PSEIRA, CRETE:
THE ECONOMIC BASE FOR A BRONZE AGE TOWN

The Minoan settlement of Pseira Island must be understood in regard to two interrelated regions: a closely packed cluster of buildings making a town, and a more open countryside. Both of these parts have been investigated by the Pseira Project [1], and all evidence indicates the two aspects of the island were interdependent. Neither one can be understood in isolation.

In its earliest period in the Final Neolithic, and probably until the end of Middle Minoan, Pseira can best be described as a rural village. In Late Minoan I it expanded in size, becoming a town of over fifty buildings. The presence of a cemetery with several tombs from the very beginning of Pseira's history shows that it was always either a permanent settlement or that it was at least inhabited for many months of the year. The absence of a cemetery from LM I is still unexplained, but one possibility is that the town was reorganized with new settlers who were taken elsewhere (back to their native soil?) to be buried. The location of the village on the island's best harbor suggests seafaring was a factor in the site's location in all periods of its history.

The village was laid out to occupy the entire peninsula (Pl. XXII). A Town Square (like the Plateia in modern Cretan villages) seems to have been present as an open space from the beginning. The buildings were arranged in irregular blocks following the topography of the land [2]. Houses varied from small structures with only a few rooms to large buildings with over thirty interior spaces. A large staircase led up into the village from the small Pseiran beach, terminating near the southwest corner of the Plateia. Ships could either have anchored in the harbor, or they could have been drawn up on the beach.

We know very little of the early centuries of Pseira because of the local practice of building in stone rather than mudbrick. New constructions were made by re-using the materials of older, ruined or outmoded structures, and new foundations were often laid on bedrock after removing earlier walls. The town was expanded in LM I, and it spread to the other side of the harbor. The visible settlement is mostly from the end of LM IB when it was destroyed and abandoned. Only a small part of the town was resettled in LM III, so that most Pseiran houses were left undisturbed after the town was destroyed.

The economy of LM IB Pseira can be reconstructed in some detail. In its final period, the town consisted of a series of irregular blocks of buildings separated by narrow streets, with each building having several rooms. Most buildings seem to have been houses, but other functions can be identified as well. The Plateia, near the center of the community, must have been the economic, social, and psychological center as well as the architectural focal point. The largest building in the town, the Plateia House, occupied the entire northern side of the square. Its impressive stone facade facing south and its elaborate entrance portico suggest it might have been the home of the town's ruler. At the entrance,

---

1 For the excavation, see P.P. BETANCOURT and C. DAVARAS, "Excavations at Pseira, 1985 and 1986", *Hesperia* 57 (1988), 207-225; "Excavations at Pseira", *Cretan Studies* 1 (1988), 35-37; " Ἀρχαιολογικές ἔρευνες στὴν Ψείρα· Περίοδοι 1987-1989", *Ἀμάλθεια* 82-85 (1990), 20-37.

2 For architectural study the writer is indebted to the researches of John McEnroe.

a covered portico provided an L-shaped bench for visitors awaiting access to the building. Inside, a stair led to a second story, many rooms of which were paved with stone slabs. The building included a cult area, rooms for domestic and industrial functions, and painted frescoes, unfortunately too poorly preserved to do anything except record that they were present.

The subsistence base of the town must have been agriculture [3]. An extensive use of very poor land on the island suggests the residents of Pseira had limited or no access to the much better land directly across the strait on Crete (for example, at Tholos on the coast near Kavousi). Finds of barley outnumber wheat in the excavation record, and other organic remains attest to olives and almonds [4]. Sheep or goat bones are the most common animal bones [5]. Every house has remains of cooking vessels as well as evidence for food processing in the form of stone tools, suggesting that food preparation and cooking were daily tasks in all domestic structures [6].

Survey and excavation in the agricultural fields show that considerable farming was done on the island, but that constant work was necessary in order to grow crops on this rocky, steep, marginal land. Stone terraces are spread over all parts of the island where the land was not too steep or too rocky. Some of them are so small they could only have supported a single tree or a very few vines, a testament to the intensive agriculture in LM I.

Survey in the island and excavation in two Minoan agricultural fields preserved behind terrace walls in the hills above the town have revealed details of Minoan farming practices. The excavations showed that sherds and other village debris were buried in the fields all the way to bedrock, indicating tillage of manure and other debris into the soil to enrich it. Two stone dams built across ravines in LM I would have retained water for a few weeks in the spring, furnishing water that could be carried up into the hills to the fields to extend the growing season a few precious weeks each summer. With this intensive agriculture, the residents of Pseira could grow at least a percentage of what they required.

Fishing must have been a common practice. Evidence from Pseira consists both of fish bones and of the implements used in fishing. Bronze hooks and floats made from pumice suggest line fishing. Net fishing is indicated by the presence of substantial numbers of the bones of small fish, especially sea breams (*Sparidae*) and Picarels, that are usually caught in fine-meshed nets [7]. Stone weights, many of which are found at Pseira, would also have been useful in fishing.

