Part II

Chapter II - Investigations Recorded

In his mode of work and in his general approach the archaeologist resembles in several significant respects the detective. Like the disciples of Sherlock Holmes, he seeks to recover the activities of men in past time from clues which compensate for their incomplete and often vestigial character by abundance and diversity. The correct interpretation of the data wrung by scientific means from material that may at first sight appear uncompromising still depends on the genius, perspicacity and breadth of sympathy of the investigator, but the range of information on which his conclusions are based will be limited by the technical means at his disposal.

........ Modern archaeologists have taken on something of the questing spirit of science: they no longer dig merely to accumulate data but to solve problems.

Grahame Clark in his Foreword to 'Science in Archaeology' ed. by Don Brothwell and Eric Higgs.
It has been recorded that the marvel of Kerala is that in spite of the heavy pressure on land, the virginal beauty of Nature is preserved almost in tact in the mist covered hills, the green plains and on the golden sea-coast. That way Kerala is a land of breath-taking colourful contrasts. In that sense the glorious sunshine of summer and the torrential down-pour of the monsoons that occur in Kerala have a charm of their own. Earlier we have referred to that this coastal area at the foot of the steeply wooded Western Ghats leave the casual visitor with the impression of happy country, but in reality it has become the problem child of the Central Government. Though out of place that is the case with archaeological explorations also.

The investigations recorded mainly deals with the rock art and engravings subsequently followed by the spread of megalithams in Kerala. The Indian cave art that may remain even today unexplored, even its existence is not well known. It is very often observed that the sand stone caves of Central India are found a great number of and variety of stone age paintings than in any other regions of the world. But this is true throughout the length and breadth of the world.
Now that the cave art study in India has reached one
gentury old, even the southern portion of the larger
Indian sub-continent has yielded stone age paintings.

As earlier referred to the study of cave art
and engravings, though not in its deepest measure
was undertaken even in Kerala as early as 1896. The
so called strange engravings of the Edakkal Cave,
Waynad has been recorded by P. Fawcett, who was the
Superintendent of Police, Malabar Division in 1896
A.D. (Indian Antiquary Vol.XXX 1901). It also re­
cords the observations of R.C. Temple (1899 A.D.)
Bruce Foote (1897), Mackenzie and others. Fawcett
has visited the site more than once the details of
which are all corroborated in the scholastic article
mentioned above.

Quite recently during the seventies and eigh­
ties myself and my friend Dr. P. Rajendran have dis­
covered Edakkal type engravings on the southern and
northern suburbs of Trivandrum, the capital city at
Perumkadavila and Tenmalay respectively.

The engravings at Thenmala has yielded micro­
liths too (personal communication). My research explo­
lations in the valley of Anju Nad has helped me to
trace out microlithic sites at Maraiyur and Chinnar
(a tribal settlement) on the banks of the Chinnar
river itself, 16 kilometres away from Maraiyur Panchayat
Panchayat. While tools were collected at Marayur at the basal deposits of the rock shelter itself, in the latter case they were found on a lesser elevation on the way to Chinnar-Champakad shelters. The explorations at all these 'Ur' (meaning land in vernacular) coupled with cave habitation, evidences in 'Kad' (again meaning jungle in vernacular) forms the major portion of this research study. Equally I have tried to include and incorporate almost all the megalithic sites hitherto located by archaeologists in this part of India.

Another prominent feature of the Anju Nad valley is that probably this is the only site in South India where we get the maximum number of megaliths in lesser floor-land areas. Further they are found in all their types as well as at all elevations. Of course in all districts of Kerala megalithic monuments have been located either as cists, chambered burials, dolmens or as urn burials. But in this tribal settlement we get even menhirs. Providence as it may one menhir-like column has been converted into monolithic inscription during historic periods.

My exploration in this valley mainly centred around the study of the three prominent cave art-rock shelters viz. Ezhuthu Alai, the cave of writing, Atta Alai, the cave of dancing, then the Pulachi-
Kumnatti Alai (the cave of Pulaya caste granny).

Investigations and study of the paintings, scenes depicted and tools from the basal deposits have rightly prompted one to think, but for the proximity of the present habitation with the descendants cave-art dwellers, the entire evidence of the stone age cultures of the Maraiyur man would have been available. Still surprisingly the neolithic like settlement even today are found in many parts of the Anju Nad valley.

Exploration has convinced that in the Maraiyur shelters we have got scenes of typical domestic life as well as social gatherings, battles, hunting, horse riding etc. These types of depictions have been found on the walls of the present day houses also. Another unique feature among the Marayurians culture is that we get dense forest growth and contemporary life intermittently.

Further during the course of official work-explorations in other parts of High Ranges it has been recorded that almost all the village-settlements have got megalithic monuments. In that sense the South Indian megalithism has its true champions here only. The Administration Reports of the state department have located stray sites in southern and northern districts of Kerala. Equally in a village
ROCK SHELTERS LOCATED

TAMIL

Tribal Temple

Veliyiri

Pulachalai

NADU

Udumalpet

Chinnar

Maraipur

Kizhandur

Swamiyar Alai

Dindikombur

Ezhuthualai

Attalai

Uvassali

Kanthallur

Mannavan Shola

Sethuparvathipuram

To Munnar

To Anjuna Valley

'Alai' referring to rock shelter (guha in Malayalam)
to village survey of antiquities by me when I was
Excavation Assistant of the State Department I could
locate megalithic evidences. During that period the
revenue officials of the Kottayam-Idukki districts
have given me even the iron-slag pieces, which indi­
cates the presence of crude iron-smelting process by
hired labourers or skilled blacksmiths. This type
of iron-smelting is reported in Assam-Nagaland region
too (N.SBN).

As already referred to the Maraiyur explora­
tion for this research was also due to the historic
background of this peculiar funnel shaped valley viz.
the valley of Anju Nad ( For supplying this informa­
tion I am greatly indebted to Shri.K. Maheswaran Nair,
the present Director of Archaeology, Government of
Kerala). The fertile tract of land known by the name
Nanchinad is generally as comprising of the major
portions of the present Kanyakumari District of Tamil
Nadu. A good number of records speak of Nanchinad as
consisting of 12 'Pidakai' extending from Mangalam
to Manakkudi, areas in and around Cape Comorin, in­
cluding the famous Suchindram. In the Sangam period
the Nanchil country was ruled by a clan of the Valluva
order and Nanchil Poranan is praised in the Puranamooru
in the high land torn verses by a number of poets.
The glorious country of the Nanchil Valluvaras is said
to be of two principal divisions according to tradition. They are 'Nanchinadu Thenvakai' or Nanchinadu South and Nanchinadu Vadavakai or Nanchinadu North. Naturally the Anju Nad valley in the High Ranges is generally taken to be the same as Nanchinadu Vadavakai. Tradition has it that the last of the Nanchil Kurava chieftains fled from Alagiyapandiapuram on account of the defeat he sustained in the hands of his enemies and retired to Nanchinadu Vadavakai.

Further the Kurava chief took with him the image of the Then-Nanchilingar and consecrated it at Maraiyur in the Anju Nad valley. Tradition does not preserve anything more about the Nanchil Kurava and his after days. Curiously enough the Thenkasinatha Temple at Maraiyur is dedicated to Siva and the deity is called 'Thennanchil Lingar' ie. Siva of the Southern Nanchinad. Equally there is a temple of Then Nanchil be Lingar at Puthugramam and it could be seen there even now just as in the case of Maraiyur. There is some connection between the two Siva temples of Maraiyur and Puthugramam of South Travancore as is inferred from four inscriptions found at Puthugramam. If epigraphical data is to be taken into consideration the Tamil inscription engraved on the rock to the north of the Siva temple at Maraiyur characterises the deity as Thirunashinappar ie. the lord of Nanchinad. This
custom of naming a deity after, installed or enshrined at a distant place, was in vogue in the South in ancient times.

What we have to infer from the tradition narrated above is that a ruler of the Nanchil country was driven out of his original home by his enemies and that he returned at last to the thick forest of the Anju Nad valley and established some habitation there. We have no ground to hold the view that it was the last of the Nanchil Kuravas who did it. Because, so far, the last phase of the history of the Nanchil Kuravas is shrouded in obscurity. Still it could well be inferred that the king expelled from Nanchinad should have either been member of the Nanchilkuravan clan or a monarch of the Pandya line.

In this connection a word has to be said about the origin of the name 'Anjunad' 'Anchunad' and 'Anchinad' as variously spelt by many. Probably the correct name is ANCHINAD which is of some historical bearing. It may be remembered that the matter was referred to earlier. In classical Tamil ANCHIMAN means—one who is humiliated or depressed. In South Travancore there was the customs of establishing 'Anchinanupukelidan' in this the limits of which a humiliated or depressed person enjoys all privileges. A corruption of this is 'ANCHI' meaning a place where
The valley of Anjunad has got settlements as well as habitations - both tribal and modern - at all its topographical levels.
Plate 16 General View of the Anjnad Valley -
  a) Koodakkad Painted Rock Shelter
  b) Pallanad Painted Rock Shelter - of
     Maraiyur Panchayat
Plate -17 The valley has got living Tribal Settlement Pockets a) as well as b) Modern habitation
dwells the humiliated. 'Anchi is again corrupted into Amsi in the local dialect of the South. Vira Pandya retired to the Anchinad valley with disgust, dishonour and despair. Hence the derivation of Anchinad. The interchangeability of the words 'maha' and 'msa' in ancient Malayalam linguistics can further be exemplified by the transformation of 'cherathuvamsam' into 'Chera Thiruvanchan' in the Iranputhur inscription of Udayanartha Thriabhuvanadovri. At any rate the legendary account of the defeat of the Nanchil Kuravan does not obviously pertain to such a very remote past. Taking all the above mentioned facts into consideration, and also because of the large influx of the megalithic monuments, I had to pinpoint my attention in to this valley of Anjunad. Chambered variety of dolmen we get in the largest number of groups scattered throughout the area, though it is equally available in singular number in almost all districts of Kerala. In Maraiyur, on the present habitation level itself we get alignment of dolmens, of course, some of them are converted into houses. This peculiar habitation mode is quite visible in all the south Indian sites of megalithic culture as well it is seen in the eastern portions of India viz. Assam-Nagaland area. Further the pottery collected by me during my research observation (excavated from the Church-compound
of Marayur) were also of pre-megalithic (see plate) viz. unburned variety of pottery succeeded by black and red ware on the upper strata. These are the reasons for taking Maraiyur as the nerve-centre of activity for this research project.

The Maraiyur Panchayat, of the said Anchunad valley is at an elevation of 3280 ft. mean sea level on the foot hills of the High Ranges located almost in the centre of the bus-service route (see map) through the forest paths connecting the nearest hill town of Kerala, Munnar (at an elevation of 6000 feet) in the Devicolan Taluk, with that of Udumalpet (the nearest railway station from Maraiyur) a small town in Coimbatore district of Tamil Nadu with an almost equal distance (44 to 46 kilometres from Maraiyur) to both these places. The only means of transport are two or three private bus services plying through the above mentioned route, excluding the jeeps and cars of the government officials as well that of the estate personnel for Munnar itself is a Panchayat full of tea and coffee estates of the Tata-Finlay Hills products (formerly Kannan Devan Hill Products Limited) covering the two sides of zig-zag road from Munnar to Maraiyur. Sixteen kilometre from Maraiyur on the way to Tamil Nadu lies Champakad, one of the Pilot Tribal Welfare centres. Three K.Ms.
away from this tribal settlement at a slightly higher elevation lies another two rock shelter which were also explored by me of which one yielded painting). That area viz, Champakkad, again on the banks of the river, Chinnar has yielded stone age paintings. Then again on the way to Maraiyur from Munnar, about 11 kilometres climb from the bus route, through steep-rocky cliffs occurs the next prominent rock shelter viz, the cave of dancing. Surprisingly enough, this rock shelter at Pallanad (name of the locality) coming at a higher altitude compared to the main one at Koodakadu, does not have basal deposits of stone cultures, though during all my trips I could find remains of fire-wood-ash, produced and made by the present day tribals, who even to-day utilise these for their natural habitations. With the result smoke particles of blackish tinge were visible on the walls of the shelter. This was equally true in the case of the Pulashhi Ali, the shelter at Champakkad too. On enquiry the local tribal boys coolly remarked to me that even today, practically every night they utilise these shelters as abodes for the purpose of cooking the snare caught animals like rabbits, pigs, porcupine etc. Painfully enough, even the prominent rock shelter, the one at Koodakadu, which was completely unknown to the local people, till my discovery
is also used by miscreants for their vandalism. All these years, we the Government as well as the Naraiyur Panchayat officials are making efforts to protect these shelters.

Further, now-a-days except the reserve forests (sometimes they too) most of these areas are being encroached upon, the estate planters as well as the sugar cane growers and also by the unauthorised encroachers and hutment dwellers resulting in the annihilation of the forests totally in the near future.

Situated neatly in a well settled manner on the eastern foothills of the Western Ghats with an average rain-fall, major portion of the Panchayat area is covered by dense forests with almost all the flora and fauna that are found in the tropical forests. Almost all the carnivorous and herbivorous animals like wolves, jackals, bison, elephant, panther, porcupine, bear, rabbit, antelope, deer, boar, tiger, monkey, snakes, leopards, horse, horned deer, cattle, buffalo, birds, fish, nilgai, mimosa plants, teak wood, sandal wood (santalum album) group between an elevation of 2000 feet to 4000 feet—best sandal wood, second only to Karnataka in growth and production) rosewood etc.

Naturally so all these animals and tree like formation together with men and women in single and
groups—indifferent postures, running, standing, grazing, hunting etc. are all visible as the contents of the paintings which we will be dealing with one by one. This particular one alone has so far yielded colourful paintings while others and even engravings on the inner surface of the dolmens just as in the case at Dindukombur area, a slightly elevated place on the way to Kanthalloor are all patinated white colour.

Another thing worthy of notice in this unique rock shelter, probably in the entire south, here we get such a crowding colour combination and styles denoting different periods. Further here alone is the only site where we get tools and paintings in one and the same shelter in Kerala. Though dating these prehistoric paintings is even today a controversial subject among scholars, all the attempted tentative chronology is applicable for this rock paintings. The styles represented here are so diversified and unique in the entire Kerala, that they are comparable only to that of the Bhimbotka variety only. Further because of the presence of stone tools, which I have collected from the basal deposits, I feel confidenty convinced that their chronology definitely is of upper palaeolithic to mesolithic down to early historic periods.
Then the tools collected by me viz., microliths can be compared with that of Dr. Rajendran 1976 who have discovered mesolithic sites in north Kerala which has been in its turn correlated with that of the teri sites in the Tinneveli District of Tamil Nadu and with (Zeuner and Allchin 1956) the prominent solitary site discovered by K.R.U. Todd, at Chevayur near Calicut. The discovery of stone age sites in the valleys of Malampuzha and Kanhirampuzha, the tributaries of the main Bharathapuzha river by Dr. Joshi and Dr. Rajendran have brought out microlith in the surface gravels on these areas. Their comparative study of the quartz tools with that of the Teri industries of the Tinneveli area of Tamil Nadu have certified the mesolithic culture of the Holocene. Many of them were made on crystalline quartz of rock crystals and were obtained from the terrace adjacent to the dam on the Malampuzha river. The raw material is vein quartz which in quality approximates the quarsite rock. Here the finished tools were found along with the cores fragments and quartz crystal or nodules, they seem to have been manufactured at the same locality. The tools comprise of points, borers or awals, burins, flakes, blades etc. Since the collection is small no attempt has been made to present the statistical grouping of the tools and rejects. D.H. Gordon (1958) has pointed out the microliths
as tools and mesolithic as a way of life are everywhere only as extension of the Upper Palaeolithic and that the former were without doubt employed by the neolithic farmers and continued to be widely used in the Bronze Age and in remote or backward areas, until the centuries of the Christian Era. This recognised tool-type of mesolithic culture, was a small stone artifact made from flake blade, sometimes tiny, often geometric in shape. The two groups of microlithic industries viz. non-geometric and geometric are found in the entire south India on scattered distribution which are that way collected in Kerala also. The non-geometric microlithic industry or quartz as well as the geometric one on semi-precious stones like Jasper, agate, cornelian—are now found in Kerala. Exploration of the Ponnani valley between Pulghat and Shoranur was partially undertaken by Sarvashri T.A.S.Iyer and K.Chandrasekharan who have noticed crude microliths mostly in quartz or crystal besides chert. Its position is of vital supreme importance in providing a natural route between Tamil Nadu and Kerala and it is quite possible that it played a pivotal role in prehistoric times (Dr. Rajendran). Typologically and technologically my evidence from the rock shelter also of the microliths stands in comparison with similar
industries from the Chevayur industry, from the few sites in Karnataka, from the tori sites in the Tinneveli district of Tamil Nadu and from sites in Sri Lanka.

As we are well aware, the microliths are found mainly in three archaeological contexts. Of the first variety they are found with Palaeolithic like tools, second found along with pottery from the surface and lastly, with cave deposits on the hillocks, rock shelters and sand plains. My research observations in the Maraiyur cave have yielded the microliths in situ, though not in its proper factory site, but definitely as a singular industry.

When the microlithic sites in Ponnani basin are located on the laterite surfaces or on gravels derived from laterite, my findings have occurred in the cave sediments, or on the surface of the bedrock. Though no fixed stratigraphy could be obtained in the trial-diggings and surfacial collection, unlike the Palghat industry, here the common tool forms were parallel blades burins, bladelets and similar artifacts shaped on flakes. Scrapers and borers are rarities and the blade element is neatly represented. Localising the industry, of course, except in cases, my research area is not advisable, for even proximal habitational abodes are subjected
to continual rainfall. Naturally so the sedimentation activity of the stream for the sake of obtaining cultural phases, chances are meagre and confusing. Pottery obtained from a nearby shelter of the present day descendants of the tribals are of quite recent, though, they didn't have any idea of monuments and the painted shelters, the surroundings area of which was their arena of wanderings for the purpose of collecting firewood, edible root tubers and others jungle produce etc. But in the case of Kumatti, Ala (the cave of grand old lady, without paintings) and in the case of Pulachi Ala with paintings, occurring at different elevations to the south-west and north direction of the first cave respectively the local people, as though on pilgrimage visit in one they have even kept symbolised 'swami' meaning master or God. Equally there is a Swamiyar Ala or a cave of Swami also. That way the valley of Anju Nad at its different elevations, have tribal deities, installed in open air and housed temples. (see plate).

Just as in the case of Bhimbetka, here in the valley of Anju Nad also are alignment of caves in the entire hilly terrain. Only the difference here is that, due to the movement of the present day tribals, the cave deposits have been continuously disturbed. In between here also, shifting back to the
microliths, we get tools, on crystalline or massive form of quartz veins in the local rocks apart from chest-chalcedony materials. Then with regard to tools types also it can be compared to almost all the known microlithic sites of India as well outside. The only problematic thing here is that we cannot divide this lithic industry in the case of Kerala into water-tight compartments as geometric and non-geometric. Further as in the case of dolerite-granite formation the assemblages are on quartz and on semi-precious stones.

In recording the investigation and explorations conducted in Kerala after I entered Government service might not be out of place for in the year 1979 I took a team of assistants working in the Department of State Archaeology to different villages of the Taluk of Mannarghat in Palghat District for excavating about 100 hero stones which were sunk deep in the surface (see page 49) soil, which the local tribals have taken them to be Gods. During that period, on the way to Anakatti (a bordering village between Palghat and Coimbatore) from Agali (a small village in Mannarghat Taluk) underneath a banyan tree, I could locate some polished celts which the tribals were worshipping as Gods. After convincing some of my local assistants, I have taken five celts (dolerite material) which is
kept in our departmental museum. That means a thorough exploration of the entire Ghat sections and the sea-coast line which borders respectively the eastern and western directions of Kerala will definitely yield the largest number of artifacts and tool assemblages of all phases of stone age cultures. For realising this optimism years of patient exploration will be the archaeological pointer for scholars engaged in the study of Kerala prehistory.

Exploration and excavation thus in the areas of South-central Kerala have revealed hundreds of megalithic sites spreading to all the variant topography of the land.

Though in scattered form equally the stone celt evidences of the Neolithic cultural phases are also available in Kerala. Here Antiquarium the emphasis should be given more on the present day settlement patterns of the tribals (for the house construction they resort mud-plastered walls for the houses as well as the bamboo-thatched roofing on the top) (see figure and plate) which even today remains in the hilly-hutment areas of Kerala and Tamil Nadu. The latter state has got evidences recorded by B. Narasimhaiah (1977) at Vattalnalai. Equally the practice of worshipping the neolithic celts are recorded at Attappady by me (earlier referred to). But like many other sites of
Plate 18

Note Bamboo house construction universal in Kerala
a) irrespective topography - Hillock or sea coast
   page 40
b) 

South India, here also we have not come across any habitation sites of the neolithic people who might have prepared and used the polished stone axes. In that sense the origin of this cultural phase in South India indeed is a great problem. Allchin has referred to them as cattle keeping pastoralists who preferred terrace cultivation. According to him the neolithic folk came from Baluchistan and Sind to the south following a land route. While another theory postulates the arrival of the pastoral community even through a sea-east route. At any rate the movement of the people of the Neolithic culture indicate convincingly from Iran and Central Asia towards the Indus valley and thence to the lower down south. The evidence at our disposal is too small to give a finer and fuller account of the way of life in the South (Narasimhaiah). In very many cases they preferred granitoid hills for their settlements which provided ample scope for terrace cultivation. This practice of terrace cultivation is even today in vogue in the hills and higher elevation of Anjunad viz. in the village of Kanthalloor (see plate). Equally on the way to Kanthalloor from Marayur, we get the topography and tall grass-cultivation which is similar and akin to that of Uzbekistan or of Central Asia. The availability of the trap-rock seems to have played a vital role in creating the
Plate 19a--Original settlers of the Anju nad valley worship--Kottavaig-Demi type images and trident like iron tools even today--Uur Vaasal.

Cheruvad Site
Iron Tools in Worship. Plate 20 (a)

See Note of Plate 19 (c)
C. Plate. Iron Tool in worship - Urvaasol

*Plate 20 (b & c)*
Plate 21—Curious it may, some terracotta deity figurines are seen in smoking fashion.
A-Nachivayal  B-Pallanad  C-Vellingiri  PLATE-21
Uncultivable rock terraces with present habitations.

Terrace cultivation closely akin to topography.
The valley is famous for its variant fauna and luxuriant flora-vegetation—the jungle is full of sandalwood (Santalum album) trees and gooseberry groves.
Mud plastered houses and floorings

Resembling Neolithic settlement
Uurvaasal-Andunad Valley
Plate 76 (a) Lady grinding and pounding Corn
Plate 27a. Quern like Stone Depressions

Plate 27b. Habitations and Settlement Pattern closer to Terrain and Topography
On the way to rock shelter, a fallen image, which highly weathered is located. It looks like the Mahishamardini Curga or that of Nataraja. On close examination of the attributes, reveals that it is a Devi Image.
Plate 29 & 30 Engravings of fox and tiger near the waterfall on the way to Koodakkad painted Rock Shelter
Plate 29B

Tamil Inscription with Engravings of Fox and Tiger. - Koodakad

Plate 30—Megaliths Excavated at Shencottah (Present say Tamil Nadu) By Vasudeva Poduval (1939) Travancore Administration Reports.
settlements of Neolithic man. Its abundance on the West Coast suggest the possibility of Neolithic man having found in Kerala a convenient region for habitation and settlement. Generally this cultural phase has got the presence of polished stone implements beginning of agriculture, pottery with proper cooking, domestication of animals (the dog appeared very early) Man had domesticated cattle sheep and goats. He was a huntsman turned herdsman of the herds once hunted and then was a distinct step in the progress of culture. During this period only he thought of having a permanent abode which was constructed with rough base and pyramid like top with thatched roofs and mud-plastered bamboo walls. This practice is found in the valley of Anju Nad in very modern houses.

The explorations recorded here show that in some cases even the Neolithic people also preferred hills and higher elevations though sites on the plains are also recorded. The pre-dominant racial element identified in neolithic human excavated remains turn to be of the Mediterranean Allchin prefers to call this race as the 'Dravidoid' with all its linguistic connotations. He feels that this Dravidian stock which appears to have been very widely spread throughout the Iranian plateau and even in Central Asia in pre-Bronze Age times, moved
into the Deccan from Persia through Baluchistan and Sind. This element which entered through the Karnataka region into the south might have been widely distributed and thus got mixed with the pre-Dravidian or Vedid race the people of which were in food collecting stage. Naturally so we do have the anthropological specimen of their descendants of this cultural phase. Talking about neolithic cultural phase, one thing we must bear in mind, of late it has come to be established that the engravings and rock bruisings are of this period even though lithic evidences are not collected from the basal deposit of the rock shelters where engravings are recorded. This is true in the case of Edakkal as well as the Peckings recorded by me at Perumkadavila in the taluk of Neyyattinkara of Trivandrum District. Here also proximity of the shelter with the present day habitation has disturbed the occupational floor-levels which ought to have been worthy of excavation. Details regarding the shelters can be discussed in the next chapter.

Further north from Neyyattinkara, in the capital city of Trivandrum I have excavated megaliths, about which also we will have to discuss later. That means then except the Perumkadavila site we have not come across any possible neolithic engravings in Trivandrum. Next that we have got the evidence
of rock engravings recently discovered by Dr. Rajendran (1982) at the foot of Chonduruni Hill on the walls of cave which he has dated mesolithic probably because of the tool assemblages viz., microliths which can equally be that of neolithic as is suspected in the case of Edakkal. Then the district has not recorded much prehistoric evidence though in the year 1967 Edamaruku Joseph, a well-known journalist has collected a neolithic cult (details are not available) at Erankavu near Thiruvalla in Alappuzha District described in his Malayalam work 'Kerala Samskaram' 'Kerala Culture,' as having authenticated as a cult from the then Director of Archaeology, Kerala Government. That means isolated tools only have been collected and no details have been given in his publication. Even then, these scattered evidences do record that we had all phases of lithic culture in this part of the land.

Further Dr. Ansari is of the view (after inspecting the Kerala Monuments and prehistoric evidences) that the Kerala meolithic man too like his counterparts might have constructed houses on flattened portion in between the boulders of rock shelters as well in the plains. Basing on that we can infer that here also we had neolithic cultural phase in between the mesolithic and the megalithic. Apart from
that the primitive customs that are sometimes prevalent even today the tribals such as the use of blow-gun, bow and arrow—all indicate the presence of neolithic economy which they have inherited from their forefathers. From that angle all recordings concerning the tribal culture of the valley of Anjnad singularly show the wider distribution of neolithism among the Marayurians as well that of the people of other villages of this valley. Another noticeable thing in archaeological investigations of the river coming from the higher elevations like Munner (the word meaning the area of three rivers—Munnu in Dravidian means three and Aar means river) they have not retained much deposits though deposits are in boulder-like pebble gravels with quite recent terraces. Then in the lower deposits of Maraiyur viz. Chinnar-ChampaTcad (tribal settlement—both ancient and modern) area also the depositional activity of the river is in poor form for the flow of the river is not terminated and diverted to side-wards, for it goes ahead to Coimbatore (Udumalpet) district with faster current. All these areas, topographically are of the hard rock-granite formations. But not very far from the Chinnar river, almost to the north-east we get rock-shelters in alignment both with and without paintings. On the way to the
shelters by crossing the river, we can observe the marked
difference in climate, environment and topography of
Chinnar, Champakad from that of Marayur because of their
peculiar geographical location at variant elevations.
But in all these areas just as in the case of Perunkadavila
search did not yield polished stone celts, though
the habitation represented all the characteristics of
neolithic cultural phases viz. that of the southern neo­
lithic cattle rearing agrarians economy together.

At the same time on the way to the first shelter
(Koodakkad area) slightly at an elevated position, where
we get the present habitation of the original Tamilian
population of Marayur, live, we get quern-like depres­
sion on the surface of the rock pounding-grinding the paddy
with the help of a lengthy club or cylindrical mace-like
thing. In almost all parts of Kerala, till recently until
the advent of the flour-mills, such practice was very much
prevlent. Ladies standing in rows, each one in front
of each quern-like depression with the thrusting mace-like
thing in hand will pound and grind the grains by throwing
the mace up and down in rhythmic speed by giving alternate
support with hands. This custom of grain-thrushing
and pondering is very much active in the remote parts
of Africa, though, in Kerala it is there in some age old
houses too. With regard to this practice throughout the
world, in very many cases, instead of the permanent
depression on the rock, we have got vessel-like containers either, stone, wood or bamboo. Probably that way, in Kerala at least Anjunad is the only site where we come across with open air stone-depression (like a common place) for domestic purposes. But unlike the Attapady settlements of North Kerala, we don't have tribal temples or places of worship with celts of different sizes as idols and objects of worship so far for Anjunad Valley has not yielded any neolithic celt or such, though, as earlier mentioned we have got the proto-type settlement of this culture (see pg.7).

It may be remembered that earlier it has observed that the geographical conditions of South-central Kerala (the former Travancore) are such that the primitive tribes have had to live 'in regions of plenty to-day and poverty tomorrow'. The refusal of certain tribes to accept the modern amenities, in a way has helped us to establish that those particular tribes could retain many of their ancestral characteristics archaeologically which are nothing but true manifestation of the neolithic economy. For instance members of the Kanikkar tribes have bow and arrow as their major weapon of defence and attack. Talking about the neolithic phase, one thing will have to be remembered is that in very many cases of the Indian primitive tribes either of the north or of the South, their basic nomadic-hunter culture is invariably of mesolithic-neolithic economy for the so called 'pygmy' implements had been very well represented in the cave paintings as shooting
with bow and arrow, the latter of which is very many cases were typical microliths. Equally for removing the hide of the hunted animals as well for scraping the flesh and carcase, these small implements were largely used. Dr. Ayyappan is of the opinion that almost all the primitive tribes of Kerala, just as their counterparts in other parts of India and abroad were largely hunter-gatherer culture. He further observes that civilization and modernisation in the case of these tribals were a curse, for gradually, with the advancement of culture they became coolie or manual labourers to the people of the plains who penetrated into their abodes in the jungle. Just as in the case of the Veddads of Ceylon, the Aranadanmars or Eranadannar of the Nimlambur forest recently were hunting with bow and arrow monkeys and rats etc. The assumption is that their most delicious food—the monkey-flesh was obtained with arrow—-in many cases stone-tipped, or metal tipped. Same is the case with the present day Muthuvans of the Anjunad valley for catching their carnivorous foodstuff, they go to the jungle armed with long and large arrow like spears and lances which are either fully metal or sometimes wooden spears the tip of which is fitted into metal points. Though Bruce Foote (1916) has done the pioneering work of collecting and cataloguing the neolithic artifacts of South India, unfortunately even to-day we could not get a continual regional distribution of the neolithic sites with inter-state correlation between Tamil Nadu, Andhra,
Karanataka and Kerala. He convincingly believed that the foothills and valleys of the Sahya ranges with its natural habitats and caverns were ideally suited for the neolithic habitation. But this is applicable for its preceding mesolithic phase also. This reality will have to be viewed from the fact that all the painted rock shelters, irrespective of their regional distribution have yielded microliths too.

Then some scholars simply refuse to all the mesolithic as a distinct phase of stone age cultures. But that argument is not very sound. Categorically enough, the valley of Anju Nad, my field area tool typologically may not be a neolithic site while from the settlement pattern, it is typical neo-chalcolithic cultural specimen. Again from the point of view of mesolithic phase, it has got cave paintings with microliths. Then there itself in the entire valley of Anjumad we get probably the largest collection of megalithic monuments. If so how came the void of palaeo and neo-cultural phases of prehistoric Kerala with a preceding gap each for the meso-and megalithic cultures. That means, south-central Kerala had all the phases of lithic cultures. Many years after Foote's observations Shri. Krishnaswami recorded a typical southern neolithic cultural zone for India based on tool typology. Its division was largely emphasized on the existence of polished stone axes. A typical neolithic habitation site at Paiyampalli in Tamil Nadu has been located by Shri. S.R. Rao which has prompted Dr. Narasimhaiah (1979) to excavate three sites Daimalai
Mullikadu and Togarapalli in Tamil Nadu, who could establish the fact that there existed a transitional neolithic culture in the hilltop ravines of the districts of Dharmpuri and North Arcot where much of his explorations are concentrated. He also has collected large number of polished stone axes from the people of the 'elevations'. But with regard to habitational evidence, the exploration could not provide any successful evidence.

Ironically enough in my field area, Anjunad has not yielded any celts or polished tools, it has got cave paintings, microliths of the mesolithic phase, which some scholars compare with the Late stone age tools, can very well be taken as a type site of South Indian prehistory. This is so because most of the scholars engaged in the study of Southern pre-history have virtually ignored the presence of even Kerala megaliths. Of late South-Central Kerala has yielded even upper palaeolithic tools and Lower palaeolithic tool types for north Kerala (discussion with Dr. Rajendran).

Lack of co-ordination among the archaeologist engaged in the study of Kerala prehistory, compels one to think that this part of the Indian Continent never had a pure neolithic cultural phase. Tools pecked and ground industry is kept as idols in the tribal temples of the Mannarghat Taluk in Palghat District. This is practically the case everywhere in the foothills of the Western ghatas. Nilgiri or Blue Mountain range also has
got such type of temple (William Noble 1976). The primary one taken for the study of neolithic phase of stone age culture in Kerala is that even modern houses, in some places in southern parts of Kerala, household articles includes large querns as well as grinding stone. This is found not only for domestic purpose, but are utilised by ayurvedic physicians in the preparation of herbs. So in recording the investigations undertaken by me in the valley of Anjunad we have to see that in every sense, we had a mature cattle-keeping and pastoral neolithic ceremony datable and comparable to all the recorded southern neolithic sites. The glaring feature of neolithic cattle keepers, in Kerala is that the meadows, grasslands and all time vegetation definitely might have attracted the neolithic people of Tamil Nadu and Karnataka into our state. Though excavated materials concerning neolithic economy is not available now, we can always look forward to the possibility of getting such evidences also in the nearest possible years. Further all the recorded evidences of the southern neolithic economy can be very well placed with the present inhabitants of the hill and hutment dwellers of the High Ranges. My area of research operation of the Anjunad valley will have to be employed again and again, a programme which I have got in mind because, probably I feel this is the only site in the whole of Kerala which retains nomadic and sophisticated
characteristics of human culture in the living prehistoric sites with its lively representatives.

In fact thousands of Megaliths varying structural forms, pattern of construction, burial practices are recorded in our state and that way noticed practically in all districts. Sometimes we are forced to think that this small geographical rim of India appears to be the richest for its megalithic cultural manifestations and its perfection in construction which is unique, even when exhibiting its fraternal correlation with megalithic monuments of other parts of our country. Further this particular valley in Kerala can rightly be called the land of dolmens. In all the villages of the Anj undad valley we get numerous types of dolmens and other megalithic monuments scattered throughout visible at all elevations. In the village of Maraiyur itself in one particular area we get about 600 dolmens on a hill-slope, viz. at KovilKkadavu in front of the Sahayagiri Hospital. In the same way in all villages like Kanthalloor and Keezhanthoor of the Anjund have yielded megalithic monuments. Then on the way from Maraiyur to the top elevation of Munnar, practically almost estates and forest-occupied area of the Devicolam Taluk has got megalithic monuments mainly the dolmen type. All the known and accepted types of megalithic monuments are recorded in Kerala such as the dolmenoid cists, capstone flush, stone circles, umbrella stones, hood stones, menhirs and urn burials. Equally been urn-burials have located, explored and excavated inside
and outside the hood-stones as well as in the contemporary habitation sites.

In Kerala in all the 13 districts including Pathanamthitta (the district formed on November 1st 1982) have yielded all the above mentioned megalithic monuments in large numbers and in some cases in solitary condition. Some are found on the gravel bed, some on the hill-slopes, some buried below the surface, some in clusters, some in isolated—all goes on record that this particular phase of Kerala History had a state-wide distribution. From Cannanore in the north to Trivandrum in the South all the taluks and villages of Kerala have yielded megalithism as mentioned above. Of course there also the largest number of dolmens come from the hilly district of Idukki. There again in the valley of Anjumad of Devicolam Taluk, we have got the largest living collection of megalithism.

Naturally so research observati ns discussed here largely amounts to this valley especially its key village viz. the Maraiyur Panchayat which can again be referred to as the cradle of prehistoric evidences in Kerala. Thus the investigations mentioned in this thesis will and should have a cartographic distribution. Along with these investigations, I have added on the recent excavations conducted by me for the state department of Archaeology, in an open air area, but within the courtyard of a compound in the busy habitation area in the heart-centre
capital city of Trivandrum. In general I have surveyed and studied only the possibilities of future gigantic explorations and excavations that can successfully and successively be undertaken in Kerala prehistory. At the same time the problems before Kerala prehistorians is that he should be thorough with the nature of the topography along with the inevitable that long-term projects of excavations may not be possible just as in the case of Assam and other parts of eastern India, for during most of the months of the year we have got terrible onslaught of the two monsoon viz. South west and north-east. Even then it is enchantingly surprising that all these monuments have survived these torrential calamities and have become abodes for the modern man too. In the whole complex of Marniyur dolmens, we can see families living inside it. Of course places like Bison Valley, Vandiperier etc, in the Idukki District too have recorded megalithic monuments of which some of them were excavated by Ward and Cowen (1806) and also by Sri. Vasudeva Poduval (1938). As such the department will be undertaking a bigger project of recording and unearthing all the megalithic monuments of Kerala especially in the High Ranges, But as I referred to my study here is restricted to the archaeological studies that have been carried out in the Anju Nad valley, Perunkadavila as well as at Sasthampalam (a city site in Trivandrum), the site of which latter have yielded alignment of urn burials within a square of 4 metres and in a depth of about 3 metres. In this site alone I have
unearthed Porkalam type urn-burials, larger ones surround-
ded by smaller one, some 12 in number, all in the same
stratums indicating black and red ware, the comparisons
will be made in the next chapter. Though I could not photo-
graph all of them completely (due to same official pro-
blems) I made observations and as far as possible photo-
graphed the burials even within the poor light and defec-
tive Camera (the matter which was reported to me by the
Government Photographer Shri.V.Madhusudanan Nair, who is a
very efficient field photographer and is in the field for
the last decade).

My investigations concerning Kerala prehistory in
the light of the cave paintings as well in comparison with
that of others southern rock engravings and brusings,
together with the microliths I do hope and pray, may give
clues for solving fresh problems concerning the cultural
continuity of lithic cultures of Kerala with that of
other prominent sites in the south India for young scholars
in the years to come, who are all eager to revel and
travel through the ravines of Kerala forests. The find-
ings and observations discovered here will have to be taken
into account simply for establishing the theory that Kerala
too had lithic cultural phase more nature and continuous,
though available only in scattered valley-terrains and
cave deposits rather than of river terraces. Equally the
megalithism of like its preceding cultural counterparts
does not limit itself to particular topography or habi-
tation sites. Side by side with this, one will have to remember the fact that it is not necessary that almost all the megaliths should record iron age implements and vice versa. This is true in the case of Black and red ware pottery too. In the light of this my humble observations may be evaluated. Differences of opinion may definitely creep in with regard to the date and habitational purpose of the megaliths. Still emphatically one thing we can declare that Kerala at its southern end geographically the present south-central portions had better archaeological yields resulting in a nature phase of human cultural progress and development.

The distribution of megaliths occurring in the valley of Anjunad have retained all the characteristics which are universally accepted in construction and its architectural value. Naturally the observations have tempted me to believe that they were habitational abode-cum-burial which can in other words be remarked that the people of this culture believed in life after death as well as in ancestor-worship. Another glaring thing which comes for discussion is that the date of the Asoka edict of Brahmagiri and its correlation with the megalithic phase, which may be illiterate representatives of that culture. In this context the findings of Haimendorf (1950) and that of Wheeler (1945) are rather baffling. The observations of the former were that the megalithic people were Dravidian speakers. At
the same time early Sangham literature records that before the beginnings of the Christian Era, the Keralaputa kings were Aryanised. Any way the cultural migration problems occurs in the sense that Kerala megaliths might have intro­duced into the late neolithic, for, some of the burials exposed of the given copper and bronze vessels instead of iron and pottery of a better ware rather than the standar­dised black and red ware. But surprising thing is that so far in Kerala prehistory, we have not come across a site where we have got all the lithic phases in one and the same stratigraphy either by way of paintings, tools or settle­ment evidences. Still in the case of valley of Anju Nad this has been achieved at least partially. The present, investigations thus in the field of Kerala has considerably contributed in understanding some of the problems pertaining to our mesolithic phase with microlithic industry and the wide-spread distribution of the megaliths throughout the length and breadth of one state.

Thus the evidences collected during my research observations in the few sites, I admit, requires thorough systematic cataloguing and codification either it is meso­ or megalithic evidences. Right from antiquarian culture of the prehistoric Kerala down to the highly sophisticated urban civilisation, our progress, with all its moderni­sation was one of ups and downs— one step forward two steps backward— this type of achievement and attempts to make
the surroundings and the world a better place to live in, have been misfired sometimes though not totally. This habit ofarrison which is human might have crept into my investigations and recordings also. So repeatedly only one thing claims that the findings here too have proved the existence of prehistoric habitations in the valley of Anjunad as well as in the busy moving habitational-residential areas of the capital city itself viz, Sasthamangalam, Trivandrum. Apart from that details, I have tried here to examine almost all the archaeological works that have been hitherto undertaken in this part of the land. Area wise, the Travancore portion had a better authentic recorded history though from the prehistoric standpoint of view, not much was covered. But at the same time as early as 1928 megaliths were recorded even at Pulimath (T.K.Joseph) 21 miles away running north of Trivandrum.

Thus almost all the investigations till now undertaken by the scholars who have worked in these areas, I have tried to corroborate them along with my observations in the High Ranges for bringing out a continual prehistoric phase. The tribal cultures mentioned concerning different tribes of Travancore and Cochin by Krishna Iyer were of immense help, when I undertook my explorations. Another notable thing is that the local people had a positive attitude to my mission because of which I went on exploring more and more rock shelters in the Anjunad valley. Unfortunately not all of them were painted shelters. Even
then the peculiar nature of the rock shelter gives the impression as to how they have been converted into modern hut-like dwellings. For instance Mayilswamy, a certain leader of the Muthuvan tribes in Maraiyur had his rock shelter had all the modern amenities including a transistor-radio. Still outside it was a plain rock concavity which was artificially seated with mud plastering with proper provision for ventilations. His abode was large and spacious enough to accommodate at least two families. Though he objected to photography, I could record that the floor of the shelters was clean and neat and was smeared with cow-dung. It had bamboo chairs, vessels, utensils, provision for granary purpose, a cot and children and fowls were wandering and playing, cows and bullocks grazing nearby—all at an elevation of 5000 ft. they have trained even the animals to descend and ascend.

