

PREHISTORIC MAN ROUND MADRAS

BY

V. D. KRISHNASWAMI, M.A., DIP. ARCH. (CANTAB)

WITH 7 PLATES

INDIAN ACADEMY OF SCIENCES
MADRAS MEETING

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Frontispiece

PIONEERS IN INDIAN PREHISTORY

PLATE 1



ROBERT BRUCE FOOTE



WILLIAM KING

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“A SCIENTIFIC SURVEY OF MADRAS AND ENVIRONS”

PREPARED FOR

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INDIAN ACADEMY OF SCIENCES

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Introduction.

Madras occupies a premier position in India as being the first place in whose neighbourhood stone implements were found in circumstances indicating it as a favourite abode of Palæolithic man. The first of these implements was discovered by Mr. Robert Bruce Foote¹ of the Geological Survey of India, on the 30th May 1863 in the debris of a pit at Pallavaram, in the lateritic gravel which occurs there as a thin bed 2' to 3' thick overlying the granite gneiss.

This was soon followed by numerous finds by him and Mr. King everywhere in the area and particularly in the valleys of Korttalaiyar and Narnavaram rivers.

Then after a lull of more than half a century, an impetus which has been gaining momentum, has been started quite recently, (i.e.) within the last decade, by Mr. Burkitt,^{2,3} whose interest was aroused by the the field work of Messrs. Richards and Cammiade, towards the exploration of palæolithic centres here and a scientific study of their materials from a stratigraphical standpoint, which alone could throw real light on man's prehistory. Under the influence of those authors the Madras University took up the question in 1935 and the writer, working on its behalf under the guidance of Dr. F. H. Gravely, discovered the Abbevillian pre-lateritic boulder conglomerate at Vadamadurai—rather a surprise with regard to previous expectations; the site has thus become the key site as it were of the region, as it affords firm data for understanding the stratigraphy of the laterite and assigning man here to prelateritic times. Towards the close of the year the Cambridge section of the Yale-Cambridge⁴ expedition to Northern India, also visited certain important sites here for purposes of study.

It is therefore fitting that of all districts in the Presidency, Chingleput should have the first place in a study of South Indian Prehistory—the more so as it abounds also in later prehistoric antiquities, *viz.*, megalithic monuments, elongated and pyriform pottery cists and the like; the area is in fact a veritable field museum of prehistoric archaeology and it has the added advantage of exhibiting its own collections gathered by Foote, Rea and other pioneers, in the prehistoric galleries of the Government Museum at Madras. The map annexed will make it clear that the sites of interest offer facilities for their study in the easy means of communication they possess with the Madras Museum. (Plate 7).

The student of Quaternary Geology and Prehistoric Archaeology will therefore recognise in Madras and its environs a unique excursion ground, interesting as much for the wealth of stratigraphic results to be obtained as for the motley of early human cultures it exhibits.

The chief reason for Palæolithic man's activity in this area is the presence of quartzite of fine quality in abundant quantity, derived mainly from the Alicoor-Satyavedu boulder conglomerate of the Jurassic period. It is obtainable handily in the valley walls and in the huge masses of gravels apparently brought in during a high pluvial period on the laterite peneplain⁵⁻²⁹ that forms the main morphological feature of the coastal tract. Into this peneplain there has been carved a big valley by a mighty river that must have flowed here. Its memory is preserved in popular tradition under the name of Vriddhakshiranadi or Old Palar, but the present stream of Korttalaiyar is the only but a most inadequate representative of it, while there is historic evidence⁷ that the present Palar itself has had a course determined for it by human agency. The gravel deposits of that mighty river which are now clearly grouped as Pleistocene, give opportunities for the study of the activities of Palæolithic man which so far are unrivalled elsewhere.

In this locality this study takes the form of an enquiry into the geological changes of the laterite coastal plain, as in it are imposed the early human cultures. Therefore in the matter of establishing the chronology of these remote Stone Ages, the archaeologist has to depend solely on the aids that geology offers.

The Terrace System of the Korttalaiyar Valley.

The stratigraphic scheme applicable to this region is based upon investigations made since 1935 of a system of four terraces first observed in the Korttalaiyar valley by the writer and the Cambridge party, which have all been classified as Pleistocene. For convenience's sake these terraces may be designated T_0 , T_1 , T_2 , and T_3 , T_0 being the oldest and the basic and T_3 the youngest and lowest. T_0 is the laterite peneplain with an average height of 100'±. It is the mature coastal plain of the whole of the east coast, of which the area in question is a part. The three other terraces are cut into this peneplain and all of them are mainly composed of boulder gravels and loams, representing 3 stages of sedimentation mainly due to eustatic movements of the sea level.

The highest member of the group, T_0 , is preserved in the laterite areas of the Red Hills and westwards as far as the Alicoor-Satyavedu ridge. The most southerly spread of lateritic conglomerate in association with Palæoliths⁸ (found by Henderson of the Christian College, Nos. 2204-13 of Foote's collection) is Walajabad in the Palar Valley. The laterite assumes a conglomeratic texture nearer the hills with even huge boulders of 2' in diameter. The size of these pebbles by itself argues that the river in its initial stages must have been very much more powerful than any stream to be now seen.²⁹ The laterite mantle obviously points to a time of strong pluviation, the region being now but a dry area with an average rainfall of but 40". Implements and rolled pebbles are found in the laterite itself and, as already indicated, even below it in the boulder conglomerate.

