

SOME REMARKS ON THE MEDITERRANEAN AND RED SEA SHIPS IN ANCIENT AND MEDIEVAL TIMES: A PRELIMINARY REPORT

The difference in shipbuilding between the Mediterranean and the Red Sea vessels in ancient and medieval times has been a topic of many discussions; but the scope of these discussions has been limited to the use of iron fastening in the construction of ships in the Mediterranean in contradistinction to the fastening by stitching the planks with fiber used in the Red Sea and the Indian Ocean. (To mention a few scholars: J. Hornell, Richard le Baron Bower, G. Hourani, L. Casson, and more recently N. Chittick and Patrice Pomey. The last one shows that sewn boats were also used in the Mediterranean in Roman times).¹

The aim of the present paper is first to offer a cursory examination of the main problems concerning the differences between navigation in the Mediterranean and the Red Sea and second to discuss in particular three of an array of problems which have remained obscure, i.e., the differences in the construction of cabins between Eastern Mediterranean and Red Sea - Indian Ocean going merchantmen in medieval times, the use of oars in the same type of vessels in both areas, and the lookout men.

Navigation in the Mediterranean in ancient and Medieval times with all its relevant problems (construction of ships, crews, equipment, etc.) has been thoroughly studied. In contrast, the study of navigation in the Red Sea and the Indian Ocean at the same period has been inadequate. It must be noted that while certain progress has been accomplished in the research of the construction and equipment of the ships used by the Arabs, Ethiopians and Indians in the Red Sea and the Indian Ocean in antiquity and later times, the paucity of sources has prevented any systematic work on the types of ships used by the Ptolemies, the Romans and the Byzantines in these seas. The lack of any concrete information about the type of ships used by the Ptolemies in the Red Sea is well illustrated in the description of Cleopatra's plan to escape through the Red Sea to Ethiopia after Octavian's victory in Actium (31 B.C.). According to Plutarch, Cleopatra ordered a fleet to be carried across the Isthmus of Suez, but the first vessels that were carried were burnt by the Nabataean Arabs.² Dio, on the other hand, reports that Cleopatra's vessels, some of which were burnt by the Arabs, were not carried but built on the Red Sea coast, being especially constructed to sail in its rough waters.³ If Dio is correct, and most probably he is, then it is obvious that Cleopatra decided to have ships built on the Red Sea coast in order to have them constructed in the best way for sailing in the Red Sea. The contemporary Arab sailing boats are built either on the ports of the Red Sea or on other ports of the Indian Ocean.⁴

In Aelius Gallus' ill fated expedition of 25 B.C. there is somewhat better information concerning Roman ships used in the Red Sea. He initially built a fleet

of 80 biremes (δίκροτοι), triremes and phaseli; but when he realized their unsuitability in the Red Sea he constructed instead 130 cargo carriers.⁵

The Byzantine sources reveal that Byzantine ships were stationed in Clysma (Ar Quzum), the chief trade port near modern Suez and the abess Aetheria, who visited Sinai in the sixth century, reports that a number of Byzantine ships retained their control of the trade traffic of the Red Sea at this time.⁶ In the *Pratum spirituale* (6th c A.D.) there is mention of Byzantine monks who sailed from the port of Raithou to the Red Sea and engaged in fishing.⁷ The *Synaxarium Constantinopolitanae*, describing the slaughtering of the Byzantine monks of Sinai in the 4th century by the Blemmyes, states that the Blemmyes sailed in large pirogues (ξύλοις μεγάλοις) and confiscated a Byzantine ship (πλοῖον) in Aila (modern Aqaba).⁸ Unfortunately, none of these sources offer us any details about the nature of Byzantine ships, their places of construction and their types.

Interestingly enough the 4th century byzantine authors Palladios and Procopios¹⁰ (6th c. A.D.) describe the India bound Arab and Indian ships constructed by stitched planks but are mute about the Byzantine ships of the Red Sea. We can assume that all or some of them must have been constructed in the shipyards of Alexandria, then carried dismantled to the Red Sea and/or that Byzantine ships were constructed by the Red Sea with imported Malabar wood.

To turn now our attention to the comparison between the Mediterranean and the Red Sea vessels it must be emphasized that the scope of the present paper is only limited to the comparison of few conspicuous points.

The first is the use of special cabins for passengers in the two above mentioned categories of vessels. Concerning the Mediterranean merchantmen there is ample literary information about a unique ship, Heros's monstrous ship (3rd c. B.C.) in which a number of luxurious cabins appear prominently, but we know little about the ordinary passenger freighter vessels in the Hellenistic and Roman periods.¹¹ In the Roman ships most of the passengers accommodated themselves on deck which at times could be open and other times partly covered by small shelters as the literary and iconographical evidence show (Fig. 1).

