

The repairs on this edifice have now been completed. It stands in an extensive courtyard, which must at one time have contained other palace buildings. The ruins of some of these still exist in several mounds within the enclosure. Excavation reveals the foundations of buildings and burnt logs of wood, which show that some of these structures were destroyed by fire. Long lines of arcades and masonry-vaulted buildings in various stages of decay run along the inner walls of the palace enclosure, and the state of repair, which they now exhibit, is almost solely due to the cohesion of the ancient mortar used in the walls and vaults. In some parts several of the adjoining piers have vanished, yet the over-hanging vaulted superstructure of masonry remains intact as if it were formed of solid stone. (Fig. 4.) A view of a part of these vaulted buildings gives an idea of their general state and an appreciation of the problems, which must be faced in any scheme of conservation, which is intended to retain their ancient character, and yet prevent as far as possible further ruin.

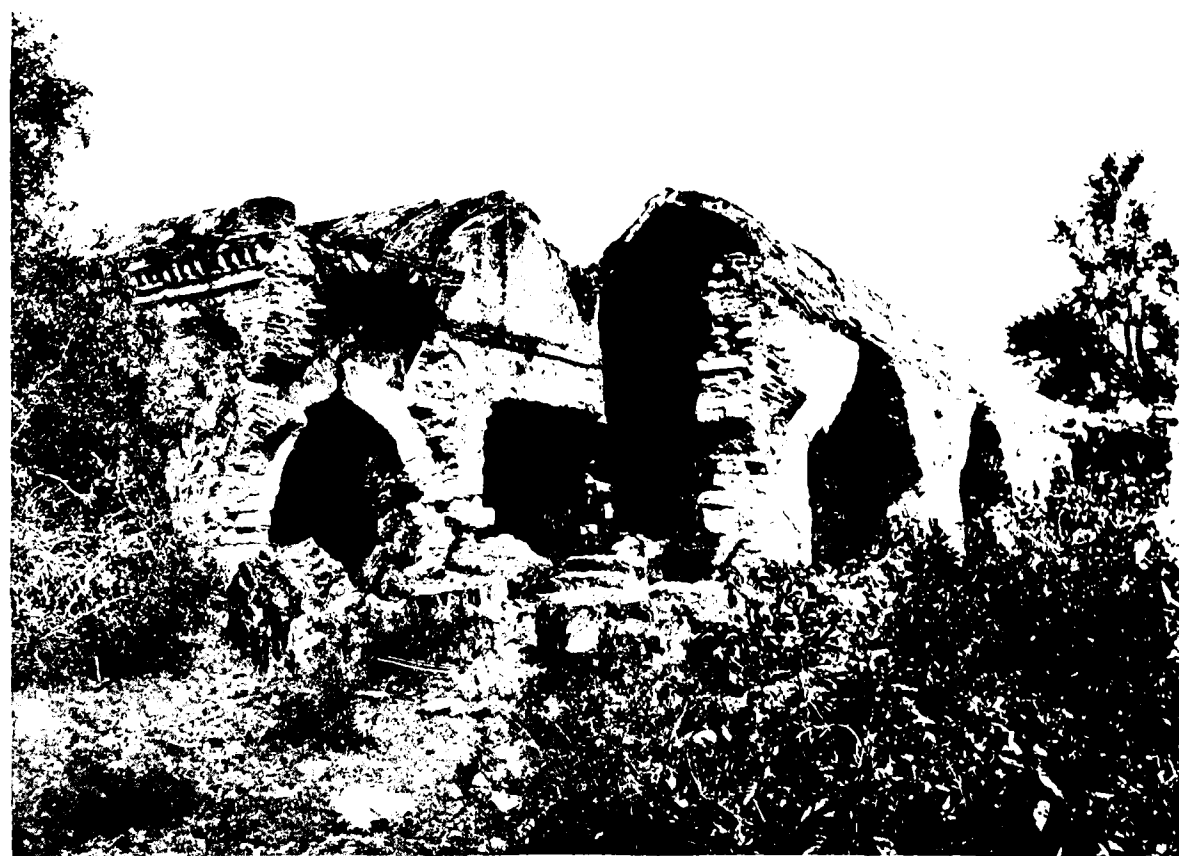


Fig. 4.

The building crowning the Rājagiri Hill is a picturesque structure known as the Flagstaff. It was originally surrounded by pillared arcades, which have now partly fallen away. Some measures necessary for the prevention of further decay have been carried out.<sup>1</sup> Progress has also been made with repairs to other of the civil buildings and to the large temples there.

<sup>1</sup> Cf. A. S. R. for 1906-7, pl. 111 (a).

Gandhikōta in the Cuddapah District is another important fort which has undergone repairs, the preliminary account of which appeared in a previous paper. The work has made considerable progress during the year under review and several buildings have been attended to. Among these is the masonry-vaulted building known as the Magazine, which was disfigured by mud walls built between the arches and by heaps of *debris* in the rooms. These have now been removed. Another interesting building is the lofty tower known as the Chār-minār. (Fig. 5) It was



Fig. 5.

generally in a fair state of repair, but some attention was needed for the decayed stucco work, particularly in the perforations of the upper windows. Some displaced stones of the basement, which seemed likely to endanger the security of the foundations, were fixed in position. The figure illustrating this building also shows one of the granaries, of which several remain. These are rectangular structures, with walls of great thickness, and with the interior spaced with lofty masonry piers supporting barrel-vaulted roofs.

With Compliments,  
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## EXCAVATIONS AT AMARAVATI.

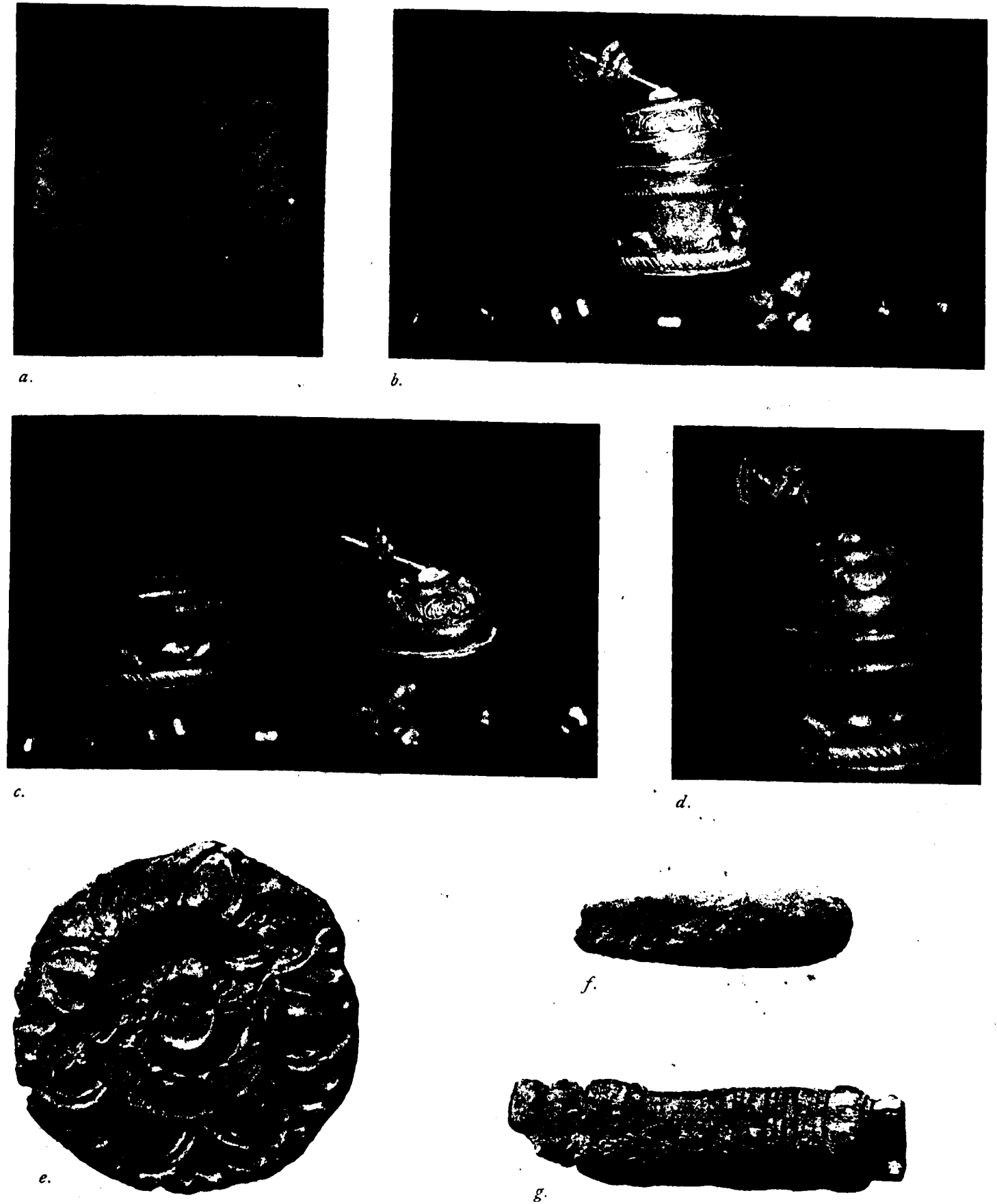
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## EXCAVATIONS AT AMARAVATI.

