

THE TERRACOTTA FIGURINES AND THE STONE VASES

by

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Twenty pieces of terracotta and 22 fragments of stone vases were found spread all over the excavated area. Only in Room E with the hearth, Room H and Corridor/Space I no finds were made. To a large extent they derive from pits, but important finds were also made in deposits, constructions and *in situ* on floors.

THE FIGURINES

Eight terracotta fragments derive from figurines of human shape and five were quadrupeds. There were furthermore two small legs (one from a bovine and one from a chair), one false-neck with horns of consecration and finally a coarse fragment similar to a “paw”. Around ten of these figurines were more or less manufactured in a Mycenaean tradition. Six figurines were found in pits, five come from constructions and levelling deposits, eight from accumulated deposits and one from the bottom of a shaft.

The head and upper body of what seems to be a Transitional figurine is locally made in the Mycenaean tradition (70-TC 014, *Pls. 217, 253c:7* [analysed: local]).¹ It was found in a LM IIIB:1 rubbish deposit north of Room H. The figurine recalls a similar piece of the Transitional type with polos from the Aphaia sanctuary on Aigina, dated to LH IIIA:2-III B(?). The Aphaia figurine is, however, more naturalistic and has indicated fingers.²

A small head of a ram which is finely executed was most probably applied to the inner rim of what seems to have been a wheel-made vessel (70-TC 033, *Pls. 218, 252g:1*). From an external view (the black, dull slip), the figurine could be dated to the MM period. The piece was found in the upper layer of mixed deposits north of Space G, which stratigraphically belongs to the LM IIIB:1 period but which also contained MM and LM I sherds. A very similar piece derives from the Citadel House Area in Mycenae: “Ram’s head attached to the handle of a vase. Handmade. From a post-destruction context. The species is rare”.³ In the Siteia Museum in east Crete, there is also a small ram’s head from a peak sanctuary, possibly Petsofas with inv. no. 5734. The head is probably part of a figurine, and was not attached to a vessel. It has faint traces of dark/black dull slip and measures about 0.015 (Mpd). In Hagios Nikolaos Museum (Room 3, showcase 25) there is a terracotta figurine, representing a ram, from Petso-

fas. For the application of the ram’s head, the best parallel is offered by a Rhodo-Mycenaean vase with a small bull’s head attached to the rim.⁴ The head also constitutes the upper part of a vertical handle, attached to the rim. The small bull’s head is turned inwards and seems to have a black, dull slip like the GSE piece. The Rhodo-Mycenaean vase should probably be dated to the end of LH IIIB into LH IIIC.

The lower part of a stem from a locally made figurine is probably of the Phi B or Psi type (70-TC 039, *Pls. 218, 252g:4*). It was found in the upper layer of mixed deposits north of Space G, i.e. the same find spot as 70-TC 033. There is a very similar stem of a figurine from the Aphaia sanctuary, which is, however, not dated.⁵ The stem of a figurine of the Late Psi type of LH IIIC date from the Syringes at Tiryns, is also reminiscent of our fragment.⁶ Another similar piece was found in the West gate area in Midea and it is a fragment of a Phi type figurine of Group B.⁷ The location of a Mycenaean figurine from Palaikastro is very interesting since, according to the excavators, it is a rare find in eastern Crete.⁸ Only the lower part of the body and stem are preserved, but it is classified as a Phi B figurine. Even though the vertical lines down the stem on the Palaikastro figurine are very few, it offers an interesting equivalent to the Khania piece.

A tiny fragment could be the leg of a bed or chair (74-TC 015a, *Pls. 228, 256d:1*). It has painted bands down the edges and a mark of application at the top. It was excavated in a LM IIIA:2 levelling deposit below Space E. It is reminiscent of the tops and legs of furniture and miscellaneous pieces from the Citadel House Area at Mycenae.⁹

A headless quadruped body could be defined as a bovine of the Linear Type 2 (77-TC 049, *Pls. 217, 250d:5*). It was found in the upper deposit between Buildings 1 and 2, in a LM IIIB:1 context. The figurine is very similar to a quadruped of the Wavy 2 type, found in a large pit near Agia Aikata-

¹ Jones 1986a, 230.

² Pilafidis-Williams 1998, 14, pl. 33, no. 49.

³ Tamvaki 1973, 225-26, fig. 11, no. 65.

⁴ Karageorghis & Stampolidis 1998, 95, fig. 8d.

⁵ Pilafidis-Williams 1998, 45, pl. 45, no. 264.

⁶ Weber-Hiden 1990, Taf. 39, no. 52.

⁷ Demakopoulou & Divari-Valakou 2001, 185, pl. LIa.

⁸ MacGillivray *et al.* 1992, 123-124, fig. 3.

