The possibility of sea trade between Mesopotamia and Egypt during the late pre-dynastic period

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[The author discusses in this article the possibility of a maritime trade route between Mesopotamia and Egypt, from the Persian Gulf to a port on the Egyptian shore of the Red Sea, from the period of Naqada II (c. 3400 B.C.) onwards. Goods would then be taken into Upper Egypt via Wadi Hammāmāt].

The Naqada I people of Egypt (*c.* 2800 BC) had definite but tenuous connections with the Persian Gulf and the southern coast of Arabia, as shown by similar types of painted vases having been found at Bandar-Bushire and Old Harmuz[1], and, even further afield, from the lapis-lazuli mines of Afghanistan[2]. Although the majority of trading goods probably came into Egypt overland via Palestine and the Nile Delta[3], it was possible that some trade goods were shipped directly on the river Nile down from ports in the Red Sea.

By the time of the Naqada II people (*c.* 3400 BC), villages were later established in the neighbourhood of the Wadi Hammāmāt, strongly suggesting that this was their main port of entry into Egypt[4]. However, it is not known where these peoples came from, and the indications may be that they may have invaded from Nubia[5].

Ships with paddles certainly were in use at this period of history[6], being employed for religious and trading purposes within the confines of riverine ports. There is evidence of contact with S.W. Asia, particularly with those of southern Mesopotamia. It is known that some of these artefacts may have entered via the Delta, although we have little evidence that trading took place from the overland route of Sinai[7]. Mesopotamian influences concerning ships, cylinder seals and other artistic motifs, began to influence areas of Upper Egypt, but the Delta area was later included in this culture[8]. This suggests that at least some of these influences may have come by the Wadi Hammāmāt, but all such influences ended by the

1. E.J. Baumgartel, C.A.H. *I* (1). 478. B.G. Trigger, "The rise of Egyptian civilisation", in B.G. Trigger, B.J. Kemp, D. O'Connor and A.B. Lloyd, *Ancient Egypt: a social history*. Cambridge 1983, 1-70, see 34-38.
2. J.C. Payne, "Lapis lazuli in early Egypt", *Iraq* 30 (1968), 58-61, see 58.
3. Trigger, *op. cit.*, note 1, p. 26.
4. Baumgartel, *op. cit.*, note 1, p. 481.
5. Trigger, *op. cit.*, note 1, p. 30-31.
6. *C.A.H.* plates to Volumes I and II. Plate 9b-e. Naqada II boats, showing flamingoes, C. Alred, "The rise of the God-kings" in *The Dawn of Civilisation* (ed. S. Piggott). London 1961, 97-132, see 99 pl. 3, 100 pl. 4, 125 fig. 5. Compare L. Casson. *Ships and seamanship in the ancient world.* Princeton 1986, fig. 3 and the later fig. 5. C.L. Woolley, E.R. Burrows, A. Keith, L. Legrain and H.J. Plenderleith. *Ur Excavations II.* London 1934, pl. 169: silver model of boat (U. 10566).
7. Baumgartel *op. cit.*, note 1, p. 481. Trigger, *op. cit.*, note 1, p. 32-33, 37-38.
8. Trigger, *ibid*, p. 36-37. Aldred, *op. cit.*, note 7, p. 125. N. Lapp, "Ancient fleet in Egyptian desert", *Bibl. Archeol. Res.* 18 (1992) 20, dated to first and second dynasty.

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time of the early years of dynasty I (*c.* 3200 BC), being equivalent to the Jamdat Nasr or the late Proto-literate period in Mesopotamia. The reason for this cessation of trade may be due to the direct trade from the North by the more secure overland route[9].

The possibility of sailing between the Persian Gulf and the Red Sea, via the southern coast of Arabia, needs to be examined more closely; and should be considered in the sight of historical events in Egyptian history.

The ship

Reed boats were in use both in Egypt and in Mesopotamia before wooden ships had been built; they were propelled by oars, but the sail was certainly used in the late Naqada II period[10]. The ships represented on the handle of the Gebel el-Arak knife-handle and those of predynastic rock drawings of ships, also found in Upper Egypt[11], are similar to those from sources in Mesopotamia of the late Uruk period, and are similar to representations on early Sumerian cylinder seals[12]. The reed boats did not have sails for use on canals or rivers in Mesopotamia, but it had been noted previously that sails were occasionally used for coastal voyages[13]. These vessels were characterised by having high bows and sterns, and the boat was steered by an oar. The Pyramid Texts of dynasty VI (*c.* 2400-2200 BC) mention a journey by reed boat to the distant horizon of the sky[14]. Quite clearly, this was considered to be a long voyage so that sails might have been used. Thus, the reed boat was already capable of making long journeys safely, even as early as the latter part of the third millenium.

