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*International maritime trade in the eastern Mediterranean during the early second millennium B.C.E.:  
Archaeology, theory, and a proposal for deep-sea research*

The beginning of the second millennium B.C.E. is marked by significant changes in the political and economic organization in the ancient Near Eastern world. In addition to a rise in urbanization and political development, there is also a concurrent increase in international interactions between polities located throughout the eastern Mediterranean, relationships that may well have been facilitated by maritime contacts. While there is evidence that points to these interconnections between a large number of regions and/or polities, constraints of time and space dictate that this paper will focus primarily on the contacts between the kingdom of ancient Egypt and the Levantine seaboard, with some brief consideration of Cyprus and Crete as they impinge on this relationship. Thus, I will provide a brief overview of the political and economic organization of each of these regions, the textual and material evidence that supports theories of international contact and exchange, and the posited economic systems and political organization that are suggested from consideration of the evidence.

In Egypt, the rise of the Twelfth Dynasty, or Middle Kingdom (beginning in the early second millennium B.C.E.), ushered in a second major period of internal organization. This internal consolidation was matched by an attendant rise in Egyptian interests in regions beyond its traditional borders, and a corresponding increase in international contact and exchange between Egypt and other polities in the ancient Near Eastern world. During the course of the Twelfth Dynasty, the Middle Kingdom pharaohs expanded to the south into Nubia – modern-day Sudan – while simultaneously embarking on policies of contact, exchange, and interaction with the polities of the Levant, in the regions of modern Israel/Palestine, Lebanon and Syria, as well as the islands of Cyprus and Crete.

In the Levant at this time, however, economic and political organization was considerably less homogenous, and ranged from highly organized urban polities, often focused on large coastal emporia, such as Byblos, in the northern Levant, to developing systems organized around city-states in the southern region of Canaan. Differential access to resources, and more importantly, to the international traffic of the eastern Mediterranean significantly influenced the political and economic development of the Levantine coastal regions, such that the northern region was more highly urbanized at an earlier stage of the second millennium than were the exchange systems and polities located in the south.

Therefore the first half of the second millennium B.C.E. marks the period of the extremely powerful Egyptian Twelfth Dynasty, the increasing preeminence and importance of northern Levantine urban centers, the resurgence of complex urban sites in the southern Levant, and an increase in international

interaction and exchange between Egypt and the Levant, exchange that was very likely conducted using maritime routes, and most probably maritime routes through deep water. Our practical knowledge of this exchange comes from both artifacts and texts. Our empirical knowledge consists of understandings of the mechanisms of trade in the ancient world, theoretical understandings of social and political contacts between cultures, analysis of site distribution and growth, and the implications toward ancient trade that is implied by these theoretical constructs. Taken together, the available archaeological, historical, and theoretical evidence strongly suggests the existence of a highly developed international trading economy during the early second millennium B.C.E. that utilized maritime routes in deep water.

The distribution of materials, resources, and manufactured goods found at sites throughout the Levantine coast constitutes some of the best evidence for examining international contact during this period. Land excavations at major sites in the northern Levant have unearthed artifacts whose point of origin must be located in Egypt and that could have arrived at these Levantine sites only through a system of exchange, either as gift exchange between rulers or through a more formalized economic process based on the principles of supply and demand. Egyptian artifacts have been found, occasionally in great quantities, at the northern Levantine sites of Byblos, Carchemish, Qatna, and Hama, all of which represent large urban sites of the ancient world in the second millennium B.C.E. For example, this gold pectoral found at Byblos, is of Egyptian origin and manufacture, and is most likely to be understood as a remains of a formal gift-exchange between the Egyptian 12<sup>th</sup> Dynasty pharaohs and the ruler of the Byblite city-state, an exchange relationship which is also supported by the sphinxes of Egyptian pharaohs found at various northern Levantine sites such as this one of Amenemhet II.

