

SOME REMARKS ON THE MEDITERRANEAN AND RED SEA SHIPS IN ANCIENT AND MEDIEVAL TIMES

Part II: Merchant - Passenger VS. Combat Ships

In the present paper I continue the comparison between the ships of the Eastern Mediterranean and those of the Gulfs and the Indian Ocean. It should be taken into consideration that while the Byzantine and Islamic navies reached their peak in the Eastern Mediterranean at the turn of the 11th century, the Arabs continued to dominate navigation in the Red Sea and the Indian Ocean until the 15th century. Thus, the time span of this article has been placed somewhat arbitrarily from the late Roman period until the coming of the Portuguese (15th century).

In this paper my research is restricted in the following topic "Merchant-Passenger vs. Combat Ships". The most conspicuous difference between navigation in the Mediterranean and that of the Gulf-Indian Ocean is that in the latter the role of the combat ships was heavily diminished. There were no decisive naval engagements like that of Dhāt aṣ - Ṣawārī or that in front of the gates of Constantinople (Christides, 1985). Both Greek and Arabic treatises of naval warfare containing detailed information about warships, naval preparedness and tactics refer to the war fleets of the Mediterranean and leave us at dark about the activities of combat ships beyond this sea.

The limited activities of war fleets in the Gulf and the Indian Ocean include a small Moslem raid against the coast of Ethiopia already in the middle of the 7th century and a number of Moslem naval expeditions originating from the Persian Gulf, launched against the northwestern

› towns of India (Christides, forthcoming a; F. Gabrieli, 1964-5).

The types of the warships that sailed in the seas beyond the Mediterranean are little known. On the one hand they had to be constructed in accordance with the model of the merchant-passenger vessels used in the treacherous waters of the Gulfs and the stormy Indian Ocean, and on the other, much was borrowed from the Mediterranean naval technology since there was a constant interchange of naval technology in the construction of vessels between the two areas.

I have emphasized in the Second Symposium of Ship Construction in the Antiquity (Athens, 1989) in the discussion following Prof. L. Casson's paper on the invention of barrels, that there were no Chinese walls between the Mediterranean and the Gulfs and Indian Ocean and that most probably the single rudder, perhaps the lateen sails, barrels and certain types of the Greek fire, were inventions transmitted from China to the Mediterranean via the Arabs.

There is no doubt that the equipment and various types of weapons used in the warships of the Mediterranean should also be traced in the ships of the Gulfs and the Indian Ocean.

From the vague information in the Arabic sources on warships we understand that no permanent large fleets anchored by the coastal towns of western India. Valuable goods — pepper, precious stones and other spices — were transported on merchant ships accompanied by warships and only in minor naval expeditions well equipped combat ships were used. Actually Islam in the Indian subcontinental and Indochina spread with limited application of the *jihād* which was the moving force in the Mediterranean naval activities (Christides, 1981). The Islamic orbit beyond the Red Sea constantly increased through international trade, mercantilism and the activities of the adventurous roaming fuqahā' personified by Ibn Battuta. (For Moslem expeditions in northern India, see Christides, forthcoming a; for south India see N. Venkata Ramanaya, 1942; for the cosmopolitan activities of the Moslem learned men, see N. Levtzion, 1986).

The most important information on combat ships and their equipment in the Indian Ocean is found in the *Rihla (Travels)* of Ibn Battuta. Unfortunately, this peripatetic *mujawir* (scholar-sojourner) who writes from first hand experience is little interested in naval architecture and his eyes are turned mainly towards local folklore, animals and passengers; nevertheless we can glean with proper scrutiny valuable information. (For Ibn Battuta in general see R.F. Dunn, 1986; for the folkloristic elements in his work, see S. Fanjul, 1981-82; H.F. Janssens, 1948; see also the introduction in H.A.R. Gibb's translation 1929).

