"Of Shoes and Ships and Sealing Wax"

International Trade and the Late Bronze Age Aegean

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"The time has come," the Walrus said,
"To talk of many things:
Of shoes—and ships—and sealing wax—
Of cabbages—and kings..."

Lewis Carroll
Through the Looking Glass

Lewis Carroll, author of Alice in Wonderland and Through the Looking Glass, was no stranger to classical antiquity. It is, however, extremely unlikely that the Walrus, who never finished the above speech, was going to talk about trade and commercial enterprise in the ancient world. If he had, his lecture may have been as follows:

During the years from 1600 to 1100 B.C., the Mediterranean area was host to many small nation-states and a few mighty empires. These years are known as the Late Bronze Age, for the best and most sophisticated weapons and implements were made of the amalgam of copper and tin we call bronze. Living in the western Mediterranean at this time were the peoples of Italy, Sicily, and Sardinia. In the eastern Mediterranean were the Egyptians of the 18th to 20th Dynasties, the Hittites of central Anatolia, the Babylonians and Assyrians of Mesopotamia, and the inhabitants of Syria-Palestine. In between, in the area known as the Aegean, were the Mycenaean of mainland Greece and the Minoans of Crete (Fig. 2, Table 1).

A complex network of ancient trade routes connected the lands of the Aegean with those of the western and eastern Mediterranean during the Late Bronze Age, despite the fact that the distances involved were enormous and the available transportation limited to ships, animals, and humans. Study of these ancient relationships entails a virtual odyssey back through time and space, but results in some fascinating discoveries.

Our guides to these ancient trade routes are mainly the physical artifacts that have been dug from the lands around the Aegean Sea or found in its waters. Although relatively abundant, these objects must be used with caution. First, they must be assigned accurate dates and proveniences, a task not always possible. Second, they are only a partial record of the goods exchanged more than three millennia ago. Not only are we to some extent dependent upon luck for the things we find, but also many of the goods traded during the Late Bronze Age were perishable and unlikely to leave much in the way of identifi-

![Figure 2. Map of the Aegean and Near East during the Late Bronze Age.](image)

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<td>Cyprus</td>
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<td>Enkomi; Kiton; Maa</td>
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Table 1

Late Bronze Age civilizations in the Aegean, Egypt, and the Near East (according to traditional chronologies).
Late Bronze Age trade and trade routes across the Mediterranean.

The Archaeological Evidence for Trade

Trade between the East and the Aegean during the Late Bronze Age was clearly reciprocal. The best-known guideposts to this commerce are the distinctive Minoan and Mycenaean ceramic vessels which were used to transport oils and perfumes—luxury trade goods. Such vessels have been found in great quantities at archaeological sites in Egypt, Syria-Palestine, Cyprus, and on the coasts of Anatolia. They have been the focus of numerous detailed investigations by scholars (Stubbing 1951; Haskey 1967; Kemp and Merrifield 1980). However, the guideposts which fascinate us the most are objects of Eastern origin which have been found in the Aegean and which are known as "Orientalia" in the parlance of archaeologists who study the Late Bronze Age civilizations of the Mediterranean. Orientalia are small objects manufactured in Egypt and the Near East, including Anatolia, Cyprus, Syria-Palestine and Mesopotamia. We are most interested in Orientalia excavated in Aegean contexts dating to the 16th through the 11th centuries B.C.—the Late Helladic or Late Minoan I-IIIC periods of the Bronze Age (see Table 2).

Orientalia come in many forms: figurines (Fig. 1), amulets, jewelry, scarabs (Fig. 7), seals (Fig. 3), vessels (Fig. 9), weapons, tools, and weights. They are made of a wide variety of materials: gold, silver, bronze, terracotta, lapis-lazuli, faience, alabaster, carnelian, and other stone.

Figure 4 (opposite page). Visitors from the Bronze Age Aegean were depicted in a number of Egyptian tombs from the time of Thutmose III (ca. 1500 B.C.) until the reign of Akhenaten (ca. 1350 B.C.). One such depiction is a wall painting found in the tomb of Menkheperresenib, high priest of Amon during the reign of Thutmose III. Many of the tomb paintings are accompanied by inscriptions which identify the foreigners in question. Terms used to identify people from the Aegean area include Kelit (Crete), Tanaita (mainland Greece), and "The Men of the Midst of the Great Green" (the Cycladic islands). The status of these visitors is debated, due in part to Egyptian propaganda which occasionally portrayed simple commercial merchants as "subservient" bearing tribute to the pharaoh.