The valley of Anjunad is like a funnel shaped geographically and naturally so it has got settlement at all levels. Cattle rearing economy is confronted in all these strata of habitations. The dense forest growth also gets mixed up with the present day settlements. Perhaps the lives depicted in the different layers of the Koodakad and Pallunad shelters can very well be taken as the forerunners of the modern Maraiyurians. This is so, because I could watch and observe the tribal dance and music festivals of the Muthuvans (I had the good fortune of attending when I visited their 'kudy' or settlement) that the movements
of the body of dancers, gestures etc. all represented more or less akin to the portrayals in the paintings of the uppermost artistic imposition. Similar to that is the engravings which are found in another site at Dindikondur on the way to Kanthalloor from Marayiyur. Here we get them inside the dolmens, deposits of which are heavily disturbed for every day practically they (the local people) blast off the parts of the dolmen for their household construction purposes.

If the dolmens of Anju Nad have been disturbed by the common people or miscreants, the megaliths at Sastha-yield mangalam could very few iron tools, because the surficial area was under high pressure of digging movements the result of which also stratigraphy was mixed up. But at the present habitation level (about 3289 Mean Sea Level) of Marayiyur in a church compound, I excavated an urn burial as well as a dolmen. Of which the earlier had broken iron implements. Similar rusted iron implements were supplied to me by the revenue officials of Udumbanchola and Nedum-kandam in Idukki (see map) who informed me on my inspection at the site that the people who came across the burial jars have smashed it off and so the result. Then at another site at Vellappara in Idukki, near the dam site a half-submerged dolmen was recorded by the Collector of Idukki, who said that his assistants also have got earthern-ware fragments of burial jars, one of which again
has yielded rusted iron implements. Together we inspected the sites, to my utter disappointment and dismay the local population have converted the broken fallen dolmen into a temple by keeping a Nagayakshi image of recent times and thus prevented any more archaeological ventures.

This is another type of human vandalism exhibited by the common people irrespective of their being literate or not. On the one hand they may worship the celt as idol and will treat dolmens to be temples and on the other they will destroy all the possible evidences of such monuments for fear of the area being acquired by authorities. Because of these above mentioned reasons most of the archaeological missions do not serve their proper purpose. Then with regard to the funerary customs the modern Keralites too (Hindus only) cremate the dead and on the 3rd, 5th or 7th day collect the bones or ashes from the cremation ground and keep it in a mud vessel (a small jar preferably) which in its turn will be installed inside a house-like chamber. This system is called the 'Sanchayana' which might have been adopted from these tribals. From that angle the megalithic monuments are sepulchral chambers as well as every day living shelters too. Sreedhara Menon states that the stray discovery of neolithic tools from some of the river beds or fixing up of the cultural horizon of microliths do not give us any positive clue concerning the earlier phases of stone cultures like the palaeolithic or the neolithic and their settlement distribution. Sincere attempts have been as far as possible
to refute the argument and establish the fact that Kerala had pre-megalithic cultural features in its archaeological sphere. At the same time Rev. Fr. Heras and Rawlinson feel that during the proto-historic period, contemporary to the Indus, there was a 'Malabar of the 'rain clouds'.

Same is the case with the date of the megalith as to whether they are earlier to iron age or contemporary. The Sangham literature contains references concerning the patterns of disposing off the dead by burial as well as by cremation. Manickavasagam Pillai (1973) feels that burial was done in burial urns. At the same time funeral pyre is also mentioned in classics. If the Manimekalai reference is to be believed P.K. Gopalakrishnan (1974) is of the opinion that the people who cremate thirumam than might have intruded into the greater megalithic mainstreams of South India. He further quotes the Tamil classic that there were five types of funerary practices in the Tamilakam which included Kerala. They are Suduvor (people who cremate their dead) Iduvor (people who throw the dead to eagles and vultures just as in the case of the Parsis of Bombay whose origin is from Persia) Thottukalippor (that set of people who bury their dead) Thanvayil Adaipor (who prefer to keep their dead in sepulchral chambers) and lastly Thazhiyil Kavippor (burying the dead in urn burial). If the megalithisms can be taken as the continual cultural concord of the Dravidian phase, then definitely the whole of Kerala can boast of having all these practices even today.
except the second one. Charred grain-like particles or burned substances have been recorded as having got the megaliths of the High Ranges. That means burial might have been done after burning (similar to the Sanchayana ceremony). The Todas of Nilgiris (Blue Mountains) practice both these types of funeral ceremonies. Naturally we cannot say emphatically burning of the dead started with the arrival of the Aryans. William Noble (1976) is of the opinion it is most logical to relate stone circle to herdsmen and dolmens to gatherer-hunters or late farmers. This inference can be partially true even in the case of the people of the valley of Anjunad and proximal areas of my investigations. Embarking on that we have to establish the fact that almost all the tribal settlements of Kerala had their predecessors even prior to their megalithic ancestry.

Further it may be made clear from the investigations of these areas, Kerala had even the pre-Dravidian cultural heritage continuously and consecutively existing in the Hill tribes of the former Travancore area late Shri Mammen (1942) feels that the Dolmens found in the valley of Anjunad as well that of the High Ranges may be taken to represent the Thumuli of the iron age, and present great similarity in structure to those existing in other parts of South India showing a uniformity of culture, which is pre-Dravidian in character and associated with races definitely not Aryans. In this connection, it may be observed from the investigations that practically all the hill tribes of south-
central Kerala except a few like the Kanikkar, bury their dead. This suggests that burial was the older method, which was later on altered because of the contacts with intruders who brought the practice of cremation into the tribal fold.

In my own observation at Maraiyur, at an elevation of about 4300 M.S.L. I could witness the post-funeral functions of a Muthuvan in a settlement called Kunnalankudiy (kudiy in the vernacular means tribal settlement). Here the male members had to participate individually in the preparation of the grave once the priest-cum-leader had given some instruction as though in the form of a funeral oration. It was equally funny enough to see that most of them had wrist-watches as well as their traditional earrings. Moaning and Mourning were very much there, of course, the youth seemed to enjoy the whole procedures. Grief concerning the departed soul was only with the older members of the tribe. Even chanting of songs in praise of Goddess to save the soul of the dead was also going on. During conversation they admitted that now-a-days in imitation of the people of the plains, they are also resorting to cremation. But this may be from the point of view of conveniences for by living up in the elevations, burial custom may be a problem.

Another thing which I could notice during my field-observation is that the tribals of Maraiyur had their own distinct dialect (is true only in the case of Muthuvans).
wherein Telugu words are also there though they speak a mixture of Tamil and Malayalam. The rock shelter at Pallanad (with white paintings), on inspection, was found to be a permanent resting place for all the cattle-rearing people of the Anjunad valley though by terrain, topography and proximity it is quite far from Maraiyur. Inside this shelter, there is a small natural tank where water is stored which comes as percolation of the rocks. Details, we will be discussing later.

The investigations recorded here and the area explored by me in the two suburban areas of Ten Manchinad and Vada Nanchinad forms the subject of discussion here. So this chapter gives cartographic distribution of my field area along with the sites which come under this geographical purview. Again this study covers the south-central portions of Kerala, when the question of comparative study comes we will be able to mention the megalithic excavations conducted by the Government of India officials in the districts of Trichur especially in that famous site of Cran/Venere or Kodungalloor.

Then a geographical distribution of the hill tribes of the former Travancore area also will have to be recorded along with this. After that a comparative map study distribution of the megalithic-rock paintings is also included in this discussion. Concerning the southern neolithic problems our only correlating evidence is the settlement pattern of the Anjunad valley and the engravings
in Thamalay in the month of July this year itself by scholars from the Deccan College is also included, though details are under study regarding the engravings and tool types.

This account of prehistoric research observations is summarised with the optimistic note that in the near future we will be able to confront archaeologically with the lower-paleolithic tools in my field area and also I will be in a position to prepare the true chronology of the Travancore specimens of Kerala prehistory in the earlier phases of his true manifestations.

Undoubtedly Kerala has a culture with certain distinct dynamic features which has got deeper and more intimate affinities with South India and that of our country in general. To describe this part of the land in a nutshell, contrast-attractive 'This land of placid lakes and shimmering lagoons with its variogated natural scenery' had definitely a glorious antique past too in the Indian prehistoric phase. Limited but sincere attempt has been made to prove the above and unravel the myth that archaeologically Kerala is something more than mere megalithic playground. The matter of controversy is catching the attention of dedicated and unbiased scholars engaged in Kerala prehistory, I feel contented that the purpose of this investigations recording is fulfilled,
Chapter IV

PROBLEMS DEALT WITH

Kerala and Indian Prehistory - Prospects and Retrospects

a) Mesolithic: Investigations recorded in the valley of Anjumadu - A typical Prehistoric Cultural site in Kerala starting with Mesolithic.

b) Cave Art

c) Neolithic Phase: Observations made at Perumkadavila - A Neolithic cave site comparable to Edakkal.

d) Megalithic Phase: (a) Story of Megaliths - A brief sketch (b) Author's recent excavations at Sasthamangalam - A typical Megalithic site in the city proper.

Antique Personality of Kerala - Conclusion.
Research on Kerala life has, long been scientifically oriented to subserve the exploitative needs of economic development of the rest of the country rather than to meet its rational and local needs. It had an attraction all its own for observant and not too disinterested scholars from outside. It was therefore invested with a pragmatic character since several decades past, thanks to the farsightedness of certain administrators (Nair-1973). A slender green crescent tucked away at the further most south western point of India, Kerala lies along a 590 kilometre sun drenched coastline of the Arabian sea, banked inland by the mountains rimmed border of the craggy Western ghats, were never found unsuitable for the activity of the Early Man. The marvel of Kerala is that in spite of the heavy pressure-on land 'the virginal beauty of Nature is preserved almost in tact in the mist covered hills, the green plains and on the golden sea coast (Mayer 1959).

Even prehistorically the Chera Dominions, (The present Kerala) included the best portions of the Dravida country had, the boundaries of which are variously defined by ancient Tamil authors as to 'Pulnay Hills in the north, the town of Paroor in the east, the sea about Cape Comorins in the south and the range of great mountains on the west, sometimes extending north boundary upto Coorg. (Shungoony Menon 1878). In demarkating the former Travancore viz. the present South Central
Kerala, Dr. A.C. Burnell (1874) recorded in his palaeography that the kingdom in this ancient land as it existed in the early centuries of A.D., extended over to Mysore, Coimbatore, Salem, Malabar and Cochin, Tondainadu and it was one of three great Dravidian kingdoms and was divided into the eastern and western Chera, the former extending up to Madras. At that time it had cities and towns like Thiruvanchicolam (Sree Vanji Kovilakam) the residence of the prosperous Vanji dynasty, Colicode (Kozhikode) and Kollum (Quilon) too were included.

That way the contemporary Hindu geography corresponded very well with that of the European chroniclers particularly in regard to the shape of the earth, that Jemboo Dwipa (Asia) in which was included the Bharata Khandam (India) which had Chera and Kerala and was the most southern and largest among the three Dravida kingdoms viz. Chola, Chera and Pandya. The western part of the range of hills called Sahhyen must have been a tract of land at the creation of the earth (legendary beliefs), but had been submerged in the sea.

"Can there be a doubt that this legend chronicles, in the style of poets, the effects of the volcanic agency on this coast centuries ago; first that there was once a subsidence, probably sudden at Gokurnam and secondly that there was afterwards a perceptible uprising, most probably in this case..."
gradual, of at least some portion, if not of nearly all the coast between Gokurnam and the Cape"

"The whole appearance of the coast of Kerala wherever at least we find the low lands and back waters would appear to indicate that it has thus been raised certainly during the present era and if, as our legend would seem to tell, this happened under the eye of man, it becomes the more deeply interesting. Nor can we forget that even now there are decided evidences of unstable "equilibrium" along the coast line. The sea at Alleppey is considerably further from the town than it was but years ago, which shows that the shore is rising; the same is the case at Cochin to an extent that we think can scarcely be accounted far by accumulating sand, while to the north of Cochin, the sea is as evidently encroaching, and in some parts has for years past caused great destruction of the property. Moreover we are not altogether strangers in Kerala to the shocks of earthquakes; in 1856 especially repeated shocks were felt; in 1823, 1841 and 1845 shocks have also been recorded at Trevandrum. In several cases the shocks seem to have been propagated from the northwest ----"

The fact of the land between Gokurnam (present Goa) and Kanyakumari having been submerged in the Ocean at one is testified to by the Brahmani Purana in which the Parasurama
is described as having proceeded to Gokurnam and prevailed upon Varuna, the Neptun of the Hindus to recede to a certain distance between Gokurnam and Cape Comorin, the result of which is Kerala, a story lacking authenticity (referred earlier).

"All these facts would appear to favour the conclusion that the lowland of the Malabar coast have been raised from beneath the sea level by subterranean forces and that this happened in all probability in comparatively modern times".

"A writer in the Cottayam College Quarterly Magazine in its issue of July 1866 concerning the geomorphology and Prehistory of Kerala" reproduced by Sroupsamy Menon 1874

While trying to trace out the cultural history and prehistoric contacts of the ancient Kerala coast, Krishna Swamy Aiyangar (1918) has identified the Cera capital of Vanchi with Muciri and says this is modern Kodungalloor (Craganore) where excavations were conducted in the seventies of the century, at a site called Cheraman Parambu (refer chapter II). But there has not been one stratigraphic dig on the whole coast of Kerala or any other site in this part of the land until the year 1974.

While describing about the Chera kings of the Sangam period' Sesha Aiyar (1937) also recorded the maritime and trade
activities earlier to the findings of K Aiyar. The trade thus mentioned in the Sangam and Greek literature is evidenced by the Roman coins. Locating the ancient geography of this past, "Chera and Kerala denote one and the same country," 'I have no doubt' so says Dr. Caldwell (1956). Equally P.T. Sreenivasa Aiyangar (1929) is of the opinion that the ancient 'Chera' people formed one of the principal sections of the Dravidians, who had trade relation with the Sumerians. Further he records that consequently the South Indian Dravidians' lived near the sea and were very familiar with the roughness of the sea. Equally proximity with the sea made them excellent boat builders and skilled fishermen. Naturally so he feels that the greater amount of coastal archaeological evidences should be found in the coastal areas of South India especially portions of Kerala and present day Sri Lanka.

In the light of those observations it may be evaluated that the ancient Kerala definitely had a mature antiquity. Though, extensive trade existed from times immemorial, between the Mediterranean Cities and the ports of Kerala (discussed earlier) neither the Phoenician under Hiran, the Jews under Solomon, the Syrians under the Selucids and the Egyptians under the Ptolemies took the open route. At least convincing evidences have not been corroborated either literary or archaeological. Still it seems that certain that the
maritime enterprise of ancient India was in the hands of the early Keralites. (it may be assumed) They gave rise to the race of sailors who carried Indian goods in boats to Africa and Arabia in the west and to Malaya and China in the East.

Elsewhere we have discussed that one enchanting characteristic of Kerala society, throughout centuries is the spirit of toleration shown by Kerala Administrators. The result of which the Phoenicians had come to Kerala in quest of ivory, sandalwood and spices and centuries later we find the Portuguese, the Dutch, the French and then the English, not ignoring the earlier presence of the Hebrew, Greek, Roman and the Muslim traders. But sorry to record so far Kerala archaeology could not fully corroborate all these continually and correctly. The result of these it may be remembered that Kerala has been described as a living museum of archaeology, ethnology, culture and religion, presenting uniqueness at every stage of developments. In this context the dolmen builders represented by the Kurumbars, a section of Kerala tribal society marked a milestone in the progress of human intellect showing its universal distribution coupled with the megalithic culture of Kerala have convinced Krishna Aiyar (1968-1970) to believe that culture spread from Kerala towards the west and east (a matter open for discussion). He adds that there is plenty of evidences to show that a large portion of the ancient trade between India and western nations was carried on in Indian
boats. Equally he laments, owing to paucity of archaeological excavations and resultant evidences we cannot justify the statements. This is true in the case of Palaeontological and fossil evidences.

Addressing the British Association for the Advancement of Science, in 1897, Sir John Simmons referred to South India as a cradle of the human race. Some other scholars observed that civilization first arose in India, associated with that of the Dravidians, which later on was taken to Mesopotamia which in turn became the source of Babylonian and other cultures of the ancient, which were antique. Kerala too has got some relevance because of its sea-faring activities. Oceanic tradition and navigation will have to be taken into consideration in this context. Many are of the opinion that the pioneer Kerala dolmen builders might have moved from the west coast of Kerala. Morgan (1934) has corroborated the megalithic migration and mobility over the European continent over the north coast of Africa and that of South India. Of course all these have not at all been justified or clarified by the archaeological explorations or excavations carried out in Kerala and naturally so till the advent of this decade, from the archaeological point of view was a prehistoric vacuum concerning earlier phases of culture prior to Kerala megaliths. Of course with due humility permit me to record that when I make this statement I am not at all underestimating the work of scholars, though not archaeologists.
like Caldwell, Matteer, Slater or any such contemporary researchers interested in recording the antique past as well the ancient heritage of Kerala. This land of breath-taking colourful contrasts has preserved a graceful harmony of all the native and foreign cultural elements—a kaleidoscope of vibrant colours with micro.-wave towers embedded amidst the green finery of paddy fields, has retained its cultural novelty much of which is lost in accidental and ignorant vandalism of the present day inhabitants.

Kerala has in her population, peoples of various grades of civilization from the most primitive to the most highly advanced. While trying to make a complex and comprehensive study of the ancient inhabitants of this part of the land, Krishna Aiyar considers Kerala, on account of its peculiar geographical environment as the spring board of the south from which culture diffused. He has postulated his own basic views concerning the dolmen builders of Kerala and their mobility, the trade activities of Kerala navigators with Babylonia, Assyria, Greece, Rome and other lands from ancient times, the Nayars of the Naga worshipping race, and their arrival and racial admixing with the Nambuthiris of Aryan descent, the arrival of the Izhuva from Jaffna (a subject of discussion).

That way Kerala Ethnology has got its individual fascinating charm. The web of Kerala social life has been woven by using
divergent cultural – anthropological threads. The archaeologists and the anthropologist have to co-operate with each other in the responsible task of bringing the facts of social existence of Kerala's past to light. Ptolemy and other Greeks mention more than fifteen towns along the coast of Kerala, while Sangam literature and other sources of tradition (Sreenivasan 1960) indicates the existence of at least about a dozen or even more. Now that Kerala has got early Mesolithic (Rajendran 1979) and late inland Mesolithic (Thampi) periods of Kerala, it may be remembered that the cultural Kerala had coastal contacts too, which in the years to come must unearth the reality and credibility of the Parasurama and Agastya legends.

A. Mesolithic

Lithic maturity of Indian prehistoric archaeology was authenticated by Robert Bruce Foote with the discovery of the First Palaeolith from Pallavaram, about a century and half from now, (1863) periods of successive and successful explorations by him and his 'companions' unravelled and unearthed the hidden prehistoric treasures of the Southern and Western Parts of this sub-continent occurring in the present states of Tamil Nadu, Karnataka, Andhra and Gujarat (Foote 1914). Tragedy as it may the portions of then Travancore, Cochin and Malabar areas (the present Kerala) did not somehow figure visibly in the recorded past of Indian prehistory, earlier to Megalithic phase, through
the findings of Coggin (1917), Cammiade (1924), Cammiade and Burkitt (1930) without forgetting the Urn Burials of Waynad. (Cammiade 1930) practically the whole of India yielding Stone Age and other prehistoric cultures. Still a systematic exploratory expedition on the lines of the Yale Cambridge expedition (Do Terra and Patterson, 1939) was unheard of as regards Kerala prehistory. Similar works of environmental ecology and antique continuity of cultural ensemble was recorded by Krishnaswamy (1938) and Aiyappan and Manley (1942) down south in Tamil Nadu and Bose and Sen in Orissa (1948). That way ever since the three decades of independent India, stone age cultures have been located in different parts of India except in the eastern most and southern parts of India, the area-wise examination has been corroborated and confirmed by Dr. Sankalia in his recent publications on the Prehistory and Protohistory of India and Pakistan (1974), Aspects of Indian History and Archaeology (1977) and Indian Archaeology (1979). Equally the earlier above mentioned beliefs concerning Assam and Kerala as unsuitable for the prehistoric man was also exposed due to the work of Sharma (1966) in the Garo Hills of Assam as well that of Rajendran (Joshi and Rajendran 1976, Rajendran 1977, 1979, 1979) and also because of my own observations (Tampi, 1974, 1976, 1977, Tampi and Bernier 1978 and 1979).

It may be Admirably recorded that name of Padma Shushana Dr. Sankalia and all his pupils of Deccan College of Archaeology
is going to be remembered for centuries together for the yeomen service done to archaeology, Prehistory, Protohistory, palaeoenvironments and rockart etc. throughout the length and breadth of this country. As earlier mentioned the four decades of Indian prehistoric studies owe a great deal to them.

The qualitative quantum of archaeological output have given inspiration for many other Indian and foreign scholars also, the zeal for exploring different parts of the Indian subcontinent as well that of other parts of country. All these pioneering efforts have always remained a source of inspiration for pupil like us, on the threshold of our career.

Protohistoric studies along with settlement pattern of the Neo-Chalcolithic Cultures were also enhanced and undertaken systematically in the sixties and seventies of this century solely because of the pioneering work scholars hailing from different parts of the country, thanks to the training imparted to them by two contemporary veteran scholars viz. Dr. Z.D. Ansari and Dr. M.K. Dhamelkar, two illustrious field archaeologists under whom I also could learn the elements of field methods and excavations. In all my exploration and excavation - field work, this has greatly helped me for making my debut in the arena of Kerala pre and protohistory. I daresay that this is the case with all archaeologists trained at Deccan College and who are privileged enough in the field of archaeology in their own localities, which is quite true in the case of my friend Rajendran too.

Then the study of Rock Art and Cave Paintings as well as the distribution chronology the south and southwestern megaliths of the Indian continent may also be looked into, before the study of Kerala prehistoric cultures. The year 1974 is specially important for the research workers engrossed in the study of the Kerala antique.

Till a decade back this part of India was considered to be a total prehistorically blank period in the archaeological horizon of the Indian sub-continent. Explorations and
investigations conducted by the young scientifically trained Kerala archaeologists (trained at that great centre of Archaeological learning viz. Deccan College Post-Graduate Research Institute, Pune) have literally unfurled the flag of archaeological revolt in exposing the myth about Kerala prehistory. Investigations conducted by me and by my friend and colleague at Poona, Rajendran, in the south-central portion and northern parts of Kerala respectively, have proved beyond doubt the existence of Early Man in Kerala.

Until 1974, no palaeolithic tools had been reported from Kerala. In the first half of the year different parts of Palghat District in north Kerala explored by Dr. Rajendran and discovered Late Acheulian-lower Palaeolithic tools from the river basins of Kanhirapuzha and Malampuzha (Rajendran, 1975). Palaeolithic sites are rare in Kerala and it is almost the same case with the west coast of India. Tools comprise of core or pebble choppers, scrapers and flakes and are conspicuous by the absence of hand axes and cleavers. While in the latter half of the year I have explored the valley of Anjumad and discovered pre-historic rock shelters both painted and not painted. Kerala was thus put on the prehistoric map of India by these explorations only. My discovery of cave paintings have further put Kerala on the stone age paintings map of India, though cave paintings have been recorded in our country as early as the sixties of the last century. But lithic pecking
and engraving like bruisings were recorded in Kerala even at the advent of this century. Fawcett's discovery of the Edakkal engravings are the pioneering effort on this line (1901).

In the year 1974, from 18th of April to May 31st, scientific excavations of the megalithic sites of Machad and Pazhayannur, Talapally Taluk, Trichur District were conducted by George (Report published by the Department of Archaeology and Ancient History, M.S. University of Baroda - prepared by Dr. R.N. Mehta and Dr. K.M. George in the year 1978) which has thrown some fresh ideas of the south Indian megaliths and especially that of Kerala.

But before analysing the prehistoric cultural evidences of Palghat (Rajendran) Idukki (Tampi) and Trichur (George) in the light of their Indian context, a peep into the earlier work must also be examined.

Another development in the context of Indian prehistory in World Archaeology is that now and new pure scientific techniques and resultant interpretations varying from Anthropological to Zoological are being adopted in par with the western and occidental countries, with the result Prehistoric archaeology is now-a-day better known as scientific archaeology.

The application of physical, chemical, natural and all biological sciences on the field data collected by the prehistorian is better understood, thanks to young scientists engaged
in similar studies right from the advent of the seventies and the eighties of this century. The palaeo-environment, ecology, flora and fauna - palaeontological, archaeozoological, sedimentological and biostratigraphical studies have greatly helped the contemporary Indian prehistorian in solving very many of his problems. The authentication of the Deccan Ashmounds were executed by conservators and scientists only, (Mujumdar and Rajaguru (1966). Chief Conservation Officer of Antiquities of Kerala, Shri Nair is conducting some experiments on metals, palm leaves, manuscripts, monuments and other antique wealth of Kerala archaeology by adopting the restoration and preservation, (which he studied at Rome) in solving local problems in accordance with Kerala climate and environment.

The palynological observations of Gurdeep Singh (1971). The famous contemporary Hydro-geologist, on Rajasthan Sediment's (Sambhar, Didwana etc.) has postulated colder climate between 6000-3000 B.C. in those areas of northern India.

Archaeozoological studies of the faunal remains in association with Stone artifacts and other archaeological evidences have given valuable information about the animal wealth of the said society in the given prehistoric strata if studied scientifically. The work of Nath (Adamgarh Rockshelter 1967), Dr. (Mrs.) Shah (Kodekal 1968) and of Dr. Alur (Hallur and T.Narsipur 1971), have helped in so many excavated material
unearthed from different parts of India by the Archaeological Survey of India and other research Institutions.

Palaeontological and Palaeobotanical studies help the field archaeologist and prehistorian in understanding the existence and extinction of ancient flora and fauna in accordance with climate and environment. To get the maximum information from animal and fossil remains, it is a must that the bones and other organic evidences from the archaeological site should be made available to the palaeo-zoologist who will have the liberty as not to what to discard and what to retain among the supplied evidencies (Thomas 1977). There should also be continuous and direct communication and communion with the excavators and the zoologist. Man's dependence on subsistence economy for food by hunting, trapping, snaring, catching of birds and fish (traits of settlement pattern and resultant culture) etc., as to how the Upper Palaeolithic and Mesolithic peoples killed hunted or domesticated - all these can be understood by systematic study of faunal evidence (not to neglect vegetarian and other food habits). The inference is from the nature fractures, cuts etc., the episodes of which may very well be portrayed in the cave art and rock paintings, which yields tool-bearing and animal-plant remains in the deposits. Equally the antique man's preference for some animals for hunting, cattle rearing-breeding, domestication and for food habits. The indication of animal fossils occurring in the alluvia of several river valleys
emphasized that these 'hitherto considered as the index for middle Pleistocene (Equus namadicus, Bos namadicus etc.) definitely have got a large time span from middle to late Pleistocene (Badam 1979) and their successors' life-activity occur from late Pleistocene to Holocene. These understandings help us in the determination of habitational suitability of Earth's crust.

The comprehensive analytical work undertaken in the areas of Rajasthan and Gujarat by Allchin (Allchin and others 1978) and that of Dr. Misra (Misra, Rajaguru and others 1980) confirmed the existence of wetter and temperate climate in the above mentioned areas during the Pleistocene period.

Quite recent times ethno-archaeological studies (Rao, Reddy and others 1980) and ethnographic-demographic studies on the archaeological subsistence pattern of Hunter-gatherers (Murty 1981) all have converted the true prehistoric archaeology into a compact scientific discipline demanding greater attention and application of composite techniques. Construction techniques of settlement dwellings and its special features in the light of other prehistoric evidences were also undertaken by scholars in recent times in regions like Andhra (Raju 1981), Reddy and Ameer 1981) and Madhya Pradesh (Pandey 1982) as well as day-to-day Neolithic-Chalcolithic cultural traits were also taken up at sites like Inamgaon (Dhavilikar 1977) proclaiming a cultural continuity for the western and southern parts.
of country. Settlement patterns, ceramic remains and other domestic materials with much emphasis on social aspects in sites like Anjar (Nagar 1967) enabled us to interpret ancient social polity and prehistoric pastoralism. Kajale (1978)'s conclusion in tracing out the Palaeoenvironment for the Ghod valley in Maharashtra, depending on chronostratigraphy, lithostratigraphy and Biostratigraphy put forth the theory that this part of Maharashtra did not show drastic climatic fluctuations.

As we are all well aware, a sizable portion of Kerala topography is dominated by the slopes of the Western Ghats and its culture to some extent determined by the Arabian sea. As far as other portions of Kerala in the high ranges of the Ghat sections are concerned, they also got the twilight world of elegant sophisticated present day life estate bungalows encircled by the most natural and the most primitive groups of the human race. Equally so in the lower plains, prosperous villages have been located which have been nourished by the swollen rivers, which of late have yielded archaeological wealth. In the light of all the hitherto work done here in archaeology, the geochronological assessment of this part of land in relation to archaeology must be looked into. Being one of the smaller States of the Indian Union, this is geographically between $8^\circ 17'30''$ and $12^\circ 47'40''$ N: $74^\circ 51'57''$ and $77^\circ 24'47''$ E (referred to earlier).
The dynamic relation of Man and his surroundings and other external nature (Clark 1952) in his evolutionary self is something really marvellous which has accelerated the study of Prehistory of all localities by scholars of respective nationalities. Naturally the raw material of the Stone-tools as well as the tool-bearing deposits, in other words geology and physiography is of supreme importance. In fact archaeology being practically a very young science, much of the earlier and pioneering works were executed by geologists, zoologists, curators etc. This is true in the case of Kerala too. Further equally the Malabar district of the Madras Presidency of the British empire have come under their thorough survey. The princely State of Travancore was not that much explored systematically and scientifically. Apart from that at times the South Central portions of Kerala were more or less seats of still petty feudatory chieftains and princes like the Punjar kings etc. under whom the High range area etc. came.

Almost three decades after the discovery of Madras handaxe industry (Foote 1863) Philip Lake (1891) surveyed geologically the physiographic situations of the south Malabar Rock formations, recorded and classified into three types of laterities in Malabar viz. Plateau laterite, terrace laterite and valley laterites with distinct characteristics depending upon their composition.

To him goes the credit of discovering the first neolithic celt from the foot of the Kanyakod hill, with pale granulites
as the raw material. Subsequently in the vicinity of Edakkal, Wynad only, Fawcett (1901) located engravings. He also collected some quartz flakes. Logan's (1879) find of ancient pottery is nothing but megalithic. His own iron findings from Ferroke excavations (Logan 1901) potsherds, zoomorphic Sacrophagi, ornaments of metal and ritual objects from the rock-cut cave tombs of Ferroke (Aiyappan 1933) and the oft referred Porkalam (Thapar) - Summarises the archaeology of Kerala (see 2nd chapter).

With regard to Megalithism, the study started for the first time, it was located in Malabar only by Babington (1823) in the Chirakkal of Cannanore district, in hundreds of numbers. Scholars from different parts of India as well as foreign nationals (mostly British) have subsequently studied and tried to understand the original purpose of megaliths. At least some one hundred scholars have tried their hand or the study of megalithism in India, of which the monuments largely occurring south India. 'The Megalithic culture in South India' by Gururaja Rao (1972) is novel attempt in this line as far as codification of megaliths are concerned. They are found as having executed in laterite as well on gneisses of granite composition as in the plains and elevations respectively. The Cuddalore sandstones occur all over south Central Kerala, while the region of Malabar consists mainly of laterite plateau (Krishnan 1956). They are found in the high elevated Rumari too.
forests of the ranges which merge into the Shola forests as well as in the dry forests of the Anjuna Valley - they are found. Logan's the Malabar Vol. II (1883) that gives a better idea of flora and fauna as to the existence of variant fauna in the wet and evergreen forests, (referred to earlier) while the Malabar and Anjengo (1906-1915) in the form of district gazetteers series by Innes and Evans descriptions of the larger laterite plateau of adjoining areas have been recorded. These two are important in the study of megalithic construction and distribution. (will be discussed later)

Just as they are at different elevations they are also found in the open air areas as well as in deciduous forest of the plains, evergreen forest of the Ghat slopes, shola forests, bamboo forests of Wynad as well in the valleys of Wynad, Anjuna and Attapady - all described by Innes (1915). Even in the entry into or exit off the megalithic diffusion, the Palghat gap plays an important part, it may be assumed, just as in the days of historic period of Krishna Deva Raya. Logan (1906) records that as regards this area by whatever great natural agency, the break, the mountain appears thrown back and heaped up as if some overwhelming deluge might have burst in sweeping them to the left and right. Ward and Conner (1820) also recorded the importance of the western ghats and High ranges.

Wadia (1944) has indicated the geomorphological potentialities of ancient Keral of the Ghats as well the gap by recording
thorin that extraordinary abrupt fluctuations of the terrain
in ancient Archaean formations to mechanical dislocation and
recent resurgence of land topography. It is to some extent
fruitful for the archaeologist too. This 'archaean' in penin­
sular India has two horizons (as regards south India), a lower
transition system identified with the Dharwar series of Foote and
upper transition system. The proximal area in the Nilgiri
hills form a massif to the north and where the Eastern and
western ghats meet, yielding dolmens. They have geologically
(Blandford 1859) and to some extent archaeologically .explored
and surveyed by Noble (1976) who tried to correlate the topography
and megalithic culture with that of the Anamalai (Rosner 1959),
dolmens of the western ghats in Kerala - all goes on to pre­
postulate the presence of Mesolithic cultures.

The occurrence of quartz as an outcrop in the Archaean
rocks (King, 1882) postulated an early tool-bearing possibility
for this area too, though exploration on those lines were not
undertaken. River beds equally has got quartz in abundance. The
pebbly gravels comprising of gneiss and quartz are generally
flat based, sub-angular to rounded in form. Equally chert,
Chalcedony vein - outcrops, located in my area also have proved
the possible yielding of the tools.

Exploration hitherto undertaken by me has not yielded
any Palaeolith, though Palaeolithic tools had been reported from
north Kerala due to the explorations of Rajendran (1974) in the district of Palghat in the month of April, which brought Kerala also into the fold of Palaeolithic phase of Indian Prehistory. Subsequent works proved beyond doubt the activity of the Early Man during the Lower and Middle Palaeolithic and Mesolithic periods of Kerala Prehistory. Rajendran claims, the Stone Age evidences in this area belong to the Late Acheulian or Early Middle Palaeolithic and Mesolithic traditions. In comparison with the Deccan Trap region the sites of Kerala are relatively few and widely scattered. Basing on that I push the Stone Age cultural horizon only on a tentatively chronology prior to my own pre-protohistoric investigations.

Concerning the role of geology in Kerala, Mesolithic assemblages, of my evidences also come under the nomenclature and classification put forward by Clark (1962).

In India the Mesolithic industries are found scattered far and wide, throughout the length and breadth of the country. They are found in various physiographic situations like the Gangetic plain (Sharma 1973) hilly regions of Central India (Supekar 1968, Misra 1967, Khatri 1958, Joshi and Khare 1966, Pandey 1977-82) Orissa (Nanda, 1978) andhra and Karnataka (Murty 1970, Paddayya 1968-76, Isaac 1960, T. Reddy 1968-78, R. Reddy 1968-76, Rao 1966, Seshadri 1960) and sites like Chittoor, Karnool, Shorapur, Cuddapah, Palavoy, Sanganakallu and T. Narsipur were
explored and excavated for ascertaining the microlithic distribution and mesolithic continuity. Some of the important mesolithic sites which have been excavated, yielded stratigraphical evidences associated with other archaeological remains.

The study of Stone age cultures of Kerala are still in its formative stages and as such only a part of north Kerala has been properly surveyed. Moreover there are no connecting-convincing stratigraphical evidences or fossil remains from Koodakkad, to make meaningful comparative studies with the already established sites in various parts of the country. Although the collection is much, however on the basis of typo-technology and morphology, the industry under discussion has been compared with some of the assemblages found in Palghat by Rajendran (1979) and Chevayur (Todd-recorded in Allchin 1966) and elsewhere in south India. Since 1974 several Mesolithic sites have been discovered in the districts of Palghat, Mallapuram and Quilon. Prior to that the region was known only by a solitary mesolithic site from Chevayur near Calicut, referred to earlier, (present Kozikode).

Recently a few mesolithic sites have also been discovered from South Kanara, coastal Karnataka (Personal communication from Rajendran).

Coastal regions of Kerala has characteristics of both submergent and emergent fluctuations (remember Lemurian theory based on geological phenomena - validity questioned). Contemporary
studies (Nair 1976) seem to indicate that geographically Kerala coast show variant and various degree of submergence. Such evidences of tidal sea-saws have been recorded from other parts of India (Krishnan 1956, Dey 1968). To a greater extent they may be of local phenomenon due to differential geological occurrences. In these contexts the observations of Innes (1915) and that of Dixitar (1951) may be recorded too. The relative rapidity of the shore line-evolution exhibited on the southwest sea coast and that of southeast coast, probably may be because of local recurrent emergences in ancient times.

The contemporary state of erosion (Deshpande 1977) along the coastaline of Kerala may also can be accounted to the slow rise in sea level noted all along the coast again (consider the the ancient Kodungallour-Crangannor geological extension)

Another geological aspect which is accounted here in connection with the rock-cut megalithic monument also. Apparently enough, the Kerala lateritic surface extensions occur at various elevations above the mean sea levels (Admn. reports of Mining and geology Dept., Govt. of Kerala) with the result lateritic caves were also found to be constructed by ancient people in all these areas. There are primary and secondary laterites in all parts of Kerala (an open geological secret). Primary laterites are the residual products of the parent rock below while most of the secondary laterites are derived from the
primary laterite due to sub-aerial erosion. Lataritic formation in Kerala is exceptionally better in the midland (see geology) even though their extensions are seen on the east at higher altitudes as well as on the west near the coast and at some places below sea level.

Climatic variations, naturally are the resultant product of the aggradational and degradational terraces in the south Indian river basins, in fact, in my area, tragically enough either terraces are nil or of the present periods. Still no conspicuous climatic change on the Kerala coast since late Tertiary or from early Quaternary periods. Of course on the basis of fossils it has been postulated that there were climatic changes during the upper pleistocene. But then my area cannot be taken up for this Indian generalization. Equally no aridity too is reported.

Contemporary floral pattern cry out the fact that Kerala is characterized by tropical, evergreen forests. The occurrence of sub fossil woods from different parts of Kerala coastline-low land shows that such forests existed in the vicinity of present coastal tip, during the late Pleistocene and continue even to the early Holocene periods. This goes on to record that the whole region of Kerala from the coast to ghats, was densely thickly forested and the prehistoric cave habitations might definitely be one of distributional nature, which at present
is located in the confined nature of the ghat section only, and were more forested in those days and it is in fact indicates that the jungle regions were unconditionally within his reach only.

Everywhere the mesolithic cultures are represented by microlithic implements which differ from the neolithic and chalcolithic cultures (Joshi 1973). Generally the implements are found made on crypto-crystalline silica. But there are major exceptions in the case of Bombay (Todd 1950) Konkan (Guzder) Goa (Sali) Kerala (Rajendran, Tampi) and Tamil Nadu (Zeuner) where the use of quartz was also equally common. Geology of the region may be the only factor in the natural environment which can be regarded permanent. The accessibility and availability of rock-raw materials for the manufacture of stone implements was one of Primary necessities for the cave man or later culture-people. It has been found from lithic evidences that raw material was not a cultural criterian, for the Kerala antique man had utilized river-worn quartz, veins in the granitic-gneiss formations, in shorty materials - etc. for the preparation of tools. Naturally from this angle in fact, it definitely defies the earlier beliefs (Foote 1914, Sankalia 1974) as earlier referred to, that Kerala was uninhabited due to the absence of suitable raw material probably quartzite.

From the varieties of the refined tools especially, of the
mesolithic period it may be argued that quartz was not so bad as it has been believed and as such there are justifications in categorising quartz as a suitable raw material too. Since only a few number of tools are made on gneiss it is obvious that more preference had been given to quartz raw material which perhaps indicates it suitably to be then prevailing technique.

Most of the mesolithic sites in South India indicate the evidences of quartz utilization as the raw material (Allchin 1956). Many of the microlithic industries in Karnataka (Seshadri 1956) are exclusively on quartz while it was utilized in equal proportion with chert in Tinnavelli district of Tamil Nadu (Zeuner and Allchin 1956).

The Koodakkad Mesolithic industry of the Maraiyur Panchayat of the Anjunad valley in the High Ranges, that way forms a separate identity of its own. The microlithic industry discovered at Koodakkad cave in Idukki district show the utilisation of quartz and chert in almost equal proportion. Even though the microlithic assemblages collected from Maraiyur is not in proportion they consist of various types of scrapers, blades, points, lunates, borers, fluted cores, flakes, chips and nodules etc. (see Figures and Plates). The implements are generally smaller in size unlike those from the coastal region and the maximum length of the tool never exceeded more than 50 mm. The blade elements is more here while they are of less percentage in the coastal
industries. The coastal mesolithic assemblages are mostly based on flake element. The core tools are totally absent in the high ranges while they are present in the coastal region. Except the lunates no other geometric forms are found in the Maraiyur industry. Moreover, the assemblages are unassociated with pottery and metal objects.

As stated above mesolithic industry in this region comes from only one site. The tools here have generally been fashioned on flakes and blades and occasionally on nodules. They have been carefully retouched to give final shape to the specimens. The retouches are generally steep, but in some cases shallow ridges have also been noticed. They are situated mainly on one of the surfaces, but some pieces show the working on both surfaces.

The tools of the site are fresh but some of them exhibit patination. The representative tool types have been described below with proper illustrations.

Since no datable material in the form of fossils and other organic evidences have been found which could help to date the Maraiyur industry. In Karnataka at Sanguankaliu, the micro-lithic deposit lie between Palaeolithic and neolithic industries and the date of the Mesolithic industry has been proposed between 9000 to 3000 B.C. On comparative basis the Kerala Mesolithic industry at Maraiyur may range between this time-span.
Plate 50 Microlithic Tools Collected from the Basal deposits of the Koodakkad Rock Shelter
Koodakad Mesolithic Industry—Microliths
Maraiyur, Anjunad Valley, Idukki, Dist. Kerala

Fig. 1
Koodoo Mesolithic Industry - Microliths.

Fig. 11
Typologically, north Kerala mesolithic assemblages have very close parallels to the teri industry, and they have been assigned to the early Holocene (Rajendran, 1980). However, based on comparative typo-technology and morphological aspects, the Maraiyur industry seems to show the later characteristics of a microlithic industry of the mesolithic culture. Hence it is pertinent to show that the paintings seen in the Stone Age cave site show a time range beginning from the mesolithic to the early historic periods (Thampi, 1976).

**Scrapers**

(1) It is a concave scraper made on a quartz flake. The dorsal surface retains a long parallel scar leaving a patch of cortex on its left dorsal margin. The working edge is confined on the right dorsal margin of the flake. The ventral surface is primary flake surface - Fresh (30 x 18 x 8 mm).