In addition to the Egyptian material in the northern Levant, Levantine material has been found in Egyptian contexts, occasionally in extremely large quantities. Levantine ceramic material has been found at sites throughout Egypt, such as the pyramid of Amenemhet III at Dahshur. Most notably, hundreds of thousands of store-jar sherds of Canaanite or greater Levantine origin, have been excavated at the site of Tell Dabĕa (ancient Avaris) in the Egyptian Delta. Although dating to a slightly later period in the Middle Bronze Age, these ceramic remains attest to the intensity of economic exchange between Egypt and the Levant. Although it is entirely possible that many of these vessels reached their destination via land routes, the sheer quantity of these jars, which most probably contained wine or oil – valuable Levantine commodities – which would be both heavy and bulky and thus awkward to transport overland, suggests that maritime routes were utilized in this exchange.

Although there are very few Egyptian artifacts from Canaanite contexts that can be dated securely to the Twelfth Dynasty, one particularly notable exception is a series of 47 bullae, or clay sealings, found in a sealed – and hence archaeologically secure – fill at the site of Ashkelon on the southern coast of present-day Israel. These bullae would have been used to seal clay jars prior to the shipment of commodities, and

the very prosaic nature of the sealings also implies that, in addition to the highly visible and highly valuable 'luxury' goods, such as the gold objects found at Byblos, subsistence commodities were being transshipped in bulk throughout the eastern Mediterranean as well. The importance of the exchange in bulk items as well as in luxury or precious goods has a significant bearing on the types of exchange systems in the ancient world, and may very well also be reflected in the type of transport, contact, and shipping undertaken by these polities.

Finally, both Cypriote and Minoan pottery has been found in Egypt and at Canaanite sites, while Egyptian material has been excavated from Middle Bronze Age contexts on both Cyprus and Crete. The presence of this imported material clearly indicates exchange and contact, but, it should be noted that, without additional evidence or supporting materials, the nature of this exchange and the mechanisms by which it was carried out remains almost completely unknown.

One of the most significant pieces of evidence that points to an organized, extensive, and well-developed system of international contact, and one which utilized maritime routes, comes from the Mit Rahina inscription dating to the reign of Amenemhet II (ca. the first third of the 19<sup>th</sup> century B.C.E.). This inscription, found in secondary context in a temple dating to the later New Kingdom, is an excerpt from the official annals of the reign of the pharaoh, and details the activities – social, political, and economic – of the kingdom for each year of Amenemhet II's reign. The surviving inscription provides information from one year of the pharaoh's 35-year long reign, and the amount of foreign contacts, expeditions, military forays, and international contact is staggering. When it is considered that this represents the activities of only one year, the implications for the entire reign of Amenemhet II, not to mention the activities of other Middle Kingdom pharaohs, are clear. During the 12<sup>th</sup> Dynasty, Egypt was actively engaged in a multitude of activities, ranging from commercial to military, all of which were designed to funnel large quantities of goods, resources, and luxuries from outlying regions into Egypt.

In terms of analyzing maritime contact, the most significant information is found in column 18 of the preserved inscription, in which the return in two ships of an expedition to Lebanon is described. It is unclear whether or not this was a military action or simply an expedition, as the Egyptian word employed, *mšē*, is ambiguous, and can mean either an expedition, or an expedition with a military component, or both. What is clear, however, is that this expedition brought back with them an extremely large quantity of commodities. Even allowing for a certain degree of exaggeration, the amount and variety of goods is extremely impressive. Large amounts of metals, aromatics and plant materials, worked goods, such as daggers of gold, bronze and ivory, building stones, and wood, comprise the bulk of the shipment, along with a smaller number of numerous other commodities.

This inscription, which provides a wealth of information concerning Egyptian interests and the types of commodities moving in the Mediterranean at this time, also poses a number of questions concerning the

means and methods of shipment and the organization of this maritime trade. Nothing is known about the ships that carried these goods, and the expeditionary force as well, back to Egypt. The hieroglyph used in the inscription for the ships represents a standard Egyptian boat, but one which, while common for Nile river traffic, is unlikely to have been used for long ventures in the Mediterranean; this raises the possibility then that the Egyptians utilized other types of ships for these expeditions, or, possibly, that they utilized ships from other polities to transship the goods meant for the Twelfth Dynasty. Furthermore, the sheer quantity of goods, and the bulk (73 tree trunks make up a sizeable cargo), implies that these vessels were, of necessity, quite large. Thus, while the Mit Rahina inscription clearly indicates the existence of significant maritime commerce during this period, it just as clearly raises a number of significant questions about the methods and organization of this interaction.

