



Late Minoan Warrior-Graves from Ayios Ioannis and the New Hospital Site at Knossos

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LATE MINOAN WARRIOR-GRAVES FROM AYIOS IOANNIS AND THE NEW HOSPITAL SITE AT KNOSSOS

(PLATES 50-56)

THESE five tombs, discovered by chance during the last two years, have an importance out of all proportion to their size and the wealth of their contents. They comprise (see Map, FIG. 1) (1) at Ayios Ioannis, a solitary 'shaft-grave'¹ with bronze weapons of early Late Minoan type, but no vases; and (2) on the site of the new Hospital, a group of four² tombs (three 'chamber-tombs' and a 'shaft-grave') containing bronze weapons, together with Late Minoan II vases which provide much fresh information about the pottery of the period.

None of the five tombs had held more than one, or at the most two, bodies: that at Ayios Ioannis, and all except Tomb I on the Hospital site, evidently belonged to warriors buried with their arms. The bronze helmet from Tomb V (see p. 256 and PLATES 50-52) is not only the first of the Bronze Age from Crete, but the only one of its type from the Aegean;³ and it has important bearings upon the origins of early metal helmets in the rest of Europe to the west and north. The arms, and notably the large fighting-spears (FIGS. 8 and 12, PLATE 53) found in all four of the 'warrior-graves', represent the finest collection of Bronze Age weapons known from Crete, and throw new light on the military equipment of the last phase of the Knossian Empire.⁴

The authors wish to express their very deep gratitude to Dr. N. Platon, Ephor of Antiquities for Crete, for his help and ready co-operation both during the excavation of the tombs and afterwards in the work on the material in the Museum at Herakleion, where his unrivalled knowledge of Cretan antiquities was of inestimable value. His ideas and suggestions have been freely incorporated in the text beyond a possibility of particular acknowledgement in each case. We are also grateful to Mr. S. Alexiou, Epimelete of Herakleion Museum, for much kind help in our work on the material in the Museum, to Professor V. G. Childe, Professor C. F. C. Hawkes, Professor J. M. C. Toynbee, Mr. R. D. Barnett, Miss S. Benton, Mr. P. E. Corbett, Miss D. H. F. Gray, Dr. H. Hencken, Mr. R. W. Hutchinson, Miss R. Levy, Miss H. L. Lorimer, Miss N. K. Sandars, Mr. L. C. D. Tait, and many others who have kindly discussed the material and offered valuable suggestions and references that have helped to elucidate it.

We are very much obliged to Mr. I. W. Cornwall, of the London University Institute of Archaeology, for examining the animal teeth and minerals, and to Mrs. F. L. Balfour-Browne and Dr. E. Trewavas of the Natural History Museum, South Kensington, for identifying the wood remains and a shark's tooth from Tomb I; to Dr. D. B. Harden, of the Ashmolean Museum, and Professor W. E. S. Turner, of the Society of Glass Technology, for reporting on the lump of glass from Tomb III; and to the Reverend V. E. G. Kenna, R.N., for a note on the seal from Tomb I, and advice and information with regard to the seals from Tomb III.

Other acknowledgements are reported in the appropriate place. The drawings, except for the plan, FIG. 1, are entirely the work of P. de Jong. The report on the tombs is by P. de Jong and M. S. F. Hood in collaboration. The account of the helmet and other objects from the tombs is by M. S. F. Hood. The photographs of the objects were taken by Mr. E. M. Androurakis of Herakleion using the School's plate camera.

The following abbreviations are used in this article, in addition to those ordinarily in use in the Annual.

<i>AC</i>	Pendlebury, <i>The Archaeology of Crete</i> , 1939.
<i>Chamber Tombs</i>	Wace, <i>Chamber Tombs at Mycenae</i> (<i>Archaeologia</i> 82), 1932.
<i>Homer and the Monuments</i>	Lorimer, <i>Homer and the Monuments</i> , 1950.
<i>MP</i>	Furumark, <i>The Mycenaean Pottery</i> , 1941.
<i>New Tombs at Dendra</i>	Persson, <i>New Tombs at Dendra</i> , 1942.
<i>Prehistoric Tombs</i>	Evans, <i>The Prehistoric Tombs of Knossos</i> (<i>Archaeologia</i> 59), 1906.
<i>Prosymna</i>	Blegen, <i>Prosymna</i> , 1937.
<i>Royal Tombs at Dendra</i>	Persson, <i>The Royal Tombs at Dendra</i> , 1931.
<i>Schachtgräber</i>	Karo, <i>Die Schachtgräber von Mykenai</i> , 1930-33.
<i>TDoAx</i>	Evans, <i>The Tomb of the Double Axes</i> (<i>Archaeologia</i> 65), 1914.

¹ For 'shaft-graves' at Knossos, see *Prehistoric Tombs* 11.

² There were indications of a possible fifth tomb (see p. 251).

³ Not, however, the first Bronze Age metal armour recorded from Crete. See note, p. 260.

⁴ As Evans says (*PM* IV 785 ff.), 'The last Palatial phase at Knossos presents a military and indeed militaristic aspect', reflected for instance in the 'Armament Tablets' and the 'Shield Fresco' (here dated to the beginning of L.M. II: but see *PM* III 308, followed by *AC* 197-8, where it is called L.M. IA); and illustrated by the break in continuity visible in the remains of the smaller sites along the northern coast, and by the cessation of Phaistos and Ayia Triadha. For an opposite view of the Minoan Cretans as essentially pacific by contrast with the war-like Mainlanders, see *AC* 271, 286.

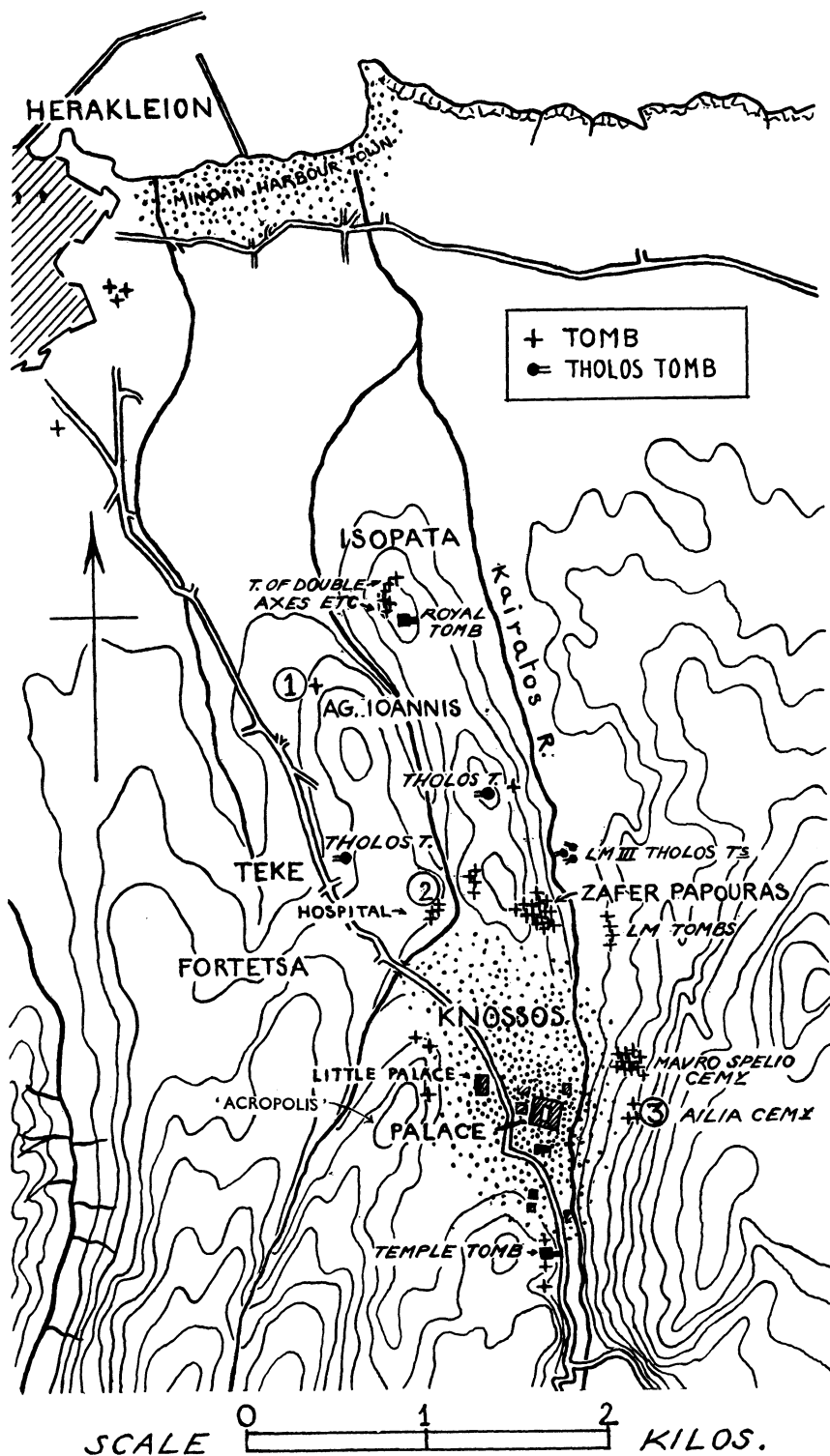


FIG. 1.—THE KNOSSOS AREA, SHOWING THE TOMBS AND CEMETERIES. THE SPECKLED AREAS INDICATE THE APPROXIMATE EXTENT OF THE CITY AND HARBOUR TOWN.

One or two similar 'warrior-graves' have turned up in the past at Knossos. Most comparable to our graves is a solitary tomb that came to light many years ago on the 'Acropolis' hill west of the Palace.⁵ No doubt there was at Knossos in this period some kind of military aristocracy, which formed the core of the army, manning the chariots stored in the arsenals of the Palace,⁶ and officering the bands of light-armed troops and foreign auxiliaries;⁷ and such graves, modest in style, but richly provided with weapons, may be supposed to belong to members of this body.

The tombs are first described (p. 245). There is then a general account of the pottery (p. 253) and bronze weapons (p. 255), with a discussion of the helmet (p. 256); followed by an inventory of the vases and other objects according to tombs (p. 261).

(1) THE 'SHAFT-GRAVE' AT AYIOS IOANNIS

(See Plan, FIG. 2)

This tomb is situated about 300 metres east of the main Knossos-Herakleion road, at the north end of the ridge that runs parallel to the Isopata ridge from the Hospital site towards the

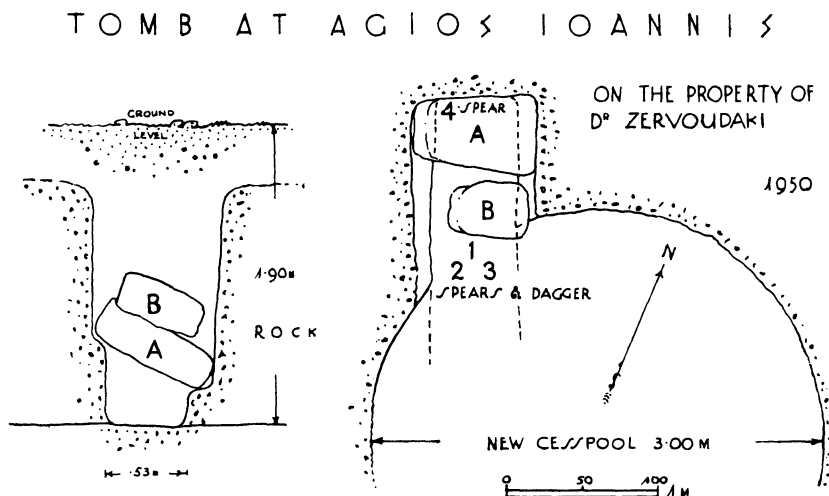


FIG. 2.—THE 'SHAFT-GRAVE' AT AYIOS IOANNIS.

sea. The tomb came to light during the Spring of 1950 in the making of a cesspool immediately in front of the house of Dr. Zervoudhakis. Most of the tomb had been destroyed and the

⁵ PM IV 849, fig. 832. This is clearly the tomb described in PM II 547, as containing L.M. IA relics, and marked on the plan (opposite p. 547) as 'Rock Tomb L.M. I' (at the bottom edge of the plan, just north-west of the ruined Chapel of 'Hagios Kyriillos'). The objects from the tomb, which are now in the Ashmolean Museum at Oxford, consist of two short spear-heads or javelins like AJ (4) and I (11), together with one long 'horned' sword and fragments of another: the only vase recovered from the tomb was a squat alabastron, which emphasises the similarity with the tombs of the Hospital site (see p. 254, and n. 43). For other 'warrior-graves' at Knossos, cf. Tomb 36, the 'Chieftains's Grave', in the Zafer Papoura cemetery (*Prehistoric Tombs* 51 ff.), with long 'horned' sword, short 'cruciform' sword, and two spear-heads like II (4); and Tomb 44 in the same cemetery (*ibid.* 62), with long 'horned' sword and short sword.

⁶ For the 'Chariot Tablets', etc., see PM IV 786 ff. Compare the similar inventories of war-like stores kept in the Palace at Nuzi, together with records of the equipment bestowed upon individual warriors (Starr, *Nuzi* I 541).

⁷ As in the famous fresco of 'The Captain of the Blacks' (PM II 755, pl. xiii; IV 886).

objects removed to the Museum before our arrival on the scene.⁸ It was a 'shaft-grave', with the floor of the compartment 1.90 below the modern surface and 0.53 wide at the bottom. Ledges ran along each side of the grave at unequal heights, the one 0.25, the other 0.50 above the floor. These ledges had evidently supported cover slabs, one of which, of roughly squared limestone, was still in position (A on Plan, FIG. 2); while another large block of stone (B) was lying at an angle higher in the fill. The only object recovered from the end of the grave that was left for us to examine was the small spear-head A J (4), which lay across the grave about 0.25 above the floor; there were traces of wood in its socket.⁹ No signs of a body were detected apart from two tiny fragments that might have been finger or toe bones.¹⁰

In 1951 trial soundings were made with the hope of finding other tombs on a patch of waste ground about 20 metres square immediately west of this 'shaft-grave' and across the road from the house of Dr. Zervoudhakis. No further tombs came to light, and it is therefore possible that here, as on the Hospital site, we must expect, not a large cemetery, but only a few scattered graves.

(2) THE TOMBS ON THE NEW HOSPITAL SITE

(See Plan, FIG. 3)

These tombs came to light during the Spring of 1951 in the levelling of the site for a new Hospital on the south slope of the hill that forms the base of the Ayios Ioannis ridge, and immediately north of the little stream which according to Evans may mark the boundary of the Minoan city at its widest extent.¹¹ As the site lies within the Knossos area, Dr. Platon asked Mr. de Jong to carry out the examination of the tombs on behalf of the British School.¹²

Three of the tombs (I, III, V) were small 'chamber-tombs',¹³ the fourth (II) a 'shaft-grave'; and a possible fifth (IV) may have been a 'pit-cave'.¹⁴ The tombs were scattered in a rough line along the slope of the hill over a distance of about 75 metres: the entrances of the three 'chamber-tombs' were more or less on a level. It is possible therefore that the tombs lay beside a path following the contour of the hill. A thorough search was made for further tombs wherever the levelling of the site had exposed the rock, an area of about 150 × 40 metres; and trial trenches were dug on the slope of the hill immediately below the levelled area to the south: but no other tombs were found. These tombs therefore do not appear to form part of a large cemetery like that at Zafer Papoura a few hundred metres to the east, but suggest a small burial ground belonging to some important family. This is also indicated by the character of the tombs, with only one or at most two bodies, and by the comparative wealth of their contents. The family would no doubt own the land on which the tombs stood.

The tombs are securely dated to the last period of the Palace at Knossos by the style of the

⁸ The discovery was reported to Dr. Platon, who invited P. de Jong to complete the examination of the tomb.

⁹ These small spear-heads probably had quite short hafts, and were hunting spears or javelins (see p. 256, and the evidence from Tomb I, p. 265, under I (11)).

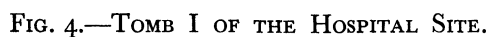
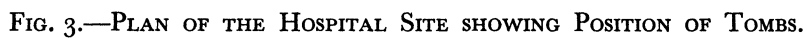
¹⁰ Compare Tomb V and the body on the ledge in Tomb I of the Hospital site.

¹¹ See the map, *PM* II, opposite 547. The stream is here shown as the 'Gully' which runs east from 'Loukas Taverna'. The stream has now been filled in and a new bed dug for it about 100 metres further south to make a boundary for the Hospital grounds on that side.

¹² The floors of the tombs were very close to the surface of the levelled area. The actual removal of the soil was therefore a simple matter, and only two men were employed, Spiro Vasilakis and Grigori Kritsalakis, under the supervision of Manoli Markoyannakis, the School's foreman at Knossos.

¹³ The chambers, dug in the soft white 'kouskouras' rock of the region, had long ago collapsed.

¹⁴ All three types of tomb were found side by side in the Zafer Papoura cemetery (*Prehistoric Tombs* 1 ff.).



vases found in them. While most of the vases may be attributed to Late Minoan II, one at least, the flowered jug from the 'shaft-grave' (II (1)), is better classified as Late Minoan IIIA 1; and it follows that the warrior in this tomb, with his richly ornamented weapons, may have been laid to rest only a year or two before the final destruction of the Palace.

Tomb I (Plan, FIG. 4). This was the largest of the 'chamber-tombs'.¹⁵ The dromos, whose sides leaned slightly inwards according to the usual practice, was 1.15 wide at the bottom. It was preserved for a length of 4.00, and sloped down steeply with two rough steps towards the entrance of the tomb-chamber: between the last step and the façade of the entrance was a shallow sinking 7–8 cm. deep and the same width as the door. The façade of the entrance was elaborately cut with sloping pilasters about 0.60 high; above which the upper part of the façade rose vertically, with a set-back of 0.10.¹⁶ The sides of the entrance, like the walls of the dromos, had a slight inward lean: the entrance was blocked with large unworked stones with soft earth between them.

The chamber, which was set at a slight angle to the dromos, measured 2.60 long by 2.20 wide, with the floor about 1.40 below the levelled surface. A low bench, raised 0.10 above the floor of the chamber, was formed by a recess to the right of the entrance. The tomb contained two bodies, perhaps a man and a woman, since by the head of the body on the floor was a pair of tweezers (12) of the type used for plucking hairs, while under that on the bench lay a spearhead (11).¹⁷ The skeletons were very poorly preserved, particularly that on the bench; but human teeth at the north end of the bench imply that this body, like the other, had been placed with its head away from the entrance.

Both the dead seem to have been buried in wooden coffins or on biers, traces of which in the form of brown smudges a few millimetres thick could be made out round the areas where the bodies had been.¹⁸ The smudge above the bench, mixed with scraps of bone, gave a very clear shape, especially at the north end; from which it could be followed down the bench for a length of 1.50 with a width ranging from 0.50 to 0.25. These brown smudges were a good 0.10 above the surface of the rock, which suggests that the coffins or biers were raised on legs: the evidence for this was particularly clear on the bench, from the rock floor of which were recovered a shark's tooth (15) and the spear-head (11), while the brown smudge ran uninterrupted some 0.10 above them; they had presumably been resting on the ledge under-

¹⁵ Tombs II–V were cleared by P. de Jong, Tomb I (which was the last to be discovered) by both of us in collaboration.

¹⁶ This may be copied from the door of a house with high stone socles supporting a wooden frame. Tomb 9, the most elaborate of the important group of fourteen 'Tombe dei Nobili' at Phaistos, had a similar façade, although the 'pilasters' were here rather lower (*MA* XIV 510, figs. 3 and 4). For other carved doorways, cf. the 'Tomb of the Double Axes' and Tomb 5 of the same group at Isopata (*TDoAx*, figs. 33a and 47), and Tomb 14 (the 'Tomb of the Tripod Hearth') at Zafer Papoura (*Prehistoric Tombs*, fig. 32). For rock-cut benches, cf. Tomb 9 at Phaistos (above) and Tomb 3 of the Isopata group (*TDoAx*, fig. 19).

¹⁷ There was no evidence that the bodies had been placed in the tomb at different times, and if anything the arrangement of the vases suggested a single occasion of burial. It is therefore worth bearing in mind the possibility of a wife or concubine killing herself or being killed on the death of her husband or master. Something of this kind was suspected by Persson in the tholos tomb at Dendra (*Royal Tombs at Dendra* 68, with a full discussion). For such practices among the Celts of Gaul, illustrated both by the literary and by the archaeological evidence, see Déchelette, *Manuel d'Archéologie* IV (1927), 541 ff.

¹⁸ If coffins were employed they would probably resemble the clay *larnakes* with legs and gabled lids common in Late Minoan tombs. Such *larnakes* were clearly imitated from wooden models (*Prehistoric Tombs* 8 ff.). They are quite short, and the bodies were placed in them with the knees drawn up; so that a body in a wooden coffin of this type might well reach the flexed position seen in the case of the skeleton on the floor of Tomb I, cf. Tomb II (FIG. 5). For wooden coffins, see *New Tombs at Dendra* 111 ff., the only example established with certainty either in Crete or on the Mainland. This was about 1.90 long and 0.55–0.60 wide, and apparently had no legs. Clay *larnakes* are hardly found in tombs on the Mainland (*Chamber Tombs* 9), and wooden coffins may also therefore have been exceptional there: the occupant of this coffin at Dendra was accompanied by the unique bronze helmet! For (?) biers, see Tomb 9 at Phaistos, in the pit to the right of the entrance (*MA* XIV 522 and n. 1), and Prosymna, where traces were noted in three or four tombs (*Prosymna* 249).

neath the coffin or bier. At the south end of the bench near the entrance the head of a sheep or goat had apparently been placed; but of this only some scraps of bone and two teeth survived.

The tomb was poor in bronzes, but yielded a rich harvest of vases, ten in all. At the far end against the north wall of the chamber had stood the fine 'Bird' amphora (6); inside it were two little plaques of schist (14), a few tiny pebbles, and the curious seal-stone (13). Alongside the bench were ranged two other amphorae (7 and 8), together with a jug (3) and an alabastron (9).¹⁹ In the corner between the entrance and the bench was the hole-mouthed jug (4); it was lying on its side with the base well above the floor, and may therefore have fallen from the bench. The stemmed goblet (1) may have been standing on top of the bier or coffin, since it was found complete about 0.10 above the rock floor of the bench. The other stemmed goblet (2) was scattered in fragments around the same area. The lamp (10) came from the actual surface of the bench.

Remarkable was the position of the large stirrup-vase (5), which was lying complete on its side in the fill a good 0.30 above the floor of the chamber.²⁰ The three large stones in the chamber had apparently fallen from the blocking-wall of the entrance.

Tomb II (Plan, FIG. 5). This was a 'shaft-grave' with the floor 1.35 below the levelled surface. On the north side of the grave about 0.95 above the floor were traces of a ledge 0.20 wide. Below this ledge a number of large stones in the filling formed a kind of layer across the grave; and immediately above this layer, in the north-west corner, was standing the jug (1).