(2) A small end flake of quartz is regularly retouched to its right ventral margin to prepare concave scraper. The dorsal surface possesses a few irregular scars while ventral surface is plain - Fresh (20 x 14 x 3 mm).

(3) A small quartz flake has been finely worked along one of the longer margins to convert into a concave scraper. The dorsal surface carries two large and a few smaller scars and the under surface is plain - Fresh (18 x 13 x 3 mm).
(4) It is a straight-concave scraper fashioned on an end flake of quartz. The dorsal surface retains a big scar covering from proximal to distal ends, as well as some smaller scars along the right margin. While on the ventral surface it has a tiny scar along left margin near the proximal end. The flake contains fine retouching on the concave margin at the distal end and straight right ventral margin. Fresh (19 x 17 x 5 mm).

(5) It is a small crystal quartz flake fashioned into a concave side scraper. The dorsal surface possess several irregular scars all over while central is plain primary flake surface and contain cortex at the distal end (15 x 12 x 4 mm).

(6) It is an end scraper made on a small flake of crystal quartz, on the dorsal surface it has a big scar in the centre while small small scars all around. The ventral is primary flake but contains some scars along the left ventral margin. The working edge is confined at the distal end. Fresh (17 x 13 x 3 mm).

Points

(1) It is a point made on a roughly triangular flake of quartz, and it carries flake scars of different sizes while on the under surface, three shallow flake scars are seen. Fresh. (31 x 15 x 10 mm).
(2) A triangular flake of quartz has been regularly retouched along dorsal right nartin to attain the edge of the point. The dorsal surface contain various sizes of flakes all over. The ventral surface is primary flake surface (22 x 20 x 6 mm).

(3) It is a blade of quartz which appears to be a point. Right half of the dorsal surface retains cortex while the other half has several narrow borer scars. The ventral surface is plain primary flake surface and has a bulbar scar at the proximal end (20 x 10 x 3 mm).

(4) A quartz blade tappers to a point. The dorsal surface has a mid-ridge. The left half of the surface retains cortex while right side has long shallow scars. Some very small flakes scars are also seen at the proximal end. The ventral surface is plain (22 x 5 x 11).

Lunatea

(1) It is a lunate fashioned on a brownish chert blade. The back blunting over the convex margin is unifacial and bold while opposite margin is straight. The left tip of the lunate is broken. Fresh (16 x 5 x 2 mm).

(2) A broken quartz lunate fashioned on a blade. Fresh (14 x 6 x 2 mm).

(3) It is a lunate, half of the portion of which is broken. Fresh (10 x 5 x 2 mm).
Blades

(1) It is a blade struck off from a quartz core. The dorsal space of the blade retains scars of various sizes while the ventral surface is plain. Fresh (27 x 13 x 5 mm).

(2) A blade of brown chert retains several parallel scars on the dorsal surface while on the ventral surface the bulb is missing. It is broken at the distal end (28 x 9 x 5 mm).

(3) It is a blade made on quartz material. The ventral surface retains some scars. On the ventral it has battering marks on left ventral surface. Fresh (20 x 9 x 2 mm).

(4) A reddish chert blade retaining several scars on the dorsal end is broken at the distal end (17 x 10 x 4 mm).

(5) It is a quartz having a mid ridge on the dorsal surface. It is broken at the distal end. (18 x 7 x 2 mm).

(6) A thin parallel sided blade and is broken at distal end and is made on yellowish chert. (17 x 5 x 1 mm).

(7) It is again a broken yellowish chert blade (15 x 5 x 1 mm).
Borers

(1) It is a borer on brown chert flake. The upper surface carries several scars and small cortex at the proximal end while under surface is plain. The borer tip has been obtained by finely retouching at the pointed end. Fresh (16 x 8 x 4 mm)

(2) It is a borer on quartz fashioned by retouching finely at both sides of pointed tip. (15 x 5 x 3 mm)

(3) A blade of quartz has been finely retouched at the pointed-distal end to obtain the borer's tip (12 x 7 x 2 mm).

Cores

(1) It is a fluted core which carries parallel scars of various sizes all around leaving a patch of cortex at the bottom. (20 x 12 x 7 mm)

(2) A quartz core retains scars all over its body. (13 x 10 x 8 mm)

(3) A core of quartz possesses scars of various sizes all around (11 x 13 x 5 mm)

III

(1) A brown chert parallel sided blade is broken at its distal end. The blade retains two ridges on the dorsal surface while the others surface has a prominent bulb of percussion. Fresh (15 x 6 x 2 mm)
(2) It is a blade on a chocolate brown coloured chert. The dorsal surface has a ridge and a small scar at the distal end while the ventral surface is plain. Fresh (18 x 6 x 3 mm).

(3) A broken blade of quartz, possesses many shallow scars on its dorsal surface while on the ventral surface, it has a prominent bulb. Fresh (19 x 13 x 5 mm).

(4) A parallel sided brown coloured chert blade, but broken, Fresh (11 x 8 x 2 mm).

(5) It is a chocolate coloured blade which carries two ridges on the dorsal surface of it. Fresh (14 x 5 x 2 mm)

(6) A quartz blade possessing parallel scars on the dorsal surface, is broken at the distal end. Fresh (15 x 7 x 3 mm)

(7) It is a brown coloured chert blade which retains battering marks on its left dorsal margin. The platform and bulb are missing as it is broken at the proximal end. (11 x 6 x 3 mm).

(8) A quartz blade is steeply retouched along its left dorsal margin. The dorsal surface carries longer scars while the ventral has defused bulb. Fresh (16 x 7 x 3 mm).
(9) It is a brown chert blade and has a mid ridge on the upper surface. The under surface has a big bulbar scar at the pointed end and small cortex at the distal end. Fresh (24 x 9 x 5 mm).

(10) A chocolate brown coloured chert blade, which has a pointed tip as well as a ridge and some irregular scars on the surface. It has an incipient tang at the base. This blade could have served as point also. Fresh (23 x 11 x 4 mm).

Flakes

(1) An end flake of yellowish chert retaining shallow and deep scars of various sizes and a small patch of cortex while the ventral surface is primary flake surface. Fresh (30 x 29 x 2 mm)

(2) It is a quartz flake which possesses only a few scars bearing a patch of cortex on its upper surface while the under surface is primary flake surface. The flake is broken at the distal end. Fresh (21 x 17 x 4 mm).

(3) It is a chip on quartz. Fresh (16 x 2 x 2 mm)

(4) An end flake is tuck off from brown quartz core. The dorsal surface retain scars of various sizes while the ventral surface has some marks on its dorsal margin Fresh (21 x 14 x 4 mm)
A roughly triangular shaped chocolate brown coloured chert flake which carries shallow scars on the dorsal surface, while on the ventral surface it has a bulbar scar. Fresh (24 x 15 x 5 mm)

Sizable quality of microliths with a better percentage of tool types on quartz were recorded in the Mahanadi basin of Madhya Pradesh by Pandey (1977 and 1982). Quartz utilization has equally been recorded by, with fairly good evidences at Birbhanpur in West Bengal on the Damodar valley (Lal 1958) which goes on to record that quartz too had played prominent raw material role and it is not hard and fast rule that only on some particular geo-morphic stone specimens, Stone age cultures have survived. It is not so. Equally it may be remembered that the three decades of prehistoric research in independent India has recorded prehistoric and Stone age evidences on a pan-Indian style from Kashmir-snowcapped valley to Kanyakumari, (nearby to Tinnevelly and Trivandrum) to the eastern, northern and southern jungle areas to north-western areas like Rajasthan have been brought under proper study and systematic classification. That means it records Kashmir (Sankalia, 1974, Joshi 1974) Garo Hills, Arunachal Pradesh and other neighbouring areas in and around Assam (Sharma 1966) Konkan (Joshi and Bopardikar 1972, Guzder 1975), Goa (Sali 1965) and of course our sites in Kerala - with dense sylvan forested area - of which Assam and Kerala though reported lately only, have proved beyond doubt that the
Early Man preferred and liked too, all the contemporary geoclimatic set up of all the concerned cultural strata. With the result no part of our land is prehistorically blank and no area of this vast sub-continent was found unsuitable for the activities of early man. Of course climatic variations and palaeo-environment might have compelled him to have some definite intervals of occupation though none of the sites in this part of the country like Saurashtra (Marathe 1977) and Konkan (Rajaguru 1973, Guzder 1975) have recorded cultural vacuums for a continuous period of time.

From the sea coast to the hilltop elevations, the microlithic industries of the Mesolithic cultural phase have got a pan-Indian distribution, as earlier referred to, throughout the length and breadth of this country (Allchin, 1968, Sankalia 1974) Occurring at different terrain-morphological areas. The coastal ones are called early mesolithic and the cave yields are referred to as late mesolithic cultures. The coastal areas like Bombay (Todd 1950) Konkan (Joshi and Bopardikar 1972) Goa (Sali 1964-65) and Timeveli (Zeuner and Allchin 1956) have yielded mesolithic cultural evidences. Till the seventies of the work by me and Rajendran, Kerala was known by a solitary site of Chevayur only, probably due to the absence of so called raw materials.

With regard to tool technology Sankalia (1964) has observed that the prime concern of the tool makers, was to
obtain the raw material with suitable surfaces which makes flaking more easy, perhaps with little effort. It may be noted that sites occur in the Mesolithic cultures, which have survived the ravages of time are the microliths (Misra 1964). In fact the Mesolithic occupation of India was much more extensive and intensive than that of any of the two preceding Stone age cultures. The rock shelters and caves occur in the sandstone regions of the Vindhya and Kaimur ranges in Madhya Pradesh and southern Uppar Pradesh and they are generally situated in the thickly wooded country - which were occupied by the mesolithic folk. Misra is of the opinion that these mesolithic people living in the cave-sites of Hoshangabad, Morhan Pahar and Lekhania in Mirzapur had continual phases of cultural occupations. This is true of my sites in the Anjunad valley also. Of the central Indian rock shelters, Adamgarh rockshelters, is the most important, excavation wise, and has yielded a sequence of stone age culture including that of mesolithic. (Joshi 1978). The sandy plains of Gujarat (Foote 1916, Sankalia 1943, 1965) and west Rajasthan (Misra 1973), have yielded quite a large number of microlithic evidences in India. Though there are well groupings of caves in Kurnool district of Andhra Pradesh, occupation of the study of cultures of prehistoric society still going on.

Many sites in India have yielded microlithic evidences from the surface and equally they are found in well-knit stratigraphical contexts in places like Langhaj (Sankalia 1956),

Exclusive use of quartz as the raw material for the microlithic industry has been noticed at Jalahalli, Kibbanahalli, Giddallur, Nagarjunakonda, Barapadi etc. (Gordon 1950). In Kerala and Tamil Nadu also the use of quartz was common (see my tool-typology at Koodakkad and that of Rajendran) which was locally available.

Microliths have been traced out with pottery in varying proportions in places like Langhnaj (Sankalia 1956) while they are also found in association with painted pottery, iron and copper tools (Sankalia 1960, Misra 1973). No ceramic association, sorry to record for my paintings as well as tools. Association of microliths with metal objects or any dominant geometric forms were also recorded at such sites like Birbhanpur (1958) Singrauli basin (Krishna Swami and Soundra Rajan 1951), Teri sites (Zeuner and Allchin 1956) and the sites in North Kerala (Rajendran 1977, 1978). The famous sites of Teri Industries will have to be compared with that of Kerala, as
we do not have any major sites. The Kodakkad mesolithic phase can be more or less called to be as Inland Mesolithic.

The words of Seshadri (1956) and that of Ailchin (1966) confirmed the presence of quartz industries in Karnataka, found as surficial finds on the laterite beds. The instance of micro-liths around Sanganakallu in the Bellary district were noticed by R.B. Foote (1916) and in later years by Subba Rao (1948) in the Samarasama Hill— all established the presence of pre-neolithic cultures. Later on further work was carried out in Sanganakallu area again (Mujumdar and Rajaguru 1966, Sankalia 1969, Ansari and Nagaraja Rao 1969) the evidences of which brought out for the first time the microliths in between the Neoliths and Palaeoliths at Bangaltola, and a date ranging from 9000 to 3000 B.C. has been proposed for the same. Apart from that, may more surficial and exploratory discoveries by scholars like Pappu (1974) at Kovalli, Paddayya (1963, 1974) at Salvadgi and Shorapur—strengthen the findings of Subba Rao (1948). They indicated many common features in their typology, technology and raw material utilization with that of Kerala microliths. Various parts of Andhra Pradesh and southern sites have yielded microlithic sites right from the work of Foote (1916) Cammiade (1974) Cammade and Burkitt (1930) Subba Rao (1948) Soundra Rajan (1958) Isaac (1960) Murty (1966) T. Reddy (1968) R. Reddy (1968) and many more. Most of the discoveries were from the surface and
and were represented by non-geometric and geometric implements.

A recent work in Coastal Andhra Pradesh on the Gambheeram river (Lat 18°50' to 18°45' north, Log. 83°15' to 83°25' East) in Visakpatnam district (Reddy and Prakash 1978) a succession of lithic industries were noticed. Here the Upper Palaeolithic is followed by the microlithic tools, separated from the former by a sterile deposit. The microlithic industry is overlain by the deposits yielding Neolithic implements. A large number of microlithic implements are made on quartz while the Upper Palaeolithic and Neolithic tools are respectively on chert and basalt. The industries from the Singrauli basin in Mirzapur (Krishnaswamy and Soundar Rajan 1951) Lekhania rock shelters excavations (Smith 1906) open air settlement excavations (Sharma IAR 1964-65), Sarai Nahar Rai (Dutta 1971) all have been drawn as parallels for Kerala Mesolithic cultures by Rajendran with that of his work in North Kerala, but how far that can be made applicable to my sites is a matter of time bound study. The quartz implements of the Mesolithic sites of Eastern India which lies at Birbhanpur on the Damodar Valley in Burdwan district of West Bengal (Lal 1958) have been correlated with that of Kerala (Rajendran 1979). Geo-chronological studies (B.B. Lal and S.B. Lal) assign earlier date to the Birbhanpur industry. Similar industry, mostly made on quartz has been reported by Pandey (1982) in the Upper Mahanadi valley.

Since there is no absolute chronology (as earlier mentioned)
for the south Indian Mesolithic cultures, the Kerala industries will have to be evaluated on their typo-technological and morphological aspects in accordance with the gradual evolution of a distinct culture. Any way the work of Subba Rao (1948) at Sannarasama Hill of Sangankallu (Bellary district in Karnataka) at that of Rami Reddy (1968-76) at Palavoy in Andhra postulates an earlier date for the pre-neolithic cultures of south India.

Summarising the Stone Age cultures and lithic industries of that tiny geographical hamlet, down south of Bharat i.e. ever-since the formation of this state of the Malyalam speaking people, the seventies and eighties of this centuries, substantial, quality wise research beginnings have been recorded, by which is known now that we have got all the lithic phases of Kerala Prehistory going back to early Palaeolithic time. Thereby establishing a relentless attempts of the then man though not successful completely - have enabled research scholars and explorarers in pointing out a cultural indicator hereto we have got prehistoric ripples, coming from the cultural stream near the Koodakkad rock shelter down to the Palghat river deposit, again to Palghat gap and finally to the Megaliths of Trivandrum all of which forms the subject under study, attempted in this dissertation.
Rock Art and Cave Paintings

With the disappearance of the great glaciers and the consequent rise in temperature brought early man out of the caves, and thereby fostered a gradual transition to farming society of the neolithic period (Lommel 1966). This evolutionary intermediary stage is known as the Mesolithic or Late Stone Age, is far more rewarding artistically than the Palaeolithic. This is true in the case of Kerala also. Paintings were made on the walls of open shelters or rocky cliff faces, and, of course, their habitational abode-walls inside. Naturally the paintings are found on the cave walls and ceilings and in small hollows or niches, formed by natural weathering. Generally these rock shelters occur at considerable elevations and unapproachable places, where, it would have been indeed, impossible to paint without some artificial help for the cave artist to stand upon. Equally in some other cases, as in the case of Altamira, Spain, the Prehistoric artist might have painted the major series of paintings of the animal gallery consisting of the bison (the oft-frequently painted subject matter), the horse, deer and wolves - by taking great strain, by possibly lying on the back for the depiction stretching to about 15 metres at a low ceiling. Without much usual aesthetic maturity, the artists, have executed paintings one upon the other and have thereby destroyed the whole beauty of their artistic expression. In my own recordings at Attaali, Pallanad (77°05' N; 10°15' E) in the second
painted rock shelter, (details follow) the depiction are shown on the inner portion of the top ceiling and one will have to lie on the floor with the camera on the shoulder, for photographing it correctly with the proper zooming and so on.

"A lanky woman runs fleeting. Is she running after her supper, a bird perhaps or a wild boar? Or is she escaping from a fierce beast or a swanky Mesolithic Casanova? One picture is worth a thousand words, and India's ancient rock artists captured such moments in hundreds of pictures with as much dexterity as regards motion, expression and detail, as one would find in a modern day cartoon.

Such scenes as well as scences of war, ritual, animals, dancing figures and men and women at work constitute some of the more intriguing rock portrayals seen around the country. Yet in spite of their artistic splendour and creative ingenuity, this ancient rock art had remained a relatively neglected subject for long. Although archaeologists had been excavating the tools and habitats of primitive man, very few of them did until very recently, delve deep into their achievements as recorded by first hand by themselves on the walls of their stoney shelters and caves. Also there have been very few books on art chronology and history wherein the discoveries made at Mirzapur in Uttar Pradesh and Hoshangabad in Madhya Pradesh for instance are referred to as works of ancient art.

Ever since, the first discovery of rock paintings in
Mirzapur district by Archibald Carlyle in 1870 and a decade later by John Cockburn, the dating of Indian rock art has been subject to dispute. A tentative chronology was pioneered by D.H. Gordon, a former English military officer, but his dating was found to be erroneous. For one thing Gordon could never imagine that Indian dates could go very early.

Quoted above are the scholarly observations on the Indian Rock Art history and its periodization, by the doyen of Indian Rock and Cave Paintings and a very distinguished prehistorian of contemporary India, viz. Padmasree Dr. Wakankar, (who has dedicated, more than three decades of his life in the study of prehistoric rock paintings of the world and India in particular,) in a recently published article, "The oldest works of art" in the April 1983 issue of *Science To-day*.

As we are well aware that the study of Rock Art and Cave Paintings are about a century old, with the writings of Cockburn (1883), actually such types of study received greater impetus only after 40 years, with the publication of 'Prehistoric India' (1923) by Panchanan Mitra whose pioneering effort of trying to understand the Cave Art of India, became the key to Indian rock art of cave paintings and engravings. Fifty years from then (1923-73) the rock art study of the Indian sub-continent with its Pan-Indian distribution, received due attention except in Kerala. Luck as it may, exactly one year after the recording of Painted
Rock Shelters of India (1973) by Dr. Wakankar, I could stumble upon the Koodakkad Rock Shelter of the Maraiyur village in the Devicolam Taluk of Idukki district, Kerala. The rock art exploration and excavation undertaken by Dr. Misra and Mathpal (1977) Mathpal (1978) in the Central Indian regions especially in Bhimbetka, have greatly enlivened the interest of scholars hailing from different parts of country in determining the relative chronology of Stone age Paintings in India. Archibald Carlleyle and John Cockburn goes with the laurels and credits for the discovery of Rock Art and Paintings, as far as India is concerned (mentioned earlier), which, centred around the then central Indian and northern provinces of Kaimur Range, near Mirzapur, Banda, Rewa etc., very soon, after the announcement of the "Look Papa the Bull" episode of Altamira by Marcelino De Sauntuola and his daughter, Maria, in the year 1879. The contemporaneity with the Altamira compelled them, then to make extravagant and exorbitant claims which became the target of attack, by many successive archaeologists and art critics. From that periods, prehistoric cave art and rock paintings became a serious subject of discussion and study among scholars working in, concerning the ancient art heritage of the country. Rest is chronology and history, which, in correlation with whatever little work I have done in Kerala prehistory, sums up the subject matter of my research recordings.

Still in relation to the sites occurring in other parts
of India, Kerala too had all lithic cultures and rock art traditions. Here also in the case of central Indian and other rock shelters explored in other continent as well, no absolute dating methods, infra-red photography or spectroscopic procedures have not been utilised. With the result the Age of Cave Art still remains an enigma, enabling the archaeologist to rely on comparative methods of painting styles and tool-typology and morphology only. Mr. G. Chaloupka, an authority, on Australian prehistoric art - cave paintings, who was here in India recently had discussed with Indian scholars as to how eustatic and sea level changes - resultant terrace morphology of the land have been adopted for dating the Australian prehistoric art. How far this can be successful as regards our cave art which are found in the interior jungle of north, central and south Indian portions.

When all these encouraging ultramodern scientific achievements were realized in Indian Prehistory, that part of the Indian peninsula viz. Kerala for reasons unknown never figured in the prehistoric India till the advent of the decades of seventies and eighties, only, the summary of which is the "problems dealt with" which I am discussing here.

Before that a brief outline and summary may be discussed as to the development of study of Rock Art in the world as well in India, in particular.

As noted earlier, this, then neglected branch of
Archaeology gathered momentum after the death of Saintula. Any way as years passed more and more caves were discovered by scholars in different parts of Europe and other continents of Asia and Africa. Consequently all these years, due to the untiring works of many European and Western scholars like Breuil, Alimen, Grand, Graziosi, Berenguer, Cole, Mellart, Lommel, Clark - hundreds and thousands prehistoric rock-shelters with cave paintings were located, explored and excavated in different parts of the known world. Prehistoric art began to be known by specialist just as the popular aesthetic climate was being formed, that was to discover it. Although it has become incommunicable, the language of animal frescoes of the cave art yet suggest that already in its own time it might have been exemplary. Its authority, the fixity of its conventions and its striking singleness of inspiration make it, in this perspective, the oldest and the most enduring of the 'classical styles', (Grand 1967). The earliest work of art is broadly credited to the Homo Sapiens. Now all these years from 1879, for a century the study of Prehistoric Art have become so popular, that it is no exaggeration to record that all the 'painted' caves have become tourist attraction and also, many schools and styles of cave art studies have come into existence. Naturally with regard to European and African prehistory along that of Asia, could evolve better by incorporating the study of prehistoric art, which in the initial stages were dismissed as simple tribal activities.
Thus within a period of one century itself, scholars, traced out many sites in the countries of Europe, viz. France, Spain, Italy, Germany, Austria etc. Simultaneously these were divided into accepted styles, also of which, the pioneering one is that of the Franco-Cantabrian which, the antique man executed in the ravines of France and Spain. In a way they have become centers of the world. The importance of prehistoric cave art, as an expression, of the major preoccupation of the human spirit is easily recognizable in the incidental details that are nearly always included in the mural drawings and engravings. The most famous of the European groups of Paintings are seen at Lascaux France. Concerning this, Grand records that the multiplication of the discoveries did not until the invention of Lascaux, open prehistoric art to the general public. In September 1940, eighteen year old Marcel Raudat and three school friends explored an ancient underground opening - following (according to legendary account) - their dog cave - came upon the most famous and certainly most widely publicised of the galleries of prehistoric paintings.

After the discovery of Font de Gomme in France, year after year, successive explorations and discoveries were made by scholars like L'Abbe Breuil (that illustrious young priest) Cartalhae, Perony and many more, the list always remain incomplete up to this day.

While discussing about the 'African Prehistoric Art'
Alimen (1957), is of the view that although, it is difficult to determine with any degree of exactitude, the date of African art, on the whole, is definitely later than the peak period of European prehistoric pictures, the specimens of which are to be found mostly in the Franco-Cantabrian region (that is to say in the south-central France and in the French pyrenees as well as in the Cantabrian mountains of northern Spain). In these regions the paintings and engravings occur generally in grottoes and caves. It is essentially a naturalistic art, whose subjects are for the most part, animals. The quite remarkable wealth of prehistoric (and historic) art found in many parts of Africa (in Europe, the comparable artistic manifestation are much more localized) is definitely of later date to that of Western Europe. The first humble beginnings of African art, date from the times of the Caspian Culture and of Homo Sapiens. In this context it may be remembered that the cave art of Asia and Europe is primarily and predominantly of Upper Palaeolithic and Mesolithic to later periods with animals and animal hunting scenes are depicted in large numbers and larger dimensions, African art is mostly of Neolithic and post-Neolithic with human beings in action and motion with scenes of domestication.

It has been repeatedly said that the Palaeolithic or early Mesolithic cave art is essentially animalistic simply because animals play a major part in the figurative representations. But although, the artistic perfection of these expressive murals
and the great variety of animal species are, what undoubtedly, attracted people. Naturally Cave art included the fauna surrounding man, the animals among, which, he lived and on which his own life depended. The horse, deer, reindeer, bison, ibex, aurochs, woolly rhinoceros and mammoth are the species most commonly depicted, but in some caves the depiction includes lions, bears, rarely fish and even more rarely birds (Berenguer 1973).

The human figures were also represented in all countries and sites, I do feel, of course at a later date. Apart from the animal depictions, prehistoric men created abstract works, which have been extremely difficult to identify, inspite of the varied theories put forward to explain them.

The painted and decorated cave walls are not only the true manifestation of the early man's sublime artistic sensibility, sensitivity and intellectual maturity, but, they are in fact these, one is tempted to feel sign and the naturalistic representation of wounded animals etc., are also the symbols of some form of ritual, sacrificial and other 'divine' rights.

Though similar views has been expressed by all the inter-continental scholars. So far even after a century of cave art study, till now they have not come together to any convincing conclusions.

Art that stamps man with the mark of divinity, art that
really sets man further apart from the rest of the animals, than anything else, art, that is the unique language given by God, so that without words, we can understand the man of all ages even after their disappearance; art that is the most sincere and important of man's manifestation, and the one that preserves the warmth of direct communication (Berenguer 1973). The precious treasure of prehistoric cave art, that way, gives a vision and a clear insight into the lives of prehistoric man very different from the cold museum image or a fossil specimen. Naturally so we must review cave man's artistic achievement to be of supreme importance in correlation to and in par with lithic tools. Still the jigsaw concerning the date and purpose of these artistic expression continues.

The rock art throughout the world will have universal similarity in their contexts, basic style and the utilization of space are the same, with their geographical variations irrespective of that of Altamira, Lascaux, Mirzapur, Koodakkad, Champakad (both of Maraiyur) Marhouma (Sahara) Oran (Algeria), but still not two caves are exactly alike.

Lommel (1966) is of the view, that the mentality of the early hunter peoples, has been preserved by the Australian Aborigines and the South African bush man and also to some extent by the Eskimos, have facilitated the attempts of modern man to reconstruct sympathetically the concepts of the cave artists of Lascaux and Altamira. As far as our present day knowledge...
is concerned, animal representation (the *zoomorphic* style) in rock paintings and engravings was the significant feature of the hunter-people’s art.

The modern man might well be humbled by looking at and trying to explain these earliest accomplishment of the earliest artists of the human race. Further it can very well be commented that these paintings are heightened passion of man in search of food. They express the catharsis of fear, wonder and mystery, of the spell with which primitive man, in danger of extinction, through the possible recoil of the beast in the hunt, wanted to conquer his foes, before the physical act of throwing the spear at his prey. The exhuberant *vitality* of the flourishes of the brush strokes is the dramatic representation of fundamental man involved in the game (Hibben 1959).

At any rate it is all imbued with the highest intensity of a secret magic which was man’s earliest expression of the psycho-social phenomenon of culture, by which the primitives added energetic insight into his body and soul.

Chronologically, Wankar (1973) feels that the earliest work of art, was traced back to about 20,000 years ago. He goes on to add that the Aurignacio-Perigordian period was a period of active creation of man, wherein, he expressed himself in a simple manner and stimulated artistic talent of man for several hundred centuries to come. Solutro-Magdalenian period.
produced equally powerful artistic creation of the Franco-Cantabrian regions (as already referred to) apart from Altamira, La Periega, Torralba, Alerona and others—Lauxcaux, Font-de-Gomme, Pachmarle—all spreading throughout the countries of Spain and France.

Though, the west European art began between 30,000 and 25,000 B.C. with the common depictions of horse, bull and bison, its counterparts in other continents are later comparatively by way of diffusion, as well by discoveries in the continents of Asia and Africa. Concerning the diffusion of the Upper Palaeolithic—Early Mesolithic animal depiction, it may be remembered that variants of the animal styles extend to Anatolia, India and China and by way of China continued, in uneven chronology throughout Indonesia and other Asiatic countries.

Paintings in the hunter styles, apart from animal depictions also occur in Norway-Sweden (Scandinavian areas) and Siberia. With the diffusion of the animal styles and hunter economy, spreading too other countries of the European continent as to that of other continents resulted in the deterioration of styles, though, basic motifs to some extent remained singularly unique, uniform, and same as they had been in the caves of Western Europe.

In Siberia and northern Africa, the early hunter style, and animal representation are always noticeably bigger.
than those of later periods. But with regard to African rock art, the animals depicted are large species like bears or bison, replaced by bubalus antiquus (an early buffalo) and rhinoceros, and the hunting magic element is usually strongly emphasized. Here there are pictures of animals with arrows flying into them, while some pictures are actually showed—stabbed with sharp point. Allmen and Lommel give detailed descriptions on such subjects as well as abstract signs which may signify traps drawn beside the animal depictions. Amit Agarwal (Science Today p. 47 April 1983) says about Niaux (located in the Pyrenian Valley) cave depictions, that are black in colour, show arrows in animal body as in the case of Lascaux and the pictures are far from the entrance of the cave. Bisons and the horses, here characterize the paintings like in other cases and the cave floor made of clay, have been engraved at places. Back to Africa, though of a later period (supposed to be) Sahara and Libya records rock paintings and engravings. Richard Leakey (1981) comments about Lascaux and other Spanish sites, to be of undoubtedly splendid legacy of prehistoric art of Europe. He feels that the cave art are the convincing evidences, that modern language had at this time been achieved by our ancestors and further comparing the African with that of Europe, that these 'ancient rock paintings' often depict human beings engaged in actions with better human representations.

In general it may be noted about the Ice age paintings
that the early people of the caves, seem to have come to pick out recognisable sketches of animals, from the casual and meandering lines. The style of the first of the three phases into which fully developed cave art can be divided, consisted of black outline drawings of animals with a thin monochrome filling. In the second phase of European art the outlines were filled in with two-colour modelling. In these earlier pictures, rocky projection areas of natural shadow and such like concavities of rock face were often utilised which may be the starting of the artist. The third and most impressive phase belong to the polychrome paintings of Altamira and Fonte de Gome. The high degree of naturalism in the drawing and the impressionist of movement volume were amazingly enough, achieved with only the most basic materials probably charcoal or earth colours.

Rock art of Europe spread only slowly, northward, very likely not by a direct route. It eventually reached Scandinavia, if Lommel is to be believed, between 60000 and 2000 B.C., Siberia by 2000 B.C. and by the first millenium B.C. appeared in the forest, and thence passed on even to America, perhaps as late as 500 A.D. During the course of these migrations, the animal style might have frequently mingled with other styles. It stimulated the art of the early food producing peoples of northern Anatolia, and even of the city-dwellers of Shang and Chou dynasty, China and in return received stimuli from them.

Mellart (1975) has recorded the distinctive Upper
Palaeolithic stone industries of blade and burin type used by Homo Sapiens for the manufacture of weapons as well as for various household objects in stone, bone, antler, wood and other perishable materials have been recognized in caves or open sites of the near eastern regions, which are still relatively little known in many parts of South Eastern Europe and the Anatolian Caucasian area. According to him, the greater part of eastern Turkey, Trans-Caucasia and Iranian Azerbaijan consists of high mountain plateaux, covered with lava flows, rugged mountains and a number of large and small lakes only one of which, Lake Sevan contains fresh water. In the more climatically favoured spots such as the southern slopes of the Caucasus in the Colchis, the Baku region or the middle Araxes valley - the Ararat plain - there is abundant evidence of early stone age occupations, some of it going back to its early stages. Here the tradition of rock engravings which stretches from the Kars region in Turkey through Soviet Armenia to the rocks of Kolostan on the Baku Peninsula. The rock engravings found here dating from many periods, I have compared them with that of my Anjunad valley paintings.

The style of the rock art in the Spanish Levante (second hunter) differs significantly from the Franco-Cantabrian style, in the sense, that here we get human portrayals as well as depictions of smaller domesticated types like dogs, comparatively mild animals like the deer and boar. Further difference is that
of human figures and animals are combined in scenes of hunting or other activities which was exceedingly rare as before.

With regard to Australia, the aboriginal people here, as a result of their isolated geographical identity, is a special case. Here the rock paintings are mushroom shaped and the face of the human figures are enclosed in a broad, horse-shoe shaped band in red or yellow ochre. Only the eyes and nose of face are depicted. The body is painted in shades of white and filled with vertical strips. The arms and legs are well defined, but the hands and feet are rudimentary (Amit Agrawal, Science Today April'83)

There is considerable gap of thousands of years between the Franco-Cantabrian (around 12000 B.C.) and the Spanish Levante (ranging between 6000 to 2000 B.C.). But it is matter of controversy, whether the murals of prehistoric Catal Huyuk can be fitted into that interregnum or not. Rock art and cave paintings have been recorded in the jungles of Sudan, Rhodesia and other parts of Africa, including Egypt.

Though not cave paintings, concerning prehistoric cave habitations as well as open air cave sites, have been recorded in Sri Lanka (former Ceylon) by Dr. Deraniyagala, the distinguished archeologist and Director of Museums, Ceylon, in the years between 1943-1945 from such sites like Batadomba, Ganbergala, Balangoda, Ratnapura, Kuruwita etc.

With regard to the Anatolian connection of Catal Huyuk
and Spanish Levante style (earlier discussed) may be a chance which cannot be ruled out for the famous rock engravings in the Alcurena Cave at Monte Pellegrino, near Palermo in Sicily, (roughly by half way between Anatolia and Spain) though made of Stone Age people, consists of numerous scenes of active human figures engaged in various tribal pursuits.

In that sense that one can believe that the mingling of this anthropomorphic style with the zoomorphic early hunter style took place on the not so distant coast of eastern Spain. Again it should be regarded that the Spanish Levante style also called Second Hunter Style is an example of the power of assimilation that is inherent in the oldest of human art styles.

Further with regard to the world-wide distribution, Wakankar and his co-author of "Stone Age Paintings", Robert Brooks, has commented by recording the sites. Wakankar refers to about the peckings and engravings of Siberia, cliffs of the Chinese river valleys studded with decorded reddish drawings-yielding shelters, islands of Indonesia with their primitive paintings, both the North and South American continents (remember the sites of Utah) which are museums of such depictions, the beautiful polychrome paintings of the lake-districts-sites of Canada, cave recordings of the resources of Navajo, Zunis, Arizona, Texas (parts of America) and river sites like the New Mexican and Mexican coast of Rio Grande, the sites of
Peru and other Latin American (indicating the ancestry even of Incan and Mayan civilization) - all in toto forms the arena of the Cave Man and champions of antique civilization.

Judging from all these the painted rock shelters of the Indian sub-continent forms literally a separate identity exhibiting all phases of stone age cultures as well as all the Early and Mediaeval cultures of country. As we referred to earlier the sixty years of Indian rock art from 1923 to 1983, is a period of tremendous achievements, primarily due to the work of many Indian and British scholars from Panchanan Mitra (1923) to Wakankar, to whom Cave Art in India has become nothing but synonym among scholars engaged in this branch of study of prehistoric art.

Then in understanding the cave art there are so many problems for researchers like me. (who is not a qualified artist, but archaeologist only). In the case of scholars like Mathpal and Wakankar’s students, they have got the additional advantage of being researchers and artists. Still, in this thesis, I have done an assessment of my paintings only in comparison with that of Stone Age Paintings, which is not at all a critical approach but only a tribute to scholars working in this branch of prehistoric study-an an appreciation to that effect. Literature on this branch of prehistoric archaeology is very less, comparatively available to us in India and equally many of them are in foreign languages other than English viz. French.
German (not much translation available) which itself is another impediment for persons like me again. Still literature on this subject now runs to hundreds of books, journals, notes, articles, and other archaeological references.

Robert Brooks (1976) has aptly observed that in almost all scholarly and popular writings, the subject of rock paintings in India has been badly neglected. (But quite recently even the western world has changed their view after the Bhimbetka excavations)

A century ago, so says Dr. Sankalia (1978) hardly anything was known of Indian rock art, either prehistoric or historic. Today India with many other countries of the world can boast of a long history of development. Unlike the initial impression, this rock art is not confined to some hilly and forested parts of Central India (M.P. and U.P.) but found to exist in similar geographical situations in Gujarat and Rajasthan, Bihar and Orissa, Andhra, Karnataka and Kerala, as well as in the borders of India and Pakistan.

Wakankar’s excavations as well as those of Misra undoubtedly indicate that these rock shelters have been continuously occupied by man for the last 100,000 years ago. Rock art include paintings on surfaces above and it includes, etchings, engravings and bruisings. Compared with that of Europe especially that of Dordogne in France and Santander in Spain.
our paintings are not that much rich in content or in artistic expression. The common feature in the early Indian and European is that we do have human representations.

As regards date of the Stone age paintings, Grahame Clark (1977), is of the opinion, scenes notably depicting elephants, warriors mounted on horse must belong to the historic period and hunting scenes such as those which at Mirzapur under lie the historical paintings may well date to be of prehistoric period and could even here have been executed by the people responsible for the microlithic industries.

With regard to the age of rock paintings in Kaimur, Raipur and other places in peninsular India also, Nilakanta Sastry (1955) commented that there can be no doubt that the oldest pecked and painted style of drawings from rock shelters along the Narmada valley belong to the end of Stone Age.

Not only the antiquity and chronology of Indian rock art and cave paintings goes to thousands of years, even the scholarly studies and understandings of these in India is also one century old, as we discussed earlier, from now, 1983. Four years after the discovery of Altamira by Sauntuola (1879) India was put in the prehistoric map of the world, thanks to the work of John Cockburn (1883) whose pioneering articles concerning the Cave Drawings of Kaimur (1899) and also the "on recent existence
of the rhinoceros in the northwest province". In fact though independent discovery, it was Archibald Carlleyle, who located the Kaimur drawings as early as 1880 and he recorded that in the year 1899, (Cockburn's recordings was footnoted by Vincent Smith). Cockburn's descriptions - observations concerning rhinoceros hunt by a group of six men in the Ghormangar cave and all attempts of pioneering nature in the study of prehistoric art. But unfortunately the claims of Carlleyle were refuted by Vincent Smith, because of the exaggerated nature of descriptions. This is so, because all these discoveries in the Kaimur range near Mirzapur, Banda and Rewa all took place in the years nearer to the discovery of Altamira. So one cannot blame the other scholars for making wild or fantastic claims. Vincent Smith (1906) questioned the authenticity of these rock paintings.

Advent of Indian rock art of course, started earlier by, though not of a prehistoric nature - C.Maxwell reported red-painted inscriptions (Wakankar 1976) at Dada Hill near Chargula. Subsequently A.M. Markham located cave paintings at Chacuca Kunda near Rewa (Wakankar 1976). But the most significant of all these years are the works of F.Fawcett in the years of 1892 and 1901 at Bellary and Edakkal respectively, the result of which, South India was put in the world Rock Art Map, without forgetting the fact that cave habitations were located, explored and recorded earlier also by scholars like Captain New Bold (1844) as well that of R.B. Foote 1884 in
the Billa Surgam caves of Kurnool area of Andhra Pradesh. These Edakkal engravings have been compared and referred to, in this dissertation, for my study of Perumkadavila engravings.

Again in the year 1907, the sites of Serhat, Malwa, Kuriya Kunda, Karpatia, AmwaUNdAN and Bargad yielded cave paintings, thanks to the recordings of C.A. Silberarrd. Then small reports on the findings in the Son Valley included in the Imperial Gazetteer of Mirzapur district of 1911, which were reprinted in Hindi by Jagdish Gupta in 1965.

The subsequent year of 1918, saw the most remarkable achievement in the history of Indian prehistoric rock art viz. the significant discoveries of Singanpur paintings by C.W. Anderson (1918). Commenting on his paper appeared in the Journal of Bihar and Orissa Research Society, Panchanan Mitra (1923) says that this paper brought world-wide attention and describes details concerning paintings in the Singanpur area in the Raigarh district. Happy as I am to record that except the plates 2,5,08 in part)(27 in part) - all the other descriptions have astonishing resemblances, with my paintings of the Anjunad valley in style and depictions and in the subjects concerned (see plates) of course, not forgetting the fact about the Cogul horse. Of the three expeditions undertook by Anderson to copy the painting, the last proved to be a failure (as recorded) because of the cruel sting of the bees. Percy Brown, the then Principal,
School of art, helped in the supplementary narration and corroboration of evidences.

'Rock paintings and other antiquities', available till then were codified and studied by Manoranjjan Ghosh in the memoirs of the Archaeological Survey of India by including Singanpur as well as studying the site of Adamgarh.

The thirties of this century, as regards Indian Prehistory, saw the active excavation and participation of European scholars in Indian caves. The work of G.R. Hunter in the middle of the thirties (1936), as well as in the early part of the fifties (1955) yielded mesolithic habitation with tools and human skeletal evidences in such sites like Dorothy Deep and Jambu Dwip, but no palaeolithic tools were collected, so records Wakankar (1976). In fact, interest in the field-excavation, to some extent was ushered in by the couple of D.H. and Marie Gordon only and about two decades of their work from 1939-58, they literally made a Prehistoric Background of Indian culture. But with regard to their classification and dating of Indian paintings are not at all convincing. Gordon dated the Panchmarhi area between the beginning of Christian era to the 11th century A.D. Totally unsounding is that, the same use were only put forward in his other publications also. Though they introduced better methods of cave excavation techniques, as far as chronology was concerned, it was not scientific or logical. In that manner the prehistoric archaeology and cave art studies were under taken by three
western scholar-couples in the fifties, sixties and in the
seventies. They are Marie and D.H. Gordon, Bridget and Raymond
Allchin and Marie and Robert Brooks, respectively. But it may
be remembered to the credit of Gordon that it was he who instilled
an interest, both, native and foreign scholars to undertake
study of Indian rock paintings. The post independent era saw
the emergence of young scholars taking up the study of the
rock paintings. In the fifties and sixties scholars from
various Universities indulged in the archaeological explorations
of cave habitation sites in the northern and central parts of
this country. Joshi's Adamgarh excavations (1978) of late, put
a C-14 date of 5500 B.C. which, wipes out the misgivings among
scholars concerning the date with no scope for Gordon's findings
that Indian rock art is not earlier to 1000 B.C.. Admirably
enough it was again the husband-wife team of Allchins, who took
up the studies of Indian prehistory by trying to solve the
problems of prehistory, protohistory and rock arts. Their
monumental work, "The Birth of Indian Civilization" apart from
other works, have been accepted by all as the standard work on
archaeology and prehistory, irrespective of their being layman
or researchers. The Allchins associate the beginning of rock-
shelter paintings with the 'Late Stone Age' or Mesolithic Cultures.
After Fawcett, along with rock paintings, engravings were also
taken up by Gordon and Allchin for further study (1955) in the
Raichur areas, which has been discussed here, along with the
section of the Megaliths and my study of Maraiyur paintings in
this direction.
Equally due to the work of scholars like Leonard Munn, Allchin, Nagaraja Rao, Sundara and young researchers like Ganapaya Bhat (1981) have undertook studies of rock paintings of Karnataka, of which the last mentioned, has tried on some cataloguing of the rock shelters of Karnataka. The work of Sundara as regards 'Rock Engravings' and 'Megaliths' - his attempts are always one of pioneering nature. Quite recently Krishnamoorthy and others of the Archaeological Survey, Govt. of India also discovered Mesolithic-Neolithic paintings in Tamil Nadu.

