

ANCIENT SEAFARING IN EASTERN AFRICAN INDIAN OCEAN WATERS

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ABSTRACT. This contribution analyses historical texts from the Egyptian and Graeco-Roman worlds, and compares their accounts with the latest archaeological discoveries in East Africa, many made by the author in Tanzania, to assess the extent of seafaring, especially maritime trade, along the East African littoral of the Indian Ocean. It argues that people from the old-world civilizations visited the coastline of East Africa in search of various resources and suggests that East Africans also sailed the Indian Ocean coastline both north and south of Tanzania.

RÉSUMÉ. Cette contribution analyse différents textes historiques des civilisations égyptiennes et gréco-romaines en les comparant avec les découvertes archéologiques récemment faites en Afrique de l'est, en particulier celles de l'auteur en Tanzanie. Elle étudie l'essor de la navigation, en particulier du commerce maritime, le long du littoral est-africain de l'océan Indien, et justifie la visite des civilisations antiques sur cette côte d'Afrique de l'est par leur vraisemblable intérêt pour ses nombreuses ressources. Elle évoque également la possibilité que les Africains de l'est aient navigué tout le long de ce littoral, aussi bien au nord qu'au sud de la Tanzanie.



DEFINING THE ANCIENT PERIOD IN AN EAST AFRICAN CONTEXT

The term 'ancient' in this paper means the period of human history when civilizations began, when humans started to have permanent settlements, to write, and to travel long distances, to trade and to communicate with people from other civilizations. It was in this period that seafaring became the main mode of long-distance travel.² For western-oriented scholarship the 'ancient'

¹ Archaeological work in these parts of Africa is in a period of rapid development, as African scholars in this discipline have just started to search for their ancient history. The publication of papers like this one will be major instigators of wider searches for more significant discoveries.

² DE SOUZA P., *Seafaring and Civilization: Maritime Perspectives on World History*, London: Profile Books (2001), pp. 7–20.

period is traditionally defined as the time covering all of the Pharaonic Egyptian civilization, and all of the Classical, or Graeco-Roman world.³ The early western Asiatic civilizations are also included in this period, which begins about 3000 BC. For the purposes of this chapter the 'ancient' period embraces the African Neolithic period, which begins around 3000 BC, and the civilizations of the Early Iron Working (EIW) cultural traditions, lasting, in Sub-Saharan Africa, from about 200 BC to AD 500.⁴ According to Elliot Smith, by the second millennium BC many parts of the world, from the Mediterranean and the Nile valley, across Mesopotamia and down the Red Sea to Arabia and the Indian Ocean, were put in a kind of a world system, described by him as 'a great social current formed of a multitude of intermingling streams that has come down from remote ages and distant lands to carry us along with it'.⁵

TEXTUAL EVIDENCE FOR SEAFARING ON THE EAST AFRICAN COAST

The earliest direct evidence of vessels sailing along the Indian Ocean coast of Africa comes from the time of the Saite Pharaoh Necho (610–594 BC).⁶ Necho organized a crew of sailors to circumnavigate Africa via the Red Sea, the Indian Ocean and then through the Atlantic Ocean back to the Mediterranean Egypt. The historicity of this voyage has been doubted.⁷ Herodotus is the first writer to report the mission, but he was also the first scholar known to have doubted the veracity of the episode, which took place about 200 years before his time. As noted elsewhere,⁸ the main reason for his doubting the episode is the geographical fact that when the sailors were at the Cape of Good Hope at the southern point of Africa they saw the sun in the North. This fact was controversial in his time, but the very element of the report that he doubted is actually the fact which makes us today accept that the mission took place. The sailors could not have conjectured what is a true geographical observation for those sailing in the Southern Hemisphere.

³ CHAMI F., 'The Egypto-Graeco-Romans and Panchea/Azania: Sailing in the Erythraean Sea', in *Trade and Travel in the Red Sea Region*, ed. P. LUNDE and A. PORTER, BAR International Series 1269, Oxford: Archeopress (2004), pp. 93–103.

⁴ CHAMI F., *The unity of African ancient history (3000 BC to AD 500)*, Dar-es-Salaam: E & D Vision Publishing (2006); PHILLIPSON D.W., *African Archaeology*, 3rd edn, Cambridge: Cambridge University Press (2005); SHAW T., SINCLAIR P., ANDAH B. and OKPOKO A. (eds), *The Archaeology of Africa: Food, Metals and Towns*, London: Routledge (1993).

⁵ ELLIOTT SMITH, G., *In the beginning: the Origin of Civilization*, London, Gerald Howe (1928) p. 9. For more recent scholarship, see SORENSON, J., JOHANNESSEN, C., *World Trade and Biological Exchanges before 1492*, New York: iUniverse Inc. (2004); CHAMI, F., 'Diffusionism in the Study of the African Past', in *African Archaeological Review* 1/2 (2007), pp. 1–14.

⁶ LACROIX, W., *Africa in Antiquity*, Nijmegen: Catholic University (1998). Lacroix has examined in detail the pre-Roman documents on Africa that provide evidence of seafaring.

