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## LYCIAN WOODEN HUTS AND SIGN 24 ON THE PHAISTOS DISK

In the fall of 1963 an excavation began at the site of Karataş-Semayük, c. 7 km. to the east of Elmah in the interior of Lycia. The work is under the auspices of Bryn Mawr College and has as its principal aim the investigation of Bronze Age cultures in the region of classical Lycia<sup>1</sup>. Lycian prehistoric remains are best preserved in the upland zones where the use of mudbrick prevailed over that of stone and timber, thus leading to the formation of mounds. A number of prehistoric mounds exist in the plain of Elmah<sup>2</sup>, a fertile area some 1100 m. above sea level, on the main roads which connect the Lycian coastal cities with the Anatolian plateau and the district of Pamphylia to the east.

In the first campaign at Karataş a cemetery of the Early Bronze Age was partly cleared. The burials are typical of western Anatolia. The extramural burial ground has a large number of pithos graves in regular alignment, the openings of the jars facing east. All the burials are contained in large or small jars, and the tomb gifts (pottery, idols, bronze ornaments) prove an average date of Early Bronze II—IIIa for the cemetery, contemporary with Troy I and part of Troy II, certainly well within the third millennium B. C.

Some of the burial jars are decorated. The use of stamp seals is attested on one of the pithoi (fig. 1), other jars have incised designs of simple nature: parallel or crossing lines, notches, an occasional braid pattern. One jar (no. 57 of the Karataş cemetery) proved to have an unusual assortment of ornaments incised in the shoulder zone. The jar is large (1.07 m. high) and has four evenly spaced handles. It was lying on its side, as all the burial jars of this cemetery, its base resting in a cutting made for the grave. The sides were protected by a large number of fieldstones; the opening

<sup>1</sup> Cf. *American Journal of Archaeology* 68, 1964, p. 156; and for more details a forthcoming report in the July 1964 issue of the same journal.

<sup>2</sup> For the Elmah area, cf. E. Petersen and F. von Luschan, *Reisen im südwestlichen Kleinasien II* (Wien 1889) pp. 160ff.; H. A. Ormerod, *BSA* 16, 1909—10, pp. 86—87.

of the jar was closed with a similar stone blocking (fig. 2). The incised designs occurred in the parts of the handle zone which were visible at the time of the installation of the burial, although they were subsequently covered with earth; the part of the shoulder on which the jar rested was left undecorated. The designs had been outlined clearly in the wet, chaff-tempered clay of the pithos before firing. They consist of the following groups listed by panels (i. e. divisions between handles):

I. two swastikas under the crossbar of a T-shaped standard, to the left of which a mountain goat and a multiple swastika (fig. 3);

II. three mountain goats, a plant with curved branches, one swastika (fig. 4);

III. one mountain goat, a tree with multiple horizontal branches, two portable huts, and one unfinished sketch of a hut (fig. 5 and 6).

The occurrence of so many motifs on a burial pithos is unusual (there are occasional single images on Anatolian and Early Helladic household pithoi e. g. at Rafina in Attica<sup>3</sup>). We have to assume that the combination of ornaments brings together things which were familiar to the third millennium villagers of the Elmalı plain. Some of the designs may have amuletic value (e. g. the swastikas which were also popular Early Bronze Age motifs on incised so-called Yortan pottery from western Anatolia and on spindle whorls from Troy), and all of them may have had some beneficial effect on behalf of the deceased, but the plants, tree, mountain goats and huts must be renderings of everyday realities.

Panel III is clearly the most elaborate one. The mountain goat here is embellished with dots between his legs, and similar dots are used to enhance the decorative appeal of the hut designs. It is the latter group which forms the special subject of this note, since the hut forms may give a clue to the antiquity of certain peculiarities in Lycian architecture.