The Mit Rahina inscription just described, and the other material evidence from land excavations, all point quite clearly to the existence of maritime interactions during the Middle Bronze Age. To date, however, there is no evidence from a strictly maritime context that can shed light on the nature of international exchange in the ancient world during this period. As a result, many details regarding the nature of this contact, and the means and mechanisms by which it was carried out, remain mostly unknown. With the exception of the Mit Rahina inscription, we do not know the composition of the shipments, their size, the frequency of shipment or circulation of goods, and we only have a certain theoretical knowledge of the organization necessary to undertake the shipment and receipt of goods.

Egypt in antiquity lacked the majority of resources and materials that it most desired. Timber, bitumen, other resins, wine, and olive oil stand out as the most obvious commodities desired by Egypt that had, by necessity, to be obtained from regions outside the traditional borders of the country. In return for these items, Egypt could provide gold, mined from the Eastern Red Sea Desert or obtained from Nubia, turquoise and other semi-precious stones, mined from the surrounding deserts and in Sinai, copper from Sinai, and a vast assortment of exotic and luxury items obtained through trade and military forays into the southern African continent. It is important also not to discount another category in constant movement throughout the ancient world, that of people and animals. Whether taken as booty from raiding expeditions, or acquired through more peaceful processes, all evidence points to the fact that people were in constant movement between the Levant and Egypt, and functioned as an extremely important commodity, yet, this crucial economic traffic will have left little or no trace in the archaeological record, and is only identifiable in certain of the extant textual material.

It should be noted, however, that most of these commodities were both large and heavy, and were, in all probability, moved in bulk. Economically speaking, there is little profit to be gained from transporting only a small amount of timber, or a limited number of jars of wine and oils, while movement on a large scale of animals and people is clearly easier and less time-consuming if conducted via maritime means. It

is also important to note that living beings, whether they are people or animals, will be more economically profitable to those who trade in these items if they arrive at their destination in relatively good health, and long overland transport would be costly, both in terms of providing subsistence for these commodities and in terms of potential loss of the commodity itself. Thus, the size, weight, and quantity of these commodities of the international world market lends itself towards ease of transport, shipment of larger quantities, and higher profit margins if the movement of these items followed maritime routes rather than land-based ones.

Our information regarding shipping in the ancient world comes from two different sets of shipwrecks: the Ulu Burun and Cape Geldoniya wrecks dating to the Late Bronze Age, and the Iron Age Elissa and Tanit wrecks. Both sets of wrecks, however, suggest different economic and political organizations. The interpretation of the Late Bronze Age wrecks is that they imply a transient multi-cargo merchant shipment, which moved from region to region trading and selling a variety of wares. The Iron Age wrecks, however, seem to represent a single-cargo consignment shipment, or they may possibly also represent a supply-and-demand trade in bulk commodities, which thus suggests an entirely different economic system from that implied by the LBA shipwrecks. As a result, we have two possible models on which to base our examination of maritime commerce in the Middle Bronze Age, and to date, no firm understanding of which would be more appropriate to the political-economic systems of the time.

It would overly simplistic to suggest that just because the Iron Age ships are later that they represent a progression in the economic sophistication of the ancient polities from the second to the first millennium B.C.E. We cannot simply posit one form of economic system for the Middle Bronze Age based simply on the fact that it pre-dates the two eras for which we have known data. Two possibilities therefore exist for the type of shipping that existed in this earlier period, one which would be patterned after the piecemeal shipping of the Late Bronze Age, and one which may be more in keeping with the economy suggested by the two Iron Age Phoenician wrecks, in which the size and single cargo of the two ships indicate an entirely different economic organizational process. A third possibility that must be considered is that it is perfectly economically feasible that both types of systems were in operation simultaneously.