The coast-wise, sailing Mediterranean merchantmen—which could carry as many as 500 people—needed not sheltering cabins, since the crew and the passengers often dined and lodged on land.

Ashburner in his edition of the Rhodian Sea Law expresses the opinion that in the Byzantine ships there were no cabins. He based his argument on the Rhodian Sea Law in which there is a reference to small dwelling places for passengers, three cubits in length and one in breadth.¹² I believe that this was actually a general accommodation, but there is positive evidence that as in earlier times the captain and the most wealthy passengers who paid higher entrance fees secured special cabins.¹³

The Geniza documents written in the 10th - 11th centuries A.D. supplement the information we get from the Byzantine sources. S. Goitein states in his book *Studies in Islamic History and Institutions* (1966): "One gets the impression (from

the Geniza documents) *that in many cases the passengers actually slept on top of the bales entrusted to them*". Thus a Jewish merchant writes in a tenth century letter, *"I intended to travel in it (boat) upon the consignment of my lord"*. In another letter of the same period we read, *"He let someone else (instead of himself) travel on top of his consignment and go to Mahdiya"*.¹⁴ Thus we notice the existence of assigned spaces for the goods and passengers in the Mediterranean bound ships. But Goitein in a later work (1973) mentions a Geniza document of the 10th - 11th century, referring to a mediterranean ship where there are clear indications of a cabin: *"We three stood on a cabin on the uppermost part of the ship and did know how to escape. People from below, called us saying come down quickly"*.¹⁵

Unfortunately, underwater archaeology does not offer us any clues on the problem of the cabins. Living quarters for example were pinpointed in the Serçe Liman shipwreck of the early 11th century, but no details about them could be detected.¹⁶

The cabins which were a rarity in the Mediterranean seemed to be a common practice in the Indian Ocean going vessels. In the Geniza documents there are many references to such cabins in the Indian Ocean going vessels, which are usually called *"bilih"*.¹⁷ In the modern Arab ships of the Red Sea bound to India¹⁸ —in which some obvious similarities with the old vessels obviously appear— passengers are placed in closed cabins called *dabusa*, on the poopdeck.¹⁹

Moslem iconographic evidence provides us with ample information concerning cabins of the Red Sea-Indian Ocean vessels, but it is mute on the cabins of the Mediterranean vessels. Interestingly enough depictions of passengers on uncovered decks of Phoenician two-banked ships appear in a relief from the palace of Sennacherib, dated from the 7th c. B.C. (Fig. 3). It is not known whether this Phoenician tradition of placing passengers on the second unsheltered bank of Mediterranean transports was transmitted to the Moslems. Arabic iconography offers us two excellent illustrations from the 13th c. manuscript of Hariri. (Figs. 4, 5). In both we notice two overimposed decked floors, and on the upper level well defined round windows where the busts of wealthy merchants are portrayed.

It should be noticed that in a manuscript of the *Materia Medica*, dating from the 13th century, which presents a boat on a river, there are two superimposed covered decks above the lower level of oarsmen (Fig. 6). In the two illustrations of Hariri's manuscripts we notice over the main deck a luxurious pavillion for the shipowner and/or his agent. The same type of pavillion appears in a Persian manuscript illumination of an India bound ship (Fig. 7).

One illumination of the Hariri manuscript and that of the Persian manuscript (Figs. 4, 7) clearly depict the look out man on a small box-like structure on the top of a pole, which is often the main mast of the ships. References to such look out men frequently appear in the Arabic sources as well as in the Byzantine, but no artistic depiction of look out men appear in Byzantine iconography.

While the use of watchmen mounted on the top of a mast are common in the Mediterranean Sea in ancient and Medieval times, the emphasis placed on them in

the India bound vessels depicted in the Moslem manuscripts betray the great importance they had in these ships.

The last problem to be examined is now the use of oarsmen in the Mediterranean and Red Sea merchantmen. It is well known that in contrast to the Mediterranean warships which were propelled mainly by oars, the Mediterranean merchantmen moved by sails and only a small number of oarsmen were used for the special maneuvering needed when the ships entered the ports or in cases of emergencies. Small boats attached to the mediterranean merchantmen also frequently appear in iconography and are mentioned in the literary sources (fig. 1).