The best preserved sign is illustrated in fig. 7. It represents a bent frame with rounded top, standing on two legs which are the ends of the frame (as seen frontally; the original must have had four or more legs). The frame is subdivided by three horizontals, the lowest of which projects beyond the upright edges of the frame, and one vertical support. The horizontal long bar must represent

<sup>3</sup> *Praktika* 1954 (1957) p. 111 fig. 8

the floor, and the most probable interpretation of the entire sketch is that it represents a portable wooden hut with panelled façade. The dots are purely "calligraphic" as the comparison with the goat shows.

The second, smaller, sketch of the hut lacks some details. The legs do not project through the floor, but the horizontal bar is prolonged on both sides of the curved frame and suggests again that the object is portable. This rather narrow structure has no horizontal panels but it is divided vertically. An abortive sketch to the left of the first hut has legs and horizontal projections.

The structural interpretation of these designs can be based on their general appearance. The framework seems to be of wood which lends itself to bending and panelling; the projecting bars are understandable as trimmed logs. The huts seem too large and the panelling too elaborate for an interpretation as beehives, which otherwise would fit into the local setting. The goats and tree suggest that we are looking at wooden storage sheds near a village of the Elmalı area as they appeared some time well before 2000 B. C.

If such is the case, several comparisons and deductions present themselves. In the first place, these Early Bronze Age portable wooden huts are the most elementary version of an architectural form which becomes visible again in sarcophagi and rockcut tombs of classical Lycia. The architecture of the Lycian necropoleis is based on timber prototypes. The care with which the classical Lycians translated wooden forms into stone allows us to infer that they had flat-roofed timber houses<sup>4</sup> as well as wooden huts with ogival roofs<sup>5</sup>. Both types occur in the east and west cemeteries at Myra, although the flat-roofed construction prevails. There are also instances of gabled pediments which may not be a native Lycian type but a hybrid. The ogival roof type, apart from the rock-cut façades, is also represented by the Lycian sarcophagi<sup>6</sup>. They continue in simplified form as the most characteristic monuments of Lycian burial grounds.

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<sup>4</sup> For the study of the flat-roofed house cf. O. Benndorf—G. Niemann, *Reisen in Lykien und Karien* (Wien 1884) pp. 96—98; *Österreichische Jahreshefte* 2, 1899, pp. 21—23. For recent studies at Xanthos cf. H. Metzger, *Fouilles de Xanthos II. L'Acropole Lycienne* (Paris 1963) pp. 49—61, *Édifice G*, figs. 7—17.

<sup>5</sup> A convenient picture survey is found in H. T. Bossert, *Altanatolien* (Berlin 1942) figs. 228—262.

<sup>6</sup> The pillar sarcophagus at Xanthos has recently been studied by P. Demargne, *Fouilles de Xanthos I. Les Piliers Funéraires*, p. 50, fig. 6 and pl. VI.

Both the flat-roofed Lycian house and the curved-roof house are constructed on a frame of interlocking beams, with characteristic upcurved ends of the horizontal carrying beams at floorlevel. The difference in roofing has been explained by Benndorf as the result of a local habit of erecting temporary structures on the flat clay roofs. „Die Zutat eines Oberbaus an sich versteht sich aber von selbst aus dem für den Orient so oft bezeugten Brauche, das platte Hausdach für die verschiedensten profanen wie gottesdienstlichen Zwecke auszunutzen, insbesondere Laubhütten auf ihm zu errichten<sup>7</sup>.“ This primitive habit of erecting tents or shelters on the roofs would have led to gradual improvements until the appearance of the Myra tombs was reached, which show a well constructed ogival attic, built on a timber frame, with neatly curved sides fastened on long straight planks (purlins).

