# Siruthavoor

## An Iron Age-Early Historical burial site, Tamil Nadu, South India

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Cover: Burial 7, urn with capstone



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SMRITI HARICHARAN

# Preface

This publication is a result of the work I had carried out during my PhD thesis. I have used the spelling Siruthavoor both here and in my PhD thesis submitted in May 2010, while the ASI used Siruthavur and the village census (http://www.census2011.co.in) refers to it as Sirudavoor. It seems that the village is referred to by all three spellings in various sources. The reason I choose to work here for my thesis was because there were so many different types of burials located in this site, and even in 2006 sand quarrying had left its scars on the IA-EH landscape. Many of the burials were exposed on a daily basis, and completely destroyed in a few days. There has been lot of previous published research on the megalithic burials especially in the Chengapattu-an administrative sub division of north Tamilnadu. And yet I felt it was astonishing that there were hardly any maps of these Iron Age-Early Historical burial sites either for this region or even much of south India.

In 2006 a colleague mentioned the existence of an amazing 'megalithic' site near Chennai and one afternoon I decided to visit the site. I must have seen only 1/4th of the site on that visit but was entranced by the different burial types. I could also see semi intact burials and their associated pottery within the sections exposed from sand quarrying, which had just begun to take place at Siruthavoor. I started my Ph.D subsequently and in 2007 had begun to survey and map the burials at Siruthavoor. Around this time my PhD supervisor Prof. Hema Achyuthan decided to apply for a permit to excavate the site along with Ms. Sathyabhama Badhreenath, who was at that time the Superintending Archaeologist, for the Chennai Circle of ASI. The ASI provided the funding for the excavation and the resource persons for drawing and archaeologists for supervision, while Anna University provided technical assistance, funding for post field work analysis such as the OSL dating and myself as a research Assistant to work at the excavation.

We excavated the site over a period of three months with a gap of a few weeks in between. My own duties included supervision as well as recording field notes. I am grateful that the ASI team were supportive of the fact that this would be a part of my PhD thesis and allowed me to take part in the decision making and direction of the excavation. I was indeed very lucky to not only take part in the excavation but also be trained in some aspects of directing an excavation. After the completion of the excavation I had shared all my field notes and photographs with them, while they shared their photographs. Most of my own chapter on excavation as well as their monograph (Badhreenath 2011) are based on these field notes.

Since 2006 I have visited Siruthavoor multiple times and have slowly watched the site being completely altered due to sand quarrying. During one such visit, I remember watching an inhabitant of the village measuring some land to sell, within which there was a dolmen. Foreseeing that this was indeed a death warrant for this burial, and in an attempt to convey its significance, I said 'do you know this is a burial and your ancestor maybe buried here?' to which the reply was 'how old is it?' and I said 'probably some 2000 years' pat came the reply 'oh in that case how is it connected to me?'. As Dixon (1982) states our (academic) temptation is to treat these works according to the model of our own symbolic activity and of what we think we know about the symbolic activity of our immediate predecessors. And yet at Siruthavoor I knew people were curious about what I was doing (literally in their backyards at times) but did not identify with it, they were in some ways awed by the age and the concept of people of the past and their achievements, but did not feel that this meant it had to be preserved.

In 2010, I had worked for four years, the villagers knew me, and I knew some of them. Sometimes during my visits if I was alone, and surveying within the reserve forest which was north of the village, and into which the site expanded, some of the younger boys from the village would come with me since they believed the forest was not safe. During the excavations many of them visited the site, and I spoke to them about what we were finding. Once a group of women form the village were chatting with me about the excavation and they were talking about how if we had found teeth we could have figured out the dietary habits of the IA-EH people.

And yet after the excavation whenever I visited, they would ask me half in jest if I was going to have them evicted from their land. The logic for them was that I had brought a government body (the ASI) to work in their village, which had in turn brought media attention (journalists who reported the excavation). They knew that this land within the archaeological site was located was contested, and yet the village politicians had promised them portions of this land. The sand or stone quarrying they carried out earned them very little, it was the more well off villagers who made the money. Many spoke to me about lack of medical facilities, hard working conditions and minimal income within the already limited options.

They were interested in the excavation and curious about my work, but understandably, did not see the need to put the preservation of these burials above their own daily struggles. Eventually most of the site was partitioned into parcels of land, divided between the villagers and sold to people from Chennai. These people from the city, cleared the burials, built fences and grew banana trees within their plots. They did not plan to live there, as far as I could tell it was an investment. This is not a unique story in any way, but it does underline the importance of mapping these sites. It is impractical to believe that we can preserve all the IA-EH burials or habitation sites around Chennai, as the city grows, villages like Siruthavoor will disappear, and soon there will remain no trace here of an archaeological site, but for Siruthavoor there are maps of where the burials once stood!

# Chapter 1
# Introduction

## 1.1 WHY STUDY THE MEGALITHS IN SOUTH INDIA

Archeological artifacts such as stone tools, ceramics, coins, metal implements, and ornaments like beads, are generally used to evaluate and understand the history of humans. These artifacts are especially important for the study of periods that lack concrete literary evidence. Intangible aspects such as spiritual beliefs and ceremonies, as well as tangible but perishable objects, are lost in the passage of time but artifacts are more likely to survive the vicissitudes of time. Pollen analysis, plant ecology and not least prehistoric archaeology have contributed to the recognition of the transitional zone between uncontaminated nature and what eventually became known a cultural landscape (Fagri 1988). Cultural landscapes are looked upon not only as products of human intervention, but also and in particular as the result of human desire to leave an imprint of control and power, often associated with territoriality and religious or political ambitions (Sahlqvist 2001). Megalithic burials, which are found in vast numbers in southern and central India, are a well-known global phenomenon and their builders have left behind a landscape altered by their funereal remains.

This study aims at using and understanding man-land relationships in order to better comprehend the megalithic burials of Tamil Nadu. Funereal remains are one of the most important lingering means of understanding society, customs and religion of pre and proto historic periods. Many questions remain unanswered for the Iron Age of south India, and the megalithic burials are an important piece of this puzzle. This site specific study helps us better understand some aspects such as spatial distribution, chronology and post depositional changes of the burials at Siruthavoor.

## 1.2 USING THE TERM: 'MEGALITHIC'

Originally, the term 'megalithic' was applied to tombs, standing stones, circle stones and isolated standing stones in western and northern Europe. The criteria for the application of this term to artifacts and monuments included not merely the existence of big stones, but also required evidence of function and ritualism (Childe 1945). Tilley (1999) provides interesting analysis on the use of the term megalithic. Previously restricted in usage, it was more frequently used in the 1960s and later, more cautiously, with the advent of the "processual" and "post processual" schools of archaeology.

The debate on the origin of megaliths is ongoing and the attempt to define the megalithic 'culture' has been made since before the 1910's (Childe 1945). Smith (1915) uses the invention of the steam engine as an analogy to argue his point, suggesting that a systematic development/invention like a megalithic burial must have originated in/from a common geographic location. Lewis (1916), on the other hand, suggests that the origin of megalithic monuments was not from one center, but that the vast number and distance between countries in which they developed implies a local or tribal, rather than a singular custom. Smith (1915) further comments that while the idea of a steam engine had been thought of by many people/in many places it was brought to perfection only in one place/ by one person. While this is an interesting analogy, unlike the steam engine, it is difficult to define a perfect megalith. Each type of megalith is modeled by a distinct culture to meet the ritualistic or functional needs of a specific social group. The arrival of scientific dating techniques such as 14 C altered the way we think of these theories (Pollard 2013).