Then from 1952 to 1983 can rightly be called the 'Wakankar Era' and from 1957 starts the Bhimbetkan phase of Indian prehistoric art and cave paintings. Three decades after of the birth of Indian republic, Wakankar has immortalised his name in the annals of Indian Cave Art and Archaeology, primarily because of his pioneering exploration and resultant excavations at Bhimbetka in the village of Bhiyampur in the Vindhya hills in Raisen District of Madhya Pradesh. This hilly site has yielded the largest number of painted rock shelters.

Stone age art throughout the world, has a relative chronology depending upon their stone tool correlations and as also based on the style, pigment, composition etc. of the paintings together with the rocky terrains, which gets weathered as time passes on. Even then in India it has got a lengthier span of time and wider distribution throughout the country.
Basham (1954) has observed that nearly all the artistic remains of ancient India are of a religious nature or were at least made for religious purposes. Secular art existed for literature shows that kings dwelt in sumptuous palaces etc. Most of the Indian and European art authorities has stressed the religious and mystical aspect of Indian art. The bow and arrow which has got a pan-Indian applications are represented in the cave art in very many cases. Most of the small tools of this period were clearly intended for hafting as composite tools and weapons. These methods, sometimes indicated their occupational economy. By the way some scholars refuse to call this period 'Meso' and instead they prefer to call it as 'Late stone age'. In the same way, some scholars are calling the Upper Palaeolithic period as the Early Mesolithic cultural phases. Microlithic industry have been found in India in the following contexts. Firstly with palaeolithic-like tools then along with pottery, from surface, from hills and rock shelters, and in sandy plains. The Mesolithic people of the Holocene period, also had hunting-gathering economy. Throughout the cave art culture of Indian Prehistory we can see a long tradition of decorative art starting from the Mesolithic to the Early historic periods.

Prehistoric Art in Kerala had its beginning with the discovery of Edakkal caves by F. Fawcett as early as 1901. This cave exists on the western slope of Sultan Battery rock at a height of 1200 feet above mean sea level. The entrance is
about 2 metres in height and about 1.5 metres in width. Peculiar human figures are found along with some inscription like rock scribblings at Edakkal. Some type of engravings are only found at Perumkadavila (1979) as well as at Thenmalai (1982), the last of which, detailed recordings by photography is not possible for the rock surface is highly weathered. Before we proceed to discuss about the Mesolithic culture we its prehistoric art styles and microlithic industry, we are forced to describe the prominent characteristic features of the South Indian Mesolithic culture in correlation with and in comparison to microlithic industry of southern India in particular and India in general.

The beginning of rock art tradition is generally associated with the big game hunting centres of Upper Palaeolithic-Mesolithic ages (Grazioli 1960). The earliest of the rock arts is of the Franco-Cantabrian style which got diffused all over the Mediterranean through the Gravettian-Solutrean culture (Hibben 1959). The Iranian cave art (Coon 1951), cave art of Eastern Syria—all these are the result of the diffusion of the original style. The world matrix of this art shows that the objects depicted belonged to the same, of the respective regions, definitely with the mystique of involvement and a sense of empathy. In the case of the first painted shelter in my field area (there are three painted rock shelters at different and far off places from one another) at Anjumad,
Cave Paintings
Koodakkad Rock Shelter
Maraiyur Anjunad Valley
Plates: 1 to 30
PAINTED ROCKSHELTER ELEVATION 5000 M.S.L.
KOODAKAD- MARABUR- ANJUNAD VALLEY.

(Ko. Fig. 1)
Painted Rock Shelter - Kodakad - General View
Marayur - Antunad Valley.
CLOSER VIEW OF THE FIGURE WITH CATTLE PROMINENT.

KKD. MYB. AV.

Kko. Fig. 2
LEFT HAND SIDE- ANIMAL GALLERY WITH SUPERIMPOSING HUMAN FIGURES.
KOOTAKKAD - MARAIYAR - ANJUNAD VALLEY.
LEFT HALF: ANIMAL GALLERY SUPERIMPOSED BY STANDING HUMAN FIGURE WITH ARMS RAISED. KKD. MYR. AV.
FIGURE SUSPECTED TO BE OF A WARRIOR.
KKD-MYR-AV.
RITUAL DANCES, BATTLE SCENES, SOCIAL CEREMONIES, DOMESTICATION OF ANIMALS.
KODDAKAD MARKURU, ANUNAD VALLEY.
NOTES ON COLOUR PHOTOGRAPHS

Some of the colour photographs have got bitter shade. As situation of the rock shelter at an odd place which is now cleared of partial vegetation suitable lighting is rarely possible.

After the discovery of the painted rock shelter, news in Press spread like wildfire with the result visitors who were attracted to the shelter in groups have disfigured it by writing their names etc. C. for colour plates.
C. Plate 2. Profile of the Shelter
   (a) With (b) Without vegetation
Plate 3 - View of the Gallery from Top. (Left half)
C. Plate 3 (a) Close up and (b) Distant view of Two Bulls possibly the earliest -
Plate 5 & 5(a) Two Bulls (possibly earliest) in opposite direction.
Plate 4. View of the animal gallery (a) From the base showing seated like (not visible) Human figures, antelope.

(b) Palm marks, all below the warrior type superimposing Human Figures all lower portions erased out.
Plate 6 Elephant facing left (early and faint) on the Extreme right.
Brownish colour.

Plate 7 - Faint figure of a bull facing right just below the forelegs.
C. Plate 5. Proximal and distant views of white
 (a) (b) crowded figures. Right half.
Plate 8 A humped bull, facing right, its hind portion below the forelegs of another, with the natural crack at Diagonal whitish colour.

Plate 9 Another Bull-Figure above the human figure standing and muddish white, closely with the natural rock.
Plate 10. Superimposed figures with standing human figures, and the whole scene superimposed by the
"middle human figure."
Human figures filled in white wavy line superimposed prominent dark brown. Four bull figures slightly above the antelope and also above white-outlined figure.
Plate 14: Crowded Figures: Technicolour—Ochre, Brown, White, Pink etc. Depictions and outline drawings of humans, palm-marks (similar to European style) Bison-like figures. Deer—All superimposed by human figures. Human figure on the left with dual white vertical wavy lines up to thighs, superimposes the Antelope, while the central human figure, both drawn in similar fashion as on the extreme left, with orange filler.
Plates 6. Recent Photographs - Intense light entering
a. Result of Human Vandalism.
b. View from below. Hand impressions—palm marks
Type Depictions—all below Wavy lined human figures.
Plate 15: Crowded colour figures: Leg of the left human figure depiction intruding into animal (Brown back) and white human figures.

Plate 16: White figures Depicting major human social ceremonies, battle scenes, domestication of horses, duels, giant bull figures, temple dance type etc. All superimposing incised tiger and even mask like later additions.
Plate: 17  Horse, Monkey and Giraffe-like animals, incised tiger, line depictions and later mask like additions.

Plate: 18: Distant view of plate 17—All scenes in lively movements and action.
Plate 19: Charging elephants near the temple or village depictions.

Plate 20: Taming animals probably horse and warriors (Big & small)
Plate 21—Fallen human beings, alignment of danced (mostly erased) all below horse and tiger.

Plate 22—Congregation type gathering or village-temple depiction, above which running man closely followed by horse.
Plate 8: Totem-like objects—village scene—as in 22 with animal and a big celt or shield is portrayed.
Plate 23—Elephants with and without riders below the level of the fallen human depiction.

Plate 24—Duels depicted on the top-in between erased out.
Plate 25—Human beings and animals in motion—closer to Plate 24, below the duel.

Plate 26—Totem like object—as in plate 22.
Plate 9 Incised tiger and other white figures
Plate 27—Elephant rider—Mostly erased.

Plate 28—Crab-like depictions—Lower levels disfigured by present-day people.
Plate 29--Marching towards Totem--Similar depiction (disfigured)

Plate 30--An overall distant view of right half Woodkad shelter with white paintings.
apart from many scattered rock shelters without paintings such as Swamiar Ala, Kummatti Ala, etc. are located. As earlier referred to 'Ala' in Tamil means cave which is 'Guha' in Sanskrit (see map) and it has got coloured paintings while the other two have got white paintings. Naturally the depictions in the first shelter are of supreme importance. The shelter has got a unique concavity, shape and concavity. This art gallery is in a solitary tall granite stone rock shelter with a wider concavity in which pictures are painted. It has an attractive shape of a serpent hood and towers to a height of 12 metres and almost three fourth of the stone, with a width of 10 metres covered with much super-imposed paintings, the details of which require careful examination and study.

To reach the shelter one will have to trek the jungle of Koodakkadu range forest of the Maraiyur Panchayat (77°05' E and 10°15' N) which is at an elevation of about 3280 feet mean sea level, on the foot hills of the High Ranges. Next in order of preferences for the archaeologist, is the so called cave of dancing or 'Atta Ala' which occurs at higher elevation than that of Maraiyur, but slightly lower to Munnar i.e. about 5500 feet M.S.L. This rock shelter just like the first one is also facing east and for reaching that shelter, for a stranger, it takes about 11 kms. climb from the Maraiyur Panchayat office (my camp -office) through the jungle ravines, overhanging rocks, tall-lemon grass (the locals say it is tiger -infested) and all along impregnable thorny bushes and slippery
By the time one reaches the shelter, he will feel that any object, however larger it may be, will be tossed upon by the incessant wind flowing throughout the day near the shelter. The rock is about two hundred metres in length and can be converted into a large camp house site.

Unlike the first shelter, here we got the paintings all in white and that too, on the ceiling and naturally so recording key moments and evidences by photography is very difficult. Tragically enough for us, this is also a regular camp site of the Tribals, in this case the Muthuvans, who come over there for grazing their cows in the nearby meadows. The Muthuvan or Muduan (Mudugar) constitute one of the largest hill tribes of Kerala and of south India, widely distributed in the High Ranges of the Idukki district of Kerala. They usually cultivated (practicing shifting agriculture) on terraced land and so permanent settlements are seldom encountered.

Recent anthropological studies of the physical characters and their variability, it is apparent, that diverse ethnic strains have entered into physical compositions of the living Muthuvan, resulting in wide variability of the morpho-physical characters and submerging the primitive Pre-Dravidian, Proto Austroloid or Negro elements constituting the ancestral features of the aborigines and cave dwellers of Kerala. Another difficulty for us is that those tribals, who still sometimes are the blow-gun and flint-stone-fire-making culture representatives (see plate)
smoke off the roof-paintings practically, on all days whenever, they enter the shelter for spending the night. Of course from that point of view, it is really a good camp-shelter (earlier referred to) even for about three families, with all the natural warmth of the rocky terrains. Because, of these, when I pondered on for relics, the layers above the hard rock were very much disturbed. The bone-specimens collected from the deposits were of quite recent like that of Koodakkadu. This shelter can be approached only through the road-area which is about 7 kilometres away to the south of Maraiyur viz, ahead and in between the Munnar (77°05' E and 10°00' N) - Maraiyur road, from where we got a dreadfully long vision about, the locality. The distance between the first two rock shelters is about 7 kilometres, though they do follow an entirely different elevated path from the base-area of my research operation viz, Maraiyur, the nerve centre of the valley of Anjnad. For reaching these shelters, the starting point is through the Forest Range office of Maraiyur, which is full of Sandal wood trees and which is a major source of forest produce to the Government by way of revenue.

The basal area of the second shelter is known as Pallanad. Further, as I mentioned earlier, even with an expert guide it requires about one day practically for the ascend. The entry to the cave is through the branches of an oscillating tree and that too, through the left hand side, and on the right hand side
Attalai. Pallanad
Maraiyur
Anjunad Valley
Plates.31t036
ONE FURLONG LENTHY CAVE (400 WHITE PAINTINGS)- PALLANAD

REPTALIAN GALLERY- AVES- 5200 FT. M.S.

FIRST HALF- DOMESTICATION, HUNTING, WILD ELEPHANT,

BRAHMI TYPE LETTERS, GEOMETRICAL SYMBOLS, TREE LIKE DEPICTIONS.
middle portion: elephant midem, snake like drawings, auspicious symbols similar to 3\(\exists\) , evident etc.
Plate 31 Pallanad rock shelter - Atta-alai Maraiyur
Anjumnd valley elevation 5200 ft. M.S.L.
Plate 31a

PAPPANAD ROCK SHELTER-ATTA ALA—KARAIYUR—ANJUNAD VALLEY, Elevation 5200 ft. MSL.
Plates 31 to 36 Give the idea as to how much crowded they are on the ceiling of one a furlong lengthy cave in all white pigments depictions include Rhino, like beings to elephant riders, lizard-like reptilian fauna, geometric symbols, snakes, tree-like depictions, brahmi type letters, ritual dances, social ceremonies, wild elephant hunting, people on sailing boat like things, pecking birds etc.
there is a small cataract with perennial water percolation into the inner wall of the cave. This side is dreadfully steep with the rock barrier projecting the shape of a steep acropolis. By photographic recording, the shelter gives the impression of the frontal metallic projection of the classical Roman helmet or that of the cap of military officer. The profile of the rock-shelter (laterally) is just like that of an opened mouth of a giant lizard or a snake creeping through a polished surface in wavy line and thoroughly in symmetrical fashion. As above mentioned the depictions are all in white and it also has human figures in their different socio-economic activity and situatsas together with some fresh additions made by some miscreants who were accompanying the Muthuvans, unmindful of the forest officials, for ganja (wild opium) which is prepared in crude manner by the tribals. The tribals keep ganja as offerings to their deities. But for them, approach for the commoner, to this rock shelter is a herculean task, due to the peculiar topography and location of this cave.

If unapproachability was the prime reason for the local people from visiting the shelter, it was ignorance that prevented them from exploring the first rock shelter at Koodakkadu. That way with regard to the existence of the cave with writing or Ezhuttu Guha or Eluthu Alai, even the President of the Panchayat had his own doubts when the tribal informant gave me the precious information as having only heard about it from his
grand-father. Though known but not exactly the location it was somehow taboo for those tribals as it was supposed to be the abode of demons.

These Muthuvans can be considered even today as the direct descendants of the neolithic people for L.A. Krishna Aiyer gives pictographic description about their using the blow gun and chukmuk (flint) for fishing and fire making (see below). Anyway nobody had seen it till I had the good fortune of discovering it on the memorable day of November 24th (Sunday) 1974 after surveying the area for about a week prior to that. Situated neatly and in a well settled manner on the eastern foothills of the Western Ghats with an average rainfall, major portion of the Maraiyur Panchayat area is covered by dense forests with almost three fourth of the area, with variant elevations perfect settlement pattern presents a picture of an attractive 'doll's house' for the archaeo-anthropologist interested in the advent of the Maraiyur antique man.

The second rock shelter has the largest number of rock paintings—about 400 with depictions and portrayals of human figures on elephants, lizards and other reptilia family creatures, tree (ornamented tree) — all painted without much symmetry. They include (1) Human Figures—With and without Elephants (2) Lizards (3) Birds (4) Acrobatics (5) Battle scenes (6) Social Gatherings (7) Sudarsana Chakra type symbols (9)
Geometrical designs—Rectangles and triangles (10) Letters (suspected only). That means as many as 10 types, though not of styles, of paintings are visible (for details see comparative chart).

The 3rd painted rock shelter, that also with human and animal depictions in white lime-like pigment occurs at a distance of about 16 kilometres away from the Maraiyur Panchayat to the tapering end of the valley of Anjunad. This shelter which is nothing but a gigantic hall, large enough to accommodate some ten families, is, locally known as the Purichi or Pulachi Ala. It is on the eastern most portion of the elevated terrace of the thorny-bush encircled mountains slightly above the present day Champakad Tribal-Welfare Settlement of the Pulayas (a scheduled tribe), facing northward adjunct to the river, Chinnar. To go this shelter, after travelling for about 16 kilometres—on the zig-zag bus route of the Maraiyur-Udumalpet in Tamil Nadu (the latter is the nearest railway station) we will have to walk about five kilometres east, through the side of the Govt. Ayurveda Dispensary and ahead to the tribal colony and thence to a deviation of about 3 more kilometres, almost reaching to the Maraiyur elevation (for Chinnar-Champakad (78°00' E and 12°35' N) area is about 2000 feet M.S.L. It appears to us this rock shelter, which looks like an antique granary rather than Aruna shelter. Paintings are portrayed on the side walls of the shelter, for inner surface is divided into
Rock Paintings
Champakad
Maraiyur Anjûnad Valley
Plates 37 to 40.
ULACHI-KUMATTI ALAI - ELEVATION - ABOUT 2000FT M.S.L. PAINTINGS IN WHITE PIGMENT; SOCIAL LIFE.

(Cp Fig. 1)
1. CHARGING WARRIOR - COMPARED WITH ARCHER
2. ACROBATIC TYPE DEPICTION - CONTEMPORARY
   WITH NEAR EASTERN STYLES.
3. EARLY HISTORIC TYPE DEPICTIONS - TRANS-
   INDIAN DISTRIBUTION
4. ANIMAL RIDER WITH WEAPONS - SINGLE OR
   MULTIPLE.
Plate 37 Champakad rock shelter. Pulachi Ali
Elevation 1900 ft. M.S.L.
Champakad Rock Shelter set in the interior dense jungle, is highly infested with wild elephants, in its surroundings.
Plate A & B of CHAMPAKAD ROCK SHELTER-PULACHI KUMNATTI ALA.
Elevation 1900 ft. M.S.L.
Paintings on sedimentary rocks, white pigment--small insize about
depictions similar to Pallanad scenes(9-12 inches height).
Plate A & B. Paintings on sedimentary rocks, white pigments - small in size similar to depictions in Pallanad.
Champakad Cave Paintings, which are closely akin to that of Pallanad, have human figure depictions in motion—pigments in white, unlike their counterparts of Koodakkad. Their location in the close interior jungle (see Plate) at the opening of cave (see Plate) indicates perfect harmony of their existence with natural surroundings. Represented here are some of the typical depictions, especially human figures in motion—Acrobatics etc.

A, B, C, D, E, F.
two room like divisions, because the giant debris of rock has fallen and that way objected any type of deposit collection. This particular rock shelter is largest so far recorded and to reach this, from the jeepable road, one has to cross a slender wooden bridge, underneath flows the river, Chinnar with much fierce-currents. Deposits are of recent origin because of the might of the water currents. The natural rock is shelter/situated at a height of about 100 metre from the base. The shelter measures about 30 feet at the opening and is about 50 feet deep. The floor is presently covered by the huge fallen rocks and there is much porcupine hunting activity as the holes in the walls are filled with ash, for trapping them by smoking and putting fire etc.

There is another shelter though not deep enough, contains a group of paintings in white colour. This shelter has no space for living, but overlooking the valley down below is excellent for watching the games and pastimes for the cave Man. The valley down below has wild animals, apart from heavily infested with wild elephant and while approaching the rock a number of foot prints and elephant dung were seen on the way down below.

The paintings are small in size (see chart and plates) about 9" to 12" in height. They are in white pigment. The rock is sedimentary (Schist) type. A number of crystalline quartz pieces are lying. The industry may be found and located in the material. There are four groups of paintings. The cave is facing east.
Then comes the rock-shelters which are not painted but spacious enough that they have been converted into small temples. All these occur in the villages of Kizhanthoor and Kanthalloor (see map) at different elevations. Among them two are on the way to Maraiyur Kanthalloor route and they occur-on the left hand side of the road while coming from Maraiyur. On the right hand of this bus route, we get terrace cultivation and it is a signally unique in this locality that there is wheat cultivation which is primarily a North Indian crop. The shelters mentioned above are known as Swami Ala and Kummatti Ala. In the former recent terracotta figurines are kept as idols, which I could see in another open air temple also. Funny enough to say that these gods are smoking pipe and in the pipe was kept the raw ganja (native opium) which the devotees donated as offerings. In the Swami Ala, which is nothing but rock abode due to the fall of large boulders, has got near the idol, a small bell, the modern agarbathi etc. It is as big as a modern terraced house, from the area point. Kummatti occurs still at higher elevation. Here also small shrine like arrangements are noticed. Here another terracotta figure with sword is kept as an idol in standing pose.

Quite near this, an alignment of three menhirs are located, though, when I went, saw that the locals, majority of them tribals, in this case, are worshipping them like the Linga. They had iron (small) spear-blade implements which are kept as offerings.
(see Plate). Then the tribal temple, on the way to Champakad, at an elevation of about 4000 ft, we can see an open air site of a tribal temple known as Velliyiri or as silver mound. On inspection it was found that small silver spears--lances are kept as offerings in this temple. But from our point of interest that it was nothing but a suspected stone circle, and in the inner side is kept three curious idols along with other objects of worship. The stone circle was found by keeping uneven stones, not of uniform variety with an entry to keep the lamp etc. To reach this site of tribal activity, also, one has to walk and climb for about 9 kms through the routes of Palapetti and Thuvanan. In all these tribes, the fortunate thing is that my local informant as well as the tribal one had a thorough knowledge of the land terrain and topography as though it is their palm. All these explorations helped me to trace out the fact that the valley of Anjunad had all the makings of human progress and civilization in this part of the land. This is so within radii of 2 kilometres, I could see the largest alignment of menhirs (small in size) on the left hand side, while on the right half-slightly at a lower elevation we can see an image of the Buddha installed in a shrine, adjacent which we get an inscription with a 'Kirthi Stambha' on each side, suspected to be that of Parantaka Chola. That means even without stratigraphy we get peculiar denotations of cultural sequence. Not only that, slightly away and above the site of the Sahayagiri Hospital at Koilkadavu, on the way to Kannalloor.
from Maraiyur (at a distance of about 5 kilometres) we get an extensive mass-burial area of small menhirs (see plate) much of which are being, deliberately destroyed by the local population for their house-construction purposes.

Still ahead, about 7 kilometres away from Maraiyur, again in the same route we get dolmens which are comparatively bigger and caged one with north-south orientation and engravings inside one dolmen, just, as that of the Todas occupying the Nilgiris or the Blue mountains. William Noble (1976) has recorded that dolmens which he has tried to correlate with the hero-stones or sati-stones of the historic periods. This area is known as Dindikombur. Another remarkable feature of the Maraiyur dolmen is that some families are living even today in that (see plate) means continue to be occupied. Then some of the dolmens are now re-constructed with brick walls below the capstone sheet, instead of the orthostatic fashion (some into houses and some temples with sula etc.)

The rock art seems to have played a major part during the period in Holocene/lithic cultures in Kerala. The stone age paintings of Kerala, discovered in the valley of Anjunad have hereby exposed the myth regarding Kerala prehistory to be a blank one. Geomorphologically, the Koodakadu site is surrounded by tilted and fractured granite formations. On closer examination of the rock-art styles throughout the world we can see a universal uniformity (see Figures) whether it is Altamira of Spain, Bhimbetka
of Madhya Pradesh or my findings at Koodakad (Maraiyur) viz. depiction of animals. In the Mesolithic depictions wild animals are the most common subject matter, followed by human figures. The animals are portrayed always in moving forms—jumping grazing, standing and as objects of hunt. One astounding thing is that these cave art picturisation has got sublime accuracy, naturalism, vigour and know-how about animal body irrespective of their geographical distribution. That way prehistoric artist's realistic portrayals are really laudable.

Rock paintings irrespective of their geographical distribution gives valuable clues on the life of the cave-dwellers. The paintings of the first shelter of the anjuned, in the Koodakkad forest has got almost three fourth of the rock concavity is covered with much superimposed paintings and engravings of horse, bull-bison, seated saint-like human beings with arms raised, or impressions of palm only, elephants with and without riders, unrecognizable but seemingly auspicious symbols and sometimes even ritual dances and social ceremonies. The colours used are red-ochre, grey, pinkish buff, saffron and brownish yellow as in the case of the rock paintings elsewhere. Cattle, antelope, elephant rider, three human figures, prominent bull-bisons going in upward-opposite directions are the major paintings to be noted. The most significant of all, is the picture of tiger-like animal in the innermost layer of superimposition, which my guide, Dr. Ansari could find it out with
Paintings nearing about 100 have different shapes and sizes with the largest single figure towering to a height shapes and sizes with the largest single figure standing to a height of 5 ft, while the small is half an inch. To be very exact the three human figures about 52", 45" and 26" respectively. All of them stylised by wavy hatchings throughout horizontally in one case and vertically in the case of the rest. That three types of depictions can be considered as one aspect of primitive art in general and naturally in this case it had special value and emphasis on local ethnology. The face is feature-less round formation filled by vertical hatchings passing three horizontal lines. Fingers are not delineated on hands or on legs either. The figures are stout with their hand stretched apart as in an enthusiastic pose like ritual dance or something like that. The earliest layer observable in the whole complex of painting is that of cattle depictions which is partly superimposed by the human figures. Even beneath that we have got antelope-doe-like depictions. In the absence of infra-red photography or spectrography colour tests with regard to the chronology of world rock art, we are constrained to rely on the methods of comparative archaeology, typology, stratigraphy as usual for tentative chronology (Marshack).

From that angle dating of rock art in India are at its
infancy. Our methods of dating are primarily typological examination of styles, contents, contexts and other apparent indications, observation of patination grade of the paintings and excavation of sites. The depiction of cattle to be of Neolithic compared with the south Indian rock art sites in general and the Neolithic paintings of Kuppgal, Maski, Piklihal in particular. But this is not a very sound proposition. With regard to the Koodakkad-Champakkad sheltered areas of the Anjunad valley, I always prefer to have comparisons with that of Dr. Wakankar's Indian terminology and division only for my paintings, a matter which is already kept open for discussion. Recently the State Department of Archaeology, Tamil Nadu conducted explorations in South Arcot, where, according to Director, Dr. Nagaswamy (July 13th 1982 "Hindu") megalithic paintings were discovered. All these render greater confusion. In the same way it is not advisable nor is it desirable to compare this with any other site, other than Bhimbétka keeping in view of the work done by Wakankar (1976). In this thesis I try to understand as to how far my paintings can be correlated with that of Bhimbétka and other sites mentioned in his "Stone Age Paintings in India."

Equally the microlithic artifacts of the Mesolithic culture will be examined by taking in view of the studies carried out in the region (Rajendran, 1980) as well as the models put forward by Misra (1973) and Joshi (1978)).

Broadly speaking, at least four prominent superimposed
styles of paintings are visible in Maraiyur. It may not be exaggeration to record the human figures standing have got some resemblance with that of the proto-Egyptian pictures. The cave paintings of 'Okzlu' a suburb of Anatolia (7000 B.C.), the wall paintings of the shrine of Catal Huyuk (6250+400 B.C.), Palanli cave paintings of the Sat mountains (4515+100 B.C.), and again Beyuk Dash of the Mediterranean late Palaeolithic style (James Mellart, 1975) have got very great resemblances with those of Marayur paintings in their similarity-style, in the depiction of figures and nature of the subjects. For detailed description of Near Eastern styles, see page 164,199, as well as other connected chapters of Mellart's book on the "Neolithic of the Near East".

The correlation and comparison between Catal Huyuk may bring out vital clues concerning the prehistory of which can be understood to a large extent. Just as we were discussing earlier the submerging of the Lemuria formations (Upadhyaya 1977) one set of scholars believe that a comparative study of these paintings as well as the rock bruisings may help us to understand the fact that the Negrito, Austrolooid-Dravidians might have had their base somewhere in North Africa, Sumeria and the Mediterranean coast. (M.G.S. Narayanan-Personal discussion).

The earliest layer of cattle and other animal depictions down to the elephant rider with weapon (the least superimposed)
including the human figures—almost all the four styles of painting have been noted here. The upper most and earliest bison-like animals, the animal gallery of bull, horse, antelope etc. the large human figures and the cluster of white paintings denoting social life, duels, elephant-rider—form the prominent styles of the Koodakkad paintings. But so far no other researcher has cared to trek the other rock shelters of the Anjunad like the one at Pallanad viz. Atta āla and the one at Champakad viz. Pulachi āla. In these later-discovered caves after Koodakkad we have got human and animal figures, the only differences that they are of a later class comparable to the while elephant rider with sword which does not appear to be superimposed.

Opinions differ greatly with regard to the tool typology and date of the paintings. Archaeologists are trying to compare this with that of paintings and engravings of Karnataka discovered by Dr. Allchin (1967-68) and Dr. Sundara (1974) and to that of Central Indian rock shelters like Bhimbetka discovered by Dr. Wakankar or even to that of the rock engravings at Edakkal in North Kerala discovered by Fawcet (1901). Of late engravings have been recorded by me at Perumkadavila (Thampi 1979) and by Dr. Rajendran at Thenmalai (Rajendran, 1982). The valley of Anjunad being such a vast area, exploration-wise Kerala remains still to be explored more and hence it would be safe to refrain from making any exact chronology or periodization. Since the studies on the cave art in Kerala is still in its infancy a tentative general chronology may be suggested for the Anjunad
cave paintings ranging from Mesolithic-Neolithic to the Early historic-Medieval periods.

In the second rock shelter at Pallanad apart from the Mesolithic type of paintings, we have got Hindu auspicious like symbols, and inscriptions like letters of which the epigraphic authenticity has not yet been established (Personal discussion with Dr. Mrs. Goldhaile). Curiously enough here we have got lizard like creatures in depiction apart from rider on horse and elephant, with no arrangement and all in scattered fashion. Compared to the first shelter here we have got more figures with less charm for all of them give the impression of an antique as well as contemporary tribal cultural. The 3rd rock shelter with paintings has also got white paintings depicting elephant rider, horse rider acrobatics, battle scenes etc. Their total length comes in between 6" to one foot. They occur all along the walls of the shelters as mentioned earlier.

Dr. Krishnamoorthy's findings of pre-historic engravings and paintings along with microliths (1980) at Naidupalli in Podili taluk of Prakasam district of Andhra Pradesh can be taken as contemporary to my findings of the valley of Anjunad. The rock paintings of Prakasam, which he thinks to be the earlier to the prehistoric paintings found at Ketavaram in Kurnool District (Andhra Pradesh) can definitely of the same type of rock art that is manifested in the forests of Kerala. Further all through the Mesolithic deposits, ground pieces of red ochre
or haematite are found practically in all sites (Mathpal 1977) showing that these were used for producing pigment which must have been used in the making of paintings in the caves. In the rock shelter of Koodakkad range of forest of Maraiyur also I too have collected haematite nodules. The people of this culture were regular users of fire for; charred bone pieces, ash etc. are found in the deposits along with bone pieces of cattle, antelope, wild boar etc.

Of late the year 1978 and 1982 rock-shelters with engravings have been discovered by archaeologists in the southern most districts of Trivandrum and Quilon in Kerala which are typically comparable to the engravings and depictions of Edakkal Malai in the northern most portion of Kerala viz. that of Waynad (referred to earlier). Concerning Edakkal, Fawcett (1901) records his discussion with Bruce Foote that the figures and other carvings on the walls of the Edakkal cave have not been cut out or chipped out but scrapped in. This type of rock **engravings** were discovered by Hubert Knox in Bellary in the eighties of the last century. In the Kuppagallu or Peacock Hill near the excavated site of Sangankallu in Karnataka state, **fine** engravings were found on the boulders of a prominent trap dyke. Men and women engaged in movements, sexual intercourse (a rarity) horned animal-like figures etc. appeared in the engravings.

**Engravings at Perumkadavila:** That way along with the study of stone age paintings for the prehistory of mankind, the rock
NEOLITHIC ROCK ENGRAVINGS

EDAKKAL TYPE

PANDAVAN PARA-PERUMKADAVILA

NEYYATTINKARA TALUK

TRIVANDRUM DISTRICT.
Rock Engravings at Perumkadavila.

Engravings at the entrance with Human Figure in action.

PERUMKADAVILA.

PDA FIG. 2.
Engraved Depictions Inside - Cluster of Sunlike Symbols
Feather, Human Figure, Trident, Shield etc.
Perumkadavila.
DIVERSIFIED DEPICTIONS RESEMBLING FLORAL-FLOWER-LIKE AND GEOMETRICAL DESIGNS ROCK SHELTER, PERUMKADVILA, NEYYATINKARA, TRIVANDRUM.
Plate 41 - Edakkal type Neolithic rock engravings at Perumkadavila.
General view of site with engraved cave beneath the boulder.
Plate 43 - Lined engravings at the entrance with engraved human figure.
Plate 44 as in 43  44 (b) as in 45
Plate 45 - Engravings inside - feather, shield, trident, sun-symbols, snake-like letters etc.

Plate 45A - Some more details from another side
Plate 45b  Similar engravings are found in France—page 173 of Prehistoric heritage. Polyx Bontinck.
Plates 46 & 47 Edakkal engravings (F. Fawcett page 418 and 419 Indian Antiquary Oct. 1901) compared with that of Perumkadavila
engravings and bruising were have to be taken into consideration, though it does not necessarily come under the term 'painting' and will be more safe and desirable to call them as Rock Art. But in the general rock art terminology, the engravings has got the relevance in relation to man's past. From that angle the Edakkal engravings has got greater significance in the context of Indian prehistory. Similar and countemporary is the recent one located by me, which is known to the people of the locality as Pandavapara at an elevation of 1000 ft. lying in the village of Perumkadavila (77° E and 8° N) of Neyyattinkara taluk of Trivandrum District. The rock shelter now known to the local people very well can be reached from the bus stop of Perumkadavila by jeep or by walk of about six kilometres only. Settlement and present panchayat office, township etc. are all on a lower elevation. On the slope of the rock shelter is the tapioca cultivation in between the small soil deposits of weathered laterite, the depth and thickness of which is about one foot only for next to that we get the solid gigantic granite rocks, the largest of which is the Rock Shelter. It stands towering to 50 ft. itself on the topmost portion of the cliff in which it is resting. It has got an enchanting appearance like a facade or like a chapel (see plate).

This rock shelter between huge boulders on the hillock sufficiently spacious and large enough to accommodate nearly fifty people, has engravings of a deep kind on its walls and
especially in the portions at the end. The elements of deco-
ration of the engravings at the entrance wall mostly floral-front
designed while in the interior, some human figures (see plates
and figures) could be seen in hunting posture with bow and arrows.
The details could not be had, unfortunately due to the very poor
light and also because of the rock. The engravings are deep
enough i.e. nearly three quarters of a centimetre and 9 milli-
metres and about 1.5 cms. in width and it appears that they are
polished. This particular characteristic of engraving and
polishing in the entrance would show that this work is executed
most probably by the Neolithic people (see Neolithic section)
or earlier concrete evidence of saddle querns and polished
stone celt and the pottery is absent, probably this could have
been covered under the debris. In the surrounding area of the
rock-shelter a number of deliberately flattered areas giving
support to stone alignment like dyke type, probably for culti-
vation which is still in vogue. On my second trip I did some
trial-digging of the deposits, though fallen rock from above as
well as the human habitation nearly has disturbed the deposits
totally. This problem is confronted by many archaeologists
working in Kerala, because of the density of population and
resultant pressure on land result in untold vandalism to arch-
aeological evidences.

The engravings at Perumkadavila was possible on such a
great depth because the outer surface of the rock presently
appear weathered, must have facilitated the process. The engravings at the entrance of the rock shelters on the right hand side would come to 2 metres in length and 2.5 metres in height. In the interior, those on both walls, would come to 2 metres by 3 metres on each side and the entire surface of the walls have been utilized in decorating them with hunting and floral scenes, undeciphered depictions, auspicious symbols like the Surya and Swastika type all comparable and contemporary to that of the Edakkal caves (see plate). Shelter for their occupation. Generally in Madhya Pradesh and Andhra Pradesh they occupied the hilly regions, and within the boulders they levelled the ground and constructed houses. This should corroborate the observation. A comparison of those engravings with that of Themmalay in Quilon will definitely satisfy the archaeologist's thirst for Neolithism in Kerala pre-history. A description by photograph is also given along with this recording of my investigations.

Structural monuments of megalithism may vary from site to site though, it has got an equally universal distribution. Same is the case with regard to cave paintings irrespective of them being in Altamaria, Bhimbetka, Catal Huyuk or Koodakkad. In that context it may be remembered that the earliest paintings like those on the walls of the caves at Lascaux are of animals. They are thus related specifically to man's instinct for survival in the world, just as the sculptured figurines of
comparable date were probably made to ensure fertility both of the earth and of human body. It seems therefore that at the outset the art of the Palaeolithic and Mesolithic ages, was associated with magic, as indeed several centuries later it became linked with religion. Man immediately became aware of that he was controlled by powers over which he could exercise little or no control, so that works of art however primitive in patterns and design were created to serve as an intercessor with the yet undefined power. Some tribal art in Africa, Anatolia and India still retain these qualities and customs even today.

While describing the 'Neolithic of the Near East' James Mellaart observes that the smaller sanctuary deposits of archaeological material—the remains of visits and not settlement, for which there was no space—covered the lower part of the engravings (page 199—SITE—Beyük Dash). There were a number of stone and shell amulets, some very coarse pottery and lapis of red ochre occur in the near east sites. The flints, comprising, well faceted blades, Gravettian-type blades with a blunted edge, pointed tools, implements with dented edges, and scrapers, trapezes are dated in the Caucasus to the late Mesolithic to the Neolithic. Formozov A.A. (recorded by Mellaart) concludes that the deposits and the engravings of the second style are 'Early Neolithic possibly even late Mesolithism' and he attributes the first style to the early Mesolithic at the latest.
Those conclusions which are wholly accepted by Mellart is applicable to Anjunad Valley paintings also. Mellart further feels that art traditions are notoriously difficult to confine with chronological limits and though cave and rock engravings and paintings are traditionally linked with hunting economies. Catal Huyuk, Umm Dabagliah and North Africa show that they can and do last into the Neolithic, linked to hunting, domestication and pastoralism. That means this art survival in that region until perhaps as late as 5000 B.C. if not later. A comparative study in the case of Maraiyur cave paintings and that of Palanli caves near Adiyaman makes many meaningful observations. Of the latter the very last pictures of animals are roughly packed into the walls of the caves and that they resemble similar representation of animals on Early to Middle Halaf culture-pottery (found on several sites nearby). If this link is valid the figures could be of roughly the same and late as 5000 B.C. in this area. In the same manner these scholars have dated the paintings tentatively to a large span of period. That means from Upper Palaeolithic to Mesolithic-late Neolithic and subsequently from the Bronze Age to the Early historic and Mediaeval periods. One glaring feature noticed in this context that scholars have agreed (Grand, Graziossi, Alimen etc.) upon the view that any prehistoric gallery once used is generally never deserted by the immediate successors or descendants of the cave artist or the first intellectual brain photographer or copier. Wakankar (1983) too gives such mention of a modern artist with photograph.
Naturally so whatever the pioneer work had been done, will be completely modified, added or redrawn by the succeeding style-makers. That means as centuries pass on, pecking, engraving, litho and graphic designing sometimes will be done in one and same shelter or at least in site and deposits. From that point of view chronology of the paintings of the rock shelters have been evaluated.

Till recently it was thought by scholars that the sandstone areas of Central and North India were supposed to be art galleries of the Cave Artists and prehistoric men. This will have to be, re-thought in the light of the evidence of prehistoric Kerala art and paintings. So observes Dr. Sankalia (1978) and records the evidences discussed in this dissertation (written as research papers and notes) to be definitely one of changing the hitherto existing opinions.

In the light of these of the above observations, I hereby record whatever little I have done in the granite-laterite areas of Kerala Prehistory and cave art by discovering and exploring the painted rock shelters of Anjnad valley of the Maraiyur Panchayat, in such sites like the Koodakkad, Pallanad and Champakad. Here the field area is known as Anjnad because, it is a deliberately natural foothill-funnel shaped valley of the High Ranges, rather than a river valley, though there are rivers like Chinnar with comparatively recent deposits apart from the confluence of the three rivers coming from the upper elevation
of Munnar (all river deposits explored along with Dr. Joshi in 1975-76, but with no lithic evidence therein)

Any way, at this point of cave art discussion, at the very outset, I would like to declare humbly, whatever observations I have done by comparision with other rock arts and cave paintings, are all nothing but, venerable appreciation of the work done by previous scholars - both Indian and foreign - rather than a critical analysis. This I have done, because, whatever discussed here, is to be taken only as a 'key to the antique personality of Kerala', which I again do hope, will be of use to future scholars, intending to work in this part of the country. Equally for comparative studies and examination, I have primarily utilised the works of these scholars like, - of course, Wakanker first, Panchanan Mitra, 'Marg' issues edited by Mulk Raj Anand (relevant issues), the recordings of Alimen (1957) Berenguer (1973) Breuil (1952) Lommel (1966) Marshack (1972) Mellart (1975) Sievoking (1979) and many more.

Concerning my description, it may be noted that the entire valley of Anjunad, I have taken all the three rock shelters viz. Ezhuthu Ali, Atta Ali and Pulachi Ali paintings to be of one combined - composited unit in all my recordings. To some extent, this has created some problem for scholars outside Kerala, as though Maraiyur paintings means only one rock shelter. In fact, of the eleven rock shelters, I have explored, three have
yields beautiful paintings, of which again only Koodakkad shelters is known outside. I do feel that because of the enlarged numbers and profusion of different styles at Bhimbetka, some times, Central Indian caves are taken to be Bhimbetkan only. Even the neolithic engravings at Perumkadavila (compared with Edakkal), I have for the sake of comparison and convenience include with paintings, though Wakankar (1983) feels, the pecking-engravings type of rock art might have started from Upper Palaeolithic periods. The Thenmalai engravings (1982) on the gneissic rock do not show better results in photography, because of the weathered nature of the rock surface. Back to comparison, the three human figures (see plate) standing with wavy lined fillings look like engravings, but they are nothing but paintings. (their description is given along with Megalithic-Neolithic study also). Still in these depictions we have got mesolithic, neolithic—pre-Chalcolithic to megalithic and early historic portrayals even. One unfortunate thing is that we do not have any pottery evidences just as Malwa ware or so to supplement and corroborate the evidence. Naturally so the dating is based on tentative chronology in accordance with other known sites and the Koodakkad Mesolithic industry only.

