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A brief Archaeological Survey of the Aqiq region (Red Sea Coast), Sudan

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Riassunto

Una breve ricognizione del territorio attorno al villaggio di Adobana, a sud di Aqiq, lungo la costa sudanese del Mar Rosso, ha permesso di rilevare strutture coperte da abbondanti sedimentazioni, associate con ceramiche del periodo islamico e con alcuni tamburi di colonne scanellate di tipo « classico », riutilizzati in altre strutture o isolati. Necropoli e sepolture singole a nord di Adobana sono apparentemente preislamiche. Nell'isola di Bahdur (Ibn Abbas), di fronte ad Adobana non lontano dalla costa, sono preservati i resti di alcuni edifici, uno dei quali molto grande, di due cimiteri islamici e di una serie di cisterne di epoca ignota, scavate nella roccia. Le ricerche sulla vicina isola di Farrajin hanno rivelato la presenza di ceramiche islamiche e di frammenti di vetro, ma nessun resto architettonico. Né epigrafi né altre informazioni hanno reso possibile una precisa identificazione delle rovine di Adobana o dell'isola di Bahdur.

Summary

A brief survey of the region around the village of Adobana, south of Aqiq on the Red Sea coast of Sudan, recorded structures buried by extensive sedimentation and associated Islamic period pottery as well as fluted «classical» type column drums recycled into other structures or standing alone in the village. Cemeteries and individual graves north of Adobana appeared to be pre-Islamic in date. Bahdur (Ibn Abbas) Island, adjacent to the coast opposite Adobana, preserved the remains of a number of buildings, one of which was quite large, two Muslim era cemeteries and a series of rock-cut cisterns of unknown date. Examination of another nearby island, Farrajin, revealed some Islamic pottery and glass fragments, but no architectural remains. Neither epigraphic nor other information provided any clue as to the identities of the remains at Adobana or Bahdur Island.

Résumé

Une brève exploration à proximité du village d'Adobana, au sud d'Aqiq le long de la côte soudanaise de la Mer Rouge, a permis d'établir la présence de structures enfouies par d'épais sédiments, associées à des céramiques islamiques et des tambours de colonnes cannelées «classiques», isolés ou réutilisés dans d'autres structures. Nécropoles et sépultures au nord d'Adobana sont apparemment pré-islamiques. Dans l'île de Bahdur (Ibn Abbas), près de la côte face à Adobana, sont préservées les ruines de quelques édifices, l'un de grandes dimensions, deux cimetières d'époque islamique et une série de citernes creusées dans la roche, d'époque inconnue. Les recherches dans l'île voisine de Farrajin ont révélé la présence de céramiques islamiques et de débris de verre, mais aucun reste d'architecture. Aucune inscription ni aucune autre source d'informations n'ont permis l'identification des ruines d'Adobana ou de l'île de Bahdur.

Introduction and background

In December 2004 a team comprising John A. Seeger, Steven E. Sidebotham and Michel Pons surveyed the region around Aqiq in the Tokar Governorate along the Red Sea coast of Sudan, about 200 kilometers southeast of Port Sudan (Fig. 1). Access to this military region was difficult requiring permits secured through the assistance of Mr. Saleh Ali Adam of the Ministry of Tourism in Port Sudan. The survey was accompanied by a military security official from Tokar. Recent heavy rains made travel along the unmarked dirt tracks between Tokar and the coast near Aqiq challenging. The principal objective of the survey was to ascertain the location of the ancient port of Ptolemais Theron/Ptolemais Epitheras (Ptolemais of the Hunts) (cf. Treidler, 1959: 1870-1883; Fraser, 1972: 178 & n. 359; Hinkel, 1992: 313-314). Ptolemais Theron was founded according to ancient sources by Ptolemy II Philadelphus (reigned 282-246 B.C.) as part of a broader program of Red Sea port and desert infrastructure construction, and mineral exploitation (cf. Fraser, 1972: 176-180; Hofmann, 1975: 81-97; Desanges, 1978: 252-279; Bagnall, *et al.*, 1996: 320; Hölbl, 2001: 55-58).

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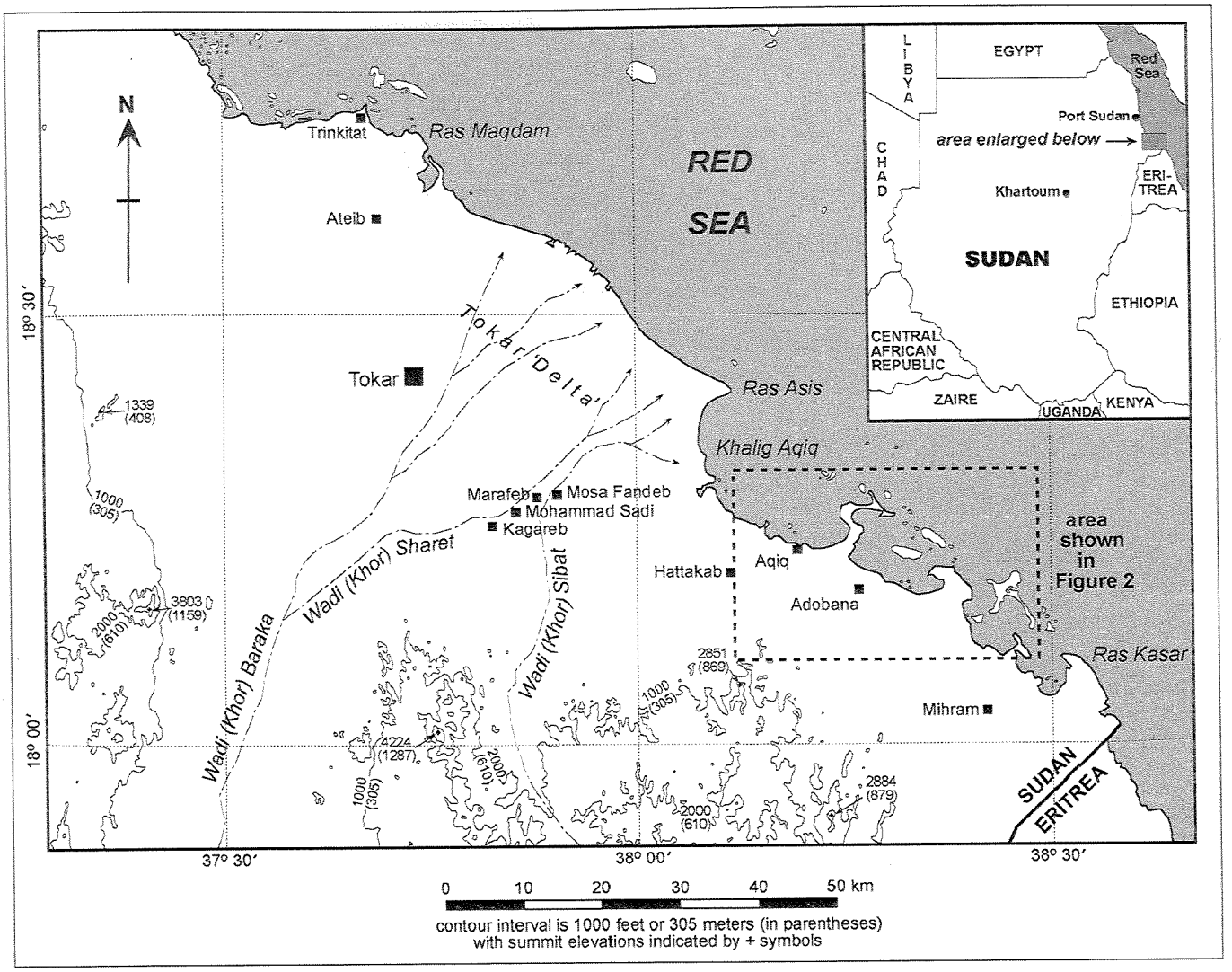