The secondary origin of the ogival attic is not so convincing to me as it was to Benndorf. The ceilings with multiple small round logs which appear under the ogival gables of some of the Myra tombs<sup>8</sup> are structurally no more disturbing than the dentils under Ionic pediments. These dentils have never led to the theory that the Ionic pediment developed out of a flimsy tent pitched on the flat roof of a megaron. Most of the ogival façades outside of Myra do not have these logs under the cornice<sup>9</sup>, and the ogival sarcophagi never have them. Benndorf left the sarcophagi out of the discussion, but they perhaps contain the clue to the problem of the origin of the form. The ogival Lycian sarcophagus (e. g. fig. 8, sarcophagus in Fethiye-Telmessus, in imperfect preservation with the lid shifted out of place) is homogeneous in construction and consists of a rectangular main part in the form of a framed timber room, crowned by an ogival attic whose panelling matches that of the lower story. The entire construction tends to be narrower and smaller than the flat-roofed timber house, and makes the impression of a storage unit. It stands on its projecting horizontal beam, and can be set on a high pedestal or various kinds of base-ments, but it is not expanded horizontally to exceed the width of the attic, whose proportions seem to be one with those of the structure. This homogeneity of the sarcophagus form is not negated by the fact that the sarcophagus is treated as a box with a lid, and that the ogival cover can be lifted to admit the burial, or, in