Of the forty four plates of paintings placed herein with its texts and charts, the matter is open for thorough study and scrutiny, apart from scientific classifying, in accordance with comparison to all sites all over the world, any scholar
is welcome to verify my results recorded here. The multi-
coloured carpet of Kerala society has been woven through centuries
with Hindu, Jain, Buddhist, Jewish, Christian and Islamic ele-
ments co-existing without losing their identity or even their
contrast in character. In fact there is no scarcity, but only
the absence of proper study concerning Kerala antiquity, so
records Narayanan (1972). This I feel is true, in the case of
prehistoric archaeology of Kerala too, which prompted my study.

Just as in the case of plates, forty four sites of Painted
Rock Shelters, mentioned in the Ph.D. thesis of Dr. Wakankar,
"Painted Rock-Shelters of India" (1973), have been taken along
with the subject of depictions drawn there. Of these twelve
sites that occur in Uttar Pradesh, twenty six in Madhya Pradesh
three in Karnataka, two in Rajasthan and one, Vikram Khol in the
(Sambalpur) district of Orissa. Engravings at Perumkadavila is
similar to that of Fawcett's Edakkal (1901). For the classi-
fication of the style of prehistoric paintings, Wakankar has
done the division of rock art archaeology into 20 styles which
comes under five periods as the cultural sequence-division
indicates as it is discussed in 'Stone Age Paintings in India'
(1976).

Indian Prehistoric rock art and cave paintings, at any
rate have a greater span of chronological time gap distribution,
the periods of which the hunter-gatherer became the domesticator
of animals, settled life preferring human being attached to the
variant fauna and flora along with social activities like dancing, taming horses and bulls, war scenes and duels, witchcraft and even fishing and navigational and commercial activities like sailing on boats. A unique instance of my cave paintings at Koodakkad, the depiction of which can very well be compared to that of Fig. 126 of page 327 of Alimen's (1957) representation of a boat in Prehistory of Africa. Another solitary and unique picturisation of incised Panther-tiger like representation in the innermost superimposition of Koodakkad (Plate 17) near the masked human head (again compared with the head depiction of human head in Wakankar's painted rock shelters of India (1973; - page 400- fig. 14) - to be very well compared with that of page 235 of Alexander Marshack's 'The roots of civilization'. Another unique feature is the rows of impression of human palm. (Soranhoghat-U.P. - page 57 of Painted Rock-Shelters of India 1973) Marks, which are found in groups at Koodakkad (Plate 14) as well as in many European sites like Pech-Merle, France-Lommel-page 27, Grand-pages 22 and 37-38-centrespread-and also pages 57 and 110 of Sieveking (1979), with reproduction of Leroi-Gourhan's diagram-50, apart from representations of the same from Africa-Plate 23(3) as well as Fig. 135 of page 395-Alimen after Burkitt) and also standing Human figures of Koodakkad shelter compared with that of Algerian rock engravings of Human figures, Ksar-el-Jhwar, Oran, Algeria-Plate 19: 2 of Alimen.
Potsherds and bone pieces collected from Koodakkad nearby shelter.
Now again in the Indian context, Lekhania rock shelters of Uttar Pradesh (page 33 - Wakankar 1973), the riders and warriors bear some resemblance to my paintings at all the three sites of Koodakkad, Pallanad, and Chamakad (see plates). The next site of Panchmukhi (page 45) has also got similarities with the Maraiyur animal gallery as well as horse riders with weapons. The third comparable site in U.P. (page 57) has been mentioned above. The animal and human depictions and others, the charioteer, I mean the upper ones of page 60 goes on to indicate similarities with Anjunad valley arts as well as Vindhon sites. Morana Nala (page 73) depictions - all except the charioteer again shows resemblances of my rock-art discoveries at Anjunad. The walking figures of later Maraiyur paintings of Koodakkad as well that of Champakad are just like that of Mukhadarai (page 78) type only. The sites of Bedia-Lad Bedia and Saha Bahia (pages 80 and 82) have got rider and animal portrayals very much like the Maraiyur styles. The two riders of Khari Pathari (page 94) can have their identity with that of Maraiyur cave art in more than one way. Page 102-site of Serhat has been discussed earlier. The sites of Kuria Kunda (page 100) and that of Patsar (Agra-page 159) have their comparison with Anjunad as far as the riders and animals are concerned. That means a dozen of the painted rockshelter-areas of Uttar Pradesh spread in the districts of Mirzapur, Banda and Agra have their counterparts in Maraiyur discoveries.
Now as regards Madhya Pradesh, trying to compare my paintings at Anjunad with that of Bhimbetka is equal to putting salt into the sea. Still scholars are welcome to correlate the pygmy evidences of Naraiyur with that of the Abominable giant of cave art evidences of Bhimbetka, with regard to the style, texture, depictions etc. Further about 25 sites of M.P. spread out in the districts of Bhopal, Gaud, Hoshangabad, Jabalpur, Mandasor, Raigarh, Raisen, Rewa, Sagar and Sehore exhibit similarities and comparisons. Page 86 showing the pictures of Bhalalai have got many similarities with that of Champakad and in some cases with that of Pallanad (see plates 31 to 39 and other associated individual descriptive plates and figures). Brihaspati Kunda (page 104) depiction of monkey, rider and animals have all their counterparts at Koodakkad (Plates 17, 22 and some more), as well as that of Pallanad (plates 32-36). The two sites of Sagar district with locations at Abchand (page 112) and Bhadel (page 116-little resemblances only) too have got something to tell about their similarities of the cave art of Anjunad. The three depicitions - one human figure and two animals of Bhadabhad (page 122) have got their parallel art beings at Anjunad, at Koodakkad, Pallanad and especially at Champakad in more than one place, not to speak of Bhimbetka, the treasure house of rock art and cave paintings. Guatla (page 136) and Kharwai (page 143) too figure in the comparative studies of my Anjunad valley cave arts. Human representation of cave arts in the sites of Narasingarh (page 147) and Kotrā Vihar (page 149) too have established similarities.
with that of Maraiyur cave paintings. Gwalior of Gird (page 153) with its 'animals' can have their kith and kin at Maraiyur art galleries. Katria Kunda (page 170) Hornless animal, horned animal of Aria (page 172) human figures of Modi (page 174) and some animals of Kanwala, doubted, (page 176) come down to South, through their depictions at Anjunad too. Malaseri (page 182) is another doubted cousin of antique Maraiyurians.

Still more are there for M.P. sites like Bhojpur (human figure page 217) and riders of Amargarh (page 219) with hand impression (independent again) come to the sites of all the three rock shelters of the Anjunad valley, together with-standing figures inside the rectangle. The Vanjārimātā (page 221) armed rider too look for their cave cousins in Kerala. The cave wall chieftain with their jungle activities have their arena in the famous sites of Adamgarh (page 222 and Joshi 1978) can afford to have their comparision of themselves at Koodakkad, Pallanad, G.R., and Champakad. Hunter's hunting and others scholarly observations of different people in the Madadeo Pachmarhi (page 233) and Monte Rozā (page 238) are unknowingly extended to my areas also, I must say in the cave art depictions. Tamia (page 249) and Son Baadra (page 251) bear little resemblance in subject matter with Maraiyur paintings only. The human figures at Jhalai (page 253) with arms, the Everready straight standing figures of Jabalpur (page 255) as well as the 'lower' human depiction (page 257) are instigating the Anjunad antique man also in their
mannerism by similarities of ideas and styles. Jambu Deep (page 242) and Mahadev (page 244) too should be taken care and noted for some comparison with Anjunad human figures.

As earlier mentioned, the Singhampur p. 260 and Kabru Pahar p. 262, have got illustrations of human beings, animal depiction and geometric designs which are seen visible at all the three rock shelters of Anjunad as well as at Perumkadavala engravings (sun symbol).

The rock shelters explored by Wakankar at Bhainsorgarh p. 195 and Gargon p. 200, both of Kota districts in Rajasthan too have got animal and human depiction with that of Anjunad valley paintings. In all these cases of Maraiyur rock shelters, even X-ray style of depiction and pictures of antelope, ibex and bull-like specimen are located in the inner layers, faint of course, superimposed by Early historic and Medieval type of paintings.

Comparative inspiration study can also be had from the rock arts of Karnataka, viz. Badami p. 272, Piklihal (Raichur p. 275) and Kupgallu (Bellary p. 278) paintings, peckings and engravings. Dr. Nagaraja Rao's work at Tekkalakota may be taken as a pioneering attempt on this line. To some extent the works of exploration in areas like Raichur (Gordon and Allchin 1955), many comparison can be derived with the elephant hunter or the so called typical iron sword of the megalithism, is brandished by the elephant riders at Koodakkad and Champakad.
Lastly the engravings of Edakkal at Jaynad in Kerala has definitely got a very large share to contribute, in enriching the comparative study of the Maraiyur cave paintings.

For that matter about 75 years after the discovery of Edakkal, I could stumble upon the Perumkadavila rock shelter, which has got neolithic-patterned engravings in every way comparable to the Edakkal (Ansari and Tampi 1960), the evidence of which in South Kerala with abundant and profusely decorated walls, records a well settled neolithic economy with its present day flat-topped terrace area cultivation as well the locality of the site.

Sali (1980) confirm the engravings of Ostrich egg shells which Wakankar believes that should be definitely earlier. In fact recently, he postulated the theory that the engravings should be older than the paintings going to as far as Upper Palaeolithic. Ostrich engravings on the walls of Marhoume (Western Sahara) is recorded by Alimen (1957- p.365, Fig. 120 and 366; Fig.121) and Carbon dating on the decorated ostrich egg shells at Chandresal shows it to be about 40,000 years old (Wakankar 1983) and beads with ostrich egg shell as the raw material have also been unearthed. Naturally so, if the rock engravings and pecking on the rock are that much old, Kerala antiquity should definitely go still earlier to the present chronology of Palghat lithic industry (Rajendran) and to that of my works at Maraiyur.
Now the subject matter of the depiction and object pictured along with the supposed to be, purpose of the rock art and dating to will have to be looked into.

Diversified forms of Fauna and Flora have been depicted in the natural prehistoric canvas - rock surfaces by the cave artists from times immemorial. The wonders and splendours of nature - that attracted the exaggerated attention of the Early Man - the natural phenomena, he tried to copy into the walls of his abode. These forms appeared to view in the cave dwellings of India by presenting themselves as many species of animals as possible, some times even in crowded manner, some times even extinct reptiles etc. Dr. Wakankar gives about 40 types of these zoological specimens p.381-383 of which only some are represented in the painted rock shelters of the Anjunad valley of Maraiyur Panchayat. Geological and geomorphical causes can be attributed in accordance with palaeo-environment and climate for the non-availability of other species like lion, rhinocerous etc. The faunal specimens which could be located even in Anjunad valley depiction are the common elephant (Elephus Maximus and also probably Loxodonta Africana), Gaur or Bison (Bosaurus) wild buffalo (Subalus bubalis) Bull with hump (Bos indicus) Bull with extended big horns (Bos namadicus), Tiger or Panther (Panthera tigris), Sambar (Cervus-unii color), spotted deer or chital (Axis axis), Black buck (Antilope cervicapra) Nilgai (bos elephas tragocamelus) Chinkara deer (Gazella gazella) Porcupine (Hystrix indica), Horse
(Equus caballus) Ass (Equus asinus) Monkey Zangur (Presbytis entellus) Lizards (Lacerta Chameleon, Calotes) Crocodile (Crocodylus) Crabs (Mala costraca) Crow (Centopus sinensis), Crane (Antigone antigone) Peacock or pea fowl (Pava cristata) Common sparrow and other aves as well as fishes of different varieties.

As far as the Anjumad valley rock shelters are concerned, except a solitary representation of a tiger and elephant, we don’t have any depiction of fierce type of animals. Equally there are lizard-crocodile type of reptalian fauna in the depiction of Pallanad and Champakad. Though the present day Anjunad valley is infested with bear, tiger, wolves and jackals, their representation is not at all located, or hitherto identified. But on the way to the first rock shelter, near a small cataract, where the people of the modern habitation wash and clean their things, on that rock we get an engraved panel of a tiger and fox with ‘Puli’ - ‘Nari’ inscribed on it, meaning tiger and jackal respectively, which they are not that much old as it appears to be. But at the same time the writing can be a later addition while the panel to be of a slightly greater antiquity (doubted). Strangely enough the most familiar domesticated animal viz. dog (Canis familiaris) is not so frequently represented, except in the duel scene (plate 16), (that also a matter of doubt and controversy).

At the same time animal depictions of the ruminant family such as bulls-bison, horses, monkeys, birds and fish - patterns are many in the paintings of Koodakkad, Champakad
Pallanad. At the first rock shelter viz. Ezhuthu Alai at Koodakkad, we get even X-ray type of drawings of antelope near the standing human figures, goat family depictions or also in in colour, while the portrayals of horse domestication or even giraffe found in white colours. Squares and oblique lines - derivative from Chalcolithic patterns, in the case of Kerala, even wavy line appears as filled in the human figures - all a matter of conditioned postulation, not criterion.

There is no unanimity about the dating of the drawings. Concerning Indian rock art, Mulk Maj Anand point out, but the researchers of Jankar, Pandey, Varma and Jagdish Gupta have now brought a consensus that the painting activity in the various caves of India, started twelve to 15 thousand years or more ago - that is to say in the Upper Palaeolithic or early Stone Age. With the notions of magic etc., the rituals connected with hunting clan be accepted as the creation of the spell for success in hunt, then undoubtedly these cave-caverns can be regarded as the earliest temples of mankind. If the inspiration of these paintings, be the exaltation of the hunt and not art for art's sake, then the creativeness of early man becomes an act of worship, the excitation in the body and soul of those insight by which, man has tried to become more and more humane. The purpose of the rock art, first and foremost may be the reflection of one's ego-exhibition similar to today's photographic recording. Secondly it is the only one means to an end of the message of communication by portraying ideographic scenes.
representing social-economic aspects of the then and contemporary societies. Then, thirdly the belief in life after death etc. - the instinct and tendency to survive the times, even when knowing fully aware by some divine mythic impulse, it is not possible.

Of course, throughout the world, in the early cave paintings going to Upper Palaeolithic and Mesolithic times, only animal depictions are found indicating some kind of animism-cult again, postulating some mythical features, definitely superior for the animals to human beings.

Equally, later depictions of animal hunt also may be an act of worshipful ritual sacrament, Wakankar quoting George Grant Mac'Cardy's (1973- p.442). Human origin, it is recorded that the origin of palaeo-art with it, is probably religious and magical. Just to satisfy his own self the gigantic animal communal hunt of the awe-creating larger animals of the early man's era are portrayed as mutilated with arrows and darts may be taken as some religious ceremony to cast the spell, similar to propitiating that particular natural phenomenon in this case, the fearfully anticipated attack of the early man by the giant animal - leading to some form of animal - nature worship and totem worship.

The primitive customs of early Keralites - even some tribals, in modern days like - tattoo and mutilate their body or at least self-torture - 'worship by self-torture and sadism' as means of achieving better results, in duels as a prelude.
before going to war, with the assurance of victory and total annihilation of the enemy. During the historic periods too, we know the custom of war-valiants of the Nayars, the Nayaks of Tamil Nadu, the Marathas and Rajputs — going to war with 'Rakta-Tilak' (auspicious symbol on the forehead, anticipating victory, smeared with blood) of the fresh deliberately cut-wounds of the body. In the same way sorcery, witchcraft all have their emergence and advent—customs during the prehistoric society only. Soloman Reinach (1903), whose views has been recorded by Wakankar as that the purpose of the palaeolithic art with major emphasis on animal portrayals, may be was to put a spell (earlier noted) on the hunted game in order to attract a large number to the vicinity of the cave for better scope of hunting.

Scholars like Giller of the view, that primitive art can be of some leisure-time hobby, past time or like 'Sunday-painting' of the modern individuals engaged in other profession of the contemporary sophisticated society. Even Mr. Chaloupka, an authority on Australian Rock art, who was in India recently, could not give convincing justification (personal discussion) as to the exact purpose of Cave Art, even today remain an un-ending puzzle only.

Of course as L'Abbe Breuil (1952) might thought these Palaeolithic art, no doubt may be the early man's attempts of understanding his own talents and self expressions of beauty which is endearing to them (an assumption) as well as to us.
Wakankar is of the view, that this art was born from a spark of genius in some few men, and that from this spark, all west of Europe was illuminated and thereby illuminated throughout. Further the cave sanctuary—an antique gallery representing thousands of years of Divinity and Sanctity—the highest restum of Prehistoric achievement might have indicated the worship of one particular ‘Witch-doctor’, semi-human or animal form of mythical identity, whom that society might have thought to them, their originator or guardian-angel. Equally the fertility of the sculptures of the ‘Venus’ of the allen dorf type figurines indicate beliefs, female energy to be the source of all creation and all etc. Scholars like Leroi-Gourhan had some special views as to portrayals of bison and bigger animals. The idea that the repeated depictions on bison always accompanied a horse and female figurine with bison indicating some form of mystic religious beliefs of female and male sexuality, of Prehistoric cave dwellers. Ironically except at Kupgallu, we don’t have any depiction of or of indicative of a sexual cult. Clay figurine have been excavated even at Inamgaon, does not have this. Of course at Bhimbetka (Wakankar 1976 p.86) phallic human as well as phallic warrior at Koodakkad are very much there as similar representation. Even in the Near Eastern styles (Mellart 1975) we don’t have animals or humans in coitus, which means the contemporary artists were not interested in eroticism.

From the cave paintings of all the three rock shelters
viz. Ezhuthi Alai (Koodakkad) Alta Alai (Fallanad) and Pulachi Alai (Champakad) nowhere I could find a larger or detailed depiction of an animal hunt. All the depictions showed riders on elephant or horse like depiction or on foot with swords or daggers or in rare cases bows and arrows. Apart from that all the monochrome as well as polychrome panels have not suggested the actual representative relation of animals with the human beings except in the cases of elephants and horses only. Then human figure representations have got head-gear or cap, but no masked figurines have been located. People worshipping temple or totem objects as well as animals-elephant like are shown charging the same also.

Now with regard to the engravings at Perumkadavila also, we can see sunsymbols, bow-like depiction - all similar and akin to Edikkal type, the portrayal and depictions-all of which are open for the scholars to study and reach convincing conclusions.

The four divisions of the sense of compositions suggested by Wakankar (i) Individual animal figures (ii) long panels (iii) Panels covering the entire wall surface and (iv) Smaller groups of animals and human figures are all marked in their own, in my Anjunad valley paintings also.

Concerning the chronology and date of these paintings, on the strength of microlithic tools and comparative stylistic evidences, I would like to put only a tentative chronology
ranging from the Mesolithic - to Early historic and some times Medieval. This is so because no Scientific-Chemical analysis of the painting-pigments have been undertaken so far, or, of the superimposed patina and incrusted materials. Tragically enough the evidences being aseramic that comparative study is also not possible than nowhere in India such advanced techniques like the spectrographic photography infra-red photography, analysis of the colouring pigments has not been undertaken due to lack of scientific facilities. It may be inferred that the Altamira people lived most of the time cooped in the cave shelters, like the Eskimos of today. The African primitive and the Central Indian Early Man spent more time in open space, whether this can be applied to Kerala antique man or not. The technique of paintings, seem to have been similar everywhere irrespective of geographical variations. The rock surface seems to be scratched with a sharp flint may be to discover the outline of the previous drawings. The paints used were taken from the earth, the red ochre, yellow ochre, manganese for black, the green of the mos and powdered stones, all ground and mixed with stone pestle and mortar. These powders were made into a paste, with marrow or animal fat. The mixture was heated over a flame and used red hot, because when cool, it would clot. The reason why this paintings for thousands of years may be due to the shelter from rain and humidity in the comparatively even temperature of the cave. The choice of the Surfaces suggest that primitive man had an
The very nature of the method of applying hot paint made for quick movements of the brush. And thus most of the paintings are action drawings. It is fascinating that what we know as the brush today had already been invented, thousands of years ago from the horse's mane or the boar, bristles or porcupine quills.

The sureness of touch in such fast work was obviously based on observation of the prey with an instinctively focussed attention. The primitive man had obviously seen things and not merely looked at them.

The cave dweller had even exalted himself to possible divine status by identifying his nervous energies in the symbolic parts of himself.

At this stage, it is not advisable on my part to say anything definite about as to the date, chronology and purpose of these cave art of the Anjunad Valley of Maraiyur Panchayat. Scholars are welcome to explore and study these areas, which demand immediate attention of archaeologists both of India and abroad. Red, white, muddy brown, lime white type of colours (probably due to weathering) are found in these paintings. Haematite nodules have been collected from the basal portion (1983) (already recorded). Amit Agarwal records that some ancient rock paintings were executed with white pigments made from Kaolin or limestone. These are also instances as at Panchmari of black or deep purple colour having obtained from magnesium
oxides. Haematite and other iron oxides provided colours in red yellow, orange or brown. Page 8 of Wakankar's Stone Age paintings (1976) shows the picture of experiments by the author's ((Wakankar and Brooks) have demonstrated that all the rock shelter pictures could have done with pigments made by grinding local rocks, palmetto stem brushes (or porcupine quills for fine work as earlier referred) and water cups made of folded leaves for keeping the mixture. This convincing experiments may give an idea for any researcher working on prehistoric art to reach to better conclusion, though I could not carry any such experiments, due to my lack of training and background in drawing and painting. Naturally so, at present comparative study of my paintings with that of Wakankar's work and taking that as the model, in accordance with the styles mentioned therein, I feel in the years to come, I will be able to carry out similar studies for re-writing Kerala prehistory.

The three rock shelters of the Anjunad Valley of Naraniyur Panchyat, unfolds the story of Kerala cave art coupled with the engravings at Perumkadavila in the south and Edakkal in the not substantially enough, corroborate the archaeological play things of Kerala Antique man.

The larger number of animals and depiction of human activity, just as in the case of African Art, where also human beings are on locomotion, may to some extent, establish settled life
economy irrespective of their being Mesolithic, Neolithic or Chalcolithic of which the last mentioned, mainly relay on ceramic and pottery evidences. This type of evidences is not available in India. Except weapons, we have not come across any water-vessel carrier or similar depictions in any of my recordings. At the same time the suspected elephant-rider and crocodalia fauna have got better and mature parallels in Central India. Then the Dancers and Drummer-type depiction can be located at Pallanad paintings. Here trident symbols are also there. The paintings were executed with some kind of brush like thing or quill as discussed earlier or thorny hair of some birds or animals, but not with finger tips for these paintings are found at such odd surfaces, right in the entry at height, or on the ceilings or the concavity. Probably this is the reason why the second and third of the above mentioned have lasted without much de-colourisation due to weathering, so being protected from sunlight, rain and humidity within the shelters and caves.

Painfully enough, all these shelters and their surroundings are being subjected to much human vandalism from the local miscreants - result of which these once a Visual Feast for the eyes of of the onlookers, have become more or less looking like a brutal rape-victim. This is visible from the colour plates, which I have exhibited along with the text. Due to the literal mud-slinging and addition of modern paintings, small balancing on dias-dance variety like the one below...
the monkey of plate 17, get erased or covered from the researcher who wants to have the study so keenly.

Consolation at least here is that just as in the case of the four plates mentioned in pages 14, 15 and 16 of Wakankar (1976) at Ambajogai valley also we get modern day-house wall decoration of trees, birds, p. 420 of Wakankar (1973), human figures etc. on the house of the permanent settlers.

It can be assured that all animal motifs, wherever they turn up, are originally derived from the hunter style of the early Stone Age periods only. Grand (1967) is of opinion that that prehistoric cave art is characterized by the nature of contact between man and the animal world. The animal is the primary subject and is represented for its own sake as it were. That at any rate, is the impression given by the frescos of Franco-Cantabrian art and at times by certain African panels - These can be no doubt - their high degree of presence proves it - that the portrayal of animals obeyed symbolical or rather metaphysical dictates that escape us, but whose existence is confirmed by the association among the figures themselves with a series of signs. In truth the effectiveness and often the very remarkable beauty of the picture, as a picture and our ignorance of the real reasons that motivated it are the only source of our feeling that animal life was recorded for its own sake. The illusion has to do with the fact that to man the animal as prey is always more occult, more venerable, more admirable than the animal as
For the rest, any attempt at an absolute reconstitution of the meaning of prehistoric art is utopian, and (prudence which is always better than valour) asks that we aspire only to a kind of phenomenon study.

Within the space of the caves and rock-shelters, these masterpieces of prehistoric art, faithful to a peculiar deliberate pictorial organization, one which is for us surprising, bring to a select fauna with gripping intensity. Prehistoric art is that way, worthy of bearing favourable comparison with all the later formulations of animal art. Instead of simply praising it, we have sought to guard it from the sentiment that threatens to swamp meditation on the origins of art.

Lommel (1966) comments, concerning world cave art, in these ideas that some thirty to forty thousand years ago people in the caves of the Dordogne and northern Spain began drawing irregular lines with the figurines on one hand on their damp clay walls. These random lines developed into the outlines of animal and so into wall paintings and modelled relief (we may put this into discussion).

During the 'Solutrian' period (about 20,000 to 15,000 B.C.) and the Magdalenian (about 15000 to 10,000 B.C.) these led to freely drawn graffiti (wall engravings) with light colourings added. Man's abilities were now extending at a more rapid state.
It may equally be remembered by us that the hunters of the Early stone age must have been thoughtful individuals, even though, without a settled life concept, not at all 'primitive savages', that they were once thought to have been. It may not be easy for modern man to understand the mental make up of the prehistoric people, still the rock art which they left us ought to help in finding a way to them. None can dispute the fact that the rock paintings are great and unique works of art, yet some people still seem reluctant to admit that those who produced these works must also have been men of unique intellectual accomplishment, in a word, great artist who are comparable with the dominating figures of historical times of India like Asoka, Akbar, Shivaji and many more.

In short irrespective of the geographical distribution and location of the rock art site, the observations concerning the evolution of rock paintings of Wakankar (1973) should be remembered and should equally be studied as the key note for any scholar interested in or devoted to the cave art of India. It has been observed rightly by Wakankar that the prehistoric paintings in India and the earliest one can be safely dated to Mesolithic (pre-Chalcolithic) if not to Upper Chalcolithic times. is relevant and applicable to my studies at Narayur too, and it continued up to the Historic times. But the only difference is that at Koodakkad, we do not have proper hunting evidences though scenes of charging elephants at villages are reported.
(referred back). Then Mesolithic paintings act as the ocular evidence of the Mesolithic community of the contemporary society. Next to that Mesolithic hunter-painters establishing contact with the pastoral and agricultural communities on the down plains and cultural barter goes on without much change in economy till the historic period. Transition from naturalistic style to conventional style is visible with the transformation of pre-historic society into historic epochs. The rock shelters were first occupied by a people who made pebble tools (the case cannot be applied to Anjumad valley at least, at present) and were followed by Acheulian, Middle Palaeolithic, Upper Palaeolithic Mesolithic, Neo-Chalcolithic and historic periods of people. That means it is implied that the cave dwellers remained hunters all the time except during historic times when they adopted partial agriculture and looting and warfare (see plates of duel etc.) as their occupation. Later on these were supposed to have been occupied by saints, munis (Muniyara or the chamber of the hermits is the name given to the megalithic dolmens in Kerala). Rock shelter dwellers constructed protective walls and fortresses as well as stupas, burials etc., the fore-runner of megalithism. Based on them, we can infer that the rock paintings throw much light on the life of those people who occupied these shelters and painted contemporary scenes the compositional element of painters was highly developed the subject matter, which changed according to time, cultural contact, environment, climate and contemporary social order.
The styles of mentioned in Wakankar's works, especially for the tables, rather than for the comparison, though that has already been done in this dissertation earlier also. Scholars like Dr. Wakankar will be immensely happy, I do believe, that in the Koodakkad rock shelter, we get for the first time of human figures standing straight with their faces, looking at the onlooker — a real rarity in the depictions of Indian rock art and cave paintings. Then with regard to patination and incrustation due to rain water percolation and weathering have of course, decolourised, the original colour of all the paintings. Naturally so, the chemical composition of the pigment, the surface of the rock, environmental and climatic factors — all play their respective roles, in disfiguring the monument. Depending upon the basal evidence as well as the excavated material and also on the lines depending upon the suggestions of B. and R. Alchin, Wakankar and Brooks, have divided the prehistoric rock paintings to about 20 styles coming under a time gap arrangement of five periods viz. (i) Mesolithic or earlier (say Upper Palaeolithic), (ii) Neolithic-Chalcolithic-Early iron and (iii) Early historic, (iv) Mediaeval (v) and Recent, occurring throughout the explored, excavated sites in Central and North India. The division of styles are equally based upon the superimposition layers also. For a Stalwart like Wakankar, this is possible to distinguish, but not with the case of others.
So far the sake of convenience, I have divided the styles of rock art and cave paintings in the valley of Anjunad as well as the engravings of Edakkal and Perumkadavila in Kerala into three periods only viz. The Mesolithic or earlier, Neolithic-Chalcolithic and Early Iron and Early Historic, with four divisions of styles for the first one (styles No. 1, 4, 5 and 6 of Wakankar (1976) and two each for the other two cultural phases of which again, period two will have styles 7 and 10 of Wakankar (1976) and the last (styles 13 and 17) two for the Early Historic. Scholars are again welcome to enlarge and elaborate this table modelled on the lines of Stone Age Paintings in India. Here again the engravings can be of the Neolithic period or of the earliest periods (recent theory of their origin with that of Upper Palaeolithic). Equally I have combined certain sub-division together, because of my own limited observations. Further the sites mentioned in Wakankar's Ph.D thesis 'Painted Rock Shelters of India' (1973) was, definitely, an inspiration during my post-graduate study period, which also might have been one of the causes of this work, for the virgin jungle of Kerala, definitely must yield all these evidence, my optimism paid well and I feel the rest of my life from now, after initiation as an archaeologist too, will be devoted to the cause of Prehistoric archaeology.
Compared With
The Table Of Styles
Mentioned In
Dr. Wakankar's
Stone Age Painting
In India
Period I Mesolithic or earlier

Style 1. Very faint, reddish-muddy brown, or black wash, found only at Koodakkad two bulls - smaller compared to Adamgarh, Modi, and Sanchi elephants and Abchand bull, superimposed by style four.

Style 4. Faint red outline with fillings following the muscles, comparatively less, but few human hunters or dancers, deer, bison - superimposed by style 5 - Koodakkad only - antelope, ibex, deer, bison - compared - Bhopal, Raisen, Adamgarh, Kabra Pahad and Penchadi depictions.

Style 5. Red, ochre red, white, white outline filled with geometric designs - intrusion and superimposition by Period (iii) again Koodakkad only compared with Hathi Tal, Raisen, Keta-varam (A.P.) etc.

Style 6: Mesolithic-Neolithic
Geometric and floral designs (p. 318 Wakankar 1973) Thin red or full white, white outline associated with animal depictions, incised tiger (Plate 17), engravings of Sun symbols etc. Koodakkad, Pallanad, Porumkada-villa and Edakkal compared (see pate) with Kabra Pahad, Modi, Piklihal, Sujangura, Putlikarad, Shahad Karad, Singanpur, and Tatkot Thenmala engravings and Guddapah - paintings, notes recorded by N.G. Ramaswamy, Indian Horizon - (1979).
Neolithic-Chalcolithic and Early Iron.

**Style 7**: Brown wash, white - buffalo, humped cattle, monkey, lizard, bison, superimposed by human depictions and Period III Early Historic and style 10 - Koodakkad, Pallanad and Champakkad compared with that of bhimbetka, Raisen, Modi, Kanwala Shahad Karad, Dharampur Shaldera etc.

**Style 10**: White or yellowish white, or yellow wash without apparent outline quite realistic and skillfully executed; humans, bulls, superimposed by Period III but not always - Koodakkad, Pallanad and Champakad compared with Fatehpur Sikri, Singanpur, Fachmari and Bhimbetka.

**Early Historic**: *Style 13*

300 B.C. to 300 A.D. Mostly battle scenes superimposing red or white outline, all-riders, horses, elephant riders, archers, human figures, taming scenes etc. Koodakkad, Pallanad, Champakad and inside the dolmen wall at Windikomour (see map) compared with Adamgarh, Bhimbetka, Shahad Karad, Kharvai, Modi, Abchand, Futlikarar, halichur, Bandha, Tatkoti & Amirawra etc.

**Style 17**: 1300 A.D. onwards

More sophisticated depictions compared to style 13 - subject more or less the same - white drawings, naturally no superimpositions - Koodakkad, Pallanad and Champakad, compared with Kharvai, Futlikarar, Vijayaagar, Lakhajaour, Bhojapur, Randapur and Bhimbetka.
PAINTING OF A BULL FROM MARAIYUR CAVE COMPARED TO PAINTING FROM LASCAUX CAVE, FRANCE.
ROCK PAINTINGS FROM MARAIYUR AND PERUNKADAVILA ARE SIMILAR TO ROCK PAINTINGS FROM SOUTHERN AFRICA.
Suprisingly enough except in engravings we don't find bow and arrow type depictions, when even today some of the tribals utilise these, as their means of subsistence for procuring hunted food. The division is purely tentative and relative chronology which prehistorians may take note that the flora and fauna, human beings in action-motion, symbols, all have been given only an ever all review and examination. But only the conspicuous absence is the scene of mass hunt, while birds like peacock, crow, occupation, navigation, rowing of boat, fishing are all (Atta ala-Pallanad) visible in the cave art depictions of that are exhibited in the Ezhuthu Ala (Koodakkad) Attalai (Pallanad) and Pulachi Ala (Champakad) of the valley of Anjunad of the Maraiyur Panchayat in the Devicolam Taluk of Idikki district, as well as the engravings of Perumkavadavila in the Neyyattinkara taluk of Trivandrum and Edakal of Manantody taluk of Waynad district of Kerala.

During the early historic periods Kerala had flourishing trade and commercial contract with the countries like Arabia, China and Roman Empire etc. all recorded in the travelogues of Arab, Chiose and European scholars like Buchanan (1807), Day (1863) and that of Barbosa (1866).—embodied or some way codified in the works of Naiynar (1942), Sreedhara Menon and the best of all the writings of Dr. M.G.S. Narayanan and in the earlier writings of Caldwell etc. republished recently.

The district gazetteers records a variety of Kerala's
fauna and flora in accordance with the topography. The Kerala forests abound in elephants, black leopard, chettah, sloth bears, giant squirrels, bison (in the High ranges there is a valley, by that name viz. Bison Valley) varieties of deer, Nilgai, ibex etc. The more delightful specimens of wild life are the charming little honey suckers with glorious metallic colours, the golden backed woodpecker, the little white moth which creeps among the leaves and the Malabar 'thrust' which has earned the name 'drunken plough boy' by its musical exortions, Rawlinson (1918) gives references about the objects made out of teak wood which were excavated from Assyria and Babylonia, which at that time was available only in Kerala. Between 3000-1500, this part of the land might have exported not only teak wood for ship building etc. but things that are required for mummification as well as perfumes (Krishna Chaitanya, 1972).

The rock art of Bhimbetka (77°37' E: 22°50' E) extends for 10 kms east-west and three kms. north-south and is the biggest repository of prehistoric art in the country, discovered by Jakankar, have got their counterparts in Anjunad valley too.

A study of 133 caves on the main Bhimbetka hill shows the wide range of animals, creatures depicted in the paintings of these caves. The study reveals the use of 16 colours, 12 styles and three techniques. The colours include white, chrome yellow, orange, orange yellow, yellow, ochre - colour
and used colour cakes are found from all the layers of the Mesolithic period. Monochrome and Polychrome, - the colours used on bare rock surface without any preparation of ground and use of background colour render confusion and consolation.

The rock art of Kerala in general, shows a developed phase of Mesolithic and Neolithic economy and it does not, in that manner show any possible arrival of cultural sequence, from Africa or Europe or other parts of Asia and India, still it is for the scholars working in multi-disciplinary branches to explore the cultural continuity of this tiny foot of India by giving importance to studies related to the unearthing of her hidden treasures of unknown past.

**Neolithic**

With regard to the inter-connecting link between the Mesolithic and the Megalithic is the so called 'Neolithic phase'. The typical Neolithic site with engravings at Perumkadavila, has been vividly dealt with in the Rock Art Section (kindly see Rock Art and Cave Paintings discussed along with Mesolithic) and this is only comparative glimps of Kerala Neolithic settlements only.

Here in the valley of Anjunad the major type of possible evidence is the construction of bamboo-huts (see plate) and the stone depression made on the surface of the common assembly-venue and the manufacture of utensils, grinding stones, polished ones and quern-like objects of daily use. During the course of research observations, in the Uruvaasal (Ur = area, Vaasal = residence)
ladies using the wooden drum-like vessels into which the cylindrical macu-like thing is thrust in a rhythmic dwindling manner for grinding and pounding. This system is found in African countries also among the tribals (as mentioned earlier). The evidences of domestic life—indications, proclaims the existence of a full-fledged neolithic economy. Then for my observations, the engravings of Perumkadavila at Neyyattinkara Taluk of Trivandrum District. The site is known as ‘Pandavapara’ (the abode of the Pandavas’). Thirdly a critical assessment of the socio-economic lines of the “Travancore Castes and Tribes” will enable us to understand the settled economy of the neolithic phase. In addition to those evidences, celts are also collected and recorded in Travancore area. Other evidences are also counted here in reconstituting the neolithic phase.

The neolithic people preferred granitoid hills for their settlement with ample scope for terrace cultivation. A kind of rice which grows in winter, wheat (in Kanthallor) jower and horse gram are the major crops now grown in the former neolithic settlements. The neolithic man might have consumed the flesh of animals like rabbits, bandicoots, fox, (Allchin 1968). Various types of aves which were hunted either by trapping, snaring, killing with bow and arrow or at least by piercing with his long lance. During this period raw material for the manufacture of ground stone axes and microliths were available in plenty (Nagaraja Rao, 1966). Meanwhile perennial water supply and availability of grazing land for his cattle must have been
ideal for reasons for the neolithic man to start his settled life. Secondary source of food economy was animal wealth. That way they hunted—as well as domesticated animals. Undoubtedly they reared cattle, sheep and goats for milk and its dairy products while pigs and dogs were kept for carnivorous purposes. The neolithic people of Tekkalkota (Sankalia 1964) and Hallur (Vishnu Mittre 1971) cultivated horse gram and ragi. The antelope like-body or cows in the paintings of Maraiyur (Tampi 1976) is similar to that of Piklihal or Hallur. The faunal study of Alur from T. Narasipur and Hallur had proved that the cattle were put to laborious task-duties in all probability was for agricultural purposes. Domestication of cattle was proved by the animal study of animal remains from such neolithic sites as Piklihal (Allchin 1960) Tekkalkota (Nagaraja Rao 1965) Hallur (Alur 1971) T. Narasipur (Alur 1971) and Kodekal (Shah 1973). Kodekal has yielded buffalo remains. The predominant racial element identified in the neolithic human osseous remains from the excavated sites viz. Brahmagiri (Sarkar 1960), Piklihal (Allchin 1960) and Nagarjunakonda, Tekkalkota (Malhotra 1965) and T. Narasipur (Malhotra 1972) is the mediterranean. Another racial element represented is the Autochthonous Proto-Australoid. However these two racial elements are mixed in these sites. Naturally so the Mediterranean and Proto-Australoid complex constructed the neolithic population. The Mediterranean racial
element represented in the above sites has got now close
affinity with the modern population. This racial element is
present in some of the Chalcolithic skeletal series from Nevasa,
Lothal, Harappa and Mohanjodaro on the one hand, in the megalithic
skeletal series from Adichchannalur (Zuckerman) Brahmagiri
(Wheeler 1943) and Yelleswaram (W. Khan 1963) on the other.

Allchin (1960) prefers to call the Mediterranean race as
the Dravidoid with all its linguistic variations and connotations.
He feels that this stock of human breed with a wider cultural
distribution throughout the Iranian plateau and even in Central
Asia in pre-Bronze Age times, travelled into the Deccan from
Iran through Baluchistan and Sind. This element subsequently
mixed with the pre-Dravidian or Vedid race, the people of which
were in food collecting stage. The Kadar and Uralis of South
Kerala can be referred to as the descendants of the negrito
race. Bow is supposed to have been discovered by the negrito
elements. That most of the tribals of Kerala has got in one
way or other some characteristics of the negritos. Many of them
have got that 'curly hairs', 'short stature' stub nose etc.
Further the hill tribes of Kerala, the aboriginals of Australia
and the Veddas of Ceylon has got astounding similarities.
Also from the point of view of cultural generalila,they are
nomadic agriculturist also. Gilbert Slater (1924) is of the
opinion that 'the Dravidian population is a branch of the
Mediterranean race or at least a closely allied race'. He believed that a branch of the Mediterranean race passed through Mesopotamia and Baluchistan to India long before the dawn of the Sumerian civilization and evolved the Dravidian race and culture in the new environment though, not without extraneous influences. These tribals who entered Kerala during the Neolithic period formed themselves into clans, and thus came under the fold of a totem-worship belief and had a common totem ancestor. This can be an animal or animal-like figure, a plant, a man-made utensil or at least a natural phenomenon. Here also as the Sanghom literature (Sreenivasan 1947) gives the evidence, certain tribes had the Neem tree, the Kadamba tree, Fish, Bow etc. in the Ancient Tamilkom.

Nomadic cultivation, it seems began during the neolithic period. Surprise, it may appear, that at the first instance ladies and the women folk of the society, were managing cultivation. Probably this may be an antique pointer for the Matriarchal society in Kerala's social hierarchy. But Gordon Childe (1958) is of the opinion that on the neolithic cattle-keepers may be of patriarchal lineage. While for Kerala matriarchy was the key note of Society for Krishna Aryan gives evidences about the Travancore tribes such as Kanikkar, Muthuvan, Mannan, Malayarayan, Vishavan, Parayan etc. That means the headship is passed on from Uncle to nephew and not from father to son. Socialists and social anthropologists believe that the
very fact even the high Caste Hindus like the Nayars were practicing these matriarchal customs, that too till the advent of this century, it may be taken to be as an idea borrowed from these tribals. Habits die very hard, so goes the saying. Among Nayars, even today the practice of cross-cousin marriage of taking the maternal uncle's daughter to be the bride exist. It can very well be traced back to the proto-Austroloid tribals who were practicing this (Thurston 1909). In the same way, as we have discussed in the preamble and introduction, the system of taboo during monthly periods for women, brother marrying the brother's widow—all these can be taken to the proto-Austroloid customs. Same is the view taken up for the disposal of the dead and religious practices (Manickavasagom Pillai 1973). As referred to earlier, Sanghom-period records the existence of a female deity 'Kottavai' similar to the Kali or the proto-type Durga. Sacrifice for propitiating this deity was also known. The fertility cult (female energy as the source of all creations) the famous Venus of Willendorf (Austria) may be remembered in this context. Apart from the Magdalenian art, Egypt, Syria, Iran and the whole Mediterranean regions all give the evidences similar to that of a proto-type Devi worship, for all these places have yielded figurines of female with sagging breasts etc. That means prior to the Indus people, the Kerala antique man had this custom. Not only that, we all know that Kerala and Bengal have more Devi Temples even today (Menon 1943). These pre-Dravidian beliefs could survive even when the incessant cultural onslaught of
the Dravidians and the Indo-Aryans were maintained in Kerala and Bengal. Naturally the supreme importance given to the female deities is understandable.

