

PETER WARREN

EGYPTIAN STONE VESSELS FROM THE CITY OF KNOSSOS:
CONTRIBUTIONS TOWARDS MINOAN ECONOMIC
AND SOCIAL STRUCTURE*

Introduction

By 1969 it was possible to record some 81 Egyptian stone vessels and fragments of the pharaonic period from Crete, of which no fewer than 60 came from Knossos and its environs, not including those from nearby separate centres such as Arkhanes or Katsamba (Warren 1969, 105-14). The great number from Knossos alone is one pointer to the unique international importance of the site in the Aegean Bronze Age. Of the Knossian pieces 16 came from tombs, notably the splendid series from the 'Royal Tomb' at Isopata, 28 from settlement occupation, and 16 were Knossian but without find context. Of those from settlement occupation 3 pieces came from Late Neolithic houses (2 of the 3 being uncertain), 3 from Early Minoan occupation, 8 from unstratified material north-west of the palace (possibly EM-MM I A prepalatial fill removed when the first palace was built), 7 from the palace itself and 8 from the Minoan city (Royal Road excavations 1957-61). The present study is not concerned with chronology, but it may be noted that these vessels were arriving at Knossos from the Early Minoan period onwards¹, the great majority coming during the earlier XVIIIth Dynasty or Late Minoan I - II.

* This article is offered with affection and respect to my friend and distinguished colleague, Stylianos Alexiou, scion of a family at the forefront of Cretan letters and recent history, and whose own researches have so much advanced our knowledge of Cretan culture at every stage, from its earliest foundations through to the glories of the Cretan Renaissance of the 16th and 17th centuries.

1. Warren 1980, 493-4; 1981. We may note here that the total from north-west of the palace (see Fig. 1) includes a new addition, a rim-body fragment of a shallow, open bowl, probably of grey-wacke, identified by me in 1987 among EM III (pre-polychrome Knossian MM I A) pottery from Professor N. Platon's post-War soundings north-west of the palace. The material is under study by Mr A.A.D. Peatfield and I am grateful to him for permission to refer to the piece, housed with the pottery in the Stratigraphical Museum, Knossos. There are 1st Dynasty parallels (Petrie 1937, pls. XVIII 248-9; XX 304-5, 307; El-Khouli 1978, 560-2, Class XVII d-f, shallow bowls with plain, rounded rim pl. 108 nos. 4329, 4331-42) and two or three from Dynasties II-III (El-Khouli 1978, *ibid.*), while the type/material does not extend to the Vth-VIth Dynasties (cf. Bernard 1966-7). For the material see Lucas and Harris 1962, 419-20. The context of the piece at Knossos provides further evidence that Predynastic - Old Kingdom stone vessels were reaching Crete in the Early Minoan, prepalatial period.

TYPES

	Predynastic - Archaic - Old Kingdom							MK/ XVIII	XVIIIth Dyn			Total	%		
	Spheroid bowls	Bowls, open	Bowls, with collar	Bowls, carinated	Jars, cylind.	Jars, piriform	Indiv- iduals	Globular alabs.	Baggy alabs.	Jars	Lids	Indiv- iduals			
Neo. houses below Palace	2				1								3		
Early Min. houses S. of Palace		1			1								2		
Palace, N. W. unstratified	2	4			1		1						8		
Palace	1			1				1	2		1	1	7		
Knossos, no provenance	1	2		4		1	1		5			2	16		
Isopata cemetery	1		1						6			5	13		
Temple tomb							1						1		
Mavro Spelio cemetery									1				1		
Tomb near Temple Tomb												1 Eg.?			
Knossos Strat Excs. 1957/61	1								7				8		
Unexplored Mansion							2	1					3		
Royal Road South 1971/3							1		2		1		4		
Strat. Mus. Excs. 1978/82	2					2	1		11	3	2	1	22		
Knossos total	10	7	1	5	3	3	7	2	34	3	3	11	89	80.9	
Rest of Crete	3		4			1	2	2	6			3	21	19.1	
Crete total	13	7	5	5	3	4	9	4	40	3	3	14	110	100.0	
MATERIALS	DI GA O PR SY	DI GA PR	DI MA PR	DI	AL LI?	BA DI PR	AL C/S DI GR OB O	AL	AL	AL	AL	AL			

AL Alabaster BA Basalt C/S Chlorite or Serpentine DI Diorite GA Gabbro
GR Granite LI Limestone MA Marble O Others OB Obsidian PR Porphyritic rock

Sources: Warren 1969 (type 42 [HM 49, HM 2238], 43); Warren 1981; Evely 1984; Previously unpublished (Royal Road South 1971-3; Palace, north-west; Stratigraphical Museum Site Excavations 1978-82).

Fig. 1 Egyptian Stone Vessels from Crete

Since 1969 three substantial excavations have taken place in the city of Knossos, namely the Unexplored Mansion (Popham 1984), on the south side of the Royal Road (Warren 1972; 1973; 1973-4) and the Stratigraphical Museum site, some 350 metres west of the palace (Warren 1980-1; 1982-3). The Unexplored Mansion yielded at least 3 Egyptian stone vessels or fragments, of which two were fragments apparently of Chephren diorite, the other a globular alabastron of Egyptian alabaster (calcite) converted to a Minoan rhyton with a hole in the base; there was also a Minoan vase, probably a conical rhyton, made of alabaster, and «rhyta and bowls-up to ten vessels», presumably Minoan, of the same material (Evely 1984, 234, 236). The Royal Road South 1971-3 excavations produced 4 Egyptian pieces, 2 being body fragments probably from large alabastrons (71/203, context LM I A and earlier; 72/652, context LM III, ? A), one a domed lid without handle (72/456, context EM II – LM III), all three of alabaster, and the fourth piece a rim fragment of an obsidian vase from an EM II A level (72/524)². This addition of about 7 Egyptian pieces to the previously known Knossian corpus³ is substantial. Now, however, the position is transformed with the recognition of no less than 22 more Egyptian pieces from the Stratigraphical Museum site excavations of 1978-82. The purpose of the present paper is twofold, to publish these new, Stratigraphical Museum site pieces and to discuss possible economic interpretations of the Knossian corpus as a whole. First, the corpus from Crete, including the new material from Knossos, may be set out in a table (Fig. 1).

Egyptian Stone Vessel Fragments from the Stratigraphical Museum Site

All measurements are in centimetres; excavation catalogue number and date of find context are given at the end of each entry.