Fig. 1. Map of the Tokar region in northeast Sudan. Elevation contours and other topographic information taken from DM 1989. Solid squares are modern villages with the larger town of Tokar serving as the capital of the Tokar Governorate. Drawing by J.A. Harrell.

The primary *raison d'être* of Ptolemais Theron was as a base for hunting parties to travel inland to secure live elephants (cf. Wilcken, 1963: 532-533, no. 451 = Bagnall and Derow, 2004: 201-202, no. 223), which were then transshipped by sea from the port to one or more of the Egyptian Red Sea emporia. The Pithom Stele, recovered in the Tell el-Maskhuta region of Egypt's Eastern Delta late in the nineteenth century, records that pachyderms entered Egypt via the Nile-Red Sea canal during the reign of Ptolemy II (Naville, 1885: 18, line 24). This, however, cannot have been a regular occurrence; more likely they landed much farther south at Berenike. After they arrived in Egypt and had been transported across the desert to some point along the Nile, often Apollinopolis Magna (Edfu), the pachyderms were then trained and deployed for military purposes primarily against the Seleucids in the Levant (Scullard, 1974: 123-145; Hofmann, 1975: 47-55 & 98-103; Desanges, 1978: 253-254, 297-298; Hölbl, 2001: 55-58). Another important export through Ptolemais Theron and other ports along the adjacent coastline in the Hellenistic period was ivory (Burstein, 1996: 799-807). This may have been collected independently of those teams capturing live elephants or was, perhaps, the by-product of the elephant gathering operations.

The Pithom Stele indicates the date for the foundation of Ptolemais Theron was sometime between 270 and 264 B.C. The stele records, in conjunction with the foundation, that there was cultivation of the hinterland and animal husbandry (Naville, 1885: 18, line 24). Thus, Ptolemais Theron was a proper colony and not merely a portal for the shipment of elephants (Agatharchides of Knidos, *On the Erythraean Sea* 5.86a = Burstein, 1989: 144 and n. 2; Conti Rossini, 1925: 5-10). Nevertheless, Ptolemais Theron seems to have declined dramatically thereafter, for by the time the anonymously authored *Periplus of*

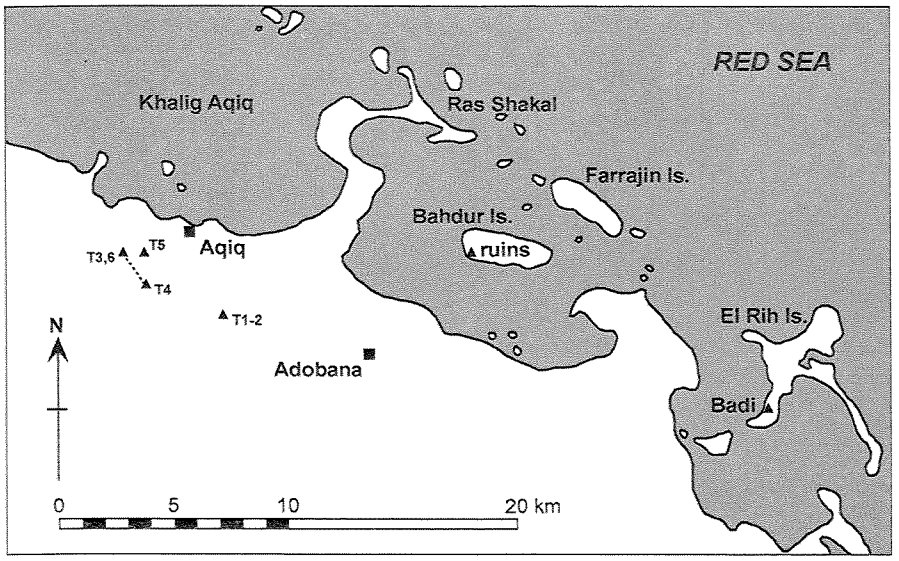


Fig. 2. Map of the Aqiq-Adobana area near Tokar, Sudan. Solid triangles are antiquity sites mentioned in the text. Drawing by J.A. Harrell.

the Erythraean Sea (section 3) appeared, approximately in the middle of the first century A.D., Ptolemais Theron reportedly exported only paltry amounts of ivory, and some turtle and tortoise shell. Pliny (*Natural History* 6.36.173), in contrast to the contemporary *Periplus,* notes that Ptolemais Theron exported a great deal of ivory, rhinoceros horn, hippopotamus hides, tortoise shell, apes and slaves.