T_1 and T_2 lie roughly 60' and 20' above river level. T_1 , noted at Erumaivettipalaiyam, is mantled by a thin cover of sandy loam with no gravels below; many palaeolithic tools are strewn in its surface. T_2 , 20' above the flood plain, is the most important of all the terraces and is well developed round Attirampakkam and Nambakkam, and again seen lower down the river at Erumaivettipalaiyam. The interval between T_1 and T_2 seems to have been a long period of erosion and aridity which was followed by the deposition of the T_2 coarse gravels which point to a definite resumption of increased pluvial conditions. The last and youngest of the terraces, T_3 , about 8' above the streamline, is observed only at Erumaivettipalaiyam and is loamy in character.

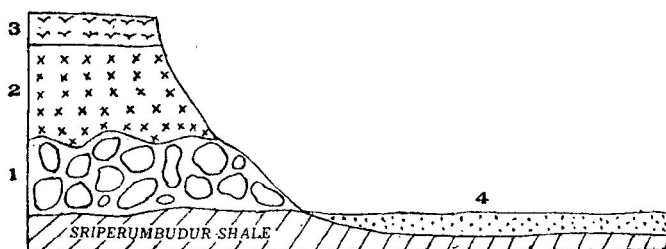
T_0 and T_2 terraces are associated with laterite but they have been differentiated not only through a study of the section of Vadamadurai and the geomorphology of the area but also through a detailed study of their industrial content.⁹

As a result of such study the age of the terraces may be given as:—

T_0	100' +	Abbevillio-Acheulean.
T_1	60'	Acheulean.
T_2	20'	Late Acheulean, Micoquian & Levalloisian.
T_3	8'	Up. Palaeolithic.

Vadamadurai Boulder Conglomerate Bed.

The earliest implementiferous deposit in the area is the white boulder conglomerate bed at Vadamadurai, observed in a tank recently dug up. Patches of pelley laterite overlie the white boulder conglomerate, the depth of which has not been ascertained. From this area has come the largest collection so far made and the typology of the tools has been studied in some detail. The following is a generalised section of the area.

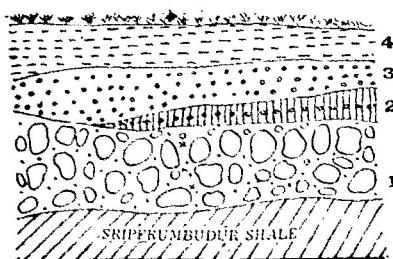


- Section I
- 4 = Alluvium.
 - 3 = weathered and rewashed layer of laterite (*middle to late Acheul*),
 - 2 = Main detrital laterite (*lower to middle Acheul*),
 - 1 = White boulder conglomerate (*Abbevillian*).

This boulder bed has brought to light for the first time the existence of Ancient Man even before the main laterite formation. This fact is the peg on which the entire edifice of the pleistocene stratigraphy of the area hangs. The tools of this bed are the crudest so far observed and correspond to the Abbevillian of the French sequence—a fact which agrees also with the horizon of the bed. The individual boulders are so big that none of the gravels from the other terraces can equal them in magnitude. This fact alone²⁹ will afford a sufficient argument for a very strong type of pluviation when man came to live in this area.

The Laterite Conglomerate at Attirampakkam.

The section of the T₂—20' terrace at Attirampakkam can be seen in the gullies which cut the terrace. In this, traces of



- Section II
- 4 = sandy loam,
 - 3 = pellety laterite,
 - 2 = White sandy clay with kunkar in strings,
 - 1 = hard laterite conglomerate,
 - x = implements *lower to middle Acheul and late Acheul*.

man's handiwork are of a prolific character, and it appears to mark the heyday in the life of Palæolithic man in the vicinity, as the tools are highly developed in style and marked by much variety of form. Foote^s says he here made "the largest and the best collection ever made in India and that, though subsequently large collections were made elsewhere by others, none of them equalled these in quality."

In 1863¹ Foote was in doubt as to the younger character of the Attirampakkam laterite conglomerate as compared with the high ridge laterite cap on the divide at Cunjalum, though Dr. Oldham and Mr. King were inclined to a contrary opinion. Now from the recent intensive studies made there, this problem has to be settled in favour of Dr. Oldham and Mr. King. The Archaeological content of this conglomerate is quite different from that of the Vadamadurai boulder conglomerate or that of the laterite series, which are patinated red, and in the field one can easily differentiate these artefacts.

Hand-axe Industries.

Five different Industries are recognisable and quartzite is the only material used. Typologically the industries may be styled a hand-axe industry, the hand-axe being the dominant tool type. But there are also other types of tools such as the cleavers of various shapes, scrapers and cores and flakes of both Clacton and Levallois.

Industry I, found in the boulder conglomerate at Vadamadurai, has yielded numbers of Abbevillian handaxes made on big pebbles and show a white cortex in consonance with the colour of the boulder conglomerate pebbles. But these are associated with lower and middle Acheul types of Industry II which exhibit laterite patination and agree with the finds near the Nandikanama pass in the Kurnool district.² The tools are much advanced over the types of the Industry I, but a great proportion of the tools exhibit the Acheul (controlled) flaking, the edges showing more and more marginal trimming and becoming straight. It is only in Industry II that the cleaver

tools appear to have originated and these increase in percentage till Industry V is reached. Collections have been made from Vadamadurai, Manjankaranai, Erumaivettipalaiyam, round Satyavedu, from Koopedu and in fact throughout the laterite ridge near the hills.

Industry III and IV conform to the very end of laterite times and therefore show very little iron patination. The forms of the tools of these groups correspond to middle to late Acheul types.

Industry V comes from the Attirampakkam terrace and shows the peak of perfection of Acheul man in tool making. A few of the hand-axes show resemblance to the Victoria West type and the cleavers are made both on the single Vaal and double Vaal principle. The industry further brings to light that the flaking technique about the end of terrace T₂ is distinctly Levallois. (Plates 2 to 5).

The above conclusions, arrived at in the recent work, would form the basis for further research for both the geologist and the archaeologist.

Caves.