The grave at floor-level measured only 1.60 × 0.60. The skeleton rested on its back with the legs flexed and the knees covering the alabastron (2): it is conceivable that the body had originally been set in the grave with the knees drawn up, and that they had afterwards fallen to one side, *cf.* the body on the floor of Tomb I above. On the chest of the skeleton was a gold-hilted sword (3), the hilt of which had apparently been placed in the dead warrior's right hand; while by his side lay the magnificent spear-head (4) with a butterfly incised on its socket. Traces of carbonised wood in the area of the sword may indicate a sheath, or a coffin or bier as in Tomb I.

Tomb III (Plan, FIG. 6). The chamber in this tomb was roughly semi-circular,²¹ 1.80 long by 2.10 wide, with the floor less than a metre below the levelled surface. The dromos was preserved for a length of 2.60; it had the walls leaning slightly inwards, and was 0.90 wide at the bottom. The entrance to the chamber was 0.70 wide with a blocking-wall of large unworked stones. Some stones on the floor of the chamber to each side of the entrance either fell there from the blocking-wall when the tomb collapsed, or may have been pushed aside after a re-opening of the chamber to admit a second burial. The tomb contained two bodies, which

¹⁹ Most of the vases in the south-east part of the tomb had been badly smashed and scattered. The amphora (7) was originally full of fine grey ash, which Mr. I. W. Cornwall, of the London University Institute of Archaeology, kindly examined and found to be highly calcareous, containing a considerable quantity of phosphate and scraps of charred wood; it could therefore be fire-ash: the wood scraps were identified by Mrs. F. L. Balfour-Browne, of the Natural History Museum, South Kensington, as olive and oak. A few tiny fragments of carbonised wood, identified by Mrs. Balfour-Browne as olive, were recovered from the alabastron (9); but these may have belonged to the contents of the amphora (7) which were much scattered. For the probable uses of alabastra, see p. 254.

²⁰ It is difficult to believe that this represents the position in which the vase had originally been placed in the tomb; and it had therefore presumably been thrown up in some way when the roof of the chamber collapsed. If the vase had been resting on top of the bier or coffin, this might be more easily understood.

²¹ Most of the fourteen 'Tombe dei Nobili' at Phaistos were of this shape (*MA* XIV 507, fig. 2): *cf.* *Prehistoric Tombs* 3 n. b, for other examples from Crete; but the shape is curiously enough not represented among the forty-nine chamber-tombs of the Zafer Papoura cemetery, although it is found in the Mavrospelio cemetery at Knossos (*BSA* XXVIII 243 ff., figs. 1 and 27, Tombs iii and xiii). It occurs on the Mainland, *e.g.* at Mycenae (*Chamber Tombs* 135) and Prosymna (*Prosymna* 243).

had been placed head to foot the length of the chamber; the skeletons were very poorly preserved, and the exact position of the bodies was difficult to ascertain.²²

This tomb was by far the richest of the group in finds. Around the walls of the chamber had stood an array of twelve vases, including a single stemmed goblet (1), a jug (2) and a hole-mouthed jar (3), three small amphorae (4-6), two alabastra (7 and 8), and three lamps (10-12). A large jar (9) had been very much scattered, presumably when the chamber collapsed, so that the base was found at one side of the tomb and the rest of the vase at the other.

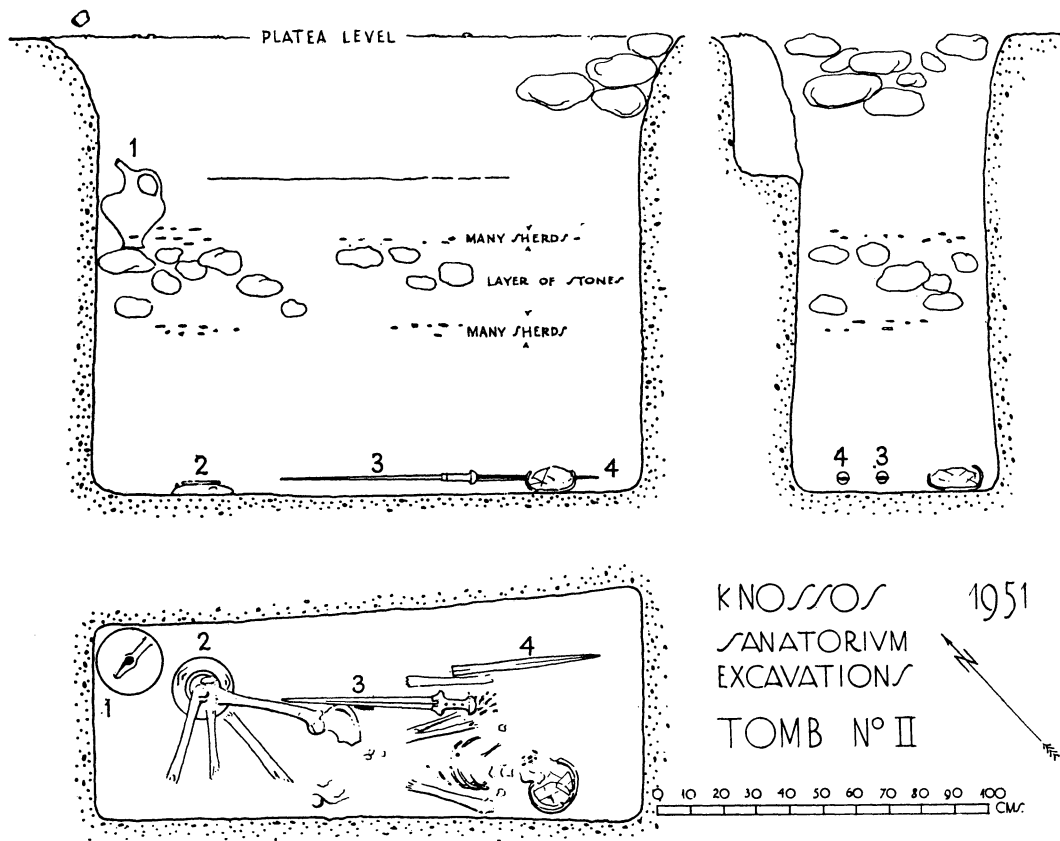


FIG. 5.—TOMB II OF THE HOSPITAL SITE.

In the south-west corner of the chamber, by the legs of the skeleton to the left on entering, lay a large spear-head (14) and a razor (15). Near the head of this skeleton by the wall were found the two fine lentoid seals (20 and 21) and a few beads of blue paste (26), together with scraps of ivory (25) which may be the remains of a small box that had contained them. Two other seals, a prism with two engraved faces (22) and a cylinder (23), came to light about $\frac{1}{2}$ metre away under fragments of vase (9). Between the head of this skeleton and the feet of the other was the dagger-blade with gold-capped rivets (13), whose base rested upon the gold toggle (19) which may have fastened a baldric: this toggle in turn overlay one end of an ivory panel with spiral decoration (24) that might have adorned a sheath or quiver (see detail at the

²² There is no evidence from this tomb to indicate that the bodies may have been a man and a woman as in Tomb I. Beads and seal-stones were, of course, worn by men as well as by women.

bottom of the plan, FIG. 6): around the ivory were traces of wood, perhaps from a backing to which the ivory had been attached. Six arrow-heads (18) were found scattered about the tomb.²³

A number of little copper staples (16) in a group together in the north half of the chamber may conceivably have fastened the leather part of a figure-of-eight body-shield to its wooden centre-piece. From the floor of the tomb among the vases against the right wall were recovered a lump of magnetite (27) and a piece of blue glass (28) which might have served as amulets or charms.²⁴

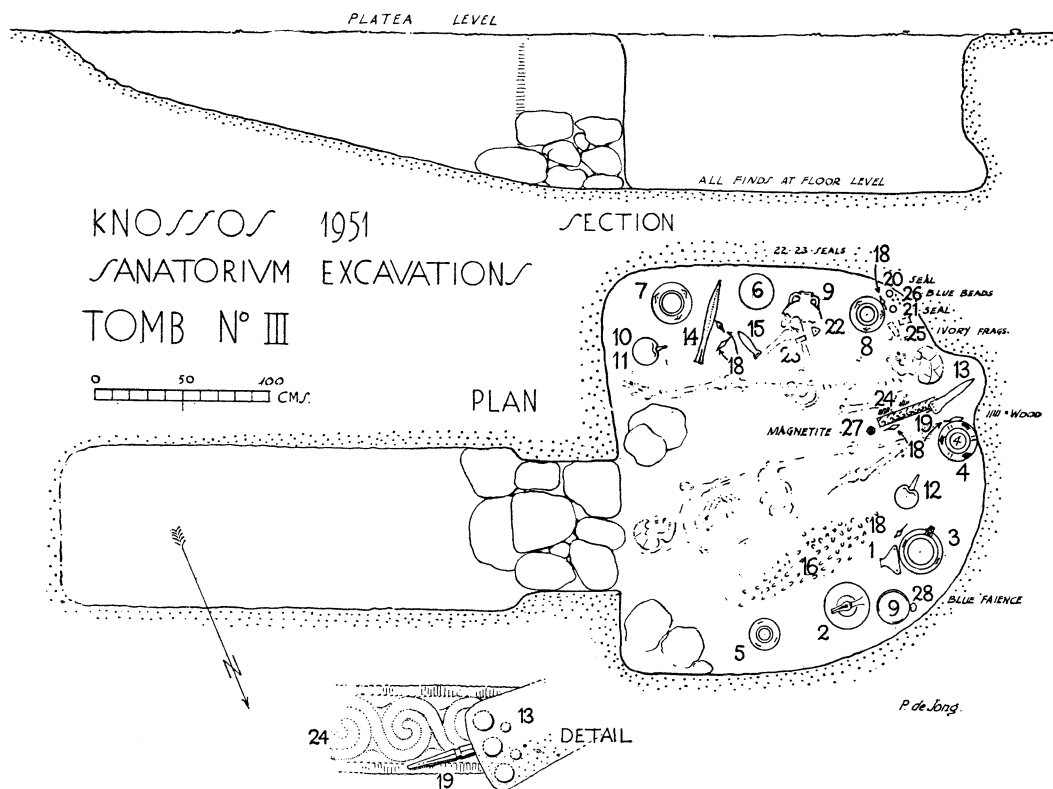


FIG. 6.—TOMB III OF THE HOSPITAL SITE.

? *Tomb IV.* This lay a few metres south of Tomb V. It consisted of a rectangular pit, measuring 2.40×2.10 , with rounded corners. The floor of the pit was only 0.40 below the levelled surface. From its filling came a few bits of Minoan pottery,²⁵ together with some Classical sherds and a fragment of modern glazed ware. From the floor of the pit were

²³ If we assume that the ivory adorned a sheath for the dagger, it follows that since the dagger was found lying on top of the decorated face of the ivory, it cannot have been inside the sheath, which is curious. It is possible therefore that the ivory belonged to a quiver, which was hanging, together with the dagger and a baldric fastened by the gold toggle, from a wooden peg in the wall of the chamber. There was some evidence in a Mycenaean tomb in the Agora at Athens that a garment had been hung on a peg set in the wall (*Hesperia* XVII (1945), 157). Note that in Tomb 10 ('The Hunter's Grave') in the Zafer Papoura cemetery the fifteen arrow-heads were found all together at a height of 0.40–0.60 above the floor, which suggests a quiver full of arrows standing upright in a corner of the tomb (*Prehistoric Tombs* 31, fig. 27).

²⁴ Cf. the shark's tooth from Tomb I (15).

²⁵ A number of sherds were recovered from the fillings of the dromoi of the chamber-tombs, and from the shaft-grave (Tomb II). These were mostly very fragmentary, and therefore difficult to attribute; but they appeared to range from M.M. I to L.M. I.

recovered some scraps of bone, including a finger bone, which appeared to be human. There was no sign of a dromos; but some stones at the south-east end of the pit might have belonged to a blocking-wall. The tomb, if it was a tomb at all, may therefore have been a 'pit-cave'.²⁶

Tomb V (Plan, FIG. 7). The chamber of this tomb was roughly circular, about 2 metres across, with the floor only $\frac{1}{2}$ metre below the surface. The entrance and its blocking-wall had

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EXCAVATIONS

TOMB N° V

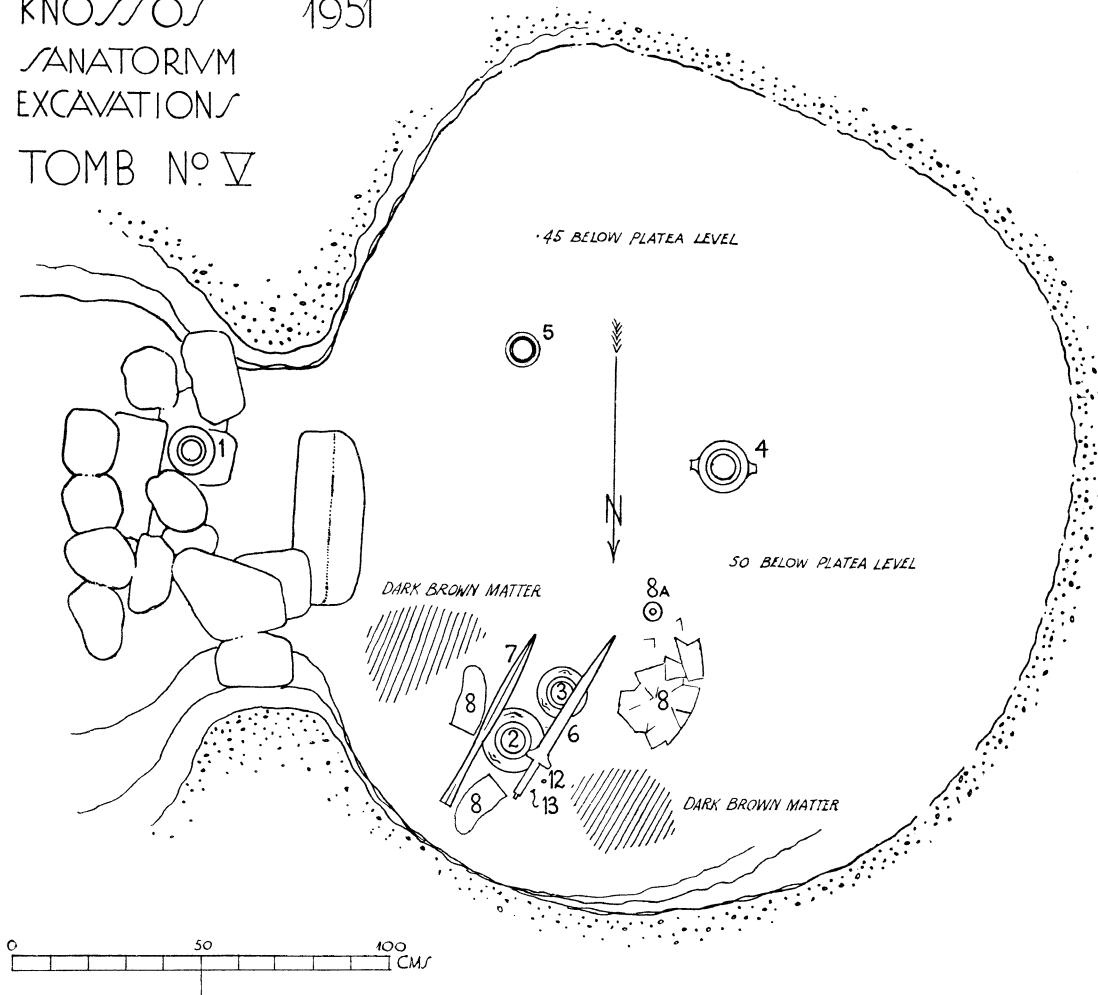


FIG. 7.—TOMB V OF THE HOSPITAL SITE.

been much destroyed in levelling the area before excavation began. The blocking-wall had been built of large stones, two of which were dressed blocks, the rest unworked. From the floor in the centre of the tomb were recovered two stone vases (4 and 5). The only clay vases in the tomb were three alabastra; one of which (1) was found amongst stones that had apparently been displaced from the blocking-wall, while the other two (2 and 3) were resting on the floor just to the right of the entrance: immediately on top of these two alabastra lay the exceptionally

²⁶ *Prehistoric Tombs* 15 ff. The 'cave' was blocked off from the 'pit' by a stone wall. In many of the tombs of the Zafer Papoura cemetery nothing was found, and no trace of a skeleton was detected.

large spear-head (7) and a short sword (6). A bronze rivet (12) and nail (13) found near the sword may have belonged to military harness of some kind.

No trace of a body was observed; but a thin brown layer, noticeable in patches about 5 centimetres above the floor of the tomb on each side of the spear-head and sword, may represent the decayed wood of a coffin or bier as in Tomb I (see p. 248). Near the sword on the floor lay the remains of a bronze helmet (8). The cheek-pieces which belonged with the helmet were resting a little above the floor nearly $\frac{1}{2}$ metre away. It is possible that the helmet had been placed on top of the wooden coffin or bier, if such existed: ²⁷ this might perhaps explain how the cheek-pieces, on becoming detached from the rest of the helmet, had fallen some distance away from it.

THE POTTERY

The twenty-nine vases from the tombs on the Hospital site have an unusual importance, because relatively few small clay vases of the Late Minoan II period have up till now been found at Knossos.²⁸ Moreover, the vases and objects from each tomb comprise a 'closed find', since none of the tombs showed any signs of having been entered after the original burials were made.²⁹

The vases in general, by many details of shape and decoration, reveal a close dependence on metal models.³⁰ The fabric of the vases is orthodox, with orange to buff clay, having the surface smoothed or burnished to a paler shade. The decoration is in lustrous paint, ranging from red to brown and black. In three cases (I (6), II (1), III (8)) the clay has a marked greenish tinge, while the decoration appears to have been of a particularly uniform deep black.³¹ The surface of the vases had in many cases suffered severely from the action of the soil: ³² and the designs were difficult to distinguish; or showed as a kind of negative, with the parts from which the paint of the design had disappeared standing out a lighter colour than the background, as on the 'Bird' amphora from Tomb I (6) (PLATE 56, a).

The naturalistic scenes of birds among flowers on this vase (I (6)) may be copied from some fresco. Characteristic of the 'Palace Style', as found on the great amphorae of the Palace itself, are the papyrus and 'sacral ivy' of the little amphora III (4). The argonauts of III (2) and (5) are interesting, since argonauts do not appear on the great Palace vases, where the octopus holds sway in sea-scenes; ³³ by contrast the octopus is not represented on any vase from the Hospital tombs.

The only form of drinking-vessel found in these tombs is the stemmed goblet. There were three of these, two from Tomb I (1 and 2) and one from Tomb III (1). In shape these

²⁷ Compare the turbans placed on the coffins of Turkish warriors. If in this tomb there was a wooden coffin with a gabled lid like the clay *larnakes* (see p. 248, n. 18), the comparison would be strikingly apt.

²⁸ The vases from the Palace itself which display the classic 'Palace style' of Late Minoan II are mostly large amphorae. Small clay vases, apart from stemmed goblets, were excessively rare; doubtless because, as Evans suggests (*PM* IV 353), the smaller vessels of the Palace during this period were made of metal—bronze, gold, and silver—and were therefore removed or plundered when the Palace was destroyed.

²⁹ Even in the tombs with two bodies the interval between the first burial and the second would not be long, since a close connection of some kind, such as that of husband and wife, may be supposed to have existed between the occupants of the tomb. For the possibility that there was only one occasion of burial even when there were two bodies, see p. 248, n. 17.

³⁰ Cf. *PM* IV 300 ff.

³¹ The combination of a greenish tinge in the clay with a uniform deep black colour in the decoration is probably to be explained by a particular circumstance of the firing rather than by a different centre of manufacture for these vases.

³² The vases had all been broken, and a few (I (4), III (6), and the lamps I (10) and III (11)) had been smashed beyond any possibility of restoration. The work of restoration was in any case difficult, since the fabric had become very soft and friable, and many fragments had actually warped out of shape. The School's technician, Stelio Katsarakis, showed great skill and ingenuity in the successful accomplishment of this task.

³³ Furumark (*MP* 167) states that 'there seems to be no example of the argonaut in the known material'. Cf. *ibid.* 306, where he cautiously adds: 'but it may have belonged to the Palace style repertory'.

three stemmed goblets appear to conform to the types grouped by Furumark as Mycenaean IIB.³⁴ It is interesting to note that while the stems of two of our goblets are of the hollow type that is characteristic of Cretan goblets in this period, the third (I (2)) has a flat foot with a rim round the edge and a slight depression under the stem, recalling some feet of stemmed goblets found in early levels at Mycenae: but there seems nothing in the character of the clay or in the style of the decoration to suggest that this goblet must be an import from the Mainland.³⁵

The finds from these tombs confirm the evidence from the Palace that the stemmed goblet³⁶ was the usual, if not practically the only, form of drinking-vessel in use at Knossos during the Late Minoan II period. Fragments of such goblets were found in large numbers in the ruins of the last Palace (*PM* IV 359): the decoration on these according to Evans was dominantly in a L.M. IB—II style, with a possible element of L.M. IA.³⁷ The stems of these goblets from the Palace, so far as is known, were hollow: these hollow stems presumably reflect metal models. Evidence for the existence of two-handled metal goblets at Knossos during this period is provided by the 'Camp Stool' fresco, which Evans dates to L.M. IB.³⁸ The hollow stem of these Knossian goblets is not apparently found on goblets from the Mainland.

A most striking feature is the large number of squat alabastra from these tombs. Few alabastra of the squat form, that could be assigned to so early a period as this, have hitherto been recognised in Crete;³⁹ although a good many have been recovered from the Mainland.⁴⁰ It has therefore generally been assumed that this type of vase was of Mainland origin and that the early examples found in Crete were imported from abroad.⁴¹

Such alabastra were no doubt used to contain some sort of unguent or oil for anointing the body, as Evans points out in connection with the large stone vases of this shape from the Throne Room of the Palace.⁴² It is an interesting fact that at Knossos in the period before the destruction of the Palace clay alabastra of this squat type appear in the graves of warriors; and indeed in two of these Knossian 'warrior-graves' they were the only clay vases found.⁴³ It is therefore not surprising that the tombs on the Hospital site should yield seven of these alabastra, representing nearly a quarter of the total number of vases; and alabastra were in fact the commonest single type of vase from the Hospital tombs.

³⁴ *MP*, fig. 16.

³⁵ See Pendlebury (*AC* 227) on the difficulty of distinguishing Mainland from Cretan products of this period by the fabric: 'The old distinction between the "feel" of the sherds . . . can, as I can testify, no longer hold good'. It would be particularly interesting, as Pendlebury, *loc. cit.*, points out, to settle the question of origins in the case of the Late Bronze Age pottery exported from the Aegean and found in Egypt and elsewhere abroad. Chemical analysis of the clay might help in this matter.