Evidence for other activities adds additional information on the economy. Because of the excellence of the harbor, one must consider trade [8]. In Crete, late summer and fall winds usually blow from the north. The advantage of Pseira's harbor is that it faces southeast, toward Crete, so that it is sheltered from most winds in this part of the Mediterranean. Even today, local fishermen use it as a place of refuge. It would have accommodated several ships at a time.

---

3 The survey was supervised by Richard Hope Simpson. For the agricultural conclusions, see P.P. BETANCOURT and R. HOPE SIMPSON, "The Agricultural System of Bronze Age Pseira", *Cretan Studies* 3 (1992), 47-54.

4 Identifications are by Glynis Jones.

5 The faunal remains have been identified by David Reese.

6 For the stone tools see H.M.C. DIERCKX, *Aspects of Minoan Technology, Culture, and Economy: The Bronze Age Stone Industry of Crete* (Ph.D dissertation, University of Pennsylvania, Philadelphia, 1992).

7 Identifications are by Mark Rose.

8 This evidence was first discussed by R.B. SEAGER, *Excavations on the Island of Pseira, Crete* (1910).

The Plateia varies between 11.5 and 24.5 m from east to west, and it is ca. 20-24 m on its north-south axis. It seems very large for such a small town. Can it have served as a market? Offshore islands are often the sites of emporia, because they provide easy access to ships from abroad as well as to residents from the nearby land mass. The square was kept open throughout its history.

All pottery found at Pseira was probably imported from somewhere else because the island had no clay, little water, and probably limited fuel. Nearby parts of Crete furnished most of the ceramics, but pottery is also known from Knossos, from the Mesara, from Zakros, and from other places [9]. Foreign imports come from the Cyclades, from Cyprus, and from Syria or Palestine. Foreign stones for tools and stone-working have also been identified. From Crete come serpentinite, several colors of marble, breccia, travertine, amphibolite, calcite, hematite, porphyry, sandstone, and several types of limestone. From farther away come emery from the eastern Cyclades, translucent dark obsidian from Melos, and white-spotted obsidian from the island of Ghyali.

Other finds from Pseira suggest trade as well. A lead weight, found in the road at the northwest edge of the Plateia, belongs to a well-known Cretan type. Other metal objects include a gold band, copper or bronze tools, and metal vessels. Surely none of them were made on Pseira. Stone vases, like an example in a schist that is most common in the Mesara, were also imported [10]. The importation of commodities into Pseira must have been routine, as one would expect from a town on an island.

What did the Pseirans have to offer foreigners in exchange for these goods? Surely the most important item was access to the port and its facilities. Ships travelling east-west along the northern coast of Crete needed places to stop where there was a comfortable house, a hot meal, and a place to sleep, and where their ship was anchored in a safe location if a wind came up suddenly [11]. With a storm, a ship might have to stop for several days at a time. The town of Pseira, with over fifty buildings, must have had plenty of empty rooms to serve as lodging.

As a final augment to the local economy, abundant evidence survives for light manufacturing and craftwork. Evidence for stone vase making includes pieces of raw material, serpentinite cores formed inside the drill in the process of drilling out the interiors of vases, drill holders used as wedges to hold the drill upright during drilling, and many finished pieces [12]. Some of the finished vases from Pseira are remarkably attractive. Other local productions probably made cups from triton shells, beads and pendants from quartz crystals, woven goods, and obsidian tools. One of the workshops for obsidian was in a tiny building that fronted on the Plateia. It was active in LM I, producing blades of the type found at many Minoan sites. Most of the evidence from the workshops consists of the waste material thrown away during the manufacturing process.

---

9 P.P. BETANCOURT and E.S. BANOU, "Pseira and Minoan Sea-Trade", in R. LAFFINEUR and L. BASCH eds., *Thalassa. L'Egée préhistorique et la mer. Actes de la troisième Rencontre égéenne internationale de l'Université de Liège, Station de recherches sous-marines et océanographiques (StaReSO), Calvi, Corse (23-25 avril 1990), Aegaeum* 7 (1991), 107-110.

10 P.P. BETANCOURT, *Minoan Objects Excavated from Vasilike, Pseira, Sphoungaras, Priniatikos Pyrgos, and Other Sites* (1983), no. 82.