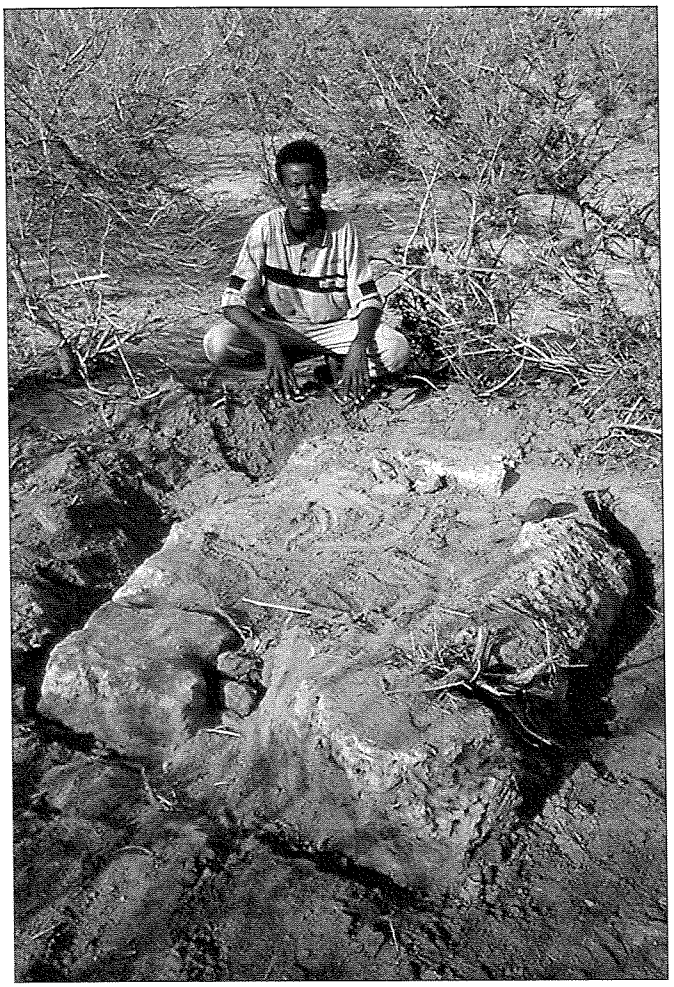
In general, however, the Roman-era authors including Diodorus Siculus (*Bibliotheke* 3.41.1-2), Strabo (*Geography* 2.5.36 and 16.4.7), Pomponius Mela (*De Chorographia* 3.80) and Pliny the Elder (*Natural History* 2.75.183, 6.33.164, 6.34.171, 6.34.173 and 6.39.220) refer to Ptolemais Theron between the mid first century B.C. and first century A.D. in a very cursory fashion or in terms suggesting its bygone days of prosperity. Claudius Ptolemy's listing (*Geography* 4.7) of Ptolemais Venationum in the mid-second century A.D. may or may not indicate the port's continued existence at that time. Ptolemais Theron was never part of the Roman Empire; the region in which it was located seems to have been ruled by the Axumites (Casson, 1989: 101, 109) throughout the early and later Roman periods.

Two extant ancient sources, a papyrus from 224 B.C. (Wilcken, 1963: 533-535, no. 452 = Scullard, 1974: 132) and Agatharchides writing in the second century B.C., but relying on third century B.C. sources (*On the Erythraean Sea* 5.85 in Burstein, 1989: 141 and note 3), report that specially designed ships called *elephantegoi* transported the pachyderms north to Egypt (cf. Casson, 1993: 253 note 25). While debated, it seems the smaller Forest elephant was the main object of the Ptolemaic elephant gathers' interest rather than the slightly larger, but less easily trained Bush elephant (Scullard, 1974: 62-63; Rice, 1993: 91, note 160; Casson, 1993: 248). Neither of the African varieties was as large as the Indian elephants employed by the Seleucids, the Ptolemies' main adversaries in the Levantine areas of the Mediterranean.

Most modern scholars have located Ptolemais Theron somewhere in the region between about 18° and 19° North latitude (cf. Desanges, 1978: 273-274). A few travelers examined the area including Reil (1869: 370-371), Crowfoot (1911: 529-534), Hibbert (1935, 1936) and de Monfreid (1974: 102-110) (cf. Casson, 1989: 101) and some of them noted the presence of ancient remains either at or in the vicinity of Aqiq. Henry de Monfreid, a French adventurer who sailed in the Red Sea throughout the early part of the twentieth century, also recorded ancient ruins on Bahdur (or Ibn Abbas) Island which lies offshore from the village of Aqiq in the «Khor» Nawarat (de Monfreid, 1974: 102-108) (Fig. 2).

The survey

With the above information in hand the present survey sought to record any ancient remains in the region of Aqiq and the islands immediately adjacent to it. The team used hand-held GPS receivers (with coordinates based on the WGS 84 datum), photographed what was visible