³⁶ Wace (*Chamber Tombs* 182 n. 2) reserves the term 'kylix' for the tall L.M./L.H. III goblets. The Knossian goblets of L.M. I-II, and the Mainland goblets of L.H. I-II, are then simply 'stemmed goblets'.

³⁷ Some of the published examples are classified by Furumark as L.M. IIIA 1 (*MP* 171 n. 2, referring to *PM* IV fig. 302 c). This would still, of course, precede the destruction of the Palace (*MP* 169).

³⁸ *PM* IV 381 ff., fig. 323-4, cf. *AC* 200. The blue colour of the vase is presumably intended to represent silver. Furumark rightly points out that the lower part of the vessel is not preserved on the fresco, and argues that it is not a true goblet, but a deep cup of L.M. I type (*MP* 56). But these L.M. I deep cups seem normally at any rate to have only one handle.

³⁹ Pendlebury (*AC* 223, published in 1939) could cite only five examples. Furumark (*MP* 40 n. 4) adds two fragments from Zakro, which may belong to an alabastron (*BMC Vases* I, A 707: there classified as L.M. II, but Furumark would make them L.M. IB).

⁴⁰ These alabastra have mostly been found in tombs; but they occurred in the settlement at Korakou (Blegen, *Korakou* 50 ff.).

⁴¹ Furumark, however, expresses a strong faith that a number of alabastra found abroad (in Melos, Palestine, and Egypt), and decorated in a L.M. I style, are of Cretan manufacture (*MP* 40); while admitting that it is a 'very remarkable fact that seven out of the fifteen or sixteen L.M. I vases found in East Mediterranean lands are of a type that is extremely rare in Crete'. See also *MP* 663, where he is clearly anxious to maintain his faith against Wace and Blegen (*Klio* XXXII 137 ff.) and Pendlebury (*AC* 223), who argue a Mainland origin for these early alabastra found abroad.

⁴² *PM* IV 938.

⁴³ *E.g.* the tomb on the 'Acropolis' hill (see p. 245, n. 5), and Tomb 3 ('The Mace-bearer's Tomb') at Isopata.

There is nothing in the fabric of these alabastra to distinguish them from the other vases, or to suggest that they must be imports from abroad.⁴⁴ The designs, as far as they can be distinguished, belong to the rather specialised repertory of 'rock patterns' that appear on the alabastra found on the Mainland.⁴⁵ It is interesting to note that Furumark says of the earliest variety of this 'rock pattern' that occurs on the Mainland, that 'although actual prototypes seem at present to be missing, there is a strong general probability that the Mycenaean I designs in question were derived from an early L.M. IA type. In any case, they are entirely in keeping with the Minoan tradition': and later, 'There is a very great probability that L.M. IB prototypes are responsible for the Mycenaean IIA variants'.⁴⁶ It is significant that this 'rock pattern' appears in one of its most typical 'Mycenaean IIA' forms on a large alabastron I (9) from our tombs, which betrays peculiarities that would, apart from any other consideration, suggest that it was of local manufacture; the large size and heavy fabric, together with the extreme squatness of the shape with the sides making a sharp edge to the base, are features to differentiate it from the ordinary run of alabastra. But another alabastron of this same type was found at Knossos in the 'Tomb of the Double Axes' (Tomb 5 of the Isopata group).⁴⁷ These two vases are clearly reminiscent of the great stone alabastra from the Throne Room in the Palace, and may perhaps be regarded as deliberate imitations of such stone vases.

The base of this large alabastron (I (9)) is rough and undecorated. The decoration on the bases of the other alabastra from our tombs consists in almost every case of concentric circles:⁴⁸ on only one example (V (3)) is there a suspicion of some simple kind of wheel pattern. This is interesting in the light of the fact that the bases of alabastra of the Late Helladic II period or earlier on the Mainland normally have the wheel pattern, and concentric circles only become common in Late Helladic III.⁴⁹

THE BRONZE WEAPONS

Each of the three 'warrior-graves' on the Hospital site and that at Ayios Ioannis contained a large spear-head, together with a short sword of the 'cruciform' type, with cross-shaped hilt, characteristic of the last age of the Palace;⁵⁰ in Tomb III, however, the spear-head was accompanied by a tangless dagger (III (13)) in place of a sword. The standard equipment of these warriors therefore appears to have been a single heavy spear and a short sword⁵¹ or dagger.

These four spear-heads are the largest and finest weapons of their kind yet recorded from Crete.⁵² They display a considerable variety in their shapes, which represent three distinct forms, and only two of the spear-heads (III (14) and V (7)) are the same. All four were

⁴⁴ See p. 254, n. 35. ⁴⁵ *MP*, Motive no. 32: 'Rock Pattern I'.

⁴⁶ *MP* 322. ⁴⁷ *TDoAx* 24, fig. 35.

⁴⁸ Concentric circles on the bases of II (2), III (7) and (8), V (2), and probably V (1).

⁴⁹ Blegen (*Prosymna* 419-20) goes so far as to say that 'In all examples (*i.e.* from Prosymna) dating from L.H. II or earlier the bottom bears as its characteristic decoration . . . a "wheel pattern" . . . In fact, I do not know of a single alabastron of contemporary date from any Mainland site that does not bear this distinctive mark in one form or another'. See, however, Furumark (*MP*, under Motive no. 68: 'Wheel', 404), who claims that four out of the nine L.H. I alabastra bases that can be distinguished have 'simple circles, mostly concentric, once with a central disc'; but he admits that the wheel pattern is characteristic of L.H. II, though concentric circles appear again in IIB and in III supersede the wheel.

⁵⁰ *PM* IV 851. For a description of these swords see under A J (1), p. 261.

⁵¹ These swords are really short stabbing-swords rather than 'rapiers' in the strict sense.

⁵² The largest (V (6)), with a length of 0.49, was longer than the sword found in the same tomb. But even larger spear-heads have turned up on the Mainland. One from the tholos tomb at Dendra, for example, attained the extraordinary length of 0.57 (*Royal Tombs at Dendra* 37, no. 18).

clearly made by casting in a mould, although all have a slit down the socket. In the case of II (4) the slit runs at an angle and not straight up one of the faces of the octagonal socket, and is so fine that it is only just possible to squeeze a razor blade down it. Round the base of the socket in three of the four spear-heads (A J (3) is the exception) is a ring; this does not seem to be cast in one piece with the socket, but was presumably fixed in place after the shaft had been inserted.⁵³ As a further guarantee that the shaft would not slip a wooden peg appears to have been passed through two 'rivet' holes on opposite sides of the socket near its base. Between the two 'rivet' holes of II (4) there are traces on the surface of the socket where some sort of binding has been wound round it.

All four spear-heads are embellished with delicate ribs and grooves along the socket and the mid-rib of the blade. The socket merges into the blade, except in A J (3); here the dagger-like ogival blade is differentiated from the socket by three curving loops of a type which also appear on some sword-hilts of gold or other material, *cf.* II (3).⁵⁴ These loops may be derived from an imitation of the binding that helped to fasten the old socketless 'dagger' blades to their hilts or hafts.⁵⁵ The socket of the fine spear-head II (4) is further adorned on one side with a lightly incised butterfly in flight towards the butt.

The two small spear-heads (A J (4) and I (11)) are of quite a different type and shape from the large spear-heads; they may have belonged to throwing-spears or javelins used primarily for hunting.⁵⁶ This point is well brought out by Marinatos in an interesting article apropos of a short spear-head of similar type from the Vaphio tholos tomb: here the shaft was encased in metal, and the whole weapon as restored was only just over a metre long.⁵⁷ Evidence from Tomb I suggests a similar length for the spear (I (11)) there. Like the large spear-heads these small spear-heads have a slit down the socket and two 'rivet' holes, but no ring round the base: they are simple in style without any decoration.

The heavy tanged blade A J (2) is evidently from a short-hafted weapon, which may have been differentiated as a boar-spear: it is the finest example that has yet come to light of a rare type apparently confined to Crete.

THE BRONZE HELMET, V (8)

(PLATES 50-52) ⁵⁸

The helmet is conical, with a knob perforated to hold a plume riveted to the top, and separate cheek-pieces. The helmet as restored without the cheek-pieces is about 0.17 high with an overall length of 0.24 and a width of 0.21. The knob is 0.039 high with a diameter at the base of 0.05. The fragments of the helmet together with the knob weigh 695 grammes. The cheek-pieces are each 0.165 long and 0.09 wide at the top, and together weigh 214 grammes. The helmet had been crushed and smashed into over a hundred fragments as a result of the

⁵³ PM IV 842. Cast spear-heads with a ring round the base of the socket appear at Ras Shamra in 'Ugarit Moyen' I (c. 2000 B.C.). But the ring is rare on spear-heads of the Late Bronze Age there according to Schaeffer (*Ugaritica* II 55 ff.).

⁵⁴ For further examples see p. 267, n. 119.

⁵⁵ For the possibility that these early socketless blades were used as spear-heads as well as daggers, *e.g.* Childe, *Dawn of European Civilisation* (4th ed. 1947), 32.

⁵⁶ But there was clearly no very rigid differentiation between weapons of war and weapons of the chase; and hunting might call for the organisation and armament of war. This is well illustrated by the famous 'lion-hunt' dagger from Mycenae, where men carry the figure-of-eight shield also used in warfare.

⁵⁷ Marinatos, 'Σιγύνη' (*BSA* XXXVII (1936-7), 187 ff.). From the Vaphio tholos came one other spear-head, which was larger and had a ring round the base.

⁵⁸ For Minoan helmets see PM IV 867 ff. For Aegean helmets in general, Kukahn, *Der griechische Helm* (1936); and more recently, Lorimer, *Homer and the Monuments* (1950), 211 ff.

collapse of the tomb-chamber. Many of the individual fragments were warped and bent, which increased the difficulty of reconstructing the helmet.⁵⁹ Most of the helmet appears to be preserved; but it was impossible to fit in some few small pieces, and at one end of the helmet there is a gap, across which no joins could be noted.⁶⁰

The bronze of the helmet itself is thin, varying from less than 1 millimetre to nearly 1.5 millimetres in thickness. In its present state of preservation it is not possible to say how the helmet was made; but like some of the similar helmets from Hungary and Germany (see p. 259), it may have been cast in a mould and then finished by hammering.⁶¹ The plume-knob was evidently cast; it is of solid bronze, and was fastened to the top of the helmet by seven small rivets (FIG. 18).⁶² A hole 4 millimetres in diameter to hold the plume⁶³ passed through the knob and continued down through the top of the helmet. Around the edges of each cheek-piece were spaced eighteen small holes between 1.5 and 2 millimetres in diameter, and there were similar holes along the bottom edge of the helmet at intervals of about 0.016: these were clearly intended for sewing the helmet and cheek-pieces to a padded lining.

All the helmets of this period in the Aegean presumably had a thick padding of some kind as a base. Helmets which consisted entirely of padding, sewn into strips like a modern rugger cap, appear to be depicted in several cases.⁶⁴ A padded helmet of this kind seems to be represented on a vase from Tomb 5 at Isopata.⁶⁵ But this padded base might be armed with boar's tusks, as described in Homer;⁶⁶ or with metal plates or discs (see p. 261, n. 101): or it might be given a complete metal shell like our helmet and that from Dendra.⁶⁷ Even a thin metal casing, such as this helmet and that from Dendra provide, would no doubt improve the defensive qualities of the helmet; but the aspect of prestige must not be overlooked.⁶⁸

It is not certain whether the cheek-pieces were meant to overlap the bottom of the helmet, or whether helmet and cheek-pieces merely fitted edge to edge (as shown on PLATE 50). In either case the lining would presumably be continuous from the helmet to the cheek-pieces, and might have extended to form a neck-piece which was not armed with metal.⁶⁹

This helmet from the Hospital site is important because to judge from the representations that survive it is of the shape that appears to have been most characteristic of Aegean helmets during the Late Bronze Age. The Dendra helmet, the only other example of the Bronze Age yet found in the Aegean, is of quite a different type, like the helmets depicted on the

⁵⁹ The School's technician, Stelio Katsarakis, was employed for nearly three weeks on this exacting task.

⁶⁰ The metal is very thin at this end, which might indicate that it was the back part of the helmet.

⁶¹ Sprockhoff, *Zur Handelsgesch. der germ. Bronzezeit* (Berlin, 1930) 44, apropos of the Oranienburg helmet, one of the group of three which most resemble our helmet (see p. 259).

⁶² These had escaped our notice at first; but they were observed by Mr. de Jong on making a careful examination of the knob with a view to drawing it.

⁶³ Possibly a long bunch of horse-hair. For representations of plumes flowing from the tops of helmets of similar shape, though not necessarily made of metal, cf. the 'Battle of the Glen' gold signet-ring from Shaft-grave IV (*Schachtgräber*, pl. xxiv, no. 241). What seems to be an actual plume of this type 0.22 long, composed of gold strips, was found in Shaft-grave V (*ibid.*, pl. lvi, no. 639).

⁶⁴ *PM* IV 867. *Homer and the Monuments* 222-3. Cf. *ibid.* 210-11, for linen corslets in later times. The defensive qualities of such padded armour ought not to be underrated. The allied troops at the Battle of Lepanto found quilted corslets an effective protection against the formidable Turkish arrows (A. Wiel, *The Navy of Venice* (1910), 256 n. 1).

⁶⁵ *TDoA* 27, fig. 37 b, reproduced in *Homer and the Monuments* 221, fig. 22.

⁶⁶ See *Homer and the Monuments* 212 ff.

⁶⁷ *New Tombs at Dendra* 43, 119 ff., pl. I.

⁶⁸ Cf. the views of Philopoemen on the importance of keeping metal armour bright: Μεγάλα γὰρ μὲν ἔφη τὴν λαμπρότητα συμβάλλεσθαι πρὸς ἐκπληξιν τῶν ὑπεναντίων. (Polybius XI 9. Quoted by Miss Lorimer, *Homer and the Monuments* 252 n. 4.)

⁶⁹ Cf. the helmet on the vase from Isopata T. 5 (n. 65 above). It is just conceivable that the curious lead-filled disc V (8a), that was found with the remains of the helmet, might have acted as a weight in some way to such a neck-piece. The thin bronze coating on one side of the lead seems to make sense only if it was intended to be seen; and the disc might therefore have been sewn into the neck-piece with the bronze showing on the outside. This suggestion was put forward, although with every reserve, by Miss D. H. F. Gray of St. Hugh's College, Oxford, who has kindly permitted us to quote it. It is admittedly not very satisfactory; but no better explanation for the use of the lead disc has offered itself up till now.

'Boxer Vase' and like a Classical 'Corinthian' helmet.⁷⁰ It is clear that there was an extraordinary variety in helmet-fashions in the Aegean at this period, particularly in the matter of crests and plumes, which offer an almost mediaeval fantasy and elaboration.⁷¹ But the dominant shape of helmet, whether made of metal or of any other material, was conical.⁷² Metal helmets were already in use in Mesopotamia during the third millenium, and actual examples were recovered from the Royal Tombs at Ur.⁷³ These early helmets from Mesopotamia itself appear to have been low caps. But tall helmets seem to be in general use in Syria and Anatolia by the Late Bronze Age, to judge from the representations, which in many cases at any rate depict metal helmets. Notable is a type of Syrian helmet seen on Egyptian monuments: this is a high dome-shaped cap with scalloped edges, but no cheek-pieces. The helmet is not surmounted by a knob, but from its top flows a double plume.⁷⁴ In Anatolia a high pointed helmet, evidently of metal, with large cheek-pieces, appears on the head of the figure perhaps of a god, on the relief at the 'King's Gate' at Boğazköy: this helmet carries a ridge-crest in place of a plume-knob, and the cheek-pieces are of a different shape from those on our helmet; but the general similarity may be admitted.⁷⁵

It seems therefore as if in the matter of helmet-fashions, as in so many other details of its civilisation, the Aegean falls into a province covering Anatolia and stretching perhaps into Syria and farther East. But the Aegean helmet of the conical type is in general less high than the domed or pointed helmets of Syria and Anatolia, and is distinguished by having a knob fastened to the top to carry a plume or crest.⁷⁶ That a helmet of the conical type was already in vogue in the Aegean, or at any rate in Crete, early in the Middle Bronze Age, is suggested by a fragment of the 'Siege Mosaic' from Knossos of Middle Minoan II date,⁷⁷ which seems to show a conical helmet. Certainly by the Late Bronze Age the Aegean appears to have developed its own recognisable variations upon the general theme; and the particular type represented by our helmet, with its low conical form, perforated plume-knob, and large separate cheek-pieces, is probably best regarded as an Aegean, if not a specifically Minoan, development. Nothing precisely comparable to a helmet of this type appears to have been recorded, either in representations or by finds of actual examples, from Anatolia or from anywhere else in the Near East.⁷⁸

⁷⁰ *New Tombs at Dendra* 43, 119 ff., pl. I. There is also a solitary bronze cheek-piece of a helmet from a Mycenaean tomb at Alysos (Rhodes) in the British Museum (Walters, *BMC Bronzes* (1899), no. 36: *Homer and the Monuments* 211, pl. xiii, 1, where it is illustrated for the first time): this closely resembles our cheek-pieces in the thinness of the metal (about one millimetre), the slightly rounded section to agree with the curve of the helmet, and the little holes round the edges for sewing on to a padded lining; but it is rather larger (0.175 long by 0.125 wide at the top), and the profile of the front edge is concave instead of scalloped as on our cheek-pieces.

⁷¹ E.g. the helmets on fragments of a silver vase from Shaft-grave IV, and that on a gem from the Vaphio tholos tomb (reproduced in *Homer and the Monuments*, pl. xv, 1, and 217, fig. 20).

⁷² Cf. *Homer and the Monuments* 225: 'The commonest form of Minoan-Mycenaean helmet is conical'.

⁷³ Woolley, *Ur Excavations II. The Royal Cemetery* (1934), pl. 218.

⁷⁴ Davies, *Ancient Egyptian Painting*, pl. xxiv, from the Tomb of Menkheperrensenb, dating from the later years of Thutmose III (1475-48). The plumes are painted blue and red, the helmet yellow, which may be intended for bronze. This reference was kindly supplied by Mr. L. C. D. Tait.

⁷⁵ This unique monument dates from the period of the Hittite Empire. On some later 'Hittite' monuments from Carchemish and elsewhere, which all seem to belong to the Iron Age, helmets or caps surmounted by a large globe are worn by gods (Weber, *Die Kunst der Hethiter* (*Orbis Pictus*, Vol. 9), pls. 2, 3, 14, 21 and 29). Humans on some Iron Age reliefs from Zencirli (*ibid.*, pls. 24-6 and 33) are wearing what are apparently (Mr. R. D. Barnett informs me) leather caps and not helmets in any true sense of the word, but which carry a low knob or projection on top giving them a profile remarkably like that of the helmet on the Isopata vase. The standard Assyrian metal helmet of the Iron Age is high and pointed, but normally at any rate without cheek-pieces or plume or knob on top.

⁷⁶ But note the very high pointed cap, that might conceivably be regarded as a helmet, worn by the figure carrying shield and spear who appears to be a warrior-god, on a sealing from the Temple Repositories at Knossos of M.M. III date (*PM* I 505, fig. 363 b; III 465, fig. 324 A).

⁷⁷ *PM* I 308, figs. 228, 1 and 229 b. This might even be intended to represent a metal helmet.

⁷⁸ For the survival of a conical type of helmet in the Aegean and Cyprus into the Iron Age, see *Homer and the Monuments* 225 and n. 2. From Greece itself only two examples appear to be known, both from Olympia (*Ol.* IV 172, pl. lxii, no.

It is therefore the more remarkable to find a scatter of bronze helmets of exactly the same type as our helmet across Hungary and up into North Germany, the so-called 'Glocken' or 'Bell-helmets'.⁷⁹ Till now these have generally been supposed to belong to an advanced phase of the European Bronze Age, the tenth century B.C. or later; and many, which are surmounted by a large round plume-knob⁸⁰ and have thick metal walls, may be quite late in date, as their associations in certain cases indicate. But three of these 'Bell-helmets', those from Beitzsch, Oranienburg and Lucky, so closely resemble our helmet that it is difficult to believe they were not copied from contemporary Aegean models.⁸¹ These three are distinguished from the rest of the 'Bell-helmets' by having thin walls and a small plume-knob with an angular profile like our helmet. The most interesting of the group is that from Beitzsch, in the Lausitz area of South-east Germany, now in the British Museum.⁸² It came to light over a hundred years ago in a peat bog, and according to early accounts was found together with a dagger or halberd blade and a couple of 'ingot' torcs.⁸³ These are objects characteristic of the Central European Early Bronze Age, and may be dated therefore to about the same period as our helmet, c. 1400 B.C.⁸⁴ This helmet from Beitzsch does not look as though it were itself an import from the Aegean: ⁸⁵ the plume-knob in particular is mean in size, and crudely shaped by comparison with the neat evenly moulded knob of our helmet; ⁸⁶ and it is fixed in place, not by means of rivets, but by a curious system that is found on other Hungarian and German 'Bell-helmets', the metal of the knob continuing down through a hole in the top of the helmet and being beaten or pressed round to grip the edge of the helmet.⁸⁷

A few helmets of the 'Bell' type are also known from Italy.⁸⁸ Two of these ⁸⁹ differ from the German and Hungarian examples in having the knob riveted to the top of the helmet as in

1031. *Jdl* LII (1937), *Ol. Bericht*, 52, pl. 6 right): neither is exactly comparable to our helmet, and neither has preserved any trace of a knob, if there ever was one. Furtwängler, in discussing the first of these, could only cite two parallels, both from Cyprus and both unpublished. The place of manufacture of these helmets would appear to be quite obscure. Models of detached cheek-pieces were found at Bassae (*AE* 1910, 315, fig. 34); Kukahn (*Der griechische Helm*, n. 45) thinks that these are comparatively early in date; but they are not like the cheek-pieces of our helmet.

⁷⁹ Von Merhart, *Zu den ersten Metallhelmen Europas* (30 *Bericht der Rom. Germ. Komm.*) (1940), 4 ff. See also Sprockhoff, *Zur Handelsgesch. der germ. Bronzezeit* (1930), 44 ff., for the German examples. Von Merhart argues that the early metal helmets of Europe are mid-European creations, and certainly free from Aegean influence. He had, however, prophetically complained apropos of the Dendra helmet that in the light of the representations a metal helmet of the Aegean Bronze Age might have been expected to resemble a European 'Bell-helmet'.

⁸⁰ But a large round knob appears in some Aegean representations of helmets, e.g. a fragment of fresco from Mycenae (*AM* XXXVI (1911), 239, pl. xi, 2. Cf. *Homer and the Monuments* 217): this might be intended for a boar's tusk helmet; but admittedly no trace of divisions could be recognised. The colours in which the helmet was painted are not given.

