SOOLAPPURAM: AN ARCHAEOLOGICAL VIEW

Dr. M. Marudhu Pandiyan
Curator, Department of Museum, Government Museum, Madurai & Theni, India

D. Ananthy
Archaeological Officer, Thirumalai Nayakkar Palace
Department of Archaeology, Tamil Nadu State Department of Archaeology, Madurai, India

Abstract
Soolapuram is a village located in the Madurai district in Tamil Nadu, the village presently suggested to be a large burial site consisting of diversified burial methods, but in a disturbed condition. The grave goods raise questions about the economic and social value of the materials, beliefs relating to the afterlife, and the kinds of material culture available to those organizing the burials. This article considers more than 988 carnelian beadsand 364 Quartz beads recovered beads in light of social context, material procurement, use and value, technology, and relative differences in status of the occupants of the grave. The data are used to identify both how different identities were structured by the Early Historic period.
Keywords: *Soolapuram, Carnelian beads, Quartz, Agananuru, Purananuru, padhitrrupathu, Narrinai*

Introduction

Soolapuram is a small village situated inPeraiyur taluk at Madurai district of Tamil Nadu. Thevillage is encircled by mountains on all three sides by theVarusanadu hills (Geographical description), but they are locally known as the Karuppasamy hills (Murugesan, 2021). Soolapuram village is located on state highways of 154 and 721, and towards the East to Western direction on NH 85. The village is a small hamlet that lies on the foothills of the Western Ghats.

The site was first discovered by a school teacher named Dr.B.Murugesan. He informed to me about the scattered antiquities in the site as me being the curator of Madurai Museum, in the year 2020 month of October. Later I along with an Archaeological officer Mr. B. Asaithambi and some local people visited the site and identified the old burialswhich belonged to the Iron age. In our exploration we noticed some disturbed urn burials, cist burials, cairn circles.I got the information about the pilfering of the stakeholders as well as the residents of that particular area and hence we passed on the information to the revenue department, who promptly acted and retrieved the stolen objects to me and is kept in the Museum.

The confiscated artefacts are as follows,Red ware potteries, Black ware potteries, Black and Red ware Potteries, Russet coated ware, potteries with graffiti, bowl, lid, ring stand, variety of beads like carnelian beads, glass beads, Iron ore, fragmented Iron tools, four legged jar (For the first time four-legged Jar discovered in Southern Tamilnadu) unidentified small size of balls. Apart from these abundant artefacts reclaimed, I mainly lay my focus on the discussion about the 'carnelian beads, quartz beads, copper and iron objects', which was recovered in abundance.

Archaeological Sites in around Soolapuram Village

The area around Soolapuram had been earlier completely surveyed by Dr.K.Rajan, Dr. Selvakumar and the Pandiyanadu Historical research centre and many exploration were listed out, but this particular village has not been so far explored by anybody. Dr. Selvakumar, Professor of Tamil University, Who excavated on the southern tip of the hills in Devankurichi Kalluppatti (Rajavelu & Thirumurthy, 1995) and other adjoining places of hills and he identified number of micro lithic tools and other material evidences. Other sites like Amathampatti, Ayyanpatti, Echampatti, Gopalapuram, Idaiyapatti, Kanavapatti, Karuvelampatti, Kodanayakkanpatti, Kottaippatti, Kuppamalai, Magarai, Nagamanayakkanpatti, Nakkalpatti, Palaiyur, Papinayakkanpatti, Paraippatti, Petchiyamman kovilpatti, Puthur, Pulavanurani, Pulavanurani, Ramasamipuram, Thachchupatti, Thirumanickam, D.Krishnapuram, Thottanampatti, Thottappanayakkanur, Thulukkuttinayakkanur, Vandarai and other sites were identified. Above all the sites are belongs to different types of cultural palliation site of Tamil Nadu.

Roman Trade in Tamilnadu

Carnelian Beads are found in various places of Tamil Nadu like Kodumanal, Porunthal, Thandikkudi, Keeladi, Konthagai, Adhichanallur, Dulukkarpatti, Korkai (Jayakumar, 2001) and etc., Due to the heavy traffic in trading with the Sumeria and Indus, the traders chose analternative trade route for carnelian beads. So that, traders of Tamilnadu, received the raw materials from North western region and exported the finished goods through Palakad, Cumbum basin. This later became a conventional trade route in South India.

The Soolapuram village which is situated on the southern bank of Vaigai river (near to 20km above the river), in between the two site onetrade route has been mentioned in Agananurua Sangam literary work.