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Figures 7A, 8. Some 14 objects with the cartouche (royal name) of Amenophis III (1408-1387 B.C.) or his chief wife Queen Tiye have been found in the Late Bronze Age Agean. Most were found at Mycenae, such as the faience plaque shown here. The others were found at scattered sites, including the scarab which was discovered at Ialysos on Rhodes. It is possible that the 14 objects are to be linked with the "Aegaeus Lid" of Archaic pottery (Fig. 8) and that they are remnants of royal gifts from the pharaoh. Such gifts would include objects of faience, exotic woods, and other items which have since perished.

ISOLOU L. 4 cm; plaque L. 18 cm. Photograph courtesy of the British Museum. (Photograph by B.E. White. The British Museum: excavation at Mycenae.

Table 2

Time Frame (approx.) | Archaeological Designation
---|---
1600-1500 B.C. | Late Helladic/Minoan I
1500-1400 B.C. | Late Helladic/Minoan II
1400-1300 B.C. | Late Helladic/Minoan IIIA
1300-1200 B.C. | Late Helladic/Minoan IIIB
1200-1050 B.C. | Late Helladic/Minoan IIIC

Given the paucity of materials, including alabaster, marble, faience, ceramic, glass, ivory, terracotta, gold, silver, and bronze. They range from ostrich egg and stones to cylinder seals (Fig. 10) and gold pendants. They encompass all politically important pieces such as Egyptian monkey figures inscribed with the royal cartouches of a pharaoh to mere trinkets such as Minoan blue glass pendants for necklaces.

Among the 842 Late Bronze Age objects of Eastern origin found in the Agean area, most come from Syria-Palestine (257) and Egypt (230). Smaller numbers come from Cyprus (174) and Mesopotamia (39), while only 12 objects originated in Anatolia. Another 127 objects are thought to be of Near Eastern origin, but their source cannot be defined precisely. The last were found either on the Ulu Burun (Kaş) or the Cape Gelidonya shipwrecks—the submerged hulls of vessels which sank off the coast of Anatolia during the Late Bronze Age.

These references are not a great number in and of themselves, considering that they were imported into the Agean area over a period of at least 500 years. However, we must keep in mind the fragile and perishable nature of such important objects. Helene Kantor of the University of Chicago once stated, "the evidence preserved to us by the passage of time constitutes but a small fraction of that which must have once existed. Each imported object...represents scores of others that have perished" (1947:73). If this view is correct, then trade between the Late Bronze Age Agean, Egypt, and the Near East will have taken place over a much longer period than that pictured here.

Although few in number, these Orientalia are a unique source of information about the complex trade networks which connected the Agean with Egypt and with the Near East during the second millennium B.C. They are conclusive proof that Bronze Age Greece was not isolated in isolation. They provide tangible evidence of foreign contacts which could have resulted from the commercial transactions of independent merchants to empires from one royal court to another. Some of the Orientalia could well have been gifts sent by the rulers of Egypt, Babylon, and Assyria to the Mycenaeans and Minoans of the Late Bronze Age Agean (Figs. 7A, 8). The Orientalia also provide some interesting guidelines to the temporal component of our map of Late Bronze Age trade. For example, Egyptian objects continued to be the vast majority of the Orientalia found in contexts which date to the period between the 16th and 15th centuries B.C. This suggests that Egypt dominated trade with the Agean during this time. Most of these objects were found on Crete, which suggests that the Minoan civilization was the Agean partner with whom Egypt was trading at the beginning of the Late Bronze Age.

Minoan Crete continued to be the principal terminus of the trade routes from Egypt and the Near East during the 14th century B.C. However, in contexts dated to the subsequent period, from about 1300 to 1200 B.C., there seems to be a change. Orientalia discovered on Crete decrease dramatically while at the same time their numbers increase proportionally on mainland Greece, at sites such as Mycenae. This new emphasis on trade involving the Greek mainland appears to have been two-way, since Mycenaean pottery in Egypt and the Near East is found most abundantly in contexts dating to approximately 1350-1200 B.C.

In Egypt, Mycenaean pottery has been found at approximately 30 sites, from Marsa Matruh on the northwest coast to Sebvu in the far south. Of the countless Mycenaean vessels found in Egypt to date, nearly 800 have been found at the site of Tell el-Amarna, the capital city built beside the Nile north of Thebes by the heretic Pharaoh Akhenaten, son of Amenhotep III (1981). A similar pattern of Mycenaean imports can be seen throughout most of Syria-Palestine and in Cyprus; in these areas, too, Mycenaean pottery is primarily found in contexts dating to 1350-1200 B.C. It appears, therefore, that the Mycenaean of mainland Greece may have gained control of the trade routes and possibly developed more political contacts with the East to the ends of the 14th century B.C. After this time, it is probable that Mycenaean merchant vessels frequently sailed the seas once dominated by the Minoans. Interestingly, the relishing of trade routes to the East was not necessarily a manifestation of a decline in Minoan prosperity; for while their trade with Egypt and the Near East was decreasing, Mycenaean contacts with the western Mediterranean, including Italy and Sardinia, were increasing. Probably this new trade concerned, in part at least, the persistent need for metals for weapons and tools. In any event, the Minoans appear to have shifted their gaze from the east to the west by 1300 B.C. (Watrzos, In press).