1. Large spheroid bowl with flat collar (Warren 1969 type 43 A); whole profile pres., quarter to fifth of whole vase; collar not well defined and not undercut; no handle pres.; tool grooves inside. Ht 10.5 Diam. 26.9. Porphyritic rock, a mass of large, irregular black crystals and some white, pinkish and orange brown crystals; for the material Lucas and Harris 1962, 416-7, cf. 408-9; see also under no. 2 below. IInd-IIIrd Dynasties. Cf closely Warren 1969, type 43 A no. 2. For a taller form with similar collar and thick wall see Petrie 1937 pl. XV 168 (IIIrd Dyn.); also 157 (IIIrd

2. In the publication (Warren 1981) the fragment was compared to obsidian bowls of 1st-IIInd Dynasty date. Since the piece, small as it is, appears to flare outwards, better Egyptian parallels are the flaring beaker, which is mainly of 1st Dynasty date, or the chalice, also 1st Dynasty (El-Khouli 1978, 659-66, Class XXVIII c, g, h, l, m, and pls. 119-20 (beakers); 669, Class XXIX c, and pl. 157, no. 5190 [chalice]) or a small pot with flaring collar, made of obsidian and of VIth Dynasty date (Bernard 1966-7, 76 no. 535 and pl. XXIX). Our rim would suit any of these three Egyptian forms, beaker, chalice, collared pot (with an example of the latter actually in obsidian). On the other hand the EM II A date of the Knossian piece requires a pre-VIth Dynasty connexion. Several of the 1st Dynasty pieces are made of rock crystal, as hard to work as obsidian.

3. As well as the bowl described in note 1 there is to be added to the material from the older excavations, included in Fig. 1, a fragment of a cylindrical jar of alabaster, for which see Warren 1981.

- Dyn.). 80/1057. Modern pit. Fig. 2, Pls. 1-2.
2. Body fragment of large spheroid bowl. 7.8 x 6.5. Porphyritic rock, black, pink and white crystals in dark grey matrix; for the material see no. 1 above; the rock is close to Gnoli's «quarzo-diorite» / «granito della Colonna» from Umm Shegilat, Gebel Dokhan (Mons Porphyrites) (Gnoli 1971, 126 and fig. 108 [colour]). Late Predynastic – early Dynastic. Cf Warren 1969, type 43 A no. 1; also no. 1 above. 78/205. LM III A-C. Fig. 2, Pl. 3 left.
 3. Rolled rim fragment, the angle of the shoulder suggesting a jar rather than a bowl; the form could be El-Khouli 1978, class III J, pl. 75 nos. 1725-7; the material indicates a IIIrd-VIth (probably IIIrd-IVth) Dynasty date. Diam. external approx. 8.0. Diorite (Chephren), pale grey with black mottling; for the material Lucas and Harris 1962, 409. 79/427. Classical-later Hellenistic pit, with residual Minoan. Fig. 2, Pl. 3 centre.
 4. Lid fragment. Diam. approx. 14.0. Diorite (Chephren), blue/grey with black mottling. IIIrd-VIth Dynasty. For the form Petrie 1937, pl. XXIX 648, 656. 79/517. Late LM III. Fig. 2, Pl. 3 right.
 5. Body fragment of large open bowl, smooth inside and out, little curvature on profile. 14.4 x 8.8. Diam towards one end about 11.0. Diorite (Chephren), grey/white with dark grey/black bands in broken lines, plus one broad band. Could be from an open bowl of large size and thickness, like Petrie 1937, pl. XXIII 382 (IIIrd Dyn.). IIIrd-VIth Dynasties (given size, probably early in that period). 82/1710. LM I-II. Fig. 2, Pl. 4.
- 6-16. Body or rim fragments of Egyptian alabaster (for which see Lucas and Harris 1962, 59-61, 406-7), some certainly, all possibly from baggy alabastrons (for which see Petrie 1937, pl. XXIX 659 (XIIth Dyn.); XXXIII 840-2 and XXXIV 869-72 (XVIIIth Dyn.); Hayes 1959, II figs. 35 and 43 (early XVIIIth Dyn. and Hatshepsut); Warren 1969, type 43 I).
6. Body fragment, giving most of the profile, but no rim. Ht pres. 12.6. Diam 12.1 78/145 + 80/1131. LM I (plus some LM II) (78/145) and LM I B (plus some MM III B/LM I A) (80/1131). Almost certainly a vessel in use in the LM I B North House (Warren 1980-1, 79-92). Fig. 2 (angle uncertain). Pl. 5 left and centre.
 7. Rim/neck fragment, flaring, with four horizontal grooves pres. Diam approx. 9.1 Cf. Warren 1969, 112, HM 175 and pl. P 607. 82/1653. LM I-II. Fig. 2. Pl. 6 top, second from right.
 8. Body fragment. 7.3 x 3.2. 82/1636. LM I-II. Pl. 6 top, left.
 9. Body fragment of large vessel. 12.7 x 8.6. Thickness of wall 2.0. 79/444. LM I-II. Pl. 5 right.
 10. Probably shoulder fragment, broken on all edges. 4.0 x 2.7. 81/1918. LM I-II. Fig. 2. Pl. 7.
 11. Body fragment. 5.5. x 2.0. 79/1824. LM II. Pl. 6 top, second from left.
 12. Flat rim fragment. 79/543. LM II.
 13. Body fragment. 5.0 x 1.4. 79/1972. LM III.
 14. Body fragment, strongly curved. Ht pres. approx. 8.3. 80/915. LM III C (probably; context not yet studied). Fig. 3. Pl. 6 lower, right.
 15. Body fragment, straight-sided (and so could also be from a Minoan conical rhyton

