Marsa Matruh as a Habour and as a Measure of the Size of ancient Ships

von
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Abstract
The evidence of the foreign pottery found on Bates's Island in Marsa Matruh confirms the arrival around 1400 B.C. of visiting ships from abroad. However the very small size of the island itself and the unvarying shallowness of the water in the harbour and in the neighbouring lagoons must indicate severe limitations on the size of these vessels. Such limitations compare favourably with the evidence from Dor and Gebeil/ Byblos on the Near Eastern coast.

Marsa Matruh, the Roman *Paraetonium*, lies along the Mediterranean coast west of Alexandria and close to the border of Libya today (fig. 1). In recent years, the town has grown closer to its small circular bay, which was not the case before.

Today, the bay measures approximately 2000 metres across and 1000 metres from north to south. It has rocky projections at its centre and is also quite shallow in places, with several wrecks within it (fig. 2). The British Admiralty chart no.3567 shows navigable channels through its waters. However, today no large ships of any kind enter this bay and the largest boats that we ever see there are some light police launches. These and other small vessels (mostly fishing boats) circle around the outer edge of the bay to reach the other side instead of sailing across its centre.

It is not easy to enter Marsa Matruh bay from the Mediterranean Sea, where a way through many reefs must be negotiated (fig. 2).This situation is made more dangerous at times when the north wind is strong because it can blow a vessel on to the reefs if its control is lost.

On the southern shore of this bay a large number of deliberately pierced stones were found[1], namely stone anchors[2]. Unfortunately we have no way of dating them. Some of these

[1] A. Nibbi/ M.I. Bakr, in: Discussions in Egyptology 29, 1994, 5-22. See also A. Nibbi/ M.I. Bakr, The Stone Anchors of Bates's Island, Proceedings of the Seventh International Congress of Egyptologists Cambridge, 1995.

were clearly of a weight to be used by fishing boats, but a few of them were quite heavy and indicated the presence not too far away of larger vessels. One of these heavier anchors, which could not be dislodged by two men on the previous day, disappeared overnight as the result of a storm which had temporarily raised the height of the water by 12 to 18 inches[3]. The Admiralty chart tells us that during northerly winds, the level of the water in the harbour of Marsa Matruh may rise from two to three feet above normal.

It is not by chance that the place where these anchors were found is directly opposite to the entrance to the bay, along the southern cliffs, which are approximately fifteen feet high.Marsa Matruh bay has five lagoons on its eastern side and it is on the first lagoon that Bates's Island is situated (fig. 2). The name we give today to this small island is in memory of Oric Bates, the American ethnographer who spent some time on the island working for Harvard University's Peabody Museum, in the winter of 1913-14[4]. Otherwise the local people call this island Al Mina Al Sharkh or Gezira el Yahudiah, because it is generally believed that there was a Jewish burial on the island. In recent years, Donald White and his team from Pennsylvania University have re-excavated the island and his excellent preliminary reports have greatly enriched our knowledge of the area[5].

Bates's Island today measures about 135 metres by 55 metres and its highest point is just over six metres from sea-level (Plate 11a). It is generally believed that perhaps half of the original surface of the island now lies underwater. Some believe also that the island may once have been attached to the mainland. These are difficult questions to resolve as the physical nature of this territory has not until now been very carefully studied and there are still many problems in the way of our understanding it.

2 A. Nibbi, in: JEA 61, 1975, 38-41; see also A. Nibbi, in: GM 32, 1979, 39-44; A. Nibbi, in: GM 33, 1979, 41-46; A. Nibbi, in: Mariner's Mirror 70, 1984, 247-266; A. Nibbi, in: International Journal of Nautical Archaeology 20, 1991, 185-194; M.I. Bakr/ A. Nibbi, in: RdE 42, 1991, 3-10; A. Nibbi, in: International Journal of Nautical Archaeology 21, 1992, 259-267; A. Nibbi, in: Mariner's Mirror 79, 1993, 5-26.

3 Nibbi, in: Mariner's Mirror 79, 1993, 19, fig. 22b.

4 A basic and remarkably complete study of Bates's Island may be found in O. Bates, in: Bulletin of the Society of Biblical Archaeology 1915, 201-207. Furthermore his extensive surveys of the area of Marsa Matruh and its surroundings contain valuable information for us to this day. See: O. Bates, Excavations at Marsa Matruh, Harvard African Studies VIII, Varia Africana VI, 1977, 123-197, and pls. 1, 65.

