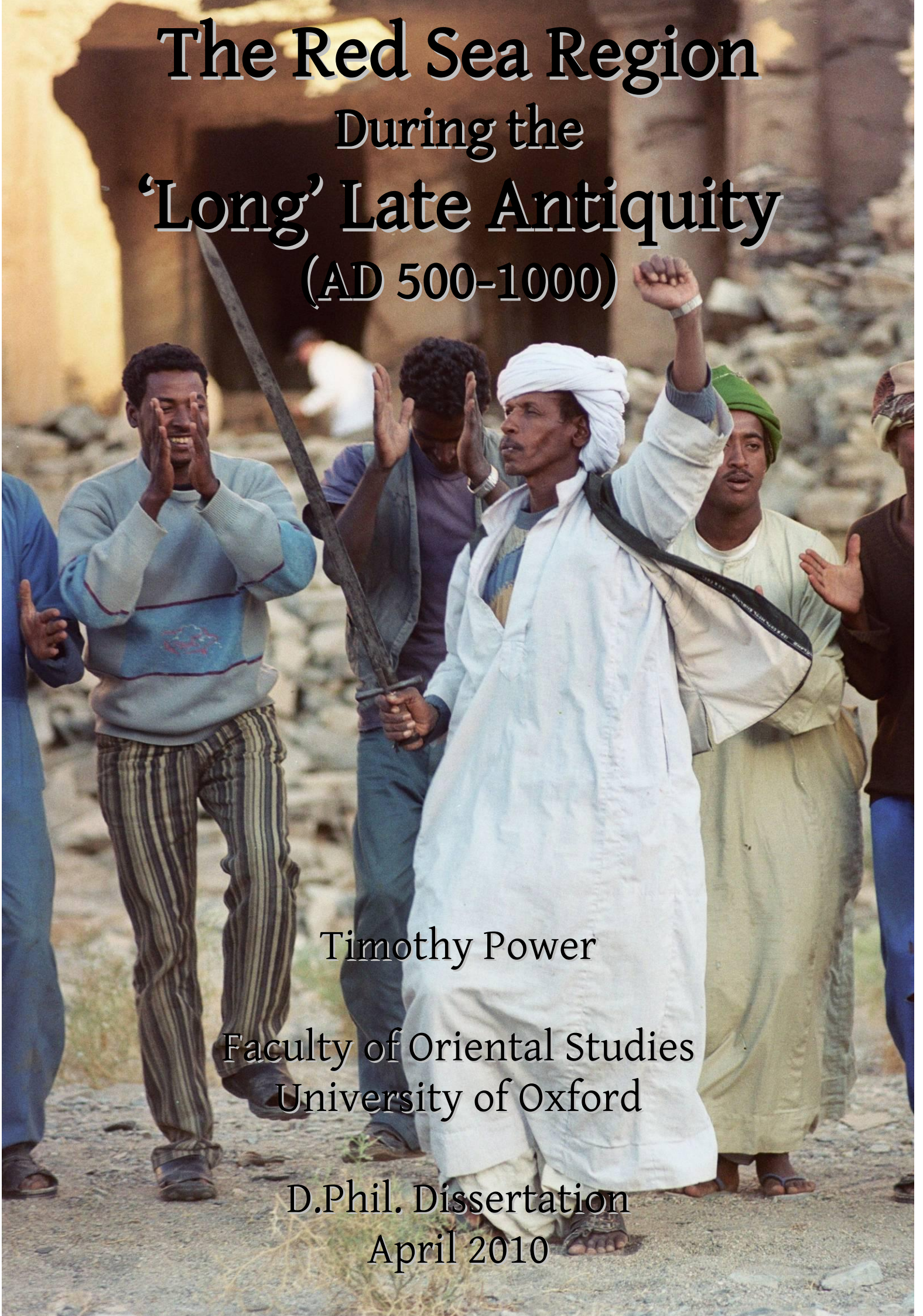
The Red Sea Region
During the
'Long' Late Antiquity
(AD 500-1000)



Timothy Power

Faculty of Oriental Studies
University of Oxford

D.Phil. Dissertation
April 2010

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Abstract

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Timothy Power, Wolfson College. D.Phil. Dissertation, Hilary 2010.

Red Sea studies have hitherto focused especially on the 'India trade' of the Julio-Claudian and Fāṭimid dynasties. This study shifts attention to the transition between Byzantium and the Caliphate, a period now referred to as the 'long' Late Antiquity, and stresses the importance of local economies such as the mining industry and slave trade. The thesis thus constitutes a regional case study in the wider debate surrounding the demise of 'Classical' antiquity and formation of the Islamic world.

The late Roman 'India trade' was increasingly handled by Aksumite and Ḥimyarite middlemen. Serious political and social disturbances in the Sub-Continent during the early sixth century appear to have undermined this trade. The declining volume of commerce fuelled internecine regional conflict in the Red Sea, affording opportunity to outside powers and ultimately overturning the late Roman order. Most late Roman ports were much reduced or entirely abandoned after the mid sixth century. The co-option of post-Ḥimyarite Yemen was crucial to the success of the Muslim conquests. The early Islamic ports emerged out of the conquest and consolidation of the new Red Sea provinces, when maritime communications with the Ḥijāz were significant.

The early Caliphate effectively abandoned its Red Sea provinces – with the notable exception of the Ḥijāz – to the avarice of alien governors. This hastened the fragmentation of the Caliphate and rise of independent local dynasties, most notably the Ziyādids of Yemen and Ṭūlūnids of Egypt, who had a vested interest in economic growth. The ninth and tenth centuries witnessed a great expansion of the mining and textile industries, together with a booming slave trade and return of the 'India trade.' The Red Sea further benefited from the decline of the Gulf and rise of the Mediterranean, associated with a Western movement of Iraqi-Iranian capital and expertise, by whose agency the early Islamic 'bourgeois revolution' spread to Red Sea.

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Acknowledgements

My interest in the Red Sea region began over Christmas 2002, working as a trench supervisor for Steve Sidebotham at the Graeco-Roman sites of Marsā Nakarī and Wādī Sikayt, on the Red Sea coast and in the Eastern Desert of Egypt respectively. This work subsequently inspired my dissertation for the M.Phil. in Islamic Art and Archaeology at the University of Oxford (2003-05), which examined the evidence for an Arab presence in the late Roman Eastern Desert. I was back in the Red Sea region for Christmas 2005, working for Ed Keall at the Islamic site of Zabīd in the Yemeni Tihāma, where I began to sketch out the idea for a synthetic study of the Red Sea in transition between Byzantium and the Caliphate. A debt of thanks is due both Sidebotham and Keall for their conversation and encouragement in these early stages.