Ibn Battuta reports stone and fire throwing machinery on ships along with other military equipment. (For the use of liquid fire on the ships of the Mediterranean, the Gulfs and the Indian Ocean, see Christides, forthcoming b). The most conspicuous example of the transmission of technology between the Mediterranean and the seas beyond it is revealed in a passage of Ibn Battuta's *Rihla*. It refers to the most sophisticated amphibious vessels used for transportation of horses, along with armed cavalry men. The Byzantine sources briefly report the use of such vessels from where cavalry men disembarked mounted on their horses, while the Arabic sources offer us more details about these speedy ships, their protective doors and the number of horses carried by them. (Christides, 1988, 318 ff.).

The horse carrying ships were called *ṭarrida*, a term used also commonly for various transport Arab ships, transmitted to other languages, as for example to Spanish, "tarides per cavalls

a portar" (F.F. Laures, 1987, 25).

Ibn Battuta describes a minor naval expedition of the Moslems on the Malabar coast of South India in which he also participated (C. Défremery and B.R. Sanguinetti, IV, 107):

«فركب مركبا معها وأنا معه --- فلما
اصبح «الصباح» ضربت الطبول والانصار
والابواق ونجفت المركب وزموا عليها
المجانيق... وكان عندنا طريدان مفتوحتي
المواخير غيظ الخيل وهي بحيث يركب الفارس
فرسه في هوضه ويتدفع ويخرج...»

"He embarked on a vessel with me... In the morning, the cymbals, the trumpets and horns (sounded) and the (Moslem) ships advanced and the ballistic machines of the attacked coastal town threw against them... There were next to us two *farrida* ships, open in the stern where the horses were placed and they were constructed in such a way that the horseman could mount his horse, dressed in his armour and disembark...".

It is noteworthy that in the above mentioned passage, in addition to the revealing information on the *farrida* vessels, there is an interesting statement about the musical instruments used by the Arabs in the naval battles. It seems that the use of the Arab horns on the ships, called "Saracenic horns", was passed to the crusaders.

Details about the construction of strictly combat ships sailing on the Indian Ocean are missing. Most probably like the merchantmen of this sea, they were sewn boats tied together with strings. The Arabic sources report that in addition to the few combat ships all merchant ships were armed and often permanent African marines embarked on them. (For these merchantmen see Kaplan 1974, and figs. 2, 3 of our text).

In contrast to the irregular and sporadic use of war fleets in the Gulf-Indian Ocean areas, combat ships played a prominent role in the Eastern Mediterranean. The warships of both Byzantines and Moslems, who dominated the Eastern Mediterranean until the 11th century, driven by sails in times of peace or propelled by oars when engaged in naval battles, were in constant battle preparedness, guided by naval war manuals, trained in naval tactics and manned by highly skilled crews. (See the relevant material in A. M. Fahmy, 1950, reprinted 1980; H. Ahrweiler, 1966; M. Reddé, 1986; J. H. Pryor, 1988, and J. L. Delgado, 1990). A detailed analysis of the Moslem and Byzantine combat ships will appear in my paper to be published in the Acts of the Fourth Symposium of Ship Construction in the Antiquity.

Byzantine and Moslem combat ships often accompanied merchant ships in the Mediterranean in long convoys and sometimes precious merchandise — mainly gold — was transported on warships. (For examples see the Geniza documents, Goitein, 1973, 311-12). Occasionally certain important passengers were transferred by warships, as for example Saint Theodore of Cythera at the time of the Arab occupation of Crete moved in the Aegean on a patrol Byzantine ship. (Oikonomides, 1967).

Turning now our attention to the cargo and passenger vessels of the Eastern Mediterranean, there was little difference between cargo and passenger vessels. Exclusively cargo ships were

rarely used, as for example those giant vessels for the transportation of corn from Alexandria to Constantinople. In the Life of Saint Gregorios of Agrigente it is described how the Saint embarked onto a vessel where there was cargo which belonged to the bishop of Panormite of Sicily. (P.G.XCVIII, col. 580): «κατ' οἰκονομίαν δὲ Θεοῦ εὗρον ἐκεῖσε σκάφος ἐπισκόπου τῆς Πανορμίτου πόλεως τῆς Σικελίας ἔχον πραγματεῖαν τινά».