The reed boat was highly valued for short voyages throughout the seas, and this type of ship was still in use during early Christian times[15]. Reed boats have proved themselves to be seaworthy for long periods at sea and could readily survive adverse sailing conditions[16]. Futhermore, this type of ship was easy to manage, gave a good, profitable cargo for the sailors, and could sail closely to the wind, and was capable of carrying food and water for a relatively large crew, thus needing no replacements from land. It should be noted, that all artefacts of Egypt associated with Mesopotamia were of small size and easily transportable as personal possessions.

By the late Sumerian period, the largest cargo vessel was only about 11 tonnes[17], having a limited capacity for the crew and their supplies of food and water. It would have been difficult to provide for a lengthy sea voyage and would have needed frequent supplies en route[18]. It was customary to land and sleep under guard every night, because sailing by night was considered to be too dangerous[19]. Apart from hostile natives, food and water were usually scarce and voyagers had to be armed against surprise attacks from

9. Trigger, *op. cit.*, note 1, p. 37-38.

10. Casson, *op. cit.*, note 7, fig. 6. Possibly also at Eridu (*c.* 3400 BC), but not definitely proven (Casson, *ibid*, p. 22, fig. 20). M.E.L. Mallowan, C.A.H. *I* (1), 247. Woolley *et al.*, note 7, pl. 169. Lapp, note 9, p. 20, wooden boats for burials at Saqqara, Helwan and Giza.

11. Casson, *ibid*, note 5, p. 12. H.A. Winckler, "Egypt before the pharaohs: new evidence from rock-drawings on pre-dynastic life", *Illust. Lond. News.* 1936 (No. 5097), 16th Dec. 1173, pictures 1 and 3. Aldred, note 7, pl. 10: reverse of ivory handle.

12. E. Strommenger and M. Hirmer. *The art of Mesopotamia.* London 1964, pl. 17b, 17c.

13. Casson, *ibid*, note 6, p. 12, p. 23. Sailing ships may have been rarely used, but were known in the first half of the third millenium BC.

14. R.O. Faulkner. *The ancient Egyptian pyramid texts.* Oxford 1969. Utterance 515 parag. 1179: "I (the king) go on reed-floats of the sky". Utterance 519 parag. 1206: "They bind together for me the two reed-floats on which I go to the horizon".

15. Is.18: 2. Pliny. *Nat. Hist.* 6.14.82.

16. T. Heyerdahl. *The Ra expeditions.* London 1972, p. 313 and 379 for voyages of 54 and 47 days continous sailing.

17. A. Salonen, "Die Wasserfahrzeuge in Babylonien", *St.Or.* 8 (1939) 1-160, see 159.

18. M. Cary and E.H. Warmington, *The ancient explorers.* Harmondsworth 1963, p. 18. Later, Alexander's fleet perfomed (with a pilot) night voyages. (Arrian. *Ind.* 27.2, 29.2).

19. Cary and Warmington, *ibid*, p. 33.

the inhabitants on shore[20]. Wooden ships with a keel and mast were not so easily manoeverable. Sailors had to keep close to land, keeping the shores in sight by visual contact with the coast, thus providing a dangerous lee shore for the unwidely vessels.

The port of entry into Egypt

Although the port of entry is still debatable, it is likely that El Quseir, near Koptos, is the most pobable for trading goods[21]. Numerous Naqada II artefacts have been discovered in the neighbourhood of the Wadi Hammāmāt[22] and this Wadi gave access to several village sites near the Nile in Upper Egypt. El Quseir was an unsheltered but deep anchorage, providing reasonable trading facilities along the African coast. There were better harbours and watering facilities along the Arabian and African coasts, but they were too isolated for trading purposes[23]. El Quseir remained in use by the Egyptians until after the reign of Mentuhotep III of dynasty XI (*c.* 2000 BC). Afterwards, the port of entry into Egypt was situated further north at Sawū (Safāga)[24], at the end of Wadi el Gasus, which terminated near Koptos, lying near the Nilotic end of Wadi Hammāmāt. Safāga was a sheltered anchorage, having good watering facilities and capable of unloading large cargo ships.