⁹ Tamvaki 1973, 256, pl. 52c, no. 254 and pl. 52d, no. 258.

erini Square in 1968.¹⁰ It could also be compared to the body of a Linear Type 2 animal from the Aphaia sanctuary and of LH IIIB date.¹¹ It is likewise similar to the fragmentary body of a dog of LH IIIC date of the Syringes material from Tiryns.¹²

The half upper body of a roughly made figurine could possibly be of the Late Psi Type; atypical (77-TC 052, *Pls.* 228, 256g:1). The piece was found in the constructions of the LM IIIA:2 Spade F. It could be compared to an atypical figurine of the Late Psi type from Mycenae,¹³ figurines of the Postpalatial period from Haghia Triada and Palaikastro¹⁴ and also a figurine (“occupant of a chariot group”) from the Aphaia sanctuary.¹⁵

77-TC 065 (*Pls.* 217, 247e:1) could possibly be a polos head of a figurine and has rather elaborate decoration. The head was found in a small LM IIIB:1 deposit in the northwestern corner of the Courtyard. It could be compared to a head of a Phi figurine from the Aphaia sanctuary with sideburns in relief on the bare head. The Aphaia head is of LH IIIA:2-B date.¹⁶ Old excavations at Khania have yielded many female figurines made in Minoan tradition, with bell-shaped skirt and polos, but with a coiffure that is reminiscent of our head.¹⁷ See also a head from possibly a Phi type figurine from the Syringes at Tiryns, with applied and painted eyes and probably of LH IIIC date.¹⁸

77-TC 109 (*Pls.* 228, 258a:1) probably represents the lower part of an arm from a figure. Grooves and stripes of paint indicate the fingers. Three bands encircling the arm possibly represent bracelets, while horizontal framed zigzags down the arm possibly depict sleeves. It was found in a LM IIIA:2 deposit south of the LM IIIA:2 Building 1. A similar arm, although slightly larger from a figure, was found at the Aphaia sanctuary and is of LH III(A:2) B date.¹⁹

A very unusual fragment is the upper part of the body from a figurine of the Hollow Psi type (77-TC 110, *Pls.* 218, 244g:3). The fragment was found in a LM IIIB:1 rubbish pit in the middle layer of the street between Building 1 and 3. It could possibly be compared to a figurine of this type from the Aphaia sanctuary and of LH IIIB date.²⁰

A very small fragment, with encircling bands of paint, is possibly the leg of a quadruped (78-TC 009, *Pls.* 218, 238b:1). It was found in a LM IIIB:1 floor of Space G. It recalls some “animal horns and legs” of LH IIIA:2-B date from the Aphaia sanctuary²¹ and fragments of animals from the Syringes at Tiryns of LH IIIC date.²²

A coarsely made figurine from Palaikastro shows a slight similarity with 80-TC 026 (*Pls.* 219, 233b:11). The Palaikastro figurine was found in a pit in the southern rooms of Building 5 together with LM III pottery.²³ Only the head and the upper part of the body remains of the figurine, with a fragment of the raised left arm preserved. The head has a pinched face with applied eyes, similar to the Khania piece, but seems to be made more in the Minoan tradition than 80-TC 026.

82-TC 008 (*Pls.* 219, 233b:12) is a horn-shaped object, which could perhaps be the nose horn of a stag beetle, but this piece is, however, finished at both edges and not broken. The horn was found in the LM IIIB:1 layer with stones above Building 1 together with the head of the figurine (80-TC 026) mentioned above, a stone vase fragment (83-S 006), and a

stone fetish (77-S 031, *Pl.* 233c:4). There are similar horn-shaped objects in the Heraklion Museum. These are horns of dung beetles(?) from peak sanctuaries(?), but are either broken off or still attached to the animal. In the same showcase are figurines and sacred insects from the Minoan peak sanctuary of Piskokephalo in east Crete.

A most important fragment is 84-TC 020 (*Pls.* 219, 245a:2), which is a very unusual piece. It seems to be part of a shoulder and false-neck with a preserved disc from a closed vessel.²⁴ The fragment is decorated with bands round the neck and shoulder in brown, dull paint. At one edge of the disc, there are miniature horns of consecration. One horn and the start of the other are preserved. A groove edges the disc and behind the horns. On top of the disc there are wheel-marks and three painted vertical lines radiating from the horns. The fragment was found in LM IIIB:1 20-Pit J in the Rubbish Area Southeast, together with (among other shapes) kylikes, cups, goblets and a rhyton. Nothing in the context would define the fragment as part of a cult vessel, but the horns of consecration are really striking. It is very similar to a fragment from Palaikastro: “a plastic horns of consecration placed on the rim of a form too narrow to be the spout of a vase and so more likely part of a kernos”. Against the facade of a building beneath Building 7 at Palaikastro, a deposit of shattered material was found from the MM IIIB-LM IA transitional phase. The context suggests “that the building the deposit came from may have contained a shrine”.²⁵ Gesell also mentions the horns of consecration in a similar context from Phaistos, in a storeroom used for cult equipments, although of Protopalatial date: “Other types of cult equipment – ... horned pots ... – are relatively common in this period”.²⁶ Our piece is an interesting find, since plastic horns seem relatively unknown in the western area of Crete,²⁷ the sign, however, appears on west Cretan sealings and seal stones.²⁸ “Signs of the horizon” seems, however, a more appropriate designation than “horns of consecration”, because of its similarity with the Egyptian determinative.