⁷ ZAYED, H., 'Egypt's relations with the rest of Africa' in *General history of Africa*, ed. G. MOKHTAR, Vol. III, Paris: UNESCO (1981), pp. 136–155.

⁸ For an overview see CHAMI, F., *The unity of African ancient history*, op. cit., Chapter 10.

The period after Necho saw the loss of Pharaonic power to the Persians who conquered Egypt in 525 BC, and were succeeded by the Macedonian Greeks, first Alexander in 332 BC and then his general Ptolemy, whose dynasty lasted from 323 to 30 BC. Persian kings sent missions into Africa by land and organized some expeditions by sea, but the Carthaginians had established regular, but secretive, African maritime trade routes.⁹ The first-century AD Greek writer Strabo of Amaseia says that they would drown any foreigners who sailed west of their territory.¹⁰

Ancient Greek writers also refer to a number of Greek travellers who seem to have sailed from Egyptian ports into East African waters. These Greek accounts about sailing to East Africa, then known as Panchaea, have usually been rated as utopian fantasy. However, this author has accepted the reports in the first-century BC historical compendium of Diodorus of Sicily regarding voyages by at least two people, Iambulus, who claims to have reached the 'Island of the Sun', which is usually held to be Sri Lanka, and Euhemerus.¹¹ These two both lived in the third century BC. They may have crossed to Somalia from Arabia and continued southwards along the coast of East Africa. For the journey home the former would have followed the south-east monsoon winds to Southern India and from there continued westwards to Greek-speaking lands. The geography and the environmental aspects provided by both of them for Panchaea and the Island of the Sun fit quite well with the modern land of Tanzania and Zanzibar Island.¹²

It is essential to mention next, as evidence of ancient sailing on the Indian Ocean, the authoritative first century AD *Periplus of the Erythraean* (i.e. Red) Sea and Ptolemy of Alexandria's *Geography*, written in the mid second century AD. Before discussing them it is worth providing a little background. The Romans came to power in Egypt in 30 BC, on the death of Cleopatra VII, last of the Ptolemaic rulers, and improved on the efforts of the Ptolemies to explore the Red Sea and the Indian Ocean. In 118 BC Ptolemy VIII Euergetes commissioned Eudoxus of Cyzicus to sail to India using the monsoon winds leading to and from East Africa, guided by a shipwrecked Indian mariner. He is also alleged to have discovered that the Carthaginians had been rounding southern Africa from the Atlantic to reach East Africa.¹³ Much credit is also given in Roman accounts to one Hippalus, who is said to have discovered the monsoon winds which lead sailors from the southern coast of Arabia at Aden strait to western India and also a return trip; it is possible that he was a member of Eudoxus' crew.

⁹ CASSON L., *The Ancient Mariners: Seafarers and Sea Fighters in the Ancient Mediterranean in Ancient Times*, 2nd edn, Princeton: Princeton University Press (1991), pp. 61–6.

¹⁰ Strabo, *Geography*, 17.1.19, citing the third-century BC writer Eratosthenes of Cyrene; see LACROIX, *Africa in Antiquity*, *op. cit.*

¹¹ See CHAMI, *The unity of African ancient history*, *op. cit.*

¹² Diodorus, *Library of History*, 2.55–60 (Iambulus), 6.1.4 (Euhemerus); see CHAMI, *The unity of African ancient history*, *op. cit.*, pp. 160–164. On Iambulus and Sri Lanka see FALLER S., *Taprobane im Wandel der Zeit. Das Śrī-Lankā-Bild in griechischen und lateinischen Quellen zwischen Alexanderzug und Spätantike*, Stuttgart: Franz Steiner Verlag (2000), pp. 183–4.

¹³ See CARY M. and WARMINGTON E., *The Ancient Explorers*, London: Penguin (1963); MCLAUGHLIN R., *The Roman Empire and the Indian Ocean: the ancient world economy of the kingdoms of Africa, Arabia and India*, Barnsley: Pen & Sword (2014), pp. 76–7.

Augustus, the first Roman Emperor (27 BC–AD 14) managed to exert some control over the Red Sea down to the Gulf of Aden, encouraging a brisk trade, which increased sailings between India and the regions south east of the Mediterranean.¹⁴ It is worth quoting what Strabo noted about sailing south to southern Africa then, whether from the northern Atlantic or from the Red sea:

All those who have made coasting-voyages on the ocean along the shores of Libya, whether they started from the red Sea or the Pillars of Heracles... have spoken of the last districts to which they came in their voyaging as Ethiopic territory and have so reported them.¹⁵

It should be noted here that in Classical times Libya was a general term for Africa, and all black Africans were known as Ethiopians,¹⁶ which has tended to obscure the extent to which they may have been referring to East Africa.