The sea route

The long coast-line of southern Arabia, exposed to dangerous winds, tides and currents, made hazardous sailing for all types of vessel, expecially the clumsy, unwieldy ancient merchant ships[25]. There were very few safe anchorages for food and water on this coast[26]. Inside the Persian Gulf, sailing conditions were much easier; the area was known to merchant traders from the reign of Sargon of Agade (*c.* 2350 BC), if not much earlier[27]. The journey along the Red Sea was less hazardous than that of the whole of the Arabian coast, since numerous places for food and water were found along the Egyptian and eastern Arabian coasts.

The voyage from the Persian Gulf to the Bab ad Mendab straits, near Aden, is *c.* 1420 sea-miles, and thence up the Red Sea to El Quseir is a further 1200 sea-miles. A wooden ship under favourable monsoon conditions would be capable of 3-4 knots, so that the total sailing-time for the voyage would be 66-71 sailing-days, without allowing for adverse weather conditions for replenishment of water and food. It is most unlikely that merchants would have been able to survive the barren, dangerous coast-line, and the sailors could with difficulty have plotted their course under such hazardous conditions.

On the other hand, reed boats under sail could travel at 2-3 knots[28], taking about 30-20 days during the NE monsoon. The boat would be sailing for 24 hours daily with a following wind and under visual

20. Cary and Warmington, *ibid*, p. 18. Casson, *op. cit.*, note 7, p. 90. Arrian. *Ind.* 23.4, 24.1.

21. BAR *1.* 161, *2.*247. Punt and Yam may be geographical, isolated areas. See also BAR *1.*33-336. Xenophon. *Hell.* 2.1.38. Crew caught and defeated at the evening meal.

22. Baumgartel, *op. cit.*, note 1, p. 481-484-485. I.E.S. Edwards, CAH. *1* (2), 44. Trigger, *op. cit.*, note 1, p. 38.

23. *Red Sea and Gulf of Aden pilot.* Taunton 1980. 12 Port Safāga (Egypt). Port Sudan (Sudan). 13 Khor Dakliyat, Massawa (Ethiopia).

24. BAR *1.*605 (*c.* 1901 BC). *1.*618 (1893 BC).

25. L. Casson, *Periplus maris Erythraei.* Princeton 1989, 274. M. 23.20. S.N. Kramer, "Commerce and trade: gleanings from Sumerian literature", *Trade in the ancient Near East.* London 1977, p. 59-66, see 63.

26. See admiralty charts *2851* (1950) (Arabia SE coast and Gulf of "Oman"), *3785* (1984) (Arabia SE coast), *2784* (1983) (Arabia SE coast).

27. H. Hirch, "Die Inschriften der Könige von Agade", *Arch. Oriental.* 20 Bhft 13/14 (1961) 37 Sargon b 2. obv. VI-11-15: ships of Meluḫḫa, Magan and Tilmun came to Agade. Kramer, *op. cit.*, note 25, p. 63, 65. Herodotus. *Hist.* 4.42, 44.

28. Heyerdahl, *op. cit.*, note 16, average speed for Ra I being 2.25 knots and for Ra II being 2.4 knots. Note also Pliny, *op. cit.*, note 15, where a papyrus boat in the Indian Ocean averaged 3.1 knots.

sight of land, keeping a close watch for dangerous rocks and shoals. The period at sea was within the time of weathering from sea water; it was well within the period of similar reed boats used by *Heyerdahl*[29]. The further journey from the African coast up to the Red Sea to El Quseir may have taken another 35-17 days, thus allowing for replenishment of food and water and for repairing the reed boats[30]. The inhabitants of East Africa had a good reputation for sailors and merchants[31].

The trade of merchants

The absence of trade westwards is rather surprising, but merchant-adventurers may have been lured by the quest for gold. Egypt was a potent source of gold[32], and it is noticeable how the sources of gold are never clearly described in the history[33]. In particular, the Ur III gold ornaments[34], the gold-mines of eastern Egypt[35], and the voyages of Solomon to Ophir[36], have become known although they were well documented historically. We know that the desert troglodytes were sailors and had a flourishing trade in the time of Sesostris I (*c.* 1951 BC) with more than twenty vessels voyaging to India[37]. They lived on the western Egyptian shores of the Red Sea, and traded in gold[38]. They were also in the hinterland of Punt and had a coastal trade with the Egyptians in the dynasty XVIII[39]. Sesostris I actually invaded the country of the troglodytes, thus demonstrating his naval supremacy[40]. Furthermore, troglodytes produced gold dust and nuggets for trade in the Arabian Gulf[41]. It appears that the Egyptian kings had strict security over the gold-mines, and we know that the pharaoh gave considerable quantities of gold for the temples which were endowed with golden ornaments[42]. These products were not usually given an undue prominence in tablets, although the goldsmith was a skilled artist[43], probably working under the eye of the ruler.