5 D. White, in: JARCE 26, 1989, 87-114; D. White, in: JARCE 23, 1986, 51-84; see also report by D. White, JARCE Newsletter no. 131, 1985, 3-17; D. Conwell, in: Expedition 29 (3), 1987, 25-34, who however, links facts with assumptions about the past and with Libyans in particular.

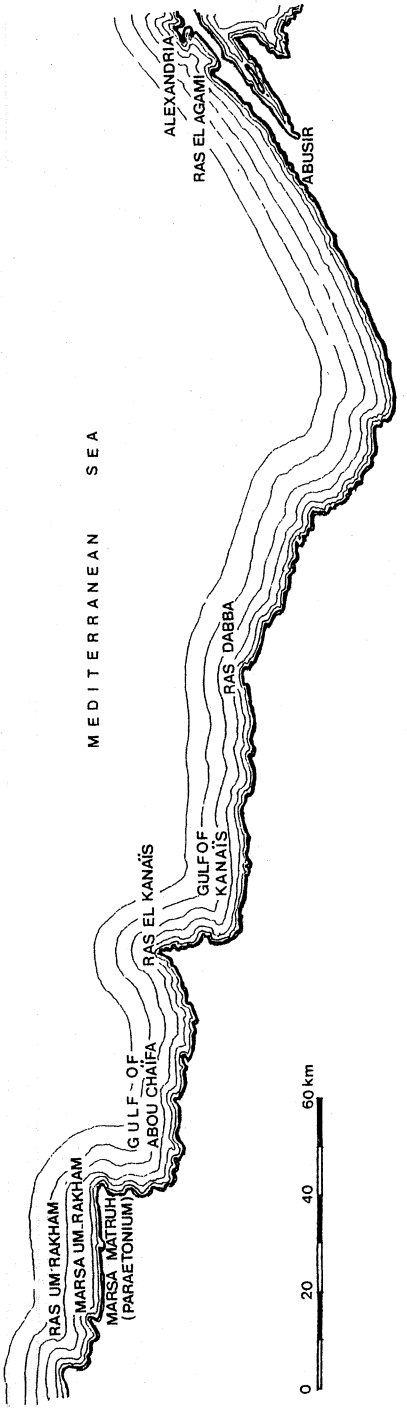

Fig. 1

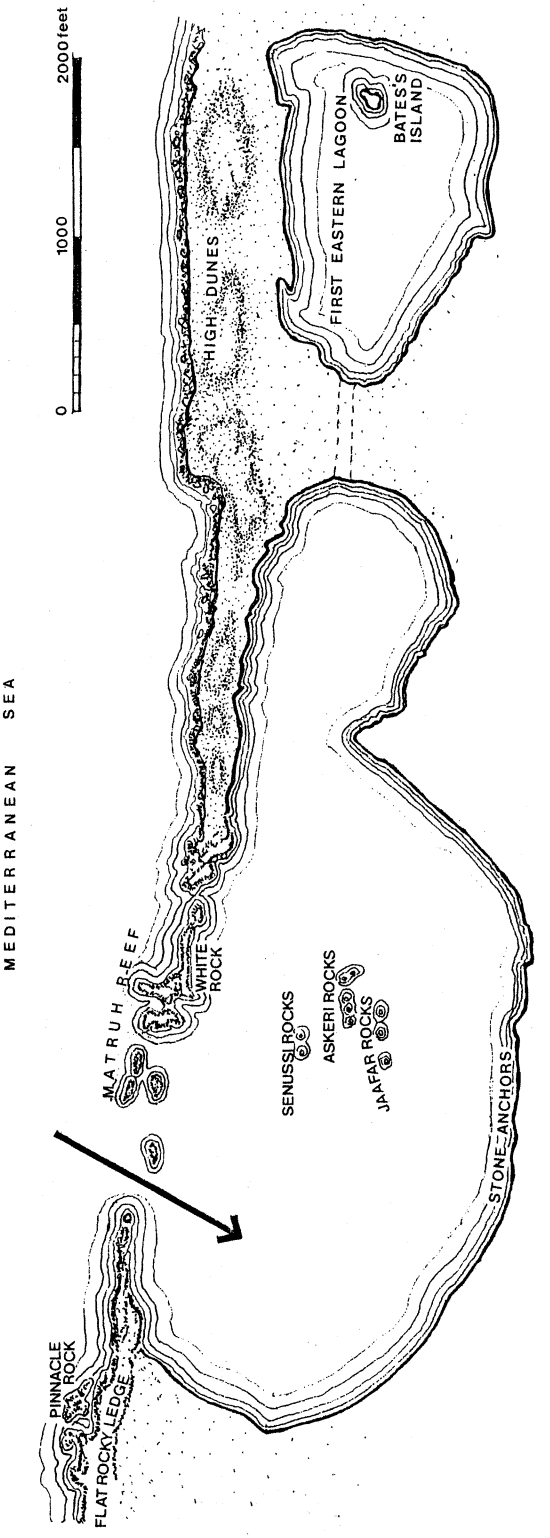

Fig. 2

On the island are the remains of a few ancient buildings, evidence of some metal-working there and a considerable quantity of foreign pottery, most of which is Cypriot, but which includes some Mycenaean and Minoans sherds[6]. We have to accept, therefore, that foreign visitors came to this island during the fourteenth and thirteenth centuries BC[7].

It is interesting to note that, approximately ten kilometres westwards of Marsa Matruh, at Umm El Rakham, the site of the so-called fortress of Ramesses II now being excavated by Stephen Snape and his team from Liverpool University, has also produced foreign pottery including some fine Mycenaean stirrup jars. But remarkably, practically no Egyptian pottery has been found inside the „fortress", as Stephen Snape has told us in his public lectures so far. We look forward to his publication of this material.

In the vicinity of Umm El Rakham, there is a stretch of beach with a little shelter from the wind, where it is likely that foreign visitors could pull their vessels to the shore and tie them up (Plate 11b). But we must not forget that the level of the water along this shore is also not high, so that very large ships would have to remain anchored at sea offshore, using lighters or dinghys to come in to land.

Sailors in ancient times were well aware of these difficulties. Diodorus Siculus spoke particularly of this shoreline when he said of the Mediterranean:

> The voyage along the coast of this sea is exceedingly long, and landing is especially difficult; for from Paraetonium in Libya as far as Iope in Coele-Syria (Jaffa), a voyage along the coast of some five thousand stades, there is not to be found a safe harbour except Pharos. And, apart from these considerations, a sandbank extends along practically the whole length of Egypt, not discernible to any who approach without previous experience of these waters. Conseqently those who think that they have escaped the peril of the sea, and in their ignorance turn with gladness towards the shore, suffer unexpected shipwreck when their vessels suddenly run aground. (I, xxx, 31)