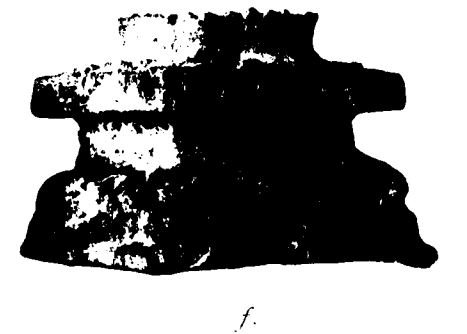
IN a former paper<sup>1</sup> on Amarāvati an account was given of some excavations at the site of the great *stūpa* which chiefly consisted of an extension of the excavated space outside the four gates. This work has been continued, and further exploration has been made in the north and north-west of the mound at some distance from the centre of the *stūpa* itself. These new excavations have yielded results in the form of walls which are interesting in some ways, but which are of a fragmentary and inconclusive nature, owing to the depredations of the villagers, who for many years had exploited the mound for bricks and other building material. Thus, though traces of walls have been everywhere met with, they are generally in a ruined condition. However, some discoveries of larger interest were made, and these will be briefly described. The majority of the marble sculptures unearthened are more or less fragmentary, and they may have been used either in the decoration of the great central *stūpa*, or on some of the smaller surrounding ones, of which various remnants have come to light. That these were adorned with marble sculptures, as is the case with the one previously discovered at the south gate, is sufficiently evident; but where the sculptures are not found *in situ*, the difficulty in determining their original position will be obvious.

At the south gate excavations were made on the west side exactly opposite the small *stūpa* alluded to above. Various traces of ruined foundations of brick walls were found, some of which were circular, as well as a number of marbles, but all in a fragmentary condition. A discovery of some interest was made at this point, but here again the depredations of previous diggers had robbed it of much of its importance. When digging into the bank of earth, a round object made of mortar, and about 6" in diameter, was found amongst the loose soil. It appeared at first to be a solid ball and nothing more, but when opened, it revealed a globular pottery relic casket and lid (Plate XXVII, fig. *a*), containing a gold reliquary in the form of a *dagoba*, 3½" high, surmounted by an umbrella. This reliquary is made of very thin sheets of pure gold embossed with crude ornament. The dome lifts off the cylinder and inside were a small piece of bone and six flowers in thin leaf gold. Plate

<sup>1</sup> *A. S. R.* for 1905-6, pp. 116 ff.



GOLDEN RELIC-CASKET AND OTHER FINDS.



XXVII, Fig. *b* illustrates the casket, bone and flowers, Fig. *c* shows them with the lid and cylinder detached, and Fig. *d* is the casket before opening.

The only building yet discovered in the vicinity, in which this casket could have originally been placed, is the small *stūpa* at the south gate, from which it was probably thrown out after the dome was ruined. It will be remembered that only the upright side walls of this building now remain intact, the dome having entirely disappeared. As the relic-casket must originally have been placed at the base of this dome, as is usual in such monuments, it would undoubtedly have disappeared with it, had its nature not been concealed by the envelope of mortar. As it was, there was nothing about it to attract attention, so that it either fell out or was thrown out unnoticed, thus escaping destruction.

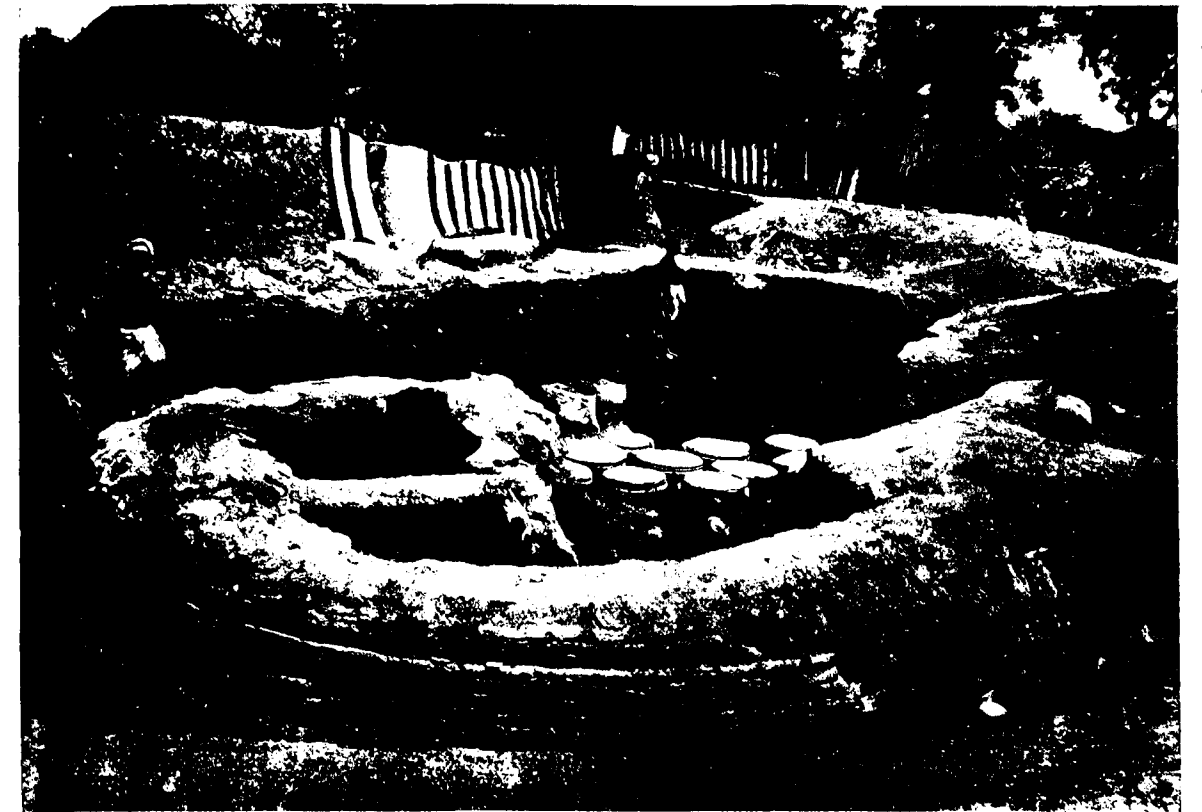


Fig. 1.

Another discovery was also made at a distance of 350 feet due west from the centre of the *stūpa* enclosure. It occurred in this way. Rumours reached me about the unearthing of some bronze images by some Vaddars in search of building material many years ago, but at first nothing definite could be ascertained. Persistent enquiry, however, resulted in an old man stating that those people, after having removed some bricks of which they were in search, found several bronze images, some of which were complete. It was at first proposed to use them as old metal, but on a consultation among them, superstitious fears as to what might occur prevailed, and the images were restored to the place where they had been found. It was difficult to ascertain where exactly this locality was, but at last it turned out to be near a Margosa tree at the spot I have mentioned. On digging here I found indeed

some bronze fragments a few feet beneath the surface, and below these again the cast bronze images with their bases detached as illustrated in Plate XXVIII, figs. *a-c* and *e-g*. These represent standing figures of Buddha and are doubtless contemporary with the great *stūpa*.

Figure *f* of Plate XXVII is a celt from the *stūpa* mound. Figure *d* of Plate XXVIII was found a short distance from the *stūpa* above noted.

At the extensions beyond the north and west gates several fragmentary marbles and traces of brick walls, all incomplete, were unearthed. Figure *e* of Plate XXVII is a marble lotus patera, 15" in diameter. The small ivory handle, 5½ inches in length, shown in figure *g* of the same plate was also found here. Various other marbles, fragmentary beads and small objects were also found, but mostly not in their original position. Selections of them appear in Plates XXIX-XXXI.