Another fragment of great interest is 84-TC 028 (*Pls.* 219, 244h). It seems to be part of the body and start of the leg,

¹⁰ Tzedakis 1969b, 430, pl. 435e.

¹¹ Pilafidis-Williams 1998, 54, pl. 49:405 (L 0.052).

¹² Weber-Hiden 1990, Taf. 51, no. 175.

¹³ French 1971, pl. 20d, no. 50-306.

¹⁴ Borda 1946, pls. 43-44.

¹⁵ Pilafidis-Williams 1998, 67, pl. 54:508-509.

¹⁶ Pilafidis-Williams 1998, 9, pl. 29:5.

¹⁷ Rethemiotakis 1998, 46, pl. 18, no. 189.

¹⁸ Weber-Hiden 1990, 50, Taf. 40:56.

¹⁹ Pilafidis-Williams 1998, 80, pl. 5:536 (L of arm 0.105). The estimated height of the figure is 0.40.

²⁰ “The Hollow Psi figurine is smaller than the regular Psi and has a conical or bell-shaped stem that is hollow almost up to the waist.” Pilafidis-Williams 1998, 15, pl. 33:54.

²¹ Pilafidis-Williams 1998, 15, pl. 55:524b.

²² Weber-Hiden 1990, Taf. 47, nos. 153-156.

²³ MacGillivray *et al.* 1989, 434, fig. 14.

²⁴ Hallager & Tzedakis 1985, 22 and fig. 14.

²⁵ MacGillivray *et al.* 1991, 137, fig. 14b.

²⁶ Gesell 1985, 11.

²⁷ D’Agata 1992, 250.

²⁸ E.g. 87-TC 008 (*Pl.* 222); Hallager 1985a; Nilsson 1950, 148, fig. 56.

probably from an animal figure or askos of animal shape. It was made in the Kydonian Workshop and has dotted circles on the body, which seem to be wheel-made with added hand-made legs. The piece was excavated in the LM IIIB:1 pit, 20-Pit H, in the Rubbish Area Southeast. A similar fragment, part of the body and the start of the leg (hollow) from an animal figurine which is decorated with a floral pattern was found in a Post-Minoan context in the Agia Aikaterini Square.²⁹ See also the fragment of a hand-made animal-shaped rhyton (fish or hedgehog) from the Aphaia sanctuary and of LH IIIB date.³⁰ It is made of orange-buff clay, has a creamy slip, and scale- and dot pattern in reddish-brown paint. A wheel-made animal-head rhyton with the hand-made face of a hedgehog with U-pattern on the body derives from the same site and is of LH IIIA:2-B date.³¹ Our piece could possibly line up in the same tradition as a very fine piece of Mycenaean type of wheel-made bull from Delphi.³² The size is small (L 0.11. H 0.07) and it has openings at the front and back. The figurine is dated according to the scale and rock pattern to the LH IIIA:2-B period.

Our figure was quite large to judge by the diameter of the upper leg which measures 0.023×0.030 . As Minoan figural rhyta (bulls) were not made after LM IB our figure belongs instead to the large, wheel-made figures which seem to be a Post-Palatial development.³³ Bull figures of a similar size from Phaistos and Hagia Triada have been dated to the end of LM IIIB and LM IIIC advanced or Subminoan respectively.³⁴ A wheel-made bull figure from Patsos comes close in size with 84-TC 028.³⁵ It is 0.26 high and is assigned to late LM IIIB-C. Wheel-made figures are also a late phenomenon on the mainland where they made their appearance in shrines before the close of the LH IIIB period and are widely attested to in LH IIIC. As our figure was lying in an LM IIIB:1 pit it is so far the earliest in the Late Bronze Age III.

84-TC 036 (*Pls. 217, 248e:4*) could be the head of a bird or bovine, with delicate leaf-shaped ornaments on the head, which perhaps represent the eyes. It was found in one of the LM IIIB:1 floors (20-Floor 6) of the Courtyard. Since the ears/horns and nose are broken off, it is difficult to define what species it is meant to be. There is, however, a slight similarity to an odd figurine from the Piazzale dei Sacelli at Hagia Triada.³⁶ It has the same pointed "nose" and thick neck with vertical bands down neck and it is defined as a griffin.