It is likely that Marsa Matruh served as a harbour in antiquity only for small vessels, although the recognition of it as Paraetonium by the Romans suggests it probably had had the status of a small port.

Today the water around Bates's Island is almost invariably only waist high, with little change throughout the year.It is very unlikely that the height of the water surrounding the island can ever have been higher than five feet or so in ancient times. If anything, it might have been lower. We found it difficult to find a boat, so we waded to Bates's Island and the water came to just over our waist, approximately one metre high.The specialists tell us that this would only allow a small vessel to sail on it.

6 L. Hulin, in: JARCE 26, 1989, 115-126.

7 The pottery evidence is decisive in this respect.

In his study of Roman harbours, Rickman emphasized that a „good" harbour in the Mediterranean was not necessarily big or deep[8]. Even the heavier cargo boats of the Roman period (of at least 240 tons) would have needed a depth of little more than three metres of water. Two metres would have been a useful depth for a harbour for smaller vessels. But at one metre, all navigation stopped. He quoted the example of the lagoon at Cagliari in Sardinia where navigation stopped in the nineteenth century AD when the depth of water went down to one metre[9].

Some of the heavier anchors which we found washed on to the shore of Marsa Matruh Harbour weighed 160 kilograms (no.R 305), 121 kilograms (no.R.369) and 112 kilograms (no.R.307)[10]. These are heavier than would have been used by the local fishing boats at any time in the history of the bay. It is not impossible that these may have been brought in by the sea and wind from wrecks in the northern part of the bay and even, possibly, from outside the entrance to the bay. They belong to heavier ships. These may have been used on vessels of 14-15 metres in length, perhaps transporting 25-30 passengers or a cargo of similar weight. According to Mendel Nun[11], those anchors weighing 50-80 kilograms would have been used with vessels of ten to twelve metres in length. However, it is certain that an ancient ship would have carried a group or complement of anchors rather than a single one of the correct weight, which, if lost by accident, could signify disaster. In fact, groups of anchors have been found lying together on the Mediterranean sea bed, confirming this[12].