In the Alicoor hills not far from Gudem are a few cave-like⁶ rock shelters of which mention has been made by Foote. They are scooped out in the Jurassic boulder conglomerate. With some difficulty the writer traced the bigger one, which in plan is a shallow crescent some 250' wide and 30' high at the entrance with a depth of about 70'. Both floor and roof consist of conglomerate and are not covered by any incrustation. (See Plate 6).

The abundance of palæolithic artefacts in its proximity enhances its prehistoric value and it may be expected to yield a concise stratigraphic history of early man to the archaeologist's spade.

Possibly Palaeolithic Human Bone in River Gravel.

Foote⁸ says:—"No crania of the Indian Palaeolithic men have been found as yet, nor, with one possible exception, any other parts of a human skeleton. The one bone in question was found by me in the Attirampakkam nulla. The bone referred to had seemingly been washed out of the conglomerate and lay in the dry bed of the stream together with a very large number of excellent implements. The bone was seen by Profs. Busk and Boyd Dawkins, and in their opinion, the bone, which had unfortunately lost both articulations, might possibly be part of a *human tibia*. The determination could not be regarded as absolute owing to the imperfect condition of the specimen."

Mesolithic.

In this area no mesolithic has been reported but in the near enough districts⁸ of Anantapur, Kurnool and Cuddapah, Foote has made collections of microliths (now in the Madras Museum) consisting for the most part of blades, scrapers and cores of agate, chert, chalcedony and of vein quartz. These materials are absent here and especially in view of recent work,^{2.10.11} which shows the survival of the microlithic industry down to proto-historic times, it appears not necessary to agree, in the absence of sufficient research, with Foote, when, in conformity with the ideas of his time, he postulates a hiatus between the Palaeolithic and Neolithic times.

Neolithic.

Chingleput has not supplied any very definite Neolithic artefacts. Foote mentions⁸ two finds, a well polished basaltic oval ring-stone (found between Satyavedu and Roshanagar) and a well made celt (found north of the Korttalaiyar opposite to Takkolam)—both in proximity to Kistvaen and Kurumbar rings. Certain of the stray celts among the writer's collections near Tirunilai and Manjankaranai on the alluvial terraces, from their thin section and straight working edge, seem to be forms copied back into stone and to belong to the Iron age man,

PLATE 2

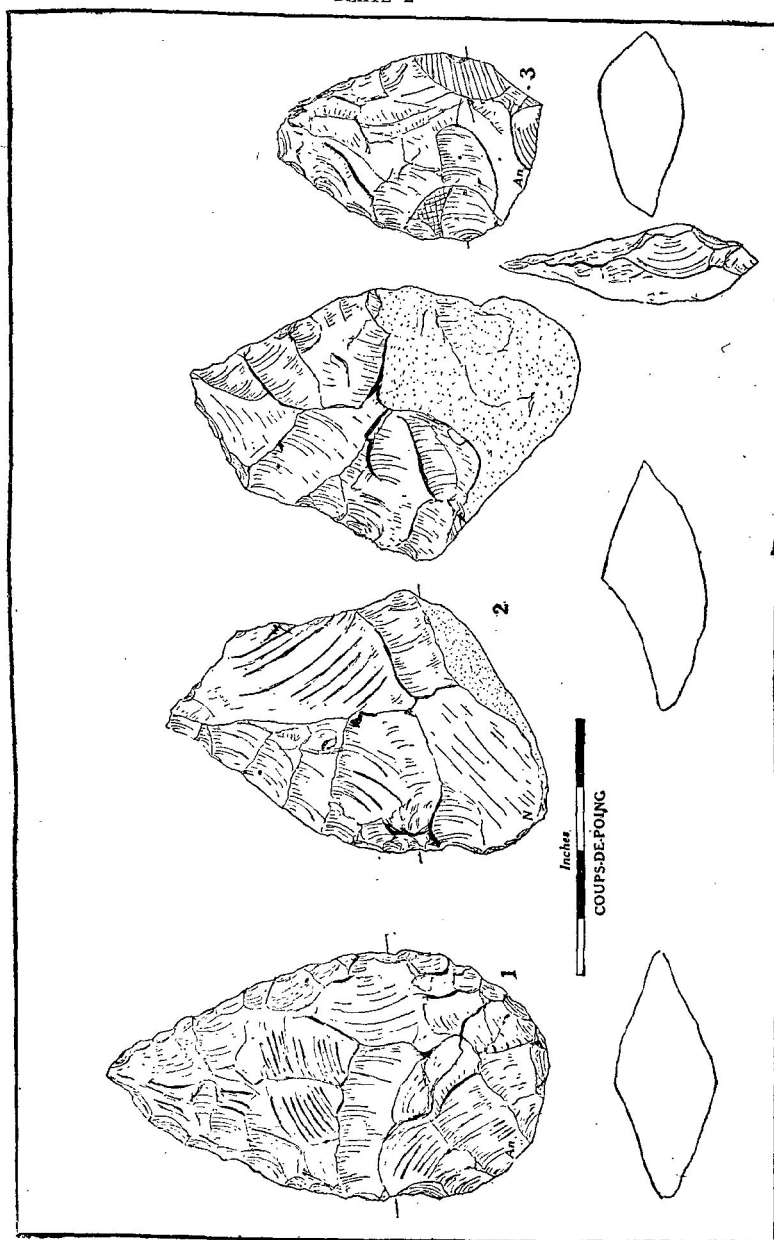
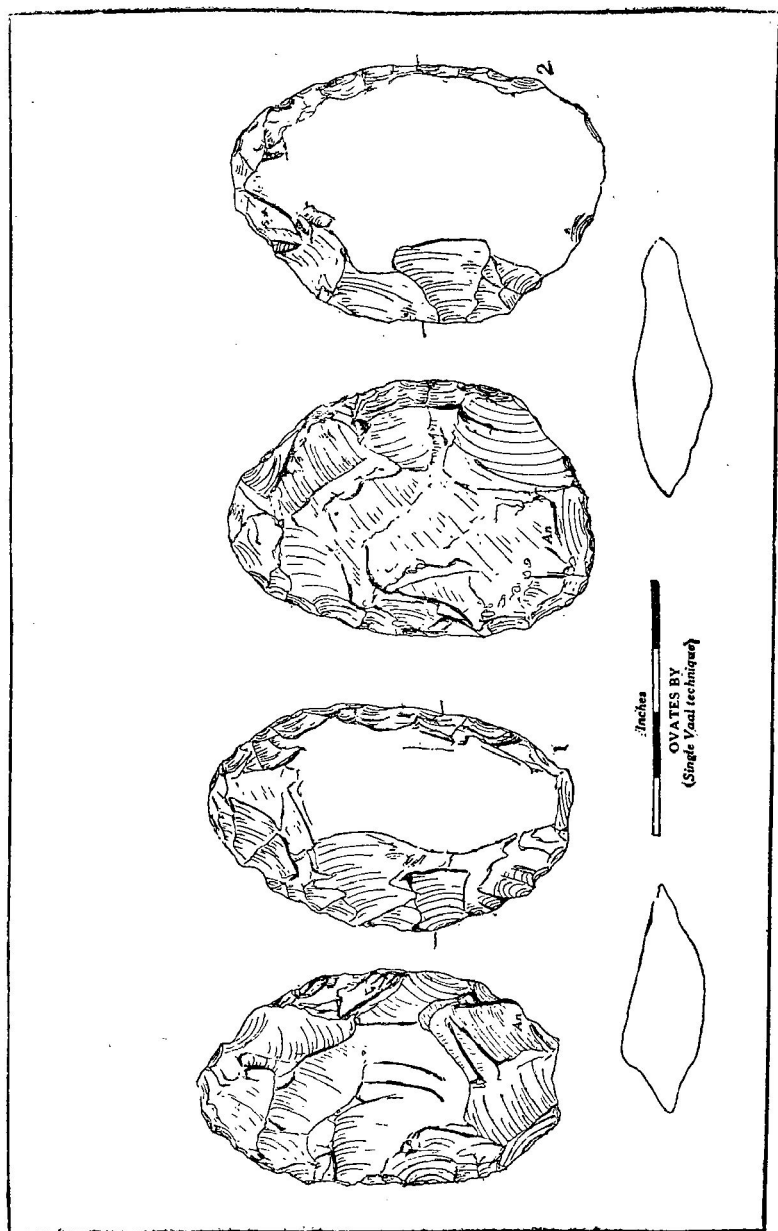
INDUSTRY V = T₂

