

30. Painted casts of four Egyptian amulets ; one bone Phoenician figure ; one wooden object. T.S.
31. Wax impression of Hebrew inscription on jar-handle from R.H. Sent before. As sharp as possible, considering state of original.
32. Impression of bit of clay stamped with seal. R.H.
33. Two painted casts of grotesque heads in blue and yellow glass, with one obscene figure, same material. R.H.
34. C. small Greek head. R.H.
35. C. small archaic Greek head. R.H.
36. C. fragment of stone corbel with head, wearing lion's skin. R.H.
37. C. fragment of statuette. R.H.
38. C. rude head. T.S. Depth, 10 feet.

Sixty-four moulds and casts in all.

THE ROCK-CUTTINGS OF TELL ES-SÂFI.

By R. A. STEWART MACALISTER, M.A.

THE extraordinary energy displayed by the ancient inhabitants of Tell Zakariya in hollowing the hill that bore their stronghold—an energy shared by their contemporaries at Atraba, Beit Jibrin, and other places in the neighbourhood—arouses expectations of the existence at Tell es-Sâfi of works similar to those I have already described in the *Quarterly Statement* (1899, p. 25). This expectation is largely disappointed ; the rock-cut chambers of Tell es-Sâfi have not nearly the interest of those at Zakariya, and a detailed account of them would be of little value for a scientific discussion of the subject as a whole. I hope to show, however, that the remains of ancient rock-working at Tell es-Sâfi are by no means devoid of interest or of importance, and therefore propose to devote the present paper to a consideration of the principal examples, dividing them into groups similar to those into which I classified the Zakariya cuttings in the paper already referred to.

Chambers.

The chambers of Tell es-Sâfi are of small interest, and I shall therefore clear the ground by cursorily describing them first. Not reckoning about half a dozen small chambers

scattered over the surface of the Tell, partly natural, and still devoted to their probably original purposes of fodder-stores, these chambers are all to be found on the southern spur of the long straggling hill, and comprise:—

I-III.—Three dome-shaped roughly-circular chambers, with staircases in the side; in all the roofs have long since fallen in, and every feature, including all the steps in the staircases, has become defaced by the weather.

IV.—A very fine approximately circular chamber, perfect, with a rather flat-domed roof, beautifully cut. It is so full of straw, stored for fodder, that satisfactory dimensions cannot be taken. There is an opening in the roof, now blocked: access is now gained by a doorway cut through a perpendicular face of rock immediately behind which is the chamber. This doorway may be modern—a modern wooden door has been fitted into it. There is another small chamber close by of no importance, and also a passage leading into the rock opening from the perpendicular face just mentioned. This runs but a short way and is then blocked.

V.—A dome-shaped columbarium, with three rows of triangular loculi in the walls.

VI.—A damaged chamber, which serves as vestibule to an enormous room, 60 feet long by 20 feet across (measured by pacing). The height is about 20 feet. With the exception of a chamber at Atraba, which is 75 feet in diameter, this is the largest rock-cut chamber I have as yet found.

VII.—In the lonely moorland south of the Tell, in a most unexpected situation, a funnel-shaped cistern, 28 feet deep, and at the bottom 25 feet 6 inches across.

There has been a group of similar chambers in a low hill across the valley to the south-west, but some are fallen in, others blocked up, and I could make nothing of them.

Scarps.

In two or three places vertical scarps have been cut in outcrops of rock—from 5 to 10 feet long and 1 to 2 feet high. These I hardly think are anything more important than small quarries, though the amount of stone removed from each is so

minute as hardly to seem worth the trouble of quarrying: an equal quantity of equally serviceable material might be picked up loose in many parts of the Tell. I have, however, no other suggestion to offer. Under this head may be noticed an ancient causeway, scarped through the outcropping rock, on the west side of the south spur of the hill. It is 16 feet broad at the top and 2 feet to 2 feet 6 inches deep, but towards the bottom it widens and shallows (like a river running through loose sandy ground), finally disappearing at the bottom. Three ancient olive trees growing in its middle are a witness to the length of time this road has been disused.

Presses.

Like other ancient sites, the place now represented by Tell es-Sâfi was well provided with rock-cut apparatus for pressing wine, olives, &c. I have noticed six, four of which are here illustrated (*see p. 32*).