If we look at the ancient Mediterranean vessels which have been found and studied, it is striking that they are all very much smaller than the larger ships portrayed on the Nile in the ancient Egyptian iconography. The Cheops ship, for example, is nearly forty-four metres long. The Sahurē vessels are depicted as large vessels and so are the stone-carrying ships or barges that came down the Nile with their cargoes. The oldest cargo vessel that has been studied so far is George Bass's Uluburun wreck, off the southern coast of Turkey and now in the hands of Gemal Pulak[13]. This is the ship which around 1400 BC was carrying ten tons of copper ingots and one ton of tin, 28 stone anchors, ingots of Egyptian blue glaze and other

[8] G.E. Rickman, Towards a Study of Roman Ports, in : A. Raban (ed.), Harbour Archaeology, BAR Int. series 257, 1985, 105-114; G.E. Rickman, in: International Journal of Nautical Archaeology 17, 1988, 257-267.

[9] D. Smith, Western Mediterranean Europe, 1979, 368.

[10] Details of these will soon be published in the full report.

[11] M. Nun, Ancient Stone Anchors and Net Sinkers from the Sea of Galilee, 1993.

[12] S.A. Kingsley/ K Raveh, The Ancient Harbour and Anchorage at Dor, Israel, BAR 9th Series 626, 1996, 641.

[13] G. Pulak, The Uluburun Shipwreck, in : S. Swiny et al. (eds.), Res Maritimae: Cyprus and the Eastern Mediterranean from Prehistory to Late Antiquity, 1997, 233-262.

things as well. Its study finally revealed a length for the hull of approximately fifteen metres only. Similarly, the Cape Gelidonya wreck (also from Turkey) which carried a cargo of about one ton of metal in ingots and in pieces, together with metal-working equipment when it sank around 1200 BC, revealed a length of 12 metres[14].

The „Kyrenia" ship sank towards the end of the fourth century BC near the town of that name on the northern coast of Cyprus[15]. Its cargo included more than four hundred amphorae of eight different types, both coarse and fine pottery, hopper-type mill-stones, coins, tools and other artifacts. The vessel has been estimated as having been approximately fifteen metres long.

Their cargoes indicate that they were merchant ships. Other ancient vessels have also survived without any hint as to their cargoes, but their very existence must presuppose trading possibilities. We also have:

- The *Ferriby boats*, Bronze Age Britain, 13.3 metres long[16].
- The *Bon-Porté I Wreck*, excavated off the southern coast of France near St.Tropez, third quarter of the sixth century BC, approx. 10 metres in length[17].
- The *Ma'agan Michael Vessel*, excavated near the shore about 35 kilometres south of Haifa, Israel, tentatively dated to 400 BC, is 11.25 metres long[18].
- The *Herculaneum Boat* found near Naples in Italy was about 9 metres long, although it was completely carbonised as the result of the eruption of Mount Vesuvius in AD 79[19].
- The *Kinneret Boat* from the shore of the Sea of Galilee was also approximately 9 metres long, though used only on an inland water[20].
- The *Yassi Ada I* and the *Yassi Ada II* were found near Bodrum in Turkey. The first is dated to the first half of the seventh century BC. This was an amphora carrier with a length of twenty metres or so. The Yassi Ada II also carried amphorae and is dated to approximately the fourth or fifth century AD. We have no precise measurements for the length of this vessel, but it is thought to be similar to the one discovered earlier[21].

[14] H. Frost, Ancient Harbours and Anchorages in the Eastern Mediterranean, Underwater Archaeology, A Nascent Discipline, UNESCO, 1972, 44f.
[15] J.R. Steffy, Wooden Ship Building and the Interpretation of Shipwrecks, 1994, 42-59.
[16] Ibid., 37f.
[17] Ibid., 39ff.
[18] Ibid., 40ff.
[19] Ibid., 67ff.
[20] Ibid., 65ff.
[21] Ibid., 79ff.

- The *Serçe Limani Vessel*, found at the site of this name in southern Turkey belongs to the mediaeval period and was found to be 15.36 metres long[22].

It is only during Roman times that we begin to find evidence for large vessels sailing on the seas, with deep holds for carrying cargo. For example the Madrague de Giens ship is one of several ancient ships belonging to the first or second century BC which have been examined underwater. Its length is estimated at no less than forty metres[23].

