

The Greeks and the Sea

Edited by Speros Vryonis, Jr.



ΕΝΘΑ ΤΙΘΑΙΒΩΛΕΥΟΤΙ ΜΕΛΙΣΣΑΙ

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PREFACE

Speros Vryonis, Jr.

The Alexander S. Onassis Center for Hellenic Studies inaugurates, with this volume, a new scholarly series dedicated to the biennial recipients of the Alexander S. Onassis Center Gold Medal for Excellence in Hellenic Studies. The decision to create the Award for Excellence in Hellenic Studies is based on two considerations. First, Hellenism has played an important role in the foundations of European civilization and in the formation of much of the Slavic world (that other Europe), and Hellenic culture was significant in the crystallization of the brilliant Islamic civilization during the Middle Ages. The second is the extremely long tradition of Hellenic studies, in unbroken continuity from the Hellenistic era through the centuries of Byzantine cultivation of the classics and the Islamic-Western European reworking of a portion of this tradition in the Middle Ages, to the major turning point which Renaissance humanist scholarship brought to the study of Hellenism. The concern of early modern and modern Europe with its classical roots has resulted in the formidable intellectual structure of classical studies. To this has been added, in more recent times, Byzantine studies with ramifications for the better understanding of Eastern Europe and the Near East.

In creating the biennial award for excellence in Hellenic Studies, the Onassis Center of New York University acts in consonance with the scholarly and historical realities of our own times. It is important for the community of scholars, as well as for the larger society, to acknowledge the importance of the teaching and scholarship that have, in the past, been dedicated to the understanding of our own modern culture through the greater comprehension of the important Hellenic dimensions of this culture. One should acknowledge, simultaneously, that while Hellenism is only one, it is an important dimension of our culture.

The founding of the Onassis Center is a result of the concurrence and

belief of the Alexander S. Onassis Public Benefit Foundation and New York University that indeed Hellenism deserves to be studied and understood in a much broader historical context. Though classical Greece has been studied extensively and intensively, Byzantine Greece is only now reaching the level of scholarly semi-respectability, and the scholarly examination of present-day Greece, modern Hellenism, is almost nonexistent in the formal university curricula outside Greece itself. The creation of the Onassis Center has as its end the study and examination of Hellenism as both synchronic and diachronic phenomena, as a reality that did not end with the failure of Demosthenes to halt the imperialist expansion of Philip and Alexander, but that continued to evolve with the succeeding phases of imperialism, Christianity, Ottomanism, and modern Europeanization.

Such being the scope of the Onassis Center, it is necessary that the procedures for selecting and honoring those scholars who have made outstanding contributions to our understanding of Hellenism should be correspondingly broad. The Center wishes to acknowledge this outstanding scholarship not only in classical studies, but also in Byzantine and modern Greek scholarship. This underlines an essential element in the understanding of Hellenism as a broader cultural phenomenon and historical reality. The International Selection Committee for the Alexander S. Onassis Center Gold Medal consists of specialists in all three chronological periods of Hellenism:

Professor Emeritus Milton V. Anastos, Department of Classics,
University of California, Los Angeles

Professor Mervin Dilts, Department of Classics, New York University

Professor Gregory Sifakis, Department of Classics, New York
University

Professor Mario Vitti, Faculty of Modern Foreign Languages,
University of Viterbo

Professor Speros Vryonis, Jr., Department of History, New York
University

The International Selection Committee has chosen Professor Robert S. Browning, Professor Emeritus, University of London, to be the first recipient of the Gold Medal for Excellence in Hellenic Studies, and the proceedings of the conference published herein are dedicated to him as a token of the esteem in which the scholarly world holds him. The scholarship and life of Robert Browning constitute a model to be followed by all aspiring Hellenists. He is first and foremost an open-minded scholar, free of the prejudices and *mikropsychiai* that so often characterize academic life. He has demonstrated a generosity toward his students, colleagues, and strangers

that recalls the *philoxenia* of classical and modern Greece. His activities as a scholar and teacher distinguish him as an outstanding interpreter of the historical rhythms of Hellenism—classical, Byzantine, and modern. He combines clear insight with a magisterial command of the sources and literature in solving major problems and enigmas that confront the student at every turn in the millennial evolutions of Hellenic culture. Not the least of these historical problems is the poorly understood question of continuity and discontinuity in the culture and history of the Greeks. His inaugural lecture at Birkbeck College, “Greece—Ancient and Medieval” (1966), brought intelligence and historical method to a question previously addressed by two successive holders of the Koraës Chair, University of London, on grounds that were blatantly racist (biological), colonialist, and static. His book on the evolution of the Greek language from the koine to present-day Greek is far and away the best such work and an absolute must for all those students who wish to come to grips with the tortuous problems associated with the cultural evolution of the Greeks. This and many other books by Robert Browning have been translated into other languages, and they constitute an essential part of the intellectual diet of Hellenists.

Robert Browning embodies all that is best in the scholarly life. Further, he best exemplifies the ideals and goals of the Onassis Center for Hellenic Studies, for he has pursued the study and understanding of the entirety of Hellenism. He is as at home with Homer as with Seferis; he reads Herodotus and Pappasopoulos with equal understanding. Moreover, with his knowledge of languages of the neighboring Bulgars, Serbians, Croats, and Turks, he is sensitive to the internal dynamics and external tensions of Greek culture. Unlike many Hellenists, Professor Browning is aware of the importance of the relations and dynamic stress among Greeks, Bulgars, Turks, Serbs, and between Christianity and Islam. His fascinating book *Byzantium and Bulgaria* (1975) brings a much needed and well balanced evaluation of that crucial relation in which Byzantine culture spread to the Slavic world using the Bulgars as the key to that new world. His simultaneous concern with the internal aspects of Byzantine culture is manifested in a series of works dealing with Byzantine education, teachers, students, and with the texts used to initiate young Byzantines into classical and theological literature. Robert Browning is that rare Hellenist, even-handed and open-minded, who is at home with the ancient Greeks, their Byzantine successors, and their modern offspring.

The symposium honoring Professor Browning focused on the relation of the Greeks of every age to the all-important sea. The initial encounter of the Greeks with the sea occurred sometime around 2000 B.C. and has

remained a constant in their every-day life, their political and commercial activity, as well as their religious beliefs, literature, art, and technology. It constitutes the first recorded encounter of a European people with the forces of nature. Inasmuch as the speakers of Greek inhabited hundreds of islands and lived close to a long indented maritime coast, this constancy in their maritime encounter is geographically comprehensible and yet not inevitable. The scholars at this conference, "The Greeks and the Sea," have presented us some of the most important and fascinating aspects of this decisive encounter of the Greek people with a part of nature, and to them we express our gratitude.

The conference attracted large audiences for three days, including a wide spectrum of American and Greek society: professors and students from academe, the Union of Greek Shipowners, representatives of international maritime activity, bankers and merchants, diplomats and politicians, members of the local and national Greek-American community, and interested New Yorkers and Californians. The subject of the sea proved to be, as in antiquity, a lively subject attractive to all.

I wish here to express my gratitude to all those people who helped us to mount such a successful conference. First I thank the Alexander S. Onassis Public Foundation, its then president, Dr. Ioannis Georgakis, its current president, Mr. Stelio Papadimitriou, and other members of the Foundation Board, Mr. Pavlos Ioannides, Mr. Apostolos Zabelas, Mr. Theodore Gabrielides, for all their support of this conference. We are particularly indebted to them for providing the gold medal.

It is doubly significant, I think, that the first conference should have as its subject "The Greeks and the Sea," for not only was the sea the scene of an essential encounter for the Greek, but it was the domain *par excellence* of the late Aristotle Onassis to whose foresight and magnanimity the Onassis Center owes its existence. His fame and spirit still haunt the sea and shipping like some latter-day Poseidon who refuses to yield his dominion. Because of this specific subject it was inevitable that the Union of Greek Shipowners should participate in our proceedings. When Dr. John Brademas and I broached the subject with Mr. Stathis Gourdomichalis at the offices of the Union in Piraeus, he and his colleagues responded enthusiastically. Their participation was both prompt and active. They co-hosted the first reception after the award ceremony, then offered two communications during that portion of the conference dealing with the Greeks and the sea in modern times. Thus through their cooperation the conference was able to effect a union of historical theory and contemporary practice.

I must especially thank Dr. John Brademas, then President of New

York University and the patron deity of the Onassis Center, who watches over its life and activities with providence and with the wisdom of the goddess Athena. His colleagues Michelle O'Connor and Vice-President John O'Connor were involved in the planning and the execution of the conference at every turn. Dr. Athena Coronis, Outreach Program Director of the Center, contributed her efforts at all times, as did the professors, staff, and students of the Onassis Center.

The Center successfully organized a series of displays in conjunction with the conference. These displays helped to highlight the material aspects and products of the Greek encounter with the sea, and for the success of the exhibits we are greatly indebted to a large number of individuals and institutions. In particular the Center thanks Dr. Carlton Rochell, Director of the Elmer Bobst Library and Study Center, and Mr. Frank Walker, Director of the Fales Library, for the exhibit of rare books dealing with the Greeks and the sea. We are likewise grateful to Dr. Thomas Sokolowski, Director of the Grey Art Gallery at New York University, and to his assistants for the actual organization and mounting of the exhibit of artifacts and art which so beautifully illuminated and concretized the subject of the conference. The gathering of the objects themselves was made possible by the kindness and efficiency of a number of individuals and institutions: Mr. George Dracopoulos, President of the Aegean Maritime Museum in Mykonos, Greece, very generously provided the exhibit with outstanding lithographs, maps, prints, a Cycladic icon, and a ship model. Mr. Panos Molfetos of the Hellenic Maritime Museum, Piraeus, Greece, loaned early maps and prints. The American Numismatic Society, New York, thanks to the interests of its director, Dr. Leslie Elam, of its chief curator, Dr. William Metcalf, and of Dr. Carmen Arnold-Biucchi, Curator of Ancient Greek Coins, loaned a very rich collection of coins illustrating the history of Greek colonization and commerce in the Mediterranean from antiquity to the nineteenth century. Mr. George Foustanos of the Union of Greek Ship Owners presented a fine photographic collection of Greek shipping in the nineteenth and early twentieth century. This collection hangs permanently in the Onassis Center. Mr. Vassilis Kapetanacos and Mr. Anthony Piperas, Chandris Lines, loaned ship models and photographic materials for the exhibits. Mr. Christos Bastis, a member of the Onassis Center Outreach Board, lent to the exhibit ancient Greek ceramic objects from his famous collection. Also, we thank Mr. Pavlos Ioannides, Vice-President of Springfield Shipping Company. We acknowledge gratefully Mr. Torkom Demirjian, of Ariadne Galleries, for the loan of ancient sculptures and objects in the exhibit hosted by the Grey Gallery.

NOTE ON THE ONASSIS CENTER GOLD MEDAL

The Alexander S. Onassis Center Gold Medal for Excellence in Hellenic Studies is awarded biennially to scholars who have achieved originality and distinction in the study of Hellenism and in the diffusion of this knowledge to the academic and extramural worlds. The Onassis Center celebrates this award with its biennial conference on Hellenism, held in honor of the recipient of the award. The selection procedure of the recipient of the award is carried out by the International Selection Committee, consisting of the following individuals:

Professor Emeritus Milton V. Anastos, Department of Classics,
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Literatures, University of Viterbo

Professor Speros Vryonis, Jr., Department of History, New York
University

It is the function of the International Selection Committee to survey the fields of scholarship that deal with Hellenism, in the broadest sense, so that recognition will be given to scholars in each of the three periods of Hellenism: ancient, Byzantine, and modern.

Part I

The Greeks and the Sea in Antiquity

THE GREEKS AND THE SEA: AN INTRODUCTION

Speros Vryonis, Jr.

Alexander S. Onassis Center for Hellenic Studies
New York University

One of the most brilliant chapters, in a very long and fascinating book full of brilliant chapters, in the cultural and historical experience of the Greek people is their encounter with the sea. It was, and remains, the most vital aspect of Greek society, and it is fitting that such a conference and volume should have been organized by the Alexander S. Onassis Center for Hellenic Studies. The ultimate founder of the Center, Aristotle S. Onassis, was a Greek from Ionia, a Smyrniote, who like his ancestors in the distant past, was chased from his home by an Asiatic invader, turned to the sea, and there sought his fate and fortune. The daring, enterprise, courage, and intelligence of this famous sea wanderer are all consonant with the qualities displayed by the ancient Ionians during the age of maritime colonization and commerce of Greece's Archaic Age.

In setting the background for the essays that are to follow, essays that derive from the addresses delivered at the Center's conference "The Greeks and the Sea," 16–19 November 1990, I should perhaps begin with some unadorned and unliterary figures or numbers in all their starkness, and then attempt to explain them in some broad sense. In the pre-World War II period the small country of Greece had developed the ninth merchant marine in the world, and during the war a substantial portion of it, serving in the cause of the Allies, was sunk and lost. From the original number of 607 ships in the Greek merchant marine at the outbreak of the war, only 130 survived. Yet, in 1981, 37 years later, there were 3,896 ships registered under the Greek flag, with an enormous tonnage representing ten percent of the world total and ranking third behind the ships under Liberian and Panamanian flags.¹ There is something extraordinary in these statistics, and buried in them is one of the most essential facts and cultural traits of this ancient people. The intimate relation of the Greeks to the sea, so spectac-

lar in our own times, is nothing new but is rather only the most recent manifestation of a constantly recurring phenomenon throughout Greek history. Here I wish to describe analytically the origins and early development of the maritime element in the structure of Greek culture.

The theme, "The Greeks and the Sea," implies a particular relation of man to nature in which man is influenced by this close relation to the sea and he in turn places a certain value on maritime life. As the Greeks were the first of the Europeans to develop a complex and dynamic maritime life, and inasmuch as the intimate relation of the nation to the sea maintained an unbroken continuity, the effects of this relation are to be seen deeply imbedded in the political, religious, economic, literary, and artistic institutions and manifestations of the Greek speaking people from the beginning of their recorded history.

I should like to commence by quoting from a modern Greek poet and a very famous poem entitled *Axion Esti*. It is, of course, the tripartite poetical composition of the Nobel Prize poet Odysseus Elytis, also referred to as the Poet of the Aegean. In the first part of this tripartite composition, entitled *Genesis*, Elytis sings the genesis of the Greek world, or as he refers to it,

This world
this small world the great.²

An important part of this "small world the great" is, of course, the sea, its isles, winds, and fish:

Then he spoke and the sea was born
and I gazed upon it and marveled
In its center he sowed little worlds in my image and likeness:
Horses of stone with manes erect
and tranquil amphorae
and slanting backs of dolphins
Ios, Sikinos, Serifos, Milos.³

After having sung the creation of other parts of "this world, this small world the great," Elytis returns to the sea and its creatures:

At the stroke of eleven
five fathoms deep
perch, goby, seabream
with huge gills and short rudder tails,
Rising higher, I found
Sponges and starfish
and slender, silent anemones,
and higher still, at the water's lip,
rose limpets
and half open mussels and algae.⁴

In the second part entitled "The Passion," he refers to the inspiration of Homer and to his own inheritance of the Greek language:

Greek the language they gave me
poor the house on Homer's shores.
My only care my language on Homer's shores.⁵

Then he proceeds to the power of the Aegean Sea and that of Homer's spirit:

The poet of clouds and waves sleeps inside me!
His dark lips always on the hurricane's nipple
and his soul always in the sea's kick
against the mountain's shin!

Finally the poet turns to the ships:

Praised be . . .
The ships upright on black feet
the ships, those goats of the Hyperboreans
The ships, pawns of the North Star and Sleep . . .

Full of gales and the hazels of Athos
smelling of dregs and ancient carobs
their bows painted like the icons of saints
heeling and motionless all at once.⁶

This poetry catches up the Greek involvement with the sea in images both modern and Homeric. The similarity with Homer, in regard to the portrayal of the sea, goes over into the very vocabulary of *Elytis*. Of approximately one hundred specialized maritime words in the passages of *Elytis* fifty-five are to be found in Homer and thirty-two are in post-Homeric classical Greek. Most of all, these words are living elements in the spoken language of modern Greek. Indeed of the four words employed by Homer to denote the sea, three have survived in spoken modern Greek and are forcefully employed by *Elytis*: θάλασσα, πόντος, πέλαγος.

In *Elytis* we see how close to the sea the modern Greek has lived. In fact, to many the Greek is synonymous with the concept of the sea, just as the fish, the waves, and the shores, and it is very often forgotten that this had not always been so with the ancestors of the ancient Greeks. Indo-European philologists have long demonstrated that of the four ancient Greek words for the sea, the most common of these, *thalassa*, is not a Greek word by origin. The most reasonable argument is that the Greeks adopted this word when they first entered the Aegean world, in the early second millennium, from the pre-Greek population they found there. According to tradition the earliest Greeks had come into the present-day Greek penin-

sula from some continental area unexposed to the sea. Thus when they settled near the Aegean and Ionian seas, their encounter with the sea was a new experience. This is the basic proposition of the extremely provocative and fertile study by Albin Lesky, *Thalatta*.⁷ His first chapter, "The Original Foreignness of the Sea to the Greeks," musters the data that testify not only to this original maritime unfamiliarity of the Greeks, but to the long period of acclimatization that ensued after the initial encounter with the sea, and finally the incomplete nature of this adjustment to the sea.⁸ Indeed Lesky envisages the encounter of the Greeks with the sea in Toynbean terms as a dynamic of challenge and response. He sees this not only as a part of the spiritual history of the ancient Greeks but also as the beginning of the European experience of and sensitivity to nature. The spirit of this essay and the motivating force behind the conceptualization of this subject and the conference derive from the seminal book of Lesky, one of the towering figures in twentieth-century classical studies.

The response of the ancient Greeks to the challenge of the sea resulted in a two-fold process: The thalattization of the Greeks and the Hellenization of much of the inland sea. Both transformations were thorough.

The Political, Military, and Technological Encounter with the Sea

The political and military response of the Greeks to the sea came early,⁹ remained constant, and was accompanied by a gradual improvement of naval technology. Thucydides provides us with a schematic, succinct history of the rise of naval power in Greece in his maritime excursus. The Greeks first appear as a naval power in the Trojan expedition, as Thucydides tells us: "I am inclined to think that Agamemnon succeeded in collecting the expedition . . . because he was the greatest naval potentate of his time If the witness of Homer be accepted, [he] brought the greatest number of ships himself."¹⁰

Thereafter followed the Dorian invasions and the Phoenician prominence on the sea, until the Greeks began their colonizing and once more took to the sea.¹¹ According to Thucydides, "The Hellenes began to build navies and to make the sea their element."¹² Thucydides traces the rise of Corinthian maritime enterprise, that of the Ionians and of Polycrates, placing the first major Greek naval battle between Corinth and her colony Corcyra at about 660.¹³ At the end of this survey of early maritime power in the Aegean, Thucydides summarizes it in a most niggardly fashion, as having been "inconsiderable."

In one of the tersest of statements, Thucydides describes the decisive moment in the final transformation of the political relations of the

ancient Greeks to the sea: "The Athenians, as the Persian host advanced, resolved to forsake their city, broke up their homes, and, taking to their ships, became sailors."¹⁴

Herodotus, always more talkative than the laconic Thucydides, elaborates on these events and relates the oracle that the Athenians sought from Delphic Apollo on the eve of the Persian invasion of Greece: "Thundering Zeus shall give a wooden wall to Tritogeneis [Athena] which alone shall remain unravaged, and shall benefit you and your children. . . . O divine Salamis, you shall destroy the children of women."¹⁵ In the famous debate that followed, as to the oracle's meaning, Themistocles's view that the wooden walls referred to ships and not to the old palisade around the Acropolis prevailed. Thucydides focuses upon Themistocles as the dreamer of the vision of Athenian maritime empire and as the architect of its basis with the building of the navy, the battle of Salamis, the sea victory over Xerxes, and as the rebuilder of the Athenian walls and of a walled Piraeus, constantly harranging the Athenians that they "must make the sea their domain."¹⁶ Thus the politicization of the sea, with which both Themistocles and Herodotus were concerned, reached a climax in the events of the fifth century.

Aware of the political, economic, and cultural implications of the control of the Aegean maritime world, these two historians were also aware of the major technological events that accompanied the emergence of sea power in the Greek world. From his point of view, which is the world of the naval battles of the late fifth century, Thucydides sees the trireme as the zenith of modern naval technology and because of his concern gives the bare outline of its ultimate arrival in the Greek world: "The Corinthians are said to have first adopted something like the modern style of ship building and the oldest Hellenic triremes to have been constructed at Corinth . . . some 300 years before the Peloponnesian war."¹⁷

The culmination of Greek ship building in the trireme form represents the ultimate evolution of a maritime technology in which the Greeks, by reacting to the challenge of the sea, created an appropriate vessel. Beginning with the simpler, sleek, long, many-oared, and single sailed vessel of the Minoans and Mycenaean, they transformed the galley about 1000 by adding a heavy metallic ramming device on the prow. The introduction of shock combat resulted in the rearrangement of ship construction, which now had to be much more massive and tight. The next stage was the matter of increasing speed and ramming power, which could be done only by the addition of extra oarsmen, a prospect with obvious limits because the excessive elongation of the ship's hull to accommodate the

increase of rowing power would render the craft fragile. The appropriate technological innovation, some time in the eighth century, was to convert the deck over the rowers into a second bank of oarsmen, creating the so-called penteconter, the ship which carried Greek colonists to their new homes overseas. The final step was the addition of a lateral extension raised above the new second bank of rowers, on which a third group of rowers was placed. Thus the trireme came into existence. The fully developed trireme was 115–120 feet in length and about sixteen feet in width with 170 rowers.¹⁸

The average lifetime of the trireme was twenty years; hence, an active maritime policy in both war and commerce presupposed an extensive port development as well as craft industries connected with the building, repairing, and provisioning of ships. The military and political challenge of the sea therefore produced an extensive technological response that enriched and further differentiated Greek society.