The average Byzantine merchantman from the 7th to the 11th centuries seems to be, as Pryor describes it, "small, of less than 250 tons deadweight tonnage, powered by a single lateen sail, steered by two steering oars on the stern quarters... with no deep keel..." (Pryor, 1988, 27-28). Pryor's description is correct and can be applied to the majority of the Byzantine and Moslem vessels of this period but smaller ships were also used as fishing and passenger boats while much larger ships were also constructed. The artistic evidence, based on miniature, mosaics, ceramics and other offers us ample evidence of such vessels. A thorough research on this topic leading to the standard three-masted vessels as it appears in a Byzantine icon of Patmos and on a drawing fragment of paper from Egypt, both of the 17th century, is still a desideratum. Such research should not only include the study of shipwrecks (G. Purpura, 1985, in addition to the other works mentioned below) but also thorough examination of the textiles. Thus, for example an Egyptian ship on a Coptic textile, dating from the 4th c. A.D., depicts an axial stern rudder (Fig. 1), while the introduction of this invention is usually dated much later.

Any technical analysis of the merchant ships of the Mediterranean is beyond the scope of the present study which will be limited to some remarks concerning the transportation of passengers along with the goods.

Regulations concerning travelling at this period in the Eastern Mediterranean appear in the Rhodian Sea Law and other Byzantine legislation. (W. Ashburner has studied thoroughly the relevant material, 1909, repr. 1976; for an Arab translation of the Rhodian Sea Law see S. Leder, 1985). The Moslem Sharī 'a laws have certain references to navigation of general character, i.e., fasting during sea-voyage, death on board ship, etc., but no specific regulations.

The Greek *Lives* of the Saints and the narration of Arab travellers offer us fresh material about voyages. In general people of various ethnicities could mingle freely in any boat and the crews could come from any faith and ethnicity. (For Moslems and Christians travelling on the vessel wrecked in Serçe Limani, see Christides, 1988, 328).

While piracy was a definite threat on navigation, it took place in far lesser scale than in the Red Sea and the Indian Ocean and we should not confuse naval warfare — including attacks on merchantmen — with actual piracy (Christides, 1981).

The passengers travelled freely without any passports. Thus for example Saint Gregorios of Agrigente changed ships simply with the consent of the captain of the ship. (P.G. XCVIII, col. 560). Similar flexibility and easy changes appear in the Geniza documents (Goitein, 1973). It is only in the river navigation of Egypt that we meet the restricted use of passports. (Arabic sijill). Such passports were issued in order to control the movement of Egyptian taxpayers and it is characteristically reported in an Arabic church source that when a crocodile ate a little girl who was carrying her passport, her mother was obliged to pay a fine and replace it. (*History of the Patriarchs of the Coptic Church of Alexandria*, ed. B. Evetts, P.O.v, p. 70).

In the Mediterranean it was not unusual that a passenger was simultaneously a merchant and in ancient times the word "ἐπιβάτης" was applied to both passenger and merchant (J.

Velissaropoulos, 1980, 338). But a good number of simple passengers travelled short or long distances simply to visit families or for pilgrimage. The pilgrims suffered heavily to perform their religious duties. Western sources describe what the Christians went through and how they managed to survive. Thus Jacques de Vitry, travelling in 1216-7, describes how the poor pilgrims were put offboard when supplies were running short (Pryor, 1987, 1709).

Many of the ships in the Mediterranean sailed coastwise and the passengers spent the nights lodging in ports, but it was not unusual for passengers to spend whole weeks on land (Life of Gregorios, P.G. XCVIII, col. 628-9).

From the Byzantine and Arabic sources it is clear that the passengers provided for their own food and water and this information is confirmed with the evidence of underwater archaeology and the Rhodian Sea Law (W. Ashburner, 1909, repr. 1976, cl).

Most of the passengers travelled carrying their own mattresses and cooking utensils and were restricted in the small assigned place on the deck, but richer merchants had their own cabins. (Christides, 1985, 77). Most probably the cabins were arranged according to their special position as in the Western ships. (A. Scialoja, 1944; Pryor, 1987, 1698-1699).