84-TC 038 (*Pls. 218, 244i:2*) could be the stem of a figurine of the Proto Phi or Phi B type; atypical. It derives from a LM IIIB:1 pit (20-Pit H2) in the Rubbish Area Southeast. There are similar stems of figurines from the Aphaia sanctuary: "... not possible to date any of the specimens, although 324-325 must have come from Late Psi figurines as is suggested by their bad modelling."³⁷ See also the stem of a Late Psi figurine, found in the fillings of the Syringes at Tiryns.³⁸ The figurine has a roughly made stem, decorated with a few irregular lines down the stem and is dated to the LH IIIC period. The coarse vertical bands down the stem of our figurine are similar to the decoration on a female figurine in the Khania Archaeological Museum and found at Dikastiria. This figurine seems, however, to have been manufactured more in the Minoan tradition with an almost bell-shaped skirt and a polos on the head.³⁹

A tiny fragment of rectangular shape is probably a leg of furniture (84-TC 064, *Pls. 218, 234b:2*). The leg was found in the shaft of Room A, Building 1 and in a LM IIIB:1 context. The decoration of this leg is very similar to an animal's leg from Tiryns, likewise very small (H 0.047) and of LH IIIC date.⁴⁰ The leg from the Syringes is decorated with transverse bars, framed by vertical bands down the leg.

84-TC 069 (*Pls. 219, 249c:2*) could be a leg of an animal figurine with bands down the leg in brown/black lustrous paint. It was found in a LM IIIB:1 wall of the Courtyard. This leg is very similar to animals' legs from Tiryns of LH IIIC date.⁴¹ They are almost monochrome painted or have thick bands down leg.

THE STONE VASES

It has been possible to define fragments of large and small bowls, possible libation tables and/or lamps, a lid and a bird's nest bowl. The remaining fragments have been impossible to define.

A rim fragment with rim lug (70-S 223/224, *Pls. 220, 253a:3*) probably derives from a large open bowl, possibly manufactured in buff alabaster. The piece has only been macroscopically examined and the stone variety could perhaps also be limestone or marble. Alabaster is a crystalline rock, with gypsum as the sole mineral, and is often confused with recrystallized limestones which are abundant in Crete.⁴² An Egyptian alabastron in the Khania Museum probably derives from a LM IIIA:2-B tomb in Khania.⁴³ Our rim fragment was found in the lower layer of mixed deposits north of Space G; a layer which, besides LM IIIB:1, also contained MM and LM I sherds.

A large piece, curved in profile and with flat horizontal grooves, (73-S 026, *Pls. 228, 262c:2*) is part of what is probably a large lamp of low, non-pedestalled type, since the pedestalled lamps usually have plain rims.⁴⁴ Marks of burning could perhaps be used as evidence for its function. It was found in an LM IIIA:2 pit (10-Pit 5) in the Rubbish Area North, which was cut into the LM IB destruction level. Lamps are very common in the MM III-LM I period, and

²⁹ 82-TC 045 (Mpd 0.046) in *GSE II*, 124, pl. 109a:3.

³⁰ Pilafidis-Williams 1998, 110, pl. 73:803. H 0.02. For discussion of hedgehog rhyta, see 137-138.

³¹ Pilafidis-Williams 1998, 110, pls. 21:801, 83:801.

³² Kourou & Karetsou 1997, 112, pl. XLIVa.

³³ Gesell 1985, 53.

³⁴ *The Bull in the Mediterranean World*, 171, no. 56; D'Agata 1997, 87-89.

³⁵ Kourou & Karetsou 1994, 87, no. 5, HM 1112.

³⁶ Banti 1948, 54, fig. 42.

³⁷ Pilafidis-Williams 1998, 42, 46, pl. 46:250 and 325.

³⁸ Weber-Hiden 1990, 49, Taf. 39:49.

³⁹ Rethemiotakis 1998, pl. 19, no. 188; Mus.no.1311.

⁴⁰ Weber-Hiden 1990, 74, Taf. 47:156.

⁴¹ Weber-Hiden 1990, Taf. 47:153-154.

⁴² For discussion about alabaster, see Warren 1969, 105 and Devetzi 2000, 124-125.

⁴³ Warren 1969, 105, 112-113; Devetzi 2000, 124-125.

⁴⁴ Warren 1969, 50.

there are few examples in LM III contexts. Our piece is most probably of MM III-LM I date and a survival. Fragments of similar lamps have been found at Kommos in a MM III and LM IIIB context.⁴⁵ A small lamp from Phaistos recalls the same type.⁴⁶ Up to 1981 twenty one stone lamps of Warren's type 24 had been found at Akrotiri on Thera and many pieces turned out to be imported from Crete. Our rim fragment is similar to a low lamp with a large groove round the top of the rim and round the side of the rim.⁴⁷

A rim fragment probably derives from a small bowl with everted rim and possibly a carinated profile (73-S 282, *Pls.* 228, 257c:3). It was found below the floor of Space H and in a LM IIIA:2 context. The fragment is most probably a survival from the late EM II-MM I/II period. The bowls with carinated or curved profile and everted rim are, according to Warren, one of the most frequent stone vase forms and the group is dated to late EM II to MM I/II.⁴⁸

Another rim fragment (77-S 027, *Pls.* 220, 251c:5) could belong to a plain bowl with curved profile. It was excavated in a LM IIIB:1 pit (11-Pit F2) between Buildings 1 and 2. The piece could well be of the same type as a base fragment from LM II/LM IIIA:1 deposit.⁴⁹ The stone variety seems almost identical; grey limestone with a white, pure calcite vein going diagonally. It is difficult, however, to decide if the two pieces come from the same stone vase since they belong to different parts of the body. Besides, the fragment 77-S 027 is slightly thicker than the earlier one, which was also found in a pit.

