

Note on Excavations in a Prehistoric Site at Kilpauk, Madras.

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THE existence of a prehistoric cemetery in Kilpauk, Madras, has been known for about twelve years past, but only to a few persons interested in prehistoric archaeology.¹ The site is included in the garden of the bungalow 'Fontenoy', which belongs to Mr. E. R. Prudhomme and is situated on Hall's Road, Kilpauk. Mr. Prudhomme had collected the pottery he unearthed in laying out his garden, the finds including a small sarcophagus and small vessels of various types among which could easily be recognised the black-tipped ware, with rim and inside black and the rest red, which is a dominant feature of the pottery found at Adichanallur in the Tinnevely District. Attention has been called to the great resemblance which South Indian prehistoric pottery bears to the pottery of pre-Dynastic Egypt.² No attempts having been made so far to explore the site, we deemed it desirable to excavate the site methodically and collect the antiquarian remains for the Madras Government Museum to which we are both attached.

With the kind permission and encouragement of Mr. Prudhomme we started in August 1934, excavating at a spot which appeared likely to yield favourable results. Excavations are still proceeding.

The first day's excavation was fruitless. The next day, however, what appeared to be the rim of an urn was revealed, and it turned out to be a big-sized cinerary urn, with its sides badly broken, though the contents helped to keep them in position. The arrangement of the smaller vessels, both inside and around, was of great interest. These were vessels of different shapes and among them were specimens of the black-tipped ware referred to above and some fine specimens of all-black pottery.

Further excavation yielded more specimens of all-black ware, a figurine of black pottery of high polish, apparently represent-

ing a bird, and a half of a fine specimen of a pottery bead. Two iron objects were also found, one a small hoe-blade of a very primitive type, with a slightly curved cutting edge and a narrow butt, and the other a stick of iron, about 6 inches long, found broken in two, all highly oxidised.

Subsequent excavations have unearthed a sarcophagus about six feet in length, standing on six pairs of short legs. It resembles the specimens found at Pallavaram and Perumbair. It has, however, been so badly damaged by the roots of a mango tree growing close by that all attempts to raise it whole have failed. It is accordingly being removed in sections. It was found filled with sand and fragments of pottery. A bit of a bone was found close to it which is identified as the head of a human tibia. The deposits are generally found at depths varying from 3 to 7 feet below the surface, buried in a bed of 'river sand'. The site is being mapped out and stratigraphical records are being kept.

While the present finds exhibit characters common to other prehistoric sites in the Presidency, they present distinctive features which mark them off from previous finds. While no sarcophagus was found at the Tinnevely site, urn burials alone being in evidence,³ both the types occur at the Kilpauk site as at Perumbair. The scarcity of iron objects among the associated finds, furnishes another parallel with Perumbair. There is, however, a marked difference in the nature of the pottery found. Unlike Perumbair, the Kilpauk site is rich in fine pottery and abounds in bowls of black-tipped ware which are comparatively rare at Perumbair. The fine all-black vessels of the Kilpauk site distinguish it from both the Adichanallur and the Perumbair finds. The black pottery figurine, perhaps a votive offering, is a significant find as such figurines have not been met with in similar sites, excepting the Nilgiri cairns.

A number of handicaps attend any attempt at establishing the chronology of the South Indian prehistoric cultures. The distinctive characteristics of this find, and its chronology in relation to the other finds

¹ It is probably this site that Mr. L. A. Cammiade refers to as a large prehistoric cemetery in the vicinity of Chetpet, Madras, in his paper in the *Indian Antiquary*, LXI, 21-3. Mr. Prudhomme tells us that Mr. Cammiade inspected the site about twelve years ago and saw the pottery that had been collected then and the sarcophagus we came across.

² By Henry Balfour, F.R.S., in *Man*, September 1932, No. 251.

³ A. Rea, *Cat. of Prehistoric Antiquities: Adichanallur and Perumbair*, 47.

in South India cannot be determined till the excavations are completed and the excavators have had further time to study the finds in detail. All that can be said at present in regard to the age of the site—and that tentatively,—is that the pottery found appears typical of the Iron Age pottery

found at other prehistoric sites in South India such as those at Adichanallur, Perumbair, and Raigir in Hyderabad, and that the character of the associated finds of pottery bead and iron objects point to the finds being assignable to the Iron Age in South India.

Prophylactic Antimeningococcus Vaccine.

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THE recent comparatively high prevalence of cerebro-spinal meningitis all over India has necessitated the Public Health Authorities taking all means in their power to check the disease. The fact that the disease has appeared in mild epidemic form in nearly every part of India, and the modern facilities for rapid transport which now exist, have emphasised the need to regard the outbreaks seriously and to employ every method, general or special, to prevent the menace assuming greater proportions.

Apart from general measures of public health two lines of attack are available, viz.,

- (a) to treat the disease efficiently in those attacked;
- (b) to prevent the disease by the use of a suitable prophylactic vaccine.

The only effective method of treatment of the disease is by the use of Antimeningococcus serum but even this method has given very varying results in different countries. The cause for this is not certain but probably several factors are involved such as varying virulence of strains, varying methods of preparing the serum and inadequate technique in dosage and methods of administration, including the continuous bacteriological control required in the treatment of cases. These factors, combined with the cost of the serum, ruled out its extended use in India except in large towns with good hospital and laboratory facilities.

There remained the second method of control and the Public Health Commissioner with the Government of India decided on the preparation of a prophylactic vaccine which could be used to immunise those exposed to possible infection in districts where the disease was known to be prevalent.

Such a vaccine had already been exten-

sively used in Turkey with results reported to be favourable.

In pursuance of this policy an officer of the Central Research Institute was deputed to collect Indian strains of *Meningococcus* from cases of the disease occurring during the recent epidemic. It was not possible in the time available to collect these from all over India but, besides those locally obtained in the Punjab and Delhi, cultures were sent to the Central Research Institute for comparison from the Haffkine Institute, Bombay, which had been collected in South India. A comparison of these with the Northern India strains showed them to belong to the same types of *Meningococcus* so that the Delhi strains were considered as probably suitable for the preparation of a vaccine which would be effective all over India. Later work in England with cultures of these strains sent from Kasauli has shown that they are also practically identical with the strains occurring in England. From the Delhi strains, therefore, a vaccine was prepared which was submitted to thorough tests on volunteers for local and general reactions and on experimental animal for toxicity. On the satisfactory completion of these tests the vaccine was prepared on a large scale and has now been available to the public for more than 3 months.

As the full value of such a vaccine could only be assessed after extended trial the Government of India decided that up to November 1934 it should be a free issue from the Central Research Institute, Kasauli, in order to popularise its use. Up to the time of writing 26,518 c.c. have been issued.

INDICATIONS FOR USE OF THE VACCINE.

It should be emphasised that the vaccine is purely a prophylactic one and is not intended to be used as a curative vaccine.