While the idea of megalithic burials may or may not have originated from one central point, in India these burials exhibit regional variations that do not always appear to be based merely on the available resources. The ritual behavior that takes place as a part of death rites of passage has been described to vary over a spatial and temporal context (Chapman 1995). The study of megalithic burials around the world has resulted in varied theories dealing with different geological and geographic motivations for the location of the megalithic sites: geotectonic settings; seismic zoning; sunshine activity; climatic peculiarities; areas of thunderbolts and hailstones; local background radioactivity (related to the rocks); and geomorphologic (landscape) location and orientation (Kostov 2008). However, while exploring various theories on territorial behavior using funerary remains on a landscape, Chapman (1995) states that the megaliths needs to be understood within a regional context and not just a localized pattern. Much like a microscope, wherein different magnifications can show you different aspects of a sample, constant readjustment of the scale, is important to the understanding of a concept as widespread and varying as the megaliths of south India.

Cooney (2000) draws attention to the question of why these monumental traditions emerged, and, in the context of the Irish megalithic, he states that often the landscape has been preceded and succeeded by other cultures. One reason why the megalithic burials draw our attention is because of their visibility in the landscape, which Cooney (2000) concludes implies that the people raising the monuments not only thought of the past but also the future. The use of megalithic burials to understand the social context/ divisions, marking/territorial behavior on the landscape has been previously debated, using case

studies as well as ethnography (Chapman 1995, Tilley 2004, Hodder 1992, Kostov 2008). The term "megalithic" is a word all archaeologists know, though not a common everyday term like cave art and, inspite of various new theories and discoveries that have occurred, the term remains durably in usage (Tilley 1999). The shortcomings with the usage of the term 'megalithic' in terms of the south Indian context has been discussed previously (Moorti 1994, Mohanty and Selvakumar 2002, Morrison et al 2008, Haricharan et al 2013, Haricharan and Keerthi 2014). However we continue to use this term, this maybe as Tilley (1999) suggests a testament to the durability of the term, yet it is important to remind ourselves of its limitations and keep an open mind towards possible alternatives. The terms Iron Age-Early Historic (hence forth IA-EH) will be used instead of megalithic in context to the burials within the larger study area of this book i.e. northern Tamilnadu in this paper. However the term megalithic is retained while referring to the larger Indian context since they are chronologically varied and using the term IA-EH for all 'megalithic' burials even within south India would be problematic.

### 1.3 CHRONOLOGY AND DISTRIBUTION OF MEGALITHIC BURIALS AROUND THE WORLD

The European megaliths have been studied often in terms of landscape and their geometric construction, even coining the term the megalithic yard, provenance etc. (Cowan 1970, Thom and Thom 1978, Thom 1978, Tilley 1999, Cooney 2000). The European megaliths are dated to the fourth millennium BCE and extend till the first millennium BCE (Thom 1978). On an island called Menorca, Spain, megalithic burials including dolmens have been built since the second millennium BCE. Similar to the Indian megaliths they are of different types, having similar grave goods, such as pottery, iron implements and disarticulated skeletal remains, and are spread over the islands of Mallorca and Menorca (Gili et al 2006). The details of the Indian and the Menorca burials are definitely different. While the Menorca burials building practice comes to an end around 800 BCE, the Indian megaliths continue till around 600 CE (Gili et al 2006). The former also had thousands of complete or fragmentary human bones buried in each complex, and dating implies that some graves could have been used for over 300 years (Gili et al 2006). The Indian megaliths, on the other hand, have similar traces of reuse, but the quantity of individual skeletal remains is restricted to less than 10 in each grave (Moorti 1994).

Most scholars date the megalithic monuments of Bulgaria to the Iron Age (1200-500 BCE) on the basis of excavated finds, but there is a suspicion that some of the sites may well date to an earlier period, perhaps even to the Chalcolithic (5000-3500 BCE) (Kostov 2008). Some work has been done to compile the occurrence of various forms of megalithic burials, like the dolmen, around the world (Mackie 1977, Michell 1982, Joussaume 1988). Sjogren (2009) talks about the Swedish megaliths, and the earliest references to these structures referencing them as being built by giants. In fact he states that before the adoption of the Three Age System, one of the terms used in Sweden was the 'Cairn Age' and some authors believed this to be the age of giants, to which period the megaliths belonged. As Midgley (2009) says with reference to the European megaliths in particular, 'modern megalithic scholarship has come a long way from the earliest concerns with these structures, but we have lost none of the fascination that originally inspired the early students of these monuments'.

Megalithic monuments and burials have also been found throughout Africa, the direction of the research with regards to these sites varies from astrological to funeral in nature (Wendorf and Schild 1998, Rao and Libeska 2005, Lawson 2001, Rao 2007). Some of the studies conducted include surveys and excavations in the western African region of Senegal and Gambia (Lawson 2001). The megalithic burials around the Senegambian region is connected to the Axum Empire which dates to around the first century CE, and evidences indicate trade with many ancient empires including India (Butzer 1981). Previous data reveal that these societies had distinct burial and ritual practices that can be seen in the excavated sites of Mai-temenenay (400 BCE) and tomb site of Emba-Derho (400 A.D.) (Rao and Libeska 2005). There is some amount of debate on the dating of megaliths in the Senegambian region (Hill 1978). Boivin et al (2009) mention the existence in Oman of Hafit-type cairn circles of the late fourth millennium BCE while discussing trade contacts between India and Arabia. Cairn-burial sites have been reported and extend from Zhob-Loralai in Pakistani Baluchistan to Kirman and Fars in Iran. The internal evidence from the cairns includes Parthian coins of 1st century BCE, and a Sassanian coin of the 7th century A.D. (Chakrabarti 1977).

Recent exploration and mapping of sites situated on the Madaba Plain in the highlands of central Jordan describe dolmens around al-Murayghat (Savage and Dubis 2002). The excavators report that very few associated pottery and no skeletal remains have been found. Most of the dolmens had clean stone floors; open on one side, with and without stone circles. Dating of the megalithic burials here is unclear due to lack of material; however the fortification walls have been said to belong to the early Bronze age, dating from c. 3500-2000 BCE (Savage 2001, Savage and Dubis 2002). The Mekong River is said to be the artery of Mainland Southeast Asia through which trade and transport were negotiated, and the delta near the coast is where a large centre with strong influences from Indian culture emerged in the first century CE (Sayavongkhamdy and Bellwood 2000, Kallen 2000).

Jar burials are increasingly being found on the Southeast Asian mainland, in Vietnam, Laos (Lao Pako) and Thailand, as well as in northern Sri Lanka. The eastern extremity of jar burial distribution is represented by Yayoi period graves (3rd BCE – 2nd CE) on the island of Kyushu (Gupta 2005).

The finding of pottery very similar in style to that found at Arikamedu, as well as the jar burials, have added to the theory of their common origin (Gupta 2005). Closer to southern India are the megaliths from Sri Lanka, wherein recent pollen analysis and dating of the burials have been carried out (Premathilake, and Seneviratne 2015). The comparisons drawn between megalithic burials of India with the European and non European megaliths have been explored in the past (Smith 1915, Childe 1945, Leshnik 1974, Allchin and Allchin 1982). Asthana (1976) explores the similarity between megaliths of Arabia and those of India, specifically drawing parallels between the Palestine and Kerala graves. While the existence of burials in various parts of the world and their integral similarity has been well documented, their common origin is no longer given much thought. Megalithic burials are found in varying shapes, sizes and forms, over many chronological sequences, and understand their individual characteristics in context with their immediate landscape is important.

## 1.4 THE IRON AGE-EARLY HISTORIC OR 'MEGALITHIC' BURIALS OF INDIA

With respect to the Indian megalithic burials, it is known that the burials are regionally spread over the Vindhyas, Deccan and peninsular India (Moorti 1994). The origin and distribution of the megalithic burials has often been debated (Smith 1915, Hunt 1924, Childe 1945, Gururaja Rao 1972, Leshnik 1974, Narasimhaiah 1980, Allchin and Allchin 1982, Reddy 1991, Misra 2001, Mohanty and Selvakumar 2002). Leshnik (1974) states that three questions that can help us understand the problems of these burials are: who made them, at what time and in what cultural-historical context? If we are to accept these three as the questions that will help us understand megaliths better, we are yet to answer any of them completely.