Whether in the Eastern Desert or Yemeni Tihāma, I found exploring the landscape exciting and the company of the workmen engaging – particularly the ʿAbābda tribe of the Beja people indigenous to much of the eastern Red Sea hinterland, who feature on the cover photograph. The present D.Phil. dissertation is inspired as much by an attachment to place and people as it is by any intellectual curiosity or academic ambition.

D.Phil. research in Oxford got underway in earnest early Trinity 2006. The thesis was supervised by Jeremy Johns, whose critical reading of the various drafts and insightful comments at our meetings have proved invaluable. The Transfer of Status paper (2007) dealt with the mineral exploitation of the Arabian-Nubian Shield and was examined by Andrew Wilson and Luke Treadwell. Work submitted in support of the Confirmation of Status (2008), discussing the conquest period and early Caliphate, was examined by Chase Robinson and Adam Silverstein. The feedback provided by my supervisor and examiners was at every stage pertinent and the thesis is much stronger for it.

Progress on the dissertation slowed considerably during 2009 as I began working as an archaeological consultant for the Abu Dhabi Authority for Culture and Heritage. This

has naturally led to a greater understanding of the archaeology of the Gulf, providing a useful counterfoil for my study of the Red Sea. I have worked closely with Peter Sheehan in the UAE, and enjoyed conversing with him in his other capacity as director of the American Research Centre in Egypt excavations at the site of Babylon-in-Egypt. I look forward to working with him in Old Cairo during 2010.

Thanks are due the organisers of the various conferences I have attended whilst researching and writing the thesis. I gave my first paper at the third Red Sea conference convened by the Seminar for Arabian Studies, hosted by the British Museum in 2006. Further papers were delivered at the CNRS / Collège de France sponsored *L'Occupation du territoire au Proche-Orient entre les périodes Byzantine et Abbasside (VII^e – IX^e siècle)* in 2007; at the CNRS funded *Ports et réseaux de commerce en mer Rouge (VIIe-XVe siècle)* in 2008; at the fourth Arabian Studies Red Sea conference, held at the Centre for Maritime Archaeology of the University of Southampton in 2008; and at the *Peoples of the Eastern Desert from Prehistory to the Present* conference convened by the Netherlands-Flemish Institute in Cairo in 2008. At each conference, it was a great pleasure to discuss aspects of my research and debate Red Sea studies more generally.

I must also thank those scholars who have sent me off-prints of articles and allowed me to see unpublished work, or have taken the time to write with suggestions for reading material and useful references. These include John Cooper, Patricia Crone, Fred Donner, Robert Hoyland, Jeremy Johns, Michael MacDonald, Peter Sheehan, Steve Sidebotham, Adam Silverstein, Roberta Tomber and Luke Treadwell. In particular, I have benefitted from enthusiastic e-mail exchanges with Kristoffer Damgaard of the University of Copenhagen International Islamic Aqaba Project and Hans Barnard of the Cotsen Institute of Archaeology. I also should mention chance meetings with George Scanlon in the Rose and Crown, Oxford, and with Yuris Zarins in Ṣalāla, Oman; I appreciated their patience and enjoyed their conversation in equal measure. Finally, I would like to my thesis examiners – Robert Hoyland and Roberta Tomber – for their careful reading of the text and recommended corrections.

1. Introduction: The Context of Study

[1.1] Red Sea Studies

(i) The Red Sea was among the very first regions of the Middle East to be studied and explored by Enlightenment Europe, for as early as 1766, d'Anville published his *Mémoires sur l'Égypte ancienne et moderne, sui vis d'une description du golf Arabique ou de le mer Rouge*. Shortly thereafter Carsten Niebuhr's publication of the royal Danish expedition to Arabia provided the first detailed account of the Ḥijāz and Yemen,[1] to which can be added James Bruce's publication of his travels in Ethiopia and Nubia,[2] and finally the epic *Description de l'Égypte*.[3] Although these wide-ranging studies variously detailed flora and fauna or described manners and customs, they all possessed a strong antiquarian flavour and may therefore be regarded as the beginnings of the historical and archaeological study of the Red Sea region.

The acquisition of antiquities developed as a corollary to these early studies, but was given renewed momentum by colonial powers competing to appropriate the deep roots of Civilisation, which they sought principally through the Classical and Biblical traditions. The first antiquarian publications of Aksum were undertaken by Henry Salt in 1805 and 1809;[4] later, the excavation of Adulis was undertaken by the British Museum during Napier's 1868 Magdala expedition. In 1818 the former circus strong-

[1] Niebuhr, 1772; 1774; 1775a & b; 1778.
[2] Bruce, 1790.
[3] *Description*, 1809-29.
[4] Salt, 1814. *Cf.* Munro-Hay, 1991: 19-29.

man Giovanni Battista Belzoni – Shelley's "traveller to an antique land" – discovered the remains of the Graeco-Roman Red Sea emporium of Berenike. Yet of all the nineteenth century savants, perhaps the most significant contribution to Red Sea archaeology was made by Louis Maurice Adolphe Linant de Bellefonds, who through the 1820s discovered the ancient Meroitic civilisation of the Middle Nile, as well as identifying Trajan's Canal and exploring the Graeco-Roman mines of the Eastern Desert.[5]

The deployment of British colonial administrators and military personnel between Suez and Aden during the later nineteenth and early twentieth centuries gave a great boost to the study of Red Sea archaeology.[6] Many of these men had received 'Classical' educations and were keen amateur archaeologists. An extreme example is Richard Burton, who discovered the Ḥijāzī mining sites, believing them to be the Midian gold mines mentioned in Exodus.[7] Less glamorous and smaller excavations were published by officers on leave, particularly in the Anglo-Egyptian Sudan: J.W. Crowfoot provided an overview of ʿAydhāb, al-Rīḥ (Bāḍiʿ) and Sawākin; Major H.E. Hebbert excavated at al-Rīḥ; George Murray dug at ʿAydhāb.[8] T.E. Lawrence documented a number of ports and roads of the northern Red Sea – later returning in another guise, of course[9] – yet the most evocative snap-shots of the Red Sea prior to modern development are to be found in Allan Villiers and Jean-Paul Greenlaw,[10] who respectively documented the traditional dhow trade and Ottoman architecture of Sawākin: both now sadly

