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Excavations at Praesos. I

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EXCAVATIONS AT PRAESOS. I.

§ I.—INTRODUCTORY.

(PLATE VII.)

THE excavations at Praesos undertaken by the British School in 1901 were begun on May 7th and continued until July 3rd. The Cretan Exploration Fund contributed £200, the Society of Dilettanti £50, and the Prendergast Fund of Cambridge University £40, towards the cost of the campaign. With me were two members of the School, Mr. J. H. Marshall, of King's College, Cambridge, and Mr. R. Douglas Wells, architect. Mr. Wells made a survey of the city-plateau and the adjoining ravines (Plate VII) and a large number of plans and drawings, many of which accompany this article. Mr. Marshall rendered valuable help in the work of supervision, and undertook a systematic exploration of the surrounding district. I much regret that it has been impossible for him to contribute to this report more than the section on the Megalithic House, printed below (§ 4). Soon after the close of the season he was appointed Director of the Archaeological Survey of India, and has necessarily been absorbed in the duties of that important post. I have had the use of his notes on some of the tombs.

The name of Praesos, like that of many other Cretan towns, survived through the middle ages. In the seventeenth century there was a Venetian village called Πρασσός on the level ground south of the First Acropolis (Plate VII), and the name as well as the ruins of the ancient city were known to Venetian antiquaries.¹ Among modern travellers Spratt gave

¹ The ruins at *Pressos* are described by Coronelli in his *Isolario*, quoted by Pashley (*Travels in Crete*, i. p. 290) and in the list of Cretan cities extracted by Flaminio Cornelio from a MS. chronicle of Andreas Cornelio (*Creta Sacra* i. p. 117, Venice 1755). The latter passage runs: *Pressos, cujus ruinae super collem a Sethia procul viii. mille passibus apparent, eamque everterunt Hierapytnii, ut scribit Strabo, qui et refert Eteocretum urbem fuisse, ex qua adducebantur canes celeberrimi.* It appears as *Prassus* in a list of the villages of Sitia in a MS. at Venice, dated 1630 (Francesco Basilicata, *Relazione di tutto il Regno di Candia*, Library of S. Mark's, H. vii. 1683), and in an anonymous MS. *Descrittione dell'Isola di Creta* of about the same period. For both references I am indebted to the kindness of Mr. Gerola of the Italian Mission.

the first general description of the site and its surroundings.¹ In 1884 Professor Halbherr discovered the first Eteocretan inscription, at the foot of the Altar-hill, and in 1887 its publication by Prof. Comparetti (*Museo Italiano*, ii. p. 673) called the attention of scholars to the problems of the district. In the summer of 1894 Prof. Halbherr began an excavation on the summit of the Altar-hill, and also at a site rich in votive terra-cottas below the village of Vavélloi, but after a few days of fruitful work he was stopped by the Turkish authorities.² About this time too the Eteocretan region was explored by Prof. L. Mariani, and in greater detail by Dr. A. J. Evans, who was here in 1894 and in 1896. Then came the insurrection of 1896. The people of Vavélloi, the rich Moslem village overlooking the site, were besieged by their Christian neighbours, but on the second night fought their way through to Sitia leaving the country in the hands of the Christians. In the months of disorder that ensued there was a good deal of reckless digging on both the sites where Prof. Halbherr had made a successful beginning, and mule-loads of terra-cotta figures and plaques were carried off to the neighbouring villages. Much was irretrievably dispersed, but a large number were saved by the enlightened energy of the Bishop of Hierapetra, who has since presented his collection to the museum at Candia. With the consent of Dr. Hazzidakis, Mr. E. S. Forster has undertaken to study and describe them in conjunction with those found in our own excavations. Prof. Halbherr had no wish to return to Praesos, and upon the institution of the Cretan Fund in 1899 it was one of the sites reserved for British enterprise by the good-will of H.R.H. Prince George of Greece, the High Commissioner of the Powers. The Directors of the Fund assigned it to the British School, and in February, 1901, I went down to reconnoitre the site, which had been visited by Mr. Marshall in the preceding January. Both Dr. Evans and Prof. Halbherr put their knowledge of the district freely at our disposal; in particular Dr. Evans's unpublished diary of his journeyings in the district proved of infinite use. Unfortunately the

¹ Sieber, who was here in June, 1817 (*Reise nach Kreta* i. p. 361), heard of the site, which he calls *Prases*, but did not visit it. Pashley visited it in August 1834: he discovered and published the Praesos-Itanos boundary-inscription at Toplu monastery (*Travels in Crete*, i. p. 290). Spratt was here in the fifties, and published his book in 1865 (*Travels and Researches in Crete*, i. p. 164.)

² Professor Halbherr contributed an article on Praesos to the *Antiquary* for May, 1902, and a preliminary account of his excavations to the *American Journal of Archaeology*, ix. (1894) p. 543, and to the *Athenaeum*, 1895, i. p. 812. A brief description by Professor Mariani will be found in *Monumenti Antichi dei Lincei*, vi. pp. 283-5; on p. 287 a useful map of the region to the East.

report of Prof. Halbherr's excavations did not appear until our campaign was at an end and our plans already engraved.¹

FIG. 1.—THE FIRST ACROPOLIS, FROM THE SOUTH-EAST.

§ 2.—THE SITE.

Praesos lies nearly midway between the north and south coasts of Crete, at the head of a fertile valley which runs inland due south for seven miles from Sitia, the capital and port of the easternmost *eparchia* of the island. The site of the ancient city is a rocky tongue-shaped plateau, almost enclosed by two streams which unite at its foot and form the Sitia river.² On north and west this peninsula descends in formidable cliffs, to

¹ *American Journal of Archaeology*, v. (1901) pp. 371-392.

² The name *Δίδυμοι*, preserved as that of a river or rivers in Crete by the author of a metrical description of Greece (Dionysius Calliphontis in Müller's *Geogr. Gr. Min.* ii. p. 242), is appropriate to the two confluent of the Praesos-Sitia river and has been applied to it, but is better avoided. Diodorus (v. 75) mentions two islands called Dionysiades on the Cretan coast ἐπὶ τῶν καλουμένων Διδύμων κόλπων, evidently the islands called by sailors Giannitzades and by the country-people Διονυσάδες, off the gulf of Sitia.

the east it falls away gradually in a long succession of slopes and cultivated terraces. At its southern extremity the valleys converge so nearly that for a short distance the road follows a narrow ridge from which the fields drop sharply away at either hand. The plateau over which the ruins extend rises into three heights which we have followed Mr. Halbherr in calling the First, Second, and Third Acropolis.

The First Acropolis, the highest of the three, is the only one to which the name of Acropolis can be applied with accuracy. It is the apex of a triangular limestone hill, which forms the whole eastern face of the plateau. Fig. I shows it as it appears from the south-east. It was the citadel and centre of the ancient city.

The Second Acropolis lies north-west of and considerably lower than the First, with which it is connected by a level cultivated plot to which we gave the name of the Saddle. It was included in the wall-circuit of the city.

The Third Acropolis is another specimen of the same 'crag and tail' formation as the First. It is a flat-topped wedge of limestone which slopes up gradually from the north-west and falls away in steep precipices on the three remaining sides. It lay outside the walls of the city and may be more accurately named the Altar-hill, having been a frequented place of sacrifice from the seventh century onwards. Between Third and Second Acropolis there intervenes a broad arid gully, the only break in the cliff-wall which bounds the site on the west; between Third and First a trough-like depression, divided into olive-groves and fertile corn-fields, in which there is hardly a vestige of ancient masonry.

Our examination of the remains of the classical city showed that the houses rest everywhere upon the rock without any accumulation of *débris* such as usually encumbers the site of a prehistoric city. Consequently the assumption that the historic capital of the Eteocretans had held the same leading position in the Mycenaean as in the Hellenic period must be abandoned. The minor results obtained in the city and in the later cemeteries in 1901, and those of some subsidiary excavations to be undertaken in 1903, will be published in the next volume of the *Annual*. The present paper describes the traces of prehistoric occupation, the early cemeteries, the important sanctuary on the Altar-hill, and a Hellenistic house excavated on the First Acropolis.

§ 3.—THE CAVE OF *Skalais*.

Not far from the quarries at the north end of the Praesos plateau, and immediately above the gorge formed by the western arm of the Sitia river, is a cave which yielded the only neolithic and Kamáres pottery that came to light in these excavations. A difficult path from the cliff top descends to a shelf commanding a fine view of the rock-walls opposite, of the river winding through thickets of plane and oleander 140 feet sheer below, and of the fertile haughs at the confluence of the two streams. The cave is so well masked by a fig and a carob-tree growing at its mouth that few of the natives knew of its existence. Those who did called it *ταὶς Σκάλαις*.

