chalcolithic cultures/traditions in Gujarat.

The Pre-Urban Harappan Sindh type ceramics collected from various parts of Gujarat were made using hand/slow wheel /fast wheel. At the same time, the vessels of regional Chalcolithic traditions/cultures like Anarta, Pre-Prabhas, and Padri were made using hand or slow wheel/turn table. This reveals the differences in the technological

know-how of Pre-Urban Sindh Harappans and Regional cultures/traditions in Gujarat. Similarly, ceramics collected from the excavations at Datrana IV is crudely made in comparison to other regional Chalcolithic types and constitutes as the most fragile ceramic type from Chalcolithic Gujarat. The vessel shapes of the same are also very different from those in the Sindh region or reported from any other parts of the Indian subcontinent. The Chalcolithic population of Datrana IV had their own technique of bead making and it appears to be different from that of the Sindh region.

Beginning of Cultural Contacts

All the available data till date suggest that the contacts between the Pre-Urban Harappans of Sindh and Regional Chalcolithic cultures/traditions in Gujarat began approximately around c. 3200-3000 BCE (Majumdar, 1999; Ajithprasad, 2002). At the same time, the chronometric dates obtained from the Pre-Urban Harappan levels at Loteshwar (Ajithprasad, 2002; Patel 2008) and Padri (Shinde, 1998; Ajithprasad, 2002) go back to 3900 BCE and 3800 BCE, respectively. These dates make one propose that the existence of regional cultures/traditions in Gujarat is datable to nearly 700 years before the beginning of their cultural contacts with Pre-Urban Harappans of the Sindh region. Probably, the Pre-Urban Harappan Chalcolithic population at Loteshwar had no contact or very minimal contact with the Pre-Urban Harappans of the Sindh region and this can be inferred from the material evidence from the site. The site has not yielded a single Pre-Urban Harappan Sindh Type ceramic.

Flimsy Deposits vs Seasonal Encampments

Due to the presence of very flimsy deposits at many of the Chalcolithic sites in North Gujarat, they are termed as seasonal encampments of pastoral communities (Bhan, 1994, 2009; Patel, 2009). At the same time, there is no evidence to prove the arrival of these people from anywhere else in Gujarat or other parts of the Greater Indus region. If the pastoral nomads were to arrive from some other region, similar artefacts should have been reported from other places in the Greater Indus region in good quantities. Similarly, the moving communities have all the chances of developing contacts with other cultural communities so easily that it could have led to the diversity in material culture within the particular site. If one keenly observes the material remains from Loteshwar, it becomes obvious that the material remains of the site have not changed over a period of 1500 years of Chalcolithic occupation. Based on the AMS and conventional C14 dates from Loteshwar,

Patel (2008, 2009) suggests a probable gap of nearly 1500 years. The studies of Patel (2008, 2009) indicate that the Mesolithic/Microlith-using communities and the Chalcolithic population at the site are two different groups. If one goes through the dates and the context (mainly pits) of dated material, it becomes very clear that the samples were not collected systematically from regular intervals; instead they are randomly collected from various contexts and depths. Therefore, in the flimsy deposit which represent approximately 5000 years of human habitation, even small gaps in the sampling for chronometric dates can create errors of hundreds or thousands of years.

Inferences from Domestication of Animals

Based on the analysis of faunal remains from Loteshwar, Patel (2009) suggests the possibilities of the appearance of domesticated cattle during the Chalcolithic period contrary to the remains of wild cattle in the aceramic Mesolithic period. Due to the availability of small sized cattle bones similar to those from the Late Neolithic and Chalcolithic levels at Mehrgarh (Jarrige et al., 1995) along with large wild cattle bones at Loteshwar by the first half of the fourth millennium BCE and difficulties in identifying the direct cultural interaction between the Mehrgarh region and North Gujarat, Patel (2009) suggests the necessity to explore the possibility of Loteshwar being a local cattle domestication centre. According to Patel (2009), wild sheep and goat are completely absent in Mesolithic and Chalcolithic levels and its domestic varieties are available at the site in later Chalcolithic levels and it may have been brought to the site probably from areas to the Northwest. It implies that the domestication of animals and the introduction of ceramics are the distinguishing features of the Chalcolithic period at Loteshwar where the local tradition of stone tool production, food processing, and food habits continue from the Mesolithic period with some addition. The introduction of domesticated sheep and goat at the site during the later levels of the Chalcolithic period may indicate the beginnings of cultural contacts in the later period between the regional Cultures and Classical Harappans.

Indicators of Cultural Interactions

The evidence for the beginning of cultural contacts between the Chalcolithic communities and Mesolithic communities of Gujarat with that of their contemporary cultural tradition in the Sindh region are available towards the end of the 4th millennium BCE approximately. In the beginning, the regional Chalcolithic cultures/tradition that

evolved from the Mesolithic communities of Gujarat around c. 4000 BCE probably had an independent existence and had some contacts with the Mesolithic/Microlith-using communities within the nearby areas, although, the evidence for these contacts is scanty. Similarly, ceramic types from Santhli (Majumdar, 1999) and Mathutra (Majumdar, 1999) suggest evidence of earlier contact with the Sindh region (Pre-Urban Harappan). By c. 3200 BCE, there is clear evidence for the contacts between different regional cultures and cultures of the Sindh region. The initial stage of Datrana reveals cultural materials of the Pre-Prabhas regional Chalcolithic tradition of Gujarat (Ajithprasad, 2002). Whereas at Santhli, Mathutra, and Juna Khatiya, only Pre-Urban Harappan Sindh Type ceramics are found (Majumdar 1999). The final phase of Datrana has a mixture of both regional and Pre-Urban Harappan materials (Ajithprasad, 2002). The absence of chronometric dates from these sites blocks its further interpretation. It is possible that major contacts and cultural integration between the Gujarat region and Indus region occurred at a later stage. However, the Gujarat region had Chalcolithic communities prior to the arrival of people from the Indus region. This is supported by the presence of settlements dating prior to 3200 BCE like Loteshwar (Patel 2008, 2009). The Padri Ware showed similarities to ceramics of Anarta tradition from Loteshwar (Shinde, 1998; Bhagat, 2001; Shirvalkar, 2008). At the upper levels of the Chalcolithic period at Datrana, the Pre-Prabhas pottery is found associated with the Pre-Urban Harappan Sindh Type ceramics and Anarta ceramics (Ajithprasad, 2002). At Moti Pipli, Anarta ceramics are found associated with the Pre-Urban Harappan artefacts (Majumdar and Sonawane, 1996-97). At Dholavira, there was a fortified settlement during this period (Bisht, 2000) and probably both regional Chalcolithic and Pre-Urban Harappan ceramics are present in the ceramic collection (Shinde, 1998). The cultural dynamics of Dholavira during this phase is unclear due to very limited published data. At Somnath, the Pre-Prabhas ceramics were found along with ceramics similar to Pre-Urban Harappan Sindh Type (Dhavalikar and Possehl, 1992). The evidence from the explored sites around Somnath (Ajithprasad et al., 2011) indicates the probabilities of the presence of Pre-Urban Harappan ceramics at Somnath. Pre-Urban Harappan ceramics were also unearthed from Surkotada (Joshi 1990), Dhaneti (Ajithprasad, 2018), and Juna Khatiya (Gadekar et al., 2021). Apart from this, many of the sites showed the presence of Black and Red Ware and Reserved Slip Ware. From the above discussion it appears that the beginnings of

cultural contacts between the regional Chalcolithic cultures of Gujarat and Sindh Type ceramics within them may be dated to the close of the fourth millennium BCE.

Prerequisites for Contact

The probable reasons which led to the cultural contacts between Pre-Urban Harappans of Sindh and Regional Chalcolithic communities may be many including the movement of people in search of pastoral lands, search for raw material resources, understanding arts and crafts, new markets for finished products, agricultural lands, to acquiring private property (?), religious beliefs and rituals (?), expansion of territory, bride/groom and workers. The evidence for many of the aforesaid parameters is unclear. Gujarat is well known for its grasslands, majority of which are located in the arid zones such as North Gujarat and Kachchh. Apart from the green grass, the availability of freshwater from inter-dunal depressions may have attracted the pastoral nomads within and outside of Gujarat. Similarly, the fertile black cotton soil in Saurashtra and other parts of Gujarat may have attracted the agricultural communities and the people in search of agricultural fields and private properties. Gujarat coast is famous for the marine shell and probably was a source for this raw material. Gujarat is also known for the mines of semi-precious stones which were used to produce beads. The availability of different raw materials and finished products like shell bangles, beads and various ceramics of different cultures and traditions from various sites within and outside Gujarat clearly show that regional cultures/traditions in Gujarat, during the Pre-Urban Harappan period, had interaction networks with one another as well as with cultures in the Indus Valley proper (Bhan, 1994; Kenoyer, 1997; Kenoyer and Meadow, 2000; Ajithprasad, 2002; Possehl, 2002).

Impact of Contact

The probable impacts of contact with the Pre-Urban Harappans of the Sindh region led to the introduction of the crested ridge blade making technique and the use of the fast wheel for pottery production. Another result of these contacts may be the integration of various regional cultures/traditions of different parts of Gujarat into the Harappan cultural sphere.

March towards Integration

Towards the end of the Pre-Urban Harappan Phase, i.e., c. 2600 BCE, the regional Chalcolithic Anarta Tradition and Padri Culture integrated into the Classical Harappans whose predecessors started the

cultural contacts with the indigenous communities of Gujarat by the end of the fourth millennium BCE. During this period, the material evidence for the cultural contacts becomes clearer. The Pre-Prabhas assemblage, which existed in the Pre-Urban Harappan Phase at Datrana IV and Somnath, did not continue during the Urban Harappan phase and the reason for their decline is not clear. The Reserved Slip Ware and Black and Red Ware technique continued during the Urban Harappan Phase. The evidence for the integration can be inferred from the data recovered from the excavations at Loteshwar (Ajithprasad, 2002, Yadav, 2005), Bagasra (Sonawane et al., 2003; Bhan et al., 2004; Chase, 2010), Shikarpur (Bhan and Ajithprasad, 2009), Padri (Shinde, 1998; Bhagat, 2001; Shirvalkar, 2008), and Nagwada (Hegde et al., 1988). The earliest evidence from Loteshwar (c. 3700 BCE) in North Gujarat (Patel, 2008) show the independent existence of Anarta tradition at the site for about 700 years. Around 3200-3000 BCE, the Anarta ceramics are found along with the Pre-Prabhas Assemblage and Pre-Urban Harappan Sindh Type ceramics at Datrana IV (Ajithprasad, 2002), and Pre-Urban Harappan Sindh Type ceramics at Moti Pipli (Majumdar and Sonawane, 1996-97; Majumdar, 1999), Nagwada (Hegde et al., 1988), and Mathutra (Majumdar, 1999), which perhaps continued up to the beginning of Urban Harappan period. At the beginning of the Urban Harappan phase, Anarta pottery is the dominant ceramic type at Bagasra (Sonawane et al., 2003) and in the next phase Classical Harappan ceramics became prominent, while at Shikarpur (Bhan and Ajithprasad, 2009) though Anarta ceramics appear in the first phase it is lesser in quantity compared to Classical Harappans. At Nagwada (Hegde et al., 1988), which is dated to the late phase of the Urban Harappan period, Anarta ceramics are the dominant variety (around 85%) (Bhan, 1994), while other Classical Harappan artefacts are also present. Some of the sites of this period also showed the presence of Black and Red Ware and Reserved Slip Ware ('glazed' and 'unglazed'). While considering the Padri Ware, which was found associated with the Sorath Harappan ceramics at Pre-Urban Harappan levels at Padri continues during the Urban Harappan period.

Conclusion

On the basis of aforesaid archaeological data, it is logical to propose that the regional Chalcolithic people of the Pre-Urban Harappan Phase within the Gujarat region may have evolved from the Mesolithic/Microlith-using people settled here approximately by the beginning of the 4th millennium BCE. These Chalcolithic people produced pottery

and stone tools in their own style and domesticated animals. It is very likely that after a long period of existence in isolation they may have come into contact with the Pre-Urban Harappans, and gradually around 2600 BCE they integrated under the Classical Harappan culture. Period around c. 2600 BCE, shows a sudden increase in the number of settlements and the prevalence of urban characteristics in the Gujarat region as in other parts of the Greater Indus region, and this period marks the beginning of Urban Harappan Phase.

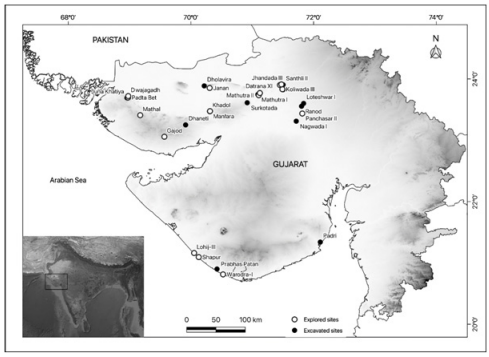


Figure 1: Reported Pre-Urban Harappan Sites in Gujarat

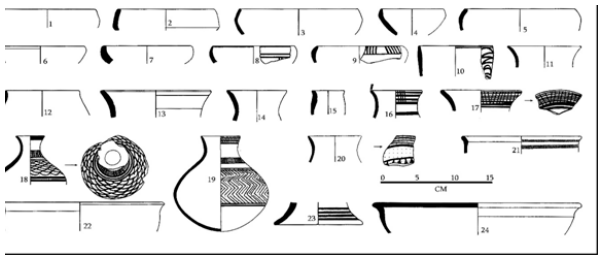


Figure 2: Anarta Ceramics from Loteshwar (Courtesy: Ajithprasad 2002)

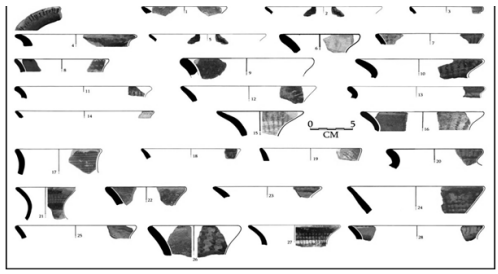


Figure 3: Ceramics from Padri (Courtesy: Shirvalkar 2008)

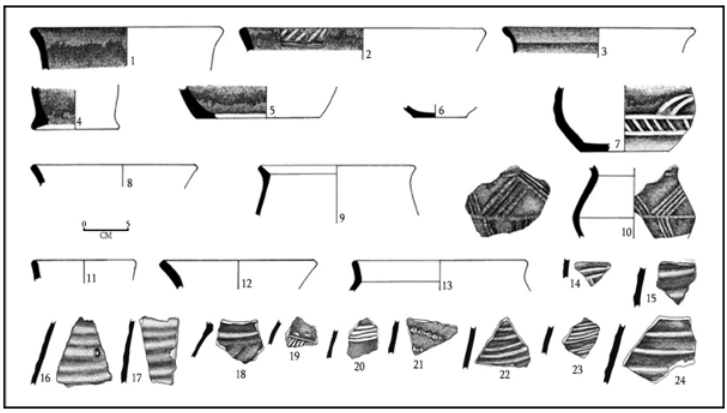


Figure 4: Pre-Prabhas Ceramics from Datrana IV (Courtesy: Ajithprasad 2002)

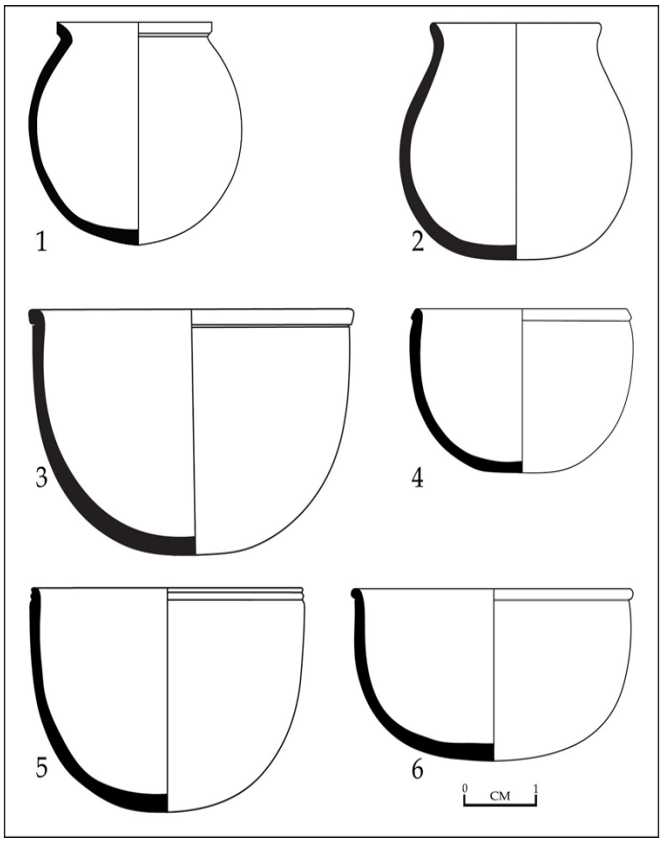


Figure 5: Unique Ceramics from Surkotada (Courtesy: University of Kerala)

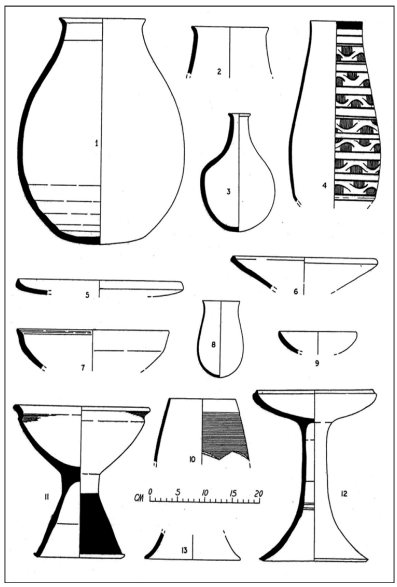


Figure 6: Pre-Urban Harappan Sindh Type Ceramics from Surkotada (Courtesy: Joshi 1990)

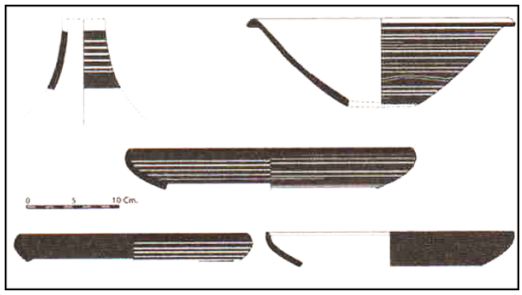


Figure 7: Reserved Slip Ware from Dhaneti (Courtesy: Ajithprasad 2018)

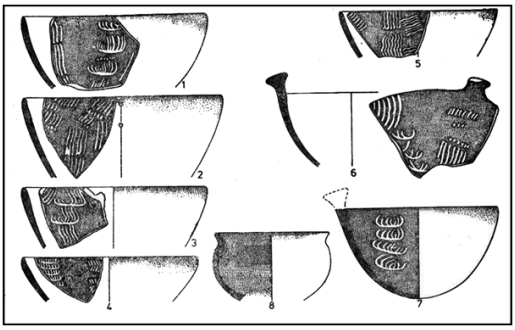


Figure 8: Black and Red Ware from Nagwada (Courtesy: Ajithprasad 2002)

Table 1: List of Reported Pre-Urban Harappan Sites in Gujarat

Sl. No.	Site	Village	Taluk	District	Size	Period/	Latitude	Longitude	References
1	Padri (Kerala no Dhoro)	Padri	Talaja	Bhavnagar	340x210=7.14	Culture*	21° 20' 21" N	72° 06' 32" E	Shinde 1992a, 1992b, Shinde et al. 1992
2	Prabhas Patan (Somnath)	Prabhas Patan	Pa-tan-Veraval	Gir Somnath	600x150=9	PW, SH, LSH, EH	20°54'00" N	70°25'30" E	Nanavati et.al. 1971, Ghosh 1989
3	Warodra-I	Warodra	Pa-tan-Veraval	Gir Somnath	10x10=.01	PP, P, LSH, LRW, EH	20° 48.75'N	70° 31.41'E	Ajithprasad and Sonawane 2011
4	Lohij-III (Devariya Nagari)	Lohij	Mangrol	Junagadh	150x100=1.5	PUHSP	21° 9.66'N	70° 3.1'E	Ajithprasad and Sonawane 2011
5	Shapur (Puncha Hira niKhetar)	Shapur	Mangrol	Junagadh	220x140=3.08	PUHSP, EH, M	21° 5.65'N	70° 7.56'E	Ajithprasad and Sonawane 2011
6	Dholavira	Dholavira	Bhachau	Kachchh	850x850=72.25	PUHSP, P	23° 53' 10" N	70° 13' 00" E	Joshi et al. 1984, Bisht 1989a, 1991, 1994, 2004, 2015
7	Surkotada	Sanva	Rapar	Kachchh	140x100=1.4	PUHSP, A, CH, BRW, SH, LSH	23° 36' 41.1 N	70° 55' 02.7" E	Possehl 1980, 1999, Joshi et al. 1984, Joshi 1990

8	**Janan**	**Janan**	**Bhachau**	**Kachchh**	**200x150=3**	**PUHSP, A, CH, SH, BRW**	**23° 51' 08.48" N**	**70° 18'16.95" E**	**Rajesh et al. 2018**
9	**Juna Khatiya**	**Khatiya**	**Lakhpat**	**Kachchh**	**400x400=16**	**PUHSP, PP, A, CH**	**23°41' 28.71" N**	**68°57' 24.24" E**	**Gadekar et al. 2021**
10	**Dhaneti (Rozimatano Saran)**	**Dhaneti**	**Bhuj**	**Kachchh**	**225x200=4.5**	**PUHSP**	**23° 15' 01" N**	**69° 54' 47" E**	**Ajithprasad 2018**
11	**Gajod (Juno Gam)**	**Gajod**	**Bhuj**	**Kachchh**	**10x10=.01**	**PUHSP, CH**	**23°03'26" N**	**69°34'01" E**	**Jadeja et al. in Press**
12	**Mathal**	**Mathal**	**Nakhatrana**	**Kachchh**	**100x100=1**	**PUHSP**	**23°24'29.43" N**	**69°10'22.52" E**	**Ajithprasad 2018**
13	**Padta Bet**	**Khatiya**	**Lakhpat**	**Kachchh**	**50x50=.25**	**PUHSP**	**23°41'47.23" N**	**68°58'24.17" E**	**Rajesh and Abhayan 2019**
14	**Dwajagadh**	**Banu Rakhal**	**Lakhpat**	**Kachchh**	**60x60=.36**	**PUHSP**	**23°43'13.69" N**	**68°58'40.10" E**	**Rajesh and Abhayan 2019**
15	**Manfara (Nakaliyo)**	**Manfara**	**Bhachau**	**Kachchh**	**50x50=.25**	**PUHSP**	**23° 28' 19.0" N**	**70° 18' 32.1" E**	**Ajithprasad Personal Communication**
16	**Khadol (Khari no Khanda)**	**Khadol**	**Bhachau**	**Kachchh**	**100x100=1**	**PUHSP**	**23° 28' 28.4" N**	**70° 18' 38.7" E**	**Ajithprasad Personal Communication**
17	**Datrana XI (Sutaria no Thumdo)**	**Datrana**	**Santalpur**	**Patan**	**9x65=.62**	**PUHSP**	**23°45'59.6"N**	**71°07'21.5"E**	**Ajithprasad and Sonawane 2011**
18	**Koliwada III (Bajaniya-no-Thumdo)**	**Koliwada**	**Radhanpur**	**Patan**	**40x30=.12**	**PUHSP, PP**	**23°49'54.8"N**	**71°29'27.8"E**	**Ajithprasad and Sonawane 2011**

19	Jhandada III (BhamariaThumdo)	Jhandada	Santalpur	Patan	36x22=.79	M, PUHSP	23°54'02.1"N	71°27'01.0"E	Ajithprasad and Sonawane 2011
20	Santhli II (Ghachiy-awado)	Santhli	Radhanpur	Patan	96x65=.62	PUHSP, LSH	23°54'16.7"N	71°30'09.6"E	Majumdar 1999, Ajith-prasad and Sonawane 2011
21	Loteshwar I (Khari no Timbo I)	Loteshwar	Sami	Patan	135x135=1.82	M, PUHSP	23°36'01.8"N	71°50'11.8"E	Bhan 1994, Ajithprasad and Sonawane 2011, Rajesh et al. 2013
22	Mathutra I (Mad-hvya no Timbo)	Mathutra	Santalpur	Patan	40x30=.12	M, A, CH	23°44'42.7"N	71°05'23.1"E	Ajithprasad and Sonawane 2011
23	Moti Pipli (Shakatri Timbo)	Moti Pipli	Radhanpur	Patan	255x120=3.06	PUHSP	23°49'24.9"N	71°30'01.8"E	Bhan 1994, Ajithprasad and Sonawane 2011
24	Santhli IV (Navod no Thumbo)	Santhli	Radhanpur	Patan	10x10=.01	PUHSP, A, CH	23°54'36.7"N	71°28'30.6"E	Majumdar 1999, Ajith-prasad and Sonawane 2011
25	Datrana IV (Hadkawala Timbo)	Datrana	Santalpur	Patan	700x500=35	M, PUHSP	23°46’14.7” N	71°07’26.2”E	Ajithprasad and Sonawane 2011; Rajesh et al. 2018

26	**Datrana V (Vadkiwalukhetar-I)**	**Datrana**	**Santalpur**	**Patan**	**100x70=.70**	**M, PP, A, PUHSP**	**23°46'12.6"N**	**71°07'25.5"E**	**Ajithprasad and Sonawane 2011; Rajesh et al. 2018**
27	**Ranod (Vaharvo Timbo)**	**Ranod**	**Sami**	**Patan**	**250x210=5.25**	**M. PP, A**	**23° 33' 17.05" N**	**71° 48' 12.01" E**	**Madella et al. 2018; Mushrif-Tripathy et al. 2014: 45-51**
28	**Mathutra II (Vadit-alavadi no Thumdo)**	**Mathutra**	**Santalpur**	**Patan**	**10x.08=.008**	**M, PUHSP**	**23°44'02.1"N**	**71°06'20.2"E**	Ajithprasad and Sonawane 2011
29	**Panchasar II (Harthar no Timbo)**	**Panchasar**	**Sami**	**Patan**	**250x200=5**	**PUHSP, SH**	**23°26'09.3"N**	**71°48'54.3"E**	Ajithprasad and Sonawane 2011
30	**Nagwada I (Ghod)**	**Nagwada**	**Dasada**	**Surendranagar**	**140x110=1.54**	**M, PUHSP, LSH, LRW, BRW**	**23°18'38.8"N**	**71°42'59.6"E**	IAR 1984-85, Ajithprasad and Sonawane 2011

* M: Mesolithic/Microlithic, A: Anarta, PW: Padri Ware, PP: Pre-Prabhas, PUHSP: Pre-Urban Harappan Sindh Type Pottery, BRW: Black and Red Ware, CH: Classical Harappan, SH: Sorath Harappan, P: Prabhas, LSH: Late Sorath Harappan, LRW: Lustrous Red Ware, EH: Early Historic, M: Medieval

References

Ajithprasad, P and V.H. Sonawane. 1993. "Harappan Culture in North Gujarat: A Regional Paradigm", Paper Presented at the Conference on *Harappans in Gujarat: Problems and Prospects*. Pune: Deccan College.

Ajithprasad, P, Rajesh S. V. and B. Sharma. 2011. "Archaeological Explorations in the Saurashtra Coast of Junagadh District, Gujarat". *Occasional Paper 10: Linguistics, Archaeology and the Human Past* (27-70). Toshiki Osada and Akinori Uesugi (Eds.). Kyoto: Research Institute for Humanity and Nature.

Ajithprasad, P. 2002. "The Pre Harappan Cultures of Gujarat". In S. Setter and R. Korisetter (Eds.). *Indian Archaeology in Retrospect, Volume II, Protohistory- Archaeology of the Harappan Civilization* (129-158). New Delhi: Manohar Publishers and distributors.

Ajithprasad, P. 2010. "The Pre-Prabhas Pottery and the Early Chalcolithic Cultural Developments in North Gujarat". Paper Presented at the *Bhuj Round Table, International Conference on Gujarat Harappans and Chalcolithic Cultures.* Research Institute for Humanity and Nature, Kyoto, Gujarat State Department of Archaeology, Gandhinagar and Institute of Rajasthan Studies, JRN Rajasthan Vidyapeeth, Udaipur.

Ajithprasad, P. 2018. "Early Harappan Burials and Kachchh". *History Today*, 19: 21-33 and Plates 4-5.

Ajithprasad, P. and V. H. Sonawane. 2011. "The Harappa Culture in North Gujarat: a Regional Paradigm". In T. Osada and A. Uesugi (Eds.). Occasional Paper 12 (*Linguistics, Archaeology and the Human Past*): 223-269. Kyoto: Research Institute for Humanity and Nature.

Bhagat, S. 2001. *A Study of the Harappan Pottery Tradition in Saurashtra (with Special Reference to Padri and Tarsara, Bhavnagar District, Gujarat*) (Unpublished Ph.D. Thesis). Pune: Department of Archaeology, Deccan College Post-Graduate and Research Institute.

Bhan, K. K. 1994. "Cultural Development of the Prehistoric period in North Gujarat with Reference to Western India". *South Asian Studies,* 10: 71-90.

Bhan, K. K. 2009. "Review of Prehistoric Culture of Gujarat and Need to Develop Accurate Settlement Gazetteer". In *International Symposium in India (2009) Changing Perceptions of Japan in South Asia in the New Asian Era: The State of Japanese Studies in India and Other SAARC Countries* (325-354). Kyoto: International Research Center for Japanese Studies.

Bhan, K. K. 2010. "Review of Prehistoric Pottery from Gujarat". *Bhuj Round Table, International Conference on Gujarat Harappans and Chalcolithic Cultures.* Research Institute for Humanity and Nature, Kyoto, Gujarat State Department of Archaeology, Gandhinagar and Institute of Rajastha Studies, JRN Rajasthan Vidyapeeth, Udaipur. Bhuj.

Bhan, K. K. and P. Ajithprasad. 2008. "Excavations at Shikarpur 2007-2008: A Costal Port and Craft Production Center of the Indus Civilization in Kutch, India". *http://www.harappa.com/goladhoro/*:1-9.

Bhan, K. K. and P. Ajithprasad. 2009. "Excavations at Shikarpur, Gujarat 2008-2009". *http://www.harappa.com/goladhoro/*:1-9.

Bhan, K.K., V.H. Sonawane, P. Ajithprasad and S. Pratapachandran. 2004. "Excavations of an Important Harappan Trading and Craft Production Center at Gola Dhoro (Bagasra) on the Gulf of Kutch, Gujarat, India", *Journal of Interdisciplinary Studies in History and Archaeology*, 1 (2): 153-158.

Bisht R.S. 1989a. "A New Model of the Harappan Town Planning as Revealed at Dholavira in Kutch: A Surface Study of its Plan and Architecture". In Bhaskar Chatterjee (Ed.), *History and Archaeology (Prof. Sankalia Felicitation Volume*) (397-408). New Delhi: Ramanand Vidya Bhawan.

Bisht, R. S. 1989b. "The Harappan Colonisation of Kutch: An ergonomic Study with Reference to Dholavira and Surkotada". In Krishna Deva and Lallanji Gopal (Eds.). *History and Art* (265-272). Delhi: Ramanand Vidya Bhawan.

Bisht, R. S. 1991. Dholavira: "A New horizon of the Indus Civilization". *Puratattva* 20: 71-82.

Bisht, R. S. 1994. "Urban Planning at Dholavira: A Harappan City". *Seminar on the City and the Stars: Cosmic Urban Geometrics of India*. New Delhi: Indira Gandhi National Centre for the Arts.

Bisht, R. S. 1997. "Dholavira Excavations: 1990-94". In J. P. Joshi, D. K. Sinha, S. C. Saran, C. B. Mishra and G. S. Gaur (Eds.). *Facets of Indian Civilization - Recent perspectives – (Essays in Honour of Prof. B. B. Lal): Vol. I (Prehistory and Rock-Art, Proto History)* (107-120). New Delhi: Aryan Books International.

Bisht, R. S. 1998-99. "Dholavira and Banawali: Two different Paradigms of the Urbis Forma". *Puratattva*, 29: 14-37.

Bisht, R. S. 2000. "Urban Planning at Dholavira: A Harappan City". In J. M. Malville and L. M. Gujral (Eds.). *Ancient Cities, Sacred Skies: Cosmic Geometrics and City Planning in Ancient India* (11-23). New Delhi: Aryan Books International.

Bisht, R. S. 2004. "Dholavira and Kachchh in Integrated Tourism Development". In A. Maira (Ed.) *Heritage Tourism-Exploring the Future (Seminar on Heritage Tourism)* (35-48). Gandhinagar: Government of Gujarat.

Bisht, R. S. 2006. "Harappans and the Rigveda". In D. P. Sharma and M. Sharma (Eds.), *Early Harappan and Indus-Sarasvati Civilization*. Vol. II (283-338). New Delhi: Kaveri Books.

Bisht, R. S. 2010. "Does Dholavira Sheds New Light on the Antiquity of the Buddhist Stupa Architecture?". In I. A. Khan, R. Barret and R. Trivedi

(Eds.). *Abstracts - International Seminar on Buddhist Heritage*, Gujarat (January 15-17, 2010) (75-76). Vadodara: The Maharaja Sayajirao University of Baroda and Government of Gujarat.

Bisht, R. S. 2015. *Excavations at Dholavira* (1989 to 2004-2005). New Delhi: Archaeological Survey of India.

Bokonyi, S. 1997. "Horse Remains from the Prehistoric Site of Surkotada, Kutch, Late 3rd Millennium B. C". *South Asian Studies*, 17: 297-307.

Brahmbhatt, R. M. 2000. *Morphological Analysis of Flakes Artifacts from Loteshwar, North Gujarat: A Preliminary Study.* (Unpublished M.A. Dissertation). Vadodara: Department of Archaeology and Ancient History. The Maharaja Sayajirao University of Baroda.

Chase, B. A. 2007. *Meat Provisioning and the Integration of the Indus Civilization: A Perspective from Gujarat (India)* (Unpublished PhD Thesis). Madison: University of Wisconsin.

Chase, B. A. 2010. "Social Change at the Harappan Settlement of Gola Dhro: A Reading from Animal Bones". *Antiquity*, 84: 528-543.

Dangi, V. 2009a. "Archaeology of the Ghaggar Basin: Settlement Archaeology of Meham Block, Rohtak, Haryana, India". *Occasional Paper 8: Linguistics, Archaeology and the Human Past.* Kyoto: Indus Project, Research Institute for Humanity and Nature.

Dangi, V. 2009b. "Recent exploration in the Chautang Basin (Jind District, Haryana)". In T. Osada and A. Uesugi (Eds.) *Occasional Paper 9: Linguistics, Archaeology and the Human Past* (73-163). Kyoto: Indus Project, Research Institute for Humanity and Nature.

De Cardi, B. 1965. "Excavations and Reconnaissance in Kalat, West Pakistan: The Prehistoric Sequence in the Surab Region". *Pakistan Archaeology,* 2: 86-182.

Dhavalikar, M. K. and G. L. Possehl. 1992. "The Pre-Harappan Period at Prabhas Patan and the Pre-Harappan Phase in Gujarat". *Man and Environment*, XVII (1): 72- 78.

Dikshit, M. G. 1950. "Excavations at Rangpur: 1947". *Bulletin of the Deccan College Post-Graduate and Research Institute*, XI (1): 3-55.

Durrani, F. A. 1988 "Excavations in the Gomal Valley: Rehman Dheri Excavation Report" No.1. *Ancient Pakistan*, 6: 1-232.

Durrani, F. A., I. Ali and G. Erdosy. 1991. "Further Excavations at Rehmandheri, 1991". *Ancient Pakistan* 7: 61-151.

Gadekar, C. S.V. Rajesh, G. S. Abhayan, B. P. Sharma, et.al. 2018. "Typo-Technological Analysis of the Lithic Assemblage from Janan- a Pre-Urban Harappan Site in Kachchh, Gujarat". *Man and Environment,* XLIII (1): 6-15.

Gadekar, C., S. V. Rajesh, G.S. Abhayan, B.P. Sharma, et.al. 2021. "Early Harappan Interaction Between Sindh and Gujarat, as Evidenced by Lithic Tools". *Journal of Lithic Studies*, 8 (1): 1-17.

Ghosh, A. 1989. *An Encyclopaedia of Indian Archaeology* (Vol. I and II), New Delhi: MunshiramManoharlal Publishers Pvt. Ltd.

Hegde, K.T.M., V.H. Sonawane, D.R. Shah, K.K. Bhan, et.al. 1988. "Excavation at Nagwada 1986 and 87: A preliminary Report". *Man and Environment,* XII: 55-65.

Hegde, K.T.M., V.H. Sonawane, K.K. Bhan, P. Ajithprasad and K.Krishnan. 1990. "Excavation at Nagwada – 1987-88 A Preliminary Report". *Adaptation and Other Essays; Proceedings of the Annual Conference of IAS, ISPQS and IHCS* -1988 (Research Publications VI) (191-195). Santiniketan: Visva-Bharati.

Heras, S. J. H. 1938. "A Proto-Indian Sign from Vala". *The Quarterly Journal of the Mythic Society*, XXVIII (3): 141-143.

IAR. 1955-56. Ghosh, A. (Ed.). 1956. *Indian Archaeology 1955-56 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 1956-57. Ghosh, A. (Ed.). 1957. *Indian Archaeology 1956-57 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 1970-71. Deshpande, M. N. (Ed.). 1974. *Indian Archaeology 1970-71 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 1971-72. Deshpande, M. N. (Ed.). 1975. *Indian Archaeology 1971-72 – A Review*. New Delhi: Archaeological Survey of India.

IAR. 1984-85. Tripathi, R. C. (Ed.). 1987. *Indian Archaeology 1984-85 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 1985-86. Joshi, J. P. (Ed.). 1990. *Indian Archaeology 1985-86 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 1986-87. Joshi, M. C. (Ed.). 1992. *Indian Archaeology 1986-87 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 1987-88. Joshi, M. C. (Ed.). 1993. *Indian Archaeology 1987-88 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 1988-89. Joshi, M. C. (Ed.). 1993. *Indian Archaeology 1988-89 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 1989-90. Mahapatra, S. K. (Ed.). 1994. *Indian Archaeology 1989-90 – A Review*. New Delhi: Archaeological Survey of India.

IAR. 1990-91. Mahapatra, S. K. (Ed.). 1995. *Indian Archaeology 1990-91 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 1991-92. Singh, B. P. (Ed.). 1996. *Indian Archaeology 1991-92 – A Review*. New Delhi: Archaeological Survey of India.

IAR. 1992-93. Shankar, A. (Ed.). 1997. *Indian Archaeology 1992-93 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 1993-94. Bisht, R. S., C. Dorje and A. Banerji (Ed.). 2000. *Indian Archaeology 1993-94 – A Review*. New Delhi: Archaeological Survey of India.

IAR. 1995-96. Menon, K. G. (Ed.). 2002. *Indian Archaeology 1995-96 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 1996-97. Menon, K. G. (Ed.). 2002. Indian Archaeology 1996-97 – A Review. New Delhi: Archaeological Survey of India.

IAR. 1997-98. Menon, K. G. (Ed.). 2003. *Indian Archaeology 1997-98 – A Review*. New Delhi: Archaeological Survey of India.

IAR. 1998-99. Misra, R. C. (Ed.). 2004. *Indian Archaeology 1998-99 – A Review*. New Delhi: Archaeological Survey of India.

IAR. 1999-00. Rajeev, C. B. (Ed.). 2005. *Indian Archaeology 1999-00 – A Review.* New Delhi: Archaeological Survey of India.

IAR. 2000-01. Rajeev, C. B. (Ed.). 2006. *Indian Archaeology 2000-01 – A Review.* New Delhi: Archaeological Survey of India.