[5] Linant de Bellefonds, 1868.
[6] Bourdon, 1925.
[7] Burton, 1878; 1879.
[8] Crowfoot, 1911; Hebbert, 1936; Murray, 1926.
[9] E.g. Aqaba described in the Wilderness of Zin Archaeological Survey (1913-1914), Woolley & Lawrence, 1936: 145-47. Famously, Lawrence took Aqaba in 1917 with the help of the Ḥawayṭāt.
[10] Villiers, 1940; Greenlaw, 1995.

disappeared. The British colonial involvement in Red Sea archaeology is exemplified by the British Admiralty pilot of *Western Arabia and the Red Sea* (1930), which in addition to producing detailed coastal survey, identified numerous Classical and Islamic port sites.

(ii) Knowledge of Islamic Egypt expanded dramatically in the decades following the Second World War with Shlomo Goetein's work on the Geniza[11] and George Scanlon's excavation of Fusṭāṭ.[12] They made explicit, in their different ways, the importance of the Fāṭimid and Mamlūk 'India trade' lately noted by Bernard Lewis,[13] wherein the Red Sea became the main artery linking the Mediterranean to the Indian Ocean. At much the same time David Meredith was laying out the ports and roads of the Eastern Desert of Egypt which once carried the Graeco-Roman 'India trade.'[14] This topic had recently been brought to the fore by Mortimer Wheeler's excavations at Arikamedu in southern India, which he believed to be a Roman mercantile colony, and a number of syncretic studies shortly appeared.[15] The early Roman and middle Islamic 'India trade'[16] therefore became increasingly well studied through the 1950s and '60s, casting new light onto the ancient transit trade of the Red Sea.

Work on the Red Sea grew steadily during the last quarter of the century. The Saudi Arabian Department of Antiquities and Museums undertook a series of 'comprehensive surveys' and excavations published in the journal *Aṭlāl* during the late

[11] Goitein, 1953; 1954; 1963; 1973; 1980; 1987.
[12] Scanlon & Kubiak. 1964-78.
[13] Lewis, 1950.
[14] Meredith, 1952; 1953; 1958.
[15] Wheeler *et al*, 1946; Wheeler, 1955; Majumdar, 1960; Derrett, 1961; 1962; Miller, 1969; Jones, 1974; Warmington, 1974; Raschke, 1978; Casson, 1980.
[16] Excavations at the early Islamic Gulf emporium of Sirāf began at broadly this time. Whitehouse, 1968.

1970s and early '80s. This represents the first professional publication of Islamic sites in the Arabian littoral and hinterland, including especially Juris Zarins' publication of ʿAththār,[17] together with the mining regions of the Wādī al-Qurā, southern Darb Zubayda and ʿAsīr mountains.[18] Work in the Red Sea moreover benefited from political instability in the Gulf. Donald Whitcomb and Ed Keall, who respectively dug at the Egyptian port of Quṣayr al-Qadīm[19] and at Zabīd[20] in the Yemeni Tihāma, had previously worked in Oman and Iran: there Keall was lucky to survive being stabbed at a road block during the Islamic revolution. By the end of the decade, Whitcomb had begun working at Aqaba.[21] The archaeological record of the Islamic period in the Red Sea was therefore largely a product of the 1980s, of which this thesis represents a first attempt to interpret as a unitary data set.

The archaeological record of the Graeco-Roman period grew similarly during the 1980s and '90s. The publication of Steven Sidebotham's PhD thesis[22] marks the start of renewed interest in the Graeco-Roman 'India trade' and its attendant communications infrastructure in the Red Sea. Sidebotham then dug at Abū Shaʿar,[23] thought to be the site of Myos Hormos but subsequently shown to be a late Roman fortress, and went on to work with others at the port sites of Berenike and Marsā Nakarī (Necesia?),[24] as well as undertaking extensive survey work targeting the roads and mines of the Eastern

[17] Zarins & Zahrani, 1985.
[18] de Jesus *et al*, 1982; Kisnawi *et al*, 1983; Hester *et al*, 1984.
[19] Whitcomb & Johnson, 1979; 1982 a & b.
[20] Keall, 1983a; 1983b; 1984.
[21] Whitcomb, 1987.
[22] Sidebotham, 1986.
[23] Sidebotham *et al*, 1989; 1991; 1994a; 1994b.
[24] Sidebotham & Wendrich, 1995; 1996; 1998; 1999; 2000; 2007. Seeger, 2001.

Desert.[25] David Peacock worked at the quarries of Mons Claudianus and then with Lucy Blue at Quṣayr al-Qadīm, now firmly identified as the important early Roman emporium of Myos Hormos.[26] Investigations of the Graeco-Roman Aila directed by Tom Parker got underway in the 1990s,[27] complimenting Whitcomb's excavation of the Islamic city, and making ʿAqaba perhaps the best known Red Sea site.

(iii) The burgeoning of Red Sea studies in the 1990s culminated with the biennial Seminar for Arabian Studies Red Sea conference series. This began in 2002 and has since become the pre-eminent forum for historians and archaeologists involved with the region. Each conference has a different theme, with past themes including trade and travel,[28] peoples,[29] natural resources and cultural connections,[30] and connected hinterlands.[31] The forthcoming 2010 conference has the theme navigated spaces, connected places.[32] The first three conferences were held in the British Museum, while the fourth was held in the University of Southampton and the fifth at the University of Exeter, both institutions with a strong fieldwork involvement in the Red Sea region. Red Sea studies have in some sense come of age with their own conference series and regular publication of proceedings.