The India bound Red Sea ships were traditionally accompanied by such little boats but in an illumination of the Hariri manuscript we also notice a number of oarsmen (Fig. 5). A careful examination of this illumination reveals that the oarsmen, whose use in the Indian Ocean was usually avoided because of the shortage of drinking water, were in action because of an emergency, i.e., the obvious breaking of the sails (Fig. 8).

This discussion will continue in the second Symposium on "Ship Construction in Antiquity", to take place in Delphi, in August 1987.

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Notes

1. Patrice Pomey, "L'épave de Bon-Porté et les bateaux cousus de Méditerranée", *The Mariner's Mirror* 67³ (1981), 225-243. See also L. Basch "Le navire cousu de Bon-Porté", *Cahiers d'archéologie subaquatique* (1967), 37-42; idem, "L'assemblage du navire de Bon-Porté", *Dossiers de l'archéologie* (1978), 71-73. Some interesting remarks concerning a comparison between the Mediterranean and Indian Ocean trade are found in C. Cahen's article, "Le commerce musulman dans l'Océan Indien au moyen âge", *Sociétés et Compagnies de Commerce en Orient et dans l'Océan Indien*, Actes du huitième Colloque International d'Histoire Maritime - Beirut Sept. 1966 (Paris), 179 ff.

2. Plutarch, *Lives, Antony*, LIX, 3: «τοῦ γὰρ εἰργοντος ἰσθμοῦ τὴν ἐρυθρὰν ἀπὸ τῆς κατ' Αἴγυπτον θαλάσσης καὶ δοκοῦντος Ἀσίαν καὶ Λιβύην ὀρίζειν... ἐνεχείρησεν ἄρασα τὸν στόλον ὑπερνεωκῆσαι, καὶ καθεῖσα τὰς ναῦς εἰς τὸν Ἀραβικὸν κόλπον μετὰ χρημάτων πολλῶν καὶ δυνάμεως ἔξω κατοικεῖν, ἀποφυγοῦσα δουλείαν καὶ πόλεμον. ἐπὶ δὲ τὰς πρώτας ἀνελκομένας τῶν νεῶν οἱ περὶ τὴν Πέτραν Ἀραβες κατέκαυσαν...».

3. Dio, *Roman History*, LI, 7: «Ἐν ᾧ δὲ ταῦτα ἐγίνετο, τὰς τε ναῦς τὰς ἐν τῷ Ἀραβικῷ κόλπῳ πρὸς τὸν ἔξ τὴν ἐρυθρὰν θάλασσαν πλοῦν ναυπηγηθείσας οἱ Ἀράβιοι, πεισθέντες ὑπὸ Κυφίντου Διδίου τοῦ τῆς Συρίας ἄρχοντος, κατέπρησαν...»

4. M. Lesourd, "Notes et Documents. Notes sur les nava khid navigateurs de la Mer Rouge", *Bulletin de l'I.F.A.N.* 22 (1960), 346.

5. Strabo, 16. 780.

6. *Itinera Hierosolymitana*, ed. P. Geyer, 116.

7. *Pratum Spirituale*, P.G. 87³, col. 2984. For the ports of the Red Sea in the Graeco-Roman period see G.M. Bauer, "The Red Sea Comments", *Meroe* 3 (Moscow, 1985), 5-31 (in Russian). See also J. Desanges, *Recherches sur l'activité des Méditerranéens aux confins de l'Afrique* (Paris, 1978).

8. H. Delehay, ed., *Synaxarium Ecclesiae Constantinopolitanae, Propylaeum ad Acta Sanctorum*

Novembris (Brussels, 1902), 390-91.

9. W. Berghoff, ed., *Palladius de gentibus Indiae et Bragmanibus*, Meisenheim – Glan 1967, 1,4: «ἔστι δὲ εἰδικῶς τὰ διαπερῶντα πλοῖα εἰς ἐκείνην τὴν μεγάλην νῆσον [Ταπροβάνην] ἀνευ σιδήρου ἐπιούροις ξυλίνοις κατεσκευασμένα».

10. Procopios.

11. Athenaeus, 5.207c - 207f.

12. Walter Ashburner, *Νόμος Ροδίων Ναυτικός. The Rhodian Sea-Law*, (Oxford, 1909, repr. 1976), 60.

13. L. Casson, *Ships and Seamanship in the Ancient World* (Princeton, 1971), 180-181.

14. S.D. Goitein, *Studies in Islamic History and Institutions* (Leiden, 1966).

15. Goitein, *Letters of Medieval Jewish Traders* (Princeton, 1973), 41.

16. For all details about the shipwreck at Serçe Liman see the forthcoming work of F.H. van Doorninck, "The Medieval Shipwreck at Serçe Liman: An Early 11th Century Fatimid-Byzantine Commercial Voyage", to appear in *Graeco-Arabica* 4 (1987).