Jarrige, C., J.F. Jarrige, R. H. Meadow and G. Quivron (Eds.). 1995. *Mehrgarh Field Reports 1974-1985 From Neolithic Times to the Indus Civilization*. Pakistan: Department of Culture and Tourism, Government of Sindh.

Joshi, J. P. 1966. "Exploration in Northern Kutch". J*ournal of Oriental Institute* 16 (1): pp. 62-69.

Joshi, J. P. 1972a. "*Fresh Light on the archaeology of Kutch". S. B. Deo (Ed.) Archaeological Congress and Seminar Papers* (21-35). Nagpur University.

Joshi, J. P. 1972b. "Exploration in Kutch and Excavation at Surkotada and New Light on Harappan Migration". *Journal of Oriental Institute,* 22 (1-2): 98-144.

Joshi, J. P. 1979. "The Nature of Settlement at Surkotada". In D. P. Agrawal and D. K. Chakrabarti (Eds.). *Essays in Indian Proto History* (59-64). Delhi: B. R. Publishing Corporation (Published on behalf of The Indian Society for Prehistoric and Quaternary Studies).

Joshi, J. P. 1990. "Excavations at Surkotada 1971-72 and Exploration in Kutch". *Memoirs of the Archaeological Survey of India,* No. 87. New Delhi: Archaeological Survey of India.

Joshi, J.P., M. Bala and J. Ram. 1984. "The Indus Civilization: A Reconsideration on the Basis of Distribution Maps". In B.B. Lal and S.P. Gupta (Eds.), *Frontiers of the Indus Civilization: Sir Mortimer Wheeler Commemoration Volume* (511-530). New Delhi: Books and Books.

Kenoyer, J. M. 1991. "The Indus Valley Tradition of Pakistan and Western India". *Journal of World Prehistory* 5 (4): 331-385.

Kenoyer, J. M. 1994. "The Harappan State: Was It or Wasn't It?". In J. M. Kenoyer (Ed.). From Sumer to Meluha: *Contributions to the Archaeology of South and West Asia in Memory of George F. Dales, Jr.* Vol. 3. Wisconsis Archaeological Reports: 71-80. Madison: Department of Anthropology, University of Wisconsin-Madison.

Kenoyer, J. M. 1997. "Trade and Technology of the Indus Valley: New Insights from Harappa, Pakistan". *World Archaeology*, 29: 262-280.

Kenoyer, J. M. and R. H. Meadow. 2000. "The Ravi Phase: A New Cultural

Manifestation at Harappa (Pakistan)". In M. Taddei and G. de Marco (Eds.). *South Asian Archaeology 1997* (55-76). Rome: ISIAO.

Kharakwal, J.S., Y.S. Rawat and T. Osada (Eds.). 2012. *Excavation at Kanmer 2005-06 – 2008-09, Kanmer Archaeological Research Project – An Indo-Japanese Collaboration*. Research Institute for Humanity and Nature, Kyoto/Gujarat State Department of Archaeology, Gandhinagar/ Institute of Rajasthan Studies, JRN Rajasthan Vidyapeeth, Udaipur.

Krishnan, K., I. C. Freestone and A. C. Middleton. 2005. "The Technology of 'Glazed' Reserved Slip Ware – A Fine Ceramic of the Harappan Period". *Archaeometry*, 47 (4): 691-703.

Lal, B.B., J.P. Joshi, B.K. Thapar and Madhu Bala. 2003. *Excavations at Kalibangan: The Early Harappans* (1960-1969). Memoirs of the Archaeological Survey of India

Lal, B.B., J.P. Joshi, M. Bala, A.K. Sharma and K.S. Chandran 2015. *Excavations at Kalibangan: The Harappans* (1960- 69), part 1. Memoirs of the Archaeological Survey of India no. 110. New Delhi: Archaeological Survey of India.

Mahida, B. 1992. *Chalcolithic Settlements of North Gujarat (A Study of the Regional Tradition in the Rupen Estuary)* (Unpublished M.A. Dissertation). Vadodara: Department of Archaeology and Ancient History, The Maharaja Sayajirao University of Baroda.

Mahida, B. 1995-96. "Loteshwar: A Chalcolithic Regional Ceramic Tradition Site of North Gujarat". *Journal of the Oriental Institute*, XLV: 85-87.

Majumdar, A and V. H. Sonawane. 1996-1997. "Pre Harappan Burial Pottery from Moti-Pipli: A New Dimension in the Cultural Assemblage of North Gujarat". *Pragdh*

Majumdar, A. 1999. *A Ceramic Study of the Harappan Burials from North Gujarat* (Unpublished Ph.D. Thesis). Vadodara: Department of Archaeology and Ancient History, The Maharaja Sayajirao University of Baroda.

Majumdar, A. 2006. "Early Harappans in Gujarat". In D. P. Sharma and M. Sharma (Eds.). *Early Harappan and Indus-Sarasvati Civilization*. Vol. I (159-166). New Delhi: Kaveri Books.

Meadow, R. H. and A. Patel. 1997. "A Comment on "Horse Remains from Surkotada" by Sandor Bokonyi. *South Asian Studies,* 17: 308-315.

Momin, K. N. 1983. "Excavation at Zekhda". *Puratattva*, 12: 120-125.

Mughal, M. R. 1970. *The Early Harappan Period in the Greater Indus Valley and Northern Baluchistan* (c. 3000 – 2400 B.C.). (Unpublished Ph.D. Thesis). Pennsylvania: University of Pennsylvania.

Mushrif-Tripathy, V., P. Ajithprasad, M. Madella, J. L. Mateos, et.al. 2014. "Osteological Study of Human Skeleton Excavated from Vaharvo Timbo, District Patan, Gujarat". *Man and Environment,* xxxix (1): 45-51.

Mushrif-Tripathy, V., S. V. Rajesh, G. S. Abhayan, B. P. Sharma and P. Ajithprasad. 2018. "Anthropological Analysis of Pre-Urban Harappan Human Skeletal Remains from Surkotada in Kachchh District, Gujarat, India". *Bulletin of the Deccan College*, 78: 35-44.

Nanavati, J. M., R. N. Mehta and S. N. Chowdhary. 1971. *Somnath-1956 (Monograph I)*. Ahmedabad and Vadodara: Department of Archaeology, Gujarat State and The Maharaja Sayajirao University of Baroda.

Patel, A. K. 1989. *Vertebrate Archaeofauna from Nagwada: A Preliminary Study* (Unpublished M.A. Dissertation). Vadodara: Department of Archaeology and Ancient History, The Maharaja Sayajirao University of Baroda.

Patel, A. K. 2008. "New Radiocarbon Determinations from Loteshwar and Their Implications for Understanding Holocene Settlement and Subsistence in North Gujarat and Adjoining Areas". In E. M. Raven (Ed.). *South Asian Archaeology 1999* (Proceedings of the Fifteenth International Conference of the European Association of South Asian Archaeologists, held at the Universiteit Leidan, 5-9 July, 1999) (123-134). Groningen: Egbert Forsten.

Patel, A. K. 2009. "Occupational Histories, Settlements, and Subsistence in Western India: What Bones and Genes can tell us about the Origins and Spread of Pastoralism". *Anthropozoologica*, 44 (1): 173-188.

Patel, B. 1992. *The Reappraisal of Chalcolithic Culture in North Gujarat.* (Unpublished M.A. Dissertation). Vadodara: Department of Archaeology and Ancient History, The Maharaja Sayajirao University of Baroda.

Pathak, V. S. 1992. "Buffalo-Horned Human Figure on the Harappan Jar at Padri-A Note". *Man and Environment,* XVII (1): 87-89.

Possehl, G. L. 1980. *Indus Civilization in Saurashtra*. New Delhi: B. R. Publishing Corporation.

Possehl, G. L. 1992. "The Harappan Civilization in Gujarat: The Sorath and Sindhi Harappans". *Eastern Anthropologist*, 45 (1-2): 117-154.

Possehl, G. L. 1994. *Radiometric Dates for South Asian Archaeology* (An Occasional Publication of the Asia Section): 1–122. Philadelphia: University of Pennsylvania Museum of Archaeology and Anthropology.

Possehl, G. L. 1997. "The Date of the Surkotada Cemetery: A Reassessment in Light of Recent Archaeological Work in Gujarat". In J. P. Joshi, D. K. Sinha, S. C. Saran, C. B. Mishra and G. S. Gaur (Eds.). *Facets of Indus Civilization – Recent Perspectives- (Essays in Honour of Prof. B. B. Lal)* Vol. I (81-87). New Delhi: Aryan Books International.

Possehl, G. L. 1999. *Indus Age: The Beginnings*. Philadelphia: University of Pennsylvania Press.

Possehl, G. L. 2002. "The Early Harappan". In K. Paddayya (Ed.). *Recent Studies in Indian Archaeology* (112-128). Delhi: Munshiram Manoharlal.

Rajesh, S. V. 2011. A Comprehensive Study of the Regional Chalcolithic Cultures of Gujarat (Unpublished PhD Thesis). Vadodara: Department of Archaeology and Ancient History. The Maharaja Sayajirao University of Baroda.

Rajesh, S. V. and G. S. Abhayan. 2019. *Archaeological Excavations at Juna Khatiya (2018-2019): An Early Harappan Cemetery in Kachchh District, Gujarat, Western India.* 48th International Annual Conference on South Asia (17-20 October, 2019). Madison – Wisconsin.

Rajesh, S. V., C. Gadekar, P. Ajithprasad, G. S. Abhayan, et.al. "Pre-Prabhas Assemblage in Gujarat.An Assessment based on the Material Culture from Somnath, Datrana and Janan". In Dennys Frenez, Gregg Jamison, Randall Law, Massimo Vidale and Richard H. Meadow (Eds.) *Walking with the Unicorn. Social Organization and Material Culture in Ancient South Asia. Jonathan Mark Kenoyer Felicitation Volume* (499-521). Oxford: Archaeopress.

Rajesh, S. V., K. Krishnan, P. Ajithprasad and V. H. Sonawane. 2013. "Evaluating the Anarta Tradition in the Light of Material Culture from Loteshwar and other Sites in Gujarat". *Man and Environment*, XXXVIII (2):10-45.

Rajesh, S. V., Krishnan, K., Ajithprasad, P., and Madella, M. 2013. "Pre-Prabhas Assemblage from Gujarat, Western India". *Heritage: Journal of Multidisciplinary Studies in Archaeology,* 1: 181–209.

Rajesh, S. V., P. Sukumaran and K. Krishnan. 2016. "Scenario of Chalcolithic Site Surveys in Gujarat". *Pakistan Heritage*, VII: 1-34.

Rajesh, S.V. and K. Krishnan. 2017. "Roots of Sorath Harappans: A Study Based on the Re-analysis of Ceramics from Padri and Its Surroundings in Gujarat, Western India". In Manmohan Kumar and Akinori Uesugi (Eds.) *Harappan Studies: Recent Researches in South Asian Archaeology. Vol. 2.* (83-101). New Delhi: Aryan Books International..

Rao, L.S., N.B. Sahu, P. Sahu, U.A. Shastry and S. Diwan 2003. "Unearthing Harappan Settlement at Bhirrana". *Puratattva*, 34: 20-24.

Rao, L.S., Nandini, B. Sahu, P. Sahu, S. Diwan and U.A. Shastry 2004. "New Light on the Excavation of Harappan Settlement at Bhirrana". *Puratattva*, 35: 60-68.

Rao, S. R. 1979. "Lothal: A Harappan Port Town, 1955-62". *Memoirs of Archaeological Survey of India, No. 78. Vol. 1*. New Delhi: Archaeological Survey of India.

Rao, S. R. 1985. Lothal: A Harappan Port Town, 1955-62. *Memoirs of Archaeological Survey of India, No. 78.Vol. 2*.New Delhi: Archaeological Survey of India.

Sankalia, H. D. 1965. Excavations at Langhnaj: 1944-63 (Part I) *Archaeology.* Poona: Deccan College Postgraduate and Research Institute.

Sant, U., T.J. Baidya, N.G. Nikoshey, N.K. Sinha, et.al. 2005. "Baror - A New Harappan Site in Ghaggar Valley - A Preliminary Report". *Pura-*

tattva, 35: 50-59.

Shaffer, J. G. 1992. "The Indus Valley, Baluchistan, and Helmand Traditions: Neolithic Through Bronge Age". In E. Ehrich (ed.). *Chronologies in Old World Archaeology* (441-464). Chicago: University of Chicago Press.

Shinde, V and S.B. Kar. 1992. "Padri Ware: a New Painted Ceramic Found in the Harappan Levels at Padri in Gujarat". *Man and Environment,* XVII (2): 105-110.

Shinde, V. 1991. "A Horn-Headed Human Figure on a Harappan Jar from Padri, Gujarat". *Man and Environment*, XVI (2): 87-89.

Shinde, V. 1992a. "Excavations at Padri- 1990-91: A preliminary Report". *Man and Envitronment*, XVII (1): 79-86.

Shinde, V. 1992b. "*Padri and the Indus Civilization". South Asian Studies, 8*: 55-66.

Shinde, V. 2006. Padri: "The Early Harappan Site in Gujarat". In D. P. Sharma and M. Sharma (eds.). *Early Harappan and Indus-Sarasvati Civilization.* Vol. I: 151-158. New Delhi: Kaveri Books.

Shinde, V. and E. Thomas. 1993. "A Unique Harappan Copper Fish Hook from Padri, Gujarat". *Man and Environment*, 18: 145-147.

Shinde, V., T. Osada, M.M. Sharma, A. Uesugi, et.al. 2008. "Exploration in the Ghaggar Basin and excavations at Girawad, Farmana (Rohtak District) and Mitathal (Bhiwani District), Haryana, India". In T. Osada and A. Uesugi (Eds.). *Occasional Paper 3: Linguistics, Archaeology and the Human Past* (77-158). Kyoto: Indus Project, Research Institute for Humanity and Nature.

Shinde, V., T. Osada, Manmohan Kumar and A. Uesugi. 2008. "A Report on Excavations at Farmana 2007-08". *Occasional Paper 6: Linguistics, Archaeology and the Human Past* (1-116). Kyoto: Indus Project, Research Institute for Humanity and Nature.

Shinde, V. 1998. "Pre-Harappan Padri Culture in Saurashtra: The Recent Discovery". *South Asian Studies*, 14: 173-182.

Shirvalkar, P. 2008. *Pre-and Early Harappan Cultures of Saurashtra with Special Reference to Gulf of Cambay Region.* (Unpublished Ph.D. Thesis). Pune: Deccan College Post Graduate and Research Institute.

Sonawane, V. H. and Ajithprasad, P. 1994. "Harappan Culture and Gujarat". *Man and Environment*, XIX (1-2): 129-139.

Sonawane, V.H., P. Ajithprasad, K.K. Bhan, K. Krishnan, et.al. 2003. "Excavations at Bagasra 1996-2003: A Preliminary Report". *Man and Environment,* XXVIII (2): 21-50.

Yadav, M. 2005. *A Typological Study of Chalcolithic Ceramic Assemblage from Loteshwar, North Gujarat* (Unpublished M. A. Dissertation). Vadodara: Department of Archaeology and Ancient History, The Maharaja Sayajirao University of Baroda.

© 2020. *Social Orbit* ISSN 2395-7719, Vol.6, pp.46-60

Iron Age-Early Historic Graffiti and Symbols in South India and Edakkal Rock Art: A Few Observations *

V. Selvakumar
Department of Maritime History and Marine Archaeology
Tamil University, Thanjavur, Tamil Nadu, India
E-mail: selvakumarodi@gmail.com

Abstract

Graffiti are post-firing marks found on the Iron Age-Early Historic megalithic ceramics deriving from burial and habitation contexts of South India. These graffiti were perhaps used as symbols of visual communication and pictography. It is not certain if they had any phonetic value or represented a form of writing, but it is certain that they had communicative value. This paper suggests that they had multiple symbolic functions. In the context of graffiti occurring in isolation, i.e. without any link with Tamil-Brahmi inscription, they might have signified the ownership and/or clan identity. In the context of their association with Tamil-Brahmi inscription they might have meant the clan identity. Interestingly, some of the symbols appear to be pictographic in nature. An interesting symbol of bullock cart on megalithic pottery resembles the engraving at Edakkal rock shelter of Kerala. This occurrence helps to date the Edakkal engraving to the Iron Age megalithic context.

Keywords: Megaliths, Iron Age, Early Historic, Graffiti, Edakkal,,Rock Art.

I. Introduction

In India, graffiti are found on pottery from the Harappan times (Lal, 1975). They are very common on the Iron Age-Early Historic megalithic ceramics and there are debates on their exact function. In this paper, I discuss the significance of graffiti on the Iron Age-Early Historic material remains, mostly ceramics, of Tamil Nadu, with a few cross references to the similar finds from the Edakkal cave of Kerala.

Cognitive Development and Rock Paintings

The ability to mentally observe and visualize the physical features, organisms, and their activities of the real world in three dimension and draw them on two-dimensional media and to conceive and

* Acknowledgement: I would like to acknowledge the UGC for supporting the research as part of UGC-MRP Project on the ceramic traditions of Tamil Nadu.

create new imaginary symbols was acquired by the modern humans from the late prehistoric times (Mithen, 1999). Prehistoric people could visualize pictures and images, of realistic and imaginary entities in their minds and they drew such images on the walls of rock shelters and caves, bodies and trees or on any other objects through engravings and/or paintings. Through these paintings or engravings, they conveyed certain messages or represented the perceived realities or imaginary concepts for a specific purpose or just as a mode of artistic, creative expression, without any specific utilitarian function. The idea of early paintings might have emerged due to the human observation of landscapes, impressions of animal tracks, foot and hand prints and shades of objects on surfaces. The pictograms developed first and they represented visual narratives of events or images created as part of magico-religious functions. The second transformation was symbolic meaning to the images. Symbols began to represent anything and everything that people or the creator wanted to mean. These symbols are sometimes culture-specific and may be universal in some contexts, but their meaning could be mostly distinct and context specific, with occasional and accidental similarity. Symbols were used for simple communicative, ritual and magico-religious purposes, and for a number of socio-economic and cultural functions. Symbols are found in various forms such as paintings and engravings on rocks and objects and graffiti on ceramics.

Iron Age-Early Historic-Megalithic Burials

The megalithic burials were built for the dead and also for warriors who were killed during battles in the Iron Age-Early Historic South India (Leshnik, 1974; Mohanty and Selvakumar, 2001). These burials are generally dated between 1300 BCE and 500 CE in South India. While the Iron Age is placed between 1200 BCE and 500 BCE, the Early Historic period, between 500 BCE and 500 CE, in South India (Morrison et al., 2015; Rajan et al., 2021). The so-called "megalithic" burials at many contexts may not be truly megalithic in nature, i.e. they were made without the use of large stones; but in general their material culture is identical and hence, all the burials are treated as megalithic, irrespective of their diminutive nature, as a cultural expression. These burials and monuments were not only created in the Iron Age and they were also built during the Early Historic period. There is a possibility that some of them were continued to be made even in the early medieval period. The megalithic burials have black-and-red ware, coarse red ware and black ware pottery vessels which were placed as grave

goods within the burials. These burials also produce etched-carnelian beads, quartz beads and pendants, lapis lazuli beads, spacers, gold beads and ornaments, copper-bronze artifacts such as bells, vessels and rings and diverse varieties of iron objects, animal bones and plant remains, which were placed as offerings for the dead, perhaps for their use in afterlife. Some of the megaliths are virtual treasure troves with a lot of artifacts which were deposited as offerings. The interesting symbolic vestiges found in the megaliths are the graffiti drawn on the ceramics in post-firing condition and they are very commonly found across South India.

II. Graffiti

Megalithic Graffiti

An interesting component of the symbolic and cognitive spheres of the megalithic culture is the graffiti found on the burial pottery more frequently, and those from the habitation sites (Yazdani, 1917). However, the meaning and significance of these graffiti could be different in the contexts of those found in the burials and habitations. The graffiti mostly occur on the exterior surface of the pottery, near the rim, neck and body. These graffiti are post-firing marks, perhaps scratched on the pottery with a sharp iron or metal tool. The scratches are often not very deep and they are just up to the surface of the burial pottery, and in most cases only the slip coated on the pottery has been scratched. This aspect indicates that they were made by the users or consumers, i.e. the people who buried the dead, and not by the potters who were the producers of the ceramics. These markings seem to have been made in a hurry, through a very fast movement of hand), as part of the rituals associated with the creation of the burials and funerary practices.

The exact nature and purpose of the megalithic graffiti are uncertain. An interesting aspect of the graffiti is their common occurrence. Certain megalithic burials have only one specific type of graffito, which may convey some idea related to the affinities of the buried individual. Their origin is uncertain, and they occur in the Harappan sites and also reported in a few Neolithic sites. Many of these graffiti have similarities with the symbols on the Harappan/Indus seals (Lal, 1960). Probably, these markings indicate the identity of the people who were buried. It could be their ethnic symbol representing a particular clan or group. It is not clear if these graffiti represented a form of pictographic or ideographic writing.

Previous Research

Megalithic graffiti have attracted the attention of several scholars, including Yazdani (1917), B.B. Lal (1960), Leshnik (1974), K. Rajan (1994, 2015), S. Gurumurthy (1999), and Boivin et al. (2003). B.B. Lal (1960) has found a high percentage of similarity between the megalithic burial graffiti and the Indus script. Iravatham Mahadevan finds parallels between the graffiti from the megalithic burials and the Indus script. The graffiti on pottery from Sulur near Coimbatore have similarities with the symbols from the Harappan/Indus script (Mahadevan n.d.). Mahadevan tends to link the language of the megalithic people and the Indus people. He adds that "I suggest that such close resemblances are possible only if the South Indian Megalithic script is related to the Indus script." Hunt studied the graffiti on pottery and said that they are not potter's mark as they were post-firing in nature (Hunt 1924). According to him, similar marks are found in the same burials in a few instances, and they also appear in different burials, and hence, they cannot be owner's marks.

Fig. 1. Graffiti on pottery from Sembiyankandiyur, Mayiladuturai, excavated by Tamil Nadu State Archaeology Department

As mentioned earlier, the megalithic graffiti were drawn in a hurry, just before the pottery vessels were placed in the burials. Hence their orientation is not uniform, with the orientation of the vessels. The Fig. 1 shows double arrow symbols sometime facing the mouth of the vessels and sometime in the opposite side. Probably, the orientation in which the person, who marked them, held the vessel, while marking the symbols, was the reason for the variation in the orientation of the graffiti. This reveals that the person who marked them was doing it mechanically, and was not bothered about the orientation of the marking. The markings found on the megalithic pottery from Sanur (Banerjee and Soundararajan, 1959) show inter-mixture of several individual graffiti in different combinations (Gurumurthy, 1999: 294). It is not clear if this was intentional or they just wanted to draw all the symbols without any specific order.

Mark of Clans

Were these symbols marks of specific clans? It appears that, in

many cases, each burial has separate, distinct set of graffiti markings. This pattern has been noticed at many sites including the excavated burial site of Sanur in old Chingleput district of Tamil Nadu.

A Rare Bullock-Cart Symbol

Sometimes pictorial representations are found on the megalithic pottery. For example, a burial excavated at Anakkara, Palakkad district in Kerala by M.G. University, Kottayam under the direction of Rajan Gurukkal, interestingly, produced a bullock-cart symbol (Fig. 2) (Shajan et al., 2013-14) and the same symbol appears on the Edakkal rock shelter (Fig. 3) in Kerala (Fawcett 1901). The same symbol appears at Kodumanal (Gurumurthy, 1999: 115). Gurumurthy has interpreted this symbol as a temple tower and such subjective interpretations are inevitable in the study of symbols (1999: 115). This symbol very much matches with a bullock cart. Similar bullock carts are found in Central India (Fig. 4) and the bullock carts of the Kota community exhibited at IGRMS, Bhopal. This bullock cart design is much different from the bullock cart models found at the Indus valley. In this context, the bullock mainly indicates the similarity in design and suggests that Edakkal engravings are dateable to the Iron Age period. However, their meaning at Edakkal and megalithic pottery could be different and context specific.

Perhaps such artifacts became symbol of a clan or group of a group of people or traders. Like the manner in which the term Katalan or Meenavan refers to the Pandyas, the bullock cart might have referred to the name of a clan. Symbols of fish are found on the ceramics in several contexts (Figs. 5 and 6) and their meaning could be different and it cannot be argued that the fish symbols always signified the Pandyas. Fish being a symbol of fertility, it is found carved on many temples of later period and similarly they could have been used as symbol of fertility or prosperity without connection with the Pandyas. However, the symbol occurring on the Pandya coins could signify the Pandya identity.

Fig. 2. Bullock cart graffito on a bowl excavated at Anakkara, Photo:Author

Fig. 3. A representation of bullock cart at Edakkal Engraving in Kerala.
Source: Rajan Gurukkal

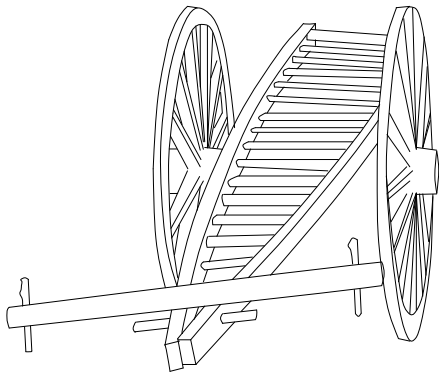


Fig. 4 Line drawing of a bullock cart from Bhopal.
Source: canstockphoto.com, image 15896805, Line drawing by T. Thangadurai.

Fig. 5. Pottery with Fish Symbols from Keezhadi.
Courtesy: The Hindu and Archaeological Survey of India

Fig. 6. Pottery with Fish Symbols from Keezhadi.
Courtesy: Archaeological Survey of India

Script/Personal Names

Were the symbols of the megalithic graffiti part of a script? Could these graffiti refer to the name of individuals? What was the importance of these symbols to the megalithic people? A graffito at Porunthal excavated by K.Rajan is interpreted to reads as "va ya ra" (Fig. 7). It could be a rare case of graffiti appears to be mentioning the name of an individual from the megalithic burials of South India. Most of the Tamil-brahmi inscriptions are found from the habitation contexts. It is a surprise find, since such script is not normally found in the burials. Interestingly, there is a graffito in the end of this inscription (?) as noticed at Kodumanal and in some rock shelters with Tamil Brahmi. A solitary Brahmi script claimed to have been found at Adichanallur inside an urn is not considered authentic. Perhaps, it was an erroneous observation (Subramanian, 2005)

Fig. 7. A Brahmi inscription (or graffito?) from a burial reading "va ya ra," with a graffito in the end (Porunthal).

Early Historic Brahmi script and graffiti

Script was thought to have appeared in the Tamil region of South India from ca. third century BCE, and recently it is argued that script developed earlier context around sixth or fifth century BCE There are serious debates on the beginning of writing in Tamil region. K. Rajan has proposed, based on recent C-14 dating of the sites of Porunthal and Kodumanal, that script was introduced in the fifth century BCE (Rajan and Yatheeskumar, 2013; Rajan et al., 2021). Iravatham Mahadevan (2003) and Y. Subbarayalu (2008) place the introduction of script in Tamil region around third century BCE. Govindaraj from the Museum Department of Government of Tamil Nadu has noticed similarity between these symbols and those from the Indus Script, and he has attempted to assign phonetic value to some of the graffiti from Kodumanal (Personal Communication).

On several megalithic pottery sherds (mostly from the habitation site) from Kodumanal, symbols are found at the end of the Tamil Brahmi inscriptions. Similar pattern is also found on one pottery inscription found at Pattanam in Kerala (Shajan et al., 2004; Cherian et al., 2007).

The pottery graffiti found along with Tamil Brahmi inscriptions at Kodumanal are discussed below (Subbarayalu, 2008: 211) (Fig. 8):

No. 5 reads "…Na n" and has with a diamond shape within a "Brahmi Ma" like symbol in the end.

No. 11 reads "kA vE" with multiple vertical lines (broken) in the end.

No. 21 reads "kOn" with Brahmi "Ma" like symbol within U symbol with double strokes on the top right, in the end.

No. 31 reads "kuviran Atan" with an arrow-like symbol (broken) in the end.

No. 79 reads "santatan" has double U symbols in the end.

No. 168 reads "…kani" and a triangle with double horns within a U symbol, in the end

Why did they place the symbol in the end of an inscription? Was it a marker of their family identity? Perhaps symbolism was strong in the Iron Age when there was no regular script and perhaps, such pictorial elements continued even after the introduction of script in the Early Historic period. They could indicate the family name or clan name or their occupation or guild to which they belonged.

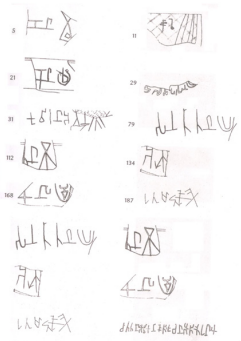


Fig. 8 graffiti found along with Tamil Brahmi inscriptions at Kodumanal (After Y. Subbarayalu 2008)

Symbols along with the Brahmi script from the Rock shelters

The Tamil Brahmi inscriptions of Tamil Nadu bear certain rare symbols (Fig. 9). And they show similarities with the markings on the pottery from the megalithic sites.

Symbol A: Circle with Hook

Iravatham Mahadevan's Symbol A (Mahadevan, 2003: 205) is found at three sites in 10 times in 9 inscriptions. These Tamil Brahmi inscriptions are found at Vikkiramangalam, Kongarpuliyankulam and Azhagarmalai near Madurai. The symbol has a circle with one hook each above and below. In some cases, three strokes extending from a central circle are found. These symbols could indicate about a particular group of merchants. It is also identified as a symbol representing gold. The symbol might be a representation of a ring. Sometimes, it has two and five strokes. It has been found at Kodumanal on a pottery as a graffito.

Symbol B: Four square

A symbol found along with Brahmi inscription has four squares/ rectangles within a square or rectangle. This symbol is found at the site of Kongarpuliyankulam and on pottery at Kodumanal.

Symbol C: Trident or tree

A symbol resembling a trident is found along with a Brahmi inscription at Edakkal along with a Cera inscription and Mahadevan (2003) relates this symbol with a palm tree, the totem tree of the Cheras. It also occurs on the seal from Anakkodai.

Symbol D: Bow and arrow

The Bow and arrow symbol is found on pottery as well as on the rock surface (along with early Vattezhuttu inscription) at the site of

Sittannavasal. The link to the Cheras is not clear here. It is a symbol of the Cheras and interestingly, it has been found at Kodumanal which was under the territory of the Cheras.

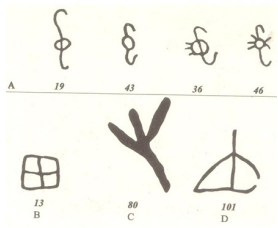


Fig. 9 Symbols Occurring along with Tamil-Brahmi Inscriptions.
Source: Mahadevan, 2003.

Symbol on Seals

A rare seal from Sri Lanka has both Tamil Brahmi and graffiti (Fig. 10). Similar combination of Brahmi and graffiti has been found in Tamil Nadu as well as Sri Lanka (Rajan and Bopearachchi, 2002).

Fig. 10. Inscription read a "kO ve ta" (left to right)
and graffito found on Anaikkodal Seal of Sri Lanka

Symbols on Coins

The coins of Chera have the symbol of bow and arrow; the Pandyas, the fish and the Cholas, the tiger. These symbols suggest the adoption of a unique symbol for each dynasty and these symbols could have been part of the clan identity in the early times. Similarly each dynasty adopted a tree and a plant as their symbol. This could have been meant for identifying the clan or sides of a warrior in a battle and for several purposes. The punch-marked coins found in South India also have several symbols and they are not discussed here.

III. Discussions

Clan identity

The symbols on the megalithic burials have cognitive signific-

ance. The graffiti appear to be pictograms in certain context and they could indicate the occupation or the rare possession of the person. Anakkara (Kerala) burial graffito could suggest that the burial belonged to the owner of a bullock cart and or the individual was doing some occupation related to bullock cart or at least the person owned a bullock cart or the person who offered the object had bullock cart as a clan mark. There is a possibility that the people adopted certain symbols as part of their group identity and several families might have had same symbols, as we find the repetition of symbols on the megalithic burials. It is common to find people or family named after the objects they own or by occupation and it becomes their identity. Many of the house names of Kerala reflect the natural features or the localities in which their house was originally located. The people might have used one symbol to represent their house name or clan name. It is possible that the bullock cart at Edakkal represented the actual object and a pictogram, while at Anakkara it could have had symbolic meaning. The graffiti could have related to the identity of the clan to which an individual belonged. They could be some kind of pictographic writing intended to be read. There is an interpretation that the Edakkal bullock cart represents the vehicle of Sun god. Here too it could have represented the symbol of movement.

Professional Identity

The adoption of certain symbols could have emerged out of the profession (occupation) of an individual or a group. Bullock-cart might have been adopted by those who possessed it or who did some kind of activities (commercial) using the bullock cart.

Identity of the Chiefs

Based on the evidence from the Sangam literature as well as the coins of the early historic period, it is clear that each chief or Vendar had his own insignia. The Pandya had fish symbol; the Chola, tiger; and the Chera, bow and arrow. In the inscriptions Meenavan is used to refer to the Pandyas and Villavan to refer to the Cheras. Here just the depiction of fish would mean the Pandyan or Meenavan. Therefore Ship can also be taken to represent the term Katalan (Samutaha Sri Lankan Brahmi from Alagankulam= Samuthiri of later times). It appears probable that the meaning of the South Indian megalithic graffito can be explained from the use of symbols by the chiefs.

In addition, various trees and flowers served as the identity of the chiefs. Having a symbol or tree or animal for group identity was

essential for various purposes. It helped them to identify themselves during the battles. Since script was not evolved during the Iron Age, symbols or pictographs became the markers of a clan or ethnic group. These symbols might have evolved from their original clan symbol of the early period.

The Pandyas had fish symbols and they are called Meenavan, one who possess fish as symbol and it could also mean fisher-folk. Why did Pandyas choose fish symbol? Kadalan (person related to sea) was also their title. They might have originally associated with the sea or coast or profession related to the coast.

The site of Keezhadi near Madurai excavated by Archaeological Survey of India under the direction of Amarnath revealed several graffiti with fish motifs and it is amazing that such motifs are found more frequently on the pottery from this site. Probably these symbols refer to Pandyans as Meenavan (Fisher folk or the one who had fish as symbol). Perhaps the Pandyas originally derived from the coastal region and hence they adopted fish as their symbol. However the fish symbols here could have been a symbol of fertility.

Cholas had tiger as their symbol. And they were also known as Kozhiyar (Kozhi in Tamil means cock or rooster). Tiger was generally a ferocious animal and they might have chosen it, due to its fierce characteristics. It was adopted perhaps to symbolically assert their domination.

The Cheras had bow and arrow. They might have adopted the bow and arrow, since it was essential for their warfare. Did they adopt bow and arrow technology in a later context? Was it a rare artifact? More than bow and arrow, the technology of digging roots and setting traps was essential in the hilly region with rich resources, unlike the open-air landscapes of Tamil Nadu where bow and arrow would have been essential from an early period.

Individual Creativity

The solitary marks, i.e. those occurring individually, from the habitation sites could be related to individual pastime and creative activities, without any other specific purpose, as in the case of the ship graffito from Alagankulam. They could have been produced out of human creativity and the interest in symbol or image making, a type of individual behavior.

Practice Pieces

The pictorial graffito from the Early Historic sites could have

been for the practice activities of the artists who wanted to execute them on some other media (Begley, 1996). Such examples have been found at Arikamedu. Especially the fine rouletted ware sherds have been chosen for this purpose.

Graffito as Group Identity

It is also possible that people had objects, for example ships, as their clan identity; however, not many instances have come from archaeological contexts in South India.

Conclusions

Symbols were used for several belief oriented as well as other activities in the ancient societies. Therefore one common function cannot be suggested for the use of several kinds of symbols. Like the way an individual's village name, family name and his/her own names are mentioned in the later inscriptions, the symbols marking clan, family or group might have been used by the megalithic people. In Tamil Nadu, certain communities have various clan groups (koottam, e.g. Kongu Vellalar, Singh, 1996: 1980) within. The graffiti might represent similar clan identities of the early period. The symbols of early period need to be studied holistically with rock paintings and all the symbols found in other media (Selvakumar, 2011) for a better understanding. It is difficult to assume that a symbol used in one part of South India had the same meaning in other part of South India. Sometimes some symbols might have been associated with certain names. For example, cattan is a personal name appearing in the Sangam Age and it might have been represented by one or two symbols. Perhaps these symbols represented the broader clan or occupational or professional identities. The meaning of the South Indian megalithic graffito can be explained from the use of symbols by the chiefs (Cholas, Cheras and the Pandyas) of the Sangam Age. Most probably the symbols represented the clan identities. The occurrence of Tamil-Brahmi with symbols could be explained as the Brahmi script representing the personal or individual names and the graffito as representing the clan identity. It is not clear if the clan identity is reflected in the material culture. The similarity between the Edakkal engraving and the megalithic graffito of bullock cart may suggest the similarity of design and it helps to date the Edakkal engravings to the Iron Age period, and since the Tamil-Brahmi inscriptions at the Edakkal caves date to early centuries of the common Era, and they were written over the engravings i.e. after the engravings it is safe to assume that Edakkal engravings belong to the Iron Age.

References

Banerjee, N.R. and K. V. Soundararajan, 1959. "Sanur 1950 and 1952: A Megalithic site in District Chingleput", *Ancient India*, 15: 4-42.

Begley, V. 1996. *The Ancient Port of Arikamedu: New Excavations and Researches*, 1989-92. Pondicherry: École Française D'Extreme-Orient, Pondicherry.

Boivin, Nicole, Ravi Korisettar, P.C. Venkatasubbaiah 2003. "Megalithic Markings in Context: graffiti marks on burial pots from Kudatini, Karnataka". *South Asian Studies* 19(1): 21–33.

Cherian, P.J., V. Selvakumar, and K.P. Shajan 2007. "The Muziris Heritage Project: Excavations at Pattanam- 2007", *Journal of Indian Ocean Archaeology,* 4: 1-10.

Fawcett, F. 1901. "Notes on the rock Carvings in the Edakkal Cave Waynad", *Indian Antiquary*, 30: 409- 21.

Gurukkal, Rajan and Raghava Varier. 1999. *Cultural History of Kerala*, Vol. I. Thiruvananthapuram: Government Press.

Gurumurthy, S. 1999. *Deciphering the Indus Script. From Graffiti on Ancient Indian Pottery.* Chennai: University of Madras.

Hunt, E.H. 1924. "Hyderabad Cairns and their Significance". *Journal of Royal Anthropological Institute*, XLIV: 140-156.

Lal, B. B. 1975. "The Indus Script: Some Observations Based on Archaeology". *Journal of the Royal Asiatic Society of Great Britain and Ireland,* 2: 173–77. http://www.jstor.org/stable/25203657.

Lal, B.B. 1960. "From Megalithic to the Harappa: Tracing back the graffiti on pottery". *Ancient India,* 16: 4-24.

Leshnik, L. 1974. *South Indian Megalithic Burials: the Pandukal Complex*. Wiesbaden: Steiner Verlag.

Mahadevan, I. 2003. *Early Tamil Epigraphy from the Earliest Times to the Sixth Century A.D*. Oxford University Press. Harvard Oriental Series 62.

Mahadevan, I. n.d. "A Megalithic Pottery Inscription and a Harappan Tablet: A case of extraordinary resemblance". July 21 2007. Url: http://www.harappa.com/arrow/megalithic-inscription.html.

Mithen, Steven J. 1999. The Prehistory of the Mind: *The Cognitive Origins of Art, Religion and Science.* Thames and Hudson.

Mohanty, R.K. and V. Selvakumar. 2002. "The Archaeology of Megaliths in India: 1947-97". In S.Settar and Ravi Korisettar (Eds.), *Indian Archaeology in Retrospect-Prehistory: Archaeology of South Asia. Vol 1* (313-51). New Delhi: ICHR and Manohar.