The success of the Arabian Studies conferences has stimulated Red Sea studies in other countries. Eric Vallet of the Orient & Méditerranée: Laboratoire Islam medieval,

[25] Sidebotham & Zitterkopf, 1989; Sidebotham & Riley, 1991; 1997; 1998; Sidebotham & Helms, 2000; Sidebotham *et al*, 2004.
[26] Peacock & Blue, 2006.
[27] Parker, 1996-2003.
[28] Red Sea I (2002). Lunde & Porter, 2004.
[29] Red Sea II (2004). Starkey, 2005.
[30] Red Sea III (2006). Starkey *et al*, 2007.
[31] Red Sea IV (2008). Blue *et al*, 2010 (IN PRESS).
[32] Red Sea V (2010). Dionisius *et al* (FORTHCOMING).
http://projects.exeter.ac.uk/mares/conferences.html

a research group associated with the CNRS and Sorbonne, convened a study day in 2008 entitled *Ports et réseaux de commerce en mer Rouge (VIIe-XVe siècle)*.[33] In 2008 Walter Ward, of the University of California at Los Angeles, chaired a panel on the Red Sea in antiquity at the annual meeting of the American School for Oriental Research.[34] A Red Sea panel is now regularly included in the ASOR meetings. Also in 2008, Hans Barnard organised a three-day conference on the history of the peoples of the Eastern Desert of Egypt at the Netherlands-Flemish Institute in Cairo.[35]

Finally, mention should be made of the MARES project at the University of Exeter, a multi-disciplinary research group focusing on the maritime traditions of the peoples of the Red Sea and Gulf: "Drawing on ethnography, archaeology, history and linguistics, it seeks to understand how people have inhabited and navigated these seascapes in late antiquity and the medieval period, and how they do so today."[36] With the establishment of these new research groups and conference panels, Red Sea studies now have a truly international scope.

(iv) One of the aims in writing this thesis is to produce a 'desk-based assessment' (DBA) synthesising the extant data set and informing future field work, a concept borrowed from British commercial archaeology as defined by the Institute of Archaeologists:

[33] *Chroniques Yeménites* 15 (2008). http://www.islam-medieval.cnrs.fr/apim3.htm
[34] http://www.bu.edu/asor/am/2008/archive/index-2008.html
[35] Barnard & Duistermaat, 2010 (IN PRESS).
[36] http://projects.exeter.ac.uk/mares/index.htm

"...a programme of assessment of the known or potential archaeological resource within a specified area or site on land, inter-tidal zone or underwater. It consists of a collation of existing written, graphic, photographic and electronic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional, national or international context as appropriate."[37]

The thesis was therefore undertaken in direct preparation for planned future fieldwork. Numerous Islamic sites have been noted by 'Classical' archaeologists working in the Eastern Desert of Egypt, yet to date no attempt at systematic exploration has been made. Archaeology might usefully compliment the Geniza documents, which do not in fact bear directly on the Fāṭimid Red Sea 'India trade' **[5.3.1] (i)**. It is hoped that the completed thesis will contribute to a successful grant application to fund a preliminary survey of the Islamic roads and mines of the Eastern Desert. Note that a good deal of research has been completed on this subject but not included in the final edit of the thesis, which sought instead to provide a broad framework supporting further research. An Eastern Desert survey would naturally lead into excavation of the important medieval emporium of ʿAydhāb, currently out of bounds to archaeologists but perhaps accessible in coming years.

(v) A brief note on Arabic historiography is necessary at this point. The majority of the sources used in the thesis belong to the ninth and tenth century, and are in some cases separated from the events they purport to describe by some two or three

[37] Institute for Archaeologists, 2008: 2.

centuries. The formation of the Arabic historical tradition has therefore been subject to much debate, most usefully summarised by Patricia Crone in her introduction to *Slaves on Horses* (1980). Such issues need to be acknowledged without necessarily resolved, a task which lies well beyond the scope of this thesis.

I have adopted the general methodology of a desk-based assessment, to collate pertinent historical information relating to archaeological sites, with particular regard to their possible origins and function. Specific historiographic issues are addressed as they arise and the Arabic historical tradition is compared to epigraphy and other source material where available. In general, I believe that archaeologists should in the first instance cautiously accept the testimony of the more sober sources, that this information ought form the basis of hypotheses to be tested by field work, and that the interaction of the two should be an ever advancing and dynamic process. This conforms to Ian Hodder's call for a reflexive method in his *Archaeological Process* (1999), wherein data and theory are bound together in an ascending 'hermeneutic spiral.'[38] The synthesis of the extant corpus of historical and archaeological data pertaining to the Red Sea (AD 500 – 1000) presented here therefore marks no more than the beginning of this process, and revisions will no doubt be made as new research is made available.

[38] Hodder, 1999: Fig. 3.3, p. 39.

[1.2] Chronological Parameters of Investigation

(i) Although the Bronze Age Pharaonic state exploited the communications corridor and mineral resources afforded by the Red Sea and its hinterlands, it did so through a series of discrete expeditions from the Nile Valley, and so established little in the way of permanent infrastructure.[39] Attempts to develop the military and communications infrastructure began in the Saite period (664-525 BC), but were only really successful under the Achaemenids (525-334 BC). Necho II (610-595 BC) built a Red Sea fleet, and according to Herodotus, commissioned a Phoenician expedition to circumnavigate Africa.[40] At the same time, he began work on a canal along the floor of the Wādī Ṭūmaylāt, so as to provide the administrative capital at Memphis with a direct link with the Red Sea. Necho never saw his canal completed, and it was only under the Achaemenid Darius I (521-486 BC) that ships are supposed to have sailed from Memphis to the Persian Gulf.[41] While a move towards a comprehensive Red Sea communications infrastructure was thus made as early as the late Iron Age, it achieved no lasting effects.

The foundation of an enduring maritime communications infrastructure spanning the Red Sea were laid by Ptolemy II Philadelphia (283-246 BC),[42] allegedly to procure African elephants for his wars with the Seleucids. He reopened the Wādī Ṭūmaylāt

[39] A single Pharaonic port has been identified at Marsā Gawāsis, at the mouth of the Wādī Ḥammāmāt. It does not seem to have had a permanent population resident, but rather occupied by maritime expeditions, who assembled the sewn-boats carried in sections from the valley. See Sayed, 1977b; Bard & Fattovich, 2003-04.
[40] Herodotus, 4.42 (1890).
[41] Posener, 1936.
[42] On the Ptolemaic expansion, see: Hölbl, 2001: 35-76; Rostovtzeff, 1932.

canal, and built four ports between the Gulf of Suez and Rās Banas: Arsinoë, Philoteras, Myos Hormos and Berenike Troglodytica **[Fig. 1.01]**. He connected the latter three harbours to the Nilotic ports of Coptos (Qifṭ) and Apollonopolis Magna (Edfu) with roads, further furnished with forts and water stations (*hydreumata*).[43] In addition to these far-reaching investments in infrastructure, he commissioned scientific voyages to improve knowledge of the region, which later provided the material for the geographers Agatharchides, Artemidorus and Eratosthenes. His reign, therefore, marks the opening up of the Red Sea to the Hellenistic world.