When Lionel Casson in 1971 discussed the dimensions of ancient ships, he was discussing the Roman grain ships[24]. He considered a vessel of 60 tons to be „absurdly" small, because the Roman grain carriers could be as large as 340 tons. But in the Egyptian iconography, very large vessels are shown on the Nile for the moving of columns and obelisks, for trading purposes (as in the Punt ships, not necessarily sailing on any sea)[25]and above all, for ritual and political purposes. The larger the ship on the Nile, the greater the impact on the people who saw it pass. We must also remember that everything carried by an Egyptian vessel had to be on the deck.

In discussing the size of ancient ships we must also take account of the ports in which they loaded and unloaded their cargoes. It was all very well for the Romans to have such large ships, with holds below for storage, but the ports at which they could load and unload them were few in number. It is generally said that ships could anchor off-shore and use lighters or dinghys to come into port. But this was not always possible in the vicinity of reefs when strong winds were blowing. This was certainly out of the question in the Mediterranean Sea outside the bay of Marsa Matruh, where the prevalent north winds could drive vessels southwards on to the sandbank and the reefs.

It does not surprise us, therefore, on reflection, that the vessels which came into the bay of Marsa Matruh were relatively small. While it is true that many Mediterranean harbours silted up after the hellenistic period, there are others which could *never* have received the very large vessels described by Casson and others. Byblos is one them.

If we look again at some of the physical realities with regard to Gebeil/ Byblos, we can see that the claim that it was one of the important seaports in ancient times is false and is due partly to a misunderstanding of the physical geography of that coastline. The *Baedeker Guide* of 1906 described Gebeil/ Byblos as „an unimportant little town of 1000 inhabitants through-

[22] Ibid., 85-91.

[23] Ibid., 62ff.

[24] L. Casson, Ships and Seamanship in the Ancient World, 1971, 183-189, 194-199, 297-299.

[25] A satisfactory site for Punt has not yet been decided on by Egyptologists.The speculation continues. See also A. Nibbi, Ancient Egypt and Some Eastern Neighbours, 1981; also: in Mariner's Mirros, 1979.

out which are scattered numerous fragments of ancient columns". It recognised no port there. In her study of the archaeological remains of Gebeil/ Byblos, Muntaha Saghieh described its „port" today as a „modest creek which is 120 metres long by 60 metres wide"[26].

It is also significant that K. Lehmann-Hartleben's study of ancient Mediterranean ports[27] had nothing whatever to say about Gebeil/ Byblos, except for a brief reference to the excavations which were being carried out there at that time by Ernest Renan.

I cannot here enter again into the question of ancient Byblos but I would refer you to my article of 1994[28]. Furthermore, it is time we exploded the myth about Egypt importing cedar or any other timber from Byblos, or from the Lebanon in general. Here too I would refer you to my articles on cedar of 1994 and 1996[29]. There was very little that Egypt used from the outside world ... only perhaps, a few luxuries. I believe that there was nothing that ancient Egypt needed to import from sheer necessity. It is therefore likely that the vessels which arrrived on Egypt's shores were foreign ones, looking for trade.

It is important to remember in this respect that the harbour of Dor on the Palestinian coast was also a shallow harbour. We are mindful of the general belief among Egyptologists that Wenamun stopped at Dor on his way to the Lebanon to obtain timber for the bark of Amun. This too must be reconsidered[30]. In their study of this area, Kingsley and Raveh tell us that the maximum length of the vessels which could negotiate those waters was from 16-18 metres[31].

We must therefore think again about ancient Egypt's trade with the world which lay beyond her natural barriers in the light of the size of the foreign ships which visited her shores at Marsa Matruh and elsewhere before the hellenistic period.

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[26] M. Saghieh, Byblos in the Third Millennium, 1983.

[27] K. Lehmann-Hartleben, Die antiken Hafenanlagen des Mittelmeeres, 1923.

[28] A. Nibbi, in: Discussions in Egyptology 30, 1994, 115-141.

[29] A. Nibbi, in: Discussions in Egyptology 28, 1994, 35-52; also: in: Discussions in Egyptology 34, 1996, 37-59.

[30] A. Nibbi, in: Discussions in Egyptology 35, 1996, 77-95.

[31] S.A. Kingsley/ K. Raveh, The Ancient Harbour and Anchorage at Dor, Israel, BAR 9th Series 626, 1996, 79f.

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Taf. 11a: Bates's Island

Taf. 11b: Stretch of beach in the vicinity of Umm El Rakham