

## THE MYSTERY OF THE ORIENTAL WARSHIP

*"The first who sailed the sea in ships which are tarred (or pitched) and nailed, rather than sewn and oiled, and their form is flat rather than having two poles, is al Hāggāg ibn Yūsuf".*

This piece of information has been preserved in a book written at the beginning of the tenth century by a Moslem Persian author, Ibn Rustah<sup>1</sup>. It appears in a chapter where the writer gives a list of pioneers in various fields and describes the "innovation" of the governor of Iraq who ruled between 694 and 714 AD, under the Ummayyad caliphs 'Abd alMalik and alWalid

I. The ships alHāggāg built were not merchantmen. He needed them to fight the Indian pirates at the entrance to the Persian Gulf, and ended up conquering Sind by combined land and sea operations<sup>2</sup>.

When Ibn Rustah said "the sea" he meant the India Ocean, or rather its western basin. Like the Mediterranean, this ocean is divided in two by Sri-Lanka and the Maldivé islands. In the eastern basin, a separate shipping tradition was dominant, led by the people of south-east Asia, with an important Chinese influence. This study is concerned with the western basin and mainly with its two extremities - the Red Sea and Persian Gulf. These waters were traditionally referred to as the "Arabian Sea". They have specific geophysical and meteorological conditions, which have determined the nature of seafaring through the ages<sup>3</sup>.

The above statement makes two important points: a. it implies the beginning of a tradition, i.e. - the building of "Mediterranean type" ships in the Arabian Sea; b. it makes a detailed distinction between the two types of ship-hulls, the Mediterranean and the Eastern ones.

A. Was alHāggāg really the first who built Mediterranean type ships in the area? Most of the mediaeval Arab, Persian and Western sources which describe shipping in the Indian Ocean allude to merchantmen. The Moslem travellers, especially Ibn Gubair<sup>4</sup>, describe in detail the general nature and the construction method of these ships. The iconographic sources also depict cargo and passenger ships, as in the well-known miniature illuminations to the manuscript of Maqāmāt alHarīrī<sup>5</sup>, frequently misused to represent Mediterranean Moslem ships as well<sup>6</sup>. These sources should be supplemented by the important studies of local craft which had existed up to World War II<sup>7</sup>. They all describe the typical oriental merchantman

as a sewn, double-ended craft, carrying a fore-and-aft sail, the so-called Arab Lateen, and equipped with a precocious stern rudder. Some of the sources, like Ibn Gubair, Ibn Batūta and Marco Polo<sup>8</sup>, complain of the poor quality of these ships and the misery of the seafarers. The miniatures also describe baling the water out as a routine operation of the crew.

The few allusions to warships add up to a strange picture. It seems that whenever a naval action was carried out in the Red Sea, ship-parts were being built in Mediterranean arsenals, then transported on camel-back to one of the ports on the Red Sea shore. There they would undergo assemblage, nailing and final construction. Then the ships would be launched, ready for battle<sup>9</sup>. The most famous example of this practice was the naval campaign carried out by Renauld de Chatillon, the Crusader Lord of Transjordan, in the Red Sea in AD 1182-3<sup>10</sup>. Less known is the fact that Saladin, his adversary, also moved Mediterranean fighting vessels to eastern waters on several occasions, as when he sent his fleet against that of Renauld, and twelve years earlier, when he captured Gazīrat Far'un, île de Graye of the crusaders<sup>11</sup>. At the end of the thirteenth century, as the final blow was being dealt to the Crusader Kingdom, several Genoese galleys were active in the Persian gulf, in the service of the Mongols<sup>12</sup>. As late as the sixteenth century, the Ottomans were fighting the Portuguese in the Red Sea with Mediterranean war fleets<sup>13</sup>.

All these instances are later than alHāggāg times, but things were no different in earlier days. The practice is attested too in the Roman and even Hellenistic periods, perhaps earlier yet. To give but a few well-known examples: The Assyrian king Sancheriv (705-681 BC) moved Phoenician shipwrights to Ninveh, where they built a war-fleet to fight "the land of the sea" (modern Kuwait?)<sup>14</sup>. Alexander the Great transferred Phoenician fleets to the Persian Gulf<sup>15</sup> and one of his successors, Ptolemy the Second, defeated the Nabateans in the Gulf of Eilat by using quadriremes (c. 275 BC)<sup>16</sup>. The Roman Aelius Gallus carried out in 25-4 BC an unfortunate trireme campaign to Aden<sup>17</sup>. According to recent Egyptian excavations at a Red Sea port site, this was the case also in Pharaonic times<sup>18</sup>.