PLATE 3



INDUSTRY V = T₂

PLATE 4

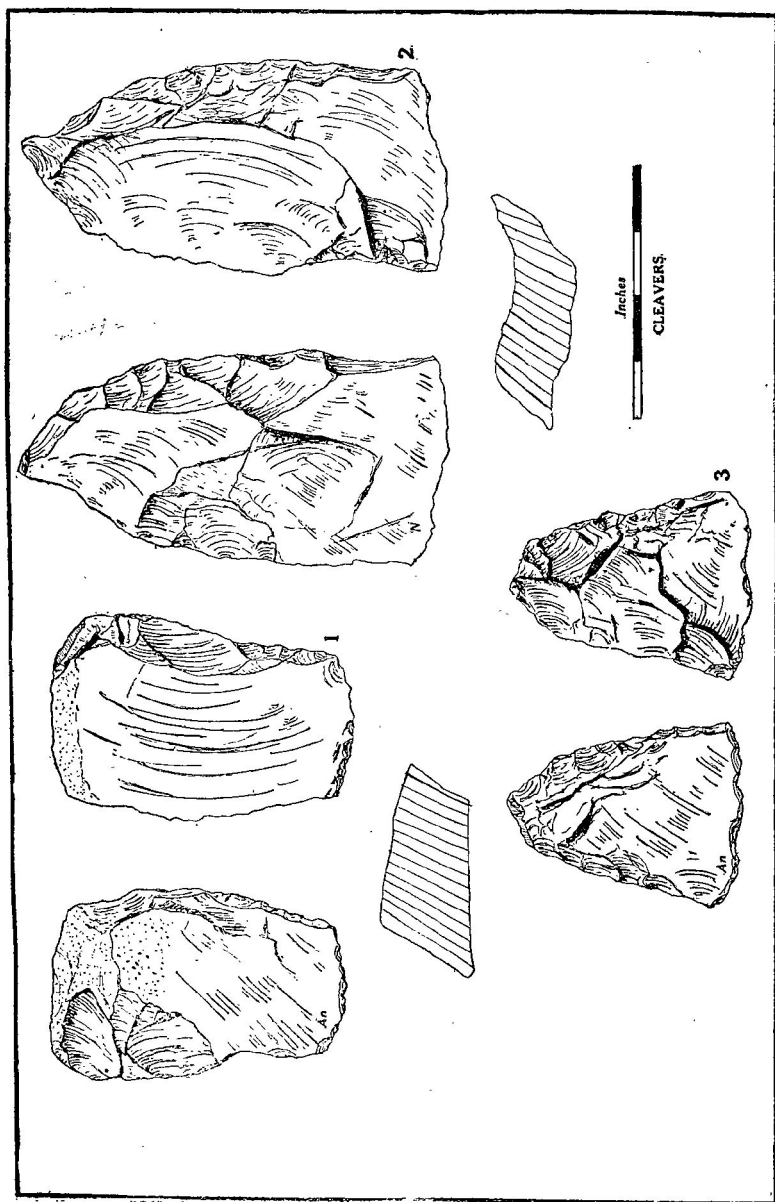
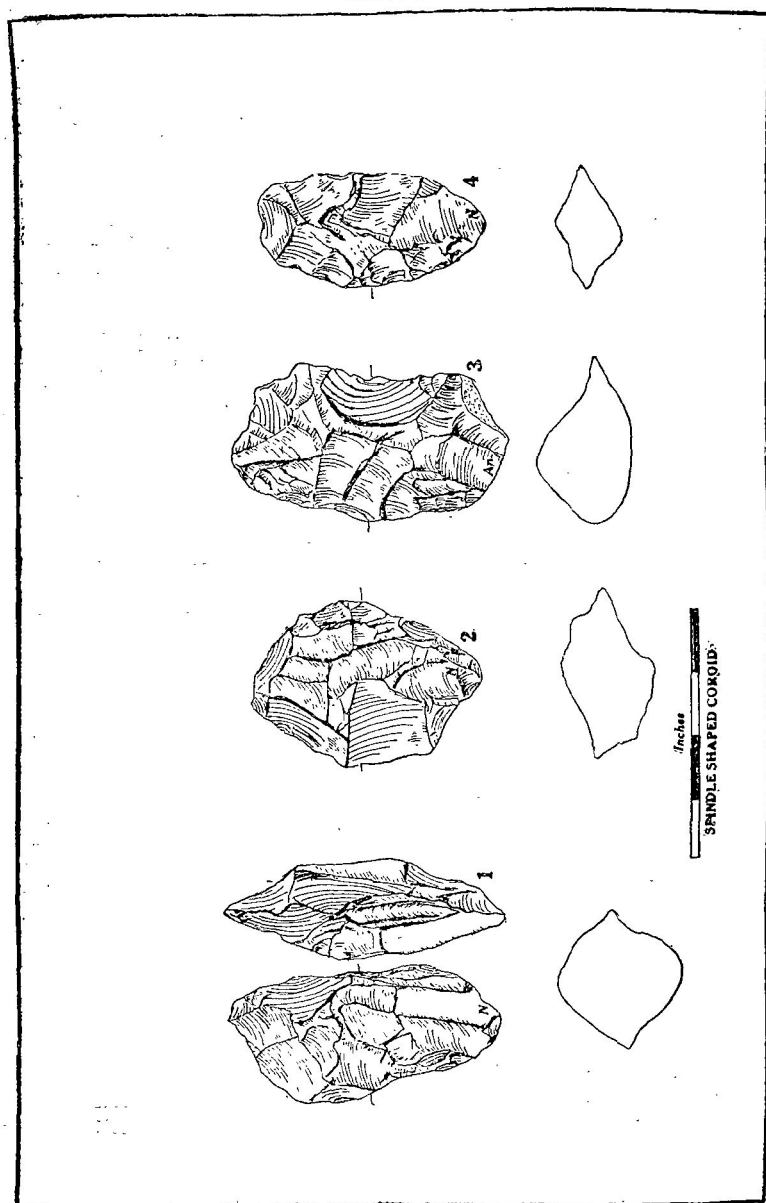
INDUSTRY V \equiv T₂

PLATE 5



INDUSTRY V = T₂

(who was the author of the megaliths in the area) not yet freed from the Neolithic tradition. Richards and Cammiade³ have found above the pellety laterite of Manjankaranai polished celts of diorite, pottery fragments and an etched carnelian bead; but their association would point to an Iron age rather than a Neolithic.

The abundance however of Neolithic artefacts in the neighbouring districts of North Arcot and Chittoor⁸ and the absence here of the trap rock which is the only material of the Neoliths, are against the supposition of the absence of this culture in the area.

But it has to be said that though Foote had located the main focus of the Neolithic culture at Bellary—a region of abundant trap and basic rocks^{12,13}—“systematic investigation of the typical Neolithic sites of the advanced stage has yet to be undertaken to reveal the steps” by which this man became the Iron Age man.

Neolithic burials:—Most of the megalithic and ceramic tombs in South India being to the Iron Age and examples of sepulchres referable with confidence to the Neolithic age are rare. As regards the sarcophagi tombs at Pallavaram, where the pottery is no doubt plain and unornamented, the absence of stone or metal implements among the grave goods has led Mr. V. A. Smith¹² to suggest the possibility of their being of Neolithic age. Foote also, before him, was of opinion, from the find of Neolithic artefacts above mentioned, that the adjoining Kistvaens and Kurumbar rings were Neolithic.⁸ But opinion on these matters is much divided and it may be noted that the evidence furnished by other sepulchres has taken them to the heart of the Iron Age.

Foote's belief¹⁴ was that Neolithic pottery would turn out to be dull coloured, rough surfaced and plain and that the Iron Age pottery would show rich colours, polished surfaces and elaborate artistic mouldings. On the other hand

Mr. Coggin Brown says that "it has been exceedingly difficult to distinguish Neolithic from early Iron age pottery" and he even denies that the collocation of pottery on a Neolithic settlement affords by any means an absolute criterion for the pottery being also Neolithic.

Iron Age: Megalithic and other Funerary Monuments.

Sepulchral monuments have been recognised in South India for nearly a century now, and there are abundant remains and descriptive and illustrated accounts of them, among which Rea of the Archaeological Department has contributed a good deal about Perumbair, Pallavaram and other places in the Madras area. But no satisfactory bases²² for their interpretation have as yet been available regarding their origin and distribution, and the "murky fog surrounding the prehistoric tombs" has remained as thick as ever. Meanwhile they are losing value and content by the ruinous operations of treasure seekers, road-makers and cultivators etc., more here than in other countries. Only a few days back Rev. Fr. Rosner²⁶ writes in the "Hindu" (27-11-1938) lamenting the fate that seem impending over the dolmens of South India and yearns for a thorough survey of them by competent men.