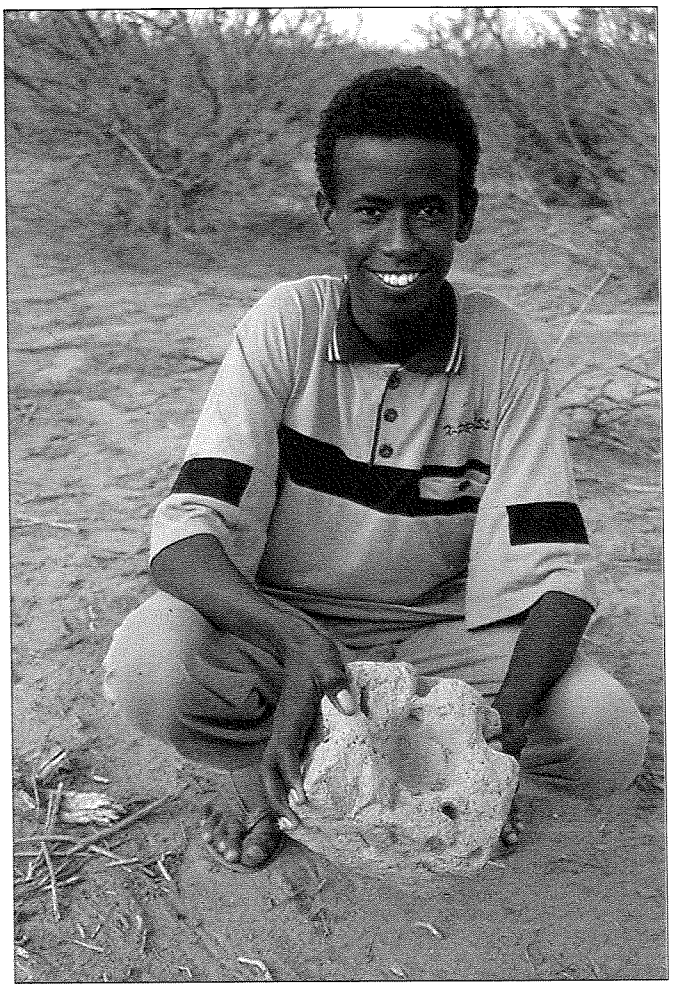


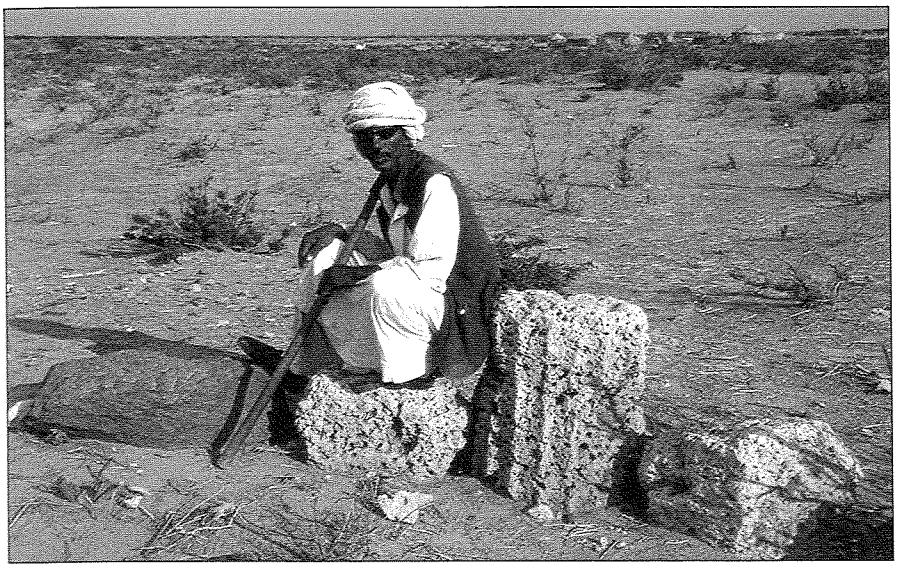
Fig. 3. «Madrepore» wall at Adobana. Photo by S.E. Sidebotham.

Fig. 4. «Madrepore» pivot block at Adobana. Photo by S.E. Sidebotham.

above ground, and collected and dated surface artifacts (mainly pottery sherds, some glass) with a view to establishing the location and identity of Ptolemais Theron. Using a four-wheel drive Toyota pickup truck and searching on foot using local guides, the team located ancient remains including cemeteries, buildings and walls of unknown function, reused ashlar blocks and fluted column drums, and water tanks in the region south of Aqiq and on one of the islands offshore.

Running along the Red Sea shore is a band of 'emergent' reef limestones up to several kilometers wide and rising 10-12 m above present sea level (Sestini, 1965: 1453, 1465-1466; Berry, *et al.*, 1966: 120-123; Braithwaite, 1982: 298-299; GRAS, 1995: 6.54). Both terrace-like outcrops on the mainland and the islands in the Aqiq region are remnants of this ancient reef tract. The limestones are the remains of a fossil reef that formed in the Late Pleistocene during an interglacial interval when global sea level was higher than it is now. During the subsequent drop in sea level approximately 20,000 years ago, to about 120 m below that of present, the exposed limestone was chemically weathered causing widespread dissolution and formation of karst features such as subterranean fissures and caverns (Braithwaite, 1982: 300, 321; Braithwaite, 1987: 40). The reef limestone is highly porous, and rich in invertebrate fossil remains. The rock is commonly referred to as «madrepore» after the coral with which it abounds. Similar emergent reef limestones occur along much of the rest of the Red Sea coast in Sudan and in the past this has been widely used as a building material, such as at the medieval-modern port city of Suakin, 130 km northwest of Aqiq (Greenlaw, 1995). In the Aqiq region this type of rock was used for the carved ashlar blocks, column drums and other architectural elements discovered by the survey.

The Red Sea coastal plain in the Aqiq region is 10-15 km wide, and rises from sea level to about 100 m at the foot of the mountains ('Red Sea Hills') to the south-southwest. These mountains reach a maximum elevation of 869 m near Aqiq and are nearly 1300 m high farther west.



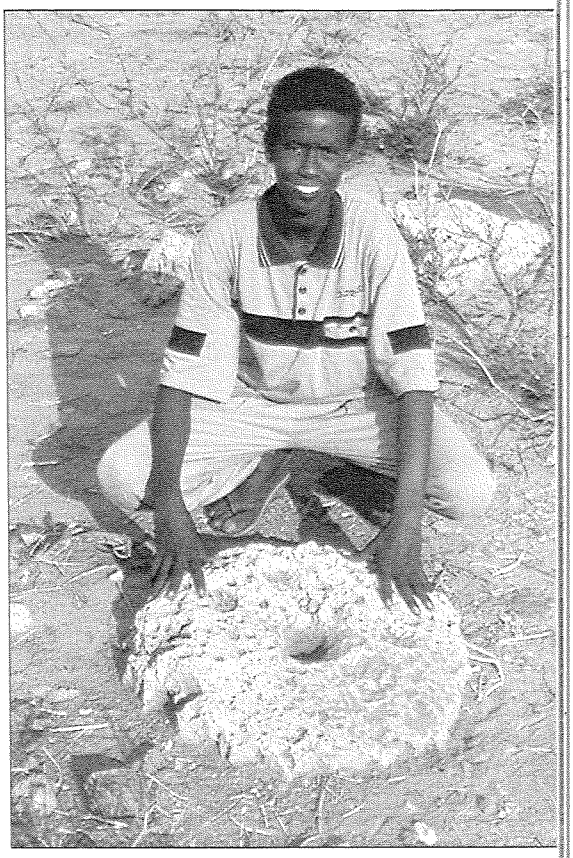


Fig. 5. Fluted column fragment reused in later structure at Adobana. Photo by S.E. Sidebotham.

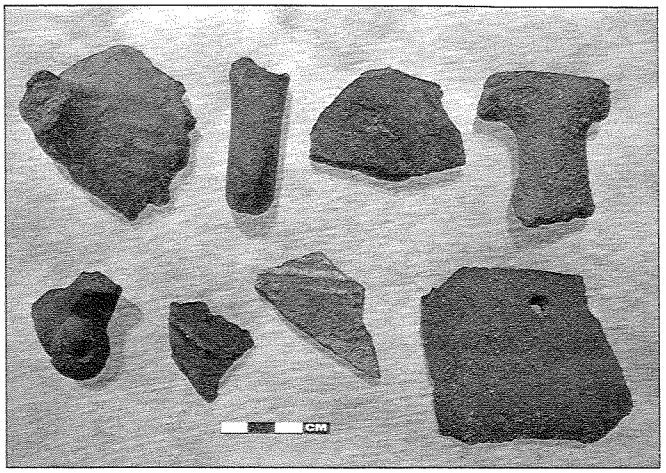
Fig. 6. Fluted column drum with centering hole reused in later structure at Adobana. Photo by S.E. Sidebotham.

Fig. 7. Later structure at Adobana comprising reused architectural elements including fluted column drums. Photo by S.E. Sidebotham.

The rocks forming the mountains are part of Sudan's Precambrian (Late Proterozoic) crystalline basement complex, which in the Aqiq region consists of metasedimentary and metavolcanic rocks plus minor gneiss and schist (DOS, 1974; Vail, 1978: 14-15; Vail, 1988: 100, 118; MEM-GMR, 1981). Sand and gravel washed out of the mountains by sheet floods emanating from the wadis blanket the coastal plain in a series of overlapping alluvial fans. By far the largest of these fans is the so-called 'Tokar Delta' just northwest of Aqiq (Meigs, 1966: 75; Braithwaite, 1987: 35; GRAS, 1995: 6.49-6.54).