- of Egyptian alabaster, as Warren 1969, 85, HM 35 and HM 885, and pls P 465. 466). 9.5 x 4.4. 80/969. Hellenistic with residual Minoan. Pl. 6 lower, centre.
16. Body fragment, straight-sided, from large vessel (seems too thick for Minoan rhyton). 8.0 x 9.2. 82/1669. Roman, with Hellenistic and LM I-III. Fig. 3. Pl. 6 lower, left.
 17. Jar or perhaps alabastron rim-collar fragment; the thickness of the wall suggests this was a large vase, a fragment of the neck only being preserved. Ht pres. 4.6 Diam (rim) 6.7. Not a Minoan shape and could be from the collar of a drop alabastron like Petrie 1937, pl. XXXIV 875-6 (XVIIIth Dyn.), but with inset rim. 80/1184. LM I-III A. Fig. 3. Pl. 8 top, left.
 18. Body-base fragment of large jar; base slightly rounded. Ht pres. 15.9 Diam (base) 12.7. Presumably Egyptian; there are no Minoan vases of this shape in this material. 81/1322. MM III B-LM I and LM II. Fig. 3. Pls. 9-10.
 19. Body-base fragment of small cylindrical jar or pyxis, grooves on body, everted base. Ht pres. 4.0 Diam (base) 5.6. 80/1163. LM I B. Fig. 3. Pl. 8 lower, left.
 20. Rim-neck fragment; it could be from a jug, since at the lower break point of the neck is the beginning of a sharp outturn, perhaps a neck ring. Cf a Second Intermediate Period jug, Egyptian or a Syro-Palestinian imitation, from a Knossian tomb, including the groove round the rim edge (Hutchinson 1956, 68, 73 and fig. 2, 18 and pl. 7 e. Warren 1969, 113, HM 2403, and pl. P 623). The shape of our fragment is not Minoan, the nearest Cretan form being the pulley-shaped neck of some rhyta, eg Warren 1969, pls. P 480-1; but these Minoan necks are symmetrical, the outer edge of the neck ring lying directly below the outer edge of the rim. The present fragment has a much wider rim, like the jug HM 2403. Ht pres. 5.9 Diam approx. 10.3. 81/1381. MM III B-LM I (with a very little LM II), a context contemporary with the Second Intermediate Period. Fig. 3. Pl. 6 top, right.
 21. Lid fragment. For the shape cf. no. 4 above. Length of frag. 4.9 Diam of lid approx. 11.0. 80/1804. MM III B/LM I A.
 22. Lid fragment, incut underside to fit rim. Length of frag. 5.5. Diam of lid 7.0. 79/372. LM I, with a little MM III B/LM I A and LM II. Fig. 3. Pl. 8 lower, right.

In addition to these 22 Egyptian pieces 4 Minoan fragments show connexion with Egypt: 79/375, probably a spout fragment, made of Egyptian alabaster, Pl. 8 top, right; and 3 fragments imitating Egyptian spheroid bowls with roll handles on the shoulder (Warren 1969, type 30 A, following the Egyptian form, Warren 1969, type 43 A [cf nos. 1-2 above]): 80/1162, no collar, but with solid roll handles (one preserved) on the shoulder, of white marble (probably Cycladic), LM I B, cf Warren 1969, 75, HM 2625 and pls. D 224 and P 402, Fig. 3. Pl. 11; 82/1736, body fragment, gabbro (Warren 1969, 131-2), LM I B; 82/1779, with small collar, mottled limestone, MM III B/LM I A, Fig. 3. Pl. 12. The roll handle preserved on 80/1162 strengthens the case for this class, Warren 1969, type 30 A, as imitating the Egyptian bowl type.

Discussion

First, the limitations of the Stratigraphical Museum site material must be noticed.

All are fragments of vessels, and had thus gone out of use as whole vessels by the time of their context. As fragments they have very little chronological value, except for providing a *terminus ante quem* for the existence and use of the whole vessel. Four are from post-Minoan contexts. However, 12 out of 17 of the alabaster pieces are from MM III B – LM II contexts and this number probably reflects importation of the vessels during their contemporary Egyptian *floruit*, that is during the earlier XVIIIth Dynasty. One alabastron, no. 6, has just enough preserved and is from a clear enough context, the LM I B destruction fill of the North House, to suggest the whole vessel was in use in the building. Otherwise, again because the pieces are fragments, their find contexts (as distinct from context dates) are of no value for the original use of the vessels.

The material does, however, have positive value. First, there are quantitative implications for the city of Knossos as a whole. The research design of the Stratigraphical Museum site excavations was to treat the site as a random plot or sample of the city. Within this framework the recognition of no fewer than 22 Egyptian pieces from such a miniscule area (approx. 700 m² excavated, which is approximately 0.09% of the city area in MM III – LM I [Warren 1984, 40]) implies an originally very large number of Egyptian imports at Knossos⁴. The smaller numbers of such imports from the 1957-61 Knossos Stratigraphic Excavations (primarily on the Royal Road), the 1971-3 Royal Road South excavations and the Unexplored Mansion, Fig. 1, warn against any simple extrapolation from the Stratigraphical Museum site total (which on its own would yield 22,000 Egyptian stone vessels for the city as a whole!). But given the numbers of alabaster vessels from all these sites, the total number of Egyptian imports at Knossos in MM III – LM II may well have reached several thousands and cannot have been less than many hundreds, distributed throughout the city. This access to foreign products immediately suggests a high level of prosperity generally throughout the city, a situation or scale unparalleled elsewhere in Crete.

Do these actual or hypothetical numbers provide economic or social information? A first point is that they suggest direct trade, Egypt ↔ Crete, since there do not appear to be such numbers of Egyptian vessels at any Levantine site. Given the natural currents and indirect route from Egypt to Crete, via the Levant and Cyprus, it would be worthwhile for this apparent evidence of direct trade to be proved wrong.

The quantities and distribution of Egyptian stone vessels within the Knossos area lead to fundamental general questions. Who controlled the Knossian economy, how was it organized or what was its structure? A subsidiary problem is that, on the assumption of Mycenaean political control of Knossos from LM II to III A, these questions need to be posed separately for the (Minoan) period MM III B – LM I B and for (Mycenaean) LM II – III A.

In relation to these general questions alternative models may be proposed.

1) External trade and/or internal (*intra*-city) distribution or access to imports were

4. Although the site had unique circular platforms (dancing places) in LM III A there is no evidence that it had any special or unique character in MM III – LM I A, nor in LM II. In LM I B the North House (with its children's bones and ritual vessels) had a distinctive function; but Egyptian fragments from LM I-II levels did not come exclusively from this part of the site.

controlled directly by the palace or by palace-controlled merchants (cf. Alexiou 1953-4).

2) External trade and/or internal distribution or access to imports were in the hands of semi-independent or independent merchants/distributors (cf. the *tamkars* of Ugarit, Heltzer 1978, especially 132-5).

3) Individuals traded directly with Egyptian (or other foreign) merchants visiting Crete.

Is any of these models more appropriate than the others for explaining the observed distribution of Egyptian stone vessels and its density?