The first (Fig. 1) consists of a floor of rock, roughly rectangular, about 42 feet long by 16 feet 8 inches broad. It has been smoothed level, and sunk to a maximum depth of about 5 inches below the surrounding rock outcrop. A little less than half the surface is covered by a thin coating of soil which conceals the rock; the remainder is exposed, and shows 12 cups scattered irregularly over its surface.

Except the cup lettered E none show any drains leading into or out of them, and therefore liquid that ran into them must have been baled out by hand; in my ignorance of the technical details of the processes which took place at presses such as this, I can but conjecture that the pressed material was allowed to stand in these cups till the coarser part had sunk to the bottom, and that the finer liquid was then skimmed from the top and poured into the large vat; or in the case of cup E allowed to run through the channel provided, and indicated in the plan. It is rather hard to account for cups B, C, and I, which are wholly or partly outside the sunk area. Under the rock surface is a large natural cave, the mouth of which has been enlarged by scarping for a depth of 7 feet; the outline of this artificial portion is indicated in the plan by

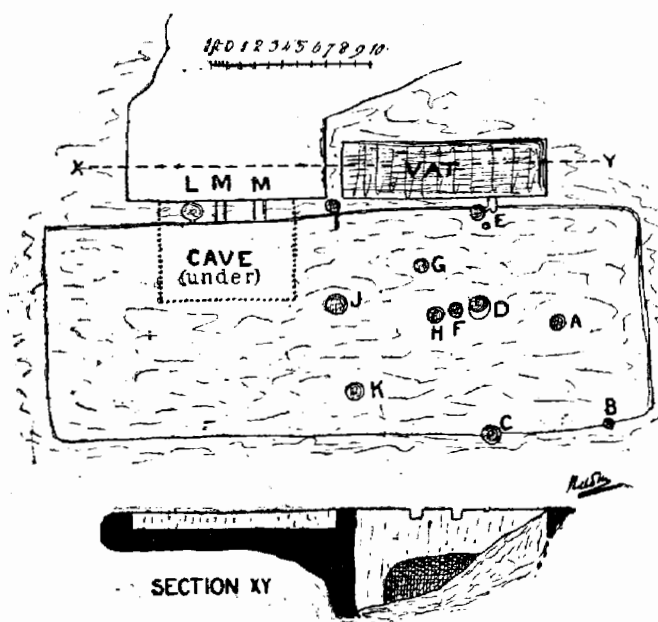


FIG. 1.—Rock-cut Press, Tell es-Sâfi.

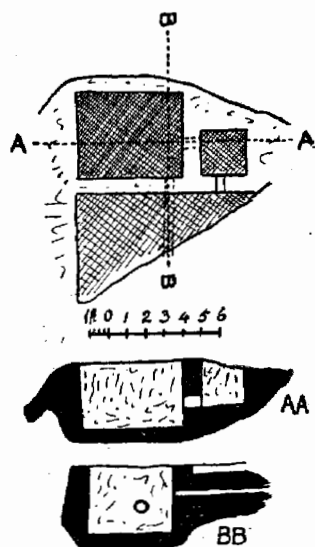


FIG. 2.—Series of Rock-cut Vats, Tell es-Sâfi.

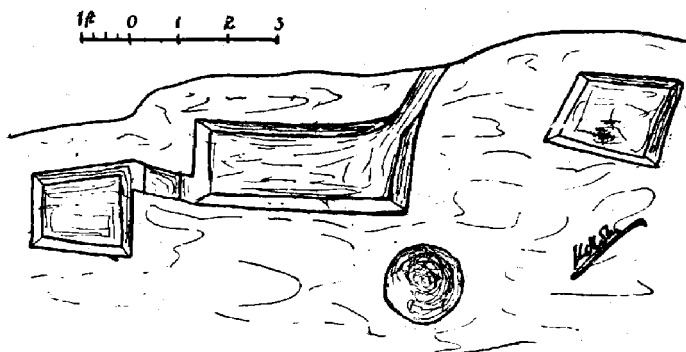


FIG. 3.—Rock-cut Vats, Tell es-Sâfi.

