Megaliths of North Kerala: Formation of Technologically Advanced Agro-Pastoral Iron Age and Early Historic Society

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Abstract: *Megaliths are the burial monuments and represented a highly organized and technologically well advanced society of Iron Age and Early historic period (circa 1000 BCE- 500 CE). They have pointed to the existence of a stratified society based on various subsistence forms with the dominance of agro-pastoral livelihood and, accordingly, organized in to different but interrelated occupational groups. The archeological and literary evidences have shown that there were some hierarchies, probably based on their socio-political or economical positions. They have developed different knowledge and skills related to every form of their livelihood. They had system of production distribution and surplus accumulation.*

Keywords: Megaliths, Iron Age, Early Historic, North Kerala, Agro-pastoral, Ezhimala, Nannan

Introduction

The present paper tries to elucidate various technological skills and knowledge of the Megalithic builders of North Kerala based on the available archaeological and literary evidences (Ganesh 1990, John 1991, Chedampath 1997, Gurukkal and Varier 1999, Satyamurthy 2002, Peter 2002, Jayasree Nair 2007, Devadas 2012). The distribution pattern of Megaliths in the Norther part of Kerala especially Kannur, Kasargode and Kozhikode districts is the main database of this study (Rajesh 2011, 2014, 2014a, 2016). Megaliths are the large stone erected in memory of the dead ancestors and the foremost material evidences to study the Iron Age period of the peninsular India in general and Kerala in particular. The term Megalith derived from two Greek words; *mega lithos* means big stone which is coined by Algernon Herbert, a British Antiquarian, in his book *Cyclops Christianus; an argument to disapprove the supposed antiquity of the stone henge and other megalithic erections in England and Britian* in 1849 (Herbert 1849). Generally Megalithic burials contained mortal remains and the belongings of the dead person. The available mortal remains indicate that there were two types of burial practices in the megalithic period in South India; primary and secondary burials. The first type contained extended human skeleton in which the full

body of the dead person buried along with the potteries, metal objects, semi-precious stone beads etc. Such types of burial has reported from Adichanellur in Tamilnadu (Rao 1972:257.) and not discovered from Kerala so far. The second types are fractional burials in which the bone fragments probably collected from different parts of the dead body buried along with burial goods. The dead bodies were either exposed or cremated. The bone fragments contained in the fractional burial have collected either from the disposed or from cremated contexts. There are different types of megaliths in Kerala like *Kodakkal*, *Toppikal*, Rock-cut sepulcher, Cist, Dolmen, stone circle, Urn, Sarchophagus, Menhir etc (Srinivasan 1946, Rao 1972, Satyamurty 1992, Gurukkal and Raghava Varier 1999). Among this, the rock cut sepulchers, *Toppikkal* (hat stone) and *Kodakkals* (umbrella Stone) are unique to Kerala and mainly distributed in the Northern part. The single and multi-chambered rock cut sepulchers with portholes or pillars only distributed towards the north of present Trissur district and a wide distribution found in the Malappuram, Kozhikode, Kannur and Kasargode districts. Most recently a single site is unearthed accidently at Neervaram Neykuppa in Waynad (Krishnaraj 2015:13). Generally, the abovementioned typologies are recognized as the megaliths, but some of them have no lithic association and therefore it is argued that all the burial monuments of the Iron Age are not megaliths (Leshnik 1974:1-2). Accordingly, the megalithic period has generally been termed as the Iron Age period in the later studies (Gurukkal and Varier 1999: 101-156,).

Previous Studies

The colonial government under Madras Presidency has made the pioneer attempt to document megalithic sites of North Kerala. J Babington excavated a capstone at Chettapparamba near Feroke Kozhikkode district in 1918, probably the first megalithic excavation in India (Babington, 1823:324-330). William Logan excavated a rock- cut chamber at Banglamotta paramba and Trichambaram near Thalipparamba in Kannur district and unearthed typical megalithic assemblages including pots and iron implements (Logan 1887[2000]:181-83). Robert Sewell's "List of the Antiquarian remains in the presidency of Madras" has also furnished a taluk wise distribution list of Iron Age burials (Sewell1882:241-43). There are few attempts to excavate some of the megalithic type after the colonial time, like the rock-cut tomb excavation at Citrari in Kannur district (John1974:385-89), umbrella stone excavation at Perambra in Kozhikode district (John 1982) and the excavation of the cluster of rock cut tombs at Umichipoyil (A.S.I: 2001, Jayasree 2008) in Kasargode district. Recently a trial excavation is carried out at Kinalur (Calicut district) under the guidance of Government Arts and Science College Meenchanta (2015-16). Apart from these studies, there is no significant attempt to trace the distribution pattern of megaliths of North Kerala.

Iron Age Burials or Megaliths and Early Historic Period

A cultural continuity, in certain extent, from the Stone Age to the early historic period is evident in the current archaeological databases of Kerala. The discovery of stone

tools from the surface explorations and excavations certainly proved that Kerala had a pre historic Stone Age phase. The Mesolithic habitation evidences have unearthed from the rock shelter at Temalai (Quilon- South Kerala), which dates back the human occupation of Kerala to 3000 BCE (Rajendran 1989:83-84), and few Mesolithic tools have excavated from Anakkara in Palakkad district (Gurukkal 2008, 2009) and Kinalur in Calicut district (Govt. Arts and Science of College Meenchanta, Calicut 2015-2016). However, no concrete evidence so far discovered from Kerala to prove a cultural phase between the Stone Age and Iron Age. No Evidence on a chalcolithic phase has discovered yet. The trial excavation made at Anakkara, which unearthed Mesolithic evidences below the Megalithic layer, proved that there was a big gap between Iron Age and Mesolithic archaeological layers. But, as the Neolithic substance (Citrari, Ummichipoyil) and copper or bronze (Naduvil, Paithoth, Chakkoththuparamba etc) remains yielded from the Megalithic context, it is possible to argue that the Iron Age culture of Kerala overlapped with the end phases of Neolithic- Chalcolithic culture. As number of sites yielded the early historic Russet Coated painted ware in association with the megaliths, it is possible to state that the late phase of megalithic cultures merged with the early historic period. The discovery of a transition layer between the Iron Age, which yielded a number of Black and Red Ware shreds, and early historic layer, which unearthed a huge quantity of Indian Rouletted Ware, at Pattanam (North Paravur, Ernakulam district, Kerala) (Cherian et.al 2007) has undoubtedly proved that the later phase of Iron Age culture merged with the early historic period. The Greek-Roman literatures (1st and 2nd century CE) that refer to the port cities early historic period and the early Tamil poems (*Sangam* literatures, 300 BCE-500 CE) that refer to the different types of burial practice and geo-historical settings of early historic period, as well hinted at the merging of Iron Age culture with the early historic culture. It is reasonable to assume that the human occupation in Kerala starts from the hunting and food gathering pre-historic Stone Age and developed into an advanced settled agrarian society during the Iron Age and early historic period.

