

§ 33. DISCOVERY OF LATE NEOLITHIC HOUSES BENEATH CENTRAL COURT: TRADITIONAL AFFINITIES WITH MAINLAND EAST.

*Retrospective observations; The Site of Knossos; Position not commanding like Mycenae, but suitable for primitive needs; Original Neolithic settlement comparatively low-lying; 'Tell' formed by successive deposits; Neolithic culture of Crete fundamentally Anatolian, conforming to late Geological Tradition. The 'great gulf fixed' between the Anatolo-Cretan Neolithic and that of Mainland Greece with its North-Eastern associations; Discovery of late Neolithic Houses beneath Central Court of Palace, 1923–24; Incidental find of coins and pottery from adjoining site of Greek Temple—the 'House of Rhea'; Two main Late Neolithic layers,  $\alpha$  and  $\beta$ ; Transitional elements in culture; The 'Chalice' type and proto-Egyptian copper parallel; Clay idols; Stone implements and Copper Axe (imported?); Axe amulet; Fragments of variegated stone vessels—evidence of pre-dynastic Egyptian influences; Plan of Neolithic houses—the Store Cells; Appearance of fixed hearths; Contrast with Minoan usage of movable hearths; Fixed hearths a Mainland tradition, inheritance of Continental Climate; Reappearance of Anatolian type of Central Hearth beyond Aegean; Movable hearths of the Minoan Age symptomatic of Southern Influence.*

A GREAT earthquake<sup>1</sup> seems to have laid in ruins a large part of the Palace as it existed towards the close of the Third Middle Minoan Period. Before, however, considering this catastrophic event and the widespread activities that mark the beginning of the New Era it is well to take a retrospective glance at the central subject of this work in its larger bearings, as illustrated by further finds due to supplementary researches. These, it will be seen, have thrown a new light on the rise of Knossos, to become the dominating centre of the insular life at the very epoch when Minoan culture was to win for itself a wider field in what was henceforth to be known as Mycenaean Greece.

More and more—beginning, as is now made apparent by some remarkable finds described below, from the latest Neolithic stage—the determining

Retro-spective survey needed in view of fresh materials.

<sup>1</sup> See below, p. 287 seqq.

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cause of this brilliant development of early civilization is seen to be traceable to the opening out of communications with the Nile Valley by means of a very ancient transit route across the island from Knossos to the havens of the Libyan Sea, surviving vestiges of which, at least in its later form, are described below. Monumental evidence of the supreme importance of this Southern route is now indeed before us in the dramatic emergence of the foundation walls and pillars of a stately portico stepping up the slope to the Palace on that side and approached on the opposite banks of the ravine by a viaduct of truly Cyclopean build abutting on the bridge-head.

Site of Knossos: not commanding.

In considering the site of Knossos and the part it played in the early history of the East Mediterranean basin we are continually struck with the apparent inferiority of its position as compared with that of other great centres in the same geographical region. Troy, with its Pergamon, dominated its plain in the same way as the acropolis of Mycenae or the Kadmeia of Thebes. So, too, in Crete itself, Phaestos, with its rival Palace, looks down on the long plain of Mesarà. But the Palace Sanctuary of Knossos on its artificially flattened knoll is overlooked in every direction by better points of vantage, including the height immediately West which formed the citadel of the Greek and Roman City. It stands back, moreover, from the river-mouth and harbour and it is only its uppermost terrace that catches the merest glimpse of sea. To the visitor approaching the site by the high road from Candia its remains come suddenly into view, cradled amidst the surrounding hills (see Fig. 1).

Site suitable for primitive needs.

The explanation is to be sought in the special circumstances of its origin. In the case of so many other ancient centres of human habitation the deliberate designs of warlike chiefs seem to have played a leading part in the choice of position, and the town arose within the walls or under the shadow of a fortified acropolis of native rulers. But the beginnings of Knossos were of a quite different order. It seems to have taken its rise in remote antiquity simply because it was a spot suitable for the needs of primitive man. So far, indeed, from starting as a hill stronghold it may be said to a great extent to have formed its own hill. As has been shown in an earlier Section of this work,<sup>1</sup> the hill of Kephala on which the great Palace afterwards rose is itself essentially a 'Tell' such as we find in Egypt or the East, built up out of the debris and deposits formed by successive stages of occupation going back without a break to the earliest Neolithic phase of which we have any record in the Island. The residence of

<sup>1</sup> See vol. i, pp. 34, 35.