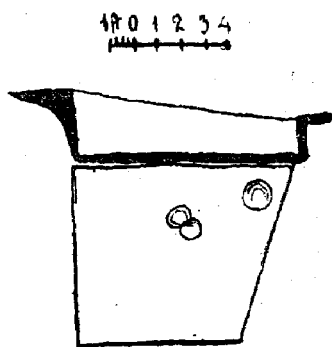


FIG. 4.—Rock-cut Vat with Cups, Tell es-Sâfi.

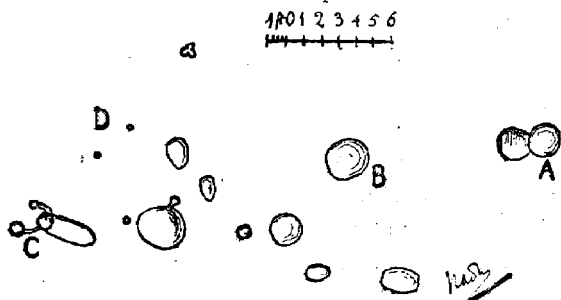


FIG. 5.—Normal Group of Cup-marks, Tell es-Sâfi.

dotted lines. It seems probable that when the season's work was over the press was cleaned and the refuse allowed to run through the two channels, MM, down to the cave below. I cannot account for the flat saucer mark denoted L.

The plan and sections (Fig. 2) sufficiently show the details of the second press I have selected. It is situated on the brow of the hill above the southern portion of the village. Its chief interest lies in the fact that the three vats are paved with a mosaic floor of rough white tesserae set in plaster. The sides have also been plastered. I have seen a mosaic floor in one other press only: it is in the garden near Jerusalem known as "Abraham's Vineyard." The drains are lined with pottery.

The third (Fig. 3) consists of two shallow vats connected by a channel. At each end of the channel the rock rises slightly so as to form a bar: in this case I suppose the fruit was pressed in one vat, and the juice passed into the other by hand, the lees being allowed to settle in the hollow between the bars. There is a third shallow vat and also a cup in the rock which seem to have no connection with the system.

The fourth (Fig. 4), situated in the deserted moorland at the extreme south of the Tell, is a large vat, in the floor of which are two cup-marks. No doubt the purpose of these was the collection of the last dregs of the liquid. One of the cups has a curved channel associated with it, obviously to increase its collecting power.

Cups.

We have already met with cases of cups associated with presses, but independent cups and groups of cups are scattered in profusion over the whole of Tell es-Sâfi wherever an outcrop of rock gives an opportunity for their formation, and it is necessary to devote a section to their consideration.

Fig. 5 represents a typical group of cup-marks of ordinary size. They are of two classes: deep circular bowls, generally speaking in the shape of a half melon cut across the long axis, and shallow saucers.¹ In the group shown, example A belongs

¹ There are besides a few anomalous forms, such as H (a cylinder) and D, Fig. 1; Fig. 6; and the horizontal cup, Fig. 7.

to the former type: it is 1 foot 6 inches deep, 1 foot 9 inches across; example B, which is 2 feet across and only 3 inches deep, is an exaggerated specimen of the second.

That the practice of making cup-marks in rocks is of great antiquity in Palestine as elsewhere I have already shown by reference to a discovery made during the excavations at Zakariya. Under 10 feet of *débris*, the lowest 3 feet of which contained pottery comparable with that of the second city at Tell el-Hesi (1500 B.C.), a cup was found marked in the rock. This gives a minor limit of date for the Zakariya example. That all cups date back even to this period cannot, of course, be as yet asserted, as so far no other light has been thrown on their epoch.

If their date be obscure, their purpose is even more so, and in Palestine they are as much a puzzle as in the rest of the immensely wide area of their range. Here, as elsewhere, the present is often a valuable illustrant of the past, and in the hope of discovering some tradition to throw light on them I have asked about them of several of the more intelligent Fellahin with whom I have come into contact. The majority of those of whom I inquired said they were "for water," obviously a mere fatuous guess; but two much more satisfactory explanations were at last elicited. These were:—First, that they were used for watering cattle; and second, that they were intended as small olive-presses, for obtaining a limited quantity of oil required for immediate use.