<sup>7</sup> Österreichische Jahreshefte 2, 1899, p. 25

<sup>8</sup> e. g. Österreichische Jahreshefte 2, 1899, p. 27 fig. 26

<sup>9</sup> Österreichische Jahreshefte 2, 1899, p. 28

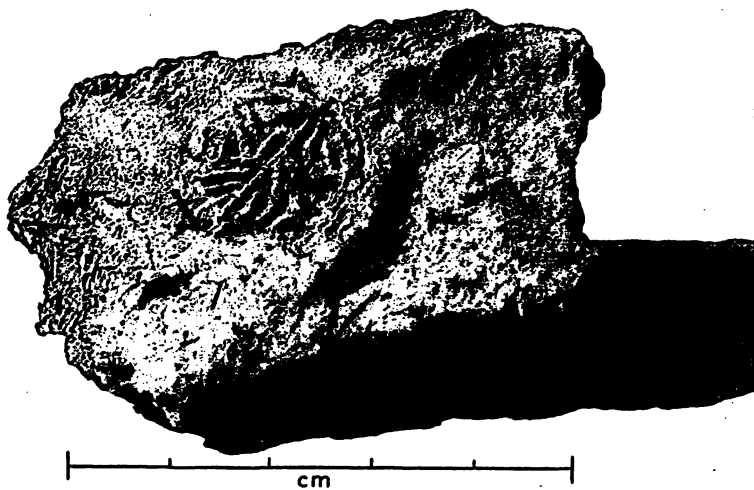


Fig. 1. Stamp seal impression on pithos at Karataş. Diameter of stamp 2 cm



Fig. 2 Karataş pithos 57 in situ in cemetery, with blocking stones

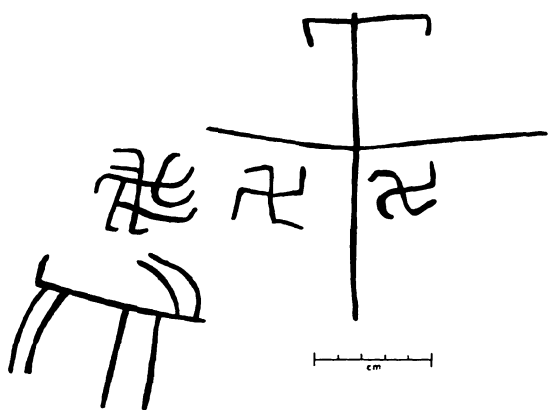


Fig. 3. Designs in panel I, pithos 57. Drawing

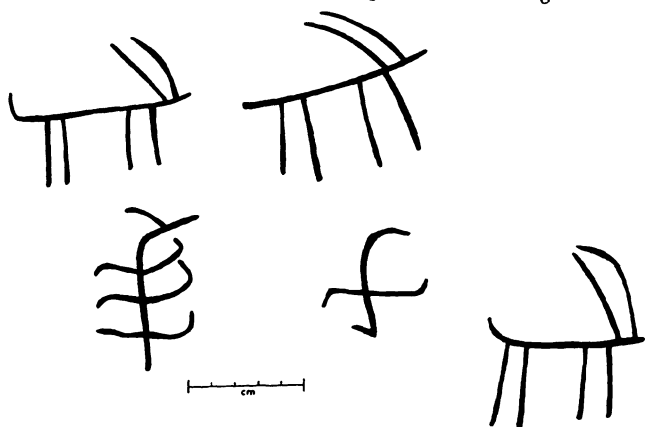


Fig. 4. Designs in panel II, pithos 57. Drawing

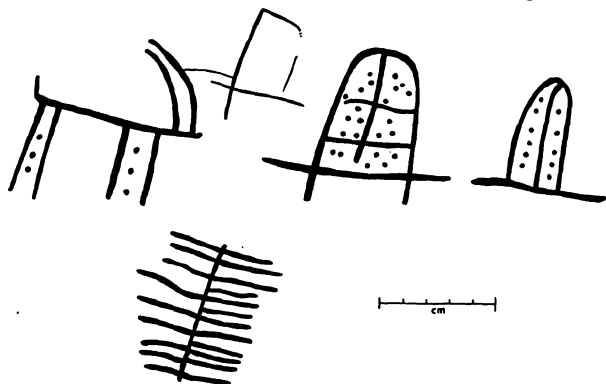


Fig. 5. Designs in panel III, pithos 57. Drawing

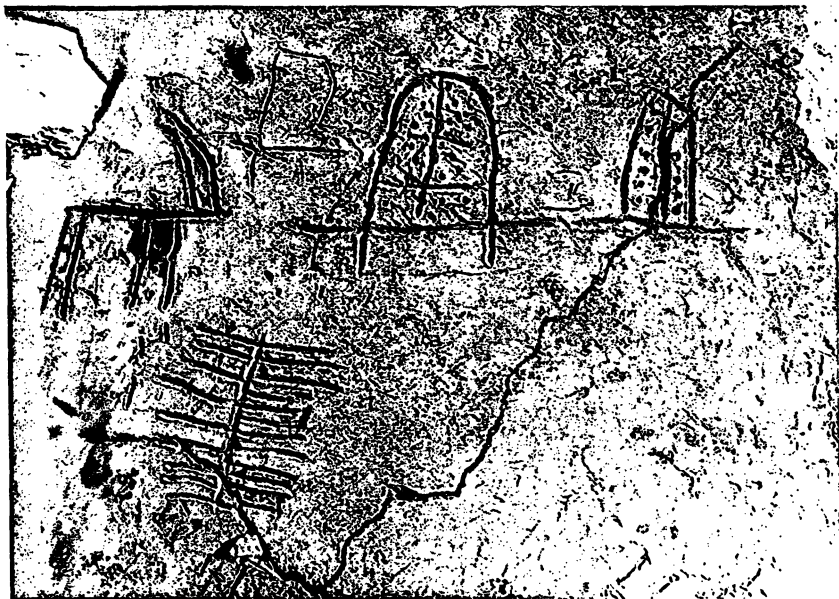


Fig. 6. Designs in panel III, pithos 57, photograph

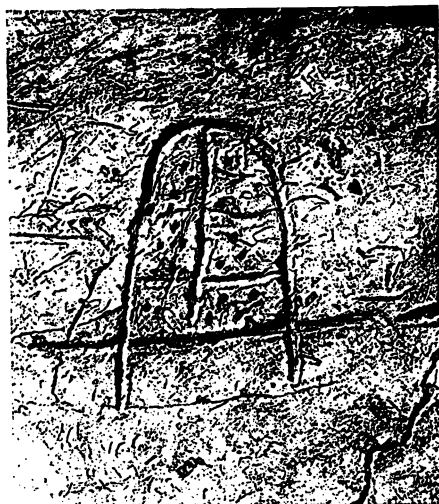


Fig. 7. Main sign in panel III, pithos 57, photograph

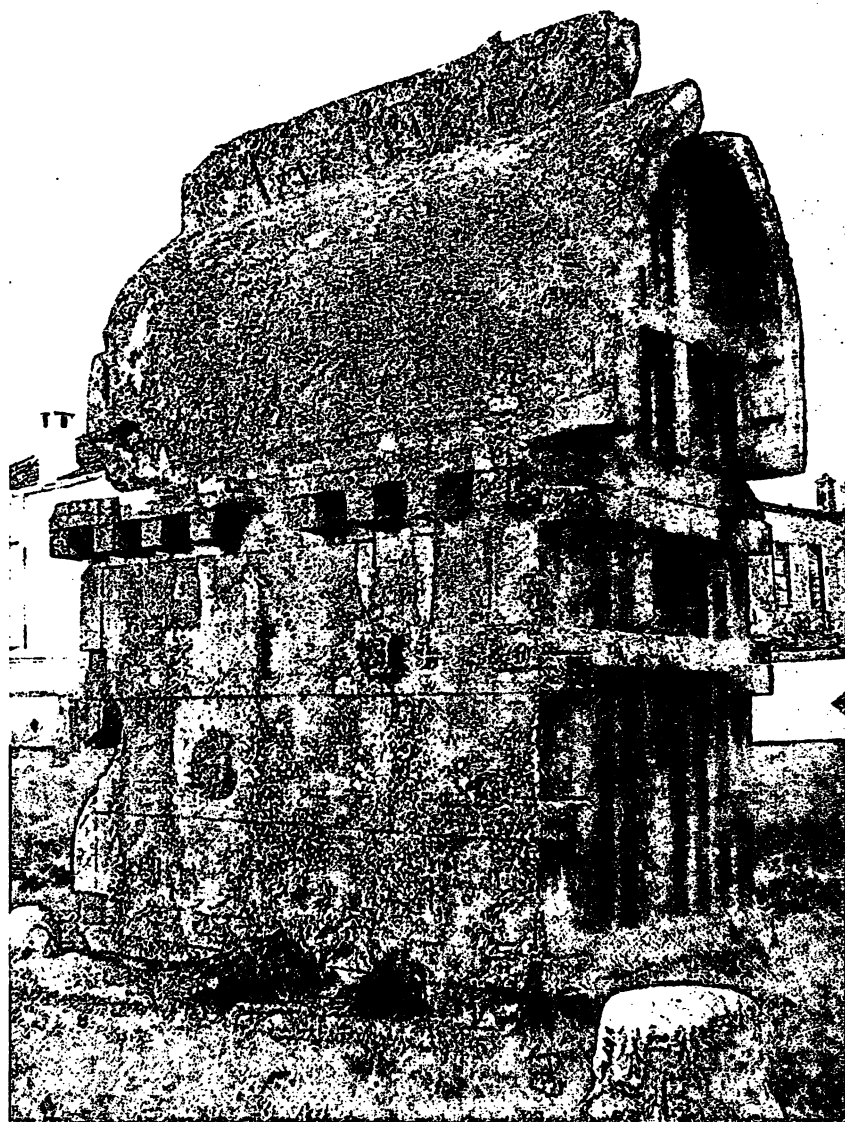


Fig. 8. Lycian sarcophagus in Fethiye-Telmessus



Fig. 9. Modern granary and wagon in Semayük, plain of Elmalı

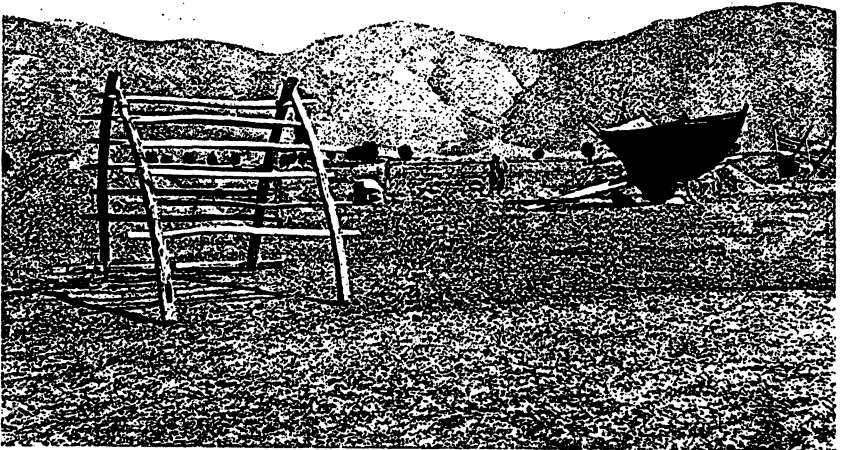


Fig. 10. Wagon frame and wagon in use, plain of Elmalı



Fig. 11. Sign no. 24 on the Phaistos Disk

modern times, the tomb robbers. All sarcophagi have lids. When they are made in the shape of a Greek pedimental temple, the pediment is removable, but this practical expedient does not reflect on the structural origins of the building type. The Lycian sarcophagus cover had become such an established form by the fifth century B. C. that in