State investment in the Red Sea continued under Ptolemy III Euergetes (246-221 BC) and Ptolemy IV Philopator (221-205 BC) – respectively associated with the ports of Leukos Limen and Nechesia – but seems to come to an end with Ptolemy V Epiphanies (c. 205-180 BC). Sidebotham argues that Philopator's elephant procurement activities had resulted in a breeding herd, while the rise of the Parthians had cut the Seleucids off from their source of Indian elephants, leaving little incentive to persist in costly expeditions to 'Ethiopia.'[44] The communications infrastructure which had developed in the context of the Syrian wars increasingly served commercial purposes, with the state taxing private enterprise, especially following the discovery of the monsoon winds and the direct route to India. Although there is some debate as to when this occurred, the earliest extant account of the voyage is that Eudoxus of Cyzicus, who sailed to India in c. 116 BC.[45] The far-famed 'India trade' passing through the Red Sea may therefore be reckoned to have originated in the second century BC.

[43] The order here is from Pliny, 6.33.167-8 (1938-62); Strabo, 16.4.5 (1917), lists the same in a slightly different order. Sidebotham, 1986: 2-12; Bernand, 1972a: 46 - 54, No. 10; Bagnall, 1976: 35.
[44] Sidebotham, 1986: 4. 'Ethiopia' was a fairly generalised term applied to the Horn and East Africa.
[45] Casson, 1980; Raschke, 1978; Thiel, 1967.

The volume of the 'India trade' appears to have peaked under the Julio-Claudians. As Strabo notes, "as many as one hundred and twenty vessels were sailing from Myos Hormos to India, whereas formerly, under the Ptolemies, only a very few ventured to undertake the voyage and to carry on traffic in Indian merchandise."[46] By the mid first century AD much of the more practical information was compiled in a mercantile guide to the ports and wares of the Red Sea and Arabian Sea, the anonymous *Periplus Maris Erythraei* **[Fig. 1.02]**, which gives vivid testimony to a booming trade. In fact, the trade with India – largely though not exclusively through the Red Sea corridor – was pursued with such vigour by the Romans that many educated contemporaries feared that the balance of trade would ruin the Empire.[47] Archaeological evidence from the Red Sea ports demonstrates a first century boom leading Sidebotham to conclude that "in the early Roman era maritime commerce with South Arabia, India, Sri Lanka and coastal sub-Saharan Africa reached its zenith."[48]

The study of the early Roman 'India trade' has tended to overshadow that of the late Roman period. Indeed, the *Periplus* has become so much cited that it has assumed a virtually normative position in the discourse. For instance, although Sidebotham notes that excavation "has uncovered more of late Roman Berenike than any other phase in the city's history,"[49] this period is only addressed specifically in a single article, wherein the late Roman 'India trade' and wider commerce of the port are

[46] Strabo, 2.5.12 (1917).
[47] Pliny, 6.26.101; 12.41.84 (1938-62); Tacitus, 3.53 (1882); Dio Chrysostom, 79.5.6 (1932-51).
[48] Sidebotham, 1999: 685.
[49] Sidebotham, 2002a: 218.

discussed in three paragraphs.[50] Roberta Tomber's recent study of the *Indo-Roman Trade: From Pots to Pepper* (2008) includes a rare synthesis of the late Roman Red Sea 'India trade' based largely on the ceramic evidence, yet it is striking that 'Classical' archaeologists have thus far neglected to write a definitive monograph on the subject. This thesis aims, in part, to redress the focus on earlier periods. It examines something of the origin and operation of the late Roman 'India trade' **[2.3]** and goes on to explore the causes and consequences of its demise in rather more detail **[3.1]** & **[6.1]**.

(ii) The Ptolemaic 'boom' in the development of maritime communications extended beyond the Egyptian littoral, to Africa and Arabia, where it was to have far-reaching effects, leading to greater regional integration and the increased movement of peoples. Between the reigns of Philadelphus and Philopator (284-205 BC) some fifteen or sixteen ports were established along the African coast of the Red Sea, as far as the Bāb al-Mandāb.[51] On the Arabian side, the Ptolemies jointly established the colony of Ampelone with Milesian settlers.[52] The location of this site remains unknown, though it has been linked with the later port of Leuke Kome, which came to replace the earlier Nabataean site of Egra further to the south. According to Sidebotham, "the Ptolemaic foundation of a port on the west coast of Arabia undoubtedly facilitated trade with South Arabia and was, most likely, an attempt by the Ptolemies to share the profits enjoyed by the Nabataean and South Arabian middlemen."[53]

[50] *Ibid.*, 230-34.
[51] Strabo, 16.4.7 (1917); Pliny, 6.34.170-175 (1938-62). See Sidebotham, 1986: 3, Rostovtzeff, 1932: 742. Only one, Ptolemais Theron, has been identified.
[52] Pliny, 6.32.158-159 (1938-62); Tarn, 1929: 21-22.
[53] Sidebotham, 1986: 3.

The west Arabian caravan trade in aromatics remained important despite the Ptolemaic expansion of maritime commerce and communications. The Hellenistic geographers Hieronymus of Cardia (fl. 323-272 BC), Eratosthenes (fl. 275-194 BC) and Artemidorus (fl. 100 BC) all attest to caravans passing up from Yemen through the Ḥijāz.[54] Indeed, the continued importance of the overland route supported the commercial expansion of the Nabataeans. By 312 BC the Nabataeans were established in Petra, and expanded into the Hawrān and Negev during the next century **[Fig. 1.03]**.[55] In c. 25 BC they annexed the Lihyanite kingdom – which had flourished in the Ḥijāzī oases of Dedan and Hegra – and by 44 AD they had taken Dūmat al-Jandal in the Wādī Sirḥān.[56] It may have been that such Nabataean military expansion was in reaction to Graeco-Roman commercial expansion, for Robert Hoyland suggests that the Lihyanites sided with the Ptolemies against the Nabataeans, "allowing aromatics to pass directly to Egypt via the Red Sea rather than going overland through Nabataean territory."[57] The Iron Age caravan trade in aromatics was therefore steadily made obsolete by the expansion of Graeco-Roman maritime commerce. In her section on the Yemeni incense trade, Patricia Crone concludes that "there is no reference to the overland route in the classical literature after Pliny and the *Periplus* (both of the first century AD)... it is not clear why some scholars believe the overland route to have continued into the fourth century, or even later."[58]

[54] Hieronymus in Diodorus Siculus, 19, 94: 5 (1933); Eratosthenes in Strabo, 16, 4:4 (1917); Artemidorus in Strabo, 16, 4:19 (1917). *Cf.* Crone, 1987: 18-26.
[55] Bowersock, 1971: 221-222, 230; Peters, 1977.
[56] Hoyland, 2001: 66, 68.
[57] *Ibid.*
[58] Crone, 1987: 25-26.