The brick foundations of another small *stūpa* were found 220 feet north-west of the centre of the main *stūpa* site. The diameter of this building is 21 feet, the walls being three feet in thickness, while two cross walls run through the centre. But the main interest attaching to it lies in its proximity to a group of seventeen neolithic pyriform tombs, which stand adjacent to, and partly under, its north circuit (Figs. 1 and 2).

The walls themselves have been much damaged by diggers searching after bricks, but, fortunately, enough remains to determine the nature of the building and thereby afford some clue to the age of the tombs in question, a clue which the wanton destruction alluded to above had all but deprived us of. Hitherto nothing of a definite nature has been found in conjunction with neolithic tombs which could fix their date with certainty. They have generally been assigned to a period some centuries subsequent to the beginning of the Christian era, but this tentative dating has never been more than an assumption. Now, however, we are furnished with definite data bearing on the problem, so that the discovery is of no little importance.

For there can be no doubt at all but that the tombs are of the neolithic type. They lie some seven feet underground and contain earth, broken pottery, and a number of small *kalasams* or pots of red polished ware of the same kind as those found at the prehistoric site of Perambair (Fig. 2).

This much being certain, the interest attaching to their position relative to the little *stūpa* is obvious. For the latter stands at a slightly higher level and must, of course, be later than the tombs. It is, indeed, probably contemporary with the main *stūpa* itself. But it may be even earlier, for certain inscribed rail stones have been found in the vicinity of a date prior to the Christian era, and the foundations in question may very well have belonged to one of the earlier *stūpas* which undoubtedly existed at this site long anterior to the erection of the main monument. In any case, these neolithic tombs are older than the *stūpa* which they adjoin and which has partly been built over them.

Round the walls of the *stūpa* are traces of a procession path, 3' 6" broad, formed of concrete, 2" thick, which was carried over the nearest of the urns, and must accordingly have been built after the time of their deposit. What this period may have been it is impossible to say, but it must be one much earlier than the date generally accepted for such remains. The discovery of large numbers of prehistoric



STONE FRAGMENTS.



STONE FRAGMENTS.



implements of the palaeolithic and neolithic types in the country surrounding Amarāvati, and in the vicinity of the *stūpa* itself, attests the existence of a large



Fig. 2.

population in times most probably long before the foundation here of the earliest of the Buddhist monastic buildings.

A. REA.



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PREHISTORIC REMAINS AT  
PERAMBUR.

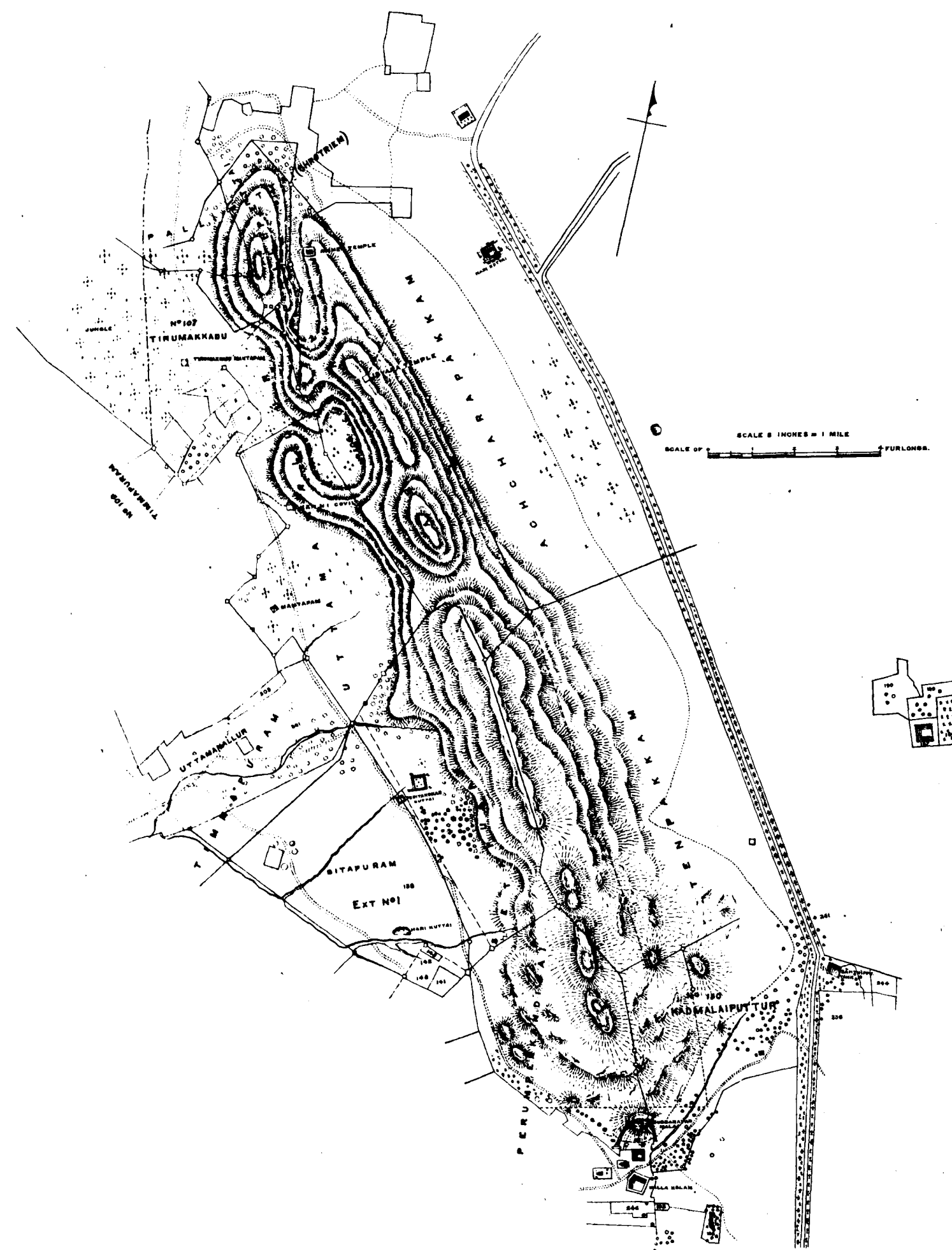
## PREHISTORIC REMAINS AT PERAMBUR.<sup>1</sup>

IN the south of the Chingleput District is a range of hills which is classed as a reserved forest. Around the base of the hills are numerous prehistoric remains (Plate XXXII). These are situated a short distance from the bottom slope and generally consist of stone circles of sizes varying from eight to fifty feet in diameter and formed of rough stone boulders. In others, the stones have been removed and the site of deposit is only marked by a low mound which must at one time have been much higher, but has been reduced in height by the action of the weather.

The reservation of the site has been the means of protecting the majority of the remains from the unrestricted depredations of treasure seekers, and the result is that many of the circles contain deposits in a varying state of preservation. Such mounds as are outside the reserve, usually show traces of having been dug into. The mounds are generally covered with a dense growth of prickly pear, which has afforded further means of protection. The surface soil is a coarse gravel with a substratum of clay. This is an unsuitable soil for the preservation of ceramic relics, as its expansion and contraction according to the moisture to which it is subjected, result in fracture of the pottery.

The deposits are generally found at a depth of two to seven feet below the surface, and are contained in long oblong pottery cists rounded at the ends and standing on two or three rows of short legs (Plate XXXIII, Fig. 1). They vary in length from two to seven feet and resemble those found at the Pallavaram site, with the exception that, whereas those at the latter place have two rows of legs, those at this site, whether large or small, almost invariably have three. One oblong cist is unusual, in that it has no legs (Plate XXXIII, Fig. 2A). But no large specimens of this form appear.

<sup>1</sup> Though the name of the village of Perambur has been adopted as the title of this paper, it does not imply that these remains are found only in its vicinity. It is situated at the west end of the range of hills, and is the place where excavation was begun. Among the hills are seven other villages, within the boundaries of which prehistoric remains of this class exist. These villages are Achurapakkam, Kadmalaiputtur, Sitapuram, Thenpakkam, Thimmarapuram, Thenmekkula and Utthamamallur.



Some tombs of pyriform shape also exist at Perambalur but they are comparatively few in number. Text illustration, Fig. 1, shows one of them from cromlech No. 9.

The main deposits are found in the cists themselves, but as with other sites, subsidiary deposits of pottery and iron implements are often found outside and around them. Some of these lie close to the surface and appear at intervals down to the main deposit, which may be as much as seven feet from the surface; but it is generally less.