That some such utilitarian purpose was intended in many cases seems most probable. Large cups, 3 feet 8 inches across by 2 feet deep are the dimensions of one at Tell es-Sâfi, are found near cisterns, and may well be intended to be filled for the use of cattle. Moreover, many groups, such as that already figured (Fig. 5), are found in the neighbourhood of places, which in all probability have always been olive plantations. Some, such as A in Fig. 5, have a levelled plane of rock, slightly sunk below the surrounding surface, attached to their sides, and grooved with channels to direct liquid into them. In others, such as C in the same figure, two or three cups drain into another at a slightly lower level. Often separate cups are

found, such as Fig. 6, with a channel of one shape or another, draining the neighbouring rock surface into the cup. That a few olives should be pressed on the rocks, so that the oil should run down the channels into the cup, is perfectly conceivable.

But there are two cases in which both these explanations,



FIG. 6.—Cup-mark with Drain, Tell es-Sâfi.

as well as any other utilitarian explanation that can be formulated, seem absolutely excluded. When a cup is cut in a vertical surface of rock it will obviously hold no liquid of any kind. After long search I at last discovered one example of a vertical-face cup on Tell es-Sâfi.¹ The rock in which it is cut has been

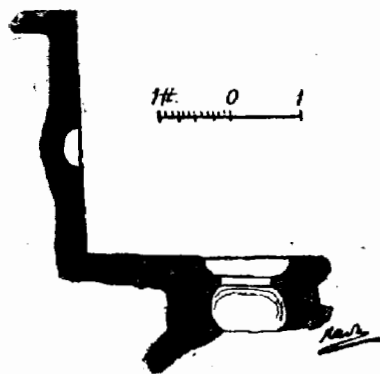


FIG. 7.—Section of Rock Surface with vertical Cup-mark, Tell es-Sâfi.

scarped, and there is a cup of unusual form in the horizontal surface under the scarp; the bottom of the latter breaks into a natural cave under the rock. In Fig. 7 a section of the rock and both cups is shown.

In the second place no utilitarian purpose seems to meet the

¹ Since the above was written I have found another.

case of the extremely minute cups which are to be seen at Tell es-Sâfi in considerable numbers. In the group shown in Fig. 5, two, lettered D, are respectively $3\frac{1}{2}$ and $2\frac{1}{2}$ inches across. What advantage would be gained in adding such insignificant receptacles to a collection of olive-presses (the cattle-watering theory

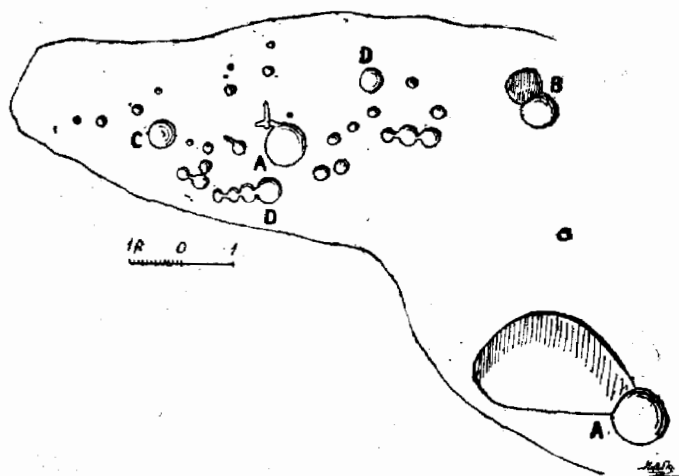


FIG. 8.—Rock Surface with minute Cup-marks, Tell es-Sâfi.

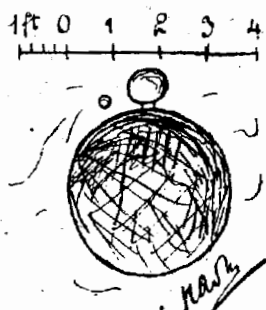


FIG. 9.—Large and Small Cups in association, Tell es-Sâfi.