11 P.P. BETANCOURT and C. DAVARAS, "Haven for Minoan Mariners", *Archaeology* 44 (1991), 32-35.

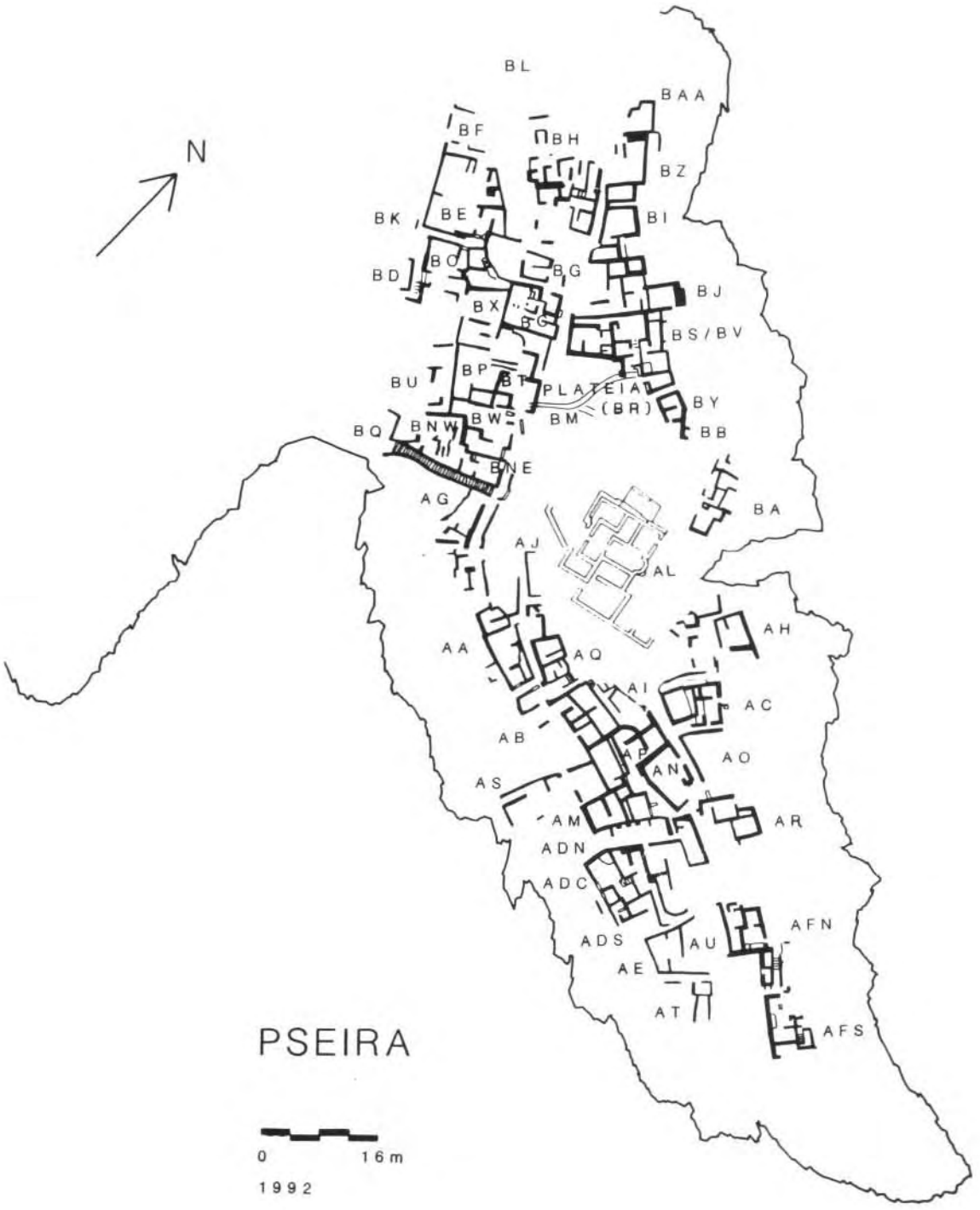
12 Evidence for local manufacture of stone vessels is reviewed in P.P. BETANCOURT, "The Stone Vessels of Pseira", *Expedition* 32:3 (1991), 15-19.

In summary, Pseira must have had a mixed economy. Agriculture, fishing, trade, and small-scale manufacturing would have made the island fairly self-sufficient. That it was successful is shown by the quality of the imported products. Although Pseirans never lived in the luxury of a palatial site, they could at least afford fine pottery made at Knossos, an occasional gold ornament, and fine relief frescoes painted in elaborate detail by some of the best artists that Crete could produce at the time.

Philip P. BETANCOURT

ILLUSTRATION

Pl. XXII Pseira, general plan of the excavations.


N
BL
BAA
BF
BH
BZ
BK
BE
BI
BD
BO
BG
BJ
BX
BS/BV
BU
BP
BT
PLATEIA
BY
BQ
BNW
BW
BM
(BR)
BB
BNE
AG
BA
AJ
AL
AA
AQ
AH
AI
AC
AB
AP
AN
AO
AS
AM
AR
ADN
ADC
AFN
ADS
AU
AE
AT
AFS
PSEIRA
0
16m
1992