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Prof. T. Balakrishnan Nayar Endowment Lectures, 1995

"Ancient Industries of Tamilnadu"

by

Thiru. Natana Kasinathan

Director of Archaeology, Chennai

New Series - General Section, Vol. XV No.5

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Foreword

Prof. T. Balakrishnan Nayar, a distinguished historian served as a Curator for the Numismatics Section in this museum. He was interested in pre-history. To honour him an endowment was instituted in the Government Museum, Chennai in the year 1982 by his students. Annual lectures are being organised in the museum on subjects like archaeology, anthropology, numismatics and museology.

In the year 1995, in this endowment lecture series, Thiru. Natana Kasinathan, Director, State Department of Archaeology gave a lecture on 'Ancient Industries of Tamilnadu'. In that lecture he discussed the existence of various industries and their indigenous technology like pottery, carpentry, metallurgy, casting, architecture, coin minting etc., with supporting inscriptional records. Pallava, Chola, Pandya, Vijayanagara, Nayak, Maratha and Sethupathy monarchs were personally interested in painting and some were themselves painters. They gave royal patronage to artisans. Artisans were allowed to assume royal titles. They were given artistic freedom. They sometimes created unique artefacts and structures like temples and palaces etc.

This bulletin is the out come of his lecture brought out as a publication of Government Museum, Chennai in the year 1997. It went out of print. I am happy to bring it out this Bulletin as a reprint this year.

Chennai- 600008,
14th February 2007.

(Dr. R. Kannan, Ph.D., I.A.S.)

PREFACE

Prof. T.Balakrishnan Nayar, popularly known as Prof.T.B.Nayar, was a distinguished historian and erudite scholar who had been a part time Curator for Numismatics in this Museum evinced keen interest in Numismatics, Pre-history and Archaeology.

It was in appreciation and erudition qualities that a Memorial Committee was set up by his ardent students and admirers to commemorate his contribution to historical scholarship in a fitting manner. On the suggestion of the committee an endowment was constituted in his name. An amount of Rs. 6000/- was made available in 1982 for this purpose and interest from this was to be utilised for endowing an annual lecture in one of the following subjects - Archaeology, Anthropology, Numismatics and Museology. A distinguished scholar in any one of this field is to be invited give a series of the lectures an any aspect of his specialisation. Another Rs.4000/- was made available to enhance this endowment by Dr.(Mrs) Matangi Ramakrishnan in 1996.

The 1995 series of Prof. T.Balakrishnan Nayar endowment lecture was given by Thiru Natana. Kasinathan, Director of State Department of Archaeology on "Ancient Industries of Tamilnadu", Archaeological Scientist and erudite Tamil Scholar. This series of lectures are being published now as a Bulletin of the Government Museum, Chennai and made available for scholars.

K.DHEENADHAYALAN, I.A.S.,
Commissioner of Museums.

ANCIENT INDUSTRIES OF TAMILNADU

At all times the industries have been established due to necessity and demand. The first and foremost industry of Tamilnadu appears to be the stone implements making industry. The person who was engaged in this art may be called as stone-smith or the primitive sculptor. The industry was functioning from the Paleolithic Period i.e. from 2,00,000 years before the present in Tamilnadu. The raw material for the industry was available without any difficulty around his habitation. The manual labour was only needed for producing these implements. In view of their safety from wild animals and to gather food for their survival they were in dire need of some material that could meet their demand. With the help of these stone implements such as hand-axes and choppers they were able to kill animals and gather roots and fruits that formed as their primary food¹. Hence the stone implements producing industry seems to have prospered at the dawn of human life.

INDUSTRIES IN PRE - HISTORIC PERIOD:

At the earlier stage, in addition to the manual labour they used only the stone boulders and a few wooden sticks for producing the stone implements. So they could produce very limited number and a few variety of implements. As time passed on and when their demands were much increased and needed more types of implements for different purposes, the stone-smiths were forced to produce more number and more types of implements by applying a few new techniques.

One group of people seems to have preferred to settle near sea on sand dunes in the subsequent period. Since their demand and their surrounding were entirely different they had to produce some different types of implements. Hence they are in microshapes and are called as microliths. These implements were used as harpoons for fishing, as blades for collecting flesh, as needles for stitching leather, as knife² (stone prototypes of our steel knives) for sharpening the bone arrow heads etc. from 30,000 years before the present to 2000 B.C.

During Neolithic period i.e. from 2000 B.C. to 900 B.C. it seems that the stone smiths had changed the raw material itself. Instead of mere conglomerates they seem to have selected granites which contain more iron minerals. They prepared the implements

in lesser weight and enshaped them by grinding and polishing for which they had grinding stones in boat shape.

As the society of Neolithic period ventured upon farming, cooking, domestication of the animals and settling in a group, their mode of life had changed considerably. They needed plough and other material for farming, fire and vessels for cooking and storing grains and water, house and fencing for settling and keeping the animals and harpoon and boat for fishing. Hence the industries of carpenter, stone-smith and potter began to exist. The potter in the initial stage had produced handmade potteries and in course of time produced potteries by using wheel and attained the maturity of decorating them with some paintings. Though this society shifted their dwelling from hillock to plateau situated near perennial rivers their association with hills had not been ceased completely. Because they appear to have frequently visited to the natural caves in hills and sojourned there. During this sojourn period they seems to have drawn some paintings depicting their inner feeling into visual forms. The paintings drawn in white pigment at Mallapadi³ is the unique example of their mastery in the field of art. Recently in Kerala some cave paintings of this period have also been noticed⁴.

The major achievement of these people was the exploitation of gold. The earliest gold ornaments were recovered from Raichur Doab. They were also the first to use copper in South India. It is noteworthy to mention here the copper objects unearthed along with urns from two sites known as Kawrimedu and Manimangalam near Pondicherry by Kasal. He mentioned that the occurrence of copper objects along with urns was in the stratum earlier than appearance the following Megalithic culture.⁵ Hence the brass making industry had made its in Neolithic period itself. Considering the Adicchanallur findings which includes gold ornaments and copper objects, one is tempted to say that the urn burials of Adicchanallur may even be assignable to the last phase of Neolithic Period.

Building of houses in round shape providing with lime mortar floor was the beginning in the art of construction.

“Many houses were probably habitations of straw e.g. of the great millet Hokus sorghum or plaited twigs which when abandoned quickly crumbled to dust and left

nothing to indicate that they once existed there. Others were built of wattle and clay topped with bamboo or palm rafters, the upper ends of which were held together by being inserted into a broken pot and covered with a thatch of coconut or palmyra leaves like the huts of the poor now-a-days. The hemispherical roofs of huts, by a pot become the prototype of the dome and kalasam of temples. Earthenware roof tiles were not used in Neolithic times⁶.”

MEGALITHIC PERIOD:

Agriculture reached its perfection producing horsegram, ragi and millets like *Cholam*, *Kambu* and *Varagu* during Megalithic period. Irrigation facilities were provided by creating ponds near the fields. Paddy was the main grain that was cultivated. This fact is attested with the discovery of Paddy husk from Adicchanallur and paddy grain from Kunnathur. In order to facilitate the industry of Agriculture, the stonemiths and ironsmiths produced number of stone and iron objects. Number of such objects namely tilling objects like stone hoe⁷, swords, spears, axes, spades, nails etc. have been unearthed along with urn burials in Tamilnadu.

These implements show how the iron smelting industry had grown and helped that society to lead prosperous life. Like this the copper objects such as bangles, figures of many animals, bowls, lids, lamps and horse stirrups collected from the same site clearly indicate the advancement made in the field of copper smelting industry in these period. In the Salem district have been found certain earthenware figurines of women. “The special interest attaching to these figures is due to the unique style of head-dress they show namely, having their hair dressed in short ringlets all round the head and high combs on the top. The finding of these little female figurines with such an elaborate style of hair dressing throws light upon the use of a neck-rest unearthed in an old iron age site on the north (left) bank of the Cauvery river opposite to the town of Tiruma Kodlu Narisipur in Mysore and just below the Sangam or junction with the Kabbani or Kapilla river. The use of a neck-rest was essential if the woman desired to preserve their curls intact when sleeping⁸.”

Besides agriculture, hunting was another main occupation of this people. Hence, for hunting the bone arrowheads were produced by the carpenters.

Layout of towns and cities had begun during this period. Houses of different types were built and were decorated with wood carvings. Hence the art of architecture and sculpture had reached its Zenith. In addition to houses they also built funeral edifices such as dolmens, cists, cairn circles and menhirs. These creations are the standing evidences for their mastery over the crafts of art and architecture.

They had painted on the side stones of dolmens. These paintings delineate their social customs in elaborate manner. The figures of animals, birds and some probable deities are drawn in these paintings. These paintings and the drawings on the pottery are the indelible evidences for the growth of painting industry.

Pottery making industry was the predominant industry during this period. Wheel was pressed into service for making different types of potteries. Black and redware potteries were produced, by using new techniques. There are different theories on the attainment of black interior and red exterior of this ware⁹. Bowls and dishes outnumber the other types of lids and stands of this ware. In addition to this, blackware, redware, blackware with white paintings were the other varieties. Russet coated ware was another important ware of this period. The above wares were used for domestic purpose, while urns were used for funeral rites. In burials also the small vessels are found placed inside the urns. It is believed that they should have contained the offerings made while the dead was disposed of or in the subsequent years in memory of the dead. The black and redware is called by archaeologists as table ware of those period as they appear with elegant shining and as if they are made recently. Three legged or four legged jars and the animal shaped Sarcophaguses are the other important vessels produced during this period.

While making lids they seem to have added some objects as knobs in the shapes of animals and birds which depict their aesthetic sense also. Even in manufacturing urns also, they embedded some female figures¹⁰ on the shoulder portion of them either to indicate the mother goddess worship prevalent in those days or to exhibit the artistic talents of the potters.

Fishing and transportation of grains took a new turn applying some developed techniques. Group fishing and sailing to far off places in search of fish seem to have

taken place. In view of the above purpose they built a few types of boats.¹¹ Hence the boat making industry was another prosperous industry in this age.