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native dynasts was ultimately fixed here because the site had been a centre of population from immemorial time.

Knossos in truth had grown up without any artificial planting, as deep-rooted in its native soil as the wild liquorice-plants that to-day flourish within its courts.<sup>1</sup> Starting from below the earliest Minoan level the Neolithic strata were found to go down in places to a further depth of ten or eleven metres, or nearly 36 feet, to the virgin rock.<sup>2</sup> There is evidence, moreover, that this Stone Age settlement covered a considerable area. Not only does it underlie the Palace and its outer Courts but it extends beyond its Northern borders<sup>3</sup> and down the slopes to East and South in the direction of the Kairatos stream on one side and its tributary torrent on the other.

Neolithic Settlement relatively low-lying.

In other words, when we take into account the rising of the surface due to these huge accumulations, the Stone Age settlement so far from being on a hill-top lay in a distinct depression among the surrounding ranges. It was thus to a considerable extent sheltered, as the historic Knossos never was, from the fury of the prevailing winds. The gorges that run up hence to the relatively low watershed form in fact the battle-ground of two main aerial forces from North and South, the violence of which often indeed interrupted the excavations. The protagonists on either side are the fierce *Borràs* (Boreas)—the Nor'-Nor'-Easter of Crete—and the hot, depressing *Notià*, lurid with Sahara sand, which often triumphs in the late spring. But these are happily succeeded by the Etesian *Meltem*s from the North-West, which from the end of May to October give this Cretan tract a fresher climate than any to be found on the low-lying districts of Mainland Greece.

Gradual formation of 'Tell'.

Unquestionably, the predominance which the Minoan Knossos ultimately obtained not only in Crete itself but throughout the Aegean and a large part of the East Mediterranean world was due to certain geographical advantages inherent in its situation but which had been little dreamed of by its first Neolithic settlers. Apart from the fact that to the West as well as to the South-East it lay on the borders of exceptionally fertile districts, the neighbouring haven at the mouth of the Kairatos and what is now the bay of Candia supplied the best outlet for Central Crete on the Aegean side.

Key position of Knossos declares itself later.

On the other hand, as a landing-place for Aegean craft it possessed special advantages. In the immediate background of the haven the conical

<sup>1</sup> The roots of these plants, which it is impossible to eradicate, go down at times to a depth of over twenty feet.

<sup>2</sup> See vol. i, pp. 34, 35.

<sup>3</sup> North of the Northern Entrance and Pillar Hall, for instance (Excavations of 1923).

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profile of the peak of Juktas, as thus seen rising from amidst a lower tract of country, presents a good landmark for many miles out to sea, while the opposite creeks of the island of Dia offered secure shelter against the Northern gales.

It is along this sector of Crete, moreover, that the dorsal chain, represented on the one side by Mount Ida, on the other by the Lasithi range (or Western Dikta), dips down so as to afford easy access to Mesarà, the largest and most fertile plain of the Island, and through it to the Southern towns and havens. Special attention will be called to the importance of the transit route thus opened in bringing Knossos into relation with civilized elements beyond the Libyan Sea.

But these connexions—so far-reaching in their ultimate results—can hardly be thought to have seriously affected its earlier prehistoric phase.

Neolithic  
Culture of  
Crete  
funda-  
mentally  
Anato-  
lian.

It has been already noted that the Neolithic culture of Crete—of which we by no means have the beginnings in the earliest strata unearthed on the site of Knossos—presents features, such as the occurrence of certain types of clay images, that find their nearest comparisons on the Anatolian side. On the other hand, recent discoveries are bringing out the interesting fact that, up to the dawn of the Age of Metals, Mainland Greece to the Southern littoral of the Morea was occupied by a Neolithic culture of very different affinities.<sup>1</sup> Its most characteristic features indeed, as illustrated by its ceramic fabrics and notably their most developed class with its bichrome and polychrome decoration, curvilinear as well as geometrical, not only fit on to the Thessalian group, but find their continuation through a large part of the Eastern Balkans to the Lower Danube and, beyond the Carpathians, to the Steppes of Southern Russia. Between the Anatolo-Cretan Neolithic and that which makes its appearance on the opposite forelands of Mainland Greece 'a great gulf is fixed', only later bridged by the rise of sea-craft on the Aegean side.