Two maps of the island of Rügen in the Baltic by Sprockhoff showing the distribution of megalithic tombs for the years 1829 and 1929 exhibited a diminution in their number from 229 to 38 in the intervening century. Dr. G. E. Daniel's observations come here very pertinent. England possesses two excellent megalithic surveys—one by the Ordnance Survey and the other by a research committee of the British Association for the advancement of science—both accompanied by detailed lists, plans and maps well on their way to completion; and he says in his paper on the "Megalithic tombs of Northern Europe"¹⁵ that before the many problems which the megalithic tombs involve, can be tackled with assurance, it is imperative that not only parts but the whole of western and northern Europe should be covered with a network of surveys comparable

with those in England, and that these, with the many scientific excavations conducted nowadays, will then afford a basis for a resurvey of all the problems connected with prehistoric burials. In the absence of this kind of work, no correlation, however seemingly interesting, can proceed on anything like firm ground. Therefore a brief account of a few places of prehistoric funerary interest is alone attempted here.

*Perumbair*¹⁶.:—Surrounding the base of the range of hills running towards Acharapakkam there are several extensive groups (some hundreds) of stone circles, varying from 8' to 50' in diameter, formed of rough stone boulders. In some the stones have been removed and the site is marked only by a low mound. In the centre of each stone circle is either an elongated pottery cist or a pyriform urn. Many had already been rifled. The oblong pottery cists are rounded at the ends, standing on two or three rows of legs varying in length from 2' to 7', and resembling those found at Pallavaram site, with the chief difference that the Perumbair oblong cists have invariably three instead of two rows of legs. One cist has no legs, rather unusual. Pyriform cists also exist here but they are comparatively few in number. In one cromlech the cist bears on the ends rows of thumb-end mark ornamentation.

The main finds were in the cists themselves but pottery and iron implements were also found outside them. The finds consisted of stone and iron implements, weapons, pottery, bones and shell ornaments, the pottery being generally dominant.

*Chetpat*¹⁷.:—The prehistoric cemetery site in Kilpauk of the Perumbair-Adichanallur type which had been noted by Cammiade, was recently excavated in 1934. Both the oblong and urn type of sarcophagi were found. The finds also show a further resemblance to Adichanallur through the black tipped pottery. The scarcity of the iron objects furnishes another parallel with Perumbair.

However the fine all-black vessels of this site distinguish it from both Adichanallur and Perumbair finds. The occurrence

here in abundance of the black tipped fine pottery bowls also makes it different from Perumbair.

Pending further excavation and detailed study of finds the age of the cemetery has been assigned by the excavators to the Iron age in South India as at Perumbair, Adichanallur &c.

Pallavaram^{18,20}—There are two representative classes of prehistoric sepulchral remains here:—(1) Stone circles with underground stone cists in the centre and (2) ceramic sarcophagi surmounted by simple barrows. They are found over the range of hills to the east of Trisulam. The stone circles occupy the slopes of the hill and high positions, whereas the pottery sarcophagi stand on a sloping ground at some distance from the base.

The oblong sarcophagi are invariably placed between two boulders one at the head and the other at the foot. Examples of both pyriform and elongated types from this place are in the museum as also the subsidiary pottery finds. Rea mentions that dolmens amidst stone circles in Trisulam were not excavated.

In the earthenware tombs, implements of stone or metal are absent and there are other associated smaller pottery outside the tombs. Some are reddish brown in colour with black on the surface but are all plain with no ornamentation. As in India iron was known from 4th Century B.C., it would be unwise to assign the tombs a very ancient age much anterior to the true Iron age sites.

*Perianattam near Chingleput*¹⁸:—Four classes of funerary remains bearing a general similarity to the tombs at Pallavaram:—

- (1) stone circles with dolmens in centre,
- (2) dolmens without circles,
- (3) circles with no surface remains in the centre, and
- (4) ceramic sarcophagi without stone circles,

occur in large numbers round the Villiyan and Vallari hills near Perianattam. The vicinity of this village teems with

dolmens of class 1 in complete preservation, whereas at Pallavaram they are few and mostly rifled. Of classes 2 and 4 also there are a number of examples, but the majority consist of class 3.

The sarcophagi and the megaliths occupy the same relative positions with reference to the hill as do the same classes of remains at Pallavaram. While pyriform tombs were alone found, the indications are that the elongated ones also exist. Here the rims of the sarcophagi instead of being a bead moulding, as in some at Pallavaram, are moulded in a sort of spear-shaped section.

The pottery found in the stone circles are quite different from those found in the Pallavaram sarcophagi. They are moulded and show signs of ornamentation while the Pallavaram pottery are all quite plain, with hardly any decoration. Even the shapes of the pottery here would seem to differ from those of other sites.

*Tombs round Red Hills and Satyavedu areas in the laterite*¹⁹:—As in the previous cases, the tombs in the Red Hills are situated on a barren laterite plain, a little elevated above the adjoining alluvial plain. They are all circles¹⁹ enclosing cists of laterite. The cists are sometimes squares of 6' in length the breadth of the tombs when not square varying from 2½'—4'; the diameter of the circle is generally 18'. Each square is bounded by 4 pieces of laterite, each piece forming a side of the square; the pieces are set in the earth upon their edges, sometimes projecting above the surface. Each circle is formed of 16 pieces of laterite each forming a rude segment of a circle set on their edges likewise. This description, says the excavator, applies to a few of the tombs that remain in a tolerable degree of preservation. In some of the cists opened by him there was a granite slab—an exotic at the Red Hills—forming the floor under which are found pottery vessels filled with human bones and pieces of broken pottery.