Based on the Porkkalam excavations, a period ranging from third century BCE to first century CE is ascribed (Thapar 1952:6,) to the Iron Age burials of Kerala. Mangadu urns belonged to a period ranging from 1000 BC to 800 BC (Satyamurthy 1992:9). Generally, a period from 1000 BCE to 500 CE can be ascribed the Iron Age of Kerala. The available Iron tools and objects like trident, spearhead, arrowheads, dagger, sickle, sward, tripod, lamp, ploughshare etc from the Iron Age archaeological contexts have shown that the Iron technology reached at a sophisticated stage during the Iron Age and early historic periods. Hence, the Iron Age burials (megaliths) have represented an advanced stage of iron technology.

Burial Practices and Ancestral Worship

The megaliths primarily represented the burial practices of Iron Age and early historic period. The mortal remains from the megaliths have revealed that the Iron Age society followed various forms of burial practices. Both primary and extended burial practices were widely practiced in South India. They made different types of sepulchers for the

dead ancestors. It ranges from the usual urn type to the complex rock –cut sepulchers, stone circle, cist-dolmen, umbrella stone etc.

Purananuru, one of the poems in *Ettutokai* collection, refers to two types of burial practices *idukavonto chudukavonto* (239:20-12) means the exposed and cremated burial forms (Rajan 2000:11-12). *Manimekhalai,* one of the Tamil epics, refers to *suduvOr IduvOr thodukuzhiPaduppOr thAzhvayinadaippOr thAzhiyil kavippOr* as part of its description of the necropolis at Puhar or Kaverippattinam (*Manimekhalai* VI 65-73). It refers to about five types of burial practices as follows;

1. *suduvOr* – those who cremated
2. *IduvOr* – those who laid dead body for expose
3. *thodukuzhiPaduppOr-* those who laid the body or mortal remains in pits dug in to the ground for the purpose
4. *ThAzhvayinadaiPOr-* those who interred in sub-terrain cist
5. *thAzhiyil kaviPOr-* those who placed the body or the remains thereof inside a burial urn and inverted a lid over it (Rajan 2000:11-12).

The megalithic burials have testified the diversity in the burial system of the Megalithic builders. It possibly represented the existence of diverse social groups who followed different form of burial systems. It also underscores the possible increase of population and expansion of settlements in the Iron Age period. The dead body had to bury in such a populous society. Therefore, they had separate space for dead. The cluster of megaliths found in various places like, Feroke, Kodakuthi paramba of Perambra and Atholi, Kinalur (Calicut dist), Taliparampa, Kozhummal, Alathata Mavicheri, Mathil, Ulloor, Chempottikkunnu, Naduvil, Sreekantapuram, Kunneru, Ezhumvayal etc (Kannur district), Ummichipoyil, Cheemeni etc (Kasargode district) and Ampukuthi, Edakkal etc (Waynad district) are the good example of the separate spaces for dead.

The megalithic monuments are treated as the pagodas of the ancestors and the living society were given offerings. The dead person got the status of spirit after death even now and the people believed that they have supernatural power to control the universe. When we talk about the death rituals and ancestral worship of kin based society of megalithic period, the ancestral became the spirit of the entire tribal settlement. Then the monument got the status of an ancestral pagoda. Hence, the living people in connection with the Megaliths built houses for the ancestors. Then it can be argued that the Iron Age burials have equal status of monuments and a worshiping pagoda.

Iron Age and Early Historic Society

The different types of sepulchers and monuments and the unearthed burial goods have signified the existence of a complex society that acquired diverse forms of knowledge and skills as part of various subsistence forms. They were involved in the multiple form of subsistence like hunting, food gathering, cattle keeping, agriculture, fishing,

salt making crafts production, masonry, iron smelting, metal tool and implements making, pottery manufacture, local- inland and coastal exchange. As we have no solid evidences about the Iron Age habitation context from Kerala, the burial monuments and grave goods are the major archaeological sources for the historical study of Iron Age and early historical period. They have furnished scores of hints about the habitation and the life pattern, way of burial practice, the social stratification etc of their builders. The following part will discuss these things in details.

A Society with Sentient of Landscape and Seasons

The megalithic builders had certain parameters to select the stone or laterite area for the construction of monuments. It is argued that there are local preferences for the megalithic types depending upon the local burial practices and the availability of raw material for the construction of graves (Ramanna 1983:4-5). In most cases, they selected non-productive areas for the burial ground, which probably located not far away from their settlement. The unfinished rock cut cave, which found very close to another finished one, reported at Citrari (John 1974) has shed light on their talent to determine the quality of stone.

The megalithic builders are aware about the seasonal changes. The shape of megaliths like umbrella, cap and doorjamb of the rock cut caves, which distributed mainly in the northern part of Kerala, have underlined that the megalithic builders were considerably cognizant about the incessant monsoon seasons of the region. As the megalithic builders have used both granite and laterite slab for the top portion of the *Kodakkal*, it can be say that the megalithic builders seem to have conceived the shape of the upper part of the monument (*Kodakkal*) as umbrella in order to solve the weathering problem of laterite due to incessant rain. The semi circle umbrella shape will protect the stone from its weathering (Figure 1). An 'umbrella stone' with four laterite slabs at the bottom as orthostat and a single dressed flat granite at the top found at Pattarkulam near Manjeri (Figure 2) in Malappuram district (Logan 1981, Devadas 2014: 121-122). These examples proved that the megalithic builders were conscious about the quality variations of the granite and laterite stones. They were also considered the climate condition of the region for determining the shape of the monument.