About eight cromlechs adjoining the village of Perambalur and situated both within and without the reserve, were examined on the first excavation of the site,

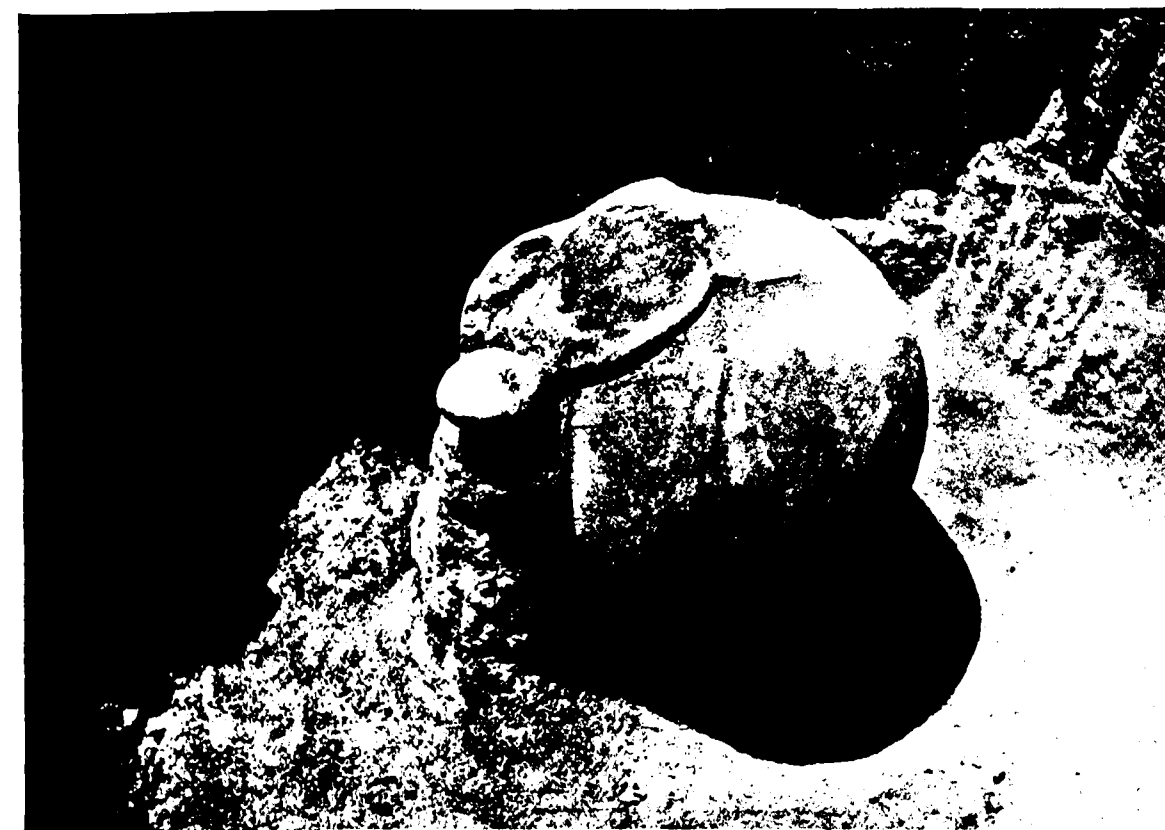


Fig. 1.

but though numerous traces of pottery were found, comparatively few of the articles were in a perfect condition. These consist of stone and iron implements and weapons, pottery, bones and shell ornaments. Some of the most typical of them are detailed in the lists below. Although a blackstone image of Gaṇēśa has been included in the list (Plate XXXIII, Fig. 28), there is little or no reason to suppose that it is prehistoric. It was found in the centre and close to the surface of a small mound some twelve feet in diameter and about fifty feet from the tank of Perambalur, which lies north-east of the village. Its position, therefore, points to its being of later date than the other remains found at this site, and which are themselves undoubtedly of the prehistoric period.

Deeper down was a human skeleton in a cross-legged sitting posture, with the hands resting on the knees as if in meditation. The skull, though cracked, was in



Fig. 2.



Fig. 3.

fair condition, but the ribs and other bones were all too much decayed through age to be removed in the position in which they were found. Of the numerous other cromlechs excavated at Perambur it would be tedious to describe all the details, and it will be sufficient to note some of the more representative.

Text illustration, Fig. 2, shows a group of pottery in the centre of cromlech No. 7 at a few feet below the surface. The main deposit consisting of a skeleton with a grinding stone and a few pieces of pottery lay below. Their position is shown below on Fig. 3. Fig. 4 shows an oblong cist with attached pottery from cromlech No. 8 as it appeared just after excavation.

Another similar cist from cromlech No. 16 was devoid of outside articles of pottery, but is curious in that it has rows of thumb mark ornaments on the ends.



Fig. 4.

Fig. 5 shows an urn of the pyriform class excavated from cromlech No. 14 at Kadamalaiputtūr. Two oblong cists with their attached articles of pottery were found in cromlechs Nos. 10 and 11 at Thenpakkam, one of them is illustrated in Fig. 6.

The cists found in these cromlechs were always in a more or less fractured condition due to the causes before alluded to, and great care had to be exercised before it was possible to remove any. The following was the method adopted :—

The cist was first wrapped with ropes of coir and straw, and then a batten framework, so arranged as to support every portion of it, was built around it. These battens had also to be inserted below the legs and body of the cist, one at a time. Spaces between the framework and the cist were well packed with straw, and the whole was then removed without injury.

EXCAVATIONS AT PERAMBAIR.

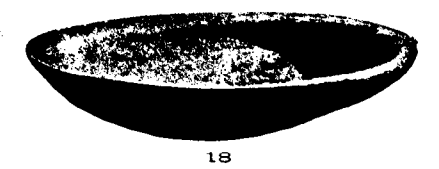
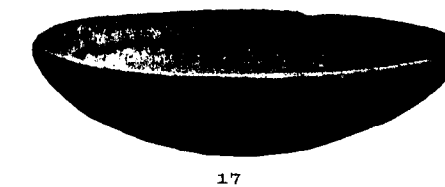
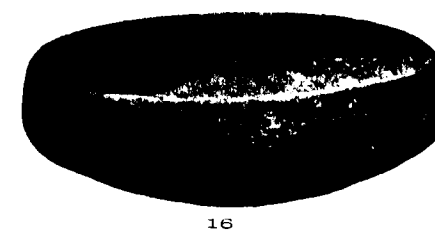
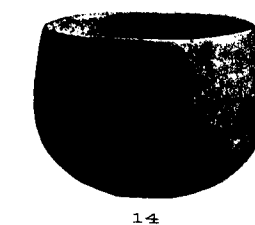
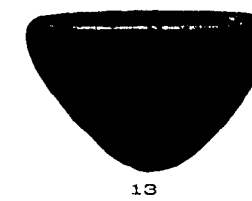
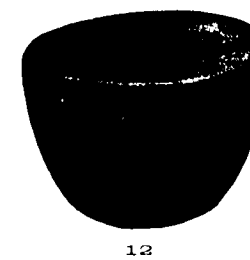
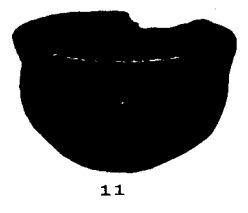
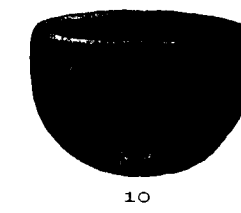
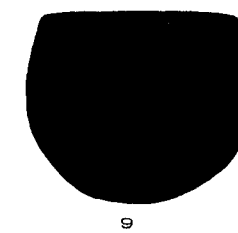
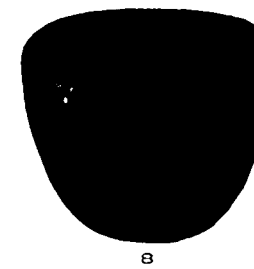
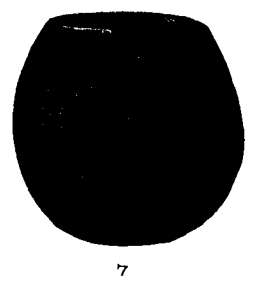
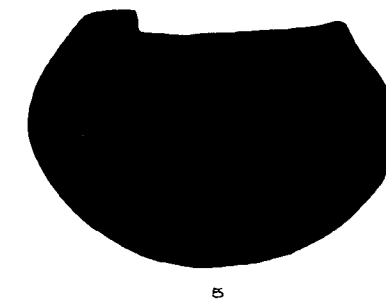
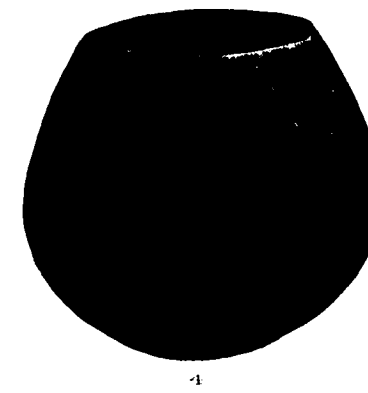
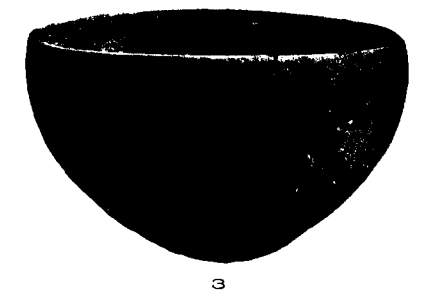
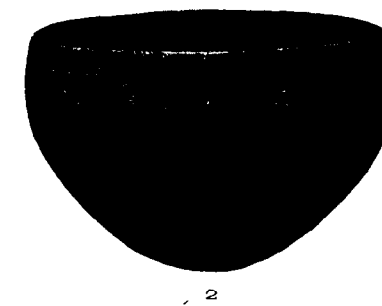
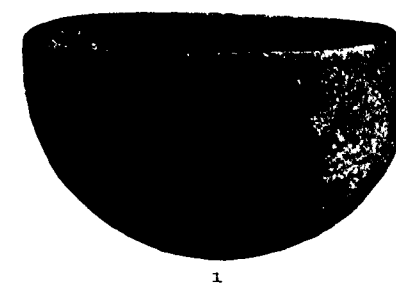