The argument for palace-controlled or 'royal' trade has been thoroughly put by St. Alexiou (1953-4; 1987. Cf. Kopcke 1987; Wiener 1987). There is the obvious evidence that raw materials, copper ingots, ivory, *lapis Lacedaemonius* for example, were stored in the palaces. With regard to the Egyptian stone vessels, the palace could also have received or controlled access to them – and some were found in the palaces of Knossos and Zakros (see below) –, and then distributed or exchanged them against goods or services. One may say, however, that while this evidence must be accepted, it is also incomplete; the full picture must take account of non-palatial, urban evidence also. The latter evidence is the main focus of the present study, on the details of one class of material. Thus, given the recorded numbers and the consequently almost certain large scale of the original distribution of Egyptian stone vessels *through the city*, the model of complete palatial commercial control seems less appropriate than the second or third models. It seems very unlikely that the population generally would be "paid" for goods or services with Egyptian stone vessels. The third model could explain the extent and scale of the distribution. But there appears to be little or no evidence that Egyptian merchants themselves (whether free or state/ruler-controlled) travelled widely. At least one Ugaritian merchant did travel to Crete (Heltzer 1978, 134, 155), but the numbers of Egyptian vessels in Crete, as apparently distinct from the Near East, suggests in this instance direct trade, without Levantine intermediaries, whatever route taken. Finally, in relation to the third model, it is most unlikely that the Minoan population generally and from throughout the city went themselves to Egypt (or the Levant) to trade. The second model, that of Minoan merchants, independent or semi-independent of the palace (like the Ugaritian *tamkars*), trading with Egypt and being free to distribute or exchange products such as Egyptian stone vessels generally throughout the city population of Knossos, seems the more appropriate for explaining the known distribution and numbers of vessels. Whether distribution was to or exchange was with persons or groups of differential status within the general population seems, on present evidence, untestable, though it should be an aim of future analysis. What these city recipients, of whatever status, gave to merchants in exchange for products such as Egyptian stone vessels is an interesting question. Services, on ships, in warehouses or in transportation of materials, or manufactured products seem at least as likely as agricultural produce.

External trade and internal disposal of goods could each have been in separate hands. But such division *within* the economic structure and organization of the merchant groups does not weaken the more appropriate applicability, in the present case, of an autonomous or semi-autonomous merchant model. Such a separation of economic

power merely divides the merchant class itself. An autonomous or semi-autonomous merchant class as a whole remains suggestive for the distribution of our products, as perhaps for others in Crete (Warren 1985, 101). Which of the two, autonomous or semi-autonomous, remains a question for further investigation or testing against more sophisticated hypotheses. As far as the Near Eastern comparative evidence has a bearing on this point, the total economic picture is in fact remarkably varied. St. Alexiou presents the palatial evidence, which is strong. Foster's recent survey (1987) shows that there were also strong elements of private and "semi-free" merchant groups, especially in the Early and Middle Bronze Age, and the Ugaritian evidence has been cited above. We may therefore have an open mind about the Minoan case. I agree that it would be surprising if Minoan merchants operated in total independence of palace authority. One positive indication of some degree of dependence is that Egyptian alabaster, like other fine foreign stones, came to Knossos in the form of raw material as well as vessels (Warren 1969, 125-6, 160, 186, 190). Although it was being worked on part of the town site (Royal Road), at least some production was for Minoan vessels used in the palace's Central Treasury (in the last, Mycenaean period, though the vessels were probably made in MM III-LM I) (Warren 1969, 85, 90, 91 and pls. P 465, P 466, P 493). This indicates at least partial control of the material, and thus of the providers of it, by the palace⁵. When, however, the total Knossian evidence, palatial and urban, is examined a semi-independent (rather than a wholly dependent or wholly independent) status is suggested.

This paper does not discuss in detail the possible *forms* in which the trade was conducted (directional, 'tramping', down-the-line, prestige gift exchange, for example). It would seem, however, that the numbers and distribution of the Egyptian stone vessels rule out prestige gift exchange, while the presence in Knossos of such numbers and their apparent absence on this scale elsewhere outside Egypt appear most unlikely correlates of 'tramping' or down-the-line trade. The material in fact looks very compatible with directional exchange. The latter mode is, however, a quite separate matter from that of control and organization of the directionality.

Finally, we may return to the relationship of our material to periods of different palatial authority or political control. We may say 1) that there are enough pre-LM II contexts among the stone vessels to allow the semi-free merchant model to stand for the Minoan period; 2) that for LM II-III A the position is less clear. If the Isopata tomb was royal (which may be doubted, given its distance from the palace) it would support a model of palace control of Egyptian material. On the other hand those buried with one or more Egyptian vases in the Katsamba and Arkhanes tombs, or in that near the

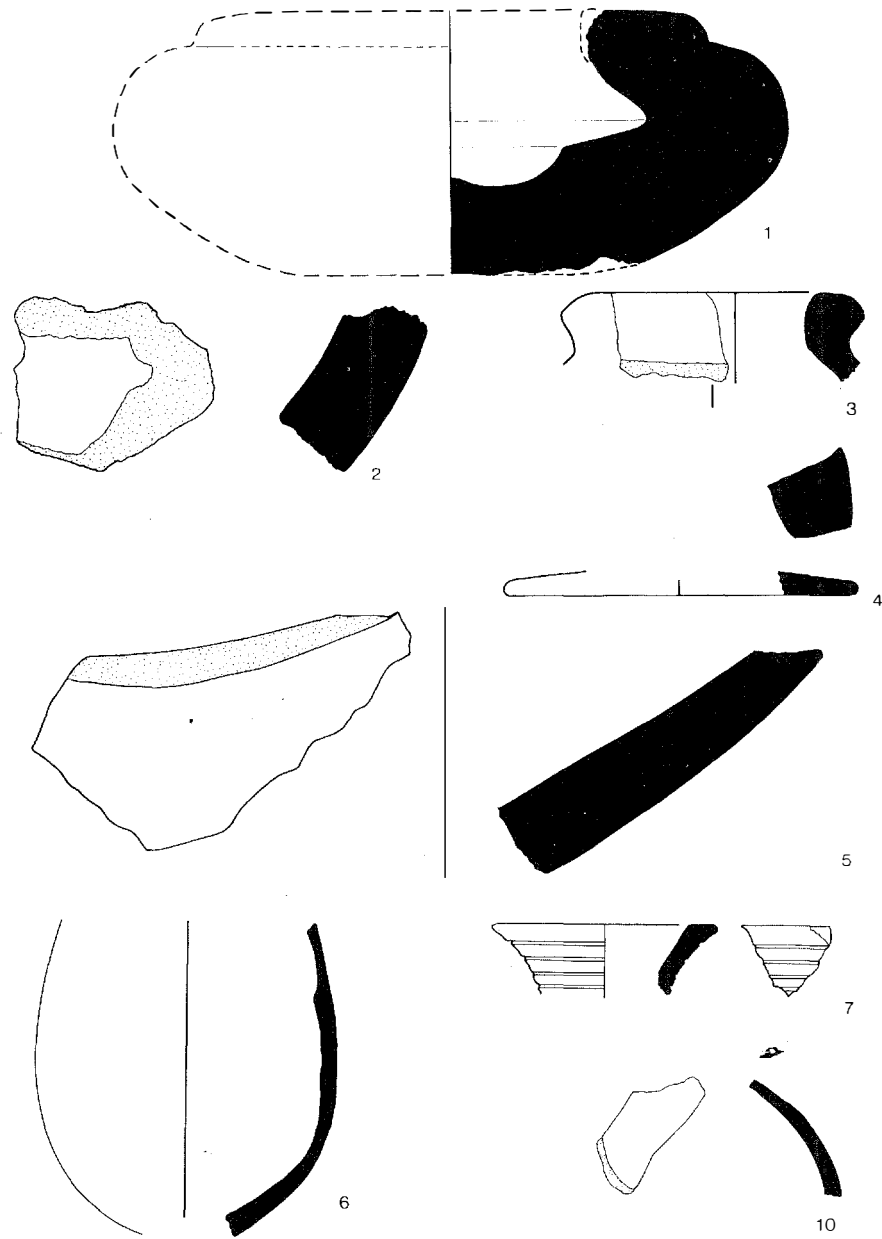
5. No 18 in the Catalogue above provides further evidence. One vertical edge of this piece is not broken, but *sawn* (as Ms Jacke Phillips kindly emphasizes to me). It may therefore have been the case that *cut-up* Egyptian stone vessels were being imported into Crete as scrap material (cf metalwork in the Gelidonya wreck) for Minoan working, along with raw alabaster itself. Alternatively the vessel, no. 18, could have broken in Crete and its fragments reused. The find-place was a disturbed gypsum slab floor in the LM II Gypsum House (Warren 1982-3, figs. 2-3). Working of Egyptian alabaster at this distance from the palace suggests at least some independence from the palace in the control of the imported material.