Round Sholavaram the writer in 1935 discovered both types of sarcophagi in abundance. The one excavated by him is of the elongated type $2\frac{1}{2}'$ in length $1\frac{1}{4}'$ breadth and $1\frac{3}{4}'$ height, including lid. The rim shows finger-tip decoration. Thin fragments of pottery were found in the laterite, filling up the sarcophagus. No human remains were found. There was no particular fixed direction in the orientation of these tombs. The whole site is undergoing rapid quarrying and the material available for study is being ruined.

Further west, near Pundi, the writer met with pyriform types enclosed in the laterite gravels occupying the higher ground.

North of the Narnavaram river^{6.14} near Satyavedu, scattered through the scrub jungle between Amerambedu and Maderappakkam, are many stone circles made of large rough blocks of laterite. Some of these contain Kistavaens made of cut blocks of the same laterite. These ancient megalithic monuments stand on the same bed of laterite as the palaeolithic artefacts found at Amerambedu.

Other scattered finds are²⁰ :—Guduvancheri (ruined cairns); Vadakkupattu (a group of dolmens); Vembakkam (stone circles); Perunagar (three cairns); Uttaramerur (two cromlechs); Takkolam (Stone circles); St. Thomas Mt.—Nanmangalam (double ring of stones surrounding a mound); Puttur near Red Hills (a number of rifled dolmens).

Thus it will be seen that the funerary monuments of the megalithic epoch—a very important phase of the prehistoric civilisation—have as yet been only studied casually. It will now be seen that the cult of the dead becomes highly specialised in post-neolithic times and acquires definite culture areas. Malabar is the area of the rock-hewn tombs; at Adichanallur we have the area of urn burials, while Chingleput becomes the area of both types of ceramic sarcophagi with dolmens and

stone circles. The variety and abundance of these structures in the Chingleput District makes it a classic land for their study and for gaining a true appreciation of the contribution of the megalithic people to the stock of Dravidian civilisation.

The dolmens and stones circles popularly known as Pandavar Koil, Kurumbar Medus and Rings etc., occupy the elevated regions round hills or the laterite. The pottery sarcophagi occupy the lower ground everywhere when in association with megaliths. The Kilpauk site stands on river sand. Fergusson is of opinion that where groups of stone circles are found they don't mark successive regal burials but battle fields.

It cannot be assumed that the folk using earthenware coffins did so because they could not obtain suitable gneiss capable of being split up into slabs. The proximity of stone cists in Trisulam to pottery burials in Pallavaram, would argue against that idea, if both types are to be contemporary.

The same people who knew the art of splitting granite slabs also knew the worth of laterite blocks and the art of cutting them and they made use of the same in the place of gneiss, in making their stone circles and cists, as in the Red Hills and Satyavedu, where there is but one single example of an exotic slab of gneiss.

About 1868 Sir W. Elliott¹⁹ thought that the authors of these funerary monuments were Pallavas or Kurumbar about the 7th Century A.D. On this view it would be difficult to answer for the resemblance to these in others out of India, and even in India, where there is no proof that they held any sway. Even within the ambit of the Pallava sway these monuments show considerable difference in plan, while their beautiful temples stand in striking contrast to the crudity of these sepulchres. It is thus very improbable that they were all erected by the Pallavas. The Pura Nānūru^{21.24} mentions urn burials as a living custom but how far earlier than the days of

early Tamil literature the custom came into use, it is as yet impossible to say.

கலஞ் செய் கோவே, கலஞ் செய் கோவே !

.....

.....நெடு மா வளவன்

தேவருலகம் எய்தினன், ஆதலின்,

அன்றோற் கவிக்கும் கண்ணகன் தாழி

வனைதல் வேட்டனை யாயின்.....

O Potter chief, O Potter chief!

.....

.....the high and mighty Valavan

Has gone to the abode of Gods, hence,

An urn so big as would cover such a one

If you are to make.....

The question of the age of the megaliths seems on the whole to lead us into the domain of Prehistory.

Prehistoric Cultures and Racial Elements.

The above described motley of cultures leads one to the interesting question whether the various peoples who from time to time came on to the South Indian *cul de sac*, have left any representatives there. Is it possible to trace any of the existing South Indian tribes to the pre-historic cultures? So far among prehistoric collections there are no skeletal materials to offer anything like definite data. Such material as there is, has not been assigned to any particular age. Prehistoric anthropometric data being thus wholly wanting, all current arguments on the matter which seems to have commenced with Dalton, have had to depend on comparisons of cultural levels.

But the question being essentially one of lineage, and cultures being things not incapable of adoption, all these arguments have belonged essentially to the region of conjecture.²⁸ All that seems certain here is, that there were, first a superimposition of a Dravidian stock over an aboriginal element, and

Tentative Sequence of cultural objects noted in the area.

PERIOD		CULTURE	TYPICAL SITES
Post Pleistocene	IRON AGE	Ceramic Sarcophagi... with and without Stone-circles; circles with no central remains, Dolmens without circles, Stone-circles with cist	Perumbair Perianattam. Kilpauk Pallavaram Red Hills* Satyavedu*. Sholavaram.
	NEOLITHIC	Neolithic artefacts, thin celt, oval ring-stone..... Burial and Stone-circles ?	Takkolam* Satyavedu* Tirunilai* Manjankaranai* Pallavaram*
	MESOLITHIC	Microliths ?	?
Up. Pl.	UPPER PALAEOLITHIC T ₈	Blades and Burins ?	Erumaiyettipalaiaim*
Middle Pleistocene	Late Acheulean + Micoquian + Levalloisian. T ₂	Hand-axe Industry with cleavers, cores, flakes of Clacton & Levallois types—	Attirampakkam Erumaiyettipalaiaim Alicoar Koopedu Thombarambedu.
	Acheulean T ₁		Manjankaranai Erumaiyettipalaiaim
	Abbevillio-Acheulean T ₀		Vadamadurai

Arrows indicate probable duration of culture.