17. According to Goitein (above note 14, p. 481), the word "bilij" is Malayan.

18. For the Arab navigation in the Red Sea and the Indian Ocean see my forthcoming articles "Milaha" in *EP* and "Moslem Navies" in the *Dictionary of the Middle Ages*.

19. According to T.M. Johnstone and J. Muir, "Some Nautical Terms in the Kuwaiti Dialect of Arabic", *BSOAS* 27, 303, these cabinets are only for women; but see H. Grosset-Grange, "Comment naviguent aujourd'hui les Arabes de l'océan Indien?" *Arabica* 19 (), 61: "dabusch, chambre sous dunette, seul local fermant à clef; on y dépose les vivres et on y loge les passagères."

Captions

Fig. 1. Cargo vessel entering the harbour of Rome. Cover partly sheltering the passengers. Ca. A.D. 200 Relief in the Torlonia Museum, Rome. Casson, *Ships*, Fig. 146.

Fig. 2. Modern Arab Dhow. A. Villiers, *Men, Ships and the Sea*, Washington D.C. n.d., 44-45.

Fig. 3. Phoenician two-banked transports, ca. 700 B.C. The passengers are placed on the upper deck. Relief from the Palace of Sennacherib. A. Fayard, *The Monuments of Nineveh* (London), 1849, pl. 78.

Fig. 4. Moslem merchant ship illumination. The Hariri Ar. MS 5847, A.D. 1237. National Library of Paris, Axial stern rudder, Look-out man, Well defined Cabins, Long raking stern. *The World of Islam*, ed. B. Lewis (London, 1976), Fig. 15.

Fig. 5. Passengers in clearly defined cabins. Crew of a cargo ship. Illumination. Hariri Ar. MS. *The World of Islam*, ed. B. Lewis (London, 1976), Fig. 23.

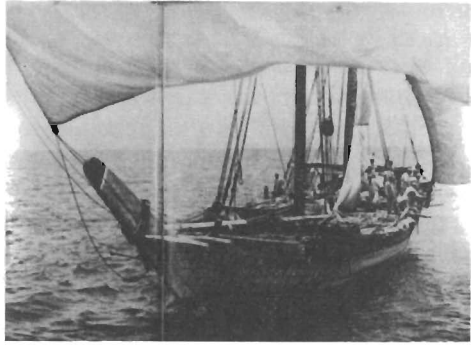
Fig. 6. Arab boat on a river. Passengers on the upper sheltered decks. MS of the "Materia medica" Mesopotamian, 1222/23. M. S. Dimand, *A Guide to an Exhibition of Islamic Miniature Painting and Book Illumination*, (New York, 1933-1934), Fig. 4.

Fig. 7. Moslem vessel endings in an animal's head. Look-out boy. Special pavillion. Persian MS. A.H. 924.

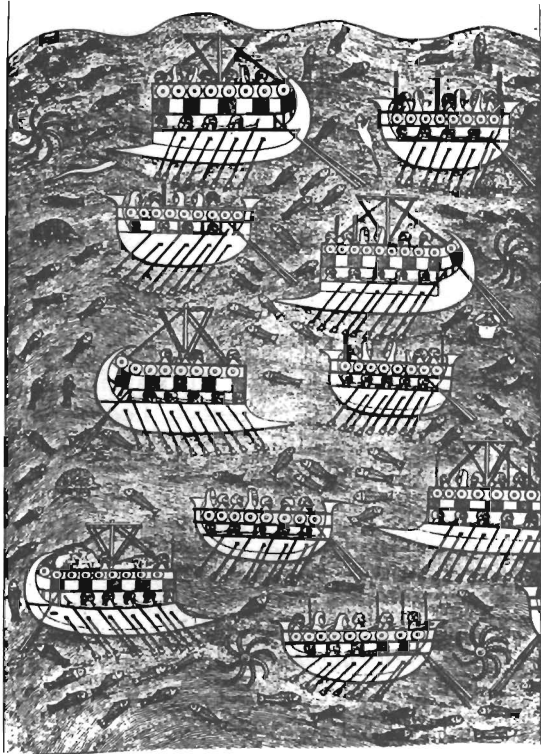
Fig. 8. Simplified form of the Hariri illumination, fig. 5.