Morrison, Kathleen D. Seetha N. Reddy, Arunima Kashyap. 2015. "Agrarian Transitions in Iron Age Southern India: Social And Environmental Implications". *In South Asian Archaeology and Art 2012 Volume 1, Man and environment in Prehistoric and Protohistoric South Asia: New Per-*

spectives (185-195). Belgium, Brepolis: Publication soutenue par la Région Île de France, Indicopleustoi Archaeologies of the Indian Ocean 12.

Rajan, K. 1994. *Archaeology of Tamilnadu (Kongu country)*. Delhi: Manohar.

Rajan, K. 2014. *Iron Age-Early historic Transition in South India: An Appraisal. Padmashri Amalananda Ghosh Lecture.* New Delhi: Institute of Archaeology.

Rajan, K. 2015. *Early Writing System: A Journey from Graffiti to Brahmi.* Madurai: Pandya Nadu Centre for Archaeological Research.

Rajan, K. and O. Bopearachchi. 2002. "Graffiti Marks of Kodumanal (India) and Ridiyagama (Sri Lanka) - A Comparative Study". *Man and Environment,* XXVII (2): 97-105.

Rajan, K. and V.P. Yatheeskumar. 2013. "New evidences on scientific dates for Brahmi Script as revealed from Porunthal and Kodumanal Excavations". *Pragdhara*, 21-22: 279-295.

Rajan, K., V.P. Yathees Kumar, M.Rajesh, R. Sivanantham, et.al. 2021. "Recent Radiometric Dates and Their Implications in Understanding the Early Writing System and Early Historic Archaeology of Tamil Nadu". *Man and Environment,* XLVI(91):57-86.

Selvakumar, V. 2011. "Rock Art as Cognitive-Functional Representations: Methodological Issues in the Study of Rock Art in India". *Man in India*, 91(2): 363-376.

Shajan, K.P., R. Tomber, V. Selvakumar, and P.J. Cherian. 2004. "Locating the Ancient Port of Muziris: Fresh Findings from Pattanam", *Journal of Roman Archaeology*, 17: 312-320.

Shajan, K.P., V. Selvakumar, P.Radhika, K.P. Rajesh, et.al. 2013-14. "Archaeological Excavation at the Megalihic Site of Anakkara, Palakkad Dt, Kerala, South India: A Preliminary Report of 2008 Season". *Tamil Civilization*, 25(1-4):25-51.

Singh, Kumar Suresh. 1996. *Communities, Segments, Synonyms, Surnames and Titles.* Delhi: Anthropological Survey of India.

Subbarayalu, Y. 2008. "Mankala Thamizh Brahmi Ezhuttuporippukal". *Avanam* (Journal of Tamil Nadu Archaeological Society), 19: 189-221.

Subramanian, T.S. 2005. "Rudimentary Tamil-Brahmi script' unearthed at Adichanallur". *The Hindu,* Thursday, Feb 17, 2005, Chennai Edition. http://www.hindu.com/2005/02/17/stories/2005021704471300.htm

Yazdani, G. 1917. "Megalithic Remains of the Deccan - A New Feature of them". *Journal of Hyderabad Archaeological Society*, 3: 56-79.

© 2020. *Social Orbit* ISSN 2395-7719, Vol.6, pp.61-82

Iron Age Early Historic Monuments of Kerala Region: Rethinking Analytical Gaps

Rachel A. Varghese
Research Officer
Kerala Council for Historical Research
Thiruvananthapuram, Kerala, India
E-mail: rachelvarghese84@gmail.com

Abstract

The Iron Age-Early Historic (IA-EH) monuments/memorials are the category of archaeological remains that have received most academic attention in Kerala. This overview article evaluates the existing published research in the area with an effort to discern the broad trends and gaps in analytical knowledge. With the aid of more recent studies, it goes on to discuss four possible avenues of research that can further our current understanding of these remains.

Keywords: IA-EH monuments, megaliths, Kerala, Anakkara, landscape.

Introduction

Kerala, as a region, had been largely marginalized in archaeological research in India until recent times. In the last few years, we see a spurt in the number of archaeological studies. The Iron Age- Early Historic (IA-EH) memorials/monuments are the single category of remains that have received the most attention in archaeological research from the region. Usually discussed under the overarching term megaliths, the IA- EH monuments refer to the diverse monument types with over-ground and subterranean features occurring in different combinations. Some of the over-ground expressions include Dolmens, Stone Circles, Menhirs, Cairns, Umbrella Stones, Hood Stones and Hat Stones. Urns, Rock-Cut Chambers, Pits and Cists are some of the subterranean features of IA-EH monuments. Monuments display architectural variations and are often found in combinations of two or more types. Apart from the structural elements, the monuments often have associated artefacts that help us make sense of the intended purpose of the monuments. The three major categories of associated finds include pottery, semiprecious stone beads and iron implements. The monuments found in the Kerala region are mostly secondary in nature. Whole skeletons have not been found from burials. The bone

remains are usually charred or fragmentary. The available evidence does not point to the direct burial of bodies. It is possible that many of these monuments were intended as memorials and might not have been without human remains. We have a handful of radio carbon dates from the region. This, along with comparative dating, suggests a large temporal span during which the people erected IA-EH monuments. We can assign a broad chronology extending from circa 5th century BCE to 5th century CE to the practice. But we do have dates that are earlier (Sathyamoorthi, 1992) and later (Uesugi et.al., 2020) than this.

Even though the region has a very long history of research on the IA-EH monuments, our understanding of their builders and the social context remains patchy and rudimentary. This paper evaluates the existing research on the monuments from Kerala region in an effort to identify the reasons for this gap in analytical knowledge. Here I will not give a complete overview of the research undertaken so far. The focus of the article would rather be on certain broad trends in research. Through an examination of some of the more recent works, I will chart out the possible avenues that further research can take in order to address the existing gaps.

Trends in Existing Research: A Brief Overview

The trajectory of academic interest in IA-EH monuments can be traced back to the 19th century and the colonial antiquarians as is the case of archaeological studies in most parts of the country. While some of these efforts amounted to mere collection of artefacts, in some instances they involved careful documentation of finds in a way that surpassed many of the post-independence period research. For example, in the first published report of the excavation of an IA-EH monument in Kerala by J. Babington (1823) at Chathaparamba at the border of Calicut and Malappuram Districts of Kerala, there is a rich description of the monuments along with detailed sketches of the monuments themselves and the goods found from within. Darsana (2006) has mapped the antiquarian research into the IA-EH monuments of Kerala which points to traits such as the employment of local knowledge, richness of description and efforts towards interpretation that characterized at least a few of these studies. Some of the early studies took the format of the listing of sites and other archaeological remains (Sewell 1882), while others were short articles published in different journals of the Royal Anthropological Institute of Britain and Ireland. Some of them are primarily descriptive in nature, and focus on drawing comparisons between sites and artefacts (Cammiade, 1930; Fawcett, 1896a; 1896b).

The Archaeological Survey of India (ASI) as well as the State Departments of the Archaeology of Travancore and the Cochin State conducted a few studies after the1940s. The efforts of V.D. Krishnaswami, Anujan Achen and others made these studies more systematic. The excavation of the urn burial site of Porkalam was undertaken by B.K. Thapar in1948 (Thapar, 1952). The Archaeological Survey of India has reported a number of megalithic sites in Kerala in the post-independence period. These reports came up in the annual reviews of ASI titled *Indian Archaeology: A Review* (IAR 1990-91, 2002-03).The majority of the reports mention only the location of the site and type of monument. Some of them go on to describe the morphology of the monument. ASI has conducted a handful of excavations. There are no detailed systematic reports available for these excavations, except in the case of Cheramangadin Central Kerala where the report is richer in detail in comparison to the others. The State Department of Archaeology has also done a few excavations of IA-EH monuments. The report of Mangadu Excavation by Sathyamoorthi (1992) in Kollam District was published by the State Department of Archaeology in 1992.

Many of the important studies that we have on IA-EH monuments were part of doctoral research by scholars of different University Departments in India (George, 1975, Chedambath, 1997, Peter, 2002, Nihildas, 2014 and Ambily, 2017, for example). Most of these works involved explorations of large regions along with excavations in some cases. The site of Anakkara was excavated in 2008 and 2009 by the School of Social Sciences, Mahatma Gandhi University. The report of the excavations is forthcoming. In the last few years the faculty and students of the Department of Kerala have been undertaking systematic excavations (Abhayan et.al., 2020, Uesugiet.al., 2020), and explorations of the region as part of Kerala Megalithic Gazetteers Project (KMGP). The total number of identified sites in the region, according to Peter (2018), is well over one thousand.

Terminology and Rethinking the Culture-Historic Approach

As mentioned in the beginning, I use the term Iron Age-Early Historic (IA-EH) monuments to refer to the wide variety of memorial types which have, until recently been included under the umbrella term megaliths. The term IA-EH refers to the broad time span of construction of these monuments which corresponds to the beginning of the use of Iron in the sub-continent. In Babington's report (1823) the term used is *Pandoo Coolies*. Different terms are used to indicate specific types of monuments locally such as *muniyara, nannangadi,* etc. In the

early academic publications such as those of Babington, often anglicized corruptions of these terms were used. The local names continue to be in use in academic publications even now. While it is important to take note of the terminology used by the public, this has often resulted in confusion because sufficient descriptive data does not accompany many of the reports. Hence it becomes difficult to identify the monument types referred to from colloquial usages and interchangeable use of terms. There are a set of problems related to the usage of the term megaliths. Some of the types included within the category do not have large lithic appendages associated with them, as the term would suggest. Hence, the term megalith is a misnomer here.

Often usage of particular terminology is considered as a matter of choice and to be of little consequence to actual research. However critical appraisal allows us to see certain implications. The use of the term megaliths to denote the IA-EH burials/memorials from South India came through drawing comparisons with monuments of memorial/sepulchral nature with huge lithic appendages from different parts of the globe. By the early decades of the 20thcentury, the efforts of both colonial and indigenous scholars made the study of the monuments more systematic. By this time the term 'megaliths' was being employed unproblematically to incorporate a wide range of burial practices from South India. Hence, comparisons with practices across the globe that come under the term begin appearing in studies. In 1947, an article by Gordon Childe (Childe, 1947) was published in the journal Ancient India. With function and plan as the bases of classification, Childe brought together a vast amount of evidence from around the globe including that on the megaliths of South India. He found that a complex of traits, like collective burials and port holes, are regularly associated with the monuments. These differences and similarities form the basis of inclusion or exclusion of a category of monuments within the classification. The system of classification based on a complex of associated traits thus cannot accommodate a wide range of monuments, including many of the subterranean rock cut caves of Kerala. Childe proposes the likely origin of the megaliths to be around the Eastern Mediterranean and suggests a diffusion that was effected either by land or by sea by multiple possibilities of human agents. Krishnaswamy (1949) observed that the megalithic monuments of South India belonged to an altogether different cluster. He attributed their difference to the different 'currents of migration'. It was this 'contact' that led to the mixture of influences and rituals in these cultural regions. Changes are

perceived not as products of processes operating from within but as imposed through outside influences either by actual contact or through a diffusion of ideas.

Varying theories of diffusion have been proposed hence. Allchin and Allchin argued for maritime influence from the Middle East and B.B. Lal suggested Heliolithic diffusion. Haimendorf argued that the builders of megaliths came from the near East (Parapola, 1973). Apart from pondering into the direction and channels of possible diffusion, the studies that take the culture-historic approach have the limited scope of simple descriptive accounts. One of the main drawbacks of the culture historic approach is that, it does not focus on explanation or causality much. Change is always perceived to have been brought from outside. For instance, there is a persistent tendency to look for links with Indus Valley sites, in academic and more so in popular writings on archaeology in the region. While this particular trend does not usually come into the study of IA-EH monuments, the micro regional variations and the agential role of the early populations to bring about such variations do not get much attention in the culture-historic approach. The possibility of multiple and regional origins for IA-EH monuments is not compatible to the approach.

Understanding the Theoretical Gaps

Even though the IA-EH monuments of Kerala region have been researched for a little less than 200 years, our understanding of the builders of the monuments is still rudimentary. There have been a number of reasons for this including lack of attention to detail and context in the documentation of the monuments, the relatively marginal status of archaeology in the region, and the lack of habitation evidence that can be associated with the builders of the IA-EH monuments. However, I consider the theoretical gaps in the archaeological studies in the region as the most significant factor that limits our understanding of the period. More recently, there have been a few works that have theoretically analysed the available information on the IA-EH monuments. I will discuss these works later in this article. However processual and post processual approaches that have informed mortuary/monument studies in other parts of the globe have not been part of the studies in the region in a major way until recently.

One of the main reasons for this is the persistence of antiquarian tendencies and culture-historic approach to archaeology that I discussed above. Another reason is the circumstances that lead to a find. Many

of the IA-EH monuments are accidental finds, especially subterranean ones like urns encountered in the course of modern-day construction and agricultural activities. Many of them go unreported. Sometimes they are reported in local newspapers or to academic institutions and local authorities. In a limited number of cases, the finds are retrieved and stored in local museums or institutions through salvage operations. The circumstances of accidental finds usually limit the retrieval of any contextual information associated with the monuments.

While one might assume that disturbance caused to the site, would lead to the loss of any potentially useful information, this is not always the case. The salvage operation to retrieve an urn burial at Nannangadikkunnu in Palakkad District by the Department of Archaeology, Kerala University is a case in point (Abhayan et.al., 2020). While most part of the soil inside the urn was already scooped out and the urn was in a highly disturbed condition, the excavators through a careful process of excavation and documentation were able to reach valid observations regarding the original placement of the urn in the pit. The GPS location of the site, and the other sites in the region, as well as the landscape context, have also been noted. This opens up the possibility of future research, for instance in approaches based on comparative perspective and landscape archaeology. Interestingly, the excavators also suggest that the excavations were "aimed to provide awareness to the local people about the significance of this kind of remains" (ibid., 89). Articulation of Public Archaeology concerns has been rare in the region and including public awareness as part of the aim of a project is an important development in this direction. The possibility of Public Archaeology approaches in the research on IA-EH monuments will be taken up further in the last section.

Unlike Nannangadikunnu, many of the IA-EH sites we have much less contextual information. Often we do not have much information about sites except the name of the village where it is located and the type of the monument. Another major disadvantage is the lack of habitation evidence for the period from the region until recently. With the identification of the site of Pattanam in Central Kerala in the late 1990s and its subsequent excavations, we have non-mortuary archaeological remains from the region for the first time. While the site is of immense significance to understand the later phase in which IA-EH monuments were being erected, Pattanam has no direct association with the monuments.

Efforts towards Theorization

Given these broad trends there have been a few efforts at theorization in the study of IA- EH monuments. In K M George's doctoral work (1975) he identified forty-one new sites and excavated three monuments. He gives a brief description of the sites, and focuses largely on diffusion theories. The advantage of the work is that, by bringing together the available information on the sites, he is able to make suggestions on the nature of the distribution of different monument types. George argues that the monuments directly reflect social ranking as can be deduced from the amount of labour that went into the construction of each.

The next major excavation of an IA-EH monument in Kerala was undertaken in 1992 by Sathyamurthy (Sathyamurthy, 1992). The scope of the study as stated by the author is two-fold: "(i) probe thoroughly into the cultural complexity of a megalithic site in the vicinity of Western coast, (ii) to find out the chronology of Iron Age in Kerala, in order to trace the route through which Iron was introduced to South India" (ibid.). Here he employs the principle of hybridisation as a frame and through comparisons using earlier studies, radiocarbon dates from the site and nature of burial goods from different levels, brings out the chronological span of the site whereby it is assigned as a zone of first arrival and transition. While the question of chronology is important, the narrowly defined scope of the study limits its possibilities to a great extent. To give an example, by way of entering into the central problem, Sathyamurthy attempts a brief sketch of the life of the megalithic builders. Here, the reconstruction is based on evidence from the site alone, without reference to the information already available i.e., without effort to place it in a broader context. The report makes an important suggestion that the monument was put to repeated use. However, this aspect is also not addressed any further to understand the life history of the site.

Except for brief considerations, the research on Kerala megaliths seldom considered the environmental factors. Jenee Peter (2002) in her doctoral research, talks about the possibility of such considerations. Peter studies the Iron Age sites of Central Kerala, listing out a total number of 658 sites and in the course of her work identifies30 new sites through survey. The major aim of the thesis is to form a typological distribution pattern for the megalithic sites of the region with a focus on the environmental factors at work. Peter calls these the geographical determinants of the site and seeks to see how they

are reflected in the selection of the sites. She states that it is possible to compensate for the absence of habitation sites from the region by studying the burial sites along with their environmental setting so as to derive a pattern by which possible settlement areas could be hypothetically marked. The spatial extent of human settlements, she says, is delimited by the environmental and geographic factors. She considers space as something given meaning to by human agency. However she does not take these ideas forward in terms of data or at a theoretical level. Peter explores the possibility of the analysis of sites at three levels – intra-site, inter site and inter-zone. On the basis of the analyses she reaches at important assumptions regarding the location peculiarities of the sites. However, these remain at a speculative level due to the inadequacy of data at disposal, and point to the need of generating fresh contextual information on the IA-EH sites that are already known as well.

A rare work that focuses on Kerala IA-EH period with a strong theoretical orientation is the doctoral dissertation by Shinu Abraham titled *Social Complexity in Early Tamilakam: Sites and Ceramics from the Palghat Gap, Kerala, India* (2002). She conducted archaeological field survey in the Palghat Gap and documented numerous megalithic clusters and other sites along with a body of ceramics (Abraham, 2002, 2004). Abraham argues that if there existed in early *Tamilakam*[1] a system of sub-regional localized communities, these would be invisible when applying standard region-wide interpretations of the material culture. She introduces Heterarchy as an alternate model for social complexity. The concept of heterarchy was first introduced into settlement archaeology by Carole L. Crumley in 1979 as an alternative to band-tribe-chiefdom-state model of socio-cultural complexity. Heterarchy is defined as "the relation of elements to one another when they are unranked, or when they possess the potential to be ranked in a number of ways" (Crumley, 1995). Abraham conducted two seasons of field survey in the Palakkad gap area to generate a fresh body of data pertaining mainly to the megaliths of the region. The data was complemented by a surface survey for ceramics which had not hitherto been attempted in Kerala. A significant outcome of the ceramic survey was that Abraham was able to identify possible location of non-burial/habitation sites on the basis of lack of the association of certain pottery clusters with burial sites. Moreover, by limiting the regional scope of the study, Abraham was able to do an effective distribution analysis taking into account environmental correlates as well as inter

and intra site variability. One important aspect that Abraham's work demonstrated was that surface explorations can themselves generate important information that opens new avenues of analysis.

Avenues for Further Research

In the previous discussion I looked at a selection of existing research on the IA-EH monuments to identify the gaps in research and certain broad trends. In the following section by looking at my own fieldwork at the site of Anakkara in 2010 and some of the new studies that are coming up, I examine the possible avenues of further research in the region.

A. Landscapes and Spaces

The IA-EH monuments have been studied out of their spatial context in most cases. We do not have indications of the associated landscape features or of the spatial organisation of sites within a locale. Such information would have facilitated important conclusions, as in the case of the Palakkad Gap Survey (Abraham, 2002) discussed above. One of the theoretical gaps in the studies on prehistoric archaeology of Kerala is in addressing the question of space. Landscape is often dealt as a static setting for events and actions. Space has come to be understood in the last few decades as dynamic – it is as much a mental construct as it is a material one (Harvey, 2001). Space is constituted experientially and can be restructured. Such restructuring of the landscape is mediated by the architectural forms, and the specific setting of the monument becomes a locus imbued with symbolic meaning sustained by the spatial organization within and among the sites and in relation to the landscape. Symbolic architectural forms, like the IA-EH monuments can be understood as restructuring space in important ways.

With this understanding in mind, I conducted a short fieldwork at Anakkara in Palakkad District in 2010 [2] . The site of Anakkara first came into archaeological notice in the 19th century. Robert Sewell mentions four rock cut caves in his *Antiquarian Remains of the Madras Presidency* (1882). However, we don't have further details about these monuments. In 2008 and 2009, the School of Social Sciences, Mahatma Gandhi University conducted two seasons of excavations at Anakkara. In 2008 (Shajan et.al. 2014), three trenches were laid out for excavation, two in the private property named Chuliparamb and one in the adjacent private property under the ownership of Sainudeeen. The trenches correspond to three monuments, one Umbrella Stone, mul-

tiple hood stone circle and one urn burial. The lid of the latter was accidentally spotted by the land owner while taking out soil for construction purposes.

In 2009, the team further excavated the hillock of Nasranikunn (10049'29.39"N; 76002'01.77"E) in Anakkara. Nasranikunn is a roughly flat-topped hillock with a maximum height of 70 m above MSL. In 2009, three monuments and a quarry/ ritual (?) area were visible over the hillock. The Mahatma Gandhi University team, of which the author was a member, excavated one of the monuments, a slab circle which was found to enclose a three-chambered rock cut cave (ANK09VI) and documented an area with multiple quarry marks and post holes (ANK09V) on the table land. The other two monuments had over-ground stone appendages. The excavated remains from the two seasons, that include ceramics, iron implements and semi-precious stone beads are currently housed at the museum of the School of Social Sciences of the Mahatma Gandhi University.

In the year 2010, a short season of fieldwork with the specific aim to document the spatial/ landscape aspects of the cluster of sites at Nasranikunn was undertaken. The details of the work done and the inferences are discussed elsewhere (Varghese 2013, 2018). Here I will only discuss the methodology adopted in brief to highlight how survey-based observations can supplement excavation data and the larger body of knowledge regarding IA- EH monuments, even if such surveys are constrained by contemporary factors. The major constraint for the fieldwork at Nasranikunn was the massive landscape alterations that happened around the time due to construction and large scale quarrying, along with contemporary divisions of property. These factors severely limited the possibility to understand past landscapes.

As part of the 2010 fieldwork, the two monuments in the cluster which were not already assigned numbers, were designated as ANK-10VII (slab circle of dressed laterite) and ANK10VIII (menhir erected on a low mound). Specially designed data sheets were used to record information regarding the landscape context, location (with GPS points) monument orientation and aspects of visibility of each monument. Aspects of visibility include a) viewshed (See figure 1) (the 3600 view of the landscape with monument at the centre in order to understand how it is oriented in relation to landscape features), b) monument inter-visibility, and c) reverse viewshed (recording the visibility of sites from four cardinal directions and prominent landscape features). The recording of each monument was done by taking GPS locations, plotting the

visible features of the monuments, photography of the architectural elements and setting, and descriptive recording of the monuments and their surroundings. ANK09VI, the excavated rock cut cave within a slab circle, had already been plotted by the excavation team in 2009. Scaled drawings of the over-ground features of the other two monuments were done (See Figure 2). While the over-ground features do not reveal the nature of the monument in its entirety, scaled drawings were deemed important because rapid landscape alterations and possibility of site destruction could lead to the loss of information and measurements of the distances among the monuments. The quarry/ritual area, ANK09V was found to be covered by construction debris and only the measurements of the spread and distance from other monuments could be noted.

Using the information generated through these methods, spatial analysis of the site was done at three levels:

1. At the macro regional level, the Nasranikunnu cluster as a whole was examined in relation to the other known monuments from the region and the major landscape features. In the course of the walk-over survey, an urn burial and a cap stone were located on the hillock of Nasranikunn. The GPS location for these, finds along with those of dressed laterite slabs (part of a monument) originally located in 2009 were noted. Macro regional analysis was severely limited due to landscape alterations and the conclusions reached were tentative in nature. However, it could be observed that the monuments of the cluster could not be considered isolated. Given the commanding location of the Nasranikunn complex (by virtue of its higher altitude) in relation to the other monuments, and its position in the landscape (that provides a high degree of visibility), a tentative argument could be made that the complex had symbolic domination over the landscape of Anakkara.

2. At the second level, the cluster was studied closely to understand the relationship among the sites within the complex and the quarry/ritual (?) area through aspects of orientation, inter-visibility and viewshed. The three monuments were found to be having a conscious pattern in terms of orientation, being placed roughly along a straight line. ANK09VI was found to be associated with a visually less elaborate monument ANK10VII, through proximity. This suggested hierarchical arrangement of monuments. Rather than being conclusive statement, the observation about hierarchy remains an informed speculation at this stage. This is because the over-ground features of ANK-10VIIand ANK10VIII, and because we do not know enough about the

original level of elaboration of the monuments. Similarly, we do not know about the subterranean features of the monuments. The choices of the monument builders regarding the hierarchy of the monuments would also have depended on subterranean features. While the over-ground features of the monuments do not seem to have any orientation towards the landscape features, the subterranean features of ANK09VI has an eastward orientation. Upon the table land the monuments are located at the area that has most visibility, even as the vegetation cover might block them from view. This indicates a conscious choice in their placement in landscape.

3. At the third level, spatial organization within a single monument was examined. This is the excavated monument ANK09VI. Spatial organization was studied in conjunction with the observations made by the excavators in 2009. Six levels of organization could be identified within the single monument that would have allowed differential and progressively limited access to people at the time when the structure was originally constructed and ritually transformed into a memorial/ monument. The monument was also seen to incorporate landscape features architecturally, such as the slope of the hillock to achieve a dome shape, and incorporation of a natural groove to achieve hemispherical division of the space within the inner circle of the monument.

From this brief analysis it emerges that the architectural grammar and the location choices of sites have signification in the symbology of the monuments. While the inferences drawn in the case of Nasranikkunn complex are tentative, it is possible to extend the methodology to the study of other sites by similarly recording over-ground and contextual information. Comparative analysis and studies in conjunction with detailed excavation reports and study of burial goods will increase the analytical potential of such data.

This significance of landscape and context is taken more into account in some of the recent studies. The Kerala Megalithic Gazetteers Project (KMGP), which we discussed at the beginning of this article, is an important instance. The project specifically aims to address the existing lacunae in research[3]. Among the many objectives of the project, are explorations to locate and document the already reported sites, identification of new sites and the creation of an integrated database. As part of the project, excavations are also being conducted. The documentation of sites identified through exploration is done or is aimed to be done in a detailed manner with geo-coordinates, information on access to the site, details current ownership, geo-morphological data,

photographic documentation, measurements, drawing and through distribution maps that look at spatial patterning.

Study of spatial patterning can give important information on aspects like whether or not specific areas were designated for the monuments, were monuments public or private in nature, how they related to the landscape and what the factors are that determined internal differentiation among monuments of a single location. The latter aspect can be very important in the case of spaces where multiple and varied monuments co-occur, like the site of Cheramanangad in Thrissur district, where we have umbrella stones, hat stones, hoodstones and circle stones occurring in close proximity in a limited space obviously dedicated for the purpose.

As the region lacks in habitation evidence, such studies will allow the researchers to make suggestions regarding settlement choices and mentalities of the builders of the monuments. The focus of KMGP on such aspects highlight the importance given by the excavators to the spatial context and landscape of the sites and can provide an analytically significant information on the IA- EH monuments and their builders in the region.

B. Architecture

As we discussed above, most of the reports from the region do not give us much information beyond the village where a monument is located and its broad type. However, within a single broad type ofmonuments, there can be considerable architectural variation. For instance, there are two protected rock cut cave sites near Kunnamkulam that are only a few kilometres apart from each other- Chovvannur and Eyyal. The Chovvannur cave is single chambered and has a recessed entrance towards the east with a veranda. The other walls of the chamber are circular and the ceiling is vaulted. The chamber has two benches—one each on the northern and southern sides. On the western side, there are five circular blocks cut out of laterite, possibly intended as stands for vessels. The Eyyalcave has two chambers excavated into a laterite boulder. The outer court leads to the main chamber, which faces east, and there is a smaller chamber to its right. The main chamber has a bench of irregular width that runs along all three sides of each chamber, except on the side where the entrance is. The two caves show considerable architectural variation though they are both considered within the broad type of rock cut caves. Some rock-cut caves can have more elaborate structures than these two. One example is the cave at Nasranikkunnu in Anakkara that we discussed above. Similarly, com-

binations of over-ground and underground features will not get reflected by assigning a monument asa single type. Monuments can also show variations and similarities in terms of burial goods, independent of their typologies.

Observations based on choices of raw material, organization of space within a monument and architectural elements, can give important insights into aspects like technological advancement, expertise and mentalities, these are rarely explored in the studies on IA- EH monuments of Kerala. We saw how in the case of Nasranikkunnu, a close analysis of the spatial organization of a single monument can help us to reach informed inferences regarding aspects like differential access. In the case of the cist burial site Enadimangalam excavated by the Department of Archaeology, University of Kerala as part of the KMGP, through careful and slow excavations and detailed recording, the excavators arrive at inferences on facets like tool technology. Importantly, such observations regarding architecture are possible even in the case of monuments that are disturbed.

The recent excavations of two rock-cut caves at Kuttikol in Kasargode district (Usuegi et.al. 2020) is an important example that illustrates the potential of careful documentation of architectural elements at the time of the excavations. In this case each architectural element is carefully documented and contour maps and plans the monuments are also made. The excavators are able through this exercise reach logical assumptions regarding the function of architectural elements which are currently not in their original position owing to later disturbances, and regarding tool technology by paying attention to aspects such as chisel marks on the surface of the monuments.

C. The Burial Assemblage

It is only rarely, that burial assemblages associated with the IA-EH monuments have received adequate attention in the region. Babington's (1823) report contains detailed drawings of artefacts the kind of which are absent in many recent archaeological reports. Plenderleith, in 1896, published a short note on the chemical composition of the glaze on black polished pottery from urn burials in Wynad (Plenderleith, 1896). The burial assemblage allows the researcher to explore aspects like craft specialization, exchange relations, ritual personal choices, social differentiation and sometimes aspects of the everyday through extrapolations. In some of the more recent studies, there have been efforts towards careful documentation of artefacts. The excava-

tions at the sites of Niramakulam (Kumar and Ambily, 2014, Uesugi et.al. 2019a, 2019b), Kuttikkol (Uesugi et al., 2019b, 2020), and Nannangadikkunnu (Abhayan, 2020) are examples.

Post excavation studies that focus entirely on burial assemblage have largely been absent in the region. Uesugi et.al (2019b) proposes a ceramic chronological sequence for the finds from IA- EH monuments, primarily through the study of typology of excavated ceramics from Kuttikol and Niramakulam and the radiocarbon dates from the site. A recent PhD dissertation submitted to the Tamil University, Tanjavur titled *Megalithic Pottery of Central Kerala by* Jaseera CM (2020) is another important effort. The researcher analyses the available body of Iron Age- Early Historic Ceramics from the region to build a typology of the ceramics from the region. She also draws analytical inferences integrating multiple approaches to ceramic studies regarding technology and use. Such an exercise is important because it allows a frame of reference to study new bodies of data that will be generated from the region. Ina detailed study of stone beads excavated from Niramakulam (Uesugi, 2019a), morphological classification, examination of drilling technology and comparative analysis have been attempted. Further studies in this direction and on other artefact classes like iron implements are awaited

D. Life Histories and the Present Lives of Monuments

In his Section President's Address at the 80th Session of the Indian History Congress, V. Selvakumar (2019) discusses how archaeology can be effectively employed in conjunction with other bodies of evidence and present landscape/settlement patterns to build a discussion on the development of settlements, and the construction of cultural landscapes of human geography in the Lower Kāvéri valley. This work deals with both time and space with fluidity. Rather than focusing on individual sites, the discussion is on archaeological landscapes evolving through time. This also allows the author to move beyond conventional periodization of history and into the contemporary. A similar sort of exercise would be very valid for the region represented by present-day Kerala.

In the case of IA-EH monuments this would mean looking beyond the actual boundaries of the monument into the landscape as I discussed above and also seeking to understand the life history of the monument as not frozen, but evolving through time. Such an approach would mean looking at the ways in which people interacted with monuments over

time up until the present. In the case of Enadimangalam, the excavators talk about possible reuse of the monument in later phases . The conventional understanding is that monuments which are disturbed in later phases lack archaeological potential. Observations as the above, tell us about the ways of relating with monuments over time and allows one to think beyond the period of their original construction.

Contemporary interactions between archaeology and the people have also evolved as an important subject matter of study in archaeology during the last five decades. Public Archaeology, the disciplinary field that looks at the ways in which archaeology relates to the public in the contemporary period, is a well-developed area of research and practice across the globe. Researchers have looked at the contemporary lives of monuments to draw attention to the poor state of preservation and threats of destruction (Rajesh K. P., 2019).But we do not have studies that specifically focus on the monument- people interaction from the region. Even so, we have information regarding the ways in which people interacted with the IA-EH monuments. There are passing references, even from the colonial writings, on how the burial remains had been perceived in the recent past. Babington (1823) mentions the prevailing beliefs that the monuments were the work of the Pandavas or of other celestial beings. He also mentions the prevalence of a legend that the monuments were abodes to old people who in the past diminished in size so much that they were not fit to live in the outside world. Hence these old people were to be placed inside the monuments along with the implements they used in real life. The myth that themicaceous sand in the pottery associated with the burials was pure gold that turned into sand on exposure to human eyes was also prevalent (ibid). Similar legends are also mentioned by Logan (1887). These early researchers, however, were not free from the colonial penchant for attributing ignorance to the local population. They tended to see these myths and legends as evidences of ignorance, and concluded reductively that the local population was not capable of informed awareness of the past. People engage with the remains in a variety of ways, which may or may not be informed by the knowledge produced by archaeologists. Often, archaeologists make use of such popular notions prevalent in an area to uncover the existence of archaeological sites.

There are numerous instances of accidental or deliberate destruction of IA- EH monuments or neglect leading to eventual destruction. However, there are also multiple other ways in which people relate to the monuments. The Kannimara Shrine in Marayur, which is now a

place of worship, is a reused dolmen (See Figure 3). Local myths associated with monuments are still prevalent. For instance, ANK09VI, excavated in 2009 that we discussed above was assumed to be a well by many of the locals prior to the excavations. There was no fear of approaching the monument. During the course of the excavations many inhabitants narrated a story that had been passed on to them of an underground tunnel and assumed that the rock cut cave within the stone circle opened the entrance to the said tunnel.

It would be wrong to assume that public understanding of monuments is limited to myths and ritual appropriations. There is also strong academic interest on the part of communities; this interest in turn facilitates archaeological studies and ensures continued protection of the monuments. The site of Anakkara during the excavations was frequented by schoolchildren, media, as well as a large number of citizens from the area and far off places.

The local television network made and aired a documentary on the ongoing excavations.

The public demanded lengthy explanations from the archaeologists on site. They also assisted the work by providing amenities to the excavators. Figure (4) shows dolmens in Kovilkkadav of Marayoor district where school children have written messages on the monuments near their school compound with an appeal that they be protected. While the practice in itself might be damaging to the monuments, the shaping attitude tends towards preservation. A detailed study from a public archaeology approach that documents the multiplicity of public approaches to the IA- EH monuments is wanting from the region.

There is a prevalent notion that Kerala, as a region, lacks archaeological potential. Apart from institutional limitations, the marginal status of archaeology in Kerala can be seen as a product of multiple factors including continuing antiquarian tendencies, failure to explore interpretative possibilities of archaeology and a preference for spectacular remains. Especially for the Early Historic Period, the IA- EH are often considered as secondary to the text-based studies on social formation, and are used as corroborative evidence to such studies. This is at the expense of the methodological and theoretical potential of archaeology. My effort in this paper has been to understand the reasons for the analytical gaps in the study of IA- EH monuments in Kerala. We see that many of the recent works have started to address these lacunae by taking up questions related to landscape, architecture, burial assemblage and so on. A deeply theoretical approach is essen-

tial to further the directions initiated in these studies. Life histories of monuments and public – archaeology relations, that have largely been ignored till now, are important aspects that will allow us to have a fluid understanding of the monuments in terms of temporality. This article, through selected studies, seeks to bringout the yet to be tapped potential in archaeological studies on IA- EH monuments. While indiscriminate excavation with the aim of retrieval of artefacts can only be damaging to the archaeology of the IA- EH monuments, fresh efforts are needed for integrating available archaeological information, detailed documentation and systematic and careful excavations (when necessary) and post excavation studies. These, along with a strong theoretical foundation, can add on to the existing analytical knowledge of the period in the region in important ways [4].

Figures

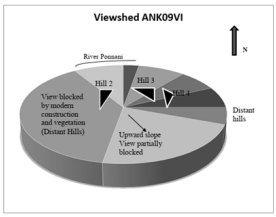


Figure 2: Example of Diagrammatic Representation of Viewshed Analysis. Author 2010

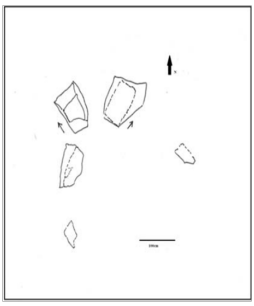


Figure 2: Scaled Drawing of ANK10VII Varghese and Damodaran 2010

Figure 3: Kannimara Dolmen Shrine, Idukki. Photo Author 2015. Courtesy: sahapedia.org

Figure 4: Dolmens, Kovilkadav, Idukki District. Photo: Varghese 2015.
Courtesy: sahapedia.org

Notes

1. Tamilakam is conceived as a singular geographical entity represented by the present day states of Tamil Nadu and Kerala and is assumed to exhibit more or less uniform characteristics. This is an assumption that relies heavily on the corpus of early Tamil poetry called the Sangam literature.
2. This work was part of the author's Master's dissertation titled Interpreting the Ritual Complex of Nasranikunn: A Study of a Megalithic Complex in Central Kerala, submitted in 2011 in partial fulfilment of the requirements of the Masters dissertation as part of the Erasmus Mundus Masters in Quaternary and Prehistory. The fieldwork was supplemented by the information from the unpublished reports on Anakkara excavations in 2008 and 2009 and personal communication with the team members. The author acknowledges Professor Rajan Gurukkal, Director of Excavations, for the access to unpublished information, photographs and his insights regarding site. The field work of 2010 was conducted with the assistance of Sreelatha Damodaran, Research Scholar, Department of History, University of Calicut and the work was conducted under the supervision of Dr. George Nash, Visiting Faculty, IPT, Portugal.
3. The project is currently ongoing, and the information discussed here is primarily on the basis of a lecture delivered by Dr. G.S. Abhayan, principal Investigator, Kerala Megalithic Gazetteers Project titled 'Kerala Megalithic Gazetteer Project and the Excavation of a Cist Burial at Enadimangalam' on 20 June 2019 as part of the KCHR Public Lectures on Revisiting Iron Age in South India at Thiruvananthapuram and through personal communication with the investigators.
4. See footnote 3.

References

Abhayan, G. S, Ajit Kumar, S. V. Rajesh, C. P. Remya, et.al. 2020. "Salvage Archaeological Operations of Megalithic Burial Urn at Nannangadikkunnu, Palakkad District, Kerala." In S. V. Rajesh, G. S. Abhayan, Ajit Kumar, and Ehsan Rahmath Ilahi (Eds.) *The Archaeology of Burials: Examples from Indian Subcontinent, 1* (86–103). New Delhi: New Bharatiya Book Corporation.

Abraham, Shinu A. 2002. *Social Complexity in Early Tamilakam: Sites and-Ceramics from the Palghat Gap, Kerala, India*. PhD Thesis, University of Pennsylvania.

Abraham, Shinu A. 2004. 'Applying Anthropological Models of Social Complexity to Early Tamilakam: Palghat Gap Survey' *The Journal of the Centre for Heritage Studies,* 1: 1-19.

Ambily, C. S. 2017. *Holocene Archaeology of Pamba Basin*. PhD Thesis. Thiruvananthapuram: Department of Archaeology, University of Kerala.

Babington J. 1823. 'Descriptions of Pandoo Coolies in Malabar' (Transactions of the Literary Society of Bombay 3: 324-30). As reprinted in *AdhAram: A journal of Kerala Archaeology and History*: Vol 1 (6-16).. Kottayam: Kerala Puratattva Samiti.