"cuḷḷiam pēriyārṟu veṇnurai kalaṅka
yavaṉar tanta viṉaimāṇ naṉkalam
poṉṉoṭu vantu kaṟiyoṭu peyarum
vaḷamkeḻu muciṟi ārppueḻa vaḷaii
aruñcamam kaṭantu, paṭimam vavviya" (*Agananuru* 149: 8-12)

It connects the ancient Chera port of Musiri. This trade route touched the Cumbum basin, Theni, Varusanadu, Usilampatti, Madurai, Alagankulam, Nilakkottai, Dindugul, Udumalpet, and Pollachi. There is we already discovered a number of Roman coins like Uttamapuram, Nathampatti, Porur, Karur, Akilandapuram, Anaimalai, Chavadipalayam, Thiruppur, Boodinatham, Vellalur, Kathanganni, Karivalamvandanallur, Kalaiyambathur and other places in Tamilnadu.

According to Maduraikanchi, one of the Sangam literature, with described the history of Madurai during the Sangam age verses.

kōṭ u pōḻ kaṭ ainarum, tirumaṇi kuyiṉarum (*Maduraikanchi* 511).

There is a mention about the artisans who worked on the beads '*tirumanikuyinars*' (*tirumani* means semi-precious beads and the *kuyinars* were artisans who drilled holes in

them). A collection of punch marked coins were discovered by a famous historian D.D. Kosambi at Bodinayakkanur above 30km from the site.

Carnelian Beads

Carnelian is a family of Chalcedony. Archaeologist, who identified, how it came into existence as carnelian raw materials by the way of the mountain vein as well as pebbles. According to the colour the name is differentbased on the colour and marginal variations in the quality, Like Sard (brownish yellow), Carnelian (red), Chrysoprase (black and green), Onyx (black and white or grey and white) and Jasper (yellow, red, brownish, red or black).

The oldest carnelian beads discovered in India and Mesopatamia during the middle of 3rd millennium BCE, this theory was accepted. The Carnelian trade took place in India and was exported to the other parts of the World, the Greek and Latin literature has mentioned this trade (De Waele & Haerinck, 2006). In addition to the Greco-Roman literature Periplus of the Erythraean Sea also refer to the trade of carnelian beads from modern Broach in India (De Waele & Haerinck, 2006). Even during the medieval period the Muslim trader manufactured these carnelian beads (De Waele & Haerinck, 2006).

The term etched carnelian beads is first mentioned by Mackey in 1938, though he refers to decorated carnelian beads since 1925, but he has not highlighted the term etched in his publication since 1938 (Frenez et al., 2018). Later Back, in 1940, has put forth something some considerations about the carnelian beads and he states that the etching took place due to a gradual chemical change that continued in the burial. Though in 2006, J.M.Kenoyer meddled the statement of Mackay about the etched carnelian beads. He used the term 'bleached' instead of 'etched' carnelian beads, because he clarified the 'etching' effect is also due to the erosion of bleached surface after thousands of years of burial. So that it leaves a shallow etched design on the surface of carnelian beads. Consequently, Kenoyer pointed out that the term "etched" is incorrect, and he put forth the term 'bleached', (Frenez et al., 2018) in the place of "etched". Anyhow, most of the scholarstermcertain corroded beads as 'etched' uniformly.

The carnelian beads were divided into three types on the appearance of colour and design and they are as follows,

1. Naturally coloured carnelian beads etched with a white pattern.
2. Completely white etched carnelian beads decorated with black design.
3. A black pattern on a naturally coloured carnelian bead.

Of these varieties, the white-on-red type was the most common, the black-on-white was uncommon while the black-on-red was extremely rare. Among them the Sulapuram carnelian beads are belongs to first type of the white-on-red beads. It is commonly found on all site of Tamil Nadu.

Carnelian Beads in Soolapuram

There are totally nine hundred and eighty-eight carnelian beads received from the collectorate of Madurai district. There are the two types. First one, 968 carnelian beads are

white on red bead with etching type. Second variety consisted of 20 beads which were white in colour without etching. Second type of the beads is uncommon. Among the 968 Carnelian beads were classified under nine categories on the aspect of size likewise Spherical, Bicone, Truncated Bicone Carnelian Cylinder, Truncated Convex Bicone shape Carnelian Beads, Tube shape, small size Disc shape, Big size Disc shape, Square Tube shape Carnelian Beads and unfinished beads. Each and every carnelian beads had different design and size. There are totally forty-twotype of designs identified. The various carnelian bead varieties exhibit indications of the manufacturing procedures used. The process involved chipping, grinding, and polishing to create a smooth, glossy surface that occasionally still showed signs of chipping scars. Significantly bevelled bidirectional piercing and other variations in perforation method and quality are present.