Temple Tomb at Knossos were surely not the ruling authorities of the palace. The fragments in the LM II Unexplored Mansion also suggest a non-palatial distribution in the city in the Mycenaean period. The Stratigraphical Museum site post-LM I B contexts, with fragmentary pieces, are insufficient to demonstrate widespread city use of Egyptian vases in LM II-III A, though they do not exclude such usage. Therefore, a semi-autonomous merchant class in the period of Mycenaean control remains undemonstrated, though there are pointers to its existence.

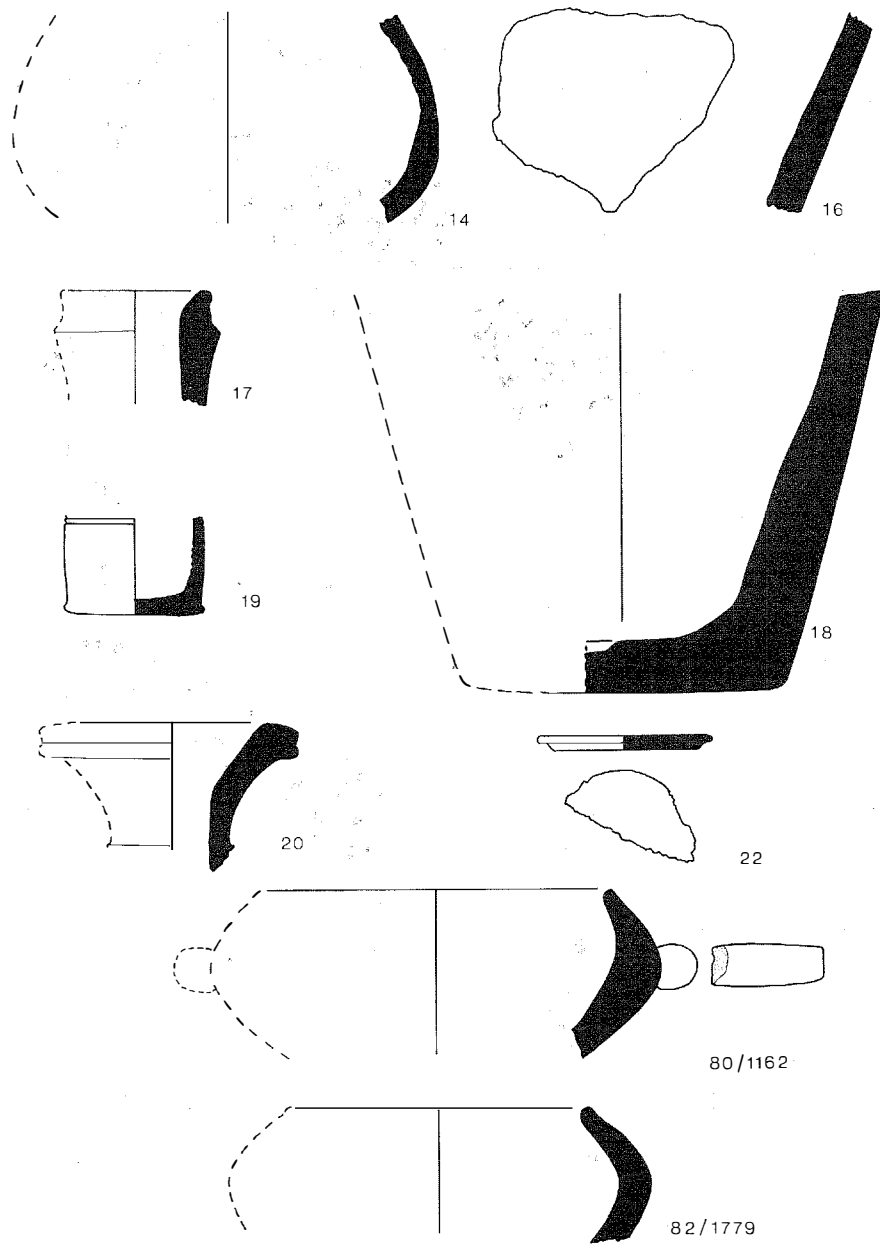
REFERENCES

- Alexiou, St. 1953-4: Ζητήματα του προϊστορικού βίου. Κρητομυκηναϊκόν εμπόριον. *Ἀρχ. Ἐφ.* (published 1961) 135-45.
 — 1987: Minoan palaces as centres of trade and manufacture, in R. Hägg and N. Marinatos (eds), *The Function of the Minoan Palaces* (Stockholm) 251-3.
- Bernard, M. 1966-7: *Les vases en pierre de l'Ancien Empire (Ve et VIe Dynasties)* (Louvain).
- El-Khouli, A. 1978: *Egyptian Stone Vessels. Predynastic Period to Dynasty III* (Mainz am Rhein).
- Evely, D. 1984: The other finds of stone, clay, ivory, faience, lead etc., in Popham 1984, 223-59.
- Foster, B. R. 1987: The Late Bronze Age palace economy: a view from the East, in R. Hägg and N. Marinatos (eds), *The Function of the Minoan Palaces* (Stockholm) 11-16.
- Gnoli, R. 1971: *Marmora Romana* (Rome).
- Hayes, W.C. 1959: *The Scepter of Egypt II* (Cambridge, Mass.).
- Heltzer, M. 1978: *Goods, Prices and the Organization of Trade in Ugarit* (Wiesbaden).
- Hutchinson, R.W. 1956: A Late Minoan tomb at Knossos, *BSA* 51, 68-73.
- Kopcke, G. 1987: The Cretan palaces and trade, in R. Hägg and N. Marinatos (eds), *The Function of the Minoan Palaces* (Stockholm) 255-60.