The platform at the cave mouth is about 10 m. from back to front. There among fallen rocks we obtained a score of grey and brown hand-polished potsherds, much like those of the neolithic strata at Knossos. Within the cave we were only able to examine a part of the floor and that with difficulty, owing to the thickness of the stalagmite. It yielded some early Bronze Age pottery, in particular a clumsy mug of reddish clay covered with a black smear (Fig. 2) and a sherd with oblique sepia stripes on yellow, resembling the earliest painted ware of Syra: a few Kamáres fragments: some cups of a thin reddish ware which baffled me at the time but in the light of finds at Palaikastro are seen to be local products of the Mycenaean age: a plain semicircular

FIG. 2.—HAND-MADE MUG FROM THE CAVE (½).

FIG. 3.—FRAGMENT OF GEOMETRIC VASE (½).

FIG. 4.—VASE-LID WITH FIGURE OF HARE (½).

bronze fibula like those from Kavusi (*A.J.A.* 1901, p. 136) : and a quantity of geometric pottery, for the most part small vessels of types already familiar on other parts of the site. Fig. 3 represents a characteristic piece with what was evidently a symmetrical panel of two birds, and Fig. 4 a cover with a lifelike crouching hare upon the handle—a piece of naturalism unusual in the industrial art of the period.

The only bones found here in good preservation were those of a colony of badgers ; the human remains were much scattered and decomposed.

§ 4.—THE MEGALITHIC HOUSE AT HAGIOS CONSTANTINOS.

(PLATE VIII, FIG. 1.)

I have already mentioned the two confluent of the Sitia river which enclose the site of Praesos. The eastern stream rises two miles from the First Acropolis in a remarkable perennial spring called *Μεσαβρύσις* or *τοῦ Τζαννῆ ἡ φλέγα*, which irrigates not only a number of gardens in the upper glen but a great part of the fields and orchards of Vavélloi. In classical days a little temple stood on the slope a few yards above the source, dedicated perhaps to the deity of the spring. Her goodwill was of some moment to the Praesians, for it was from here that they drew their water-supply. The old people of Vavélloi point out the general line of an ancient conduit of earthenware pipes, now in great part destroyed, which followed the curves of the hillside from the *Μεσαβρύσις* to the foot of the First Acropolis. Nowadays the irrigation system does not extend so far.

FIG. 5.—EARTHENWARE PIPES ($\frac{1}{20}$).

Strips of megalithic wall are noticeable at several points along the steep sides of the valley watered by this spring. Some of them may be no more than retaining-walls for cultivation terraces ; the only one which we excavated proved to have formed part of a large house. It lies above and south-west of the spring, on a knoll crowned by some ruined cottages. The blocks which first attracted our attention are irregular cubes of limestone, measuring over a metre in each dimension. A second row of smaller

blocks extending across a small plateau on the west may mark the limits of a forecourt. Close by stands the little church of Hagios Constantinos built in the shelter of a conspicuous tower-like rock. These features are seen in the photograph (Pl. VIII, 1), the bleached remains of the forecourt-wall appearing midway between the church and the right-hand edge of the picture, while the background is filled by the limestone heights overhanging the villages of Katsidhoni and Sandali. The top of the rock on which the man in the foreground is seated has been hollowed out into a primitive winepress. Details are given in Fig. 6. It lies 200 yards south of the megalithic farmstead, and may be coeval with it. If, as there is some reason to suppose, wine as well as oil was made and exported by the

FIG. 6.—ROCK-CUT WINEPRESS AT HAGIOS CONSTANTINOS.

Mycenaean population of Crete, the culture of the vine may afford an explanation of the spread of their settlements from the coast-plains to the highlands of the interior, for in Crete the vine succeeds better in mountain districts than at sea-level, and vineyards are frequently planted at a height of 2000 feet above the sea. It is true that nowadays there are few vineyards on the uplands round Praesos, but this is because they have belonged for generations to the Moslems of Vavélloi. Nearer Khandra and in the mountain plains of Sitanos and Kataleone, and at several points in the chain of Peponas, especially at Orno, the remains of Mycenaean civilisation are found in close proximity to flourishing vineyards.

More excavation is required before we can speak positively as to the date of the megalithic buildings in the interior of the island. Their construction favours the supposition that some of them at any rate are contemporary with the megalithic houses of Palaikastro. In the present case the evidence for a Mycenaean settlement is furnished by the tombs. I picked up fragments of undoubtedly Mycenaean *larnakes* on the hillside

known as 'ς τὸ Μαυρίκι, a few hundred yards from the spring, and was shown spots where complete specimens had been ploughed up. Considered along with the imposing Mycenaean tombs lower down the valley, these traces suggest that some of the adjoining megalithic walls may be the work of Mycenaean settlers. The house which we excavated here yielded little pottery. Some plain domestic ware of the Cretan Dipylon period

FIG. 7.—HOUSE AT HAGIOS CONSTANTINOS.

was found in a basement room which also contained broken *pithoi* with ornamentation of sub-Mycenaean style, but it would be rash to lay much stress on the juxtaposition, for there were indications of a rebuilding in the course of which this cellar had been filled up. No painted ware was found, neither Mycenaean nor geometric.

Mr. Marshall, who superintended this excavation, has furnished the following detailed description.

The excavation disclosed the remains of two houses at different levels ; the older had apparently fallen in or been destroyed, and on its ruins was built a later house of a somewhat different plan, but its traces were too scanty to allow of a restoration, and it has consequently been omitted in the drawing. The older building was better preserved ; it was constructed in terraces sloping down to the N.N.E., but it is probable that the addition of upper storeys brought the roof of the whole to the same level. The room (*a*) may well have done duty for a basement cellar, for it lay lower than (*b*) or (*c*) of which the pavement was preserved at the same altitude as the flooring of the rooms behind to the South.

In room (*a*) were found large *pithoi* of coarse fabric with spiral and scroll designs and bands of perpendicular lines or cross-hatchings incised ; by their side was some local ware of the characteristic grey clay with a rough sepia slip. In chamber (*b*) at the N.W. corner was a small oblong depression in the floor built round with uneven stones to a depth of about two feet, and containing 13 or 14 small "flower-pot" cups, several with burnt vegetable matter beneath them, and all showing some signs of fire.

In the S.W. of these chambers and on the same level as (*c*) and (*b*) were six rooms, leading one from another. The doorway in the fourth wall from the East was built in at a later time, and the threshold seemingly removed to the opposite side of the chamber (*g*) where it is marked in the plan. The thresholds of the other doorways remain *in situ*, firmly let in to the walls on either side. The lower portions of the jambs, massive blocks of stone some 3 feet in height, also remained *in situ*.

The first room (*j*) on entering from the East was paved over with irregular blocks of limestone of varying sizes, as also were the rooms marked (*b*) and (*c*).

The partition wall between (*h*) and (*g*) was rebuilt in the original house, an inner-wall with a circular corner being constructed inside the chamber (*g*).

At the fourth partition wall from the East the back wall (*m m*) was rebuilt out of the straight, and falling back at a slight angle towards the West. Southward again of this wall were two other chambers (*k*) and (*l*) of which the former contained one large pithos, with spiral decoration, together with other vessels of the common local fabric. These chambers were standing to the height of 5 or 6 feet. No doubt other rooms existed to the South and East at a higher level, but their plan is no longer traceable. The wall (*m m m*) is backed to its full altitude by virgin soil.

The inner walls of the house are built upon a foundation of natural round stones laid upon the clay subsoil, as large in size as the two hands could conveniently grasp. Upon these are set the roughly squared megalithic boulders, with smaller stones wedged into the interstices.

What the limits of the outer walls of this homestead were towards the north could not be determined. They may have extended in that direction to the rocky eminence upon which stands the church of Hagios Constantinos, and which is separated from the house by a shallow depression in the ground ; similar remains in similar situations are to be remarked elsewhere among the hills of Eastern Crete, e.g. at Chordáki, at the *metoche* beyond Kalochorio (south-east of Apidhi), and at a site north of Perivolakia.

In the interior of the house between the chambers marked (*k*) and (*g*) was a later grave containing bones, some pottery of the common local ware, a small *aryballos* of early Corinthian fabric, a portion of a silver ring, a fragment of silver with hatched lines incised, a circular piece of bone with rough flutings, and an ivory disc. The existence of this grave at a period fixed within narrow limits by the

presence of the Corinthian vase, when the later of the two houses had been levelled with the ground, gives the lower limit for the date of the original buildings. The higher limit is perhaps determined by the fact that there was no trace of anything Mycenaean in the houses, though this negative evidence may count for nothing if it be the case that the first inhabitants of the house belonged to a non-Mycenaean people of the interior. On the other hand, sub-Mycenaean survivals were apparent on fragments of *pithoi* found in the lowest stratum along with that peculiar local ware of grey powdery clay with a coarse sepia slip which has not, so far as I know, been found at an earlier period than the geometric in Crete.

