

PSEIRA AND MINOAN SEA-TRADE

Pseira, an offshore island at the east end of the Gulf of Mirabello in eastern Crete, is the site of a small Bronze Age town ¹. A rocky promontory on the southeast of the island was first inhabited in the Final Neolithic period, and the location became an important small town in Minoan times. It is likely that the small islet's geography played a role on the decision to found the settlement there because the main attraction of the spot is its excellent and protected small harbor. Since the harbor faces southeast, it offers natural protection from storms blowing from the north or west, and in the late summer and fall, when northern winds blow almost every day, it still provides one of the most protected havens along this part of northern Crete.

The excavation of Pseira has revealed a town that expanded during Early Minoan and Middle Minoan times, reaching its greatest size in Late Minoan IB. During this entire period, it must have relied on the sea for many of its supplies; it was surely an important way-station along the east-west coastal trade route that linked the palaces of Knossos and Malia in central Crete with the west, as far away as the Levant.

Ceramic Imports

Of the many imports which can be identified in the archaeological record, pottery is particularly useful. Pseira has yielded fragments of ceramic vessels from many areas, both within Crete and outside the island ². Examples of Cretan wares have been identified from several Minoan sites by the study of their style of decoration and/or the petrographic analysis of their clay fabrics: Knossos (Pl. XXVII, n° PS 785) ³, the Phaistos-Kommos area (Pl. XXVII, n° PS 788) ⁴, Kato Zakros, Petras, and several other sites. As is to be expected, the largest percentage of the imported pottery comes from nearby parts of Crete.

Pottery vessels which originated outside of Crete, surely at least partly imported for their contents, have been recognized from the Cyclades, Cyprus, and the Levant. A few foreign goods from the Cyclades already appear by the Final Neolithic to Early Bronze Age, indicating

1 For the early excavations, see R.B. SEAGER, *Excavations on the Island of Pseira, Crete* (1910). For the recent excavations, see P.P. BETANCOURT and C. DAVARAS, "Ανασκαφική Έρευνα Ψείρας· Περίοδοι 1985 καὶ 1986", *Amaltheia* 68-69 (1986), 183-200; "Excavations at Pseira, 1985 and 1986", *Hesperia* 57 (1988), 207-225; "Excavations at Pseira", *Cretan Studies* 1 (1988), 35-37; "Pseira", *Kretike Estia* 2 (1988), 338-340.

2 Analyses of the clay fabrics by Peter Day, through ceramic petrography, suggest that no pottery at all was made on the island, and that all Pseiran pottery was imported by sea, either from Crete or from farther afield.

3 The sherd is in the Spirals and Arcading Group of the Special Palatial Tradition, discussed by P.P. BETANCOURT, *The History of Minoan Pottery* (1985), 147. Compare S. HOOD, "Archaeology in Greece, 1961-1962, *Archaeological Reports* 1961-1962, fig. 37, from Knossos.

4 Compare P. BETANCOURT, *Kommos II, The Final Neolithic to Middle Minoan III Pottery* (1990), n° 1191, from Kommos.

a strong foreign connection even at the early stages of the settlement's development, but the largest quantity of identifiable foreign pottery comes from later. A noticeable increase in foreign goods appears in LM I, perhaps indicating an increase in foreign trade at the time of the founding of the New Palaces at Knossos and Malia.

Contact with the north is shown by the occurrence of a piece of highly micaceous pottery, probably from the central Cyclades (Pl. XXVII, n° PS 162). The shape of the vessel is not known.

Several sherds come from Cyprus. One piece is a fragment decorated with vertical lines below a horizontal band which is probably from an amphora in White Painted VI ware (Pl. XXVII, n° PS 691)⁵. Some less distinctive Cypriote sherds have also been found (Pl. XXVII, n° PS 718, PS 1165 and PS 1159).

From the Levant come several fragments of a Canaanite transport amphora (Pl. XXVII, n° PS 1158). The vessel is identifiable by its fabric as the product of one of the centers in the eastern Mediterranean, but the vase is too fragmentary for its shape to be recognized (only body sherds have been found).

A leg, a handle, and several body sherds come from a red painted legged flask (Pl. XXVII, n° PS 618). The vase is very important, and it is unique to Crete. The fabric is not Cretan, and its source in the eastern Mediterranean is not known, although it is most likely from somewhere in Cyprus or the Levant. A related shape, of somewhat later date, is known from Ugarit⁶, and the legged flask is also known in Red Lustrous Wheelmade Ware on Cyprus⁷.

Stone Imports

The other imports into Pseira confirm the same pattern suggested by the pottery, suggesting a town that was in constant touch with its overseas neighbors, depending on sea-trade for many of the materials it used on a daily basis. Stones for tool production include obsidian from Melos, a compact sedimentary quartzite for the making of querns (from an unknown source), and many materials that probably come from sites in Crete: hematite, serpentine, red limestone, and sandstone.