- Lucas A. and Harris, J.R. 1962: *Ancient Egyptian Materials and Industries* 4th ed. (London).
- Petrie, W.M.F. 1937: *Stone and Metal Vases* (in *Funeral Furniture and Stone Vases*) (London).
- Popham, M.R. 1984: *The Minoan Unexplored Mansion at Knossos* (London).
- Warren, P.M. 1969: *Minoan Stone Vases* (Cambridge).
 — 1972: Knossos. Royal Road South excavations, *Ἀρχ. Δελτ.* 27, *Χρονικά* 627-9.
 — 1973: Knossos. Excavation in the area of the Royal Road, *Ἀρχ. Δελτ.* 28, *Χρονικά* 574-6.
 — 1973-4: Knossos 1973. Royal Road excavations and study season, *Ἀρχ. Δελτ.* 29, *Χρονικά* 903-4.
 — 1980: Problems of chronology in Crete and the Aegean in the third and earlier second millennium B.C., *AJA* 84, 487-99.
 — 1980-1: Knossos: Stratigraphical Museum excavations, 1978-1980. Part I, *Archaeological Reports for 1980-81*, 27, 73-92.
 — 1982-3: Knossos: Stratigraphical Museum excavations, 1978-82. Part II, *Archaeological Reports for 1982-83*, 29, 63-87.
 — 1984: The place of Crete in the thalassocracy of Minos, in R. Hägg and N. Marinatos (eds), *The Minoan Thalassocracy: Myth and Reality* (Stockholm) 39-43.
 — 1985: Minoan palaces, *Scientific American* 253, no. 1, 94-103.
- Wiener, M. 1987 Trade and rule in palatial Crete, in R. Hägg and N. Marinatos (eds), *The Function of the Minoan Palaces* (Stockholm) 261-6.

ΠΙΝΑΚΕΣ

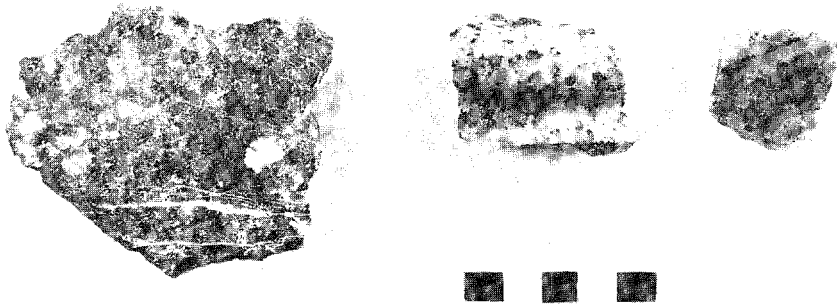


Egyptian stone vases from Knossos, Stratigraphical Museum Site. Cat. nos. 1-7, 10. Scale 1:3

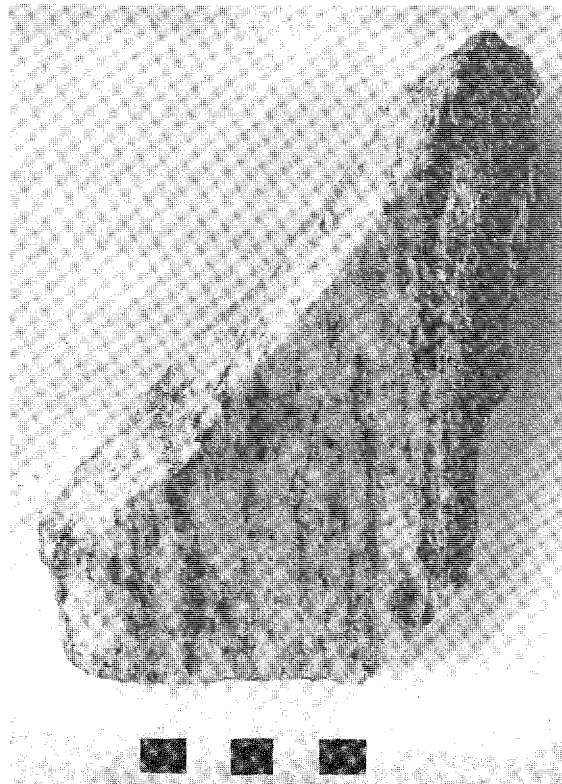


Egyptian stone vases from Knossos, Stratigraphical Museum Site. Cat. nos. 14, 16-20, 22, 80/1162, 82/1779. Scale 1:3