These examples add up to a long standing tradition. In the case of the Red Sea, the ships were constructed in the traditional shipyards and transported, mostly on land (!), to the theatre of war. When the ancient canal linking the Nile with the Red Sea was in use, the ships could pass through it, although we have no direct evidence for this practice<sup>19</sup>. In the Persian Gulf and beyond, the ships were constructed in situ. When these ships were constructed in the eastern

arsenals, it may be assumed that Mediterranean master shipwrights were employed, using Mediterranean-basin timber like Aleppo pine, and the Mediterranean method of construction. In classical times, the warship was of the trireme type, while in the medieval period it was of the galley type, called in the Mediterranean area Ghurāb or Shīnī. In the East, these ships seem to have been called by the generic name Mu'abbada - constructed, processed<sup>20</sup>. The practice of "importing" warships is understandable in the case of Mediterranean sea-powers pushing into foreign waters. Even in this case, we would expect the enemy to adopt eventually the superior design and tactics of the intruding warships, as would normally happen in a similar situation. But it did not happen here, although Mediterranean warships were not only moved into eastern waters, but were repeatedly constructed there.

From the preceding evidence it is clear that alHāggāg represents a link in a chain of long-standing tradition. He was neither the first nor the last. But his project did not have any prolonged impact on the eastern shipbuilding industry. Over 150 years after alHāggāg's times, the complete dichotomy between the two shipbuilding traditions, that of the Mediterranean and the Indian Ocean, is attested by a tale ascribed to "Sulaiman the Merchant", who was active in the eastern trade around the middle of the ninth century<sup>21</sup>. He says that:

"now we know something which our predecessors did not know, namely that the Ocean bordering on China and India is connected with the Mediterranean. It has been proven by a part of a sewn Arab ship hull, found in the Mediterranean. The ship must have been wrecked and this part of the hull was carried by the waves to the Caspian Sea, from there to the Black Sea, whence it got into the Mediterranean. Now we know that only the ships of Siraf (on the Persian Gulf) are sewn, while Syrian and Byzantine ships are nailed and not sewn".

He obviously did not know about the sewn boats of the Mediterranean<sup>22</sup>, and his knowledge of the northern waterways leaves something to be desired, but he certainly made his point<sup>23</sup>.

Egypt, with coasts on both the Mediterranean and the Red Sea, is an enigma. Throughout its medieval history, Egypt had close relations with Mecca and Medina, a flourishing trade with the Far East and a constant need to protect its long eastern border<sup>24</sup>. Nevertheless, it seems that it always had Mediterranean warships as patrols in its eastern waters, and that these did not affect the local ships industry, even during periods of intensive maritime activity, as under Ummayyad and Fatimid rule. Qulzum, Qusair, Aidhāb, at-Tur and other coastal towns served at different periods as important ship-building centers, but they turned out sewn merchantmen,

unaffected by the Mediterranean tradition.

B. The comparison made by Ibn Rustah is undoubtedly describing the main differences in construction and profile between Mediterranean and Eastern ships. I would like to emphasize the contrast “tarred (or pitched) and not oiled” in connection with the effort, brought up to date by L. Basch, to follow the etymology and origin of “calfatage”<sup>25</sup>. Ibn Rustah writes more than three hundred years after the Greek Papyrus mentioning “kalaphates” for the first time, and a hundred years before the Serçe Liman wreck, preserving real caulking, and before the first mention of calfatage in the Arabic sources<sup>26</sup>.

No doubt the Mediterranean ships Ibn Rustah is describing are already built frame-first, as is evident by the date and by the term “nailed” he uses; but he does not use the term “qalfata” but rather qayyara, which may apply to the protective layer of hemp and pitch and not necessarily to forced or “true” caulking. Several Abbasid poets who were contemporaries of Ibn Rustah also used Muqayyara and not muqalfata. The Persian orbit of language and culture did not adopt this term, and continued to use the rather unspecific qyr. Here there was not much use for it, as the ships which needed caulking were indeed rare east of Suez.

The term qalfata in Arabic means only true calfatage, as in the European languages. To be sure, this four letter root is definitely alien to Arabic. Originally it was a three letter regular semitic root which made the round and came back into the Arabic via the Greek. The Byzantine term is derived in my opinion from the Syrian and Aramaic, and its remote origins are in Mesopotamian boat building (as Noah’s Arc, Genesis 6, 14) and Egyptian ship construction (Moses boat, Exodus 2, 3). The root qlf does not appear in the Old Testament. It is quite prevalent in the Talmud, where it means as in Aramaic - shell, outer skin<sup>27</sup>.