Ptolemaic commercial activity on the coast of Arabia created a demand for Mediterranean material culture, associated as it was with the great powers of the day – Lihyanite kings took the name Talmay and their sculpture quotes Ptolemaic royal statuary. Further south along the caravan route, Qaryat al-Fāw began to consume and copy Mediterranean material culture.[59] Arabian merchants start to arrive in the Mediterranean at much the same time. A funeral inscription of 263 BC from Giza mentions Zayd-Il the son of Zayd, a Minaean priest in an Egyptian temple responsible for importing Yemeni aromatics.[60] Importantly, the inscription attests that he exported Egyptian linen in his own ship, attesting to a Yemeni involvement in Red Sea maritime trade almost from its inception. A little later, a number of second-century Minaean, Sabaean and Gerrhaean inscriptions are attested at Delos, vividly attesting to the penetration of the Mediterranean by Arabian merchants.[61]

Roman regional hegemony afforded an ever greater integration of the Red Sea region and increasing movement of peoples. Even at the inception of Roman rule, Augustus (31 BC-14 AD) despatched a military expedition to Yemen under the command of Aelius Gallus in 26 BC. Strabo writes that, given the far-famed wealth of Arabian aromatics, Augustus "hoped either to enjoy the Arabs as his rich friends or to subjugate them as his rich enemies."[62] Descriptions of the Red Sea region become more frequent in the wake of the expedition, appearing in a number of major first century AD sources, which suggests that the expedition succeeded in its objective to

[59] Ansary, 1982.
[60] Hourani & Carswell, 1995: 21; Rhodokanakis, 1924.
[61] Yemeni inscriptions in Hourani & Carswell, 1995: 23; Rostovtzeff, 1941: 702. Gerrhaean in Hoyland, 2001: 25. Note that Antiochus II sailed to Gerrha in 205 BC, suggesting that Seleucid commercial expansion into the Persian Gulf paralleled Ptolemaic expansion into the Red Sea.
[62] Strabo, 16.4.22 (1917).

"explore the tribes and places."[63] Economic transactions and population interaction in the Red Sea region increased to an unprecedented degree in the wake of the Gallus expedition. While Graeco-Roman merchants operating out of Egypt and Palestine were the principal carriers of the 'India trade,' the Yemenis were also notably active in the maritime commerce of the Red Sea and western Indian Ocean. The *Periplus* gives a comparatively full description of the far-flung commercial contacts of Muza, a leading port of the Yemeni Tihāma:

"The very last market-town of the continent of Azania (East Africa)... is called Rhapta...The Mapharitic (from the Maʿafīr region inland of Aden) chief governs it under some ancient right that subjects it to the sovereignty of the state that is become first in Arabia. And the people of Muza now hold it under his authority, and send thither many large ships; using Arab captains and agents, who are familiar with the natives and intermarry with them, and who know the whole coast and understand the language. There are imported into these markets the lances made at Muza especially for this trade, and hatchets and daggers and awls... (As for Muza itself), the whole place is crowded with Arab shipowners and seafaring men, and is busy with the affairs of commerce; for they carry on a trade with the far-side coast (i.e. Somalia) and with Barygaza (in India), sending their own ships there."[64]

This is complimented by the inscriptional evidence for Yemeni activity in Egypt. A first century text from Coptos mentions a Hellenised resident of Aden,[65] three

[63] *Ibid.*
[64] *Periplus*, 16, 17, 21 (1912).
[65] Wagner, 1976: 227-281. Cited by Sidebotham, 1986: 99-100.

Minaean graffiti from the Wādī Ḥammāmāt,[66] and two from the Arabian peninsula directly pertain to trade with Egypt.[67] Similarly, the port of Myos Hormos (= Quṣayr al-Qadīm) has produced pottery, *dipiniti* and graffiti attesting contacts with Saba and Ḥimyar.[68] While this is not in itself indicative of a Yemeni presence, taken together with the Wādī Ḥammāmāt inscriptions of the Myos Hormos – Coptos road, it led Sidebotham to conclude that "some South Arabians visited, perhaps even dwelt in, Quṣayr."[69] Yemeni maritime commerce was therefore perhaps second only to the Roman through the first two centuries AD.

The integration of the Red Sea region increased markedly through the Hellenistic and early Roman periods, first characterised by politico-economic exchanges and then socio-cultural interaction. High state investment created a communications infrastructure which increasingly threatened the Arabian caravan trade, and allowed the Mediterranean core to penetrate the Arabian periphery on a hitherto unprecedented scale; Mediterranean material culture was consumed and copied by local elites, so that Arabia increasingly looked to the Graeco-Roman world. The movement of peoples grew exponentially, due both to maritime communications and market forces, with the result that Arabian and African individuals are attested in the Mediterranean, and Graeco-Roman merchants were to be found in the ports of Arabia and Africa. In short, the Red Sea as a discrete unit of human geography was created and consolidated over the course of the two centuries before and after Christ. The transformation of this internally coherent regional unit of human geography in the

[66] Ryckmans, 1949: 56-57, nos. 360-361. Cited by Sidebotham, 1986: 99-100.
[67] Sidebotham, 1986: 99-100.
[68] Whitcomb & Johnson, 1979; 1982a; 1982b.
[69] Sidebotham, 1986: 100.

late Roman and early Islamic periods, which may be grouped together as the 'long' Late Antiquity, provides the basis of the following investigation.