Chronologically we are not sure whether we have a continuous full-fledged neolithic economy comparable to that of Brahmagiri, Sangankallu, Piklihal, Tekkalkota, Hallur, Payyaappalli, Allichanallur, Coimbatore, Nilgiris etc. Without metallic-objects only neolithic tools were collected at Uthnoor (Alchin 1961) in Andhra. From Kerala almost all the celts were collected in isolated manner, without any other neolithic assemblages. Karnataka and Tamil Nadu sites show that the Neolithic-Chalcolithic cultures might have entered three comparatively earlier (N. Rao 1966). This cannot be said about Kerala. But the celt collected from Thiruvalla as well as the specimens from the tribal temple at Agali (Tampi 1980) village of Mannarghat taluk of Palghat which show the characteristics of pecked, ground and polished industry. Here too, all the specimens are in dolerite material and are comparable to that of southern neolithic of Vattalmala, Daimalai and Togarapalli recorded by Narasimhaiah (1980). (see plate).
Megaliths are found in almost all continents of the hitherto known world—with a wider distribution in Europe, Asia as well in Africa. These gigantic rude stone monuments are found in North-western Europe, the Mediterranean and in the Asiatic countries of Japan and India etc. Megalithic monuments that way are not restricted to India. Just as the Greek words 'Mega' meaning great of big, their distribution is also so wide and voluminous wherever they are found. These monuments with and without capstone have been recorded from England, Wales, Portugal, Spain, France, Germany, Italy, Sweden and Sardinia. Equally they have been reported from the Sahara, Mauritania, Senegal, Konya, Uganda, Algeria, Somaliland, Abyssinia, Palestine, Arabia, Georgia, Cambodia, Indonesia, Japan and Philippines. But there are no Universal type of pottery, implements or any other kind of object obtainable from graves of this category and therefore in the world context, there is no uniform megaliths as such. The megaliths in Europe, it may be pointed out belong to very early dates ranging from 3200 B.C. to 1500 B.C. They are either of the Mesolithic period or of the Bronze Age. Early Iron Age megaliths in Europe or in the Middle East are extremely rare, in India and South East Asia they are on the other hand many of the Iron Age alone (1000 B.C. to 100 A.D. and later).

Concerning the origin of megalithic rite is obscure, so says Dr. Harding (Prehistoric Europe - 1978) still it is generally assumed that it was in the south-east in the coastal zone of
Almeria that collective burials first superseded the cave and pit burials of the preceding early Neolithic. Equally a comparative study the megalithic tombs of northern and western Europe reveal an amazing variety of structural variations both in external appearance and in the lay out and in construction of their internal chambers, which is true in the case of Amunad valley also. Glyn Daniel (1963) distinguished two principal categories — in addition to the single chambered 'Dy-seas passage graves) of northern Europe — on the basis of structural morphology; passage graves, in which the burial chamber, generally within a circular mound is approached by means of a passage distinct from it and gallery graves in which there is no separate passage, the entrance leading directly into the burial chambers. What makes it so difficult to trace population movements or cultural diffusion among the megalithic users, however is not so simply the multiplicity of variant forms which the tombs take, but also the fact that particular architectural features may be paralleled from region to region where other aspects of tomb typology are indicative of divergent traditions. Before the advent of Christian Europe it had a prehistory ranging to about 5000 years and from its origin in the Near East civilization spread westwards giving rise to the fifth and fourth millenium B.C. megalithic cultures of Central Europe. The iron age of the first millenium B.C. was climaxed by the celtic cultures Hallstatt and other sites famous for their hill forts, chariot burials, wheel-thrown pottery and coinage.
Though typologically different and chronologically earlier, scholars, still, have made some attempts to trace links between the Indian and Western megaliths. Wheeler (1947) traces the possible resemblance of Indian megalithic types with the megalithic structures of West Asia and Europe and suggested Karachi as the springboard of the megalithic idea for entry into south India. Gordon (1958) on the other hand suggested that the megalithic architecture can be associated with the people whose ships floated between Western coast of India, indicating an Arab contact and resultant origin. Haimendorf opined that the megalithic builders had their migration into this land from the Mediterranean coast following a south ward movement along the western coast. Banerjee (1965) feels that the Indian megaliths were inspired by the Cairn Burials of Baluchistan, and that they came to south India from the north-west through the land route crossing the mountain of Vindhyas.

Heine Geldern in his Forward of ‘Iron Age in India’ proposed a central Asian origin for the megalithic builders. Walter Ruben is quoted by Banerjee as having a Palestinian or Persian origin for the megalithism. The theory of Leshnik may also be mentioned, so records Asthana (1976) while commenting on his postulation on Indian megalithic links with its Persian and Caucasian counterparts, for which he has put forth some parallels also.

While indicating the Middle East contacts with the Indian megaliths, Allchin believes that South Indian
graves appear as a developing complex combining several streams of influence in them. Allchin (1968) Ramachandran (1969-70), derived parallels for the Malabar rock-cut graves with that of Mesopotamia, Persian Gulf and Yemen. Allchin concludes that during first millenium B.C., these as influences due to maritime contacts from the Middle East. The small bowl on stand found in two megalithic graves in the Perumal hills, Kodaikanal may be the influence.

Concerning this phenomenon, K.V. Soundara Rajan felt that they are composite in their architectural ingredients and from diverse original sources, a maritime as well as overland, with many 'first arrival zones'. As such it appears that the megaliths were introduced from outside. There are two groups of scholars - Leshnik and Banerjee tracing the movement of the megalithic builders from north to south (Central Asian-Iran theory), while other groups of scholars consisting of Krishnaswamy, Wheeler, Heimendorf and Soundara Rajan thinks that first the megaliths came to south from the west and then their movement within India took place from the north and south. The other theory is that they had their landing first along the Western coast of India in about 1000 B.C. as Gupta and others think. Of course, it is admirably admitted that systematic classification of the Indian megalithic by Krishnaswamy (1949) has helped one and all to understand them better and that the megaliths have world wide distribution, in India roughly between 8° N to 20° lati.,
outside the peninsula in Pakistan, Baluchistan, Persia, Indonesia, Cyprus and Palestine apart from earlier mentioned. Any way some sort of relationship between Indian and Western megaliths, are always postulated by scholars, although, it is difficult to determine its exact nature and quantum (say sarcophagus was in use much in the south, especially in Kerala as well as Mesopotamia and some Arab countries). The Pandukal complex of burials are sufficiently conspicuous to have been the early object of attention. From the evidence of Junapani (Thapar 1962) Takalghat-Khapa (Deo 1973), the Pandukal society may be associated with settled agriculture. The recent floral and palaeobotanical studies (Thomas 1977) and Kajale (1978) with archaeozoological studies sums up a better idea of the megaliths.

South Indian megaliths have not yielded always iron implements from excavations (Aiyappan 1941 and 1945). Urn burials excavated by Aiyappan and his studies at Perumalamalai in Madurai District have not yielded any iron fragments instead vessels in copper and bronze and Kerala too has got sites without iron traces in the urn burials. This aspect of megalithism we have recorded here very often. That goes on to record probably south Indian megaliths may be even contemporary to the Copper or Bronze age of Europe or West Asia. Subba Rao (1962) inferred that the Dravidians probably came from Rajasthan to South India through Central India, around 500 B.C. or later. In his opinion the megalithic culture had a greater claim to be attributed to the Dravidians.
because of the continuity of tradition and references in literature. Gururaja Rao (1972) feels that the black and red ware people, the Dravidians, first appeared in the Kathiawad Peninsula, along with the Harappans, and from there they spread to the south with the acquisition of iron and the cult of megalithism ultimately from south Russia and North Iran, through the Cairn-builders of Baluchistan in the early centuries of the first Millennium B.C., entered South India ideally suited for their new cultural needs. Alchin (1968) feels that the demand for better meadows and survival for a pastoral economy compelled the European tribes towards B.C. 2000-1000 to move on metal culture pockets with its variant cultural pockets. Naturally so the movement towards the rituals, that existed in the Mediterranean areas were recently excavated in the South, commenting on which the late Dr. K.K. Pilley (1970) observes that golden crown and other objects connected with the worship of Muruga or Karthikeya, the war god of the Hindus, etc., were collected from Adichchanallur. Maritime and Commercial Links and Contacts have been recorded earlier also by scholars like Sivaraja Pillai (1932) and (Thomas, P.J. 1953). Kanak Sabhai (1956) has also justified the navigational strength of the kingdoms of the Tamizhakom. Excavated objects of the same contemporary periods were available from the sites in Palestine, Syria and Cyprus. Simply, because of this, we cannot say the people of the Tamizhakom and West Asia had close commercial contacts. Equally
you cannot rule out the fact that religious customs too can be exchanged or imitated.

Emphasizing the Indian context that the Dravidians must have moved towards south India much earlier than 500 B.C. and the Aryanisation too must have started earlier than the above data. Further between B.C. 1500 and B.C. 1000 Copper and Bronze vessels in cultural strata became popular and in use. In accordance with the movement of the people of Neolithic-Chalcolithic, between the above mentioned period from Caucasian ranges to the Sahya ranges. Towards the close of this 'popular movement' somewhere in the Asia Minor and Caucasus iron came into use, say about 1200 B.C. C-14 method of dating has almost put the advent of iron age chronology of Gangetic plains contemporary with that of South Indian megaliths. (Allchin and Allchin). Hallur in Mysore gives the date of iron for Piklihal and Brahmagiri also correspond to this date. That means it is inferred that the megalithism might have crossed into the Sahya range and valley from the Mediterranean. That way scattered throughout the Peninsular India, the movements of megalithism, the makers of which may appear to be 'uncultured' from the sophisticated point of view. But if the untiring mind, the willingness to undertake and execute laborious physical task are the keynote of life survival, their architectural achievements are undoubtedly pieces of mastery and perfection. D.D. Kosambi (1965) feels that the makers of megalithism were physically and economically affluent endowed with the patience...
and will to construct such gigantic pieces of architectural glory and artistic achievements.

Now that we have got early coastal Mesolithic (Rajendran) and inland Mesolithic (Tampi) periods of Kerala prehistory, it may be remembered, that cultural Kerala had coastal contacts as well, which might have been an unending continuity, even by helping the archaeologists to expose the reality involved in the Parasurama and Agastya legends. It is from this angle, Kerala megaliths will have to be viewed. What Subba Rao (1958) felt about Indian prehistoric sequence, may be applied to Kerala, this integral part of Indian union as well. He records that just at present Indian sequence does not fit into any mould, European or African. Let us discover our own pattern by intensive stratigraphic studies of more localities and rely less on typology. This can be said about all cultural phases and can be utilised in the study of Kerala archaeology.

The fag end of Indian lithic chronology is characterized by occurrence of polished stone axes. In central Deccan, we have more or less stratigraphic evidence to show that these people of the late Stone Age were widespread agricultural and pastoral communities with a preference for upland or hilly type of terrain. That settled way of economy, even today, prevails in the tribal belts of the suburban area of all districts of Kerala as well in the central and South Indian States.
Archaeology during the last two centuries has brought to light a complex of stone structures which are widely distributed over the globe, but little understood. The occurrence of these megaliths (as they are called now) - monuments in India, especially in the south has been noticed from time to time by several explorers and scholars (Asthana 1976).

The large complex of megalithic distribution and its variant typologies located in this part of the world, which has already been recorded in its abundant literature - forms, thanks, primarily due to the pioneering spirit exhibited of British administrators as well as foreign scholars. The urge to understand these were sporadic and spontaneous. But at the very outset it may be noted that collateral or conditional agreement have not been reached upon by scholars as to the purpose and date of the erection of these monuments.

From that point of view, early excavation, next to Babington (1823), the name of Breck (1837) should be remembered, for, in his 'An Account of the Primitive Tribes and Monuments of the Nilgiris' he has recorded different types of Cairns, Barrows, Kistaverns and made some attempts to study the economy of the Toda tribes and their cultural features.

The observations of Congreve (1847 and 1861) were about the antiquities of the Neilcherry hills including an enquiry into the descent of the Todars, where he has traced out the Seythian origin of their descent. On the basis of correlation
with European monuments, South Indian monuments - Cromlechs to be of Druidic origin.

In the year 1851 ancient sepulchres of Pandavaram Dewai Chittor in North Arcot, Tamil Nadu were studied by Newbold. Subsequently in the years 1859 and 1872, Cairns and Urns were explored, located and studied by Cearns, J.E. and J.T., which were identified as much akin and similar to the Anamalai and Nilgiri monuments of South India and were compared to their Irish counterparts in a haphazard manner. Cole in the years between 1868 and 1973 excavated and recorded dolmenoid cists in the districts of Coorg, recently studies by Subbaiah (1972) Kolar and Bangalore of Karnataka State, (Again studied by Seshadri) Lewis (1869) made notes on the builders and purpose of the megalithic monuments ranging from India, to Britain and Scandinavia as to the Celtic influence in Indian alignments and circles, which are places of sacrifices and menhirs to be commemorative pillars and tomb stones. Mulhern (1869) located cromlechs on either banks of the Godavari. Oldham (1869) indicated an advanced State of metallurgy, while commenting on the cromlechs of Veerajendrapet excavated by R.A. Cole. Col. G.H. Saxton (1870) collected a set of iron implements from a cromlech in a private estate of one Major Sweet in the Nilgiris of Tamil Nadu (then Madras Presidency), by pottery comparison, he tried to compare that pottery to those from the cromlechs in Coorg excavated by Oldham. Meadows Taylor's work in the years 1851, 1853 and 1862 concerning the description and distribution pertaining to Cairn
Cromlechs, Kistavens and others Celtic, Druidical and Scythian monuments in the Deccan at sites like Rajen, Kolloor, Hajaratgi Jiwarji (human skeletons), Yemmigudda, Andola were counted for studies from the site of Jiwarji, Taylor found full skeletons—the evidences from which he postulated some sacrificial ceremonies, further because of his rational and scientific approach to unravel the mystery pertaining to Megaliths, even today he is considered as a pioneer in the field of excavations and field methods. Leslie (1871) felt that all megalithic circles were not primarily and exclusively sepulchral and in India are being converted into places of worship (The practice continues even today) James Ferguson (1872) was the first to draw the attention of scholars as to the archaeological importance as to the fact that the style of megalithic architecture in different regions of the world are very much similar, of course, with slight geographical variations. He has examined the south-Indian megaliths in details, it seems. He is of the opinion that the similarity between the Indian and European monuments cannot be accidental. As regards the distribution of these in India, he says that the rude stone monuments are not found much in Gangetic valley or in those of tributaries of Ganga, or in the banks of Tapti, Narmada. To say the north of the Vindhyas, They are located in the valleys of the Godavari, Krishna and their tributaries, on both sides of the ghats upto Cape Comorin and all over the Madras Presidency. Mackenzie who
who in the year 1866 and 1873 recorded Barrow's, Tumuli, circles which were excavated by him, in the districts of Hassan and Coorg. It is of the opinion that cairns were the graves of persons of then Karnataka, killed by tigers or those who died of leprosy, a curious belief indeed. Maurice Philips's (1873) dissertation on burial monuments of Salem district which are classified according to their contents and structural details. The finds such as pottery iron implements, human bones and ornaments were similar to those found elsewhere in the tombs. Garstin (1876) excavated the dolmens of the Coremondal coast at Kollur, near Tirukovilur and Devanur contents inside were of the usual pottery, iron objects, and skeletal remains besides terracotta legged sarcophagi, one even with fifteen legs. While trying to evaluate the antiquities of Nilgiris, possessing remarkable prehistoric remains, Walhouse (1873-77) has located many underground chambered tombs or Kistvaens. He noticed cairn circles clustering around a large urn at Perundurai near Nallapalli 12 kms. north of Coimbatore on the Coimbatore-Salem road.

In that manner the history of excavation of megalithic monument is more than a century old. Of all the megalithic sites the classic site of Adichchanallur in the Tinnevelly district excavated by Dr. Jagor of Berlin (1876) is of supreme importance. At Adichchanallur or Adittanallur, 15 miles south east of Tinnavelli (Tirunelveli) and 9 miles west of Korkon was located an extensive urn burial site spread over an area of 114 acres. In the site the contents of the urns vary from one part to the
other some parts have the urns containing a rich group of bronzes, another skulls and complete skeletons which were studied by Zuckerman (1930) and also some utensils, while yet another part of the site has iron objects and so on indicating either a difference in age or in the cast of people who simultaneously made use of the cemetery in this site. William King (1877) found a prehistoric burial site about eight miles (12.8 kms) on the right bank of the Godavari on the road to Hanamkonda was found. Among the stone circles cists were also noticed along with cruciform monoliths. Some of the stone circles enclosed double cists.

In his note on the 'Find of Ancient Pottery' in Malabar, William Logan (1879) gives description as to how a four-celled rock-cut cave was found, six and a half miles (8.8 kms) north of Calicut in the Padinayattamuri Desam, Calicut taluk (modern Kozhikode) was excavated by him, which yielded pottery and objects Billhooks, charcoal of wood etc. Two of the pots contained whitish substance suspected to be of burned ashes. Of these four, two are situated laterally facing east while the other two are facing north and south respectively. In all a social gradation on the basis of shape and size of burial urns and their contents has been postulated.

Between the years 1y80-81 Branfill discovered 'old slab monuments in Madras and Maisur' and excavated a megalith on the Savandurga Rude Stone cemetery, Central Maisur', which have yielded iron implements pots, bowls etc.
In his 'List of the Antiquarian Remains' in the Presidency of Madras published in 1882, Robert Swell has mentioned among other things as to the places where megalithic burials have been found.

According to Elliot (1886) who studied the sepulchral remains of southern India viz. Stone Circles, 'Topikal', rock-cut caves etc., has tried to correlate the megalithic relation of Kurumbars, a set of tribals, professing Buddhist tenets which was destroyed by the imperial Cholas.

Different scholars and Officers of the British regime undertook excavations of the megalithic remains, which has got a Pan-Indian and a Trans-Indian geographical distribution.

Dr. Jagor who first noticed the site of Adichchannallur, carried out excavations and collected a large quantity of articles which included pottery of variant types, and artefacts with human skeletal remains and skulls, (Rea). Later M. Lovis Lapicque of the Paris University excavated at Adichchannalur in 1903-04, found four burials and collected a variety of pottery including different types of bowls, pots, lids, cups, jars, ring stands, iron swords, rods, saucer lamps, chain hook and bar, hanging lamps with six arms, bronze bangles, metal cups, ornamental bands, belts, vessels like bowls, plus human skeletal remains.

Equally impressive work was done by conducting large scale
large excavations by the Archaeological Survey of India, under
the dynamic leadership of Alexander Rea from 1899 to 1905,
brought to light a very rich collection of antiquities consist­
ing of large sized pyriform burial urns (similar ones I excavated
at Sasthamangalam) small vessels of either the black and red ware,
the black ware or the red polished ware, rarely decorated with
simple painted designs consisting of a very large variety of
shapes, iron weapons, tools and other objects like bronze
vessels, ornaments etc. - a few gold diadems and house hold
stone tools - were also found.

The urns are large pyriform with thick section - are
about 3 ft in diameter, with a slightly greater height and
are made of a thick, coarse red ware. Decoration is scanty, but
occasionally the rims exhibit either the finger tip designs,
line alignments etc. The urns are invariably covered with flat
conical lid. Some have side projections and have single or double
spouts. Many complete vessels, besides a very large number of
broken ones (see Rea's catalogue) consisting of a variety of
bowls, round based, conical or carinated, globular pots etc. -
I am happy to record similar evidences are recorded in my site
at Sasthamangalam.

Iron objects are next in importance. Quite a large
number of swords, spears, daggers, lancers, javelins, arrow heads,
tridents, saucer lamps (all referred to earlier) formed the
yields of excavation.

Bronze objects unearthed too exhibited a high degree of
skill in workmanship and manipulation of metal (For further
details kindly see 'Megalithic culture in South India, by
Gururaja Rao)

Among the stone articles may be mentioned grinders, grinding
stones, four-footed saddle querns, rollers etc., all of which
form kitchen utensils.

The Adichchanallur site is one of the most extensive
urn fields in India.

It should be remembered that the study of the pottery type
of the black and red ware from north-eastern region of Tamil
Nadu and those from Adichchannallur indicate the movement of
the people from the former to the latter (Narasimhaiah 1980).
This observation has been strengthened by the anthropological
evidence, earlier established, that the racial element represented
by the human osseous, remains from Megalith at Sanur and Adi-
chchannallur which is Proto-Astroloid or Negroid. Zuckerman
(1930) feels that the presence of a Dravidian skull in the
Adichchannallur remains implies that mixing with invading
people from the north, had occurred before the time of the
burial. That means that the Adichchannallur remains could
not be earlier than Dravidians.

In fact Adichchannallur excavation has thrown an over-
all archaeological light into the life of contemporary
megalithic cultural phases. It is very often observed, in
many of the urn burials and megalithic sites - that a waste, rock-
high ground, unfit for cultivation, is generally selected for
burials and such is the case of and at Adichchonnallur also.
But this becomes totally untrue in the modern context, for in
my site at Trivandrum, urns were found right in the heart of the
city, though pottery types and ware are very much similar.

Of course, there are many more sites in Tamil Nadu where
megalithic evidences were neatly explored by Narasimhaiah (1980)

Following closely the work of Jagor, came that of Rivett-
Carnac at the site of Junapani, near Nagpur in Maharashtra in the
year 1879. Deo has excavated many sites like Mahurjari (1972),
Nalikund (1982), etc.

By this time, the Madras Museum had become the store-house
of the explored and excavated antiquities which was kept open for
world scholars, thanks to the publication of the catalogue of
Prehistoric antiquities including megaliths in South India.
This includes many excavated and collected from Malabar sites,
which was a part of the then Madras Presidency. The works of
logan and Cammiade have added the antiquities from the Malabar
to the Museum. Quite recently, these evidences concerning Kerala
antique wealth, there at Madras, was published by Devaiah
(1975).

Coming back to the chronological sequence of pre-indepen-
dent India, Bidie (1887) had recorded some prehistoric
graves (nothing but megalithic sepulchral chambers) near Pallany
Rama Varma Raja (1887) has located Sepulchral urns in the district of Coimbatore, which are similar to Tinnevali ones and the urn found interred in the cist surrounded by stone circles, yielded bone fragments, small spear - or arrow heads of iron. It was inferred that these chest like chambers with circular openings were habitations of a pygmy race (Caldwell 1887) excavated some sepulchral urns at Korkei, southern India which were comparatively 'civilized', as he claims and try to draw some parallels with the urns found that Tirunelveli and Madura. Wyanad urns were studied by Camniade as early as 1930. Most of the Waynad regions have yielded urn burials and in the seventies some of them were explored by K.J. John (1973-75). In the sixties and seventies, K. Chandra Sokheran of the Archaeological Survey, Southern Circle, have recorded many megalithic rock-cut caves and urns (solitary ones and in groups) in different parts of Kerala (see Indian Archaeology-A Review - relevant issues) N.M. John (I.A.R. 1963-64) in his explorations discovered urn burials at Chengamenad yielding iron implements and two 'caves' at Chundel, Kunnamkulam and thus recorded archaeological findings in the districts of Calicut, Ernakulam, Trichur and Trivandrum.

Fawcett (1896) accidentally discovered a rock-cut cave. In India the history of domestication goes as far back as the Mesolithic times (Thomas 1977). The same may be said of course, to periods earlier and latter for settled economy and agriculture.
A word in this connection may be said about the megalithic deffusion too. Arriving via Baluchistan and Sind, the megalithic folks eventually established themselves in the area of the peninsula, roughly defined by the 14th and 17th parallels. This wide belt of land stretching from coast to coast, represents the major distributional area of Pandukal sites (Leshnik). Ancient Tamil literature recognizes their existence under the name of *aruvalar*, meaning generally the land of nomads and specifically the people of the billhook (Aiyangar 1918). The significance of the term, becomes clear when it is recalled that billhooks and sickles are common in the Pandukal assemblages and that here they are taken as the characteristic implement of the nomads. Nagpur lying rather north-west to the main distribution area represents an early stage in the southward movement. Adichchannalur and other sites of the south of this main belt, represent slightly later stages. For this region Stone circles are seldom found in the regions of Tinnevelly and Arcot. As seen in the south the tradition is a declining one which no longer emphasizes the elaborate construction of tombs.

In Nagpur, both Pearson (1861) and Rivett Carmac (1879), were informed that the cairn were the work of Gadin—the local shepherd caste. The same can be said as, it was recorded by Krishna Aiyar as to the dolmen, as the ancestors of Urulik and Kurumbar concerning Kerala megaliths. The cist builders
Catacomb excavators of Iran and farther north were all nomads and in large part equestrains. This is evident from their grave goods, and the same conclusion may be drawn from the Pandukal or 'Pandu Coolies' assemblages, (Leshnik 1970). Some kind of 'Ayudhajivins' or weapon worshipping cult - culture people can be assumed as their ancestry because of the large quantity of swords, daggers and the weapons which point out that the megalithic burials, exhibit a martial society. In India the rearing and breeding of animals was at least in parts supplemented by agriculture as the presence of ploughshare (though rare) indicates. It is that way obvious that very few of the Central Asian or Iranian nomadic elements are present in India in their classic forms. The unique cultural trait of Indian society have them as an already Indianised adopted child.

Dolmens indicating east-west orientation connected with the so called 'sun-worship' were located by Harding (1889-94) at Nakinaikempatti and Nallukalpoliem of Coimbatore district of Tamil Nadu. Such prehistoric graves were opened again in the district of Coimbatore, which yielded the usual megalithic grave goods such as pots, bones, iron implements etc. Foote (1916) felt that Iron Age in Peninsular India was not proceeded by Bronze Age for he believed, after his study of antiquities, that this period succeeded Neolithic period only. After examining the pottery marks of the excavated material of the Madras Museum, Yazdani (1917) has come to many conclusions. He compared
these marks with that of the Egyptian hieroglyphs and was of opinion that South Indian megaliths resembled those of Etruria. Longhurst (1911-15) describes about the laterite rock cave of Calicut, Kerala, the cairns of Coimbatore, Tamil Nadu, Cairns and Stone circles at Gappalakond, Kurnool, Andhra Pradesh, in his reports, were he observes that the nature of the constructions of the tombs, the similarity between these sarcophagi and pots found in each tomb indicate that all these groups belong to about the same period and were set up by the same race of people.

The districts of South and North Arcot, Tamil Nadu, with its rich megalithic sites were studied by Rea, Hearsey, Richards and Gastin. The three burials were excavated by Richards (1924) at Odugattur village of North Arcot which again exposed megalithic objects such as iron plates, decorated (incised) chank ornaments. In the Nilgiris, a rich hoard of bronze objects were found from the Megaliths exhibiting workmanship. Some of them were bowls, very finely worked, decorated with lattice design, scroll work or lotus designs. Their special features were compared with the exquisite beauty of a gold bowl of Ur which is assigned to a high antiquity — 3500 B.C. and scholars are of opinion that these similarities could not be fortuitous, though the two specimens are widely separated in time, their relationship is worth investigating.

For a period of eight years from 1922 to 1930,
J.B. Hutton's observations centered around the 'Prehistory of Assam' (1928), wherein he postulated the theory that the dolmens of Assam and other eastern Indian provinces, originally came from South India. The probable route spread across the Bay of Bengal and then back again westwards from further Asia. It is inferred that the probable origin was from Indonesia from where the use of arecanuts spread to India.

The Sangam literature which constitute the early Tamil literary records have referred to about the Megaliths. They comprise primarily composition and anthologies of different poets composed in different periods and the epics (of that period) Manimekhalai and Silappadikaram and these literature have been dated to the early centuries of the Christian era. (Nilakanta Sastri 1955) and some of the works or the tradition discussed in the literature, may well go back to a century or two before Christ (Srinivasan 1946). It is noted by some others that towards the close of the Sangam Age only we see the appearance of these epics viz. Manimekhalai and Silappadikaram.

With regards to Megaliths, again, Thurston Quotes the Rev. S. Mateer, that we learn again that the Aryan bury their dead consequently there are many ancient Tumuli in these hills, surrounded with long splintered pieces of granite from 8 to 12 or 15 feet in length set up on the edge with sacrificial altars and other remains, evidently centuries old. Numerous vaults, too
called Pandi Kuri are seen in all their hills (1909, Vo. 4; p. 389). Mitra (1973) is of the opinion that these were the times, when India was in intimate cultural contact with Egypt and possibly Central Asia and may be set down roughly as ranging between 2500 and 800 B.C. He has further quoted the views of C. Nayavadana Rao, who has summarised the evidence of Brecks and Bruce Foote, thus 'Prehistoric burial graves' such a stone circles, Cairns, cromlechs barrows and cistavaens have been found in the Nilgiris, Travancore, Malabar, Cochin, Tinnevelly, Madras, Palani hills, Coimbatore, Salem, North Arcot and South Arcot, Chingaleput, Bangalore, Coorg, Anantapur, Bellary and Kurnool. They mark the burial sites of race of pygmies who at one time formed the general population of the land - interred in tall jars surmounted by domed lids, sometimes in filling, but mostly projecting over the edges of the jars they covered. Fergusson (1872) critically remarks "In India there is a curious but persistent juxtaposition that everywhere prevails of the highest form of progressive civilization beside the lowest types of changeless barbarism. Everywhere in India past is present and the present is past!"

Rev. A Anglade and Rev. L.A. Newton (1928) gives topographical distribution, description of the monuments, mode and purpose of the construction etc. of the 'Dolmens of the Palni hills'. These two bishops along with their students, elaborately studied the megalithic and allied monumental remains
on the Palni hills has not only supplied large information and
gave new clues about the burial habits of the people
who built those monuments, but as suggested by these two holy
fathers, a phase of activities can be brought to light if the
village sites are associated with them. Horace C. Beck in his
'Notes on Sunday Asiatic Beads' deals with the beads obtained
Raigar, megalithic Tombs and Midden in Sulur, Urn Burials of
Waynad — all telling something about the beads that occur
in the megalithic construction and their similarity is very well
recorded with that of Mesopotamian ones.

A common cultural unity among the urn burials of South
India and the Deccan were suggested by Codrington, K de B (1930)
The urn burials of Waynad and Adichchannallur, legged urns or
pottery cists of all sizes of Perumbair and Pallavaram, and cave
tombs of Malabar all have been given a chronological range from
3rd century B.C. to 4th century A.D. He equally made a new approach
by making a study of the funerary furnishings, particularly the
pottery in the urn burials and cairn burials and differences
that existed among the types of vessels from different classes
of monuments. Ramakrishna Reddy (1931) has compared the Nilgiris
bronze bowl (Bruce Foote's Catalogue in the Madras Museum —
Plates 10 to 12) and plates 41 and 42 of Breck's 'An Account of
the primitive tribes and the monuments of the Nilgiris with a
gold bowl found at Ur by Sir Leonard Woolley (The Illustrated
London News: 1st. Dec. 1927) and have suggested some phylogenetic
connexion between the two vessels. Fifteen years later in 1945 in his paper, 'Prehistoric burials at Pallavaram' he excavated urns which were deposited in pits scooped out in the bed rock, wherever necessary. Sarcophagi iron objects (Oxidized) such as trident, sickle, spear head etc. were found in the burial on a hill slope in Trisulam village near Pallavaram.

The megalithic culture was an advanced iron using civilization, exhibiting evidences, so observed M.D. Raghavan, of a high social organization and well developed religious cult.

Between 1932 and 1936 he unearthed megalithic evidences like the ram shaped sarcophagus from Cuddapah in Andhra as well as rock cut caves of Malabar which also had pillar in the centre inside the laterite - scooped out caves. Excavation of the chelleth cave yielded pottery of which some had decorative designs and geometrical bands in monochrome. Pigment was black and painted after firing. Colour was some form of carbon unmixed with any colour. Five iron objects were obtained. The bowl containing bones was covered with a ring-knobbed-lid. To some extent, Raghvan agreed with Logan, in that these caves were constructed by a people before the intrusive Vedic Brahmin culture. He has also recounted a legend - a local legend regarding being used for residential purposes. While trying to elicit the importance of the Hyderabad Cairns and their significance, Col. Hunt an officer of the Archaeology Department of the Nizam's government took interest in the remains of the megalithic
and earlier cultures and conducted excavations to reveal the potentialities of the then Nizam’s dominion’s antiquity. Suitably, in relation to and also in accordance with its place in the megalithic burials of South India. In the years 1916, 1929 and 1933 Hunt recorded most of his observations in the sites of Raigir, surrounding areas of Bellary, Raichur and some others from where oblong cist burials have been reported. The interments in the cairns (cist) in Hyderabad mainly from Raigir viz. bones, pottery, beads, gold, silver, copper and iron objects have been dealt with in detail. The Stone Circle varied from 15 to 70 feet (5.5 to 21.3 m) in diametres. The cists were north-south oriented with a little variation and were found very deep (sixteen feet - 4.9 m and more) below the ground level. The slabs were lowered down through a ramp either on the north or the south. The last item in the construction of cairns was the placement of the bounding circle stones.

Such types were equally located in my field area, Anjuna valley also. Multiple dolmens were common (see plates).

The burials have been divided into three classes: (i) Cist with north-south longer axis (ii) rectangular cists with porthole on the northern slab and (iii) cist with a subsidiary cist inside the main cist and with a porthole on the east — all these types suggesting an evolution of ideas connected with burials. Besides, cairns, menhir, cromlechs dolmens were noticed. Foreign contacts have been suggested on the strength of the lapis lazuli beads.
Nickel impurities in copper denoted a link with Mesopotamia. Pottery included Black and red varieties with incised decorations, rarely painted pottery, some hand made, some wheel made and some partially hand made and partially wheel made. It seems this can be said about major megalithic sites of other places also. Iron objects such as dishes, arrow heads knives, spears etc. were available among the evidences.

In the years between 1923 and 1945, Aiyappan, that veteran anthropologist has excavated many megalithic monuments in south India especially in the Malabar district of the former Madras Presidency. With his vast experience and knowledge in the field of Anthropology, Field Archaeology and Prehistory he has contributed much to the study almost all the baffling issues of megalithic of south India. His excavations of the two rock cut tombs at Feroke, south Malabar including surfacial observations yielded urn, pottery, iron objects and skeletal remains. The graffiti marks on pottery, legged trough like vessel - apparently sarcophagus, vessels in greyish colour, vessels containing animal ash - all compelled him to prove the 'caves' to be of megalithic character. He also found a few etched carnelian beads in a sarcophagus from Feroke. Grave goods consisting of pots, iron implements and channel spouted jars etc. formed the excavated material from the Perumal Hills of Kodaikanal, of which the last mention was compared with that of its counterparts in Iran by the excavator viz. Aiyappan. This area in Tamil Nadu was excavated by Rea, whereupon a large number of cists are
found on the sides of the valley of Perumal peak - on its western side. This is locally known 'Panch Pandava Methi' site, on excavation as usual with megalithism had black and red ware, bowls in black, vessels with some carination spouted bowls in all 23 pots in this stone circle. Here dolmens or burial stone cists are to be found near different types of megalithic building covering the slopes of the lower Palani from Neutral Saddle at the foot of the Perumalmalai range to the plains of Palani, Dindigul, Attur and Periakalum. What are called dolmens, observed Anglade (1923) in opposition to 'cists' hereunder are groups of stone chambers surrounded by dry masonry walls, some exist - singly here and there and are so situated as to serve as 'observation posts' or 'links' between two groups, which are otherwise hidden away from one another on too, removed to communicate with each other shouting in times of emergency. This is true in the case of Anjumad valley dolmen also (see plates). The 'Valiveedu' tradition i.e. monuments of Valiars or men with tail or a monkey tribe, scholars like Walhouse (1875) or Anglade (1928) felt, were assisted by supernatural powers, at the same time might have been a pygmy race. This tradition associating the cists with the Pygmies is widespread being current in the Coimbatore region, Coorg and Chitradurg. This view was expressed by Cole (1868) as well by Krishna (1940). Aiyar has mentioned that the popular belief in Kerala concerning the dolmen being referred to as the ''Muniyara'' or the chamber of the ascetics.

This type of belief is again recorded from the Belgam district (Panchamukhi - 1945-46). He is of the view that the Kannada, Telugu and Tamil speaking people were racially allied to the Australians and Egyptian and that either of them must have borrowed the tomb-building practices from the others.
Dolmens constructed of huge unheved boulders are of the Palaeolithic culture, while the slender flat-slabbed ones later in age, so goes his theories, some dolmens were of the Vedic age (1200-1000 B.C.). Dolmens were the dwellings of royal personages who took to Vina-prastasrama in their declining age and their remains were either buried or burnt in the cells. A careful study of the marks on pottery would reveal a clue to the origin of the Brahmi script. One needn't have to see that these views are foolish or outlandish for one must appreciate the spirit behind the studies of these dolmens.

By the way, symbolically representing the migration of the Jaina ascetics, following Chandragupta Maurya and his Jaina teachers, Bhadrabahu who migrated to the south, these dolmens are called as 'Mauryamane' in northern Mysore (Krishna 1940). In the south Indian languages, these burials were frequently referred to as Pandukkuzhi, Pandoo Cooles (Dabington 1823) Pandavaramane (Panchamukhi 1945) and again as Pandavakuli and their construction is associated to the Pandavas or the Pandyans (Harding 1889-94). Venkatarama Aiyar (1940) derived these from the word Bhandakulli or Pandakulli meaning a pit or Sandavarkulli, the burial pit of the dead (Sreenivasan 1947). In some other contexts they are referred to as Vedarkudu (Walhouse 1876) or the hunters don or refuge or as the burials of the dead lepers or slain by tigers (referred earlier Mackenzie 1873). It is equally believed to be as the hidden-treasure gallery or the
abode or the spirits guarding that (Vasudeva Padaival 1933-34) References and inferences are there concerning these megaliths as the village of demon, 'Rakshasagudium' (William King 1877) magician's arena 'Mantraki' (Jlch in 1956) and some times even as elephant's stables, and some times replica of local super-stition as to beast into stones by supernatural curse (Taylor 1853 republished in 1941).

Speaking on the larger context, so observes Dr. Deo (1973) they have been reported in Rajputana, Uttar Pradesh, Gujarat, Kashmir, Panjab Sind and Baluchistan and even as far north as Tibet, - their concentration in the south is too outstanding irrespective of typological variations. Illuck as it may, habitation sites are rare. Their distribution (the baffling menhirs) from Kerala in the south to Madhya Pradesh in Central India are not always associated with burials. With regard to habitation sites and settlement pattern, the sites in Nagpur district of Maharashtra (recent reports of the work of Nagpur University and Deccan College) and some sites in the districts of Bijapur, Gulbarga, Sharvar and Belgaum (Sundara 1975) and that of Hallur (Nagaraja Rao 1981) and also that of Paityampalli (Rao 1965) - all to some extent corroborate some evidences.

Continuing the story of megalithic chronology in India and its contemporary significance, we may add that the works of Aiyappan and other scholars in the thirties and forties gave impetus to these studies pertaining to megaliths, for th
possible contacts from Iran and Indonesia of megaliths postulated decades back, are hailed high even today. Even in the eighties, Ramanna (1980) has recorded the megaliths in south Asia and its contemporaneity with peninsular India. The origin of the type of burial viz. Sarcophagus has not so far been traced. (Aiyappan 1945) feels that this type entered into Tamil Nadu from Bali island of Indonesia. Any way this custom does not seem to have originated on Indian soil for this type of burial are extremely rare and are non-existant in the southern districts of Tamil Nadu.

Without any trace of human bones some cists have been yielded megalithic objects in the excavation conducted by Raju (1937) of the burials of Kaliyapatti and Kalakkudipatti in the former Madras, Gururaja Rao (1972) is of opinion due to the pioneering work of Venkatarama Aiyar and Sreenivasan, two illustrious brothers, our attention to the passages in Tamil Sangam literature bearing on the megalithic monuments draw special appreciation in the forties and fifties of this century Das tried to study the megalithic problem of the south, especially Nilgiris and he could procure coins from supposed to be megalithic burials, which again is a problem of correlation Das (1946-47 records that the coins collected from the excavation of Indian megalithic tomb fall under two categories (i) Punch marked and (ii) Roman. The former are from Savadimalayium Sulur etc. in Coimbatore while the latter sites are from Nilgiris, Kodaikanal etc.
During the years 1939-40 Dr. Sankalia located megalithic monuments near Poona, about eight and a half (13.7 km) north of Poona, on the Poona-Nasik road. He gives narration as to how the particular monument, on local enquiries, is converted into a temple. His own later excavations, he has recorded a top layer showing megalithic or early historic intrusions.

Then thanks to the work of that great pioneer - prehistorian V.D. Krishnaswamy (1947-57) for about a decade in the pre-and post independent Indian archaeology, we have got today a standardized form of all megalithic types as the first noble task on that line. Of course even before him, also attempts were made by scholars like Brecks (1837), Taylor (1851), and Burgess (1874) of which the last mentioned has recorded his findings in 1901 also. After them earlier days of Krishnaswamy, Ahamed (1935-36) and Leonard Munn (1935) recorded prehistoric antiquities and expressed their opinion on the types of megaliths that were located in the then Nizam's dominion, the present day Andhra Pradesh. Yazdani the pioneer archaeologist of Andhra, in the course of his excavation opened megalithic graves oriented east-west. Black and red pottery with graffiti marks were also located. These resembled Pali letters, old Cretan Mycenaean, Etruscan and Libyan characters. He felt that the early settler might have brought with them the mode of megalithic tomb building and they might have migrated via Makran where similar sepulchres and a dialect akin to Dravidian - Brahui to be seen.
Excavations of megaliths at Hashmatept yielded iron implements like knife or dagger, a sickle, a ring of an axe, a prong of hay work or ploughing implement. Remember the megalithic 'plough-coulter from Brahmagiri' (Dhavalikar 1968). Human skulls, teeth and foot portion of calf - all reported. Raichur exploration by Yazdani located Benkal dolmens as well as rock paintings on the hillocks. Rectangularly constructed cromlechs at Rajankallur were also recorded by him.

Not only that even in the twenties and thirties attempts were made by Joseph (1928) and Poduval (1934) to have some arrangement as to the peculiar types of megaliths that are available in the tiny state of Travancore, the south Kerala portions of present day Kerala. In the years 1947 and 1956, the rock-cut caves of Cochin were explored and examined by Y.D. Sharma, whose sincere attempt to date the caves on the basis of pottery and architectural technique and came to the conclusion they are not Vedic or Buddhist, but of the megalithic periods received some support. Method of construction and typological evolution of these were studied by him in such areas like Kattakampal, Chovvannur, Kandassery etc. (refer chapter II).