The early Tamil literatures give signs on the awareness of the contemporary society about the seasonal changes (Rajesh 2011). It is a complex endeavor to make a discussion on the nature of climate in the early phase of human life, as it is unrecorded. *Akananuru* (hereafter *AN*: 119) refers to the early historic conscious about the seasonal changes. The spread of drought owing to the high temperature and consequently the evaporation of the water sources and resourceful units are testified by the terms like *Tirankutham,* (drained plot) and *varumchunai,* (evaporated water body). The arrival of rainy season in the region is apparent in the usage of the terms *tanmazhai inamazhai thavazhum ezhil kunrathu* (cluster of clouds above the mountain Ezhil or visible from the Ezhimala hillock-*AN*:258, 345). The cloudy climate gradually follows lightning and

thunder (*chelmakkal*) and leads to incessant rain (*AN*:392). The turbulent floodwater from the hillock, which flows by the streams, has shown the frequency of rains in the region (*AN*:142). Thus, the water-evaporated plots became wet and ready to vegetate and the atmosphere became cool and pleasant (*AN*:345). The term *mamuri inru marakompu akaippa* (*AN*:345) means the tiny tips of water spread on branches and leaves of the tree may show the end of rain and the arrival of another state of nature, probably the beginning of spring season. The term *uraikazhinthu ulantha pintai* (after the end of rain *AN*:345) has also indicated the arrival of the same. The beginning and end of each season are represented in the poems. Thus, both Megaliths and the literature have represented the seasonal knowledge of the contemporary society.

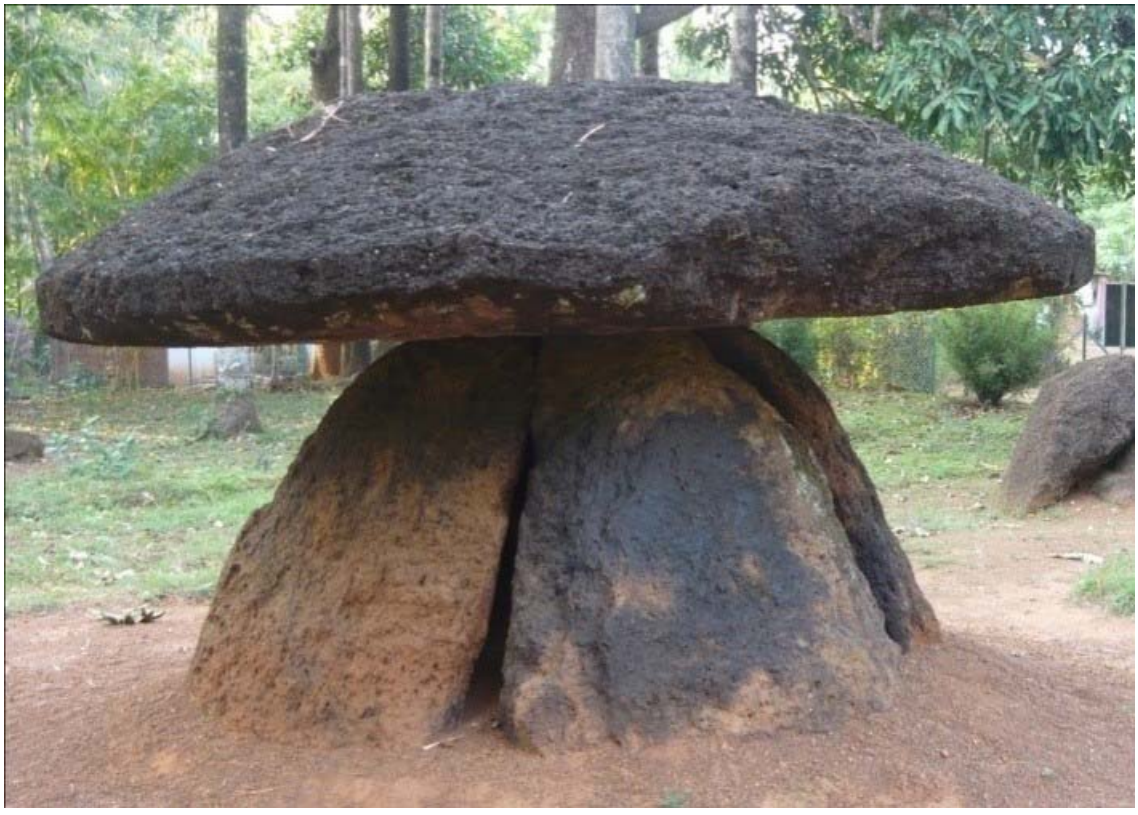

Figure 1: Cheramangad – Umbrella Shaped Top with Laterite

A Society with Mathematical Knowledge

They had mathematical calculations and planning to build megalithic monuments. Certain uniformity can be seen in the preparations, measurements and sketches of the monuments. It is highly evident in the dimensions of rock-cut caves and umbrella stones of the region under study. In a recent article, K.V. Ramakrishna Rao examined the mathematical and astronomical notions of the megalithic builders and argued that the Megalithic builders must have spent much time to find out the relation between circle and square. They were familiar with the square, rectangular, pentagon, hexagon, polygon shapes. He stated that there must have so many trials and errors before visualizing the shapes of Megaliths. The megalithic people visualized the shape, size,

cutting, chiseling, carving, and the arrangement of the Megaliths through the thinking process. Thus, he argued that the megaliths were arranged in a geometrical pattern (Ramakrishna Rao 2010: 97-116).