Fig. 5.



Fig. 6.





## LIST OF FINDS.

## Plate XXXIII.

1. Oblong cist with ten legs in two rows ( $2' 6'' \times 1' 2'' \times 9''$ ). The length of the legs is  $3''$ .
2. Oblong cist without legs ( $1' 9'' \times 1' 6''$ ).
3. Three-legged jar ( $1' 7\frac{1}{2}'' \times 11\frac{1}{2}''$ ). The length of the legs is  $3\frac{1}{2}''$ . The mouth is  $5''$  in diameter.
4. Pot (Height  $4\frac{1}{2}''$ . Diameter  $7''$ ).
5. Oval-shaped pot which would be placed on a stand like fig. 12. It has a raised rim round the neck. Colour reddish. (Height  $7''$ . Diameter  $6''$ ).
6. Similar pot of smaller size. Colour reddish. (Height  $5\frac{1}{4}''$ . Diameter  $4\frac{1}{4}''$ .)
7. Small black pot covered with red colour. (Height  $4\frac{1}{2}''$ . Diameter  $4\frac{1}{8}''$ ).
8. Round elongated pot. The rim of the mouth is partly broken. Colour black. (Height  $4\frac{1}{2}''$ . Diameter  $3\frac{1}{2}''$ ).
9. Pot with a wide mouth. The lower half is red and the upper half black; the whole coated with white colour. Height ( $3\frac{1}{4}''$ . Diameter  $3''$ .)
10. Small pot. Colour black. (Height  $3\frac{1}{4}''$ . Diameter  $3\frac{1}{4}''$ .)
11. Small toy pot. Colour black. (Height  $2''$ . Diameter  $2\frac{1}{4}''$ .)
12. Long ring stand. A portion of the lower base is broken. Colour red. (Height  $7\frac{1}{4}''$ . Diameter  $7''$ .)
13. Wide saucer-like pan. Colour red. (Diameter  $8\frac{3}{4}''$ . Height  $2\frac{1}{2}''$ .)
14. Flat saucer. Colour red. (Diameter  $5\frac{3}{8}''$ . Height  $1\frac{1}{4}''$ .)
15. Broken knob. Colour black. (Height  $1\frac{5}{8}''$ . Diameter  $1\frac{3}{4}''$ .)
16. Another knob. Colour black. (Height  $1\frac{5}{8}''$ . Diameter  $1\frac{3}{8}''$ .)
17. Brass coiled wire bangle. (Diameter  $1\frac{1}{2}''$ .)
18. Thin iron hatchet ( $8\frac{5}{8}'' \times 3\frac{1}{4}'' \times \frac{1}{4}''$ .)
19. Long iron chisel ( $9'' \times 2\frac{5}{8}'' \times \frac{1}{4}''$ .)
20. Scythe ( $11\frac{3}{4}'' \times 1\frac{1}{4}''$ .)
21. Small knife with a handle ( $6\frac{1}{2}'' \times 1''$ . Length of the handle  $\frac{3}{8}''$ ).
22. Arrow-head with a handle ( $3\frac{1}{2}'' \times 1''$ . Length of the handle  $1\frac{1}{4}''$ ).
23. Black granite grinder with four legs ( $18'' \times 8'' \times 7''$ ).
24. Neolithic celt of black polished stone. It is chisel-shaped, but the edge of the chisel portion is blunt. The other end tapers to a point ( $4'' \times 1\frac{3}{4}''$ ).
25. Long ivory bead ( $3\frac{1}{4}'' \times \frac{1}{8}''$ ).
26. Conch shell ornamented with triangular and linear incisions.
27. Circular shell head ornament with circular and triangular incisions and a hole in the middle ( $2\frac{1}{4}''$  in diameter).
28. Roughly sculptured blackstone Gaṇeśa image ( $3\frac{1}{4}'' \times 2\frac{1}{8}''$ ).

## Plate XXXIV.

1. Bowl ( $7'' \times 4\frac{1}{2}''$ ), black and polished, from Perambair.
2. Bowl ( $6'' \times 4''$ ), reddish and polished, pointed base, from Perambair.
3. Bowl ( $5\frac{1}{2}'' \times 3''$ ), black and polished, from Perambair.
4. Mug ( $5'' \times 5''$ ), black and polished, with grooved lines in the middle, from Kadamalaiput-tūr.
5. Bowl ( $5'' \times 3''$ ), reddish and unpolished, with grooved lined neck, from Perambair.
6. Bowl ( $10'' \times 8''$ ), black and polished, cone-shaped, from Tenpākkam.
7. Small mug ( $4'' \times 3\frac{1}{2}''$ ), reddish and dull polished, from Perambair.