77-S 031 (*Pl.* 233c:4) could be a fetish of stone and it is made up of four spherical natural stones, small in size, and part of a fifth in buff, porous limestone. It was found in the LM IIIB:1 layer with stones above Rooms A-D in Building 1.⁵⁰ Evans describes "a series of grotesque concretions of quasi-human appearance" from Knossos⁵¹ and defines them as "fetish images" in a "domestic chapel". The Knossos concretions are of a much larger size, but have the same shape as the Khania piece.⁵² These small pieces of stone – fetishes or not – sometimes show a striking similarity to the early Mesopotamian female figurines, made of alabaster.⁵³ Most of these derive from Tell es-Sawwan in northern Iraq, where they were found in tombs. The figurines date to the 6th millennium B.C. and are the earliest representations in stone of human beings in Mesopotamia.

Part of a flat base and wall could derive from a bowl with curved or carinated profile (77-S 063, *Pls.* 220, 245d:3). It was found in LM IIIB:1 20-Pit M in the Rubbish Area Southeast. The fragment could be paralleled by several pieces from similar bowls from the LM IIIB:2 strata.⁵⁴ They are, however, manufactured from dark grey peridotite and not from grey serpentine(?) as the 77-S 063 fragment. All the mentioned vases are survivals of Warren's type 6 and probably of MM I date. The bowls with carinated or curved profile and everted rim are one of the most frequent stone vase forms.⁵⁵

78-S 025 (*Pls.* 220, 236c:1) could possibly be a part of the everted flat rim from a lamp or libation table with stepped underside. It is most probably a survival from the MM III-LM I period. It was found *in situ* on the LM IIIB:1 floor in Room D, Building 1.

A very large fragment is part of a straight rim from what is probably a large plain bowl or basin with curved profile and

possibly of MM date (80-S 038, *Pls.* 220, 234a). It was found in the shaft of Room A in Building 1.

A chip of conical shape could possibly come from a base/ pedestal of a lamp (82-S 009, *Pls.* 220, 246b:3). It was found in a LM IIIB:1 deposit in the Courtyard. The chip could be compared to the base of a lamp, made of serpentine, from Kommos,⁵⁶ although the Khania fragment is smaller. The Kommos lamp has a low pedestal, tapering upwards, and was excavated in Greek levels, in Room A2, Temple C. The lamp is of Warren's type 24 and of MM III-LM I date. The Khania chip could perhaps also come from a separate stand, since low lamps were put on stands of clay or stone in LM I.⁵⁷

A very chipped and cracked piece could be the rim fragment from a lamp or table (82-S 014, *Pl.* 247a:6). The surface is probably affected by high temperature. It is most probably a survival of MM III-LM I date. The piece derives from the LM IIIB:1 pit, 19-Pit Q, in the Courtyard.

A fairly large fragment is probably from the body of a plain bowl with curved profile (83-S 006, *Pl.* 233b:16). It was found in the LM IIIB:1 layer with stones above Building 1. A large body fragment, curved in profile and from the LM II/LM IIIA:1 strata offers a good parallel.⁵⁸ It is likewise made of grey peridotite with white and buff veinings. Both fragments have the same thickness, 0.01. Plain bowls with curved profile (Warren's type 6) are survivals and should be dated to the MM period.

The plain and flat-topped lid (84-S 005, *Pl.* 258f:5) has an incut underside, possibly to fit a pyxis. The lid is probably a survival from EM III-MM II. It was found in the LM IIIA:2 pit, 20-Pit L/AJ, in the Rubbish Area Southeast. There is a similar lid from Kommos (lid to a bird's nest bowl) in a LM IIIB context, although the type dates to EM III-MM II.⁵⁹

84-S 077 (*Pls.* 228, 255c:4) is most probably a rim and body fragment of a bird's nest bowl, rather large in size. It was found in the LM IIIA:2 levelling deposit of Space A-D. The piece is possibly a survival from MM I, but it could also be later because of its size. As Warren has shown, the small ones are under 0.05 high, and date to the MM period while the LM ones are few, larger and high-shouldered.⁶⁰ Other bowls of this type – but made of limestone – derive from LM I-LM III contexts and are probably to be dated to the MM

⁴⁵ Schwab 1996, 277, pl. 4.24, nos. 39-42.

⁴⁶ Mercado 1978, 25-26, fig. 15.