Megalithic burials in India are mainly found across the five states of Maharashtra, Tamil Nadu, Karnataka, Kerala and Andhra Pradesh, although some scattered burials are also seen in the north and northeastern areas of India (Moorti 1994, Mohanty and Selvakumar 2002). Moorti (1994) illustrates the number of megalithic sites in India are as follows, Maharashtra has 43 burial (only) sites, while Andhra Pradesh has 168, Karnataka 429, Tamil Nadu 423, and Kerala 196. Interestingly, his data indicates that memorial stones in Tamil Nadu (68) and Kerala (73) are far more in number than Karnataka and Andhra Pradesh (25). However, in the last 10 decades more explorations, surveys and excavation has been carried out; Rajan et al (2009) reports more than 2,500 sites in Tamil Nadu and 866 sites in Kerala. Large cemetery sites include as many as 1,500 graves, although a majority of the nearly 2,000 reported sites in south India consists of less than 10 graves (Sinopoli 2002). There is evidence of uneven distribution of sites within Tamil Nadu, Kerala, Karnataka and Andhra Pradesh and little systematic survey has been carried out to define the density and scope of the sites (Sinopoli 2002). Studies on the megaliths in India have focused on creating and understanding a typological classification, contextualizing the literary evidence found of this period and excavating burials (Srinivasan 1946, Krishnaswami and Saran 1955-1956, 1956-1957, 1957-1958, Banerjee and Soundararajan 1959, Thapar 1971, Gururaja Rao 1972, Narasimhaiah 1980, Moorti 1994, Rajan 2000, Misra 2001, Mohanty and Selvakumar. 2002). There is a desperate need to uncover further data from these sites through topographical mapping and recovery of artifacts.

Evidence from the human skeletal record of prehistoric India suggests that diet supplementation and gene flow between settled and mobile traders has existed for at least four millennia. This implies considerable antiquity for the close relationships between hunter-gatherers and urban agriculturalists (Lukacs 1990). In the above study, Lukacs (1990) largely used skeletal records from Harappan and others sites from the north of India, yet these studies strengthen already existing ideas of the hazy line existing between social groups in the Indian context. Chattopadhyaya (1996) has studied the ethnographic and archaeological evidence that supports the Saxe-Goldstein formulation on the interrelationship between cemeteries and corporate group rights to crucial resources. He further states that amongst the lineage based group, the Mundas of the Chhota Nagpur hills of southern Bihar, land is precious and inherited within the family. Each clan has its own *Sasan,* or formal disposal area for the dead, situated on one side of the village. This supports the idea that it is possible that, within a site, certain families/clans had inherited rights over certain spatial areas thereby giving another possible explanation to different types of burials within a single megalithic site.

The megalithic burials are influenced by the local geology and rock types to some extent; for example, in Maharashtra a large number of stone circles are found, while rock cut chambers and topikal are seen in Kerala and Menhirs in Andhra Pradesh, Karnataka and Kerala (Reddy 1991, Babington 1823). Two important aspects of the megalithic burial are the availability of raw material, i.e., the geological features, and the social aspect of the burials, i.e., the ceremonial and emotional characteristics of the burial. Two possible motivations for any aspect related to culture and society's reaction to death are firstly, to preserve the body along with relics of the person, and secondly, to put the dead out of sight. Ethnographic and archaeological evidences indicate that in India burial preceded cremation (Crooke 1899).

In case social differences did emerge during the Iron Age, literary and archaeological evidence are the best clues available. Settlement during the Iron Age appears to have been spatially diverse. They vary in size, and some with specialized economic production occur in a wider variety

of settings than during the Neolithic period (Bauer et al 2007). Gallon (2008) has also analysed iron objects from excavated sites in Karnataka, Maski, Brahmagiri, and Kadebakele in the context of habitation and IA-EH sites, and the megalithic burials seem to have a higher percentage of tools and weapons. He concludes that construction materials are positively associated with habitation areas, weapons are negatively associated with habitation areas, and tools appear in both contexts at expected frequencies. Brubaker (2001) states on the assumption that the megaliths were restricted to higher status individuals, weapons probably served as symbols of social inequalities and as mechanisms for physically maintaining such differences. The high visibility of these objects and their similar forms across the study sites may indicate that they also carried messages regarding inter-group affiliations. Objects such as beads and bangles are made of metal, most often copper, bronze or gold. Conversely, metal objects that are not ornamental are almost exclusively made of iron, suggesting distinctions between the social value of iron and other metals (Gallon 2008).

### 1.5 THE SANGAM LITERATURE AND IA-EH BURIALS OF TAMILNADU

*Sangam* literature has been used often to understand social aspects of the period contemporary with the IA-EH burials of Tamil Nadu. Contextualising the archaeological and historical data together would contribute much towards an understanding of the Iron Age (Abraham 2003). While few scholars still question it, most scholars date the composition of the *Sangam* poems, if not their compilation into anthologies, to the 3rd BCE -3rd CE (Pillai 1986, Nilakantasastri 1966, Sivathamby 1974, Stein 1977, Subrahmanian 1986, Narayanan 1988, Zvelebil 1992, Gurukkal 1993, Champakalakshmi 1996, Heitzman 1997, Hart 2004). Besides the *Sangam* anthology, other sources of evidence such as stone edicts, copper plates from Tamil Nadu, the Asokan inscriptions, as well as foreigners' accounts, help corroborate to some extent the dating of the anthology (Subrahmanian 1986, Zvelebil 1992, Heitzman 1997, Abraham 2003).

The *Sangam* literature has been open to possible alteration, manipulation or even forgery due to political and religious motives in later periods. It is also known that the palm leaf manuscripts were not always well preserved or copied and a lot of data has been lost (Zvelebil 1992, Heitzman 1997). The usefulness of the literary evidence in the study of the socio-economic nature of ancient Tamil Nadu has been debated upon by many scholars (Sivathamby 1974, Srinivasa Iyengar 1983). However one thing that is strongly brought forward through these debates is that there is a danger in the literal interpretation of the *Sangam* poems. Trinkaus (1984) highlights the pitfalls of complete reliance on literary evidence, which is subject to manipulation to meet the needs of the society contemporary with the literature in question. He states that reliance on written documents alone requires communication between individuals separated in space and/or time, which is not possible. With respect to the archaeological data, many of the excavation reports are subject to the excavator's unique descriptive methods. This then results in the fact that some details which may be considered important in an geoarchaeological context or certain specific details about the Iron age-Early Historic burials and habitation sites are not available for study. The choices of which burials are excavated have also been made to fulfill the aims of each particular excavation, making a comparison between the individual sites harder.

Another factor is that each site may contain a roughly estimated average of over a 100 burials; however, the number of burials excavated is generally less than 10. For e.g., at Tiruvakkarai, South Arcot district, only four out of an estimated total of over 100 burials were excavated (IAR 84-85). Out of the four burials dug in the second season of excavation at Kunnattur, Chengalputtu district, and one burial had no skeletal remains and limited grave goods (IAR 56-57). However, this was a result of the burial chosen and does not necessarily reflect on all the burials at that site. This implies that the data we have is roughly 4% of the complete data, which then means that the information we have is unintentionally biased. Considering how unique and variable the IA-EH burials even within a particular site are, this leaves us blind to a lot of information. Nevertheless, an attempt has been made to try to compare and understand the excavated material using a tabular column (Tables 1.1 to 1.3).