In his paper on 'Megaliths' Gordon Childe (1948) has recorded his observation on the characteristics of megalithic burials. Herein, he feels that the pot hole is a highly specialized for generalized megalithic culture. He further adds that if the Indian megaliths had their origin in the west, then he contacts must have been from the sea.
Indian Archaeology as a science, attained its status primarily due to the academic zeal of Wheeler, whose work on Indian Pre and Proto-history. Beginning with him only various Indian archaeologists like Krishna Swamy, Banerjee, Soundara Rajan, Thapar and others have carried out much field work and apart from them, scholars like Subba Rao, Gordon and Haimendorf have devoted their energies to study and unravel this mystery. Gururaja Rao (1972) is of opinion that megalithic culture was responsible for setting up in motion the forces that heralded the dawn of the historical age in South India and was authored by a people who have determined the course of South Indian history.

Wheeler's Brahmagiri and Chandravalli excavation (1948) which is the guide guardian for all Indian and international archaeologists, is a report of scientifically conducted excavation of a site (for the first of its kind in India) with overlapping cultures Neolithic, megalithic and Andhra revealing evidences that reconstitute the course of Indian archaeology with again far reaching results. A reasonable computation of the time-value of the megalithic Strata at Brahmagiri suggested c.200 B.C. as an initial date for the arrival of the culture of this region. A clear overlap with the succeeding megalithic culture showed that the stone axe culture had lasted until and after 200 B.C. and the depth of the accumulated strata indicated its arrival at Brahmagiri some time in the first half of the first millennium B.C. Brahmagiri excavations had thus not nearly furnished
the evidence which was their primary objective, but had in fact placed no fewer than three widespread, but hitherto unclassified south Indian cultures in a clear sequence with a chronological datum line at one end of the sequence.

As has earlier referred to the works of Banerjee (1956-1965) and as well that of Allchin (1956-68) have virtually given a definite periodization as regards the pre-and protohistory of south India, still south Kerala, from the general megalithic mainstream has not come under for thorough study and proper scrutiny.

In fact the fifties and the sixties of Indian archaeology of this century, undertook rapid scientific archaeological excavation and associated ventures, while, Kerala archaeology was active in the seventies and eighties. The seventies saw a genuine interest in the study of South Indian megaliths. So far as these are concerned, the four decades of independent India saw many major and minor explorations undertaken by many scholars in the southern states of Andhra, Tamil Nadu, Karnataka and Kerala.

Explorations in the districts of Madurai, South Arcot, Tanjore of Tamil Nadu were explored and many megalithic sites (Indian archaeology—a review: 1958-59 p. 32, 60-61: 18-19 and 63, 1961-62: 26-27 and relevant excavation reports of the State Archaeology Department, and of University of Madras) sites were excavated and better results were obtained.
The names of Dr. K.V. Raman (one time Dy. Suptg. Archaeologist of Archaeological Survey, Southern Circle and now Professor and head of the Department of Archaeology, University of Madras and that of Dr. Krishnamoorthy, (Suptg. Archaeologist, of the ASI) to be remembered in this context. Quite recently they have recorded the discovery of Rock Paintings at Malladi, Dharmapuri district of Tamil Nadu (1978). For the last two decades Raman has done much work with Shri K.V. Soundara Rajan. That goes on to record that the Neolithic habitation site of Paiyampalli in Tiruppattur Taluk, North Arcot district was explored thoroughly by S.R. Rao (1954-65) and 67-68) and the sites occurred in the districts of Chingleput, Pudukkottai, Madurai and Coimbatore districts have been systematically explored by such scholars like Krishnaswamy (1946) Sreenivasan (1938-44 to 1945-46) Raman (1958-78), Desikan (1957-58 to 1962-63: 38, 71, 18, 26 of IAR), Saran 1955-56: 23, 56-57: 31-34 and 1957-58: 37-38 of IAR) apart from the illustrious observations of that great distinguished archaeologists viz. K.V. Soundara Rajan (1949-1980)

Narasimhaiah (1980) is of opinion that the Megalithic monuments in Tamil Nadu with their conspicuous bold and curious appearance have attracted the attention of many amateurs and scholars since Breeks (1837) published his"An Account... of the Nilgiri hills" Since then many scholars like V.D. Krishnaswami, K.R. Srinivasan, N.R. Banarjee and K.V. Soundara Rajan have tried the original chronology of the megaliths in Tamil Nadu. Subsequently
hundreds of sites with megalithic monuments have been brought to light and several sites have been excavated and thus Chinglepet, Pudukottai, Madurai and Coimbatore districts have repeatedly been explored for the megalithic cultural antiquity.

This is true in the case of Karnataka and Andhra, where many megalithic sites were explored and excavated thanks to the untiring efforts of many dedicated and young scholars towards the beginning of the fifties to the present day. The Bibliography of Indian Megaliths prepared by K.S. Ramachandran (1971) of the Archaeological Survey of India as well as the Megalithic culture in South India by Dr. B.K. Gururaja Rao (1972) of the University of Mysore codifies and summarises the work of practically all the scholars engaged in and devoted to the study of the South Indian megalithic cultures hitherto known and recorded.

In Karnataka, the pioneering spirit was thus expressed by late Dr. M. Seshadri. In the years 1955-56, 56-57, 58-59, 59-60 and in 1961-62 he systematically explored and excavated at sites such as Narasamantale, Arkalavadi, in Chamarajanagar taluk, Chimasandra, Konganahalli in Chintamani taluk, Jadiganahalli in Hoskote taluk and Kongarajapalle in Kolar taluk, the reports of which have all been published. The megalithic stone circles excavated from Jadiganahalli, Bangalore district yielded sarcophagus whose body was moulded by hand with wheel made legs and domical lids. No skeletal remains. Pottery and iron objects such as
sickles, daggers and suspected frying pan were found. Excavation at T, Narasipur represented a full-fledged megalithic culture with typical black and red ware, black polished and red wares and it was highly polished and with graffiti marks. Seshadri also has discounted the common origin between Indian and European megaliths.

The work of Dr. Nagaraja Rao, (1958-1981) the present Director of Archaeology, Govt. of Karnataka is also one of pioneering achievements. Apart from being an authority on pre- and proto-history of India, especially of the south, he had conducted many original explorations and excavations at such sites viz. Bidarkatti, Sidanur, Chinnikatti, Kerwadi and Udgatti of the district of Dharwar (Indian Archaeology - A Review(1958-59: 32) Budapanahalli, Asundi, Kushur, Kotihal and Malkanahalli (IAR 1959-60: 37-38) Kamdod, Hosur, Jangad (IAR 1960-61: 28) stone circles were located, while at Bellati, a dolmen was observed, all again Dharwar district. The years 61-62 (IAR: 34) 62-63: 16-47 and 63-65) records the explorations and excavations conducted by Rao in the districts of Dharwar, Bellary, Bijapur, and Raichur, in all these places cists, cairn circles and other megalithic evidences. Rao states that the archaeological remains in the district fall under the following broad categories (i) Prehistoric remains (ii) Chalcolithic remains (iii) megalithic remains and (iv) Early historic remains etc. Excavations at Hallur (1964-65) revealed three periods of which the third phase was -- overlapped phase of neolithic-megalithic. Emergence of black and red ware
including the one with the white decoration and iron objects such as arrow-heads, spear heads etc. Recently C-14 dates were obtained for southern protohistoric sites, as has been by Rao (1981).

When we take the study of Southern Megaliths, the names of Dr. Sundara and Dr. Narasimhaiah may be specially noted. Like Nagaraja Rao, Sundara also undertook exploration and excavation and at present engaged in the scientific chronology of south Indian megalithic problems, while working in the Department of Archaeology, University of Dharwar. Between the years 1958-59 and to this date, he carries on exploratory work. Explorations in the districts of Bijapur (IAR 1958-59: 32 and 1960-61: 28), Belgaum and Gulbarga (IAR 63-64: 23) - all records the cairns, cists and stone circles - distribution. His revised publication (1975) of his original excavations recorded in his thesis (1969) gives much clues regarding the megalithic habitation sites and megalithic urn burials located at such sites at the foot of the Somesvara hills on the Unachagiri in Gaudageri, Kalakaleswara, Rajuke and Unachagiri. On a sandstone hill consisting of forty megalithic structures built of quartzite sandstone, on top of a flat quartzite sandstone, near Kaladgi town, in Bijapur district were discovered, two types which are hitherto unknown types of circle stone; (one with a porthole) connected with passage. It may be remembered that even in the Anjumad valley; the Naraiyur dolmens, they do have passage chambers variety.
One highly admirable thing in Sundara's work (1975) is that he had studied thoroughly almost all the known megalithic monuments that are known to us, with their geographical distribution. To list out types of megaliths found in peninsular India is by no means a simple task, as there are variation in each type. The typological classification of the Indian megaliths is fought with difficulties because of the variation between the surface indications and what is actually revealed in the excavations (Sarkar 1979-80). Some of the passage chambers appear like the Greek or Latin Cross, though, circular variety is also found. (Sundara 1975) It may be dated to 1000 B.C. to 700 B.C. and are considered as the precursor of other refined types. With regard to the burial customs and other interment, Childe (1948) and Subba Rao (1962) felt that the megalithic cult must be separated from the accompanying cultural traits. Continuing on the footsteps of Subba Rao, Sundara and others more archaeologists and scholars have come into the field of Karnataka megaliths like Dr. Subbaiah who had recorded the megaliths of Coorg (1972) and Bhat (1981) of which the latter has tried to classify the Rock Art of Karnataka, for Sundara also has done work on rock engravings as well as megaliths. Within a period of two decades, itself, Dr. C.Krisnamoorty has recorded many cairn circles and other megalithic sites in the districts of Mysore (IAR 1960-61) as well as discovered cave paintings in the Prakasam district of Andhra (1981) by which now many megalithic sites are available for further
exploration by researchers in Karnataka as well as Andhra.

Though difficult is the reconstruction problem of megalithic culture, a few habitation-cum-burial sites, have been investigated. Notable among these are Brahmagiri by Wheeler, Sangankallu by Subba Rao, Maski by Thapar, Kunnathur by Krishna Swamy and Vallabhb Saren, Banerjee's work at Amrithamangalam - all these have a good knowledge of the evidences.

Recent years, Andhra megaliths have also come in for much study. Right from the work of Anchan (1955-36) upto this day many scholars have explored and excavated many regions of the present day Andhra Pradesh, with its enlarged geographical dimension which was the former Nizam's dominion reaching upto Chanda district of Maharashtra. Spreading on the east coast of South India, from a point a few miles north of Madras and covering eastern half of the Deccan plateau this area is rich in the remains of Early Man from the Palaeolithic times onwards, the evidences of which were nicely and neatly recorded by scholars and prehistorians like Isaac (1960) Murty (1966) Rao (1966) Rami Reddy (1968) Thimma Reddy (1968) and Paddayya (1968) who have explored the regions of Andhra in the sixties as well as the recent observations by Raju (1981) have greatly helped them in solving the prehistoric and early stone age cultures of Andhra.

The area forming part of the erstwhile state of Hyderabad, received some attention at the hands of the Department of Archaeology of the Nizam's dominions. The explorations undertaken
by scholars like Hunt and Yazdani and others, we have seen earlier as to how they explored Kurnool, Chittoor, Raichur and other districts. Andhra was the area of operation for the work of Meadows Taylor too.

Allchin (1956) made a study of the stone alignment from 43 sites situated in the district of Gulbarga, and Raichur in north eastern Mysore, and Nalgonda, Mahbubnagar and Atraf-i-Balda in the former southern Hyderabad regions. Many of these had been previously reported and some of them were discovered by Allchin himself for the first time. The district of Hyderabad, Medak, Nalgonda, Warangal, Guntur, Adilabad and Chittoor districts have yielded megalithic monuments. In the post independent years, burial sites near Topran a village in Medak (IAR 1953:38) were recorded. Stone circles and Menhirs were found. But the primary exploration - excavation was that of Allchins only in independent India. Allchin recorded that the stone alignments are found in north of the Krishna and Tungabhadra rivers in the Raichur, Atraf-i-Balda, Nalgonda and Mahbubnagar districts of Hyderabad State now Andhra Pradesh. These are accurately said in parallel rows and are oriented approximately on cardinal points. These are found by the side of the cist burials and are perhaps, contemporary with them. They are quite different from the Assam and Cochin types. There might have been cattle stones with halting places on the occasion of market days and fairs. The Piklihal excavation by Allchin (1960) deals with grave sites, stone alignments and stone enclosures at Piklihal. The graves
were found in three groups, the types being cairn, circles and cists. Concerning this Allchin observes "Excavations at sites II, III and IV showed the graves lying on the plain ground and the settlement areas belong to this age. Similarly stone alignments were erected alongside the graves, perhaps for some related ceremonies. Here in the Deccan, they appear as we have seen open air sites already chosen for the slab lined pit graves of the intrusion, which were the first signs of introduction of new rites — the cists seem often to be of rather family ossuaries in which bones of many persons were deposited".

Allchin feels that the stone alignments are of indigenous development. The two dates of Hallur, 1050 B.C. and 1950 B.C. correspond with the introduction of iron in north India. Banerjee (1960-62) feels that the Megalithic folks were intruders among the primitive folk of the Deccan. Though Aryans could have been the moving force, it is not possible to link them with the death cult as megalithism had no place in their ritual.

The cairn circles are very well represented in the megalithic sites of Junapani (Thapar 1961-62) Khapa (Deo 1968) and Nagarjuna Konda (Subramaniyan, 1968), Yeleswaram (Waheed Khan 1963) and Raigir (Hunt 1924) are the sites where oblong cist burials have been reported. As the name is suggestive, the cairn-circle is a heap of stone rubble, bound by either single or more stone circles of undressed boulders. Usually the cairn circles have oblong burial pits in the centre. The exploration by
Sivaiah in the districts of Medak (1961-62 and 62-63) Chittor (1963-64) and Guntur (1963-64) of the I.A.R. all have resulted in the discovery of dolmens and dolmenoid cists and stone circles.

In the year 1963-64, Mafeed Khan excavated at Pochampad, district Milanabad, where he explored cairn circles. Three burials were excavated. Megalithic objects like iron lances, javelins, daggers, sickles and cross strapped hatchets were found. Subsequently in the years from 1963-64 and 1964-65, the megalithic site of Yeleswaram, Nalagonda district, was located and on successive excavations of dolmenoid cists, cairn circles, and burial urns yielded pottery and iron implements such as lances, swords, javelins, daggers etc.

Excavation at Nagarjunakonda in Guntur district carried out by Shri K.V. Soundara Rajan (1956-57) resulted in the exposing off a megalithic stone circle enclosing an oblong pit covered by multiple capstones of Cuddapah slabs. It did not have any porthole or floor slab. The burial was secondary with fragmentary skeletal remains, with the usual pot, iron implements etc. Sreenivasachar (I.A.R 1958-59: 68) reported twenty one stone circles at Koisaram and a group of thirty-five near Balajigutta - were discovered in the Hyderabad district.

Megalithic sites were located by Raghunath (I.A.R 1961-62: 96) at Karla Pahad and Gangasanapalli, in the form of cairn circles. Raghavachari (I.A.R 1962-63: 67) noticed megalithic burial sites.
The site was further explored by Venkataramayya and I.K. Sharma who explored the districts of Kurnool and Cuddapah (IAR 1962-63: 2 and 65).

H. Sarkar conducted explorations in the districts of Guntur (IAR 1960-61: 1) and located megaliths at Lam, Motadaka, Le Malle, Yedlapadu and cists were observed at Nemalipuram, 63 kms from Guntur and Syemarajapuram on the Buggavagu. He also carried explorations in the district of Krishna (IAR 1961-62: 1) and megalithic monuments were located at Dona-banda, 22 kms north-west of Vijayawada. He executed excavation at Kesarapalli near Gajjavaram (IAR 1961-62: 1 and 2), Krishna district. The site situated at a distance of about 20 kms north-east of Vijayawada on the Madras - Calcutta Trunk Road. In Period II iron and megalithic pottery begin to appear. Successive floor levels with portholes and oven were exposed. The burial monuments were found near the habitation area and they are cist.

Sali (IAR 1960-61: 26) during his exploration in Dhulia district of Maharashtra, Collected black and red pottery in a pit burial at Ranjala, without megalithic evidences.

As a matter of fact, Kerala megaliths can be considered as a largest collection of prehistoric monuments that any country can account for, from distribution point of view. At the same time it is in this phase of lithic cultures, metals came into being and in use. Perry (1926) is of the opinion that if a survey be made of the materials used by the builders of Megalithic England and other parts of the world, it is evident that in addition to the mining of metals, and their exporting ventures, these people were using for their ornamentation and for their domestic industries, while living in the country itself, substances such as amber, flint, ochre, dolomite, hornblende etc. This is not completely true though we will have to accept it partially. In any way the megalithic builders were determined in their occupation of any country by the presence of desired substances. Prof. Eliot Smith (1927) holds the view that the Megaliths had their beginning proto dynastic Egypt from where it spread to other places. (1973-79) Walhouse and others advocate the western origin. Majority of the application of metal in this context denotes iron implements and ceramic evidences or the black and red ware. But of late there are evidences of copper and bronze occurring in this evidence taking the period of megalithism back to centuries. In the study of Kerala megaliths all these years — to be exact within its 89 years of Kerala archaeological studies, very many times megaliths were excavated from time to time i.e. in the thirties byLate Sri Poduval in the High Ranges and late Shri Anujan Achinan in the Fifties at Porkalam (Ayappan, 1933, 1942, 1945; Thapar...
1953) John, (1973; Jaynad) Mehta & George, (1978 Machand and Pazhayannur) to myself in the year 1974 at Maraiyur and in 1981 at Sasthamangalam in Trivandrum in the observations made on these studies have proved the correlation of Kerala megaliths with that of Brahmagiri and Adichchainallur pottery culture, which is justified here in the urns. The recent work by me at Sasthamangalam probably is only in Travancore (South-Central Kerala) where we have got an open air site in city proper. The major part of the excavation was spent for unearthing this alignment of urn-burial which gives impression of a mass-burial area. Admirably enough, just as in the case of Porkalam (1947-48) we could obtain about 30 jars in different sizes and stages, all suggest the successful operation of megalithism here in this area which we will be dealing with in the ensuing descriptions.

The megaliths of Peninsular India have been studied during the last two centuries or so. They are proved to a better archeological evidences concerning the cultural phases of Pre and Proto history throughout the world and in the southern part of India in particular. As a class they generally deal with the burial tombs and memorial stones of the iron-using people along with the Black and Red ware pottery users (a controversial view now) with a universal application and distribution. In this context it may be noted that the south Indian megaliths, including those of Kerala has got a connection and correlation with the megaliths of other parts of the world, say it is Europe, the
Mediterranean, the Atlantic, in the Caucasus Cyprus, Palestine, Iraq and Iran (Asthana 1976). That means this phase of megalithism in Kerala should be regarded as part of world-wide megalithic culture.

The megalithic monuments discovered from Kerala falls into (1) Dolmenoid cists (2) Capstone flush (3) stone circles (4) Umbrella stones (5) Hood stones (6) Nadukaluses or Polochikal (Menhirs) (7) Nannangadis or Thazhis (Urns Burials) and (8) Rock-cut tombs etc. They have been assigned by some to the last two centuries before and about two centuries after the Christian Era (2000 B.C-2000 A.D.) and of these the last mentioned may not be megalithic monuments (Gopalakrishnan 1974). They are oblong or in some cases, circular in plan and are provided with single or multiple chambers. Some have single or double benches and an open space generally like a small hall. They are also provided with most cases. The available evidence (Deo, 1973) shows that the megalithic people of Peninsular India have utilised different metals like gold, silver, copper, bronze and iron and also glass and semi-precipous stones like Cornelian, agate, chalcedony etc. for beads. The amount of objects found in these media is fairly large, implying either on uninterrupted supply of raw materials or definite sources for barter or exchange. Even then the largest number of objects have been made out of iron. These include axes, hoes, swords, daggers, lance heads, small 'sula' frying pans, arrow heads, black and white red ware pottery etc.
Though in every many cases it has yielded grave goods, we should not infer that the megalithic monuments were simply sepulchral tombs or chambers. (Deo 1981).

Wheeler (1943) postulated the theory that the Achamenoid Persians introduced the use of iron into the northern India at the end of the 6th century B.C. and that iron works of the megalithic builders of the South are derived from the north (Banerjee, 1965). Contrary is the truth and recent discoveries in the north have shown that the people had the knowledge of iron earlier. A series of radio-carbon dates were obtained (Nagaraja Rao 1981) from the Radio-carbon laboratory of the Tata Institute of Fundamental Research, Bombay, which showed that the arrival of the iron using people and other changes took place around 1000 B.C. (T.F. 575, 2930±105 B.C.) Thus it has now been established, on the present evidence that the earliest evidence of the use of iron in India comes from Hallur in Dharwar district in Karnataka in the Peninsular India. Such a dating of evidence has not been carried out concerning the Kerala megaliths. Still we can refer that the iron age study was associated with the megalithic builders of the South. Banerjee (1965) has ascribed the earliest occurrence of iron in Peninsular India to about 700 B.C.).

As early as 1934 A.D. the tiny native state of Travancore had made an unfading mark in the megalithic map of Indian archaeology. Having established the department 87 years back from
the present (refer Chap. II) it has conducted excavation though not scientific and explorations concerning Kerala megalithism in as many as 10 recognised sites of megalithic occupation, under the guidance of that illustrious and erudite scholar, the late Shri Vasudeva Poduval as early and as far back as 1934. The thirties and forties of this century, just as in the case of seventies and eighties were periods of active and exploration-cum-excavation activities for the native states of Travancore and Cochin States, solely because of the devotion exhibited by its respective heads. With regard to the archaeological explorations of Cochin State, the services of the late Shri Anujan Achan, the then Government archaeologist is definitely worthy of mention and veneration. The explorations-cum-excavation (in some cases trial-diggings) of the Anjunad valley by Poduval and the Forkalam excavation of the Urn Burials along with the Archaeological Survey of India (Govt. of India) by Anujan Achan, have immortalised their names in the annals of Kerala Prehistory and Protohistory studies.

At the same time it is equally unfortunate to record that it took about 50 years for archaeologists to carry out archaeological explorations in Kerala prehistory, in these areas, the author having reached the valley of Anjunad for his doctoral research in 1974 only. While commenting on the ‘Early Chamber Tombs of South India’ (Sundara 1975), Sankalia has lauded the builders of the passage chambers who were excellent architect engineers as one can see from the plan of the monuments, for the
plan of the monuments, for the chambers proclaim the architectural skill of the builders. However, except a few scholars like V.D. Krishnaswami (1949), K.S. Ramachandran (1971), Gururaja Rao (1972), Deo (1973-81), Sundara (1975), K.V. Soundara Rajan (1977-80), not many have bothered to look into the southern belt of this tiny land of megalithism. Unfortunately South Kerala has not figured much in any comprehensive study of megaliths, the reason being no scientific excavations were undertaken except that of George (1978) and that of mine (1981). My attempt here in this dissertation is to understand better the Kerala megaliths in relation to its counterparts throughout the world, and south India in particular with its 'generalia' features. Quite recently (1980) Narasimhaiah in his 'Neolithic and Megalithic Cultures in Tamil Nadu', has traced out the hitherto work than in the south Indian phase of megalithism with special reference to Tamil Nadu starting from 'An account of the Primitive tribes and monuments of the Nilgiris', Breeds (1837), up to the eighties of this centuries combining with his own explorations and he has tried to give a systematic assessment of the megalithic cultures of the peninsular India which falls between 8° north to 20° N latitude along with detailed description of the different types of megalithic monuments that are found in Karnataka, Andhra, and even Maharashtra Narasimhaiah (1980).

Further within a period of 160 years from the 'Description of the Pandoo Coolies in Malabar' by Babington in 1823 to this day
many scholars have been attracted to the study of Megaliths in India and as regards South Kerala the task was that of Shri Poduval. Sri K. Vasudeva Poduval, The First Director of Archaeology, Travancore, has undertaken excavations and trial diggings in the nearby and proximal areas of the High Ranges, by unearthing urn burials and some iron implements etc. (see 'the Megalithic Culture in South India' by Gururaja Rao 1972: 43-60). The Travancore administration Report of 1934, narrates the accounts as to how Poduval conducted excavations at a place called Panjappalli Parambu, about two furlong east of the Railway line going to Shoranur, to the north of Irinjalakuda, located by the then Railway Engineer at Trichur, Mr. R.A. Edington. Shri Poduval who was then only the head of the Travancore State Archaeology Department, and was on leave, proceeded to the site and conducted excavation which brought to light the existence of over 20 burial urns. The biggest of them, though it got cracked in the course of digging, measured about 3 feet 5" in height and had a diameter of 3 ft. inside. Its neck was 1 foot 3.5" in diameter and was covered by a laterite lid 6" in thickness and having a diameter of 2'7" at the major axis and 2'8" at the minor axis. Two small broken pots were also found in this urn.

The urns and the small pots discovered were all glazed inside. The former in particular were found decorated on their exterior with either a head pattern or leaf pattern drawing. All of them were seen buried in water channel on the slope of the
mudhill. In another urn which was all cracked over seven soft sock boulders were found, and in the rest there was nothing but earth. Admiringly enough, it goes on to record to the credit of late Shri Poduval, that this excavation was undertaken 14 years prior to the scientific excavation of Wheeler at Brahmagiri in 1948.

The second discovery in the same year was in a hilly valley three miles east of Maraiyur and about 30 miles north of Devikulam in the High Ranges, and pertained to a small sized rock cut temple of the 11th century A.D. with excellently carved stone images of Lakshmi, Parvati, Vishnu, Ganapathi and a few Nagar inside. His report "a number of dolmens were also sighted round about this deserted village shrine," the reality of Dolmen existence remains singularly true even today, though local people are destroying the scattered monuments for their house construction etc. He further recorded that these dolmens are megalithic monuments and were "thought of until recently to be the burial places of the mighty chiefs or temples used by the "Druids". The people in the vicinity i.e. near Maraiyur and of Anju Nad call them as 'Vali Vedus' (refer back) or abodes of monkeys. Uralis, a tribal group call them as Pandukuzhis or the pits made by Pandu or Pandavas and they believe that treasure is hidden. This type of beliefs of referring archaeological monuments as that of the Pandavas is common phenomena in ancient India. One noteworthy feature of these dolmens is that in erection certain architectural methods and principles are greatly in evidence. These dolmens
found at Maraiyur and in the Anjunad Valley are situated on a flat level rocky table land and are in groups of three, four, five around each of which is visible hewn stone circles. The majority of them is in east to west direction, but there are a few situated north to south orientation also. The floor of these is paved with a flat stone slab about 108 inches long, 50" broad and on the lower slabs of some are seen rubble stone packing. In the same way late Sri Poduval and late Shri Anujan Achan excavated many sites in the High Ranges and at Cochin respectively (see for details the Administration Reports of 1934, 1938, 1939, 1940 and 1944 to 1944 of Travancore Cochin respectively).

That way I feel it a great privilege that I could record my observations in the valley of Anjunad, wherein, even after days of human vandalism, the land continues to be the land of Dolmens. Just as we saw in previous chapter, the Kerala megalithic with all its isolated and characteristic features, are a nature class by itself. Further all the known types of megalithic monuments like the transepted cists with passage, Dolmenoid cists with four orthostats with port-hole in the east, with east-west orientation. Dolmenoid cist with four orthostats kept anti-clockwise with 'U' shaped port-hole on the top corner of the eastern orthostat and dolmenoid cist with four orthostats arranged clockwise with Slab-circles—Sacrophagus, Menhir, Stone circles, Cairn circles, Cairn Circle with capstone and barrow, Urn Burial—all are found in all the 13 districts of Kerala many
of which are in good shape even today megalithic monuments are found in all districts of Kerala from Cannanore in the north to the capital city of Trivandrum in the South. The areas like Chovvannur, Kandanasserri, Perkalam, Eyyal, Kattakampal in Trichur district have yielded megalithic evidences. (see adm. Reports). The rock-cut caves are oblong or circular in plan and are provided with single or multiple chambers. Some have single or double benches and an open court. They are also provided with narrow rectangular entrance. The Kudakkal or Umbrella stones and Topikal or Hat stones are generally made of dressed granite. The former is called so because it resembles the handless umbrellas of palm leaf used by the local people and the latter because it consists of circular stones. The Kudaikal looks like a dome covering a burial appendage (see plate). The dolmenoid cists are real burial chambers. Each of these is made of four slabs placed on edges a fifth one covering the cist as a stone cap. There are also multiple dolmens, i.e. several within a single stone circle. Menhirs are not that way sepulchral in character but monoliths of laterite or granite planted as memorials.

Just as in the case of Travancore, the Cochin (erstwhile) state, geographically the modern central portions of Kerala had achieved good success and that they have assisted the Archaeological survey of India people in their observation of the site and later on in their excavation-expedition too. In the month of
February 1945-46, V.D. Krishnaswamy, then Asstt. Superintendent (Pre-history) visited Cochin State with a view to conduct a survey of the megalithic and urn burial sites in Cochin. A good number of megalithic sites were visited by him and some of them are listed below:

a) The burial caves and dolmens around the Velakad Temple in the Porkalam Village, Talappally Taluk.

b) The Kalkakkat cave near Kunnamkulam, Talappally Taluk.

c) The Kattakampal caves near Pazhanji, Talappally Taluk.

d) The Eyyal Caves in the Eyyal village, Talappally Taluk.

e) The Umbrella stones and the burial cave at Ariyannur near Kandanasseri, Talappally Taluk.

f) The Umbrella stones of Cheramangad, Talappally.

g) The Chovvannur cave near Kunnamkulam, Talappalli Taluk.

h) The Monolithic Monument at Kuttur—Trichur Taluk.

i) The monolithic monument at Vilvattam, Trichur Taluk.

j) The dolmens on the Vallani Mala, Trichur.

k) The dolmens at Thiruvilwamala, Talappally Taluk.

l) The dolmens over the rock at Irinulamkod, Mullurkara, Talappilly Taluk.

m) The dolmens near Vazhachal on the Annamala road, Chalakudy.

n) The monolithic monument near Aulanthurithi Church, Kanayannur Taluk. As per the Administration Report of Archaeology Department of Cochin (1947).

As a class, the Kerala megaliths like their counterparts in India, discloses more advanced knowledge of mathematical calculation in construction, especially in spacing the tombs in the long barrows, or in rectangle or in a circle having perfect circles and in the size of the barrows. It is only the port hole
element of the port-holed chambers that is usually referred to as having similarity with that of the passage chamber of western Europe. It is uncertain if the porthole is directly linked with those of western Europe or those of Western Asia. But in the case of the passage chamber (the prominent megalithic monument) the similarity with that of western Europe is more direct and emphatically substantial. It is noteworthy at this juncture that comparable passage chambers have not been reported so far in Western Asia. In South India it is observed that the megalithic builders there were an agricultural people who depended upon bounded rain water for irrigation.

The Kudakkal monuments of Kerala are typical to this part of the land especially Cochin area. Because of the excavation conducted by Thapar, and Prof. Aiyappan, it has come to be recognised that Kerala had advanced megalithic cultural features. It is indeed a welcome signal for the archaeologists that just as megaliths are scattered throughout the length and breadth of this small, land, we are lucky indeed that in the different districts of Kerala we have got all the accepted type of megalithic movements with their geographical distribution in accordance also with the topography. Dolmen and Dolemnoid cists are used as sepulchral chambers for keeping the dead body, after which the chamber will be sealed with a covering stone which will have a hole. The type is located in the valley of Anjunad. Then with regard to the capstone flush, capstone will have a hold in the centre, the burial will be inside a urn, so urn-burial which will
be kept deep into a pit and flat stone will be kept on the top of the urn, which is buried inside the soil (Anujan Achan records this type capstone burial at Valapai near Trichur. (administration report of Cochin State 1948).

Stone circles are generally prepared for deliberately decomposing of the body at the earliest or for giving to the birds of prey, for eating them away of the dead body. Constructing circular umbrella-like formation in stone with supporting pillar, underneath of which the dead body is kept buried then it is called umbrella stones. They more or less look like giant mushrooms. At Trichur there is a site by name Kudakkalparambu. (see plate). The same type circular umbrella is pressed on to the ground by construction than it becomes Topikal or Hatstone. Menhirs are monolithic columns or pillars which are generally created as memorial stone on the top of the burial. Lastly burials are executed inside large burial jars which are kept sunk deep into soil, below the surface.

High Range area of Devikulam Taluk of Idukki district is the real arena of megalithism. It is still assumed that they are the earliest iron using people in the country. (Banerjee 1965) Specimens of iron slag collected by me from Erattupetta and other sites of Palai Taluk in Kottayam (see plate) indicates that they were not only used iron but had also iron smelting activity. Thapar’s excavation at Porkalam (1948) and that of Prof. Aiyappan at Feroke in South Malabar (1933) brough to light
Dolmens
Anjnad Valley
Maraiyur.
Devicolam Taluk.
Idukki District.
Notes on Anjunad Valley Megaliths

It can rightly called as the land of Dolmens. Herein we get almost all types of megalithic monuments like the dolmens, dolmenoid cist, rock-cut cave type cist, alignment of menhir, like their European counterparts, though comparatively smaller, dolmens with multi-chambered apartment, with single, two or multiple orthostats, with and without capstones, transepted cist with passage, dolmenoid cist with porthole on the east, stone slabs - directly placed on rock surfaces - some which are illustrated here. Pit burials too are located, not exactly pit circles, the latter, which Sundara has inferred to be of the local population who were previously in the Neolithic stage. They found at all elevations as well scattered all around irrespective topography. Though Megalithic monuments are found many here, settlement pattern is more indicative of Neolithic habitations.
C Plate 10: Dolmen Village-Thittavayal Koilkadavu-Maraiyur

C Plate: Menhir alignment – megalithic field
European style - Prehistoric Heritage
Felix Paturi
C. Plate 12. Dolmens on the plains

C. Plate 13. Dolmenoid cists
C. Plate: As in 12 - Capstone missing

C. Plate: Transepted Dolmen with double orthostats
Plate 51--Land of dolmens--Anjunad valley.
Plate 63—Dolmen on the southern slope of a hillock—north—
(See Ground Plan) South oriented—capstone missing.

Plate 64—A, B, C & D. Dolmens covered with cut block walls and filled
in groups, of two and four dolmens caged in rectangular walls
(See ground plan).
Dolmens and dolmenoid cists are found at different elevations of Anjunad valley

Ground plan
See plate no. 63
DOLMENS AND DOLMENOID CITS ARE FOUND AT DIFFERENT ELEVATIONS OF ANJUNAD VALLEY

GROUND PLAN
See plate no: 64
Plate 65—Megalithic monuments—Dolmens of Kollkadavu-Anjunad Valley are occupied by present day habitation.
Plate 66—Group of three dolmens East-west oriented with rubble all around and also on the capstone of one Kovilkadavu settlement (Ground Plan).
DOLMENS AND DOLMENOID CIS TS ARE FOUND AT DIFFERENT ELEVATIONS OF ANJUNAD VALLEY

Ground plan
see plate No:66
67 (Plate) Portholed cist below earth's surface.
Plate 67B—Chambered—No capstone—rock cut cave type?
—Pannivaiikkara—Church compound, Maraiyur Panchayat.
late 68—Urn burial with lid—excavated on the church compound of Marayur Panchayat—Iron implements were obtained.

Plate 69—Dolmenoid cist field—South east of Maraiyur.
Plate 70—Dolmen near the paddy field—North-south facing south west of Marayur Panchayat

Plate 71—Two cists—East-west oriented—not in tact.
Dolmens and dolmenoid cists are found at different elevations of Anjunad Valley.

Ground Plan
See Plate No. 70
Plate 72--Two dolmens--North-South oriented Sahayagiri.

Plate 73--Megalithic field facing west--Koilkada
Plate 74—Dolmen with passage chamber type Sahayagiri (Marayur)

Plate 75—Transepted cist with passage
Plate 76 —Dolmen field— Koilkadavu Sahayagiri.
Plate 77—Solitary dolmen on a hillock-way to Koodakkad rock shelter.

Plate 78—Typical Kerala megalith—Kudakkal or Umbrella stone.
various kinds of implements, variety of postsherds, ornaments of metal, stone and glass, ritualistic objects and skeletons of men and women from megalithic graves of Kerala etc. Sites like Chovvannur, Kandannasseri, Porkalam, Eyyal and Kattakampal yielded Kudakal or umbrella stones and Topikal or hat stone monuments.

The problems with Kerala megalith is that unlike Tamil Nadu, nobody has systematically studied and classified the Kerala megaliths, for all these years. As earlier mentioned the trial diggings in the High Ranges by late Sri Poduval and late Shri Anujan Achan's work only, at least has given the idea to the world and India in particular that here too we had a mature phase of megalithism. Poduval has excavated such sites in the High Range as Tengakkal in Vandiperiyar, Muttakkad in Bison Valley and of course Maraiyur in the Anjunad valley (see Travancore Administration Reports 1934-40). Dolmens of the Anjunad Valley-Maraiyur

Recorded here are my observation in the last mentioned site viz. Maraiyur of the Anjunad. Exploration and Excavation began with the unearthing of urn burial near the Panchayat Office in the compound of a lower Primary School. The burial occurred at about 2 ft. below the surface. But by the time I reached the site, the labourers who were managing the tapioca cultivation have disturbed the layers and virtually broke the side of the jar, still I completed the unearthing of urn which has yielded fragmentary iron blades, which was taken to the Panchayat.
Office and now kept with the Calcutta University, History Department (see plate urn exposed). About three feet away from that burial, while continuing my exploration, I have excavated a dolmenoid cist with port hole (see plate). This chambered burial with the slit-door does not have grave goods and lid was also conspicuously absent. The passage divided this typical monument into two cellar, but in unequal halves. This chamber is having passage formed out of two slabs placed upright as either side of the porthole and is closed in from with another slab. But without the tapstone, covered by bushes, it has got two compartments (see plate). The capstone is missing and the deposit is of quite recent. It is in a church compound, about 2 furlongs away from the panchayat office and this is described here separately because this isolated dolmenoid cist in just in the heart of the living habitation, where the urn-burial was located slightly away (about 3 feet) outside the dolmens (see for details, map of 'Field area of Research'), indicating the location, description and its characteristic features). This one is mentioned here to correlate the megalithic habitation with the present day habitation. Further Anchunad or Anjunad (both are correct) being the land or valley of dolmens, it is not so easy to record all the megalithic monuments. Naturally we will have to choose the best irrespective of their being in the plains, uplands or in between the muddy field or terrace cultivation (see plate). Probably this may be the unique site in the entire India where within a small area we get the largest collection of dolmens even after every day local
people are destroying these monuments, for their house construction purpose, because of its artistic excellence and engineering craft.

Being a nearer area to the district of Coimbatore it is glaringly noted and surprising that how the Valley of Anjuna did not get the importance it genuinely deserved from Scholars who worked concerning the Archaeology of Tamil Nadu. From the Panchayat of Maraiyur, the nearest Railway Station is in Udumalpet, which is a small town in Coimbatore, situated about 42 kms. away.

Megalithic monuments are found, so many in number even after repeated local human vandalism, it is found at all levels of which some have been recorded here by way of drawings, ground plans and pictures and plates. Some of the dolmens had caged stones with a varying length of 58 cms., 2.89 m, 1.98 m, 0.9 m, 2 m and had an average unit of 20 cms in thickness. The supporting orthostats too had equal dimensions, (see the plates of dolmens). Equally too they have got a width of varying, again measurements of 1.08 m, 2.05 m, and 2.23 m, and had a height ranging from 25 cms to 175 cms. Some of them are caged with bricks, had about 4.74 m in length, 3.34 m in width and about 2.05 m in height. They are neatly and nicely arranged with bricks by the present day inhabitants though, the archaeological purpose of the monuments have been destroyed.

Though in some of them are found in groups, while, others are in single or two numbers with capstone in tact as well as
it is missing or fallen near the monument in some cases. Horizontal and oblong sheets of these are found scattered. They also comprise of a dimension of about 2.22 m in length, 0.63 m 0.45 m 0.98 m and about 1.09 m in breadth. Some had stones covered on all sides and no opening except for that 'U' shaped valve. While there was deliberate entry provision too, the back slab too had a height of about 0.37 m. to 1.72 m. in height with 2 m. approximately, the length of the stone sheet.

Some had rubbles scattered all around, disturbing once-arranged stone circles or on the top of it fallen on mass debris type. Some had basal stone slabs, while some were kept simply elevated on the rock's surface itself. In sites like Thittavayal 2 kms away from Maraiyur, dolmens had no capstones, while the major ones on the Maraiyur-Kanthalloor road had, all of them in groups, in alignment with North-south orientation. Equally on the opposite side of the road, dolmens are found with orientation in East-west direction. They have also measurements ranging from 5.44 m in length to 5.10 m in breadth and as such types covers an area-alignment about 400 ft x 300 ft. In the Nachivayal area of Maraiyur, four caged - in one group covers a diametre of about 8.90 m with corresponding length to all sides, was recorded. At another site again, are found at Murugan Para, Maraiyur, dolmens with a breadth of about 1.66 to 3.96 m in length. Of course in all these monuments of megalithism, one thing was noticed that stone circles as such were not found. Menhirs are a rarity.
Monuments like Kudaikkal are umbrall stones, and Topikkal or headstone (unique and peculiar to central-north Kerala) are not seen in this site.

Another interesting thing worthy of notice is that the Dolmens of Koilkadavu, the local people have added brick-alignments constructions after removing the orthostats for other household purposes. All the standard types of dolmens with its local variations have its representatives in the valley of Anjumad such as the transepted cist with passage, dolmenoid cist with multiple orthostats. Menhirs are also there, which have converted Linga-weapon cult-worshipping temples. For e.g. on the way to the first rock shelter, iron objects of worship like the small sula, sword etc. are kept as beneath a menhir like formations.

The area is known as Urvaasal at slightly higher elevation from the Panchayat office i.e. about 4000 ft. M.S.L. Surprisingly enough other than dolmen and the urn burials, stone circles are not located. Dolmens are found at all levels of habitation, say near the rock shelter, on the plains of the present settlement, higher up along with the tribal settlement as a mass burial dolmen village (see plate). In other words, they are found at Koodakad, Maraiyur, Nanchivayal, Koilkadavu, Keezhanthoor, Kanthalloor, Dindikombur etc. In the last mentioned site on the way to Kanthalloor, three caged dolmens are located inside one of which we have got the white elephant rider like engravings. A gypsy type habitation was visible, when I visited the shelter along with the native informant. From the excavation of the urn-burial I could
collect heavily rusted iron implements, which included long
spear (about 54 cms) like blades etc. We do not have any evidence
of manufacture of tools in any of these layers of habitation or
inside the dolmens as such.