J. H. MARSHALL.

§ 5.—THE EARLY TOMBS. *A*.

Tomb *A* is a large bee-hive tomb underlying the public road south-east of the Third Acropolis and east of the main cemetery. The clue that led to its discovery was the presence in the roadway of some huge wedge-shaped blocks, which proved to be part of the highest surviving course of the back-wall. The floor was found 2·60 m. below the surface of the road. East of it the tomb extends into a field at a lower level, and here the walls stand only half a metre high. The entrance is from the north-east through a short *dromos* cut in the subsoil, which leads to a feature unusual in such tombs, a vestibule 2·30 m. by 1·50. Beyond this is a low threshold and a passage ·85 m. wide through the thickness of the wall, which is about 1·60 m. at ground-level, and becomes less as the wall rises. The diameter of the circular chamber is 4·07 m. A rebate in the wall at either side of the entrance suggests that there was a door here and wooden door-posts. The material used is not the Praesos limestone but a soft white freestone quarried near Vavelloi; it is laid in regular courses about ·20 m. thick. The chamber was choked with the fallen stones of the roof; below them and ·35 above the original floor there was a hard trodden floor of earth and broken pottery; it seems that the tomb was discovered while still intact and inhabited or used for some agricultural purpose.¹ The discovery of a late silver coin of Itanos suggests that this may have

¹ To the right of the entrance are two blocks resting on earth containing broken pottery. One is a round drum ·51 m. in diameter, ·17 high, with a circular sinking on its upper face ·32 in diameter and ·04 deep. A similar stone was found near the entrance. Were these basins for libations? One of the geometric tombs at Knossos contained 'a cylindrical stone, 1 ft. high and 1 ft. 4 in. in diameter, with a central hollow 6 in. in diameter,' explained by Mr. Hogarth (*B.S.A.* vi. p. 83) as a funerary altar. The other is a rectangular block (·85 m. × ·50 × ·27 deep), with a raised margin on three sides of the upper surface, which is sloped away towards the fourth side, forming an inclined trough, ·05 m. deep at the upper or closed end, ·15 deep at the open end.

THOLOS TOMB "A".

SECTION dd.

PLAN.

FIG. 8.—BEE-HIVE TOMB AT PRAESOS.
(Scale 1:110).

happened in the first or second centuries B.C. Below this later floor-level was a tightly packed deposit of broken pottery and other objects mixed with red earth which showed the effects of fire. It became clear that the whole of this stratum had been dug over; the pottery was smashed and the pieces scattered. It was for the most part coarse geometric ware of types already familiar. There was no Mycenaean or Kamáres ware. Although the whole of the deposit was dug out inch by inch with knives and the earth was afterwards sifted, no bones were found except some teeth (man, ox, and dog). I am inclined to explain the large quantity of pottery

FIG. 9.—GEOMETRIC JUG FROM BEEHIVE-TOMB ($\frac{1}{2}$).

FIG. 10.—GEOMETRIC CUP FROM BEEHIVE-TOMB ($\frac{1}{2}$).

found here as the result, not of repeated interments, but of honours paid to the dead during several centuries of hero-worship, such as we know to have attached itself to the beehive-tomb at Menidi. The best-preserved vases were those found in the vestibule, in the recesses at either side, which seemed to have escaped the notice of the ancient excavators. Fig. 9 represents a small jug made of a thin, metallic ware; most of the decoration is in dark brown glaze laid on the drab clay, but the narrow white bands on the body are in *white* paint laid over the brown glaze, a technique which was common in East Crete and may have been a direct continuation of the method so popular there in the Bronze Age; a fine example of it occurred in Tomb C (Plate IX. *d*). The decoration of the cup (Fig. 10)

is made up of familiar elements, and succeeds in producing a certain richness of effect.¹ Associated with this group was a proto-Corinthian aryballos with elongated pear-shaped body.

Within the chamber no whole vases were found; the mass of fragments filled twenty-three baskets, but prolonged examination shows that very few can be put together. A great part of the original deposit had been dug out and scattered by the first excavators; our trial-pits on the slope below the Tholos came on *débris*, including pottery and scraps of gold-leaf, which seemed to have been thrown out at that time. The latest of the potsherds are two red-figured fragments, of no interest, and part of a standard-vase of the type sometimes called *plemochoe*. Part of an earlier vase of somewhat the same shape had the figure of a bull on it in high relief. A globular aryballos was the only specimen of Corinthian ware.

FIG. 11.—GOLD RING WITH GRANULATED WORK. (Length of bezel '028).

FIG. 12.—GOLD ROSETTE. (Diameter '023).

Among the later geometric sherds there were numerous pieces of plates with low vertical sides, decorated on the exterior with large rosettes. One large fragment of this form, to be published shortly by Mr. Hopkinson, has a figure-subject both inside and out, on the outside a hero attacking a fishy monster, on the inside a horseman, drawn in outline in a very spirited sixth-century style.

Among the minor objects found within the chamber was a remarkable gold ring (Fig. 11) which has the bezel turned at right angles to the hoop, as is usually the case with Mycenaean rings; it is too frail for actual use and must have been made as a substitute for the ring worn by the dead man during his lifetime. The bezel is lozenge-shaped and has been cut out of a flat plate of gold. A lozenge-shaped cloison occupies the centre, and a small round cloison is placed at each angle; it is not clear how they were

¹ Compare a vase from Anopolis published by Wide, *Geometrische Vasen aus Griechenland*, p. 12, Fig. 17.

FIG. 13.—SILVER PIN FROM BEE-HIVE TOMB (3).

filled. The border forms a series of openwork triangles, and their margins are picked out with fine granulated work.

Fig. 12 represents a disc of very pale gold in the form of a flower with ten petals. Numerous scraps and strips of gold leaf, with thread-holes showing that they had been attached to garments, were scattered through the deposit. Among the other objects were :

A fragment of ivory with a finely incised rosette and traces of red and yellow colouring.

A bone sword-pommel, original diameter about '06 m.

Piece of a bone haft-plate with a gold stud attached.

Fragments of a bone comb, with incised ornament.

A small *Triton* shell.

A lentoid gem of steatite, the design obliterated.

An amygdaloid gem of cornelian with a meaningless wheel-cut design, somewhat resembling two fish, common on Cretan gems of the sub-Mycenaean age. (Cf. Furtwängler, *Die antiken Gemmen*, Taf. IV. 9 and 10).

The tip of a bronze knife or dagger.

Fragments of a plain hemispherical bronze bowl without handles.

A lozenge-shaped bronze plate, '043 m. in diameter.

Twenty-three beads of glazed earthenware, much perished.

Thirteen small blue and yellow beads.

One cylindrical glass bead, banded with white.

Four wheel-shaped earthenware spindle-whorls with a cross-hatched zig-zag band on the rim.

One spherical bead with similar ornament

A small disc of striped blue and yellow glass.

Two spear-heads rusted into one mass.

A palette (?) of black slate measuring '026 by '020. Others were found in Tomb C.

A silver pin (Fig. 13) '275 long, with a flat spreading head on which is a small rosette.

A bronze *fibula*, of the size and shape of a modern safety-pin, with three twisted strips of bronze wire bent about the pin.

The neck, lip and handle of an *oinochoe* of bright blue porcelain with a trefoil mouth. The form is almost exactly that of the bronze jug with riveted handle found in the Idaean cave (Halbherr and Orsi, *Antichità dell' Antro*, &c. Pl. xxi. 12).

The neck, lip, and handle of an *oinochoe* of black *bucchero* ; of the same form as the preceding, with the difference that the handle of the porcelain jug has three shallow flutings, while that of the other is formed like two slender reeds set side by side. Not a fragment of the body of either jug could be found.

The deposit had been so much disturbed that it is hard to identify the offerings which accompanied the original

interment. Nothing was found which can be claimed as indisputably Mycenaean; the bronze knife, the much worn steatite lentoid, the hint of Mycenaean tradition in the form of the ring, are not conclusive. The sequence of the pottery shows that the tomb was known and frequented for many generations, probably as a place of cultus rather than of burial. The other offerings may be taken as evidence of an important interment in the early geometric period, but do not exclude the possibility that the first tenant of the tomb was a Mycenaean.

The juxtaposition of vessels of blue porcelain and of black bucchero is a fact of great interest. If the one material points to Egypt, the other points to Italy, while the likeness of both to the bronze jug found in the Cave of Zeus on Mount Ida suggests that they were imported at the period when Phoenician influence, as attested by the discoveries made in the Cave, was dominant in Cretan art and industry.