Maritime Migration

The development of naval power and technology in the Greek world from the eighth to the sixth centuries coincided with two other important developments. First, the demographic explosion and the growth of towns outstripped the economic resources of Greece.¹⁹ The original solution to this overpopulation was overseas migration.²⁰ The great colonizations of the eighth through the sixth centuries dotted the coastlines of eastern Spain,²¹ southern Gaul,²² southern Italy,²³ Sicily,²⁴ parts of the Adriatic,²⁵ the northern Aegean,²⁶ the Black Sea,²⁷ Syria,²⁸ Egypt,²⁹ and north Africa³⁰ with over 120 colonies. When the fury of Greek maritime colonization had abated in the sixth century, the world of the closed seas had been changed beyond recognition. The Greeks had scattered over much of this littoral, established their new cities, and instituted the Hellenic way of life. For the Greeks of the fifth and fourth centuries, the geographical concept of Hellenism had greatly expanded. In a famous passage of the *Phaedo*, Plato places the following remarks in the mouth of Socrates: "I believe that the earth is very large and that we who dwell between the pillars of Hercules [Gibraltar] and the river Phasis [Caucasus] live in a small part of it about the sea, like ants or frogs about a pond . . ."³¹

Once established, the colonist polis became politically independent of the mother city, at the same time often maintaining close cultural and family ties with it. Though situated in foreign worlds, the Greek *apoikiai* were extraordinarily successful in maintaining their Hellenic style of life and culture. The contrast with the neighboring peoples gave resonance to the concept of the barbarous, the non-Greek speaker, whereas at the same time the

wealth and opulence of the colonists created the mentality of the *nouveau riche* toward the Greeks of the homeland. Nevertheless, the luminaries of the cultural world of the homeland were esteemed, and the Platos and Pindars were invited by the wealthy and powerful of the Greek new world.

The experience of the maritime colonization and the encounter with the many foreign peoples created a profound sense of self-confidence, of freedom, and opened the outside world to the Greeks physically, spiritually, and intellectually. It is important to note, however, that as of this stage of development the Greek on the sea and its coasts usually felt these sentiments and feelings, not in the depths of landlocked continents. An epigram attributed to Plato and addressed "To the Eretrians settled in Ecbatana" of Persia, pithily expresses the relation to the sea.

We having at one time abandoned the loud roaring swell of the
Aegean now dwell in the midst of the plain of Ecbatana.
Hail, o former renowned fatherland, Eretria.
Hail, Athens, neighbor of Euboeia. Hail beloved sea.³²

More gripping is the account of the return of Xenophon with the 10,000 Greeks from Mesopotamia across the mountains of northern Asia Minor toward Trebizond and their reunion there with the sea:

When they looked down on the sea, a great cry arose. Xenophon and the rear guard having heard this they pushed forward . . . And suddenly they heard the soldiers shouting "Thalatta, Thalatta," as they came closer. And they all pushed forward there, the rear guards, the pack animals, the horses, and when they had all reached the height, there they embraced one another, both generals and captains, weeping . . .³³

The epigram and the account of the joyful reunion of the Greeks with the sea, and their entry into the Milesian colony of Trebizond speak worlds for the intimacy of the Greeks with the sea. The sea gave them freedom of movement.

Economic Exploitation of the Sea

The maritime exposure of the Greeks early turned them to the economic exploitation of the sea as they realized that life could be expanded and made more bearable by reaping the wealth associated with it. The growth of population not only spurred maritime colonization but forced the Greeks to devise a method of providing the grain and meat necessary to sustain the populations of the older Greek city-states. Further, they needed metals for their war and other industries. Thus the Greek merchants and their ships soon cultivated a trade that had among its primary concerns the acquisition of the goods and money to buy this grain on markets abroad.

The Greeks adapted to this trade by developing the agricultural products of their land, wine and oil, as well as a blossoming and richly variegated pottery industry, and finally by acquiring the silver for those lands not interested in buying their pottery.³⁴

By the fifth century the Greek system of maritime trade had passed under the semi-control of Athens, and in a sense this represents the ultimate point in the evolution of the early Greek system of trade. As the anonymous Old Oligarch noted: "The choicest of things of Sicily and Italy, of Cyprus and Egypt and Lydia, or wheresoever else . . . are all swept . . . into one center."³⁵

Given the tight economic margin between sufficiency and hunger in the Greek cities, the grain imports were so important that here and there we see this fact reflected in the few surviving legislative acts. A fifth-century inscription referring to Teos in Asia Minor states: "Whoever prevents grain from being brought to Teos by any device either by land or sea or who re-exports it after it has been brought in, that man is to be put to death, both himself and his family."³⁶

But maritime commerce exploited only the surface of the sea. There was the wealth that lurked below. The poet Oppian describes, in literary form, the four basic methods of taking fish from the sea that were applied in the ancient world: hook and line, nets, wicker baskets, and the trident.³⁷ Of considerable importance was the tunny, and Greeks fished it systematically all the way from Sicily to the Aegean, up the Hellespont-Bosphorus to the shores of the Black Sea.³⁸

The fisherman hunted the treasures of the sea from above its surface, but the ancient Greek soon developed the skill of going himself below the surface of this element and there pursuing the treasures of the sea which cannot be induced, by guile or ruse, to come to him. Thus there developed among the Greeks a specialized class of fisherman: the deep-sea diver. The most famous of these, celebrated in Herodotus and elsewhere, was Scyllies of Scione. Herodotus's description of Scyllies as the best diver of his times implies that there were many divers.³⁹ That this was so is indicated by the extensive use of the sponge in ancient Greek society. In both the *Iliad* and the *Odyssey* the sponge is used for wiping the hands, face, chest, and neck, and for the cleaning off of tables and chairs in the dining room.⁴⁰ As a common household item it is quite ancient, and this implies the early existence of specialized divers into the depths of the sea. The best account of the sponge fishermen and the practice of their craft is in Oppian's *Halieutika*:

These, when they prepare themselves for their labour, use meager food and drink and indulge themselves with sleep . . . So do they zealously take all watchful care that their

breath may abide unscathed when they go down into the depths and that they may recover from past toil. But when they adventure to accomplish their mighty task, they make their vows to the blessed gods who rule the deep sea A diver is girt with a long rope above his waist and, using both hands, in one he grabs a heavy mass of lead and in his right hand he holds a sharp bill, while in the jaws of his mouth he keeps white oil Standing upon the prow he scans the waves of the sea, pondering his heavy task and the infinite water. His comrades incite and stir him to his work with encouraging words. But when he takes heart he leaps into the eddying waves and as he springs, the force of the heavy grey lead drags him down. Now when he arrives at the bottom, he spits out the oil, and it shines brightly and the gleam mingles with the water, even as a beacon showing its eye in the darkness of the night. Approaching the rocks he sees the sponges which grow on the ledges of the bottom, fixed fast to the rocks Straightway rushing upon them with the bill in his stout hand, like a mower, he cuts the body of the sponges, and he loiters not, but quickly shakes the rope, signalling to his comrades to pull him up swiftly.⁴¹

Thus these ancient Greek fishermen and divers not only harvested the sea, but they also came to know it intimately, and they figuratively became parts of the sea . . . an extension of Greece down into the sea.

Religion

The intimacy of the Greek relation to the sea is reflected in the religion of the Greeks where the seas seem to have almost as many types of spirits as of fish. The clearly dominant maritime deity, from the time of the Homeric poems, is Poseidon, the brother of Zeus and Pluto, with whom he divided the heavens, earth, and sea. It is he who gives good and bad voyages, who calms and rouses the sea. In the epic Odysseus makes sacrificial offerings to him. Thus for the classical Greeks Poseidon was clearly lord of the sea. But he had not always been so, for there are reminders in his cult of an older time when he was a god of the land and of fresh water sources. The conclusion has been drawn that as a god brought into the Greek peninsula by those who migrated from a landlocked home further to the north, the Greeks took Poseidon down to the sea when they themselves entered its domain.⁴²

The most prominent subjects of Poseidon are the nymphs known as Nereids. Originally land spirits, the Nereids were also thalattized, probably because of all the nymphs they were the ones associated with fresh water springs (as they still are in modern Greek folklore). The large troops of Nereids were given as their maritime consorts the Tritons, probably pre-Greek maritime spirits, which the Greeks adopted.

Without belaboring the point, one should conclude that the Greek's encounter with the sea transformed his gods; that is, it made seafarers of them, and further the Greeks "humanized" or anthropomorphized the deities of the sea. By this anthropomorphism the Greeks created a kindlier

and less fearful set of sea divinities and spirits. Thus in this respect the encounter with the sea did result in a considerable Hellenization of the sea at the religious level.

Greek Literature and the Sea

Greek literature makes its appearance against the immediate background of the sea and in part, in the sea. From that moment, the sea abides in the written Greek word. Though Achilles is primarily concerned with glory to be attained in land battles, nevertheless he and his comrades and allies have arrived across the waters by ship, and they live on small strip of sand at the edge of the Trojan sea, by the side of their ships. Odysseus lives on the sea, and he is concerned with its navigations and with the confrontation of its great dangers and unknown extent. Thus the sea is everywhere in these poems, and the poet describes its life in beauty and in anthropomorphic terms in a manner that shows how fresh is the impact of the adjustment to the sea. As such, it is a living experience deeply impressed on the Greek mind.

From this early beginning the imagery of the sea spread quickly into practically all literature in references to and explanation of politics, the state, love affairs, the tragic condition of human life: the winds of misfortune, the storm of life, the rudder and pilot of the ship of state, the internal storms that shatter or unsettle the soul, the mind, and the heart. The ultimate disaster culminates in "sinking."

The scientific literature attempting to present a descriptive analysis of the sea begins with the vague and theoretical considerations of the origins of the world and sees water as one of the basic elements; in some philosophical works it is the unifying element. But in the hands of Aristotle the science of the sea becomes precise, detailed, and is subjected to a certain ordering, and finally incipient extrapolations of principles.

In the *Historia Animalium* Aristotle undertakes to describe the living creatures of the heavens, the land, and the sea. Within these broader categories he dedicates an extensive space and attention to sea life with a wealth of detail that seems to have been based heavily on personal observation, the observation of fishermen and seafarers, as well as on other authors' views. He begins with the general descriptive account of the fish, the evidence for the existence of the various senses among them and the manner by which they copulate and reproduce. Aristotle's *Historia Animalium* indicates that the Greek scientific gaze took in not only the land and air, but also the sea, and did so with exhaustive detail and keen perceptivity.

Art

In the representational arts we have less evidence about the subject of the sea than is the case with the literary evidence. The older taste for the creatures of the sea, which is so marked in the arts of Minoans and Mycenaean, temporarily disappears from the art of the Greeks for a time. The ship and sailors do reappear sporadically on the vases of the Geometric period and thereafter become established only in the representations on black-figure vases of the sixth century. Here the painters treat them with a complete understanding of their functions. Often these vessels are accompanied by the dolphin, friend of sailors and leader of ships. There are scenes of swimmers, sea battles, maritime commerce,⁴³ gods, and myths of the sea.⁴⁴

Swimming, Recreation, Pleasure

In treating the theme of the Greeks and the Sea, we cannot omit mention of swimming,⁴⁵ recreation, and pleasure. In the Homeric poems the two principal heroes appear as powerful swimmers. Achilles, at one point in his pursuit of the Trojans, drove them headlong into the Xanthus River whereupon he removed his armor, plunged into the river, and pursued the swimming Trojans.⁴⁶ The case of Achilles would be logical since his mother was a Nereid or water spirit. The description of the ship-wrecked Odysseus, separated by the angry sea from his raft, swimming desperately and incessantly, is a realistic picture of the sailor struggling to save himself at sea.⁴⁷

Herodotus bears striking testimony as to the relatively widespread knowledge and ability in swimming among the Greeks of his age. About the course of the great naval battle at Salamis he writes:

There perished the general Ariabignes son of Darius and brother of Xerxes, and many others who were prominent of the Persians, Medes and the other allies, but only a few of the Greeks. For the Greeks knew how to swim . . . and they swam to Salamis. But the majority of the barbarians perished in the sea for they did not know how to swim.⁴⁸

In Plato's *Laws*, Athenaeus speaks of the ignorant and ill-formed men as those who "know neither how to write nor how to swim."⁴⁹

The question has been raised whether or not the Greeks derived pleasure from swimming and the sea, and because of the nature of the sources it is difficult to have a satisfactory answer. Indeed if one were limited to Hesiod alone, one would have to conclude that many Greeks feared or hated the sea.⁵⁰ That water sports were not parts of the major athletic contests of the Greek is probably true.⁵¹ However, there is reference to regattas during the celebration of the Panathenaia in Athens⁵² and, further, Pausanias records that at Toezene there were swimming races and regattas to honor the god Dionysos.⁵³

That the Greeks did actually combine their pleasures with the sea seems to emerge in a number of disparate sources. One such is the fourteenth of Alciphron's *Letters of Fishermen* which describes a fictitious outing of youths:

Just the other day Pamphilus with his chums hired my small boat to sail about in, the sea being calm, and at the same time to join in our fishing; then I discovered what great luxuries are provided for them from land and sea. For he couldn't endure the wooden planks of my fishing smack and reclined on some imported rugs and cloaks (he said that he couldn't possibly lie down like the rest of us on the bare decks . . .), and he asked us to contrive some shade for him by rigging up an awning from the cloth of the sail . . .

Well, as we sailed about together—Pamphilus was not alone, nor accompanied by his chums only, for a bevy of extraordinarily good-looking wenches had come along with him, all singing girls . . . my boat was full of music, and the sea rang with singing, and all was filled with gladness.⁵⁴

An author of the early Roman period, writing in Greek, composed an epigram on pleasure ships of yet another nature. The epigram is that of Antiphilus of Byzantium and is entitled "On a Ship on Board of Which Prostitutes Were Crossing the Sea Carrying about their Evil Commerce." It is the ship itself which speaks in the epigram:

Formerly I was a business partner to a man of gain,
 at that time when he took on as a passenger common Kypris.
 Kypris could gaze upon me rolling into the sea from the land.
 This is my equipment for love. There are
 delicate white sails (sheets) and a delicate seaweed
 (mattress)
 above the boards (boat bottom.)
 Now you sailors, all of you, come and mount my prow
 courageously, for I know how to carry many rowers.⁵⁵

The Food and Diet of the Greeks

Related to the question of the sea and the pleasures of the Greeks is the substantial theme of Greek diet, for as in the case of many peoples the matter of eating, though a necessity, can be, like reproduction a matter of considerable refinement and intense pleasure. The position of sea food in the Greek menu in classical times was central. Though it is true that Homer's heroes do not eat fish except under extreme necessity, that they always eat beef and mutton, and that they never sacrifice fish to the gods, already in the epics there is a complete knowledge of the Greek technology of fishing.⁵⁶

So common had sea food come to be in later times in the diet of the Greeks that the fishmarket was regulated by the state, and fish was looked on as a staple for the masses, which should be made available cheaply and abundantly, as well as the domain of the wealthy gourmets. The ichthyoma-

nia of the Greeks attained such proportions that as a national vice it was ranked equal with their lechery. Athenaeus relates that in a famous case "The orator Demosthenes reviled Philocrates for licentiousness and luxury in eating, because he spent the money derived from his treason on harlots and fish."⁵⁷ The role of the fish cook had high standing, according to Athenaeus. His status was an elevated one in urban society, and a really good cook, as he was always sought after, was unbearably arrogant.

After having established that wisdom and art are essential to the successful cook—and here it is the skill of the cook in preparing fish that is the standard—a cook informs his colleague that a really good cook cannot work for the poor or the miserly. The host must be rich and generous.

No, Draco, I won't take you on for a job unless you are likely to spend the day as a table-maker with a lavish abundance of good materials. For I never go to a man until I first make sure who is giving the sacrificial feast, or what people he has invited Take for example the class that belongs in the port. A sea-captain offers sacrifice to pay a vow; he has lost the mast or rudder of his ship and completely wrecked it I let that kind of man alone, because he never does anything for pleasure While the libations are poured he is calculating how big a share of the loss he can levy on the passengers But another man has sailed into port from Byzantium; only two days' voyage without a scratch; he has made money, and is overjoyed that he has made a profit of ten or twelve percent. He is full of talk about his fares, he belches forth his loans, celebrating a debauch with the help of tough panders. Up to him I sidle, purring, the moment he disembarks; I put my hand in his, I remind him of Zeus the Saviour, I am all engrossed in the thought of serving him. That's my way!⁵⁸

These super cooks have their favorite recipes for the cuisine of the fish fanciers, including one (the menu of which has survived) twelve-course fish dinner. Athenaeus and his authorities distinguish between those fish that are for the poorer classes and those that only the more affluent can afford. Further, in his effort to be complete, this author informs his readers what the qualities are of various fish and where the best ones are to be sought. Having enriched his public with this essential information, he surpasses other authors on fish by pointing out the various medical consequences which ichthyophagy produces and what preventative measures ought to be taken. Inasmuch as he is writing for a world where lechery and ichthyophagy were conspicuous, he finished this section of his treatise by noting the effects of fish eating on erotic life: "The mollusks incite to pleasure and desire, especially the flesh of the octopus . . . but the red mullet will give no strength to the glands. For she is the daughter of the virgin Artemis and loathes the rising passion"⁵⁹

The status of the fish had risen, since Homeric times, not only in the esteem, value, and social hierarchy of man, but also in those of the gods.

Whereas we see no mention of the sacrifice of fish to the gods in Homer, it abounds in later Greek society.⁶⁰ Having thus led their gods to and into the sea, and having given them a baptism by salt water, the gods, like the Greeks, became eaters of the flesh of fish.

This close association with fish and with the sea is reflected in the role the sea and fish played in Greek humor and proverbs. The most famous of these proverbs, both in ancient and modern Greek is

Πῦρ γυνή καὶ θάλαττα, κακὰ τρία,
Fire, woman, and sea, evils three.

Related to this very rich store of proverbs is the body of lore, stories, and jokes that have to do with fish, fishermen, fish fanciers, and fishmongers. Of these too, Athenaeus is a treasure trove, and I shall close my discourse with a few of these. One such anecdote illustrates the ichthyomania of the Greeks:

When his slave failed to buy fish in the market, the epicure Dorion flogged him and told him to recite the names of the best fishes. And when the slave enumerated sea-perch, sea-lizard, conger-eel and others of that sort, he (faintly) said, 'I told you to recite the names of fish, not gods.'⁶¹

There emerges from the gourmandic literature of the Greeks a class of heroes famous for their epic ichthyophagy. Of these perhaps the most renowned was Philoxenus, the dithyrambic poet of Cythera. He met death, fittingly, while he assailed the maritime viands of Syracuse, attempting to ingest an entire octopus of a yard's length. Not having devoured the head, he asked that he be allowed to take it with him to the grave, as he lay dying.

Philoxenus . . . once prayed that he might get a throat three cubits long. "I want," he said, "to take the longest possible time in swallowing and have all kinds of food to delight me at one and the same time."⁶²

The gourmand Euphranor, on learning of the death of a fellow ichthyophage while he was swallowing a hot cut of fish, cried, "Death is a sacrilegious robber."⁶³

The consideration of our subject, the Greeks and the Sea, has taken us from the sublime to the slightly ridiculous, and so I must become serious and bring this introduction to a close. The picture that emerges from this rapid analysis of the Greek encounter with the sea constitutes, I think, an astonishing testimony to the fundamental transformation of the nation in its encounter with nature. A people originally landlocked reacted to the challenges of the Mediterranean by adapting their bodies, souls, and minds to live by, on, and in the sea. In mastering the sea, they were enriched, and more importantly, their bodies, their minds, and their souls became free. Lesky summarized this pithily by quoting Goethe: "A free sea makes man free."⁶⁴

Notes

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42. See Lesky, *Thalatta*, 88–148 who treats the subject with perception and in great detail.

43. Lesky, *Thalatta*, passim, has devoted the majority of his great book to the subject of the sea and Greek literature. See also A. Montagu, *The History of the Dolphin* (Los Angeles, 1963); E. B. Stebbins, *The Dolphin in the Literature and Art of Greece and Rome* (Menasha, 1929); X. Krieger, *Der Kampf zwischen Peleus und Thetis in der griechischen Vasenmalerei. Eine Typologische Untersuchung* (1975); F. Moll, *Das Schiff in der bildenden Kunst* (1928).

44. S. Lattimore, *The Marine Thiasos in Greek Sculpture* (Los Angeles, 1976); J. Ringel, *Marine Motifs on Ancient Coins* (Haifa, 1984); K. Schepard, *The Fish-Tailed Monster in Greek and Etruscan Art* (1940); D. von Bothmer, *The Amasis Painter and his World. Vase-Painting in Sixth Century B.C.* (New York, 1985), 218ff. For an ancient description of such a work of art, see Aelian, *On Animals*, 6.6 (trans. Benner) in Loeb.