The merchant ships in the Eastern Mediterranean sailed to various directions, avoiding the winter, frequently overloaded in spite of the legal restrictions.

The passengers' transportation and security depended on the whims of the captain. His responsibilities and power, similar to those of his colleagues in the Gulf-Indian Ocean vessels, will be discussed at the end of this paper.

Turning to the vessels sailing in the Red Sea, we notice a vessel which carried passengers, i.e., pilgrims. It is the usually two-masted ship called *jalīb* which carried pilgrims from Aydhab to Jidda. (Fig. 4). The Arabic sources state that the Beja-Sudanese black tribe which controlled this traffic overloaded these ships and pilgrims suffered many hardships.

Of course, even in the vessels of pilgrims and those that sailed in the Red Sea cargo could be added, and overloading was almost a norm. Ibn Battuta complained about the mingling of passengers with camels and his remark is supported by artistic evidence (Fig. 5). Such mingling of animals and passengers was not unusual in the Mediterranean vessels, since it appears even in the 15th century Venetian ships in spite of the legal prohibition (D. Gofas, 1965, 95).

The vessels which moved beyond Aden following the spice route as far as India or the silk route to China were passenger-cargo ships. Ibn Mājid, the pilot and author of a treatise on navigation, describes the average transoceanic vessel as two or three masted, which had already existed from the early, even pre-Islamic times. It was equipped either with two-steering oars (*miqdafayn*) or a single rudder (*sukkān*). (Ibn Mājid, ed. of the Academy of Moscow, II, 1984 Passim. For Ibn Mājid in general see T. Shumovsky, 1960; G. Ferrand, 1921-1923; G. Wiet, 1925; G. R. Tibbets, 1971; and the introduction in the edition of his text by the Academy of Moscow, I, 1985).

The artistic representations provide us with concrete information about those early three-masted transoceanic vessels. Thus a wall painting in a cave *in situ* in Ajanta of India, dating from the 6th c. A.D., and a graffito of a ship *in situ* at Siraf of Iran, dated by Nicolle to the 11th century, offer us illuminating examples (D. Nicolle, 1989, 173), (Figs. 6, 7).

This is not the place to discuss at any length the construction and function of the transoceanic Arab vessels which are beautifully represented in the *Maqamāt* of Ḥarīrī (Fig. 8). We must of course take into consideration that the ship depicted in Ḥarīrī's *Maqamāt* represents

one of the most solid vessels of the different types of transoceanic ships. Smaller vessels partly decked, where cargo was covered with hides and passengers suffered in bailing out water constantly, were also used. (See for examples given by G. Hourani, who nevertheless failed to understand that there was not just one type of transoceanic vessel; Hourani, 1951, 98).

Tim Severin constructed an Indian-going vessel based mainly on the Ḥarīrī vessel, which he named Sohar, and sailed from Oman to India and China (Severin, 1982). Severin's reconstructed 87-foot long ship wore two settee sails and a jib and it was built without the use of any nails like the typical Gulf-Indian sailing Arab vessels (Fig. 3). Although Severin's experiment revealed intriguing details about the construction of the ocean Arab-going vessels, stitched together with cord made from coconut husk-jiber, and his adventurous trip manifested the real problems sailing according to ancient practices, many questions still remain unanswered. Thus the function of the superstructures which we observe in Ḥarīrī's ship remain an enigma. For example two strange figures (sailors?) appear below the passenger-merchants' decked cabins dumping something into the sea (Fig. 9).

Another problem is the exact position of the special cabin used for the owner or *his* agent, a deck-house richly decorated in form of a crow's nest (Figs. 23, 24a, a simplified sketch by Nicolle). While in the best known Ḥarīrī's illumination, it appears far from the stern-rudder, in another illustration of Ḥarīrī's *Maqamāt*, it is placed far from the stern rudder, on the other end close to the grappled anchor.