The transmission must have occurred during Hellenistic or early Roman times, when Greek and Western semitic languages influenced each other to a great extent. In the beginning, the word meant protecting the hull by asphalt, bitumen and the like, and only later it became specialized to true caulking. In my view, the sixth century papyrus still uses the word in this general sense. When “qalfata” appears in Arabic for the first time (no later than the eleventh century), it is by any way of the Byzantine Greek term, as the added final “ta” shows. The Turkish term may have come either via the Greek or the Arabic, but not vice versa, as it is neither a Turkish nor a Persian root.

On the whole, naval activity in this region was very sporadic. When describing Gallus' campaign, Strabo said<sup>28</sup>:

"Now this was the first mistake of Gallus, to build long boats, since there was no naval war at hand, or even to be expected; for the Arabians are not very good warriors even on land, rather being hucksters and merchants, to say nothing of fighting at sea".

This statement remained valid for the western Indian Ocean for hundreds of years to come, although in the Mediterranean the same Arabs rapidly developed into a naval power to be reckoned with. Hourani in his pioneering study of this topic has commented on the lack of naval tradition even within the seafaring tribes of south and east Arabia<sup>29</sup>.

Most modern treatments of the subject of Moslem Eastern seafaring deal mainly with commercial expansion, note the technical characteristics in ship construction and types, but fail to emphasize the absence of warships and naval actions from the eastern sphere<sup>30</sup>. A.R. Lewis, in this study of Indian Ocean shipping in the late Middle Ages, concludes that the eastern system of free trade lasted from pre-Islamic times to the age of the great discoveries and was totally different from the military commerce prevailing in the West<sup>31</sup>. This point was justly elaborated on by Christides and others<sup>32</sup>. But Christides maintains also that:

"on the one hand, [eastern warships] had to be constructed in accordance with the model of the merchant passenger vessels..., 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"<sup>33</sup>.

The evidence seems to point in the opposite direction. The specialized warships of the western Indian Ocean were "imported" Mediterranean ships, and there was no lasting influence between the two types. The need to "import" warships from western arsenals and the sporadic nature of naval warfare in the East reflect two distinct concepts of sea power.

Piracy, however, continued to be a major problem throughout the Middle Ages<sup>34</sup>. The south-Arabian tribes engaged in piracy from times immemorial, as an extension of the caravan robbery on land. The straits of Tiran, Bab alMandab and Hormuz and the adjacent islands (Socotra, Bahrein, the mouth of the Indus), were well-feared pirate nests. State-or-region organized campaigns against them usually failed. This endemic situation in another aspect of the lack of naval power in this area.

The absence of specialized warships had far-reaching implications on the nature of maritime commerce and the dominion of the seas. In the western Indian Ocean, commerce was free and open to all, and the style of international relations up to the great discoveries was not violent, but depended on diplomatic missions like that of the Queen of Sheba in the tenth century BC or the Ming Dynasty voyages at the beginning of the fourteenth century AD<sup>35</sup>. At the end of the Middle Ages, the fusion of the seafaring traditions of the Mediterranean and Atlantic Ocean led to European victory over the oceans and the dominion of the whole world<sup>36</sup>. In the East, no mutual influence occurred between the seafaring traditions of the Mediterranean and Indian Ocean. The absence of the oriental warship may be regarded as a major factor in the inferiority of the East at this crucial moment in history.

The reasons for these developments, or rather lack of them, are beyond the scope of this paper. A glimpse into the mentality which lay behind them is found in an eloquent passage, quoted in the name of a Persian sage, talking of the differences between land and naval tactics<sup>37</sup>:

“Chess is similar to land-battle, while backgammon represents a sea battle. The backgammon player places his pieces in choice positions and stays on guard, but the dice come up with what does not agree with his plan, so there is no use for his watchfulness, and his stratagem comes to nothing, as with the shifting winds and the everchanging sea”.