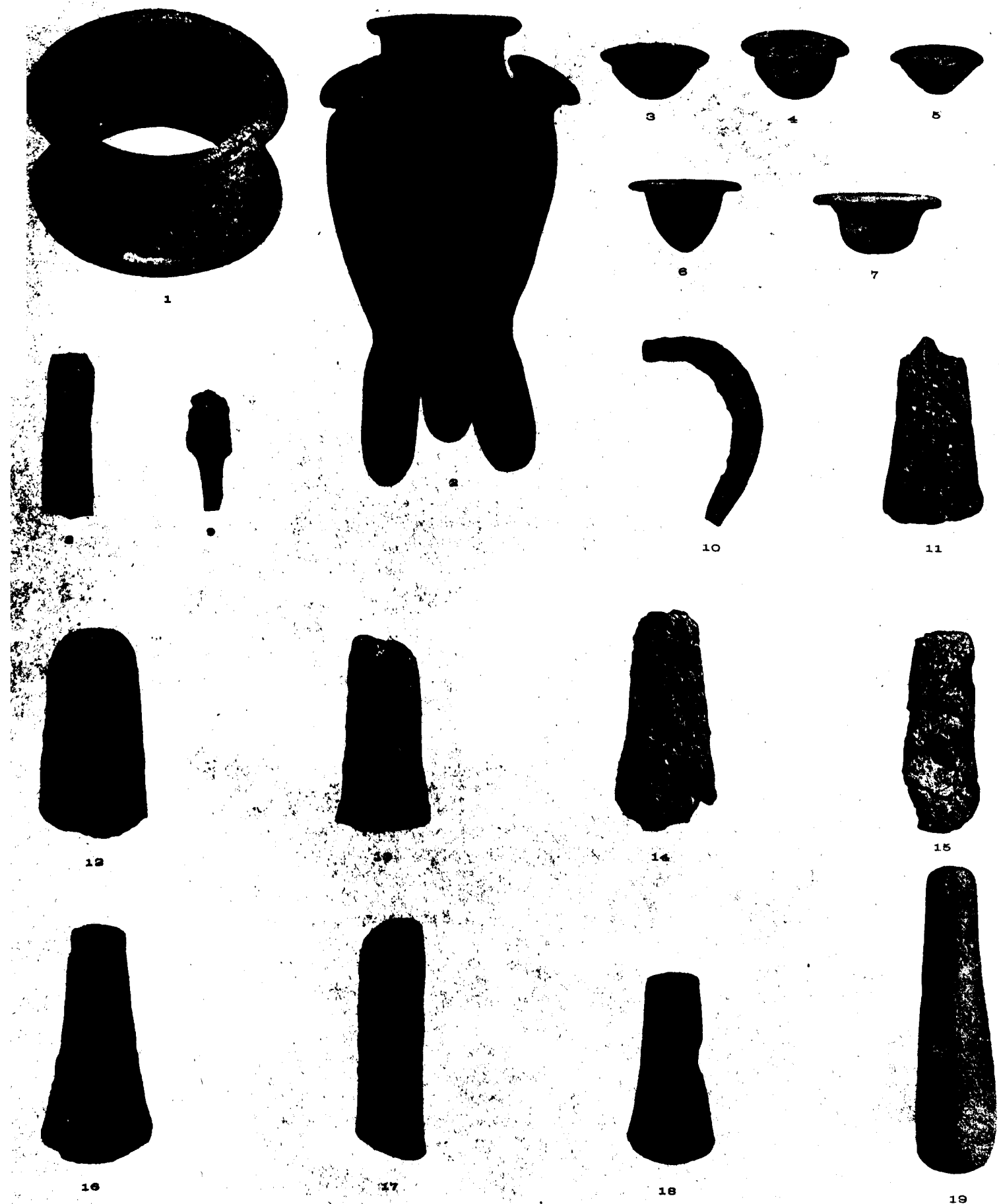
8. Cup ( $4\frac{1}{2}'' \times 3''$ ), reddish and unpolished, from Perambur.
9. Small Bowl ( $3'' \times 2\frac{1}{2}''$ ), black and polished, from Kadamalaiputtūr.
10. Cup ( $3'' \times 2''$ ), black and polished, from Kadamalaiputtūr.
11. Small Cup with rim ( $3'' \times 2\frac{1}{4}''$ ), black and polished, from Kadamalaiputtūr.
12. Cup ( $4\frac{1}{2}'' \times 3''$ ), black and unpolished, from Perambur.
13. Cup cone-shaped ( $3'' \times 2\frac{1}{4}''$ ), black and unpolished, from Perambur.
14. Small Bowl ( $3'' \times 2\frac{1}{2}''$ ), black and unpolished, from Perambur.
15. Tumbler ( $6'' \times 3''$ ), black and unpolished, from Perambur.
16. Wide-mouthed bowl ( $8'' \times 2\frac{1}{2}''$ ), black and unpolished, from Kadamalaiputtūr.
17. Saucer or lid ( $7'' \times 2''$ ), black and polished, from Perambur.
18. Saucer or lid ( $6'' \times 1\frac{3}{4}''$ ), black and polished, from Perambur.

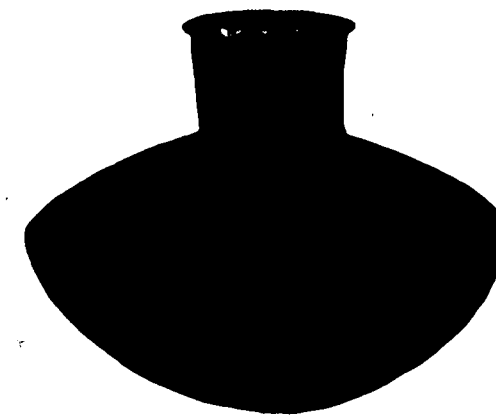
**Plate XXXV.**

1. Large ring stand ( $8'' \times 5''$ ), black and polished, from Kadamalaiputtūr.
2. Jar ( $1' 5'' \times 9''$ ), reddish and dull polished, with 3 legs and 4 spouts, from Kadamalaiputtūr.
3. Lid cup ( $3\frac{1}{2}'' \times 2''$ ), black and dull polished, from Perambur.
4. Lid cup ( $4'' \times 2\frac{1}{2}''$ ), black and dull polished, from Perambur.
5. Lid cup ( $3\frac{1}{2}'' \times 1\frac{1}{2}''$ ), black and dull polished, from Perambur.
6. Lid cup ( $3'' \times 2''$ ), black and dull polished, from Perambur.
7. Lid cup ( $4'' \times 2''$ ), black and dull polished, from Perambur.
8. Portion of an iron sword ( $1\frac{1}{3}''$ ), from Perambur.
9. Handle of an iron sword (handle  $1\frac{1}{2}''$ ), from Kadamalaiputtūr.
10. Iron sickle or grass cutting implement ( $1' \times 6''$ ), from Kadamalaiputtūr.
11. Iron hatchet ( $6'' \times 3''$ ), from Perambur.
12. Iron hatchet ( $6'' \times 3''$ ), from Perambur.
13. Iron hatchet ( $6'' \times 1\frac{3}{4}''$ ), from Perambur.
14. Iron hatchet ( $6'' \times 2\frac{3}{4}''$ ), from Sītāpuram.
15. Iron chisel ( $5'' \times 2''$ ), from Sītāpuram.
16. Iron chisel ( $6'' \times 1\frac{3}{4}''$ ), from Tenpākkam.
17. Iron chisel ( $5'' \times 2''$ ), from Tenpākkam.
18. Iron chisel ( $6'' \times 1\frac{1}{2}''$ ), from Tenpākkam.
19. Stone pestle ( $10'' \times 2\frac{1}{4}''$ ), from Perambur.

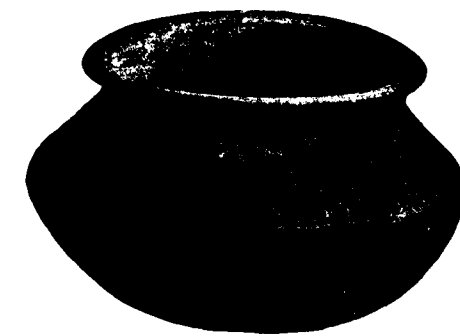
**Plate XXXVI.**

1. Long-necked pot ( $10'' \times 8''$ ), black and unpolished, from Kadamalaiputtūr.
2. Wide-mouthed pot ( $8'' \times 9''$ ), reddish and unpolished, from Kadamalaiputtūr.
3. Pot with rim ( $7'' \times 7''$ ), black and unpolished, from Kadamalaiputtūr.
4. Broad pot ( $8'' \times 6''$ ), reddish and not polished, with wide twisted mouth, from Kadamalaiputtūr.
5. Long-necked pot with rim ( $8'' \times 7''$ ), black and polished, from Perambur.
6. Pot ( $5'' \times 5''$ ), black and dull polished, long and wide-mouthed, four grooved lines in the centre, from Kadamalaiputtūr.
7. Pot with broken neck and four grooved lines in the centre ( $8\frac{1}{2}'' \times 7''$ ), reddish and polished, from Perambur.
8. Long and wide-mouthed pot with rim ( $1'' \times 4''$ ), black and polished, with 2 grooved lines below the neck, from Perambur.
9. Broken wide-mouthed pot ( $7'' \times 5''$ ), reddish and dull polished, with pointed base, from Perambur.
10. Pot ( $5'' \times 5''$ ), reddish and not polished, broken mouthed, from Perambur.





