Shells and pottery – a preliminary survey of medieval sites along the Red Sea coast of Sudan

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This article reports on an archaeological survey carried out along the Sudanese coast of the Red Sea in February 2020 by a joint team from the universities of Khartoum (Sudan) and East Anglia (UK). The work aimed to fill a gap in our knowledge of this region in terms of evidence from the medieval period. Islamic archaeology in Sudan has been described as "at its very beginning" (Elzein 2004: 127) and this is true of the Red Sea coast, where only very limited research has been undertaken: small-scale test pitting on some of the offshore islands (Kwatoko 1993ab) and broad regional surveys (Crowfoot 1911, Seeger et al. 2006, Smith 2006, Adam 2019) constitute the main investigations to date. The only long-term research programme has been conducted at Suakin, an UNESCO-listed historical site south of Port Sudan (e.g. Breen et al. 2011, Smith et al. 2012, Phillips and Smith 2014).

The work reported here involved three strands: archaeological survey north of Port Sudan, ethnographic interviews on cowrie usage, and archaeological survey in the Agiq (Aqiq) region south of Suakin. For the sake of brevity, this paper will focus on the results of the archaeological surveys and particularly the work around Agiq. The areas of interest recorded are listed in Table 1.

The area north of Port Sudan has been little studied, although its historical importance has been highlighted by Breen (2013), for example, who discusses ibn Battuta's landing on that shore. On the other hand, the Agiq region some 250km south of there has been a repeated focus of archaeological and historical interest over the last 130 years, with attempts made to match its archaeological remains

with historical, and in particular Classical, sources. On one hand, scholars have speculated about the location of the site of Ptolemais Theron, reportedly founded in the third century BC as a base for hunting elephants and visited in the first century AD by the writer of the *Periplus of the Erythrean Sea*, who said: "In this mart is procured the true or marine tortoiseshell, and the land kind also, which, however, is scarce, of a white colour and smaller size. A little ivory is also some times obtainable" (cited in Crowfoot 1911: 531). The roughly contemporary Pliny noted that Ptolemais Theron exported a great deal of ivory, rhinoceros horn, hippopotamus hides, tortoiseshell, apes and slaves (Seeger et al. 2006: 9). Scholars have also sought to identify the medieval trade ports mentioned in Arabic historical sources, and in particular the place named Badi. However, it is probably fair to say that most scholarly attention has concentrated on exploring this region in light of the Classical Mediterranean sources. In contrast, the larger questions underpinning the present survey related to the nature of medieval trade networks linking Western Indian Ocean and Mediterranean networks.

Among the many artefacts that can illuminate such connections, we were particularly interested in two species of cowrie shell and in earthenware pottery. The shells of Indo-Pacific cowries (*Monetaria moneta* and *annulus*) were sought at an early date by African consumers. They reached West Africa by the seventh century, and their source is usually presumed to have been the Indian Ocean archipelago of the Maldives (Haour and Christie 2019). This assumption is partly based on the later historical sources, which insists on the importance of the Maldives as a supplier of cowries (particularly *moneta*) to global networks. However, apart for some brief allusions in the Cairo *geniza*, relating to the twelfth century (Goitein 1973: 199), the role of the Red Sea ports remains unclear. In fact, the potential role of the Red Sea as a source of, not just a transit zone for, cowries to medieval West Africa has recently been proposed by Insoll (2021) based on data from Ethiopia. As living creatures, these molluscs have quite specific environmental requirements and the abundance of species in the Red Sea has only partially been mapped, though it is known that a high number of endemic species likely exist (Mastaller 1978; Bemert & Ormond 1981: 20-1). In terms of ceramics,

archaeological sites around the Indian Ocean and in to the Persian Gulf and Red Sea have yielded low-fired, often paddle-impressed and/or carinated earthenwares, with the Indian subcontinent as the most likely source (Begley 1996; Selvakumar 2011; Pavan & Schenk 2012; Rougeulle, Collinet and Martin 2015; Jaufar 2019). It may be that these reflect the settlement of merchants of Indian origin, and as such they offer a valuable insight into processes of exchange and identity in the medieval Indian Ocean (Horton 2004, Kennet 2004, Collinet 2010).

It is within the framework of these questions that this survey was devised. In environmental terms, the region falls mainly within the acacia desert scrub region, with an annual rainfall of 50-300mm and a typical 8-month dry season (Elzein 2004). Beja, nomadic pastoralists speaking an Afro-asiatic language, appear to have occupied the area since the early days of the Islamic period, with Arabic groups arriving more recently from the opposite side of the Red Sea. In the more recent timeframe, regions bordering Eritrea suffered from tensions between Khartoum and Asmara in the 1990s, and many residents of the Agiq region emigrated to Port Sudan. To this day, villages in the area remain underpopulated, while access to some areas remains difficult to outsiders.