The region around Aqiq has endured extensive sedimentation over the years as it is situated on an alluvial plain that is subject to occasional wadi floods. Large quantities of water-borne sediments have covered most of the area, undoubtedly burying many ancient remains there. Low scrub bushes punctuate the landscape with thorny mesquite dominating. Diodorus Siculus (*Bibliotheke* 3.41.2) reports that the country around Ptolemais Theron had rivers flowing into the plains from the Psebaean Mountains and that the plains bore many types of fruit and other vegetation. This description generally fits with what can be seen in the area today.

The survey found a concentration of architectural remains at the modern village of Adobana (18° 10.72' N/38° 15.90' E). The site includes remnants *in situ* of walls built of ashlars (Fig. 3), a small block preserving a depression that undoubtedly served as a door pivot (Fig. 4), as well as scattered ashlars and fluted column drums with centering holes (Figs. 5-6); all architectural remains were made of «madrepore». The column fragments are «classical» Greco-Roman in appearance and measure



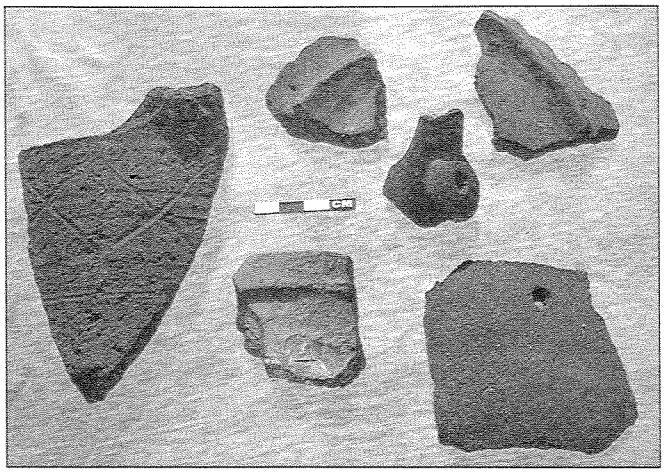


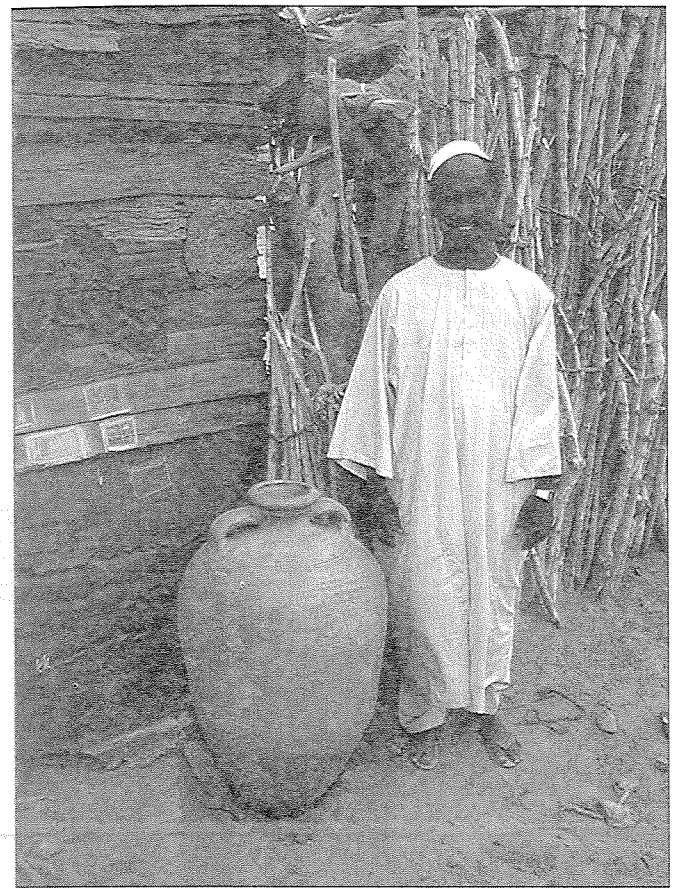
Fig. 8 and 9. Pottery from Adobana.
Scales = 5 cm.
Photos by S.E. Sidebotham.

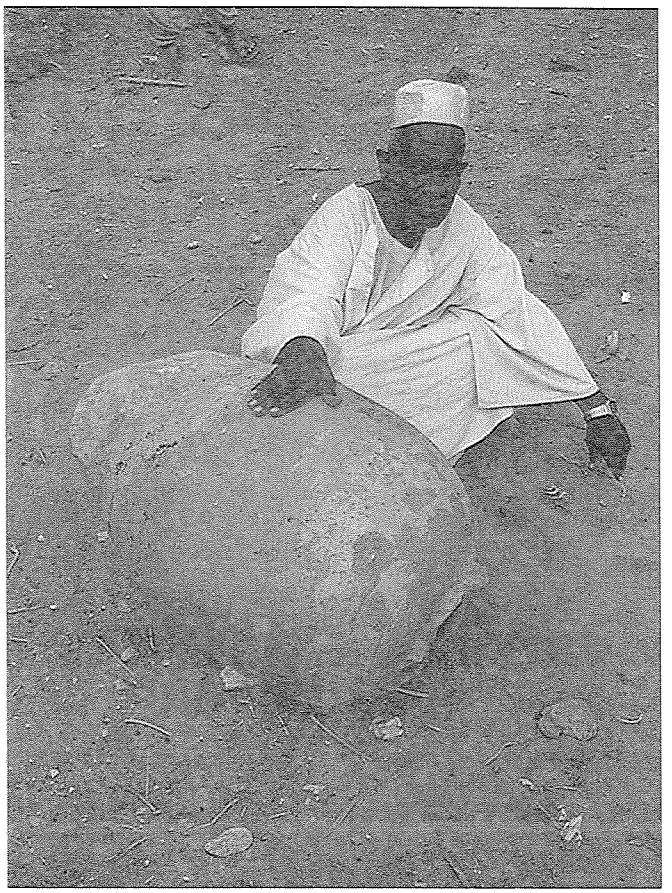
uniformly about 0.55 m in diameter with square centering holes. At least three of the column drums had been reused in a single later jerry-built structure measuring approximately 8.0 x 6.8 m (Fig. 7); several additional column drums, now badly worn and taken from this or some other nearby structure, had been removed by villagers and now stand in open areas between the huts. Potsherds litter the site and the more diagnostic of these were collected (Figs. 8-9). These comprised ceramics of Islamic date; no recognizably earlier sherds were noted. The survey saw and photographed three large amphora-like jars, one complete and the other two nearly so, which villagers claim they collected from the nearby island of Bahdur. The largest preserved intact had a small flat, round bottom and ribbon handles and measured 0.98 m high x 1.76 m maximum exterior diameter. Interior diameter of the amphora mouth was 0.135 m (Fig. 10). The other two were incomplete, missing portions of their tops and bases (Fig. 11). All three were Islamic in date.