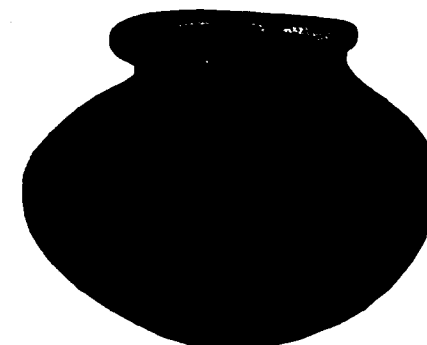
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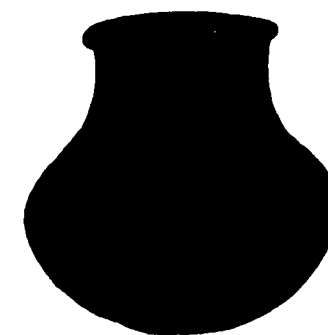
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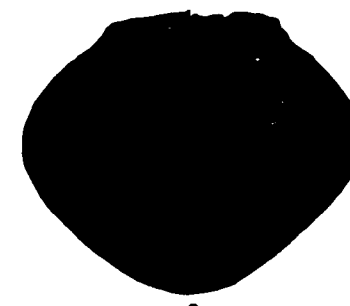
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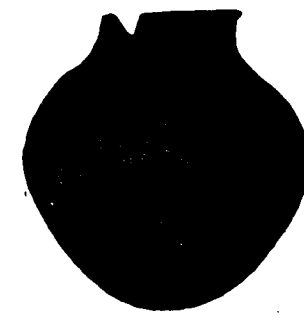
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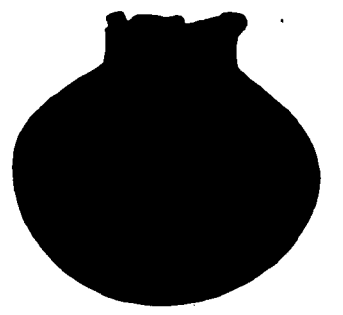
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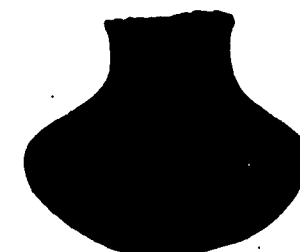
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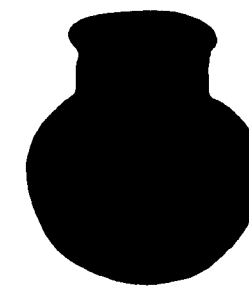
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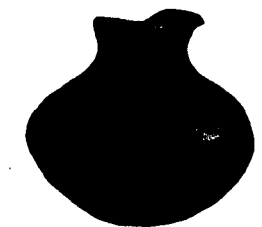
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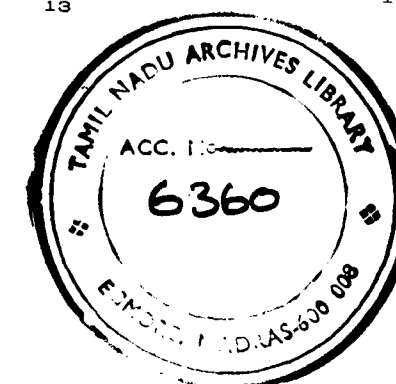
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11. Pot (6" x 6") , reddish and dull polished, broken mouthed, from Perambalur.
12. Lower portion of a pot with three legs (6½" x 6") black and unpolished, from Perambalur.
13. Pot of unusual shape (4" x 3½") , black and polished, from Perambalur.
14. Small pot with long neck (4½" x 4½") , reddish and dull polished, from Tenpakkam.
15. Small pot with curved mouth (3½" x 3½") , black and polished, from Kadamalaiputtūr.
16. Small wide-mouthed pot (5" x 3") , red and dull polished, from Perambalur.

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With Compliments.

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## CONSERVATION IN MADRAS.

## CONSERVATION IN MADRAS.

THE places at which conservation measures have been carried out number over forty, but as some of these are extensive sites, which include several monuments or groups of them, the total number of buildings is somewhat larger. The most important are those which have figured prominently in previous reports, and in which groups of structures are being steadily and successively taken up. Some new works have been taken in hand, but the repairs at these places are none of them of a very extensive order.

Even so, certain works which had been contemplated, and estimates for which had been duly countersigned, have had to be postponed owing to the misconduct of my late office manager, who suppressed the estimates in question. But the amount of money which lapsed in consequence has proved to be less than was at first feared, and the few works which have been delayed for this reason will be proceeded with at the first opportunity.

The most extensive measures of conservation carried out during the year were those at Vijayanagar, where work has been steadily progressing for some years past. Among the most noteworthy buildings which received attention were the large and important temples of Viṭṭhalasvāmī, Krishṇasvāmī, Achyutarāyasvāmī and Paṭṭābhirāmasvāmī. These had all previously undergone extensive repairs, but the necessary additions which were pointed out by me in a previous inspection have now in large measure been carried out.

Among the lesser temples and other buildings are the Gaṇḍeṭṭi Jain temple, the Chaṇḍikēśvara temple, the Śiva temple and Maṇḍapam near Viṭṭhalasvāmī temple, the Chandraśekhara maṭham and the Sarasvatī temple near it, and the Vēṅkaṭarāmasvāmī temple near Kamalāpuram.

The repairs on these buildings were generally of the same nature as has been previously described, and need not now be given in detail.

Some of the repairs, however, present difficulties which tax the skill of the engineers to the utmost, as will be realized without detailed description by a reference to Fig. 1, which represents the Hēmakūṭam Jain temple at Vijayanagar. Its ruined condition is almost solely due to defective foundations. These have been

built on soil placed above the rock on which the temple stands, and enclosed by revetments to prevent the spread of the earth from under the temple walls. By the removal or collapse of the retaining walls the foundations have sunk, with consequent fracture of the superstructure. Several of these Jain temples are in varying stages of similar decay, all due to the same cause, the above being an extreme example. Some have been successfully preserved and others are being attended to.



Fig. 1.

The several groups of buildings contained in the ancient palace received attention, which was generally a continuation or completion of previous repairs. Most of these buildings have been described in previous papers, but one not mentioned hitherto calls for notice here. This is the building known as the “watershed,” on account of its containing a reservoir which was originally supplied with water from the pipes of the ancient irrigation system, which still exists (Fig. 2).

The building evidently took the place of a public well, and was supplied with water by gravitation from the great tank near Kamalāpuram.

Few visitors to Vijayanagar, who have noticed the stone aqueducts across the low-lying ground near the palace buildings, can have realized how perfect was the ancient system of water-supply by small earthen pipes embedded in blocks of hard mortar or concrete. Remains of these exist in many places, and generally they are formed of groups of several pipes all set close together and parallel to each other.



Fig. 2.

The building above illustrated is covered with an arched masonry dome, which, together with the arches of the doorways, was fractured in several places. The reservoir in the centre was also choked up with *débris*, which has now been removed.

Another building, which received its water-supply from the system above alluded to, is the Queen's Bath. It consists of a large, square, uncovered reservoir surrounded on its four sides by arcaded and groined corridors. The outer walls are comparatively plain, though originally they were surmounted by an ornamental cornice and a parapet, which, however, have now almost entirely disappeared, the supporting stone brackets alone remaining. It would, in my opinion, be a permissible piece of restoration to replace this parapet. Its design can easily be gathered from the remnants preserved on parts of the inner walls, as can be seen by referring to Fig. 3. The brackets are the same in both cases, and so must have been the parapet also. At present the exterior wall-head is finished with a layer of plain mortar, which was added in the early eighties, during the time of the late Conservator of Ancient Monuments.

Though the exterior of the building is plain, the interior is lacking neither in ornament nor in architectural detail. Each side consists of three arches through

which the central reservoir could be viewed or entered, and which alternate with projecting balconies. The mullions of these balconies are embossed in arabesque stucco work, which has in parts crumbled away. During the restoration in the early eighties these gaps were covered with plain mortar. It would be an improvement to have this scraped off and replaced by actual stucco casts, taken from mullions