(iii) Almost all of the recent accounts of the late Roman period end abruptly with the 'Arab conquests,' an upper chronological parameter imposed externally by traditional academic particularism rather than the internal dynamics of historical process, which has increasingly been redressed by a conceptual shift towards a 'long' Late Antiquity, stretching from the Tetrarchs to the Sāmarrān Caliphs. The concept of Late Antiquity was first fully articulated by Peter Brown in *The World of Late Antiquity: From Marcus Aurelius to Muḥammad (150 to 750 AD)* (1971). Traditional accounts stressed either the cataclysmic nature of the barbarian invasions and 'fall of Rome' in AD 476, or else a definitive end to 'Classical' antiquity wrought by the Muslim conquests, and universally interpreted the late Roman period as a period of terminal economic decline. Clearly influenced by the Annales concept of *la longue durée*, Brown's approach was to stress the broad continuation and slow transformation of social and cultural systems from the late Roman Empire through the migration period.

Averil Cameron, in her paper entitled *The Long Late Antiquity* (2002), has pushed the upper chronological boundary of Brown's Late Antiquity to include the early ʿAbbāsids up to the death of Ḥarūn al-Rashīd. She argues that the social and cultural continuity of the old Byzantine Mediterranean and Sasanian Iran (and Central Asia) under Muslim rule only really abated with the imposition of a new order by al-Maʾmūn and the Sāmarrān Caliphate. The archaeologists Donald Whitcomb and Alan Walmsley similarly stress the uninterrupted economic prosperity in Syria-Palestine into the

ninth and tenth centuries, overturning traditional accounts which attributed the economic decline of Syria to the relocation of central authority to Iraq. Accordingly, a 'long' Late Antiquity may be proposed stretching five hundred years from c. 330-830, broadly from the establishment of Constantinople to the foundation of Sāmarrāʾ.

In this sense, Red Sea studies have lagged behind recent conceptual developments in the mainstream study of the wider late Roman period, a shortcoming this thesis hopes to redress by examining the Red Sea in transition through the 'long' Late Antiquity. It is clear, for instance, that there was very considerable social-cultural continuity in the old Roman dioceses of Egypt and Palestine throughout the period under consideration. The Egyptian papyri show that rural communities only began to use Arabic instead of Coptic in legal documents during the ninth century, and the Arabic language first appears in Coptic literary texts of the tenth century, where it is written in Coptic letters.[70] Conversion to Islam seems to have gained pace following the Bashmuric rebellion in 832, though an Arabic speaking Muslim majority only emerged in Egypt under the Mamlūks.[71] The 'long' Late Antiquity therefore provides much more pertinent chronological parameters than the tradition distinction between late Roman and early Islamic periods.

(iv) No attempt has yet been made to write a monograph on the early Islamic Red Sea, which remains a poorly known and much misunderstood period. The origin and early development of such renowned Islamic ports as ʿAydhāb and Jedda, for example, has

[70] Abbott, 1941; MacCoull, 1985; 1989b; Wilfong, 1998: 185.
[71] Frantz-Murphy, 1991; Gellens, 1991; Décobert, 1992; Wilfong, 1998: 182-84; Little, 1990; Northrup, 1990.

largely been obscured by retrospective projections drawn from later medieval accounts. There has therefore been a tendency in the secondary literature to unduly emphasise the importance of the 'India trade' and maritime Ḥajj traffic, interpretations which might well have an 'Orientalist' inspiration found in Eastern exotica and Muslim spiritualism.

The maritime commerce of the Red Sea has too often been equated rather crudely with the transit trade in luxury commodities originating in India and China, and since this largely passed through the Gulf in the early Islamic period, it is further assumed that there can have been no significant maritime trade in the Red Sea at that time. Just as the *Periplus* and early Roman period overshadow the late Roman 'India trade,' so the Cairo Geniza and the middle Islamic period eclipse the early Islamic trade:

"(The Geniza comprises) a collection of letters, legal documents, accounts and other papers related to the mediaeval trade to India, in particular during the eleventh and twelfth centuries. There is no need to emphasise the importance of that trade. It formed the backbone of mediaeval international economics and was a powerful factor in the formation of that great civilization, which we are wont to call 'Islamic'... Finally, it was the search for the direct route to the Far East and for the control of the Indian trade which led to the most vital geographic discoveries and inaugurated modern times."[72]

[72] Goitein, 1954a: 181.

Accordingly, virtually every account of the Islamic Red Sea instead takes as its starting point the rise of the Fāṭimids in the late tenth century, with no detailed discussion of the first three centuries of Muslim hegemony in the region.[73] Yet Ibn Khurradādhbih's (wr. 846) well known description of the Rādhānite merchants **[6.3.1] (ii)** makes it clear that the early Islamic Red Sea 'India trade' was active over a century before the Fāṭimid conquest. Almost all of the Islamic ports, however, appear to have been established before the return of the 'India trade' to the Red Sea in the second half of the ninth century, suggesting that the early Islamic 'India trade' – much less the Fāṭimid 'India trade' – can hardly be a contributing factor to their inception.

The other commonly encountered assumption is that the Islamic ports were established to serve the maritime Ḥajj traffic. For instance, Mark Horton writes that shortly following the birth of Islam, "ports sprang up to transport pilgrims from the newly converted countries. Places such as ʿAydhāb and Sawākin on the African side... grew prosperous in this new trade in people."[74] Much has been made of the location of ʿAydhāb across the water from Jedda, supposedly resulting from a spurious Arab fear of long sea voyages.[75] Sir Hamilton Gibb, meanwhile, found in al-Yaʿqūbī evidence for the ninth-century Ḥajj traffic of ʿAydhāb, though in fact the passage reads: "From ʿAydhāb people sail to Mecca, the Ḥijāz and Yemen, and from there traders ship their gold dust, ivory and other goods."[76] In other words, al-Yaʿqūbī says nothing explicit about the Ḥajj and the general context instead appears to concern mercantile voyages. Of course ʿAydhāb would most likely have been used by pilgrims from Aswān

[73] *Cf.* Lewis, 1950; Horton, 1987; Bianquis, 1998.
[74] Horton, 1987: 350.
[75] Muir, 1924: 205.
[76] al-Yaʿqūbī, 334 (1892); trans. Vantini, 1975: 78.

and the Upper Ṣaʿīd, but the Ḥajj certainly did not comprise the economic mainstay of the port. Indeed, al-Maqrīzī (d. 1442) explicitly states that the Egyptian Ḥajj caravan only began to use the route through ʿAydhāb in the year 1058[77]– fearing Seljūk reprisals following a failed Fāṭimid-backed coup in Baghdād – which would rather tend to preclude maritime Ḥajj traffic on a commercial scale in the early Islamic period.