For more historical records on ancient sailing along the Eastern African coastline in Roman times, then known as Azania, the Elder Pliny's *Natural History* is valuable evidence, particularly on the sources of cinnamon and cassia. Pliny, writing in the first century AD, reports that cinnamon and cassia, known to the Greeks from the time of Herodotus and to the Egyptians in Pharaonic times, have reached Egypt and the Red Sea from the southern region, in the land of the long-living Ethiopians.¹⁷ Pliny seems to be the first person to have known the land of Panchaea by the name **Azania**. According to him, Azanians had been receiving the spices from the 'Cave dwellers' (*Troglodytis*), who probably dwelt in limestone caves, as can today be proven archaeologically.¹⁸ The cave dwellers were themselves obtaining the cinnamon from a territory across the open seas, by sailing thither. Spices were brought in by other people who were courageously sailing several years to bring the spices to Azania. Since we know today that those spices are not derived from African plants, but are of Southeast Asian origin, it is likely that the courageous people of Pliny could have been Austronesians, who were then reaching Madagascar or the Comoros Islands, where the Azanians collected the spices from local traders.¹⁹

The Periplus of the Erythraean Sea is a mid-first-century AD travel guide, written by an anonymous person who seems himself to have visited not only Azania, but also India. The document reports that the Indian Ocean sees frequent sailing activities, not only by the Romans, but also by Arabs who are found trading in the capital of Azania, Rhapta. They claimed to have put Rhapta under their sway. The

¹⁴ MCLAUGHLIN, *The Roman Empire and the Indian Ocean*, op. cit., pp. 77–87.

¹⁵ Strabo, *Geography*, 1.2.26; trans. H.L. JONES, *The Geography of Strabo*, vol. I, Loeb Classical Library, London & Cambridge, MA:William Heinemann (1917), pp. 119–21.

¹⁶ This is discussed in detail in CHAMI, *The unity of African ancient history*, op. cit.

¹⁷ Pliny, *Natural History*, 12.42–43.85–98.

¹⁸ See further below.

¹⁹ MILLER J., *The Spice Trade of the Roman Empire*, Oxford: Clarendon Press (1969). It is noted below in the archaeological records that in Kuumbi cave in Zanzibar volcanic stone tools have been found in association with ancient cultural materials. It is suggested that the stones could have been brought there from the Comoros Islands.

Arabs were so well acquainted with Azania that they even intermarried with the local people and knew their language.²⁰ This report suggests that sailing to Azania was a regular activity for some Arabians, and makes it highly probable that the Azanians also sailed to Arabia.

We can complete the ancient western historical records with the *Geography* of Claudius Ptolemy, written in the second century AD. The important contributions of Ptolemy are the provision of latitudes to the places first reported in the *Periplus of the Erythraean Sea*. These places include the island of Menuthias at lat. 6° S which one passes before reaching the emporium of Rhapta at lat. 8° S, at a navigable river. Also another emporium is Toniki at latitude 4° S. This is located on the coast before one reaches Menuthias. Toniki was an emporium at the time of the *Periplus*, but it had first become a metropolis in the Ptolemaic period. It should be noted here that the Menuthias of the *Periplus* is therefore Zanzibar and it will be noted further that Rhapta is at the Delta of Rufiji on the central coast of Tanzania. It will be seen below that in all these places remains of ancient settlements of the Roman period and earlier have been found, with trade goods.

There seem to have been a number of sailors and travellers who were also well acquainted with Azania, to the extent that they knew much of the geography of the region, from which knowledge Strabo and Claudius Ptolemy probably got much of their published geographical information. The men with that knowledge included one Diogenes, who, having travelled to Azania several times, also visited the deep interior of Azania where he discovered the beginning of the Nile River, the so-called 'mountains of the moon', which are definitely the Ruwenzori Mountains where the Blue Nile originates. He also knew about a snow bearing mountain with three peaks, most likely Mount Kilimanjaro in northern Tanzania. It is also likely from Diogenes that Ptolemy knew about the range of mountains running east-west, likely the Usambara - Pare range of mountains in northern Tanzania.²¹ Another person well acquainted with Azania is Theophilus, reported to have frequently visited Azania and to have travelled as far south as Cape Delgado, situated on the modern border between Tanzania and Mozambique on 12° S latitude which runs through the Comoros and Madagascar.²² It is probably from people like Theophilus that Ptolemy got his information about Madagascar.

Also of paramount importance is the provision in Ptolemy's work of a map, showing not only Azania, but also other parts of ancient Africa to the south and west, which is the whole sub-Saharan Africa. People of different locations are also

²⁰ *Periplus of the Erythraean Sea*, 15–16; CASSON L., *Periplus Maris Erythraei*, Princeton: Princeton University Press (1989), pp. 285–9.

²¹ Ptolemy, *Geography*, 1.9.1; on Ptolemy's sources see GEUS K., 'Claudius Ptolemy on Egypt and East Africa', in *The Ptolemies, the Sea and the Nile: Studies in Waterborne Power*, ed. K. BURASELIS, M. STEFANO, and D.J. THOMPSON, Cambridge: Cambridge University Press (2013), pp. 218–31.