Non – Etched Carnelian Beads

The carnelian beads are of different shapes, like barrel shape, tube shape, annular cylindrical annular beads. Thus, one barrel shape beads changed its original colour from white to grey due to the deceased person's heat affected to bead in earth. Some of the beads are damaged either in manufacturing or the pressure of the earth. The diamond shape beads are also damaged on the edges. Octagonal shape beads are also available, and its working nature is very beauty. All the twenty white carnelian beads doesn't bear any design.

Manufacturing Methods

The raw materials were borrowed from the northern India, particularly in Indus region. The Indus region having enough number of source materials. By all over the world archaeologist discovered number of carnelian beads in either burial or habitation site, but unanimously they accepted, that the raw materials were obtained from Indus region (Brunet, 2009). Likewise Mesopotamia, Syria, Turkey, Persia, Persian, Baluchistan, China, Tibet, Russia, China, Vietnam, Hongkong, Taiwan, Philippines, Borneo, Cambodia, Coastal Thailand, Central Malay Peninsula also traded in this region (Jayakumar, 2001). Thus, In Tamil Nadu it is presumed that they would have acquired from the Indus region only. The extraction of the raw material is divided into two types one is primary deposit in their forms of veins, second one is as a secondary deposit in the forms of pebbles (Brunet, 2009).

After the extraction of raw materials from either vein or the pebbles they were heated intensively to obtain the red colour through oxidation as well as to soften their cortex to facilitate the flaking of blades from the core (de Walle & Haerinck, 2006). Next, these blades were diminished into small pieces. Then the outer parts of the carnelian beads were ground well. There are perforated beads as well and there are six types of the drilling methods identified. They are, Manual drilling, bow drilling, bipolar rotary drilling, double bipolar rotary drilling, (de Walle & Haerinck, 2006) diamond drilling and Drilling with metal (Glover & Kenoyer, 2019). Among the total collection of 988, nine hundred and sixty-one carnelian beads of Soolapuram are well perforated. The perforation remains are exposed in all the beads of carnelian. Even some of the unfinished beads also having a perforation with

great manner. At last, the beads were polished and reheated to bring back their original shine (Glover & Kenoyer, 2019).

Heat treatment needs to be done carefully due to the nature of the raw material, overheating at times expose white film on the surface of the bead (Brunet, 2009). When classified the Soolapuram carnelian beads, there found some of the white film formed on the carnelian beads and this may be due to the overheating. Hence, the people of Soolapuram village had the knowledge of the manufacturing the carnelian beads. Apart from this, sometimes when the carnelian beads were not properly knapped, it gives some knapping traces on the surface of the beads. Even the Soolapuram beads consist of the traces of knapping of the beads. Hence this site would have been an industrial site during the period of Early History times; anyway this could be hypothetically ascertained depending on the availability of the antiquities in its varied forms. This could be certainly confirmed after conducting an excavation either by the ASI or the State Department of Archaeology.

Importance of Carnelian Beads

Carnelian beads area prestige goods during the period of Early Historic times. Similar type of the carnelian beads are explored in graveyard,different types of carnelian beads are excavated at the habitational site also, this is so because the Carnelian beads functioned as onal goods symbolising the status. It is a visual indication of persons wealth, status, ideology or cultural affiliation. It has been exchanged to foster inter-elite alliances and worn to symbolize the acquired and attributed status of the individual (Theunissen et al., 2000). Due to the population growth, agricultural development, increasing social stratification it expanded the prestige goods, this brought about the social complexity in Early historic period (Theunissen et al., 2000). It created a mark in the social status and power so that beads were often excavated from the burial site. Soit served as an associated grave good to adorn the dead and placed as offering goods in the graveyard.

Quartz Beads in Soolapuram

Quartz beads are the best known and most widely found in excavational site. The sangam literature *Purananuru, Agananuru, Pathirruppathu, Kurinchippattu* and *Nattrinai* mentioned the sources and uses of quartz. There is a mention about a Cera ruler named Selva Kadungo Valiyathan, who donated high variety of quartz to the poets. Kodumanal, Porunthal, Thandikudi and other early historical sites are yielded number of quartz beads. Quartz beads dominated the land of *Mullai*, hence the source materials were available abundantly. The recent excavation at Keeladi procured quartz weighing stone. This was the first quartz weighing stone found in an excavation conducted in Tamil Nadu.