In contrast to the preceding centuries, during the period from about 1400 to 1050 B.C. there was no clear domination of the Agean trade routes by any one of the Eastern powers. Objects from Egypt, Syria-Palestine (Figs. 10, 11), and Cyprus are found in approximately equal quantities, first on the island of Crete and later on sites on the Greek mainland. We may deduce that the Egyptian and Syrian traders to the Agean who had dominated the earlier period between the 16th and 15th centuries B.C. had now been joined by others from Syria-Palestine and Cyprus.

The high level of trade between the Agean, Egypt, and the Near East dropped off in the period from about 1200 to 1050 B.C., when the international trade routes were apparently disrupted by pirates and roving bands of brigands (Sandars 1985). These disruptions are described in written texts from Egypt and Syria-Palestine; one example is cited in the next section. From this time onwards, local imitations of Mycenaean
The Literary and Pictorial Evidence for Trade

Thus far we have considered the archaeological evidence for commerce in the Late Bronze Age Aegean. We now present pictorial evidence for an extensive international trade (Vercoutter 1966; Strouhal 1973). In the Aegean, written references to contacts with the East are found in the Linear B. The Linear A, now known primarily from Egypt, was used predominantly by an administrative bureaucracy which required permanent records of inventories and commercial transactions involving lists of people and goods. Such records, written and preserved on clay tablets, have been found at major cities throughout the Aegean, but mostly abundantly on Pylos and the Greek mainland and at Knossos on Crete. On these tablets there are found two words which refer to Egypt and the Egyptians, "met-a-re-pa" and "a-kue-pa-te." The first means "Egyptian"; the second means "Egyptian" or 'man from Memphis.'

There are also at least nine words in Linear B which are identified as "loanwords" from Syria-Palestine (Astour 1964, 1975). These are words borrowed from the northwest Semitic language and brought into the Greek language as a result of contact between the Aegean and the Near East. Some examples of such Near Eastern loanwords found in the Linear B texts include the words for sesame, cumin, gold, cattle, and ivory (respectively, sa-so-ru, ka-mi-no, ku-ru-so, ki-to, and e-re-pa in the language of Linear B). It is obvious that many of these trade goods; apparently foreign names were often imported along with the objects. Several female workers named in the Linear B texts from Pylos have ethnic names interpreted as western Anatolian in origin. These women came from Milatos, Knidos, and Halicarnassus. There is also a craftsman of Anatolia, others from the Dodocaenese islands located just off this coast. These may have been bought or captured by the Mycenaeans (Chadwick 1988). Several other words in the Linear B texts seem to refer to the distant island of Cyprus. One is ku-pi-te-ra, meaning 'Cypriot.' It appears in numerous times in tablets found at both Pylos and Knossos. At Pylos, it is used in conjunction with the names of individuals associated with shepherding, bronze-working, and with commodities including wool and cloth. At Knossos, the term is used to describe spires, but is also used to modify the words for wool, oil, honey, vases, and unguent ingredients. Two leading Linear B experts, Professors Josep Melaena and Thomas Palaima, have suggested that the term ku-pi-te-ra is possibly being used to denote Mycenaean goods imported from Cyprus, rather than Cypriot goods which had arrived in Crete (Palaima 1981).

A mile and a half away, at the port city of Ugarit on the coast of Syria-Palestine, a number of texts mention Creto. One text in particular is concerned with the tax-exempt status of a rich and influential Ugaritic merchant named Sinamum, whose ship returned from a voyage to Crete in the mid-13th century B.C. The text reads:

From the present day Ammistam, son of Nigmepe, King of Ugarit, exacting tax and demand of [taxes]..." His [grain], his beer, his [olive] oil to the palace he shall not deliver [i.e., he would be assessed for taxes]. His ship is exacted when it arrives from Crete...

Another text found at Ugarit documents the disruption by sea referred to earlier:

My father, the enemy ships are already here, they have set fire to my towns and have done very great damage in the country. My father, did you not know that all my men were killed at the Hittite country, and that all my ships are still stationed in Libya and have not come back? I considered this my father, there are seven enemy ships that have come and attacked Crete. Now if there are more enemy ships let me know about them so that I can decide what to do.

The letter never reached its intended recipient, the King of Cyprus, for Ugarit was destroyed before it could be sent. We know, from other evidence, that this occurred shortly after 1200 B.C.