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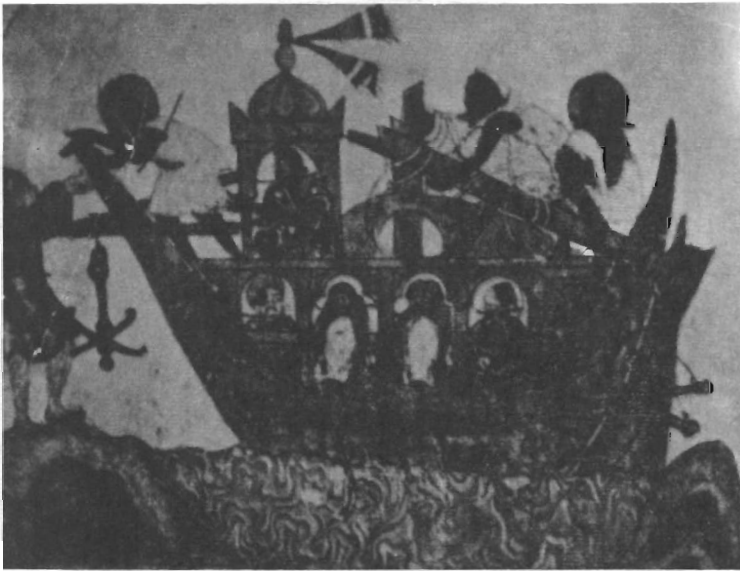


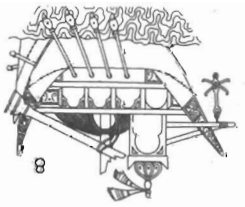
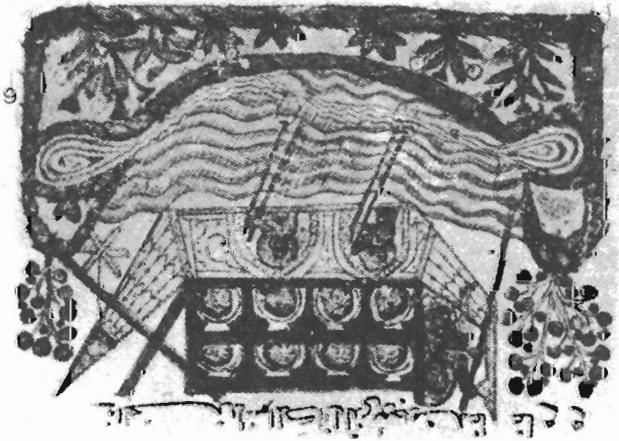
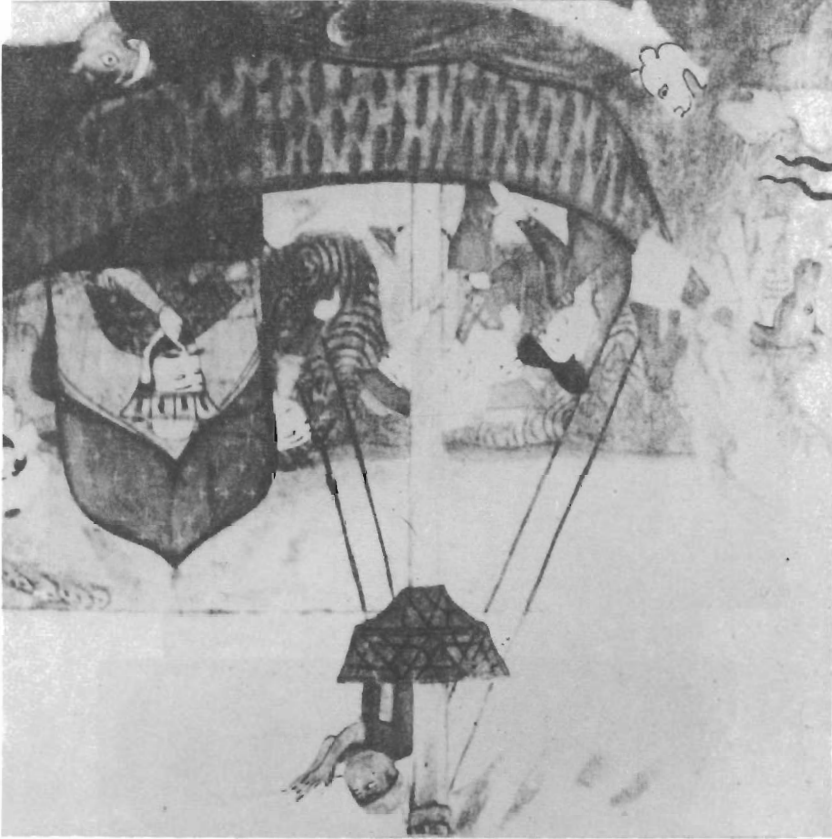
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