45. E. Mehl, *Antike Schwimmkunst* (Munich, 1927).

46. *Iliad*, 21.31.
47. *Odyssey*, 305–375, 391ff.
48. Herodotus, 8.89.
49. Plato, *Laws*, 3.689d.
50. Hesiod, *Works*, 618–694.
51. Lesky, *Thalatta*, 23–24.
52. H. W. Parke, *Festivals of the Athenians* (Ithaca, 1977), 37.
53. Pausanias, 2.35.
54. Alciphron 1.22, (trans. A. R. Benner) Loeb ed. (Cambridge, 1962).
55. *Anthologia Graeca*, 9. 415.
56. Lesky, *Thalatta*, 18–23. See also Athenaeus, *Deipnosophistae* (trans. Gulick), 7. 297, 303, 325, Loeb ed. (Cambridge, 1967), for fish sacrifice.
57. Athenaeus, 7. 343.
58. *Ibid.*, 292 (translation C.B. Gulick).
59. *Ibid.*, 325 (translation C.B. Gulick).
60. See note 56 above.
61. Athenaeus, 8. 337–338; (translation C.B. Gulick).
62. *Ibid.*, 341.
63. *Ibid.*, 345.
64. Lesky, *Thalatta*, 57.

THE GREEKS AND THE SEA
AS REFLECTED IN ATTIC VASE PAINTING

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The vast topic of this two-day conference makes me sigh with the fishermen of Brittany, "Oh Lord, your sea is so big and my boat is so small," with the emphasis on the second part, particularly apt for my modest offering and, incidentally, for my family's punning coat of arms—a rudderless silver boat without oars in an azure sea.

Lest you expect me to produce contemporary vase paintings depicting such historic sea battles as Salamis, let me explain at the outset that vase paintings of the Archaic and Classic periods did not portray contemporary political events and that, in any case, nature—be it seascapes or landscapes—played a minor role in an art that concentrated on the human figure and treated man's surroundings more like stage props. In artistic shorthand, a column would stand for a porch, a door for a house, a tree for a forest, and a rock for a mountain. The seashore, as in the fight between Theseus and Skiron,¹ would be indicated not so much by waves, but by a sea turtle; in fishing scenes like that on the inside of a red-figured drinking cup in Boston (fig. 1)² the rock that acts as perch for the boy merges into the water, and lest we misunderstand the scene, the lower half of the tondo is shown in what I call an "aquarium" view, filled as it is with the denizens of the deep—fish galore, an octopus, and a fisherman's creel. By the same token, the visit of Theseus to the palace of his divine father Poseidon on the bottom of the sea, an interlude best known in literature from Bakchylides, though depicted on vases already much earlier, is rendered by columns (fig. 2). The young Theseus, wearing the new robe he got from Amphitrite, is about to return to the ship that will take him and his fellow Athenians to Crete. By the simple expedient of showing the young hero between the powerful arms of a Triton, the painter of this cup in the Metropolitan Museum³ has identified both the



Fig. 1. Boy fishing. Interior of an Attic red-figured kylix, Boston 00.8024. Attributed to the Ambrosios Painter. Late sixth century B.C.

locale and the occasion, and, more than that, the confident expression of Theseus anticipates his forthcoming victory over the Minotaur and the end of Athens's tribute to King Minos.

To the eminently practical Greeks, the sea, sometimes calm like a pond, at other times whipped by the storms into a roiling turbulence, was closely linked to ships, for in a country that depended on sea lanes for communication, trade, victories in wars, and colonies, the freedom of the seas and all the benefits an enterprising people could derive from it provided the Greeks with both a challenge and an opportunity, denied other countries, either landlocked or, if bordering on the Arctic, with a dearth of ice-free harbors. The Greeks, of course, were not the first to treat the Mediterranean and, by extension, the Black Sea as *mare nostrum*. Egyptian shipbuilding can be traced back to 3000 B.C., and the Phoenicians, oppressed by the Assyrians on land, took to the sea and established their outposts on the north coast of Africa and the coast of Spain, and at one time or another came into conflict with Sicily and other powers in the



Fig. 2 Theseus leaving the palace of Poseidon on the bottom of the sea. Obverse of the exterior of an Attic red-figured kylix, type C, New York 53.11.4 (Pulitzer Bequest), augmented by 1970.46 (Gift of E.D. Blake Vermeule, 1970). Attributed to the Briseis Painter. About 470 B.C.

western Mediterranean. Victories of Egypt over the so-called "sea people" in 1227 and 1197 B.C. were commemorated on reliefs in Medinet Habu, and may reflect clashes with the Minoans whose domination of the sea was coming to an end. The earliest Greek sea battle that we hear of thanks to Thucydides took place between Corinth and Kerkyra in 664 B.C., yet there may well have been earlier engagements for which we have no literary documentation.

On a number of geometric vases of the eighth century B.C. lively



a



b



c



d

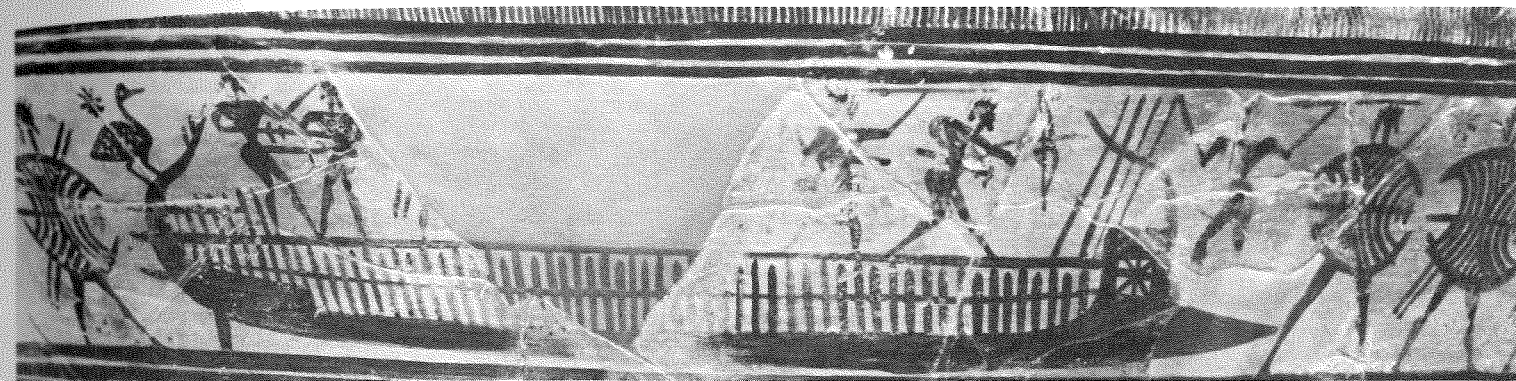


Fig. 4. Fight on a ship. Detail from the middle zone of an Attic geometric krater, New York 34. 11. 2 Eighth century B.C.

combats take place on ships, with men overboard and in imminent danger of drowning (fig. 3 a, b, c, d).⁴ We would give much to know more about these naval engagements, which are hardly mythological, but must refer to the deceased, probably Athenian sea-captains, on whose tombs these kraters—one in New York⁵ (fig. 4) almost complete, the other divided between Athens, Brussels, and the Louvre⁶ (fig 5 a, b)—were erected. Also of the geometric period is a Corinthian mixing bowl in Toronto⁷ that shows in remarkable detail an oared ship; the number of oarsmen need not to be taken literally, as the vase painter first painted the ship for the entire length of the vase and then added the rowers at suitable intervals. A very similar bowl in the British Museum⁸ is more animated because it shows a hero stepping into a boat with a lady (fig. 6). This may well be the abduction of Helen by Paris (rather than Theseus carrying off Ariadne after his slaying of the Minotaur, an exploit rendered possible by the help, if not connivance, of the daughter of King Minos), and we may have on the London vase the incident that sparked the Trojan War. All the same, looking closely at the lady seized by the man, we may well ask like Doctor Faustus in Christopher Marlowe's play, "Was this the face that launched a thousand ships, / And burnt the topless towers of Ilium?" Another early naval encounter occurs on one of the earliest vases bearing a potter's signature, Aristonothos (fig. 7).⁹ An oared warship on the left attacks an armed merchantman, probably Phoenician, as we can tell from the lookout on top of the masthead.

The menacing ram of the boat on the left presages a victory for that party, for presently the ram, reinforced with metal, will pierce the heavier sailing ship and cause it to sink. The artist has kept the two boats at a certain distance, not wishing to show the actual ramming, which in any case would have been difficult to show tactically correct. On such occasions the boat attempting to ram an opponent had to change course at the last

Fig. 3 a-d. (*opposite page*) Shipwreck. Details from the neck of an Attic geometric oinochoe, Munich inv. 8696. (*Archäologischer Anzeiger* 1954, cols 260-264, figs 1-3). Mid-eighth century B.C.

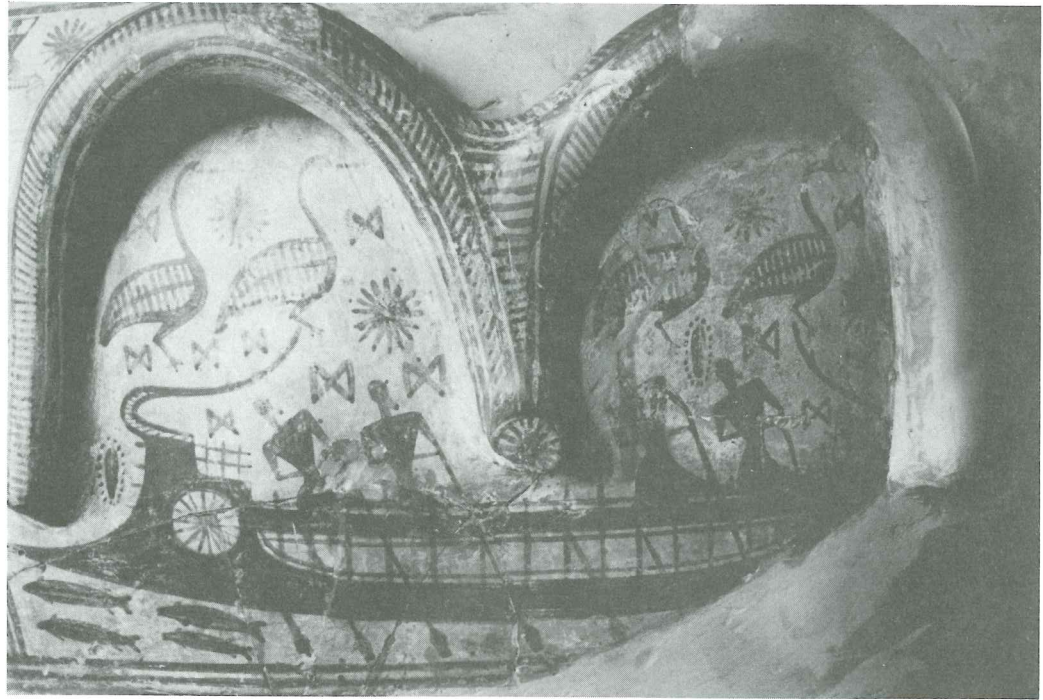


Fig. 5 a, b. Naval engagement. Details of an Attic geometric krater, Louvre A 517 and A 528 (F. Villard, *Corpus Vasorum Antiquorum* Louvre, fasc. 11, 1954, III H b pl. 1 and pl. 7,7). Mid-eighth century B.C.

moment in order to hit the other vessel at right angles to it, more or less in the middle, broadside as it were, for at either prow or stern the ram would miss the target or be deflected, a maneuver only a well-trained crew could execute with reasonable hopes of success.

Actually, there could not have been much difference in the construction of a Greek ship from one part of Greece to another, and even the fleet of the Persians trapped in the waters of Salamis was, as we know, manned not by Persians, but by crews pressed into service by the Great King from his satrapies—Phoenicia, Egypt, Cyprus, and Anatolia.

If I introduced the word “Attic” into the title of this paper, it was more a concession, if not homage, to the numerous and better drawn Attic ships, and because by and large we are quite well informed about the ships, especially the triremes that were built, launched, and stored in slipsheds on the Attic waterfront.¹⁰

A case in point is a Corinthian drinking cup with a big ship, rather crudely drawn, on one side of the exterior (fig. 8).¹¹ Contrast it with the Attic oared ship as shown on the François vase in Florence (fig. 9).¹² The scene on the right shows the return of Theseus’s boat to the shores of



Fig. 5 b

Crete—a joyous event for the crew and the rescued victims, after the safe escape from the labyrinth. Beazley's description cannot be bettered:

The ship is a long, low, open rowing-vessel, with a single sail. We notice the stem-post and the foredeck; the railing; the stern curving round and ending in a pair of swan's heads, strengthened by a timber with a strut. The steersman, warmly dressed, sits at the stern with the two steering-oars. The mast has been lowered—the only representation of this in antiquity, although the process is often described in Homer. There is great excite-

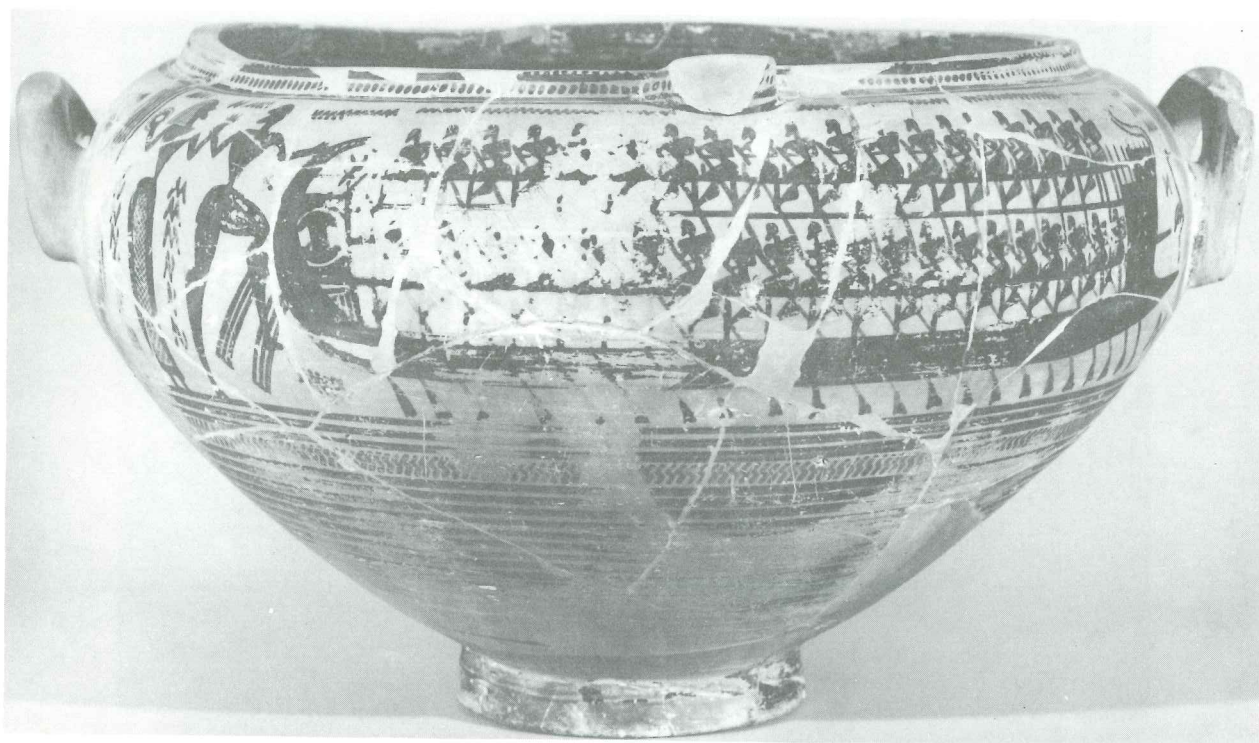


Fig. 6. Man leading a woman to a ship. Obverse of an Attic spouted krater, London 1899. 2-19.1. (For the subject see also D. Williams, *Greek Vases*, 1985, p. 17). About 730-720 B. C.

ment and delight. Some of the rowers rise from their seats, and one of them throws his arms up in joy. Another man has jumped overboard and swims to land, with a trudgeon-like stroke. Sixteen rowers are preserved, and there were probably thirty—the vessel was a triakonter.¹³

After the Attic ship had delivered Theseus and his fellow victims—the seven boys and seven girls, that made up the tribute of Athens to King Minos—the boat and the crew sailed off some safe distance from the shore near Knossos, instead of mooring in hostile waters, to return later, in case Theseus succeeded in slaying the monster and thus put an end to the human sacrifice. Note that the sailors wear brimmed hats and that the ship shows the proper method of beaching, with the stern turned toward the shore. The painter Kleitias was careful to indicate that the ship is still afloat and has shown the water, which ends under the feet of Phaidimos, the last one to join the victory dance on the beach.

The picture is on the rim of the vase, a volute krater, and its long and narrow proportions allow the painter to show not only the dance, but also the transport. If the water level appears to be higher than the dry land, the difference would not have bothered an ancient spectator, for he would have realized at once that the dancing youths and maidens should



Fig. 7. Pirates attacking a merchantman. Reverse of a stemmed black-figured krater found at Cerveteri; Rome, Museo del Palazzo dei Conservatori. Signed by Aristonothos as potter. Argive (?), seventh century B. C.

occupy the narrow strip fully, with the heads almost touching the upper edge and the feet firmly on the ground. The crew and ship are shown on a smaller scale, forming almost a separate picture, but linked with the main theme, the dance, through the evident excitement of the oarsmen, the impatient swimmer, and the helmsman who looks around.

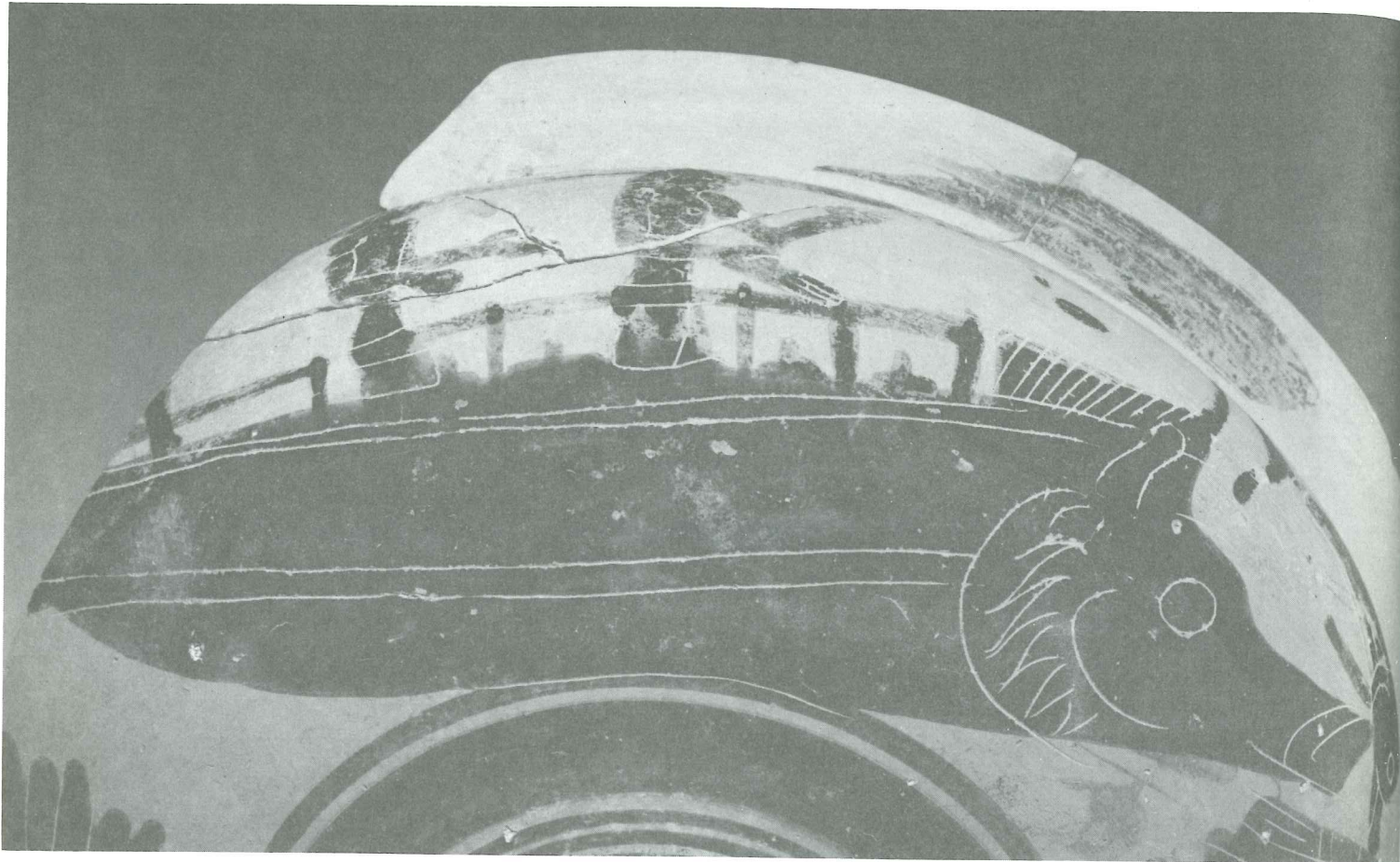


Fig. 8. Obverse of a Middle-Corinthian kylix, Boston 1989. 677. About 600–575 B.C.