Other textual sources indicate that Mycenaean goods reached Mesopotamia, directly or indirectly, as early as the 18th century B.C. Numerous commerce texts from the palace of King Zimri-Lim, at the site of Mari northwest of Babylon, mention Mycenaean goods. One extant record a "Cretan weapon with its top and base covered with gold and its top mounted with lapis lazuli." An unusual direction from the Cretan style clothing and one pair of leather shoes in the Cretan style, which Balidi-Lim (an official) carried to Hammurabi, King of Babylon, but which were returned. One wonders why the items were returned. However, references to the Aegean and to Aegean peoples are far more common in inscriptions than in any other Eastern country. Here, numerous tomb paintings (Fig. 4) and literary texts document contact with the Aegean during the New Kingdom period (1800-1500 B.C.).

For instance, in the forty-second year of the reign of Thutmosis III, his Amala record: "Tribute from the Prince of Crete (in mainland Greece) silver shawabati-jug of Kefiu [Mycenaean] while and four jug of iron (copper) with silver handgrip." The wall paintings in the tomb of Rechmir, vizier to the Pharaoh Thutmosis III during the 18th century B.C., contain the most famous depictions of Aegean peoples visiting Egypt. On these paintings, men in Aegean style of dress are shown carrying typical products of the Aegean, such as glass vessels. The men are identified in an accompanying inscription as "Chiefs of Kefiu" and "Chiefs of the Isles which are in the Midst of the Great Green"—that is, Crete and the Cycladic islands, respectively. The gifts borne by the visitors are labeled as "tribute" meant for the pharaoh. Most scholars attribute such phrasing to Egyptian propaganda rather than to true Egyptian control over the Aegean.

Trade Routes Between the Aegean and the Eastern Mediterranean

Can we reconstruct the ancient sea routes by which the merchants and the political envoys of the Late Bronze Age sailed between the Aegean and the East? The traditional route postulated by most scholars is based upon the winds and currents which prevailed in the Aegean and in the Eastern Mediterranean for most of the year. This route runs in a counter-clockwise direction from Crete through the Cyclades to Egypt. This route was also used by Mycenaean traders to reach the Cyclades mainland from Crete, south to Egypt, up to Syria-Palestine and Cyprus, west via the southern coast of Anatolia to Rhodes and the Cycladic islands, and finally returning to Crete and mainland Greece. Of course, mercantile traffic may have occurred at any point along this route. They may have included a voyage to the western Mediterranean in their travels as well (Bass 1987).

Recently, Dr. L. Vance Watrous, an archaeologist and art historian at the State University of New York at Buffalo, has presented evidence that a clockwise route of travel around the Bronze Age Aegean was also possible (Watrous, In press). Such a route would have involved sailing, say from Egypt, probably via the Libyan coast and watering holes such as Marsa Matruh, directly up to Crete and thence, via the island of Kythera, onward to mainland Greece. The journey might have then continued via the Cycladic islands, Rhodes and the southern coast of Anatolia, to Cyprus, Syria-Palestine, and finally back to Egypt. Shorter, more direct routes must almost certainly have also existed, such as one between Crete and Egypt and another between the Greek mainland and western Anatolia. The exist-
Reports from the Field

Capuchins, Capybaras, and Cattle

One solution to this problem is to structure conservation programs so that they provide economic benefits in exchange for the lost earnings of potential land no longer available for local use. On the vast central Venezuelan plain known as the Llanos, one family has made this approach a key element in their strategy to preserve a part of an ancient ecosystem. Because much of the Llanos is flooded for half the year, large-scale agriculture has been impractical, and from earliest colonial times raising cattle has been the llaneros’ principal occupation (Fig. 1). When the Branger family bought 100 square miles of llanos forty years ago, Hato Piñero was a working cattle ranch much like others in the area. Antonio Julio Branger, the senior member of his generation of the family, immediately imposed strict controls on hunting, deforestation, and burning. Over the years, as other landowners had cleared their few remaining forests to create additional grassland, captured macaws and parrots for the pet trade, and hunted marinals and reptiles alike for their meat and skin, the wildlife at Hato Piñero has coexisted in relative tranquility with cattle.

Many Museum members are familiar with the popular “Reports from the Field” lecture program. In an effort to expand the focus of that program and to reach those of you who live far from Philadelphia, this series will examine some of the field research being carried out by the Museum and associated departments at the University of Pennsylvania. Robert O. Harding is Associate Professor of Anthropology at the University of Pennsylvania.

For conservationists, a central dilemma is how to preserve species, habitats, and even ecosystems without depriving the people who depend on the land of their ability to make a living from it. Arguments based on preserving natural beauty and saving endangered species rarely convince those whose livelihood is tied to the land, and so it is not surprising that no matter how well funded they may be, conservation efforts are almost never successful in the face of local apathy or concerted opposition.

Figure 1. Zebu and hybrid zebu cattle are the mainstay of Hato Piñero’s beef herd, and are typically accompanied by flocks of cattle egret.

Bibliography