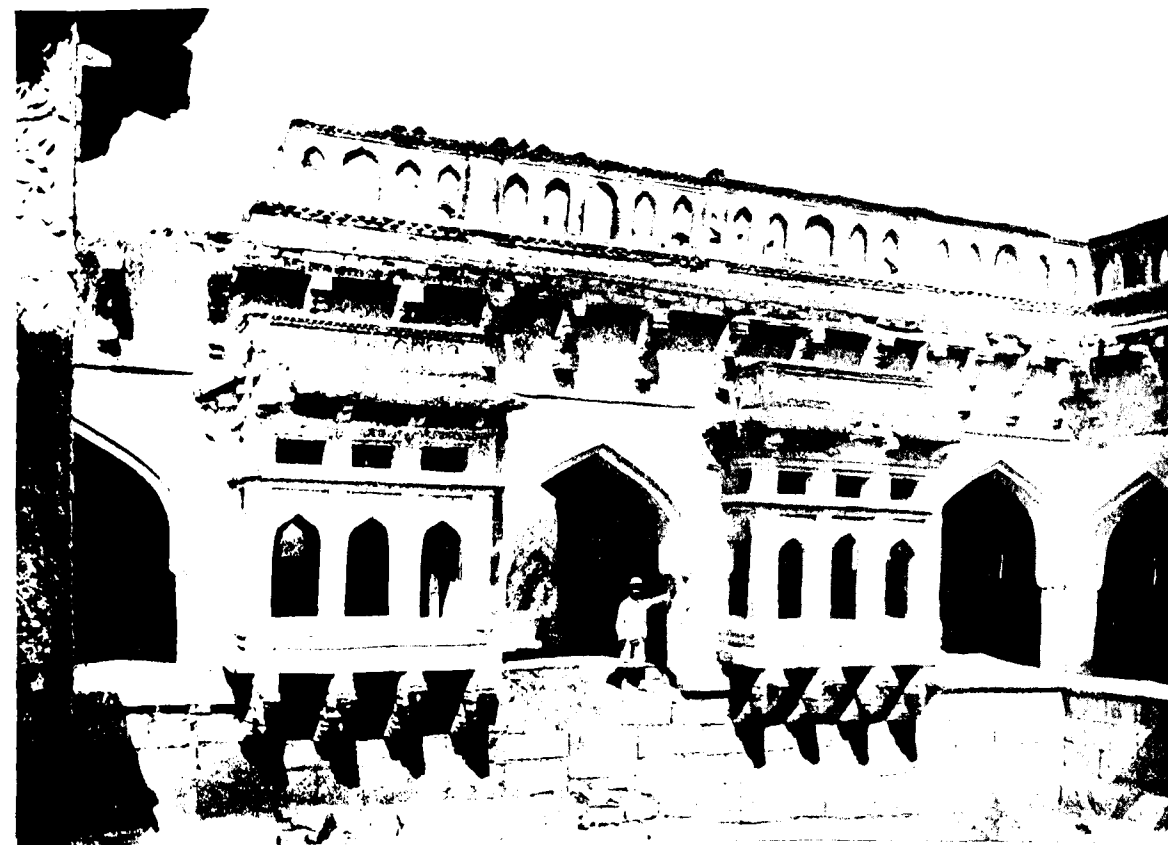


Fig. 3.

where the arabesques remain complete. The parapet which surmounts the inner walls is evidently a replica of that which has disappeared from the exterior. The structure of the building is of stone, with parapets in brick and ornament in stucco.

In a previous paper mention was made of the extensive hill-fortress at Ginjee in the South Arcot District, and of the conservation work which had been initiated there. It will be remembered that the main grouping of the buildings is on and around two lofty detached hills, the Rājagiri and the Kṛishṇagiri, the whole site being enclosed in long lines of fortified walls, which extend for several miles around it.

The general scope of the work is very much the same as that which has been successfully adopted at Vijayanagar. There is no single conservation work of any great magnitude required, but all of the buildings (and they are both numerous and of considerable size) require individual repairs of one kind or another.

One of the most important structures is the many-storeyed building known as the Kalyāṇa Mahall,<sup>1</sup> which is in a very perfect state of preservation.

<sup>1</sup> Cf. *A. S. R.* for 1906-7, pt. II (a).

The repairs on this edifice have now been completed. It stands in an extensive courtyard, which must at one time have contained other palace buildings. The ruins of some of these still exist in several mounds within the enclosure. Excavation reveals the foundations of buildings and burnt logs of wood, which show that some of these structures were destroyed by fire. Long lines of arcades and masonry-vaulted buildings in various stages of decay run along the inner walls of the palace enclosure, and the state of repair, which they now exhibit, is almost solely due to the cohesion of the ancient mortar used in the walls and vaults. In some parts several of the adjoining piers have vanished, yet the over-hanging vaulted superstructure of masonry remains intact as if it were formed of solid stone. (Fig. 4.) A view of a part of these vaulted buildings gives an idea of their general state and an appreciation of the problems, which must be faced in any scheme of conservation, which is intended to retain their ancient character, and yet prevent as far as possible further ruin.

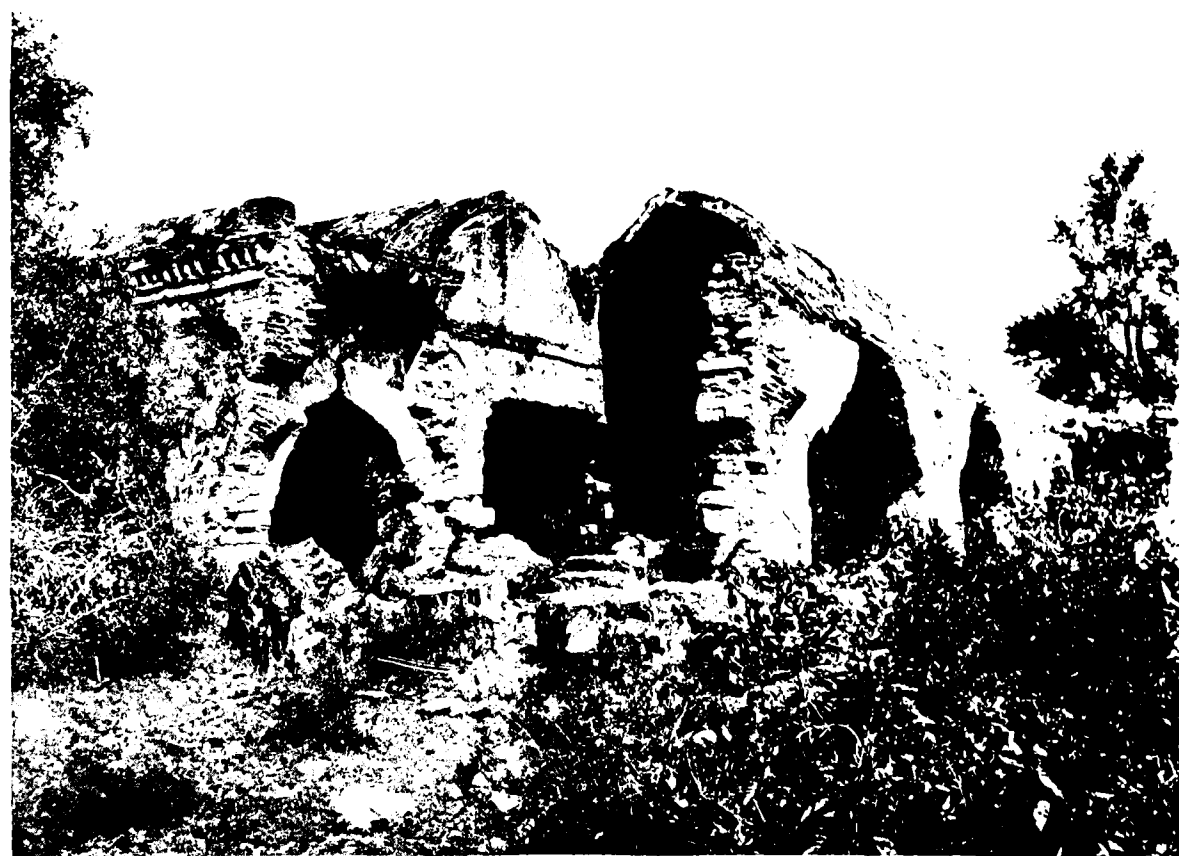


Fig. 4.

The building crowning the Rājagiri Hill is a picturesque structure known as the Flagstaff. It was originally surrounded by pillared arcades, which have now partly fallen away. Some measures necessary for the prevention of further decay have been carried out.<sup>1</sup> Progress has also been made with repairs to other of the civil buildings and to the large temples there.

<sup>1</sup> Cf. A. S. R. for 1906-7, pl. 111 (a).

Gandhikōta in the Cuddapah District is another important fort which has undergone repairs, the preliminary account of which appeared in a previous paper. The work has made considerable progress during the year under review and several buildings have been attended to. Among these is the masonry-vaulted building known as the Magazine, which was disfigured by mud walls built between the arches and by heaps of *debris* in the rooms. These have now been removed. Another interesting building is the lofty tower known as the Chār-minār. (Fig. 5) It was



Fig. 5.

generally in a fair state of repair, but some attention was needed for the decayed stucco work, particularly in the perforations of the upper windows. Some displaced stones of the basement, which seemed likely to endanger the security of the foundations, were fixed in position. The figure illustrating this building also shows one of the granaries, of which several remain. These are rectangular structures, with walls of great thickness, and with the interior spaced with lofty masonry piers supporting barrel-vaulted roofs.

Some necessary repairs have also been carried out to the group of eight large temples at Pushpagiri in the Cuddapah District.

An interesting temple of very early date and of unusual design in many of its principal features is that at Kurangunathan in the Trichinopoly District. (Plate VIII.) Some extensive and urgently needed repairs have been executed there.



Fig. 6.

It is stated that worship was never performed in the temple owing to its having been defiled by a monkey (Tamil *kuraigay*) after its consecration. From this it has derived its name.

Among the remaining monuments, on which extensive works are in progress, are the Dansborg at Tranquebar, and the fort at Tanjore. At the former place under-pinning of dangerous walls and various other repairs have been done. At the Tanjore fort (Fig. 6) vegetation has been cleared from the ramparts, and the preservation of bastion No. 11 is in progress.

A. REA.