⁴⁷ Warren 1981, 95, fig. 8, pl. 203, no. 1830 (H 0.049; Ø 0.143 in serpentine and chlorite).

⁴⁸ Warren 1969, 21.

⁴⁹ 77-S 033 (Vol. V, forthcoming), see Warren 1969, type 6 or 16.

⁵⁰ Cf. also 84-S 022 which is a "fetish" of the same kind (Vol. V, forthcoming).

⁵¹ Evans 1904-05, 8-11, fig. 4.

⁵² Evans 1921-35, II, 346, fig. 198; Rutkowski 1986, 138, fig. 194.

⁵³ *Trésors du musée de Bagdad* 1978, 62-67.

⁵⁴ *GSE* III, 62, pls. 146, 155a:5 (70-S 465), 79, pl. 156b (70-S 735a), 180, pl. 165b:2 (70-S 781).

⁵⁵ Warren 1969, 21-22.

⁵⁶ Schwab 1996, 278, no. 42, pl. 4.24.

⁵⁷ Warren 1969, 50.

⁵⁸ 71-S 025, Vol. V, forthcoming.

⁵⁹ Schwab 1996, 279, no. 55, pl. 4.27.

⁶⁰ Warren 1965, 306, n. 90.

I period. A bird's nest bowl of a high-shouldered, large type in the Khania Museum is reported to have been found in a LM I-III context.⁶¹ The bird's nest bowl is the most common type of Cretan stone vase, according to Warren. Bird's nest bowls were used as offerings in the cemetery of Pseira, but they were also found in the town which indicates that they

were objects of everyday use as well as offerings to the deceased.⁶²

⁶¹ Jantzen 1951, 73 (Mus.no. L 1016).

⁶² Betancourt 1990b, 15-16.

THE OBSIDIAN OF THE LM IIIB:1 AND IIIA:2 PERIODS

by

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The presentation of the LM IIIB:1 and LM IIIA:2 period material from the Kastelli excavations will be treated similarly in terms of context grouping (floor deposits, construction/levelling deposits, pits and accumulated/related deposits) to those already presented in the two previous volumes (*GSE II: LM IIIC* and *GSE III: LM IIIB:2*).¹

RAW MATERIAL AND REDUCTION TECHNIQUES

Thus far LM IIIB:1 and LM IIIA:2 contexts at Kastelli have mainly revealed obsidian pieces and very few flints. Most are of grey opaque (LM IIIB:1: 126/22%, LM IIIA:2: 30/28%) and black opaque material (LM IIIB:1: 358/62%, LM IIIA:2: 61/57%), with the remainder being grey translucent (LM IIIB:1: 35/7%, LM IIIA:2: 5/5%) and black translucent (LM IIIB:1: 60/10%, LM IIIA:2: 10/9%). Six flint fragments have been identified from LM IIIB:1 (73-S 162, 77-S 066, 78-S 028, 80-S 027, 84-S 026, 84-S 034) and a small worn piece of raw material (82-S 012). Three are dark grey in colour, two creamy-buff, and one dark brown. Flint colouring can be quite varied, even from a single source, and chemical or physical analysis might possibly identify the origin.

All the obsidian finds from the LM IIIB:1 and LM IIIA:2 Kastelli deposits originated from Melian quarries,² and, as suggested for the previous LM IIIC and LM IIIB:2 material, the raw or roughly worked obsidian blocks may have been acquired with other commodities. The inhabitants of Kastelli may have collected obsidian directly on procurement expeditions, during occasional trips to Melos, or have obtained it via “down the line” obsidian trade routes from other Cretan sites (i.e. from western sites such as Nopigeia in Kissamos, or Kythera).³ The few flint pieces found in the LM IIIB:1 context must be of local, native provenance.

As emphasized in the previous commentary on the obsidian of the LM IIIC and LM IIIB:2 periods, it should be noted that the LM IIIB:1 and LM IIIA:2 obsidian have also been studied and classified according to morphological and technological features; different flaking stages were considered (from the imported raw material to flaked tertiary products). No micro wear use traces studies were carried out for LM IIIB:1 and LM IIIA:2 obsidian. *Sensu strictu* tools are considered by type and in terms of degree and morphology of retouch.

From the LM IIIB:1 level 579 obsidian pieces were taken (and only 6 flint pieces), whereas from the LM IIIA:2 only 106 obsidians (and no flints) were found.

Most LM IIIB:1 (275/47.66%) fragments were found in accumulated/related deposits (isolated areas, various trench levels, architectural remains). A considerable amount of LM IIIB:1 material (172/29.8%) was found in construction/levelling deposits (associated with rooms – construction levels; room interiors – walls, various rooms and spatial deposits) and also in pits (73/12.65%). 59 fragments (10%) were found in floor associations. As for LM IIIA:2 contexts, most of the obsidian (46/43.3%) was uncovered in the construction/levelling deposits and also in pits (43/40%). Of the rest, 16/15% pieces were found in accumulated/related deposits and only 1/0.9% in a floor deposit (*Table 1a-1b*).