It seems permissible, indeed, to trace in this cultural divergence the continuous operation of physical causes to which was owing the marked difference observable between the fauna and flora of Mainland Greece and

<sup>1</sup> Mr. Blegen informs me that Neolithic remains of the Thessalian kind have not only been brought to light in the course of researches near Corinth, but that he has found them, in the course of the American School researches, at Phlius, the Argive Heraeum, and near Tegea in Arcadia. At Gonià, near Corinth, he exposed a stratification showing below two stages of Neolithic answering to the Thessalian, and,

immediately superposed, an Early Helladic deposit illustrating the first intrusion of the Central Aegean culture on the Mainland. Professor della Seta, who has made recent excavations on the South slope of the Acropolis at Athens, has also brought to light Neolithic deposits of the Thessalian Class beneath the Helladic.

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that of Crete. This, indeed, is nowhere more distinctly visible than in the neighbouring islands of Cerigo and Cerigotto which stood as their respective forelands at the time of the inrush of the Miocene Sea and the formation of the South Aegean basin. This irruption—later completed by the still greater submergence in Pleistocene times of the tract occupied by what is now the North Aegean—had left Crete part of a projecting horn of Western Asia Minor, nor does the subsequent segregation of Rhodes and the other intermediate islands seem to have affected this fundamental relationship with the Anatolian mainland. Suggestive phenomena are presented by the community of early names both of places and persons in both areas and by the long survival in the island of a dominant proto-Armenoid type.<sup>1</sup>

Discoveries made at Knossos in 1923 and 1924 in the Central Court of the Palace have now thrown a clear light on the latest stage reached by the insular Stone Age culture on purely indigenous lines. It has already been noted that in order to obtain a level space for this Court and the adjoining West Section of the Palace the builders had levelled away the original top of the 'Tell', removing thus almost the whole of its Early Minoan strata, and this ancient process of excavation has greatly facilitated access to the Neolithic deposits in this area. These begin in fact almost directly below the pavement level, and certain stumps of walls that had been brought out here by successive seasons' rains in the South-Western part of the Central Court, where the paving slabs had been torn away, proved to belong to structures that for the first time supply detailed plans of Neolithic dwellings in Crete.

Although, except for a small fragment, the Minoan paving had been removed,<sup>2</sup>—partly, it would seem, in quite recent times,<sup>3</sup>—the underlying deposit was as a whole curiously free from any ingredients later than the latest Neolithic. In a section of the South-West angle of the excavated area there were, however, signs of a considerable superficial disturbance marked by the presence of plain pottery of Hellenic type. A more precise indication was supplied by the discovery among the sherds of four silver staters, or 'tortoises', of Aegina, the early diffusion of which in Crete is one of its most marked numismatic features. Two of these, found near one another,

Discovery of Late Neolithic Houses.

Beneath Central Court of Palace.

Incidental find of pottery and Aeginetan coins from Greek Temple.

<sup>1</sup> See vol. i, pp. 8, 9 and Fig. 2; also pp. 271, 272 and Fig. 201, *a, b*.

<sup>2</sup> The pavement of large limestone slabs preserved in the adjoining S.W. angle of the Central Court is of L. M. I construction, the earlier pavement having been removed at

the time of its construction.

<sup>3</sup> The Bey who owned the Tchiflik immediately below the Palace hill on the South-East is known to have carried off a number of slabs from this side of the building in recent years.



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were mere dumps, of archaic aspect,<sup>1</sup> not struck later than the seventh century B.C., and a good deal worn. Another, still presenting the earlier, smooth-shelled type of the tortoise,<sup>2</sup> belongs to about the middle of the sixth century. The fourth piece was brilliantly preserved and displayed a tortoise of naturalistic style<sup>3</sup> dating from about 480 B.C. The impression that the coins leave is that they may originally have formed part of more