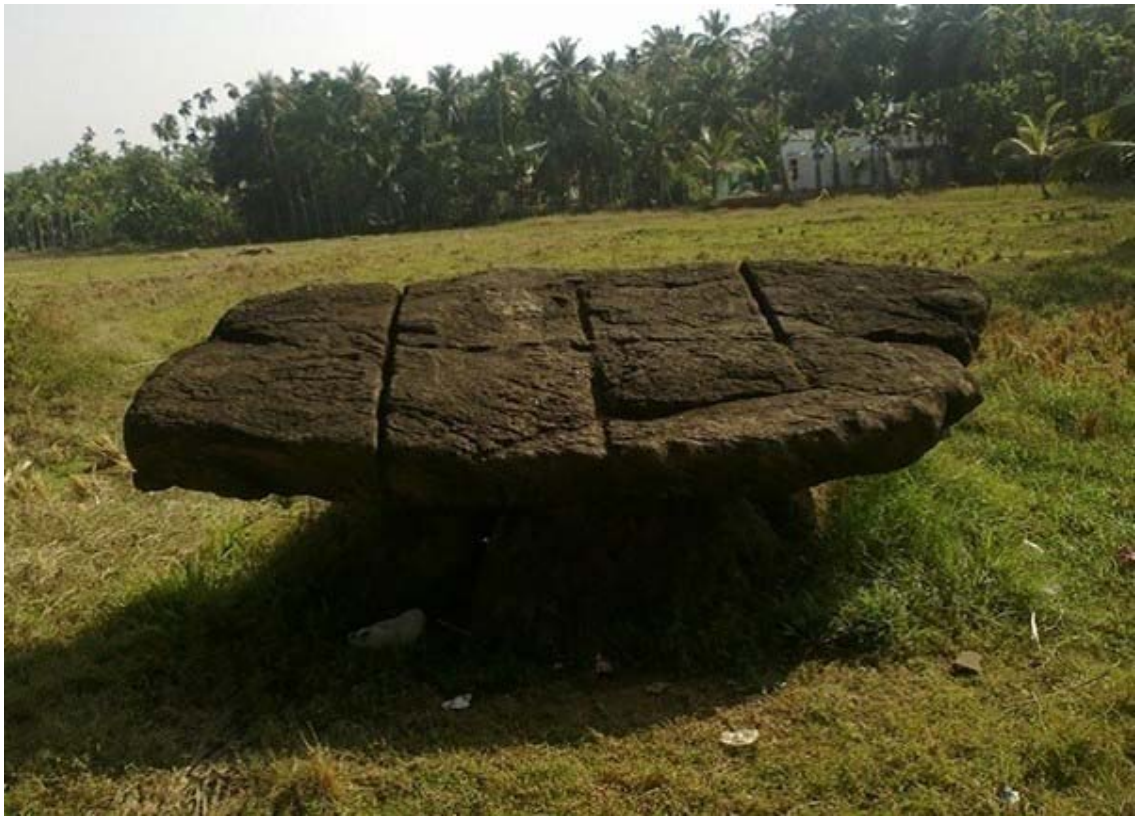

Figure 2: Pattarkulam – Top Part of Kodakkal with Granite

The unearthed earthenware, stone beads and metal objects of different sizes and shapes from the Iron Age burials of the region under discussion have also disclosed the mathematical cognizance of the Iron Age and early historic society. The Pattanam excavation certainly proved the existence of bead, ceramic and metal manufacturing workmanships of the Malabar Coast (Shajan et.al 2014, Cherian et.al 2007 -2015). The measurement definiteness of the objects like handmade or wheel made potteries (rim diameter, , body circumference, height etc) perforated highly finished and different shaped stone or glass beads and pendants (tubular, cylindrical, triangular, biconial, barrel, spherical, square, rectangular etc) and different types of megaliths have attested the mathematical notion of the Iron Age and early historic society.

Knowledge and Skills

The megalithic monuments and the unearthed burial goods have shown the possible formation of various skilled occupational groups like stonecutters, masons, pot makers, ironsmiths, braziers, gold smiths etc. Iron was the most prominent metal used by the people. The iron working was the central feature of contemporary technology and the iron smelting was a specialized craft, which is evidenced by the iron objects or implements unearthed from the burials (Gurukkal and Raghava Varier 1999:133-34).

Iron implements and objects like sword, dagger, tridents, knives, chisel, arrowheads, spearhead, ploughshare, saucer lamps, tripod etc were unearthed from the megaliths. But the archaeological remains related to the iron smelting like crucibles are not found from the Iron Age burial context of the region under discussion. However, the processes of metal tool making are evident in the literature (A.N.142:24). The highly figurative rock cut sepulchers carved in the laterite plateau and the decorated laterite slabs of the multiple hood stone circles; umbrella stones etc have shown that the contemporary people had manufatured sophisticated iron tools. The doorjambs, the port holes and its lids, pillars, passages, the finished roof etc are representing the accuracy and the technological sophistication of the megalithic masonry. Highly figurative rock cut sepulchers with square and arch type doors are found from Cheemeni, Ummichipoyil (Kasargode) Kunneru, Chunda, Alathatta Mavicheri, Ezhilode, Kunjimangalam (Kannur) Cheliya, Kakkodi, Kuruvattur (Kozhikode) Marakkara (Malappuram). The circular port holes, which vary in its thickness and diameters, have shown the multiplicity of the technological skills and the possible use of different kinds of tools for its construction. The masons must have based on certain calculations or plans for the construction of such monolithic monuments and it is tangible in the accuracy of stone dressing and the aesthetic beauty of monuments. They must have developed tools for both rough works and more meticulous finishing works. The huge burial monuments presuppose their builders' knowledge and technology regarding a variety of things such as identification, cutting, shaping and transporting of the raw material for construction (Gurukkal and Raghava Varier 1999:141). However, the study of megalithic technology remains a virgin area and it requires detailed scientific analysis.

The references like *uruvukilar ervinaipolintha pavai* (A.N.142:21) and *thathucheypavai* (A.N.1392:6) in the literature shows that the early historic society was familiar with the toys made of wood, clay or metal. Indirectly, this also emphasized the possibility of the formation of toy making units or the exchange networks related to the same. The crystal and quartz beads from the stone circle at Naduvil and also from Wynad have shown either the presence of the bead making crafts or the inland exchange network of the region. Recently, the excavations conducted at Pattanam in the Periyar river belt of central Kerala have unearthed solid evidences related to the bead manufacture (Selvakumar et.al 2005:83-85, Cherian et.al 2007- 2015). This site could be contemporary to Naura in the Northern part. According to E H Warmington, the beryl from Punnata in the south west of Mysore would be sent to Naura (Warmington 1995 (1928):251). All these have shown that a specialized group either for bead making or for bead exchange developed in the region.