As referred to earlier, during one of my visits to Kottayam,
I could collect black worm like iron slags which indicated the
presence of iron-smelting activity, thousands of years ago. So far
Kerala has not recorded a Kiln in the archaeological evidence,
still traces of iron-smelting can be located in the foothills of
the High Ranges. But again the black and red ware pottery the
characteristic of iron age evidence mixed with russet coated ware,
(a controversial view) is found in almost all megalithic evidences.
Megalithic monuments which are comparable to that South India
are found along the Caucasian, Mediterranean and West Asian cultural
levels. R.D. Banerjee (1939) observes that these people buried
their dead, instead of cremation. The people of Babylon, Crete,
Rhodes, and Troy kept their dead on storage jar vessels in
clenched fashion or kept the bone pieces in earthen jars. Such
vessels with bone fragments were available in excavations from
the sites of Mediterranean, Persian, Baluchistan, Sind and South
India (Keane 1908).

The megalithic monuments of Anjunad are in granite while the
menhir at Thirunnakkara, Kottayam, and the Kudakkals or umbrella
stones of Trichur, are generally in laterite. Floor levels being
heavily disturbed, excavation possibility is remote, most of the
dolmens intact are either converted into temple like structures by the Muthuvans or occupied by present day habitations. Mostly the objects of worship were mainly celt-stone formations or small trident like iron blades and other implements. That way the Maraiyur dolmens, may be regarded as a separate class by themselves with possible connection from the Middle East and Near East. But of course, with regard to the multi-chambered variety, Kerala dolmens differ greatly from Palestinian counterparts.

A brief summary of the work done in the Indian Peninsula especially in its western and southern areas in particular also may again be dealt with, before we deal with the relevance of Sasthamangalam burial in Kerala Protohistoric cultures. Even then, the enigma shrouded with the originators of the culture remains.

The chronological survey of megalithic excavations and trial diggings undertaken by Keral scholars right from the recordings of Joseph 'in the village of Pulimathu at the 21st mile stone on the main central road north of Trivandrum' up to these years of seventies and eighties, sporadic diggings and resultant recordings have been recorded in the Kerala proto-historic cultural horizons (Gururaja Rao 1972) has given detailed regional survey of the megalithic sites explored and recorded in Kerala as we discussed earlier, while analysing the megalithic culture in South India. Simultaneously in the same year, K.S. Ramachandran (1971) have come out with a beautiful 'Bibliography of Indian Megaliths'
which will definitely help any research scholars engaged in similar study. These two scholars have corroborated almost all the available literature concerning megalithism (referred back) which is as rich as the sites themselves, with much emphasis on south Indian and western Indian megalithic sites. The problem has equally been looked into by Deo in his 'Problem of South Indian Megaliths' 1973.

Krishna Aiyar (1926, 1967) felt that the dolmens found on the higher elevation - at the High Ranges and Cardamom hills, which were generally, oriented north-south with a circular port-hole on the south were of the Malayarayan tribes while there were other tribes who had the east-west orientation of burial practices.

Govinda Menon's (1937) excavation of painted pottery found inside a dolmen at Tiruvilvamala in Cochin, as the designs of pottery consisting of wavy lines, loop-coil etc. with the pots having of slipped variety applied with pre-firing texture - all denoted sub standard. This excavation, unearthing in central Kerala yielded a bronze bowl also from the so called grave.

The red painted pottery had not been reported from Cochin so far. The types in that ware from Tiruvilwamala are similar to the vessels from megaliths in other parts of South India consisting of carinated bowls with the upper parts - the sides sloping slightly inwards, elongated conical bowls - spherical
bottomed bowls and flat dishes. The pottery was given red paintings (Ochre wash) over which painting was executed in, white substance (Kaolin) in wavy lines, concentric circles, loop-coil designs, straight lines or oblique strokes. Some of the bowls were painted both on the inside and outside. This is mentioned here because similar pottery was found mixed with, in my urn burial excavations (see chapter II) at Sasthamangalam (1981). The dolmen, besides the above objects, was filled with earth.

Then all these years, the department of Archaeology, Govt. of Kerala, has also recorded many megalithic sites (Indian Archaeology - A Review 1962-63, 63-64 and 64-65 and 67-68) in almost all districts of Kerala which are narrated in the administrative reports of the department in these successive years.

That way most dolmens and others megalithic occur in central Kerala regions, while the rock-cut caves and Kudakkal types are found in Central!north Kerala. The entire belt of the Ghat section yielded megalithism, equally in all these places we get tribal settlements even today also.

Concerning the typological variants and its geographical distribution, Thapar has recorded that (Ramachandran, 1971) India is well known for its rich megalithic monuments. Actually this is perfectly true in the case of Kerala also. In fact first recording and study of these monuments was located by Babington in Malabar, an integrated part of Kerala (Malayaram) of the
Malayalam speaking area. (see Chapter 1). In the Deccan and southern portions of our country, it shows larger distribution.

Mateer in his 'Native life in Travancore' (1883), states that hillmen proper like the 'Ullatan', a hunting caste, 'Vedar', a rare mountaineers, being found at the foot of the hills and are in a similar social conditions to the Pulayas and other hill tribes ask to some extent dolmen-building-culture successor communities.

Kerala has in her population, people of various grades of civilization (Krishna Aiyar 1968) from the most primitive to the most highly advanced - all having a small slant for megalithic ancestry. He further considers (1970) Kerala on account, its peculiar geographical environment and topography as the spring board, indicated earlier, of the south from wherein east-west cultural diffusion. That way, Kerala Ethnology has got its individual fascinating charm. The web of Kerala social life has been woven by using divergent cultural - anthropological threads.

Krishna Aiyar (1929-30) long back expressed the optimism that if the archaeologist and anthropologist herein co-operate willingly and willfully, with each other, then the responsible task of bringing the facts of prehistoric social existence of Kerala archaeology into the limelight. This is so because, references in the Sangam literature and other sources of literary tradition of Dravida desa including Kerala, (Sreenivasan 1960) indicates the existence of at least about a dozen or more towns babbling with
trade activities, mentioning of the same by Ptolemy and other Greek writers, which very likely may be the immediate post-megalithic or some times contemporary cultures.

Naturally so, pioneering views concerning the dolmen builders of Kerala, their mobility and diffusion and successive trade activities of the Kerala navigators, in relation to and in accordance with the then known world viz., that of Babylonia, Assyria, Greece, Rome, the emergence of the Nayars, the prominent non-Brahmin groups of present day Kerala society, with its entry and racial mixing with the Nambudiris of Aryan descent, the arrival of the Izhavas from Jaffna (a subject of discussion) in relation to protohistoric Kerala, which must attract the attention of researchers engaged in the study of Kerala antiquity and prehistory.

The megalithic people were Dravidian speakers, so claimed, Haimendorf (1950) basing on the result of the excavation at Brahmagiri and the Asokan Edict there. Obviously he had in mind, the result of this excavation, where the Black and Red ware culture overlaps with the preceding neolithic culture which is later completely assimilated by the former. The possibility of the Dravidian speaking, occupying Central Asia in prehistoric period has been expressed by scholars like Mateer (1927) Slater (1924) and Ramaswamy (1929) argues that the Dravidian originated in South-west Central Asia and spread eastwards and westwards, and
Author's Excavations At Sasthamangalam. Trivandrum.
MEGALITHIC POTTERY COMPARABLE TO ADICHCHANNALLUR.
SITE SASTHAMANGALAM. TVM.

SSM FIG 1
MEGALITHIC POTTERY COMPARABLE TO THUKKAMPULIYR AND ADICHCHANNALLUR, SITE SASTHAMANGALAM TRIVANDRUM.
MEGALITHIC POTTERY COMPARABLE TO ADICHCHANALLUR, SASTHAMANGALAM, SITE TRIVANDRUM.
MEGALITHIC POTTERY EXCAVATED FROM SASTHAMANGALAM TRIVANDRUM, COMPARED WITH ADICHCHANNALLUR AND PORKALAM
MEGALITHIC POTTERY COMPARABLE TO PORKALAM SASTHAMANGALAM TRIVANDRUM SITE
EARThERN WARE-URN- SASTHAMANGALAM TRIVANDRUM
MEGALITHIC POTTERY COMPARABLE TO ADICHCHANNALLUR.
SITE SASTHAMANGALAM, TRIVANDRUM.
SITE - SASTHAMANGALAM.
CAP STONE FLUSH TYPE - BURIAL URN.
YIELDED BROKEN IRON BLADES.
Megalithic pottery excavated from Sasthamangalam Trivandrum compared with Adichchannallur and Porkalam
MEGALITHIC POTTERY EXCAVATED FROM SASTHAMANGALAM, TRIVANDRUM, COMPARED WITH ADICHCHANNALLOR AND PORKALAM SITE SASTHAMANGALAM TVM.
Plate 51  Excavated Trench and Stages of Excavation
(a) (b) & C.
Plate 52  First Urn located below the front verandah beneath the Capstone flush type
Plate 54  Urn fully exposed - Damaged -
Plate 56. Alignment of jars with exposed ones and urn surrounded by small jars. Supported with ring stands etc.
Plate 59 and 58 Rimmed Jar Exposed Almost completely (stages of excavation) with Breast-Like or Lid Type Formation (in fact while digging) shown separately

Yielded iron implements and Bowl-like vessel.
Plate 60  Black and Red Ware and Russet Coated Ware Excavated objects.
trace out a South Indian continuity and contemporaneity. These Dravidians were ethnically of Mediterranean complex. D.C. Sarkar (1955) suggests the fusion of the Dravidian and Aryans in Iran (possibly East Iran).
Workers spotted a set of earthen pot while digging the ground to lay the foundation of building-extension in the plot owned by one Mr. C Ramachandran Nair, a teacher by profession residing at Sasthamangalam (I am highly indebted to the officials of the department of Archaeology, Government of Kerala, for kindly allowing me to include this in my thesis). The site lies about 4 miles from the Trivandrum Central bus station. The site is the household i.e. in the verandah of his house facing East about half a kilometre walk from the Sasthamangalam junction going to west in the direction of East, prior to the former bus terminus.

This excavation at Sasthamangalam has yielded a large number of urn burials. The digging operation by the owners, which was started before a month prior to the archaeological unearthing and excavations, had shown a lengthy-large alignment of burial jars, 'the nannangadi' in Malayalam, the type of which was excavated by late Sri. Anujan Achani, George (Machad) (1978) N.M. John (1964) and K.J. John (1973-75 Waynad) and others.

The operations conducted by the department led by the author for about a month, starting from the second week of August and
ending by the first week of October 1921. The first megalithic Urn was found by the owner, in the portion adjacent to the wall, more or less emboled on, to the bottom of the verandah. Further excavations have yielded the largest number of urn burials in Kerala with different sizes at different levels. The trench, of course, with the steps on its side measured about 4 metres 2 cms. square, having a depth of about 2 metres. The jar located first at a depth of about 1.56 metres, the others had slightly more depth in their location, but not very far from the first one. In this manner, the trench in square shape has yielded about 21 megalithic monuments of which 5 are bigger burial jars of which one has a capstone flush with about 18 jars surrounding the main jar. The stratigraphy revealed completely that of a mass burial alignment, the pottery and the iron implement revealed the greatest collection of megalithism in such city-brad area. The pottery yielded in the megaliths are akin and analogous to that of Porkalam, Adichannallur, Perur, Sanur, Togarapalli, Machad (Kerala) and other recognised sites of Southern Megaliths.

In accordance with the stratigraphy, we may state, the area will have many more burials, but the trench could not be extended or any other fresh trench can be taken because of the thickness and density of the population living in this area. Twenty seven objects have been collected during the excavation, and in which 5 are large burial jars, 17 small jars and a common ring stand and 2 broken iron blades, which are variant types of pottery
such as the russet coated, the Black and Red ware, variety to black coarse Earthenware etc. Of these last mentioned, which occurred at the first phase of level three. It has round but flattened bottom while three had round base and the last one had a shape of a leg-like formation. Most of the pottery types were wheel made and the black and red ware, had black inside and red outside which, may be due to the result of process of 'inverted firing'. The urns were embedded in mud till to the bottom of the excavated trench. The most important part of the find or that occurred at a depth of 2 metres, surrounded by about 15 small jars and three ring stands which are common dark brown tan-ware (similar to that of Pankalam). The diameter of the urn at the mouth, 50 cm, with a circumference of 210 cm at the top portion, has mid portion of about 260 cm, and 72 cm depth. It was surrounded in all its sides by small jars and a cup like bowls, analogous to that of Peria Kanal High range excavated by Poduval in 1939. All of them were of the glazed black on red variety. Many of them are in fragmentary form, of course with the shape in tact. The difference between the burial jar excavated at Panivaikkara, Marayur (near the Panchayat Office) which is kept in the Calcutta University Museum, and that of Sasthamangalam ware is more or less laterised in appearance. Some of the Sasthamangalam pots are of hand-made. (Is a matter of discussion) But with regard to the Sasthamangalam urns it had coarse ware as well as glazed type. (see Fig. 5 and 6). For the two jars that occurred to the right of the trench, facing east, while the former facing (north)
47.45 cms, each to the mouth top about 144 cm about 70 cms in the lower portion and 217 cm, in the middle portion as the circumference. But only one big urn could be taken at without any damage. All the specimens are kept in in the deptt. Museum, for further study for scholars and researchers.

The central cap stone flush type, only yielded iron implements and three jars inlaid-inside it. But none of them had any other implements like beads or bangles just as in the case of Porkalam or Machad. This was under constant disturbance, for the owners had tried house construction earlier also, and stopped because he came across similar urn burials on previous occasion, which the labourers had destroyed. Observation and exploration in the area has yielded urns, occurring repeatedly in the trench that the words of the owner, Shri Nair, will have to be taken into account that the possibility of having burials even inside his living rooms. The capstone flush-urn had one more significance that on the side facing west-north, there is a clear-cut projection suggesting prominent breasts (see plate) which can equally be 'shifted' lie-end of the top of the jar also with which jar was covered. In the case of deposits of Swamiyar Ala of the Anjunad valley, I came across a terracotta or pottery-offering box which had the shape of an urn with small mouth rimmed middle portion, snakes drawn on its body, breast-like features of two holes instead of projections. Then with regard to the small jars each had round bottom but, some were jars and some were ring like objects and some are almost similar to the larger urns in which
the three jars themselves were kept. Because of the peculiar nature of the trench (see plates), we could not record photographically the urn in their proper vision and placing.

The excavation recorded the largest in size as well as in number of megalithisms in South Travancore. All the urns were not hand made, for the glazing and the texture, may arouse controversy in the technology and manufacture of the urns for this part of the area, viz. a site in south Kerala has so far not yielded any sarcophagus as in the case of Kattakampal in Trichur. Same is the case with the Kudakkal or Topikkal formation of the megalithic cultures. Still we may correlate reliably that here only we have got the capstone flush type (unlike stone circle and topikkal) and alignment of burials in one and the same strata. The mushroom-type hat stones or topikkal, the umbrella type kudakkal, the dolmens of Ranni, Bison valley, Idamalayar forest have not yielded this much urn burials and capstone flush monument in large measures and that too in a busy populous city-habitation area, compared to the nature of the topography, geomorphology, antiquity of the site etc. The urn burials at Sasthamangalam gives the archaeological clues for any scholar that Kerala pre and Protohistory had a better base even in the so-called crowded area. This area, I do feel, without offending the benevolent attitude of the owner, may be explored and excavated thoroughly by the state as well as the Central departments of Archaeology in the years to come. This is one of the few
excavations in the phase of Kerala especially pre and proto-
history, in the south (Travancore area) region where megalithic
evidences are traced out by archaeologists, through scientific
excavations.

The texture of the burial urns were of course, of black and
red variant or black-on-red ware coated ware. The small
jars of this burial are not painted and this have very little
decoration. The larger urns, that way just as in the case of
Tengakkal and Vellimalai near Eraniel and from Shencottah, exca-
vated by late Shri Poduval (1938) have a chain pattern (see plate),
and the small pots found inside are of a slip variety. Equally,
though broken, they were of the thin ship variety, and naturally
it may be noted that the Travancore megaliths' area from Ten
Nachinadu to Vada Nanchinadu have got a wider distribution of
megalithic monuments (Padmanabhan 1971). Sites like Vellimalai
(1938) Ranni (1940), Maraiyur (1934), Shencottah (1939), Tengakkal
(1938), near Vendiperiyar, Kaccanapara (1940) KaruppuKottai
(1940), Perumkadavila (1978), Maraiyur, Kanthalloor of the
Keezhanthur, Dindimombur, Pallanad (1974-76), Koodakkad,
Nedumkandam (1977) Sasthamangalam (1983) have been mentioned
and in my research observations. (Sites in the valley of Anjunad
(Neosolithic to Megalithic), Edakkal like rock shelter at
Pandavapara (Perumkadavilai-Neolithic) Sasthamangalam (Megalithic)
in Trivandrum City in 1981 and the recent discovery of the Stone Age engravings at Tenmalai by Rajendran (1982). Naturally have figured deeply in my doctoral studies.

As earlier referred to, of the 5 large massive pyriform type jars. One had lid (Fig. 1) and another had a side projection like a pointed breast (see plate). Then of the 18 jars of which three were inside the bigger jar. Equally the common types of Black and Red Ware pottery, studied by scholars, from such sites like Tirukkampuliyur and Alagarai (Mahalingam 1970), types mentioned by Gururaja Rao (1972) that of Deo (1973) and also by Narasimhaiah in his studies (1980) for all the megalithic classification of potteries, they are (i) Black and Red Ware (ii) Burnished black ware (iii) Red ware, (iv) Micaceon ware and (v) the Painted ware.

First and the third can be located among the excavated jar at Sasthamangalam. Of the 26 excavated objects - 13 are here illustrated here by drawings - (5 jars 18 small pots, inclusive of cups and bowls, 1 ring stand and 2 iron blades). Photographic recordings are also kept herein. Vertical form of straight spade work, alone is possible here and that too, in a densely populated capital city area, where pressure of land is very heavy because of the house construction and other area disturbing activities. In fact the mounting population of Trivandrum, in future, I am afraid, may destroy the possible archaeological evidence. The two iron blades might have been daggers (highly corroded and both in brittle fragmentary form) are the only
excavated materials other than these is the ring stand - apart from the jars and pots. The bigger one is only is 15 cms in lengths, about 5 cms in breadth and 2 cms in thickness. The second one can be called a simple iron blade rather than a dagger. Partially broken, the present length comes to just 7 cms only. But similar daggers and larger - longer lances in iron have been reported from such sites like Udumbanchola, Maraiyur, Bison valley of the High Range areas. Ring stand (see plate) excavated here, can be compared with to, the ones excavated at Eyyal, and Kattakampal (Y.D. Sharma), Chingleput (N.R, Banerjee). Salem (Maurice Philips) & Machad (George).

Lid shown in Fig. 1 or the high necked jar (Fig 4: 1), the large red pots, pyriform jars - are seen in many Kerala megalithic sites like Padinyattawmuri (Logan), Feroke (Aiyappan), Eyyal (kept in Trichur Museum) Porkalam (Thapar), Sarvadhi, Trivendrum (1967-68). All these are characteristic of south Indian megalithic burials.

The burial urns with and without decoration which are found scattered in Kerala, have more or less got uniform shapes. In many ways they are similar to the ones found in the nearby areas like Salem, Coimbatore, Adichchannalur, Chinglepat etc.

It is very often referred, that the Palghat gap might have been, one of the migration routes for the megalithic people into Kerala, from the nearby Tamil Nadu region. But the passage of megalithism into Travancore can be two other routes also. As
regards the Kumuili – Cumbum route of the High ranges or the Aramboli (Aruvaimozhi) passage of Nagercoil – Tinnevelly route for Paduval's excavation at Karuppukottai, Sarvadhi burial jar, Sreekaryam, Trivandrum (Administrative Report, Archaeology Dept. 1968), and my own finds in Trivandrum, shows an extension of the Megaliths in the centre of south Kerala belt also. This can be said about the 'teri Mesolithic industry' too for future explorations, we may come across a site in South Kerala, which is geographically nearer to Nagarcoil which in turn is near to Tinnevelly. At present, such possibility may be scoffed at, but we cannot rule out a future achievement.

Anyway with regard to the pottery types, I am not categorising anything and scholars are all welcome to correlate and compare my evidences with that of any known south Indian megalithic sites and even of the Vidarbha – Nagpur regions with such famous sites of Adichchanallur, Sanur, Perumbair, Maski, Brahmagiri, Porkalam, Tirukkampuliyur and Alagarai or the megalithic types, illustrated in Mahalingam's report 1970 (TKP Black and Red ware – Fig 6, 6a, 6b, 6c and 7), with that of Gururaja Rao (1972; fig. 9, 12, 13, 14, 15, 16 and 17a), with that of Dao (Problem of South Indian Megaliths – 1973: Fig. 2, 3 and 4) with that of George (1978: Fig. 4, 5, 6, 7 and 8) and also with that of Narasimhaiah (1980: Fig. 20, 21, 22, 23, 25, 32, 33, and 34).

Further quite a number of excavated sites in South India have shown that the black and red ware which is wheel made is associated with burial. The tragedy is that, all these jars
irrespective of size, but did not have paintings or graffiti marks. Still all these, it may be remembered that, knew better technique of firing, which is an important factor in the manufacture of the pottery for it seems these types of potteries were subjected inverted firing, meaning putting the vessel upside down. In my recordings, I have put the goblet like vessel as well as the dish (see plate) in the category of megalithic pots only.

Megalithic monuments are found in many numbers, throughout the central and north portions of Kerala, though, it has been reported rarely in South Kerala. Further quite recently, an opinion has emerged as to whether the thazhis (in the vernacular) urn burials can be truly called megaliths or not. But judging from the evidences that are collected from the dolmens, cists, as well as from the urn burials, being the same, there is nothing wrong in calling these also to be as 'Megaliths'. Repeatedly in recording, only one thing I want to emphasize that South Kerala too had mature megalithic occupation. I will equally be delighted if only somebody is correlating this pottery types, with even that of Arikamedu - (Indo-Roman Pottery) of Wheeler (1944), for many coins of Roman origin indicating Kerala's commercial contact with European country have already been established. Same is the case with Punch-marked coins collected therein. Parameswar Lal Gupta has recorded Kerala coinage in his publication concerning coins of Kerala. Dhavalikar's (1968) plough-coulter, suggesting Roman trade may be remembered in this context too. Apart from
that, I do feel, probably, in the years to come the city of Trivandrum and its suburban areas may yield all pre-and-proto historic cultures in the near future. For recent geological studies by Murthy (1975) and others reveals an unending cultural sequence of geological and anthropological activity in this part of the land.

Whatever may be the distribution and correlation of these monuments their pattern of houses has been scanty (Deo 1973). Exception to this are the sites of Takalghat and Paiyampalli (Nagaraja Rao 1971) gives the example of patches of floors at Hallur in the excavations and state that the period seems to have witnessed much burning, because of which the available structures might have been destroyed. Kesarpalli (Sarkar) evidences, has floor levels with port holes. Takalghat (Deo), the habitation site, was associated with the stone circles at Khapa, on the opposite bank of the river Krishna gave better evidence. Rao could obtain evidences of circular as well as rectangular house at Paiyampalli.

The megalithic folk who followed the neolithic people in the south might have made considerable progress in building operations and constructions. Sangam literature says similar instances (during the early centuries of the Christian era) they used to burnt bricks for their construction and knew lime and mud plastering. Whether that much advancement was there for the immediate successors of the megalithic people, is a matter to be looked into.
The black and red ware shows essentially utilitarian and plain shapes. Rimless bowls, carinated bowls, dishes, carinated bowls, dishes, carinated lids or covers, vases, basin, ringed stand, lipped bowls, channel spouted jars and legged pots as also ladle shaped are the distinctive types in this ware. The legged jars reported from Porkalam, is a general characteristics with all the megalithic pottery excavated in Kerala, though they are totally absent in Maharashtra.

The black and red ware pottery and iron has now literally became synonyms of megalithism throughout the South. At the same time Russet Coated Ware is also available in the megalithic layers and copper and bronze are found instead of iron, which definitely push forward the date of megalithism. That means it is abundantly clear that this ware does not seem to possess a characteristic cultural assemblage of its own and it is equally true that this ware does not appear to possess any typological personality of its own other than the megaliths.

The megalithic sites of Adichchanallur, Sanur and Perumbār types of potteries are considered to be standard type as far as black and red ware and russet ware pottery, denoting a time range between the Megaliths as well as the Early Historic. Some of the jars excavated or similar to the plain russet coated ware and red ware, recently excavated by the University of Madras, (Mahalingam 1970) at Tirumikkampuliyur and Alagarai. The excavated jars at Sastamangalam are massive and are in cluster, in a small area and the iron blades are heavily rusted and fragmentary for
and so I have not kept photographs of that. At Kesarapalli, about 12 miles north east of Vijayawada, in Andhra, megalithic excavations recorded earlier revealed a sequence of habitational deposits among which period II was megalithic in content well, characterised by the use of the black and red ware and others along with iron objects.

When we discuss the megalithism of the south, dolmenoid cist, with slab circles also may be remembered. This has been reported in the districts of Chittoor (Andhra) Kolar and Bangalore (Karnataka) as early as 1881 by Branfil, succeeded by Yazdani's work, which too had urn burials also. But Anjugad valley also has got cists, occupying an extensive area like the Iralabanda site of Chittoor, unlike that of the city site of Sastamangalam.

With regard to the description of the Sasthamangalam pottery except that they are black and red ware as well as russet coated ware, I refrain from making any conclusion. The studies of the pottery specimens compel one to think that the Sasthamangalam jars have all characteristics of the pure South Indian megaliths, as well as they are a separate group just as in the case of Porkalam of Trichur (Thapar). From massive pyriform jar types with (Fig. 1) and without (Fig. 2) lid, to cups, bowls and goblets (Fig. 5) types were also seen. The goblet is drawn to the actual size. Three common ring stands (see fig. 4:3). Dishes are also represented (see plate) in the burials. The typical high necked jar (Fig. 4: 1 & 2) were also unearthed. Some of the
jars have round base, while majority had slight-pointed bottoms. Right below the trench was, adjacent to the capstone flush type was seen the broken earthen-coarse ware vessel (Fig.6) and not wheel made.

The large number of jars concentrated in a single area is one of characteristic of urn fields in Indonesia and the Philippines. Jar burials were sometimes covered with stones. The jar burials were used for flexed and secondary burial. Ramanna (1980) is of the opinion that a comparative study of the types of South East Asia with those of South India would be rewarding and interesting. Urn burial alignments are widely found in Jawa, Indo-China, South Sumatra, Borneo, Celebes, Philippines and Formosa. The megalithic culture entered South East Asia along the river valleys. They are associated with notions after death.

Considering all aspects of the megalithic movements, it appears that the slab cists and the dolmenoid cists — of megalithism — stand out as one of the three basic features of this distinct culture, the other two elements being the use of iron and black and red ware pottery. Several cultural strain earlier as well as contemporary, got mingled up to give rise to a complete megalithic cultural matrix. Definitely it might have been a developed-evolved culture in its heyday though the presence of some nomadic people or pastoral population alongside the settled agricultural population can by no means be ruled out.

As Professor Deo (1973) observes, while dealing with...
the megaliths in these words, "Whatever be the culture currents underlying the homogeneous façade of megalithic remains, there no doubt that these funerary monuments, and the basic homogeneity of the material equipment spread over very large region bespeak a well-knit social organization having more or less similar ideas about the funerary cult. The iron tools and weapons imply a well-knit group of specialized smiths, conscious of the economic and other needs of the society. However, the divergences in the orientation of the dead on multiple methods of disposal of the dead, might imply either social gradations or section in the community itself.

It is also remarkable to note that in spite of the megalithic folk coming in contact with other contemporary cultures of the Deccan, they were culturally so conservative that they refused to be dominated by these. What a pity that we hardly know anything certain about their beginning and end and what a beauty that in spite of a rich material culture, the megalithic folks have hardly left their name in any form of these.

Soundara Rajan (1980) observes that the megalithic monuments form a world-wide problem and the global dimension of their character and diffusion whether we discuss the site and the representative of which is the one from Kerala or that of the Nilgiri Todar. Megaliths of India are largely confined to the peninsular and coastal areas although some monuments, whose claim to being classified as typical megaliths is yet tentative have been found in Rajasthan, Central India, Sub-Himalayas regions and
in the Assam zone. Some of these upper Indian and East Indian megaliths seem to be affiliated with an East Asiatic Neolithic common or live and funerary tradition (Hutton 1928). South Indian megaliths which occur on the edge of the Vindhyan plateau and into the Ganga-Yamuna valley forms a very rich varied and picturesque body of sepulchral edifices connected with the death rites of protohistoric peoples of the Indian Iron Age. These monuments reveal a social structure wherein the essential element of the life after death concept, will be shortened with all these things we are not sure what and where the earliest type of occurrence of megaliths in India is. It is sometimes held with a hypothetical facility that megaliths are already seen in the early centuries. But in the lower Deccan their counterparts occur and they have an early chronology (Deo 1973). The only thing we know about Indian megaliths is that, broadly speaking, it is found to have largely been a maritime impulse inducted into the country by a complexity of vehicles and in so far as this goes, our stand will be justified in taking the potential line of entry.

Talking about the 'megalithic culture in Sri Lanka', Sitrampalam (1980) feels that the present day Vedah are the descendents of the Austro-Asiatic language speaking Late Stone Age people and they found a substantial element of the population of the succeeding megalithic phase as is reflected in the legends of Protohistoric period. The extension of almost all the aspects
of the Indian Civilization to Sri Lanka and South East Asia during the early centuries of the Christian era bespeaks of the potentiality of the Indian Civilization to expand by sea. Our survey of Stone Age showed a similar trend. This has proved that the megalithic culture of the island which is really an extension of the southern zone of Indian megalithic culture. Sri Lankan part is really an extension of the protohistoric and early historic sequences of the Peninsular India.

While evaluating the primitive megalithic economy of the Todas, we feel convinced that their social customs and beliefs are totally unique and strange. Polyandry as a system remained till very recently. After their entry from the Mediterranean area, it couldn't retain their identity for long, though certain social customs are still practised. They adopt to the funerary practice of cremation as well as burial. Generally they keep the dead in stone circles. (Noble 1976). This is another point to show of the earlier belief in the life after death, just as in the case of the Egyptians. Naturally the evidences obtained from megalithic excavations are of grave goods, rather household articles and utensils. Even today some of such beliefs have been retained in certain sections of the society.

Cattle rearing was the primary occupation of the Todas, though agriculture was only secondary. As earlier referred to though entered in Iron age, still they were practising the megalithic-chalcolithic economy. It is inferred that the Todas and Coorgs (probably because of physical appearance too) apart from other reasons are the contemporary representatives of the Mediterranean race. The Todas exhibit one economic religious unique-
ness by keeping secular and sacred buffaloes and processing ordinary milk in dwellings and sacred milk in temples. They have further maintained sacred grades of buffaloes each attended by corresponding priests and each related to corresponding dairy temples. Historians definitely believed that they were the Nordic Aryans because of their imposing structure, brown complexion, prominent nose and similar jew-like features and so might have prompted the ethnologists for their findings (Ananthakrishna Aiyer 1925).

For centuries together there was not any change in everyday life of the people. Farming and cattle rearing on the same manner continued. That means people continued to live by constructing dolmens and other megalithic monuments. The primary evidence in this line was that there was not any change in the productive utensils. Neolithic chalcolithic economy continued to be in use. That means even after the emergence of iron, copper and bronze were very much in use, the evidence of which was indicated by excavation in which along with iron implements, sword, sickle etc., pendant like bells for the bulls in copper and bronze were also available. In a way agriculture and handicrafts—artistry were made popular by through democratisation of those arts. This can be hailed as an achievement. Economy in the cost of production of metal was popularised. Still during this period the axe and plough were not in vogue, though Dvalikar (1968) records a unique example of 'an iron plough-coultar' from Brahmagiri and in the northern parts of India, it was achieved.
just as in the case of European prehistory. Then also cattle keeping and cattle rearing continued to be the primary occupation. This is even today true in the case of the Todas who practice buffalo-rearing as the chief occupation. The settlement pattern and the construction of houses continued to be the same. On a clay circular basement huts with pointed tip and circular edge resembling the tribal basket-net or like circular pyramid-style was adopted for houses. This neolithic practice continued and even in this century, the poorest section of the tribals live in this type of houses. Dr. Nagaraja Rao (1965) records such type of houses at Tekkalakota. Majority of the tribal construction at Marayur continues to be the same. But with the growing popularity of agriculture people started constructing better houses. With the idea of permanent abode people constructed cow-pens also. Afterwards by using huge blocks (laterite) basements for houses were constructed on it and gradually construction of megalithic chambers came into existence. Black and red ware continued. This particular ware was brought to India from the north western frontiers along with the advent of the Dravidians entry into India (south). With the prominence of agricultural economy painted grey ware was becoming popular. In the South this was initiated slightly earlier to the advent of the Christian era. Because of this slow progress, many of the Neo-cultural traits remained and continued throughout the megalithic period. In other words phases of culture remained more or less the same.
Further it may be noted that as already referred to earlier not all the megalithic monuments may be of the iron age or of black and red ware. The inference therefore is given that Kerala megaliths can also have an earlier date. At the same time though controversial, the portrayal of horse juxtaposed in the strata of cattle depiction in the Koodakkad (Maraiyur paintings) can be dated to early Neolithic while the elephant rider can be of the megalithic, for we have similar depictions in the valley of Anjumad, itself, such as in the rock shelters of Dindikombur, paintings here and inside the dolmens at Pallenad, Champakad and some more inferences. A self evident Iron age portrayal is that of the elephant with its armed rider whose weapon obviously the representation of Megalithic iron sword, (open to discussion). The megalithic iron technology is the transitional force of the Neolithic phase in Kerala. Naturally so the wavy hatchings on human figures of the art gallery have been compared with the white wavy designs on russet coated, painted red ware or black and red ware of the iron age by some archaeologists like Soundara Rajan, who visited the site of Maraiyur. But this stylisation is common in most of the Neolithic-Chalcolithic paintings of the South India. Just as in the case of megalith-iron, not all archaeological excavation has yielded iron implements in the urns and urn burials of Kerala. In this context the recent work of the author, in the city site of Sasthamangalam in Trivandrum be valued, though it yielded two iron blades.
Further the linguist and ethnologists and ethnographers along with archaeologists and anthropologists must ponder as to how and why the terms like 'Vali Veedus', the house of Bali, the monkey king of Ramayana face for the abode of the hermit — muni-varya were coined for referring to the megalithic dolmens that occur in the valleys of the High Ranges like Bison Valley, Anjunad valley etc. Equally pertinent is the question of worshipping deities, of course on mistaken identities. The major example is the popular deity of the Hari-Haraputra or Ayyappa (Arya Sastha) (Joseph 1939) who resides on the Sabarimala (the inference is Sabari of the Ramayana fame) a controversial Buddha figure in sitting posture is the idol installed there, which is the biggest and famous Hindu pilgrim centre of Kerala. At Maraiyur also I could notice a small Idol of Buddha with the Varada Mudra is worshipped in a temple as a manifestation of Swamy or Siva. In the same on the way, to the first painted rock shelter I have located fallen granite image of a Nataraja (see plate) and some inscriptions on the rock on the pedestrian path of a temple as well on huge monolithic slab which once, probably might have been a menhir. Then in the entire valley of Anjunad there are hundreds of rock shelters smaller ones, all of which, of course not painted, but is occupied by the present day inhabitants which prove beyond doubt the unconditional presence of the antique man. Here on the hillock of the Maraiyur range forest as well on the way to Kanthalloor resides the Muthurams with their well-knit family referred as (Kudy' inside of which, except for the dirty arrangements,
can very well thought of to be an anthropological Museum.

Another striking thing about this valley, (see plate) the people (original settlers) of the locality — Urukār, follow some kind of sophisticated arms -- worshipping culture (Ayudha Puja) the custom of which has got a universal application. Another episode is the large side hunting of elephants, which once might have been a crude practice, is now done on organised illegal levels by shooting them mercilessly, without the knowledge of the government officials.

It should be noted that the cave painters of India are understood to be non-Aryans of the country's present populace and that the valley of Anjunad remains a place of potential/continued archaeological activity, Champakkad cave acting as the gallery for the cave man to watch (even today from there, the township of Udumalpet is seen at night as though a golden river) and peep from his abode, from which he got inspiration to paint passing army bands of regional kings, the fighting of well-armed soldiers with their chieftains. Even then also the animals and surroundings around him also attracted his attention. Here also in the valley of Anjunad the area is covered by dense tropical jungle harbouring wolves, jackals, bison, elephant, panther, bear and porcupine amid an environment of teak, sandal-wood, rose wood and mimosa, that inspiration had its finest expression. Definitely it is a sheltered area and naturally, as similar studies, like that of Mathpal (1976), have also brought out corresponding evidences.
"BRAVING THE STORMS THAT RAGED THOUGH MANY AGES,
MY LAND, KERALA STILL GLITTERS LIKE A CELESTIAL
FLAME"

Mahakavi M.P. Aiyen
(A KERALA POET)
Antique Personality of Kerala - Conclusion

Evaluation of human evolution - the development of the Cave Man into Aero Man had all along been a subject of never ending interest, and demanding deeper engrossed concentration. From that point of view, Indian archaeology, especially prehistoric phase, had always played a very effective role in collecting, connecting and correlating the constructive evidences for reconstructing our own past naturally the study of the pre-literate society with all its variant and vibrant stone age phase took its academic birth only in the first half of the century, while such studies are just a decade old in this part of the land viz. Kerala.

"There is a growing desire in recent years to know more about Kerala and her people. There have been some attempts to satisfy this. I have been attracted to the State of Kerala because of her uniqueness in several respects - her remarkable history from the earliest times, relations with foreign countries, the wonderful preservation of culture by her, the spirit of tolerance down the ages, and the valuable contribution, she still continues to make, such as the Kathakali and other art forms to the rest of India and abroad. For many of these reasons a work on Kerala is of special value."

Late Dr. Zakir Husain, Former President of India. Introduction to L.K. Krishna Iyar's - 1967

'Social History of Kerala'
To any non-Malayali, Kerala might have appeared as the land of Kathakali, Onam (harvest festival) Sankaracharya, boat races in back waters, ivory works and intelligent people. On closer acquaintance, you gain some awareness about Nayars and Nambudiris, Mappila Muslims and Syrian Christians, the intricacies of the matrilineal joint family, the Guruvayur Sri Krishna temple, Communism through the ballot box, Sabarimala and Sri Narayana. Everywhere in India and in many parts of the world, Keralites are known to be smart, hard working, highly volatile and sociable and full of adventure. All these qualities come out best when they leave the comfort and security of their own home, village and state. One will find them earning their livelihood in all walks of life, but most, where technical skills and intellectual ability are in demand.

It is difficult today to distinguish among the Keralites between a Muslim, Christian or Hindu or among the Hindus themselves, between a Nayar, Nambudiri or Ezhava - neither too tall, nor too short, neither too dark, nor too fair - they represent a mixture of many races - miniature India - with differences in faith and Status reflecting dress and manners, practically died out a half century ago, the contemporary society being entirely different from what it was in this 'Land of Perumals' as seen by Day (1863) and continues to be singularly unique as the 'Land of Charity' narrated by Mateer (1971).
From my research findings, however crude or unscientific it may be, in conclusion I would like to say that the prehistoric past of the Kerala antique man with his peculiar and diversified customs and manners together, with his well-knit settlement pattern must attract the attention of scholars of all living sciences for much of the area, I do feel remain unexplored. Further I do feel that more and more explorations and excavations, research-oriented co-ordinated activities, absolute dating by different scientific, geochronological and other modern methods should be experimented and implemented, say for the study of subjects like the cave art should be enhanced and organised to trace out the already mentioned missing link in this part of the land. Apart from that the problems confronted by researchers working in Kerala archaeology as to whether all the rock-cut caves, supposed to be of the megaliths or are they simple megalith or something more — a question to be answered even today by all the scholars engaged in the study of South Indian prehistory.

Attempts in the preceding chapters may be taken as the key to studies in Kerala prehistory, which is in its infancy, and rock art — cave paintings, which has taken its birth quite recently only. Side by side with that the mesolithic industry of Koodakkad the social and cultural antique existence of the megalithic-urn burials, the resultant study of the ethno-archaeological features of the contemporary society — have been dealt with in puny manners for many more years of dedication and sincerity
in academic proforma and pragmatism is required to fulfil the task of achieving the archaeo-realization of the dim past. As a result of these social, anthropological and cultural jigsaws and puzzles, definitely still remain unanswered, which I could not, but I feel will 'be solved' in the near future by young scholars who may have to take up projects like the authenticity of the Naga worship of the Nayars 'with Malabar as their headquarters maritime and naval activities of early Keralites, extention of the coastal Mesolithic cultures, wider distribution of Kerala Cave Art and its tribal continuity, cultural entry of the Tamil Vellalas of the Nanchinad into Kerala because of the political turmoil in Madurai, the caste-ridden society of Kerala, relevance of the Hero Stones in Kerala in rewriting Sangam polity, emergence of the forest tribes, political experiments done in the democratic Kerala laboratory, antiquity of Kathakali and its cultural significance, the impact of Pro-Dravidian and Dravidian aspects in Malayalam and literature and many more to be studied thoroughly, systematically, scientifically and, of course, with a sense of dedication and an unbiased balance of mind.

Further from the ecological point of view Kerala and South Kenara are quite similar in the Indian continent. Geologists like Dadia and Dey have indicated as to how geological and ecological factors have exerted a striking influence on the distribution of archaeoological evidence and patterns of settlement.
Even Achutha Menon (1961) recorded that within the historical period, the smallest political unit was a household which later on might have diffused into larger centre of antique social settlement. That way ecological factors have influenced social structure and bygone society too. The forest flora-fauna akin to Cave Arts of Kerala and northern and Central India must attract due attention.

It is very often pointed out rightly that exposure to sea and its influences gave Keralites their acquaintance with several varieties of culture in the ancient world as well as the modern. Indeed this factor is largely responsible for the dominant trait of adaptability and cosmopolitanism in the personality of Kerala. Supplementing with the previous reference we may not notice state's extensive contacts with the rest of the world — contacts which go back to the millenium preceding the Christian era because the Malayalam coastal line was dotted with important trading outposts—Quilon, Alleppey, Calicut, Cannanore—names of spice towns that ring with melody and imperial nostalgia Egypt, Asia Minor, the Assyrian and Babylonian empires at the zenith of their power, the Greeks, the Romans and the Chinese—all these had trade relations with Kerala long before the Christian era. But more than all these we had a better mature developed antiquarian culture the discussion of which was the subject of this thesis discussed in the previous chapters. Along with the problems of South-central Kerala, nay, Travancore megalithic diffusion is also taken into consideration.
That way concerning Art and Archaeology, we can say that the Rock Art tradition of India, its purpose, the date, the authors - all these must acquire adequate importance among the general public, the mass, the educated youth and to every moving mind. This moral compulsion. I do pray, should lead me kindly into future academic wilderness of Kerala antique forests.

Arranged in between is the descriptive charts and plates and 'little observations' concerning my research as to how I am wandering in these, with a view to fulfil the task of unravelling, unearthing and thereby popularising and serving that great academic guardian angel to me viz. Archaeology, the work of which is assigned to me and to my conscience.

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