The survey north of Port Sudan, carried out along 6 transects 20km apart, with groups of two or three people walking for one hour in opposite directions, identified many stone tumuli, likely funerary monuments, often evidencing shell fragments on their surface and sometimes containing upper grinding stones (Figure 1). In morphology, these differ from the well-known burial monuments known as *ekratail,* which also occur in the Red Sea area (Ahmed 2019). A water-retaining feature consisting of a low depression in the ground was shown to us on Transect 5 by a local informant, who stated that most villages in the vicinity had such features and that they were very old. Against the abundance of funerary structures, noted on several transects, no incontrovertible settlement evidence was identified. The survey located artefact scatters, mainly pottery but also some metal, shell and glass, but these were scarce and some clearly modern. Transects 2 and 6 yielded no finds.

South of Port Sudan a key geographical feature is the Baraka (Arabic: نهر بركة), a seasonal river that forms part of the extensive Tokar Delta, by far the largest of the series of overlapping alluvial fans created by sand and gravel washed out of the mountains by sheet floods (Seeger et al. 2006: 11). J. W. Crowfoot, who was based in Sudan in the early twentieth century and is an important source for the area, believed the Baraka corresponded with the Astaboras River mentioned by Strabo (Crowfoot 1911: 531). Moving south, another notable landmark is Jebel Tagdara ('Dekdera' on the map by Holled-Smith, 1892: 549); from there, along the base of the Red Sea Hills, which reach a maximum elevation of 869m near Agiq and nearly 1300m high farther west, are plains consisting of annual grasses and low acacia trees, then the small village of Adobana (Cressman et al. 1999; Seeger et al. 2006). Offshore is a complex archipelago (Figure 2).

One of the best-discussed archaeological sites in this area is that of Umm Muqban (Crowfoot 1911 [with photographs in the Durham archive], Seeger et al. 2006, Smith 2006). The site is, as report Seeger et al. (2006: 12) a "quite impressive, long and narrow, cemetery… comprising, apparently, ancient graves and more recent Muslim burials". We undertook a systematic survey of the features, moving southeast to northwest (Table 2). Structures occur in a range of forms – rectilinear edifices of coralstone blocks and plaster, stone tumuli of several types, monoliths, and seemingly recent Islamic graves – and it is not clear that they all served a funerary function. The site is quite likely the same place as that described by Holled-Smith (1892: 548) as a "group of remains, suggesting a line of defence, [occupying] a slightly rising ground at Akik-el-Soghier, about 2 miles inland." As did some later authors (Crowfoot 1911: 534), Holled-Smith identified this place as the possible Ptolemais Theron.

In our mind, the rectilinear structures of coralstone blocks and plaster are the most intriguing feature of Umm Muqban site (Figure 3). One of these – a "structure consisting of a low wall only 30 centimetres in breadth, enclosing a space roughly square and rendered with plaster, in the middle of which was a stepped building measuring just 3 metres square, of which only 2 steps remained" was tested, admittedly hurriedly, by Crowfoot (1911: 534). He did not recover human remains and suggested such structures may be cenotaphs, altars or thrones, rather than graves. He believed Umm Muqban to date to the first millennium AD, "synchronizing, that is to say, with the domination of Axum" (Crowfoot 1911: 537). However, these structures have never been dated and we would suggest, based on some similarity with the remains observed at Tagdara (see below) that some are likely more recent, probably medieval. In fact, lone coral blocks with evidence of adhering plaster are a relatively recurrent features at Umm Muqban, apparently not in situ, hinting that more extensive remains once existed.

Our informants took us to the village of Adobana with a view to reassessing the large rectangular structure reported by previous researchers, and examining the portable artefacts curated by the local community. Here we cannot improve on the excellent photographs and descriptions by Smith (2006: 1-2) and Seeger et al. (2006: 11-12), who visited the site independently a year apart about 15 years ago. We found that surface archaeological material was scarce, contra Seeger et al.'s (2006: 12; Figs. 8-9) comment that potsherds littered the site; this is almost certainly a function of the proximity of the present-day village. As reported by Seeger et al. (2006: 12), who describe them as Greco-Roman in appearance, we saw several column drums, clearly out of place, dotting the present-day village and we were shown several complete and near-complete vessels. We were not able to visit the red brick foundations described by Hinkel (1992: 317) near Adobana.