Cammiade, L. A. 1930. ". Urn-Burials in the Wynaad, Southern India." *Man*, 30: 183–86.

Chedambath, Rajan. 1997. I*nvestigations into the Megalithic and Early Historic Periods of the Periyar and Ponnani River Basins of Kerala*. PhD Dissertation. Pune: Deccan College Post Graduate and Research Institute.

Childe, Gordon V.1947. 'Meglaiths." *Ancient India*, 4 (July 1947- January 1948): 5-13.

Crumley, Carole L. 1995. "Heterarchy and the Analysis of Complex Societies." *Archeological Papers of the American Anthropological Association*, 6 (1): 1–5.

Fawcett, F. 1896a. "Rock-Cut Sepulchral Chambers in Malabar." *The Journal of the Anthropological Institute of Great Britain and Ireland,* 25: 371–73.

Fawcett, F. 1896b. "Rock-Cut Sepulchral Chambers in Malabar." *The Journal of the Anthropological Institute of Great Britain and Ireland,* 25: 371–73.

George, K. M. 1975. "Archaeology of Kerala Upto 1500 AD." PhD Thesis. Baroda: Maharaja Sayaji Rao University.

Indian Archaeology 1990–91: A Review. New Delhi: Archaeological Survey of India, 1995.

Indian Archaeology 2002–03: A Review. New Delhi: Archaeological Survey of India, 2009.

Jaseera C. M. 2020. *Megalithic Pottery of Central Kerala*. PhD Thesis. Tanjavur: Tamil University.

Krishnaswami V.D. 1949. "*Megalithic Types of South India." Ancient India*, 5: 35-45.

Logan, William. 1887 [1951]. *Malabar: Vol*1. Madras: Government Press

Nihildas, N. 2014. *Archaeology of the Anjunad Valley, with Special Reference to the Megaliths and Rock Art, Idukki District, Kerala.* PhD Thesis. Pune: Deccan College Post Graduate and Research Institute.

Parapola, Asko. 1973. *Arguments for an Aryan Origin of South Indian Megaliths.* Tamil Nadu: State Department of Archaeology

Peter, Jenee. 2002. *Dimensions of Megalithic Culture of Kerala in Relation to Peninsular India: An Interdisciplinary Approach*. Ph.D Dissertation. Baroda: M.S. University.

Peter, Jenee. 2018. "Social Hierarchy and Mortuary Variability: The Iron Age Culture of Peninsular India with Special Reference to Kerala." *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 6: 515–28.

Rajesh, K P. 2019. "Misfortunes of the Megaliths of North Malabar: Revisiting the Umbrella Stones (Kodakkal) Site of Perambra, Calicut District." *Heritage: Journal of Multidisciplinary Studies in Archaeology*, 7: 352–92.

Sathyamurthy T. 1992. *The Iron Age in India: A Report on Mangadu Excavation*. Thiruvananthapuram: Department of Archaeology, Government of Kerala.

Selvakumar, V. 2019. "Historical Archaeology in India: Iron Age-Historical Landscapes in the Lower Kāvéri Valley". Section President's Address, 80-th Session of the Indian History Congress. Kannur, December.

Sewell, Robert. 1882. *Lists of the Antiquarian Remains in the Presidency of Madras*. Madras: Government Press.

Shajan, K.P. V. Selvakumar, P. Radhika, K.P. Rajesh, K and Sreelatha Damodaran. 2014. "Archaeological Excavation at the Megalihic Site of Anakkara, Palakkad Dt, Kerala, South India: A Preliminary Report of 2008 Season". *Tamil Civilization*, Vol. 25 (1-4 Apr. 2013 - Jan. 2014): 25-51.

Thapar, B K. 1952. "Porkalam 1948: Excavation of Megalithic Urn Burial." *Ancient India* 8: 3–16.

Uesugi, Akinori, Ajit Kumar, G S Abhayan, S V Rajesh, and Yasuji Shimizu. 2020. "Excavations of Rock Cut Burials at Kuttikol, Kerala." In S V Rajesh, G S Abhayan, Ajit Kumar, and Ehsan RahmathIlahi Eds.). *The Archaeology of Burials: Examples from Indian Subcontinent*, II (396–419). New Delhi: New Bharatiya Book Corporation.

Uesugi, Akinori, C.S. Ambily, Ajit Kumar, G S Abhayan, and S V Rajesh. 2019. "Stone Beads from Megalithic Burial at Niramakulam, Kerala." In S V Rajesh, G S Abhayan, PreethaNayar, and Ehsan RahmathIlahi

(Eds.). *Human and Heritage: An Archaeological Spectrum of Asiatic Countries (Felicitation to Professor Ajit Kumar), Vol. 1*. New Delhi: New Bharatiya Book Corporation.

Uesugi, Akinori, C.S. Ambily, Ajit Kumar, S V Rajesh, and G S Abhayan. 2019. "A Study of Ceramic Sequence in the Megalithic Culture of Kerala." *Man and Environment*. XLIV (1): 21–32.

Varghese, Rachel A. 2013. *Interpreting the Ritual Complex of Nasranikunn: A Study of a Megalithic Complex in Central Kerala*. Master's Dissertation published as a limited monograph as part of Cadernosde Quaternárioe Pré-História, Série Arqueologia, vol.14. Portugal.

Varghese, Rachel A. 2018. "Monuments in Space: Towards Developing a Methodology to Record Spatial Information on Archaeological Sites". In Devadevan, Manu V. (Ed.) *Clio and Her Descendents: Essays for Kesavan Veluthat.* New Delhi: Primus Books.

© 2020. *Social Orbit* ISSN 2395-7719, Vol.6, pp.83-102

Revisiting Cheramanangadu: A Study on Pottery Assemblage *

Jaseera C.M.
"Aathira"
TC 47/2620, KRRA 58
Maviravila Lane, Mudavan Mukal
Thiruvananthapuram, Kerala, India
E-mail: jassiarc@gmail.com

Abstract

Pottery is one of mundane subjects in the archaeology of Kerala. A systematic analysis of pottery constitutes one of the major tools to contextualize the past society. This paper discusses the result of the analysis conducted on the pottery assemblage unearthed from the site Cheramanangadu. The study gives a detailed account of pottery typology. The paper proposes interpretation of the burial pottery by applying fabric analysis and use alteration trace analysis.

Keywords: fabric, typology, use alteration, megalithic, Iron Age- Early Historic period.

Introduction

Iron Age-Early Historic burials or megalithic[1] burials have been a subject of scholarly research since the discovery of such burials from Chattaparamba by Babington in 1819 (Babington, 1823). Thereafter numerous megalithic sites were reported and a few of them were excavated in Kerala. They are valuable in providing general information, but the basic historical understanding of these monuments is confined mostly to monument typology. Studies on the grave goods are very limited; grave goods are considered as a vital indicator to understand

* This paper is a developed version of a segment in my PhD thesis. Thanks to Dr. V. Selvakumar; I have benefited from his intellectual insights which stimulated me to think beyond the constraints of the discipline. The support and facilities provided by Archaeological Survey of India, Trissur circle is acknowledged. I am extremely thankful to Dr. Smitha S. Kumar (Superintending Archaeologist), Kumaran (Assistant Archaeologist), Gangadevi (Assistant Archaeologist), Dr. Rani (Assistant Archaeologist), and Sumesh (staff of the department) for creating a tensionless atmosphere to access, collect and process the data which is contradictory to the tendency noticed in most of the museums or institutes in Kerala. The technical support in GIS provided by Muhammed Asif and Midhun Madhavan is greatly acknowledged. I am very much thankful to Rajesh Karthy for photographic documentation.

archaeological record since the 19th century, particularly after worsaae's Law. Pottery is often considered as a mundane subject in the history of archaeology in Kerala. But a very few articles has been published so far, particularly focusing on burial pottery from Kerala. K. Govinda Menon (1937) and Akinori et.al (2019) have studied about megalithic burial pottery. The primary task of the present study is to understand the nature of pottery deposited as grave goods in the megalithic burials located at the site Cheramanangadu in Trissur district of Kerala.

The site

Cheramanangad is located near Vellarakkad, 8 km away from Kunnumkulam in Talappily taluk of Trissur district in Kerala which can be accessed on the Vellarakad-Trippalassery route. The plot where the megalithic burial monuments are located is known as Kudakkalparambu, which is 1.8 km north east of Cheramanangadu junction. The site is located in 100 41' 07.38" N and 760 07' 18.2" E in the global positioning system (Figure 1). The site is now under the protection of Archaeological Survey of India and the protected area has a total of 69 monuments consisting of multiple types of megalithic monuments, including umbrella stone, hood stone, hat stone, pit burial and stone circle (Figure 2). Laterite is the raw material used to construct these monuments except in pit burial which is capped by a granite stone.

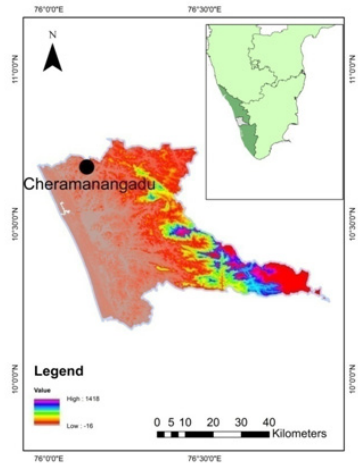


Figure 1:Location of the megalithic burial site at Cheramanangadu
(Illustration: Author)

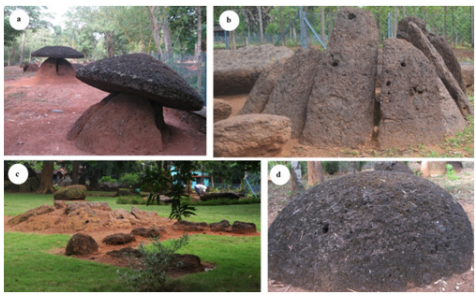


Figure 2: Multiple Monuments at Cheramanangadu;
a. umbrella stone, b. hood stone, c. hat stone, d. stone circle
(Image: (a,b,c) Rajesh Karthy 2013; (d) Author 2018)

The site was excavated under the leadership of B. Narasimaiah of the Madras circle of the archaeological Survey in 1990-91 (IAR 1990-91) and later on it was re-excavated in 2002-03 (IAR 2002-03). During the first season five monuments were opened up for study. The excavators marked these monuments as megalith I – hood stone [2] (class IV type1); megalith II – multiple hood stone (class V type 2); megalith III – granite cap stone; megalith IV –topical/umbrella stone (class IV type 2); and megalith V – stone circle (class 1 type 2). The excavation during the second season opened two monuments marked as megalith I (class IV type1) and megalith II (class V type 2). The non-standardized terminology in referring the various types of burials in previous archaeological literature has created confusion while comparing these monuments, hence a new set of typological classification has been proposed (Jaseera (in press)) and a code is given in the bracket referring this newly proposed classification.

The excavation of megalith-I has revealed an urn within a pit under a bun-shaped laterite stone. The burial goods inside the urn consisted of a vase (red ware), bowl (rcp), bone fragments and a vase (red ware), three bowls (Black and red ware) and an iron object. The urn was filled with sand up to the middle and then with loose gravelly soil. The urn was sealed with a granite cap stone. No burial goods were unearthed from megalith-II. The monument consisted of eight clinostats arranged in roughly circular pattern. The clinostats were placed in a pit. Megalith-III also was not seen to carry any burial goods. Megalith IV revealed features similar to megalith I. An urn has interned into a pit which had eleven pots and fragments of bones. Megalith V has revealed three pits within the circle. Each pit has been marked with the alphabets A, B and C. An urn sealed with a laterite cap-stone has been unearthed from Pit A. The urn filled with sand was at the bottom and a

copper bowl and iron objects were recovered just above the sand bed. The clayey soil covered the copper and iron objects. Pottery and a triangular granite lid were also unearthed from the urn. A heap of granite rubbles were noticed at the corner of the pit. Pit B also revealed an urn sealed with laterite cap-stone. Iron objects, and a copper bowl were recovered from the urn and three granite slabs were unearthed from the pit. Pit C also yielded similar artefacts as in Pit A and B. Not much data is available on the excavation conducted in 2002-03 except a brief description in IAR (IAR 2002-03)

Pottery assemblage from Cheramanangadu

A techno-morphological typology has developed for the megalithic burial pottery assemblage, out of the materials collected in surveys and excavations (Jaseera, 2020). In this classification the whole pottery assemblage is divided into six classes [3] (Table 1), based on the chain operatoire. This classification method is followed because wares tend to be defined very loosely. The methodologies for the megalithic burial pottery have been thoroughly described (Jaseera, 2020) and will not be rehearsed here.

Class	Variants	Description
I	Nil	Unslip red ware
II	Variant 1	Red slip Ware
	Variant 2	Restricted red slip ware
III	Nil	Black and Red Ware
IV	Nil	Black slip ware
V	Variant 1	Russet coated painted on red slip ware
	Variant 2	Russet coated painted on black and red ware
VI	Nil	Urn

Table 1: Megalithic burial pottery classes

The pottery assemblage unearthed from the site currently kept in the Interpretation Center of Trissur Circle of Archaeological Survey of India has a total of 32 vessels, including complete and broken, and a few potsherd collected from excavated burials of the site Cheramanangadu. An identification code is assigned to each vessel which is a combination of site code (i.e. CHD) and a number for each vessel of the assemblage. A total of five burials were excavated in 1992-93, but the potteries unearthed during this season of excavation have no context details for understanding the monuments from which the pottery was retrieved. This lacuna restricts us to understand the vessel frequency in each burial. The potteries unearthed from the excavation conducted in

2002-03 season were individually marked with their context. The pottery assemblage of the site, unearthed from two seasons of excavation, belongs to class I, II (variant 1), III, V (variant 1) and class VI. The description given below focuses only on the classes of pottery yielded from Cheramanangadu.

Class

Class I is an unslip ware (Figure 3). Munsell reading for this class is 5YR 8/4 pink. The pottery is hard and irregularity can be felt by touching the surface. A combined production technique might have been used for making these vessels. Traces of secondary modeling have been observed in the vessel (CHD 23) where the ring foot is made separately and attached to the base of the shaped pot. Only one complete specimen was noticed in this category which is from the site Cheramangadu and other analyzed sherds, including rims are small specimens. Continuous horizontal striation on the exterior surface indicates that the pot was smoothened while it was rotated.

Figure 3 Vessel CHD 23 belonging to class I (Image: Author 2016)

The potteries belonging to class II variant 1 has a red slip on surface of the pottery (Figure 4a and b). This class is referred in archaeological literature as red slip ware. There are many variations noticed in the red slip according to the chronological and regional variations. However, in the literature all of them are included within the umbrella term 'red slip ware' which makes the comparison difficult. Very often this group of pottery is also referred to as red ware in archaeological literature. This class belongs to the fabric group 2a. Class II, Variant 1, is medium coarse pottery with application of slip on the exterior, and often in the interior as well. The Munsell readings obtained for this class are 7.5 YR 4/6 red, 10 YR 4/6 red, 7.5 R 4/6 red, 2.5 YR 3/6 dark red. The observation of joining junction in the vessels numbered CHD.18 and 19 shows that the vessel pars were made separately and joined together later on.

Figure 4a: vessels belonging to class I variant; a.CHD.13, b. CHD.25, c. CHD.31, d. CHD.12, e. CHD. 9, f. CHD.15, g. CHD.24 (Image: Author 2016)

Figure 4b: vessels belonging to class I variant 1; a.CHD.14, b. CHD.10, c. CHD.19, d.CHD.11, e. CHD 18 and 19. (Image: Author 2016)

The pottery known as black and red ware forms the class III (Figure 5). BRW is one of the most discussed pottery classes owing to its distinctive double colour. It has a black slipped interior surface and on the exterior black colour is confined to the upper part, mostly in the rim portion. The remaining exterior surface has red slip. All the vessels in this belong to fabric group 2a except one vessel which belongs to fabric group 2 b.

Figure 5: vessels belonging to class III; a.CHD.7, b. CHD.27 c. CHD.20, d.CHD.21, e. CHD.28. f. CHD.29 (Image: Author 2016)

The class V consists of vessels variant 1 is those with painting on Red Slip Ware, commonly known as russet coated painted ware (Figure 6). Among the examined assemblage, the vessels belong to fabric group 2a. The RCPW has white or pale white painted designs on the exterior.

Figure 5: vessels belonging to class V; a.CHD.8, b. CHD.6 c. CHD.1, d.CHD.16, (Image: Author 2016)

Urns, generally treated as a kind of vessel form, are treated here as class IV (Figure 6) due to the distinct fabric and chain operatoire. This class includes urns found inside the Iron Age-Early Historic burial monuments. Urn is a large terracotta vessel with a bulbous body. Paddling marks can be seen in the interior. These vessels appear with or without slip. In cases where the urn is treated with slip, red slip is applied to the exterior. The urns yielded from the site belonging to fabric group 1b.

Figure 5: urn sherds belonging to class VI (CHD.29) (Image: Author 2016)

The representation of vessels belonging to these classes is not equally distributed. Among these, class II variant 1 is the dominant one which represents fifty percentages in the total assemblage. Class III and class IV has equal distribution i.e. seventeen percentage and class v variant 1 represents thirteen percentage in the entire assemblage. In the case of class VI, all the urns found in the excavated burials are not preserved in the center and the percentage shown in the chart is based on the number of urns examined. The chart given below gives an idea of distribution pattern of pottery at Cheramanangadu (Figure 6).

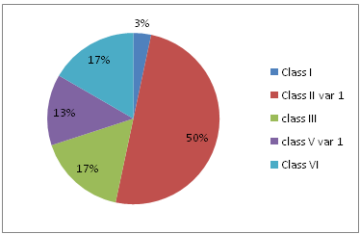


Figure 6: Distribution of pottery classes at the site Cheramanangadu.

Fabric groups

The fabric analysis was conducted on some of the samples to understand the composition of clay. A fresh break was made by snipping off a corner of the sherd with pliers to examine the fabric of each sherd from a freshly cut section. This was not done in the case of whole vessels. The fabrics were studied with the assistance of a 10x hand lens and a portable digital microscope (Micro-Capture, Veho vms004).

The digital microscope was used only for the initial identification of fabrics. A rigorous checking like thin section analysis may bring more fabric groups which is not focused here. The Fabric groups were identified on the basis of variations in the composition of fabrics. Two major fabric groups were identified in the analyzed assemblage. Group1has a high frequency of inclusions, quartz particles are the dominant temper and has a coarse texture. The second group has a slightly more compact texture with tiny inclusions. There are a number of variants in this group.

Fabric group 1a: The texture is very coarse and has a very grainy fracture (Figure 7a and b). It has a few elongated voids. The temper includes high frequency of closely spaced angular elongated quarts grains up to 2mm, a few rounded elongated red, brown and black grits (up to 1mm). The angular quarts particles indicate that quarts was crushed and added to the clay as temper. It has poor pebble sorting. One of the specimens has a single core section and Munsel reading is 5 YR 8 /4 pink. The other one has a section with a thick margin and thin core, margin is 10 YR 2/9 pale orange yellow and the core is 5Y 4/1 dark gray. This group noticed in a few vessels belonging to class I and II variant 1.

Fabric group 1b: This group has a coarse texture with closely distributed sub-rounded quartz particles which measures up to 1mm and organic inclusions (Figure 7c). It has widely spaced black patches. Non-fused organic inclusions are visible in some parts of the section. The voids are elongated and widely spaced. This group has a single core section and the Munsel reading is 7.5 YR 5/6 strong brown. This fabric was noticed in the urn fragments from Cheramanangadu.

Fabric 2a: It has a semi compact texture with a few sand inclusions and irregular fracture (Figure 7d). The voids are elongated. The inclusions consist of white elongated particles below 1 mm size and black elongated particles. Compared to the group 2a, the proportion of sand is high in this group. Tiny specks of mica are visible among the inclusions. It has a single core section with Munsel reading 7.5 YR 4/1 dark gray. This group is the most abundant fabric noticed in the whole assemblage. All the vessels belonging to class V variant 1 and class III except one have made of fabric group 2a.

Fabric 2b: It has a semi compact texture with a few sand inclusions and irregular fracture (Figure 7e). The voids are elongated. The inclusions consist of white elongated particles below 1 mm size and

black elongated particles. Compared to the group 2a, the proportion of sand is high in this group. Tiny specks of mica are visible among the inclusions. It has a single core section with Munsel reading 7.5 YR 4/1 dark gray. This fabric group noticed only on one specimen belonging to class III

Figure 7: a. Fabric 1a ((32X magnifications); b. fabric 1a ((30X magnifications); c. Fabric 1b (32X magnification); d. fabric 2a (30X magnification); e. fabric 2b (32X magnification). (Image: Author 2016)

Vessel form

A complete list of vessel forms for the megalithic ceramics of Kerala has given below (Table 2) (Jaseera, 2020). Among these the vessel forms A, B, C, D, E, F, G, I and O has unearthed from the site Cheramanagadu.

Code	Forms
Form A	Dish
Form B	Bowl
Form C	Deep Bowl
Form D	Bowl with wide orifice
Form E	Lid/ lid cum bowl
Form F	Pot with very short neck
Form G	Pot with short neck
Form H	Pot with high neck
Form I	Bowl with flange at the waist
Form J	Dish/Bowl on stands
Form K	Pot without neck
Form L	Pot with funnel neck
Form M	Pot Stand
Form N	Legged pots
Form o	Urns

Table 2: List of vessel form codes with their respective forms

In the whole assemblage the form B predominates and there is marked difference in the representation of forms in each class. The class I is represented by a single specimen of form D. all the vessel forms available in the site, except form D has a representation in class II variant 1. Class III is represented by only vessel form B. A few sherds of form O were also analysed. The excavation reports mentions

the recovery of a number of urns, but all of them are not preserved. The chart (Figure 8) given below illustrates the form frequency in each class.

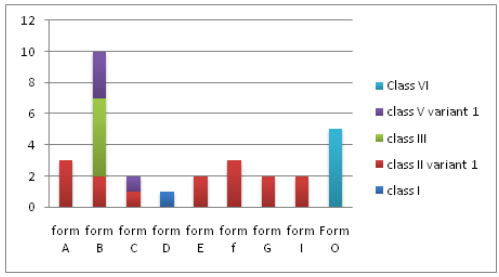


Figure 8: Vessel form frequency in each class

Typology

The morphological typology of vessels unearthed from central Kerala belonging to each class has formulated (Jaseera, 2020), but here only the vessel types yielded from Cheramanagdu is discussed here and The class I represented by only one vessels specimen which belonging to from D- Bowl with wide orifice and type 1. Type 1 (Figure 9) has out-turned, horizontally bent, rounded rim with a groove just below the rim and has a convex sided body. This type has a round base and ring foot.

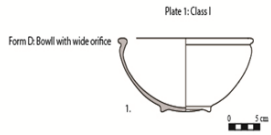


Figure 9: vessel form and typology of class 1; 1. CHD.23, dia ext 21.5cm (Illustration: Author)

Various vessel forms and types are noticed in the class II variant 1 (Figure 9 and 10). Three types of vessel shape have observed in the form A. The type 1 variant1.1 has thickened rim on the exterior leading to a gentle undercut joining to the flared sides and has sagger base. The type 1variant 2 has a gentle beaked rim on exterior and a blunt projection where the body joins with the rim. The sides are flared joining to the round base. Variant 3 has inturned thickened rim with round lip and has gentle projection where the body joins with the rim. It has rounded thickened rim on the interior with undercut leading to the oblique sides

and sagger base. The vessel form B consists of single vessel type. The type 1 in form b has simple rim with round lip and slightly flared sides. The profile is rounded on exterior at the junction of flat base. Two vessel types are noticed in vessel form C. Type 2 has slightly inverted simple rim with round lip and the interior has slightly thickened round rim. It has a round base with gentle bending towards the obliquely leveled sides and has a sharp bend in the junction of lower and upper body. The upper body is tapering towards the rim. Type 3 has in turned rim with round lip and shallow undercut on the interior. It has straight sides just below the rim which is leading to concave bend, then it forms an oblique profile which gently bends towards the round base. Two distinct vessel types noticed in the form E (Figure 11). Type 1 has short ledge rim with round lip and dome like body with sagger base. The interior has curved rim merged into a deep groove leading to oblique sides. Type 2 has externally splayed out rim with shallow undercut leading to round body and round base.

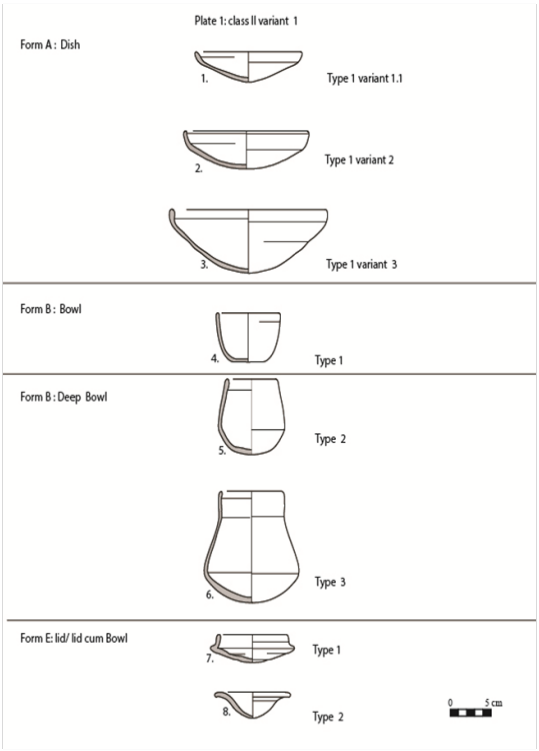


Figure 9: Vessel forms and types of class II variant 1-1. CHD.3 ,Dia ext 13cm, 2. CHD.19, dia ext 15cm, 3. CHD.11,dia ext 19cm, 4. CHD.2 Dia ext 7.5cm,5. CHD.10, dia ext 6cm, 6. CHD.14, 7. CHD.4, dia ext 8.5 cm, 8. CHD.26, dia ext 9cm. (Illustration: Author)

Form F consists of two vessel types. Type 1varaint 2 has out turned rim, bulbous body and round base. It has out turned slightly thickened rim with a round lip and concave neck leading to an oblique shoulder and has bulbous lower body leading to round base. The specimen from Cheramangadu has three grooves on the shoulder. Type 6 has flared rim with out-turned round lip. The neck has concave profile and the shoulder is a splayed shape. It has gentle projection at the junction of shoulder and body. The body forms bulbous profile leads to a gentle bend towards the flat base. The specimen from Cherumanangad has four grooves on the shoulder. Two vessel types included in the vessels form G. Type 2 has two variants. Type 2 variant 1 is characterized by a flared rim and a bulbous body. It has flared rim with out-turned pointed rim. It has a concave shape at the neck. The shoulder is obliquely leveled, then the body forms a bulbous profile leads to the flat base and has projection at the junction of body and base. Type 2 variant 2 has out turned triangulated rim leading to straight neck and shallow concave profile on the junction leading to bulbous body which joins with flat base. It has a prominent projection at the junction of body and base. The interior form a convex profile covering the rim and neck and it gently projects to form concave interior body which sharply bends towards the flat base. Form I has type 1 variant 2. It has a slightly curved upper body deeply bend towards the flange and the flange has rounded upper and lower sides which join to the oblique lower body and round base. The interior is obliquely leveled both on the upper and lower body and the groove at the junction of upper and lower body is not deep. Two broken rim less pots belonging to this class not included in typological classification because a complete analogue of such vessels so far noticed from any other site.

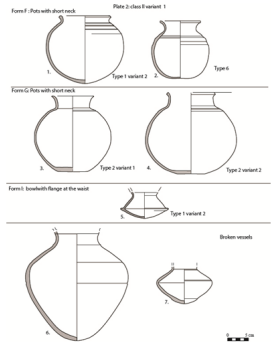


Figure 10: Vessel forms and types of class II variant 1- 1. CHD.15, dia ext 12 cm, 2. CHD.9, dia ext 9.5cm,3. CHD.13,dia ext 11 cm, 4. CHD.12, dia ext10cm 5. CHD.17, dia neck ext 6.5cm6. CHD.25, dia ext neck 10.5cm, 7. CHD.24, dia ext neck 6cm (Illustration: Author)

Figure 11: Form E; a. CHD 26, b. CHD 4 (Image: Author, 2016)

Class III has represented only in vessel form B and a number of vessel types noticed within this form (Figure 12). The variant 1 has slightly interned simple rim and convex upper body gently bent towards oblique lower body has a gentle projection leading to the flat base. The rim of the specimen unearthed from Cheramanangadu has broken away. However complete specimen was unearthed from other sites. The type 4 variant 1.1 has collar rim with slightly out turned lip and obliquely leveled interior. It has bulbous body and round base. The type 4 variant 1.1 has collar rim with slightly out turned lip and obliquely leveled interior. It has bulbous body and round base. The type 4 variant 1.2 has slight variation on the interior rim which is slightly thickened and round in profile. Type 8 variant 1 has out-turned round lip leading a round upper body which gently merges to obliquely shape lower body. It has projection where the lower body joins with a flat base.

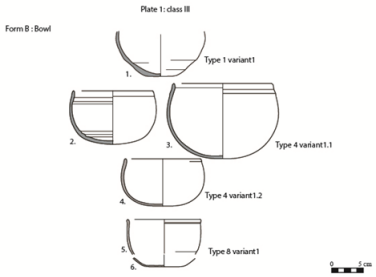


Figure 12 Vessel forms and types of class III-
1.CHD.7, dia base ext 5cm 2. CHD.20,dia ext 12.5cm,
3. CHD.22, dia ext 15.5cm 4. CHD.21, dia ext 12cm, 5. CHD.27, dia ext 12cm,
6.CHD.28 dia ext 6cm.(5 and 6 could be parts of the same vessel)
(Illustration: Author)

The class V variant 1 consists of vessel form B and C. Two vessel types are noticed in the form B. The type 1variant 1.2 has slightly incurved rim. The convex profile of the upper body gently bends to join the base. The variant 2 has slightly in turned rim with pointed

lip and the upper body has an ovoid profile which gently merges to the oblique lower body with sharply projected junction leads to flat base. Wavy lines are painted on the exterior surface of the specimen discussed above. The vessel form has represented by only one vessel type. The variant 2 has simple round rim and tapering sides with sharp carination at the lower end leading to a round base. The painting on the surface depicts wavy lines.

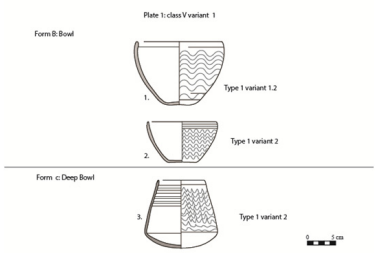


Figure13: Vessel forms and types of class III- 1. CHD.6, dia ext 15cm, 2. CHD.1 dia ext 12cm, 3. CHD.16, dia ext 8cm (Illustration: Author)

A number of urns were recorded in the excavation report, however only a few sherds are available in which a rim sherd and base sherd noticed. The rim is belonging to type 2 variant 12. It has nodule like thickened rim on the exterior. The rim offset from the body with shallow bend at neck. The interior rim has a convex shape and it offset from the body with a bend. The specimen has finger impressed chain design on the neck. The base of urn noticed in the collection belonging to base type 3. It has a truncated base and the lower body is splayed out.

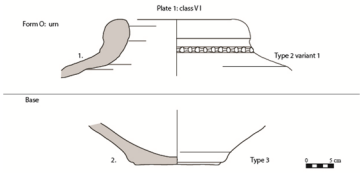


Figure 14: Vessel forms and types of class III- 1.CHD.29, dia unknown, here 20cm, 2. CHD.30 (Illustration: Author)

Discussion

The diverse fabric groups noticed among the potteries unearthed from the site Cheramanangaduu give some insights to understand the nature of this pottery assemblage. The lack of contextual details of some of the samples and poorly defined internal chronology of the monuments limited to make a comprehensive analysis. However, the

fabric analysis and use alteration analysis give some clue to understand the nature of the pottery assemblage.

The variability in fabric can be taken as an indicative to propose that potteries had not been made by following a uniform production process. It is possible that the function of vessel may have decisive role in the clay preparation. For example, the clay paste for making the cooking vessel is not always same as the clay paste of non-cooking vessel. The ethnographic parallel[4] noted in the pottery workshop at Kottayil kovilakam, located near Paravur in Ernakulam district gives some insight in this regard. Omana, the potter who owns the workshop stated that they are producing only non-cooking vessels currently due to the non availability of the clay suited for the production of cooking vessels. The clay used to make the non-cooking vessels has no thermal shock resistivity. This confirms that the function of the vessel has prime role in the preparation of clay paste. The potter may add temper to the clay or remove certain particles from the clay in relation to the functional efficacy demanded for the vessel. The variability in the function may be one of the reasons for the presence of diverse fabric group in the pottery assemblage unearthed from the site Cheramananagadu.

Two bowls belong to same class, form and type noted for its fabric variance. It is not clear that these two vessels unearthed from a single monument due to the lack of contextual data. One of the vessels comes under the most abundant fabric group noticed in the site i.e. fabric group 2a and the other one belong to fabric group 2a. These samples belong to the class III, form B, and type 1 variant 2, thus the intended function of these bowls may be more or less same. If these bowls intended for the same function; fabric variability noticed in these bowls were not due to the functional reason. These phenomena can be best explained with the help of ethnographic data. The ethnographic documentation of pottery workshops in Eranakulam district (Jaseera, 2017) suggests that most of the potters collect the clay from nearby sources. The potter collect the clay from the shortly accessible sources in most cases. If we take a wider region as the unit on analysis, potters in various localities may have accessed different clay sources for the collection of clay. The petrological composition of the clay collected from each point may have variation. The ethnographic parallels allow us to infer some possible explanations for fabric variability. The fabric variability in these bowls may indicate the presence of two distinct potter groups and they have collected clay from two different sources

or they had followed different chain opetoire in the pottery production. The collection of clay from multiple sources may create fabric variability in the vessels produced from the single workshop.

If the potteries unearthed from the burials intended to perform a single function; i.e. as grave good; the frequency of fabric variability must have been very less. The diverse fabric group noticed in this relatively small assemblage, I argue that the fabric variability can be seen as an evidence to suggest that the pottery assemblage interned in the graves produced not merely to deposit as a grave good; it had some functional dimensions before being part of the grave goods.

The use alteration traces noticed in all the examined vessels is a corroborating evidence to propose that the pottery had a functional value before it interned into the burial as grave good. Most of the pottery in the assemblage has surface attrited traces including both attritional mark and patch. The most common surface attrition is the patch formed on the brim of the vessel (Figure 15). An experimental study has conducted to understand the surface attrition trace formation. In the experimental study two pots were taken, one was filled with drinking water and the other one was used to store tamarind. The water pot accessed very frequently and the tamarind pot accessed often. Both the pots has been using for two years. The frequently used water pot has a very prominent surface attrition patch on the brim which is as same as the patch noticed on the vessel (figure 16) from Cheramanangadu and the tamarind pot has relatively less prominent traces. The study reveals that such traces have been forming while covering and uncovering the lid. It is also important to note that the frequency of use also matters in the formation of use alteration traces. Similar patches noticed on the base of a few bowls. This mark is due to the abrasion while keeping the bowl on some surface which suggests the bowls were in use before depositing into the grave. Scratch marks in different directions were noticed on the surface of some of the vessels, which indicate that the abrasion may be a result of the striking action while washing the vessel with some abrader or unintentionally created while in use.

Figure 15: Use alteration trace on the brim of the vessel (Image: Author, 2016)

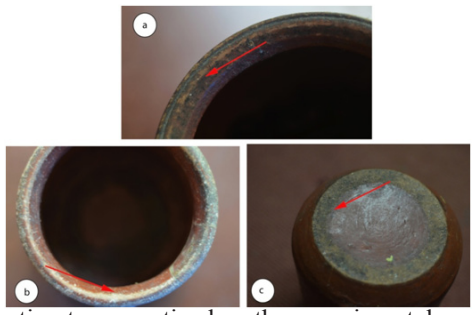


Figure 16: Use alteration traces noticed on the experimental analysis on the brim of the vessel; a. use alteration trace on a tamarind stored vessel, b. use alteration trace on the brim of drinking water storage vessel, c. use alteration trace on the base of drinking water storage vessel (Image: Rajesh Karthy, 2018)

There are a few vessels (CHD 9, 14) which have highly corroded surfaces (Figure 17). The post depositional process can contribute to the corrosion of the surface, but in this case only a few vessels have highly corroded surfaces in the whole assemblage which suggest that the corrosion noticed on the surface is not a result of post depositional alteration. It is possible that these vessels might have been used to carry or store something which has water or moisture content which may have resulted in salt erosion, that ultimately led to the corrosion of the surface.

Figure 17: Highly corroded vessel surface. (Image: Author, 2016)

Chipped surface is a use alteration trace, noticed in a few vessels. These chipping marks commonly noticed on the rim and the brim of the ring foot (Figure 18). The observation of the vessels currently using in the households revealed that such kind of chipping marks very commonly found on the vessels which are in frequent movement. For example the movement of the storage jar relatively less compared to cooking vessel. The striking of the vessels on a surface or some object may cause chipping of the vessels.

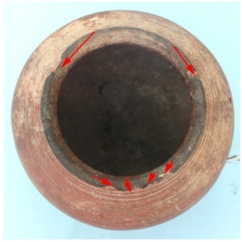


Figure 18: (Image: Author, 2016)

The formation of pits (figure 19) noticed on the external base of the vessel is an indicator to understand the used alteration of the pottery. Skibo (115) observed that such kind of pits created on the vessel surface due to the forceful contact with a small abrader that is harder that the ceramic.

Figure 19: Formation of pits on the base (Image: Author, 2016)

The deposition of soot on the vessel surface is a use alteration trace which contributes to the surface attrition of the vessel. Three vessels noticed with soot deposition on the external surface (figure 20) suggest that these vessels came into contact with fire. However there is marked (Babington, 1823) bowl with wide orifice and it has a very thin layer of soot spread in the base part in an irregular shape. The morphology of this bowl is quiet interesting in this context. The ring footed bowls are generally not intended to placing on fire. This sample is a perfect example to show the intended function of the vessel may not be same in the actual use. The density of the soot on this vessel suggests that the bowl had not been keeping on fire repeatedly and the pot might have positioned in a distance from the fire. The bowl may have kept on fire one or two times. The second pot (CHD15) has soot deposit spread almost on the lower part of the vessel. The soot density is relatively thick compared to the first vessel. The soot has spread on the entire external surface of the third pot (CHD 22) and the density of soot deposition is relatively high. These two later mentioned vessels

might have kept on fire frequently. The soot deposit on the vessels indicates that these were in use before interred as a grave good. The soot on the vessel surface have deposited as result of firing as part of cooking process or some industrial activity. The very less representation of soot deposited vessel in the entire assemblage can be seen as evidence to support the possibility of industrial activity, but this argument has to be tested by conducting more scientific analysis.

Figure 20: Soot deposited vessel; a. CHD.23, b, CHD.15, c. CHD.22
(Image: Author, 2016)

All the pottery unearthed from the site has use alteration traces which indicate each vessel has in use before interring into the grave. The results of fabric analysis and use alteration analysis form the basis to argue that the potteries deposited in the graves have not bought as kiln fresh, instead selected the vessels which have use value in their contemporary time. Most probably the vessels selected from the used articles of the deceased and this may represent the individual's professional or (and) household items.

It is important to note that the use alteration traces may not be available in the pottery assemblage unearthed from various other sites. Each assemblage unearthed from various sites or even various burials within a site may have distinct nature. Multiple variables might have influenced the cultural formation process and it cannot be identifiable with a linear perspective. The article presents results of a primary analysis and a comprehensive analysis has to be undertaken to understand the complexities of megalithic burials of Kerala.

Notes

1. The term megalith is used in this paper to denote the burial practice prevailed in the Iron Age – Early Historic period; not as a chronological and cultural label.