On another Attic vase of the same period, a Siana cup in Toledo (fig. 10),¹⁴ the stern of a beached ship is shown near the handle, while a battle rages on land. We ask ourselves whether this could not refer to the plight of the Greeks at Troy, when the Trojans had advanced to the Greek encampment. Part of a ship would have been explicit enough for an ancient spectator to realize at once which battle was meant. Obviously in choosing between ships or fighting men, the artist was not going to give too much space on the cup exterior to several boats—the emphasis being, as usual in Greek art, on the heroes, rather than the timber.

The most memorable boat painted by Exekias, the famous Attic potter and painter, is his signed cup in Munich (fig. 11).¹⁵ Without Dionysos, the grapevine, and some of the dolphins, this image was used by the medalist who designed the first Onassis Center gold medal awarded to Professor Robert Browning. The background of the Exekias cup is not the ordinary



Fig. 9. Return of the Athenian ship from safe off-shore anchorage to Crete to convey Theseus and the other Athenian youths and maidens back to Athens. From the rim of an Attic black-figured volute krater, Florence 4209 (the 'François Vase'), signed in two places by Kleitias as painter and Ergotimos as potter. About 570 B.C.

color of clay, but is coated with a special glaze that in firing turns a glossy red, the color of coral or sealing wax. There is no horizon: sea and sky merge. Dionysos in a sailing vessel is surrounded by playful dolphins: seven black ones that are swimming in the sea, and two little ones that are leaping, silhouetted in white against the hull of the ship. This vessel, under full sail, with every nautical detail accurately drawn, is quite miraculous, for an enormous grapevine with seven clusters of grapes grows on the starboard side and spreads out like a canopy over the sail.

Drinking cups were filled with wine: add wine to the Exekias cup and the dolphins as well as the boat are in their natural liquid element, as on a cup in Paris¹⁶ with Poseidon riding a hippocamp and boats along the rim. It is no coincidence that a number of different Attic vases, intended to hold wine mixed with water, are decorated on the inside of the neck and rim with marine decorations, which, when viewed at an angle from above, give the appearance of ships at sea. Exekias himself invented this scheme for a dinos,¹⁷ a handleless mixing bowl with a rounded bottom that was meant to rest on a tall stand. From the dinos this decoration spread to column kraters, and even to volute kraters, of which the finest example is on Thera.¹⁸ The ships thus shown are mostly oared biremes under sail, and the waterline is indicated by stylized waves, as if the sea were always choppy. Most of the time the ships shown are of the shallow rowboat variety and are equipped with a single sail, a prow, commonly in the shape of a boar's head, a stern curving upward, ending in a figurehead, the *apblaston*, two steering rudders, and a ladder.



Fig. 10. Stern of a beached vessel, fight. Obverse of an Attic black-figured Siana cup lent to the Toledo Museum of Art. Attributed to the Heidelberg Painter. About 570–560 B.C.

When oared ships under sail appear on the horizon, as it were, on the rims of cups or kraters, the scale is small, and there is not enough detail to allow us to recognize the difference between warships and merchantmen. Obviously such boats, when not engaged in trade, could in times of war be pressed into naval service. Ready access to ports and the sea was essential for trade, and the coastal cities soon became more powerful than landlocked communities devoted to agriculture. Strabo makes fun of Kyme, on the Aeolian coast, renowned in antiquity for its stupidity: he recounts the famous anecdote that it took the Cumaeans three centuries, after having settled there, before they realized that they could charge harbor fees and take advantage of their location by the sea—*ὅτι ἐπὶ θαλάττῃ πόλιν οἰκεῖν*.¹⁹

Most Greeks were, if not exposed to the sea, familiar with it; hence the prophecy of Tiresias's ghost to Odysseus he would find a peaceful end by shouldering an oar and walking inland until he came to a place where salt was unknown and the villagers would mistake his oar for a winnowing fan.

The outside of cups, however, provided a bigger surface for decoration, and it is on cup exteriors that we get the best illustration of ships. This preference for the exterior of cups makes even more sense when we



Fig. 11. Dionysos sailing. Interior of an Attic black-figured eye cup, Munich 2044. Signed by Exekias as potter. About 530 B.C.

remember that cups not in use were suspended from one handle hanging on the wall with the tondo on the inside facing it. A cup in the British Museum²⁰ shows, as Lionel Casson recognized many years ago,²¹ a lively scene of pirates attacking merchantmen (fig. 12 a, b). The pirates are aboard their particular galleys called *hemiolia*, or "one and a half," after the arrangement of oarsmen in two tiers. Since galleys used sails only for cruising and used oars for maneuvering in combat, pirates developed a galley with two banks of oarsmen, of which the lower had the full complement of rowers, whereas the upper occupied only the forward part of the ship. On the London cup there are twelve in the lower line, but only six in the upper. The pirates thus combined the advantages of sail and oar when pursuing a merchantman and could afford to wait until the last moment to clear the deck for action, to take down the sail and the yardarm, and to lower the mast. This was the task of the half-bank of rowers in the upper tier, and we see on the two sides of the same cup two consecutive events involving the same pirate galley and its prey, a heavy merchantman traveling under shortened sail. One side shows the pursuit itself with the half-contingent of upper oarsmen still rowing under full sail; the other side presents in loving detail the critical moment when the captain of the pirate ship has given his orders for the upper oarsmen to get busy with the sail, the tackle, and the mast. If the distance between the two opponents is the same, we must attribute this to the artistic convention of telescoping: even in battle scenes the range is deliberately narrowed, and the opposing parties always look as if they were in hand-to-hand combat, when in reality in any attack more distance is required for missiles like spears and arrows. The small boat that appears under one handle is unmanned, and I suspect that it is being towed. After the successful capture of the precious cargo taken from the merchantman, it may be used as an *aviso* or dispatch boat, or even for transport of part of the booty.

Another contemporary black-figured cup in the Louvre,²² signed by the potter Nikosthenes, shows on the exterior four galleys sailing side by side, two on each half. This is a peaceful scene. The galleys are propelled solely by the wind, and while there are proper openings for the oars, neither the oars nor the crew working them are shown. The side bearing the potter's signature should be considered the better side if only because the boats racing alongside each other have a lookout on the prow dressed in a himation. Under each handle a dolphin is leaping to the right, following the boats. The sirens perched on tendrils springing from the handles look back with much curiosity. At first one may be tempted to interpret them as the fabled sirens against whom Odysseus took such special precautions, a subject I

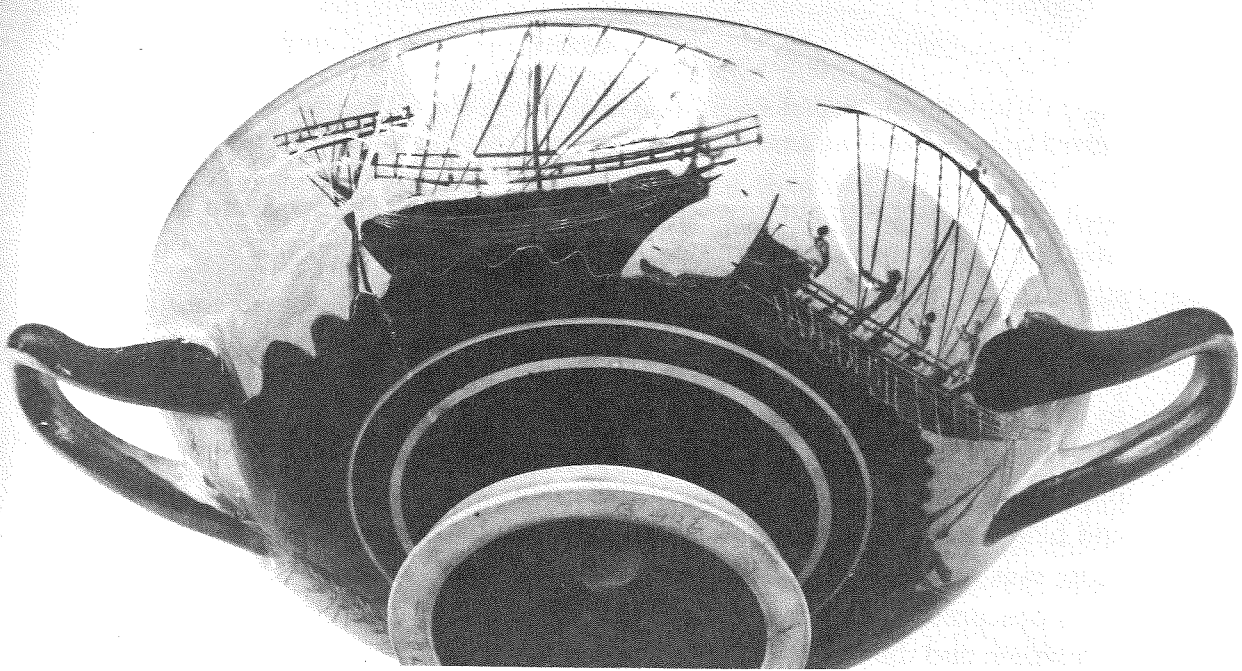
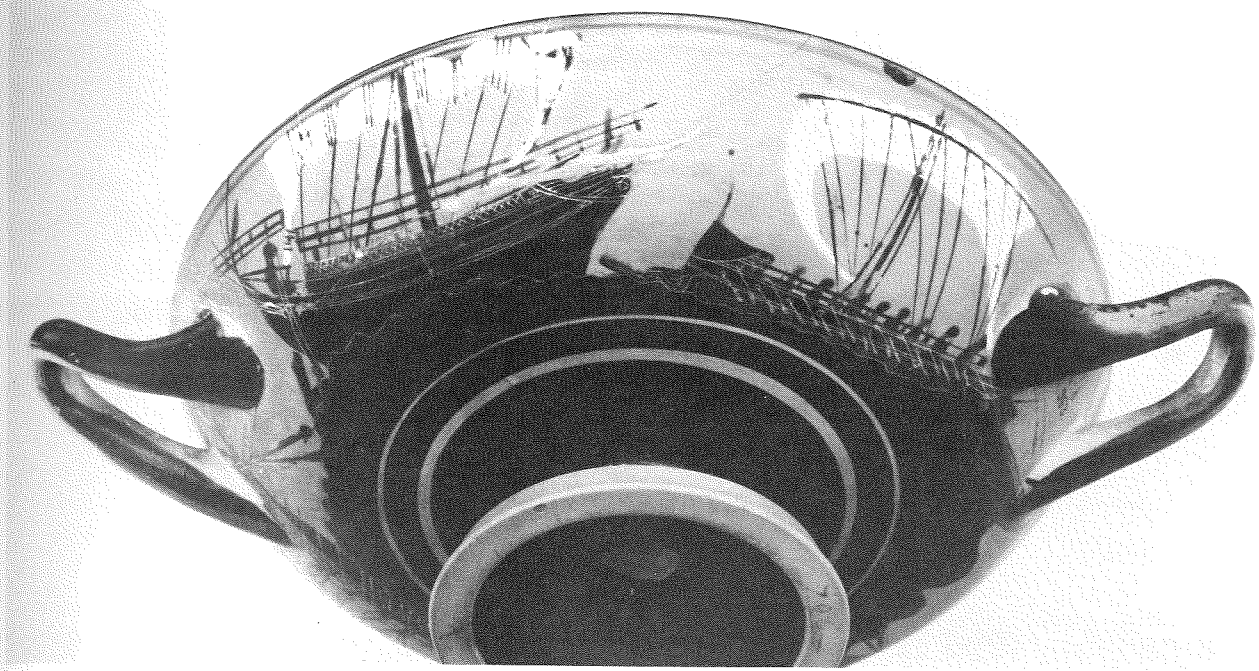


Fig. 12 a, b. Pirates attacking merchantmen. Exterior of an Attic black-figured kylix. London B 436. About 520 B.C.

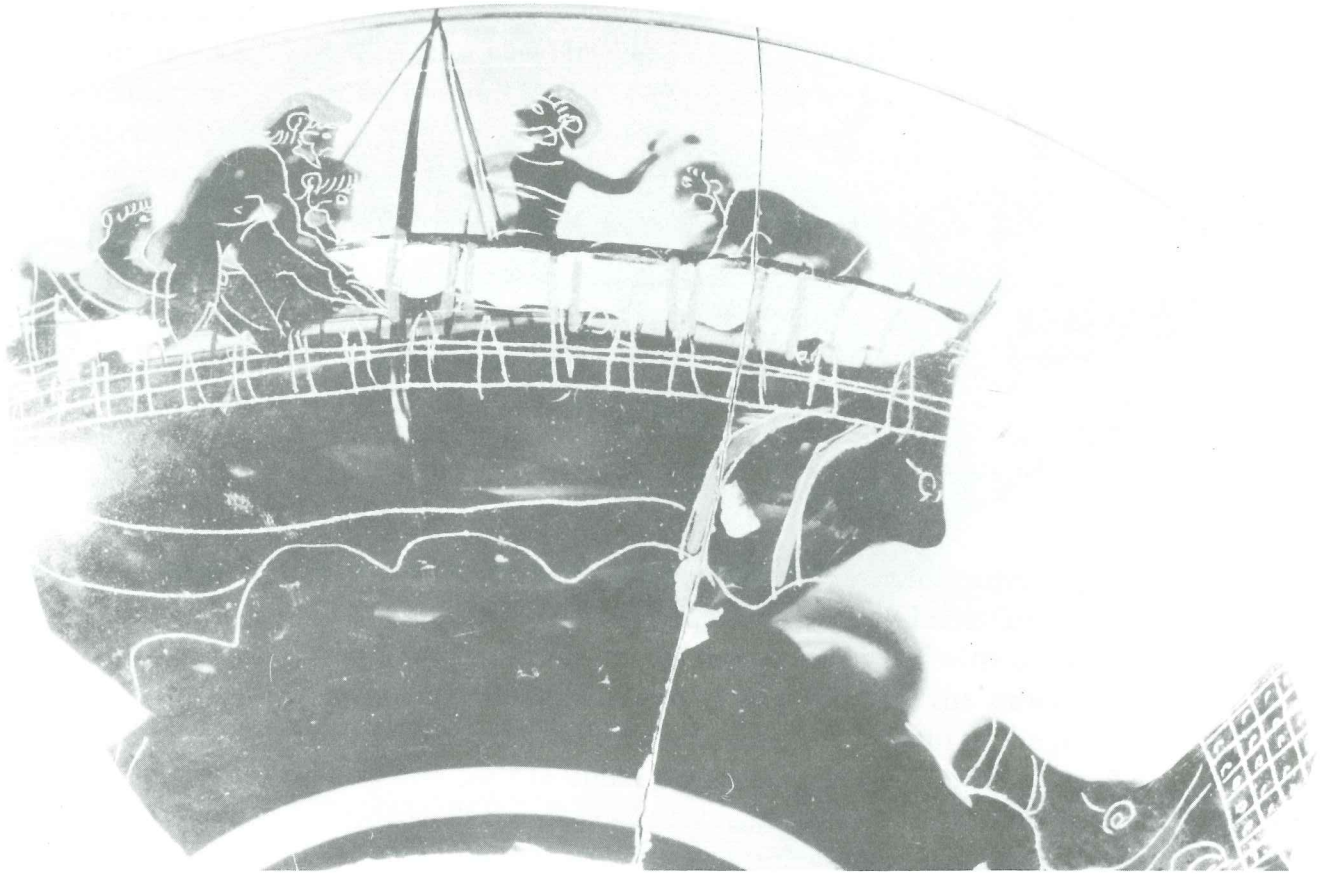


Fig. 13. The taking down of the sail. Detail from the exterior of a fragmentary Attic black-figured kylix in Heidelberg (see note 21).

shall discuss later, but the mythical bird-women on the Louvre cup neither sing nor play a musical instrument, and are no more lethal than the many sirens that appear perched on chariots in departure scenes.

As mentioned earlier in reference to the cup in Toledo, Attic vase painters did not always show entire ships as their chief subjects, but were quite happy to limit themselves to their salient parts, the prow or the stern. The prow, in particular, was often chosen as decoration on eye cups for the space between the eyes and the handles. Earliest of these cups with foreparts of ships around and below each handle is an eye cup in Copenhagen (fig. 14).²³ Wishing to show sails as well, the painter has moved the masts forward, their mid-sections obscured when the handles were applied later. The two hulls almost join below, and the two sails above the handles merge into one.

On a cup in the collection of Christos Bastis (fig. 15)²⁴ the painter has kept the foreparts of two ships well separated. He, too, has moved the mast and the sail nearer to the prow, but has refrained from joining

the sails. Not content with leaving these truncated boats on dry land, as it were, he has added a strip of water clearly marked by a wavy line below the bow of each boat.

A third solution to the problem of decorating the section was proposed by the painter of an eye cup in the Metropolitan Museum (fig. 16).²⁵ It had once belonged to Cecil Torr, the first British archaeologist who in 1894 wrote a book on ancient ships. As on the other galleys, the mast is forward, the brail ropes are indicated, and there are bunt lines, but in contrast to the Bastis cup he has omitted the sailyard or brace. Novel to his treatment is the addition of oars with the blades showing—the moment the oars hit the water—and the water itself is no longer limited to the parts of the ships, but continues all the way around the cup, thus producing the unexpected effect that the hoplites between the big apotropaic eyes appear to be walking on water, well before Christ on the Sea of Galilee. The two foreparts of ships are no longer clearly separated but touch or cross each other in rather a muddle. This, of course, is an area where even the most accomplished vase painter might justifiably become somewhat confused, and each artist is more or less on his own.

A fragment of a cup in Innsbruck (fig. 17)²⁶ shows the two half-ships at an odd angle, as if they had been in a rear-to-rear collision, but the bunt lines are shown very clearly, the bow screen is drawn with much detail, and the oarports are visible.

Finally, on a cup in Sydney,²⁷ the ultimate heraldic symmetry is achieved: the two halves are joined, the mast is flanked by halyards, bunt lines and brail ropes are present, and the water extends from one ram to the other. The only slight error is the angle of the oars, all of which are immersed in the waves, as if this two-headed boat were moving from right to left. We may well wonder how it can be steered.

In a galley under full sail, the oars were hardly needed, and the rowers could take a break. On a neck amphora in Mannheim (fig. 18 a, b)²⁸ the artist has concentrated on the steering mechanism at the poop of a cruising ship. The balustrade with its rails extend beyond the raised stern. The picture also shows very clearly the ropes attached to the corners of the sail, called sheets in nautical language, and the slings at the end of the brail ropes. The bow screen had the same criss-cross pattern already observed on the Copenhagen cup. An enormous white bird is perched on the stempost. The waves are rendered rather summarily and slope down fore and aft, partly obscuring the handle ornaments of palmettes.

A somewhat coarser rendering of an oared vessel under sail occurs in the panel of a kalpis in The Hague.²⁹ Here seven oars appear with the

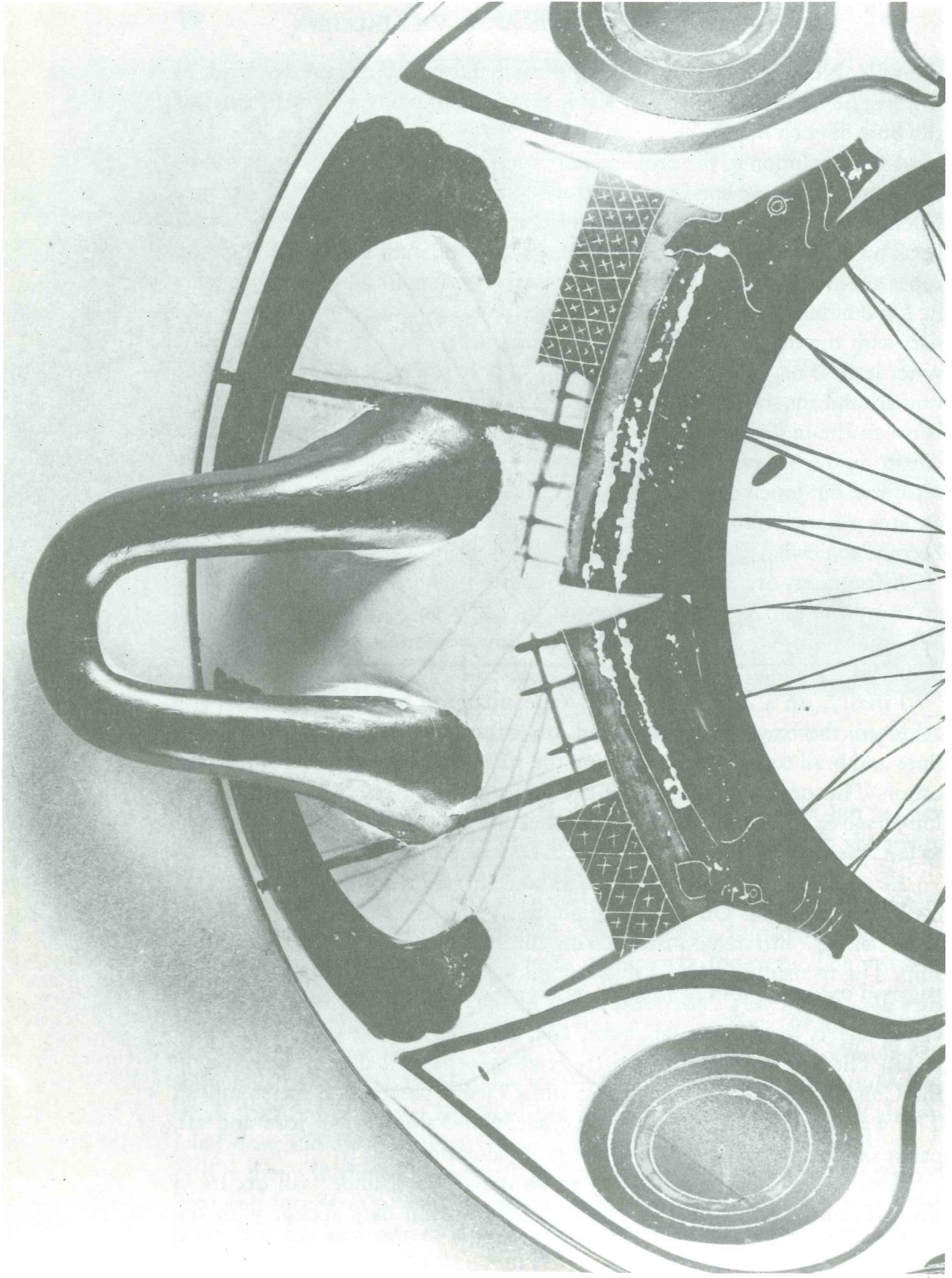


Fig. 14. Prows of two ships around a handle. Exterior of an Attic black-figured eye cup, Copenhagen, NY Carlsberg I.N. 3385. About 539. B.C.