As mentioned above, the Agiq region features a set of offshore islands, one of the few along this coastline. We were able to conduct a survey on one of these islands, ibn Abbas (Bahdur), which, at

some 4km long, is quite big. Holled-Smith (1892: 548-550), recalling Strabo's statement that close to Ptolemais Theron was a large island where olives grew, suggested this may correspond with Bahdur, and noted that there and at nearby Er Rih island were "very old cisterns arched over, and in Er-ri two stones (basalt, which must have come from the mountains inland) were found bearing inscriptions in ancient Arabic." We located the graves, structures and cisterns mentioned by previous authors (Crowfoot 1911, Anderson 1939, Seeger et al. 2006) at ibn Abbas, which lie on the southern (shore-facing) side of the island, as well as the apparent remains of a pier, to our knowledge hitherto unreported. The cisterns are cut vertically and horizontally into the limestone bedrock (Anderson 1939: 277 provides a good description) (Figure 4). We recorded the remains of a dozen coral-built structures, probably domestic in nature apart from a large one resembling a mosque. This was described by Seeger et al. (2006: 14 and Fig. 17) as "an impressive multiple-roomed edifice with overall measurements of about 25.30 m N-S x 24-26.50 m E-W" and is probably the same as the building described as a "ruined fort" by Crowfoot over a hundred years ago (1911: 540). At the time of his visit, Crowfoot commented that the island had been used as a refuge by the people of Agiq late in the previous century, and he found five families still living there.

We noted pierced *moneta* cowries, ceramics (both earthenware and glazed materials) and many glass fragments, some modern. Pottery included Dehua and Jingdezhen wares from the eighteenth/nineteenth century, as well as nineteenth/twentieth century European materials (Ran Zhang, University of Durham, pers. comm. on the basis of photographs). Some material is, however, clearly older. Many artefacts appeared to have been disturbed by flooding in the lower-lying area of the island while abundant pottery fragments, some large, were recovered from the sea, suggesting the island and its archaeological site are subject to erosion. A study of coastline change over the middle and longer term is important. Indeed, Seeger et al. (2006: 16) suggested that in Antiquity ibn Abbas Island would have formed a peninsula connected with the mainland, creating "a very large and well protected harbor for the ancient port at Adobana."

Disappointingly, adverse weather conditions unfortunately prevented our planned visit to the island of Er Rih, where archaeological remains of what may be the medieval port of Badi have been reported Crowfoot 1911, Hebbert 1935, Kwatoko 1993ab, Maritime Endangered Archaeology Project of University of Southampton & Ulster University: https://storymaps.arcgis.com/stories/ff81c04afda847e280f3f2f96655cd6a).

Our final site to report is one which, to our knowledge, has not been described by earlier researchers. This is situated at Tagdara, a noteworthy landmark that consists of two prominent conical hills. At their foot are a considerable number of stone tumuli, as well as an Islamic graveyard. We recovered some pottery in the eroded river channels here. On the hills themselves are many petroglyphs (Figure 5) and a network of stone walls. We studied those on the east hill, the higher of the two at an altitude of 67m. A wall runs partway down the eastern side, across contour lines, and at the apex of the hill are several quadrilinear stone structures. A single piece of glass was recovered from a large mound scattered with fragments of coral blocks as well as of what appeared to be bone; this mound is at least partly artificial, as evidenced by the plaster-faced coralstone walls within it (Figure 6), but the lack of material culture makes it impossible to suggest age or usage. Other stone structures, resembling terracing, are visible all around. The sea is clearly visible, as is the wider surrounding area, so a defensive or observational function seems credible. Other elevations nearby include similar features.

Conclusion

This field season allowed us to carry out survey in a previously unresearched area of the Sudan coastline and to revisit sites near Agiq previously reported in the published and grey literature (Crowfoot 1911, Hebbert 1936, Seeger et al. 2006, Smith 2006), updating knowledge of their

condition (details in Haour 2020). While previous researchers had focused primarily on the possible Classical associations of these sites, we sought to highlight plausible medieval associations.

In further work, the question of seasonal and longer-term fluctuations in the position and shape of the coastline should be a priority. In several places we encountered what seem to be raised former shorelines. The region around Agiq in particular is a complex, highly dynamic environment which involves an alluvial plain, several offshore islands and, in vegetational terms, rapidly decreasing tree cover. Sedimentation, flooding, erosion and storm surges have shaped it over the years and most probably displaced, buried and exposed archaeological remains. The use of magnetometric techniques would be beneficial here. North of Port Sudan, further survey targeting water points will likely identify settlement remains to complement the numerous funerary structures which we identified. The investigation of these settlement remains is necessary to improve understanding of the past of this region.

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References cited

Adam, A. 2019. New perspectives on the archaeology of the Medieval period in the Red Sea area of the Sudan. Azania 54: 487-500.