Reil (1869: 370) noted graves and monuments in the region. Hibbert (1936: 193 & Pl. X) saw square blocks, an architectural molding, and simple and fluted column drums either at or near Aqiq. Hinkel (1992: 317) reports a «Red brick foundation (?) constructed apparently of old, long bricks... in the bed of Khor Teggat, quite close to the modern village of Adobana...» Neither Reil (1869: 370-371), Crowfoot (1911: 529-534), Hibbert (1936) or Hinkel (1992: 317), however, recorded the other ashlar remains or the column drums found by our survey at Adobana. The presence of the fluted column drums, which are very Hellenistic-Roman in appearance, should renew interest in this site as the possible location of an ancient settlement, perhaps Ptolemais Theron.

Our cursory reconnaissance also located scattered ancient graves mixed with more recent Muslim burials north of Adobana. In every instance these graves now appear as dilapidated mounds, circular in plan such as the one at 18° 11.63' N/38° 12.42' E (6.50 x 6.20 m in diameter) or another nearby at 18° 11.71' N/38° 12.45' E (4.7 x 4.6 m in diameter) (Tombs T1 and T2, respectively, in Fig. 2). On closer examination the latter was, in fact, the ruins of a finely-made rectangular structure comprising metamorphic cobbles from the mountains lying to the west and coral heads some of which appear to have been shaped. The survey noted non-diagnostic potsherds and human bones in the vicinity.

A quite impressive, long and narrow, cemetery, again comprising, apparently, ancient graves and more recent Muslim burials, lay northwest of the tombs described above. The farthest north in this group lay on higher ground and, therefore, remained free of the water-borne sediments that partially buried most of those graves lying to the south in the same cemetery complex. In the area with water-borne sediments many low scrub bushes cling to the berms that have been piled up by flowing water. The survey observed the northern and southern limits of this sizeable, but narrow (E-W) necropolis: 18° 13.17' N/38° 09.99' E at the northern end and 18° 12.40' N/38° 10.54' E at the southern (T3 and T4, respectively, in Fig. 2). Where examined, the graves appeared as dilapidated circular mounds of earth mixed with coral heads, metamorphic cobbles from the mountains to the west and ashlars of «madrepore» limestone or cut coral heads. Upon closer inspection many





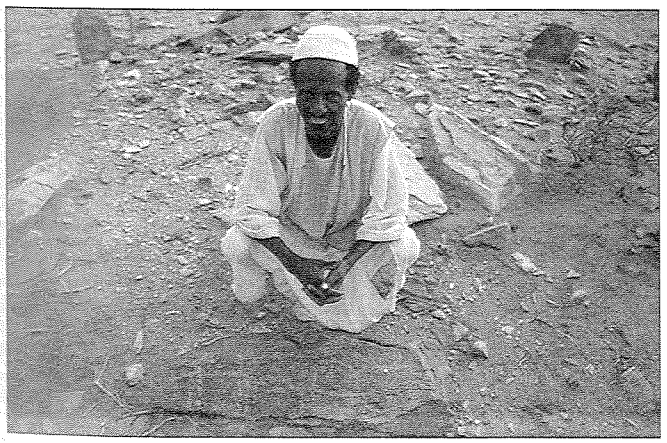
of the tombs were rectilinear in plan and built of carefully squared ashlars. One tomb at 18° 13.15' N/38° 10.50' E (T5 in Fig. 2) had a dark metavolcanic or metasedimentary stone, 0.88 m x 0.31 m x 0.15 m, that preserved two graffiti of camels walking left (Figs. 12-13). The survey could not determine whether this decorative stone was originally associated with the burial or a later addition to it. Another tomb (at 18° 13.16' N/38° 09.98' E; T6 in Fig. 2) not only comprised, in part, nicely cut madrepore limestone ashlars, but evidence of plaster adhering to several of the blocks (Fig. 14). Whether these were part of the original tomb construction and decoration or they represent, rather, blocks recycled from some earlier architectural context remains unknown. The southern-most tomb noted by the survey in this large necropolis (T4 in Fig. 2), and which had been almost completely covered over by waterborne sediments and overgrown by scrub, preserved an upright monolithic orthostat of worn granite gneiss measuring 2.20 m x 0.60 m x 0.25 m (Fig. 15). This was the only ancient tomb noted by the survey that had such a feature. These individual graves and necropoleis do not appear in Crowfoot's or Hinkel's accounts of the area though Reil (1869: 370) vaguely locates some in this general vicinity.

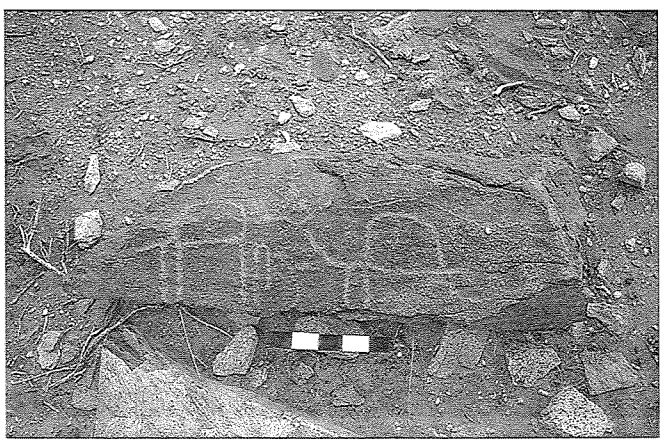
Fig. 10. Complete large jar with base at Adobana.
Photo by S.E. Sidebotham.

Fig. 11. Portion of large jar at Adobana. Photo by S.E. Sidebotham.

Fig. 12. Grave with camel graffito at northern end of large cemetery north of Adobana.
Photo by S.E. Sidebotham.

Fig. 13. Detail (of Fig. 12) of stone with camel graffito. Scale = 20 cm.
Photo by S.E. Sidebotham.