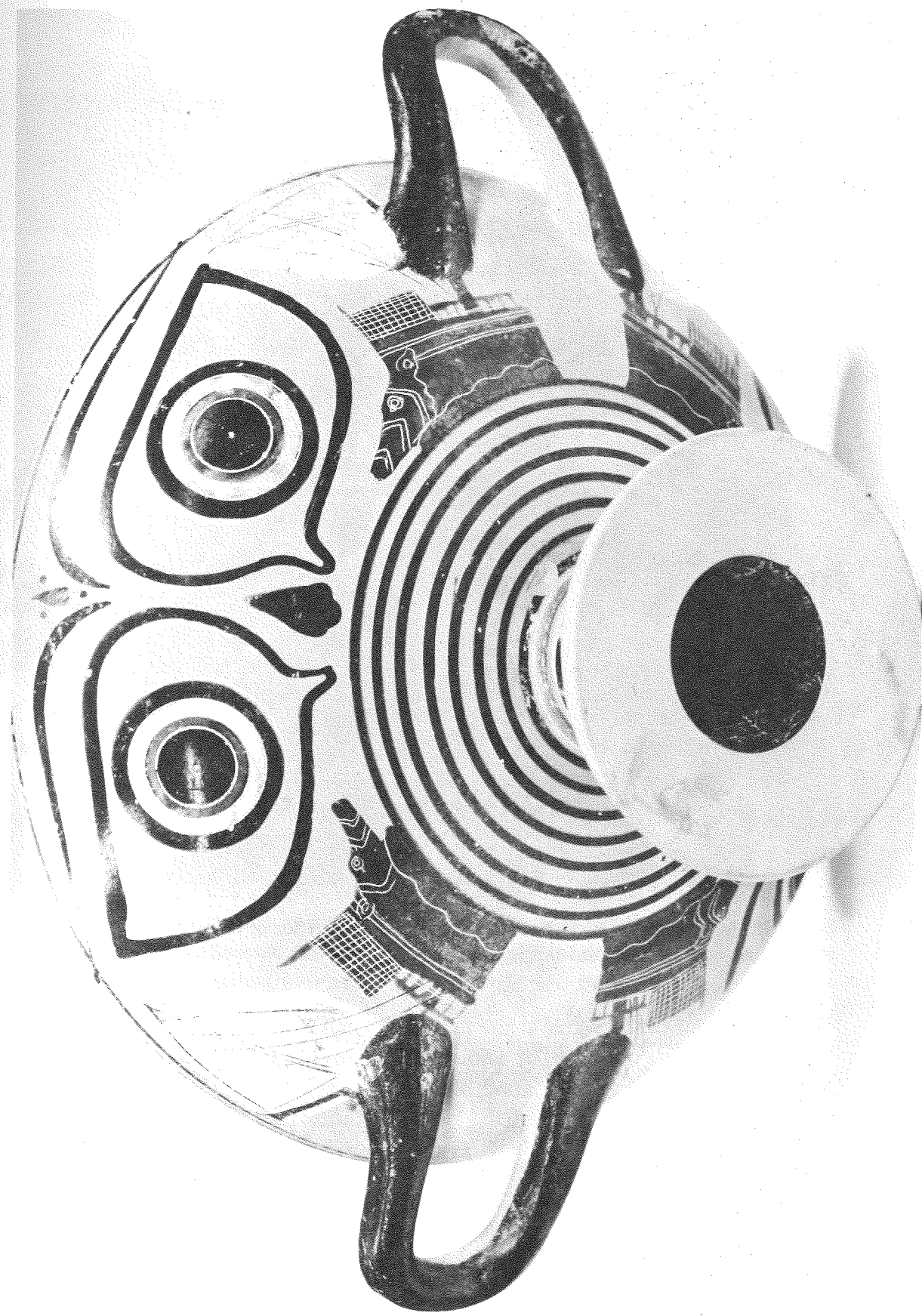


Fig. 15. Two foreparts of ships around each handle. Exterior of an Attic black-figured eye-cup, New York, Christos Bastis Collection. About 520 B.C.

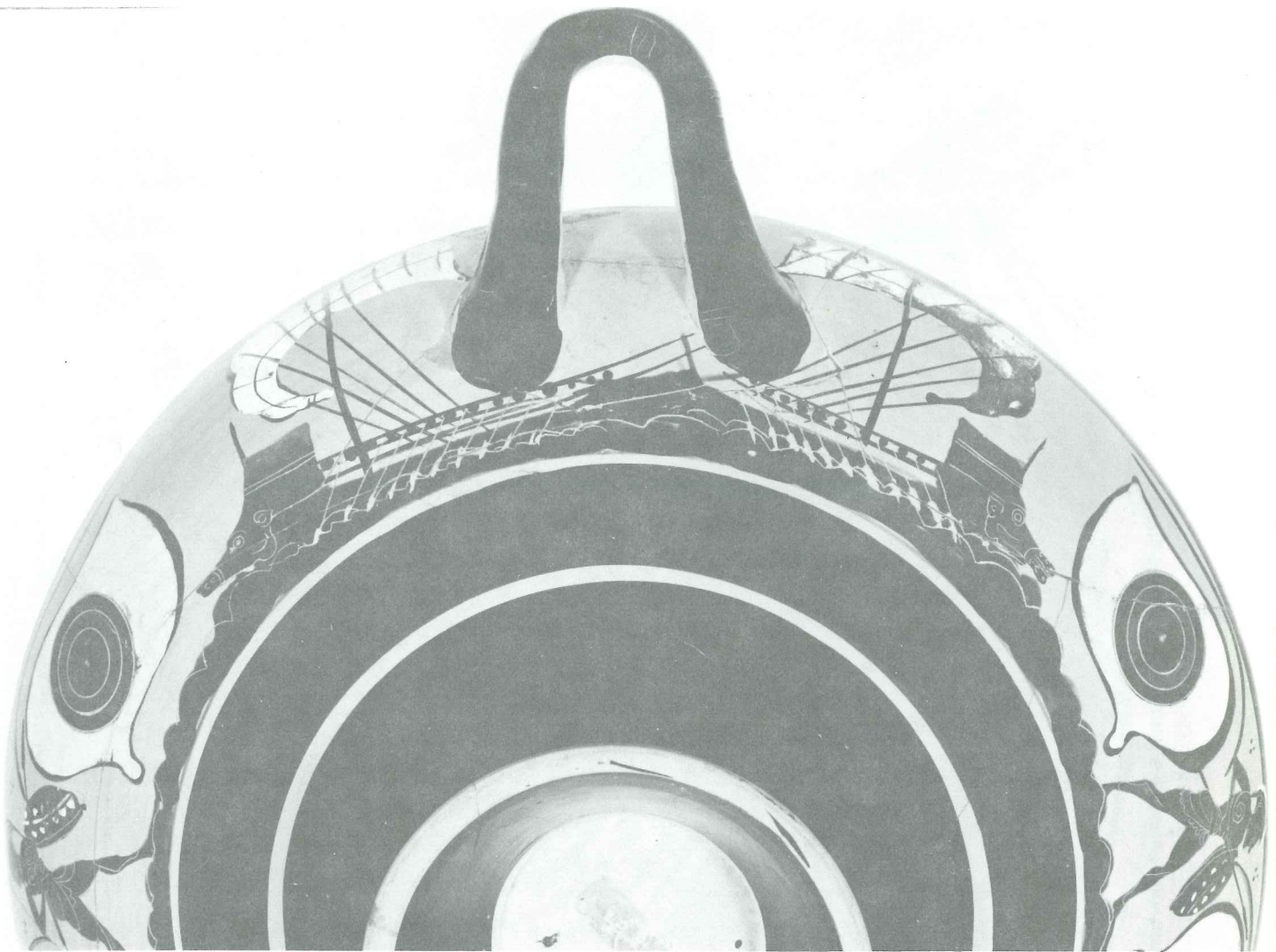


Fig. 16. Two ships, back to back, around each handle. Exterior of an Attic black-figured Chalchidizing cup, New York 56. 171. 36 (Fletcher Fund, 1956). About 520 B.C.

blades well out of the water at the end of the pull, but the oars are not connected to the five oarsmen, of whom two face in the wrong direction. This picture, however, gives us a good rendering of the bunt lines, the sailyard, and the so-called truck, the fixed block at the top of the mast, through which the halyards work, as well as the braces, the ropes attached to the sailyard. The bow of the ship is incorrectly restored.

More rewarding is the curious scene on an oinochoe in London (fig. 19).³⁰ A nude youth is walking the plank holding onto the sturdy stempost, prodded from behind by another youth as if he wanted to push him into the

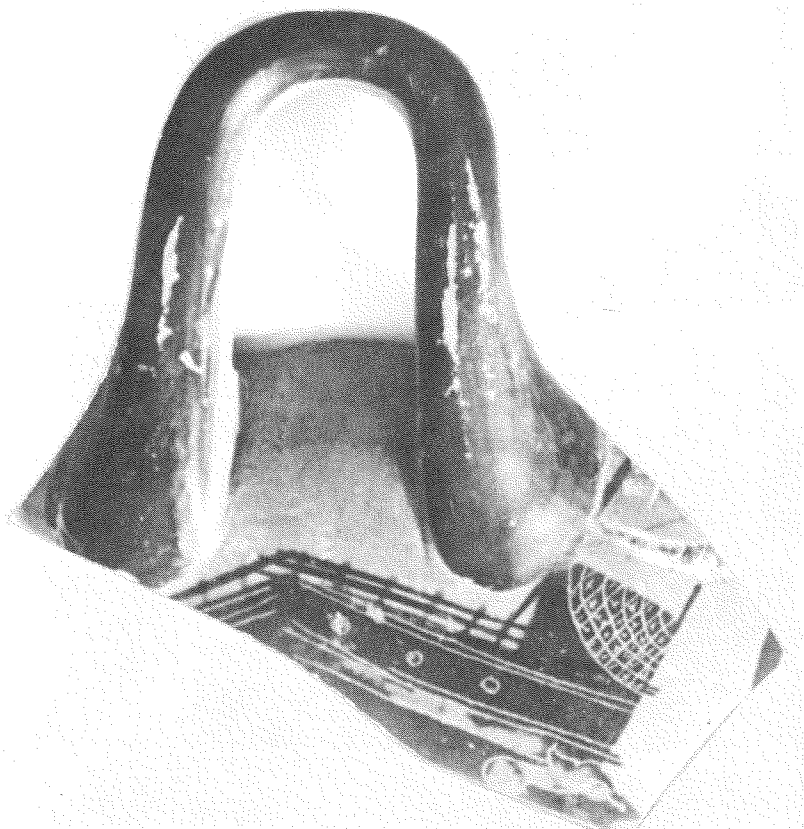


Fig. 17. Two foreparts of ships around a handle. Fragment from the exterior of an Attic black-figured eye cup, Innsbruck, Archäologische Sammlung der Universität II 12 (12). Last quarter of the sixth century B.C.

water. A third man, seated behind them, raises his left hand in one of those mute but ambiguous gestures so common on Greek vases. The poor man holding onto the stempost has been variously interpreted—Protesilaos by H. B. Walters, who thought he might be the first Greek landing at Troy,³¹ or, as Williams proposed in 1958,³² Arion, the famous poet, who having been thrown overboard was saved by a dolphin that carried him ashore. The ship is not landing, since it moves in the wrong direction. A proper beachhead landing should be astern, as demonstrated by the hoplites on a fragment found on the Acropolis.³³ What is beautifully clear on the London vase are the nautical details: the wales extend beyond the stern, between the wales and the supports the heads of the crew appear; the seated figure above with his raised hand is an indication that there is an upper level of oarsmen; the rigging is quite explicit: the sailyard is attached to the

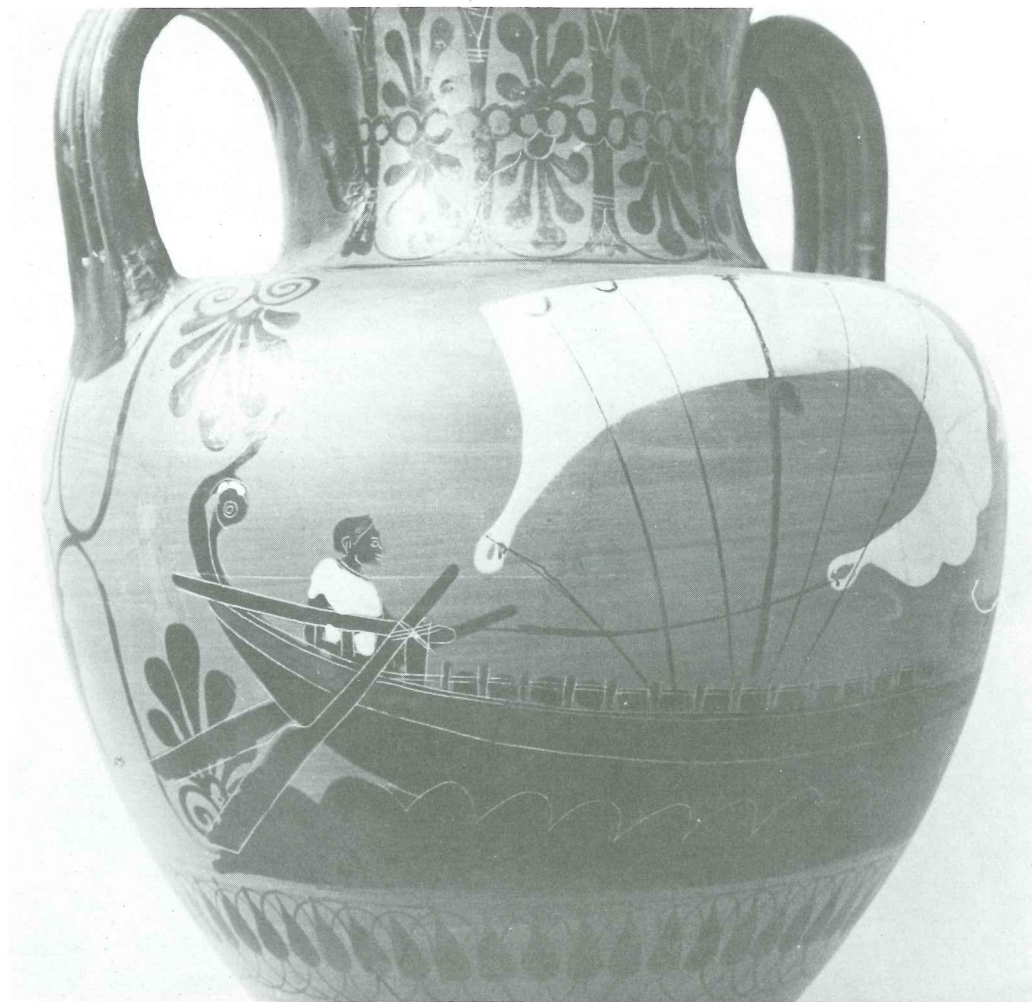


Fig. 18 a, b. Sailing vessel. Reverse of an Attic black-figured neck amphora, Mannheim, Reiss-Museum. Attributed to the Toulouse Painter. Last quarter of the sixth century B.C.

mast by a sling; the mast is supported by forestay and backstay; the bunt lines appear, and we catch a glimpse of the special attachments along the sailyard over which the brailing ropes pass. The three fish painted in the water below tell us that we are still on the open sea, even though branches in the field suggest that land is near.

Equally mysterious is the episode depicted on a neck amphora in London (fig. 20).³⁴ An oared ship passes by a rock on which a raven is perched. On the near plane an enormous hoplite, fully armed, flies through the air. H. B. Walters thought this figure should be the shade of Achilles passing over the Greek ships near Cape Sigeum on his way to the Islands of the Blessed, an interpretation accepted by Morrison and Williams in 1968. I



Fig. 18 b.

cannot come up with a different or better interpretation, but show this vase for the sake of the two curved lines below the bow which should stand for the so-called cathead, a projecting timber from which the bow anchor is slung.

There are, of course, other ways of marine transport, especially for the gods and certain heroes: Poseidon rides a hippocamp, Aphrodite a goose, Hyakinthos a swan, Phrixos a ram, Europa a bull, Deianeira a centaur, and the Nereids ride dolphins and kete (sea monsters). Herakles borrows the bowl of Helios to cross the sea. Apollo quite regularly employs his tripod as Apollo Hyperpontios seated in the bowl and playing the lyre, as on a neck amphora in the Louvre (fig.21),³⁵ the earliest representation of this aspect of the god. Here the artist was not quite sure how to render this difficult subject: the tripod almost touches the ground, Apollo's quiver and bow are suspended from the struts of the tripod legs, and the sea is marked by two

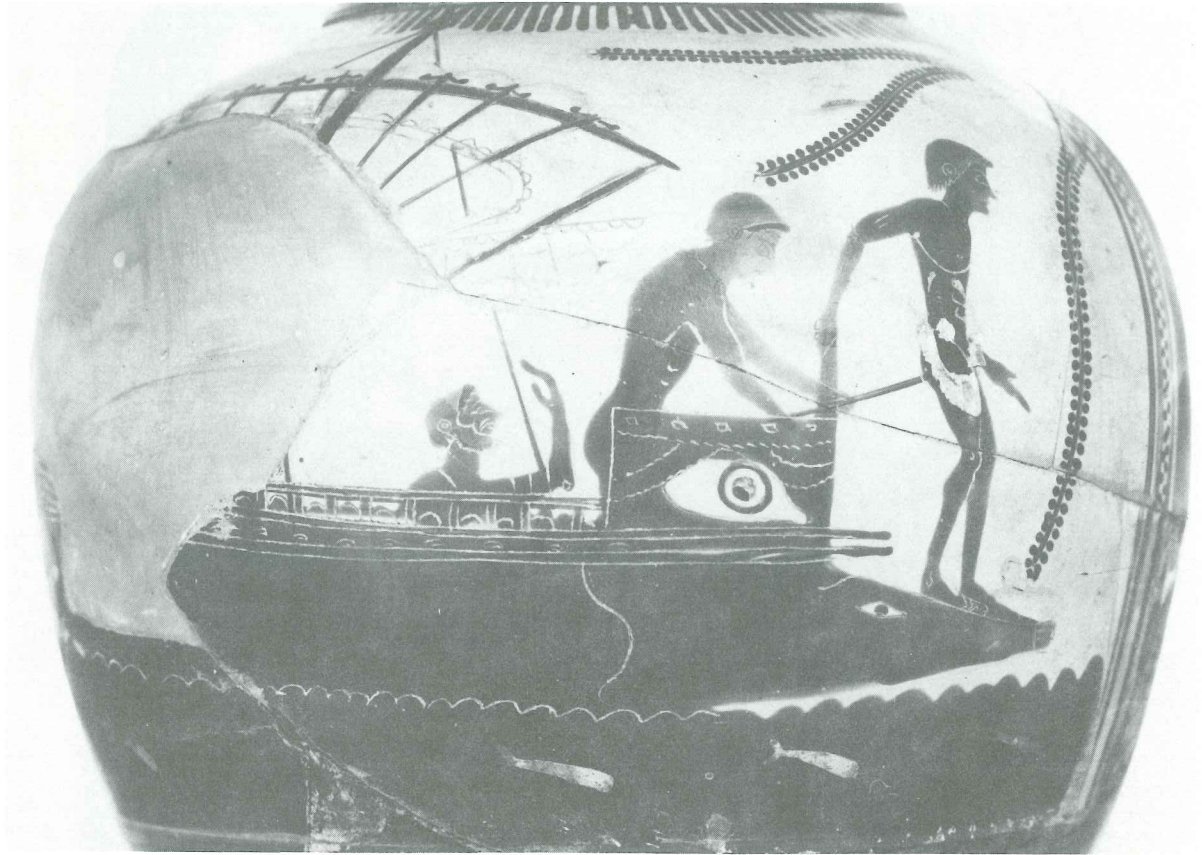


Fig. 19. Man about to jump ashore? Detail of an Attic black-figured oinochoe, shape 1 London B 508. Assigned to the Keyside Class and stylistically linked to the Leagros Group. About 515–500 B.C.

playful dolphins in the background. The two flanking figures should be his sister Artemis and his mother Leto, but we are puzzled by the lack of differentiation between the sea and the dry land on which the goddesses stand. Lastly, and this is important, how does the tripod fly over the sea? This problem was successfully solved some thirty years later by a red-figure artist, the Berlin Painter (fig. 22),³⁶ who attached wings to the tripod. Apollo is more relaxed and better seated, and the tripod, with proper feet, looks sturdier. That Apollo is indeed flying over the waves like a hovercraft is properly indicated by the water line of the sea level, with enough water shown to accommodate fish and an octopus. The dolphins, of course, are leaping through the air, and since both face right, like Apollo, we can be sure that they will escort the god on his journey.