Anderson, L. S. 1939. Cisterns at Ibn Abbas island. Sudan Notes and Records 22(2): 277-280.

Begley, V. 1996. Pottery from the northern sector, 1989-1992. In Begley, V., et al. eds. The ancient port of Arikamedu, Vol. 1. Pondichéry: École française d'Extrême-orient, 115-285.

Bemert, G. and Ormond, R. 1981. Red Sea coral reefs. London: Kegan Paul.

Breen, C. et al 2011. Excavations at the medieval Red Sea port of Suakin. Azania 46: 205–20.

Breen, C. 2013. Towards an archaeology of Early Islamic ports on the western Red Sea coast. Journal of Maritime Archaeology 8(2): 311-323.

Collinet, A. 2010. Au prisme de la céramique : le Sind et l'islam : culture matérielle du sud du Pakistan, IIe-XIIe / VIIIe-XVIIIe siècles. PhD thesis, Sorbonne.

Cressman, K. et al. 1999. Annexes to A Joint Survey of the winter Breeding Areas of the Desert Locust on the Red Sea Coast of Sudan, 8–13 March 1999. Rome: FAO. http://www.fao.org/ag/locusts/oldsite/PDFs/SUDJS99b.pdf

Crowfoot, J. 1911. Some Red Sea ports in Anglo-Egyptian Sudan. Geographical Jrnl 37(5): 523-50.

Elzein, I. S. 2004. Islamic Archaeology in the Sudan. Oxford: Archaeopress.

Goitein, S. D. 1973. Letters of medieval Jewish traders. Princeton UP.

Haour, A. 2020. Shells and pottery – a preliminary survey of medieval sites along the Red Sea coast of Sudan. Report to the British Institute in Eastern Africa.

Haour, A. and Christie, A. 2019. Cowries in the archaeology of West Africa. Azania 54 (3): 287-321.

Hebbert, H. E. 1935. El Rih – a Red Sea island. Sudan Notes and Records 18(2): 308-313.

Hebbert, H. E. 1936. Relics at Agig. Sudan Notes and Records 19(1): 193.

Holled-Smith, C. 1892. The Beni Amer country. Proceedings of the Royal Geographical Society and Monthly Record of Geography 14(8): 546-550.

Horton, M. 2004. Artisans, communities, and commodities. Medieval exchanges between

Northwestern India and East Africa. Ars Orientalis 34: 62-81.

Insoll, T. 2021. Marine shell working at Harlaa, Ethiopia, and the implications for Red Sea trade. Journal of African Archaeology 19: 1-24.

Jaufar, S. 2019. An archaeological study of the Maldive Islands: Investigating the Islamic Period Settlements. PhD thesis, University of East Anglia.

Kennet, D. 2004. Sasanian and Islamic pottery from Ras al-Khaimah: classification, chronology and analysis of trade in the Western Indian Ocean. Oxford: Archaeopress, Society for Arabian studies.

Kwatoko, M, 1993b. Preliminary survey of Aydhab and Badi sites. Kush 16: 203-224.

Kwatoko, M. 1993a. On the tombstones found at the Badi site, the Al-Rih Island. Kush 16: 186-202.

Mastaller, M. 1987. Molluscs of the Red Sea. In Edwards, A. J. and Head, S. M. eds. Key Environments: Red Sea. Oxford etc. Pergamon, 194-214.

Pavan, A. and Schenk, H. 2012. Crossing the Indian Ocean before the Periplus: a comparison of pottery assemblages at the sites of Sumhuram (Oman) and Tissamaharama (Sri Lanka). Arabian archaeology and epigraphy 23: 191-202.

Phillips, J. and Smith, J. 2014. Suakin and China. Conference: Exploring China's Early Links to Africa, Addis Ababa, October 2014.

Rougeulle, A., Collinet, A., Martin, N. 2015. Les céramiques non glaçurées. In A. Rougeulle, Sharma – un entrepôt de commerce médiéval sur la côte du Ḥaḍramawt. Oxford : Archaeopress, 157-236.

Seeger, J, A. et al. 2006. A brief archaeological survey of the Aqiq region (Red Sea Coast), Sudan. SAHARA 17:1-18.

Selvakumar, V. 2011. Contacts between India and southeast in ceramics and boat building traditions. Asia. In Manguin, P.-Y.et al eds. Early interactions between south and southeast Asia. Singapore: Institute of southeast Asian studies, 197-220.

Smith, L. 2006. Reconnaissance survey of Aqiq area, January 2006. Unpublished report to NCAM.

Smith, L. et al. 2012. Archaeology and the archaeological and historical evidence for the trade of Suakin. In Agius, D. et al. eds. Navigated spaces, connected places. Oxford: Archaeopress, 173-186.