§ 6.—THE EARLY TOMBS. *B.*

Tomb *B* lies 250 yards south of the tomb just described, east of the road to Vavélloi, in a sloping field called 'Αρφανοπεριβόλια. A grave containing *pseudamphorae* had been found some years before in an adjoining garden; consequently we made some trials here; on July 3 one of our pits struck upon this tomb, a built chamber 2·50 m. square, entered from the north-west by a passage '93 m. wide. The walls, nearly a metre thick, are built of irregular blocks of freestone quarried on an adjoining hill, laid in courses of varying thickness. The roof had collapsed; it had been formed of overlapping slabs, some of which remain in position at the farther angles. The perspective sketch (Fig. 14) shows how the courses were corbelled out. The two largest blocks are a door-jamb (displaced) '46 × '42 × '95 m., and the lintel 1·62 × '90 m.; the latter varies in thickness; like most of the blocks here it has been split, not dressed into shape. There had been at least three interments, the first in the Mycenaean period, the second in the geometric, the third in the fourth century B.C. The remains of the first were fragments of two *larnakes* and some gold ornaments: of the second, some coarse geometric pottery and stamped clay beads: of the third, several dozen iron swords and spear-heads, broken into small pieces, and a gold stater of Philip in excellent condition found near the door. Fragments of a marble standard-vase and of the moulded

THOLOS TOMB 'B'.

SECTION dd.

PLAN.

SECTION $\beta\beta$

FIG. 14.—TOMB B. (Scale about 1 : 80).

base of a silver vessel probably belonged to the third interment. Only the Mycenaean objects merit a detailed description.

Of the two *larnakes*, one was shaped like an elliptical bath-tub, the other like a chest with a gable-lid; both forms are well-known in Crete. The former was decorated with meaningless serpentine curves in dark red paint on a buff slip, and measured about a metre by half a metre with a depth of '55 m. The other had

FIG. 15.—RESTORATION OF LARNAX FROM PRAESOS ($\frac{1}{10}$).

a spirited ornament of running spirals on one of the longer sides, also in dark red on buff. Of the ends and of the lid few fragments were recovered, but they make it possible to restore the form and design of the original (Fig. 15). It was '92 m. long, '43 wide, and about '65 high without its lid. The clay of both *larnakes* resembles that of Palaikastro and must have been brought from the coast.

Of the gold ornaments the most important is the gold ring shown in Fig. 16. The elongated bezel is hollowed on the inside to fit the finger, and sloped away from the longer axis on the outside. A similar ring was found in Grave 37 at Ialysos and is now in the British Museum (Furtwängler and Löschcke, *Mykenische Vasen*, Text pp. 16, 17, Fig. 4). The ornament represented in Fig. 17 is formed of stout gold plate, the interior being hollow, and is pierced at the neck to serve as a pendant.

Tomb *B* also yielded a quantity of crumpled gold leaf, some of it impressed with concentric circles : and a crystal sphere $\cdot 023$ m. in diameter, with a perforation $\cdot 007$ in diameter running through it, which must be Mycenaean. I feel less

FIG. 16.—GOLD RING FROM TOMB *B*. (Length of bezel $\cdot 024$).

FIG. 17.—GOLD ORNAMENT FROM TOMB *B*.
(Greatest length $\cdot 03$).

FIG. 18.—
GOLD BEAD ($\frac{1}{4}$).

FIG. 19.—GOLD IVY
LEAF ($\frac{1}{4}$).

certain as to the period of a tubular gold bead (Fig. 18). A gold ivy-leaf (Fig. 19) may have formed part of a wreath accompanying the latest interment, the remainder having no doubt been removed by the plunderers who ruined the tomb.

§ 7.—THE EARLY TOMBS. *C*.

(PLATE IX.)

West of tomb *A*, where a long gravel ridge rises between the public road and the Altar-hill, we discovered a cemetery containing tombs ranging in date from the early Iron to the Hellenistic period. The most interesting of the former class is a square shaft-grave ($2\cdot 60$ m $\times$ $2\cdot 30$) sunk to a depth of over three metres through the gravel subsoil at the north-end of the ridge. Denudation had reduced the depth on the eastern side, and it was from here that we approached the chamber. At least three interments had been made in it. The latest deposit, very near the surface, contained a poor four-handled 'Corinthian' bowl but no trace of bones ; the second, $1\cdot 50$ m. above the floor, consisted of a skeleton with feet to the north and the vases *a*, *b*, and *c* of Plate IX. ; the earliest, of a skeleton laid with feet

to the north on a stone bench, an iron sword at his right side, and upwards of thirty vases, among them Plate IX. *d*, disposed partly on the floor of the tomb and partly on the bench at his head and feet. The second skeleton was laid exactly above the first, a fact which may imply that not many years elapsed before the second interment, and that the position of the first was remembered. The lower part of the tomb is cut in the *kouskoura* (wrongly *Tuscara* in the illustration) or hard white marl which here lies below the gravel; the bench, 70 m. high and 50 wide, is of *kouskoura* covered with thin slabs.

The four vases on Plate IX. vary considerably in technique. Thus *a* is painted with brick-red on a powdery yellow clay: *b* with a paint varying from sepia through red to black: *c* with very fugitive black. The clay of *b* and *c* is well levigated, crisper and better baked than that of *a*, and of a pale buff colour. On the other hand *d* has *white* decoration on a thin black slip, the body clay being reddish.

As to form, I know of no Cretan parallel for the bird-shaped vessel. It is hollow and has a trefoil lip attached to the head, but the opening is so small that it cannot have been meant for practical use. Some analogy for the plastic form is offered by a vessel in the form of a seated nude woman with a *hydria* on her head, one of several score of geometric vases found last winter at Adhromyloi, to the south of Praesos.

The squat vessel, *b*, is a *hydria*, the vertical handle not appearing in the illustration. The find just mentioned contained a large vessel of nearly the same shape, and a smaller one with more tapering base and 'orientalizing' palmettes on the shoulder. The ring on the upper part of the neck is a continuation of the handle, copied from metal vases in which the handle actually clasped the neck of the vase; it appears also on the large *hydria* with mourning women and a chariot, found by Miss Boyd at Kavusi; and on *d* of our Plate. The draughtsman has omitted a small spiral which springs from the top of some of the rectangular gate-like figures on the shoulder of *b*.

The drawing of *c* represents it restored; on the original most of the paint

FIG. 20.—TOMB C. (Scale about 1 : 80).

has scaled off, leaving the design only faintly visible; but there is no doubt about the fidelity of the copy. The double side-handles have a shape that is familiar on the large Dipylon amphorae, but unusual on small vases. The ornament, like that of *d*, presents an interesting juxtaposition of rectilinear and curvilinear motives. The rosette springing from the base reappears on *d*; it is very common at Praesos and in East Crete generally. The pendent spirals on the shoulder furnish another link with the Adhromyloi find, which includes a vase-lid (of the type of *A.J.A.* i. (1897) p. 256 Fig. 4) decorated on the convex exterior with similar spirals, painted in the technique of *d*, however, with white on dark-red ground.

As for *d*, it belongs to an interesting class which goes far to disprove the current *dictum* as to the ugliness of Cretan geometric ware. Hitherto the best

FIG. 21.—VASES FROM TOMB C AT PRAESOS. (1:5½).

examples of it have been a series of five vase-covers (like the one from Adhromyloi already mentioned), found by Mr. Hogarth in tombs at Knossos; they are painted with rosettes, cable, concentric circles, spiral loops, and other curvilinear patterns. The jug with a delicate white scale-pattern on black ground from Kavusi, published by Miss Boyd in *A.J.A.* 1901, p. 146, is of very similar fabric.

Tomb *C* yielded other examples of this technique, a miniature *hydria* (ht. .10 m.) and *skyphos* (ht. .06), and an open-work tripod or vase support (ht. .32) which is shown in Fig. 21; on the legs of the latter there are traces of a white meander-pattern, on the two miniature vases concentric circles.

The little *hydria* and the tripod just described stood on the stone bench behind the head of the corpse. In the corner beyond them was a remarkable deposit, consisting of a large basin (ht. .13 m. diam. .35) in which were packed eight smaller vases, the miniature *skyphos* in the centre and seven small *lekythos*-like vessels, with round bases and flat narrow mouths, laid radiating from it, and of the slender jug *d* which was laid across the basin—evidently the toilet-furniture of

the dead. The small vases probably contained unguents, the *skyphos* may have served for mixing them. The *hydria* shown in Fig. 21 (ht. '29, with perfunctory decoration of thin concentric circles on buff ground) stood close by, and may have held the water for ablutions. Other articles of the toilet—two obsidian razor-blades, a pair of bronze tweezers, and three rectangular plates of slate (the largest '038 m. × '024, the smallest '025 square) which may have been used as palettes, were found in sifting the earth of the tomb; their place in the deposit is unknown.