It is hardly surprising that strict secrecy was to be preserved in all their profitable trading ventures. The voyage was so profitable that trading returns were well worth the risk, and the weight of the goods was so profitable. It does, however, assume that the monsoon was known to the sailors, which may have

29. Heyerdahl, *ibid*, p. 313, 370.

30. *Red Sea and Gulf of Aden pilot*, *op. cit.*, note 23; many of the modern sites may also have been available in antiquity. *Ocean passages for the world.* Taunton 1987, p. 221 (9.57). December-February are the best months for the journey. Winds may carry the ship as far north as El Quseir.

31. *Red Sea and Gulf of Aden pilot*, p. 19-24. BAR *1*.247.

32. S.A.B. Mercer. *Tell-el-Amarna tablets.* Vols. 2. Toronto 1939; EA 14: letter to Akhnaton concerning a marriage; EA 22: letter of Amenophis IV for royal gifts. EA 369: to Milkilu of Gazru. R. Forbes. *Studies in ancient technology VIII.* Leiden 1971, p. 162. Qoseir and Djebel Zebârâ were gold mines in dynasty XI-XIII (2133-1991 BC), which used boat transportation. BAR *2*.32: during reign of Ahmosis I (*c.* 1560 BC).

33. Herodotus. *Hist.* 3.115. Tin-islands wrapped in Mystery, coming from Europe in most distant parts. Jer. 10:9. Dan. 10:5. Ophir may have been a trading station in southern Arabia or in Uphaz. The port of Ezion-geber was destroyed during a fleet of ships towards Ophir (1 Ki.22.48-49).

34. Woolley, *op. cit.*, note 7, ornaments from Shub-Ad. PG/1237 of gold (U. 12380), pl. 161 and pl. 162 of gold (U. 10453, U. 10850).

35. R. Forbes, *op. cit.*, note 32.

36. Strabo, *Geogr.* 17.1.13.

37. Strabo, *Geogr.* 1.2.34, 16.4.18, 16.4.22, 17.1.13. BAR *2*.718-727 for gold;*2*.732-740 debits for gold by Tuthmosis III (dynasty XVII).

38. Strabo, *Geogr.* 16.4.18. BAR, *ibid.*

39. W.S. Smith. *Interconnections in the ancient Near East.* London. Yale University Press. 1965. fig. 45: painting in Theban tomb 143.

40. Strabo, *Geogr.* 16.4.4.

41. Strabo, *Geogr.* 16.4.18, 22.

42. BAR *2*.718-727, 732-740.

43. S. Lloyd, "Melting pot of the peoples", in *Dawn of civilisation* (ed. S. Piggott). London 1961, p. 162-194, see p. 168 fig. 20, p. 168: gold chair with cartouche of pharaoh Sahure, with silver dagger and sailing ships. Smith, *op. cit.*, note 29, p. 9, fig. 11.

indeed been known from that part of the homeland of India towards Mesopotamia[47], and possibly from the time of Hatshepsut (dynasty XVIII) in her expeditions to Punt[45].

Abbreviations

BAR: J.H. Breasted. *Ancient records of Egypt, I-V.* Chicago. University of Chicago Press, 1906.

CAH: *Cambridge ancient history* (ed. I.E.S. Edwards, C.J. Gadd and N.G.L. Hammond). Cambridge: (a) 1970. *1* (1) and (b) 1971. *1* (2).

44. Casson, *op. cit.*, note 25, p. 289. Hippalos discovered the monsoon, without mentioning the date (Periplus 27.19-2-3). Possibly also Strabo, *Geogr.* 17.1.13. and Herodotus. *Hist.* 4.12. Later, Arrian. *Ind.*18.1-39.8 had a skilled pilot as a guide.

45. BAR *1*.429, 433, from Amenemhet II's fleet from Koptos. BAR *2*.295 Hatshepsut's expedition from Punt to Thebes.