is here excluded by the shallowness of the cups)? It may be answered that these are unfinished; but is the same to be said of the great group (Fig. 8)? Here the cups lettered A are 1 foot across; that marked B is $8\frac{1}{2}$ inches; C, 7 inches; D, 5 inches; and these by themselves may be olive-presses—

two are provided with the channelled sinking. But scattered among them is a large number of small cups, ranging from $3\frac{1}{2}$ inches to 1 inch in diameter, some connected by channels, whose purpose seems inscrutable. Again, consider Fig. 9; this consists of the large cup, 3 feet 8 inches across and 2 feet deep, to which reference has just been made. Beside it is one of smaller size, 7 inches across, 7 inches deep, connected with it by a channel 2 inches deep. Some explanation might be found

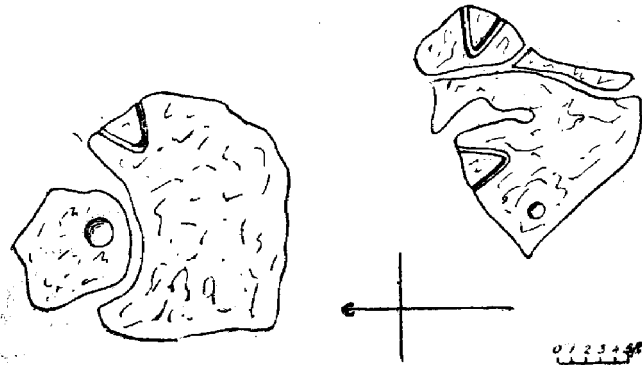


FIG. 10.—Rock Surfaces with Cups and "V-marks," Tell es-Sâfi.

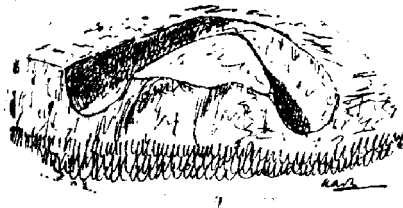


FIG. 11.—Sketch of "V-mark."

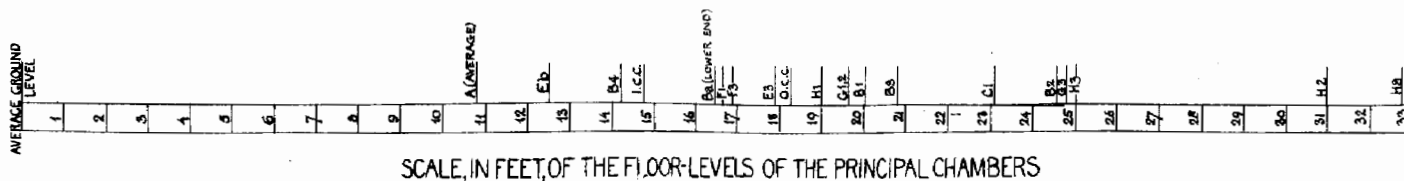
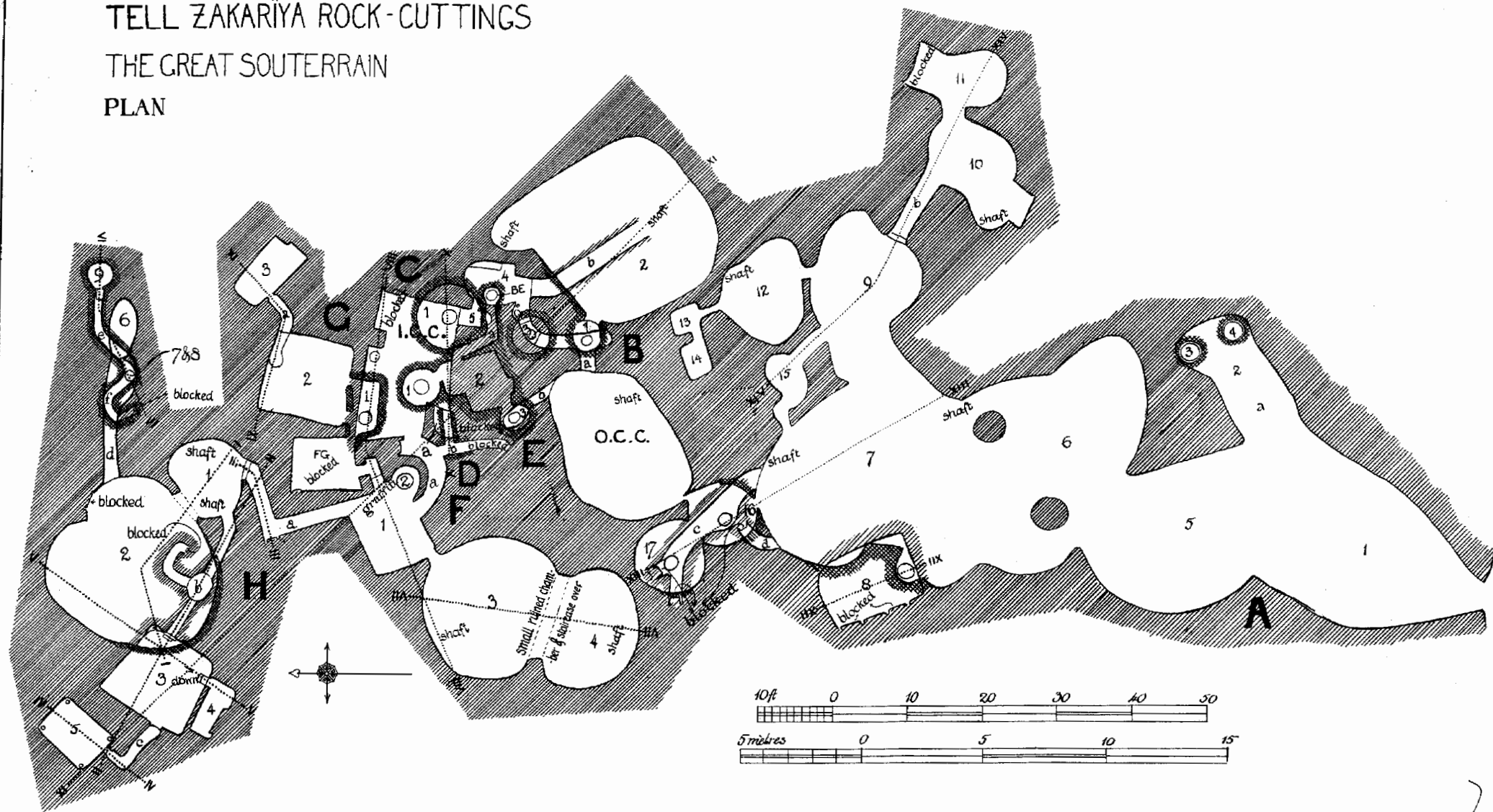
for these two; but what are we to make of the small independent cup, 3 inches across, 1 inch deep, beside them?