⁸¹ Von Merhart (*op. cit.*, 11) notes that these three helmets fall outside the main group of 'Bell-helmets' by reason of their smaller knobs. With them he places the two helmets from Corneto in Italy (see p. 259, n. 88).

⁸² B.M. no. 68. 12-28. 248. Described by Sprockhoff (see p. 259, n. 79 above). In the files of the British and Mediaeval Department of the Museum is a very clear and detailed MS. summary of the literature on the Beitzsch helmet by Professor C. F. C. Hawkes. With his consent, and by courtesy of the Department and the Trustees of the Museum, the fullest use has been made of this account.

⁸³ These are also in the British Museum. The blade has elaborate incised decoration, and closely resembles the most ornate of the blades from the Neuenheiligen hoard (Childe, *The Danube in Prehistory*, fig. 143, top r. centre).

⁸⁴ For recent views on the dating of the European Bronze Age, see Childe and Hawkes in *Proc. Prehistoric Society* XIV (1948), 177 ff.

⁸⁵ The Beitzsch helmet weighs only 353 grammes compared with the 695 grammes of our helmet without the cheek-pieces. The weight of the Beitzsch helmet was kindly supplied by Mr. J. W. Brailsford of the British and Mediaeval Department of the British Museum.

⁸⁶ It must, however, be noted that the standard of workmanship would tend to reach a very much higher level at a great capital city like Knossos, than at some provincial centre. This can easily be seen by comparing the spears and swords from our tombs at Knossos with contemporary weapons of the same types from provincial sites in Crete.

⁸⁷ Illustrated by Hampel, *Ältherthümer d. Bronzezeit in Ungarn* (1890), pl. xxxiii, 2 c. In the case of the Beitzsch helmet at any rate the metal appears to have been pressed down while in a soft or molten state with some implement whose marks are clearly visible, cf. Sprockhoff, *Zur Handelsgesch. der germ. Bronzezeit* 44, apropos of the 'Bell-helmet' from Sehlisdorf.

⁸⁸ Two from Corneto (Etruria), two from San Canziano near Trieste, and one from somewhere in Italy, according to von Merhart's list. But there are also clay imitations of 'Bell-helmets' which were used, like the helmets themselves, to cover cremation-burial urns, e.g. Randall-MacIver, *Villanovans and Early Etruscans*, pl. 11, 15, from Corneto.

⁸⁹ The two from Corneto. These are tentatively grouped by von Merhart with the three 'Bell-helmets' of p. 259 and n. 81, which most closely resemble our helmet.

our helmet.⁹⁰ This would seem to indicate, what is in any case probable, that this fashion in armour spread to Italy direct from the Aegean and not through the Balkans.⁹¹

None of the 'Bell-helmets', whether from Italy or from Germany or Hungary, has been found with cheek-pieces, although there are cheek-pieces on a helmet of another early type from the region of Salzburg (Austria),⁹² and an isolated cheek-piece has turned up in North Germany;⁹³ but these cheek-pieces do not show the peculiar scalloping of the front edge which distinguishes the cheek-pieces of our helmet.

It is therefore the more astonishing to find certain Etruscan helmets of a characteristic type flourishing from about the fifth to the third centuries B.C., which not only in a general way seem to reflect the tradition of early Aegean helmets like ours, but which actually reproduce the same scalloped edge in the cheek-pieces.⁹⁴ These Etruscan helmets are of thick bronze, while the knob, which is unperforated, is cast in one piece with the rest of the helmet and the cheek-pieces are hinged: but the points of resemblance are so striking that, despite the gap of a thousand years that separates them, it is tempting to believe that they are in fact descendants of Aegean helmets of the Bronze Age like ours. This Etruscan type of helmet and the scalloped cheek-pieces continue into Roman times.⁹⁵

NOTE ON PREVIOUS FINDS OF BRONZE AGE METAL ARMOUR IN CRETE

One of the fourteen 'Tombe dei Nobili' at Phaistos yielded a fragment of bronze plate, which Savignoni thought to be part of an armour-belt, the *μίτρη* of Homer (*MA* XIV 537-8 no. 6, fig. 22). This fragment was 0.295 long and 0.12 wide, with the edges of the long sides much destroyed and one end broken short; but the other end was very well preserved, having one corner rounded, and there were five small holes down the edge of this end for sewing the metal to some sort of backing.⁹⁶ Fragments of another similar bronze plate are mentioned in the account.

No other example of metal body armour of the Bronze Age appears to have been reported from the Aegean.⁹⁷ But metal armour was in general use during the latter part of the third millenium in the Near East.⁹⁸ There is therefore no reason why these plates should not have belonged to some sort of body armour as Savignoni believed. Such plates would conveniently form a corslet built up of strips like the corslets depicted on the 'Chariot Tablets' from Knossos, whose metallic character Evans did not doubt.⁹⁹

⁹⁰ But with only four rivets in place of the seven on our helmet.

⁹¹ The 'Bell-helmet' is not the only early type of helmet in Italy for which Aegean Bronze Age parallels can be found. The distinctive 'Villanovan' helmet with its fore-and-aft ridge-crest strongly resembles a helmet depicted on a silver vase from Shaft-grave IV, as Kukahn and Miss Lorimer note (*Der griechische Helm* 7. *Homer and the Monuments* 216, pl. xv, 1. Cf. *Schachtgräber*, pl. cxxxi, g). The third type of early Italian helmet, which also occurs in Central Europe, is not very unlike some of the squatter forms of helmet seen on Aegean monuments (compare e.g. Randall-MacIver, *Villanovans and Early Etruscans*, pl. 13, 12, 15 and 16, with helmets depicted on the Zakro sealings, *JHS* XXII 79, nos. 24 and 25). In this context the similarity long ago noted between the *ancilia* of ancient Rome and the Minoan figure-of-eight shield may be kept in mind (cf. Evans, *Tree and Pillar Cult* (1901), 31).

⁹² Von Merhart, *Zu den ersten Metallhelmen Europas* 23, fig. 8, 3, from Pass Lueg, Reichsgau (Salzburg).

⁹³ *Prähist. Zeitschrift* XXXII-XXXIII (1941-42), 74, fig. 13. L. 0.155, W. 0.118. In shape not unlike the cheek-piece from Ialysos (*Homer and the Monuments* 211, pl. xiii, 1), although the metal is much thicker. This reference was kindly supplied by Dr. H. Hencken.

⁹⁴ E.g. *BM Guide to Greek and Roman Life* (3rd ed. 1929), 79, fig. 72, no. 230.

⁹⁵ For Roman helmets which continue the tradition of the Etruscan 'Jockey-cap' helmets, *ibid.*, 81, and fig. 74; but the cheek-pieces are missing here. For the cheek-pieces, see *BM Guide, Roman Britain* (1951), pl. xxv, 6. Both these helmets were found in Britain!

⁹⁶ Compare the holes along the edges of the helmet and cheek-pieces from Tomb V (p. 257 and PLATES 50 and 51).

⁹⁷ *Homer and the Monuments* 200, 246.

⁹⁸ *PM* IV 804. *Homer and the Monuments* 196 ff. Actual bronze scales were found in quantities at Nuzi (Starr, *Nuzi I* 475, pl. 126). Part of a bronze 'belt' came from one of the tombs at Ras Shamra (*Syria* XIX 240, fig. 32 w, reproduced in *Ugaritica* I, fig. 63 w).

⁹⁹ *PM* IV 803. For the possibility that the waist-belt of Minoan civilian dress may have been plated with metal on occasion, cf. the 'Cup-bearer' fresco, where the blue and orange of the belt might be taken to represent silver and copper as seems probable for the rhyton (*PM* II 705, col. pl. xii).

From the same group of tombs at Phaistos¹⁰⁰ came two small trapezoidal plates (*ibid.*, nos. 7 and 8), measuring about 0.05 by 0.04, with holes round the edges of two or three of the sides: the holes retained scraps of the thread which had fastened the plates on to some sort of backing. These plates also seem to belong to armour, and might be scales from a coat of mail or from a helmet. A helmet on a fragment of a steatite rhyton from Knossos¹⁰¹ has the surface divided into rectangles which might represent metal plates like these from Phaistos.

INVENTORY OF THE VASES AND OTHER OBJECTS FROM THE TOMBS

(1) THE 'SHAFT-GRAVE' AT AYIOS IOANNIS

A J (1). Sword (FIG. 8). Bronze. Blade damaged and broken. Part of tang missing. L. if complete c. 0.40.

The sword is of the 'cruciform' type (see p. 255 and n. 50). The blade has a thick mid-rib resembling that of the spear-head A J (3) from the same grave. There are flanges all down the hilt and round the shoulder to hold the wooden hilt-plates firmly in position: the hilt-plates were further secured by two small bronze rivets in the shoulder, and also apparently by three wooden pegs which passed through the three large holes in the tang, *cf.* the gold-hilted sword II (3) (p. 265 and FIG. 15 a). The projection at the end of the tang was clearly for fastening the pommel, of wood or ivory, which had perished. The slots in this projection on the tang were made by boring circular holes which overlap in a line, *cf.* the slots in the blade of A J (2) and in the projection on the tang of II (3).

A J (2). Leaf-shaped spear-blade (FIG. 8). Bronze. L. 0.38. Max. W. of blade 0.06. W. of tang 0.028. The tang is broken, and the tip of the blade has burst apart through corrosion so as to give the false impression of having four prongs.

The blade is slightly leaf-shaped with a thick heavy tip. There is a short tang, and two slots appear half-way up the blade just before the blade begins to swell and thicken. The weapon was evidently hafted in a cleft stick, and lashed in place round the tang and through the slots.¹⁰² On each face of the blade, just above the point that the haft would have reached, is a lightly incised spiral.

This blade is clearly derived from a Middle Bronze Age type found over a wide area in the Aegean, in Crete, the Cyclades, and at Troy.¹⁰³ But this Late Bronze Age form with a heavy leaf-shaped blade appears to be rare and confined to Crete.¹⁰⁴ Such a heavy blade, so weighted towards the tip, can only have been a thrusting weapon on a comparatively short haft. It is reminiscent of the mediaeval boar-spears with their strong short hafts and heavy blades to be seen in the Tower of London; and it may perhaps have been developed for the same object.¹⁰⁵

A J (3). Spear-head (FIG. 8). Bronze. L. 0.43. W. of blade at the base 0.05. W. of socket 0.034. Socket broken, and parts missing from socket and blade.

The blade is ogival with a thick mid-rib. The socket is split, and has a pair of 'rivet' holes but no ring at the base. For the decoration, see p. 256. The ogival shape of the blade is unusual.¹⁰⁶

¹⁰⁰ It is not made clear from which of the fourteen tombs the various bronze plates came, or whether they were all from the same tomb.

¹⁰¹ *PM* III 184, fig. 128. Evans thought the rectangles were intended for boar's tusks, *cf.* *Homer and the Monuments* 220. But Persson (*New Tombs at Dendra* 129) believed that in Crete at any rate such representations implied metal plates, e.g. the Zakro sealing reproduced in *PM* IV, fig. 856. Metal discs from Shaft-grave IV may, as Karo suggests, come from a helmet (*Schachtgräber*, nos. 541-49, pl. lxx); Evans (*PM* IV 869) cites, but does not illustrate, an ivory relief from Knossos showing a helmet which seems to be armed with similar metal discs.

¹⁰² For the slots, see above under A J (1).

¹⁰³ CRETE: Khamaizi (*AE* 1906, pl. 7, 5). Tip broken. L. as preserved 0.19. Presumably M.M. I. Mallia (*Études Crétoises* VII 52, pl. lxi, 2-3, no. 2255): from the interior of the necropolis building at Khrysolakkos. L. 0.28. Attributed by Demargne, but only on the grounds of its appearance, to the second period of the Palace. CYCLADES: Amorgos (*AM* XI (1886), 24, Beil. 1, 8): L. 0.23. TROY (*Dörpfeld, Troja und Ilion* I 344, fig. 262 d): Troy II-V. *N.B.* On p. 345 Dörpfeld speaks of a mould found at Troy for a blade of this type. These blades were probably spear-heads (Childe, *Dawn of European Civilisation* (4th ed. 1947), 54; for the system of mounting on a haft, *ibid.* fig. 26, reproduced from *BM Bronze Age Guide* (1920), fig. 173).

¹⁰⁴ There is one in the collection of Dr. Giamalakakis at Herakleion (Κρητικά Χρονικά Δ' (1950), 110 and 122, no. 358, pl. Γ'. Published by Miss Xenakis. Dr. Platon kindly brought this reference to our notice). L. 0.216. Miss Xenakis notes the resemblance of this blade to our blade A J (2). A second blade of this type was found in a hoard of L.M. bronzes at Tourloti, near Mouliana (Sitia), and is now in Herakleion Museum (No. 542): it is mentioned by Xanthoudides (*AE* 1906, 135) apropos of the Khamaizi M.M. blade (see n. 103 above). Some daggers of the Late Bronze Age in the Aegean also have a leaf-shaped blade, e.g. *Prehistoric Tombs* 82, fig. 90 (from Knossos), and *BM Bronze Age Guide* (1920), fig. 173 (from Naxos).

¹⁰⁵ For differentiated boar-spears, see Marinatos in *BSA* XXXVII (1936-7), 191, esp. n. 2. *Cf.* the fine spear-head from Ras Shamra with two boars springing from the ring at the base of the socket, and Schaeffer's remarks (*Syria* XIV (1933), 118-19).

¹⁰⁶ There is a very similar spear-head in the collection of Dr. Giamalakakis (Κρητικά Χρονικά Δ' (1950), 112 and 124, no. 508, pl. Δ'); and another from Gournia (Boyd-Hawes, *Gournia*, pl. iv, 48).

AJ(4). Small spear-head (FIG. 8). Bronze. L. 0.24. W. of blade 0.03, of socket 0.024. The socket is split, and has a pair of 'rivet' holes at the base. Remains of the wooden shaft were recovered from the socket. For the type, cf. I (11) and p. 256.

AJ(5). Leaf-shaped 'razor' (FIG. 8). Bronze. Broken; tang and end of blade missing. L. preserved 0.12. W. 0.045.

There were six of these implements in the Zafer Papoura cemetery, and Evans thought that they were razors (*Prehistoric Tombs*, 117). This is denied by Blegen (*Prosymna*, 332); from Prosymna twelve examples were recovered in L.H. I-III contexts. Persson inclines to accept them as razors (*New Tombs at Dendra*, 45), on the grounds that to judge from the monuments, as Evans pointed out, the people of the Mainland shaved the moustache after the Shaft-grave period.

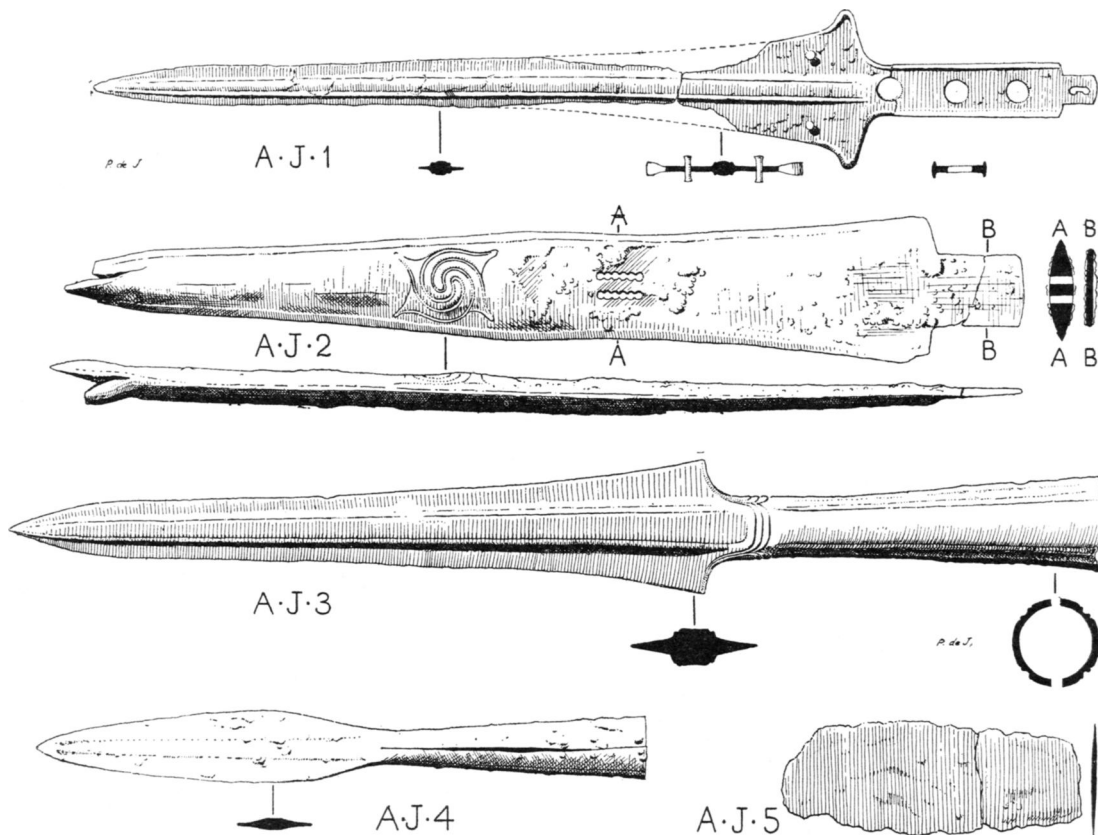


FIG. 8.—BRONZES FROM THE 'SHAFT-GRAVE' AT AYIOS IOANNIS. Scale 1 : 3.

(2) THE TOMBS ON THE NEW HOSPITAL SITE

I(1). Stemmed goblet with two handles (FIG. 9, PLATE 55, c). H. 0.103. D. 0.12. Fine orange clay with the surface smoothed to a paler shade. Decoration in dark-brown lustrous paint. The foot is remarkable in having a rim round the outside edge and a slight depression under the stem in place of the usual hollow stem (see p. 254). The foot, rim, and handles are painted solid. There are two zig-zag lines round the body with horizontal bands below.

I(2). Stemmed goblet with two handles (FIG. 9, PLATE 55, c). H. 0.09. D. 0.10. Fine orange clay with the surface well smoothed. Decoration in red lustrous paint. Hollow stem. The inside of the cup is painted solid on the bottom, with a band above, and a band round the inside of the rim. There is a band round the bottom of the foot, cf. III (1). The handles are decorated with hatching, which continues down each side of the stem. For the central pattern, cf. PM IV, fig. 301 n (L.M. II) from the Palace; this, however, lacks the dots; the motive in the angles is an *iris* according to Furumark, *MP*, no. 10 A, c (L.M. II-III A).

I(3). Large jug (FIG. 9, PLATE 55, a). H. 0.40. D. of body 0.27. 'Metallic' base and handle. Greenish-buff clay. Decoration in black. The decoration is very faint, and the designs on the neck and shoulder are not at all certain. For 'net pattern' covering the body of vases in L.M. II, see *MP*, 202: the 'net pattern' on our jug is probably a degenerate version of the 'tricurved arch net' (*MP*, no. 62), derived from rock work. For the fill-ornament in the network, see *MP*, no. 10 A, types b and c (L.M. II-III A).



FIG. 9.—VASES FROM TOMB I. Scale 1 : 3, unless otherwise indicated.

I (4). Bridge-spouted jug (FIG. 9). Much destroyed and incapable of complete restoration. H. estimated c. 0.30. D. of body 0.275, of mouth 0.115. Orange clay. Decoration in brownish-black lustrous paint shading to red. 'Metallic' handle with two low 'rivets' at the top of the handle where it joins the rim of the vase. The decoration was difficult to distinguish, and is uncertain in detail. There is a wide band of running spirals round the body, cf. I (5): some at least of the spirals may have had filling ornament of some kind at the centre.¹⁰⁷

I (5). Large stirrup-vase with three handles¹⁰⁸ (FIG. 9, PLATE 55, a). H. 0.26. D. of body 0.28. Pale orange clay with a smoothed buff surface. Decoration in brownish-black, much worn. Band of running spirals round the body. The details of the decoration on the top of the vase are very uncertain.

I (6). Three-handled amphora (FIGS. 10 and 14, PLATE 56, a). H. 0.33. D. of body 0.28, of rim 0.16. 'Metallic' base, handles, and rib round the shoulder. The handles are set sideways and upright. Greenish-buff clay. The decoration was in black, and traces of the original black paint are still preserved on the bands round the neck and the base; but elsewhere the paint has disappeared, leaving the design showing like a negative, pale against a darker background. Over large areas of the vase the design has entirely vanished.

The elaborate scene on the body of the vase shows three birds, which may be intended for partridges, walking among flowers. The three groups of flowers vary in detail: in two lilies seem to be dominant, while the flowers of the third group closely resemble the flowers to the left on a L.M. IA sherd from Knossos (*PM* II, fig. 276j).¹⁰⁹ The naturalism and variety of this scene are probably to be explained as a copying from some fresco on the walls of the Palace or elsewhere.¹¹⁰

There is a similar amphora with the same scene from Ialysos in Rhodes (*Ann.* VI 130, figs. 50 and 52). But this has only two instead of three birds, and the style of the decoration is very much cruder than on our vase. It is dated by Furumark to L.M. IIIA1.

The occurrence of birds on pottery of this period from Crete is unusual.¹¹¹ Evans (*PM* IV 337) mentions fragments of bowls with ducks and papyrus of a class parallel to IIIA2 examples from Phaistos (*MP*, 171), and says that some of these may well come within the limits of L.M. II. He cites a sherd from Knossos on which the bird has the body filled with dots, cf. our birds (*JHS* XXIII 198, fig. 14).

For the wavy lines of the upper border, see *MP*, no. 53, and *PM* IV, fig. 282. The motive is found from L.M. IB onwards: it is derived from metal work, e.g. the bronze jug from the NW Treasure House (*PM* II, figs. 402, 411 a).

For the tricurved arch linking the loops of the lower band of wavy lines, see *MP*, no. 62. The motive is derived from rock-work (*ibid.*, 144): it is characteristic in land scenes of L.M. IB period (*ibid.*, 160), and occurs in L.M. II (*ibid.*, 210), e.g. *PM* IV, fig. 262.

For the quatrefoil rock-work in the loops of the lower band of wavy lines, cf. an amphora from a chamber-tomb at Mycenae, which is regarded by Evans as of Knossian fabric and incipient 'Palace style', i.e. L.M. IB/IIA (*PM* IV, fig. 262 b: on the right of the vase under the handle). The trefoil variety of this motive appears to be more common.¹¹²

I (7). Three-handled amphora (FIG. 10, PLATE 54, b). H. 0.20. D. of body 0.165, of rim 0.11. 'Metallic' base, handles, and rib round shoulder. The handles are set vertical. Fine orange clay with the surface smoothed to a paler shade. Decoration in dark brown shading to reddish.