²² CARY and WARMINGTON, *The Ancient Explorers*, *op. cit.*; CHAMI, *The unity of African ancient history*, *op. cit.*; CHAMI F., 'Graeco-Roman documents about Azania: A new look at some controversial issues', in *Combining the past and the Present: archaeological perspectives on society*, ed. T. OESTIGAARD, BAR 1210, Oxford: Archeopress, (2004), pp. 137–143. For the African map of Ptolemy showing Madagascar, see LACROIX, *Africa in Antiquity*, *op. cit.*

identified on the map in the manner already identified by Ptolemy and Herodotus as black people, or the so-called Ethiopians. It is important that Madagascar is shown in the deep ocean opposite Cape Delgado, where Theophilus is said to have reached. On the map of Ptolemy the capital of Azania, Rhapta, is placed on a delta of a river identified as Rafiji. This name is similar to the modern day river on the Tanzanian coast, Rufiji. Also on the map of Ptolemy, just opposite the channel of the Rufiji Delta, is an island known as Mafiaco. Today the island opposite the Rufiji Delta is called Mafia. It seems likely that the modern name is the same as that of the ancient island on the map of Ptolemy. The latitude provided by Ptolemy for Rhapta and Mafiaco are like those of modern day Rufiji Delta and Mafia Island of 8° S. Another town mentioned in the *Periplus* and also by Ptolemy is Toniki, which was placed at latitude 4° S.

It is known today that Ancient Chinese records suggest that Chinese sailors had also reached Azania, which they termed SeZan. From there they either circumnavigated Africa to sail via the Atlantic to Rome, or, more likely, had knowledge that one could reach Rome by sailing southward and then through the Atlantic to the Mediterranean.²³

NON-ARCHAEOLOGICAL FINDS OF ANCIENT ARTEFACTS RELATING TO MARITIME TRADE

Since colonial times, ancient artefacts of trade originating from Europe and Asia have been collected from different parts of Eastern and Southern Africa. These have been used to confirm ancient sailing connections between these regions of Africa and the rest of the northern civilizations in the ancient time. I have also presented the evidence in detail elsewhere;²⁴ only a few findings are worth noting here. Mark Horton reported the finding of Roman coins, one of Antoninus Pius from the Umtali gold mining area in Zimbabwe, and another of Claudius Gothicus (AD 268–270) from Bindura also in Zimbabwe.²⁵ Also in Zimbabwe was found a coin of the Indian Kushan Empire of AD 130–150. Similar coins have been found in South Africa in Pondo land, most importantly one of Ptolemy VIII Euergetes, dating from about 120 BC.²⁶ There are reports that a pot was found from an ancient copper mine in Transvaal South Africa which had glass beads

²³ Scholars have now found documents suggesting that the ancient Chinese knew about Azania, and they also knew that it was possible to circumnavigate Africa; see CHAMI, *The unity of African ancient history*, op. cit.; YU H., *The Peoples of the West: From the Weilue, a third century Chinese account composed between 239 and 265 CE*, section 15. Draft English translation by John E. HILL September 2004, <http://depts.washington.edu/uwch/silkroad/texts/weilue/weilue.html>.

²⁴ CHAMI, *The unity of African ancient history*, op. cit., chapter 9, where old and new findings are presented.

²⁵ HORTON M., 'Early Maritime trade and settlement along the coasts of Eastern Africa', in *The Indian Ocean in Antiquity*, ed. J. READE, London: Kegan Paul (1996), pp. 439–460.

²⁶ See BRYANT A., *Bantu Origins: The people and their language*, Cape Town: Africana (1963).

identified as originating in the Roman Empire and dating between the 5th and the 6th century AD. There are also a number of publications which report about the findings of similar coins from the coast of East Africa.²⁷ According to Horton,²⁸ the coins include: a gold coin of Ptolemy IX Soter (116–107 BC); three hoards from Zanzibar; one group of Parthian and Sassanian of dates ranging from AD 41 to 241; another group containing an additional sixteen coins, including some that are described as ‘Hellenistic and Byzantine’; and a group containing 29 Roman coins and one Parthian one. There is also a report of coins from Tanga in Tanzania, two being of Roman emperors (Carus, AD 282–283, and Constans, AD 337–350) and another of the Byzantine emperor Heraclius (AD 610–641). Similar coins were also found in Nairobi, Uganda, and on the southern Somali coast. Although the coins are not from archaeological contexts, their identification renders them potentially useful as evidence of ancient seafaring in the East African waters. They can be plausibly connected to some of the ancient trade missions along the regular trade routes reported by the ancient sources discussed above.

EVIDENCE FROM ARCHAEOLOGICAL CONTEXTS

Archaeologists working in Eastern and Southern Africa have excavated artefacts of trade since the colonial times. The earliest published finds are those found by the Leakeys in the excavation of the Njoro cave on the Kenya Rift Valley in late 1940s.²⁹ A burial was found with semi-precious beads, some made of locally available raw materials and others which were recognizably imports, probably from Egypt, or from other northern civilizations, dating to between 800 and 400 BC, being of the late African Neolithic period. Similar items were found in a burial site of the same Neolithic date in the Ngorongoro crater in the same East African Rift Valley, but further south in Tanzania.³⁰ The Ngorongoro finds included beads of materials such as carnelian and faience, clearly suggesting Asiatic or north African origin. They must have reached East Africa by sea since, in the same Ngorongoro burial site, cowrie shell beads from the Indian Ocean were found. It is, therefore, obvious that the Rift Valley sites were in good contact with the coast, where cowrie and the other imported beads originated. It should also be emphasized here that this is the time of late Pharaonic civilization, when Egyptian circumnavigation of Africa took place, or slightly earlier. This evidence of ancient trade coincides with the high peak of the Neolithic civilization in East Africa, when we have archaeological evidence of

²⁷ CHITTICK N., ‘Six early coins from near Tanga’, *Azania* 1 (1966), 156–157. For a synthesis see SHERIFF A., ‘The East African coast and its role in maritime trade’, in *General history of Africa*, Vol. II, ed. G. MOKHTAR, Paris: UNESCO (1981), pp. 551–91.