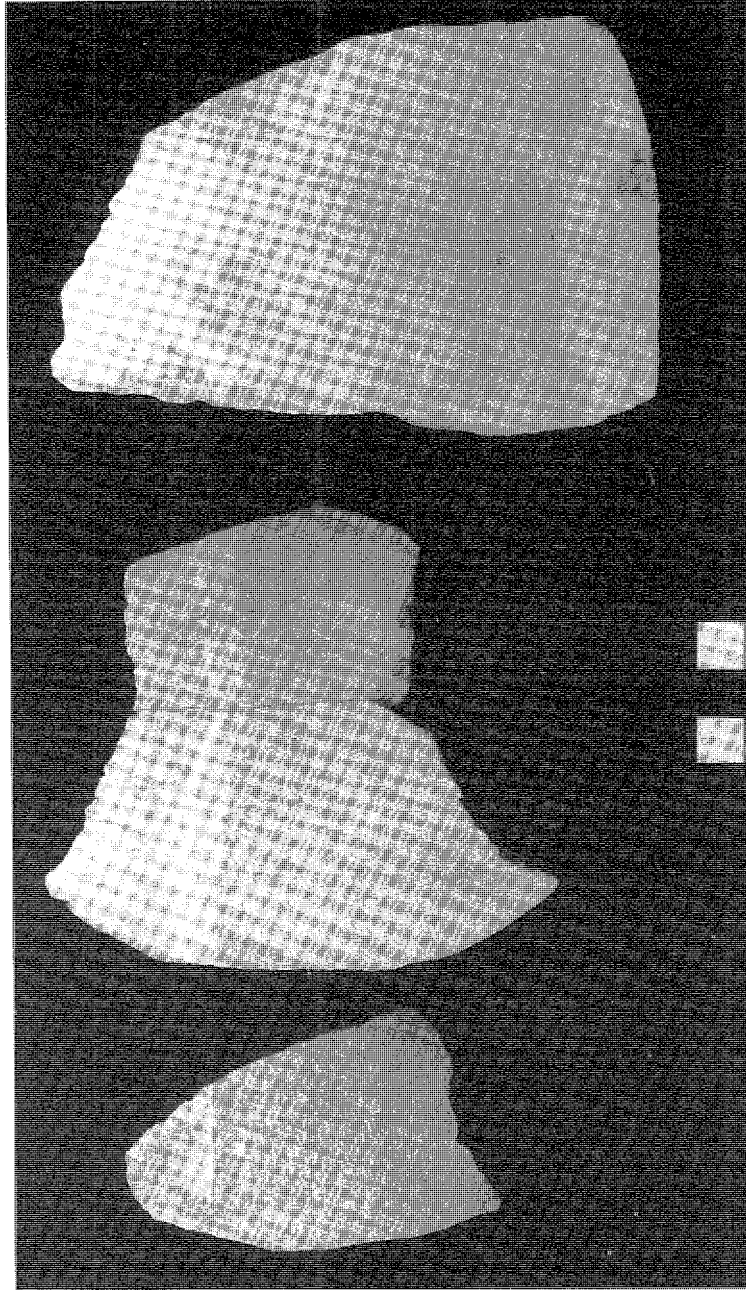




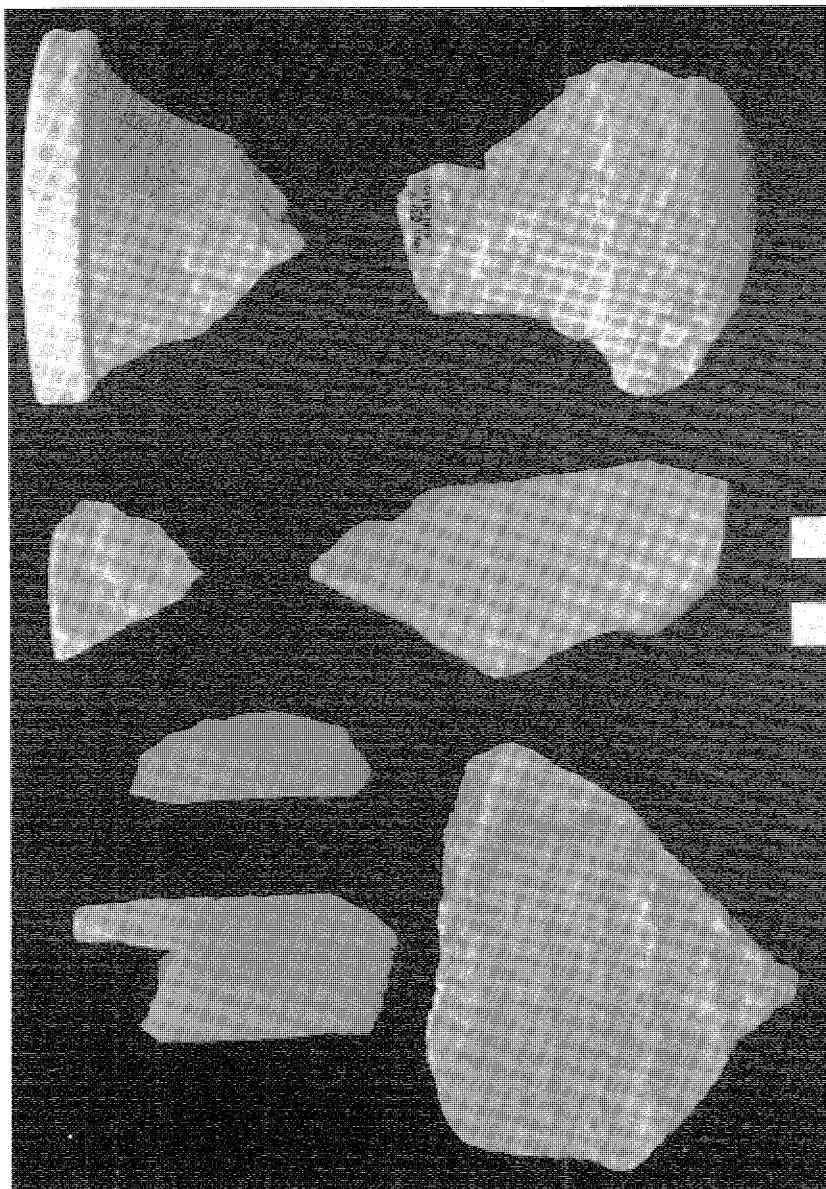
3. Cat. nos. 2 (left), 3 (centre), 4 (right)



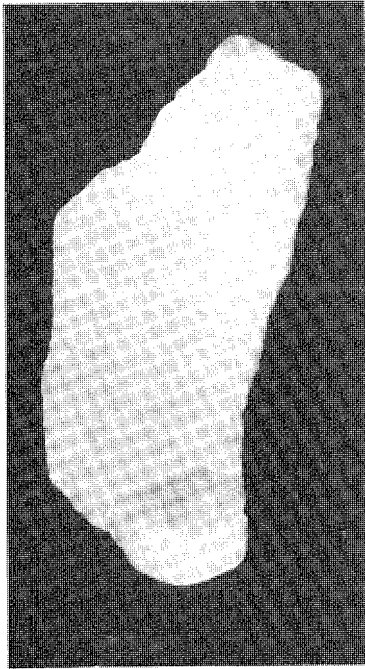
4. Cat. no 5



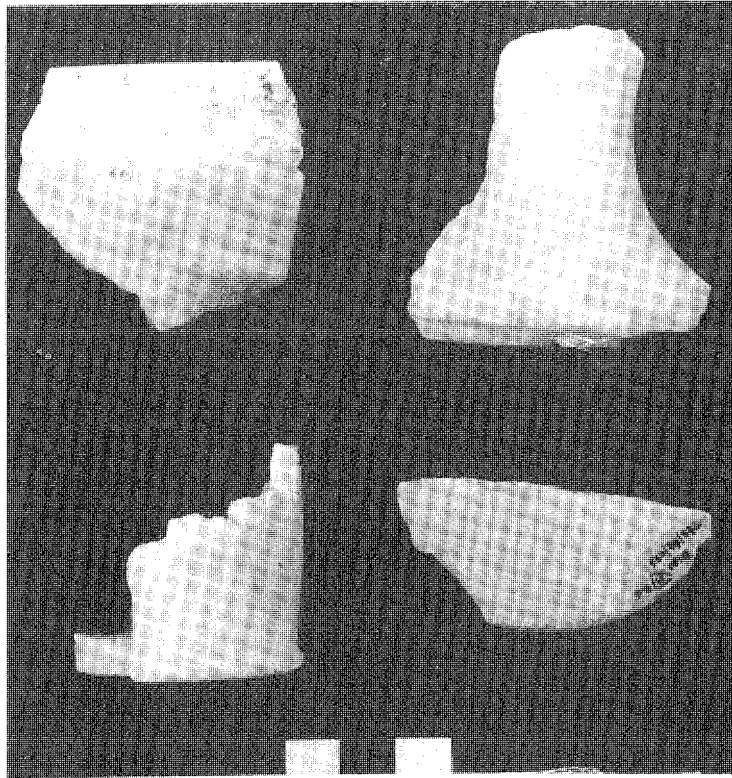
5. Cat. nos. 6 (left and centre), 9 (right)