one exceptional case it was incongruously put on top of a Lycian tomb in the shape of a low wide hut with clay roof. The ogival cover in this case looks exactly like a sarcophagus lid, and even has the flange at the base to prove what it was meant to fit on<sup>10</sup>. Here we do not see the transformation of a temporary roof shelter but the transfer of a sarcophagus lid to crown a monument of other type and to mark it unmistakably as funeral.

It would seem to me that the structural form of the sarcophagus and the rock-façades of ogival type is an old timber unit, understandable in a land which practised carpentry in various forms and which may have found the portable storage units with curved roofs very practical in seasons of snow and rain. Experiments with curved wooden planks and ribs must have been age-old in the coastal zone of Lycia where ships were built. The details of the roof construction in the classical series (e. g. in fig. 8) are reminiscent of ship construction, as has been noticed by several students of Lycian architecture.

How ancient the Lycian building forms were cannot be determined from the evidence of the classical façades. All we can see is that the Lycians followed the fashions of their times in suddenly beginning to carve stone replicas of their timber architecture. We see the same trend in the Phrygian and Paphlagonian rock-façades, and, as far away as Persia, in the royal tombs of the Achaemenids. Each area translates its indigenous architecture into stone, and the Lycian types look thoroughly autochthonous.

The graffiti of figs. 5—7 now present evidence that a portable storage unit with the three major characteristics of the ogival Lycian hut (horizontal projecting floor-bar, panelling and curved roof) was in use as early as the third millennium B. C. The round top of the structure in fig. 7 is but a primitive variant of the more advanced ogival construction. The posts on which the early hut stands are not preserved in classical times.

<sup>10</sup> Österreichische Jahreshefte 2, 1899, p. 25, fig. 24; E. Kalinka, *Tituli Asiae Minoris I* (Vienna 1901) p. 65 no. 77; H. T. Bossert, *Altanatolien* (Berlin 1942) fig. 236. Çindam (Iari)

The antiquity and persistence of certain forms of Lycian timber architecture has been noticed by many modern travellers. Even to-day the inhabitants of Lycia (both in the coastal zones and in the Elmalı plain, showing the homogeneity in material culture of the two areas) build wooden storage sheds of a special type, small units differing from the village houses in style and material<sup>11</sup>. The modern sheds have preserved the timber frame with projecting horizontal floorbeams, and the panelling, but the roofs are gabled and made of shingles, tiles or even flattened rusty cans. The modern wooden sheds serve as granaries. They are raised above the common ground level on a specially prepared layer of stones (fig. 9, granary in Semayük, plain of Elmalı).