The body is decorated with scale pattern (*MP*, no. 70). This is very common on three-handled amphorae found on the Mainland, e.g. Mycenae (*Chamber Tombs*, pl. xxviii, 1 (L.H. II)) and Prosymna (*Prosymna*, figs. 260, 621 (L.H. III)). But Furumark (*MP*, 405) claims that there is evidence to show that the characteristic Mycenaean IIA types of scale pattern are of Minoan origin.

This amphora had been filled with fine grey ash.¹¹³

I (8). Three-handled amphora (PLATE 54, b). H. 0.21. D. of body 0.175, of rim 0.11. Fine orange clay with the surface smoothed to a paler shade. Decoration in black. For the shape and design, cf. I (7); except that there is a band of dots in place of V marks round the shoulder.

I (9). Alabastron (FIG. 10, PLATE 55, c). H. 0.08. D. of body 0.27, of rim 0.135. For the unusually squat shape, with the sharp angle between the sides and the base, see p. 255. The vase is heavy, and has thick walls; the fabric is rather coarse, with gritty orange clay, the surface orange and not well smoothed. Decoration in thick brownish-black lustrous paint. The under side of the base rough and undecorated.

The decoration consists of 'Rock Pattern I' (*MP*, no. 32, 19) in a Myc. IIA form characteristic of such vases found on the Mainland, e.g. *Chamber Tombs*, pls. xxviii 2, xlviii 12; *Prosymna*, no. 1167, fig. 687.

I (10). Lamp. Much destroyed and incapable of restoration. Very soft fabric. Orange clay. For the type, cf. III (12).¹¹⁴

¹⁰⁷ For running spirals on jugs of this type, but of an earlier date, e.g. *PM* IV, fig. 195 (L.M. IA).

¹⁰⁸ Three handles are unusual. Cf. *PM* IV, fig. 298, from the S.W. part of the Palace at Knossos, dated by Evans to the beginning of L.M. II.

¹⁰⁹ Furumark regards these as iris (*MP* 190 n. 1. N.B. *i* should be *j*); but Evans seems to think that all the flowers on this sherd may be a version of 'honey-suckle' as seen on a fresco fragment from the House of the Frescoes (*PM* II 469).

¹¹⁰ For the influence of the naturalistic designs of M.M. III wall-paintings on the decoration of L.M. pottery, see *PM* II 468 ff., cf. *JHS* XXIII 194. For a fresco with partridges, cf. *PM* II, fig. 51-4, from the Caravanserai, which according to Evans is L.M. IA (*ibid.*, 116); one of these partridges has a raised wing (fig. 51), another a slightly parted beak (fig. 52), like the birds on our vase. Furumark (*MP* 195) suggests that representations like that of this partridge fresco may have served as models for some of the birds on L.M. III vases.

¹¹¹ See *AC* 243.

¹¹² See *PM* IV 314, fig. 250, for the evolution of trefoil rock-work from the triple group of rock and seaweed of the L.M. IB 'Marine' style.

¹¹³ See p. 249, n. 19.

¹¹⁴ For Minoan clay lamps in general, see *BSA* XXVIII 292, pl. xxii, where the lamp V 23 (at bottom r.) most resembles our small type I (10) and III (12). Cf. *MP* 77. N.B. The raised lip by the handle is to protect the hand from heat.

I (11). Small spear-head (PLATE 53, *b*). Bronze. L. 0.25. W. of blade 0.03, of socket 0.025. The socket is split, and has a pair of 'rivet' holes at the base. For the type, cf. A J (4) and p. 256.

This spear-head was lying on the ledge immediately above the rock and well below the undisturbed layer of brown marking the presence of the coffin or bier with the body (see p. 248). It was probably found, therefore, in exactly the position in which it had originally been placed in the tomb. There were traces of the wood of the haft in the socket. It follows that if the spear had been put on the ledge with the haft unbroken and with the head resting where it was found, the length of the spear when hafted could not have exceeded 1.25, cf. the spear of the same type from the Vaphio tholos tomb (p. 256).

I (12). Tweezers (FIG. 12, PLATE 53, *b*). Bronze. L. 0.082. Badly corroded and broken. For this type in Crete as early as the E.M. period, cf. Seager, *Mochlos*, t. xix, 28, fig. 12.

I (13). Seal (FIG. 18). Lentoid. Grey steatite. L. 0.015. W. 0.015. Worn condition, and damaged on the reverse side round one end of the string-hole and elsewhere. The design is rudely incised or scratched; the drill does not seem to have been used. This seal was found together with I (14) inside the 'Bird' amphora I (6).

The Rev. V. E. G. Kenna, R.N., has kindly supplied the following note on the seal: 'I have not seen the original; but from the drawing and description submitted to me it seems that in the field are three groups of figures. They do not appear to be script or pictographic signs, but either individual marks, whose value in sealing would be their uniqueness, or debased motives from another sphragistic tradition. It is suggested that the origin of the seal be looked for in Anatolia. The material, grey steatite, and the technique, are more akin to Anatolian products than to Minoan work. Yet the sense of the 'round' in the arrangement of the figures points to Minoan influence, and the figures themselves to decadent copying of original Minoan motives. This is not without parallel either in Anatolian or Syrian seals of the latter half of the second millennium, cf. Hogarth, *Hittite Seals* (1920), 19, 62, 70 (esp. no. 133, procured from Smyrna); compare also the sudden entry into Phoenicia at the same period of the scarabs having their faces covered with tubular drill marks, which are obviously related to similar amygdaloids of L.M. I-II.

'The groups of figures consist of (1) perhaps a debased form of the two-animal motive of L.M. I: one animal looks to the left, the other behind it looks back. (2) Probably a debased bird. A bird in flight in the field with the animals is common on peripheral lentoids derived from L.M. sources. (3) If one group, a debased form of bull: the figure has then affinity with the Ayios Onouphrios whorl (Evans, *Scripta Minoa* I 118, fig. 52 *a*). If two groups, then the chevron at the top is to be considered as decoration or filling ornament, and the rest of the design as the debased form of an animal.'

I (14). Two schist plaques (FIG. 18): (1) L. 0.048, W. 0.019; (2) L. 0.04, W. 0.017. Found with the seal stone I (13) inside the amphora I (6).

I (15). Shark's tooth¹¹⁵ (FIG. 18). L. 0.012. W. 0.012. This was lying on the rock surface of the ledge under the layer of brown marking the coffin or bier with the body.

II (1). Jug (FIG. 10, PLATE 56, *b*). H. 0.25. D. of body 0.20. 'Metallic' handle and rib round the shoulder. Greenish-buff clay. The decoration is much worn, but seems to have been in dark brown or black. Three stylised papyrus-like flowers hang downwards from the neck. In the intervals between them are two other flowers, difficult to distinguish but perhaps of the same type, growing straight upwards from bands round the body.

The flowers on this vase clearly look towards the 'Flower' motive so characteristic of developed Mycenaean vase decoration (MP, no. 18). As Furumark says: 'The genesis of the Myc. III flower may be described as a transformation of the Myc. IIIA₁ lily under the influence of late L.M. IIIA₁-2 hybrid floral types with the Palace Style papyrus as the basic element' (MP, 286). Thus while our flowers with their curling volutes are reminiscent of the lily, they are closely paralleled by what is evidently papyrus on a sherd from a large jar found in a house west of the Palace at Knossos (PM IV 334-6, fig. 278: below the duck on the left). Evans is cautious in his attribution of this vase, but concludes that 'it may seem best to group it with a certain number of painted clay goblets . . . which . . . seem to have been actually in use in the last Age' of the existence of the Palace; 'but which typologically fit on rather to the succeeding L.M. III phase'. In other words, this vase would belong to Furumark's L.M. IIIA₁ phase, which immediately precedes the destruction of the Palace (MP, 169); and the flowers of our vase are also probably best regarded as belonging to the style of IIIA₁.

In the same way the shape of our vase corresponds to Furumark's shape 144 of IIIA₁ (MP, fig. 5), cf. a jug from the Zafer Papoura cemetery (*Prehistoric Tombs*, fig. 175), and another from the Tomb of the Double Axes (PM IV, fig. 244 *b*), both classified by Furumark as IIIA₁ (MP, 171 and 173).

II (2). Alabastron (FIG. 10, PLATE 56, *b*). H. 0.06. D. of body 0.19, of rim 0.09. The vase was much destroyed, and about half the rim and other pieces are missing. The clay is orange, and the fabric very soft; the surface has much perished, but preserves traces of decoration in red, consisting of some form of rock pattern with dots. There are concentric circles on the under side of the base.

II (3). Sword (FIG. 15 *a*, PLATES 50, *b*, 53, *a*, 54, *a*). Bronze. The hilt plated with gold. The pommel was originally of ivory, of which fragments were preserved (*N.B.* the pommel in PLATES 50, *b* and 53, *a* has been restored in wax). L. with the pommel as restored 0.61. W. across shoulder 0.06. D. of pommel 0.045. The blade is broken, and the bronze is in very poor condition.¹¹⁶

The sword is of the 'cruciform' type cf. A J (1), with the wooden hilt-plates held in position by flanges round the shoulder and tang, and by three large wooden pegs passing through holes in the tang, together with two small bronze rivets at the base of the blade (see p. 255). The flanges round the tang and shoulder were plated with gold, which was wrapped over their edges.¹¹⁷ The wooden hilt-plates were also covered with gold, a single sheet of gold on each face stretching

¹¹⁵ Dr. E. Trewawas of the Natural History Museum, South Kensington, who kindly examined the tooth, informs us that it matches well with the teeth of some of the species *Carcharhinus*, notably *C. longimanus* (Poey) and *C. obscurus* (Lesueur), both of which are known from the Mediterranean.

¹¹⁶ This is doubtless because, as Mr. Cornwall suggests, the bronze was in contact with the decaying flesh of the body, which, containing sodium chloride, would favour metallic corrosion. The contrast between the poor preservation of the sword and the unusually fine condition of the spear-head II (4) is remarkable.

¹¹⁷ Cf. a 'horned' sword from Tomb 9 of the 'Tombe dei Nobili' at Phaistos (MA XIV 535-6, fig. 20 *a*).



FIG. 10.—VASES FROM TOMBS I-III and V. Scale 1 : 3, unless otherwise indicated.

over the hilt and shoulder; these sheets of gold were decorated in repoussé with interlocking spirals¹¹⁸ which were divided at the join of the hilt with the shoulder by two loops like those on the spear-head A J (3) (see p. 256).¹¹⁹ There were three large holes in each gold sheet, corresponding in size to the holes in the tang, to allow for the passage of the three wooden pegs: into the ends of the pegs were fixed six bronze nails with short points and wide gold-capped heads shaped to fit the curve of the hilt. The two bronze rivets at the base of the blade were also capped with gold. The hollow at the base of the blade on each face, formed by the extensions of the hilt-plate, is covered by a sheet of gold, decorated with running spirals in repoussé which continue the line of the mid-rib. No trace of decoration could be made out on the mid-rib itself; but in view of the poor state of preservation of the bronze it is impossible to be certain that the mid-rib was not decorated. The hilt is divided from the pommel by a ribbed collar of gold; and the ivory of the pommel was held in a gold 'cup' (PLATE 54, a), decorated like the plates covering the hilt with interlocking spirals in repoussé, and perforated to take a peg, which secured the pommel to the projection at the end of the tang.¹²⁰ The projection on the tang had a slot composed of three overlapping holes, cf. the slots in the blade of A J (2).

The hilt of this sword is only moderately 'cruciform' and in profile rather reminiscent of a 'horned' hilt. There are two swords with gold-plated hilts of a fully developed 'cruciform' type which may be compared with our sword: (1) from the 'King's Grave' in the tholos tomb at Dendra (*Royal Tombs at Dendra*, 35, no. 11, pls. xx and xxii). The blade is rather longer than that of our sword: but the hilt is decorated in the same way with interlocking spirals; although there is no gold along the flanges, or at the base of the blade. (2) From the 'Chieftain's Grave' in the Zafer Papoura cemetery at Knossos (*Prehistoric Tombs*, 57, fig. 59). This is exactly the same length as our sword (0.61 with the pommel). The hilt has an elaborate scene of lions and wild goats. As in the Dendra sword, there is no gold along the flanges or at the base of the blade: but both the mid-rib and the flanges are decorated with double rows of running spirals 'of microscopic fineness in relief', cf. the 'horned' sword from the same grave (*ibid.*, fig. 58).¹²¹

II (4). Spear-head (FIGS. 12 and 15 b, PLATES 53, a, b). Bronze. L. 0.56. W. of blade 0.03, of socket outside 0.025, inside, 0.02.

This weapon, which is in the finest state of preservation, belongs to the type already well known from the 'Chieftain's Grave';¹²² of which Evans aptly says that 'on the whole this must be regarded as . . . very practical . . . for its purpose, both compact and penetrating' (*PM* IV 844). The mid-rib, with three fine ridges running down it on each side of the blade, widens at the bottom to form two facets of the octagonal socket. The edges of the blade flatten out to produce another two facets of the socket, each of which is also decorated with three ridges. The other four facets, in the intervals between these, are formed by the continuation of the leaves of the blade. At the base of the socket are two 'rivet' holes (6 mm. in diam.) for a peg to secure the shaft; and on the surface of the socket between these two 'rivet' holes are traces for a width of 3 mm. where a binding of some kind had been wrapped round the socket. The socket has a slit, which runs diagonally instead of straight up the socket, and is so fine that a razor blade can barely be forced down it: the slit can only be traced for a distance of 0.09 from the butt. The base of the socket is closed by a narrow bronze ring, which was apparently fixed in place after the shaft was in position, and not cast in one piece with the rest of the spear-head. On the same side of the socket as the slit is the lightly incised figure of a butterfly with outspread wings, in flight down towards the butt;¹²³ this design is not repeated on the opposite face of the weapon. The tip of the wooden shaft was remarkably well preserved inside the socket.¹²⁴

III (1). Stemmed goblet with two handles (PLATE 55, b). H. 0.115. D. 0.12. Fine orange clay with the surface smoothed a paler shade. Decoration in reddish-brown. Hollow stem. The rim is painted solid inside, and hatched outside. There is a band round the bottom of the foot, cf. I (1). The body is decorated on each side with a double spiral.¹²⁵

III (2). Jug (FIG. 10, PLATE 55, a). H. 0.40. D. of body 0.30. Orange clay with the surface smoothed a paler shade. Decoration in red-brown lustrous paint. The rim is painted solid round the inside. The 'scale pattern' of the neck (cf. *MP*, no. 70, 4a, which according to Furumark is Myc. IIA), and the 'foliate band' of the shoulder (*MP*, no. 64), are both to be derived from metal work (see p. 253, n. 30). The 'foliate band' in particular, as Furumark says, is very unusual in the Palace style (*MP*, 180 with references). In other respects the decoration of this vase is remarkable. The body is adorned with six argonauts, and argonauts have not apparently been recognised hitherto on any vase of the L.M. II period (see p. 253, n. 33. Cf. III (5)); moreover, these argonauts are peculiar in having a fourth 'arm' substituted for the body of the animal. For the dots along the arms of the argonauts, cf. a vase from Shaft-grave I (*Schachtgräber*, no. 197, pl. clxviii), which must be L.H. I; and an L.M. I vase from Gournia (Boyd-Hawes, *Gournia*, pl. J): but dots represent suckers on the tentacles of an octopus on a Palace style amphora from Knossos, classified by Evans as L.M. IIA (*PM* IV 305, figs. 240-1).

III (3). Bridge-spouted jar (FIG. 11 PLATE 55, b). H. 0.195. D. of body 0.20, of rim 0.15. 'Metallic' base and rim, and a little rivet-like knob projecting from the back of the vase opposite the spout. Greenish-buff clay. Decoration in black. The broad flat top of the rim is decorated with chevrons. The design on the upper part of the body is very

¹¹⁸ The design of interlocking spirals shows signs of wear in places owing to frequent handling of the sword. This is some indication, if such were required, that richly decorated weapons of this type were not kept merely for occasional parade or ceremonial use.

¹¹⁹ For such loops on the gold hilts of 'cruciform' swords, see the sword from the tholos tomb at Dendra and that from the Zafer Papoura cemetery at Knossos described below. Cf. the 'cruciform' hilt-mountings of agate and faience from Mycenae, and one of crystal from the Palace at Knossos (*Prehistoric Tombs* 110; illustrated in *PM* IV 852-4, figs. 836-7).

¹²⁰ The peg may have been of wood or ivory and not bronze, as no trace of it was found.

¹²¹ Persson believed that these two swords actually came from the same workshop, which was situated on the Mainland (*New Tombs at Dendra* 61). The discovery of our sword suggests a Cretan origin at any rate for the two swords from Knossos.

¹²² *Prehistoric Tombs* 55, figs. 55-7. Cf. *BM Bronze Age Guide* (1920), fig. 171, from Ialysos.

¹²³ Cf. a bronze double axe from Phaistos (Mosso, *Dawn of Mediterranean Civilisation* (1910), 318, fig. 180). For butterflies in general as representing the 'life' of man, see *PM* III 148 ff., cf. II 787.

¹²⁴ Cf. III (14) (p. 271), where the wood was identified as olive.

¹²⁵ Cf. the rather similar motif on a jug from Korakou (Blegen, *Korakou*, fig. 69 and pl. V), classified by Furumark as Myc. IIB (*MP* no. 47, 1).

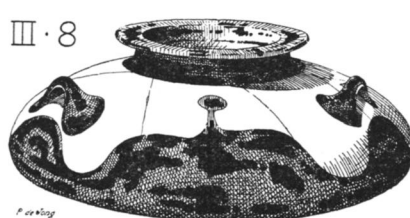
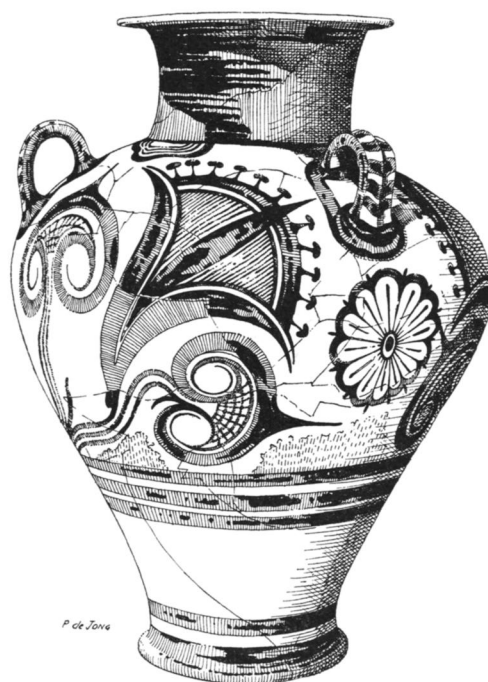


FIG. 11.—VASES FROM TOMB III. Scale 1 : 3.

worn and not at all certain; but that on the lower part is well preserved, and consists of simple rosettes above an elaborate variety of zig-zag, which may be derived from an imitation of the veining on alabaster vases (*PM IV* 271, fig. 201, cf. *MP*, no. 61, 9, a sherd from the tholos tomb at Oxyliothos (Euboea), classified by Furumark as IIIA ?2: Furumark observes (*ibid.* 387) that 'the intermediate dots . . . are a constant feature of Minoan designs of this class'.

III (4). Three-handled amphora (FIG. 11, PLATE 55, *b*). H. 0.30. D. of body 0.22, of rim 0.13. 'Metallic' base and handles: the handles are set vertical. The vase was much broken, and large parts of the body are missing. Fine orange clay, with a buff surface well smoothed. Decoration in brownish-black lustrous paint.

This vase is adorned with floral decoration in the most typical Palace style, including papyrus (cf. *MP*, 11, 23 etc. Myc. IIA), 'sacral ivy' (*MP*, no. 12, = L.M. IIA), and rosettes (*MP*, no. 17, 7 = Myc. IIA *late*).¹²⁶ Somewhat similar in shape and decoration is the amphora from a chamber-tomb at Mycenae (although this has the handles set sideways and not vertical), which is described by Evans as being of Knossian fabric and incipient Palace style (*PM IV* 320, fig. 262 *a*). The 'stippling' on our vase, so characteristic of the L.M. II Palace style,¹²⁷ is here transferred from marine scenes, where it represents the sea sands.¹²⁸ For the 'tricurved arch' rock work of the background, see under I (6) (p. 264).

III (5). Three-handled amphora (FIG. 11). Much broken, and large parts missing, including most of the rim and neck. H. to base of the neck 0.18. D. of body 0.17. The handles are set sideways and upright. Very soft fabric. Orange clay, with an orange surface, well smoothed or burnished. Decoration in dark brown shading to red-brown paint.

The body supports three ivy-like argonauts¹²⁹ swimming against a stippled background, which may represent the sands of the sea.¹³⁰ For the argonauts, cf. *Chamber Tombs*, t. 529, 4, 103, pl. xlviii (L.H. II).¹³¹ For the 'foliate band' on the shoulder, cf. III (2) (p. 267).

III (6). Three-handled amphora. The vase was of such soft fabric and so badly destroyed that it was impossible to restore it. 'Metallic' base, and rib round the shoulder. The three thin 'strap' handles were set vertical.¹³² The clay was orange. The decoration, in lustrous red paint, consisted of a flower design, including lilies which in a general way resemble the types grouped by Furumark as L.M. IIA-B (*MP*, no. 9, 2-1).

III (7). Alabastron (FIG. 11, PLATE 55, *b*). H. 0.065. D. of body 0.21, of rim 0.105. Fine orange clay with the surface smoothed. Decoration in brownish-black lustrous paint. The body has a simple version of the 'rock pattern' (*MP*, no. 32, 5 = Myc. I-IIIB). There are concentric circles on the base, but it is impossible to distinguish whether the centre of the base is occupied by closely spaced circles or by a solid spot.

III (8). Alabastron (FIG. 11, PLATE 55, *b*). H. 0.07. D. of body 0.185, of rim 0.095. Greenish-buff clay, the surface much worn, but showing traces of decoration in black. On the body a version of 'rock pattern' (*MP*, no. 32, 22 = Myc. IIA). The base seems to be decorated with concentric circles.

III (9). Large two-handled jar (FIG. 13, PLATE 55, *a*). H. 0.40. D. of body 0.28. Soft fabric. Gritty orange clay. Decorated with horizontal bands in brownish-black. On the shoulder are traces of a circle with a cross inside it.

III (10). Large lamp with 'candlestick' centre¹³³ (FIG. 13, PLATE 55, *b*). H. to rim 0.065. D. of rim 0.19. Much broken, and several pieces including the tip of the handle missing. Very soft fabric. Rather gritty reddish clay. There were faint traces of light blue paint along the top of the rim and the upper side of the handle, cf. III (11).¹³⁴ Marks of fire along the top of the rim.

III (11). Lamp, cf. III (12). Much destroyed and incapable of restoration. Very soft fabric. Deep orange clay. Traces of light blue paint along the top of the rim and on the handle, cf. III (10).

III (12). Lamp (FIG. 13). H. to highest point of rim 0.05. Width of rim 0.11. Very soft fabric. Orange clay. The whole surface of the lamp is covered with a poor black wash inside and outside and under the base.