2. The excavator used the term hood stone to refer the monument which is commonly called as hat stone.
3. This classification is based on the analysis of pottery assemblage unearthed from a few sites in Kerala, particularly in Central Kerala. There is a possibility to find out more classes /forms/types, while analyzing more pottery assemblages.
4. For more details see C.M., Jaseera, 2017. "An Ethnographical Study of Pottery Workshops in Central Kerala, South India." Heritage: Journal of Multidisciplinary Studies in Archaeology 5: 445–60.

References

Babington, J. 1823. "Description of the Pandoo Coolies in Malabr (Transactions of the Literary Society of Bombay 3: 324-30)." *As Reprinted in AdhAram: A Journal of Kerala Archaeology and History : Kerala Puratattva Samiti 1.*

Indian Archaeology 1990-91- A Review. New Delhi: Archaeological Survey of India.

Indian Archaeology 2002-03- A Review. New Delhi: Archaeological Survey of India.

Jaseera, C.M. 2017. "An Ethnographical Study of Pottery Workshops in Central Kerala, South India." *Heritage:Journal of Multidisciplinary Studies in Archaeology,* 5: 445–60.

Jaseera, C.M. 2020. "Megalithic Pottery of Central Kerala." Thanjavur: Tamil University.

Jaseera, C.M. In press. "A Reconsideration on typology of megalithic burials in Kerala." In Abhayan G.S, Rajesh S.V, Uesugi Akinori (Eds.) *Beyond Megas and Lithos: Advances in the Iron Age and Early Historical Archaeology of Kerala.*

Mehta, R.N., and K.M. George. 1978. *Megaliths at Machad and Pazhayannur, Talppally Taluka, Trichur District, Kerala State*. Vadodara: M.S.University.

Menon, K.Govinda. 1937. "Red Painted Pottery from Cochin State." *Man*, 37: 144-46.

Skibo, James M. 1992. *Pottery Function: A Use-Alteration Perspective.* New York: Plenum Press.

Thapar, B.K. 1952. "Porkalam 1948: Excavation of a Megalithic Urn Burial." *Ancient India*, 8: 3–16.

Uesugi, Akinori, Ajit Kumar, S.V. Rajesh, Abhayan G.S., and Ambily C.S. 2019. "A Study on the Ceramic Sequence in the Megalithic Culture of Kerala." *Man and Environment* XLIV (1): 21–32.

© 2020. *Social Orbit* ISSN 2395-7719, Vol.6, pp.103-129

Funerary goods in the Iron Age/Megalithic Burials of Pamba River Basin, South Kerala – A Discussion *

Ambily C.S
Assistant Archaeologist
"Dharohar Bhawan", ASI Head Quarters
24, Tilak Marg, New Delhi, India.
Email: ambilyananova@gmail.com

Abstract

Funerary goods were deposited with the dead in many periods of the human past, from the late Palaeolithic to the Middle Ages and the more recent past (Harke, H 2014). It contains information about the economic fluctuations and social changes experienced by the past societies responsible for their deposition (Izquierdo-Egea, P 2013).The practice of placing various objects of day to day use with the dead supports the firm belief in the continuance of life or a virtual breakdown of unhealthy saturnine attachment among survivors. The grave is also considered as the residence of the departed. The present paper is a discussion of various aspects of funerary goods such as typology of pottery, beads and other objects, chemical analysis of iron implements, SEM study of stone beads and carbon dating of charcoal samples unearthed from the burials of Pamba River Basin. A comparative discussion of funerary goods of the Pamba River Basin with the other parts of the state is also included in the paper.

Keywords: Pamba River Basin, Iron Age/Megalithic Burials, Funerary goods, Comparative study, Chronology.

Introduction

Iron Age burials also known as megalithic monuments are widely found in all over the world especially inKerala. They are quite well preserved, most visible and common archaeological remnants from the bygone eons of Kerala. Large number of megalithic burials varying in its architectural features, raw materials and funerary goods are found in every district. Megalithism is explained as an aspect of religious practice of the ancient man pertaining to death and in his belief in the

* Acknowledgment: The author wishes to express her sincere thanks to Ajit Kumar, P. Rajendran, Vinod Pancharath, Ganga Devi M.R., Rajesh S.V., Abhayan G.S., Akinori Usegi, Haseen Raja, Sheena V.R., Nithya P., Santhosh, Suja and family, Azad C.S., Vijayarajeswari, villagers of Konni and Gavi area, and all my friends and family for the unconditional support for conducting field survey and completion of this work.

'life after death'. The practice of placing various objects of day to day use with the dead supports the firm belief in the continuance of life, or a virtual breakdown of unhealthy saturnine attachment among survivors (Ambily, 2021).The practice was clear from the references in Sangam literature (John,1973:134). The Sangam literature comprising the Ettuttokai and Pattuppattu mentioned the political, social and economic condition and existence of both burial and cremations prevailed in Kerala (Manickavasagom Pillai,1973:109).As said earlier Iron Age burials are also known as the Megalithic Period in India in general and Kerala in particular. But all the burials of this period are not megaliths. Many of them have no lithic association like urn burials, barrows, pit burials etc. These are not large enough to be called mega or huge, nor have any lithic association. So the term megalith is not appropriate to refer to all burials and monuments of the Iron Age. But among the various kinds of mortuary practices prevailed in that time, erecting huge stones or megalithic monuments is comparatively high (Gurukkal and Varier,1999). For this reason and the term megalithic have been widely accepted in almost all parts of the world, here also this term denotes all types of burials and monuments of this period that have sepulchral association, irrespective of their dimension and structural features.

The Pamba River lies between 9°29'59.99" North and 76° 24' 59.99" East (Figure 1). It is 176 km in length and originates at Pulachimalai hill in the Peermade plateau in Idukki District. Pamba River drains through Idukki, Pathanamthitta and Alappuzha districts and finally empties into the Vembanad Lake. It is bounded by Mallappally taluk of Pathanamthitta district, Cherthala and Kuttanadu taluks of Alappuzha district in the north, Kozhanchery and Adoor taluks of Pathanamthitta, Karthikappally and Mavelikkara taluks of Alappuzha district in south, Tamil Nadu in the east and Arabian Sea in the west. Sixty five megalithic sites are found in Pamba basin so far. The reported sites in Pamba basin can be divided into 1) Cist Burial, 2) Dolmenoid Cist, 3) Urn Burial, 4) Menhir, 5) Cairn circle,6) Laterite chamber, 7) Dolmen and 8) Sarcophagus.

Among the sixty five sites only eighteen sites are having material remains reported from various excavation, exploration and chance findings. Vandiperiyar, Kadukuthy, Chenkalthadam, Mudimala, Njalikkandam, Thottabhagam, Kavumgumprayar, Niramakulam, Puliyur and Phoothankara/Enadimangalam are the excavated sites in Pamba basin. Exploration/chance-finds are from Kavumbhagam, Valanjavattom, Pandanadu, Eraviperoor, Illimala Bridge, Kodakulanji, Thiruvalla

locality 1, and Vandiperiyar locality-1 (Table 1).Among these, a few sites were salvaged by some of the colleges in the nearby areas of the sites. According to the available evidence, pottery, iron objects, bone pieces, beads, copper objects, one stone axe, charcoal and gold ornaments were the material remains reported from the Pamba basin so far (Ambily, 2021). A brief idea of funerary goods reported fromthe Iron Age burials of Kerala with Pamba basin is discussed in this paper.

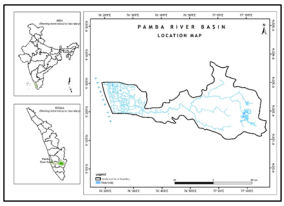


Figure 1. Location Map of Pamba River Basin

Table 1: List of Material remains reported from the Megalithic sites in Pamba basin

Sl.No	Name of the site	Megalithic Type	Material remains
1	Vandiperiyar	Cist, Dolmenoid cist and Cairn circle	2 bigger jars with decoration and small pots
2	Kadukuthy	Dolmen	No material remains
3	Mudimala	Laterite chamber	Iron implements
4	Chenkalthadam	Urn Burial	9 pots,2 small black and red ware, encrusted iron sickle and pieces of infant baby bones
5	Kavumgumprayar	Not mentioned	Iron implements and stone axe
6	Valanjavattom	Not mentioned	Six urn burials and Bayonet like iron weapon
7	Kavumbhagam	Not mentioned	Burial jars and iron lamps or swords
8	Njalikkandam	Urn burial	Iron pieces and bone fragments
9	Thottabhagam	Urn burial	Bone pieces
10	Pandanadu	Urn Burial	Bone pieces
11	Eraviperoor	Urn burial	No material remains
12	Kodakulanji	Urn burial	Black and red ware potsherd and old jars
13	Thiruvalla locality -I	Not mentioned	Rusty remains of iron implements
14	Vandiperiyar locality-I	Not mentioned	Red bowl
15	Illimala Bridge	Not mentioned	Iron sword
16	Puliyur	Cist burial	Six pieces of gold ornaments, iron blades and piece of shaped copper
17	Niramakulam	Cist Burial	Pots,bowls,lids,ring stands ,beads, charcoal and iron implements
18	Phoothankara/Enadimangalam	Cist burials	Iron implements and black and red ware in 1938and Pots, bowls, ring stands, lids, fragments of iron tools and charcoal in 2018.

Funerary Goods

Megalithic monuments in India generally have one or more complete skeletons or a few bone fragments, and associated grave goods comprising different varieties of pottery, iron implements, beads, stone tools, gold ornaments, charcoal, ash, grains etc. But in the case of Kerala most of the burials are fractional or secondary in nature. Not a single complete skeleton has been reported from any of the sites hitherto. Only charred, uncharred or decaying bone fragments are found so far. Some of the burials do not have any kind of bone remains too. Thus, the burial practice of Kerala may be post excarnated or cremated. It is also difficult to infer whether the burials were meant for individuals or more than one due to this practice except in the case of multiple burials (Gurukkal and Varier, 1999).

The sites having evidences of bones reported in Kerala are Varkkala (skeletal remains) and Sreekaryam (bone like material) in Thiruvananthapuram district , Thenmala-Kulathuppuzha area (human bones), Mangadu (charred bones), Poredam (child fossil) and Arippa (child cranium with fragmented skeleton remains of an adult and animal bone) in Kollam district, Anjunadu valley (human remains and ashes), Nedumkandam/Chempakappara (bone remains) and Chellarkovil (Humerus bone?) in Idukki district (Figure.2), Thonadannur (bone pieces), Mekkalady and veliathunadu (bone remains), Machad and Pazhayannur (charred bone pieces including skull, raduis and ulna), Cheramangadu and Punkunnam (bone pieces) in Thrissur district, Anakkara and Chingachira (skeletal remains) in Palakkad district, Chelavoor and Thondanur (bone pieces) in Kozhikode district, Kallarakkunnu (bone pieces) in Malappuram district, Cheruparamba (uncharred human bones), Kotturvayal (human bones include fragment of skull, few teeth and limbs of a child), Citrari and Perungulam (bone pieces) in Kannur district etc (Ambily, 2021). Different parts of bones, age and sex group of buried persons can be identified from these evidences. Not much scientific studies on bones have been carried out in Kerala. Only one example of human skeletal remains from Anakkara burial excavations has been studied and as result some osteo phytic growth on vertebral body portion and possible case of maxillary sinusitis were observed (Abhayan,2018:174) interestingly, an animal bone also reported from Arippa in Kollam district. Animal ashes were reported from Chenaparambu in Kozhikode also (Chedambath,1997: 283). It might be a clue of the domestication of animals during the Iron Age/Megalithic Period.

Figure 2. Humorous bone, Chellarkovil, Idukki (Courtesy: Krishnaraj.K)

Compared to other sites in Kerala Pamba basin is not an exception to this. Bone remains from Thottabhagum, Njalikkandam and Pandanad and infant baby bones from Chenkalthadam in Pathanamthitta district are the sites having bone remains reported in Pamba basin so far. The evidence shows that megalithic people of Kerala and Pamba basin followed a fractional or secondary burial practice. Infant baby bones with iron axe and other materials from Chenkalthadam is a clue that some megalithic people keep fresh material objects in burials, which is for using it in the life after death, instead of materials already used by the buried person in his/her daily life. Similar examples have been noticed from sites like Arippa, Poredam and Kotturvayal. In Arippa adults, child and animal bones were found placed in the same burial, indicating the fact that they might have died together at a time or had some other ritual connections (Ambily, 2021). In Tamil Nadu, Karnataka and other states have complete skeleton remains in megalithic burials even Gulbarga region in Karnataka has sixteen people in one grave is reported by Meadows Taylor (Ramanna, 1983:5).

Various types and shapes/forms of pottery have been noticed from the megaliths of Kerala. Black and red ware, russet coated painted ware, mere red wares, red-slipped wares, polished red-ware, black and black polished ware are the major types reported hitherto. Handmade (Figure 6), wheel made and both hand and wheel made potteries have been noticed. Pinkish, grey and chocolate coloured, micaceous grey, painted and decorated pottery also have been reported from some sites. Graffiti on potsherds also have been noticed from burials. Urns, bowls, dishes, vases, jars, lids, pots, ring stands and globular pots are the major shapes. Urns are of different shapes and features as exemplified by the legged ones (Figure 10), pyriform-types, pointed ones and those with variously fashioned rims, shoulders, sides and bases. Shreds of pinkish channel spouted from Chitrari rock cut caves in Kannur, Channel spouted vessels from Ummichipoyil in Kasargod are resembling the Neolithic type of vessels. (Jayashree, 2007:18-35). Black and red

ware, red ware, red polished ware, black and black polished wares are reported from most of the megalithic sites. But chocolate coloured pottery was reported from Niramakulam only. Grey ware reported from Arippa in Kollam, Malambuzha in Palakkad, Cheruparamba, Keraltheruvu and Citrari in Kannur. Micaceous grey ware was reported from Poredam in Kollam (Ambily, 2021).

Figure 3. Painted pots from Poduvacherry, Kannur (Courtesy:Krishnaraj.K)

White dotted painted shreds reported from Oliyani in Kottayam (Figure 5). Painting on the bottom of a cup shaped bowl was reported from Periakanal in Idukki District and three bichrome pots (Black and cream colour with designs like bands and triangles) have been unearthed from Poduvacherry (Figure 3), and a pot having black geometrical designswas reported from Kodiyeri in Kannur District. Painted pottery was found in Anakkara also. Decorated shreds were found most of the sites having urns/jars as beaded or coir/thread impressed decorations on the shoulder portions of urns.Russet coated painted wares are reported from Cheramangad, Engandiyur, Thiruvilamalai and Nattika and Kattakampal in Thrissur, Anakkara and Thadukkassery in Palakkad, Ambalavayal in Idukki (Figure 4a), Maniyur (Figure 4b) and Chathanparamba in Kozhikode and Kuttippala and Vattakkulam in Malappuram (Ambily, 2021). Pattanam in Ernakulum district also have russet coated painted ware (Abhayan,2018:168) Russet coated painted pottery is dated 3rd century CE to 3rd century BCE and generally consider the megalithic-early historic pottery (Chedambath,1999:93-94). But recent excavations in Kodumanal in Tamil Nadu revealed an early date which goes back to 5th century BCE (Rajan,2020: Webinar talk).

Figure 4 a&b. Russet coated painted ware,
Ambalavayal, Idukki and Maniyur in Kozhikode
(Courtesy: Rachel Varghese;. Sahapedia.org and Krishnaraj. K)

Six terracotta hooks/claws like projections inside the rim portion of urn burials have been reported at Vellakkunnu in Kannur, Porkkalam in Thrissur and Feroke/Chenaparambu in Kozhikode have great importance. These potteries have parallels in the urns from Adichanallur in Tamil Nadu, which is now in the Madras museum. There, two hooks of horns were found at two sides of inside the urn just below the rim portion evidently for hanging or suspending pots or other articles. But in Feroke nothing could be found inside the urn. Similar horns on the outside of urns have been reported from Bangalore as well (Aiyappan,2007:19-20).

Black and red ware, black ware, black polished ware, some chocolate slipped ware, white dotted black and red ware, red ware and red slipped and a few grey wares are the types of pottery noticed from the Pamba basin. The shapes include jars, pots, bowls, lids, dish, basin and ring stands. Jars are unearthed from Vandiperiyar, Kavumbhagam, Kodakulanji etc. Jars from Vandiperiyar have decorations too. Pots are reported from Vandiperiyar, Chenkalthadam, Phoothankara, Niramakulam etc. Bowls are reported from Vandiperiyar locality I, Phoothankara and Niramakulam. One cup-like bowl of black and red ware with a round base was also reported from the Pamba basin. Similar type mentioned from Periakanal in Idukki district as well. Lids and ring stands are reported from Niramakulam and Phoothankara. White dotted black and red ware and black ware shreds unearthed from Niramakulam. Dish and basins are also identified from Niramakulam. All these types have differences in size and shape.


Figure 5 &6. White dotted painted shreds from Oliyani in Kottayam and Handmade decorated pottery from Velam in Kozhikode (Courtesy: P.Rajendran and Krishnaraj .K)

Lack of proper information regarding the pottery from the other reported burial sites in thePamba basin except Niramakulam (Figure 7) is a problem for the systematic study of the same. Nira-

makulam pottery is handmade and both hand and wheel-made. The pottery seems to have been made using well levigated clay and has fine to medium texture. Nearly half of the shreds found have mica content visible in its core, internal and external surfaces. Few shreds have sand particles also. Burnishing and polishing marks are visible in almost all the shreds. Grey shreds and chocolate coloured pottery are very less in number. Dotted white paintings are found on black ware and black and red ware shreds. Slip is also present in diagnostic shreds. Bowls form the highest percent in pottery. Pots come next and ring stands and lids follow. Dish and basins are very few in number. Featureless/perpendicular rim found here is a common feature, and noticed in the megalithic bowls in almost all the excavated site like Machad, Pazhayannur, Kuttikkol, Porkkalam and Arippa etc. Most of the bowls from Niramakulam have thin sharp rims, bulbous body and saggar base. Black ware and black and red ware are the common varieties noticed among the Bowls (Ambily, 2017).

Figure 7. Rings stands, lids, pot, cup shaped vessel and bowl

Miniature pots to large pots have been identified in the cist. One miniature pot is a black and red ware with a carinated shoulder and pointed base. It seems like it was used for some ritualistic purpose during the time of erecting the burial. Some other pots are short necked with simple, beaked, quadrangular everted rims and some of them have a slender neck and wide mouth. Most of the shreds are red ware. Lids and ring stands are of black polished variety. No red colour or black and red ware varieties noticed among these types. The lids and ring stands have similarities with the pottery of Kuttikkol, Oliyani, Arippa etc. Similar types of black polished ring-stands, lid with tiered knobs, black and red ware bowls and pots were reported from Adichanallur in Tirunelveli district of Tamil Nadu that are now placed in the Government Museum at Chennai. One important type of pottery from the site was the chocolate coloured fine ware. It has not been reported from any of the megalithic sites in Kerala hitherto. It is noticed that the rim por-

tion of the small pot is also made in chocolate coloured clay. Chocolate colour might be the result of heat applied on the pottery during the time of making or due to the nature of clay. White Paintings as dotted lines on black and red ware potsherds has been reported from Oliyani in Kottayam and Poredam in Kollam excavations in Kerala (Rajendran, 1995: 2005). Here as well there are potsherds with the dotted lines, although the white painting has faded. Dishes and basins have everted rims and very few in numbers. Grey colour shreds are only few reported in Kerala. Poredam and Arippa in Kollam, Malambuzha in Palakkad, Cheruparamba, Keraltheruvu and Citrari in Kannur are the sites having grey ware reported earlier. Black and ware pottery are very common in almost all the megalithic monuments. Black ware and black slipped ware and red ware also as usual found from the burial sites of Kerala (Ambily, 2021).

Figure 8. Cup -shaped vessels with lids and ring stands, Ilaitaikulam, Tamilnadu (Courtesy: R.R. Srinivasan)

The cup shaped black and red ware unearthed from Niramakulam has similarities with vessels found from Ilaitaikulam in Tamilnadu. Those were found along with lid and ring stand which are exactly fit for the lota/goblet. In Niramakulam evidence of lid and ring stand was absent and the base of the vessel is round while Ilaitaikulam has a pointed base (Figure 8).

Identification of rims of black and red ware is difficult as sometimes if the rim belongs to black and red ware family there is a chance for misunderstanding it with black ware and vice versa. So in some cases it is difficult to conclude whether it is black ware or black and red ware. The large amount of potsherds within the Cist is the indication of disturbance of cist and the evidence of other vessels placed along with other funerary goods. Lack of evidence of base portion of vessels among the potsherds indicates that most probably all the vessels have round or saggar base. Presence of ring stands from the site is supporting this. It is difficult to keep the round based vessels on a flat surface.

So ring stands are necessary to keep the vessels. Trend of keeping some vessels on ring stands and not directly to the surface might be part of some unidentified ritualistic activity prevailing in the megalithic period. Compared to the other megalithic sites in Pamba basin, many intact pots were collected from the cist burial at Niramakulam and most of them were wheel made, thin and well fired. Some of the small pots interred seem to bear ceremonial value than any utilitarian value.


Figure 9&10. Lipped bowls (Neolithic affinity) and legged jars from Ummichipoyil (Courtesy: Abhayan.G.S)

Most of the pottery noticed from the Pamba basin shows similarities with those found from previous megalithic excavations in Kerala and adjoining areas like Coimbatore, Adichanallur, Brahmagiri, Nagarjunakonda, Pochampad, etc. (Murthy, 2000). Pottery (channel spouted vessel) reported to have Neolithic affinities such as from Ummichipoyil (Figure 9) and Citrari and early historic pottery like russet coated painted ware from Anakkara, Enagandiyur, Chathanparamba , Kattakkambal etc. were completely absent in the Pamba basin as of now.

Beads of various shapes and dimensions made of carnelian (with etched decorations comprising eye designs and horizontal, vertical and radial lines), jasper, orthoclase-feldspar, glass, wax, agate, bone, terracotta, jade, hone, quartz crystals, copper /bronze etc. have been discovered from a number of burials. Beads made of an intermediate metal and pendants of paste were also unearthed at Porkkalam and Machad respectively (Gurukkal and Varier, 1999). Carnelian beads were reported from Mangadu in Kollam district, Porkkalam in Thrissur, Valiyangadam/Kattappana and Nariyanpara in Idukki district (Figure 11), Chingachira in Palakkad, agate, crystal and carnelian from Chathanparamba, Viyur (Figure 16) and Kinaloor in Kozhikode, Kandathamvayil in Wayanad, chert, quartzite and carnelian beads from Kadanad (Figure 13&14) in Kottayam district, carnelian, jade,quartz and copper/bronze beads from Chellarkovil (Figure 12&15), beads

from Alappara and Nariyanpara in Idukki, beads from Veliathunadu, Kurumassery in Ernakulum district, beads of carnelian, agate, cherty jasper, crystal and orthoclase, feldspar from Machad and Pazhayannur, Engandiyurr in Thrissur, and Malambuzha in Palakkad, terracotta bead from Ummichipoyil and carnelian beads from Kudol/Peralam in Kasargod are some sites having beads reported from Kerala (Ambily, 2021).

Except Niramakulam no other sites have beads reported from the Pamba basin. Fifteen beads made of carnelian have been unearthed from Niramakulam (Figure 10). Among the beads similar decorated/etched carnelian barrel shaped beads with three vertical lines at the centre were reported from the megaliths of Machad and Pazhayannur. Tablet shaped decorated/etched beads were very common in the megaliths of South India. The sites include Maski, Vellalur, Salem, Kupgal Wayanad, Palghat, Porkkalam, Machad, Pazhayannur, etc. (Mehta and George, 1978, Murthi, 1994, Ramachandran, 2000).

Figure 10. Carnelian Beads from Niramakkulam

Figure 11&12. Carnelian beads, Nariyanpara and Quartz beads from Chellarkovil Idukki (Courtesy: Krishnaraj.K)

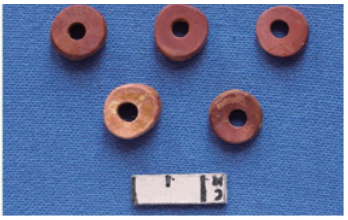


Figure 13&14. Stone beads from Kadanad, Kottayam District (Courtesy: Abhayan G.S)

Figure 15&16. Copper/bronze bead,Chellarkovil ,Idukki and stone beads from Kakkodi and Viyur in Kozhikode (Courtesy: Krishnaraj.K)

Most of the stone beads might be made by selecting a large block of stone and then breaking or sawing it into smaller blocks or beads rough outs and beads rough outs are groped or carved to achieve the final bead shape. Chalcedony and agate are the raw materials used for making carnelian beads. Both these materials are less found in Kerala. Hence it might have been imported from outside, probably the Deccan area through trade or exchange. Further study is essential for answering such questions. None of the beads found to have been in an unfinished stage and it suggests that there was no local base for the bead industry. Some of the SEM images of Niramakulam beads show deep parallel grooves on the rugged surface indicating the use of diamond drill technique and the holes were made from both the sides. Shallow parallel grooves are also noticed in some of the specimen which might be made by using copper tubular drills (Ambily, 2021).

Varieties of iron objects like swords, tanged daggers, wedge shaped blades, barbed arrowheads, hanger (Figure 17) and hooks, nails, spindles, spearheads, knives, rods with forked end, tripods, axes, bayonet like object, chisels, bill-hooks, iron wedges, flanged spades, hoes, shovels, spades, sickles and ploughshares (Figure 19&20), lamps, crowbars, hook-lambs, simple rods, hanger, fish hook (Figure 18), tridents, etc. were unearthed from various excavations from Kerala (Gurukkal and Varier, 1999). Apart from these, a stick identified as 'Narayam', 'Urumi', human and animal forms were also reported among the iron objects (Ambily, 2021).

All these objects can be classified into weapons, cutting tools/agricultural implements, household/domestic, toys or ritual objects, writing material, fishing tools and other ritualistic tools. Tripod , lamps, trident ,crowbars, hook-lambs and simple rods might be used as ritualistic objects, like swords, 'Urumi' tanged daggers, wedge shaped blades, barbed arrowheads, spearheads, tridents, knives, rods with forked end,

bayonet like object as weapons , 'Narayam' as writing material, hoes, bill hooks ,chisels, wedge and ploughshares, axes , shovels, spades. as agricultural /cutting tools, bullock with animals and plough, human and animal forms as toys or ritual objects ,nails, spindles, knives, sickle, tripod stand , hanger, nails, lamps as domestic or household objects. A fishhook has been identified from Nalloor in Calicut is a rare example of evidence of fishing in the Megalithic period. Some of these tools have multiple uses as well. Chisels might be used for cutting stone, wood and even metal, axes for clearing trees, cutting logs, as a weapon and ceremonial symbol, sickle for agriculture (Harvesting, or cutting fodder) and domestic purpose, daggers as weapons of offense or ornamentation, arrowhead for hunting or war, bill hooks are for slashing vines and hooking branches, hoes for digging up the roots, to prepare a seed bed, weeding and ridging, etc. (Chedambath, 1997:281). Anthropomorphic figure from Punnol (Ghosh,1989:353), zoomorphic forms from Valiyapadam (IAR,1989-90:45) and three serpents (Figure 21) from Oliyani (Rajendran,2005:41-42) are the animal and human forms reported from Kerala. Narayam or "iron stick" reported from Punnol (Ghosh,1989:353) and iron "Urumi " reported from Srimulnagaram in Ernakulum district (Ismail Pallipram, 2017). Long rod and long rod with curved edges have been reported from Kadanad in Kottayam district (IAR, 2007-2008:81-85). A pair of bullocks in cast iron along with a plough and yoke and an elephant were found in Angamaly in Ernakulam district (Chedambath,1997:284).

Figure 17&18. Iron hanger, Kakkodi and iron fish hook, Nalloor, Kozhikode (Courtesy: Krishnaraj.K)

Apart from this evidence, iron slags and ingots were also found from various sites in Kerala. Iron Age smelting sites reported from Ezhuvanikkonam in Thiruvananthapuram having burnt wood, charcoal, iron slag and smelted crucible with laterite gravel (IAR, 1995-1996:46). Abhayagiri in Kollam has crucibles (Figure 24) , iron slag, smelting blocks of iron and charcoal (IAR, 1995-96:46), and Varanampadam in

Thrissur has iron slags and large blocks of tapped slag. Other sites having iron slags were reported from Mangad in Kollam, Nalancheri and Manjalur in Palakkad and Periyar river valley (Abhayan, 2018:180), etc. A terracotta crucible (Figure 23) was reported from Kallimali in Idukki district (Sandra.et.al, 2017). Iron ore mines are also reported from Payippara in Ernakulam district (Selvakumar, 2005:74)

Figure 19 &20. Ploughshares from Kuruvattur in Kozhikode and Kongad in Palakkad (Courtesy: Krishnaraj.K)

Figure 21&22. Iron serpents from Oliyani and iron implements from Kadanad, Kottayam (Courtesy: P.Rajendran and Abhayan.G.S)

Figure 23&24. Terracotta crucible, Kallimali, Idukki and iron ingot, Abhayagiri in Kollam (Courtesy: Sandra and P.Rajendran)

Iron sickles from Chenkalthadam (IAR, 1990-91:33), blade from Puliyur (Sathyamurthy, 1992:25), axe from Karimpaloor (IAR, 1990-91:3), bayonet like object from Valanjavattom (Mathew et al., 2006:14), lamps and swords from Kavumbhagam (Menon, 1975:24), lamp from Thiruvalla locality-I (Nambyar, 1932: 61), sword from Illimala Bridge (Mathew et al, 2006:14-17), rusted and coated iron implements from Kavumgumprayar (IAR, 1969-70:59), iron implements from Mudimala (IAR, 1992-93:113), few iron pieces from Njalikkan-

dam (Archana, Personal Communication), tools from Phoothankara/ Enadimangalam (IAR, 1960-61,1961-62: 21& Abhayan, 2019) are the sites having iron implements already reported in the Pamba basin. As mentioned earlier eight iron implements including sickles, knives and sickle cum knife, one iron nail, and three unidentified objects have been unearthed from the excavated site at Niramakulam. Iron slags also have been collected from the vicinity of the site Niramakulam and near Kurichy locality-I (Figure 25&26). The iron implements from Niramakulam were probably used for agricultural and domestic purposes. The sickle seems to be used for reaping the crops and knives might be used for domestic activities. Likewise, sickle from Chenkalthadam and axe from Karimpaloor were also might have been used for domestic or agricultural activities. Swords from Illimala Bridge and Kavumbhagam and bayonet-like objects from Valanjavattom might be used for hunting or war purposes. Lamps might be used in houses for domestic purposes.

Figure 25 &26. Iron lump/slags and potsherds including plane Red ware and impressed shreds found near the stone trough, Kurichy Locality-1

Iron implements that were recovered from the cist at Niramakulam (Figure 27) were comparatively small in size and mainly included sickles and knives. Small sized iron nails and some unidentified objects were also collected from the cist. Sickles of similar type have been reported from other megaliths in Kerala and outside. These types of iron implements are still vogue in the region. Other unidentified objects have resemblance with those reported from the sites like Oliyani in Kottayam, Machad in Thrissur and Kadambapur and Pochampad in Godavari basin etc. A quantitative chemical analysis was done by using Thermo Scientific Niton XL3t XRF Analyser to know the properties of iron implements from Niramakulam. The detected elements include iron, copper, nickel, chromium, phosphorus, zirconium, titanium, vanadium, sulphur, molybdenumand undetected elements. The highest percentage of iron was found in a knife which is 95.15%. The low-

est percentage of iron was found in another knife which is 75.78%. The percentage of waste (Undetected elements) comes second and Nickel comes third. Percentage of chromium, phosphorus, zirconium, titanium, vanadium and sulphur are ranging below 1%, except copper. The percentage of copper is ranging from 0.315 to 1.62 in implements. Except iron, copper and nickel, other metals are even absent in some specimens. It is quite interesting to note that the iron implements from Niramakulam are not as pure as the iron implements found in other parts of Kerala and neighboring states. The impurities within the iron implements are also different from them. Selection of the ore for the extraction of iron and technique might be the reason for this. However, both the implements and slags from the site have the same impurities giving a possibility that these iron implements were manufactured locally by using these ingots/slags. Unfortunately, the location of ore for the extraction of iron for this purpose could not be identified. But presence of iron slags from the premises of megalith at Niramakulam and Kurichy area suggests that the implements might have been made locally.

Figure 27. Iron objects from Niramakkulam

One of the noteworthy features is a stone trough (Figure28) most probably used for storing water during the iron smelting has been found at Kurichy locality -I along with iron slags and potsherds. Interestingly, a clear slicing/cutting mark (Figure 29) has been noticed in two of the iron slags which might have happened during the time of tool making process. It can be considered as an evidence of iron-working locally.

Figure 28. Stone trough found at Kurichy Locality-1

Figure 29. Cutting/slicing mark on iron slag, Kurichy Locality-1

In Kerala very few iron specimens have been studied properly. One specimen from Pazhayannur in Thrissur District is analysed for the same. Abhayagiri (IAR, 1995-96:46), Ezhavanikonam in Bharathannur, Trivandrum and Tenmala (IAR, 1990-91:33) are some of the iron ore smelting/melting areas and evidence of slags were reported from south Kerala. 35 % of iron was found in the slag from Bharathannur, 35% and less than 0.5 % was reported from Abhayagiri (IAR, 1995-96:20). As mentioned before, the highest percentage of iron is found in a knife from Niramakulam which is 95.15%. The lowest percentage of iron found in another knife is 75.78%.. The highest percentage of iron content noticed in one among the three slags/ingots is 78.78% and the lowest percentage is 59.85%.The Pandalam area of the Pamba basin, where laterite Menhirs are found, are rich in iron content (Ambily, 2017). Unlike the iron implements from Pazhayannur, all the implements from Niramakulam were analysed. Only one hook found from the Pazhayannur cist was used for analysis. The result was 99% pure iron. Apart from iron, Manganese, aluminium and cobalt are also found as minute impurities in hook. Megalithic sites at Tagalghat and Khapa and an early historic site at Dhatwa also got 99% pure iron (Mehta and George,1974:20-23) in other parts of India. But the percentage of iron content varies from implement to implement and slags in the case of Niramakulam.

Bronze includes jars, vases, lamps, bowls knobbed lid and bells from Pattapiriyam in Malappuram, Eyyal and Thiruvilamalai in Thrissur and Pulimath in Thiruvananthapuram district in kerala. But no bronze objects have been reported from the Pamba basin hitherto.

Figure 30. Bronze/copper object from an urn burial, Vellakkunnu, Kannur (Courtesy: Ramesh N.K)

Bangle from Arippa, Kollam (Figure 31) , dish from Ambalamedu in Idukki, four legged stand, bell and unidentified ornament (Horse ornament or equipment?) from Valiyangadam/Kattappana in Idukki district ,male torso from Thalakkode in Malappuram (Figure 32) and bowl from Cheramangad in Thrissur district are the sites having copper objects reported from the megaliths of Kerala. Bronze/copper globular object with antennae like projection reported from Vellakkunnu in Kannur District (Figure 30). The less percentage of copper objects from the burials indicates the facts that copper was a quality material in those times or was not available locally or was not a fashion in megalithic period. Typology of copper objects restricted to vessels, ornaments for both human and animal (Horse) and in the form of figurine, which might be a toy object or had some ritualistic value. Copper is sometimes found with bronze and gold as well.

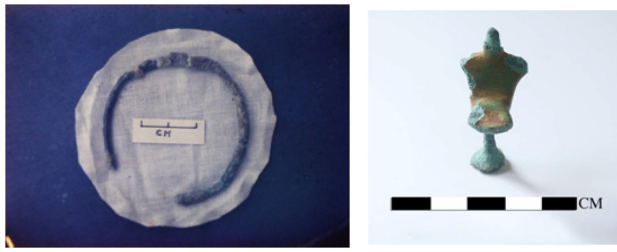


Figure 31&32. Copper bangle from Arippa,Kollam and male torso? from Thalakkode in Malappuram District (Courtesy: P.Rajendran and Krishnaraj.K)

One shaped object from Puliyur in Alappuzha was the only copper object reported from the burials of Pamba river basin as of now. Two copper rings with thin gold covering were reported from Kattipoyil in Kasargod district (Jayashree, 2005:32-33), an earring from Arippa (Figure 34), and a leaf from Kadanad were the gold objects (Figure 33) reported from Kerala. Six pieces of gold ornaments from Puliyur in Alappuzha district were reported from the study area so far.

As per the evidence, the Pamba river basin has the richest collection of gold objects from the burials. All the gold objects seemed to have been used as ornaments.

Figure 33&34. Golf leaf from Kadanad, Kottayam and ear rings from Arippa, Kollam (Courtesy: Abhayan.G.S. and P.Rajendran)

Microliths were found very close to the dolmen found at Kanichattupara in Ernakulam (Figure 36), at the excavation at Anakkara in Palakkad and from an urn burial at Nalloor in Kozhikode (Figure 35). Grinding stones, four legged querns and rollers /pestles were reported from Panunda, Kanichattupara (Figure39), Machad and Pazhayannur. Celts/axes were reported from Kudol/Peralam, Edayadukkam and Ummichipoyil in Kasargod district, Kallimali (Figure 37) in Idukki district and adzes were unearthed from Oliyani/Kunnoni in Kottayam district (Figure 38) have also been reported from the burials in Kerala. A peculiar polished stone also had been reported from Kanjur in Ernakulum district. Stone tripods have also been reported from the rock cut cave at Mangad in Thrissur

Figure 35&36. Microlith from Nalloor in Kozhikode and Kanichattupara in Ernakulam (Courtesy: Krishnakumar.K &Gangaevi.M.R)

Figure 37&38. Polished axe from Kallimali, Idukki and Adze from Oliyani, Kottayam (Courtesy: Abhayan G.S and P.Rajendran)

Figure 39. Saddle quern from Kanichattupara, Ernakulam

Stone benches and pillars with and without decoration have been reported from various Rock cut caves of Kerala. All these materials were used for domestic, agriculture and ritualistic purposes. Microliths and stone axes and adzes might be the continuation of Mesolithic/ Neolithic tradition in Iron Age/Megalithic culture.

Pamba basin also has stone axe/celt and it was reported from the megalith of Kavumgumprayar in Pathanamthitta district. Terracotta figurines like bearded heads of men, torso of a woman and parts of horns, possibly of a bull from Kodanand, bull from Elanthikkara and figurines from Kunnukara in Ernakulum, applique terracotta mother goddess form Malambuzha in Palakkad, human head (Figure 40) from Thrikkanya in Thrissur (Abhayan, 2020:173), bull/goat head from Kandathamvayil in Wayanad, terracotta dogs from Feroke/Parambathali and terracotta eagle head like figurine from Perumundassery in Kozhikode were unearthed from various sites (Figure 41). All these might have been in use as toys, decoration or for the purpose of rituals. It also shows the importance of animals in the Iron Age/Megalithic time. Except pottery no terracotta objects were reported from the Pamba basin so far.

Figure 40&41. Terracotta human head from Thrikkanya, Thrissur and eagle head like figure from Perumundassery, Kozhikode (Courtesy: Abhayan G.S and Ramesh N.K)

Rice husks were reported from Parambantalli in Kozhikode and Chokkanad in Idukki district and an unidentified grain was identified at Arippa in Kollam district (Figure 43) Paddy husk/ash was said to have been found from a clandestine excavation of megaliths by local people around Neeloor in Kottayam District (Ajit Kumar and Nihildas, 2014:682).

Figure 42&43. Rice husk from Chellarkovil ,Idukki and charred grains from Arippa (Courtesy: Krishnaraj.K and P.Rajendran)

Charred grains of rice from a rock cut cave also have been reported from Vadakkanchery in Thrissur district (Chedambath,1997: 271) Rice husk has also been noticed in one of the potsherds found at the site Pallumala in Thrissur district. Recently grains with rice husk were found accidently during a construction work at Chellarkovil near Mayiladumpara in Idukki district (Figure 42) (Vineeth K.G, Local resident. Personal Comunication,2020). No botanical remains have been discovered or reported from the Pamba basin so far.