Similarly, the earlier red-figure artist Oltos has left us a cavalcade of hoplites who are mounted on dolphins, each properly named “epidelphin-



Fig. 20. Fully armed winged hero flying over the sea. Obverse of an Attic black-figure neck amphora, London, B 240. About 515–500 B.C.

ios,” literally “one on a dolphin.” Where, however, is the sea? The answer is supplied by the shape of the vase, a psykter (fig. 23).³⁷ This was a vase filled with wine and cooled by being put in a krater that held cold water. The psykter is built like a boat with a keel and floats, when filled with wine, without capsizing. At a banquet anybody looking at the figures of dolphins painted on the psykter would think of them as being in their element. When wine was ladled from the floating container, the psykter was rocked like a boat, and the illusion was perfect. Apollo hovering over the sea and hoplites riding dolphins, while somewhat preternatural, do not strain our imagination; rather they open our eyes to the way the Greeks combined the miraculous with solid reality. This same freedom of moving from the real world to the imaginary made vase painters dwell with much pleasure on mythical sea voyages like the adventures of Odysseus as he neared the Bay of Naples, the land of the sirens, who had much the same effect on seafarers as the fabled Lorelei on the banks of the Rhine; in some ways they were more dangerous than Scylla and Charybdis, and many an unwary mariner came to grief. Odysseus, not wanting to forgo the pleasure of listening to their music, plugged the ears of his crew with wax and had



Fig. 21. Apollo on his tripod travelling over the sea. Obverse of an Attic black-figured neck amphora, Louvre Cp. 10610. Attributed to the Ready Painter. About 530 B.C.

himself tied to the mast, thus free to listen to the bewitching music, while the crew, undistracted, kept a steady course. A black-figured oinochoe in the collection of Gregory Callimanopulos in New York (fig. 24),³⁸ illustrates this perilous encounter. On the left, three sirens perched on a rock perform: one is playing the lyre, one is singing, the third is playing the flutes. The big ship of Odysseus passes the sirens on a dangerously close course; the oarsmen, of course, have their ears stuffed and do not even see them, but Odysseus, erect against the mast to which he is tied, cries out, "Loosen me," but fortunately for him (and his wife, Penelope, I might add) his plea falls literally on deaf ears.

On another Attic vase, some forty years later, a red-figured stamnos in



Fig. 22. Apollo on his winged tripod flying over the sea. Attic red-figured hydria, Vatican 16568. Attributed to the Berlin Painter. About 500 B.C.

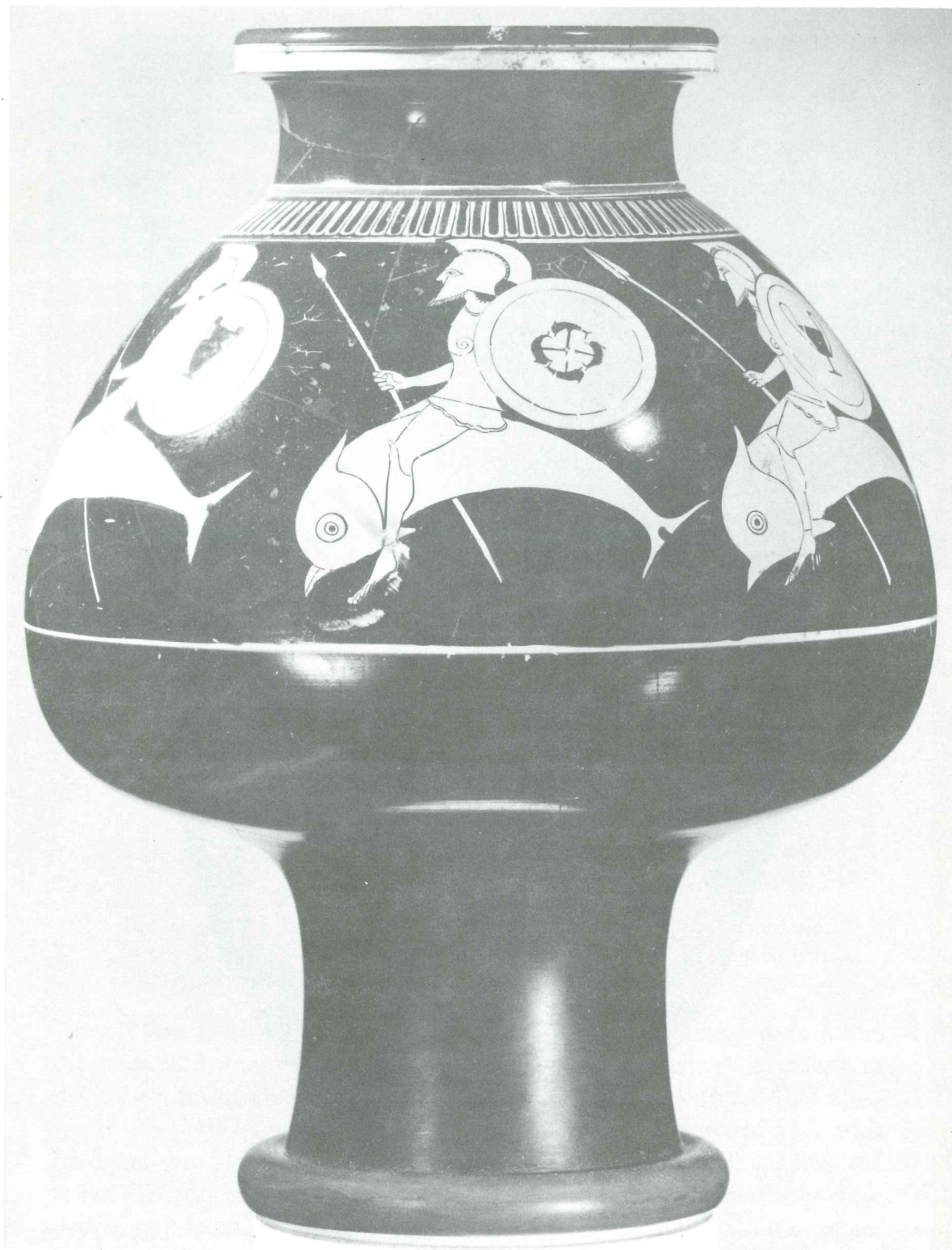


Fig. 23. Six dolphin-riders. Attic red-figured psykter. New York 1989.281.69 (Gift of Norbert Schimmel Trust, 1989). Attributed to Oltos. About 520–510 B.C.



Fig. 24. Odysseus sailing past the Sirens. Attic black-figured oinochoe, shape 1, New York, Collection of Gregory Callimanopulos. Assigned to the Keyside Class. About 515–500 B.C.



Fig. 25. Odysseus in his boat, rowed by his crew, between the Sirens. Obverse of an Attic red-figured stamnos, London E 440. Attributed to the Siren Painter, named after this vase. About 470 B.C.

London (fig. 25),³⁹ the sail is reefed, and the ship is shown in full. Once again the sirens are above, but this time they play no musical instruments. One siren is named Himeropa; she and her companion on the facing rock are still singing, while their sister, her eyes closed, in despair at seeing her prey escape, plunges headlong into the sea. Perhaps she is Parthenope who survived her dive and surfaced near Naples, the town originally named after her. In red figure the background is black, and to separate the sea from the sky the artist has used a dilute glaze for the water, rendering it almost translucent. The helmsman of the boat has draped his warm wrap over the aphiaston of the stern.

My third example of this scene—and I might add that there are not many devoted to this subject—is not Attic, but on a vase made and painted in Paestum (fig. 26),⁴⁰ not too far from the locality where the incident in Odysseus's homecoming took place. The boat looks more like a pleasure craft or fishing vessel with two rowers facing each other, accompanied by three other crew members wrapped in heavy garments, of whom the helms-

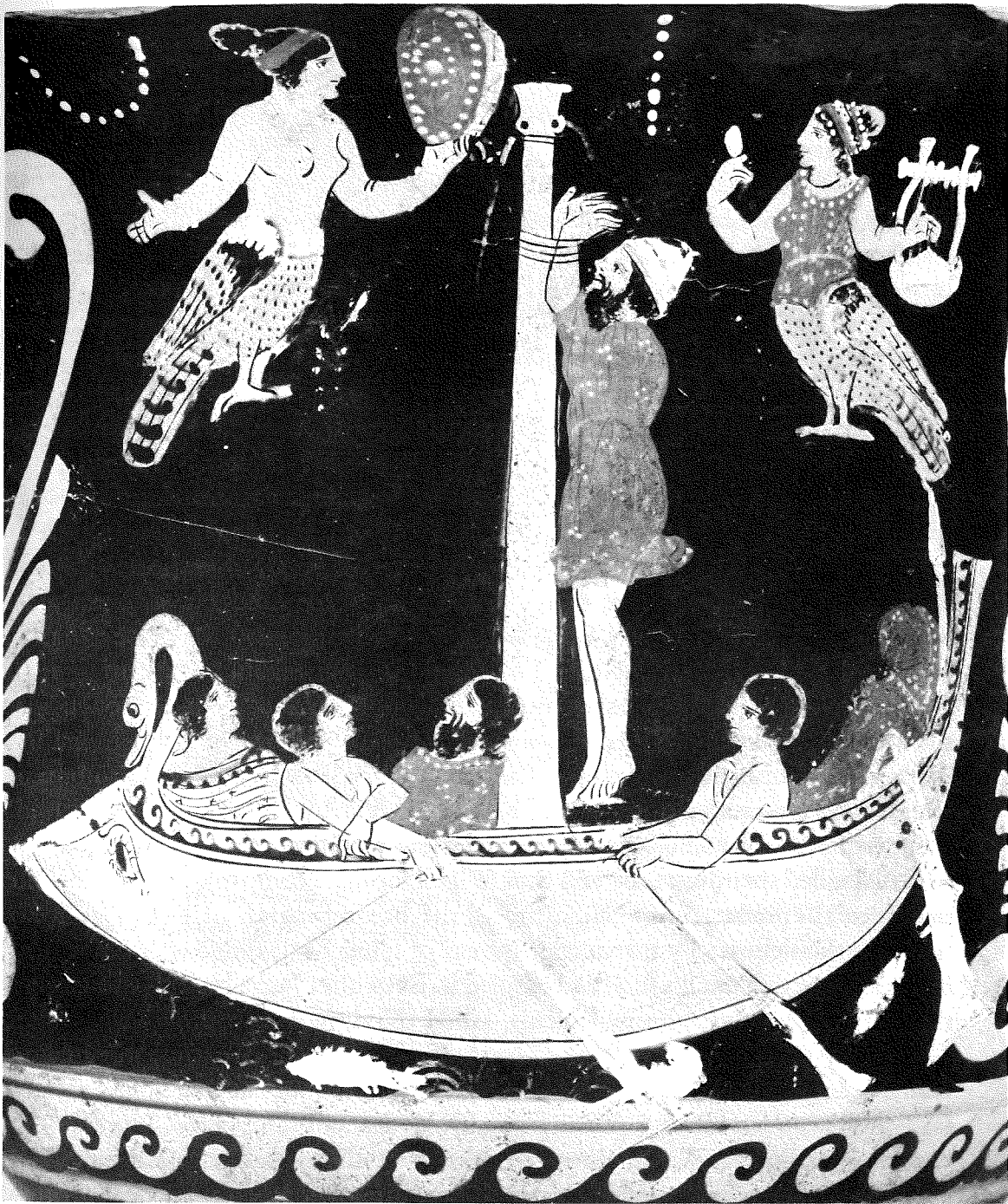


Fig. 26. Odysseus and the Sirens. Obverse of a Paestan red-figured bell krater, Berlin V.I. 4532. Attributed to Python. About 330 B.C.

man has covered his face, while the other two act more like passengers. The mast is enormous, and there is no sail. Odysseus on tip-toe vainly strains against the rope that ties him. By now—the middle of the fourth century B.C.—the sirens are no longer birds with the necks and heads of women, but are handsome ladies down to the groin, where their human upper bodies emerge from the bodies of birds. The siren on the left, naked to her hips, holds a tambourine and opens her right hand invitingly to Odysseus. Her sister, behind Odysseus, is fully dressed and even more alluring. In her left hand she holds a lyre and in her right hand a mirror. Two fish and a shell below the boat denote the sea.

The return of Odysseus to Ithaca took many years, and his adventures included a long stay with Calypso, the building of a float, his shipwreck, and finally, his arrival at Phaeacia whence he was brought back to Ithaca by the Phaeacians. His long exposure to the sea and its perils, as well as his endurance and survival, have made him and his odyssey justly famous, largely thanks to the Homeric epic.

The most celebrated ship in antiquity, however, was the *Argo*, built by Jason in his quest for the Golden Fleece. She counted among her crew Orpheus, Herakles, the Dioskouroi, the Boreads, and many others collectively known as the Argonauts. Lynkeus was the prorates, the bow officer, and Tiphys the helmsman. The *Argo* sailed from Iolkos, the modern Volos, and reached her destination in far away Kolchis after many adventures: among them the stay on Lemnos, gladly received there by the women of that island who had killed their husbands and thus longed for male company, their initiation into the mysteries of Samothrace, the boxing match of Pollux and Amykos, the delivery by the sons of Boreas of blind King Phineus from the harpies that either ate his food or befouled it. Even after Jason had fulfilled all the tasks required of him in Kolchis, killed the dragon, and obtained the Golden Fleece, the return of the *Argo* was delayed by many detours. In Crete, Talos, the watchman made of bronze, whose duties entailed killing all foreigners who landed, was put to sleep by Medea and then killed. It is this episode shown on a vase in Ruvo (fig. 27)⁴¹ that almost parenthetically has given us the most detailed vase painting of the stern of the *Argo*, here revealed as a trireme. Obviously it was painted from firsthand knowledge of triremes, and the large scale of the vase, as well as the beginning of a partial perspective, elucidates many particular problems that the earlier vases could not fully explain. The deck rests on curved stanchions; the two courses of planking of the outrigger are braced by a straight and by an s-curved support; the seat and the hole-pin for top level or *thranite* oarsmen can be discerned, and of the middle tier, the *zygians*, we have the port holes. The bottom oars-

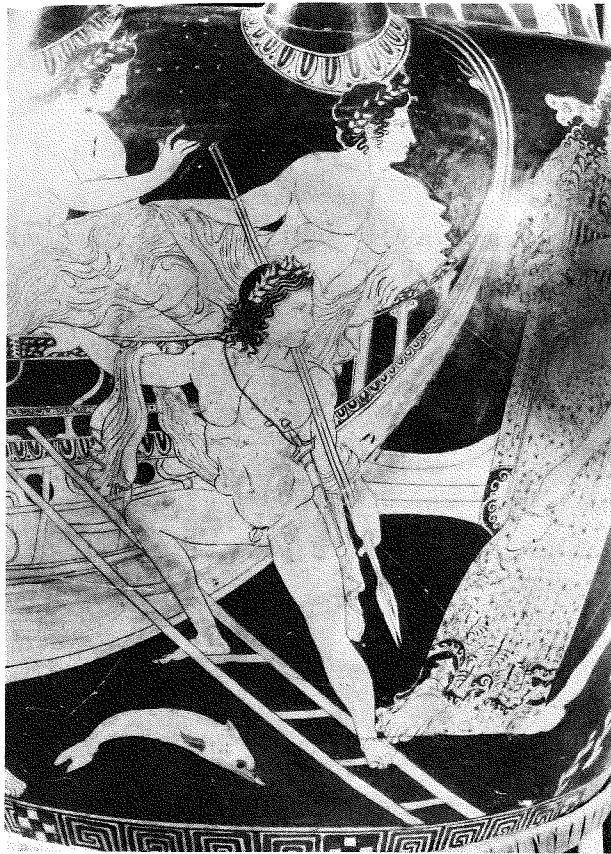


Fig. 27. Argo, the ship of the Argonauts. Detail under the left handle of an Attic red-figured volute krater that shows the death of Talos. Ruvo, Jatta 1501. Attributed to the Talos Painter, named after this vase. Late fifth century B.C.

men, the *thalamians*, whose oars would have been near the water line, pushed theirs through a tight-fitting sleeve, probably of leather, for which the ancient Greek word is *askoma*.

The perspective on this detail of the vase is a bit misleading, and Morrison and Williams⁴² struggled hard to make the drawing on the vase agree with the so-called Lenormant relief from the Erechtheum, now in the Acropolis Museum,⁴³ which shows the sideview of a trireme without the distortion of perspective. Making due allowances for artistic license, they came up with what might be a blueprint of the rather complicated structure of a trireme, which in turn led to the ultimate triumph—an actual reconstruction of an ancient trireme, built in the

Tsakakos shipyard of Keratsini, near Piraeus, and launched on 27 June 1987. On Thursday, 30 July, the trireme was towed to Poros to await the arrival of the crew for a trial run, and finally the first modern trireme named *Olympias*—for the Olympic games rather than the controversial mother of Alexander the Great, I hasten to add—was commissioned on 26 August. It has gone to sea many times since that momentous day.⁴⁴

Notes

1. As for example, on an Attic red-figured cup by the Euaion Painter in Frankfurt, J. D. Beazley, *Attic Red-Figure Vase-Painters*² (hereafter abbreviated *ARV*²), p. 796, no. 117.
2. *ARV*², p. 173, no. 9.
3. *ARV*², p. 406, no. 7.
4. On naval engagements in Greek geometric art, see Gudrun Ahlberg, *Fighting on Land and Sea in Greek Geometric Art* (Stockholm, 1971), 25–38.
5. Ahlberg, pp. 27–29, B 3, figs. 28–30.
6. *Ibid.*, 31ff.
7. J. S. Morrison and R. T. Williams, *Greek Oared Ships 900–322 B.C.* (Cambridge, 1968), p. 36, pl. 7 d.
8. *Ibid.*, pp. 28–29, pl. 4e.
9. *Ibid.*, pp. 74–75, pl. 9
10. *Ibid.*, pp. 186–192, (by D. J. Blackman).
11. *Cat. Sotheby (New York) 27 November 1989*; now Boston, Museum of Fine Arts, 1989. 677. Gift of H. Amos, M.B. Comstock, S.S. Fried, J.H. Kagan, and J.L. Murray.
12. J. D. Beazley, *Attic Black-figure Vase-painters* (Oxford, 1954), hereafter abbreviated *ABV*) p. 76, no. 1.
13. J. D. Beazley, *The Development of Attic Black-figure* (revised edition, Berkeley 1986), p. 31.
14. Collection R.F. Reichert. H.A.G. Brijder *Siana Cups II, The Heidelberg Painter* (Amsterdam 1991) p. 451, no. 375, pl. 126. Now on loan to the Toledo Museum of Art.
15. *ABV*, p. 146, no. 21.
16. Louvre F 145. Morrison and Williams, *Greek Oared Ships* p. 100, Arch. 63, pl. 16d.17.
17. Villa Giulia 50599*ABV*, p. 146, no. 20.
18. Archaeological Museum 1774. Angelos Delivorrias, *Greece and the Sea* (Amsterdam, 1987) p. 179, no. 77.
19. *Geography* 13, 3, 6.
20. Morrison and Williams, *Greek Oared Ships* p. 109, Arch. 85, pls. 19–20a.
21. *Journal of Hellenic Studies* 78 (1958): 14–18, pls. 5–6. Another splendid example of such an encounter is furnished by the outside of a fragmentary cup in Heidelberg (25/8); H. Gropengiesser *Corpus Vasorum Antiquorum Heidelberg* 4 (1970) pl. 162, 10–11; *Alltag und Fest in Athen*, Freiburg im Breisgau, 1987, pp. 10–11, here republished fig. 13 with kind permission of the Archäologisches Institut of Heidelberg.
22. *ABV*, p. 231, no. 8.
23. J. D. Beazley, *Paralipomena* (Oxford, 1971), p. 104, top; Vagn Poulsen in *Opus Nobile Festschrift Ulf Jantzen* (1969), p. 125, pls. 19–20. Here republished with kind permission of Flemming Johansen.
24. *ABV*, p. 223, s.n. 65 and *Paralipomena*, p. 109, middle; Morrison and Williams, *Greek*

- Oared Ships* pl. 16a; Diana Buitron-Oliver in *Antiquities from the Collection of Christos G. Bastis* (New York, 1987) pp. 272–273; here republished with kind permission of the owner.
25. *ABV*, p. 205, no. 14; *Paralipomena*, p. 93.25.
 26. Archäologische Sammlung der Universität, II 12 (12).
 27. *ABV*, p. 207; Morrison and Williams, *Greek Oared Ships* p. 99, Arch. 60, pl. 16a.
 28. *Münzen und Medaillen Auktion 51* (1975), pp. 50–51, no. 129, pl. 25.
 29. August Köster, *Das antike Seewesen* (Berlin, 1923), pl. facing p. 157, fig. 47.
 30. *Ibid.*, fig. 47; Morrison and Williams, *Greek Oared Ships* p. 111, Arch. 88, pl. 20d; *ABV*, p. 426, no. 10 (assigned to the Keyside Class).
 31. *Catalogue of the Greek and Etruscan Vases in the British Museum 2* (London, 1893): 247, no. B 508.
 32. R. T. Williams, *Journal of Hellenic Studies* 78 (1958): 128.
 33. *ABV*, p. 233 (Athens, Acr. 2414); D. Callipolitis-Feytmans, *Les plats attiques à figures noires* (Paris, 1974), pl. 9, no. 51; A. Delivorrias, *Greece and the Sea* (Amsterdam, 1987), p. 180, no. 78.
 34. B 240. Morrison and Williams, p. 108, Arch. 82, pl. 18c.
 35. *ABV*, p. 685, Ready Painter no. 8 (Louvre Cp 10619).
 36. *ARV²*, p. 209, no. 166.
 37. *ARV²*, pp. 1622–1623; *Paralipomena*, p. 326, Oltos no. 7 bis. Now Metropolitan Museum of Art 1989.281.69.
 38. *Paralipomena*, p. 183, Keyside Class no. 22 bis.
 39. *ARV²*, p. 289, Siren Painter, no. 1.
 40. Berlin inv. 4532; A. D. Trendall, *The Red-Figured Vases of Paestum* (British School at Rome, 1987) pp. 155, 158, no. 272, pl. 100 e, f.
 41. *ARV²*, p. 1338, no.
 42. Morrison and Williams, *Greek Oared Ships* 173ff.
 43. *Ibid.*, 284ff.
 44. I owe special thanks to R. Ramsdell (a friend and classmate of our son) who in the summer of 1990 rowed on the *Olympias* and sharing his experience with me gave me a better understanding of Greek oared ships.