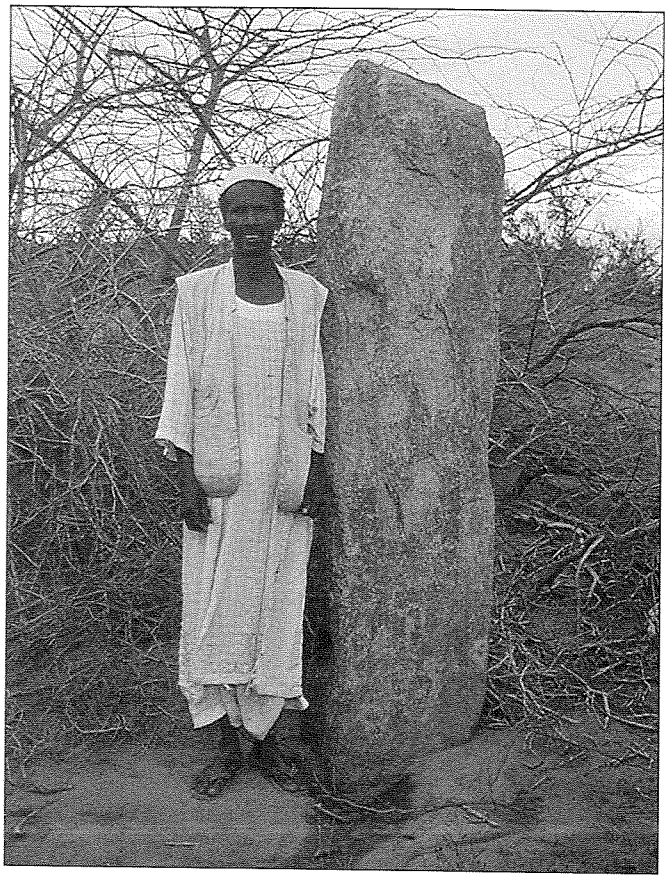


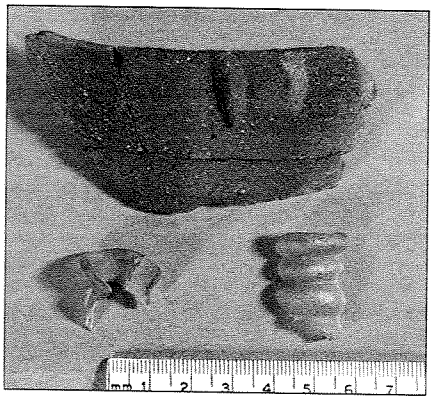
Fig. 14. Tomb with plastered ashlar blocks at northern end of large cemetery north of Adobana. Photo by S.E. Sidebotham.

Fig. 15. Tomb with orthostat at southern end of large cemetery north of Adobana. Photo by S.E. Sidebotham.

Two islands off shore preserve evidence of ancient activity. Both appear to be uninhabited now except for occasional visits by fishermen; in one instance the survey noted some local people SCUBA diving for sea cucumbers. The extreme southwestern corner of the island of Farrajin, which the survey visited courtesy of the Sudanese Coast Guard, contained shell middens at 18° 13.87' N/38° 21.83' N. Potsherds, including the rim of a cup or bowl and some glass vessel fragments were collected here (Fig. 16) found intermingled with Tridacna squamosa, Strombus bulla, Murex and cowry shells. The survey, however, noted no architectural remains on Farrajin Island.

Closer to the mainland, Bahdur (or Ibn Abbas) Island preserved many architectural remains ('ruins' in Fig. 2). The brief time allowed for a visit led to the identification of at least nine structures that were rectilinear in plan on the western side of the island towards its northern end. The largest of the structures (at 18° 13.17' N/38° 18.49' E) was an impressive multiple-roomed edifice with overall measurements of about 25.30 m N-S x 24-26.50 m E-W. A large abandoned eagle's nest perched atop the highest point of this structure (Fig. 17). Walls of this edifice and others examined in some haste comprised cut ashlars and coral heads. At least one other structure lay north of this large edifice and a concentration of seven smaller one- or multiple-roomed buildings lay to the south (at 18° 13.10' N/38° 18.54' E). The survey did not have time to investigate de Monfreid's report (1974: 104-106) of a village on the southern part of the island.

Fig. 16. Pottery and glass from Farrajin Island. Each small increment = 1 mm, numbers = cm increments. Photo by S.E. Sidebotham.



At least two large concentrations of Muslim graves (one at 18° 13.38' N/38° 18.66' E, the other at 18° 13.29' N/38° 18.61' E) lay in this western and northern part of the island and many of these preserved recycled material from earlier structures including cut ashlar blocks and vesicular basalt chunks (Fig. 18). The basalt would have been imported from the southern Red Sea area and almost certainly was used as grinding stones for grain. The survey collected some sherds and glass bangles from the cemeteries (Fig. 19).

Most impressive was a set of numerous cisterns cut both vertically and horizontally into the limestone bedrock in the area between the two Muslim cemeteries. These may, in part, have originated as dissolution cavities produced by natural karst processes. The vertical cis-

Fig. 17. Bahdur Island large building with eagle's nest.
Photo by S.E. Sidebotham.

Fig. 18. Bahdur Island, portion of one of the Muslim cemeteries.
Photo by S.E. Sidebotham.

terns were circular in plan (Fig. 20) while the horizontal ones appeared as arched facades (Fig. 21). Located at 18° 13.37' N/38° 18.62' E, just north of the island's ruins, these unusual structures contained large quantities of water. Depth of the water in the cisterns was not measured. One of the survey team, Michel Pons, who had visited Bahdur in 1988, reported at least one other set of cisterns and subterranean galleries farther south on the island containing fresh water, but due to our brief stay on the island we were unable to record these on this trip. Photographs taken on that earlier visit suggest rather shallow depths of those cisterns of less than one meter; silting may have filled in much of their original capacities. Hibbert (1935: 312-313 & Pls. XV, XVI and XVIII) and Hinkel (1992: 318) note similar cisterns on the island of El Rih/Er Rih/Badi (at approximately 18° 09.15' N/38° 25.40' E), about 80 km southeast of Tokar and 10 km southeast of Bahdur. De Monfreid identifies the island as the Pharos of the Ptolemies (1974: 102) and describes other ruins on El Rih of the medieval port of Badi (1974:103-104). He reports (1974: 104) that the cisterns on that island «...were in the form of amphorae, ten feet in diameter. The walls were of baked clay, all in one piece. They were in a perfect state of preservation, without a single crack. The clay for these cyclopean potteries had probably been fired on the spot.» De Monfreid (1974: 107-108) and Hinkel (1992: 315-317) also briefly report on the cisterns on Bahdur, and Hinkel provides a sketch plan (1992: 316). Reil (1869: 371) reports that there was a Greek city on a small island

Fig. 19. Pottery and glass bangles from Bahdur Island. Scale = 5 cm.
Photo by S.E. Sidebotham.