The ceramics consist of Black and Red ware, Red slipped leg wares, Black ware and Russet Coated painted wares, which yielded from the burial monuments, indicated the evolution of the ceramic technology and potter's settlements. A large number of potteries were unearthed from the rock-cut sepulchers at Ezhilode, in the Perumba river belt and the Alathatta Mavicheri at Talipparamba in the tributary of Kuppam

River belt (Rajesh 2011, 2014). Distinct variety of potteries has also been found from a rock-cut sepulcher at Sreekantapuram (Gurukkal and Raghava Varier 1999:138). The megalithic people have used the pots for storing water and cooking food items. The pots were also used for storing toddy (A.N.356:1-2). The making of burial urn was also quiet significant in the contemporary society (*Purananuru,* (hereafter *P.N.*) 187, 228: 1,10-15, 256:1-7,). The unearthed burial assemblage like well burned fine quality pots and rough made urns have shown the development of handmade and wheel made pottery technology. The pot makers must have acquired skills of inverted burning technology. The wide distribution of black and red wares pointed to the possible development of inverted burning technology. A large number of such potteries were unearthed from Sreekantapuram, Ezhilode and Alathatta Mavicheri.

The Space for Settlement

Of course, the megalithic builders had distinct space for settlement, which probably located not far away from the burial space. The megalithic builders were selected their settlement area proximity to the fresh watercourse (Moorti, 1994:11). Unlike Tamil region, the Kerala archaeology so far furnishes single sign of the Iron Age settlement at Pattanam, a part of the Iron Age and Early historic port city Muziris. However, the builders of magnificent monuments, especially of the single or multi stored and port hole or pillared rock cut cells, must had a space for settlement. A sound settlement base have robustly required for the construction of such elaborated 'dead houses' for their ancestors. They seem to have conceived the idea or model of the sepulchers from their living environment. It does not mean that they were lived in the rock cut cell, but they were familiar with the building styles of huts, square or circled houses with square or arch type entrances. The presence of various types vessels, probably used in their real life for cooking, serving, pouring, drinking, eating, storing, carrying purposes etc, in the megaliths have hinted at the existence of a settled social system. Similarly, the profuse discovery of iron lamp from the megaliths of Kerala also represented the possibility of the expansion of settlement space in the nearby zones of megaliths. It is ridiculous if one observes that the lamps used only in the context of funeral rites during the megalithic period. They must have space for cooking in their dwellings. They must have ordinary and advanced type of hearths. The iron tripods with three or four legs seem to have represented use of some kind of advanced hearths in the contemporary society. It is not clear whether it was used for making hearths or as stand for placing the conical shaped pots. However, as it found in the dead houses it must carry the purpose of cooking for the dead person in his/her future life after death. Similarly, the *Akananuru* literature, which deals with the matters related to the familial life of early historic time, represented the possible spread of households with multiple-subsistence forms and development of lively kinship family in the ancient *Tamizhakam*.

Social Formation

The Iron Age burial remains and the *Sangam* poems have revealed the evolution of a society with agro-pastoral subsistence in which the hunting and food gathering also sustained. It is argued that the megalithic people were settled agrarian community

(Rao 1972:298-299), Ramachandran 1980, Sathyamurthy 1992) and the nomadic pastoral society (Leshnik 1974,). The megalithic people practiced a mixed economy based on agro-pastoral production (Moorti 1994:44, Mohanty and V Selvakumar 2002: 330-31). Based on *Sangam* literature and its *Tinai* concepts (*Tinai* is a poetical conception of Sangam society about the contemporary geo- eco zones. There appears five *tinais* (*aintinai*); *Kurinchi* (hilly tracts), *Mullai* (Pastoral tracts) *Palai* (parched zones), *Marutham* (wet plain field), and *Neital* (coastal zones) For details, Rajan Gurukkal and Raghava Varier, *Cultural history of Kerala*, pp 165-173)of early historic landscape, it is suggested that the contemporary people had multiple form of subsistence strategies and call it as 'multiple economies' of early Tamizhakam (Madhavan 2011).

The archaeological and literary evidences have pointed to the growth of multiple subsistence forms. The hunting, food gathering, cattle keeping, plunder or robbery, slash and burn cultivation, craft production and fishing and salt making were evolved. None of these was autonomous in any pure sense and had considerable overlap among them depending upon the nature of the eco-zones (*Tinai*) (Gurukkal and Raghava Varier 1996: 228, Madhavan 2012). The hunting and food gathering were the most primitive modes of subsistence. The hunters used primitive tools like *Kavanai* (catapult or a stone used in a sling) and *Vel* or trident. (A.N. 392: 15,21. 152:10-11).

The artifacts unearthed from the Iron Age burials like trident, arrowheads and such other iron implements have corroborated the practice of hunting gathering subsistence forms in the region (John 1990, Poyil 2006:95). The kin group settlers were collectively gathered their daily food from the wild and resourceful forest region and then redistributed it among the community (A.N. 178:4, 5, 12).

The cattle keeping was an important subsistence form. The cattle herds used to graze in the pastoral tracts (A.N. 97:4). The grazing tracts were mainly spread in the hillock or hillock slopes. The herds of cow and deer grazing in the slopes of the hilly forest were often threatened by leopards (A.N. 392:11-18). The natural aquifers and water bodies (*Chinai*) of the hillocks are also a constituent element in the formation of pastoral tracts. These waterways seem to have been used by the cattle herds and the group of cattle herders. A wide area in and around the present Ezhimala, including the laterite plateau of Ettukudukka, Naduvil, Alathatta, Ezhumvayal, Talipparamba, Madayi, Sreekandapuram, Alathatta, Kunneru, Echilamvayal, Korom, Payyannur, Kunjimangalam, Pilathara etc of the present Kannur district contained grazing tracts (Rajesh,2011:106-108).