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The sea has both a surface and a depth. It thus lends itself to be the paradigm for the human soul, which, as the Chorus of Sophocles's *Antigone* says, when stirred brings to the surface the blackness within.¹ The soul retains the very nature of historical time, in whose sediment are stored the experiences of an original terror. Aulus Gellius remarks that the sons of Zeus are outstanding in virtue, prudence, and strength, but the sons of Poseidon are monstrous, cruel, and alien from any hint of humanity.² The archaeology of the human spirit is one of the characteristics of ancient poetry. It consists in the attempt to consider the origins of things in light of the current experience of those things. This juxtaposition of the beginning with the present, of the roots with the flowering, tends to expose the criminality of the presumably lawful, whether it be that the fraternity at which the city aims is built on the incest of Oedipus and the fratricide of his sons, or that the name of Oedipus and the fratricide of his sons, or that the name of Oedipus himself, which like all proper names designates but does not mean, expresses the truth of the crimes he cannot will in retrospect but nonetheless cannot deny to be his very nature.

Among these double things is sailing. Sailing is the first item in a list of nine things which the Chorus of Sophocles's *Antigone* cites as evidence for the uncanniness—the δεινότης—of man.³ The Chorus is prompted to reflect on man's uncanniness, which consists, it says, in the nonexistence of any limits to man, by the daring of persons unknown to bury the body of Polyneices despite the prohibition of Creon and, as Creon has just proved to the Chorus, despite the gods' support of that prohibition. Sailing, in a most obvious way, brings together what nature has kept apart. Sailing did not exist in the Golden Age, when people lived by themselves without the contamination of the alien. The self-sufficiency of one's own leads Herodotus to distinguish between the time when Egypt was completely

isolated from the outside world and the time when it became known to others, and more importantly when it came to know others; and Herodotus expresses this difference by letting the Egyptians speak in direct discourse only when either foreigners come to their land or the foreign and strange—the un-Egyptian—arise within it.⁴ Rational discourse becomes possible only after the discovery of the other. The other is the theme of Plato's *Sophist*, and the account is assigned not to the stay-at-home Socrates but to an anonymous stranger.

For this understanding of Egypt, Herodotus is ultimately indebted to Homer, one of whose protagonists saw the cities of many men and knew their mind. Odysseus's desire to return home is informed by his knowledge of what is not at home. This knowledge of the alien tempers his knowledge of home. His justice in returning home to vindicate his wife and son is controlled by his wisdom that has no home. He is nothing but mind (μητις) and no one (οὐτις) away from home and the son of Laertes only on his return.⁵ Odysseus traveled on the sea. The sea in the form of Ocean comprehends everything on the shield of Achilles, and Ocean is the origin, the γένεσις, according to Homer, of all things, including the gods.⁶ Odysseus's search for wisdom, then, is supported by that which would be the source of his wisdom as of everything else. The understanding of all things would be grounded in the nature of all things. Such a harmony, however, of nature and knowledge, is not in accord with the prohibition not to look beyond one's own that Herodotus's Gyges urges as the essence of ancient wisdom when the king Candaules orders him to see Candaules's wife naked.⁷ To see things as they are is to uncover one's father's nakedness. It is after Solon laid down laws for the Athenians, which they were forbidden to alter for ten years, that Herodotus has him travel, and Croesus speaks of his great reputation for wisdom and wandering (σοφίης εἵνεκεν τῆς σῆς καὶ πλάνης), and calls him a philosopher (φιλοσοφέων).⁸ It seems not too farfetched to suggest that the coupling of wisdom (σοφίη) and wandering (πλάνη) is a deep-seated pun on philosophy itself: it is the union of wisdom and error. "Philosophy" in any case does not recur in Herodotus.

The Athenian Stranger of Plato's *Laws*, who has come to Crete to contaminate or enlighten the laws of the Cretans with those of Athens, remarks that ports let in more than wares.⁹ The revolutionary *Republic* is at home in the Piraeus. The transgressiveness of knowledge comes to light especially clearly when it shows up with imperialism. For Thucydides, Athens as a sea power is linked closely with its restless innovativeness, so that its ultimate ambition seems to have been to be a floating city, to be everywhere and nowhere, rootless and all-powerful.¹⁰ For the young,

Thucydides says, the Sicilian expedition expressed their longing for an absent sight and vision, which could never be satisfied no matter how far Athens expanded.¹¹ The issue Thucydides raises, of the disharmony between the universality of thought and its spurious counterpart in political imperialism, nowhere is more clearly expressed than in Horace. I begin with Horace in order to show how the problem of forgotten beginnings, which Greek poetry had discovered, was transmitted and reinterpreted in an alien city, which threatened to wipe out by its very success both the freedom that had made it great and the alien wisdom it had learned to acknowledge if not accept. The paradoxical nature of Horace's enterprise is nowhere more clearly expressed than in the sixteenth epode. Horace there proposes to the Roman people that they sail with him as inspired poet or *vates* to the islands of the blessed where sailing is unknown.¹²

The first three poems of Horace's first book form a group. They are concerned respectively with Horace and Maecenas, Horace and Augustus, and Horace and Virgil. In the first poem he lists eight possible ways of life before he mentions his own, to be at one with the gods and apart from the people, as a lyric poet. At the center of those lives is the merchant's. The merchant is the only one who experiences doubt about his occupation and toys in his fear with the idea of a life in the country; but this soon passes, once he repairs his boat, unteachable as he is to learn to endure poverty. Roman merchants (*mercatores*) belonged to a guild called *Mercuriales*. Horace, by a conceit peculiar to him, claims to be a *Mercurialis*.¹³ He thus connects the original meaning of *Mercurialis*, one who is favored by Mercury as the inventor of the lyre, with its extended and contemporary sense, which designates an association of merchants who travel for gain. Horace, who withdraws from the people to be with the gods, returns to the people in the guise of a sea voyager.

In the second poem of Book 1, Horace presents himself as called upon to discover the god who will save the Roman people from the crime of civil war. He connects the civil war with Rome's first crime that matches in turn the original crime that led to the flood from which Deucalion and Pyrrha alone survived. With an audacity that is hard to match elsewhere, Horace rejects the traditional Roman gods, Jupiter, Mars, and Venus, and identifies the savior as Caesar, but it is Caesar as the son of Maia, or Mercury, the very god he will later claim saved him at the battle of Philippi from the forces of Caesar.¹⁴ Not only is there slight evidence that Augustus Caesar ever was considered Mercury, but Horace goes so far as to deny that Augustus Caesar even exists. He does not say that Caesar is Mercury; he says that Caesar is Mercury in disguise. The disguise, more-

over, that Mercury has adopted is the one he took in the last book of the *Iliad*, when Hermes brought Priam through the Greek lines to Achilles's tent, so that Hector's body could be ransomed and buried at Troy. Homer's Hermes, who brings about the reconciliation of Greek and Trojan, has become in Horace's transformation the avenger of Caesar's assassination. Vengeance and not reconciliation is all that Rome can expect from a Caesar who is nothing but a phantom.

Horace's second poem gains its full explanation from Virgil's *Aeneid*. Virgil puts together the *Iliad* and the *Odyssey*, but he reverses their order, and there is no Odysseus in his version of the *Odyssey*. The storm with which his poem opens is subdued by Neptune, who in rising from the sea is compared to what happens among a great people when civil strife arises and the common people seethe in their spirits and torches and rocks fly; then they spot a man distinguished by reverence and honor; they fall silent, and he soothes them with words.¹⁵ This likening of a storm at sea to a mob has its source in the second book of the *Iliad*, where Odysseus quiets and controls the army in turmoil as if they were a storm at sea.¹⁶ What is simile in Homer is reality in Virgil, and what is simile in Virgil is the reality of Odyssean wisdom. This inversion finds its complete expression in the asymmetry of the *Aeneid*. In Book 22 of the *Iliad* Hector dies; Patroclus is buried in Book 23 with elaborate funeral games; and in Book 24 the body of Hector is returned for burial. In Book 12 of the *Aeneid*, Turnus is killed in the words of Hector, but in Book 5 of the *Aeneid* is the funeral of Anchises that matches Book 23 of the *Iliad*, and the *Aeneid* has no Book 24. There is no reconciliation possible in Rome between the republic and the empire; the republicans must be utterly destroyed.

In the third poem of the first book, Horace speaks of Virgil. He addresses a ship to which Virgil has been consigned as a piece of merchandise on credit, and Horace asks the ship to return him safe and sound to Athens. Horace imagines that Virgil, who is half of his own soul, is going home to Athens. This daring enterprise leads him to reflect on the armed heart of him who first entrusted a fragile craft to the sea. It was all in vain, he says, that god in his wisdom separated countries by the noncommunicable Ocean since impious ships jump across the waters that are not to be touched. The human race, bold to experience everything, rushes headlong through forbidden crime. Prometheus brought fire to mankind by criminal fraud; and after the fire came diseases and the slow necessity of death picked up the pace. Daedalus tried the empty air with wings not given to man, and Hercules broke through Acheron. Nothing is too steep for mortals. We seek the sky itself in our folly, and through our crimes we do not allow Jupiter to

set aside his angry thunderbolts. Horace thus contrasts the inevitability of human criminality for which there is no savior, with the possible solution the Augustan peace might achieve as far as Rome is concerned. In this contrast he puts Virgil not where we would be inclined to place him ourselves, on the Roman side with Augustus, but on the human side with Athens and philosophy. The original criminality of man, which has been all but forgotten by time and usage—Horace's very next poem is about the return of spring when as a matter of course ships are drawn down to the sea—returns in the form of Virgil's departure from Rome. The poet at sea is a poet caught between the present and future of an imperial bleakness and a past that holds the key to the understanding of man's misery. Only a rehearsal of man's criminality offers any hope for safety, and Horace dashes that hope by expressing his prayer for Virgil in a form that cannot be fulfilled.¹⁷

The poets traffic in guilt and innocence. They enchant us with a past without blemish and disenchant us through the uncovering of the falseness of their own pictures. Pindar, in *Isthmian 2*, celebrates a chariot victory by Xenokrates of Akragas; it is dated with some probability in 470 B.C., Xenokrates was the owner of the team, but he did not drive them himself; the actual driver was Nikasippos, to whom Pindar gave the poem to hand over to Thrasuboulos, Xenokrates's son. The poem he says was not made to stay at home. It was made to travel and extend the glory of Xenokrates. Pindar himself, however, does not travel; he celebrates those whom he has never seen and he does it for pay. Songs are now sold overseas. The word Pindar uses for 'sell overseas' (πέρναμαι) contains the same root as the word for prostitute (πόρνη). Songs are now silverfaced; they offer themselves to whoever can pay for them, and the song is as long as the client can afford. *Isthmian 2* is a relatively short poem. In the past, Pindar tells Thrasuboulos, poets who mounted the chariot of the golden Muses sang love poems in praise of whoever had the sweetest flower of Aphrodite. The Muse was not a lover of gain and open for hire. Pindar, then, recalls a past in which poets sang sincerely; they celebrated their beloveds in pederastic poetry that never left home. The beautiful was a matter of sight and not hearsay; but nowadays the beautiful is a matter of honor and almost confirms the truth of the utterance of the man who lost his friends when he lost his money: "Money, money is the man."

Pindar's reflection on the relation between the poet and the merchant has its source perhaps in Hesiod's *Works and Days*, where Hesiod contrasts sailing, whose sole purpose is for profit, with the honorable and just life of the farmer; but he has to admit that, though he is ignorant of sailing, his own experience of the sea was to sail to Khalkis, where he won a tripod in a

contest of song.¹⁸ Hesiod urges his brother to work hard, but he himself does not work; he sings. However this may be, the shift from the poetry of love to the poetry of glory, which is meant to recall the same shift in the *Iliad*, from the contest between Menelaus and Paris for Helen to the contest between Ajax and Hector for glory,¹⁹ inevitably taints the poetry. This loss of innocence, Pindar seems to be saying, is all to the good. It is only in the eyes of the poet that his beloved is beautiful, and the absence of pay only guarantees that the poet does not know about his own insincerity. Now, however, that the Muses have been silvered, and it is possible to aim at universal recognition—from the River Phasis to the River Nile, as Pindar says—the poet can reveal the tricks of the trade and still serve his purpose. Poetry has become self-conscious and acknowledges the human condition. The beautiful now exists in the element of knowledge. As Homer has Helen say, after the gods above have withdrawn from the war, and she herself has ceased to be of concern to either Greeks or Trojans, “Zeus placed an evil fate on Paris and me, so that even hereafter we might be the subject of songs for future men.”²⁰

The relation between the local and the universal, between the law and the transcendence of the law, which is at the heart of ancient poetry, recurs in the element of philosophic reflection in Plato. In the *Timaeus*, Socrates, in affirming his own incapacity to depict the best city of the *Republic* at war, remarks that sophists are too rootless and poets too drenched in the ways of their own place to know how to represent the speeches and deeds of politicians and philosophers.²¹ And although Socrates believes that one of those present will satisfy his desire to see his own city in motion, Timaeus tells a likely story of the universe, Critias never finishes the story of Atlantis, and Hermocrates is silent. Only the missing fourth listener to the *Republic* on the day before could perhaps have given Socrates what he wanted; but apart from this most remote of possibilities, the setting of the best city in speech, which could be anywhere at any time, into a definite place and time seems impossible. Odysseus the wise can never go home. On the day after the *Odyssey* ends, Odysseus sets out for a people who do not know the sea and mistake an oar for a winnowing fan. There Odysseus sets up an altar to Poseidon; he establishes the worship of a god for whom a landlocked people have no evidence. His piety is at the expense of wisdom. It seems only fitting therefore that death is destined to come to Odysseus gently from or out of the sea.²²

Notes

1. Lines 586–593; cf. 929–930; Herodotus 7.16α.
2. *Noctes Atticae* 15.21.
3. 334–337. In *Prometheus Bound*, sailing opens the second series of the nine discoveries Prometheus claims as his; their common trait is the bringing out into the open of something that is not in the open: mining is the last item (467–503).
4. 2.114–115; 173.2; 181.3. Herodotus begins Book 2 with Psammetichus's experiment to discover the first language; and Psammetichus turns out to be the first king who arranged for Egyptians to learn Greek (154.2).
5. Cf. *Odyssey* 8.18; 9.405–414.
6. *Iliad* 14.201, 246; 18.607–608.
7. 1.8.4. The difference between hearsay and the eyewitness determines the structure of Herodotus's second book on Egypt; cf. 2.99.1, 147.1.
8. 1.30.2
9. 704d3–705a7.
10. Cf. 1.143.5.
11. 6.24.3. Horace assigns the same desire for sights to the Roman imperial legions without the slightest justification in either Roman character or policy (*Odes* 3.3.53–56).
12. 16.24, 58.
13. 2.17.28.
14. 2.17.14.
15. 1.148–156.
16. 2.144–154; 207–210.
17. See, for example, the commentary of Nisbett and Hubbard on the incoherence of the opening word *sic*.
18. 618–662.
19. It is worth remarking that Hector, in imagining his own glory, shares it with his challenger in the form of a mound by the Hellespont, “and someone will say of men born hereafter, as he sails over the winedark sea in his many benched ship, ‘Here is the tomb of a man who died long ago, whom in all his excellence glorious Hector killed’; so someone will say and my fame shall never perish” (7.87–91).
20. 6.357–358; cf. *Odyssey* 8.577–580. It is in the context of the godless pyramid builders that Herodotus speaks of the prostitutes Rhodopis and Arkhidike, the first of whom Sappho made famous (κλεινή), and the second became a subject of song (ἀοίδιμος) throughout Greece (2.135.3).
21. 19e2–8.
22. 11.127–137.

GRAECO-ROMAN TRADE IN THE INDIAN OCEAN

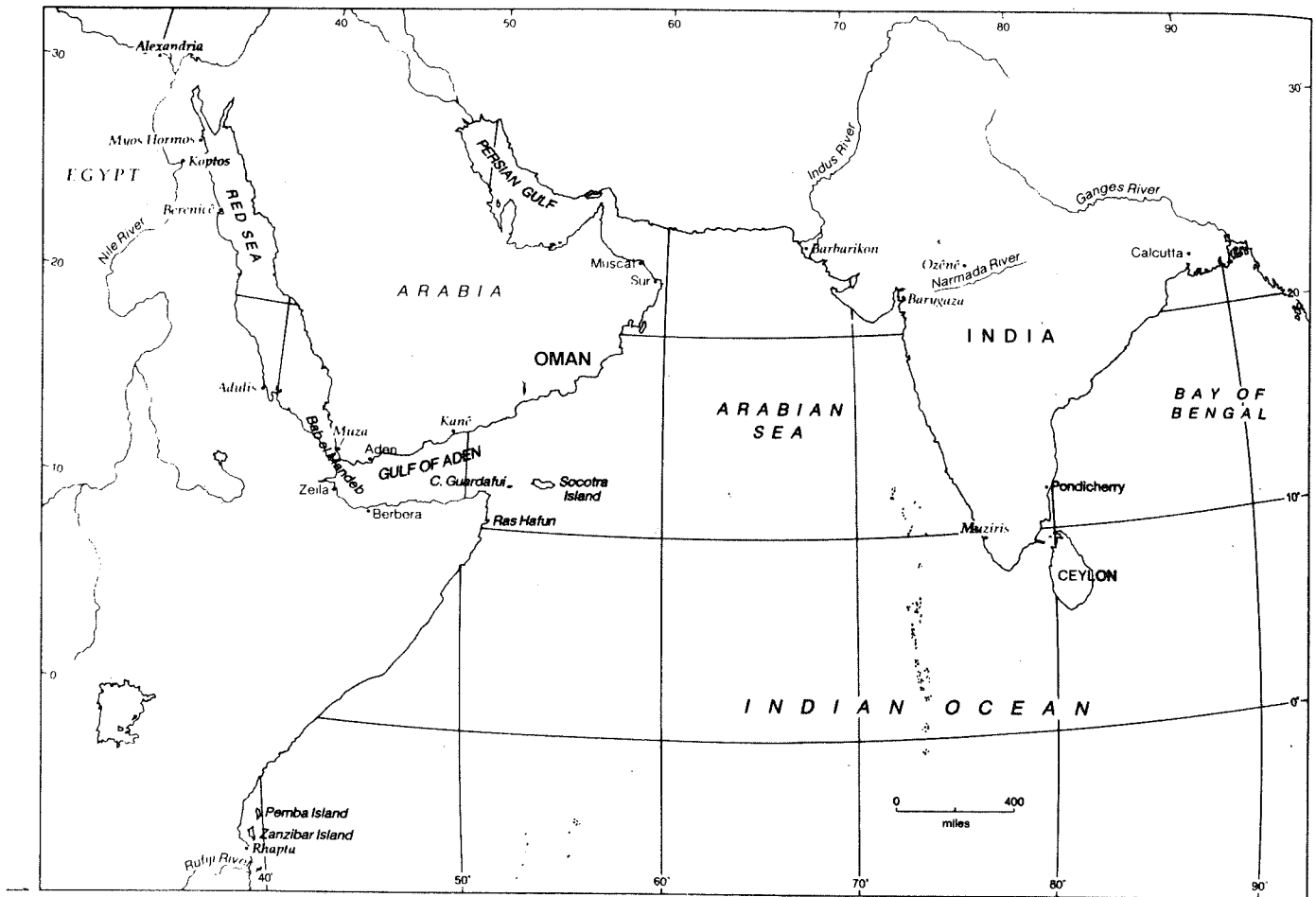
Lionel Casson
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The history of trade in the western Indian Ocean goes back at least to the beginning of the second millennium B.C. By that time Mesopotamian seamen were traveling from the head of the Persian Gulf along the shores of what is today Iran and Pakistan to the mouth of the Indus, and Indian seamen were doing the voyage in reverse. In subsequent ages Phoenicians and Arabs joined their ranks. Greeks, however, for many centuries took no part. Even after the Ptolemies had established Greek rule in Egypt in the wake of Alexander's conquests, and had access through ports on the Red Sea to the Gulf of Aden, the Arabian Sea, and beyond, their ships ventured no further than Aden, a mere hundred miles beyond the Strait of Bab el Mandeb; transport further eastward was left to the maritime peoples that had always taken care of it, Arabs and Indians.¹