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## NOTES

1. “Wa ‘awwal man agra fi albaħr as-sufun almuqayyara almusammara ġair almakħruza almadhuna walmusattaħa ġair dħawat alġa ‘āġi alħaggāġ ibn yūsuf”, Ibn Rusta, *Ala ‘lāq an-nafīsa*, ed. M.J. De Goeje, M.J., (Leiden 1879), R. Brill, 1967, pp. 195-6; Trans. G. Wiet, *Les Atours Precieux*, Cairo 1955, p. 227.
2. Baladhury, *Futūh albuldan*, ed. M.J. de Goeje, (Leiden 1866), R. Brill 1968, pp. 435-6, 444-6; Trans. K.P. Hitti & F.C. Murgotten, *The origins of the Islamic State*, N.Y. 1916-24. See A.S.S. Nadvi, *Arab Navigation*, Lahore 1966, p. 41 (originally in *Islamic Culture* vols. XV-XVI, 1941-2). Apart from the fact that merchantmen were not usually built by the state, the ground for this assertion will become clearer further on.
3. See my “Ships and Shipping: the Red Sea and Persian Gulf”, forthcoming in the *Dictionary of the Middle Ages* by Scribners’ Sons, Publishers, N.Y.
4. Ibn Gubair, Riħla, ed. & trans. W. Wright, Leiden 1907, p. 70-74; English trans. by R.J.C. Broadhurst, London 1952.
5. Bibliothèque Nationale, Schefer collection, Ms. Ar. 5847, fol. 119v; reproduced fully in R. Ettinghausen, *Arab Painting*, London 1977; partial reproductions in G.F. Hourani, G.F., *Arab*

- Seafaring in the Indian Ocean in Ancient and Early Medieval Times*, Princeton University Press, 1951, L. Casson, *An illustrated History of Ships and Boats*, N.Y. 1963 and others.
6. See for instance V. Christides, *The conquest of Crete by the Arabs (c. 824) - a turning point in the struggle between Byzantium and Islam*, Athens 1984, p. 69 f.
  7. Hornell, J., "A tentative classification of Arab Seacraft", *Mariner's Mirror* 28/1942, 11-40. Nougarede, M.P., "Qualités nautiques des navires arabes", *Océan Indien et Méditerranée, Travaux du 6ème Colloque International d'Histoire Maritime*, Paris, S.E.V.P.E.N. 1964, pp. 95-122. See J.S. Illsley, *A Database Bibliography of Underwater Archaeology*, Bangor 1989.
  8. Marco Polo, *Travels*, ed. & translation P. Latham, Penguin 1958, p. 66; Ibn Gubair, *ibid.*; Ibn Batūta, *Rihla*, ed. & trans. C. Defremery and B.R. Sanguinetti, Paris 1879-93, 4 vols, vol. IV, pp. 158-163.
  9. A passage describing this procedure is erroneously ascribed to Ibn alAthīr in several of the leading naval histories written in Arabic. See: Su'ad Māhir. *Albahriyya fi miṣr alislamiyya*, Cairo 1940, p. 190; Muhammad Yasin alHīnawi, *Tarikh al 'ustūl alarabi*, Damascus 1945, p. 60. See note 11. I have been unable to find the true source of their quotation, but it must come from a much later author, as the details are distorted and reflect conditions at the time when at-Tūr became an important port of embarkation for the Red Sea.
  10. Lebrousse, H., "La guerre de course en mer Rouge pendant les croisades", *Course et Piraterie, Travaux du XVè Colloque International d'Histoire Maritime (CIHM)*, ed. M. Mollat, Paris 1977, I, pp. 36-77.
  11. Ibn al-Athīr, *Alkāmīl fi at-ta'rikh*, 12 vols., Beirut 1966, R. of C.J. Tornberg edition, Leiden 1853, XI 365, 490-1.
  12. Guillaume Adam, *Recueil des Historiens des Croisades, Documents Armeniens II* (1906), ed. C. Kohler, pp. 549-555 see Richard, J., "Les navigations des occidentaux dans l'Océan Indien et la Mer Caspienne", *Sociétés et compagnies de commerce en Orient et dans l'Océan Indien, Travaux du VIIIè C.I.H.M.*, ed. M. Mollat, Paris, S.E.V.P.E.N., 1970, pp. 353-363.
  13. Hess, A.C., "The evolution of the Ottoman seaborne empire in the age of the oceanic discoveries", *American Historical Review* 75 (1970), 1892-1919; Soucek, S., "Certain types of ships in Ottoman-Turkish terminology", *Turcica* 7 (1975), 233-249. Guilmartin, Jr., J.F., *Gunpowder and Galleys, Changing Technologies and Mediterranean Warfare at Sea in the Sixteenth Century*, Camb. U.P., 1974, esp. pp. 7-15 (Gedda 1517).
  14. Luckenbill, S., *Ancient Records of Assyria and Babylonia*, Chicago 1927, II, secs. 318-321.
  15. Arrian, *Anabasis* VII, chs. 19-20, Loeb Classical Library. All quotations from the classical sources are according to the LCL; The translations from the Arabic are the author's.
  16. Agatharchides, chs. 83-8; Strabo XVII, ch. I, 44-5.
  17. Strabo XVI, ch. 4, 23; Pliny, *Naturalis Historia*, II, 168. Notes 14-17 are quoted by Hourani, *ibid*, ch. I.
  18. Abdel Monem A.H. Sayed, "New light on the recently discovered port on the Red Sea shore", *Chronique d'Egypte* 58/1983, 23-37, esp. p. 30. Qulzum may be an exception, with Mediterranean warships being built in its Arsenal. Qulzum started declining in the tenth century AD and was completely in ruins by the fourteenth.
  19. Hallberg, C.W. *The Suez Canal, its History and Diplomatic Importance*, N.Y. 1974, Ch. I.
  20. Al-Hīmaqi. 112 (citing a poem by Ḥasan ibn Ḥani, Abu Nuwās). The root 'abd is synonymous to ṣn'a, whence Dar aṣ-ṣina'a, arsenal, the place where warships were constructed in the Mediterranean world.
  21. Silsilat at-tawārīkh, in *Relation des voyages faits par les Arabes et les Persans dans l'Inde et la Chine dans le IXè siècle de l'ère Chrétienne*, texte Langles, trad. M. Reinaud, 2 vols., Paris 1845, p. 87.
  22. Pomey, P., "L'épave de Bon-Porté et les bateaux cousus de Méditerranée", *Mariner's Mirror* LXVII/1981, pp. 225-243. See the reports on the wrecks of Giglio and Gela (western and southern Italy, respectively) and Ma'agan Michael (Israel) in *TROPIS III*.