It is to be noticed that the Arabo-Islamic tradition of the "crow-nest", dome-like structure, continued in the Ottoman period as manifested in an illumination of the *Diwan Najati*, dated to 1518/19 (Fig. 10). I believe that it is this tradition which was followed in the "kadirga" galley where a shelter was placed in the back of the ship for the sultan, in the form of a luxuriously decorated wood-carved dome. (Fig. 11). (For this kadirga see L. Basch, 1979, 1989).

The size of the cabins on the merchant-passengers which so clearly appear in Ḥarīrī's manuscript as well as the facilities they offer remain unknown. While details are lacking it is obvious from numerous references in Ibn Battuta's *Rihla* that wealthy merchants could have ample space in their headquarters to accommodate their slaves and concubines. Special lavatories were attached to each of these luxury compartments. But Ibn Battuta's lust for luxury could be fully satisfied only in the Chinese junks. They were five-masted huge vessels with watertight apartments and numerous stern rudders; they could accommodate animals in especially provided spaces and in their large compartments whole harems and any number of slave servants could fit.

Concerning slaves on board, it must be said that in both the Mediterranean and Gulf-Indian Ocean vessels no slaves were used. Byzantine and Arab warships were manned by efficient and well paid crews and in the merchant vessels the members of the crew engaged in the risky profession of sailing were lucratively rewarded (Christides, 1982, 80, 84 ff.). Actually the Byzantines followed the Roman tradition according to which no slaves served in warships and the enlisted men felt proud to serve in the navy. Heated discussions took place on this subject (L. Casson, 1966 and more extensively M. Reddé, 1986, 473 ff.), but I believe that the evidence of the papyri is undisputable. Thus in a letter, dating from the second century A.D., a father named Sempronius expressed his great grief because his son did not enlist in the Roman navy and threatened to disavow him (J.C. Winter, 1927, 245-246):

Σεμ[πι]ρώ[ν]ιος Γαίωσι τῶ υἱῶ μο[υ] ...
 .σοι ο[ὐ]κ ἐ] στρατεύσου εἰς κλάσσαν, καὶ
 ἐποίησα δύο ἡμέρας λυπούμενος.
 λοιπόν οὖν βλέπε μὴ πισθῆς καὶ οὐ-
 κέτι ἔση μου υἱός. ...

In the cargo-passenger ships of the Red Sea and the Indian Ocean, while slaves were not used — under the harsh conditions we meet in the later Western galleys — we notice some trusted slaves that occasionally undertook the task of supervising the crews and taking care of the interests of their masters. (See examples in the legendary story of Sindbad the Sailor and other sources in G. Hourani, 1951, 112 ff.).

It is noteworthy that the captains and the members of the crews of the Mediterranean and the Gulf-Indian going merchant vessels enjoyed the same privileges and had almost the same duties. A comparison between the relevant passages of the Rhodian Sea Law and the maritime customary law which has been practiced off the Arabian coasts from the pre-Islamic times until the present day reveals the obvious resemblance (Ashburner, xcii., R.B. Serjeant, 1966). The great navigator of the Indian Ocean, Ibn Mājid, offers us moreover a code of ethics, the *siyāsāt*, correctly labelled by G. R. Tibbets, "the nautical etiquette" (Tibbets, 1971, 3): "We members of the fraternity of pilots are enslaved by our duties being ordered never to leave our ships, even at the very end. Thus we go aboard our ships and stay bound to them for ever, as long as they remain safe we are safe and when they perish we die with them."