The painters or the potters appear to have had an additional job of engraving graffiti on the potsherds to convey some message to other persons or to indicate their ownership of them¹². This art also seems to have originated only from this period as far as Tamilnadu is concerned. It is believed by some that this graffiti was the script from which the present Tamil script is derived.¹³

Bead making industry had also reached to some advancement during this period. Semi precious stone beads had been collected in large quantity from the Megalithic sites. Kodumanal,¹⁴ Sanur and Amirthamangalam are some of the sites to be mentioned for having yielded beads made of different materials.

Weaving was another major industry of this age. Wherever we dig in Tamilnadu, we get a considerable number of spindle whorls used for thread making. Adicchanallur had yielded the relics of the clothes from the stratum of Megalithic period.¹⁵ From Kodumanal charred cloth embedded with iron stems and the piece of a charred cloth embedded with clay had been collected.¹⁶ The above artefacts attest the fact that the weaving industry had prospered to a certain extent in Tamilnadu in Megalithic age.

The last phase of Megalithic period seems to have coincided with the advent of Sangam age. If it is to be said in another way, the Sangam age was the culmination of the Megalithic period. Hence for the matured civilization of Sangam age, the progress took place in every field during Megalithic period had become as the base and forerunner.

SOCIAL LIFE AND INDUSTRIES IN SANGAM AGE:

The activities of the village based society had progressively evolved with the growth of their sensitive power. This society is understood to have made divisions of the land according to the geographical conditions. *Kurunji, Mullai, Marudam, Neydal* and *Palai* were such land divisions that seem to have been demarcated by them. Let us first understand the day to day life of that society who lived in those geographical divisions of Sangam Literature. It is described as is given in the words of Professor K.A. Nilakanta Sastry¹⁷.

“In *Kurunji*, the smell of sandal wood and incense mixes with that of ginger, turmeric and pepper which have been cut and piled up on the rocky ground could be smelt. The sound of parrot-chasing in the fields mingles with that of the rousing cry of the hillmen driving away the cattle laden with flowers and there are all but smothered by the piercing screams of the wild bear being done to death after being trapped in covered pits by the hunters on the upper terrace of the hill and are heightened further by the roar of the tiger which had stalked and pounced upon the black boar. All together rise in endless echo, combined with the noisy fall of the hill torrent.

People taking their dogs with them on hunt, on filling bamboo pipes with the sweet-smelling toddy called ‘*Toppi*’ for overnight fermentation, their eating along with venison, porcupine flesh also, their using receptacles made of palm fronds, are not lost sight of. Similarly too is the sight of hill children undergoing self-taught training by aiming their thorn topped arrows discharged from small improvised bows, on the large seen emerging from the fences of the cotton crops.¹⁸

We shall now learn about the activity in *Mullai* tract¹⁹. The huts in the tract had short posts and were tied up with the fodder required by the sheep these people tend. The people sat on spreads of *Ragi* leaf (dried) and slept on goatskin. The compound of the hut carried short pegs for tying cattle. There were also pens with thorny fence around for the rams and goats. Heaps of dry cattle dung littered the surface around and within their houses. The warming fire is lit outside the house for warding off cold at night and they know how to raise fire by using churning sticks. These shepherds always wear leather footwear and due to tough and constant use of these sandals, their feet appear calloused. They stand resting on their staff and carry besides, a fork stick (for removing foliage) and axe, and carry burdens placed in two slings tied to a pole which they place on their shoulder and walk in jerky steps. Their hair is sticky and smelly due to smears of fresh cow’s milk. They deck themselves with forest flowers of many colours. They play on flutes and on harps which have animal guts as strings. Their women are of comely mien and complexion and wear palm leaf ear studs and have firm shoulders like bamboo joints and flowing black tresses of hair. They barter paddy and gold for the curds, milk and ghee they sell. They store grains in large earthen jars. Their courtyards display cartwheels by the side of the plough. Their folk dance ‘*kuravai kuttu*’ is essentially in praise of their favourite god Vishnu (Tirumal). They also fix menhir stones and tie

menhir garlands around them and worship them. Since *Marudam* tract is adjoining *Mullai* in the lower altitude, it is not surprising to hear that the border areas of the *Mullai* country are given to agriculture. Their villages are encircled by thorny bush fences. These people whose cultivation is mainly that of millets, store their harvested grains in standing earthen jar (silos) in their courtyard. There is also a small thatched pavilion of millet leaves and stalk. The cattleshed is usually thatched with dry hay. These people have a more settled occupation in agriculture, although it was only 'subsistence' standard.

Their folk-pastime is bull fight wherein young lads chase bull calves and try to bring them under control using only the bare hands. This is known as '*Erukodal*'. This was raised to the dignity of a socio-cultural festival in which the entire village participates and particularly the coy milkmaid lasses stake care to attend them and see the village youth steal alike the prizes and their hearts.

Coming to the *Marudam* tract we may note that this was the most fertile part of the country and was located in the plains with access to the sea-board. Thus as different from *Kurunji* and *Mullai* which are known as *Van pulam* (hard country) *Marudam* is called *Men pulam* (soft and alluvial land). The habitations of these *Marudam* people are known as *ur* and differentiated as *Sirrur* and *Perur*, according to their size, importance and cultural background.

The *Marudam* villages are invariably surrounded by green fields. The houses rose tall with terraces beyond the reach of normal ladders. Their barns were well stacked with rice of many varieties. Many cows dozed in their backyards, having been tied together with their ewes, tied to short tethers by brights-coloured coir ropes. Carpenter lads of the village dragged in sport and having tired themselves thus, avidly sucked their mother's breasts and went into a nap quickly.

The villages were adjoined by *Pallis* (the locale of milkmen and *cheris* of any social groups). The people of these *Marudam* tracts were called *Kalamas*, *Ulavas*.²⁰ Their paddy fields were found fringed with green reeds. The wet fringe of the fields was thriving with crabs and fish of many kinds. Their ploughshares were curved like the mouth of a cow-elephant and having a tip which resembled the angular sharp head of

the iguana (udumbu). They carefully selected the bullocks that were to be yoked to the plough.²¹ They did not tire to go round and round the wet field. Ploughing was not a durdgerly and was well relieved by scenes of two bullocks qurelling with each other and in the process so ploughing up the field even without the ploughshare, that they were ready for sowing seeds. The seeds were first sown in a nursery and then transplanted into the fields for full growth. They also adopted the other method of straightaway sowing the seeds in slushy area.

They also grow sugarcane and by crushing them when fully grown, produce cane juice from which they make sugar. The screeching sound of the crushing sugar mill sometimes simulated a distant cry of the elephant.

We have now to leave *Marudam* and come to *Neydal* folk. The *Neydal* folk are dependants on the sea for their life and activities. Their villages were on the sea side and on the backwaters side and fenced by ketaki-shrubs. They were usually known as '*Pakkam*' or '*Sirukudi*'.²² Their houses had walls with the thin branches of good strong trees like Vanji etc. and were thatched with grass reeds. Their roofs are generally very low and in their front hang fishing rods, nets etc. They net sharks sometimes in the sea, by using harpoons.²³ At nights, when they are out in the sea, they keep small earthen lamps fed with fish fat. Their boys on the shore were even able to identify their father's boats by the intensity and character of the lamps on the rafts.²⁴ The catch when brought ashore is heaped on the sand, while they lounge under the shade of Punnai trees and drinks toddy to forget the strain.

The important alternative occupation of these folk is the extraction of chank shells from the seafloors and cutting chank bangles out of them.²⁵ They also sell salt. An exact description of their carts and their merchandise is found in *Perumpanarruppada*.²⁶ Lest their carts topple over in undulating terrain, they were provided with supportive axle and pins of wood in their carts. A poet brings before us the imaginery of the rows of salt carts in a *Kurunji* tract, causing great fun and wonder to the young *Kurunji* girls standing on the roofs of their houses whose courtyard is sparkled with cotton wisps.

The people living in *Palai* are known as *Eyinar* and their villages are called *Kurumbu* and their houses are thatched of date palm and give the appearance of the

back of the percupins. Even the squirrels and rats do not dare to run over these roofs lest they should be slashed by the tips of the leaves. Bows strung duly and arrows are found in good number in these houses. Bundles of arrows could be found placed on a loft. Dogs tied with chains are not an uncommon sight. At the entrance to their well fenced villages are to be found sharp wooden spikes fixed in rows.²⁷ These people are of seasoned body and muscle, with a feline looks, considerable daring; they grow their beards long and twist their ends like the horns of the (vialai-stag) male deer.²⁸ They wear re-tinted cloth²⁹ and always wear leather sandals on the feet. Apart from brigandags, they are always seen hunting animals with considerable skill and caution and they would crouch in scakpits unobserved in the night and await and wait and stalk their prey, the bears which would come to partake of the scarce supply of water. By day they spread their nets around the bushes and rouse the hares out of their holes and catch them in the nets, for which they use the hunting dogs also. They also adopt in cattle-lifting. They have a sadistic pleasure in tormenting the unfortunate victim of wayfarer who had nothing to part with. They play on 'tudi' while merauding³⁰ and on the *tannumai* while lifting cattle.³¹ It is said the sound of these instrument would strike terror into the hearts of the travellers who pass by.³² Their girls collect assiduously the grains brought together in largest ant-hills by wildants³³. The women, after delivery, lie in soft deer skin beds, while others are busy collecting grains from ant-hills. They eat the flesh of the iguana caught by their dogs along with the boiled grains gruel.³⁴ They worship stone menhirs, the spirits resident in burial tombs and the flowers to the standing stone shafts, play on 'tudi' and offer rice beer and ram kid in propitiation.³⁵

Having thus said much about the common folk of the five fold physical divisions, we should now draw the picture that we get of metropolitan life in large and small towns, which certainly was more collective, cosmopolitan and varied. They were not, of course, forming a new norm but undoubtedly were high grade and quite sophisticated: We hear much on the life in the capital cities of Puhar, Uraiyur, Madurai, Vanji, Korkai etc. from the bards of the Sangam age and it is to this now that we would shift our attention.