We received three hundred and forty-six quartz beads from Soolapuram. These quartz beads are different types, like Pendulous but lower part more like a top with a button projection below, annular shaped beads, Barrel annular bead, cylindrical annular bead, diamond shape bead and unfinished raw quartz stone material. All the quartz beads were used as ornaments in early historic period. They are undecorated and come in a limited

range of colour like orange and pure white.

Copper

Coper is a chemical element. Its symbol is '*Cu*' and atomic number 29. The Sangam works like *Purananuru, Agananuru, Maduraikanchi, Nedunalvadai, Eyngurunur* and *Nattrinai* mentions about the element copper. Copper vessels were discovered in various site in Tamil Nadu, like Adhichanallur, Auroville, Anaimalai, Nilgiri, Sottukeni located 30 kms from Arikamedu (Rao, 1972). In Soolapuram, a double fish symbol with stand, three copper bangles and copper hooks were obtained. The height of the stand consisting of the fishes, was about 10cm and 14 cm breadth. Both fishes were 9cm height each. One fish wasbroken into two pieces, and the other one's tail was broken. The copper double fish with stand was excavated from Adhichanallur and Auroville (Pondicherry) earlier. Apart from these three copper bangleswere also received from Soolapuram. The presence of similar copper bangles is recorded from Nagapattinam and Thiruvarur. Among the three bangles one was broken. Besidesthesethere were thirty-six copper studs identified from Soolapuram. These studs are mainly used for indigenous purpose only. Though there are no copper deposits in Tamil Naduprobably, the copper objects would have been imported to the Tamil region fromvarious parts of the subcontinent in around 4th BCE (Verma, 2006).

Iron Objects in Soolapuram

There are many references about in the Sangam literary works like *Purananuru, Agananuru, Perunarattruppadai, Nedunalvadai* and *Natrinai*, they mention the uses of Iron. Initially, there was a difference of opinion as to when the iron making technology first appeared. Recent excavations of Mayiladumparai have answeredto the question about the earliest existence of Iron in the Tamil country. The Iron usage in India starting from 4172 BCE (Department of Archaeology, 2022). Iron objects were found in Soolapuram burial site as associated grave goodsas ritual objects. We understand Iron was a part of the live of the people during that time. The iron is found in all sepulchral monuments. TheSoolapuram burial site yielded small-size knives, arrowheads, points, sickle, swords, spear, lance and other damaged iron weapons were received from Soolapuram.

Other materials have also been interpreted as having symbolic significance. For instance, Ökse speculates that the red colour of the few agate stone beads, which resemble some of those at Soolapuram, may have symbolised a force that fought evil spirits or life-giving blood (Ökse, 2006). Due to the possibility of restricted product access, production control and organisation, and quality and design decisions being made by the site's occupiers, the availability of raw materials also affects how the value of the beads made from these materials is interpreted. The apparent high status of these funerals was probably not due to individual merit; instead, it was most likely caused by family relationships and the standing of elder members of the social group in which the individuals were buried (Baysal & Sağlamtimur, 2021). Apart from these inferences the location of the beads is equally important since the beads in some cases found near the head of the deceased would indicate

the daily use of the deceased and hence would have been buried along with such kind of personal associations.The remarkable amount of material richness found in the largest cist grave at Soolapuram, however, is rare for this time period and suggests a certain level of accumulated wealth within the community.

Conclusion

Though totally 988 carnelian beads were received from Soolapuramvillage,but we are not able to concludethe sourced area exactly. The collection of carnelian beads indicates that, it would have been an industrial site like Kodumanal and Porunthal. Though the carnelian beads were used as a prestige goodsby the people of Tamilnadu during the Iron age time, the manufacturing industry came into existence only during the Late Iron age. Because, due to the heavy traffic that existed between the trade conduct of Sumeria and Indus, the traders of the Tamil country utilised this situation, and they involved in carnelian bead making. As a result of this, we identify bead making industry in Porunthal, Kodumanal etc., Even Soolapuram may be an industrial site due to the availability of certain unfinished carnelian stone, blades, flakes, piece-meal stone etc, which were obtained by the museum. Hence if we excavate the entire site there are possibilities toobtain thousands of carnelian beads from the sites. Though the focus may lie on the carnelian beads, the copper objects obtained from the site needs a deep analysis in order to find out the purity of the metal, as well to gain knowledge as to whether the artefact was made either through smelting or melting. If it is made of melting process, it would have been locally made. Thus, there is a need for an instantaneous excavation to be conducted, so that at least the surviving evidence could be retained for the future generations and hundreds of graveyards of Soolapuramare a waiting for the spade of the archaeologist. The delay of the same would lead to more amount of vandalism.

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