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ILLUSTRATIONS

1. Egyptian ship on a Coptic textile (4th c. A.D.). Primitive axial stern rudder.
2. A qatar shipwright uses an adz to strengthen ribs. (M. Kaplan, 1974, photo on page 346).
3. Sewn boat. (T. Severin, 1982, photo on p. 10).
4. Jalīb, vessel of the Red Sea. Courtesy photo of Kuwait Museum.
5. Men loaded along with camels in a Moslem manuscript. (S. Maher, no. 59).
6. Three masted Indian Ocean-going ship. Wall painting in cave, 6th century A.D. *In situ* in Ajanta, India. (Nicolle, 1989, fig. 34).
7. Three masted Indian Ocean-going ship. *In situ*, Siraf. (Nicolle, fig. 10).
8. The famous Indian Ocean-going vessel depicted in Ḥarīrī's MS. A.D. 1237. (Bibliothèque Nationale, MS arabe 5487, Paris).
9. Nicolle's simplified version of Ḥarīrī's vessel. (Fig. 24a).
10. Ottoman vessel with "crow nest". *Diwan Najatī*. (Nat. Lib., Ms. Turk. 18, Cairo). (Nicolle, fig. 56).
11. Kadirga ship with "crow nest". (L. Basch, 1989, p.33).

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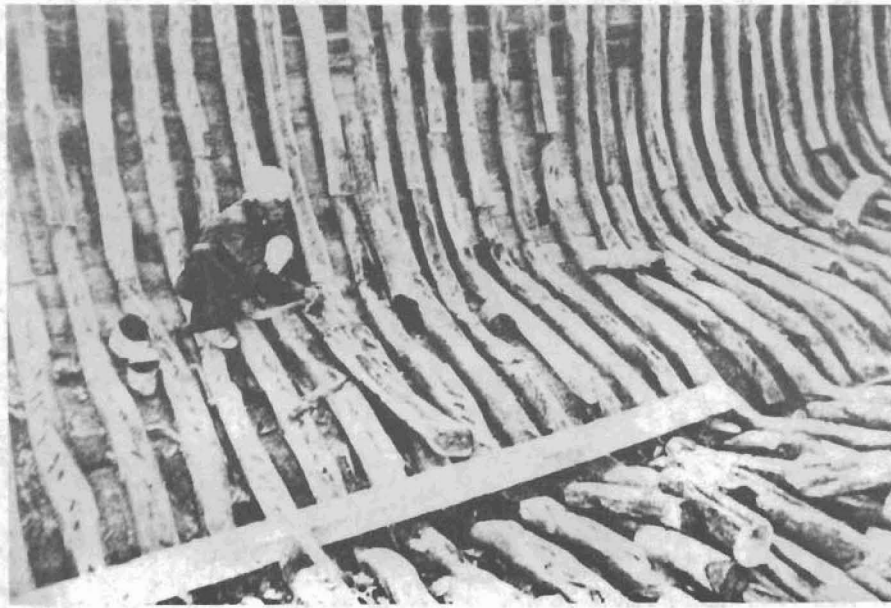
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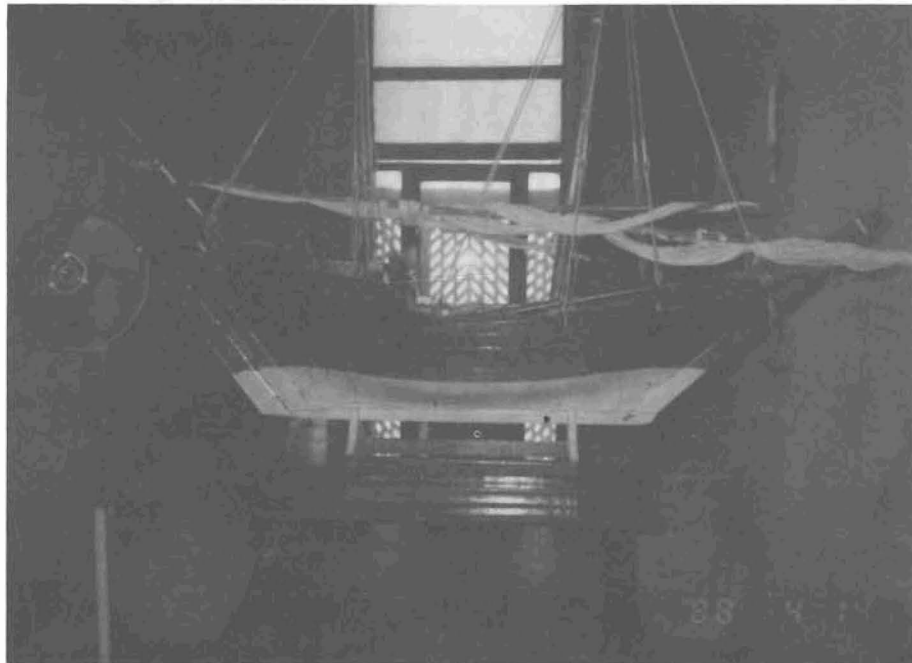
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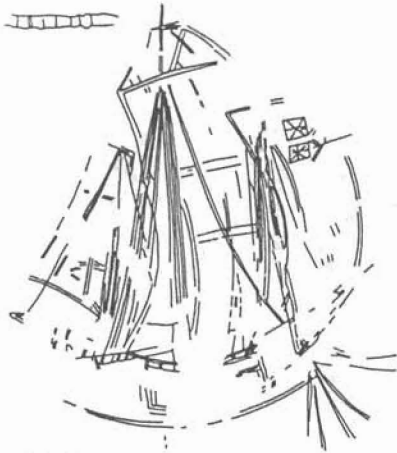