The Sangam literature furnishes us with quite a considerable list of names of small towns as well as cities, besides a few places outside Tamilnad in India and overseas. Besides the well known capitals of the three noted kings of Tamilnad, we have the

names of the chief towns as such other subordinate or local chieftains, as *Tagadur* of *Adigaman*, *kolli* of *Ori*, *Parambu* of *Pari*, *Elil* of *Nannan*, all of the *Kurunji* tract; *Velur*, *Ollaiyur* of the *Mullai* country; *Ambur*, *Attavayil*, *Alundai*, *Arkkadu*, *Kudavayil*, *Urandai* ect. of the *Marudam* zone; and *Kaveripattinam*, *Marungurpattinam*, *Eyilpattinam*, *Korkai*, *Tondi*, *Musiri* of the *Neydal* strip.

Most of the big towns had protective walls around them and smaller towns even on hills had heavy thorny trees or fences surrounding them, and of moats, sometimes infested with crocodiles was also common.³⁶ An interesting light on city lay out of Madurai and Kanchi is known by a verse from Paripadal (8:1-5) and *Perumbanarrupadai*,³⁷ wherein the royal palace was placed in the central or focal point and disposed around it in a series of concentric arrangements were the localities of brahmins, princes, tradesmen, peasants, and further the artisans, potters etc., the entire design simulating the disposition of lotus petals around the central calyx. Storeyed mansions have also been freely mentioned and the ladies who stroll on their terraces sporting themselves with the ball game, became a favourite theme of poets who strikingly compared the faces of the maidens on the high terraces with the moon which lurked amidst the clouds. Specific mention has also been made in some songs about the experts in Silpa sastra, who designed the layout and location of the royal civilian and other structures giving the details of how they set about them.³⁸ Gopura entrances for palaces with Gajalakshmi on the lintal (as *lalata bimba*) are observed. Their interior premises were provided with sport gardens laid out with sandy patches where the peacock and the gazella pottered about unmolested: there were also painted galleries. The palaces were immediately surrounded by the residences of purohits, commanders, ambassadors, diplomatic couriers, spies etc. Among the craftsmen of the aesthetic vocations, mention is made of bead-makers, goldsmiths, garment sellers, florists, unguent dealers, painters etc. The musical mendicants-*Panas*-were usually residing just outside the town in *Cheris*. The festivals in temples for Vishnu, Murugan, Indra, Balarama, Krishna, Siva and Durga are celebrated in these homes with great eclat and the seventh day of the festivities was marked by a holy bath at dawn. The gods were propitiated with flowers, incences, lights, sweet-meats, fruits and rice balls. Spirits which were considered as protecting the towns were also duly appeased with offerings. There were the denominational religious institutes of the jains and Buddhists, besides those of the Brahmans.

A significant public institution of the towns was the 'hall of justice' where dispassionate and fearless elders meted out justice to the common folk that brought them their cases. The hall of justice at *Uraiyur*, the capital of the Cholas, was justly celebrated, as *Puram* and many other works have indicated³⁹. The city bazaars were divided into day-markets and night shops; merchandise of many varieties were traded in these bazaars, sold by elderly matrons while the trudging of different kinds of vehicles, chariots etc., mingled with the cacophony of street vendors filled the dusk air. 'Time' was counted by hour glasses (Kannal) and the activities filling the routine of men on the *Yamas* of the day and night, have been carefully delineated in *Maduraikkanji*. We have mention of such well known daily programs at the palace, like the sutas, magadhas and vandis praising the king at day-break. At seaport towns, we are told the loads of merchandise lying on the wharfs were after inspection stamped with the tiger-seal of the Chola royalty. The goods littered there included the gem stones from the northern hills, pearls from the southern sea, pepper from Muziris, articles from Ganga, Ceylon, Sumatra etc. The Yavana foreigners had their quarters close to the port. The people, men, women and children gave themselves upto legitimate material pleasures and cultivation of fine arts.

The artisans of the society included carpenters, blacksmiths, potters and goldsmiths. By their manual labour their bodies were of taut glistening skins. The smithy had the foot-operated bellows for kindling fire and they annealed the redhot iron lump in cisterns of water: sparks (compared to small flowers) flew from their anvil when they were at work; the carpenters used axes, chisels, vices and pliers in their job. It is they who fashioned the plough for the fields, the doors for the houses, the carts for the roads and even the harps and lyres for the leisure hour⁴⁰. The goldsmiths used the touch-stone (called *Kattalai*) for testing the quality of gold; while the coppersmith applied himself in making copper and bronze vessels and chiselled them to shape and surface brilliance, the pearl strand makers dexterously polished the pearls and perforated them. Gold was mined in Tamilnad near the head waters of Kaveri and in certain other parts called Konkanam. The shell-slicers were mostly drawn from indigent and uneducated brahmins who made bangles from chank. The potters lay the dough of kneaded clay on the 'tigiri' or the rotating wheel beat and activate it by a stick. They wear garlands of Nocci seed (Which was apparently used for burnishing pottery, as is done even today) and take active part in folk arts and entertainments. The weavers wove elegant cloths of cotton and silk after removing all stiffness from the cotton seed by submitting it to the 'bow'

treatment. Silk garments had tassels on the edges and were worn only during day time, cotton alone being worn at night.⁴¹ Besides these, there were the basket makers and cot-makers who were rather low in the social grouping. But undoubtedly they enriched the life of the people as much as other artisans did.

We are told the society was having the following communal services catering to its organizational, material, cultural, artistic and moral needs. The painters, architects, culinary experts, the weavers, washermen, physicians, royal attendants, minstrels, vigil-keepers, animal tamers, charioteers, boatsmen, cartwrights, menials, the hill tribes, the predatory tribes, the musicians, mendicants, the preiests and clergymen- all these were the known and well-consolidated entitled in the society and undoubtedly their selfless endeavour kept the social weel and progress on an even keel.

THE SOCIAL LIFE OF INDUSTRIAL WORKERS AS GLEANED FROM INSCRIPTIONS:

The earliest inscriptional reference (Third century B.C.) on goldsmith comes from Alagarmalai near Madurai. It refers to the gift of probably the rock bed by one individual Atan, a goldsmith of Madurai.⁴²

Another inscription found at Mamandur, near Kanchipuram states that the rock bed was made by Ciru...van, the stone manson.⁴³

An inscription at Tirupparankundram has been read as follows :

Errukkatur ilakkutumpikan polalayan

Ceyta aycayan netucatan.

But this may be read in a slightly modified form. The modified reading is

Erukatur ilakutumpikan polalayan

Cey taaycavan netucatan.

According to the new reading Netucatan, the stone mason made that rock-bed. The inscription, dated in third Century A.D., recently found by the Department of Archaeology at Pulankurichi⁴⁴ in Ramnad district had been engraved by one Nariyangari of Venadu.

He may have been a stone mason. The cave inscription found at Pillaiyarpatti in Ramnad district refers to the architect of that cave as Erukkaturkkon Peruntacan.

Coming to Pallava period there are enough evidences to study the true position of the artisans in a mixed society. They were seemed to have been treated respectably by the royal personages. They were more close to the kings to have been appointed as Rahasya Krt.⁴⁵ (Confidential writer).

The engravers of the copper-plates were highly spoken of by the prasasti writers. In Hallahara copper-plates the acharyan is compared with Visvakarma.⁴⁶ This acaryan's name is also Visvakakrmacaryan. In Unnakuravayam plates, the scribe is mentioned to have originated from Kanaskand Vamsa.⁴⁷ The scribe of Kasakkudi plates was Parameswaran alias Mahakastakari.⁴⁸

In some copper-plates the engraver's native place is also referred to. Velurpalayam plates say that the scribe was Perayan, son of Kastakari of Aimmanaiceri in Kaccipedu.⁴⁹ The father of Perayan may have been the same Mahakastakari who engraved the Kasakkudi copper plates. Perayan is said to have been famed because of his hard work. He is also described as Stapatikula Vyomacandra (as moon in the sky he is in the family of the Stapatish). This is the earliest reference about stapatikula in Tamil inscriptions. In another plate, the scribe is referred to as Sri Tandiyan, son of Videllviduka Pallavapperuntaccan of Aimpanaicceri in Kaccipedu.⁵⁰ The name Videllviduku Pallavapperuntaccan may have been assumed after Nandivarman Pallavamallan, the Pallava king. Aimpanaicceri is the place where five kinds of people namely stone mason, carpenter, iron smith, brass smith and gold smith lived.

Bahur plates of Nrpatungavarman extol in high terms the family of the goldsmith who engraved the letters on them. He is described as the foremost of his Utitotita kula well versed in all sastras and the traditional servant of Pallava kula. His name is given as Nrpatungan, assumed obviously after his overlord Nrpatunga Pallava. He has left his signature mentioning that he was a native of Kilparisaram in Kaccipedu⁵¹ being the son of Madevipperuntattan and the grandson of Utitotayapperuntattan.

Velanjeri plate of Aparajita not only mentions the name of the engraver but also

tells the remuneration he got for his service. Vijayanna who inscribed the prasasti got one patti of wet land. The name of the brazier who embossed the seal of that plate is also known as Videlviduku Perunkannan. He also was given one share.⁵² Vijayannan is described as the foremost among the silpins, holding the fortune and born out of grace of the king. He was born in the city of Kanchi. Since most of the Pallava royal charters were issued from Kanchipuram those were engraved by the silpins of Kanchipuram.

In the court of Dantivarman there was a very famous architect. He was the architect who constructed the great Sundaravaradapperumal temple at Uttiramerrur. In praise of his service a high tribute had been made and engraved in letter which is the standing evidence of today. The relevant portion of the inscription says thus:

“He who knows the essential nature of the entire science of Architecture (in building temples, palaces etc.)”

“This shrine, shining, as it were, as the sun among the shrines of the village and adored by its name and class etc. was built in conjunction with the agamikas of this village versed in agamic principles and practice, by one truthful and dexterous Paramesvara Takshaka of Pataka.⁵³

It appears that he was supreme among the architects versed in Vastu Vidya. Vastu Vidya is the text that deals with the architectural details of the building. He was also well versed in agamic principles and practice. Construction of temples must be true to the agamic principles. Hence he was proficient in that text also.