III (13). Dagger (FIG. 12, PLATE 53, *b*). Bronze. L. 0.285. W. 0.055. The blade is flat and has no tang. The hilt was secured by three large bronze rivets with gold-capped heads 0.014 in diam., and by two smaller rivets set between and immediately below them on the blade. This is an early type, of which many examples have been found in Crete and on the Mainland.¹³⁵

¹²⁶ For the rosettes, cf. a fragment of a L.M. II goblet from Knossos (*PM IV* 360, fig. 302 *a*).

¹²⁷ *BSA* Suppl. I (1923), 74. Cf. *MP* 205, where Furumark notes the occurrence of stippling on Palace Style vases with designs both of the marine and of the floral class, and its survival into L.M. IIIA1.

¹²⁸ *PM IV* 306. Furumark agrees with Evans that this type of stippling was imitated from a fresco pattern, which probably represented sands (*MP* 423): but he doubts if such stippling was really meant to depict sea sands in marine scenes on Palace Style vases, and suggests that it may have served as a substitute for other patterns which were used to represent water in marine compositions of L.M. IB-II (*ibid.* 205-6).

¹²⁹ For the tentacles, cf. in a general way the types classified by Furumark as IIB-III A1 (*MP*, no. 22).

¹³⁰ See under III (4) above and nn. 127 and 128.

¹³¹ The figures on this vase are called by Wace 'argonauts'; but Furumark classifies them as 'sacral ivy', and regards them as 'a kind of pictorialisation under the influence of the argonaut' (*MP* 269, no. 12, 11 = Myc. IIA).

¹³² Contrast the thick handles with their elaborate 'metallic' sections on the other amphorae from these tombs. The thin strap handles of this amphora may, of course, also be imitated from metal.

¹³³ Cf. *BSA* XXVIII 294, fig. 46 (ix. B. 12), from the Mavrospelio cemetery: also *PM I* 579, where the type is described and compared with Egyptian 'candlesticks' of Dyn. IV.

¹³⁴ Several tombs in the Mavrospelio cemetery produced fragments of lamps painted in unfixed colours, red, white, and blue (*BSA* XXVIII 294). Cf. *TDoAx* 26 ff., and *Prehistoric Tombs* 72.

¹³⁵ E.g. CRETE: Gournia (Boyd-Hawes, *Gournia*, pl. iv 60, 61): no. 61 has gold-capped rivets like our dagger. A. Triadha (Montelius, *La Grèce Préclassique*, pl. 7, 20): from the second tholos tomb. Mochlos (Seager, *Mochlos* 37, t. II 52): found close to the surface and probably intrusive. Seager thought that this 'would appear to belong to L.M. I' on typological grounds. MAINLAND: Dendra (*New Tombs at Dendra* 43, fig. 48, 1); Mycenae (*Chamber Tombs* 189, pl. vii 27): from its associations not later than the first half of L.H. II; Prosymna (*Prosymna* 330): three examples, all attributed to L.H. II: that on Pl. II (bottom) has gold-capped rivets like our dagger.

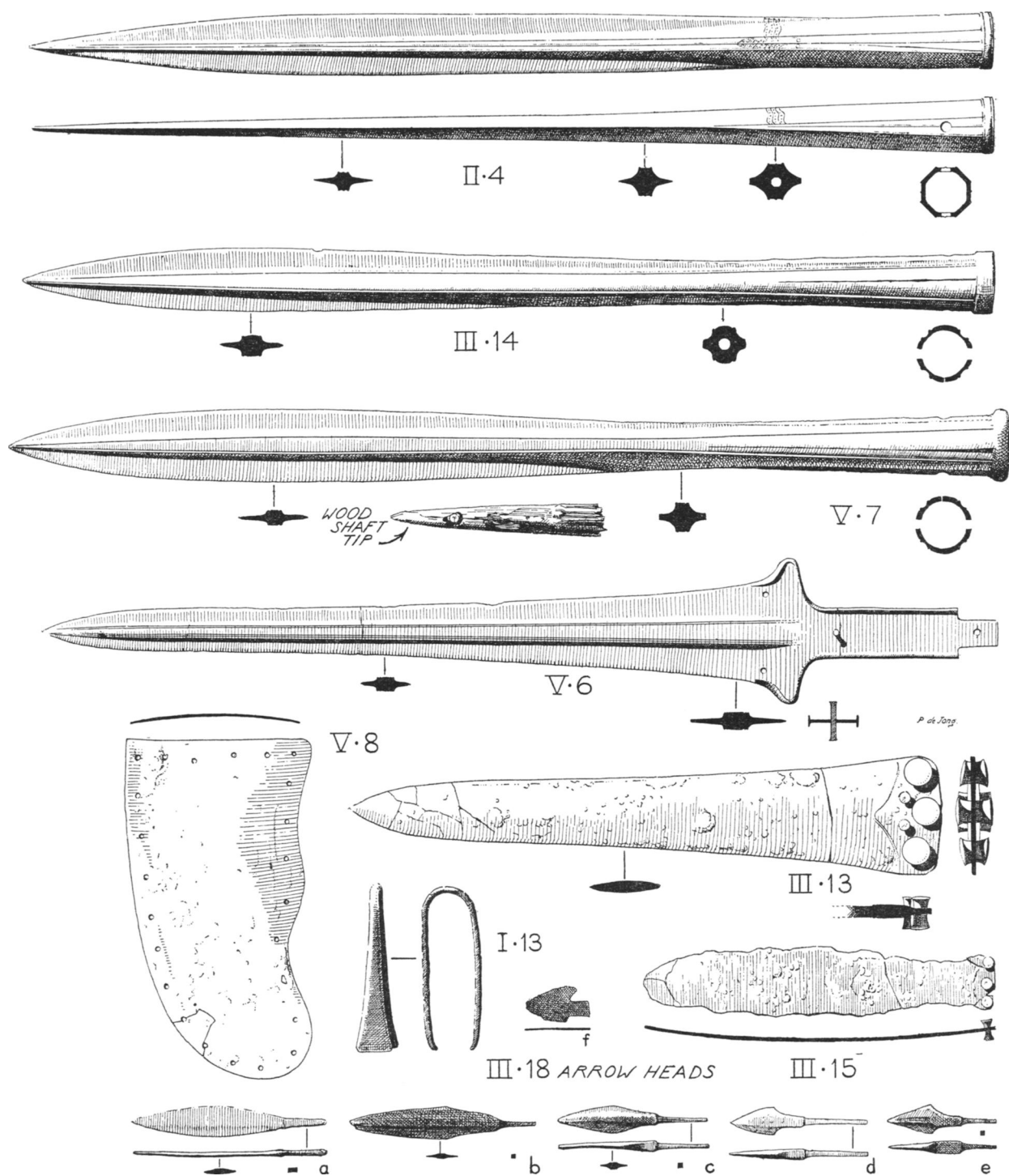


FIG. 12.—BRONZES FROM TOMBS I-V. Scale 1 : 3.

III (14). Spear-head ¹³⁶ (FIG. 12, PLATE 53, *b*). Bronze. L. 0.47. W. of blade 0.03, of socket outside 0.029, inside 0.025. The blade is leaf-shaped, and has a very pronounced mid-rib, rectangular in section, with a thin groove along each side of the top surface. The mid-rib continues down the blade and merges into the socket; the leaves of the blade similarly continue, to become four semi-circular channels. The socket is split, and has two 'rivet' holes and a ring round the base, cf. II (2). The tip of the shaft of olive-wood ¹³⁷ was preserved in the socket.

III (15). Razor (FIG. 12, PLATE 53, *b*). Bronze. L. 0.17. W. as preserved 0.033. The handle was fastened to the blade by three small bronze rivets with heads 5 mm. in diam. Cf. A J (5) (p. 262).

III (16). Copper staples ¹³⁸ (PLATE 52, *b*). About 150 in number, many of them broken, found scattered on the floor of the tomb over an area of c. 0.95 × 0.30. With the staples were three small fragments of very thin copper/bronze plate (III (17)), having traces of perforations into which the staples could fit. The staples, made from copper wire with a circular section 1-1.5 mm. in diam., appear to be of various types—some of simple horseshoe-shape with equal arms, others of the same shape but with one arm longer than the other, and others again with one end bent in one direction and the other end bent in a different direction. These staples (if straightened out) would vary in length between c. 0.014-0.025; their ends in every case seem to be blunt and not pointed.

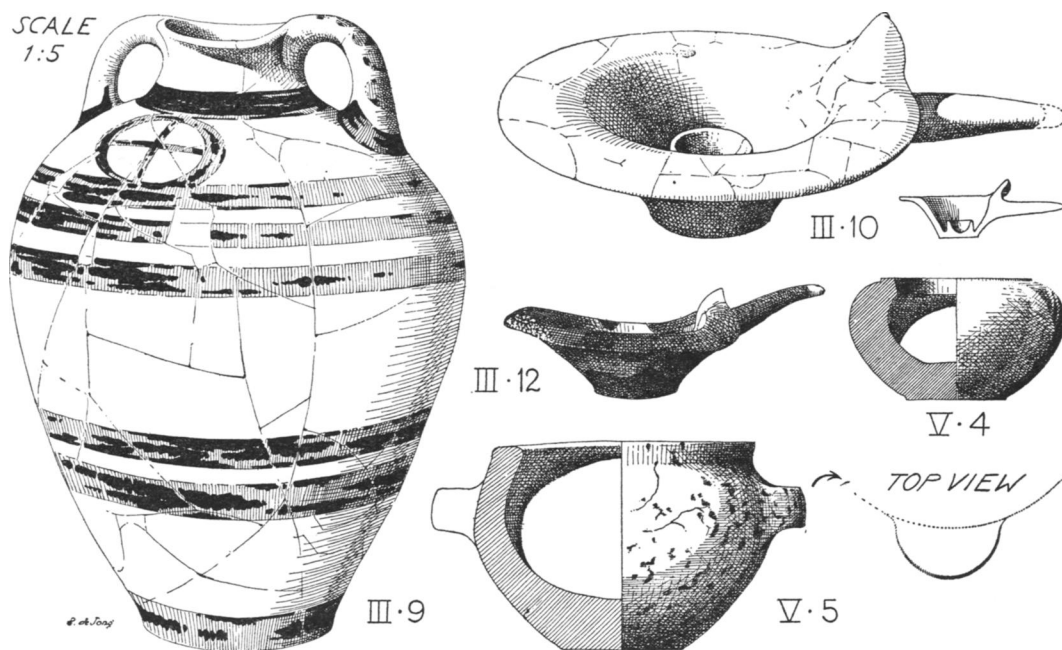


FIG. 13.—VASES FROM TOMBS III AND V. Scale 1 : 3, unless otherwise indicated.

The area over which the staples were found is roughly the same in form and size as that which might be occupied by the cigar-shaped centre-piece of a figure-of-eight shield as depicted, for instance, on the 'Shield fresco' in the Palace.¹³⁹ It is suggested therefore that these staples may possibly have fastened the leather or hide part of such a shield to its centre-piece. This centre-piece was probably of wood, if Evans is right in deriving the figure-of-eight shield as represented on the 'Shield fresco' from an original wooden parrying-stick (*PM* II 52; cf. *JHS* XIII (1892), 215 n. 44). Even if the centre-piece was of wood, its outside surface may have been covered with hide, as the strokes on the centre-pieces in the 'Shield fresco' seem to indicate.

III (17). See under III (16) above.

III (18). Six arrow-heads (FIG. 12, PLATE 53, *b*). Bronze. Various types. The longest (*a*) (L. 0.092) is leaf-shaped and flat with a flat tang; (*b*) and (*c*) (L. 0.09 and 0.072) have a more angular profile and a slight mid-rib, while the tang is square in section; (*d*) and (*e*) (L. 0.065 and 0.052) have a small thick diamond-shaped head and the tang square in

¹³⁶ Cf. *TDaAx* 15, fig. 21, which is almost exactly the same length (0.468) as our spear-head (the text mentions five holes in the base of the socket, with a wrong reference to fig. 22. Fig. 21 shows only the usual two 'rivet' holes). Also *FLMV*, Text Vol., pl. D, 4 and 5): these two spear-heads are from Ialysos (Rhodes) and are rather shorter than ours (0.41 and 0.42).

¹³⁷ The wood was kindly identified by Mrs. F. L. Balfour-Browne of the Natural History Museum, South Kensington. A knife from one of the Zafer Papoura tombs had an olive-wood handle (*Prehistoric Tombs* 80, no. 80 *a*). For wooden shaft tips well preserved in spear sockets, cf. *Prosymna* 199, fig. 511.

¹³⁸ The metal was identified as copper and not bronze by Mr. I. W. Cornwall, to whom a sample was submitted.

¹³⁹ *PM* III 299 ff., fig. 196 and col. plate xxiii; cf. IV 785.

section. The arrow-head (f), which is only 0.031 long, is a thin flat plate of bronze with one barb; it is damaged, and the second barb appears to be missing.

For the types (a)–(e), cf. *TDoAx*, 6, fig. 10 (*PM* IV, fig. 820), from the Isopata Tomb 1 A (L.M. IIIA), described by Evans as ‘javelins or darts’: but note that in the tomb there were only the three examples figured of this type, and they were found together with ‘arrow-plates’, i.e. thin flat arrow-heads akin to our type (f). What seems to be another arrow-head of type (a)–(e) is mentioned, but not illustrated, from Isopata Tomb 3 (*TDoAx*, 15). Cf. *Prosymna*, 200, fig. 512, from tomb x (L.H. III).

Arrow-heads therefore of these types with a mid-rib like (a)–(e) appear to be rather rare compared with the flat ‘arrow-plates’, of which many examples are recorded both from Crete and the Mainland; although the particular type of ‘arrow-plate’ represented by (f), with a wide barbed head and a short tang and no perforations through the blade, does not seem to be usual. However, there are some from *Prosymna* which look rather similar to our type (f) (*Prosymna*, 113, figs. 263–4 (t. xxxiv); 182, fig. 461 (t. iii)). Cf. *BCH* LXXI–II (1947), 233, fig. 27, from the Artemision deposit at Delos (this deposit, however, yielded post-Bronze Age as well as Bronze Age relics).

III (19). Gold toggle with eight facets (FIG. 18, PLATE 54, c). L. 0.055. Weight 13 grammes. Probably for fastening a belt or baldric (see p. 250).



FIG. 14.—DEVELOPMENT OF THE DESIGN ON THE BODY OF THE AMPHORA I (6).
Scale 1 : 4.

Similar gold toggles were found in association with two baldrics of strong gold plate, each over a metre long, from Shaft-grave IV (*Schachtgräber*, 76, pl. lviii); each of these baldrics was fastened by two gold toggles, of which one (no. 372) had eight facets like ours. Cf. *ibid.*, pl. cxliii, from Shaft-grave V, of silver; *Prosymna*, 95, fig. 214, 2, of gold with ‘remnants of a bronze attachment’ round the middle; Frödin and Persson, *Asine*, 371, fig. 241, of bronze covered with gold-leaf with spiral decoration.¹⁴⁰

III (20). Lentoid seal (FIG. 16, PLATE 54, c). Onyx.¹⁴¹ L. 0.034. W. 0.031. One axis is therefore longer than the other, cf. III (21).¹⁴² String-hole 2.5 mm. in diam. Very fine condition. Scene of a goddess flanked by two griffins and supporting above her head a pair of bow-like objects surmounted by a double axe. Both goddess and griffins are standing above a ground marked by two lines. The goddess is dressed in a long skirt with her breasts bare, and almost appears as if she were suckling the griffins, although this effect may not be intentional.

A number of seals are known from the Aegean of about this period which show variations of this scene. These are listed and discussed by Chapouthier (*REA* XLIX (1947), 22), and more recently by Nilsson (*The Minoan–Mycenaean Religion* (1950), 360 ff.). The goddess is sometimes flanked by lions instead of griffins, e.g. *PM* IV, fig. 133, from Knossos, and

¹⁴⁰ A rather similar toggle, but made of bone, was found in the lowest Copper Age Level I at Alişar in Central Anatolia (Schmidt, *The Alişar Hüyük: Seasons 1928–9 (Researches in Anatolia IV)* 71, fig. 85, b. 752). Another toggle from Level II of the same site is made of stone: it is fat and dumpy in appearance, but curiously enough has eight facets like our toggle. It is described by the excavator as ‘the most beautiful ornament from Stratum II’ (*ibid.* 171–2, fig. 221). Schmidt compares these toggles to some, apparently of faience, from pre-Dyn. IV contexts at Abydos, which Petrie thought to be toggles for fastening dress with a loop (Petrie, *Abydos* II 26, frontispiece and pl. viii, nos. 141–3). Professor Childe has kindly drawn our attention to another toggle, said to be of ivory, from ‘Troy III’ (Schliemann, *Ilios* (1880), 426, no. 536 = S. S. no. 7917); and to one of bone from as far afield as the ‘tholos’ tomb at Almizaraque in the south of Spain (Leisner, *Die Megalithgräber der iberischen Halbinsel (Röm.-Germ. Forschungen* 17) (1943), 11, pl. 28, 22).

¹⁴¹ We are much indebted to Dr. Platon for identifying the stones from which the seals are made.

¹⁴² The Reverend V. E. G. Kenna, R.N., informs us that ‘this disparity which produces an elliptical shape seems intentional, and is not usually seen in lentoids of M.M. III–L.M. I, although it occurs in L.M./L.H. III’.

Chamber Tombs, pl. xxviii, 31 and 32, from Mycenae. The bow-like object may be triple instead of double, and there may be indications of some kind of binding which ties the 'bows' together. The double axe does not appear above the goddess in all cases.

The intention of the bow-like objects is puzzling. Perhaps the least unsatisfactory explanation is that offered by Evans, that the 'bows' represent a ritual object composed of stuffed snake skins (*PM* IV 168 ff., cf. *Chamber Tombs*, 200). Nilsson is doubtful, but cannot suggest anything more probable.¹⁴³

III (21). Lentoid seal (FIG. 16, PLATE 54, c). Dark sardonyx. L. 0.029. W. 0.027. One axis is therefore longer than the other, cf. III (20) (see n. 142, p. 272). String-hole 2 mm. in diam. Very fine condition. Two oxen are lying back to back above a ground line indicated below. There are thistle-like plants to left and right of the oxen. This scene is known from several seals of the period, e.g. *PM* I 695, fig. 517, bought in Athens, but according to Evans from Crete. Cf. *Chamber Tombs*, pl. xxviii, 35, and p. 200, with references to other examples from the Vaphio tomb and Mycenae; and *Royal Tombs*, 80, pl. xxxiv, from the cenotaph at Dendra.

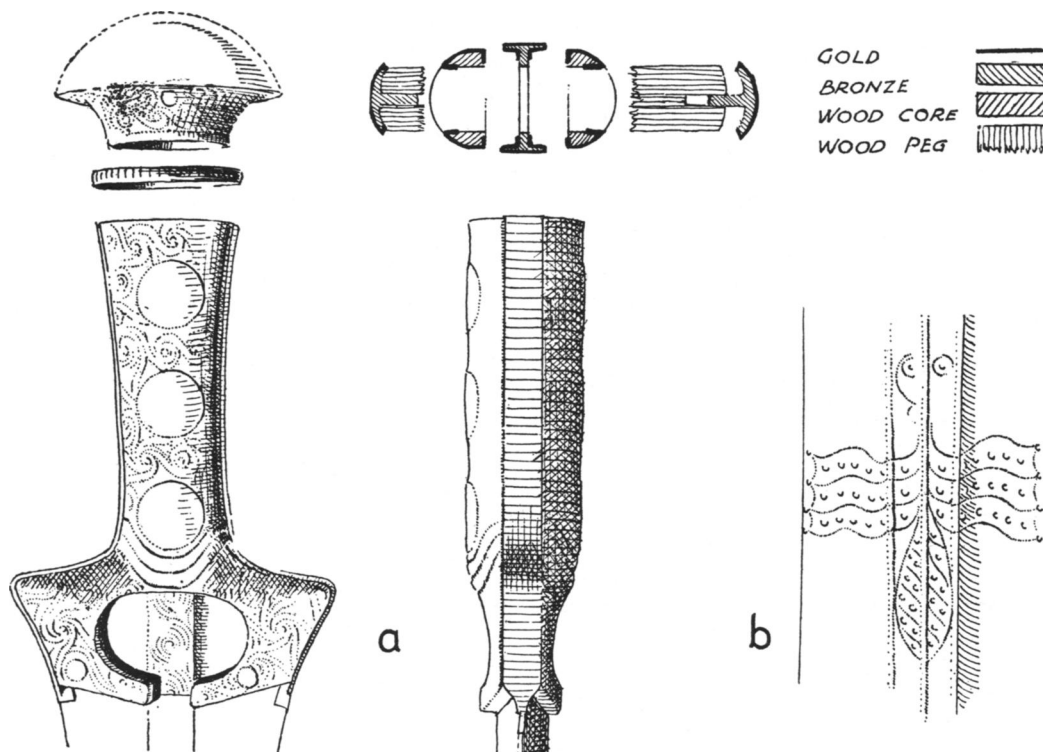


FIG. 15.—(a) HILT OF THE SWORD II (3). (b) BUTTERFLY INCISED ON THE SOCKET OF SPEAR-HEAD II (4). Scale 2:3.

III (22). Three-sided prism seal with gold mountings at the ends of the string-hole (FIG. 16, PLATE 54, c). L. (without gold mountings) 0.021. W. 0.019. String-hole 1.5 mm. in diam. Fine condition. One face of the seal is blank; the other two faces are engraved with scenes: (1) Recumbent ox with a shrub or tree behind. (2) Wounded lion turning to view the spear that sticks in its back. The shaft of the spear is knobbed.¹⁴⁴ Behind the neck of the lion project what appear to be three spikes of a plant.

Both these scenes are usual on seals of the period. For wounded lions in general, see *Chamber Tombs*, 199, with references: a gem with a similar scene is described, but not illustrated, from the 'Chieftain's Grave' at Knossos (*Prehistoric Tombs*, 59, 36 m.).

¹⁴³ The interpretation of the bow-like objects must to some extent depend upon whether they are regarded as being different from (so Evans and most authorities) or the same as one or other of the similar looking objects that appear on the following: (1) The gold signet-ring from Dendra (*Royal Tombs* 56, fig. 34 and pl. xvii). (2) The pin from Shaft-grave III, and the Aegina pendant (reproduced in *BSA* XLVI (1951), figs. 1 and 7). (3) Some Zakro sealings (*JHS* XXII 82 ff., nos. 57, 61-3, 66, 80-5, 88). For the view that all these are representations of one and the same thing, see most recently Marinatos in *BSA* XLVI (1951), 102 ff. Cf. Holland, 'Mycenaean Plumes', *AJA* 33 (1930), 190 ff.

¹⁴⁴ For the knobbed shafts of short hunting-spears or javelins with heads like A J (4) and I (11), see Marinatos in *BSA* XXXVII (1936-37), 187 ff.