Finally, about 116 B.C., under the auspices of Ptolemy VIII a certain Eudoxus carried out a pioneering voyage to India,² and thereafter Greek ships sailed regularly from Ptolemaic Egypt to India, but only in limited numbers, fewer than twenty a year.³

This remained the case until Augustus made Egypt a province of the Roman Empire.⁴ From then on, trade burgeoned, not only with India but with the eastern coast of Africa. We know about this distant trade on the periphery of the Roman Empire better than the far more voluminous trade at its center, thanks to the survival of a unique work, an anonymous pamphlet entitled *Periplus Maris Erythraei* or "Sailing Guide for the Erythraean Sea."⁵

The term "Erythraean Sea," meaning literally "Red Sea", included not only what we call by that name but also the Gulf of Aden and the western Indian Ocean. The *Periplus Maris Erythraei* is a handbook drawn up for the use of skippers and merchants who worked the routes in those waters. The unknown author clearly writes from firsthand knowledge; he very likely was himself a skipper or merchant on the run. Though brief—it is but twenty

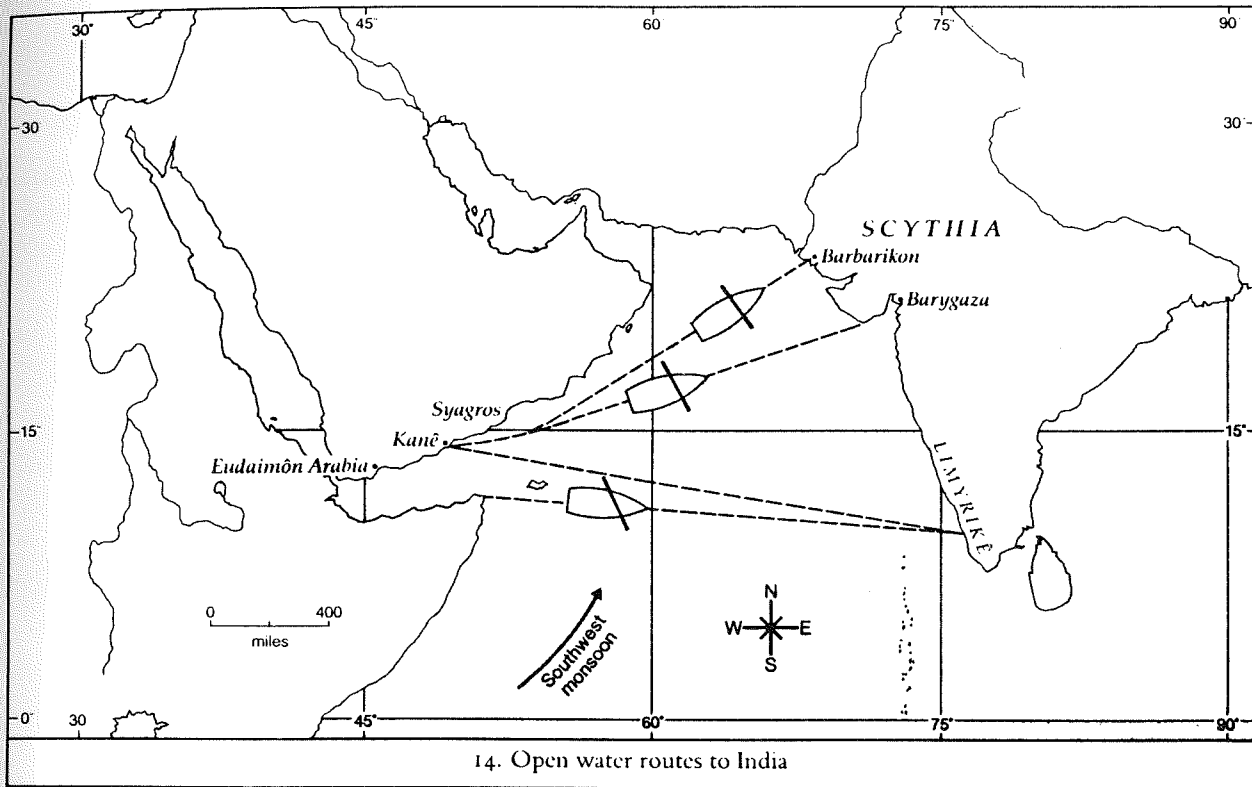


1. The Red Sea, Gulf of Aden, Arabian Sea

pages long—it is a mine of precious detail. It supplies terse sailing information—winds, distances, nature of the harbors—and full information on what can be bought or sold in all the ports.

Trade Routes

There were two major routes, both of which started from the ports of Myos Hormos or Berenicê on the Egyptian shore of the Red Sea. The first and less important—it occupies but a third of the *Periplus*—was the African route. This went south down the Red Sea, touching at various ports on the African shore, of which the chief was Adulis; then east through the Gulf of Aden, touching at various ports along the southern shore; and then, entering the ocean, continued south along the east coast of Africa as far as Rhapta, either where Dar es Salaam stands today or somewhere in the vicinity. The other route, the more important since two-thirds of the book



2. Open water routes to India

is devoted to it, led to Arabia and India. It went down the Red Sea to Muza on the Arabian side just north of the Strait of Bab el Mandeb or to Okêlis on the strait itself; it then followed the southern coast of Arabia as far as Kanê. At this point it forked, one branch going northeast to Barbarikon and Barygaza in northwestern India, the other going southeast to the ports on India's Malabar coast, notably Muziris. An alternative way of getting to the Malabar coast was by setting a course from Cape Guardafui. All three involved sailing over the open waters of the Arabian Sea or Indian Ocean.⁶

What made these voyages possible was the very special nature of the prevailing winds, the so-called monsoon winds. These blow steadily from the northeast between October and April but switch to the opposite direction, the southwest, from May to September. Thus, by judiciously choosing a proper departure date, skippers could ensure having a favorable wind for both legs of the voyage. The Mesopotamians and Indians and Arabs who sailed the Indian Ocean no doubt had known about these so

very convenient winds from early on, but they understandably had little interest in sharing this knowledge with potential Greek competitors. Almost certainly Eudoxus's pioneering voyage resulted from his having found out about the monsoons.

The proper time to leave Egypt for India, the *Periplus* states, was in July. This is precisely what we would expect. It enabled skippers to

1. sail down the Red Sea with the northerlies that prevail over that body of water during the summer;
2. sail through the Gulf of Aden with the southwest monsoon;
3. sail with the same monsoon, as specifically counseled by the *Periplus*, across the Arabian Sea or western Indian Ocean to India. The return could be scheduled for any time after the beginning of November, when the northeast monsoon provides favorable winds right up to the entrance of the Red Sea.

As it happens, the two monsoons are very different in nature. The northeast is the answer to a sailor's prayer: it is marked by weather that is clear and balmy and by winds that are consistently gentle. The southwest monsoon is just the opposite: it is marked by weather that is often stormy, by heavy rain, and by winds that blow hard as consistently as they blow gently during the other monsoon. Off the coast of India it creates sailing conditions so dangerous that at its height practically all maritime activity ceases. Marine insurance rates, which vary between one percent and one and three-quarters percent during the northeast monsoon, rise to twenty percent by the end of May when the southwest monsoon has set in, and, during the next three months insurance is not available at any price. By September, when the winds have begun to quiet down, it is again offered at about the same rate as in May. Departure from Egypt in July, as recommended by the *Periplus*, brought a ship into the open waters of the Arabian Sea or western Indian Ocean just when the southwest monsoon was at its height, when day after day the wind velocity averages twenty-two to thirty-three knots and frequently rises to gale force; as the author of the *Periplus* puts it in his matter-of-fact way, "The crossing with these winds is hard going but absolutely favorable and shorter."⁷

Arab treatises on navigation of the fifteenth and sixteenth centuries reveal that Arab seamen of that age used a different schedule for getting to India: they prudently delayed departure until the end of August, thereby doing their sailing over open water when the southwest monsoon has lost a good deal of its bite. In this century the practice among Arab skippers has been to avoid the southwest monsoon altogether and fit the whole voyage, out as well as back, into the mild northeast monsoon

season. The nature of Arab craft dictated such behavior: their hulls were not strong enough and their rig not fitted for the blustery blasts of the southwest monsoon at its height.

But Roman ships were different. They boasted hulls that were massively strong, for they were built in the special fashion favored by ancient shipwrights. The method of putting together a wooden hull traditional in the West, and hence most familiar to us, starts with the setting up of a skeleton—a spine of keel, stempost and sternpost, and a cage of ribs (or frames, to give them their technical name)—to which there is then fastened a skin of planks. The ancients reversed the procedure. They first assembled the skin, joining the planks edge to edge to build

up, as it were, a wooden shell; this, in itself, is not exceptional, since shipbuilders in many parts of the world have followed such a procedure and still do. What is exceptional is the way the ancients joined the planks to each other: they locked them together not by casual joinery but by thousands of close-set mortise and tenon joints (fig. 1) Then they transfixed each joint with dowels to ensure its never coming apart. And lastly, into the shell thus created, they inserted a complete set of frames to stiffen it. The result was a hull that was absolutely staunch and incredibly strong (fig. 2). And they fitted these hulls with a conservative rig, one designed first and foremost for safety and not for speed and equipped with the ancients' special system for shortening sail, which was far safer and more effective than that favored in the western world until the present century.⁸

Hull and rig were one key factor. Size was another: only big ships dared to venture over open water during the southwest monsoon. We know that on the Mediterranean the Romans used merchantmen up to one hundred and eighty feet in length and capable of carrying over a thousand tons (fig.

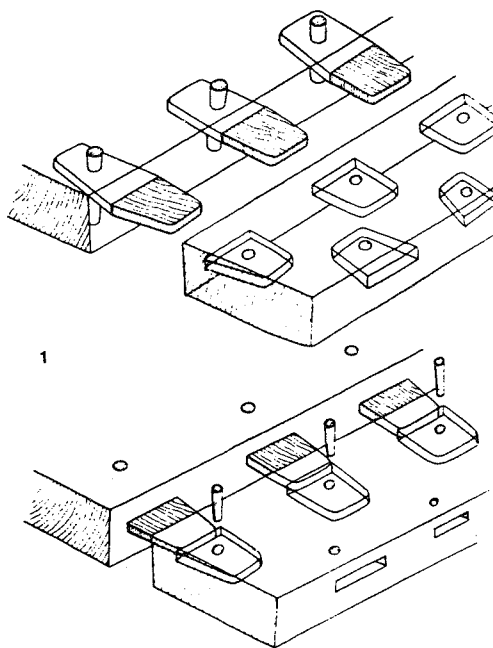


Fig. 1. Sketch illustrating the ancient method of joining planks by means of closely set mortise and tenon joints pinned by transverse dowels. After P. Gianfrotta and P. Pomey, *Archeologia subacquea* (Milan, 1981) 238.

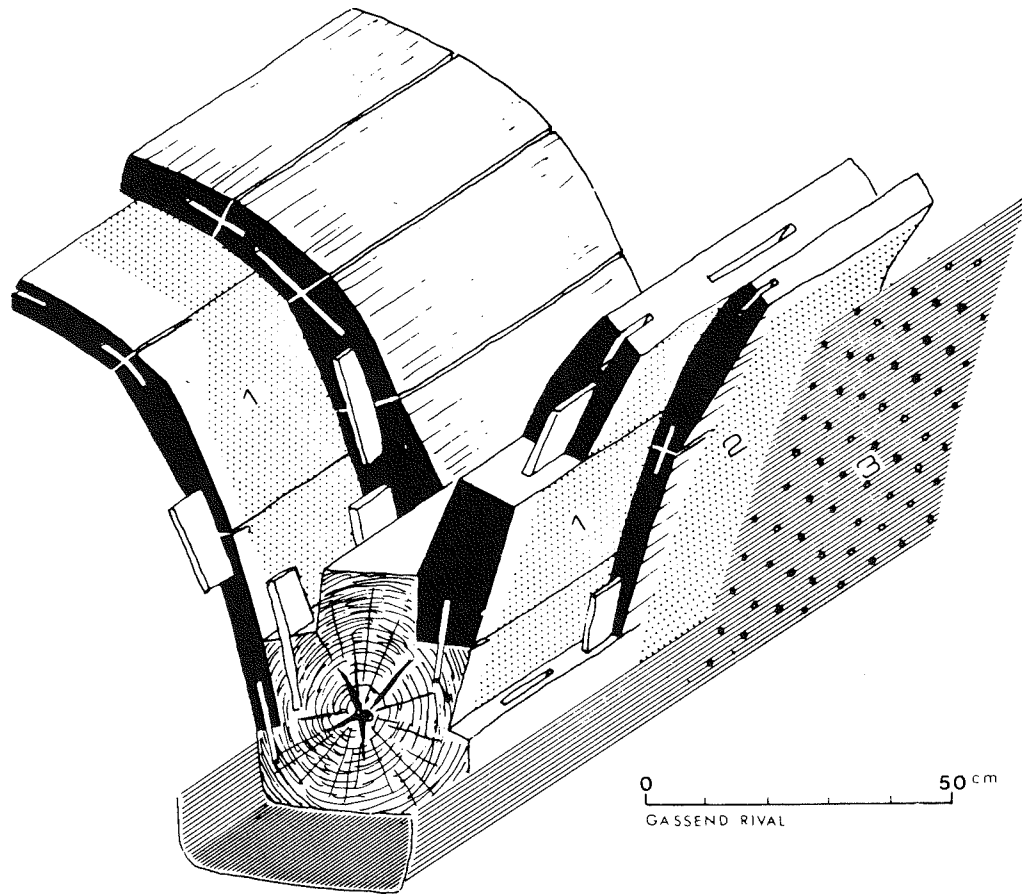


Fig. 2. Sketch of the keel and lowermost planks of the *Madrague de Giens* wreck, a large Roman merchantman of the mid-first century B.C. found in the waters off Toulon. The hull had two layers of planking secured by mortise and tenon joints and a sheathing of thin lead plates over the underwater surface of the outer layer (marked 3 in the sketch). The two layers were separated by tarred fabric (1), and there was tarred fabric (2) between the outer planking and the lead sheathing. After A. Tchernia et al., *L'épave romaine de la Madrague de Giens* (xxxiv^e supplément à *Gallia*, Paris, 1978) 86.

3).⁹ Very likely there were ships this size on the Egypt-India run. None, we may be sure, were small.

That only big ships could serve as carriers in the India trade has economic implications of major significance. India's exports were not bulky and cheap commodities but compact and costly merchandise: silks, fine cottons, ivory, spices, aromatics.¹⁰ To fill the hold of a large-sized freighter with such cargoes required the investment of a great amount of capital. A recently discovered papyrus document, dating to the middle of second century A.D., provides concrete proof of just how great.¹¹ It contains a



Fig. 3. Large Roman merchantman, entering Portus, the port of Rome, ca. 200 A.D. Relief found at Portus and now in the Torlonia Museum, Rome. The lines that run vertically down the front surface of the sail were for shortening and furling sail: the hands, by pulling on these, rolled the canvas upward much as a venetian blind is raised. Photo, Alinari/Art Resource, NY.

listing of part of a cargo that was shipped from Muziris on India's Malabar coast to Alexandria. This consisted of at least 700 to 1700 pounds of nard, about 4700 pounds of ivory, and about 790 pounds of textiles, in other words, a total weight of at most 7190 pounds, little more than three and a half tons. The cost of this modest tonnage was just short of 131 talents. If the ship it had been loaded on was, say, a 500-tonner—no very great size by Roman standards—there could well have been over one hundred and fifty times that amount aboard with an aggregate value of 20,000 talents, a vast sum indeed.¹² The cargo of any one vessel almost certainly consisted of a multitude of individual consignments, each belonging to a different merchant or group of merchants; even so, the investment any one participant had to make must have reached a very high figure.

The Objects Of Trade

From Africa Greco-Roman traders sought four products in particular, all of them costly: ivory, tortoise shell, myrrh, and frankincense. The first two were to be found from Adulis down to Rhapta; the other two in the ports along the southern shore of the Gulf of Aden. In exchange they sold the locals much more humble objects: tools, iron and tin, tableware. Traders went to Arabia principally for myrrh and frankincense; the port of export for the first was Muza, for the second Kanê. In exchange they sold such staples as clothing, textiles, copper, tin, as well as certain drugs and cosmetics.¹³

From India came a great variety of products, almost all of them expensive. At Barbarikon and Barygaza, the chief ports of northwestern India, traders bought costus, nard, and bdellium, all three used in the preparation of cosmetics and drugs; gems; cotton textiles and garments; silk cloth and yarn, which had come to India overland from China; some pepper. Southwestern India, whose chief port was Muziris, offered in addition to gems and cottons and silk—also originally from China—ivory, tortoise shell, and quantities of pepper; indeed, pepper was what the area was chiefly noted for. In exchange western traders sold India certain raw materials, such as lead and tin and copper, certain drugs and cosmetics, some silverware and glassware. The value of all these fell far short of what they bought; Rome was the first of a long line of western trading states that poured cash into India for what they took from it. It is no surprise that vast numbers of Roman coins have been found there, particularly in the southern region, the source of pepper, the item that bulked largest among Rome's imports from the east.¹⁴

The *Periplus* dwells at length on the trade between Greco-Roman Egypt and the ports of India's west coast; clearly it was active and voluminous. The east coast, on the other hand, is given short shrift. The author knew it well right up to the mouth of the Ganges, and we know for sure that at least some western traders got this far.¹⁵ He lists what is available for purchase at the major ports including one at the mouth of the Ganges. Yet he gives the distinct impression that western ships as a rule did not go further than the southern tip of India. In the light of this, it is curious that the strongest archaeological evidence for the presence of westerners is to be found on India's east coast. At Arikamedu some two miles south of Pondicherry, excavation has unearthed fragments of western shipping containers and tableware that point unmistakably to the existence of a colony of westerners there during the first and second centuries A.D. Very likely these were brokers who handled the import of goods from the West

and the export of local products but entrusted the transport both ways to Indian craft; these, being small and of light draft, could negotiate the shallows of the Gulf of Mannar and Palk Strait between the southern tip of India and the northern tip of Ceylon whereas the big western merchantmen would have had to make the time-consuming voyage all around Ceylon. It stands to reason that their skippers would prefer to leave hauling to the east coast to the locals.¹⁶

How much further than India did Greco-Roman traders get?

In the first century A.D., when the *Periplus* was written, the port furthest east that the author knows is one called Chrysê; this was most likely on the coast of Burma. By the next century, when Ptolemy wrote his *Geography*, traders had pushed on further, for, on the basis of their reports, he describes places that can be identified with Malay or Sumatra or even Java. And he mentions a city name Kattigara that lay a sail of many days beyond; this has been set as far east as Singapore or Hanoi or even Canton.¹⁷

Notes

1. L. Casson, *The Periplus Maris Erythraei* (Princeton, 1989) 11. This book is cited hereafter as *Periplus*.
2. Strabo 2.98–99; cf. *Periplus* 224.
3. Strabo 17.798.
4. By Augustus's time the number of vessels sailing annually to India had risen to 120. See Strabo 2.118.
5. For the latest edition, with improved text, translation, and commentary, see *Periplus*.
6. *Ibid.*, 7–10 (author and work), 285–89 (African route), 289–91 (Indian route).
7. *Ibid.*, 75 (“the crossing”); 283–85 (monsoons); 285, 289 (departure dates); 283, 289–90 (southwest monsoon).
8. *Ibid.*, 290–91 (Arab sailings). L. Casson, *Ships and Seamanship in the Ancient World* (Princeton, 2d ed., 1986) 201–208 (shipbuilding), 239–42 (rig), 275–78 (shortening sail).
9. Casson, *ibid.* 172–73.
10. *Periplus* 16.
11. L. Casson, “New Light on Maritime Loans: P. Vindob G 40822,” *Zeitschrift für Papyrologie und Epigraphik* 84 (1990): 195–206.
12. Cf. *Periplus* 35.
13. *Ibid.*, 16–17.
14. *Ibid.*, 16–17, 21–23.
15. *Periplus* 89–90; cf. Strabo 15.686.
16. See L. Casson, “Rome's Trade with the Eastern Coast of India,” *Cahiers d'histoire* 33 (1988): 303–308.
17. See *Periplus* 235–36; J. Thomson, *History of Ancient Geography* (Cambridge, 1948) 315–16.