23. Nonetheless, the route he describes is navigable, with short portages, the other way around, and was indeed practiced by the Varangians at his time. See:  
Ellis Davidson, H.R., *The Viking Road to Byzantium*, London, Allen & Unwin, 1976.  
Lewis A.R., *Northern Seas, 300-1100*, Princeton University Press, 1958.
24. Labib, S.Y., *Handelsgeschichte Ägyptens im Spätmittelalter (1171-1517)*, Wiesbaden 1965.
25. Basch, L., "Note sur le Calfatage, la chose et le mot", *Archaeonautica* VI/1986, pp. 187-198.
26. Kahane, H. & R., and Tietze, A., *The Lingua Franca in the Levant, Turkish nautical terms of Italian and Greek Origin*, Urbana, 1958, p. 513.
27. The nouns derived from the root qlf became quite important in Jewish Kabbalistic circles, denoting the material shells of existence, the dark side of Creation, etc.
28. Strabo, *Geography* XVI, ch. 4, 23.
29. Hourani, p. 55 - "It will by now be clear that the maritime activity of the ancient Arabs was restricted to commerce and piracy. However many Yamanis and Bahraynis took part in the invasions of Egypt and Syria, their nautical knowledge would be quite useless in a sea battle", see also p. 31.
30. Al'lbādi, A.M. and Sālem, A.A., *Ta'riḫ albaḥriyya alislamiyya fi miṣr wash-shām*, Beirut, 1972. Doctora Safā Hāfīz 'Abdul Fatāh, *Almawāni watthugūr almisriyya min alfath alislami hatta nihayat al'asr alfātimi*, Cairo, s.d.  
See also Māhir and Himawi, note 9 above.
31. A.R. Lewis, "Les marchands dans l'Océan Indien, AD 1100-1500", *Revue d'Histoire Economique et Sociale*, LIV/1976, 468, 475.
32. Christides, V., "Some remarks on the Mediterranean and Red Sea ships in Ancient and Medieval times: A preliminary report", *TROPIS II*/1985, pp. 75-82; *TROPIS III*/1987, pp. 87-99.  
See also his "Milāḥa" in the *Encyclopaedia of Islam*, new edition.
33. Christides, *TROPIS II*, pp. 88.
34. Toussaint, A., "La course et la piraterie dans l'Océan Indien", *Course et Piraterie*, II, pp. 703-743. The main sources are: Barhebraeus, *Chronography*, ed. & trans. E.A.W. Budge, Oxford 1932, pp. 130, 133; Tabari, *Annals*, ed. M.J. De Goeje and others, Leiden 1879-1901, v. III p. 1582; Ibn Batūta IV 59-60; Marco Polo, p. 290-1;
35. Levenson, J.R. ed., *European Expansion and the Counter-example of Asia, 1300-1600*, Cambridge, Mas. 1957. Filesi, T., *China and Africa in the Middle Ages*, Trans. D.L. Morrison, London, F. Cass, 1972.
36. Villain-Gandossi, C., Busuttil, S., Adam, P., eds., *Medieval ships and the birth of technological societies*, 2 vols., Malta, Foundation of International Studies, 1989-92.
37. AlḤasan, ibn 'Abd-allah, *Athār aluwal fi tartīb a-duwal*, quoted by alḤimawi, p. 112. I have been unable to check this quotation.