The availability of water and the distribution of megalithic monuments have shown that the cattle keepers from very early period have inhabited in these areas. The engravings of cattle at Ettukudukka (Kannur) seem to have shown that the region has a long tradition of cattle keeping (Rajesh, 2011:127-128). Since the rock art is an integral part of the collective memory of humanity (Sridhar 2005:1), the engravings of the cattle herds at Ettukuduka (Damodaran et.al 2006:84) have represented the collective memory of a pastoral society (Figure 3).

Figure 3: Ettukudukka Engravings

[The engravings are found on a hard laterite surface, on the Ettukudukka- Pakkayam road about half a km away from the Ettukudukka bus stop at Kankol Alappadamba Panchayath, 12km to the east of Payyannur in Kannur district. The thickness (width) of the engravings varies from half a cm to two cm in. The engravings are found on an area about 50sq ft and all the engravings are facing east." (Damodaran et al 2006:84)]

The engraving of the cattle (three in number) in the moving posture towards eastern direction is significant as it is the only such trace on laterite from Kerala so far. Both the topographical features and the information gathered from the local settlers have shown that the plot has been under the use of pastoral communities. Accordingly, Ettukudukka was earlier a grazing land where shepherds used to live. Near to the engravings site, there is a tank, with sloping surface and steps, probably in order to enable the cattle to reach the tank comfortably. We are not sure whether the engravings belonged to the Iron Age or early historic period or later. However, the close affinity of rock cut sepulchers of Iron Age to these sites and the conspicuous absence of the source materials of the later occupation have hinted at their possible earlier entity. As the rock art sites of Kerala like Ancode, Marayur, Edakkal and Tovari have close linkage with the megalithic tradition (Mathpal 1998:19), the Ettukudukka engravings seem to have connection with the Megalithic builders. A large number of rock cut sepulchers and other megalithic burials are located in the surrounding areas of Ettukudukka like Ullur, Mathil, Kankol, Alappadamba etc. The cattle wealth was fundamental part of the early historic economy. They were usually plundered by the tribal groups for food and accumulate surplus (A.N. 119: 8-9). The cattle were also used for plowing the land (A.N. 262:2-3).

The shifting and slash and burn cultivation was widely performed in the hilly *Kurinji* zones and such cultivated areas were known as *Nadu* (Gurukkal and Raghava Varier 1996:174). The *nadu* got a separate entity from the *kadu* (resourceful forest region). The terms *kadu* and *nadu* denoted the conversion of natural space into productive space. It included habitational and production spaces (Ganesh 2009:173). The term *Nalmalainadu* shows the existence of prosperous production units and the settlement areas in the mountain tracts (A.N. 178:13). The *punam* (millet or paddy cultivation in the dry land) cultivation was practiced in slope or valley of the hillocks (A.N. 396:2). *Punam* involved slash and burn cultivation and it extended to both forest and pastoral lands (Ganesh 2009:173). The swampy areas and the bushes growing hillock plains were reclaimed and transformed into cultivable tracts. The land was prepared by burning the dry leaves and bushes. Then they tilled the plot by using plough pulled by cows and used natural fertilizers like the mixture of cow-dung and leaves of plant (A.N. 262:1-4). These references indicate that the early cultivation units were spread mainly in the hilly tracts and the garden land areas in the valleys of the mountain. The terms like *Chiruthinaipperum Punamvechanadu* (millet cultivating agrarian unit), *Chiruthinai nalmalainadu* (millet cultivating prosperous agrarian unit of the hillock), *Nannan punanadu* (millet cultivating unit under the control of Nannan), *Nannan nalnadu* (the prosperous agrarian unit of Nannan) etc have shown the formation of agrarian tracts in the *Kurinji* zones (A. N. 148:6, 178:12-13, 396:2). The term *Nannan Parambu* stands for the spread of garden lands in the elevated plains in the valley under the predatory control of Nannan (A. N. 356:8). As this term occurs in the *Marutham* song, it seems to have an elevated space near to the wet lands. However, the surplus from these cultivation units has a pivotal role in the making of the social formation of the region under discussion.

The cultivation process gradually extended from the hillock region to the wet fertile plains in the valleys. The discoveries of the Black and Red Wares from the burial monuments have represented the gradual shift from the hunting and food gathering to the sedentary agriculture (Gurukkal 1992:16-17). It is suggested that primarily the megalithic builders were agriculturalists (Ramachandran 1980:69). The wet paddy cultivation units were spread in the *Marutham* tracts. Nannan had predatory control over the paddy production unit and he was depicted as the chief of the paddy grown at *Vallam,* seems to be an agrarian unit (A.N.356:13). The term *Nedunkathir Kazhani* that appears in the song related to the archaic Brahmin settlement Perinchellur (Veluthat 1978), shows the formation of rich paddy field in the fertile river valley (A.N.220:18). Unfortunately, there is no tangible evidence of rice husks or grains from the archaeological context to substantiate the presence of rice in the early historic time from the region. However, there is oral information regarding the discovery of rice husk in a red ware from the rock cut chamber at Cheemeni, Kasargode district.

The plunder was another subsistence form of the Iron Age and early historic society. The *Palai,* parched zone, was the core area of the robbers. Armed clans like *Maravar* and *Eyiner* used to plunder the people passing through the *Palai* tracts (Gurukkal and

Raghava Varier 1996:172-173). The cattle lifting of the *Maravas*, which was termed as *Vetchi*, and the fight to recover the same were part of the *Sangam* society (Narayanan 1994:83-96). The cattle herds were frequently plundered by the robbers called *Atavar* (A.N. 97:4-6). The cattle were killed for food and the flesh redistributed among the kin groups. The *mazhavar* or *maravar* (the plunders) were active in the *Palai* eco-zone and they were used the abandoned hearth of itinerary caravan merchants to cook the plundered cattle flesh (A.N. 119:8-9). The wealth was appropriated through the plunder. Nannan appears in the literature as the chief of the Ezhimala accumulated wealth by plunder and predatory marches.