III (23). Cylinder seal (FIG. 16, PLATE 54, c). Carnelian. L. 0.019. D. 0.008. String-hole 2 mm. in diam. Fine condition. The design, which is remarkably vivid considering the confining character of the medium, represents two lions¹⁴⁵ hunting in a landscape with clumps of bushes. The lion above is turning back its head, while a wild goat springs upwards out of a thicket on the left; on the right is a long-billed bird also facing up the picture, with what may be intended for another bird or perhaps a bush immediately behind it. Mr. Kenna observes: 'The cylinder is interesting, because the design shows the element of "torque", or feeling for the round, which is habitual in all Minoan engraving, and which here appears even though there is an attempt at a horizontal pattern'. For cylinder seals in Crete, see *PM* IV 496: they were not actually made in Crete before L.M. IA.

III (24). Ivory panel (FIG. 17, PLATE 54, d). L. preserved 0.34. W. without border 0.045, with border 0.059. The panel is c. 0.01 thick. The design on the panel consists of eight running spirals boldly carved. The ivory was in very poor condition, and is largely restored in wax as seen in PLATE 54, d.

The border is composed of separate strips 7 mm. wide. Only fragments of these strips are preserved, except at the right end of the panel in PLATE 54, d, where part of the border remains in position. The end of one strip was recovered; it is cut obliquely to form a bevelled joint (FIG. 17c). On the under side of the strips are little holes for pegs to fasten the strips to a backing of wood; traces of wood were noted in the area from which the ivory panel came. There is no indication that the strips were fixed in this or in any other way to the panel itself; the panel was presumably fastened in the same way as the strips to the wooden backing. It is interesting to note that one of these border strips preserved traces of red paint or dye.

For similar ivory panels with spiral decoration, cf. *BCH* LXXI-II (1947-8), pl. xxxii, no. 19;¹⁴⁶ and pls. xxvi-xxvii, nos. 2-5, for ribbed borders. Cf. *New Tombs at Dendra*, 47, pl. II, 2, where the border is exceptionally well preserved. For the ribbed border, cf. *Schachtgräber*, pl. cxlvi, no. 819, with holes on the under side like our border strips.

It is suggested that this ivory panel may have decorated a quiver¹⁴⁷ or a sheath¹⁴⁸ (see p. 251 and n. 23). Cf. Homer, *Od.* VIII 405, where Odysseus is given a sheath 'of newly sawn ivory' at the Court of Alkinoos.

III (25). Fragments of ivory, perhaps remains of a small box which might have contained the two seals III (20) and (21) and the beads (26) below.

III (26). Three beads (FIG. 18). One of light, the other two of dark blue paste. Flattened globular in shape. L. 4.5 mm. W. 5 mm. Perforation 1 mm. in diam.

III (27). Lump of magnetite.¹⁴⁹ C. 0.03 × 0.03. Mosso (*Palaces of Crete* (1907), 26, fig. 6) reports a lump of magnetite from the Neolithic levels at Phaistos, and says that 'we may be certain that it was a sacred stone'. Similarly our lump of magnetite may have been kept for its supposed magical qualities as a charm or amulet, cf. the lump of glass III (28) below, and the shark's tooth I (15).

III (28). Lump of light blue glass (FIG. 18). C. 0.25 × 0.25. The lump has one straight edge with a single large hole in it, but apart from this is formless.¹⁵⁰ The material is opaque, and full of small cavities. The lump was submitted to Professor W. E. S. Turner, of the Society of Glass Technology, who kindly arranged for tests to be carried out on it and reports that the material is 'glass, although incompletely fused, probably for the lack of a high enough temperature—a common feature of many of the samples of Egyptian glass of the same period. The cylindrical cavity in the straight edge clearly appears to have been drilled to contain a socket and some means of suspension'.¹⁵¹ Therefore, the object might perhaps be, as Professor Turner suggests, some kind of charm or amulet, cf. the lump of magnetite III (27) above, and the

¹⁴⁵ Dr. Platon first pointed out to us that these creatures were lions. His opinion is endorsed by Mr. Kenna, who says that there can be no doubt whatever that they are lions 'on technical, stylistic, and associative grounds'.

¹⁴⁶ This reference was kindly brought to our notice by Mr. S. Alexiou.

¹⁴⁷ Cf. Murray, *Excavations in Cyprus* (1900), 17, fig. 28, for the remains of an (?) ivory quiver with bronze arrow-heads.

¹⁴⁸ Cf. Frödin and Persson, *Asine* 256, fig. 181, for a bone mounting of trapezoidal shape, with running spiral decoration, from a late E.H. stratum (*N.B.* In the text 'M.H.' seems to be misprinted for 'E.H.'): it is described as a mounting for a sheath.

¹⁴⁹ Mr. Cornwall, who kindly examined the lump, describes it as 'a lump of mineral, largely composed of magnetite (magnetic iron ore)'.

¹⁵⁰ From tombs at Phaistos came 'pezzi varii di una materia di colore turchino (κύανος?) . . . Incerto e l'uso' (*MA* XIV 522 and 557), which sound as if they might conceivably be formless lumps of glass or faience comparable to III (28).

¹⁵¹ Professor Turner adds: 'Colleagues or old students of mine (namely, Dr. Eric Preston, Mr. H. P. Rooksby, Mr. B. S. Cooper, Mr. A. C. Jeffkins, Mr. G. Warr) at the Research Laboratories, and laboratories attached to the Glass Works of the General Electric Co., Ltd., Wembley, were good enough to carry out the experimental work of which the following is a summary of the facts: I. The sample is an incompletely fused glass with all the characteristics, such as type of fracture, of a glass. II. The major constituents found by a spectrographic examination are silicon, sodium, potassium, calcium, and magnesium, and the elements found in smaller but appreciable amounts are copper, aluminium, iron, boron, and antimony. It is the copper which is the source of the blue colour. This was the common agent in use also in Egypt for producing the various shades of blue colour. III. A quantitative chemical analysis disclosed the following percentage composition: SiO₂, 64.40%; Al₂O₃, 2.11%; MnO, 0.25%; Fe₂O₃, 0.36%; TiO₂, trace; BaO, trace; CuO, 1.62%; Sb₂O₃, 0.50%; CaO, 9.88%; MgO, 2.56%; Na₂O, 14.42%; K₂O, 2.40%; SO₃, 2.03%.

From the composition above no conclusion could be drawn whether the glass was made in Crete or was a somewhat crude piece derived from Egypt. All the samples of Egyptian Eighteenth Dynasty glass so far analysed vary distinctly in composition amongst themselves. There is a certain general pattern in the balance of the constituents, and the composition of this Cretan sample can be said to belong to the same pattern. IV. The whitish material associated with and embedded in crevices of the sample appears to have the same general composition as the glass and not to be merely a decomposition product arising from its weathering. This observation must not be assumed, however, to exclude the probability that the white material does include some constituents resulting from weathering.'

shark's tooth I (15). In Greece and Turkey today beads of a light blue colour are regarded as having prophylactic qualities, and are used to adorn animals.

V (1). Alabastron (PLATE 56, *b*). H. 0.065. D. of body 0.17, of rim 0.085. Orange clay, the surface much worn, but bearing traces of decoration in black. The design cannot be distinguished, but appears to consist of sprays of some kind on the body, with rows of dots round the neck. Possible traces of concentric circles on the base.

V (2). Alabastron (FIG. 10, PLATE 56, *b*). H. 0.06. D. of body 0.175, of rim 0.105. Very soft fabric. Fine orange clay, the surface much worn, but showing traces of decoration in red. The design can just be distinguished as a variety of 'rock pattern', cf. III (8). Concentric circles on the base.

V (3). Alabastron (PLATE 56, *b*). This vase is less squat in shape than the other six alabastra from the tombs. H. 0.075. D. of body 0.13, of rim 0.095. Pale orange clay, the surface originally buff well smoothed or burnished. Traces of decoration in black visible under the rim and round the handles. Possible indications of a simple cross on the base.

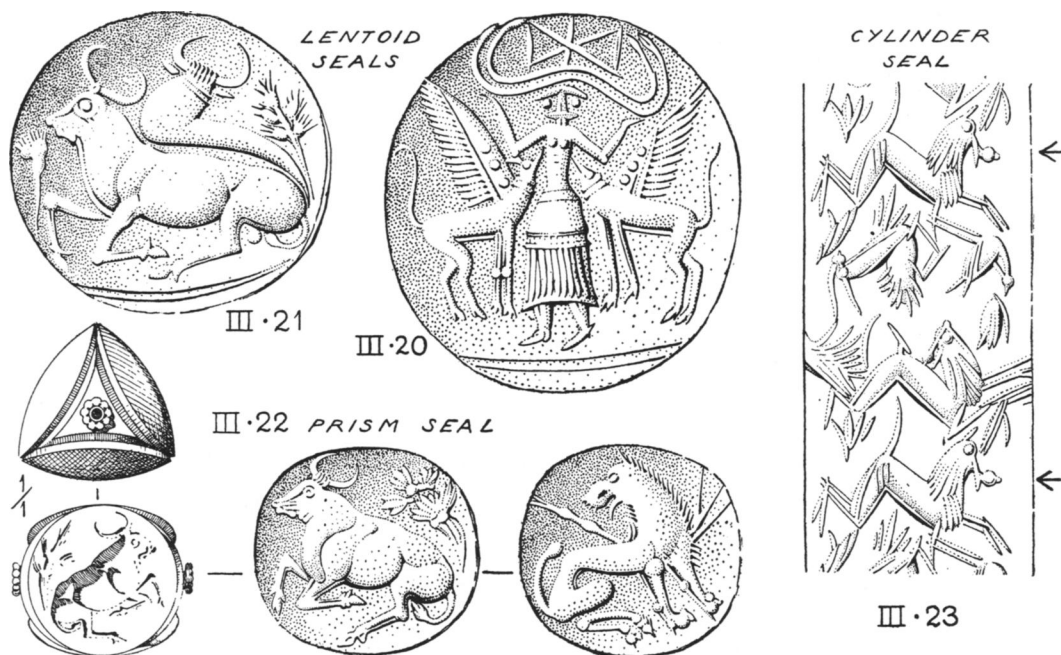


FIG. 16.—SEALS FROM TOMB III. Scale $3/2$, unless otherwise indicated.

V (4). Stone bowl with two solid lug-handles (FIG. 13, PLATE 56, *b*). H. 0.083. D. 0.12. Soft crumbly yellow stone flecked with black. There is a bowl of identical shape and made of the same stone from the Palace at Mallia (found in 1924: Herakleion Mus. no. 2094). Cf. *BSA* Suppl. I 133, pl. xxx, D. 3, from the hoard of stone vases in a L.M. II house at Palaikastro.

V (5). Stone 'Bird's Nest' bowl (FIG. 13, PLATE 56, *b*). H. 0.048. D. 0.087. Black stone boldly veined with white. The surface is rough. Cf. *BSA* Suppl. I 133: 'Bird's Nest' bowls were common in the L.M. II Hoard. The broad flat rim as found on our vase is said to be characteristically L.M.¹⁵²

V (6). Sword (FIG. 12, PLATE 54, *e*). Bronze. L. 0.47. Broken, but complete. The blade has a pronounced mid-rib. The sword is of the 'cruciform' type with flanges round the tang and shoulder, cf. A J (1) and II (3). There are two small 'rivet' holes 3 mm. in diameter low down on the shoulder, and a single bronze rivet of the same size still in place at the base of the tang. The tang has no other rivets or holes in it: but the extension of the tang is provided with a single small 'rivet' hole for affixing the pommel.

V (7). Spear-head (FIG. 12, PLATE 53, *b*). Bronze. L. 0.049. W. of blade 0.035, of socket outside 0.032, inside 0.024. This is the largest of the spear-heads from the tombs; it is slightly longer than the sword V (6) found with it. For the description cf. III (14), which it resembles in detail.

V (8). Helmet (see p. 256).

V (8a). Lead disc (FIG. 18, PLATE 51, *b*). D. 0.055. The disc is convex on one face, with a slight depression on the other. The convex face is plated with a thin sheeting of copper/bronze, which overlaps round the edges of the other face. This disc was found with the remains of the helmet, and may or may not belong to it (see p. 257, n. 69). From a tomb at

¹⁵² Bird's Nest stone bowls first seem to occur in M.M. I, and flourish into the L.M. period (Seager, *Mochlos* 38).

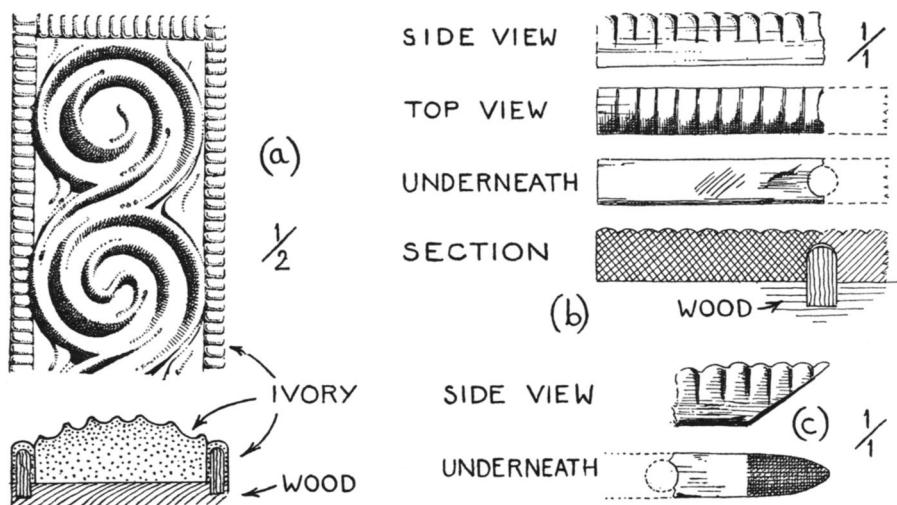


FIG. 17.—THE IVORY PANEL II (24).

(a) End of the Panel. Scale 1:2. (b) and (c) Fragments of Border Strips, (b) showing method of attachment to wooden backing, (c) with the bevelled end preserved. Scale 1:1.

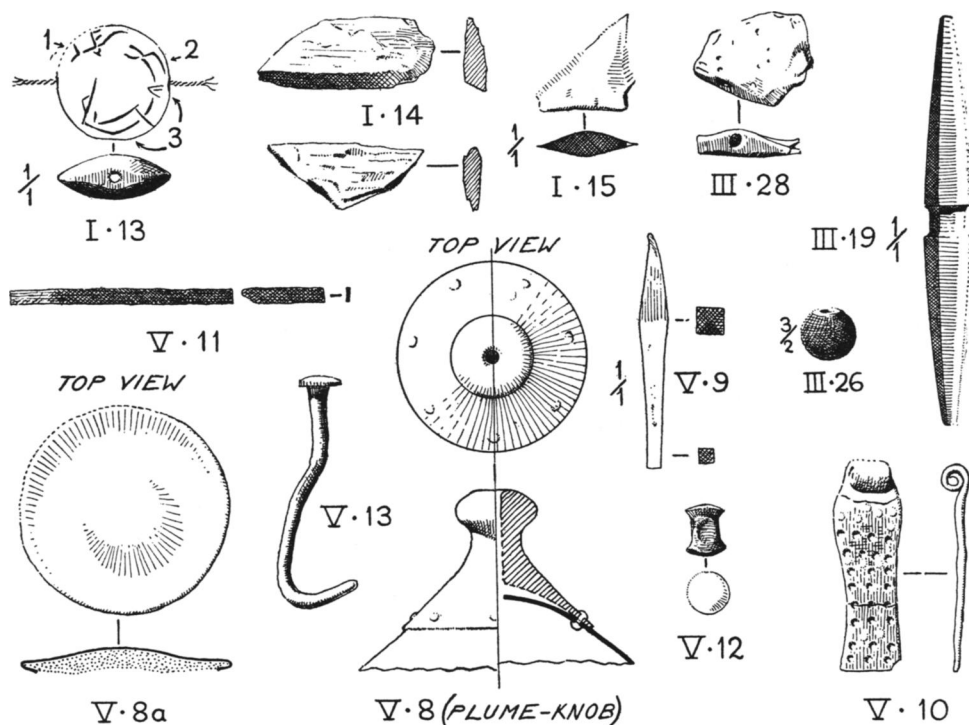


FIG. 18.—SMALL OBJECTS FROM TOMBS I-V.
Scale 1:2 except where otherwise indicated.

Dendra came a 'convex bronze button filled with lead' 0.041 in diameter: but this had a 'small severed rod on its lower surface' (*New Tombs at Dendra*, 64, fig. 76, 1).¹⁵³

V (9). Point (FIG. 18). Bronze. L. 0.03. Square in section. Rather roughly made and irregular in shape. The tip is blunted and bent over. Possibly an arrow-head. Cf. *MA* XIV 536, no. 4 (L. o. 122), from Phaistos: this is not illustrated, but is compared to one from Menidi (Lolling, *Das Kuppelgrab bei Menidi* (1880), pl. ix 12, cf. two others similar, 8 and 9). Similar objects from Prosymna are called by Blegen 'small javelin points' (*Prosymna*, 145, plan 29, (44) and (47), fig. 361, 4 (L. just over 0.045)).

V (10). Pendant (FIG. 18). Thin bronze plate. L. 0.055. Broken. The pendant seems to be decorated on both faces with rows of punched dots. Cf. *BSA* XXVIII 268, fig. 38, ix D. 1, from the Mavrospelio cemetery, described as a 'bronze pendant axe blade'.¹⁵⁴

V (11). Band (FIG. 18). Bronze. Broken. The pieces preserved have a total length of 0.14. W. about 5 mm.

V (12). Rivet (FIG. 18). Bronze. L. 0.012. D. of head 0.01.

V (13). Nail (FIG. 18). Bronze. L. if straight would be 0.073. The head is circular (0.11 in diam.) with a flat top, and the shaft of the nail is round in section. Cf. *Schachtgräber*, 121, pl. clxii, for nails from Shaft-grave IV, similar in size and bent in the same way; they are said to come from bronze vases.

M. S. F. HOOD

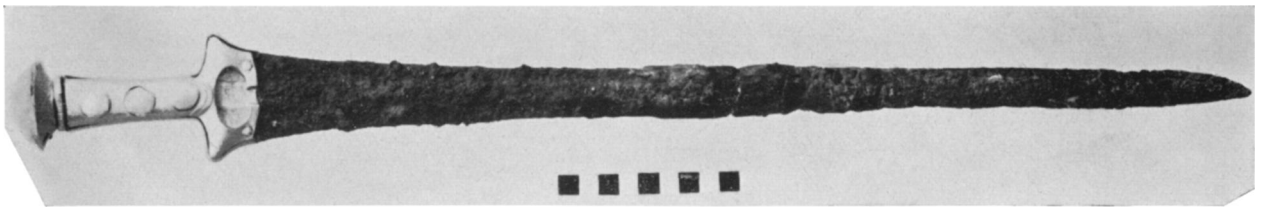
P. DE JONG

¹⁵³ The 'button' was found at the bottom level of the *stomion* (i.e. entrance) of Chamber-tomb 10. The tomb yielded no weapons; and the gold ornaments, etc., from it suggested that a woman had been buried here. On the other hand, all these ornaments, etc., came from pits in the floor of the tomb: and the tomb had evidently been opened, and the objects from the floor itself removed. The material recovered ranged from L.H. II to the beginning of L.H. III in date.

¹⁵⁴ Two objects of a rather similar shape appear attached to the ends of (?) cords floating from the top of a Syrian helmet in an Egyptian representation (reproduced in *Homer and the Monuments*, pl. xvi, fig. 5). It is therefore conceivable that our pendant had something to do with the crest or plume of the helmet.

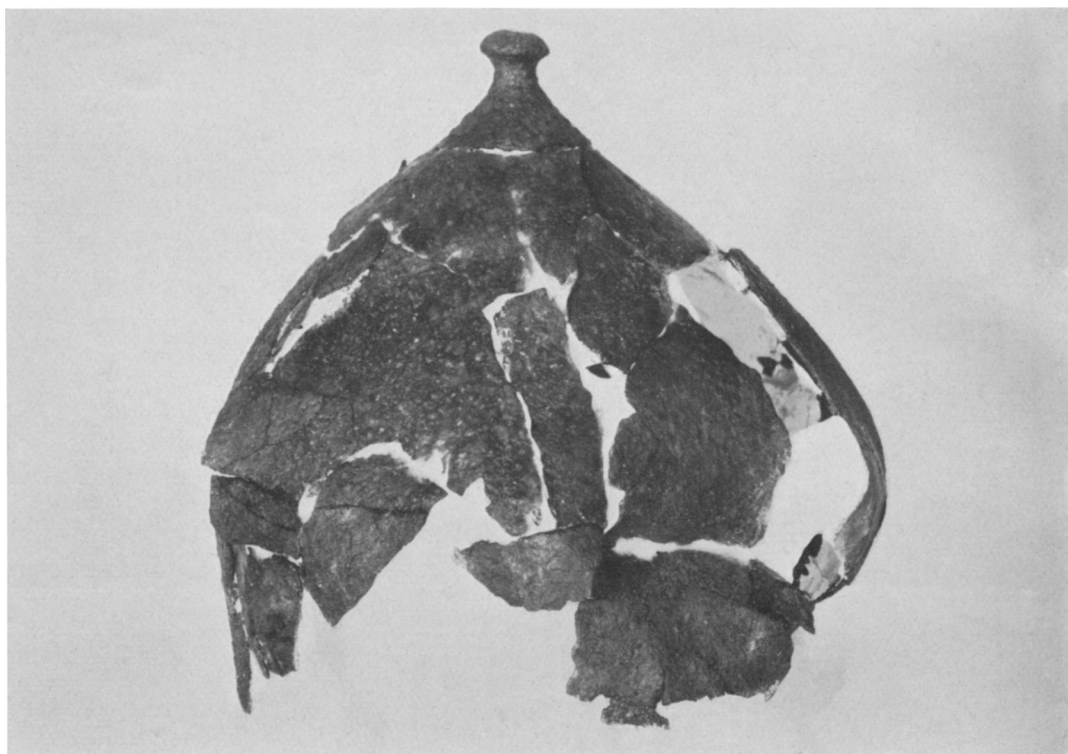


(a)

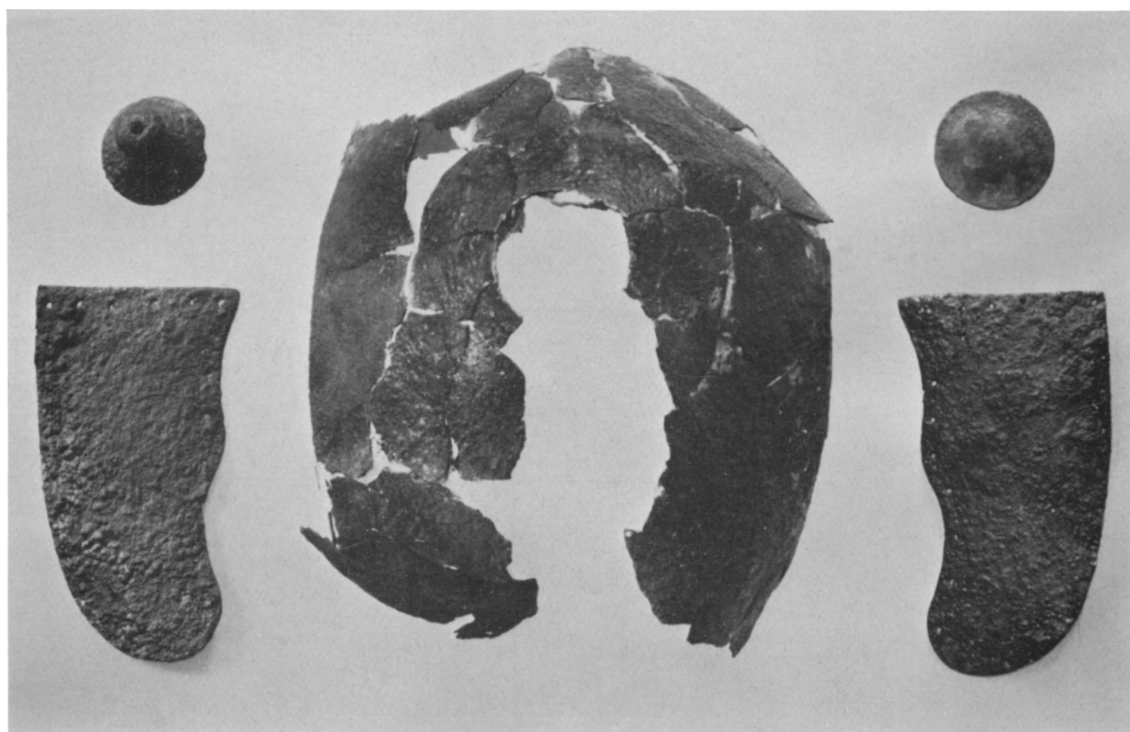


(b)

KNOSSOS. (a) THE HELMET V (8), SIDE VIEW. (b) THE SWORD II (3) WITH GOLD-PLATED HILT.