Curved wagon frames are also characteristic of modern Lycia, although they have a wide range of occurrence in southwestern Turkey. The bent frames are put together without the use of metal and make a simple pointed arch (fig. 10 shows a dismantled wagon frame and a wagon in use, plain of Elmalı).

This entire note would have appeared more appropriately in an architectural journal were it not for its relevance to the question of what is represented in sign no. 24 (Evans' numbering) on the Phaistos Disk (fig. 11).

Evans discussed this sign in some detail. He considered the "pagoda-like building" as a relative of the Lycian tomb forms with "carinated hull-shaped roofs" and illustrated one of the Myra tomb façades for comparison<sup>12</sup>. With the new evidence from figs. 5—7, it seems correct to say that the Lycian architectural series is the proper cognate for the form rendered in sign no. 24.

The "pagoda" of the Phaistos Disk has the three characteristics which link fig. 7 with the classical ogival unit: horizontal projecting floorbeam, panelling and the curved roof. It stands on posts as does the unit of fig. 7. There are some discrepancies which are partly due to the more elaborate nature of the structure. Fig. 7 is the basic form, fig. 11 shows a construction with more panels, with an increase in vertical subdivision although the horizontals remain at three. Fig. 7 has the floorbeam projecting, fig. 11 has slight projections of the floorbeam (with curved and upturned ends, it seems) but the long bars come at the middle level. This

<sup>11</sup> O. Benndorf—G. Niemann, *Reisen in Lykien und Karien* (Wien 1884) pp. 99—101; *Österreichische Jahreshefte* 2, 1899, pp. 29—31

<sup>12</sup> *Scripta Minoa I* (Oxford 1909) pp. 26—27; *The Palace of Minos* (London 1921) pp. 657—658

is but a variant in the portable nature of the structure, which is stressed in the long projections of figs. 7 and 11, but less emphasized in the later series. The early structures stand on legs for convenient movability. The "pagoda" has three legs, two of which seem to be joined at the base, an increase in supports proportionate to its greater width. The roof of the Phaistos Disk structure is rather rounded but has a knob on top where the frame is joined, thus foreshadowing the ogival development.

The affinities of the Phaistos Disk sign to the classical Lycian façades had always been clear, but the chronological discrepancy between the fifth century stone monuments and the Disk (found in M. M. IIIb context and presumably dating to c. 1600 B. C.) was discouraging. The new evidence from Karataş shows that the principles of architectural construction shown in sign 24 were known as early as the Early Bronze Age (II—IIIa, within the 2500—2000 B. C. range) in Lycia. Thus a claim can be made that sign 24 is congenial to as well as chronologically compatible with the architectural tradition of Lycia.

No similar claim can be made for Crete at present. Nor do we find the diagnostic marks of sign 24 in hieroglyphs of the Cretan scripts, not even among the signs engraved on the Mallia block. The Mallia sign compared by Chapouthier<sup>13</sup> lacks panelling and has no horizontal projections; it may not be of architectural origin. The closest architectural relative is a sign in the pictographic script B, Evans 43a, b which renders "a shed on piles, probably a storehouse"<sup>14</sup>. This sign has a gabled roof, but again lacks panelling and projecting floorbar. The pictogram may prove that wooden sheds on piles were also used for storage in Middle Minoan I—II Crete, but the Phaistos Disk shed is essentially different in construction.

One resemblance to Bronze Age Lycian architecture does not vindicate Evans' theory of a Lycian origin for the Phaistos Disk, but it helps to keep it alive. We shall have to wait for more illustrations of pre-classical Lycian culture to find additional support for what remains an attractive possibility.

<sup>13</sup> BCH 62, 1938, p. 108. The Linear A (and B) ideogram L 44, compared by Chapouthier, looks even less like an architectural sign.

<sup>14</sup> Scripta Minoa I, p. 198; The Palace of Minos I, p. 282, fig. 214