### 1.6 SOCIAL AND ECONOMIC STRUCTURE OF THE IRON AGE-EARLY HISTORICAL PERIOD BASED ON LITERARY SOURCES AND THE ARCHAEOLOGICAL EVIDENCE

Tamil literature talks about the five different divisions based on their physiographic location, each following its own individual customs and mode of living. These five landscapes are *marutam, kurunji, mullai, neithal, palai* (Sesha Iyengar 1982, Srinivasa Iyengar 1983, Gurukkal 1993, Rajayyan 2005). Of interest to the study of the IA-EH burials, these divisions were not just with reference to their geographic location but also their separate systems of social, economic and political structure. The people of *marutam* landscape were the agriculturists, the people of *kurunji* zone were semi agriculturists, the people of the *mullai* region were pastoral, people of *neithal* zone were fishermen and the inhabitants of the *palai* landscape the hunters (Sivathamby 1974, Sesha Iyengar 1982). Within the eastern coast of Tamil Nadu, besides the fishermen, other culturally or socially different communities cohabited. The literary evidence points to a complex system of kinship, clan and various modes of habitation such as *Kudi, cheri* and *nadu*. For more on the *tinai* system from the *Sangam* literature and the archaeological data from the IA-EH sites of north Tamilnadu see Haricharan and Keerthi (2014).

It has also been hypothesized that agriculture (*marutam*) may have taken a while longer to develop and a strong pastoral, subsistence agricultural system may have co-existed along with a hunter gatherer system (Raman 1974, Seneviratne 1995). The *tinai* system is important for an understanding of the socio-economic development in the Tamil country (Champakalakshmi 1996). Rajan (2000) draws attention to the fact that a large number of references are made to urn burials in the *Sangam* literature and his explanation for it is that the majority of *Sangam* literature is in connection to the *marutam* region. From topographical data we can speculate that the urn burials are found largely in the *marutam* region, which is the fertile delta region, due to lack of availability of stone.

Assuming that this dynamic society mentioned in the literature evolved over a period of time, it seems obvious that it must have had some reference in an earlier period. On the basis of this reasoning, the IA-EH burial system and the evolving social and economic structure would surely have impacted if not stimulated each other. Two factors that added impetus to the urbanization were the trade system and agriculture, and its main impact is seen in the *marutam* and *neihtal* eco-zones (Champakalakshmi 1996). The diversification of agricultural production and the use of both wild and domesticated animals in Iron Age and Early Historic life likely accompanied changing logistics, understandings, and cultural valuations that can be linked to emerging social differences (Bauer et al 2007). Previous research has assumed that towns probably first arose from the bartering of products; the literature refers to the coastal communities that manufactured salt, which was of great demand (Sesha Iyengar 1982).

On the coast of Tamil Nadu, excavations have revealed that amongst others Arikamedu, Korkai, Karaikadu, Alagankulam, Vasavasamudram and Kaveripattinam are port sites, highlighting the existence of trade contacts and outside cultural influences (Begley 1983, Sridhar 2004, Sridhar 2005) (Fig 1.2). Suttukeni which has IA-EH burials can be dated to 2nd century BCE and this suggests an overlap with the early stages of the port site at Arikamedu. It is also known that the two sites are about 20 kilometers apart, so while we may not know what interaction existed between them, some contact seems probable (Begley 1983). We know from the excavations at Arikamedu that the structures seem to be industrial-commercial in nature and the residential area, if it existed at all, remains unexcavated. However Arikamedu is an exception, for unlike other South Indian port sites that have only had sporadic contacts with the west, it had continuous and flourishing trade over a long period of time (Begley 1983). What this illustrates is that while this period had habitation sites on the scale of a cluster of huts, as well as urbanized centers and ports contemporaneously.

The sporadic urbanization correlates well with the habitation variance within the *tinai* system. For instance, the *neithamakkal* have *pattinam/pakkam* (villages) and the agriculturists have *ur/perur* (big village) and the semi agriculturists who lived in the hilly region had habitation which consisted of clusters of *sirukudi* (huts) (Sesha Iyengar 1982). Literary evidence has special relevance here as it helps us understand the complete lack of habitation sites for most IA-EH sites. It seems probable that if there were fewer large habitation sites compared to the smaller sites referred to in the literature as huts, the poor preservation of these remains would make it difficult to find archaeological remains of bricks and walls. Evidence of rice cultivation and domestic cattle from the Iron age and Early Historic period has been gathered from mt DNA analysis and analysis of organic matter, using the structural appearance of grains and husk markings in pottery, however there is limited data both spatially and chronologically (Fuller and Qin 2009, Chen et al 2010). While evidence of cultivation of rice has been excavated in China, the data for agriculture in south India is mainly from analysis of grains recovered from excavation (Fuller and Qin 2009, Fuller 2009).

A study of the Neolithic period of north-west European loess zone shows a marked difference between the Neolithic period of Central and Western Europe. The former has more settlement sites than burials, the later is the inverse. It seems that the burials are the only element of permanence in Western Europe. This implies that while the settlement acted as a means of keeping the community together in one case, the monument and its rituals did the same job in the second case (Sherratt 1990). The IA-EH burials of Tamil Nadu obviously are contextually different; however, it is possible to speculate that some sort of communal spirit is an essential factor for people who are making iron, growing crops and herding animals whether in Europe or in India. *Sangam* literature talks of villages, urban centers and cluster of huts, as well as trade, agriculture, hunting and pastoralism. The juxtaposition of IA-EH burials in this background makes them more complicated to interpret and understand.

According to Rajayyan (2005) the S*angam* literature and foreigner's accounts imply that a vast majority of the people lived a tribal or "primitive" lifestyle and yet sectors of people made considerable progress in their cultural pursuit. Sesha Iyengar (1982) states that the *Sangam* literature gives evidence for the existence of class, caste, cultural and social differences. The economy described by the *Sangam* literature was an ensemble of unevenly developed forms of production pursued by a society of decent groups who interacted with one another (Gurukkal 1993). Economically, what was earlier a kin labor system was transforming into a more feudal system (Vanamamalai 1973). Literary evidence seems to indicate a change in the social structure of this period and the rise of a class system (Vanamamalai 1973, Gurukkal 1993). Even within a social set up, there seems to be a complex relationship between people, family/

communities. Heitzman (1997) stresses more on the system of honorable gift, and services through heroism and munificence, as well as constant raids and campaigns amongst the three main dynasties of the period.

Literary evidence talks of the Kurumbas who lived in the Palar and Pennar region (*tondaimandalam*). They were attacked by *Athonda*i (illegitimate son of Karikal Chozha), who then subjugated them, a pastoral community, in order to tame the "barbarous people" of the region (Sesha Iyengar 1982). This suggests the existence of intra regional cultural differences as well as an awareness of these differences. Heitzman (1997) states that agrarian surplus and commercial taxation was in effect but to a lesser extent than in later periods. The probable existence of multiple systems/ levels of economy and social structure, and the lack of a better understanding of these structures, makes it harder to interpret the period. The *tolkappiyam* also talks of some sort of caste division (*anandanar*-priestly community, *arasar*-warrior, *tatchan*-carpenter, *vellalan*-agriculturists, *vaisyas*-merchants, *paradavar*- fishermen, *umanar*-salt merchants, etc.) though the following of each community was by will and not by traditional obligation (Rajayyan 2005). Unlike the class (or even caste) system of present day, it seems more of a division based on occupation and the influence of the hierarchy on social practices is unclear. While this has not been seen in the archaeological data, the rise in violent war-like activities has been reflected in the archaeological remains from IA-EH burials which make up 1/3rd to 2/3rd the percentage of all the iron artifacts ever excavated (Vanamamalai 1973, Deo 1985). According to Leshnik (1974) this also may also be reflective of a largely non-agriculturist and more pastoral society, which may have been mobile.

## 1.7 ARCHAEOLOGICAL EVIDENCE FROM EXCAVATED SITES

A complex relationship probably existed between the agriculturists, non agriculturists, producers and other participants of the society, a coexistence of hegemony and discordance on which social formation was based (Gurukkal 1993). In certain respects the collection of south Asian skeletal remains is better documented palaeontologically and archaeologically than aspects of the history of man's biological evolution in Eurasia, Africa, Australasia, and the Americas (Kennedy 1975, Kennedy 1980). The IA-EH burials, generally contain post-excarnate fractional human skeletal remains of usually more than one individual (Sundara 1979). Dental pathology studies done at Mahurjhari showed that the people occupying the area were agriculturally oriented, with a diet of soft carbonate food (Lukacs 1981). Skeletal remains from Kodumanal were examined and while they were similar in cranial length and breadth to those of Adichanallur, the shape of the head was different between the two sites (Reddy and Reddy 2004). A male skull from S. Pappinayakkanpatti site, situated at closer proximity to Kodumanal than Adichanallur, shows closer affinity to the latter. Excavation sites both at Adichanallur and Kodumanal exhibit heterogeneity characterized by a mixture of Veddid, Australoid and Mediterranean characters (Reddy and Reddy 2004).