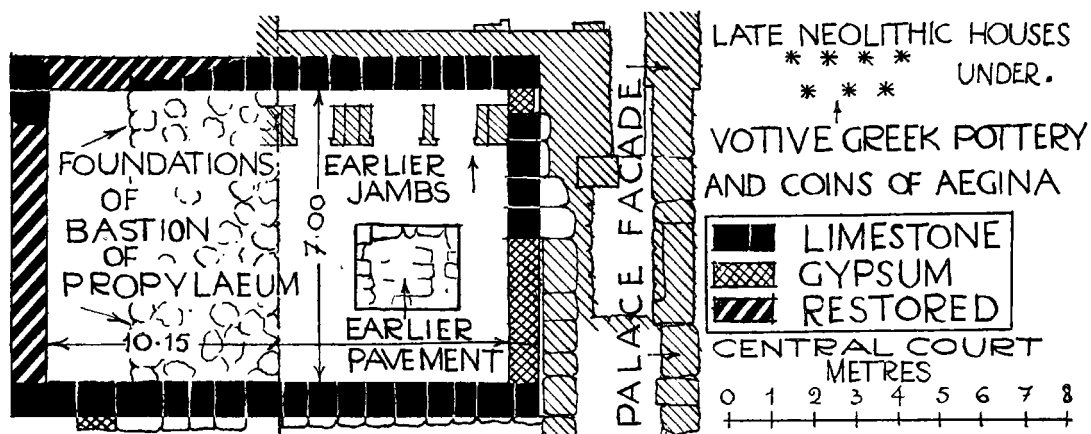


FIG. 2. BASE-BLOCKS OF EARLY GREEK TEMPLE VISIBLE BETWEEN PROPYLAEUM AND CENTRAL COURT.

than one separate hoard deposited in the treasury of an adjacent Hellenic shrine the actual evidence of which has been preserved.

Base-blocks of Temple in neighbouring Palace area.

There are in fact visible in the area that here borders the Central Court the base-blocks of an oblong building, immediately overlying the wall stumps of a Palace chamber and the rough foundations of the bastion of the stepped Porch beyond, blocks from which had been appropriated for this intrusive structure.<sup>4</sup> Its interior dimensions are 10.15 by 7 metres, with a major axis running East and West, the main lines of the building conforming, doubtless for convenience' sake, with those of the Palace (see Plan, Fig. 2). We have here a very simple temple plan showing no traces of cross partitions within or *antae* without.

The debris containing the sherds and Aeginetan coins extends to

<sup>1</sup> Cf. *B. M. Cat.*, Pl. XXIII, 1-3. The weights were 12 grm. and 12.2 grm. respectively.

<sup>2</sup> Cf. *op. cit.*, Pl. XXIV, 1-2. Wt. 12.3 grm., counter-marked with a leaf symbol.

<sup>3</sup> Cf. *op. cit.*, Pl. XXIV, 10. Wt. 12.4 grm.

<sup>4</sup> In the course of the partial reconstitution of the stepped upper Propylaeum some of these blocks were replaced in their original context.

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within about three metres of the East wall of the temple and have afforded the first clue to its approximate date. The vase fragments themselves were generally plain, showing only in rare cases a black or red glaze. They seem to have mainly belonged to the *kantharos* type with handles curving out from the inside of the cup. There were, however, a great number of miniature handleless cups, only *c.* 2.30 cm. in height and clearly of a votive class (see inset).



The existence of this Hellenic temple within the Palace area has a special interest since it fits in with the statement of Diodoros that in his day there were still visible on the site of Knossos the foundations of the House of Rhea and a very ancient cypress grove.<sup>1</sup> It is certainly something more than a coincidence that the later shrine of which we have now the evidence stands on the borders of the Central Sanctuary of the Minoan Goddess, depicted on its official seals like the later Mother of the Cretan Zeus, between lion supporters.<sup>2</sup>

'House of Rhea' and Cypress Grove at Knossos.

The occurrence of Greek remains at this spot is itself, so far as the excavation of the Palace is concerned, an unique phenomenon. Nowhere else within its boundaries, extended as they were, was any similar record of occupation in classical times brought to light, though outside them, especially to the North-West, there were abundant signs of habitation from the Geometrical period onwards. The probability that a great part of the site was covered in later antiquity by the Grove of Rhea gains support from the straggling specimens of *Cupressus horizontalis*<sup>3</sup> that still grow wild in the gorge of the old Kairatos stream below. The mighty cypress beams of the Palace themselves suggest the accessibility of fine specimens of this tree in early times. Who shall say that during the dark period that followed on the fall of Minoan civilization in the Island this forest growth may not, in the valleys at least, have regained part of the area that it had lost by excessive exploitation? The deserted site of Knossos would thus have more nearly recalled the state in which it was first found by primitive man. In the Homeric Hymn to Apollo it is spoken of as the 'many tree'd'.<sup>4</sup>

With the exception of a small part of the area near the border of the Central Court where these intrusive classical remains were found on the upper level, the Neolithic deposit that had lain immediately beneath the original pave-

Two layers,  $\alpha$  and  $\beta$  in the Neolithic Houses.

<sup>1</sup> Diod. Sic., lib. v, c. 66.