Nothing has as yet come under my notice analogous to the cups with concentric circles, so familiar to northern archaeologists.

V-marks.

* Lastly, I have to refer to a set of three marks, quite unique so far as my experience goes, to be found on the saddle of the

TELL ZAKARIYA ROCK-CUTTINGS THE GREAT SOUTERRAIN PLAN



R.A. Stewart Macdonald
 1908: 23. 24. 25.

southern spur of the hill where so much interesting detail is collected together. They consist of V-shaped grooves cut on the edges of three adjacent rock-outcrops. It cannot be an accident that the three are identical in shape and size; but (unless a wild guess which occurred to me, that they might be some sort of rude sun-dial, have anything to recommend it) I have no light to throw upon them. The Rev. Père Vincent, to whom I showed them, told me that nothing similar was known to him.

FURTHER NOTES ON THE ROCK-CUTTINGS OF TELL ZAKARĪYA.

By R. A. STEWART MACALISTER, M.A.

THE GREAT SOUTERRAIN.

IN the issue for January 1899 of the *Quarterly Statement*, pp. 25-36, I submitted a catalogue of the remarkable series of chambers and groups of chambers with which the sides of Tell Zakarīya are pitted. I now wish to supplement that article by the results of further study of these and similar excavations. My original design was to make plans and sections of the entire series, but on consideration I decided that such an undertaking was hardly worth the great expenditure of time it would involve, and that a better course would be to confine my attention to a few typical specimens.

On examination, the great system numbered XXI in my catalogue proved to be far more elaborate than I should ever have expected, and I considered it worthy of a survey as nearly as possible exhaustive, and of treatment in a separate article. The present part of this paper, therefore, is entirely devoted to this excavation. For a future part are reserved some miscellaneous notes on other rock-cuttings described in the previous communication, and also an account of a few others that came to my notice after it had been printed,