The little *stamnos* in the centre of Fig. 21 is typical of most of the remaining vases from this tomb. It is formed of soft yellow clay, covered with a sepia slip, and is without painted ornament. There are half a dozen one-handled cups of this presumably local ware, both large and small, two *skyphoi*, a crater, and a basin; the latter has a white wave-pattern on the exterior, the rest are plain. There is also a tiny *skyphos* of slate-coloured stone-like clay and a toy-jug with thin painted bands on the body (ht. '05 m. and '04 m. respectively.) Drawings of these vases will be included in a table of the forms of Cretan pottery which it is hoped to publish as a result of the recent work of the British School in the island.

The sword found beside the skeleton is '50 m. long, including the hilt; a bronze stud is all that remains of its fittings; the top of the hilt is missing.

The only other objects in the tomb were ten clay beads (diam. about '03 m., Fig. 22) and two clay spindle-whorls (diam. '05 m.); they escaped notice in the caked gravel filling, and were found in the subsequent sifting. Probably they accompanied the second interment, with which no weapon was found and which is likely to have been that of a woman—possibly the wife of the warrior buried immediately below.

FIG. 22.—CLAY BEAD FROM TOMB C ($\frac{1}{2}$).

§ 8.—THE EARLY TOMBS. *D* and *E*.

Tomb *D* was the only indication of a Mycenaean settlement that came to light on the First Acropolis. It lies half-way down the north-west slope on the seventh terrace from the top, and is surrounded by remains of Hellenistic houses. It must have been discovered and plundered when they were built; yet by an extraordinary accident a precious part of its contents was preserved on the spot for us to identify. The tomb is an irregular oval chamber (Fig. 23) hewn in the limestone and entered by a very low doorway raised '90 m. above its floor. Facing the doorway is a small recess (less regular than it is represented in the drawing), '75 m. wide and '46 high. The tomb itself contained only stones and modern refuse. Adjoining it on the north was the back-wall of a Hellenistic

house built against the rock, and on the south a small bath-room, the floor and walls of which were lined with plaster. It appears that earth from the

FIG. 23.—MYCENAEAN TOMB ON THE FIRST ACROPOLIS. (Scale about 1 : 80).

adjoining tomb had been used in making the mortar for these buildings, for on May 17, after heavy rain, one of our workmen spied a Mycenaean gem sticking, as he reported, 'like a snail' to the back-wall of the bath-room. The rain had detached some loose patches of plaster and dissolved part

FIG. 25.—MYCENAEAN GEM FROM TOMB D. (2).

of the mud-mortar behind it. The diagram (Fig. 24) shows the relation of the tomb to the Hellenistic house; the builders seem to have incorporated it in their plan, perhaps turning it into a cistern. The gem is a somewhat large lentoid of yellow agate with milky white bands. The design, reproduced in Fig. 25 after a drawing by Mr. Gillièron, shows a couchant bull surprised by a hunter who seizes him by both horns. There is an exergue of horizontal lines above and below, with sprays repre-

NOTE. SINGLE LINES DENOTE
TERRACES (SEE SECTIONS.)

PRAESOS, CRETE. PLAN SHEWING STREET EXCAVATED ON WEST SLOPE OF FIRST ACROPOLIS.

senting vegetation, and a tuft of grass before the bull's head. The man's figure is stiff and awkward; the bull is excellently done. It is note-

FIG. 26.—TOMB *E*. (Scale about 1 : 80).

worthy that the line of the bull's back follows that of a natural band in the agate. A comparison with the gems found in the Vaphio tomb, particularly with one representing wild boars couched in a swamp, reveals interesting points of contact.

Tomb *E* (2.20 × 1.84 m.) was discovered on the ridged top of a height called 'ς τήν 'Ρίζαν a quarter of a mile south of H. Constantinos and just outside the limits of the map. The entrance, .85 wide, faces north. In construction it is a miniature copy of Tomb *B* with similar vaulting beginning at the fourth course. The floor is roughly paved. It was prob-

ably a Mycenaean tomb, but beyond earth and stones nothing whatever was found in or around it.

§ 9.—THE ALTAR-HILL (THIRD ACROPOLIS).

In this excavation both Professor Halbherr and the country people had been before us, under circumstances which I have already explained. The former had opened up a rich stratum of votive bronzes and terracottas under and round about a primitive altar, 'built probably of earth, and surrounded by four walls or simply supported on two parapets at the two sides which look towards the declivities of the hill.' These parapets, 'composed of a single course of blocks standing on a very simple foundation of compact earth and small stones' were destroyed by the peasants who dug here during the disorders of 1896. Professor Halbherr's clear description of the site and of his operations on it,¹ which had long been

¹ In *A.J.A.* v. (1901), pp. 375-384. It should be noticed that in his plan (*Fig. 6—The Summit of the Acropolis C at Praesos*) North is turned to the left, East to the top of the page, while in our plan (*Fig. 27*) North is to the top. His plan includes the full extent of the hill-top

ready for the press, was not published until after our work was done and our plan engraved.

The chief object of our excavation was to search for further inscriptions in the Eteocretan language. The method adopted was to clear the whole hill-top, a plateau measuring 50 m. from north to south and 60 m. from east to west, bounded on three sides by precipices and easily accessible only from the north. It soon appeared that this north side had been closed by a wall of small stones mixed with mud-mortar, which at the east end loses itself among rocks and at the west returns so as to cover a part of that side which is less precipitous than the rest. Parallel to it at a distance of 2·70 m. to the south are the foundations of a similar wall, forming one side of a long building now in great part destroyed. Near the east end of the north wall is the entrance to the *temenos*, a

FIG. 27.—WALLS EXCAVATED ON THE ALTAR-HILL.

passage 2·80 m. wide with a narrower doorway and three steps up; it was here, lying on the steps, that we found the Eteocretan inscription of which Professor Conway has kindly undertaken the publication in the present *Annual* (p. 125). Further down the hill, outside the *temenos*, there

from North to South, omitting the western part; ours gives the full extent from East to West, omitting the southern part where we found no depth of earth and no remains. On our map of the site (Pl. VII) the *temenos*-wall has, by an unaccountable error, been made to face the precipice on the East instead of the slope on the North

came to light fragments of Greek inscriptions in a still more shattered condition, and the mask of a huge life-sized terracotta lion of which other fragments had been found within the enclosure—speaking proofs of a violent and wanton wrecking of the sanctuary.

The pits dug by our predecessors lay south and east of this entrance; some of the freestone blocks that had formed the parapet of the altar were strewn about them. Here the votive deposit was exhausted, but south and south-west of the steps we came on undisturbed patches in which terra-cottas, bronzes and pottery lay mixed with burned matter and fragments of bone. We traced this deposit under the foundations of the buildings to the west and up to the *temenos*-wall, the foundations of which go down to the rock. There was no true stratification. So far as I could judge, the deposit had not taken its present form as the result of gradual accumulation, but was rather due to an artificial levelling of the ground and burying of old offerings undertaken when the *temenos*-wall and the inner structures, clearly contemporary with it, were built. The large terracotta heads of a lion and of a young man (Plate XIII.), which were dug out intact, greatly to the credit of our raw workers, come from this *stratum* of buried offerings. Fragments of the lion's body were recovered from points several metres apart; of the rest of the human figure not a trace could be found. Hence also came the bronze miniature armour, a considerable quantity of geometric pottery, an Attic *kleinmeister* kylix, and all the terracotta figures, with the exception of the largest lion. There was nothing which need be later than the fifth century in this well-defined black layer; on the other hand the fact that it extended under the walls on the west showed that they could not be earlier.

The evidence afforded by the excavation may be summed up as follows:—The principal *stratum* of terracottas, bronzes, and pottery, represents a cult which flourished from the eighth or seventh to the fifth century, and had for its centre a primitive altar on a bare hill-top.¹ The votive offerings most in fashion were on the one hand terracotta figures of men, women, lions and bulls, on the other, weapons and armour both real and miniature. We do not know how the larger offerings were deposited; some of the model helmets, cuirasses, and shields, had been slipped into

¹ The earliest object found on the hill is a steatite bowl, probably of Mycenaean date. There was no Mycenaean pottery, however, and the bowl may have been brought there at any time. Last year I found a similar steatite vessel, which had been discovered in an early grave, in use as a lamp in a church near Palaikastro.

crevices between or under the loose masses of limestone which encumbered the ground about the altar.

The construction of the *temenos*-wall and inner-buildings, including perhaps the altar-parapet, may belong to the late fifth or early fourth century. The plainly-constructed inner buildings were stores for ἀναθήματα or priests' houses. When the sanctuary was finally ruined the chamber at the west end contained cauldrons of thin sheet-bronze—part, perhaps, of the sacrificial furniture.