<sup>2</sup> See *Knossos, Report*, 1901, p. 29, Fig. 9, and cf. below, § 65.

<sup>3</sup> This, rather than *sempervirens*, seems to be

the true botanical name. A Cretan seal even suggests that its timber was exported (see p. 248).

<sup>4</sup> l. 392, πολυδένδρεον.

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ment was, as already observed, of a very unmixed composition. Moreover, the uppermost of the two principal layers that can be here distinguished must be regarded as still belonging in its essential features to the insular Stone Age. The contents of both layers indeed represent substantially the same concluding phase of the Upper Neolithic, though the sherds of the upper layer show less of the traditional burnish and present a somewhat paler surface. Incised decoration is even rarer and more superficial there and the material is less coherent. Certain objects from both levels are nevertheless grouped together in Fig. 3, as on the whole complementary to one another; the examples taken from the earlier level being marked  $\alpha$  and the others  $\beta$ .

Upper House plans imperfectly preserved.

The upper floors here lay as a rule about 25 centimetres above the lower, both showing a white 'kouskouras' face put on a backing of red earth and prepared clay.<sup>1</sup> Intermediate levels occurred, however, in places so that it was not always possible rigorously to distinguish the contents of the two main systems. The walls of the upper structures, immediately underlying the pavement of the Central Court, had been much disturbed or entirely destroyed over the Western half of the area. Thanks, however, to a slight slope towards the Eastern border the deposit on that side was thicker, and a section of the walls of a later house could be there made out superposed on the earlier structures<sup>2</sup> ( $\alpha$ ) at a slightly different angle (see Plan, Fig. 8 and inset). Floor deposit answering to the later system ( $\beta$ ) was nevertheless traceable throughout the greater part of the area explored.

Upper Neolithic stage brief and transitional.

The upper and lower stratum here laid bare do not together occupy more than half a metre in depth, a small proportion of the total extent of the Neolithic beds in this part of the site, which amounts to about seven metres.<sup>3</sup> There are clear indications, however, that the more or less transitional phase illustrated by the Upper Neolithic was of relatively short duration. Already, in the neighbouring area to the West, beneath the upper platform of the South Propylaeum, pottery was brought out, little more

<sup>1</sup> A typical fragment of pavement belonging to stratum  $\beta$  gives a section about 3.80 cm. thick, consisting of an upper coating of put 'kouskouras' ( $\approx$  1.50 cm.) resting on a thin layer of red earth ( $\approx$  0.80 cm.), below which was a layer of pale prepared clay of about the same thickness as the put 'kouskouras'.

<sup>2</sup> Dr. Mackenzie notes that at the N.E. corner, where this superposition is clearest, the overlying wall has its 'separate bedding of mud-mortar and pebbles 10 cm. thick which

runs along the top of the earlier wall'.

<sup>3</sup> A pit dug through the Neolithic strata 9.15 m. east of the E. wall of the Upper Neolithic structures reached the virgin rock ('kouskouras') 6.85 m. below the level of the Central Court pavement. A few centimetres, however, may be safely added to this for surface portions of the Neolithic levelled away for pavement. Elsewhere in places the Neolithic goes down over 11 metres.



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than a metre down in the Stone Age deposit, representing the very acme of the mature Middle Neolithic phase, including hand-burnished pottery, of the old crisp make, unsurpassed in brilliance.<sup>1</sup> But the growing use of the potter's oven coupled with the operation of new influences from overseas seems to have brought about a somewhat rapid transformation. Old processes were given up but at the same time the new were not sufficiently advanced, so that the general effect in the ceramic field is one of decadence. It is also to be observed that, while in fabric and texture and in certain typical forms, such as the chalices, the pottery of this series shows significant anticipations of the products of the First Early Minoan Period, in other marked respects it falls short of them. There is no trace for instance of painted ware and incipient glaze, nor of the characteristic 'through and through grey' biscuit. On the other hand, Neolithic shapes of very ancient descent predominate, such as the vessels with upright walls,<sup>2</sup> well illustrated in this case by remains of a series of large pans. The old tradition, too, was specially notable in the handles, the more developed vertical 'band' handle occurring side by side with the horizontally perforated knobs out of which it grew.<sup>3</sup> Fragments were also found of handles of the 'wishing-bone' type,<sup>4</sup> but these were rarer than in the Middle Neolithic strata. Part of a clay ladle came to light with a flat handle of the parallel type showing a rounded opening.<sup>5</sup>

Decadent aspect of pottery.