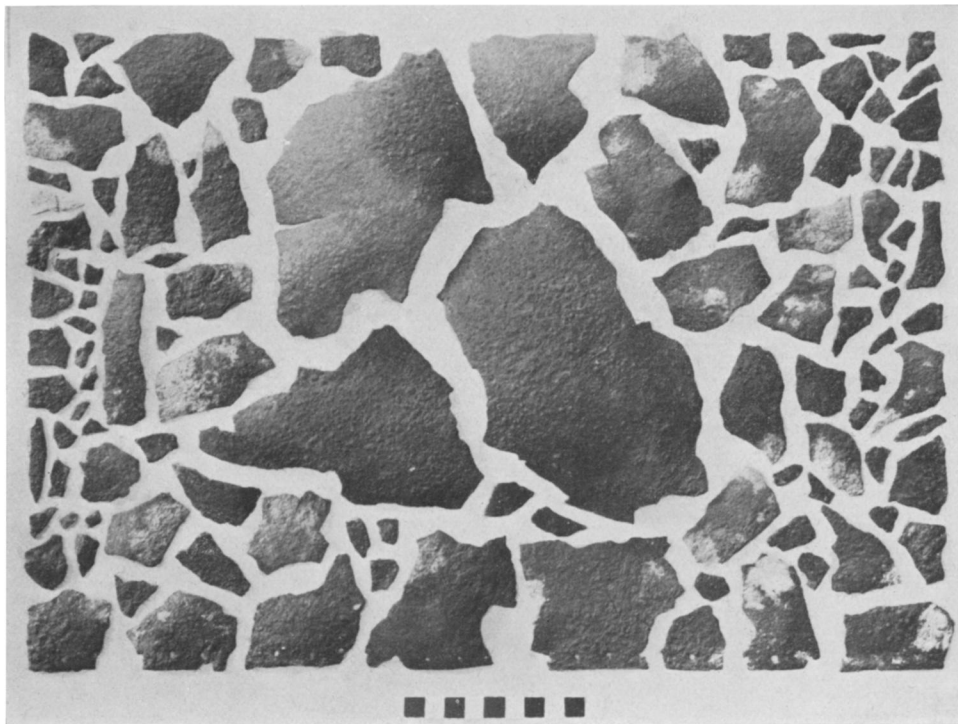


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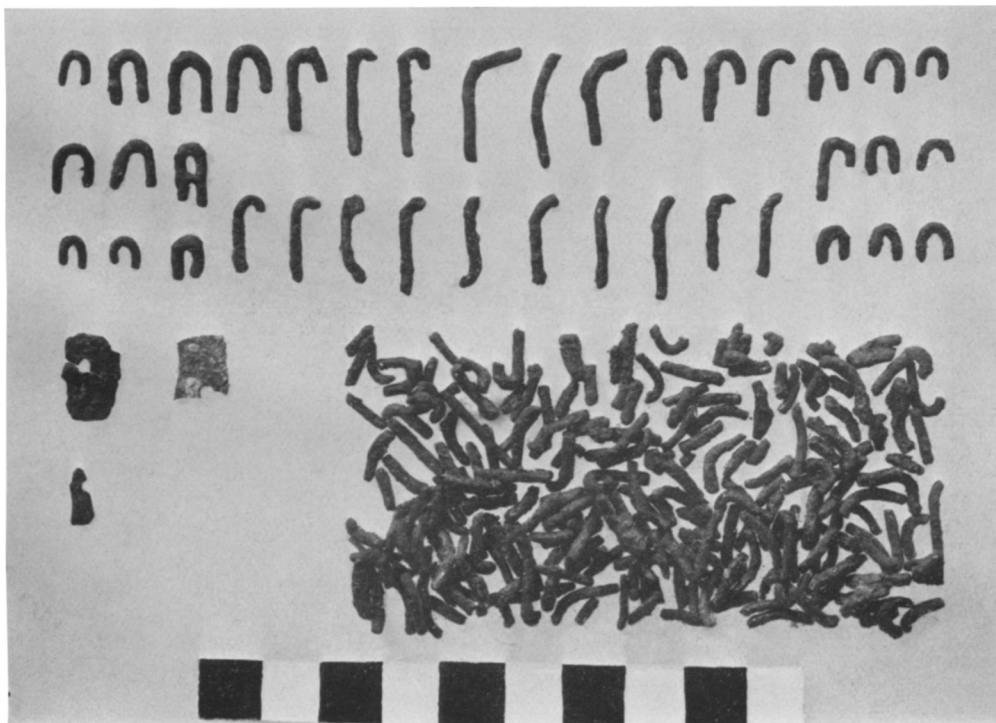


(b)

KNOSSOS. THE HELMET V (8): (a) END VIEW. (b) VIEW FROM ABOVE WITH CHEEK-PIECES AND PLUME KNOB (*top left*) AND LEAD DISC V (8a) (*top right*).

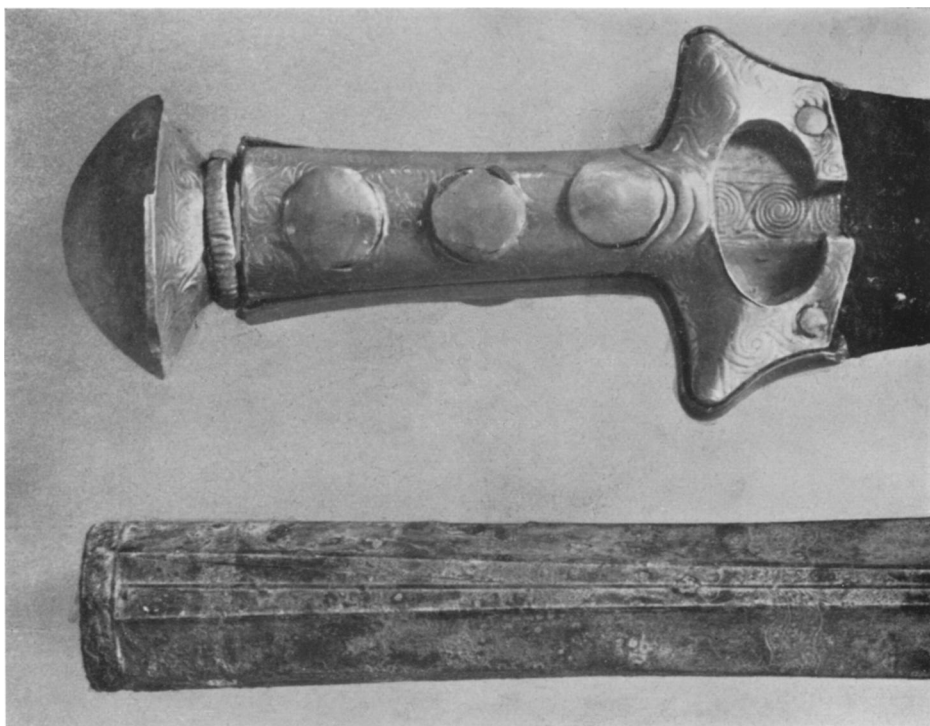


(a)

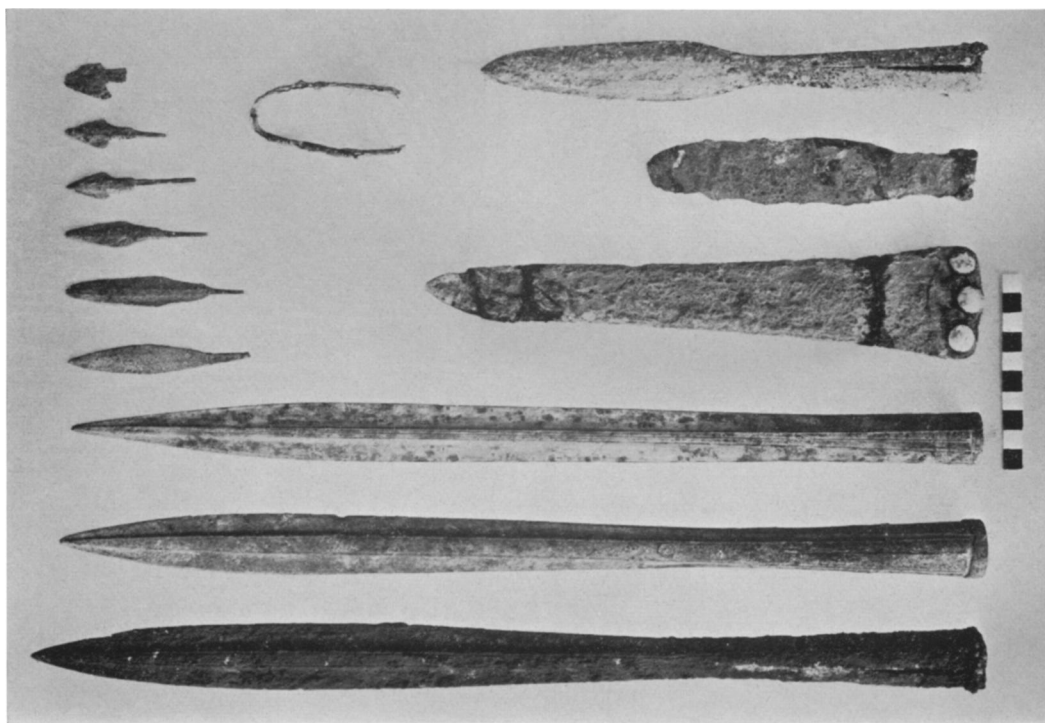


(b)

KNOSSOS. (a) FRAGMENTS OF THE HELMET V (8) BEFORE RECONSTRUCTION (WITHOUT PLUME KNOB OR CHEEK-PIECES). (b) COPPER STAPLES III (16) WITH SCRAPS OF COPPER/BRONZE PLATE III (17) (to left).

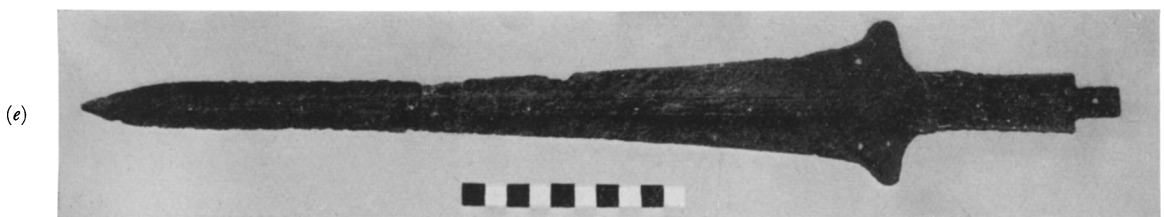
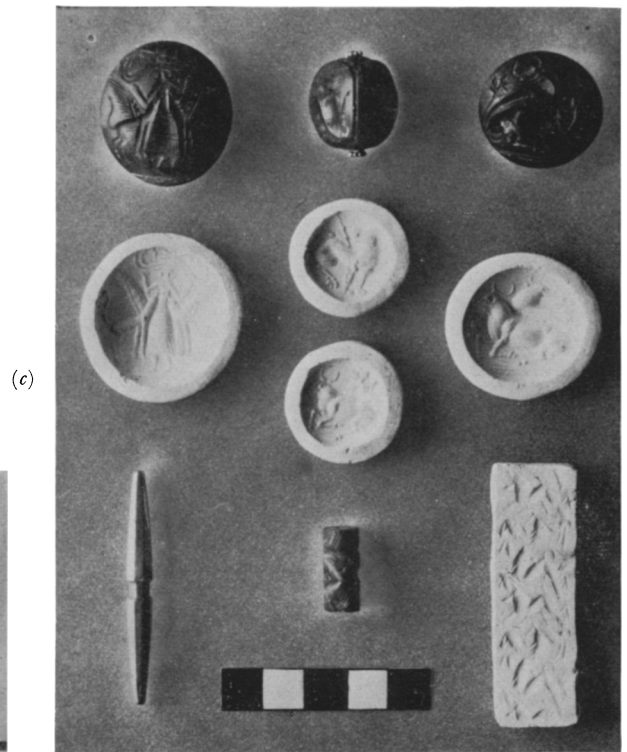
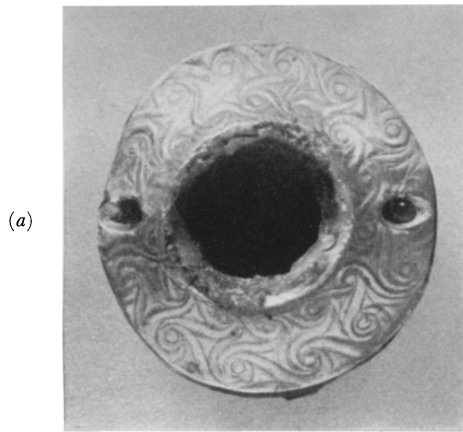


(a)

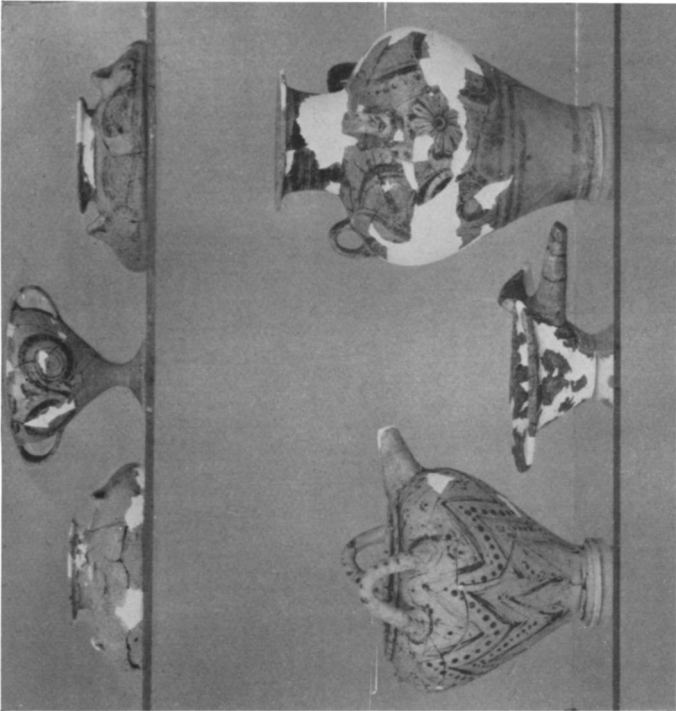


(b)

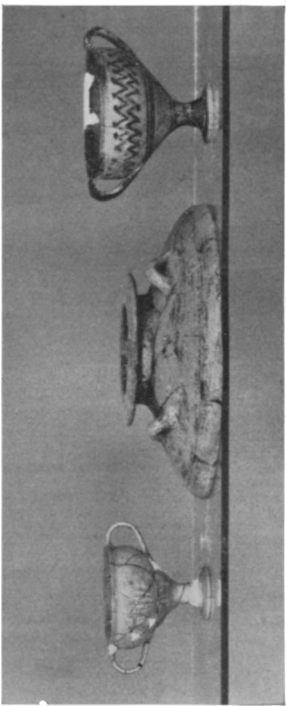
KNOSSOS. (a) HILT OF II (3) AND BUTT OF II (4). (b) BRONZES FROM THE HOSPITAL SITE.
Top left: ARROW-HEADS III (18a-f), TWEEZERS I (12). *Top right:* SHORT SPEAR-HEAD I (11),
 RAZOR AND DAGGER III (15) AND (13). *Bottom:* SPEAR-HEADS II (4), III (14), V (7).



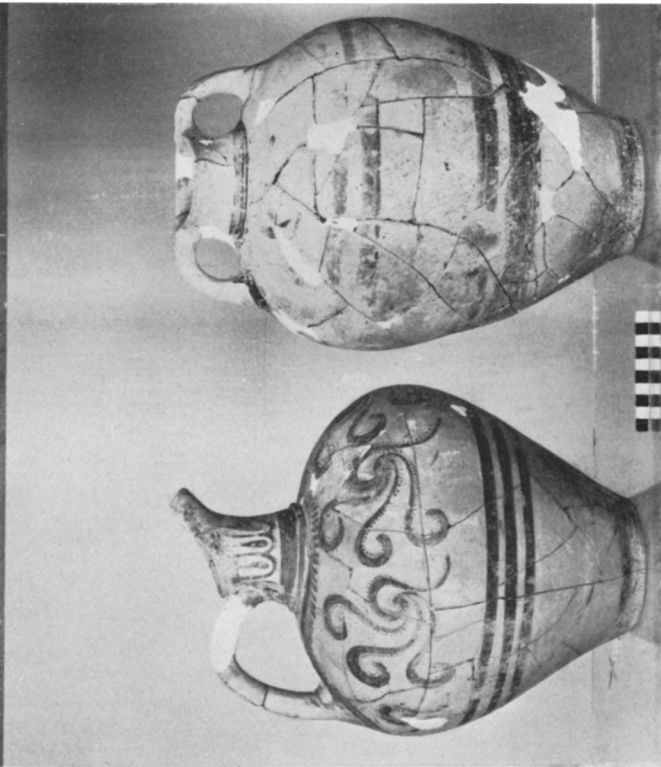
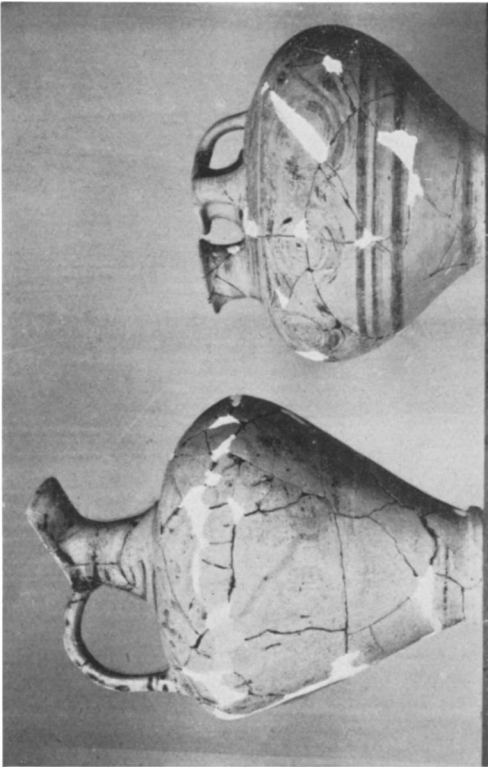
KNOSSOS. (a) GOLD 'CUP' FOR POMMEL KNOB OF SWORD II (3). (b) VASES FROM TOMB I (7) AND (8). (c) SEALS (left to right) III (20), (22), (21); CYLINDER SEAL (23) (below, centre); GOLD TOGGLE (19) (below, left). (d) IVORY PANEL III (24). (e) THE SWORD V (6).



(b)

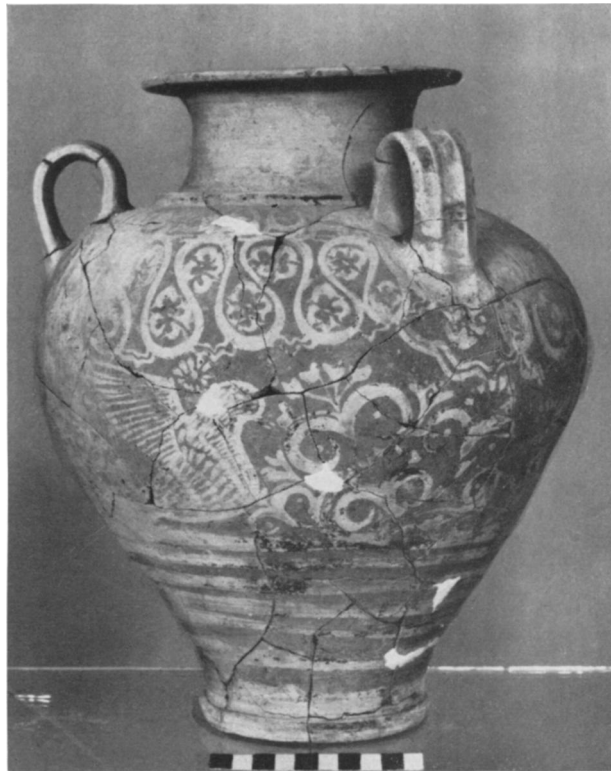


(c)



(a)

KNOSSOS. VASES FROM (a) TOMB I (3) AND (5) (above) AND III (2) AND (9) (below); (b) TOMB III (8), (1), (7) (above), III (3), (10), (4) (below); (c) TOMB I (2), (9), (1).



(a)



(b)

KNOSSOS. (a) THE 'BIRD' VASE I (6). (b) VASES FROM TOMB V (3), (1), (2) (*above*); STONE BOWLS FROM TOMB V (5) AND (4) AND VASES FROM TOMB II (1) AND (2) (*below*).