Star indicates, finds are not in situ or decisive in character.

Query Mark shows that the absence of artefacts need not necessarily mean the absence of culture,

then, that of an Aryan stock over both elements. The conjectures about the assignment of what now pass for the aboriginal elements to the palaeolithic and neolithic stocks, have not been unanimous.

Conclusion.

The extent of time covered by the Prehistorian is vast and geological and therefore the environment as well as the culture of ancient man must have changed, and changed often and remarkably. It is the geologist's ignorance in archaeological matters that has missed for him many opportunities of contributing to one of the least known yet most fascinating chapters of human history.

Prehistoric Archaeology has quite recently advanced in a manner calculated to make us feel that, to use the words of Prof. Boswell (1936), "we are living in the Golden Age of research in Prehistory". The work of Abbe Breuil in the Somme valley has made prehistory an exact science. All over the world work is proceeding vigorously in prehistory and attempts are being made to correlate the different cultures. Mr. Burkitt has stressed the similarity of the lower palæolithic industries between South India and Africa. Dr. Teilhard²⁵ is attempting to bring under one stratigraphical and physio-graphical scheme the late Cainozoic history of the whole of South and Central Asia.

Quaternary research in India has been put on a scientific basis by the joint Yale-Cambridge expedition⁴ to Kashmir and Punjab and this would provide a stratigraphic scheme applicable to other areas also, such as Central and South India. The recent work of Drs. Terra, Movius and Teilhard in Burmese quaternary geology²⁵ and prehistory has brought to light certain very important facts which have direct bearing on the South Indian History. The complete absence of hand-axes in Burma would seem to indicate that it has not been influenced from South India. It has more typological affinities, with the Javanese industries.

The all too brief work in South India offers a true chronological basis for the Stone Age here that could be substantiated stratigraphically.

The time is ripe for intense research work in Indian Prehistory, and it is a matter which "taken at the present flood must lead on to fortune" as the field in Madras is so exceptionally rich that great strides could be made in a short time, if work is initiated on an organised footing.

If only this paper should attract the attention it claims, Madras may easily become the Mecca of Indian Prehistorians and M. Camille Jullian²⁷ may come to say, as he said of Les Eyzies in France,

*"Tout Indien qui a le culte de ses ancêtres,
tout homme qui a le respectueux souvenir du
passé doit faire le pèlerinage de Madras."*

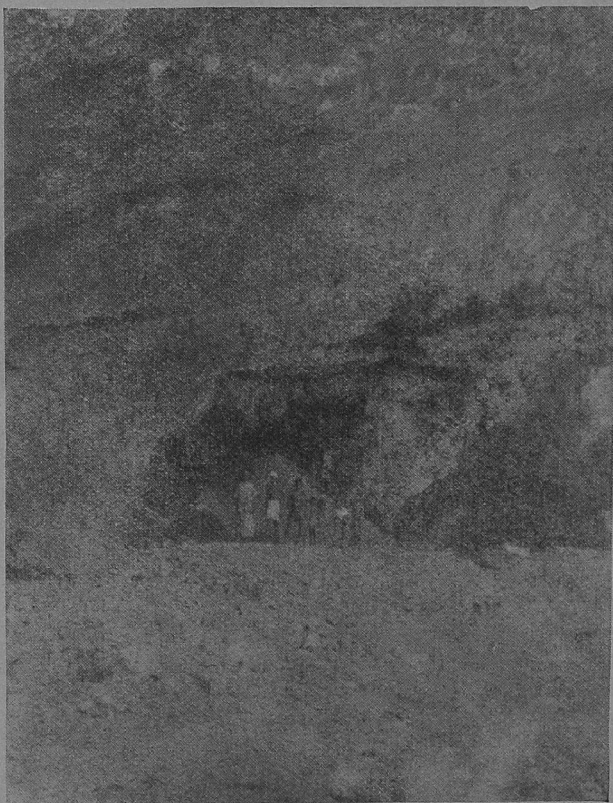
It is for the archaeologists here to awaken public interest in the matter and elicit its co-operation by showing the enormous antiquity of the prehistoric remains which takes our civilisation far, far back of Mohenjadaró on into the dim geological past.

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PLATE 6



ALICOOR CAVE

79° 30'

80° 0'

MAP SHOWING MAIN PREHISTORIC SITES OF CHINGLEPUT

Scale of Miles 1 inch = 4.7 Miles
 5 4 3 2 1 0

TALUKS

- I MADURANTAKAM
- II CHINGLEPUT
- III SAIDAPET
- IV PONNERI
- V TIRUVALLUR
- VI SRIPERUMBUDUR
- VII CONJEEVARAM

13° 30'

13° 30'

13° 0'

13° 0'

12° 30'

12° 30'

79° 30'

80° 0'



KEY

- PALAEO-LITHIC
- + NEOLITHIC
- ⊙ STONE CIRCLE WITH DOLMEN &c
- ▭ ELONGATED AND PYRIFORM CIST

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The following Survey of India one inch topographical sheets cover the Madras area as shown in Plate 7.

$$\left[\begin{array}{ccc|ccc} \text{O} & \text{O} & \text{P} & \text{P} & \text{P} & \text{C} & \text{C} & \text{C} & \text{C} & \text{D} & \text{D} & \text{D} \\ 57\frac{-}{15}, \frac{-}{16}; \frac{-}{9}, \frac{-}{13}, \frac{-}{14} & \left| \right. & 66\frac{-}{3}, \frac{-}{4}, \frac{-}{7}, \frac{-}{8}; \frac{-}{1}, \frac{-}{2}, \frac{-}{5} \end{array} \right]$$

k