Absence of some typical E.M. I. features.

Still fundamentally Neolithic.

The general *facies* of the pottery from this Late Neolithic deposit, of which some forty basketfuls passed through my hands, was by no means prepossessing. The tone, owing to the new procedure, was predominantly a pale red, but the vessels, especially the larger ones, were still imperfectly baked. The surface was generally dull and the fine 'bucchero' tradition of the earlier series was to a great extent lost, except in the case of some small cups. At times, too, the surface of the pots was covered with a wash

<sup>1</sup> The surface of the Neolithic rises here above that of the Central Court. Among objects from this deposit were fragments of highly polished 'rippled' ware, some with a mottled red and dark brown surface recalling the later Vasilikì ware, and many remains of fine black burnished pottery including a handle-less mug, a beaked spout belonging to a bowl like Fig. 3, x, several large handles of the 'wishing-bone' type, and a quaint bird's head with striations on the neck, perhaps belonging to a figure like *P of M.*, i, Fig. 11, 1. There

was also found the central part of a clay chalice like those referred to below. The proportion of incised fragments was much larger than in the later deposit here described.

<sup>2</sup> Cf. *P. of M.*, i, p. 39, Fig. 6, 1.

<sup>3</sup> In one case we see this in a rudimentary form without the perforation.

<sup>4</sup> Cf. *op. cit.*, pp. 38 and 40, Fig. 7, 1, 3, 5, 6. The 'wishing-bone' type is also diffused North of the Aegean.

<sup>5</sup> Resembling, *op. cit.*, Fig. 7, 7.

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that had afterwards been highly polished. Examples of the old incised decoration are given in Fig. 3, in rare instances containing white inlay (Fig. 3, *o*), but it must be borne in mind that these only represent a fractional percentage.<sup>1</sup>

Large  
pots of  
stratum  $\alpha$ .

On the floor levels of stratum  $\alpha$ , thanks to the greater preservation of the walling, remains of a series of larger vessels came to light, several of the type shown in Fig. 3, *r*, though, owing to the imperfect cohesion of the walls, their reconstitution was for the most part impossible. An exceptionally large cooking-pot with a diameter of over seventy centimetres found near the hearth in house B contained, together with a serpentine axe, the bones of a kid. It seems to have had four handles. With it were found large stones showing traces of fire. Abundant remains of bones of animals, mostly cut or split, came out throughout both layers of the deposit. These included the Cretan ox,<sup>2</sup> goats, and swine; bones of a dog also occurred. That some of the food supplies were brought up from the sea was shown by the numerous cockles found, supplemented by limpets of large size and an occasional whelk and other shells.<sup>3</sup> Many of the cockles and some of the other shells had been bored to be worn as ornaments. A curious find—inside a clot of earth near the floor of House B, and well beneath stratum  $\alpha$ —was part of a nut which proved to have belonged to the obtuse end of an almond stone.<sup>4</sup>

Shell fish.

Proto-  
types of  
Early  
Minoan  
'Chalices'.

Some fragments were found of carinated bowls of the type illustrated in Fig. 3, *x*,<sup>5</sup> and which is already represented in Middle Neolithic deposits. The 'bridged' spout of these affords an early illustration of a favourite Minoan form.<sup>6</sup> A still more striking link of connexion is seen in the remains of cups or bowls on conical bases supplying the immediately antecedent stage of the elegant Early Minoan 'chalices', so well illustrated by the remains from the Ossuary Cave of Pyrgos. A restoration is given in Fig. 3, *m*, of a simpler form with slanting incised decoration and a taller and more developed specimen, with burnished vertical striations is shown in

<sup>1</sup> Fig. 3, *t*, with the chevron band against a dotted background has been further adorned with a ruddy ochreous wash.

<sup>2</sup> In *Bos creticus* of Boyd Dawkins. Numerous teeth also occurred.

<sup>3</sup> Amongst them were specimens of *Trochus lineatus*, *Pectunculus glycymeris*, *Spondylus gaederopus*, and *Cypraea*.

<sup>4</sup> The interior of this looked extraordinarily fresh, but the circumstances of the discovery

seem to preclude any recent date.

<sup>5</sup> The drawing is based on the fragments of two specimens: the spout of another is placed below for comparison.

<sup>6</sup> The influence of spouted Egyptian copper vessels with very prominent spouts on the Early Minoan class must at the same time be admitted. See vol. i, pp. 80–2 and Fig. 48, *a*.