²⁸ HORTON, ‘Early Maritime trade and settlement along the coasts of Eastern Africa’, *op. cit.*

²⁹ LEAKEY M. and LEAKEY L., *Excavations at the Njoro River Cave*, Oxford: Oxford University Press (1950); LEAKEY L., *The Stone Age of Kenya Colony*, London: Frank Cass (1971).

³⁰ See LEAKEY M., ‘Excavation of burial mounds in Ngorongoro Crater’, *Tanzania Notes and Records* 66 (1966), 123–135; SASSON H., ‘Excavations of burial mound in Ngorongoro Crater’, *Tanzania Notes and Records* 19 (1968), 15–32.

the spread of Narosura Neolithic tradition to the coast and as far as Madagascar,³¹ and when Sub Saharan Africa is in contact with the people of North Africa. The third century BC Greek traveller Euhemerus reported of the Rift valley of East Africa the same variety of animals as can be observed today in the Serengeti; he also reported that the population included many pastoralists.

In the 1950s Neville Chittick conducted a number of archaeological surveys and excavations on many parts of the coast of eastern Africa in search of evidence of ancient international sailing in the Indian Ocean. He was only successful on the coast of Somalia at Ras Hafun. Here he found sites with trade goods, mainly pottery originating from the Mediterranean Sea region, the Red Sea, the Persian Gulf, and India. The sites with these materials were dated to the early centuries AD, at the height of Roman commercial activities. Some pottery was from East Africa, identified as dating from the contemporary Early Iron Working (EIW) period, showing that East Africa, then known as Azania, had a hand in that ongoing international trade.³²

From the 1990s more incontrovertible archaeological evidence of ancient maritime trade on the Indian Ocean has been collected from sites on the coast of Tanzania, both on the littoral and on the islands. It should be reiterated that, as we have seen, it is on the Tanzanian coast that the Roman historical documents of *Periplus of the Erythraean Sea* and Ptolemy's *Geography* placed the Azanian emporia of Rhapta and Toniki, which were trading with the Romans and the Arabs. It may also be here, at Panchaea, where the Greek travellers visited and stayed at the emporium of Panara, on the Island of the Sun.³³ It was noted earlier that one of the reasons for scholars not accepting as factual the historical accounts in the Greek and Latin texts was the lack of archaeological finds of ancient artefacts or sites related to transnational sailing; that situation has now changed.

The district of the Rufiji Delta, proposed by this author to be the location of Rhapta, was first archaeologically surveyed in 1995 and 1996. The purpose of the expeditions was to find whether ancient settlements reported by the historical records really existed in the region. Many sites of the ancient time with cultural materials of both the Neolithic and the Early Iron Working periods were discovered. Settlements which started from the late Neolithic thrived up to the 6th century AD, when they entered into the later Iron Age period, roughly contemporaneous with the end of the Roman Empire. It is important for the

³¹ CHAMI F. and KWEKASON A., 'Neolithic pottery traditions from the islands, the coast, and the interior of East Africa', *African Archaeological Review* 20.2 (2003), 65–80; CHAMI F. and R. RASOLONDRAINY, 'Discoveries of ancient cultural connections between main continent Africa and Madagascar. Evidence for sailing in the ancient time', (forthcoming).

³² SMITH M. and WRIGHT H., 'The ceramics from Ras Hafun in Somalia: notes on a classical maritime site', *Azania* 13 (1988), 115–143.

³³ Diodorus of Sicily, *Library of History*, 5.42; CHAMI, *The unity of African ancient history*, *op. cit.*, pp. 159–160.

reliability of these findings to note that a number of scholars participated in the research, for which the preliminary work was begun in 1986.³⁴

The most important discovery of this archaeological campaign was from the Rufiji Delta site of Mkukutu/Kibiti. Several glass beads of Roman date were recovered. The most celebrated one is a segmented glass bead inlaid with gold and silver recovered from a context of the earliest cultural phase of EIW period. The cultural horizon in which it was found was dated to AD 200, but it is dated elsewhere in the same region to the first century AD.³⁵ Given the lack of local expertise on imported materials, the beads were taken to Uppsala University in Sweden to be examined by classical archaeologists who identified the glass inlaid with gold and silver as Roman, from the island of Rhodes in the Mediterranean. The other beads were also identified as being of the Roman period. Photographs of the beads was also posted to England to be re-examined by specialists who confirmed them to be from the Roman period;³⁶ the beads were immediately published.³⁷ Similar beads were found at Meroe in the Sudan, which was the capital of the ancient kingdom of Kush from c. 800 BC to AD 350. Meroe is known to have had significant economic links with the Roman Empire.³⁸