Interestingly, no clear pattern emerges when comparing only the overall variety of types of burials at a site (Table 1.1 and Figure 1.2) but there is a definite difference in the type of burials present at each site. Here, the subjective nature of classification at each site is taken into consideration, but even accounting for that there does seem to be a very clear difference between each site. In a stable society, less of the deceased member's actual/real wealth is deposited in the tomb. In other words, fewer and fewer of the goods actually used, worn or habitually consumed in life were deposited in the tomb/consumed in the pyre (Childe 1945). It is difficult to base any study of the economy solely on the grave goods found at the burial sites but some basic ideas can be derived from grave goods.

This is implied by what is seen in the archaeological evidence (Tables 1.1 and 1.2) the burials do not seem to reveal a very strict framework. In order to understand the IA-EH burials and their regional context better, reports from excavated and explored sites in coastal and inland Tamil Nadu were compared. The division of these zones is based on geomorphologic data and previous studies. Sen (2002) mentions a matter of controversy raised by different authorities: the distance inland to which the coastal plain extended. He further talks about Ahmad's (1972) view of basing the coastal zone demarcation on the melting down of the Pleistocene glaciations resulting from the eustatic rise of sea level by about 50 meters, thus implying ingression of seal level. Sen (2002) further assigns the marine transgression to 30 kms inland in the case of the Circar coast, more than 100 kms along the Gangetic plain, 50 kms inland in case of the Coromandel coast and more than 100 kms in case of deltas. Herz and Garrison (1998) discuss the potential of coastal zones for hunting and gathering societies, due to the abundance of resources and raw material within short distances, as well as water transport such as sea, rivers and lakes for contact with others.

The different excavated burial sites imply the opposite in fact: a more adaptable/variable system. The geographic, economic and cultural divisions that have been spoken of in the literature may well reflect on localized differentiation. If these differences that are spoken of were geographic rather than geomorphic divisions, the burials of the coastal region should reflect more singularity. Instead they seem far more plural; this preliminary conclusion is however subject to available information from archaeological excavation previously conducted. When comparing the different type of burials of inland and coastal sites, it also seems obvious that the variety of typology found in

coastal sites does not seem to exist with inland excavated sites (Tables 1.1 and 1.3).

A number of habitation sites have been excavated including Kancheepuram, Uraiyur, Appukallu, Perur, Kudikadu, T.Kallupatti, Adiyamankottai, Kambarmedu, Palur, Maligaimedu,, Tiruverkadu, Malyampatti, Thirukkoyilur, and having iron implements and Black and Red Ware pottery, with various phases of occupation spreads over Tamil Nadu (Sridhar 2004, Shetty 2003a, Shetty 2003b, Kasinathan and Majeed 1996, Ghosh 1989 IAR 69-70, IAR 70-71, IAR 71-72, IAR 74-75, IAR 75-76, IAR 83-84, IAR 87-88, IAR 88-89, IAR 89-90, IAR 92-93, IAR 95-96, IAR 99-00).

Grave goods vary in quantity, be it beads, pottery, iron or bronze implements. The available information being kept in mind, this does seem to reflect a certain amount of flexibility in burial customs. The surface morphology of burial types also differ; again, in some instances in spite of the similar availability of raw material. It does reflect a larger variety of burial types. Underwater exploration has also revealed submerged land off the coast of Tranquebar, presently 8 m under water. This suggests that the sea has encroached upon the land (Tripati 1993). Shell artifacts have been found at Sanur, Perumbair and Odugattur (14 kms from Vellore, North Arcot district): 10 shell objects (circular discs and long barrel shaped beads) from Odugattur, 6 shell objects from Perumbair

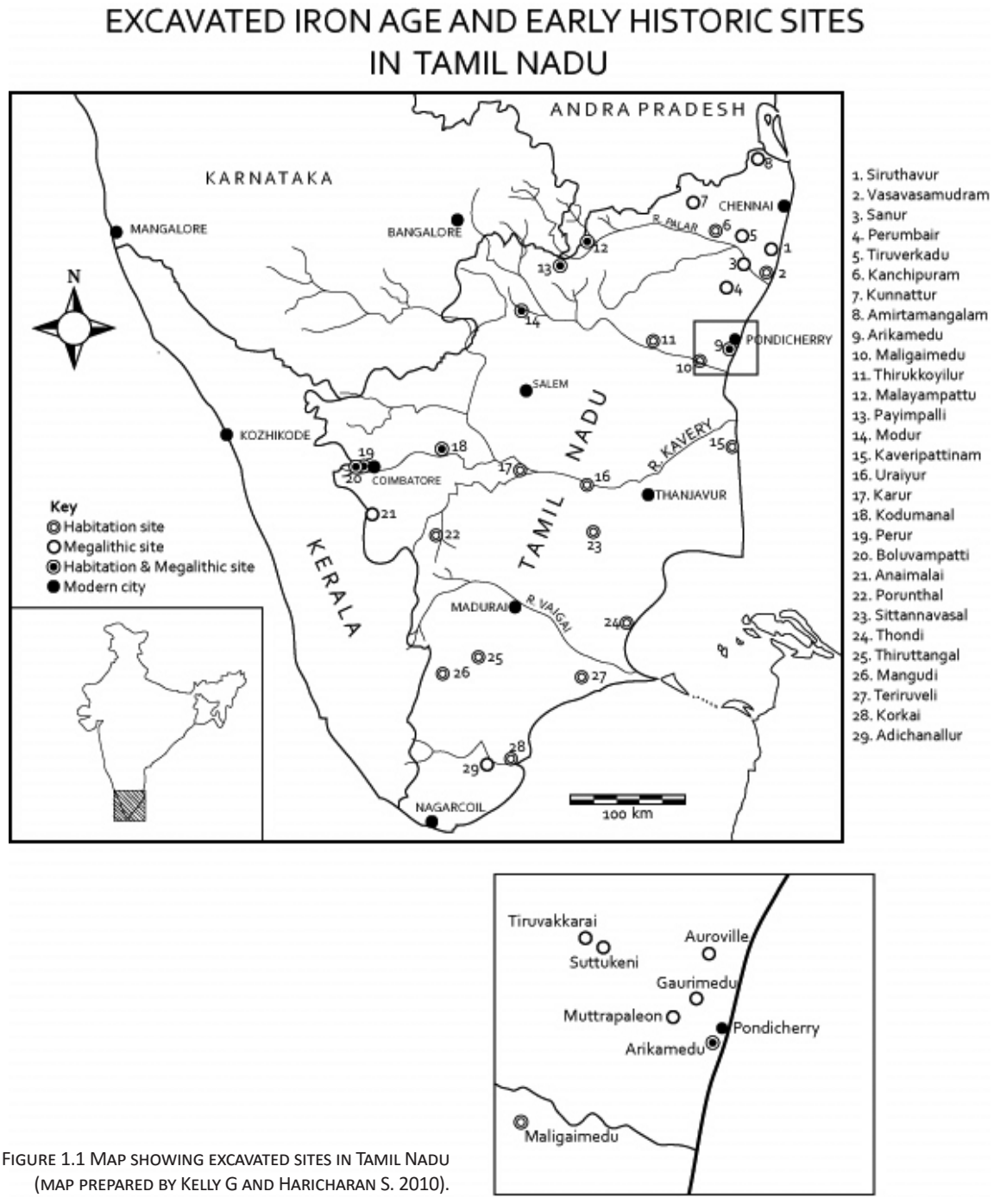


Figure 1.1 Map showing excavated sites in Tamil Nadu (map prepared by Kelly G and Haricharan S. 2010).