Charcoal identified from sites like Venjaramoodu in Trivandrum, Ezhuvanikkonam, Abhayagiri and Mangad in Kollam, Oliyani in Kottayam, Nannagadikkunnu in Palakkad Muruganpara in Idukki, Peralam in Kasargod etc. evidence of ash reported from Anjunadu valley in Idukki and Padiyanattumuri Desom in Kozhikode etc. Charred wood has been collected from Kuttikkol in Kasargod district as well (Abhayan, 2018:176). Niramakulam and Enadimangalam/Phoothankara in Pathanamthitta district of Pamba basin have evidence of charcoal reported so far.

Graffiti on pottery has been reported from the various sites in Kerala. One of the important is a post firing graffiti of cattle was found on a red ware jar from the rock cut cave at Ulliyeri in Kozhikode (Figure 43). A fragmentary inscription in a menhir reported in Kaccanpara in Idukki district (Sathyamurthy, 1990:27). An interesting stone with Pictograph or ideograph was reported from the urn burial site at Peringassery in Idukki District (Figure 44)

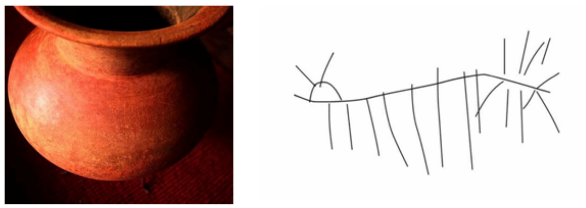


Figure 43. Post firing graffiti on red ware (cattle) from Ulliyeri in Kozhikode (Courtesy:Krishnaraj.K)

White painted motif on a Dolmen reported at Chenganperu, Dindukombur and Nanchivayal of the Anjunadu Valley (Nihildas,2014:181). Except white dotted painting on the pottery from Niramakulam nothing has been reported from Pamba basin so far.

Punch marked coins are also said to have been reported from Thiruthur in Thrissur district (Jaseera,2020:455). It is also said that punch marked Roman coins were also found very close to the rock cut caves at Eyyal (Gangadevi M.R, Personnel communication). Some of the coins were said to have been found from the burials in the study area. But no evidence of coins has been identified at the Pamba basin as of now.

Figure44. Graffiti on a stone slab found below an urn burial at Peringasserry, Idukki (Courtesy: Jee Francis Therattil)

Chronology of Burials

Generally the Iron Age/Megalithic period of Kerala is considered in between 1000 BCE to 500 CE. Kerala has a limited number of radio carbon dating available so far. Initially B.K Thapar provide a tentative date of Porkkalam ranging from 3rd century BCE to 1st century CE based on the presence of etched carnelian beads with designs, which have parallels with Brahmanabad, Brahmapuri, Maski, Sanghanakallu etc. After him George and Mehta excavated Machad and Pazhayannur and ascribed to a period ranging from 2nd century BCE to 2nd century CE on the basis of beads, ceramic and iron implements (Jayashree, 2007). Lots of tentative chronology has been made by various scholars, who worked on megaliths thereafter. The earliest radiocarbon date of Kerala goes to Mangad in Kollam district. Two dates obtained for the

sites are 2850+-90 and 2890+-70 years BP (Sathyamurthy, 1992:32). Another C14 date of a cist burial is at Oliyani in Kottayam district that provides an age of 810+- 80 years BP (Rajendran, 2005:45). Thermo-luminescence date of the urn burial site at Poredam in Kollam district gives an age of 1375+-15 years BP (Rajendran, 2012). Recently two more sites obtained radiocarbon dates and they are from Kuttikkol in Kasargod district and Nannagadikkunnu in Palakkad. Kuttikkol has four dates (328+-19, 385+-18, 430+-19 and 2526+-20 years BP) and Nannagadikkunnu has two (2350+-30 and 490+-30 years BP) Both these sites showing a wide range of time period starting from 7th to 6th century CE from Kuttikkol and 4th to 5th century BCE from Nannagadikkunnu to 15th century CE. Excavators had an opinion that the later dates of these sites could be because of later disturbances. If it is not so, the upper limit of Megalithic culture in Kerala goes to 15th century CE (Abhayan,2018:176-178). The site Oliyani also provides a later date which goes to 11th -12th century CE. However the later dates for the samples from Kuttikkol and Nannagadikkunnu were collected from disturbed deposit, we need more scientific dates to fix the upper limit of Megaliths tradition of Kerala in a conclusive manner. (Abhayan, Personnel communication)

The AMS dates of Niramakulam from the Pamba river basin ranging from 4th century BCE to 4th century CE. The earliest date (2190+-30 years BP) is coming from a depth of 164- 185 cm within the cist and later found outside of the burial which was from 96-105 cm depth from the surface (1790+-30 years BP). These dates are significant for the fact that they are the earliest date of sepulchral activity and artifacts from the hill range of the Pamba basin as of now. Second importance is that the dates divulge human activity of two different periods of time. There is a chance for the continuation of Megalithism and settlement in the same area even in the early historic period too. Early historic potsherds were also collected from very next to these monuments.

Conclusion

Grave goods were deposited with the dead in many periods of the human past, from the late Palaeolithic to the Middle Ages and the more recent past (Harke, 2014). It is said that funerary goods may considered as votive deposit, which are for the use of deceased's journey to life after death or offering to the gods. Grave goods contain information about the economic fluctuations and social changes experienced by the past societies responsible for their deposition (Izquierdo-Egea, 2013). The grave is also considered as the residence of the departed. Many

aspects like ritual, belief, and belief after death ,racial affinities ,family groups ,clan groups, division of labours, age, sex, nutrition, paleo demography, paleo diseases, paleo climate, craft specialization, trade, chronology, hierarchies and many facets of human past can be studied through burial and burial goods. Different types of burials goods might be the indication of social, religious or economic differentials that had been prevailing in their society/clan/group. Age, occupation and gender also might have been taken into consideration while offering funerary goods.

Very limited materials/burial goods are available in Pamba river basin as of now. Hence it is difficult to ascertain conclusions for several aspects. According to the available evidence certain observations are made in respect of funerary goods. As in the case of Kerala, Pamba basin also does not have the evidence of complete skeleton remains. Hence it is possible to say that megalithic people of Pamba basin followed a fractional or secondary burial practice. Burial pottery shows similarities with those found from previous megalithic excavations in Kerala and adjoining areas except some wares discussed earlier. However, chocolate colored shreds are reported from Pamba basin only. Division of labourscan also be understood through burial goods. Ceramics itself is an indicator of the existence of a highly advanced group of potters in Pamba river basin. Presence of carpenters/blacksmiths also can be traced through the presence of iron implements such as chisels, axes, bill hooks etc. from the burials. The finding of the iron slags/ ingots and implements from the same locality is the indication of the existence of iron working people. Evidence of manufacturing of iron is also obvious from the stone trough and associated iron slags having cutting/slicing marks. Copper and gold objects from a few sites indicate that they might have been extracted or processed locally or traded from outside.Raw material sources of copper and gold have not been reported from Kerala so far. However, until we get the evidence of manufacturing of these metals, local trade should be considered as a source. Carnelian beads from the excavation at Niramakulam indicate the presence of trade activity in those times.Because raw material source of carnelian is also not reported from kerala hitherto. The Deccan and Gujarat areas might have been the source of carnelian beads in those times. The sickle from Niramakulam might be an indicator of agricultural activities in the study area. Erecting megalith monument as part of the death rituals in the Pamba basin might have started during the late Neolithic times onwards as indicated by the example of

Neolithic tradition of "an axe" found in one of the burial monuments at Kavumgumprayar in Thiruvalla, Pathanamthitta district.

The AMS date of charcoal samples from Niramakulam clearly shows an antiquity of 4th century BCE for the megaliths of Pamba basin. The significance of carbon dating results are, the sample number one represents the earliest human activity and the artefacts from the hill range of the Pamba river basin and sample two is the later date of the Megalithic site in the study area. This indicates that there is continuity in using the site again by the members of the same family or clan or society over a large period of time. More excavatios and scientific studies are needed to answer several unanswered questions regarding the mortuary/grave goods.

References

Abhayan G.S., S.V. Rajesh, Ajit Kumar, C.P. Ramya, et.al. 2020. "Salvage archaeological operations of Megalithic burial urn at Nannangadikkunnu, Palakkad district, Kerala". In Rajesh S. V., Abhayan G. S., Ajit Kumar, and Ehsan Rahmath Ilahi (Eds.), *The Archaeology of Burials: Examples from Indian Subcontinent Volume-I,* (86-103). New Delhi: New Bharatiya Book Corporation.

Abhayan, G.S. 2018. "Iron Age culture in Kerala, South India: An appraisal". In Akinori Uesugi (Ed.), *Iron Age in South Asia, South Asian Archaeology Series 2,* (145-188). Osaka: Research Group for South Asian Archaeology, Archaeological Research Institute, Kansai University.

Abhayan, G.S., S.V. Rajesh, Akinori Uesugi, Preeta Nayar, et.al. 2021. "Megalithic cist burial excavation at Enadimangalam in Kerala and its implications in cist burial architecture and burial practices", *Archaeological Research in Asia* 27: 100293 https://doi.org/10.1016/j.ara.2021.100293

Ambily, C.S. 2021. *Megalithic Culture of Kerala:A study of Pamba River Basin.* New Delhi: Sharada Publishing House.

Ambily, C.S. (2017) "Holocene Archaeology of Pamba Basin". Unpublished Ph.D. Dissertation. Thiruvananthapuram: Department of Archaeology, University of Kerala.

Ambily, C.S. and Ajit Kumar. 2017. "A brief report on megalithic cist burial excavations at Niramakkulam, district Pathanamthitta, Kerala". In Ajit Kumar, Rajesh S.V. and Abhayan G.S. (Eds.), *Kailashnath Hetu (Essays on Prehistory, Protohistory and Historical Archaeology) (Festschrift to Shri. Kailash Nath Dikshit)* Vol.1 (290-296). New Delhi: New Bharatiya Book Corporation.

Ambily, C.S., Ajit Kumar and S. Nazarudeen. 2020. "Excavation of a cist burial at Niramakkulam, district Pathanamthitta, Kerala". In Rajesh S. V., Abhayan G. S., Ajit Kumar and Ehsan Rahmath Ilahi (Eds.), *The Archaeology of Burials: Examples from Indian Subcontinent Volume-II*,

(536-554). New Delhi: New Bharatiya Book Corporation.

Babington, J. 1823. "Descriptions of the Pandoo Coolies in Malabar", *Transactions of the Literary Society of Bombay* 3: 324-330.

Government of Kerala. 1996. *Watershed Atlas- Pamba River.* Thiruvananthapuram: Kerala State Land Use Board.

Gurukkal, R. and M.R. Raghava Varier (Eds.) 1999. *Cultural History of Kerala.* Thiruvananthapuram: Department of Cultural publications, Government of Kerala.

Haseen Raja, R. 2017. *Megaliths of Pathanamthitta District with Special Reference to Adoor and Konni Taluks, Kerala.* Unpublished M.Phil. Dissertation. Thiruvananthapuram: Department of Archaeology, University of Kerala.

Härke, Heinrich. 2014. "Grave Goods in Early Medieval Burials: Messages and Meanings", *Mortality: Promoting the interdisciplinary study of death and dying*, 19(1), London: Routledge.

IAR. 1970-71. *Indian Archaeology-A Review*. New Delhi: Archaeological Survey of India.

IAR. 1990-91. *Indian Archaeology-A Review*. New Delhi: Archaeological Survey of India.

IAR. 1995-96. I*ndian Archaeology – A Review*. New Delhi: Archaeological Survey of India.

Khanna, A.N. 1992. *Archaeology of India, Retrospect and Prospect -Book I, Highlights of Indian Archaeology.* New Delhi: Clarion books associated with hind pocket books.

Mehta, R.N. and K.M. George. 1978. *Megaliths at Machad and Pazhayannur, Thalappally taluk: Trichur District, Kerala State (A report of the excavations conducted from 18th April to 12th May 1974*. Vadodara: M.S University Series-15.

Moorti, U.S. 1994. *Megalithic Culture of South India: Socio-Economic Perspective.* Varanasi: Ganga Kaveri Publishing House.

Murthy, P. Ramachandra. 2000. *Megalithic cultures of Godavari Basin*. New Delhi: Sharada Publishing House.

Nair, Jayashree. 2005. "Exploring the Megaliths in Kasargod", *Journal of the Centre for Heritage Studies* 2: 18-35.

Nair, Jayashree. 2007. *Megaliths in Kasargod: Understanding an Unexplored Region*. Unpublished Ph.D. Dissertation. Kottayam: School of Social Sciences, Mahatma Gandhi University.

Nambyar, Raghavan V. 1932. "Annals and Antiquities of Tiruvalla". In T.K. Joseph (Ed.), *Kerala Society Papers* (57-86). Trivandrum: Gazetteers Departments.

Nihildas, N. 2014. *Archaeology of the Anjunadu Valley with Special Reference to the Megaliths and Rock Art, Idukki District, Kerala*. (Unpublished Ph.D. Dissertation). Pune: Department of Archaeology, Deccan

College Post-Graduate and Research Institute.

Paddayya, K. 2006. "Colonel Colin Mackenzie and Discovery of Iron Age Megalithic Tombs in South India", A*dharam -A journal of Kerala Archaeology and History.* Kottayam: Keraleeya Puratatva Samiti.

Pascual Izquierdo Egea. 2013. "On the Contextual Valuation Method and the Economic Archaeology of Grave Goods", *Advanced Archaeology 1, A Supplement of Arqueología Iberoamericana* 93-12). Graus, Spain.

Rajan, K. 2014. "Iron Age Early Historic transition in South India: An appraisal", *in Padmashri Amalananda Ghosh Memorial Lecture, Institute of Archaeology*. Delhi: Red fort Complex.

Rajendran, P. 2005. "Oliyani cist burial excavation", *Journal of the Centre for Heritage Studies* 2: 36-46.

Rajendran, P. and A. Kshirsagar. 1993. "Poredam urn burial- A Chalcolithic culture", *Current Science* 64(3): 148-149.

Rajendran.P. 2012. "The prehistory, protohistory paleoenviorment and paleoanthropology of the kerala region: An overview", *Puratattva*. 42: 47-58.

Ramanna, H.S. 1983. *Megaliths of South India and South East Asia- A Comparative Study.* Madras: New Era Publication.

Sathyamurthy, T. 1992. The *Iron Age in Kerala: Mangadu Excavations*. Thiruvananthapuram: Kerala Department of Archaeology.

Selvakumar, V. 2020. "Megalithic Architecture of South India". In Rajesh S. V., Abhayan G. S., Ajit Kumar, and Ehsan Rahmath Ilahi (Eds.), *The Archaeology of Burials: Examples from Indian Subcontinent Volume-I* (25-46). New Delhi: New Bharatiya Book Corporation.

Selvakumar, V., K.P. Shajan and Roberta Tomber. 2009. "Archaeological investigations at Pattanam, Kerala: New evidence for the location of ancient Muziris". In Michael Wills (Ed.), *Migration, Trade and Peoples,* (29-41). London: European Association of South Asian Archaeologists.

Srinivasan, K.R. and N.R. Banerjee. 1953. "Survey of South Indian Megaliths", *Ancient India*, 9: 10-115.

Thapar, B.K. 1952. "Porkalam: Excavation of a Megalithic urn-burial", *Ancient India,* 8: 3-16.

Uesugi, Akinori, Ajit Kumar, Abhayan G.S., Rajesh S.V. and Yasuji Shimizu. 2020. "Excavations of Rock Cut burials at Kuttikol, Kerala". In Rajesh S. V., Abhayan G. S., Ajit Kumar, and Ehsan Rahmath Ilahi (Eds.),. *The Archaeology of Burials: Examples from Indian Subcontinent Volume-II,* (396-418). New Delhi: New Bharatiya Book Corporation.

Varghese, R.A. 2011. "Interpreting the ritual complex of Nasranikunnu- A study of the Megalithic complex of Central Kerala, south India" (Unpublished Dissertation), Portugal.

Wheeler, R.E.M. 1948. "Brahmagiri and Chandravalli 1947: Megalithic and other cultures in the Chitradurga District", *Ancient India,* 4: 181-308.

© 2020. *Social Orbit* ISSN 2395-7719, Vol.6, pp.130-138

The Cult of Nandi in Tamil Nadu With Special Reference to Rajarajeswara Temple, Thanjavur

S.B. Darsana
Assistant Professor
PG and Research Dept of History
Holy Cross College, Tiruchi, Tamil Nadu, India.
Email: darsana.selvakumar@gmail.com

Abstract

All forms of nature are worshipped in India from time immemorial including plants and animals. Nandi worship manifests from the Bull worship. When humans shifted from being the food gatherers to food producers, the Bulls played a crucial role. From the Neolithic period onwards, cattle assumed significance in the social and economic spheres. An iconographic form was created for Bull in the form of Nandi, who was made as the vahana of Shiva. He is shown seated in front of Lord Shiva with utmost dedication and concentration. Though a lot of work has been done on the iconographic forms of various deities, not much work has been attempted on the iconography of Nandi. This article traces the cult of Nandi as shown in Rajarajeswaram temple, Thanjavur built by the Chola King Rajaraja I in 1010 CE. Two Nandi sculptures belonging to the Chola and the Nayak period have been studied. It also highlights the legend of Nandi and the iconographic representation of Nandi.

Keywords: Nandi, Rajarajeswaram temple, Nayak, Cholas, Nandanar, Shiva's vahana, Pradosha.

Introduction

The concept of nature worship in India can be traced to the ages of the Neolithic, Harappan, and Vedic periods. Humans not only looked at nature from a utilitarian perspective but also a sacred point of view. In the animal kingdom, certain animals are respected and valued more than others, because of their perceived characteristics, attributes, appearance, and utility. There is a strong symbolism behind such attributes which can be approached from eco-critical perspectives. The cow is one such valuable animal and in human-environmental relationships, the cow was perceived with respect in Indian tradition. The divine animals can be seen in the Indian iconographic forms from a very early

period. Almost all the gods and goddesses are provided with vehicles and associates in animal forms.

One such important vehicle or vahana, for Siva, is Nandi, the bull. The bull is considered a sacred as well as powerful animal in India from a very early period. The depiction of bulls in Harappan seals and the coins of historical periods is noteworthy. Apart from the utilitarian value, the aesthetic characteristics and symbolic values of nature are in cultural spheres. The Shankha (conch), Garuda, and bull and personification of rivers formed an essential component of nature worship and symbolism. No wonder that the Harappans gave such prominence to bulls in their iconographic system as reflected in the seals. Similarly, the iconographic features of Asokan pillars suggest the use of animal symbolism.

The powerful bulls were tamed, used, and were also worshipped. The bulls assume significance in religious traditions too. Nandi or bull is given the place of prominence initially as the door-keeper of Siva's abode and as the leader of sivaganas. Later he became the proud vahana of Lord Siva. Though there are sporadic publications on Nandi, there is no comprehensive work on Nandi in medieval Tamil Nadu.

Previous Work

The earliest sculptural representation can be found in the temples built by the Pandyas in the southern part and by the Pallavas in the northern part of Tamil Nadu. One of the earliest representations can be seen on the vimana of the monolithic temple at Kalugumalai, Tirunelveli where Siva and his consort Uma are shown flanked by two Nandis (Randhawa and Randhawa, 1985).

The Cholas perfected the architecture and art of their predecessors and erected colossal temples for the Hindu deities all across their territories. Many scholars have worked on the art and architecture of the Siva temples built in the Pallava, Pandya, and Chola periods. These scholars have contributed immensely to the study of art and architecture. Apart from this, various studies on important Siva temples in Tamil Nadu have been conducted (Dubreuil, 1915, 1926; Banerjea, 1956; Nagaswamy, 1970, 1983; Gopinatha Rao, 1971; Balasubramanian, 1966, 1971, 1975, 1979; Gupte, 1972; Soundararajan, 1981; Kramarisch, 1981; Maity, 1982; Rathnasabhapathy, 1982; Subramanian, 1985; Rajendran, 1988; Waghorne, 1991).

However, there are only a handful of exclusive publications on the studies of Nandi (Dhaky, 1972; Rathnasabhapathy, 1982; Rajarajan,

1996; Akila, 2015). The Silpa texts such as Manasara (Acharya, 1979) give a detailed description of the iconographic representation of Nandi. Dhaky (1972) analyzed the Nandi images from the regions of Tamil Nadu and Karnataka, Rathnasabhapathy (1982) while describing the bronze images at Thanjavur art gallery, elaborates on the Adikaranandi form. Rajarajan (1996) discussed the Vrishabavahana form of Shiva in which Lord Siva is portrayed leaning on Nandi in literary and artistic traditions. Akila (2015) highlighted the importance of Nandi as Pradoshanayakan wherein she traced the puranic story of Nandi. Here the focus is on the colossal Nandi at Brihadeswara temple, Thanjavur.

The legendary and textual evidence has been studied by scholars albeit on a minor scale. The legend of Nandanar was popularized by Gopalakrishna Bharati (1899) in which the Nandi at Thirupungur moved aside to allow Nandanar, one of the 63 Saivite saints and a lower caste person to have a clear darshan of Lord Siva. Nandi has been a part of Hindu rituals. The legend of Nandi's marriage at Tirumazhappadi with Swayambikai is very popular and till today the marriage ceremony is celebrated with pomp and gaiety. After the marriage, Nandi and his wife are taken in procession around the saptavidangasthalas namely Thiruvaiyaru, Thirupazhanam, Thiruchotruthurai, Thiruvedhikudi, Thirukkandiyur, Thirupoonthuruthi, and Thiruneithanam (allocated near Thanjavur). The popularity of Pradosha time during which Lord Siva is said to be dancing atop Nandi between the horns is also noteworthy. The religious texts of the medieval period namely Devaram provide a lot of reference to Nandi (Narasimhan, 2006). The Devaram texts refer to Nandi as 'vitai, erutu, itapam'.

The Cult of Nandi

There are religious texts that describe the story of Nandi. He was elevated to the position of guru to eight important disciples who were instrumental in spreading Saivism across the world.

Nandi, according to Siva Maha Purana, was born as the son of Salankayana, a rishi who did penance under a Sala tree and asked for a son. Vishnu gave the boon and a son sprang from the right side of Vishnu, who looked like Lord Siva. He was named Nandi, one who gives joy and happiness. In Tretayuga, a rishi known as Nandi did penance in the Mandara mountain. He asked for two boons, namely steadfast devotion to Lord Siva and appointment as the head of the ganas. Linga Purana narrates that a boy emerged from a yajna (Vedic sacrifice) as a son for the blind rishi Silada, who was doing penance for the birth of a son without human bondage. He appeared like Siva with

jatamakuda, three eyes, and four arms carrying Sula, tanka,Gada, and vajra (Gopinatha Rao, 1971).

In the spatial scheme of Iconography, Nandi should be placed before the shrine of Siva in erect or recumbent form either within the temple or on a raised pedestal in an outer mandapa. The Manasara text gives vividly the various measurements for sculpting the image of Nandi (Acharya, 1979; Manasara, LXII). Nandi is usually depicted with virility, strong physique, legs, tail, and dewlap. In the early period, the ornamentation of Nandi is not elaborate. In the later period, Nandi is adorned with garland, a string of bells attached to the neck, saddle cloth, and leg ornaments too (Dhaky, 1972; Kramarisch, 1981).

The literature too highlights the importance of Nandi. The Saivite hymns called Devaram sung by the Saiva devotees in the medieval period in Tamil give information about Nandi.

The Nandi can be iconographically depicted in five forms (Rathansabhapathy, 1982) namely

a) Brahmanandi, of stone is placed near the side of the main deity at the Sanctum
b) Vishnunandi, of metal, is placed in mahamandapa
c) Mahanandi, of stone, is placed outside the main shrine
d) Adhikari Nandi, a form that looks exactly like Lord Siva with attributes such as mriga (deer) andparasu (axe). But Adhikara Nandi is shown in Anjali hasta while carrying a rod on his shoulder. He is portrayed at the Gopura between Vishnu Nandi and Mahanandi.
e) Nandiaavartanam, is placed beneath the main Linga in the sanctum as eight nandis. It is very rare to see with the exception being at Kapilswara temple, Mylapore, and Siva temple at Tirumullaivasal. He is shown in Anjali hasta with rudraksha placed between the hands.

The Sivagama Nibandhana of 11th century CE describes that the Nandi should be shown with flawless limbs and he should be adorned with many jewels (Dhaky, 1972). The Nandi will have the following adornments.

Forehead with manirekha (jewel band)

Thigh with Chamara (fly whisk)

Neck with bell or garland of bells

Rajarajeswara temple, Thanjavur

Vijayalaya established the Chola kingdom in Thanjavur in the 9th

century CE andhis successors not only consolidated their power by political conquest but also left an indelible mark in the cultural landscape of the Kaveri region. The temple building activities started by the Pallavas in northern Tamil Nadu and the Pandyas in southern Tamil land were developed by the Cholas who built innumerable temples across the breadth and width of the Tamil region.

The Chola architecture reached its zenith during the rule of King Rajaraja I (985-1014 CE), who built a magnificent temple which he called Rajarajeswaram in the capital city of Thanjavur in 1010 CE (Fig. 1). The temple popularly called Brihadeswara temple is known for its tallest vimana and a huge Sivalinga. The temple has many additions and modifications in the later period. The Amman shrine was added by the Pandyas, the Subramanya shrine by the Nayaks, and the Ganesha temple by the Marathas.

The temple has two main gateways-gopuras built during the Chola period. On entering the temple, a huge Nandi mandapa is seen that houses a huge Nandi. However, the Nandi mandapa and the Nandi were built during the time of the Nayaks. According to some scholars the original Nandi built during the Chola time due to its smaller size is kept in the prakara mandapa near Varahi temple (Balasubramaniyan, 1995). As the Linga is huge, the later Nayak rulers could have replaced the smaller Chola period Nandi with a bigger one as Brihadeswara (Lord Shiva who is magnificent) deserves a huge Nandi.

Fig 1. The temple Vimana *

The Chola Nandi

The Nandi placed in a small enclosure in the prakara mandapa near the Varahi temple has characteristic features of Chola Nandi (Fig.2). Here Nandi is shown in couchant position and his head is adorned with a headband. His front legs are folded backward while the hind legs are bent frontwards. His head is raised with his tongue sticking out. He is

* I would like to thank R.Karthikeyan, Project Fellow, Tamil University, for the photographs.

adorned with neck ornaments. He has a ghantamala- a garland of bells around his neck and one around his body. He also has a neckband. He has a band that goes in the middle of his body. His dewlap is not very prominent. The horn and ears are not shown prominently.

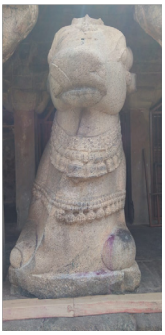


Fig 2. Chola Nandi?

He is shown with a hump that is shown prominently running across his body like a thick fold. This feature is unique which is not seen in the later period. This feature is noticed in pre-Rajaraja Nandi sculptures with hump shown around the body with folds (Fig 3 and 4). This can be dated to the Chola period stylistically based on similar Nandi forms found at Puspavaneavara temple, Tiruppunturutti (Near Thanjavur), Sadyayar Kovil, and Isvara Kovil, Pudur (Dhaky, 1972).

Fig.3 and 4. Profile of Chola Nandi

The Nandi of Nayak period

The Nandi mandapa is the later addition to the temple complex. Built by the Nayaks, the mandapa can be reached by a flight of steps. It has a huge Nandi image, made of a single stone. It is 12 feet high with a width of 8 feet. The Nandi mandapa is painted beautifully. The mandapa has portrait sculptures of Sevappa Nayak and his son Achchyuta Nayak.

Fig. 5. Nandi in Nandi mandapa (Nayak Period)

Nandi is decorated with manireka on his forehead, and he is adorned with a garland of bells around his neck and body. Apart from this, three layers of neckbands adorn the Nandi. He is shown seated in a couchant position with the head held high. His eyes and ears are prominently portrayed. He has a saddle cloth over which a band runs. He has a very prominent hump but the folds of the hump as seen in Chola Nandi are not visible. His dewlap merges with his frontal portions. His tongue is shown outside. His horns are sharp and huge.

Stylistically there is a variation in the form of Nandi from that of the Chola period. Adornment is becoming more prominent. The hump is portrayed boldly. The horns and ears are shown very clearly. The majestic nature of the bull is significant in the portrayal.

On the day of Maatu Pongal in mid-January (Pongal festival celebrated exclusively for cattle), the Nandi is adorned with one thousand kilos of fruits and vegetables (Fig.6). Pradosha day every month is celebrated with abhisheka for Nandi in a grand manner.

Fig 6. Nandi adorned with vegetables and fruits
(After Malaimalar dated January 17, 2019)

Nandi as a vahana has significance in many aspects. Spiritually it is believed that Nandi is in deep meditation and his unwavering steadfast devotion is shown in the way he is portrayed in front of Lord Shiva. The devotees on seeing the Nandi image before entering the temple are inspired by Nandi's devotion to God, and they are encouraged to emulate his example.

In the natural world, Nandi is associated with agricultural practices. Though food production started in the time of the Neolithic period, in the consequent periods including the modern-day, the importance of agriculture is well attested. The Cholas having their center of power in the fertile Kaveri plain are known for meticulous land management, which is known by the inscriptions attesting to the production of agricultural goods. The personification of fertility is shown as Nandi. Probably that is the reason why fruits and vegetables are offered as adornment to Nandi as a thanksgiving for his contribution to the agricultural prosperity of a region. Both from spiritual and materialistic points of view, Nandi assumes significance.

Conclusion

This research paper tries to throw light on the hitherto unfocussed iconographic form of an important vahana of one of the trinities in the Hindu pantheon. There are many interesting stories and legends associated with various forms of Nandi. In the same temple complex, the images of Nandi belonging to two different cultural periods are differently portrayed. A detailed study of Nandi images of the Chola period and Nayak period is needed to understand the nuances of the sculptural variations.

References

Acharya, P.K.1979. *Hindu Architecture in India and Abroad*, Manasara Series. New Delhi: Oriental Books Reprint Corporation.

Akila, M. 2015. *Pradosha Nayakar-Nandiyem Perumal* (in Tamil). Thanjavur

Balasubrahmaniyam, S. R.1966. *Early Chola Art – Part I.* Bombay: Asia Publishing House.

Balasubrahmaniyam, S. R.1971. *Early Chola Temples – Parantaka I to Rajaraja I* (A.D. 907– 985). New Delhi: Orient Longman Ltd.

Balasubrahmaniyam, S. R.1975. *Middle Chola Temples – Rajaraja I to Kulottunga I* (A.D. 985-1070). New Delhi: Thomson Press Ltd.

Balasubrahmaniyam, S. R.1979. *Later Chola Temples – Kulottunga I to Rajendra III* (A.D. 1070-1280), Chennai: Mudgala Trust.

Balasubramanian K. 1995. *Thanjavur (600-1850 CE)* (Tamil). Thanjavur: Annam Publications

Banerjea, J.N.1956. *Development of Hindu Iconography.* Calcutta.

Bharathi, G. 1899. *Nandanar Charithrakeerthanai* (in Tamil) Chennai: Manonmani Vilasam Publication.

Dhaky, M.A. 1972. "Nandi Images of Tamil Nadu and Karnataka". *Artibus Asiae* XXXIV: 183-210

Dubreuil, G. J. 1916. *Dravidian Architecture*. Madras

Dubreuil, G. J. 1926. *Iconography of Southern India.*

Gopinatha Rao, T.A. 1971. *Elements of Hindu iconography*. *Vol II, Part II.* Delhi: Indological Book House.

Gupte, R.S.1972. *Iconography of the Hindus, Buddhists, and Jains*. Bombay.

Kramrisch, S. 1981. *Manifestations of Siva*. Philadelphia: Philadelphia Museum of Art.

Maity, K.S.1982. *Masterpieces of Pallava Art.* Bombay: Taraporevala.

Nagaswamy, R. 1970. *Gangaikondacholapuram*. Madras: The State Department of Archaeology, Government of Tamil Nadu.

Nagaswamy, R. 1983. *Master Pieces of Early South Indian Bronzes*. New Delhi: National Museum.

Narasimhan, Sita. 2006. *Saivism under the Imperial Colas as revealed through their monuments*. Delhi: Sharada Publishing House.

Rajarajan, R.K.K.1996. "Vrisabhavahanamurti in Literature and Art". *Annali* AION 54(3): 304-310.

Rajendran, A. 1988. *History of Siva cult in Tamilnad from the Sangam Age to the Cholas.*Acharya Nagarjunakonda University. Ph.D. Dissertation.

Randhawa, Mohinder Singh and Randhawa Doris Schreier. 1985. *The Scene, Themes and Legends*. Bombay: Feffer and Simons Ltd.

Rathnasabhapathy, S. 1982. *The Divine Bronzes. The Thanjavur Art Gallery Bronze Sculptures. Vol. 1.* Thanjavur: Thanjavur Art Gallery Administration.

Soundararajan, K.V.1981. *Art of South India- Tamil Nadu and Kerala*. Delhi.

Subramanian, K.R.1985. *The Origin of Saivism and its history in the Tamil land*. New Delhi.

Waghorne, J.P.1991. "Vahanas. Conveyers of the Gods". *Marg* XLIII(2):15-28

© 2020. *Social Orbit* ISSN 2395-7719, Vol.6, pp.139-159

Megaliths of the Karamala Valley: Extant Burials and the Impact of Human intervention *

K. Rajan
Associate Professor in History
Govt. Victoria College, Palakkad, Kerala, India
Email: rajanpkd@rediff.com

Abstract

The culture of erecting megaliths is not unique to Kerala or other parts of India – it is universal practice. The basic structure of the megaliths, therefore, has a universality. Megaliths represent a culture that goes back to as early as 1000 B.C in south India. They were erected by people who had practised agriculture and animal husbandry. The paper discusses the state of megalithic sites in and around the Karamala valley in Tharoor Panchayat in the Alathur Taluk of Palakkad district, Kerala. The focus of the narration is on the extant burials and the impact of human intervention on their survival. It also describes the findings of the salvage excavation conducted under the leadership of the author and his six students and archaeologists in the state archaeology department – B MohanaChandran and K Krishnaraj– from January 9 to 15, 2015.

Keywords: Karamala, Tharoor, Stone circles, Cist burials, Menhirs.

Introduction

Megalithic communities of the southern peninsula do not seem to have lived beyond an average age of 40 years (Subbarayalu, 2014: 19). Their burial monuments are the most widely found archaeological evidences for the early history of Kerala. They were supposed to be a direct continuation from the Neolithic culture (Wheeler, 1947: 202). However, we do not know much about the Neolithic antecedents of the megalithic builders of the State, though there are evidences in the form of Neolithic tools. The megalith builders were once widely dis-

* Acknowledgement: The author deeply acknowledges the support given by Dr. Abhayan, Dept of Archaeology, Kerala University, for preparing a map indicating the distribution of some of the important sites in the Karamala valley. He also thanks his students Jamsheer, Ramdas, Manikandan, Gaganasruti, SajanaParveen and Fousia. The utmost care taken by K Krishnaraj and B MohanaChandran of the State archaeology department to take out the relics in a scientific manner also deserves a word of praise.

tributed all over the Palakkad district of Kerala. Little remains of their habitational structures though they might have lived in groups. These monuments are the only major evidences for the reconstruction of belief systems as well as the way the earliest iron using agriculturists had lived in the regions including Kerala. The study of megalithic burials continues to be relevant for the fact that they represent iron phase in the south. Unlike in the north, there is no megalithic phase without the use of iron.

It is over two centuries since the first studies on the Indian megaliths were published. However, we have not been able to examine a large portion of the megalithic burials and the associated relics. It is exploration that has enabled us to make some conclusions on the megalithic culture. Exploration in the Karamala region was conducted in 2013-14 period. Surface finds and observations during the salvaging of artefacts persuade the author to argue that the megalith builders had excelled in the techniques of metallurgy, pottery, stone cutting, masonry and making of weapons and implements. The tops of Karamala in the Alathur taluk of Palakkad district alone account for about 30 burials. Most of the house compounds in the slopes of the Karamala contain burials.Among the types of megaliths found during exploration in the Tharoor region include dolmens, slab-cists, urn burials, stone circles and menhirs. The burial chambers made of gneissic granite are the most common type in the eastern parts of Palakakd, including Tharoor. Excavation to salvage the artefacts likely to have been destroyed was done by the State archaeology department in association with the author and his students during January 9-15, 2015.

People in the south had used terms such as Mudumakkalttali, Pandavakkulietc to refer to the megaliths. (Srinivasan, 1946: 9-16). In Kerala, the megaliths were also known as Nannangadi, Muniyaraetc. It was held that these megaliths were of the period dating back to 3rd century B C to 1st century A.D. (Rajan Gurukkal and Varier, 1999: 106). However, archaeologists have given much earlier dates to the burial monuments which according to them belong to Iron Age-Early Historic periods. V Selva Kumar, for example, dates the south Indian megaliths to the period from 1000 BCE to 300 BCE (Selva Kumar, 2010: 90). According to him, the megaliths continued to be erected upto 500 A.D (Selva Kumar 2010: 92). Archaeologists have not been able to clearly establish whether the stimulus for the Iron Age culture came from the north as had been argued by scholars such as R S Sharma. (Sharma 2007: 212). Megaliths, according to T Satyamoorthy,

represent a transition from the Neolithic culture (Satyamoorty, 1992: 7). Although we can agree with Sharma that the early historic kingdoms of the south including the Cheras coincided with the time of Mauryas, there is little credence to the idea that iron using groups made progress as a result of their interaction with the people from the north. The practice of agriculture using iron tools, for instance, could well go back to the period before the 5th century B.C. Carbon 14 dating and TL dating of pottery samples have given earlier dates for the megaliths in other States. Satyamoorthy had got a radio carbon date of 900 B.C for the remains tested after Mangad excavation. One of the recent carbon dates procured for a cremated bone carbonate sample from a rock cut chamber from Kakkodi by the State Archaeology department from Beta Analytic Inc, Miami in June 2015 pushes the megalithic burials back to 2490-2350 BP. Kuttikkol site has given a calibrated radio carbon date of 792 -551 BCE. The Niranamkulam date of 135-330 CE also gives us the idea that megalithic burial monuments continued to be erected in the State as late as the early 4th century A.D (Peter, 2019: 522-30). The cist burials were built by the megalith people using stones cut out of rock near the sites. According to R E M Wheeler, stone slabs for cist tombs were made 'by lighting a fire on the surface of the rock.' Iron wedges were inserted into the cleavages for separating the top layer. Sites, including Karamala valley, have indicated that chisels for putting holes on the rock could have been made.

In Kerala, people had for long been familiar with the myth of interring the aged people into a Nannangadi (urn) with food and water. The megaliths of Kerala have survived to this day thanks largely to the fact that they were associated with such myths. The story that the megaliths were the last abodes of the very older people in the past has been handed down through the generations. Some have even feared that any damage to them would bring in troubles in their life. Asanumma of Vadakkumuri, on the southern slopes of Karamala, who died about seven months ago, had told this author in 2014 that the slab cists in her compound were the abodes of Kuttichathan. She even informed me that the Kuttichathan kicked the head of her mother. Some rituals had also to be performed with the support of her neighbour to ward off the problems caused by Kuttichathan. A few yards away is the compound of Manikandan where a cist burial is still found. Citing the place name Madathilpparambu, Manikandansays that the cist burial in his compound was built by Brahmins who had resided there previously. The construction of a dolmen, known as Vattakkallu (round stone), found at

Kolaroad in Tharoor village 2, is supposed to be the work of natives for threshing paddy. Kunjali, a native of Vadakkumuri told the author that these monuments were erected in the time of prophet Musa. Around 20 years ago, he had dug out a cist upto a depth of 2 m. He could find only pottery and iron objects. A trader himself, he used the `box' for ripening banana for two decades. This also implies that the force of myths has not been really strong to avert the process of destruction of the burials. Ali Muhammed was busy breaking the orthostats into pieces to make the floor for his cattle shed when this author spotted it a possible source of information on Iron Age life. Same was the case of Rayankutty who was about to cover the cist burial close to his house wall. Both these were salvaged (Fig. 1&2). However, excavation has not been effective in checking destruction of the monuments.