With this finding it was first established by using archaeological records that Roman trade goods did reach the delta of the Rufiji, which can explain why they named the Rafiji river on their maps and placed there the capital of Azania, Rhapta. The excitement generated by this discovery prompted a mission which replicated the Roman sailing route into Rhapta on the Rafiji River, now the modern Rufiji River. The sailing vessel entered the river from the deep ocean, heading towards the site where the Roman beads were found, acting as if entering the ancient emporium of Rhapta.³⁹

The culture of the EIW tradition, which provides the context in which the Roman beads were discovered, is known to have intensively and extensively smelted iron.⁴⁰ It has been argued elsewhere that one reason for Roman interest

³⁴ SCHMIDT P. et al., *An archaeological investigation in the vicinity of Mkiu, Kisarawe District, Tanzania*, Dar-es-Salaam: University of Dar-es-Salaam Press (1992). For more on the location of Rhapta, see CHAMI F. and MAPUNDA B., 'The archaeological reconnaissance north of the Rufiji Delta', *Nyame Akuma* 49 (1996), 62-78; CHAMI F., 'The archaeology of the Rufiji Region', *Studies in the African Past* 1 (2001), 7-20; CHAMI F. and P. MSEMWA, 'Trade and culture on the Azanian coast', *Current Anthropology* 18.4 (1997), 673-677.

³⁵ CHAMI F., 'Limbo: Early Iron-working in south-eastern Tanzania', *Azania* 27 (1992), 45-53; FAWCETT W. and LAVIOLETTE A., 'Iron Age settlements around Mkiu, south-eastern Tanzania', *Azania* 25 (1990), 19-27.

³⁶ Thanks to Dr John Sutton, then the Director of the British Institute in Eastern Africa, who also visited the site where the beads were found.

³⁷ CHAMI F., 'Roman beads from the Rufiji Delta, Tanzania: first incontrovertible archaeological link with the Periplus', *Current Anthropology* 4 (1999), 237-241.

³⁸ WELSBY D.A., *The Kingdom of Kush*, London: British Museum Press (1996).

³⁹ See the film in the documentary by Gus Casey Hayford in the series, *Lost Kingdoms of Africa*, broadcast on BBC 4: <http://www.bbc.co.uk/programmes/b01bgnb1/episodes/guide>

⁴⁰ SCHMIDT et. al., *An archaeological investigation, op. cit.*; CHAMI F., *The Tanzanian coast in the first millennium AD*, Uppsala: Uppsaliensis (1994).

in Azania was the purchase of iron.⁴¹ The Rufiji Delta region and Rhapta in particular is now thought to have been a 'gateway community' for the economic development of East Africa, a phenomenon that is well known from archaeological finds in relation to the Roman economy.⁴² Such a gateway community was necessary to link the coastal zone with the deep interior of Africa for resources demanded by traders such as gold, metals and animal products. It was in this way that new cultural aspects such as some animal domestications, as well as technologies such as iron smelting and various Iron Age pottery traditions spread to the wider African regions. The spread of such cultural aspects has been attributed to what is known as the 'Bantu migrations'.⁴³ I have understood this cultural phenomenon as an effect of the vivid opening up of the southern half of Africa to trade networks through maritime commerce on the Indian Ocean, for which Rhapta acted as a key gateway community.⁴⁴

Another excavation which has provided significant discoveries related to ancient sailing is that of Machaga cave in Zanzibar.⁴⁵ In this first limestone cave to be excavated on the coast of East Africa, several imported materials were found in association with potsherds of EIW period dated to the early centuries AD. The objects included potsherds of Roman trading goods and some of Parthian origin, with green and blue glazes and milky paste. Associated with them were beads of the Roman period. In the same cave, also in ancient cultural contexts, but from the Neolithic period, were found chicken bones. This was the first time any remains of domesticated birds were found on the coast of East Africa in relation to the ancient period. Chickens are known to have originated from Southeast Asia and hence the finding established the likelihood of ancient sailing communication between that region and East Africa, logically via Egypt. The context was dated to 3000 BC, which suggests that the Egyptians were possibly in maritime communication with East Africa very early in their history. As it was noted earlier, Pliny reported a brisk communication between the two regions of south east Asia and Azania or then East Africa in later times, although that trade was in spices and metals. Following the discoveries in Machaga cave, several journal articles were published in relation to the implications of the finds

⁴¹ CHAMI F., 'Graeco-Roman trade link and the Bantu migration theory', *Anthropos* 94 (1999), 205–215.

⁴² HODGES R., *Dark Age Economics*, London: Duckworth (1989); GREENE K., *The Archaeology of the Roman Economy*, London: Batsford (1992).

⁴³ PHILLIPSON, *African Archaeology*, *op. cit.*; SOPER R., 'A general Review of Early Iron Age of the southern half of Africa', *Azania* 5 (1971), 39–52.