(conch shells, circular discs, barrel shaped longish beads) and 17 shell objects (circular discs and beads and conch) from Sanur (Banerjee and Soundararajan 1959). Though these sites are closer to the coast than other inland sites in Tamil Nadu, they are far enough inland to suggest a certain amount of trading. Among the grave goods from excavated IA-EH sites, fish hooks were also found at Tangal, Chengalpattu district, of Tamil Nadu (Hunt 1924, Deo 1985). This again correlates with the literary evidence that describes occupational differences, yet the data available from excavated sites is not large enough to establish any pattern. It is known from literary evidence that excarnation and cremation happened side by side at the same site (Srinivasan 1946, Gururaja Rao 1972, Leshnik 1972, Narasimhaiah 1980). The relationship between burying, cremating and excarnating the dead is a complex one, which intensified around 1000 BCE onwards, a date generally held to herald the Iron Age (Childe 1945).

Another concept in this ideology is that cremation encourages a belief in an afterlife rather different from burials, which maintain greater continuity with the mundane. The reduction of the human body to a handful of ashes may have required, by way of a counterpoint, a focus on the disembodied soul and its continual reincarnation (Thapar 1994). This is another example of an evolving society, different burial practices and an increase in complexity of the society at this period is corroborated by the *Sangam* literature. The relationship between cremation and burial and the simultaneous prevalence or precedence of one over the other is interesting (Codrington 1930, Crooke 1899). Crooke (1899) brings attention to not only the tribal and ethnographic information regarding the precedence of burial over cremation in India, but also differential treatment to certain people of that society, such as young children, priests or headmen.

The bones found in the IA-EH burials are inexplicably in various states of completeness and disarticulation (Codrington 1930). Gururaja Rao (1972) states that a majority of the Indian burials follow the example of the skeletal remains from Sanur: they are post excarnation secondary burials. The *Sangam* literature talks of various forms of disposal, including cremation, burial, and excarnation, yet the reasoning for the choice made is not explained in terms of social, economic or cultural factors (Srinivasan 1946). An overview of the burials excavated shows everything from near complete skeletal remains (Perambair — Table 1.2) to very few bones (Suttukeni — Table 1.2). At Tiruvakkarai, South Arcot district, the burials excavated revealed no skeletal remains and the burials, besides being loosely packed, also had a disturbed appearance. The only other site where no bones were found was at Gaurimedu near Pondicherri (Table 1.2). The excavators at Tiruvakkarai also describe the burial pits as shallow, the cairn packing measuring around 10-15 cms in thickness (IAR 84-85).

Here again the sample size and lack of information makes interpreting this anomaly difficult. More work in this respect in terms of excavation, survey and inter disciplinary methods would prove very valuable (Mohanty and Selvakumar 2002). Estimates, especially from the IA-EH burials of Karnataka and Andhra Pradesh, based on excavated megaliths suggest that individual monuments contain an average of c. 2.3 individuals (Brubaker 2001). Even were the number of known cemeteries and monuments doubled or tripled, the figures derived clearly could not account for the entire population of a period that spanned a millennium or more in some areas (Brubaker 2008). However, considering some of the burials are secondary burials with very few diagnostic remains, and other burials are non sepulchral, making any estimation of the population dynamics with respect to the IA-EH burials is difficult.

The *Sangam* people believed in life after death and they worshipped heroes; the *nadukal* was planted in memory of the dead and *virakal* for those who died in battle. A number of steps leading to the ceremonial/ritualistic practices carried out before, during and after the laying of a hero stone are described not only in later texts but also in earlier ones like the *tolkapiyar* (Vanamamalai 1975, Rajan 2000). While hero stones themselves are different from the IA-EH burials, it is probably the closest ideology we have in comparison to that of the IA-EH burials, besides the ethnographic work that has been collected. This may throw some light on the ritualistic aspect but it does not in any way explain if there existed any difference between the communities.

The only noticeable aspect of all the burials is that there seems no evident correlation between proximity of two sites, the grave goods and the type of burial. Interesting triads of burials sites are the ones excavated at Suttukeni, Muttrapaleon and Gaurimedu. While the latter two are urn burials, Suttukeni (Tables 1.1 and 1.2) has urn burials, cist burials, cairn circle and cist with circle. However, Leshnik (1972) also brings attention to the possibility that agricultural work may have resulted in the removal of the stone appendage from the surface. Similarly, there does not seem much of a correlation between the grave goods either. Gaurimedu is remarkably conspicuous by the absence of iron implements or Black and Red Ware. Leshnik (1972), Allchin and Allchin (1982) again hypothesize that it could be of an earlier period, and that the pottery from this burial resembles Brahmagiri rather than Muttrapaleon. At both Suttukeni and Perumbair, bronze bracelets have been among the grave goods, which, considering the marked lack of variety of grave goods seems a peculiar coincidence. Though

the tables (Tables 1.1 and 2) provide some insight into these observations, more in-depth analysis of excavated material and more excavations are required before any kind of hypothesis can be developed.

Further north on the Tamil Nadu coast are the sites of Sanur, Kunnatur and Amrithamangalam. Amrithamangalam is different as it has only urn burial but the former two are similar in having most of the different types of burials (Tables 1.1 and 1.2). There also seems to be some similarities in the fact that the grave goods of Kunnatur and Sanur appear to be along the same lines, with the only differences being that Sanur appears to be richer in variety of beads, and that Kunnatur had a settlement site associated with the burial site (Leshnik 1972, Moorti 1994).

Another way of exploring possibilities would be to classify sites based on the *tinai*, in order to look at the artifacts and typological variations of burials at various excavated habitation and burial sites from northern Tamil Nadu. However the results of this analysis are limited by the lack of enough information from excavated sites. Yet this does show some variation in material evidence from sites located in different landscapes, whether this can be attributed to the *tinai* or not is debatable (Haricharan and Keerthi 2014). The archaeological evidence points to a fluid cultural, economic and social practice when it comes to disposal of the dead. This is mirrored in the literature as well. Despite the lack of any conclusive results, this study attempts to elucidate that the *Sangam* period was complex and earlier ideas of dividing Tamil Nadu on broad regional basis need revision. More site-specific study, using scientific methods as well as the *Sangam* literature in confluence with each other, will help in the understanding of the IA-EH period better.

| Site/Type of Burial | Urn | Cist | Dolmenoid Cist | Cairn Circle | DolmenoidCist with circle | Cist with circle | Simple lined burial with sarcophagus with stone slab |
|---|---|---|---|---|---|---|---|
| Kunnathur | | | ✓ | ✓ | | ✓ | ✓ |
| Sanur | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Amirthamangalam | ✓ | | | | | | |
| Perumbair | | | | ✓ | | | |
| Southykeny | ✓ | ✓ | | ✓ | | ✓ | |
| Muttrapaleon | ✓ | | | | | | |
| Gaurimedu | ✓ | | | | | | |
| Thiruvakkarai | ✓ | | | ✓ | | | |
| Siruthavoor | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |

*Source: IAR 1954-55, 1956-1957, 1984-1985, Krishnaswami and Saran 1955-1956, Krishnaswami and Saran 1956-1957, Krishnaswami and Saran 1957-1958, Banerjee and Soundararajan. 1959, Gururaja Rao 1972, Leshnik 1972, Leshnik 1974, Narasimhaiah 1980, 1985-1986, Rajan 1997, Rajan 2000

Table 1.1 Correlation between sites and type of burial of coastal sites in Tamil Nadu