In the Kastelli LM IIIB:1 and LM IIIA:2 contexts (*Table 5a-5b*), the primary products were identified in a few examples (IIIB:1: 21/3.6%, IIIA:2: 5/4.8%), originating from nodule shaping, and corresponding to the initial flaking phase (*Pl. 267a-c*). There is also one small piece of unworked raw material from LM IIIB:1 associations. However, a significant increase in the amount of secondary products was recorded (LM IIIB:1: 47/8.1%, LM IIIA:2: 9/8.6%) in comparison to primary ones. Some of those fragments (chips and waste material) display partial cortex removal and may well be associated with the initial flaking phase. Others (blades, flakes, bladelets), which are tertiary products, correspond well to the later stages of flaking, because the cortex removal process was, on occasion, found to be rudimentary or incomplete (*Pl. 265, 77-OB 117a; Table 5a-5b*).⁴

Evidently it is difficult to clearly distinguish products that have derived from core shaping and those coming from the reduction of the core itself. For this reason, the percentages of

¹ Comparable material from the LM IIIB:1-LM IIIA:2 chipped-stone industry is, for the most part, unpublished. Cf. Torrence 1985, 469-474; Bialor 1986, 707.

² It is remarked that the grey coloured obsidian probably originated from the Adamas or Demenegaki quarries of Melos, and the black/black-translucent variety from the Chondro Vouno quarry. Geroulanos 1986, 310. For raw material cf. Perlès 1990, 4; Moundrea-Agrafioti 1990, 393.

³ Renfrew *et al.* 1965, 241; Perlès 1990, 1; Torrence 1986a, 96; Geroulanos 1986, 310; Renfrew 1972, 166; Torrence 1982, 197; Moundrea-Agrafioti 1990, 393; Kardulias 1992, 434-436.

⁴ The same has been noted at Akrotiri, Moundrea-Agrafioti 1990, 395.

core shaping and core reduction products, represented in *Table 2a-2b*, should be considered as approximations. From the LM IIIB:1 Kastelli context, 40% are considered as resulting from core reduction and 9.7% from core shaping, whereas in the LM IIIA:2 context, 42.5% of the finds are considered as core reduction products, and 11.3% as those of core shaping. In both contexts the percentages of cortical pieces and the by-products of core shaping are not so high as to lead to the conclusion that the working process had taken place *in situ*, inside the settlement area. The raw material may initially have been worked in a remote area of the settlement, or the pre-shaped cores may have been imported.⁵

Only very few blades from the LM IIIB:1 and LM IIIA:2 Kastelli periods reveal very little cortex (1.0%), and the same is true of the bladelets (0.5% in LM IIIB:1. *Table 5a-5b*). Moreover, there is a restricted number of LM IIIB:1-LM IIIA:2 blades, bladelets and flakes with partial cortex removal (LM IIIB:1: 5.3%, LM IIIA:2: 6.8%; *Pl. 269a*). Some of these pieces show peripheral use retouch or spontaneous retouch (LM IIIB:1: 1.0%, LM IIIA:2: 4.7%; *Pl. 263, 70-OB 142*) indicating that these products were used directly as they came from the core, and thus indicating the inherent value of the raw material.⁶ Cortical obsidians are numerous at the Akrotiri settlement (20.9%),⁷ and the percentage of cortical pieces at the Phylakopi Sanctuary and Sector PLa is considerably higher within certain levels or floors (from 57.2% to 74.8%).⁸

LM IIIB:1 and LM IIIA:2 debris, or waste by-products, amounted respectively to 11.1% and 10.5% of the total finds (*Table 1a-1b*). These percentages demonstrate a rather careful flaking process with a low error rate, and indicate real economy in terms of the raw material.⁹ From the nodule-shaping process the finds also included: (a) those polygonal, usually cortical pieces, without butt, classified as amorphous core parts and related to the initial stages of the cortex removal from the raw material (LM IIIB:1: 0.9%, LM IIIA:2: 1.9%. *Table 1a-1b*), and (b) core tablets remaining from the creation or preparation of the core platform (LM IIIB:1: 2/0.3%, LM IIIA:2: 1/1.0%. *Table 2a-2b*).