Professor Halbherr argues that the cult which had its home upon the Altar-hill was 'a worship of ancient origin, practised without a temple in the midst of the wildness of nature.'¹ As regards the early period I believe him to be right, but there are indications that the *temenos* of the later period enclosed a small temple as well as an altar. Some architectural details (lion-head gargoyles, antefixes, and anthemia), which can hardly be interpreted otherwise, will be figured and discussed in the fuller publication of the terracottas. The only spot where a temple can have stood is a rectangle of levelled rock,² 13 m. by 9, in the south-east quarter of the plateau. If it be asked what has become of its materials, we may point to the squared blocks in the field-walls below, blocks of the same freestone as the altar-parapet, and conjecture with Professor Halbherr, who saw pieces of columns here in 1884, that they have fallen—or been thrown—from the overhanging plateau. The razing of the temple to the ground and the dispersion of its members may be imputed, along with the mutilation of the inscribed *stelai*, to the destructive fury of the foes who conquered Praesos somewhere about 140 B.C. and made it no more a city. Κατέσκαψαν Ἱεραπύτνιοι, says Strabo.

We have no means of determining to what deity the Altar-hill was dedicated. The prominent place taken by figures of lions among the votive offerings ought to furnish a clue; but as there is reason to hope that further discoveries may extend our knowledge of Eteocretan religion, it is better not to waste time in speculation. One of the terracotta antefixes bears a remarkable design of a woman in a Doric chiton holding a snake in either hand.

¹ *A.J.A. l. c.* p. 379.

² First discovered by Prof. Halbherr, who saw in it the meeting-place of a sacred assembly, or a place for ritual dancing.

§ 10.—THE BRONZES FOUND ON THE ALTAR-HILL.

Plate X. represents the best of an interesting series of votive models of armour.

Helmets.—Six complete and fragments of others. They all consist of two pieces of sheet-bronze cut and bent into shape, and rivetted together at the top and back. Five of them have a high crest and a small square face-opening. The sixth and largest is of true Corinthian shape with advanced cheek-pieces; it had a crest and the usual nasal, but these are broken off.

For this primitive type of helmet compare Conze, *Melische Thongefässe*, Taf. iii.

Cuirasses.—Ten half-cuirasses (γύαλα) and one complete example with breast-plate and back-plate still united at the shoulders. The latter, not shown on the plate, bears the same engraved ornamentation as one of the half-cuirasses found at Praesos by Halbherr. (*A. J. A.* 1901. p. 384, Fig. 13) consisting of a volute over each breast and an omega-curve below. Cuirasses of this form and engraved with this conventional pattern were used in Greece from the end of the seventh century. They are seen on the François-vase, on the Rhodian plate with the combat of Euphorbus and Menelaus, and on the 'Tyrrhenian' amphorae (Attic products of 600—650 B.C.), and are common in later black-figured pictures, but are superseded in the early part of the fifth century by the more elaborate cuirass with movable shoulder-pieces which was clasped at the front instead of at the sides. Pausanias x. 26. 2 notes that a θώραξ of this archaic type appeared in the Iliupersis of Polygnotus. One of the rare instances on a red-figured vase is Gerhard *A. V.* iii. 201.

Loin-guards.—Seven whole, besides many fragments. These semicircular plates have been found more often in Crete than on the mainland. The Candia Museum possesses a fine example, presented by M. Triphyllis of Rethymnos, with a group of figures engraved in sixth-century style. Six examples, the largest 29 m. long and 15 deep, came to light in excavations at Axos. They have sometimes been explained as pectorals, worn to guard that part of the chest which was exposed by the deep neck-opening of the *thorax*. I prefer a suggestion made by Furtwängler in publishing a large plain example found at Olympia (*Die Bronzen*, Taf. ix. 985, Textband iv. p. 158) that it was attached to the girdle of the *chiton* under the cuirass and hung like an apron to protect the lower part of the abdomen.

The Praesos loin-guards have three rings in their upper edge; in the specimen from Olympia the middle part of the upper edge is missing, but there is a ring at each end. A smaller example found at Olympia has small holes all round its margin, and seems to have been mounted on leather.

Shields.—Between thirty and forty bronze discs, whole and in fragments, some of which are certainly models of shields. I have reproduced at the bottom of Plate X. specimens of two common types, the one perfectly plain and slightly convex, the other with a narrow flat rim. A third type has a raised central *umbo*; one example occurred in the Dictaeon cave and several in the cave on Ida. (*B.S.A.* vi. 109. Fig. 41. on right).

I have included in Plate X. two terracotta shields found in the same deposit. The larger, placed below the largest loin-guard, is quite plain, the other (above on the right) has two circles of red paint. Neither has any handle on the inside.

Besides these miniature offerings there were pieces of real armour—a Corinthian helmet, greaves, loin-guards and the central part of a shield decorated with

concentric circles, all crushed and in miserable condition: the tapering butt of a lance (*συνόρμη*) square in section and 17 cm. long (*Olympia, Bronzen*, Taf. lxiv. 1050), and parts of others, one of them round, (*ib.* 1066): three arrowheads: and tattered pieces of bronze plate, some of which may be the remains of full-sized cuirasses.

The remains of vessels include part of the ring-handle of a tripod, like that found on the same spot by Halbherr (*loc. cit.* p. 383 Fig. 12): a cauldron-handle and large shreds of cauldrons of hammered bronze: a vase-support in the form of a hoop with ovolo decoration resting on three claw-feet (cf. Carapanos, *Dodona*, Pl. xli. 112); and seven or eight little T-shaped objects, possibly vase-handles, like *Ol. Br.* Taf. xxxv. 666.

Among other bronze objects may be noted a hammer-head 7 cm. long: three olive-leaves which must have formed part of votive wreaths (cf. *Ol. Br.* Taf. lxvi. 1173): part of a fibula, (length preserved 11 cm.), the nearly semicircular bow expanding and becoming hexagonal in section: a fish-hook; a bodkin; a pair of tweezers; and a great number of plain rings, nails, and studs.

The only coins found on the Altar-hill are a didrachm of Cyrene and a base didrachm of Phalasarna (Wroth, *B.M. Cat. Crete*. Pl. xvi. 7, Svoronos, *Num. de la Crète*, Pl. xxv. 5).

Among the objects in other materials are the leg of a marble statuette (knee to ankle, 10 m), two button-like discs and a toggle of bone, and part of an aryballos of striped glass.

The terracottas are discussed by Mr. E. S. Forster in a separate paper.

§ 11.—THE HELLENISTIC HOUSE ON THE ALMOND-TREE SITE.

(PLATES XI. AND XII.)

This was the best constructed of the buildings which we examined within the town, and the only one that was well enough preserved to merit complete excavation. It is a compact block of irregular outline lying on the north-western slope of the First Acropolis, a few yards to the east of the saddle-like depression on which there is some reason to place the ancient Agora. Its front-wall, which owing to the declivity is a retaining wall, stands to-day three metres high, and the back-wall within the house is preserved to a height of two and a half metres. The ruins of insignificant houses on a lower terrace to the west had dammed back the covering of earth so effectually that not a stone of the existing building was in sight before the excavation, although scattered blocks of unusual size and finish attested that an important edifice had stood hereabouts. In the last week of May a trial-pit sunk through a threshing-floor struck upon an oblong stone tank, and a trench carried southwards from it exposed a doorway with massive jambs. Then a part of the imposing west front, worthy of a public building, came into view. (Pl. XII. 1.) Three weeks later, when

a systematic search by means of trial-pits and trenches had failed to find any structure comparable to it in workmanship or preservation, I decided to clear it entirely, and this was done between June 17th and July 3rd. Care was taken so to dispose of the earth and stones as to improve the surrounding property, broad new terraces being formed on the slope below, which had been a mere moraine of tumbled ruins. In recognition of this betterment the Moslem proprietors, who had dealt throughout in a most friendly spirit, were content to name a nominal price for the freehold; and the excavated area, twenty metres by thirty, was purchased, fenced in, and made over to the Cretan government. An old almond-tree growing in the south-west angle had afforded us shade during the midsummer heats. We were able to preserve its roots unharmed, and for many years to come its green boughs, a rare sight on that arid plateau, will guide the traveller to the monument which bears its name.

The coins found in the Almond-tree house range from the fourth to the second century B. C. A detailed list is given below. The peculiarities of its plan (see Plate XI.) show that the architect had to take account of existing streets; he had to sacrifice regularity of plan in the smaller rooms, in order to make the large rooms 9 and 4 approximately rectangular. (See the Plan, Plate XI.) To the north-east he has encroached on earlier houses, while the houses on the lower terrace to the north-west are contemporary or of later date. It follows that the house does not belong to an early stage in the city's history. The pottery found in it, and the comparatively unworn condition of the thresholds, suggest the third rather than the fourth century as the period of its construction.