## 1.8 CHRONOLOGY OF TAMIL NADU IA-EH BURIALS

More than fifty $^{14}C$ dates are available so far for IA-EH sites all over India broadly falling within the range of the late second millennium BCE to the early centuries of the Christian era (Sundara 1979, Deo 1985, Possehl 1994, Moorti 1994, Mohanty and Selvakumar 2002). In Tamil Nadu, dates from the excavated IA-EH burial sites such as Paiyampalli (North Arcot district) and Adichannallur (near Tirunelvelli) (Table 1.1, Table 1.4) reveal that the two sites were in use from 640±105 BCE (charred grain) until 1150±100 CE (wood), respectively. Agrawal et al (1964) stated that the dates from Adichannallur are not in agreement with the archaeologically accepted ages. Similarly, at Veerapatti district, Madurai, charcoal was dated from IA-EH burials but the dates were of a modern period (IAR 94-95). It is evident that the dates from the northern megaliths of Tamil Nadu (Paiyampalli) and those from southern Tamil Nadu (Adichannallur) are distinctively of different periods. However, due to the lack of well dated IA-EH sites in Tamil Nadu, no proper understanding of this chronology has been possible (Sinopoli 2002). The IA-EH burials of Karnataka and Andhra Pradesh are dated as far back as 1400 BCE to 500 BCE (Gururaja Rao 1972, Narasimhaiah 1980, Moorti 1994, Bauer et al 2007, Brubaker 2008). This also shows that there is a need for more scientific and precise dating of the IA-EH burials. 781 radiocarbon dates were used in the Menorca, Spain, megaliths to understand the significance of the typologically different burials on the island through their chronology (Gili et al 2006). The Cova des C`arritx in Menorca, a cave accidentally closed in 800 BCE and reopened in 1995, had a number of very well preserved skeletal remains and dating of this has shown that the cave was in use over many generations by closely related members of a social unit for over 600 years.

## 1.9 TYPOLOGY OF THE BURIALS

Among the megaliths around the world, the generally described architectural forms are menhirs (standing stones), dolmens (stone "table" or stone "house"; usually a rectangular space formed by big rock slices with or without an entrance passage and a barrow above), cromlechs (stone circles), alignments (rows with large stones) and cyclopic buildings (walls, temples, fortresses, etc.) (Kostov

| Site | Pottery | Metal / stone implements | Jewellery | Bones |
|---|---|---|---|---|
| **Kunnathur** | Black, Red, Black and Red | Iron: flat Celts, knives, daggers, iron spike, sword, spear head, horse bit, nails, chisel, adze, coil bracelets. Copper belts, bowls | Terracotta beads | Fragments, skull and long bone |
| **Sanur** | Black Ware, Red (slip and dull-terracotta) Ware, Black and Red Ware, Graffiti | Spear, tanged knife, bar with pointed tip and socketed end, horse bits, hook, wedge, sickle, arrowhead, scraper and chisel granite and quartzite pestle | terracotta beads, shell beads, discs, carnelian beads conch shells | skulls, disarticulated teeth |
| **Amirthamangalam** | Black and Red Ware | Few iron objects | | Uncalcified skeletal remains including skull and teeth |
| **Perumbair** | Fine Black and Red Ware, Black Ware, Red Ware | iron arrowhead and blade, stone and iron implements, stone quern | bone and shell ornaments, bronze bracelet | one complete skeletal remains and disarticulated skull, jawbone and long bone, maybe different people |
| **Suttukeni** | Black, Red, Black and Red Ware | sickle, wedge, single edged knife and sword fragments, bronze mirror, vases, bells and curious objects | gold beads, glass beads, etched carnelian beads and gold jewellery | Few bones |
| **Muttrapaleon** | Black Ware, Red Ware, Black and Red Ware | sickle, wedge, double edged knife, sword, lances, javelin head (some iron implements have traces of wood) | | some fragmentary bones — uncalcified — in some burials |
| **Gaurimedu** | Neolithic-like pottery | Stone axes | Bronze bracelet with trumpet ends | |
| **Thiruvakkarai** | Black and Red and Coarse Red | | | |

*Source: IAR 1954-1955, 1956-1957, 1984-85, 1985-1986, Krishnaswami and Saran 1955-1956, Krishnaswami and Saran 1956-1957, Krishnaswami and Saran 1957-1958, Banerjee and Soundararajan. 1959, Gururaja Rao 1972, Leshnik 1972, Leshnik 1974, Narasimhaiah 1980, Rajan 1997, Rajan 2000

Table 1.2 Correlation between site and artifact excavated of coastal sites in Tamil Nadu

2008). Generally speaking, urn burials with or without stone appendage are universal in all districts of Tamil Nadu and Kerala with a concentration in the delta ends where the availability of the stone is meager (Rajan 2000). Rajan (2000) states that dolmen or cists are found extensively in mountainous regions where pastoral economy was prevalent.

The *topikkal* (hat stone) and *kodaikkal* (umbrella stone) are found on the western coast (Rajan 2000). Rajan (2000) discusses a particular poem in *Manimekala (*a post *Sangam* literature*),* which describes the great necropolis port city of *Puhar* or *Kaverippattinam* where different types of burial methods or types such as *suduvor, iduvor, todu-kuli paduppar* (cists or cellars) and *tal vayin adaipor* (burial urn with inverted lid) are all carried out in the same burial site. Clearly while regional variation is present, there seem to be no strict boundaries that differentiate the type of burials. Some sites may have only a single type of burial, yet others have many types, signifying that in order to understand typological significance just classifying or tabulating site and typology is not enough.

Rajan (2000) also then says that it is possible from the literary evidence that the urn burials were largely for natural deaths while the cist burials where for those that were hailed heroes, dying in cattle raids. His major support for this theory is that the poems talk of kings also being buried in urn, in many ways implying no class differences attributed to typological choice. Again the literary evidence should be correlated with archaeological evidence to prove this as it may be purely more poetic to describe a king as one who believed in equality, or an anomoly. Rajan (2000) highlights earlier *Sangam* poem references to *idukau* (burial grounds practicing exposure or excarnation) and the later references to *sudukadu* or *imam* (cremation or lord Yama). This indicates the

| Site/ Type of Burial | Urn | Cist | Dolmenoid Cist | Cairn Circle | Dolmenoid Cist with circle | Cist with circle | Simple lined burial with sarcophagus with stone slab | Menhir |
|---|---|---|---|---|---|---|---|---|
| Sittannavasal | ✓ | | | | | ✓ | | |
| Kodumanal | ✓ | ✓ | | | | ✓ | | ✓ |
| Tiruverkadu | ✓ | ✓ | | | | ✓ | | ✓ |
| Paiyampalli | | | | ✓ | | | | |
| T. Kallupatti | ✓ | | | | | | | |
| Appukallu | | | | ✓ | | | | |
| Odugattur | | ✓ | | | | ✓ | | |
| Adichanallur | ✓ | | | | | | | |

Source: IAR A-Review 1954-55, 1956-57, 1984-85, 1985-1986, Krishnaswami and Saran 1955-1956, Krishnaswami and Saran 1956-1957, Krishnaswami and Saran 1957-1958, Banerjee and Soundararajan 1959, Gururaja Rao 1972, Leshnik 1972, Leshnik 1974, Narasimhaiah 1980, Rajan 1997, Rajan 2000

TABLE 1.3 CORRELATIONS BETWEEN SITES AND TYPE OF BURIAL OF INLAND SITES IN TAMIL NADU

possibility of some chronological change from burial to cremation. Rajan (1991, 1993, 1994) has elaborated on existing classification and he uses the following classification and parameters:

- Cairn circle (height of cairn packing is dependent on nature of burial and terrain to an extent):
  a. Cairn circle entombing cist burial
  b. Cairn circle entombing urn burial
  c. Cairn circle with double circle entombing cist burial
  d. Cairn circle with menhir
  e. Cairn circle entombing sarcophagus
- Cist (including transcepted cist burial)
- Urn burials and Sarcophagus type of burial
- Menhir
- Dolmen:
  f. Simple dolmen
  g. Dolmen encircled by single or multiple slab circles
  h. Dolmen with passage
- Dolmenoid cist
  Rajan (1991) further describes a dolmenoid cist as having the following features:
  i. Shorter in height (approx 1metre or less)
  j. Capstone placed either on rubble or boulders instead of orthostats (even if slabs are used, it consists of more than one irregular slab on each side)
  k. Three sides are closed and the remaining side is kept wide open
  l. Devoid of any porthole