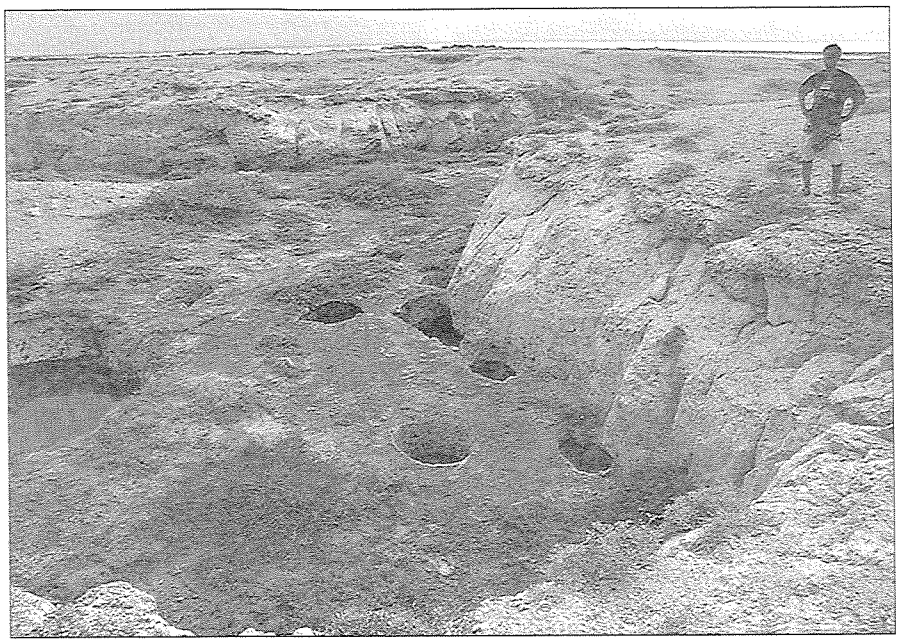


Fig. 20. Bahdur Island, some of the vertical rock-cut cisterns. Photo by S.E. Sidebotham.

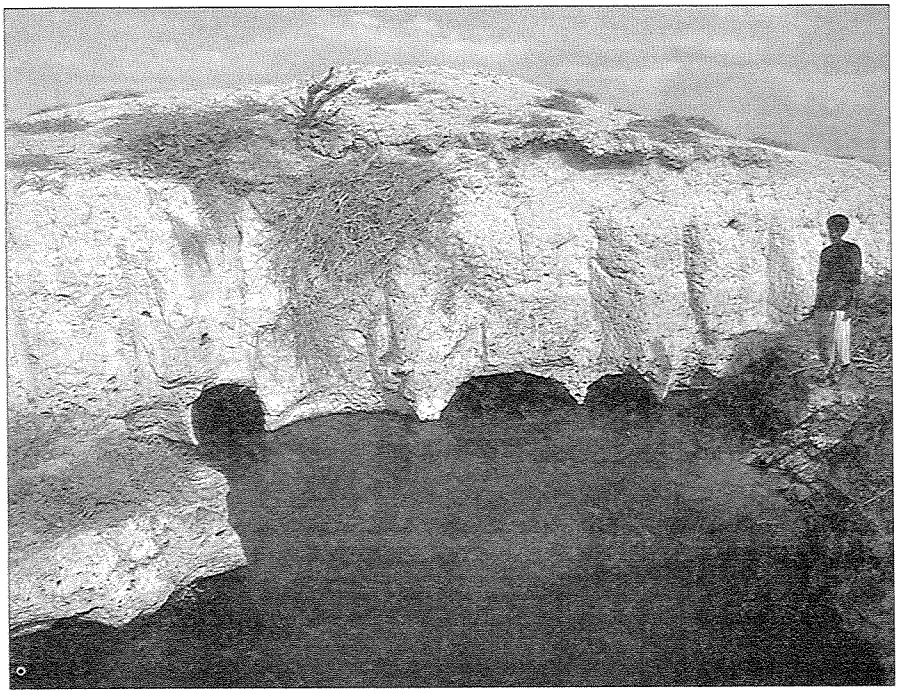


Fig. 21. Bahdur Island, the horizontal, arched facade rock-cut cisterns. Photo by S.E. Sidebotham.

off shore, perhaps Bahdur (?), but he does not name the island and writes that he could not visit it in any case; perhaps he refers to the ruins on El Rih noted later by de Monfreid.

A gap of approximately 200-300 meters separates the southeastern end of Bahdur Island from the closest point on the mainland and water depth in this intermediate area is relatively shallow, approximately 1-2 meters. It is generally accepted that there has been a rise in the level of the Red Sea of about 1-2 meters since antiquity (Harrell, 1996: 103-104) and if this is the case then Bahdur Island was likely originally part of the mainland and would have formed a long peninsula that jutted into the bay from the southeast towards the northwest. This would have created a very large and well protected harbor for the ancient port at Adobana on the mainland opposite with the western side of Bahdur providing watering and other support facilities for ships anchored in the area or tied up to piers and wharfs nearby. The peninsula forming Ras Shakal to the north and west, and Farrajin and nearby smaller islands north of Bahdur would have created a well protected harbor, though somewhat difficult of access for ships plying the Red Sea in various periods due to the numerous reefs and shoals.

Conclusion

The short time available for the survey to examine the region around Aqiq revealed, what appeared from some of the surviving architecture, to be an ancient and later Islamic settlement in the village of Adobana with scattered ancient and Islamic graves and cemeteries lying to the north. The survey could not determine if the ancient burials and the settlement at Adobana were contemporary and related. The surface pottery and glass examined by the survey at Adobana and on Farrajin and Bahdur Islands, however, all appears to be Islamic. The short time available to the survey did not allow us to establish whether the surface ceramics from Adobana represented a later phase of habitation of an originally earlier ancient site or a single period of occupation of this location only in Islamic times. The presence of the fluted column drums suggests, however, at least two distinct periods of occupation with at least some of these architectural remains almost certainly dating to the Greco-Roman period. Given the extensive silting that has taken place, only a more careful survey, which should include ground penetrating radar/magnetometric techniques and some excavation of the site, can reveal more of this site's chronological significance and size.

Examination of two islands off shore from Adobana, those of Farrajin and Bahdur, revealed little human activity on the former, but extensive activity on the latter. Bahdur preserved remains of water cisterns and buildings whose close proximity to the sea suggests that they may have been related to support activities for ships. The dates of neither the cisterns nor the buildings, however, could be established, though pottery associated with the latter was Islamic.

The survey recovered no epigraphic evidence that identified the main site at the modern village of Adobana; thus the ruins there cannot be positively identified as those of the ancient port of Ptolemais Theron/Ptolemaic Epitheras. The remains though now badly silted up are, however, located in a position suggesting that they were once on the sea; their situation opposite the island of Bahdur with its impressive archaeological remains would indicate a port of some significance. The fluted column drums and ashlar blocks found at Adobana are worth additional investigation. None of the extant ancient literature indicates any harbor in this vicinity other than that of Ptolemais Theron. More extensive archaeological surveying of the region and excavation of the principal remains, however, must be undertaken to identify the age, size and name of this Red Sea port.

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