Its original destination cannot be determined. The massive carefully dressed masonry is such as we should expect in a public building rather than in a private house of so remote and poor a city. The doorways are considerably wider than those with which we met in other houses at Praesos. Was it a public guest-house or *κοιμητήριον* such as is mentioned by Dosiadas (in Athenaeus, iv. 143 b) in his description of the Cretan *συσσιτία*?

Εἰσὶ δὲ πανταχοῦ κατὰ τὴν Κρήτην οἴκοι δύο ταῖς συσσιτίαις, ὧν τὸν μὲν καλοῦσιν ἀνδρεῖον¹ τὸν δ' ἄλλον ἐν ᾧ τοὺς ξένους κοιμίζουσι κοιμητήριον προσαγορεύουσι.

¹ The *ἀνδρεῖον* is mentioned in *C.I.G.* 2554, l. 51 (Treaty between Olous and Lato), and 2556, l. 37 (treaty between Hierapetra and Priansus).

All that we can say with certainty is that for some time before it was ruined and abandoned certain rooms were in use as an oil-factory. It may have been built as a summer residence by some rich citizen; the position of the largest room, 9, at the northern angle of the building, is significant of a desire to escape from the sun. But it seems more likely that it was originally intended to serve a public purpose, and then by some vicissitude fell into private hands, becoming little better than a farmhouse.

Mr. Douglas Wells has furnished the following architectural notes:

The main walls of the building are of ashlar, built in uneven courses, the blocks being drafted for about an inch and a half and faced with a chisel. The stone is a calcareous limestone, of a soft creamy tint when quarried, weathering to a very hard material of a grey-blue colour. Lime mortar has been used, but the joints are so fine that it is difficult to get the blade of a knife in between them.

The partition-walls are built of rough rubble with a large proportion of mud. No bonding occurs either between them and the main walls, or with each other, there are straight joints in every case. The lower part of the walls at the back of the building is cut out of the solid rock on which the whole structure was laid.

Patches of cobble paving remained, but the rest of the floor was either rock or a hard clay subsoil.

The roof had been tiled, quantities of plain tiles and cover-tiles (see Fig. 28) being found over all the floors.

The walls were finished on the inside with plaster.

COVER TILE
ALMOND TREE SITE

FIG. 28.

Ascending the rock-cut street 'P,' six feet wide, which mounts steeply from the Agora, we reach a point where a narrow lane branches off to the right; on the left is a paved recess which forms the forecourt of the house to be described. The street continues up the hill in a series of broad shallow steps, and is joined from the left by another, 'O' on the Plan, which skirts the back wall of the house. From the forecourt a doorway facing the street leads into the vestibule 7, and one on the right into the triangular room 5, while on the left a flight of eleven steps descends to a narrow basement and to room 6 opening off it, beyond which there is a cave-like cellar hewn in the rock below the little forecourt (see Section N-N); over 6 there may have been another room, of which no trace now remains, entered by a door opposite to the entrance of 5. This grouping of the entrances makes it practically certain that the whole block including rooms 1-9 formed one dwelling. It consisted of two separate parts, the series 7, 8, 9, 2, 1, which seem to have been living rooms, and 5, 4, 3, which were work-rooms. There was an upper storey, reached by a stair from 3.

Before passing to the interior it will be convenient to describe some external features.

In the high front-wall of the house are two water-spouts, issuing from just below the floor-level of rooms 7 and 8, and discharging into the basement mentioned above. They are projecting bosses '17 m. square with a chamfered face and round orifice, worked in the centre of ashlar blocks of the eighth course from the rock. This course is destroyed further north, but it is probable that the spouts were repeated at regular intervals. The wall below the southernmost of the two which remain is much weathered by the dripping water; it may have been the outfall of a sink in the adjacent corner of room 7.

In the same wall there are three beam-holes, cut about a metre apart, for beams '25 m. broad and '20 thick. Almost under the southernmost is a rebate in the base-course intended to receive a wooden post. They are rudely cut, crossing the joints between the courses, and evidently belong to some structure, posterior to the rest of the house, which was erected in the basement. (See Plate XII. Fig. 1.)

SECTION AA
FIG. 29.

Among the fallen blocks which choked the two narrow basements in front of the house were a waterspout and two window-heads, all in the same limestone as was used for the ashlar-work. They are shown in Figs. 29 and 30. To judge from the positions in which they were found, both windows belonged to room 9. They were '35 m. wide, and had been furnished with wooden shutters turning on pivots like the doors. Here also were found some stone cornice-blocks.

Turning to the internal arrangements, we find nothing of interest in room 7 except a roughly hollowed circular mortar. The doorway between 7 and 8, the real front door of the house, is more carefully finished than the others, and the stone jambs characteristic of all Praesian houses are here more massive than usual. The threshold, details of which are given in Figure 30, is much like that of a late Hellenistic house at Delos (*B.C.H.* xix. Pl. V.). The position of the hole for the bolt shows that the right-hand half of the two-leaved door was opened first, as is also the modern practice. The sockets for bolts and door-pivots were fixed in wooden

PRAESOS SITIA CRETE.

Architectural Fragments from Almond Tree Site, 1st Acropolis & the Saddle.

ARCHITRAVE

CAP TO ANTAE

CORNICE

DOOR ARCHITRAVE
SECTION.

DOOR ARCHITRAVE
ELEVATION
(TO SMALL SCALE)

1ST ACROPOLIS :— (ALL IN LIME STONE)

TRIGLYPH OF EARLY PERIOD
from 'The Saddle'

PART OF A DORIC FRIEZE
from 'The Saddle'.

SECTION

PLAN OF DOORWAY shewing INTERNAL & EXTERNAL FINISH.

SECTION THRO' STEP & CILL
Almond Tree Site (Small Scale.)

SECTION OF TRIGLYPH (THE SADDLE)

VOLUTE OF IONIC CAP (Sketched to Scale.)

PLAN LOOKING UP.
(Dotted Lines shew
Shutter opening)

SECTION

WINDOW (SMALL SCALE)
ALMOND TREE SITE.

OUTSIDE ELEVATION

FIG. 30.—ARCHITECTURAL DETAILS.

plugs. There is a similar sill with three mortices in the doorway between 4 and 5, and another belonging probably to the door of 7 was found in the forecourt.

Room 9, the largest, measures 10.40 m. by 8.70 and was the principal living-room. The cross-wall marked on the plan does not now project above the clay floor; being better finished on the south side it seems to indicate an original difference of level between the floor near the entrance and the larger area beyond, which formed a dais rising about six inches above it; a later levelling-up obliterated this arrangement. A mass of broken pottery was found in the south angle of this room, chiefly pieces of large storage-jars; they did not form complete vessels, but had been brought there for some purpose as fragments. Similar jars, which had been in use when the house was abandoned, were found in rooms 8, 9, and 2, crushed by the fall of the roof. The wall separating 2 and 1 is a late addition, perhaps contemporary with the blocking-up of a doorway in the north wall of the former.

Returning to the entrance and crossing the triangular vestibule we reach a large room, 4, which has a door-sill resembling that of 8, and measures 9.60 m. by 8.35 m. A low platform about 1.10 m. broad and .20 high seems to have extended all round the room; the surviving parts of it are the stone slabs marked in the Plan. In the middle are remains of an oblong tank or vat, wrongly described in the Plan as an *impluvium*; the ends are destroyed, but the sides, each formed of a single slab, are still in position; the floor consists of cobblestones bedded in clay. It was surrounded and strengthened by a stone plinth .32 wide and .25 high, two blocks of which are still in place. A use for this receptacle is suggested by the presence of an oil-press in the same room; it may have been a vat for the storage of oil, for which purpose it would probably be lined with lead. A rebate along the rim of the side-slabs shows that it had a wooden lid, such as would be necessary for the protection of the oil from dust. Internally it measured 1.50 m. in length, 1.05 in width, and nearly .40 in depth.

The position of the oil-press is determined by two beam-holes in the wall, to the right of the entrance. A stone press-bed was discovered close by on the raised platform already mentioned; the plan (Pl. XI.) shows it in the position in which it was discovered, with its spout turned towards the corner. On it lay a small greenstone celt which was certainly left

there when the house was abandoned. It may have been picked up and preserved as an amulet. If so, it is an interesting indication of superstitious ideas attached to *ἀστροπελέκια* in Hellenistic times.