It is said that the artisans who had executed the world-famous temples of Mamallapuram had left their names on small rocks, popularly known as nondivirappan Kudiraittotti, adjacent to Mamallapura.⁵⁴ Their names are written as (1) Kevatapperuntaccan (2) Gunamallan (3) Payyamilippan (4) Catamukkiyan (5) Kaliyanai (6) Namah Tiruvorriyur A (bha) jar (7) Kollan Semagan in Pallava grantha - Tamil characters. Kavatapperuntaccan may have been the chief architect among them.

The artisans had been engaged not only in engraving the royal charters and in the construction of temples, but also in establishing irrigational sluices. One Kuvanataccan

is said to have made the sluice which was gifted by Nakkan, the son of Koorayanandar of Arrur situated in Nedungal Nadu, a sub division of Indurkkottam, during the reign of Nandivarman II⁵⁵.

The royal charters of Pandyas had also been written by the expert artisans of that period. The famous Velvikkudi copper-plate had been inscribed by Yuddaakesaripperumpanaikaran⁵⁶ From his name 'Yuddakesari', it is known that he was a mighty soldier also. He was paid a house site and two ma of wet land and one ma of dry land for his service. Perumpanaikaran seems to mean one who owns a big workshop.

Sinnamanur copper plates and Sivaramangalam copper - plates were engraved by one Arikesari Perumpanaikaran, the son of Pandiperumpanaikaran.⁵⁷

Tirupparappu copper-plates of Ay King Kokkarunandadakkan had also been engraved by one Srivallavapperumpanaikaran alias Aviyalanradakkan.⁵⁸

The scribe of the Dalavaipuram Copper-plates was highly extolled by the prasasti writer of both Sanskrit and Tamil Portions. The Sanskrit portion describes that this chart had been engraved by Nakkan who was the foremost among the karmars of the king and master of all silpis. The Tamil portion says that the scribe of this chart was Nakkan who came from the family of those who had carved bow, tiger and two fishes on the golden mountain, Imayam and the father of one who composed prasastishesham of this chart.

The composer of the prasastishesham of this chart is also an artisan, a blacksmith, by name Pandimarayapperunkollan alias Srivallavan. He is also praised both in Sanskrit and Tamil portions. While the Sanskrit portion praises him in about two lines saying that he was a kavi (poet) an alankar to Pandya Travidars (Travidar, Tamilar), the chief among Karmars and one who was always remembering the feet of Siva, the Tamil portion pays the tribute extensively. It delineates that he was the descendant of those who made the axe at the request of Siva, a descendant of sage Manu, was also called as Panditatan, belongs to South Vaigai Nadu, the chieftain of Kuntur, had several titles such as Tamilabaranan and whose name was Pandimarayapperunkollan.

In recognition of their service, the poet and the scribe were awarded the lands named Kannan Kiranvayakkal and Somaci vayakkal along with three wells. The area in between the three wells were gifted as house sites and gardens for them. They were also given the right of getting half share in fishing in the tanks probably of their village.⁵⁹

The royal charters and the stone inscriptions of the Chola period throw more valuable light on artisans. The most informative inscriptions about the origin, the nature of work and the assembly of them are one from Alangudi on Trichi district,⁶⁰ the other from Tiruvarur in Tanjore district⁶¹ and third from Uyyakondan Tirumalai in Trichi district.

Though the inscription of Alangudi, dated in 1264 A.D. is highly damaged, its importance is very great. It gives the legendary account of the artisans and the proceedings of their assembly which had its jurisdiction over eighteen districts.

The damaged Sanskrit verse found in the beginning of the inscription starts with the word 'Upajivita'. The preserved Tamil portion of the text seems to contain the prasasti of the artisans. It tells us "that the Rathakaras, who were of four classes and did six kinds of work had Aryanadu as their place of birth and acquired Uttarpatti; they measured Tavappalli and obtained by conquest the makara flag; they witnessed the dance of Isvara and had by the favour of (the diety) Kattavur Ammal, a rain of gold; they were renowned for righteous acquisition of wealth; for prosperity attended with greatness; for flawless family tradition; for power of utterance; for leading a life of fearlessness; for reducing enemies to ashes; for victories gained in all battles undertaken by them; for securing the grace of Devadana and for their extensive fame and progeny. Their industrial pursuits won the admiration of all. Akkasalai and Palli were in their charge⁶².

At the end of the Prasasti portion the inscription records that the Rathakaras had assembled in full in the temple of Vanduvarapati (Perumal) at Rajaraja caturvedimangalam on Suttamallivalanadu and carried out a resolution to the effect that an inavari shall be paid by all persons living in the several districts to raise a fund from which the expenses of constructing a pavilion called Muludumvallan, in the

Tirunirruccolantoppu at Alangudi alias Janathacaturvediangalam in Mudicconadu, a sub division of Suttamallivalanadu, in order that the God Apatsahayesvara be taken in procession and made to rest there.

The above decision was communicated to Rathakaras of the districts and to the Samaya sanketins of the Nadu. Viramaheswaras were authorised to collect inavari and to remit it into the treasury.

This agreement was signed by a number of persons. Among them Periyannattucari, Rathakaracakravarti, Padinenbhumi Rathakara Cakravarti, Kayilkaniyudaiya-peruntaccan, Periyannattu Peruntaccan and Tattan etc. are the artisans. This inscription is a clear evidence that the artisans were also called as Rathakaras. They were united, they took any decision only after proper discussion and the decision arrived at in the meeting could bind all the artisans living in the eighteen mandalams.

The origin of the artisans and their professions are found described in the inscription of Uyyakondan Tirumalai, Trichi district. The inscription is dated in the forty eighth year (1118 A.D) of the reign of Tribhuvanachakravartin Kulottunga Chola I.

It says that the Anuloma was the son of Mahisya by a Karani woman. The following professions are attributed to him: Architecture, building coaches and chariots, erecting gopuras of temples with images on them, making instruments for use in sacrificial, ceremonies, building mandapams and making jewels for kings such as diadems, bracelets etc.

More details about Anuloma and Pratiloma sects are found in Tiruvarur inscriptions engraved in 12th century grantha characters. It records the decisions arrived at the meeting of learned Brahmins of Pandyakulantaka Chaturvedimangalam on the traditional origin of the artisans, their education and adoption of their learning to their profession. Some quotations on them from literature have also been given in it.

This inscription also refers to artisans as Rathakara. They are said to have been born as Anuloma and Pratiloma. Anulomas are described as those who were the sons of high caste father and a low caste mother. Pratiloma are said to have been born of low

caste male and a high caste female. Anuloma class is considered to be superior to the Pratiloma class. All the texts quoted in this inscription explain the birth of Rathakara of mixed caste. Some literature refer to them as of low birth people as they were born of Sangirna caste while other literature say that they are Acaryans and all works have to be done by them only.

Most of the literature eulogize them. They say that those who make ornaments out of gold are called swarnakaras, those who do carpentry work as ayaskars and those who work on iron are called Taksan, those who make figures are called Tvastas, also known as Rathakaras and those who construct temples with Gods and Goddesses are called Stapati. They further tell that the words Stapati, Visvakarma, taksan, tvasta, rathakar, kastakar, varthaki all would denote silpi.

Some literature concede that they could wear yaganopavita and could perform Sandhyavandanam. But they forbid them from performing yajna and agnihotram and reciting the Veda. Upanayana of the Rathakara, it is said, has to be performed without quoting mantras. Some authorities quoted in the inscription say that they are well versed in Vedas, Nitisastras and experts in astronomy. They are, it is said also known as acaryas.

Establishing the cities, carving the images, making implements etc. are prescribed as their duties. Rathakara is said to have been well versed in Vastu Vidya and expert in archery and in removing the arrows and thorns. Corroborating the statement of these texts an evidence has come from a copper-plate. The scribe of Tirupparappu copper-plates is referred to have made implements to the king Kokkarunandadakkan.

That the artisans lived in separate hamlets adjoining big cities is known from inscriptions. An inscription⁶³ from Chidambaram refers to the establishment of a nagara, Gunamenagaipuram and states that it shall have in it as inhabitants such as vyaparis (merchants), Velir(Cultivators). Sankarapadiyar (oil mongers) Saliyar (weavers) and Pattinavar (probably those who weave silk cloths) as well as the kilkalanai classes, viz taccar (carpenters), kollar ((blacksmiths), tattar (goldsmith) and koliyar, that are desirous of entering it. It may be noted that taccar, kollar, tattar and koliyar are here called as Kilkalanai. K.V.Subrahmanya Ayyar thinks that the term Kilkalanai corresponds to the

Sanskrit anuloma. He also points out that the Kilkalanai, saliyar, vanigar, senaiangadiyar and koyil angadiyar formed purakalanai, a term that is akin to and perhaps derived from pratiloma as kilkanalai seems to be derived from anuloma.⁶⁴ In some epigraphs their living place is specifically mentioned as Kammalacceri.⁶⁵

The four main divisions of Rathakaras may be the carpenter, koliyar, blacksmith and goldsmith. Another artisan, brazier, is rarely met with in inscriptions. Koliyar may be an artist (painter) who uses brush (kol) for the drawings.

The Chola kings had highly honoured the artisans. Not only the kings but also the queens showed more favour to them. Since the construction of temples was in increase, the need of artisans was very much felt. Moreover the artisans were also learned in Vedas, Agamas and Vastu sastras, They were truthful and upright. They know astrology and could test the soil and find out flaws in stones.

The artisans who built important temples had got their names also inscribed on them. The name of the architect who built the great temple Rajarajesvaram at Tanjore is mentioned in inscription as Viracolan Kuncaramallan alias Rajarajapperuntaccan. He was assisted in this task by two carpenters by name llatti cataiyan alias Kantaradittapperuntaccan and Kunavan Madurantakan alias Nittavinodapperuntaccan. Virasolan Kuncaramallon alias Rajarajapperuntaccan seems to be the chief architect for which he got three shares; while the other two got three - fourths of the share each in recognition of their service.⁶⁶

The architects of Lokamadevisvaram is clearly found in inscription as follows:

“Ittirukkrrali ceyta
taccacariyan Eluvadiyan karonanana
Puvanimanikka acaryanukkum merpadi
taliceyta Nakkanaccanana
Kaliyukarampaip peruntaccanukkum
Marrattaccak kaniyal nilankalum.⁶⁷”

Eluvadiyan Karonanana Puvani manika Acaryan and Nakkanaccan alias Kaliyukarampaipperuntaccan were the architects. They were awarded one-fourth of a land.