The coastal piracy was its utmost condition during the early historic period in the region under study. The pirates were concentrated in the valley of Ezhimala, the space which is not easily visible from the sea owing to the natural jutting of the mountain into the sea. It was a lurking place of the plunders. According to Pliny, the robbers must have been active in the first two marts of Damirice, namely Naura (Cannanore / Narath ?) and Tyndis (Ponnani?) (Warmington 1928 (1995): 57). Ptolemy refers to the pirates of Nitria, a port that seems to have been located in the northern part of Ezhimala (Mc Crintle 1884:47-50). The *Maravas*, the plundering tribal groups, were active in the coastal port city *Naravu* (*Patittupath*:6-10). All these have shown that the pirates were active in the port cities of the region.

Fishing and salt making were also a dominant means of subsistence of the people of the coastal zones. In a *marutham* song, a heroine appears gloomy because of the irresponsible attitude of her hero who expressed reluctance to engage in fishing (A.N. 196:1-7). As it appears in the *marutham* songs, it seems to have represented a wet land cultivation unit located in the river valley, where the fishermen settlements were also formed. The term *Uppuchirai* (A.N. 208: 19) has also hinted at the existence of saltpans in the coastal areas. It further indicates the possible growth of a reciprocal exchange relation between the settlers of the seacoast and other resourceful and production zones in the region.

Surplus Distribution System

The surplus from the aforementioned slash and burn cultivation and resource units and the growing agro-pastoral settlements resulted into the growth of the reciprocal exchange relations in the society. It is stated that different kinds of exchange forms like reciprocity, goods to goods exchange, mercantile circulation and transmarine contacts were developed in the early historical time (Gurukkal and Raghava Varier 1999:176-183). The redistribution of accumulated surplus among the members of tribe under the supervision of chiefs was the most primitive form of exchange. Similarly goods to goods exchange or the reciprocal surplus exchange within the kin based tribal settlements, according to which each groups had to give something and collect certain other goods in return, also developed. The producers of each *Tinai* or eco-zones were exchanged with those of other *Tinai*. Reciprocity was the basis for the development of such practice. Hence the givers and the takers would be the same person as everyone

engaged in the exchange networks. The term *noduthu/noduthal* shows the process related to the internal exchange network (*A.N.* 196:3). The reciprocal exchange between the hilly tracts and the river valley coastal fishing or salt making zones of the region has already mentioned by citing the term *uppuchirai* occurs in a *Kurinji* song. As *Kurinji* being a hilly forest tract, it is impossible to develop a salt pan there, so the term *Uppu* which appears in the *Kurinji* song seems to be referring to the presence of itinerary salt merchants from the coastal plains in the *Kurinji* zone. The term *Nedutheru*, which appears in the *Marutham* song, indicates the formation of internal exchange spaces in the plain land (*A N,* 356:5). According to a *Neital* poem, different types of paddy were exhibited in the exchange space called *Unur* (*A N.* 220:13). This reference indicates that the paddy seems to have brought to the coastal area from the hillocks plains and the wet *Marutham* tracts. Toddy was one of the items of exchange (*A.N.* 196:1-3, 356:1-3). The salt and paddy were the medium of exchange (Gurukkal and Raghava Varier 1999: 179). The fish and salt circulation took place in various places. These exchanges must have based on certain standard traditional weight and measurement. The term like *terikkol* indicates that the contemporary society had certain instruments for measuring weights of the goods (*A.N.* 349: 3-4, Raghava Varier 1996).

Inland itinerary mercantile circulation was another important form of exchange. The itinerary merchant groups passed through land where they often faced the threat from the robbers. Therefore, the merchant groups were often accompanied by the armed warriors to protect them from the accidental misfortunes. The memorial stones were erected in memory of such heroes who died in the battlefield (Rajan 2000:5). The abandoned hearths, used by the itinerary merchant groups for cooking (*A.N*.119:8-9) have shown the continuous movements of itinerary traders through the region. The *Umancattu* or salt merchants were moved through the evaporated land (*A.N*.119:8-9). The non local ceramics like Russet Coated Painted, which is also known as Andhra ware yielded from the Iron Age burial monument have also pointed out the possible expansion of exchange relation with the northern parts of the region.

Elamkulam. P.N. Kunjan Pillai has pointed out that there was a *pattanam* in Pazhikkunnu (Kunjan Pillai 1961: 58, 1964: 74-76, 1970: 45-47). It was a space of internal exchange and located in the Perumba river belt or probably near to Payyannur area in the pKannur district (Pavithran 2004:96). Similarly, the presence of *Turai* (*Munturai, Kizhturai, Perumthurai* etc) in the west coast of the region has also indicated the possible development of river based exchange spaces (*A. N.* 152:6, 196:2, 199:19-20, 356:1, 18). The arrival of wooden canoe with gold, which often faced misfortunes during the voyage to the *Perumthurai*, probably near to Ezhimala is evident in the *Akam* poem (A.N.152: 4-7). Similarly, Nannan, the chief of Ezhimalai, described in the poems as a chief who often decked up in gold and his city Pazhi was full of splendor for its gold treasure (*A.N.* 15:10-11, 396:1-3). As the gold is not a locally available metal in Kerala, such indications proved the maritime contacts of the region with the outside world, probably with Mediterranean coast. The unearthed gold remains from Naduvil (John 1991) and the Roman gold coins of first century C.E from Kottayam Poyil near

Koothuparamba (Satyamurti 1992:13,33) in Kannur district have corroborated the flourished brisk trade relation between the west coast of northern Kerala and the Mediterranean world in the early historic times. *Periplus of Erithrian Sea* and Ptolemy's *Geography* refer to the port city Naura and the pirates of *Nitria* port, which located to the north of Naura, in the northern part of Malabar Coast. According to *Periplus*, *Limyrike* (Malabar) started at Naura, an emporium which did not belong to the Chera Kingdom, but at the same time was situated outside the area controlled by the pirates (Romanis1997: 90-98). Naura is identified with somewhere around coast of present Cannanore or Narath (Kumaran 1998:24-29). Pliny says that Naura was not a desirable port of call on account of the neighboring pirates, who occupy a place called Nitriae (Romanis1997: 91). Nitria, according to him, lay immediately to the north of Tyndis; it has been thought, therefore and with good reason that if Nitria is not exactly the Naura mentioned in the *Periplus* it must have been situated very close to it (Romanis1997: 91). *Naravu* appears in the *Patittupathu* as the coastal port where the *maravas* (looters) were active (*Patittupathu*:6-10). If so, it can be seen that the pirates seem to have concentrated in the nearby areas of Ezhimala, a mountain is jutting to the Arabian Sea. The traders from Mediterranean region who were moving to the Roman trade center at Muziris of the Cheras , were often attacked and looted by the Nitrias. As we have no tangible proof to identify the exact location of *Nitria* and the identity of pirates, it is possible to assume that these people might have belonged to Ezhimala region. However, all these indications proved that the interior exchange and coast based maritime trade were active in the northern part of Kerala.