⁴⁴ CHAMI F., 'Graeco-Roman trade link and the Bantu migration theory', *op. cit.* For sceptical counter-arguments see SINCLAIR P., 'What is the evidence for external trading contacts on the East African coast in the first millennium BC?', in *Natural Resources and Cultural Connections of the Red Sea: Proceedings of Red Sea Project 111*, ed. J. STARKEY, P. STARKEY and T.J. WILKINSON, BAR International Series 1661, Oxford: Archeopress (2007).

⁴⁵ CHAMI F. and WAFULA G., 'Zanzibar in the Neolithic and Roman times', *Mvita* (1998), 1–10.

for ancient seafaring in the region.⁴⁶ These imported materials, together with those of the Rufiji Delta region, strongly support the ancient textual evidence for the western Indian Ocean seaboard having regularly been visited by foreign mariners. These findings have stimulated more research to find more caves and excavate them for additional evidence.

It is at this juncture that we should consider the excavations of the Mafia Island sites, just opposite the Rufiji Delta, particularly the Ukunju limestone cave. The discovery of that cave happened together with the discovery of many sites of EIW period, similar to those of the Rufiji Delta,⁴⁷ now known as Rhaptonoid culture.⁴⁸ Important findings in relation to ancient Indian Ocean seafaring came from these caves. In the cave of Ukunju, in a context dating to c. 800–400 BC, several shards of imported ceramics were recovered. Those identified at the University of Uppsala, Sweden, using chemical tests,⁴⁹ are several marl clay pieces which were found to have originated from Egypt. There were shards from India and others from the Red Sea and the Mediterranean regions. Some were burnt red brick, others were with red grog in the paste and others had red paint on the surface. A number of beads, one being an eyed bead, all of Greek or Phoenician origin, were also recovered.⁵⁰ In the two Mafia Island caves excavated several ceramic shards were found that have been identified by Indian scholars as of Indian origin.⁵¹ We

⁴⁶ CHAMI F., 'Chicken bones from a Neolithic limestone cave site in Zanzibar', in *People, Contacts, and the Environment in the African past*, ed. F. CHAMI, G. PWITI, and C. RADIMILAHY C., Dar-es-Salaam: Dar-es-Salaam University Press, pp. 84–97; CHAMI F., 'People and contacts in the ancient western Indian Ocean seaboard or Azania', *Man and Environment* 27.1 (2002), 33–44. For scholarly criticism of these arguments see SINCLAIR, 'What is the evidence for external trading contacts on the East African coast in the first millennium BC?', *op. cit.*; SUTTON J., 'A review of people, contact(s) and the environment in the African past', *Journal of African History* 43.3 (2002), 503–505. Those criticisms are rebutted in CHAMI F., 'The atomic model view of society: application in studies of the African past', in *Postcolonial archaeologies in Africa*, ed. P.R. SCHMIDT, Santa Fe: School for Advanced Research Press (2009), pp. 39–57.

⁴⁷ CHAMI F., 'The early Iron Age on Mafia Island and its relationship with the mainland', *Azania* 34 (1999), 1–10; CHAMI, F., 'Further archaeological research on Mafia island', *Azania* 35 (2000), 208–14.

⁴⁸ CHAMI, *The unity of African ancient history*, *op. cit.*

⁴⁹ Many thanks are due to Professor H.Å. Nordström, a specialist of the Nile valley studies, who conducted the tests to identify the marl clay pottery. The ceramics originated from the lower Nile Valley and the same type of pottery was sold to the Nubian state in about the 8th and 7th centuries BC, which is the same carbon fourteen dating for the cultural context in which the potsherds were found in Mafia. For the archaeology of this kind of pottery, see KENDALL T., 'Kings of the sacred mountains: Napata and the Kushite twenty five dynasty of Egypt', in *Sudan: Ancient Kingdoms of the Nile*, ed. W. DIETRICH, Paris: Flammarion (1997), pp. 161–228.

⁵⁰ CHAMI, *The unity of African ancient history*, *op. cit.*, p. 144.

⁵¹ CHAMI F., 'The Egypto-Graeco-Romans and Panchea/Azania: sailing in the Erythraean sea', in *Trade and Travel in the Red Sea Region*, ed. P. LUNDE and A. PORTER, BAR 1269, Oxford: Archeopress (2004), pp. 93–103. To follow-up on these discoveries on Mafia Island several archaeologists have come to the island for further excavations of the sites. These include Mark Horton of Bristol University and Jonathan Waltz of Rollins College, Florida, in collaboration with Amandus Kwekason of the Dar-es-Salaam Museum. Their findings, which they have communicated to me by personal comments, support and add to what I had found earlier, but to the best of my knowledge they have yet to be published.

should also mention an earlier discovery made at the Unguja Ukuu site on south-east Unguja, Zanzibar, by Juma Abdurahaman, of Roman pottery and Egyptian alabaster potsherds. These were also in association with domesticated animals such as cattle. These discoveries were dated to the fifth century AD.⁵²