Similarly the architects of the temple at Tiruvamattur in South Arcot district (Villupuram District) is also referred to as Taccan Naranan Vekandaran alias Tiruvamattur Acaryan.

Consecration of images in temples was also made by artisans. In one instance an Acaryan by name Images Nayacavacariyan, son of Erukkacariyan, is said to have consecrated kamala Nayakar in Parasurameswara temple at Gudimallam without getting any remuneration (vastukondu eluntaruliviyate eluntarulivitta). But the members of Tiruvunnaikai and the Mahesvarars of that temple gave half of a land as bhumidana to him.⁶⁸

In another instance the Stanattars of a temple, desiring to consecrate, a Sripita requested the acariyars to do so. But the acariyars did not do it. Then the acari Udayadivakaran who had the temple land came forward and consecrated the pita. For his memorable service, he was offered tax-free land.⁶⁹

It is understood that in every village there must have been some portion of land as taccakkani,⁷⁰ tattarakkani,⁷¹ acariyakkani⁷² etc. Those lands must have been assigned to those who did the respective services. Alangudi, a village in Tanjore district, had portion of land as silpacaryakkani, and that was possessed by Sanduyan Udaiyan alias Sirilango Acariyan during the time of Rajaraja II in 1147A.D.⁷³

Similarly the temples had also allotted some portion of their lands to the artisans permanently. When the temple appoints somebody as its artisans a portion of land will be assigned to him. Lokamadevisvaram temple built by Danti Sakti Vitanki alias Lokamadevi, queen of Rajaraja-I and mother of Rajendra-I at Tiruvaiyaru had in its possession "Tattarappani ceykani" and is said to have assigned that land to tattan Sakkadi-Camutaiyan alias Cembiyan Medevipperuntattan as tattarakkani on the specific instruction of Lokamadevi⁷⁴ in the year 1016 A.D.

Since the artisans were in good position they had donated land, cash and sheep to the temples. Senanayakakoyir peruntaccan who had land in Colakeralanallur, the south hamlet of Sripatatuliccaruppedimangalam had endowed some land as Tiruvilakkuppuram to the temple of Tiruvenkadu Udaiyar⁷⁵.

Srikuvaingalapperuntattan of Kuram is said to have gifted pon to burn a perpetual lamp to the Mahadevar of Peruntirukkoyil⁷⁶. Kollainkumuranicalan alias Viranaranapperunkollan of Neduvayil in Karaikkatticennivalakurram had gifted 45 sheep to burn a lamp in day time in the temple of Mahadevar of Tirumalavadi⁷⁷.

Thousands of inscriptions, the invaluable wealth of the Tamils, found engraved on the temples and rocks are the creations of the artisans. They had engraved them on the suggestion of the members of the sabhas or the stanattar of the temple. In most of the inscriptions it is clearly mentioned that the scribe had engraved them at the instance of the sabha of the village or the stanattar of the temple⁷⁸. In some cases after having written the entire matter the scribe had affixed his signature also⁷⁹. There are some instances where the scribe had affixed his signature on behalf of somebody who were not known to put their signature⁸⁰. It seems also that some of the artisans had been appointed as liaison officers (Naduvirukkai⁸¹.) In some cases the artisans had also assisted in demarcating the boundaries of the gifted villages.

In recognition of their benevolent acts and their invaluable services the artisans were accorded some special privileges. An inscription of Modakkur records that the artisans (Kanmalars) of Talaiyur nadu, Vengala nadu, Araiya nadu, Idaippula nadu, Vadakaraimanalur nadu, Tattaiyur nadu, and Kilangu nadu were allowed to blow double conch on auspicious and bad occasions, to beat drums, to wear chappals wherever they went and to plaster their houses⁸². Another inscription of Pariyur in Coimbatore District registers that the artisans of Kancikoval nadu were permitted to play all instruments including the double conch and to wear chappals wherever they went⁸³.

Likewise a Vijayanagar inscription of the time of Srirangadeva Maharaja records that the same rights and privileges as were in vogue to their classes in Padaividu, Senji, Tiruvannamalai and Kanchipuram should be accorded to the three artisan communities (Kammalar), carpenters, blacksmiths and goldsmiths of the several villages in the northern paruru⁸⁴.

From these above inscriptions one should not come to the conclusion that these artisans were deprived of these privileges ever before the time of these epigraphs. During Pallava and early Pandya periods they could have enjoyed these privileges. Even

during the medieval Chola period they might have got these privileges since they were highly respected by the kings and queens. At the end of Chola and Pandya periods there was a downfall in all fields and in all activities. Want of artisans could not have been in the same ratio as was in earlier periods. Therefore, the artisans might have lost their resources and reduced to destitution.

The artisans were even driven to the extent of stealth from the temples with the connivance of others. An inscription of Srivirapandya dated in the second regnal year states that the ornaments of Tirunalkunramudaiyar temple had been found stolen. On enquiry Kunran Cherundivanapperumal alias Edirilicolapattan and the mason of that village were found to have stolen them⁸⁵.

Involvement of two artisans in a forgery case is also referred to in an epigraph. This epigraph belonging to Tirupattur dated in Saka 1309 i.e. 1387 A.D. registers that the accountant Kulalan Ambalattaduvan alias Ayriattelunurru Muvendavelan had deliberately engraved on a stone stating that he had a house-site and some privileges in the village with the help of the goldsmith Ayriattelunurruvan and the mason Alaivayugandan while they knew distinctly that he had nothing of that sort, and having made this act known Ambalattaduvan had run away. On knowing their crime the goldsmith and the mason were excommunicated by their own people⁸⁶. It is interesting to note that the punishment on these two artisans was awarded by their community people themselves.

The miserable position of an artisan in 1219 A.D. is revealed from an inscription wherein it is stated that a stone mason, his wife and four sons of them were sold out as adimai⁸⁷ (slaves)

During Vijayanagar period the encouragement for fine arts had again been revived. Temple construction found more important place. Consequently artisans were badly needed and their service was highly appreciated. The names of the silpis who erected the north gopura of Nataraja temple at Chidambaram are found carved on the gopuram itself. Their names are found written below their portraits as follows: (1) Viruttagiriyil Kesavapperumal (2) Visuvamuthu, the son of former (3) Son of Tiruppirakkodai acari (4) His brother Karanacari.⁸⁸

The Nayak rulers also had patronised the artisans very much. They also gave due importance to the artisans in their copper-plates. An interesting copper plate grant, now preserved in the Vishnu temple of Tirukkannamangai in Tanjore district records the gift of certain lands to the temple of Vishnu of Tirukkannamangai, by the Tanjore Nayak ruler Vijaya Raghunatha Nayak.

“Unlike the usual charters, the present charter begins with three panels of figures incised. The first panel carries a standing Vishnu image flanked by Sridevi and Bhudevi. To the extreme right is shown Lakshmi as Tayar seated with four arms. To the left is Andal standing. Obviously this is the presiding deity of the Thirukkannamangai temple, Abhishekavalli Tayar and Andal.

In the centre of the second panel is Krishna dancing on the snake Kaliya. To his left is a seated person, probably Nammalvar. Flanking them are shown Siva and Brahma, adoring the central image. Further away are shown seated and standing sages and devotees. To the extreme right is Surya standing.

The third panel is more interesting. In the centre is shown Garudadhvaja, with Garuda shown at the top. To the left of the pillar is shown a royal figure standing in anjali pose. A sword is shown on his waist. He has crown but wears his hair in dammilla fashion usually found in Nayak sculptures. The figure is obviously the portrait of the donor king Vijaya Raghunatha Nayak of Tanjore.

To the right of the Garuda pillar is a temple priest welcoming the ruler to the temple with purna kalasa. Another priest standing behind him carries a bell. Behind the ruler is also a priest. At the extreme end are shown two soldiers, one on either side, carrying long swords, tucked in their arm pit. Such sword bearing body guards may be seen even today accompanying the ruler to the temple in Ananta Padmanabhaswami temple at Trivandrum⁸⁹.

The point of interest in this plate is that we are informed of the name of the artist who drew the figures which explains that royal personages visited and worshiped the presiding deity, as Venkitacala Acari, son of Lakshmana Acari of Tanjore. The chart is

dated in Saka era 1530, corresponding to 1608 A.D. It is understood that the skill of the artisan had not been deteriorated even in 17th century.

Madurai Nayak ruler Visvanatha Nayaka had also conferred some privileges on artisans. In Saka 1581 i.e., 1659 A.D. he issued an order permitting the five divisions of Kammalar or Pancalattar use of the privileges of elephant, double chowries, white umbrella, palanquin, tents etc. when they go out in the Madurai and Tirucirappalli desa⁹⁰.

There was a learned artisan in the 16th century also. A goldsmith of Nallur in the Pandya country wrote the "Arichandra Purana" in 1524 A.D.⁹¹.

The inscription often refer to a group of people as Anjuvannam⁹². Scholars differ on the interpretation of this word Anjuvannam. Some say that it refers to a trade guild as like Nanadesi and Valanjiyar. But some are of the opinion that it refers to the five kinds of artisans. In support of the latter opinion they cite the word panchalatar, which is frequently occurring in inscriptions to denote the five kinds of artisans such as goldsmiths, blacksmiths, brassmiths, carpenters and stone masons.

The Annual Report on Indian Epigraphy for the year 1949-50 reports that a curious bronze plaque, the obverse of which contains sculptures in seven rows depicting several Gods and Goddesses and some artisan tools, was received from Pondicherry by Dr.A.Bigol. The reverse of the plaque contains an inscription in Telegu, which registers an agreement between two disputing artisan communities. The disputants are said to have come to an agreement in the presence of a certain Dakanacari who bears a number of interesting epithets such as the "Lord of Pendolpura" devotees of the Goddess Kalikadevi and Kamathesvara etc. The sculptured panel on the obverse of the plate evidently represents these deities and the artisan tools, the emblems of the communities, The inscription is not dated but may be assigned to the 16th or 17th century A.D. on palaeographical grounds⁹³.