## 1.10 PREVIOUS CLASSIFICATIONS OF MEGALITHIC BURIALS

The above table (Table 1.5) shows that the classification of burial types has been difficult, largely due to regional differences. For example, Gururaja (1972) included alignments and avenues under menhirs, and Rajan (1994) (Kongu), used transected cist and cist with passage under the cist burial types. However, the typological classification done by the above authors is based on the region in which they have worked: Rajan et al's (2009) classification is based on exploration and excavation of north Arcot, Dharmapuri district, Coimbatore region etc., while Narasimaiah (1980) concentrated on northern Tamil Nadu (Payampalli), Andhra Pradesh etc. However, Krishnaswami (1949), who made the first attempt at classification of IA-EH burials, takes into account regional as well as overall differences in megaliths. His classification of the Chengalpattu megaliths gives all above rounded "rude" stone structures as Dolmenoid cist, naming them as D1 and D2, Cairn circle with urn burials, sarcophagi. He highlights that the occurrence of sarcophagi is restricted to the coastal northern Tamil Nadu region, and clarifies the typology of Pudukottai, Adichanallur, Kerala (Cochin) and north eastern Indian megaliths.

| Sample No | Place Name | Date | Calibrated dates | Site and Burial types |
|---|---|---|---|---|
| TF- 987 | Korkai | 810±95 BCE (Wood) | Cal BCE 906 (818) Cal 795<br>Cal BCE 1005 (818) Cal 558 | IA-EH Port site |
| TF 823<br>TF 826 | Paiyampalli | 640±105 BCE (Charred Grain)<br>215±100 BCE Charcoal) | Cal BCE 800 (764, 614, 606) 410<br>Cal BCE 835 (764, 614, 606) 390<br>Cal BCE 333 (102) Cal AD 9<br>Cal BCE 381 (102) Cal AD 115 | IA-EH |

(Source: IAR 65-66, IAR 69-70, Possehl 1994)

TABLE 1.4 DATES FROM PREVIOUSLY EXCAVATED IA-EH SITES

| Type of Burial | K.P. Rao | K. Rajan | B.Narasimhaiah | Gururaja Rao | Allchin and Allchin | Sundara | K.R.Srinivasan and N.R.Banerjee | V.D.Krishnaswami |
|---|---|---|---|---|---|---|---|---|
| Transected Cist with passage | | | ✓ | | | ✓ | | |
| Rock cut chambers | | ✓ | | ✓ | | | | ✓ |
| Cist burial | ✓ | ✓ | | | ✓ | ✓ | | ✓ |
| Port hole cist | | | | | | ✓ | ✓ | ✓ |
| Dolmen (with circle of slabs) | | ✓ | | | | | | |
| Dolmen | | ✓ | | | | ✓ | | ✓ |
| Dolmen with passage | | ✓ | | | | | | |
| Dolmenoid Cist | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | |
| Sarcophagus | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| Menhir | | ✓ | ✓ | ✓ | | ✓ | | ✓ |
| Slab circle | | ✓ | | | | | | |
| Double circle | | ✓ | | | | ✓ | | |
| Stone circle | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Barrow | | | | | | ✓ | ✓ | ✓ |
| Cairn | | | | | | | | ✓ |
| Cairn circle | | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Circle with Menhirs | | ✓ | | | | | | |
| Cairn circle with capstone | | | ✓ | | | | | |
| Urn burial | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | |
| Pit burial | ✓ | ✓ | | ✓ | | ✓ | | |
| Anthropogenic figurine | | ✓ | | | | | | |
| Hood stone | | | | | | | | ✓ |
| Hat stone | | | | | | | | ✓ |
| Hood stones and Hat stones | | | | ✓ | | | | |
| Stone alignments | | | | | ✓ | | | |
| Rock cut chambers | | | | | ✓ | ✓ | | |
| Clan ossuary | | | | | | | | ✓ |
| Cromlech | | | | | | | | ✓ |
| Stone seats | | | | | | | | ✓ |
| Topikal | | | | | | ✓ | | ✓ |
| Avenue | | | | | | | | ✓ |
| Alignment | | | | | | | | ✓ |

(Source: Krishnaswami 1949 Gururaja Rao 1972, Sundara 1979, Narasimhaiah 1980, Allchin and Allchin 1983, Rao 1988, Rajan 1991, Rajan 1993, Rajan 1994, Moorti 1994)

Table 1.5 Classification of burials put forward by several archaeologists

Two very different approaches to the classification system however are by Sundara (1979), who divides the burials into chambers and non-chambers, and Moorti (1994), who divides the burials into sepulchral and non-sepulchral. However without excavation or firm establishment of any type as non-sepulchral, it is difficult to effectively use this system at all sites. The division of burials into chamber and non-chamber however is interesting in that it tries to think outside the nomenclature already given. Dikshit (1969), however finds Krishnaswami's (1949) classification problematic in that it does not distinguish cist from dolmen, but instead uses dolmenoid cist. Dikshit (1969) further advocates the Montelian system of three broad classifications, as this helps understand the correlation between typology and chronology of different burial types, Using this logic, he believes the classification of burials into cist and dolmen type is effective as this is not only typological but also a chronological differentiation, as the cist burials are dated later than the dolmen. Table 1.5 also shows that the basic types are the same: dolmen, cist, circle, without stone appendage, yet the sub divisions are where the variations occur. The large number of burial types and extent would suggest that such variations are due to raw material or social or cultural divisions. Sundara (1979) also states that post depositional process may change the appearance of the burials, and unless these processes are considered, typology is harder to interpret.

When a site contained more than one type of burial, each type occupied a separate portion within the complex as noticed by Mungilpudur and Pachchihanapalli (Rajan 1993). It has been noticed that in many sites chambers in all three states (cist, dolmenoid-cist or dolmen) or exclusively in either of the states, or in the last two states but segregated from each other, are found. This is exemplified by the passage chambers in all the states in North Karnataka, dolmens in the Palani hills, cist circles in Brahmagiri and dolmens and dolmenoid cists in Hire-Benkal (Sundara 1979). Though geological conditions of the spots where the chambers are erected appear to be the reasons for the different states of the erections in north Karnataka, they do not hold true in the case of others (Sundara 1979). The reasons for such preferences appear to be more cultural than environmental: a problem for further study (Sundara 1979).

The cairn circle entombing cist burial generally was raised (or lowered) 2-3 m above; those entombing the urns are 30-50 cm raised above ground or below. Rajan et al (2009) infers that the Palar basin is influenced by the cairn circles from Pennaiyar river region, the stone circle and other

stone variety of burials from eastern and western parts, respectively, of Chittoor district, Andhra Pradesh, and the dolmenoid cists either originated here or from Chengalpattu where they are found in vast numbers. However, a large number of the theories are based on a general comparison of surface typology of the burials, not exploring in-depth any specific aspects of the burials like the spatial and temporal behavior of these burials.

### 1.11 THE IA-EH SITE-SIRUTHAVOOR

Siruthavoor has cairn circle, dolmen, dolmen with circle, dolmenoid cist, cist, cist with circle and urn burials. The chronology and typological analysis of the burials is integral to further understanding the origin and distribution of IA-EH burials. Thus considering present theories and previous studies conducted, a site such as Siruthavoor provides a unique opportunity to understand the relationship between different types of burials and their chronology.

The study of IA-EH burials has a long history (Mohanty and Selvakumar 2002), however, gaps still remain. The many questions raised have only multiplied, and grown more complex. The need presently is to understand IA-EH burials and how they fit into the proto history of south India. Besides typological classifications, which may be the key to understanding any society, economic or other differences of that society need further analysis. Since the IA-EH burials are very much a part of the landscape, which is subject to change over a period of time, the burials have to be studied in that context. Dating the IA-EH burials is also important as we need to further understand the chronology to verify its impact of typology.