Fig 1. Cist at Ambattuparambu in 2014

Fig 2. Cist at Vadakkumuri in 2014

To cite an example, a cist had existed on the banks of a well in front of Sujatha at Madathilpparambu. Her son, while drawing water from the well, had almost fallen into it when the sides collapsed. Sujatha and her family members soon buried the entire thing in order to avoid damage to life (Fig. 3 &4). Jaleel, a native of Koranamkod situated at the bottom of the Karamala on the south said there was a cist in front of his house. It had to be removed during house construction. He could see only `hilt less knives' and `broken pottery' inside it.

Fig 3. Cist slab as well wall, Madathilpparambu

Fig 4: In covered state

Fig. 5 &6: Cists in destroyed state

Adjacent to that house plot is the compound owned by Ibrahim (also known as Thankamani). Work on a new house has just started there. Cist burial slabs are heaped together by its side. They were part of a big cist burial located on the north-eastern corner of the plot. The plots of Ibrahim and Jaleel were part of a compound known as Darbar-thodi which is now a rubber plantation (Fig 5 &6). Several cist burials had existed in it earlier. There is a heavy concentration of cist burials in the locality. Ibrahim at present lives in his ancestral house which is a tiled one. Behind it are found four big sized cist burials, two of which are having cairns on top. It has been the practice among the local people to dig into the cists hoping for some treasures. They never dig deeper into it. Ibrahim, for instance, had dug out the top portion of one of the cists and used the pit thus made for dumping ashes (Fig 8). He had found four separate chambers capped with slabs which he did not bother to take out. The contents of a cist in the compound of Manik-andan had also been dug out about 10 years ago.

Fig 7: Cist slab with chisel marks

Fig 8: Cist used as an ash pit

Nisamudheen's house, for example, was a small tiled house when excavation had been conducted in the adjacent compound owned by Ali Mohammed. There were a huge stone slab with chisel marks and some other cist slabs close to that house. No slab exists now. The stone slab was cut and the surface levelled (Fig. 7)


Fig 9: Cists in destroyed state


Fig 10: urn with cap stone

The house is now on top of it. Only an urn which had remained in front of his house is still found. Some of the contents of the burials have thus been buried forever. With the use of earth movers, the entire burials have been razed into the ground. The cist slabs are broken into pieces in some cases (Fig. 9&10).

Physical features of Karamala valley

Karamala is one of the hills dotting the Palghat gap. It is located to the east of the Tholanur hills. The hills close to Karamala are Valliyamkunnu on the west and Pezhumkode on the north. On the east is Anchangadi and Kudappuzha hills. The hills around Karamala do not fail to produce the evidence of Iron Age-Early Historic burials. Megalithic burial types such as laterite stone circles, cairn circles, cist burials, dolmens, menhirs and urn burials are found in these areas. (Fig. 11 &12). Most of the hills in the Palakkad gap region were Iron Age burial centres. Some of the hills immediately around Karamala with a large concentration of megalithic burials are Muppuzha, Konikkunnu, Kottod, Mazhuthekkampara, Tholanur, Pezhumkode, Nechurmala and Veezhumala,


Fig: 11: Stone circle, Karamala


Fig 12: Stone circle, cists, Karamala

The topography of the region is marked by vast paddy fields between the hills. The fields begin from the end of the hills at the bottom. It is likely that some of the areas close to the hills were parambu lands as is evident from the presence of cist burials and cist slabs on the banks of paddy fields. The raised portions of land at the margins of

low lands must have been converted into paddy fields at a certain point of time. That may go back to centuries ago. A natural and wide stream, originating in the Pezhumkod hills on the north, flows on the western side of the Karamala hill. It proceeds towards the south and finally reaches the river Gayathri at Athippotta. The river, originating from the Anamalai hills, reaches the valley after its course through places such as Kollengode. Kollengode hills are also a source of water for the river. It is the river Gayathri, to which the other rivers – Kalpathippuzha and Yakkarappuzha – merge to form the Bharathappuzha.

The 5-6 m thick red loam deposits on the hill in some parts of the Karamala help vegetation. A few quarries had functioned on the south east of the hill. There, the soil cover has been removed considerably. The hill is sloping towards the west. The water from the hill flows into the stream below on the western side. According to the 71-year-old Balan, the hill has remained like this from his childhood onwards. A few houses are found on the north east and east of the hill. The eastern part of the hill is slightly like a table top. The western, southern and south eastern parts of the hill are decorated with stone circles of varying sizes. The western end of the hill is slightly plain and there a few cairn heaps are also found. Habitation in the area around the hill, especially on the north west, north-east, and the south, had started a few generations ago. Houses were fewer some five to six decades ago. That must have protected the megalithic burials until recently. On both sides of the Karamala-Ambattuparambu road are dotted with houses. The tiled houses on both sides have now been converted into concrete houses. This has resulted in the destruction of many of the burials. However, a considerable number of burials continues to survive. There has been relatively lesser pressure on land in the area. This situation is changing now.

Most of the people in the area are subsisting on casual labour, animal husbandry, cultivation and trade. The hill and the parambu lands on the southern slopes on the Ambattuparambu and Vadakkumuri were assigned to tenants on simple lease. Some of the settlers in the area are descendants of these tenants. About 22 acres of land on the hill on the south west are supposed to be in dispute. The hill also comprises forest lands. The Karamala valley includes many places other than Vadakkumuri and Ambattuparambu. The outlying areas such as Madathilpparambu, Koranamkod, Anchangadi, Kudappuzha and Cherakkod can also be considered as part of the Karamala valley. There also, house compounds and portions of hills are noted for cist burials. The outlying

areas forming paddy fields, streams etc are at a level suitable for retaining rainwater in paddy lands. That implies that the area has been fertile for a longer period. The presence of clusters of megalithic burials on the surrounding hills and their valleys also indicates that the plains below the Kollengode hills –forming the Gayatri river basin—have been among the well irrigated portions in the Palghat gap for the past several centuries.

The high lands and the mid lands in the region were centres of megalithic burials. K R Srinivasan and N R Banerjee, based on their survey and excavation of sites in Chingleput district of Tamil Nadu and other areas, had observed that `rocky high grounds' unfit for cultivation had been centres of megaliths. They even point out that arable lands and the required water sources were readily available for the people of the megalithic phase. According to them, `megaliths sprang up where population could thrive, and populations could thrive only where the climate was clement in the form of abundant rains to make irrigation possible.' (Srinivasan and Banerjee 1953: 109). The Alathur taluk, formerly part of the Palakkad taluk, has been a low rainfall region for the last couple of decades. (1951 Census Hand Book Malabar District: 3). That need not preclude the possibility of the region having given a haven for the early settlers. The megalithic burials indicate human presence on a considerable scale. Megalithic settlements on a larger scale could have existed there, though clear traces of habitation are wanting. The presence of iron slag sites on the south of the Karamala valley along with cist burials persuades us to think that the habitation sites of the people could not have been far away from their burials erected on the tops and slopes of the hill. Given the wider distribution of megaliths in the low lands just above the paddy fields, there is no basis in saying that the people had not settled on the plains. Historians have considered the megaliths as representative of a period when the society had been in the stage called chiefdom. Romila Thapar for instance describes the megaliths `the burials of chiefly families.' (Thapar, 2002: 230).

Fig 13, 14: Cists in good state of preservation

Fig 14: Cists in front of house, Vadakkumuri

Fig 15: Iron Slag, Keedakkunnu

Explored sites in the valley

The important sites in the Karamala valley are Karamala, Madathilpparambu, Ambattuparambu, Vadakkumuri, Keedakkunnu, Koranamkod (Fig 18).

1.Karamala

Karamala (N L10°30'45'/ E L 76°29'17') is home to well over 30 stone circles. The diameter of the circles ranges from 3 m to 6.30 m.In addition to these, a few cairn heaps have also been found. The stone circles are formed by granite boulders around cists. Some of them contain more than one cist.The cists do not have cap stones. The orientation of the cists is not exactly on the east-west orientation. The excavation of sites such as Kadanad has already indicated that the orientation of the cists also varies. A stone circle on the north-western slope of the hill (10°39'57'/ 76°26'50')is having two cist burials. One of them, having a diameter of 5.90 m, is divided into two chambers on the eastern and western sides. The eastern chamber is 90 cm in diameter. The western chamber is 2 m in diameter. The north-south length of the rectangular cist is 1.40 m. At about a distance of 90 cm is the second cist burial having two chambers on the southern and northern sides. The diameter of the cist is 1.55 m and length, 2.12 m. In front of the house of Rajan are found two cists. A cap stone, 3.40 m in length, could also be found. Towards the western side of the hill (N L 10°40'20'/E L 76°28'53') is a circle having a granite menhir on north-south direction, one m each in height and width and 20 cm thick. Pot sherds and terracotta pieces have been found around cairn heaps. Urn shards, fragments of miniature pots and bowls in red and black ware have also been found at the margins of the mounds. On the south east of the hill (N L 10°30'03'/E L 76°31'30') is a stone circle containing a port-holed cist slab. The square port hole is 50 cm in diameter. Total height of the 5-12 cm thick slab is 90 cm from the surface. The exposed portion of the slab upto the porthole is 40 cm. The north-south length of it is 83 cm. The other side slabs of the cist could not be found.

2.Madathipparambu (Karingulangara)

a) The burials in Madathilpparambu site, located at the foot of the Karamala valley on the southern side, are distributed over a few house compounds. The first compound (NL 10°39'54'/ EL 76°29'42'), owned by Manikandan, contains a cist burial the contents of which have already been dug out. Pot sherds could be found around the cist which is rectangular in shape (Fig 16). The north-east side slab of the cist, according to Manikandan, had a port hole.Theport hole bearing slab is not found now. The depth of the cist at present is 82 cm. The western side slab is 1.5 m in length whereas the slabs on the south and north are 1.30 m-1.40 m long. The thickness of the cist slab is 15 cm.

Fig 16: Cist, Madathilpparambu

Fig 17: Laterite stone circle, Madathilpparambu

b) The cist burial in the second compound adjacent to that of Manikandan is also in opened state. It is also rectangular in size with the east-west length of the slabs measuring 1.90 m. The north-south length of the slabs is one meter. All the slabs are intact.

c) Close to the compound of Manikandan is a laterite stone circle site (NL 10°40'12'/ EL 76°29'44'). On the east of the circle are two laterite clinostats, each measuring 2.30 m in width. The circle is found on the plot owned by Theethikkutti. One of the clinostats is a little higher, with a width of 1.30 m. It has a thickness of 50 cm. The diameter of the circle is 3.30 m. The clinostats are 40 cm high from the present surface. The circle has a rubble heap which is 75 cm high from the surface. (Fig 17).

d) Adjacent to this compound is the house site of Kundumpulli Devaki. Just one cist burial side slab could be found in it. The slab, which also formed part of the well in front of the house of Devaki was 1.72 m in height, 15 cm thick and 1.10 m in width. Parts of the slabs on the other side could also be seen. All of them have now been buried.

3. Ambattuparambu

The house compound of Ali Muhammed (N L 10°40'16'/ E L 76°30'12)contains a cist burial.When field work was conducted in

2014, the earth around the eastern slab had been removed upto the port hole. The cist slab measured 76 cm in height and 54 cm upto the port hole. Its thickness was 10 cm thick. The east- west length of the cist chamber was 1.80 m. Its width on the north-south direction was 1.05 m. Small pieces of the side slabs were found on the other sides.Following excavation, the owner of the plot buried the cist.

A cist slab with chisel marks and an urn had existed in the adjacent plot owned by Beevathu (N L 10°40'16'/E L 76°30'12). Only the urn remains now. The place where the cist slab had stood has been levelled for house construction.

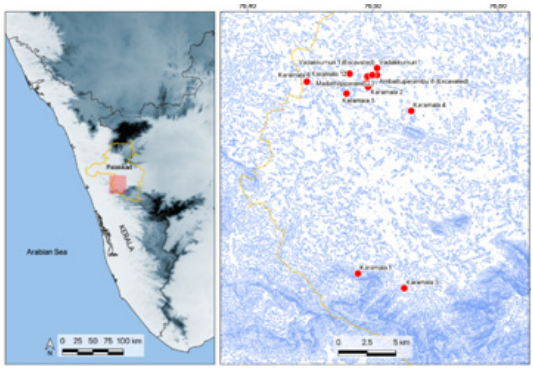


Fig 18: Distribution of sites

4.Vadakkumuri

The cist burials found in Asanumma's compound are in a disoriented state (N L 10°40'16'/E L 76°30'12). Two cists could be found in it (Fig. 20). Only one side slab of a cist remains for the first one. In the case of the second cist, the side slabs on the north, south and east are found. The northern side slab is one meter long, while the slab on the south is 2.04 m long and 22 cm thick. Only a 50 cm long piece remains of the eastern side. A middle slab portion could also be found. It is 85 cm long and 12 cm thick. Another 1.50 m long, 10 cm thick slab on the east of a cist could also be found.

Two cists were noticed in the compound of Velayudhan. Two more cists could be found in the compound of Vasu. Only two slabs of a cist could be noticed in the comound of Aziz. The northern side slab was 20 cm thick. The north-south diameter of the cist was 1.40 m. The northern slab was 22 cm in height. Only two side slabs (western and southern) were found in the compound of Rayankutti. (N L 10°40'16'/ E L 76°30'12). The western slab was 90 cm long while the southern one 1.50 m long. The cist has now been buried (Fig 19).


Fig 19: Cist, Vadakkumuri


Fig 20: Cist, Vadakkumuri

5. Keedakkunnu

Keedakkunnu (N L 10°40'16'/E L 76°29'58) is to the south east of the compound of Ali Muhammed. It is noted for the presence of a 20 cm thick, 82 cm high and 2 m long cist slab and heavy deposits of iron slabs.

6.Koranamkod

Koranamkod on the south of Karamala is a very important megalithic site. A cist burial was found in front of the house of Asan Muhammed. It was located on the path way leading to his house. There were two cist burials in the compound of Muhammad Kani. There was also a cist burial in Pokker's house compound. Leelavati's plot had contained three cists. Only three slabs of the first cist had existed. The northern side slab was 2 m in length. The slab on the western side was 1.30 m long. It was 8 cm thick. The northern side slab was 15 cm thick. Only two side slabs of the second cist burial were found. The slab on the north was 2 m long where the one on the west was 1.30 m long. The third cist burial too had two slabs. On the west was a 1.50 m long slab. A 1.50 m long slab could be found on the east as well. Only a cist slab could be found in the vegetable garden of Dharman (Fig 21). There were seven cist burials in the plot of Kabeer. Five were destroyed when it was converted into a rubber plantation. Only two cist burials remained. One of the surviving cists had a 20 cm thick, 1.20 m x 1.60 m long cap stone. The other cist burial had two side slabs having a length of 1.40 m on the north-south and east-west directions. The slabs were 15-20 cm thick. The destroyed and removed slabs of the other cists could be found in the plot. Of these, one was a cap stone.


Fig 21: Cist, Koranamkod

There are four cist burials in the compound of Ibrahim. Three of these are intact. Though the largest of the four cists had been dug out a few years ago, not much was exposed. Two slabs of this cist remain. The cist burial was erected with a clear east orientation. The chamber has a diameter of 1.55 m on the east west. Both the eastern and western side slabs are 2.25 m long. The second cist burial had two side slabs in an exposed state. They are in north-east and south west orientation. The north-east side slab has a length of 1,86 m and is just 7 cm thick. The south-west side slab is 1.55 m long but is 22 cm thick. The north-south diameter of the cist is 1.25 m. There are three side slabs for the fourth cist burial. It is oriented north-west and south-east. The north-west side slab is 16 cm thick and 1.15 m long while the one on the south-east side is 1.94 m long and 14 cm thick. The diameter of the cist on the north-east direction is 1.50 m. The slab on this side is 1.5 m long and 9 cm thick. The cairns on top of the three cists have not been removed completely. The cists seem to have been remaining undisturbed. No cap stone could be found.

Megalithic and iron slag sites around Karamala and Tharoor region

In the low lands on the east of the Karamala valley is Kavungalp-parampu where cist burials were dug out in 1975-6. Iron bars, sickles, a lamp like object etc were among the grave goods found, according to local people. Close to it is a place called Ambalakkad where cists were found on the path ways and private compounds. At Kudappuzha, belonging to Tharoor village 2, a cist was found on the pathway leading to Anchangadi. Situated to the west of Siddic's house, only an east-west side slab in exposed state remains now. It is 2 m long and 15 cm thick. Kolaroad is also a site close to it. It forms part of the hills immediately connected to the Karamala hill. A dolmen could be found at Kolaroad. It is 40-60 cm in height on the east and 63 cm high on the north. The dolmen is slanting towards the south and west. It is 53 cm high from the surface on the south and 50-55 cm high on the west. The slab thickness is 35 cm. The gigantic dolmen's cap stone is 1.70 m in diameter on the north-south and its length is 2.90 m on the east-west. Boulders, 35-40 cm in thickness support the dolmen cap stone on the east.There are courses of boulders and slabs below the cap stone. The floor slab, if any, is not exposed. Above a course of boulders on the floor, is a 45 cm long, 43 cm wide flat slab on the north-western corner. On the south-western corner is a huge stone boulder, 40 cm thick and 53 cm long above the floor boulder. On the south east side is a 60 cm long, 40 cm thick boulder. On the east, almost in the middle, is a 40 cm long, 30 cm thick boulder.

About one kilo meter to the south of the Karamala valley is Cherakkod. It is an important site known for urn burials and cist burials. Two urns were found in the house compound of Balakrishnan at Pulichikkundu in the locality. Two slabs covering an urn burial could also be found. The rim portion of an urn was found in an exposed state in the adjacent compound of Basheer. The diameter of the exposed rim portion was 38 cm. A cist, encircled by laterite blocks, could also be found in another plot owned by Prabhakaran Nair. Close to this compound was a plot known as Keedakkunnu. As in the case of Ambattuparambu, Keedakkunnu here is also noted for the presence of iron slags.

Salvage excavations at Ambattuparambu and Vadakkumuri and findings

The two cists uncovered at Ambattuparambu and Vadakkumuri were in compounds where deep digging had not been undertaken for cultivation. It was about 11 years ago that Ali Mohammed bought his land (Fig 22). Before that, the land was used only for cultivating the rice variety Modan and horsegram. Rayankutty had settled in the compound (TRR 2) around the year 2000. (Fig 23). The only crops grown in the compound were tapioca and vegetables such as brinjal. A 3.5 x 3.5 m square trench, with a diagonal of 4.95 m, was laid for TRR 1. A smaller trench, 2.5 m on all sides and 3.5 m diagonally, was laid for TRR 2.

Fig 22: Cist at Ambattuparambu

Fig 23: Cist at Vadakkumuri

Salvage excavation of two cist burials in the private compounds in the Karamala valley was carried out jointly by the State Archaeology department and the department of History, Govt Victoria College, Palakkad during 9-15, January 2015. Apart from the author, a few students of the department of History also took part in it. Th cist close to the house wall of Rayankutty (TRR 2) was found to be the least disturbed despite it having been under the roots of tamarind and rosewood trees. This cist was uncovered after removing the roots.

Structural features and grave goods

On account of the limited nature of salvaging work, we do not get a clear picture of how the pit was dug for the cists. The area around the cist was not dug for recovering artefacts. There is no trace of any passage. That may indicate that the cists could also be of an earlier date. The arrangement of the orthostats indicated their swastika shape (Fig 24). The excavation revealed that both the transept cists with double chambers were port holed and oriented in the east west direction. Both the cists had circular port holes at the base of the middle slab which was low and thin as compared to the other orthostats. There were two port holes each in both the cists. They were on the slab on the south-east corner of the eastern slab and at the bottom of the middle slab in both cists. The arrangement of grave goods was same in both the cists. Pottery could be found carefully placed on the floor slab at the western and eastern portions of the southern chamber. In the case of TRR 2, a pot was also found placed at the south western corner a little above the floor slab. Pottery could be found in the middle chamber of the northern chamber of TRR1. The bottom chamber of the northern chamber of TRR 2 could not be opened. Swords, blades and knives were found on a bench prepared almost at the middle of the northern chambers of the cists. No beads could be found in them.

Fig 24: Cist at Ambattuparambu

There were two monolithic side slabs on the eastern side of TRR 1. The side slab at the bottom was upto the level of the bench in the northern chamber. Above this bottom slab is the other monolithic slab, which bears a semi-circular slab. Such side slab is not generally found in the other sites.

The port hole of the first cist TRR 1 was having a semi-circular port hole on the south east corner of the eastern slab. It had a diameter of 40 cm.The port hole bearing eastern slab was placed on top of the bench slab in the northern chamber. Below the semi-circular port hole was erected another orthostat to form the cist wall on the east. Pottery and iron objects could be found on a stone bench in the northern

chamber. The southern chamber was filled with soil upto the floor slab. Except the eastern and southern orthostats, the other orthostats were not monolithic. The eastern orthostat was 14 cm thick. The northern and southern side slabs were 12 cm thick, while the slab on the west was just 10 cm thick. Its middle slab was just 2-4 cm thick. Total length of the cist on the east-west direction was 1.80 m. The north-south diameter of the cist was 1.17 m. The port hole on the south-east corner was covered by a 54 cm long, 37 cm wide and 10 cm thick slab.

Fig 25: Cist at Ambattuparambu

Fig 26: Iron trident, Ambattuparambu

Pottery types found in the cist included bowl, ring stand, dish, lid, small sized water vessels etc. Black ware ring stand, a medium sized pot and a few bowls, including a black ware bowl, were found on the bench in the northern chamber of the cist. Below the benches were also arranged pots. The benches in the northern chamber were made with three slabs. Just below the slab in the middle were found pots in the opening of the porthole of the bisecting slab. They were arranged in line opposite to the porthole. Another pot was placed close to the porthole. Behind it were two water vessels and a deep bowl in a row. The rim of the bowl had a diameter of 20 cm. It was 10 cm high from the floor slab. Two black ware ring stands and two small bowls were also found. One of the bowls was placed in an inverted form over the mouth of the water vessel which was resting on the black ware ring.The southern chamber had pottery on the floor slab by the side of the trident on the western side and by the side of the port hole on the middle slab. Pots were in broken state.

The blades in the northern chamber of the cist was 27 cm long. The tanged dagger was 23.5 cm long.Both these were found on the bench in the northern chamber. The iron trident found in a standing position close to the wall of the middle slab at the south-west corner of the southern chamber was one meter in length. It was almost like the one found by J Babington at Neelachaparambu in Kozhikode in 1819

(Fig 25). Its shape and quality of preservation as also the occurrence of iron slags in the vicinity indicate that the megalithic communities of the time had excelled in metallurgy. Babington had attributed Saiva trait in the trident unearthed by him. Other scholars, including Rajan Gurukkal and Raghava Varier also attributed ritual significance to trident (Gurukkal and Varier, 1999: 135). Given the fact that trident bearing Saiva Bhagavatas had existed only in the second century B.C, there is no basis for this assumption. (Saletore, 1943: 491). Saivism was a product of fusion of elements from the north and the south. D N Jha, for instance, says that this fusion occurred in the beginning of the Christian era. (Jha, 2004: 142). Around the 5th-7th centuries A.D, Saiva worshippers grew in number in the south (Thapar1990: 160).Archaeologists have taken trident more as a weapon (Satyamoothy, 1992: 23).

The depth of the cist at TRR 2 upto the floor slab was 2.50 m. The middle slab was 1.84 m long, 7-10 cm thick and 1.50 m above the floor slab. There were no iron objects in the southern chamber of the cist while the sword and other iron objects were found in the northern chamber. Sandy soil could be found at the bottom of the southern chamber. The four monolithic orthostats of the cist were very heavy and high. Black ware could be found at a depth of 1.50 m from the datum point in the north western corner of the cist. The western slab was 1.60 m long and 10-12 cm thick. The northern slab was 1.80 m and 10-16 cm thick. The southern side slab was 1.96 m long and 10-18 cm thick. The eastern side slab's length could not be measured as it was close to the house wall. The length of the slab from inside the cist was 60 cm and its thickness was 12 cm. There was a variation in the diameter of the cist on the western and eastern sides. It was 1.16 m on the west while it was 1.28 m on the east. The length of the cist in the inside was 2 m. Loose soil was found in a circular pit around the porthole side while gravelly soil was found inside the cist. Only miniature pots, both red ware and black ware and bowls could be found inside the cists. Iron slag could also be found inside the cist at a depth of 1.62 below the datum point. The 62 cm long sword found in the northern chamber had a sharp edge and was placed east west in orientation. Its hilt was on the eastern side.

The pottery types included black polished ware, red ware and black and red ware. Fragments of bowls, lids and small and medium sized pots could be found in the cists during digging. Some of them seem to be water-pots. A black ware rim fragment could be found at a

depth of 1.62 m from the datum point. Pottery could be found in the western end of the southern chamber on a bed like structure, 1.82 m below the datum point. In addition, two pots could be found close to the port hole of the middle slab in the same chamber. The chamber also contained a ring stand. A 62 cm long and 5.7 cm wide sword was found in the northern chamber. Its hilt measured10 cm in length. A 6.3 cm long, 3.1 cm wide and 5 mm thick iron point facing the west was found in the southern chamber at a depth of 2.5 m. In addition, a blade and a knife were found on the south west corner of the same chamber. On the south east corner was found a spear head 6.6 cm in length, 5 mm-2.3 cm in width and 5 mm in thickness. Two daggers, one placed over the other, were also found in the same corner. The dagger above had a length of 34 cm and a width of 4 cm while the respective measurements of the length and width of the one below were 39 cm and 4.5 cm. They were facing opposite directions, with the dagger below facing the south west.

At the time of salvage digging, the pots taken out from the cists could not be examined for ascertaining whether they had contained bone remains. The report of the digging has not yet been finalised.

Discussion

The cist burials indicate a general trend found all over the south. It is the availability of the material for construction that must have persuaded the megalithic builders to construct these stone houses for the remains of the dead. It is highly unlikely that the cist burial builders of Karamala would have lived on its tops as they are dotted with burials all over the hill. There is, however, no means of establishing that the megalithic communities of the valley had also discontinued the Neolithic practice of burying the dead within their habitations.Their habitation might not have been too far away as is evident from the deposits of iron slags found close to cists. They indicate iron-smelting on a bigger scale in the area. There is a possibility that iron making did not require import of raw material from outside. Most probably, iron ore could have been available in the vicinity. Iron objects found in the cists must have been made indigenously. Most of the iron objects found in the two cists–tridents, swords, daggers, blades, spear head etc--seem to belong to the category of weapons. They indicate the existence of a society in which warfare had been an important trait of culture. It is, however, difficult to imagine the people of the megalithic period as being engaged in `hunting/gathering supplemented by shifting cultivation

and animal herding' (Gurukkal and Varier, 1996: 102). Such a reading of the megalithic culture was made by historians when not many absolute dates for the burial remains had been made available. The latest absolute dates indicate that the iron using people of the megalithic culture in the south, including Kerala, had existed long before the coming of the Mauryans to the Deccan. Although the carbon dating of objects from the Mangad excavation suggested an earlier date, it was rejected citing that `no other reliable evidence has come up' (Gurukkal and Varier, 1996: 128). Theirs was an uncritical adoption of anthropological concepts for the study of megalithic culture. Kerala, in their view, `was almost entirely forested but interspersed by tracts of marshy, grassy and water-logged terrain' (Gurukkal and Varier, 1996: 146). If that was so, where would the megalithic people of the Karamala valley have lived?

The extant cists in the area are covered with cairn packing. It is clear whether the cists could have been buriedwithout capstone.Archaeologists have asserted that cap stone would have been placed over the pottery and bone remains in the cist tombs of the south (Wheeler, 1947: 188). There are examples of urn burials with cairn packing elsewhere (Subbarayalu, 2014: 16). The circle of slabs or boulders must have been removed. The cists in the Vadakkumuri and Ambattuparambu localities had retained much of their interred goods due to the fact that habitation in these sites has a short history. The excavated cists were bigger cists as they are divided into two chambers. Archaeologists like Rajendran have expressed the idea that cist slabs do not retain `any marks of use of iron implements.' (Rajendran, 2000: 85). Chisel marks on cap stones and cist slabs in sites in Palakkad district, including Ambattuparambu, disprove this notion. The monolithic cist slabs of a gigantic size erected at Vadakkumuri demonstrate their engineering skill as well.

The occurrence of large number of wheel-made miniature pots and other smaller pottery types in the cist burials has been noticed in many sites. Archaeologists have observed that the materials used in making the pottery were laterite and clay (Rajendran, 2000: 84). Bowls and ring stands made of Black Ware were found were found in the burials excavated in the Karamala region. Small sherds of black ware bowls could be found in the cairn heaps. This clearly establishes black ware as typical megalithic burial pottery in Kerala as well. The occurrence of pottery is universal in the Neolithic and megalithic buri-

als. What distinguishes the megalithic pottery is the manner in which they are placed. The bowls, lids and pots might have been intended as ritual offerings to the dead. It is unfortunate that the report of the digging could not be finalised.Excavation of cists elsewhere has revealed that bones were kept in the smaller pots and bowls. Rajendran had recovered bone remains in three pots and a bowl from the cists excavated at Arippa (Rajendran, 1995: 685). No such remains could be examined in the case of pottery from the Tharoor cists.

Underlying the practice is a belief in the after-life of the dead. In fact, the megalithic people all over the south had not used stone or bricks for constructing their houses (Subbarayalu, 2014: 23). Stone workers, potters, iron workers, warriors etc could have formed important groups in the society that had lived in the Karamala valley. Kinship-ties alone could not have been sufficient to erect such massive structures with utmost precision. There could be some skilled people outside of kinship ties for providing labour in fixing the orthostats in such way that even the thinner middle slab has continued into the present without any damage.

Conclusion

The excavation of the two cist-tombs for salvaging relics which would have otherwise been lost reveals that our megalithic heritage requires a little more care on the part of those who are supposed to be the custodians of these relics from the past. Joining together bits and pieces from the megalithic sites is a fruitful exercise in the sense that they throw light upon several issues including the transition from the Neolithic Culture to Iron Age and the exact links between these monuments and the early historic culture of the south usually referred to as Sangam Age.

References

Gurukkal, Rajan., 1999. Raghava Varier, M.R. *Cultural History of Kerala Vol. I.* Thiruvananthapuram: Department of Cultural Publications.

Jha, D N. 2004. *Early India A Concise History of India.* New Delhi: Manohar Publishers and Distributors.

Peter, Jenee. 2019. "Reinterpreting the Chronology of Iron Age Burials in Kerala". *Heritage: Journal of Multidisciplinary Studies in Archaeology,* 7: 522-530.

Rajan, K.1992. *Archaeology of Kongu Country (Tamil Nadu)*. Madras: Vikas Publishing House.

Rajendran, P. 1995. "A Note on the Megalithic Cultural Remains from the cist burials at Arippa in Kollam district of Kerala, South India." *Current*

Science, 68 (7): 685-6.

Rajendran, P. 2000. "The Prehistoric Cultures of Kerala." In T Madhava Menon (Ed.), Handbook of Kerala (80-6). Thiruvananthapuram: The International School of Dravidian Linguistics.

Saletore, Rajaram Narayan. 1943. *Life in the Gupta Age*. Bombay: The Popular Book Depot.

Selva Kumar, V. 2010. *Tamil Cultural Connections Across the World*. Tanjavur: Tamil University.

Sharma, R. S. 2007. *India's Ancient Past*. New Delhi: Oxford University Press.

Srinivasan, K R. 1946. "The Megalithic Burials and Urn-fields of South India in the Light of Tamil Literature and Tradition." *Ancient India*, 2: 9-16.

Srinivasan, K R., Banerjee, N R. 1953. "Survey of South Indian Megaliths." *Ancient India*, 9: 103-15

Subbarayalu, Y. 2014. "Megalithic Burials and Graffiti." In N. Karashima (Ed.), *A Concise History of South India Issues and Interpretations*, (15-25). Delhi: Oxford University Press.

Thapar, Romila. 1990. *A History of India*. Delhi: Penguin Books.

Thapar, Romila. 2002. *Early India.* New Delhi: Penguin Books.

Wheeler, R.E.M. 1946. "Brahmagiri and Chandravalli 1947: Megalithic and other Cultures in the Chithaldrug district, Mysore State." *Ancient India*, 4: 182-308.

© 2020. *Social Orbit* ISSN 2395-7719, Vol.6, No.1, pp.160-170

The Acclimatization of Narasimha Imageries into the Temple Murals of Kerala

Sheena V.R. & Renjeshlal S.R.
Assistant Professors (on contract)
Dept. of Archaeology, University of Kerala
Thiruvananthapuram, Kerala, India
Email: vr.sheena@gmail.com; renjeshlalsr@gmail.com

Abstract

Narsimha, often considered as the most ferocious incarnation of lord Vishnu can be noted as the most frequently and most elaborately painted images in the temple murals of Kerala. Among the thirty-seven temple murals, which were extravagantly reviewed and studied, the twelve temple murals of Kerala have the panel of Narasimha.These temples are scattered in and around Kozhikodu, Malappuram, Thrissur, Kottayam, and Pathanamthitta districts. The esteem respect and fidelity through the fear-provoking facet of the lord Narasimha has been rendered aesthetically in the temple murals throughout different regions across Kerala. The acclimatization of the Narasimha image in the mural paintings across Kerala had been witnessed after the Bhakti movement, which occurred on and after the 15th century CE. Generally, the image is portrayed in two distinctive personalities of lord Narasimha, like the Yoga-Narasimha and Ugra-Narasimha. Ugra-Narasimha is the most commonly occurring theme. This paper gives brief discussions about the acclimatization and the iconographical nature of the lord Narasimha in Kerala murals and the veneration of the god among the present society.

Keywords: Murals, Narasimha, temples, acclimatization, Iconography, Vishnu

Introduction

Lord Vishnu is one of the three principal stalwart cults of Hinduism. He is often considered as the responsible force behind the function of preservation of the universe. He has taken ten avataras or incarnations for protecting and maintaining worldly peace in the universe on numerous arduous circumstances. Each of these incarnations has precise reasons and has different influences overthe human society. In these incarnations, Narasimha is the fourth one of lord Vishnu, which has been venerated with an embodiment of valor and grace (Desai, 2013: 84). In this form the god is metamorphized in to zoo-anthro-

pomorphic form with a human body and the face of a lion.

The name Narasimha shoots out from nara (human) and simha (lion), the word nara denotes the individuality of human and simha denote the character of lion, the god having literally materialized in toafigure with a lion like face with a human torso. There is no justifying tradition about the symbolic significance of the Narasimhain the Vedic literature. The popularity of the Narasimha avatara of Vishnu is demonstrated through various hymns. He is invoked and described in many Puranas such as Kurma-puranas, Saura-puranas, Vayu-puranas, Padma-puranas, and the great epic Mahabharata (Rao, 1914: 146)

The Bhagavatha-puraṇa describes Hiranayakaśipu conquered the three worlds and no one is allowed to worship the god in his country. But Prahlada the son of Hiranyakasipu becomes a worshipper of Vishnu.Once he asked to Prahlada if Vishnu was present everywhere, why he was not observable in the pillar. Hiranyakasipu broke the pillar then the lion faced avatara came out from the pillar and killed Hiranyakasipu (Desai, 2013: 85)

Narasimha in sculptural art

Narasimha is one of the most preferred deity in the sculptural art of India. Though the antiquity of Narasimha in Indian images has been traced back to the times of Guptas and the oldest representation of Narasimha belonging to the Gupta period, which was executed on a seal found from Basarh. Other peculiar image of Narasimha during the Gupta period is from the chaitya windows of Deogarh Dasavatara Temple. The notable characteristic of Narasimha images in Gupta period is the absence of the demon Hiranyakasipu, ie, he is shown as single or Kevala Narasimha with two or four arms. Occasionally he is shown as seated in the uṭkuṭāsana pose with the forelegs are tied together by an yogapatta and traditionally known asYoga-Narasimha. This form of Yoga-Narasimha is normally found in south rather than in the north (Desai, 2013: 88).

Unwavering representations of Narasimha images can be seen in the post-Gupta period. In these images, he is depicted as killing the demon Hiranyakasipu and popularly called as Ugra-Narasimha. The important sculptures of Narasimha belong to this period are from Rajivalocana Temple at Rajim in Madhya Pradesh and is datable to 7th century CE and another interesting image of Narasimha from Devangana near Abu datable to 9th century CE (Desai, 2013: 90).

In South India, the sculpture of Narasimha was noticed from

the periods of Pallava, Chola, Chalukya and Vijayanagara (Dubreuil, 2001:77). The Narasimha form of Vishnu gained popularity at the time of Badami Chalukyas and Vijayanagara rulers.

The earliest, while considering the Narasimha sculptures in Kerala is a Yoga-Narasimha from Guhantaswami temple at Cape Comorin, belongs to ancient Travancore region dated to13th century CE (Poduval, 1948: 73) and a remarkable representation of lord Narasimha of 14th century CE from Kattil Mekkathil Ponmana Temple in Kollam district (Poduval, 1948: 111). In the later periods, theworship of Lord Narasimhaflourishedwith greater prominence and started to develop into an independent veneration and becomes a principal deity. Apart from being worshipped as a subsidiary deity as shown in the wall, pillars and brackets the lord Narasimha is, worship as a principal deity in about 17 temples.In addition to this, a large number of detached images, especially of Yoga- Narasimha are installed on the western side of the temple complex.

The acclimatization of Narasimha images in the Mural Paintings of Kerala

The Narasimha incarnation of lord Vishnu have been noticed in the temple murals from the 15thcentury CE onwards. This acclimatization of the Narasimha imageries in the temple murals of Kerala has been happened during the onslaught of the Bhakti cult movement , which sweeps across the southern India on and after the 15th century CE. After surveying thirty-seven temple murals from different regions of Kerala, about twelve temples have the paintings of Narasimha and they are distributed in Pathanamthitta, Kottayam, Thrissur, Malappuram and Kozhikode district.

Generally, the Narasimha form of Vishnu is represented with a haloed lion face with a human body. He has an open mouth, furious fangs, protruding tongue, thick mane, scout neck, muscular shoulders, muscular chest, slender waist and sharp nail. The image is depicted as seated on a simhasana, with four, eight or sixteen hands. He is holding usual Vaishṇava emblems like conch and disc.The complexion of the body is crystal white, which represents Sattvaguna (Neeakandanassari, 2003: 9). The most popular iconographic form of Narasimha depicted in Kerala murals are the Yoga-Narasimha and Ugra-Narasimha.

Yoga-Narasimha

In Yoga- Narasimha, the form the god is depicted in a meditative mood. Normally, this form is represented as a single figure, seated on

a simhasana with padmasana in the utkuţika posture. The forelegs and the back of the body are gained together with yoga- patta. The image has four hands, the upper right hand and lefthand carry chakra and sanku respectively, and the other two hands being stretched forward and supported on the knee. Among the surveyed thirty seven temple murals, only two temple murals have the panel of Yoga-Narasimha.

One of the most extraordinary paintings of Yoga-Narasimha is noticed from the Thrikkodithanam Mahavishnu Temple in Kottayam district. Here the western wall of the srikovil has an exquisite panel of Yoga-Narasimha seated on a throne, which betray apparently all the similar iconographic representations of above discussed Yoga-Narasimha. He is shown as wearing red-coloured costumes and the body is richly bedecked with all ornaments. The colour scheme of this image is good and it provides elemental power and depth (fig. 1).