Like this bronze plaque, a stone bearing the artisan tools and the figure of Gajalakshmi has been noticed recently at Tiruppalanam in Tanjore district. An inscription is also found on the other side of the stone⁹⁴.

From the figures found on the copper-plaque and stone it may be inferred that the artisans had followed the Saktam i.e. Sakti cult, since Sakti (energy) is essential for their efficient services.

With regard to artist (Painter), barring the Sangam age, there is no specific reference, except the mention of Kōliyar as an artisan community in the Chola period. But very valuable paintings had been drawn during Pallava, Chola, early Pandya, Vijayanagara, Nayak, Maratha and Sethupathi periods. They are all well preserved even today.

It is known that the kings were personally interest in drawing paintings. Pallava king Mahendravarman is said to have been a great patron of art and he himself might have been an efficient painter as he is called as Citrakarappuli in his inscriptions⁹⁵.

Every ruling monarch of ancient period had encouraged the art of painting. But we are not able to find out who was the patron for a particular painting. King's unbound interest in painting had been traditionally maintained even upto the period of Sethupathi kings, who ruled in the latter part of 18th century.

There are a number of valuable paintings in the palace of Ramanathapuram. In one painting a palm leaf containing a painting is left unfinished by the side of the king and queen. This suggests that either the king or the queen could have been the artist who drew the painting found on the palm leaf⁹⁶.

The artist's signature in the painting is found at Kuricci in Tanjore district. These painting are assignable to the 18th century. There the figure of artist in prostrate position before the God and his signature in Tamil character are found painted⁹⁷.

All these artisans had to pay some professional taxes such as tattarappattam⁹⁸, tattirai⁹⁹, tattoli¹⁰⁰ by tattar, taccattalam¹⁰¹ by taccar etc. There is also a tax term called tapati arici¹⁰² which may denote the dues collected from stapatis.

Agriculturists were treated with due respect during the rule of Pallava, Cholas and Pandyas. Because they were the producers of food and commercial commodities.

They were called as Bhumi Putra i.e. the sons of earth. They formed a committee called Citrameli Periyannattar. They respected plough. Hence they had the figure of plough in their banner as their symbol. They were also known as Perukkalar and Nattar. They often meet at a place and discuss their problems.

When a royal order was issued donating some land to a particular person in a village, the order will be brought to that village by a royal official. This order would usually be received by the nattars and they led the official to the donated land and helped to demarcate the boundaries of the donated land and to plant boundary stones and thorny bushes. They were the responsible persons to issue the final order demarcating the boundaries of the gifted land.

The women of the agriculturists were more respected than the male folk. If there were any default in remitting taxes to the Government, the tax collecting authorities were severely warned not to harass the ladies and being to the ambalam where the enquiry usually held.

For doing cultivation the Government made all possible held such as digging lakes and channels, erecting lifts known as Kurrettams and Errams. When disputes among farmers arose on the sharing of water and on boundary problems, the Government enquired with the help of written documents and delivered acceptable judgements¹⁰³. The Government itself had issued some regulations on the irrigation system.

The farmers were given five sixth of the produce and they had to remit the taxes to the Government.

In every village they had an assembly known as Ur for which election was conducted to elect members. Some of these members were again elected to number of Variams i.e. committees namely Eri Variam, Samvatsara Varim etc. There were stringent rules specifying number of qualifications for contesting in the elections.

The farmers who were in higher starata were called as Velars. Some of them were appointed in Government services. When their services were honoured they were given epithets known as Muvenda Velars.

INDUSTRIES IN MEDIEVAL PERIOD:

The significant industry during medieval period was oil pressing. Since oil was needed for burning lamps in the temples and for cooking in houses. It seems the Government itself had taken care of establishing oil presses in number of places. That such oil presses made of stone bearing legend in Vatteluttu and early Tamil characters had been noticed in a few places. The oil mongers were also highly held by the local people and Government. The Government had granted number of privileges to these people, though they had to pay professional tax. These people were called as cekkar, vaniyar Chakkarappadiyar or Sankarappadiyar and Sakkiri.

Almost all the epigraphical references regarding Sankarappadiyar indicate that they were supplying oil for temple lamps. They are mentioned in inscriptions from Pallava period. The Sankarappadiyar of Vadakkilangadi (northern bazaar) of Uttaramerur Chaturvedimangalam agreed to supply one ulakku of oil every day in the Mahadevar temple of Tiruppulivalam by receiving 15 Kalanju of pon from Sendan Ganapati alies Sivasikamani Pallavaraiyan of Mannuperum Paluvur¹⁰⁴. During the reign of Parantaka-I, the Sankarappadiyar of Iranajayappadi, Ekavirappadi and Vamanasankarappadi of Kanchipuram undertook the responsibility of maintaining the temple lamps by getting 20 kalanju of pon¹⁰⁵. Another inscription of the same king mentions that the Sankarappadiyar of Kumaramarttandapuram promised to supply one ulakku of oil every day by receiving 20 kalanju of pon¹⁰⁶. It is clearly stated in another epigraph that they followed the profession of oil pressing. The exact passage runs as follows; chekku onrukku sankarappadiyar per-pannirandu aka (twelve persons for one oil-mill¹⁰⁷).

The Sankarappadiyars seem to have lived as a separate guild. This fact is known from a royal order of Kulottunga Chola (1070-1120 A.D.) asking the twenty-five families of Sankarappadi to settle down in Rejendracholappadi, a new settlement, and supply oil to maintaining temple lamps¹⁰⁸. They were also to have been included in the group of nagarattars. An inscription of Rajadhiraja I lists the nagarattars of Tirukkalukunram or Ulagalandacholapuram in Kalattur-nadu of Jayankonda-cholamandalam as

Manasangakkolundan and Ulundan surai, vyabaris (merchants). Accantittai, saliyar (weaver) and Angadi Eduttapadam and Marivennavasal Sankarappadiyan (oilmonger¹⁰⁹).

In due course their status appears to have been raised to kudi (cultivators). The Vellalars, the Sankarappadiyar, the Saliyan and the Pattinavan are referred to as kudikal while the taccar (carpenter), the kollar (blacksmith), tattar (gold-smith) and koliyar are mentioned as kikkalanaiyar, probably servants according to an inscription of Chidambaram¹¹⁰. One Sankarappadiyan was included in the panel of gold testers of Uttaramerur charturvedimangalam during the reign of Parantaka Chola I (907-955 A.D.¹¹¹).

Weaving industry had its prominence from the beginning of Christian era. In almost all the capitals of ruling monarchs and their ports this industry was very well prospered. We get authentic evidence for dyeing the threads in dyeing watts from excavations. Excavations conducted at Arikamedu, Uraiyur and Karur had revealed the existence of dyeing watts. In addition to these, we get number of spindle whorls in every excavation conducted in Tamilnadu.

Weavers were also highly respected during medieval period. There were divisions among them. Their main occupation was weaving. Weaver is first referred to in an ancient inscription datable to 3rd century B.D. as Aruvai Vanikan. As cultivators, these weavers were more needed for manufacturing cloths for wearing, decoration and for offering to God. It seems that they manufactured cloths for men and women. The cloth that was worn by male folk was also called as Pudavai. Weavers were also appointed in royal services especially in army and were called as Kaikkolar and Senamudalis. i.e. one who leads the army.

They were accorded a few privileges of getting betel leaves first leaving others behind in temple festivals, services as judges in some important enquiries and using palanquins and conch in their ceremonies¹¹². They wove cotton and silk garments and paid tax as Tari irai, denoting tari (loom) was used to produce cloths.

The other minor industries that flourished during this period were shell slicing, pearl fishing, salt manufacturing, bead making etc.

Arikkamedu and Alagankulam excavations had thrown more light on shell slicing. Number of plain and decorated bangle pieces, along with sawed pieces have been collected from the above two sites. Korkai excavation revealed heaps of oyster shells discarded after collection of pearls. This site had also supplied number of full grown conches. Beads made of different semi precious stones have also been collected from almost all excavated sites suggesting that the bead making industry was uniformly prevalent in every towns and port cities. For the purchase of these pearls and stone beads the Roman sailors came to Tamilnadu and traded with Tamil merchants.

The salt pan industry was also an essential industry for human living. Without salt, no food is tasteful. This was the same situation in ancient period also. Hence, the people who lived near the sea ventured upon this business. The salt pans were called uppalams i.e. uppu + alam. During Pallava period, this industry was monopolised by Government. Salt costed more than paddy due to shortage if salt production. During Chola period this industry seems to have got royal patronage and encouraged much. Hence number of salt pane situated along the eastern coast are referred to in Chola and later Pandyan inscriptions. Large quantities of salts were transported to salais. i.e. bearing institutions during Chola period.

Pearl fishing industry is mentioned by foreign chroniclers and inscriptions. It is known from Kharavela king loaded with pearls along with other presents. The foreigners who visited Tamilnadu during later Pandya period had the occasions of witnessing the pearl fishing in Pandyan ports and sending the royal share to Madurai, the capital of Pandyas. For pearl fishing, these foreign auothers say, that the Pandyas had pressed into service the prisoners brought from conquered countries. It is said that the pearls collected from Pandyan ports had valued high by the Romans.

Bead making was another sophisticated industry in Tamilnadu. This industry had prospered in the western part of Tamilnadu especially from Kongu region. Kodumanal the corrupted form of Kodumanam of Sangam age appears to have played very vital role in the manufacture of beads of semi precious stones. There should have been large industries for the production of large quantity of beads and they should have engaged many labourers for doing this job. It is said beads made of quartz, agates, and carnelian

jasper had high demand in foreign countries. These beads were produced in different shapes such as globular, barrel shaped, banded and faceted.