System of Surplus Accumulation

The above dialogues disclose the development of multiple form subsistence forms and skills of Iron Age and Early historic society. These multiplicities have resulted in the evolution of a system of surplus accumulation and its redistribution. The available archaeological remains and literary evidences have pointed out that this system could be chiefdom. The chief was central to the entire matters of the tribe in a chiefdom society. Thus the chiefdoms have centralized direction, hereditary hierarchical status arrangements with an aristocratic ethos, but no formal, legal apparatus of forceful repression (Service, 1975:16). The redistribution process of Tamizhakam corresponded to the development of different level of chiefly power. The central feature of the chiefdom was linked up with predatory marches and booty redistribution. The plundered items were redistributed among the members of the tribe according to their requirements. The process of redistribution in the chiefdom society was concentrated on the chief. Differences in the size of the megaliths and the burial goods suggested some kind of political ranking in this period (Gurukkal and MR Raghava Varier 1999:145-147). The huge and highly decorated megalithic burials like rock-cut sepulchers, umbrella stones, the stone circles and urn burials seems to have shown the possible existence of some kind of socio-political hierarchy in the society.

The *Sangam* poems mention about three layers of chieftains in the early period such as *Kizhar*, *Velir* and *Ventar* (Gurukkal and MR Raghava Varier 1999:199-213). *Kizhars* were

the heads of the prominent households in the *Ur* known as *Ur-kizhar* or *Ur-mannar*. They were basically the hunter chiefs who held control over the plunder raids and agrarian tracts. *Velir* seems to be the most archaic chieftains of Tamizhakam. They were the hill chieftains and held control over the *Kurinji* and *Mullai* tracts. The next category of political power was *Ventar* represented by the three major chiefly lineages of early Tamilakam viz; Chera, Pandya and Chola. These three are referred to in the *Sangam* poems as *Muventar* or *Muvar*.

Nannan's chiefdom of Ezhimalai (*A N*, 15:10-11,97:12-13,142:9, 152:13-14, 173:16, 199:20, 208:14, 349:8-9, 356:8, 392:27, 396:1-6, *P.N.* 151, 154, *Kuruntokai* 73,292) was considered to be the early political entity of the northern part of Kerala (Kunjan Pillai 1961:64-82, 1970:41-52, Gurukkal and Raghava Varier 1999: 199-213, Ganesh1996:344-348). It was one of the most prominent hill chiefdoms of Kerala during early historic times (Gurukkal and Raghava Varier 1999:200). Ezhimala and Pazhi appeared as the core centers of the chiefdom. Nannan's chiefdom did not belong to the Cheras, the early political entity of Kerala. According to Ptolemy, the Chera's country started from the port Tyndis, which located towards south of Ezhimala (Mc Crintle 1884: 48-50).

Nannan belongs to the chiefly lineage called *Velir* (A.N. 97:12, 258:1-3,). It seems to be the most archaic and lineage consciousness. The *Velir* chieftains held sway over the *Kurinji* and *Mullai* tracts, i.e. pastoral forest hill (Gurukkal and Raghava Varier 1999: 199-200). The *Velir* chiefs also tried to control the maritime exchanges (Ganesh 1996:345). Nannan had predatory control over the slash and burn *Punam* cultivating units of the hillock plains and wetland agrarian tracts in the valley of hillocks. As mentioned earlier, Nannan plundered cattle wealth and gold frequently. He seems to have obtained gold or such precious metals and stones through the plunder marches. Pazhi was famous for its gold treasure and considered as the core of Nannan's chiefdom. The accumulated surplus seems to have stored in this city. Similarly, *Vakai Perumturai*, a coastal port under Nannan, also had a significant role in the making of the chiefdom (A.N. 199:19-20). Nannan had collected *Tirai,* could be a form tribute, from the conquered region (*A.N.* 142 : 8-9). It was another form of surplus accumulation.

Nannan faced the frequent threat from the Cheras. The main reason of the conflict between Nannan and the Cheras was the predatory control over the Pazhi and Vakai Perunthurai. Both these port cities, as the poems mentioned, were famous for its gold treasure and they were under the control of Nannan. The second major reason was the activities of the pirate in the port Nitrias. They looted the wealth of the Roman fleet which moved through the west coast of the sea and this gradually affected the brisk trade between the Cheras and the Mediterranean world. Thus, the ceasing of the piracy and the capture of the predatory control over this coastal chiefdom was a necessary factor to the Chera. The Chera chief Narmudicheralathan chopped the *Vaka*, the guardian or totem tree of Nannan (A.N. 142, 199:19-24, Patittuppattu 4-10) which symbolically represent the decline of the power of the chief.

Conclusion

The megaliths and the unearthed burial goods primarily represented the burial systems and ancestral worship of the Iron Age and early historic society. This period witnessed population increase, the formation agrarian settlements, the emergence of specialized craft groups and exchange communities. The presence of various potteries and the huge quantity of iron tools and implements and other objects has underlined the formation of a stratified society with a strong base of production and distribution and the system of surplus accumulation. Based on the above discussion the present paper emphatically argued that megaliths of north Kerala represented an advanced knowledgeable multifaceted Iron Age and early historic period society with sound multi-crop agro-pastoral economy.

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