In 2005 the largest domicile cave known on the coast of East Africa, the Kuumbi cave in southern Zanzibar, was excavated.⁵³ Several materials indicative of ancient maritime connections were discovered, including remains of domesticated animals, namely, chickens, cattle, ovicaprids, dogs, and a donkey. All these have been found in cultural contexts dating to 4000–3000 BC; all except the chickens could have been brought to the region from Egypt. Also in the EIW context of probably 1st century BC to 1st century AD two beads were recovered, similar to those already recovered from Machaga cave reported above. The finding of many stone tools made from volcanic material in the Neolithic contexts also suggest that the inhabitants of Zanzibar and the region around had been in contact with volcanic landscapes such as the Comoros Islands, which lie about 1000 km south-east of Zanzibar.⁵⁴ This is the closest volcanic landscape. Recent archaeological works in the Comoros have also uncovered stone-age sites with volcanic stone tools similar to those of the Kuumbi cave. Those excavated from a cave were found in association with bones of chicken and sheep. Pottery of the EIW period was found with them, suggesting that the Rhaptonoid culture people had themselves been sailing to the Comoros and perhaps even on to Southern Africa.⁵⁵

Further evidence which helps to extend the picture of East African seafaring on the Indian Ocean includes the discovery of a rock shelter site in south-western Madagascar with multiple evidence of contact between the main continent of Africa and Madagascar.⁵⁶ Stone tools were found in association with pottery similar to those of East African and the Nile valley Neolithic tradition. Of particular interest are rock paintings similar to those found in the rest of Africa from the south to the north. These are mainly schematic, geometric and amorphous (SGA) in type, recognized elsewhere as of North African origin,⁵⁷ where they are

⁵² JUMA A., 'The Swahili and the Mediterranean worlds: pottery of the late Roman period from Zanzibar', *Antiquity* 70 (1996), 148–54.

⁵³ CHAMI F., SINCLAIR P. and JUMA A., 'Excavations at Kuumbi cave on Zanzibar: An overview', *Studies in the African past* 5 (2009), 95–107; CHAMI F. (ed.), *Zanzibar and the Swahili coast from c.30,000 years ago*. Dar-es-Salaam: E & D Vision Publishing (2009).

⁵⁴ KESSY E., 'Analysis of lithic artefacts from Kuumbi and Mwanampambe caves', in CHAMI (ed.), *Zanzibar and the Swahili coast, op. cit.*, pp. 131–45.

⁵⁵ See CHAMI F. et al., 'Preliminary report of archaeological work conducted on the southern Ngazija island', in CHAMI (ed.), *Zanzibar and the Swahili coast, op. cit.*, pp. 118–29; CHAMI F., 'Archaeological research in Comores between 2007 and 2009', in *Civilisations des Mondes insulaires*, ed. C. ALIBERT, Paris: Editions Karthala (2011), pp. 779–811.

⁵⁶ RASOLONDRAINY T., 'Discovery of rock paintings and ancient scripts from Upper Onilahy region south-west Madagascar', *Studies in the African Past* 10 (2011), 173–191; CHAMI F. and RASOLONDRAINY T., 'Discoveries of ancient cultural connections between the main continent of Africa and Madagascar: evidence for sailing in the ancient times', *op. cit.*

⁵⁷ CHAMI, *The unity of African ancient history, op. cit.*, chapter 8 on the archaeology, rock paintings and engravings; See also CHAMI F., 'The Great lakes: a complexity of cultural wellspring', in *Art in Eastern Africa*, ed. A. MARION, Dar-es-Salaam: Mkuki na Nyota (2008), pp. 47–65.

recognized as *tifanagh*, and have been related to ancient Punic culture.⁵⁸ Recently Parthian green and blue ware ceramics of milky paste have been discovered from excavations on the southern coast of Tanzania in association with pottery of the EIW period, similar those of the Rufiji Delta region, dated to the first two centuries AD.⁵⁹ Similar pottery was also archaeologically recovered from another EIW context in Natal in southern Africa,⁶⁰ suggesting that the ancient maritime trade routes may have continued along the East African coast of the Indian Ocean via Azania to Southern Africa.

CONCLUSION

In ancient times, between about 3000 BC and about 500 AD, people from the old-world civilizations sailed the Indian Ocean to visit the coastline of East Africa in search of various resources. People of the Eastern and Southern African region were in what scholars define as their Neolithic and Early Iron Age periods. They were active in the acquisition and production of materials which were required by the visitors. They also sailed on the Indian Ocean and probably beyond, sometimes in reciprocity of the foreigner's visits and in search of those materials they needed. Connections with the African interior were also established for the spread of various resources that were in demand.

⁵⁸ OBENGA T., 'Africa the cradle of writing', *ANKH Magazine* 8/9 (1999), 87–95; FELL B., *America B.C.*, New York: Demeter Press (1975).

⁵⁹ KWEKASON A., 'The early iron working pottery tradition of southern coastal Tanzania', *African Archaeological Review* 30 (2013), 1–23 [<http://link.springer.com/article/10.1007%2Fs10437-013-9132-5>]; KWEKASON A., *Holocene archaeology of the southern coast of Tanzania*, Dar-es-Salaam: E & D Vision Publishing (2011).

⁶⁰ WHITELAW G., 'Towards an Early Iron Age world view: some ideas from KwaZulu–Natal', *Azania* 29–30 (1994–1995), 37–50.