Evidence for Middle Bronze Age international contacts, however, is inconclusive in this respect. The prestige goods and luxury items of Egyptian origin and manufacture found in the northern Levant point very strongly to formalized 'gift' exchange between ruling parties, and thus can tell us little about the normalized foreign trade between these regions, if any existed. The Mit Rahina inscription seems to imply that there was, indeed, foreign trade, but drawing conclusions from this one text concerning its nature and the mechanisms of exchange can be dangerous and is limited at best, as it is a single piece of evidence. The sherds of Cypriote and Minoan wares found in Egypt and in Canaan certainly attest to exchange, but

these sherds are from small juglets, and other non-utilitarian wares, and thus seem to indicate a trade in preciosities, rather than in bulk. All of this, so far, points to the existence of multi-cargo, mixed shipments.

An exception to this, however, are the bullae found at Ashkelon and the Canaanite jars at Avaris; both sets of evidence are indicative of the movement of more prosaic exchange items, and the movement of these items in bulk, and thus may imply either consignment shipping or regularized trade organized along supply-and-demand principles. This evidence, therefore, suggests that in addition to multi-cargo luxury shipments, there also existed, simultaneously and within the same political and economic systems, transshipments of goods in bulk.

Were there to be discovered even one shipwreck dating to the Middle Bronze Age, many of these issues would begin to be addressed, and some even potentially answered; at the very least, our knowledge of maritime shipping and international interconnections during this crucial period of re-urbanization would be enhanced. It is possible that the discovery of a Middle Bronze Age shipwreck would also enable us to gain a better understanding of the routes utilized during this era and, from that, the method of contacts between cultures themselves. There are two major projected routes that are immediately relevant. The first route runs between Egypt and Crete and/or Cyprus. There is clear artifactual evidence of contact between Middle Kingdom Egypt and these two islands; there is little or no evidence that informs us of the way in which this contact was carried out. Did the shipping go directly from the Delta to the island cultures, or did it travel a less direct route? The discovery of a Middle Bronze Age wreck on a route between Egypt and these islands would shed light on questions concerning the nature of the trade conducted between these regions.

The second route that needs to be examined in more detail is the commercial route between Egypt and Byblos, and the other major urban sites of the Levant. In the past, it has always been theorized, in keeping with earlier understandings of ancient shipping, that the travel up from the Delta to Byblos would have, by necessity, hugged the coast, and put in frequently at other port sites in Canaan. Given new understandings of the possibilities of deep-water travel, however, it is interesting to suggest that this method of transport and maritime travel utilizing deep-sea routes may have had its inception much earlier than previously anticipated. This is not to suggest that the Egyptians and their trading partners did not either stop at or have exchange contacts with the ports in Canaan, but rather to suggest that the actual trading routes themselves during this period are not fully understood. Any wreck found at any point along this route would increase our knowledge of this frequently traveled and ancient shipping lane, would provide an initial basis for further expedition and survey, thereby adding to our knowledge of shipping in this area.

The twofold purpose of this paper has thus been to illustrate the known information concerning international maritime trade in the early second millennium B.C.E. and to express the need for survey and deep water archaeological research along either or both of these crucial routes. The gain for archaeologists

and scholars of ancient Near Eastern history and archaeology from such a project is obvious: any wreck at all increases our knowledge of the political and economic organization of this period, contributes to our information regarding international contacts, and adds to our understanding of the development of the ancient world. The gains for those who study purely maritime issues or early technology are also apparent in that wrecks from this period would provide some of the earliest known evidence for deep water maritime trade and hence, the earliest known (so far) technology that was adapted to deal with the specialized conditions relating to deep water navigation and economic transport. The technological capacities for conducting research in deep water now available to us, and the collaboration developing between archaeologists, oceanographers, engineers, and all the other specialties represented here at this conference allows us to contemplate far more possibilities for research and analysis than has been possible before now. The potential results of such a survey and collaboration are diverse, and allows for new venues in which the technological challenges presented by early deep water archaeological research will be of interest for the engineering community, and allow the archaeological community to expand its research, questions, and knowledge in new directions.