6. Top: cat. nos. from left, 8, 11, 7, 20. Lower: cat. nos. from left, 16, 15, 14



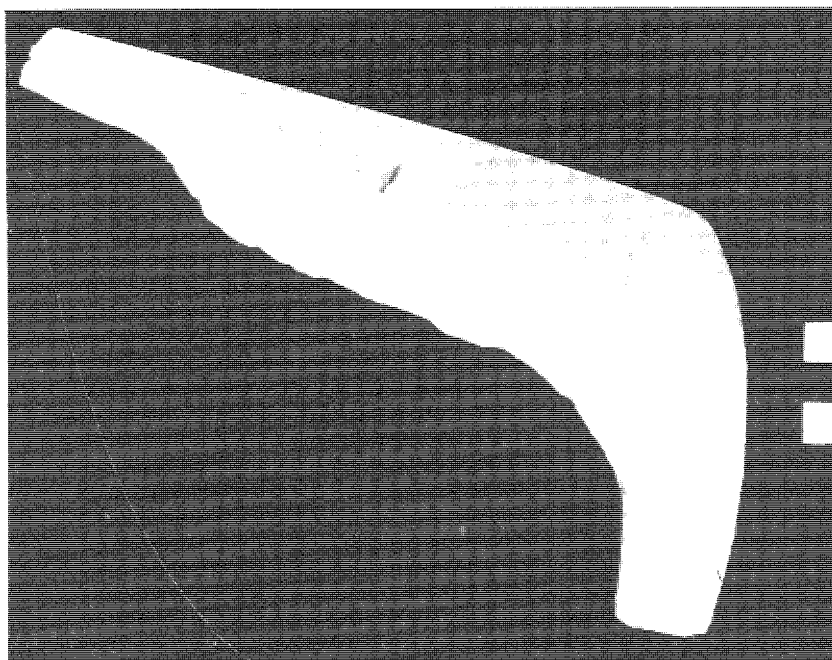
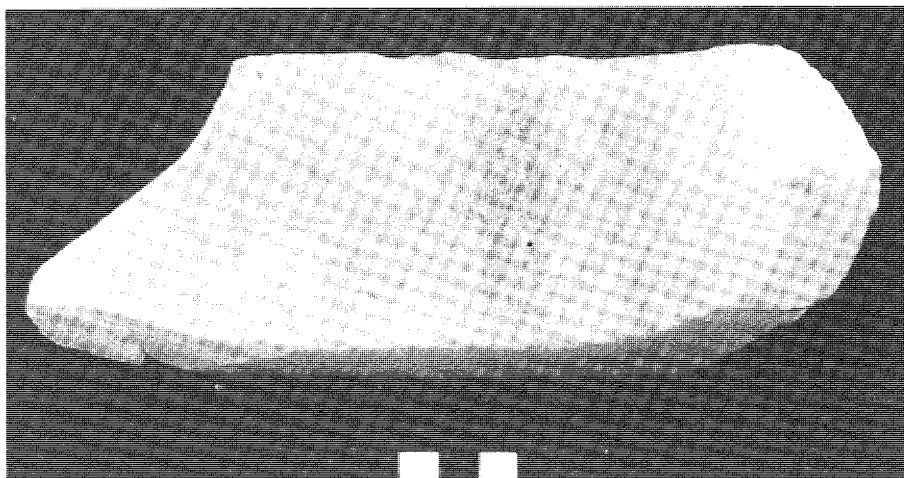
7. Cat. no. 10



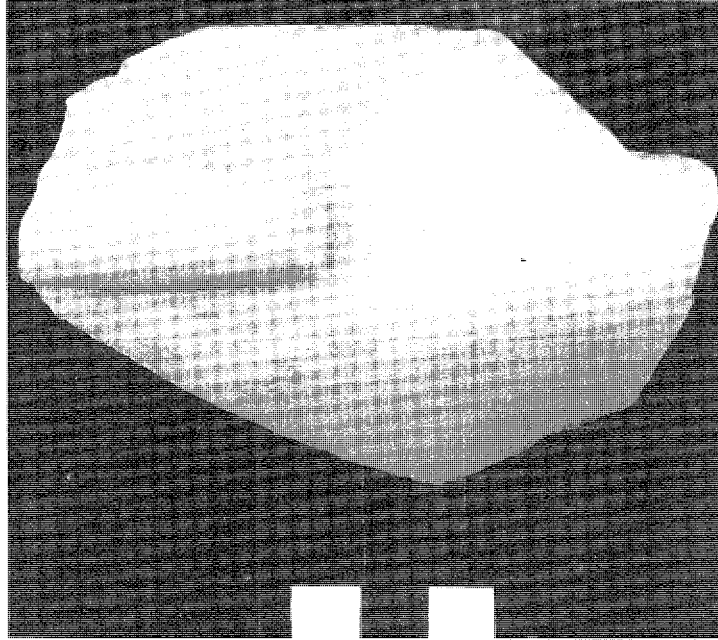
8. Top: cat. nos. 17 (left), 79/375 (right). Lower: cat. nos. 19 (left), 22 (right)

WARREN

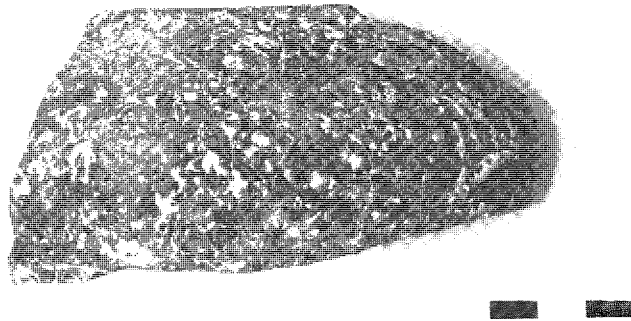
PL. 9-10



9-10. Cat. no. 18



11. 80/1162



12. 82/1779