The morphology of the parallel-sided blades and bladelets (*Table 8a-8b*) suggests the use mainly of pressure flaking in the production of the artefacts. The Kastelli blades and bladelets are usually unretouched, retaining their sharp edges and a distinct cutting ability; they were therefore mostly adapted as cutting implements (*Table 3a-3b. Pl. 269a-c*).¹⁰

Other technical features that are characteristic of the BA chipped-stone industry are crested blades (first, second and third row), corresponding bladelets (LM IIIB:1: 45/7.8% crested blades, 13/2.2% crested bladelets [*Table 2a*] and LM IIIA:2: 7/6.8% crested blades, no fragment of crested bladelet [*Table 2b*] *Pls. 263, 268d, 269a*),¹¹ rejuvenation flakes and chips (*Pls. 264, 268a, 269a*)¹² from the flaking renewal of the pressure platform (LM IIIB:1: 61/10.7% [*Table 2a*] and LM IIIA:2: 15/14.3% [*Table 2b*]). Therefore, a relatively frequent rejuvenation of the pressure platform is well indicated by these percentages, which were also slightly higher than those of Akrotiri (5.8% crested pieces, 4.6% rejuvenation pieces).¹³ Almost corresponding amounts to the total of LM IIIB:1 Kastelli crested pieces were found at Aghia Irini (10%) and

Pseira (3.6% of the primary total).¹⁴ A higher volume of crested pieces was found at Phylakopi (22%),¹⁵ whereas the percentages of crested pieces from other sites are relatively low in comparison to the Kastelli LM IIIB:1 and LM IIIA:2 finds.¹⁶

Cores found in the LM IIIB:1 and LM IIIA:2 contexts at Kastelli were in the final stages of reduction (*Tables 1a-1b, 9a-9b*). The knappers at Kastelli did their best to exhaust the cores entirely before discarding them.¹⁷ There were six exhausted cores in the LM IIIB:1 context (1.0% of the total. *Pls. 263 and 268b, 71-OB 463*), one single exhausted bladelet core (1.0% of the total) in LM IIIA:2 (*Pl. 263, 84-OB 049*), and also one blank that shows elements of a semi-cylindrical blade core (*Pls. 264 and 268a, 77-OB 138a*). The LM IIIB:1-core grouping includes: 1 indeterminate, exhausted blade core; 1 semi-cylindrical blade core (*Pl. 268a, 77-OB 034b*); 2 semi-cylindrical bladelet cores (*Pl. 263, 71-OB 463; Pl. 268a, 73-OB 234*); and 2 flat or tabular bladelet cores with two opposing detachment faces (*Pl. 268a, 77-OB 113d*). Flat (or tabular) and semi-cylindrical cores are frequent finds in BA contexts.¹⁸

In most cases the platform is faceted and, as a result, LM IIIB:1 and LM IIIA:2 Kastelli has a higher percentage of faceted and dihedral butts amongst blades and bladelets compared to other butt types (*Table 7a-7b*). Cores represent just 1.3% of the Akrotiri chipped-stone finds¹⁹ and 1% of the Lerna IV material (EH III). The highest finds are at the LM settlement at Pseira (12.4% of the total).²⁰ There is only one unmodified nodule and only one piece of unworked raw material in the LM IIIB:1 context, and none from LM IIIA:2 Kastelli (*Table 1a-1b; Pls. 263 and 268c, 71-OB 649*). This evidence, in association with the percentages of primary and secondary products, emphasizes the suggestion already put forward that either the Kastelli pre-formed nodules were imports, or that the initial task of shaping the unworked raw material was perhaps undertaken in an area other than that of the investigated settlement.

⁵ Perlès 1990, 4.

⁶ Torrence 1979, 80.

⁷ Moundrea-Agrafioti 1990, 394.

⁸ Torrence 1985, 475, table C1, C2. The economy of use of the raw material itself is, in the main, related to the distance of the site from the point of supply.

⁹ Cf. supra n. 4. As no flotation or sieving procedures were carried out, it was not possible to confirm whether all the obsidian debris or waste products, especially tiny fragments, were collected.

¹⁰ Torrence 1979, 74. For the Messenian sites: Blitzer 1999, 84-87.

¹¹ Torrence 1979, 72; Cherry & Torrence 1984, 20; Van Horn 1980, 488.

¹² Effenterre, H. van 1969, 18-20, pl. 5; Sfériadiès 1975, 25.

¹³ Moundrea-Agrafioti 1990, 396.

¹⁴ Dierckx 1999, 211-212.

¹⁵ Torrence 1979, 72, *ibid.*, 1986b, 92-93.

¹⁶ Cf. "Obsidian workshop" at Malia (K17, L17): Sfériadiès 1975, 25-26; Effenterre, H. van 1969, 17-21, pl. 5: C5581, C5587, C9293, crested, and also some rejuvenation flakes. Kardulias 1992, 427. At Aghios Stephanos obsidian crested blades are represented by 31 pieces (2.6%).

¹⁷ For comparison cf. Torrence 1986b, 81.

¹⁸ The flat tabular core is the most typical in the Aegean Bronze Age. Cf. Van Horn 1980, 489-491; Torrence 1982, 207-211, figs. 15.11, 15.12.

¹⁹ Moundrea-Agrafioti 1990, 396.

²⁰ Runnels 1985, 361, tab. 2. Dierckx 1999, 212. Cf. also for Malia: Effenterre, H. van 1969, 19; Sfériadiès 1975, 24, 28.