Sugar canes were also grown for the manufacture of sugar and jaggery. The sugar producing industry is not much referred to in medieval period inscriptions as is mentioned in Sangam literature. There should have been crushers for squeezing out juice. The jaggery and sugar are mentioned along with other ingredients in inscriptions as offerings to God.

Pottery industry was the predominant industry among all. Potters were prevalent almost in all villages in order to supply vessels for cooking in houses and in temples. Different shapes of vessels were produced to meet various purposes they used different materials also like clay, sand, straw, paddy husk etc. In addition to cooking and storing vessels they were engaged to supply terracotta pipes for bringing water from a river situated at distant places and for discharging the waste water to a far off places.

They were also engaged in preparing terracotta images for worship. They were able to produce them either in hollow or in solid by using different techniques. The potters had produced vessels for marriage purposes as well as funerary purposes by using wheel and very few accessories.

For the disposal of dead they were engaged to manufacture urns and utensils such as cups, bowls etc. They had also produced beaked and spouted vessels, lipped lamps, pots with handles, dishes etc. for household usages.

In earlier period they had produced terracotta images of Gods, animals, toys etc.

The terracotta mother Goddess images collected from Melapperumpallam, a suburb of Pumpuhar and Tirukkoyilur, the torso of Senthamangalam, the hip portion of female figure of Korkai are the finest examples of earlier period. The Yaksha figures collected from Dharmapuri and Coimbatore districts, the head of Muruga from Manigramam near Pumpuhar are the excellent specimens of Pallava period. Mother and child images gathered from different parts of Tamilnadu and the images collected from

Senthamangalam excavation represent the artistic excellence of medieval period. The terracotta images of Konthagai near Madurai are the fine examples of Pandya's potters.

In later periods they were pressed into service to produce colossal images like Ayyanar, horses and elephants. It also seems that they were responsible for producing sun baked and kiln baked bricks.

Minting of coins was another most essential industry in Tamilnadu from the pre-christian era. There were punch marked coins from 5th-4th century B.C. These coins have been found in large number from various parts of Tamilnadu. Hence it is pertinent to believe that there should have been coin minting industries atleast at the capitals of ruling monarchs. These coins could have been produced either by the method of dieing or moulding. But we do not get clear evidence about the method of the production of coins. The solitary evidence for the production of coins by method comes from Kanchipuram wherefrom a few terracotta moulds of Punch marked coins, Sathavahana and Pallava coins have been unearthed.

The copper square coin of Sangam age seem to have been produced either by cast method or by dieing process. As said earlier the terracotta mould found at Kanchipuram suggest that some of the coins that were in currency during Pallava period should have produced by mould method.

The industry that minted coins was referred to in inscriptions as Akkasalai¹¹³ The earliest reference occurs in an inscription of Kodumbalur belonging to the time of Virachola Irukkuvel of 9-10th century. A.D.¹¹⁴. There is a village known as Akkasalai near Korkai, the ancient seaport of Pandyas. The temple of this village is called as Akkasalisvaram indicating the existence of Akkasalai there. This temple received a gift from Virapandya Achariyan a Kammala¹¹⁵. K.G.Krishnan thinks that Akkasalai might have named after Akkam the lowest denomination of coin prevalent during those period.

The treasury known as Karuvulakam appears to have also produced coins. It is attested from an inscription where in the following phrase is mentioned "kadamai irukkum alavil Karuvulakattu adikkum panam mudarpanamaga idakkadavadagavum".

Another term for coin mint was Tankasalai since the Tanka is also a term for coin¹¹⁶. The Tamil equivalent of it is Tangasalai, the mint street, one such street is in existence in Chennai (Madras) city.

There is still another word for the establishment of Mint known as Kambattattu anikkarar. This term is found used to denote the member of the mint establishment in an epigraph of Hoysala Ramanatha from Srirangam. This inscription is dated to 1261 A.D.¹¹⁷. Kambattu could refer to a furnace used by the metal workers and anikkarar could mean the persons who process the seal of the stake, according to P. Shanmugam¹¹⁸. There is a street by name Anikkaran street even today at Chidambaram. This is evident that there was an establishment for producing coins at Chidambaram also probably in later period.

The Process of minting coins is known from a solitary Tamil record of about eleventh century A.D. It narrates as "pon chuttu Vettichudu Ka(du)utta Kachcharrikaichchelvadu Kalanju-pertta tulaippon Uraiyan tulaiyu valuvadadu - gold called tulaippon subsequent to being burnt, cut, melted, cooled, current and cut to the weight of one Kalanju, neither wanting in purity nor in stamping. Tulai refers to the punch. Obviously this describes the process of minting punch marked coins to the required weight. It may also refer to gold ingots of the required weight, as there is no word signifying coin like Kasu"¹¹⁹.

A Pandya inscription refers to one Idarigansalai. Shanmugam thinks that this could also mean the coin mint¹²⁰.

There is one evidence for the existence of coin mint during Vijayanagar period in Tamilnadu. This mint was located at Tiruvaiyaru in Thanjavur district¹²¹.

This inscription states that a contributory payment to the temple at the rate of 34 panam for producing coins to the value of every 100 pon.

During Maratta period one mint was in existence at Tirumarahal. In 1783 A.D. a coin called Durga Dakka was minted. For the production of 5000 coins of this new variety it is said an expense of 104 Dakka and eight Ruke were incurred¹²².

The production of coin should have been under the full control of Government. Hence this work would have been entrusted with the royal blacksmiths known as Perunkollan.

The practice of mentioning the minting place on the coins as was in foreign countries seems to have not adopted in Tamilnadu. But due to the influence of Andhra Pradesh a few coins issued for the currency in Chalukyan country, by the Cholas appear to have the names of the minting stations. "In one type of gold coins found in Kavalavalli village of Nellore district, it carries along with the tiger and fish the legend 'Kanchi' is found in Tamil, Another type of the same hoard is said to carry the legend 'Ne' in Tamil taken to stand for 'Nellore' According to Nagaswamy, "if the readings are correct, the word Kanchi would indicate that in 12th century A.D.the custom of indicating the place of minting the coin has come into vogue"¹²³.

The custom of putting the legend indicating the minting place seems to have existed again during British period after a long gap. It is because of the influence of foreign merchant. We get the coins bearing the legends namely Puduceri, Karaikal, Palani and Madurai, etc. indicating the minting places of coins.

* * * * *

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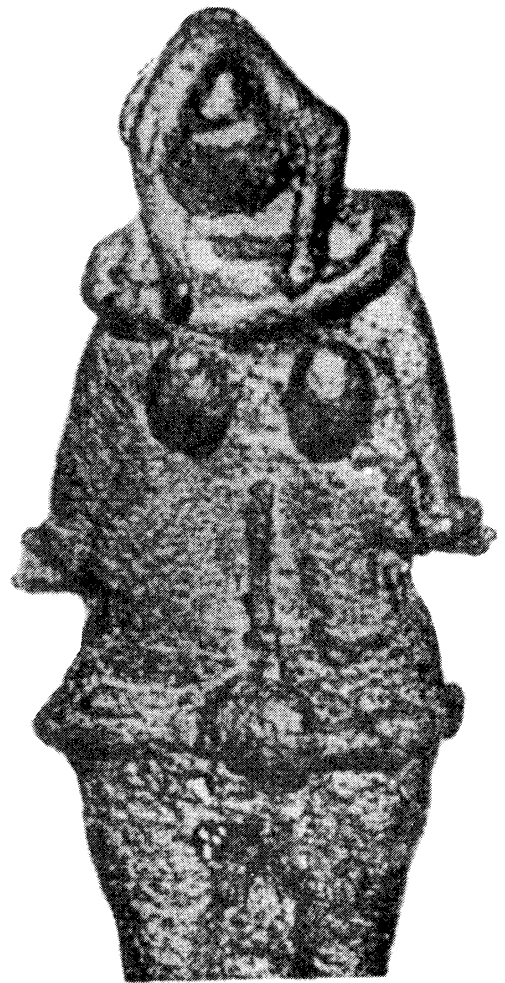
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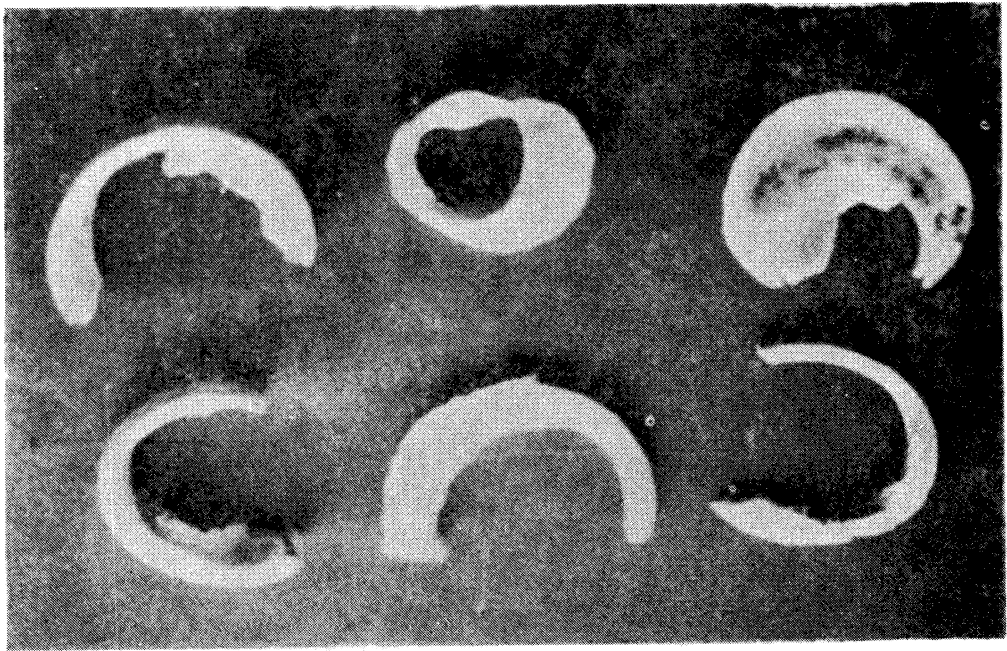