The stone vase industry on Pseira seems to have been a thriving activity, and it needed to be supplied with a constant supply of materials, all brought in by sea⁸: serpentine from several sources on Crete; travertine from several Cretan locations, including one near the coast at modern Pacheia Ammos (unpublished), marbles, sandstone, breccias, chlorite, shale, calcite, and red limestone from Crete, and white-spotted obsidian from the island of Ghyali⁹.

Other Imports

Many miscellaneous materials in the archaeological record may be added to this basic list: gold and silver jewelry; quartz crystals (found both as unworked crystals and as a finished pendant); pigments for paint. Copper and tin, or the finished products made of bronze, were imported into Pseira on a regular basis. The local building materials were augmented by

5 Compare P. ÅSTRÖM, *The Swedish Cyprus Expedition Vol. IV. Part 1C. The Late Cypriote Bronze Age. Architecture and Pottery* (1972), fig. 39, n° 4 and 11.

6 C.F.A. SCHAEFFER, *La troisième campagne de fouilles à Ras-Shamra* (1933), pl. II, n° 3.

7 P. DIKAIOS, *Enkomi. Excavations 1948-1958* (1969), pl. 69, n° 4-5.

8 For a discussion of stone sources on Crete, see P. WARREN, *Minoan Stone Vases* (1969), Chapter 3.

9 For the source of the white-spotted obsidian, see H.-G. BUCHHOLZ and E. ALTHAUS, *Nisyros-Giali Kos, Ein Vorbericht über archäologisch-mineralogische Forschungen auf griechischen Inseln* (1982).

sandstone from near modern Mochlos in Crete ¹⁰ and by wood from unknown sources (both pine and oak are attested in the archaeological record ¹¹, and it is uncertain if they came from Pseira itself or from nearby parts of Crete).

In addition, there must have been many necessities which leave no archaeological trace. Food and water must surely have been at least partly imported across the small channel separating Pseira from Crete, especially if one considers that the merchants and sailors who stopped at the port would need to be supplied with provisions for the continuation of their voyage.

Conclusions

The conclusion that Pseira was a trading station seems to be one of the few explanations for a wealthy harbor-town set on an island with little arable land, no mineral wealth, and few attractions other than the harbor itself and the beauty of the rugged landscape. The visible imports into Pseira indicate farflung trading connections, but they indicate much closer ties with the coastal communities of Crete itself. Whatever the role of long-distance trade, it is likely that the sea was an even more important avenue for local traffic, providing easy access from one spot to another in spite of mountainous landscapes that made the land transport of heavy goods difficult.

The evidence from Pseira suggest that one must imagine a Minoan World in which travel by sea was routine. Products of all types were probably carried by sea not because it was special but because it offered the easiest method of conveyance in a time when travel by land was slower and more difficult.

In addition, one may note that the main period of Pseiran foreign trade, especially with the Eastern Mediterranean, seems to have been in LM I. This is important if one compares the main period of Pseiran trade with nearby Mochlos, a town whose greatest period of prosperity seems to have been in Early Minoan and Middle Minoan ¹². Can one suggest that the change is not coincidence, and that unknown factors, probably political or economic, resulted in a change in the trade patterns of this part of eastern Crete at the beginning of the second palace period? Certainly this period witnessed an expansion in the role played by Pseira, with a greater exploitation of its strategic placement astride the east-west trade route along coast of Minoan Crete.

Philip P. BETANCOURT and Eleni S. BANOU

10 For the nearest quarry producing this type of sandstone, see J. SOLES, "A Bronze Age quarry in eastern Crete", *Journal of Field Archaeology* 10 (1983), 33-46.

11 The identification of woods from the charcoal remains has been done by Werner H. Schoch, at the Labor für Quartaere Hoelzer, in Adliswil, Switzerland.

12 See the paper by Keith Branigan, *supra* 97-105.

Catalogue of Pottery Illustrated in Pl. XXVII

From Knossos:

- PS 785:** (from Building AD Center, Space AD 6a). Body sherd from a closed vessel. Maximum dimension 6 cm. Spirals and arcading motif.

From the Phaistos-Kommos area:

- PS 788:** (from Building AD Center, Space AD 6a). Body sherd from an open vessel, either a cup or a bowl. Maximum dimension 3,8 cm. Stamped running spirals; dark painted on interior and exterior; added red bands below the spirals.

From Cyprus or the Levant:

- PS 618:** (from Building AD Center, from debris from the collapse of the building, found in the road west of the building). Leg, handle, and many body sherds from a flask with legs. Restored ht. ca. 35 cm. Lens-shaped section. Traces of red paint on the worn surface (possibly Red Lustrous Ware ?).

From the Syro-Palestinian area:

- PS 1158:** (from Building AD Center, Space AD 6). Body sherds from a closed vessel, probably a transport amphora of the type called a "Canaanite jar". Maximum dimension of largest sherd 5,5 cm.