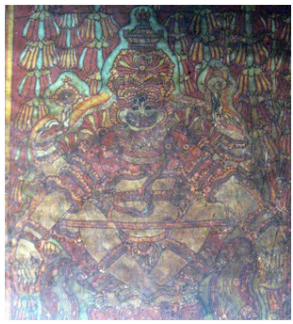


Figure 1. Yoga-Narasimha from Thrikkodithanam Mahavishnu Temple

Subsequent to Thrikkodithanam, stylistically and iconographically almost similar specimen of Yoga-Narasimha panel is noticeable from the srikovil walls of Thali Mahadeva Temple and Arpookkara Subramanyaswami Temple in Kottayam district. Here the image of Narasimha is less decorative with lighter colour (fig. 2).

Figure 2. Yoga-Narasimha from Arpookara Subramanyaswami Temple

Srikovil wall of Chendamangalam Siva Temple at Calicut has a beautiful 18th century CE mural of Yoga-Narasimha panel depicted as seated on an inverted lotus pedestal. His body is adorned with minimum ornaments and costumes. He wears only lower garment which reaches up to the thigh and it is demarcated by using green colour.

Ugra-Narasimha

The Ugra-Narasimha image is often represented as the lord killing the demon Hiranyakasipu. This image of Narasimha is customarily shown with eight handed, with a fierce looking lion face with a thick mane. He is seated on a throne and shown as tearing out the entrails of the demon. The image is generally holds two Vaishnava emblems sanku and chakra and the other hands are engaged in killing the demon. The front two hands are used for tearing the bosom of Hiranyakasipu, who is seen lying on his lap. The lower two hands used for holding the legs and hands of the demon and pulling out the entrails of the demon with other two hands.

The most exclusive depiction of Ugra-Narasimha is found from the paintings depicted on the srikovil walls of Thriprayar Sreerama Temple. Here the lord Narasimha is represented as killing the demon king Hiranyakasipu. Here Hiranyakasipu is depicted as lying on the lap of Narasimha. His head is seen on the right folded leg of the god. He is adorned with all suitable ornaments such as necklaces, bracelets and anklets. He is shown as wearing kiritamakuta. He has large opened bulging eyes, wide opened mouth and protruding teeth. His hands and legs are held in the hands of the god. The skin colour of the demon is dark, represents Tamo Guna or evil character and he wears red coloured lower and upper garments.The lower garment reaches up to the thigh and upper garment reaches up to the abdomen (figure 3).

Figure 3.Ugra-Narasimha from Thriprayar Sreerama Temple

This painting is remarkable for its enlargement of thematic illustrations and this obliteration scene is shown with the presence of spec-

tators like Prahlada, Brahma, Indra and Siva, with anjalihasta. These paintings have excellent visual unity and the themes co-exist within a large single panel without frame or borderline between them.

The srikovil wall of Panayannarkavu Bhagavthy Temple in Pathanamthitta district has an 18th century CE mural of Ugra-Narasimha. The iconographic illustrations are same as that of Thriprayar, but this painting is enhanced by the grandeur magic of colours and the themes are arranged in separate single panels. The demon Hiranyakasipu is laying on the lap of Narasimha, his head is on the left folded leg of the god. His hair is tied upward in a knot like fashion. His body is demarcated by using green colour represents Sattvik nature. Prahlada is depicted as standing on the right side of the god with anjalihasta, he is shown as wearing ornaments decorated with rosary beads and without garments (figure 4).

Figure 4. Ugra-Narasimha from Panayannarkavu Bhagavathy Temple

The outer wall of Sankaranarayana shrine of Trissur Vadakkumnatha Temple has a small beautiful panel of Narasimha belongs to 18th century CE (Vijayaraghavan 1998: 79). Here the image is shown as sitting in Yoga pose in varadamudra which is rarely seen in Kerala murals (figure 5)

Figure 5. Ugra-Narasimha from Vadakkumnatha Temple

The srikovil wall of Pallimana Siva Temple at Trichur has a wonderful depiction of Narasimha killing the demon Hiranyakasipu. He is depicted with sixteen hands among these six hands are used for attacking the demon and the other ten hands holding various weapons sanku, chakra, gada, padma, pasa, ankusa, khadga, kheta bow and arrow. The sixteen handed Narasimha is rarely seen in Kerala murals. This image is very distinguishable for its colour and decorations. White, ochre-yellow and shades of blue are predominant colous used here. The artists employed these tints very astonishingly with delicate lines. The costumes are decorated with round shaped designs which are very apparently confined to the viewers. The ornaments are adorned with sparkling stones and pieces of metals. Prahalada, is depicted as seated on his right side with anjalihasta. All the other spectators of this panel like Brahma, Siva and Indra are also shown at the top with folded hands (figure 6).

Figure 6. Ugra-Narasimha from Pallimana Siva Temple

The interior of the eastern wall of Vadakkumnathan Temple has a 19th century panel of Ugra-Narasimha, which is completely faded and unable to identify the iconographic details. The demon is seen on his lap and Prahlada is shown on his left side with a folded hand (Vijayaraghavan: 85).

The north western wall of the srikovil of Manganam Narasimhswami temple at Kottayam district has a late 18th century mural of Ugra-Narasimha. The image of Narasimha is shown as strangling Hiranyakaśipu, who is lying on his folded legs. He is depicted as seated on a throne with large bulging globular shaped eye, strong shoulders, waist and neck. The middle part of the body and belly are lean. The body of Narasimha adorned with hārās, bhujavalaya, kankaṇa, upavita and pādasara. He wears karaṇţamakuţa, decorated with garlands and jewels.

These ornaments in the body are demarcated by using red and yellow colour. Hiranyaksipu is depicted as lying on the lap of Narasimha, his head is seen on the right folded leg of Narasimha. He is shown as wearing ornaments and costumes. The obliteration scene is shown with the presence spectators like Prahlada, Brahma, Indra and Śiva. Prahlada, the great devotee of lord Viśṇu is depicted as a young boy seated on his right side with anjalihasta. Adjoining to the Prahlāda is Brahma and Indra, they are shown as standing with folded hands. LordŚiva is depicted on his left side with four hands holding tanka and mriga in the upper hands and the lower hands are in anjalihasta.

Another most precious specimen of Ugra-Narasimha belongs to this period is conspicuously visible from the walls of the srikovil of Vakamoli Mahavishnu Temple at Calicut. This image is depicted with a grandeur workmanship with clear contours. Here the lord Narasimha is depicted as seated on a throne, he wears typical kathakali type kiritamakuta decorated with jewels and adorned with a sikhara like super structure on the top. He has large globular shaped bulging eyes, broad eyebrows, and mouth opened with long and sharp teeth, broad ears with pointed end, broad shoulder and slender hips. He has eight hands; the upper two hands are used for dragging out the entrails of the demon. The middle right hand carry chakra and left hand has sanku, the lower right hand holding the hand and left hand holding the leg of the demon and the other two hands are used for attacking the stomach of the demon. His body is adorned with ornaments and costumes. The colour of this mural is faded, the dark red colured changes to ochre-white. The demon Hiranyakasipu is depicted as lying on the folded legs of Narasimha, the head of the demon shown on the right folded legs of the god and his body is demarcated by using dark colour represents the Tamasic quality, he wears kiritamakuta and the body is adorned with ornaments and costumes. Prahlada, the great devotee of lord Vishnu is absent in this panel (figure 7).

Figure 7. Ugra-Narasimha from Manganam Narasimhaswami Temple

The srikovil wall of Kottakkal Mahadeva Temple at Malappuram has a 19th century mural of Ugra-Narasimha. Here the lord Narasimha is depicted vibrantly as killing the demon Hiranyakasipu with his eight hands. The artist tried to portray the strength and vigor of the Narasimha by using a red background. The ornamental treatment of this panel is amazing, he wears a beautiful kiritamakuta decorated with shining stones and a many layered beaded chains with a pendant at the centre. He wears both lower and upper garments, the lower garment is red in colour and reaches below the knee and the upper garment is green in colour and reaches up to the abdomen. The treatment of ornaments and costumes enhances the beauty of this panel. Prahlada and other spectators are also absent in this panel (figure 8).

Figure 8. Ugra-Narasimha from Kottakkal Mahadeva Temple

Conclusion

Narasimha, the fourth incarnations of lord Vishnu is one of the important manifestations which can be seen throughout the sculptural as well as murals art of Kerala. The most ferocious and fearsome incarnations of lord Vishnu, the lord Narasimha has been venerated with extreme reverence and pinpoint attention. The sculptural representation of the lord Narasimha can be noticed from the Gupta age itself; but the acclimatization and the integration of the lord Narasimha into the imageries of the mural tradition across Kerala has been commenced from the 15th century CE, which marks the initiation of the Bhakti cult movement which sweeps across the southern India in and after the then century. The significant gesture and the bodily approaches of these Narasimha depictions shows two distinctive personalities, such as Yoga and Ugra. In Yoga-Narasimha form the god is shown as a single with a mutely attitude. Only three temple murals have the panel of Yoga-Narasimha. However, in Ugra-Narasimha form the god is

seen associated with spectators depicting forceful attitude. This Ugra-Narasimha form the artist tried to impregnate the story behind the origin of this avatara. The notable feature of lord Narasimha in Kerala mural are depicting with a white coloured body representing Sattvic nature or envisaged as the character emphasizing peaceful power and strength. The body colour of the image in mural paintings are depends on the nature of the character mentioned in religious text.

This paper discussed about twelve Narasimha panels in various temple murals, among these four of them are from Thirssur, four from Kottayam, two from Kozhikodu, one from Malappuram and one from Pathanamthitta districts. Among these five district Kottayam and Thrissur districts have four temples with Narasimha panels, which means this image is commonly seen in central Kerala.

The image of Narasimha appears in Kerala murals only after the 16th century CE. Usually, the iconographic representations of lord Vishnu in Kerala murals become predominant during the 17th century CE onwards. It may be due to the influences of some devotional Malayalam works like Adhyatmaramayanam, Mahabharatam and Harinamakirtanam by Tunchat Ezhuthachan, which popularized the devotion for Vishnu and his forms (Menon, 1967:194). This clearly shows the selection of mural themes in a temple, as it is directly related with the popularity of themes and images sustained in the then society.

This study mainly focuses on the twelve temples which have the Narasimha panels and it shows an interesting feature as in the twelve temples, six of them have Vishnu as the principal deity and the other six temples has Siva and Bhagavathy as the principal deity. This clearly shows the dominance and popularity of the Narasimha incarnation of Vishnu over the other deities at that time in the society. Apart from the iconographic and imageries of the Narasimha murals, the integration of these aesthetically murals into the temples of Kerala have been discussed. The mural paintings are always showcasing a clear reflection of the relationship between the religious and socio-cultural traditions continued in the society, which can be ascertained by the huge incorporation of Vishnu murals in the Kerala temples. The mural paintings and the themes in these temples often reflected the nature and direction in which the then society has been beholding and thinking. The emergence of the bhakti movement and the repercussions which have been elaborately glanced, reviewed and acknowledged through these visually magnificent treasure troves which is plainly hidden in these temples.

References

Desai, Kalpana. 2013. *Iconography of Viśṇu*. New Delhi: Abhinav Publications.

Jayashankar, S. 1997. *Temples of Kerala*. Kerala: Directorate of Census Operations.

Kramrisch, Stella and Vasudeva Poduval. 1948. *The Arts and Crafts of Travancore*, Cochi: Paico publishing house.

Mahadevan, T.M.P. 1956. *Outlines of Hinduism*. Bombay: Sudhakar, S.Dikshit for Chetan Pvt.Ltd.Bombay.

Menon, A. Sreedhara. 1967. *A Survey of Kerala History*, Kottayam: D.C. Books

Nagar, Shantilal. 2006. *Vishnu the Preserver*. New Delhi: B.R.Publishing Corporation.

Nayar, S.Vijayarakhavan. 1998. *Vadakkunathan Temple Complex, Trichur*. Mumbai: Manan Prakashan.

Neelakandanassari, K. 2003. *Sreemanushyalaya Vidhi*. Kodungallur: Devi Book Stall.

Ramachandran, A. 2005. *Painted Abode of Gods- Mural Traditions of Kerala.* New Delhi: Indira Gandhi National Centre for the Arts Vadehra Art Gallery.

Rao, S. K. Ramachandra. 1988-1992. *Encyclopaedia of Indian Iconography (vol.1, 2 & 3),* New Delhi: Indological and Oriental Publishers.

Rao, T.A.Gopinatha. 1914. *Elements of Hindu Iconography (vol.I, part.I).* New Delhi: Motilal Banarasidass Publishers Pvt.Ltd.

Sastry, H.Krishna. 2003. *Indian Images of Gods and Goddesses.* New Delhi: Bharatiya Kala Prakashan.

© 2020. *Social Orbit* ISSN 2395-7719, Vol.6, pp.171-180

Report of the Salvage Digging at Kinalur, 2016-17

V. Selvakumar
Department of Maritime History and Marine Archaeology
Tamil University, Thanjavur, Tamil Nadu, India
E-mail: selvakumarodi@gmail.com

Abstract

Discovery of the Kinalur site was quite accidental; local people engaged in digging pits for rainwater harvesting noticed unusual objects at the surface level at the Kinalur Estate. A team from Govt. Arts & Science College, Kozhikode, with Krishnaraj of Archaeological Department made an exploration and recognized its archaeological potential. With permission from Kerala Archaeological Department, Industrial Department, Revenue Department, and the owner of the land, two successive excavations were conducted at the site (in 2016 & 2017), under the leadership of Dr. Selvakumar of Tamil University, Tanjore. A megalithic urn with carnelian beads and other allied objects, including iron implements, were unearthed from the site. Further exploration of the site yielded objects like microliths and Neolithic hand-axe and a vattezhuthu inscription from the nearby temple – all of which suggested continuous habitation in the region from Early Historic to Early Medieval periods.

Keywords: Kinalur, Gunavayil Nallur, Megalith, beads, black-and-redware, Iron Age, Mesolithic, Lunate.

1. Introduction

Kerala has very rich cultural heritage dating back to the prehistoric period. However, very limited research has been undertaken on the prehistory of Kerala by scholars. The megalithic burials are found all over Kerala and they are being destroyed day by day by various digging and development activities.

* The research team consisted of Faculty members of the Department of History, Govt. Arts and Science College, Kozhikode (Academic coordinator of season I was Dr. P. Beena and season II Dr. Shihabudheen Punthala. Other members were Sri. Moideen Thottassery, Dr. P.J. Vincent, K.G Mujeebrahiman, P. Sasi, Kala. K.K, Sreejith. K, Shyju Hendrik and Lukanual Hakkeem.Dr. Sreejith E was the site cordinator for both the seasons), expert team from Department of Archaeology (Mr. Sadhu & Mr Ramesh), Dr. V. Selvakumar (Department of Epigraphy and Archaeology, Tamil University, Thanjavur), Ms. Srilatha Mohamed (Research scholar, Calicut University), Ms. Jaseera Majeed (Research Scholar, Department of Epigraphy and Archaeology, Tamil University, Thanjavur) and Mr. Mohamed A. (Photographer, Kozhikode).

This report presents a preliminary report of the archaeological finds at the site of Kerala Industrial Development Centre Park, Karradi, Panangad Village, Kozhikode district. The materials collected at the site by Kerala State Archaeology Department need to be analysed for a detailed report. However, the finds from the site are sufficient to get a preliminary understanding for the archaeological potential of the site.

2. Background to the Study

The site of Kerala Industrial Development Centre Park, Karradi, Panangad Village, Kozhikode district revealed urn burials when rain water harvesting pits were dug in 2015. In 2016 the Arts and Science College, Calicut, with the permission and support of the Kerala State Archaeology Department, recovered the burials and dug a trench in the area disturbed by the rain water pits, as part of Archaeology Workshop to train the students in local history and archaeological research. Prof. M.G.S Narayanan inaugurated the workshop. The antiquities and artefacts collected from the site were handed over to the Department of Archaeology, Government of Kerala. A report of the digging and the cultural materials are presented here.

Fig.1. Prof. M.G.S. Narayanan at the workshop

3. Objectives

The objectives of the study are :

1) To reconstruct the local history of the region.
2) To understand the historical importance, and potential of the archaeological remains at the site, of Karradi.
3) To train the students in archaeological research methods.

4. Historical Background

Kinalur is a historically important village and a Vattezhuttu inscription has been found in the Puvembayi Kshetram by Prof. M.G.S Narayanan and this inscription mentions the name of the village as Kunavayil Nallur. This inscription is datable to 9th century CE.

Fig. 2. The Siva Temple, Puvambayi

Fig.3. Vattezhuthu Inscription from the Puvambayi Siva temple

5. Location and Description of the site

The site is located 6 km from Balusserry on the state Highway. Its geo-co-ordinates are 11° 28' 38" N; 75° 51' 43" " in the north-western part of the Puvambayi village, within the Kerala Industrial Development Centre Park, Karradi, Panangad Village. The site is located near the area called Chattan vidu. It has branches of the High-range Mountains on the northern side. The hills that are visible to the north and northeast of the site are, from the west to east, viz., Kurikunnu, Kurumpoyil, Thalaiyadu and Kanthaladu. The site is covered with lemon grass plants and as a result the surface features are not clearly visible. The burials are visible only from the exposed pits dug for rainwater harvesting.

Fig. 4. A view of the Burial Site with the hills in the background

6. Surface Finds

The surface finds from the site include microliths, a few black and red ware pottery, and a cluster of iron slag in the north-eastern part of the area near a playground. The finds are found mostly on the eastern half of the site; other areas could not be inspected since the grass growth obstructed the surface survey. These plants need to be cleared for completely surveying and understanding the potential of the area.

Urns

Several urn burials are exposed in the pits dug for rainwater harvesting. They suggest that these were occupied by Iron Age Early Historic people.

Iron Slag

The remains of iron slag prove that iron smelting was undertaken near to this location. However, chronology of the iron smelting evidence is not clear, as no clear associated ceramics could be identified. Further research is required at this location.

Fig.5. Locality with a large cluster of Iron slag: evidence for iron smelting

7. Trench KNL I

A trench named KNL I was excavated in 2016 to understand and document the presence of the burials from a datum context and hence a trench was laid to finally cover an area of 4 m north-south and 3 m east-west.

Three urns were found within the trench and another urn was exposed on the eastern section of the trench. The urns were found from more than 20 cm from the surface.

Fig. 6. Close-up View of Urn I in a disturbed pit

Fig. 7. Urn Burials in the early stage of exposure

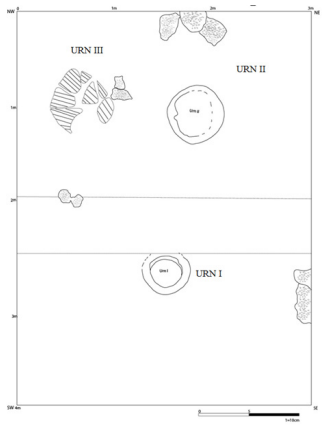


Fig. 8. Plan of the excavated Burials in 2016

Fig 9. A view of three urn burials from Kinalur

Fig. 10. A close-up View of Urn I

Fig. 11. A View of the Burials at Kinalur

Fig. 12. A view of the Urn burials from Kinalur

Fig. 13. A black and red ware bowl from the Urn Burial

Fig.14. A Stone placed inside an urn burial

Fig. 15. Etched Carnelian Beads found in Urn Burial, Kinalur Site

One of the urn found in the southern part of the trench (urn I) was disturbed and the capstone on the top was found inside. Urn II has another jar placed on top as a lid. Another urn (urn III) had stone slab placed on top as capstone and the capstone was broken and appeared in several fragments because of the pressure of the top soil.

The urns produced black and red ware bowls and one urn produced 4 etched carnelian beads. No iron objects were found inside the urn burials. Over all these urn burials are similar to the burials found in Kerala and they can be broadly dated to the Iron Age-Early Historic period (1000 BCE to 500 CE), based on the material culture but detailed scientific study is necessary to date these burials.

An important find from the excavation are the microliths made of quartz and they clearly belong to the Mesolithic context. The microliths are found on the surface and they are also found along with the soil found in and around the urn burials and they point that the site is disturbed. However, some of the undisturbed soil horizon produces microliths in original contexts. From the section observed from the nearby plots it is certain that they are found in the red soil sediments on top of the laterite rock formations. Hence their original Mesolithic context cannot be suspected. Because of erosional activities and later disturbances they are found on all sediments of the site. They need to be excavated from undisturbed context.

They could be dated to the Early to Mid-Holocene, more particularly to the period from 8000 BCE to 1000 BCE. The objects collected included chips, cores, flakes, retouched flakes, points, and a lunate. These chips and implements are of Mesolithic age and they predate the Iron Age evidence. One of the microliths, a backed lunate with working edge place the microliths close to the geometric microlithic context; however un-disturbed deposit needs to be excavated to further classify the nature of the prehistoric industries present in this area.

Fig. 16. Microlithic and Lithic Artifacts from Kinalur site

Fig. 17. A Lunate from Kinalur site

8. Cultural period

From the materials collected from the site and their preliminary analysis on the site, it can be deduced that two cultural periods are evidenced at this site – Period I Mesolithic Culture and Period II Iron Age-Early Historic Culture.

Period I: Mesolithic/Microlithic

The Mesolithic Cultural period represents the earliest cultural phase at this site, as revealed by the preliminary study of the stratigraphy and material culture. There may be earlier evidence than the Mesolithic but proper context has to be identified. Microlithic or tiny artifacts were by the prehistoric period about in the Holocene context and also in the Later Pleistocene context. Based on the chronology of microliths found in southern part of India and also the C-14 date from Tenmala obtained by P.Rajendran the microliths at this site could be dated between 8000 BCE and 1000 BCE. However it needs to be substantiated through scientific dating process. Similar Microlithic implements were found at Chovvayur, Peruvattur and a few other sites of Kerala.

The Mesolithic people at Kinalur used mostly quartz as raw material for their tools. The tools include scrapers, flakes, lunates, points

and borers. The people who lived during the Mesolithic period are called hunter-gatherers and they were nomadic people who hunted wild animals and gathered fruits and roots available in the forests. They did not seem to have the knowledge of pottery and they used containers made of wood and leaves. They did not have the knowledge of iron or any other metal. The flakes and artifacts from Karradi site reveal their fine lithic working skills and workmanship. They have collected the raw material carefully and flaked them carefully to make the necessary implements. These Mesolithic population can be called the earliest group to occupy the entire stretch of Kerala from the hills to the coastal region and they experimented with their environment and led a life closer to the nature.

Period II: Iron Age-Early Historic

The Iron Age is represented by megalithic urn burials and these people had a different way of life from the Mesolithic period. The people of Iron Age Early Historic period led a sedentary or semi-sedentary life and had created village-like settlements. They had marked a separate burial area. Probably the dead people were cremated or laid to the natural elements and the burials were made by collecting and placing a few bones inside. But often the burials are commemorative without any mortal remains of the dead. Probably these burials were created sometime after death – as a ritual. These people used varieties of pottery such as black ware and black and red ware and etched carnelian bead garlands as mala. Carnelian is a red colour material and resembles coral, and these beads have designs in white colour. The carnelian material is not locally available in Kerala and probably these people obtained them from North India, Deccan or Gujarat region. This evidence clearly proves that these people had trade relations with far off regions. These people might have practiced cultivation and animal domestication, although direct evidence is lacking, it could be deduced from the references in the Sangam texts. These people used iron, but no iron object was found in the burials from the 2016 season. This cultural period could be dated to ca. 3000 BCE to 500 C.E. Further studies are needed to understand the chronology and context of this culture.

The place name of the village Gunavayil Nallur reveals that it was a settlement of Early Historic or Sangam Age. The site name reveals that it is located as an entrance on the east. The trade route from the east perhaps from Waynad and Karnataka reached this part of Kerala via this area around Kinalur. The Medieval period route connect-

ing the ports of Calicut and Pantalayini Kollam with Karnataka and Mysore plateau must have crossed this village. Therefore the evidence from this region beyond doubt highlights the historical importance of the region.

9. Summary of the Finds

1. The salvage excavations pointed out that people were living in the region around Kinalur from the Mesolithic period.
2. The urn burials revealed that this area had a large settlement of people during the Iron Age
3. Overall, the burial site is relatively better preserved than other sites of Kerala and this site needs to be preserved for future.
4. The site has evidence for early history of Kerala and more detailed and scientific studies are necessary to better understand the culture of this region.
5. The site is historically important for understanding the local and regional history of Kerala

10. Recommendations

1. The preliminary study indicates that this area is archaeologically and historically important. The site had extensive megalithic burials and more importantly has evidence for Mesolithic or microlithic human occupation.
2. The site needs to be extensively excavated and some of the burial area needs to be preserved to facilitate future research and to train college and school students. advanced scientific methods may help to understand the culture in a better manner. The area should be protected and preserved.
3. A megalithic park may be created at this site, after detailed survey and excavations, for Total Station survey and dating of materials in a scientific manner.
4. All or part of the site that has burials may be preserved for future
5. In order to facilitate these efforts an Institution called “Kerala Institute for Archaeological Studies and Research on the model of Institute of Archaeology, New Delhi may be established with the following infrastructural and academic facilities.
    a. Museum
    b. Library
    c. Two lecture Halls
    d. One Conference hall with multimedia Interface
    e. Two Guest Rooms
    f. Certificate and Diploma Courses in Archaeology
    g. A Total Area of 10 acres may be set apart for this venture.

© 2020. *Social Orbit* ISSN 2395-7719, Vol.6, pp.181-188

Village Settlements in Middle Chaliyar Basin: Preliminary Reflections from the Fieldwork at Ugrapuram, Near Areakode, Malappuram, Kerala

T. Muhammedali
Associate Professor of History
Farook College, Kozhikode, Kerala, India
E-mail: mali@farookcollege.ac.in
&
Sabna.K
Doctoral Fellow, Department of History
Farook College, Kozhikode, Kerala, India
E-mail:shabnakarippur@gmail.com

Abstract

A riverine village in the erstwhile Ernad Taluk in Malabar, Ugrapuram has the potential to attract any keen observer. Still preserving an ambiance of a medieval village, Ugrpuram has offered archaeological remains of early historical and medieval period. The present paper emerges from the field explorations held in the village in connection with the study of the settlement and society of middle Chaliyar basin. In addition to bringing out some new data found out through fieldwork and archival research, the paper presents some preliminary reflections on the village society. The overall findings apparently indicate a cultural continuity from the Mesolithic to the medieval period in this village. Specialists in archaeology, history and anthropology may probably take up the questions and arrive at a credible conclusion in future.

***Keywords*:** Ugrapuram, Chaliyar, Mesolithic, Megalithic, Kavu

Introduction

Ugrapuram is a small village on the southern side of the river Chaliyar lying just west to Areekode which is a town situated in the midland area on the riverbank in the erstwhile Ernad taluk of Malappuram district in Kerala. Physiographically, Kerala is divided into highlands, midlands and seacoast. Rivers of Kerala generally originate in the highlands, cut through the midland and empties in to the Arabian Sea through the littoral. The village consists of low lying areas near the river, hilly heights on the sides and dotted paddy fields in an undulating terrain. Situated in the coordinates of the latitude 11° 14′ 17.59″ N and the longitude 76° 01′ 41.91″ E, the village hasa total area of 940 acres. This is one among the many desams that lies on either side of

the river in the midland where brahmins settled in large numbers in the medieval times. The village is situated in Ward I&II of the present Areakode panchayath. As per one document, this village is one of the five desoms of the Areekkode amsam. (DMA,1935) whereas another one shows Ugrapuram as part of the Irivetti amsam (DMU, 1901). The boundaries of the village are the river Chaliyar in the north, Mundambra desom in the south, Poonkudi streams in the west and Arinjeeri mount in the east.Chaliyar being a perennial river, the village would have benefitted from its proximity to the Calicut port,on the Malabar-Coast, during earlier times.

This paper is an attempt to present some preliminary ideas on the settlement and society of Ugrapuram village. The study makes use of the already published data on the area with fresh data procured through interviews and fieldwork, in addition to colonial documents and secondary literature. The study basically proceeds from examining the contemporary life in the village to the past nuances of village life. Fieldwork gives a clear picture of the caste/ community-wise distribution of settlements as well as the spread of early historic life in the village. Colonial documents, such as settlement registers of 1901 and 1935, help a lot in understanding the landscape, land-type and the land use of the village. Field names of the areas are vividly mentioned in these documents. These evidences,considered in the light of the existing literature on the village societies of the pre modern period, constitute the methodology of the present study.

Field Data from Ugrapuram

Being close to the river Chaliyar, which is perennial on both sides, having a lot of early historical sites and medieval villages, a study of Ugrapuram village acquire multiple dimensions from the point of view of settlement and society. Situated on the southern bank of the river Chaliyar, where we have other megalithicsepulchral complexes excavated about 30kms west to it at Feroke (Ayyappan, 1933) and Chattamparamba (Babington,1923),and on the northernbank we have Nellikkaparamba (Babington,1923) situated at a distance of 9kms again in the western direction from Ugrapuram. A lot of remains related to early historic period have been found out from the village;it is plausible that the presence of adynamic river valley settlement developed in the early historic period. Previous explorations in the area have reported the presence a lot of megalithic remains. Rock cut chambers are reported to have been found out from Perumparamba[1] and from the hill which lie beyond the upper boundary of the Perumparamba areas in the

southern boundary of the Ugrapuram village [2] . People in the area keep memories of a lot of locations wherefrom urn burials were unearthed during well-digging and house constructions[3]. Villagers also keep the memories of dolmens in the village. The fieldwork and explorations in the area has also brought out a lot of evidences for early historic remains in the village being concentrated mainly in the Perumparaba area. Early historic remains found out through the fieldwork include microliths, urn-burials, post-holes, etc. Post-holes are largely found in the lower edge of the Perumparamb area (see Appendix 1). The field work also brought out sherds of medieval refined pottery from Perumparamba. There are thus extensive evidences for early and medieval history in the village; a systematic excavation in the site may reveal a clearer picture of the state of early historic and medieval life in the village. Chart 1 shows the distribution of the megalithic remains in the village.

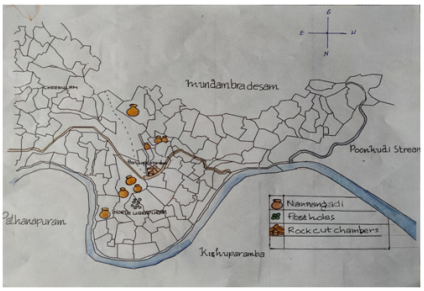


Chart 1. Representations of Megalithic remains in Ugrapuram village.
Source: Field work by the Authors

Before we move further, it is good to have current picture of the households and its distributions in the village. This would also be useful to presume which people and jatis lived in the village in pre-modern times. The current distribution of the settlements in the village tempts us to have an impression of the village being a Brahmin village in the medieval period, where the life and activities of the people was controlled through the institution of the temple, i.e., the Ugramoorthy temple. The place name Ugrapuram itself is said to have evolved from the name of the temple. Illoms, the residences of the Nambutiris, are found to have arranged close on the river alluvial. There are 6 illoms within a distance of one Kilometre. As per the settlement register of 1901, most of the land in the village was under the Janmam right of these Nambitiri Brahmins. All the ferries situated on this side of the river, seemed to have been controlled by these illoms.

On the northern fringes and north-western slopes of the village we see the settlement of Nair families who lived in the nalukettu type of tharavadu. Currently, there are four prominent families of Nairs in these areas, the legacy of whose rich past is well preserved by keeping parts of their medieval pathayapuras in their remodelled new modern homes [4] . Close to them we see the abodes of the washer-people caste, peruvannans. There are many such families living near by the perincheeri illam and pullurmanna illom. Apart from them, there are clusters of different craft families at different points of the village. Chart 2 shows the distribution of settlements in the Ugrapuram Desam.

Chart 2: Distribution of Households in Ugrapuram Village
Source: field work by authors

Chart 2 shows the details of the current settlements located through fieldwork. As is shown, the Ugrpuram village consists of kaniyans (astrologers), nambutiris (priests), kollans (smiths), kumbharans (potters), chaliyans (weavers), asaris (carpenters), thiyyas, pisharodies (temple servants), nairs and adiyars (such as cheruma and pulaya) living in small clusters. There are some Muslim households who keep the memories of their embracing of Islam in the beginning of the twentieth century CE.Following the model of segmented residences in pre-modern Malabar (Eric Miller,1954), the current pattern of residences in the village is presumed to have some semblance of the past, the village shows some clustering of residences in the pre-modern period too.

The presence of temples and *kavus* further attest the variables of *jatis* and service-groups settled in the village. The village possesses a number of *kavus* along with three temples. Each *illom* has an attached *kavu* with it which is exclusively maintained by the Nambutirihouseholds. Nairs as well as other jati groups have *kavus* of their own, protected and promoted by them. Lower castes maintain their deities in simple and crude forms in cult spots in the vicinity of their residences. All places of worships, other than the temples, propitiate traditional

deities. A distinctive trait of the *kavus* in this village is that they have not been generally assimilated by any outside traditions. Still, the worship forms in some kavus are seemed to be highly primitive with its distinctive deities (see AppendixII(b)). The fact that very few kavus have been transformed into temples in the village probably allows us to compare between the current practices and the primitive religious traditions. Ethno-archaeological studies of kavus might probably bring out some "living pre-histories" (Kosambi: 1956) from the village. Chart 3 shows the current distribution of the places of worship.

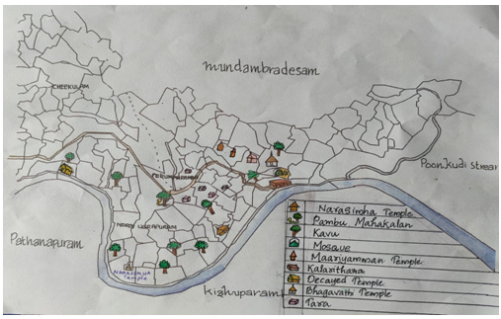


Chart 3: Distribution of Places of Worship in Ugrapuram Village
Source: Field work by the authors

Discussion

Having had a good picture of the spread of early historic/megalithic remains in the village, the nature and distribution of a semi-clustered settlement, the volume and features of the places of worship in the village, some hypothetical questions could be raised. A village that still keeps an overall medieval pattern of the settlement in the present, Ugrapuram stands as a strong case for consideration. As, the microliths in South India are often suggested to be continued through the Neolithic period (Ceri Shipton et.al, 2012) and microliths are associated with many megalithic sites in Kerala, the presence of microliths in the village indicates continuation of hunting gathering culture along with the Neolithic-ceramic culture. The association of microliths with the megalithic urn burial in Ugrapuram probably indicates the continuity of the Mesolithic traditions till the megalithic culture. The large scale sepulchral remains found in the village in the areas of perumparamba along with the postholes in large numbers on hard laterite surface led us to presume that a thriving life of people must have been there during the early historic period.

The large scale presence of *Kavus* and traditional cult spots in the village, which even braved the so called appropriation of non- Aryan

deities and cult spots by temple traditions emerged in the third century CE in peninsular India (Rajan, 2013), indicates preservation of the age old traditions rooted in belief in "life after death, hero worship and ancestral cult" (Gurukkal and Varrier, 1990) till now. Further, the facts borne out by the field work in the village and data available in the settlement registers of the village help us to assume that during the late medieval period, the village has become one that is dominated by the Brahmins, through material and ritual powers resulting in the formation of a typical pre-modern village in Ugrapuram where almost all service castes and institutions are present. A detailed enquiry in this regard would extend potential additions to the existing knowledge on pre-modern village societies in South India (Varier, 1994). Another dimension is the village's involvement in trade. We see a number of Kadavus (jetties or river crossovers) which are still under the control of Brahmin illoms. Possibly, these must have been points of exchange of commodities reached from the surrounding villages where at least pepper has been grown in large extent to transport it via the river to the port of Calicut. On the whole, Ugrapuram village apparently offers immense possibilities for archaeological, historical and anthropological research.

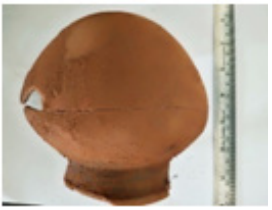
Appendix I

Newly Founded Archaeological Remains from Ugrapuram Village

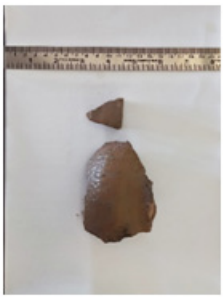
Nannangadi(Urn Burial) No 1

Nannangadi(Urn Burial) No.2

Microlith unearthed from soil around the Urns No.1&2



Small pot(Black and Red) from the Urn 2



Sherds of Medieval pottery(Perumparamba)

Post holes (Perumparamba)

Source: Field Explorations by the authors. Authors express thanks to Dr. C.A. Anaz and Dr. U Shumais from the Department of History, Farook College for being part of the exploration.

Appendix II(a)

Table 1 : Description of Land Types in Ugrapuramdesam

	Wet		Garden		Occupied dry		Unoccupied dry		Unassessed		Inam		Puramboke		Total	
	1		2		3		4		5		6		7		8	
Year	ACR.	CENT	ACR.	CENT	ACR.	CENT	ACR.	CENT	ACR.	CENT	ACR.	CENT	ACR.	CENT	ACR.	CENT
1901	110	49	243	40	99	64	399	56	2	59	6	0	71	97	939	65
1935	158	68	315	22	143	22	290	53	2	02	--	--	86	61	990	38

Source: Descriptive Memoir of Ugrpuram Desam No.125 of the Ernad Taluk (1901); Descriptive Memoir of Arikkod Amsam No.125 of the Ernad Taluk of Malabar District (1935)

Appendix II(b)

List of traditional deities propitiated in various *kavus* of Ugrapuram

Gurumuthappan
Kali
MundianBhadrakali
Karinkali
Karinkutty
Kalabhairavan
Poonkutty
AadamanKarinkutty
Vettilakkodumkali
Mudunkonkutty
Mariyamman
Kuttichathan
Gulikan

Notes

1. Interview with Santhakumari (53), School teacher at Perumparamba, Ugrapuram on 18th April 2020; Kottapurath Janardhanan Nair (71) Retired Tehsildar at Ugrapuram on 28th March 2020.
2. Interview with Chelly (85) a resident near the site at perumparamba, Ugrapuram on 19th April 2020
3. Interview with Kanichadi Balan Nair (62) at Perumparamba, Ugrapuram on 8th March 2020
4. Authors have visited pathayappura personally on 9.5.2020

References

Ayyappan,A. 1933. "Rock-cut Cave-tombs of Feroke, South Malabar" in M.R. Manmathan (2007ed.) *Archaeology in Kerala: Past and Present.* Kozhikode: Farook College Publications Division.

Babington,J.1823. "Description of the Pandoo Coolies in Malabar: With Four Drawings", in *Transactions of The Literary Society of Bombay.* Downloaded from https://www.samorini.it/doc1/alt_aut/ad/babington-description-of-the-pandoo-coolies-in-malabar.pdf.

Descriptive Memoir of Arikkod Amsam No.125 of the Ernad Taluk of Malabar District(1935) (DMA)

Descriptive Memoir of Ugrpuram Desam No.125 of the Ernad Taluk (1901) (DMU)

Gurukkal, Rajan and M.R. RaghavaVarier.1999. *Cultural History of Kerala.* Thiruvananthapuram: Government of Kerala.

Kosambi, D.D.1956.*An Introduction to the Study of Indian History.* Bombay: Popular Prakashan.

Miller,Eric, J. 1954. "Caste and Territory in Malabar", *American Anthropologist*, New Series, 56 (3): 410-420.

Rajan,K. 2013. "Appropriation of The Megalithic Burials as Cult Spots and Temples: A Study on the Megaliths in the Tamil Nadu-Kerala Border Regions", in *Proceedings of the Indian History Congress* , Vol. 74, pp. 815-825.

Shipton, Ceri et.al. 2012. "Lithic technology and social transformations in the South Indian Neolithic: The evidence from Sanganakallu–Kupgal", *Journal of Anthropological Archaeology*, 31:156–173

Varier, M.R. Raghava.1994. *Village Community in Pre- Colonial Kerala*. Mysore.