FIG. 7

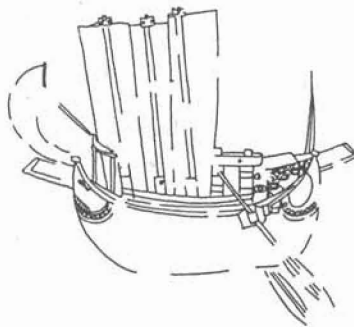


FIG. 6



FIG. 8

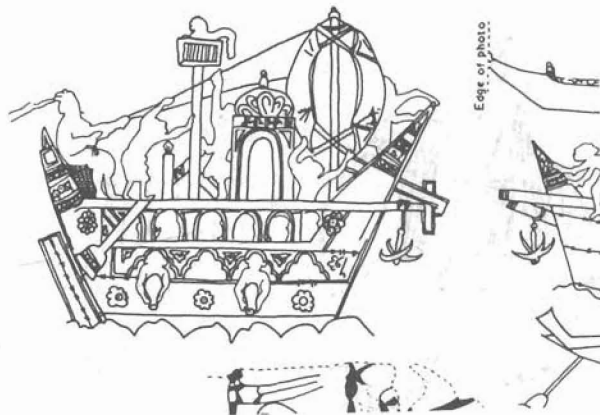


FIG. 9

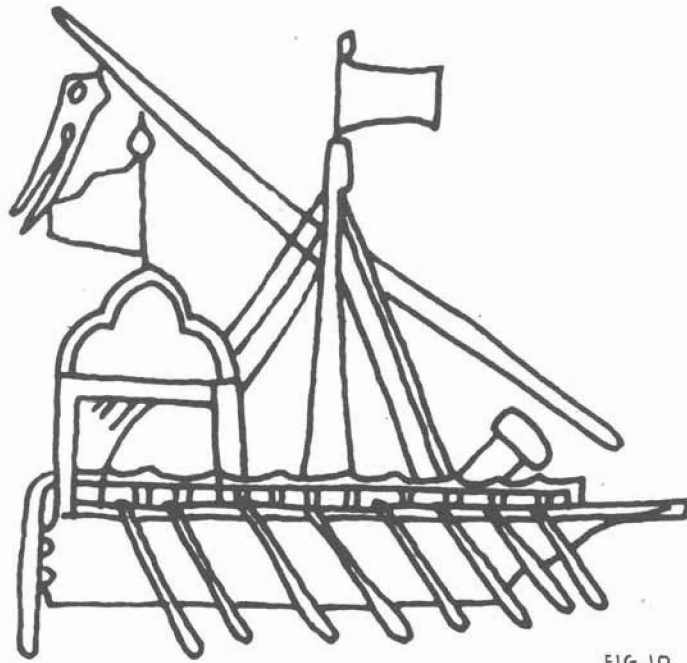


FIG. 10

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