From Cyprus:

- PS 718:** (from Building AD Center, from debris from the collapse of the building, found in the road west of the building). Diameter of base ca. 10-12cm. Base sherd from a closed vessel. Pale colored slip on exterior (White Plain Ware).
- PS 1165:** (from Building AD Center, from Space AD 6). Body sherd from a closed vessel. Maximum dimension 6.0. Pale colored slip on exterior (White Plain Ware).
- PS 691:** (from Building AD Center, from Space AD 6). Body sherd from a closed vessel. Maximum dimension 5.8 cm. Pale colored slip on exterior (White Painted Ware). Vertical bands and a horizontal band.
- PS 1159:** (from Building AD Center, from Space AD 6). Body sherd from a closed vessel. Maximum dimension 4.5 cm. Pale colored slip on exterior (White Plain Ware).

From the Cyclades:

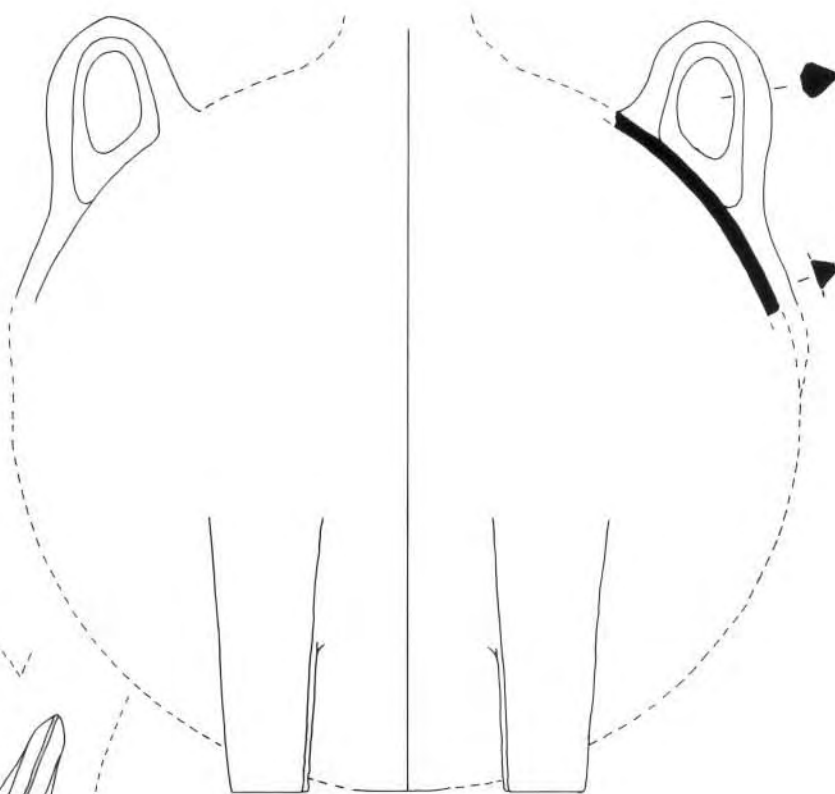
- PS 1162:** (from Building AD Center, Space AD 6a). Body sherd from a closed vessel. Maximum dimension 9.5 cm. A closed vessel, probably a jug or a jar. Identified by the highly micaceous fabric.



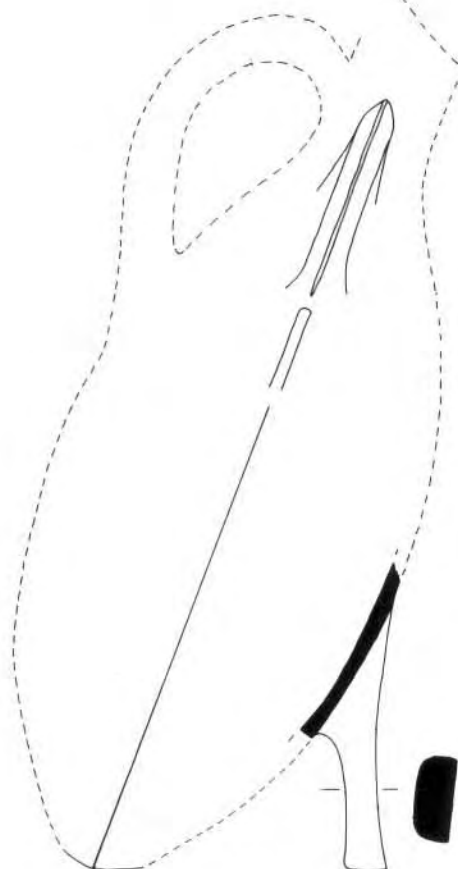
PS 785



PS 788



PS 618



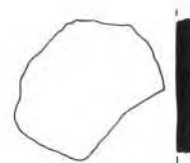
PS 618



PS 1158



PS 718



PS 1165



PS 691



PS 1159



PS 1162