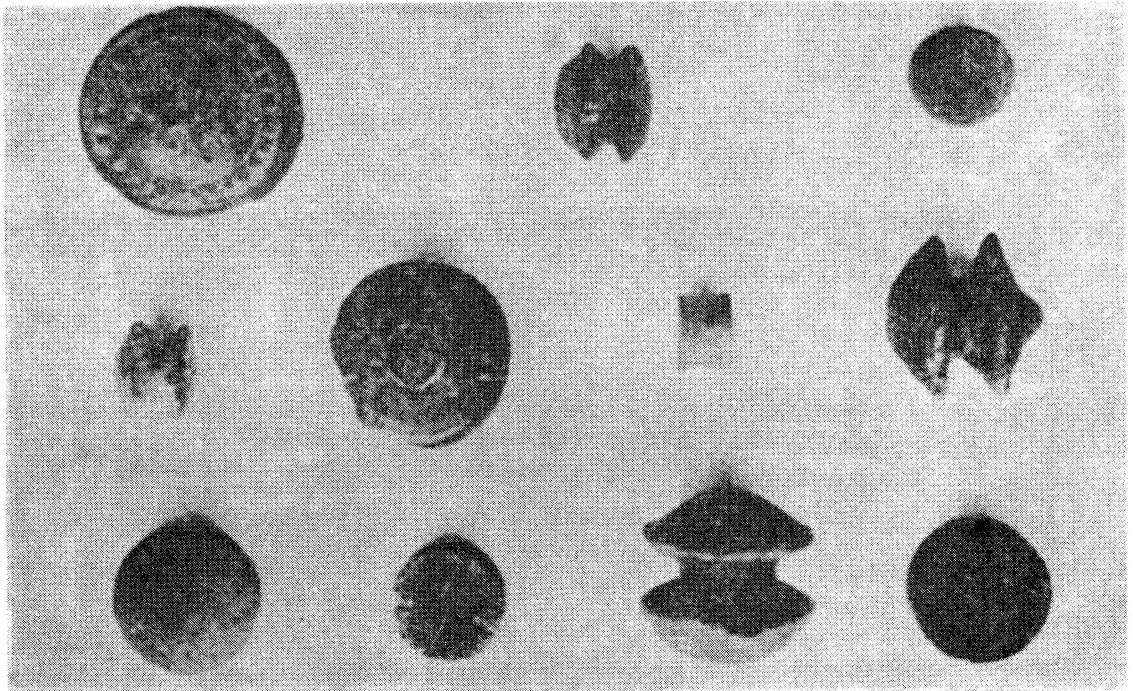
DHYANI BUDDHA
Bronze image,
Melaiyur, About 4th-5th Century A.D.



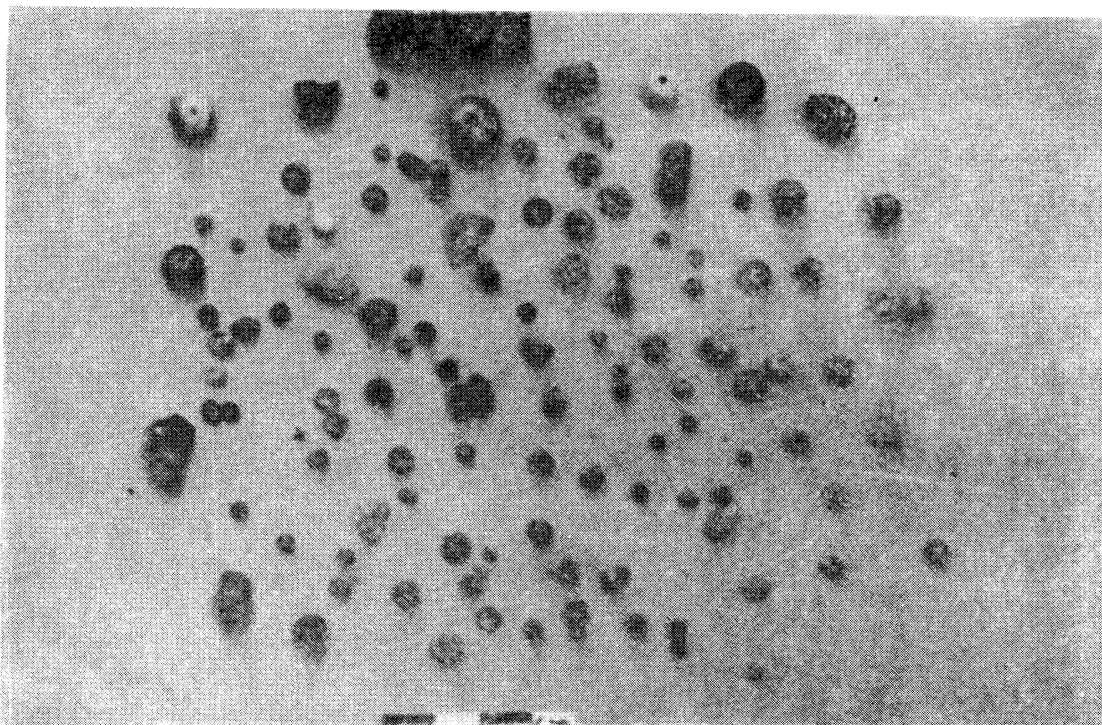
MOTHER GODDESS
Bronze image,
Adicchanallur, 7th Century B.C.



HEAP OF SAWED CONCHES
Alagankulam, 1st - 2nd Century A.D.



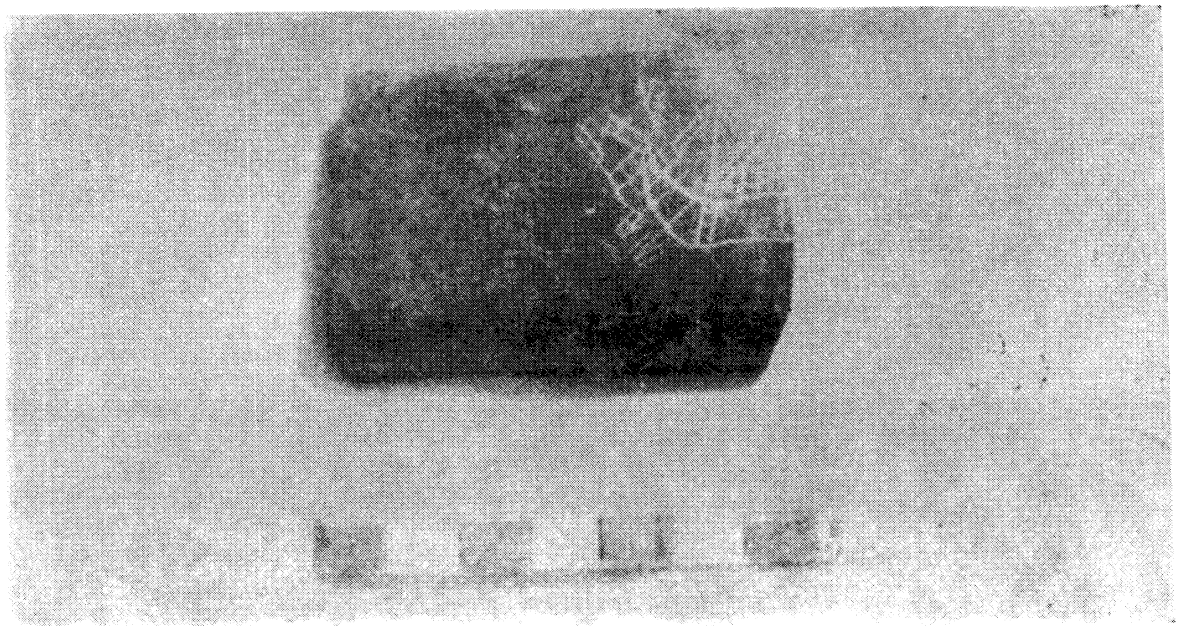
TERRACOTTA EARLOBES,
3rd Century B.C. to 2nd Century A.D.



SEMI-PRECIOUS STONE BEADS
Alagankulam, 3rd Century B.C. to 2nd Century A.D.



SAWED CONCHES FOR MANUFACTURING SHELL BANGLES,
Alagankulam, 1st - 2nd Century A.D.

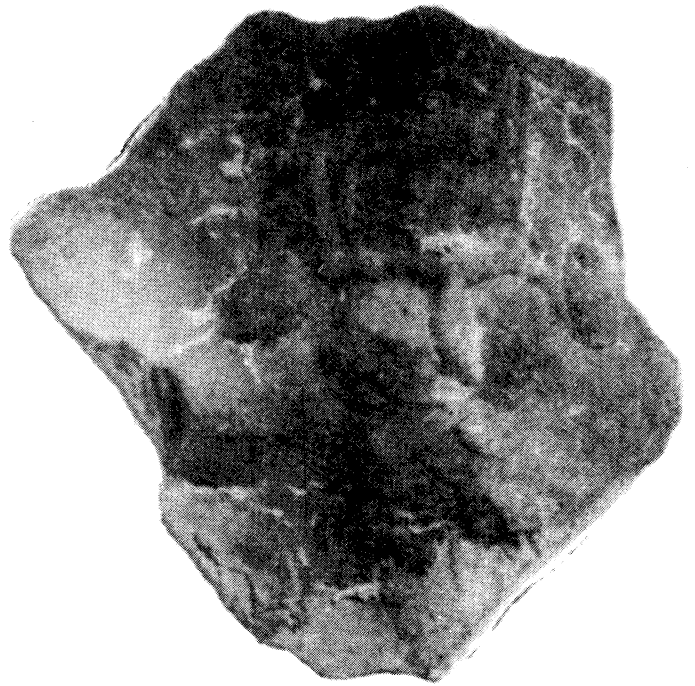


ENGRAVING OF A SHIP ON A POT-SHERD
an indication for boat and Ship building industry Prevailed in Tamilnadu,
Alagankulam 2nd Century B.C. to 2nd Century A.D.



DURGA
(Terracotta)

Melapperumballam, About 3rd Century A.D.



MOTHER GODDESS
(Terracotta)

Tirukkoyilur, About 4th - 5th Century A.D.