Figure 32, sketched by Mr. Comyn, shows the press-bed replaced on a block found *in situ* under the beam-holes, but it is clear that a part of the substructure is missing and that the press-bed when in use was raised nearer to the beam. The apparatus was of the kind described by Messrs. Paton and Myres in *J.H.S.* xviii. 209—217. The press-bed, a neatly

FIG. 31.—OIL-PRESS IN ROOM 4.

worked circular slab of limestone .74 m. in diameter, has the usual ring-channel on its upper surface deepening towards the point where it issues through a heart-shaped spout, which projects .09 m. The narrowness of the margin surrounding the sunk ring-channel distinguishes this example from most of those described by Messrs. Paton and Myres, and suggests that the olives pressed on it were not packed in bags, as was and is a common practice, but in folded squares of grass-fibre such as are still used in Crete and bear the name of *μαλαθούνια*. The packer works at a raised counter, and it is astonishing to see with what speed he fills the outspread cloth with a flat cake of olive-pulp, previously crushed in a horse-mill,

drenches it with hot water, folds over the corners envelope-fashion, and piles them a dozen at a time on to the press-bed, called *κατωμαγγάνα*. This method seems to have been used in Attica about 500 B.C. Mr. Cecil Smith recently published a black-figured vase on which two men are depicted forcing down the beam of an oil-press (*Forman Collection Sale Catalogue*, No. 323). The drawing (Fig. 33) which his kindness allows me to republish here shows that the mass between the press-bed and the beam is divided by eight horizontal white lines; I have very little doubt that they represent just such a pile of flat envelopes as I have described.

FIG. 32.—OIL-PRESS IN ROOM 4:
SECTION OF WALL AND PRESS-BED.

FIG. 33.—ATHENIAN VASE WITH SCENE OF
OIL-PRESSING.

The form of our press-bed makes it probable that the same method was in vogue at Praesos in the second century B.C. But there is evidence that a different one had been in use not long before.

On the outer faces of the two slabs already described as forming the sides of the vat in the middle of the room there are cut certain channels which prove that they were once united. Fig. 34 shows how they would appear if placed in juxtaposition. Together they compose an oblong press-bed furnished with a circular channel spout of the usual kind besides some subsidiary channels intended to prevent the escape of oil which overflowed to either side. The slab has not only been sawn in two, but curtailed in length; it is evident that the small channel on the right is only the end of a diagonal drain which extended much further,

and it is probable that something has been cut off at the left hand also. It must have sloped forward, so that the escaping oil tended to run to the front; the subsidiary channels were contrived to intercept and conduct it to a point near the principal outfall.

It is not unlikely that this cumbrous oblong slab was displaced in favour of the handy and portable circular press-bed in consequence of the introduction of a new method which was more effectual in confining the olive-kernels to the central area (diameter .48 m. in the round press, .63 in the large one) and made it unnecessary to guard against an overflow. The older method may have been to crush the olives in a single bag which would spread out under pressure—hence the wide margin; the improvement may have lain in the adoption of cloth envelopes. These would

FIG. 34.—PLAN AND SECTION OF OLDER PRESS-BED.

occupy more place vertically than the single bag and might necessitate the raising of the beam-hole; hence perhaps the second beam-hole seen in Fig. 31. The old press-bed was turned to account in the construction of a vat, probably for the storage of oil; we have seen that it was provided with a lid, which, as modern experience shows, is indispensable for the exclusion of dust. I have refrained from speculating on the means by which the pressure was applied. In the vase-painting a man is seen tying two huge weights to the end of the beam, while another has added his own weight to it, clinging in mid-air. The combination of beam and screw figured by Messrs. Paton and Myres (*loc. cit.*, p. 210) seems to be mentioned by Pliny in his obscure description of

oil-pressing machinery (*N.H.*, xviii. 317) as having come into use about a century before his own day. He calls it *Graecanica*; it may have been known in the Levant considerably earlier than in Italy, and it is possible that a large block with a deep round mortice in the centre of its upper surface, placed on a raised platform in the other side of the doorway of room 4 and marked *stone buttress* on the plan, may have played a part here.

Room 9 had been used as a store-room and contained remains of numerous *pithoi*. To the right of the door was found a well-preserved group of three large vases (Pl. XII. Fig. 2, foreground, on the left), a broken

FIG. 35.—OIL-SEPARATOR FROM HOUSE
AT PRAESOS.

FIG. 36.—OIL-SEPARATOR: SKETCH OF
HANDLE.

pithos, an amphora with pointed base, and the two-handled jar shown in Fig. 35. It is pail-shaped, and has a projecting spout flush with its bottom. There can be little doubt as to its use. In the modern process the olive kernels, before being pressed, are drenched with hot water, and the product after pressing contains more water than oil. The oil in due course separates itself and rises to the surface, and it is necessary either to bale it out from the top or to drain away the water from the bottom. The former method is slow and primitive; I was surprised to see it practised last November in the province of Mylopotamo. The latter is in general use, large and complicated separating-tanks being constructed on this principle; the Praesos jar illustrates the simplest form of it, in which after the contents have been allowed to stand some time, the tap is set running and the

water escapes, a watcher being ready to stop the flow and change the recipient as soon as oil appears.

From this room a staircase ascended to the upper floor, or to the roof. The three lowest steps were of stone, '90 m. wide; the remainder were no doubt of wood.

Minor Finds.—Pottery. Fragments of coarse *pithoi* were numerous in rooms 3 and 9. The former yielded the only inscribed potsherd, part of the rim of a jar which had an aperture at the mouth of about '35 m. The rim itself is '05 wide and has the name

ΤΑΝΩΝΟC

deeply incised on its upper surface in letters '025 high. The mutilated letter is certainly a Π; it is impossible to say whether others preceded it, since in spite of repeated search no other fragment of this rim was discovered. The finer wares were almost wholly wanting. Besides one fragment of red figure and one of geometric pottery, which had drifted in with earth from the slopes above, there were a few bits of Hellenistic black-glazed cups and plates, and one fragment of this ware with a female head in high relief.

Coins.—The diameter is given in millimetres.

1. Æ 25. Aptera. *Obv.* ΑΠΤΑΡΑΙΩΝ. Head of Artemis r. The artist's name ΠΥΘΟΔΩΡΟΥ is just legible. *Rev.* ΠΤΟΛΙ ΟΙ ΚΟΣ. Warrior, armed

with helmet, cuirass, shield and spear, standing l., raising his r. hand towards a tree. Wroth, *Brit. Mus. Cat. Crete, etc.*, p. 8 (1), Pl. ii. 3. Svoronos, *Numismatique de la Crète Ancienne*, p. 15, (5), Pl. i. 10.

2. Æ 19. Itanos. *Obv.* Helmeted head of Athena l. *Rev.* Eagle l., looking back, in incuse square. Svoronos p. 204 (26), Pl. xix. 12.

3. Æ 13. Itanos. *Obv.* defaced. *Rev.* Star.

4. Æ 20. Praesos. *Obv.* Female head l. *Rev.* Bull's head. Svoronos p. 292 (48), Pl. xxviii. 18.

5. Æ 19. Praesos. *Obv.* Female head r. *Rev.* Bull's head. Svoronos p. 292 (46), Pl. xxviii. 17.

6. Æ 15. Praesos. *Obv.* Head of Apollo r. *Rev.* ΠΡΑΙ CΙΩΝ. Thunderbolt. Svoronos, p. 292 (49), Pl. xxviii. 20. Wroth, p. 72 (16), Pl. xviii. 5.

7. Æ 15. Thebes. *Obv.* Buckler. *Rev.* Cantharos.

Bronze.—Neck and foot of a small oinochoe. Socketed arrowhead, '042 long. Socketed hook (from a spindle?). Stud with flat round head, from one margin of which projects a small loop. Disc, '15 m. in diameter, '001 thick, with lead rivet

at centre. Bolt .05 long and .012 thick. Four nails, respectively .13, .05, .05, .045 long. Numerous broken nails and miscellaneous fragments. Disc .07 in diameter (mirror-cover?). Small figure of couchant lion, .09 long, pierced through back and head. Conical bolt-head, with remains of iron bolt.

Lead.—Massive rivet, used for mending a *πίθος*.

Glass.—One fragment of a vase. 21 large and small blue beads, mostly dark blue. Two long cylindrical beads. Fragments of an intaglio of glass paste.

Miscellaneous.—Pieces of resin (for sealing jars?). A water-worn pebble of singular form, pierced for suspension. Marble knob, probably from the lid of a pyxis. Three fragments of rock crystal and six of obsidian. Four minute discs of polished bone. Two stone beads. Part of an amygdaloid cornelian intaglio of the common sub-Mycenaean type with a decoration of meaningless wheel-cut lines.

R. C. BOSANQUET.

I.

↑
Bath Room

↑
Square Impluvium with column bases at angles.

2.

I, PRAESOS: REGION OF MEGALITHIC REMAINS.

2. PALAIKASTRO: INTERIOR OF HOUSE B.

PRAESOS: VASES FROM TOMB C.
(Scale $\frac{1}{3}$.)

PRAESOS: MODELS OF ARMOUR FROM THE ALTAR HILL.
(Scale about 2:5.)

I.

2.