Why, then, have the 'India trade' and maritime Ḥajj traffic dominated discussion as to the origins of the Islamic period ports? Part of the blame must be attributed to the normative position which the Cairo Geniza has come to hold in Red Sea studies. The wealth of detail supplied paints an especially vivid picture of the 'India trade,' as indeed it well might, given that the Fāṭimid period is sometimes held to represent a peak in pre-modern activity in the Red Sea. Similarly ample Maghribī pilgrimage literature and the abundant writings of Mamlūk encyclopaedists coincided with the Seljūk and Crusader presence in Bilād al-Shām, which redirected Ḥajj traffic away from the Darb al-Ḥajj through ʿAydhāb between the eleventh and thirteenth centuries. The main artery of North African pilgrimage therefore ran through the Red Sea. The 'India trade' and Ḥajj traffic, while certainly important in the high Middle Ages, have perhaps therefore tended to eclipse other economic activities through a combination of evidential bias and historical coincidence. The application of this normative paradigm to the early Islamic period can demonstrably be shown not to work, and therefore represents an inappropriate retrospective projection drawn from the world of the Cairo Geniza and Mamlūk encyclopaedists.

[77] al-Maqrīzī, 299 (1911-27).

[1.3] Geographical Parameters of Investigation

(i) "All of the Ethiopian coast of the Red Sea west of Yemen, from Jedda to the Ḥijāz, is barren and wretched, producing no trade goods, except tortoise shell and panther skins. The same is true of the opposite shore, the land of al-Shiḥr and al-Aḥqāf from the coast of Ḥaḍramawt to Aden. The whole of this coast is without resources, and its one export today is the incense called *kundur* (frankincense). This sea, which ends at Qulzum, is to the right of the Indian Ocean, even if their waters form part of the same whole. The Red Sea is the most dangerous of the seas and gulfs which make up the Ethiopian Sea; none has more reefs, and nowhere is one more prone to be seasick. No sea is more sterile and less productive, both as regards its shores and the depths of the sea itself than the Red Sea. During the sailing season, ships voyage night and day in the rest of the Ethiopian Sea. In the Red Sea, on the other hand, ships sail only by day. When night falls they drop anchor at known anchorages, just as caravans stops for the night at known campsites, because of its reefs, its darkness and the fear it inspires. Far from sharing in the riches of the Indian Ocean, this sea is completely unendowed."[78]

A sea barren and dangerous, then, in the opinion of al-Masʿūdī (wr. 947). Nine centuries earlier, the *Periplus Maris Erythraei* advised its readers to "pass on as fast as possible by the country of Arabia."[79] Only in Ethiopia and Yemen were trade goods to be found, including "spices, a little ivory, tortoise shell, and a very little myrrh."[80] The *Periplus* has exerted a unique influence on academic writing about the Red Sea, and –

[78] al-Masʿūdī, 61-62 (2007).
[79] *Periplus*, 20 (1912).
[80] *Periplus*, 7 (1912).

together with Goitein's work on the Geniza – has come to be viewed as normative. While both the *Periplus* and the Geniza letters make reference to the produce found in the Red Sea ports, they are much more concerned with the transit trade with the Indian Ocean, a concern duly reflected in the secondary literature. The maritime historian Will Facey, for instance, neatly describes it as "a sea on the way to somewhere else,"[81] a statement which typifies the general consensus reducing the Red Sea to a corridor of trade between the Mediterranean and Indian Ocean.

Returning to al-Masʿūdī, it can further be shown that the Red Sea was not nearly as dangerous as has traditionally been understood. In medieval Turkish, the Red Sea was called the 'Coral Sea,' and indeed the coral reefs of its coasts are a salient feature in navigational handbooks. The *Periplus*, warns that "navigation is dangerous along this whole coast of Arabia, which is without harbours, with bad anchorages, foul, inaccessible because of breakers and rocks, and terrible in every way."[82] Medieval travellers were similarly dismayed by their experience of navigation on the Red Sea. Ibn Jubayr (d. 1217) was fairly well terrified of the apparently poorly built and overcrowded vessels used during the Ḥajj:

"The boats (*jilāb*) which they launch on this Pharaonic sea are built with planks held together without nails. They are bound together with ropes of *qimbār*, which is the fibre of the coconut tree (*nārjīl*), trashed until it can be twisted into ropes which join (the planks of) the boats together, and fill the interstices with pegs of palm-tree wood. When they have completed the building of the *jalba* in the way just described, they

[81] Facey, 2004: 7.
[82] *Periplus*, 20 (1912).

smear it with castor oil or with the oil of *qursh* (a fish), which is even better. More surprising still is the sail of the *jalba* which is made of leaves of *muql* (Theban palm) plaited in the same careless and irresponsible way as the whole boat is built. May God protect such boats, for He alone can give salvation! The behaviour of the inhabitants of ʿAydhāb towards the pilgrims is that of tyrants. They pack the travellers into the *jalba* to the point where one sits on top of the other, and treat them harshly as if they were fowl crowded in a cage. Their only concern is to rent the boat and make the highest profit from it in one journey... they say: 'We take care of the planks (*alwāḥ*), let the pilgrims take care of their lives (*arwāḥ*),' which is a current proverb among them."[83]

Of course, these vessels were made dangerous not by their construction or the vicissitudes of open water, but by the avarice of their owners during the overcrowded Ḥajj season. Ibn Baṭṭuta (d. 1377) later remembered of the Red Sea that "the wind changed and we were led astray far away from the coast we aimed at, the waves overwhelming the boat soaked us, (and) the passengers suffered from sea-sickness."[84] The old soldier Procopius (d. 554) was altogether more sanguine about navigation in the Red Sea, which he describes accordingly:

"(It is) a great open sea. And those who sail into this part of it no longer see the land on the right, but they always anchor along the left coast when night comes on. For it is impossible to navigate in the darkness on this sea, since it is everywhere full of shoals. But there are harbours there and great numbers of them, not made by the

[83] Ibn Jubayr, 68-70 (1907); trans. Vantini, 1975: 296-97.
[84] Ibn Baṭṭuta, 253-57 (1927); trans. Vantini, 1975: 521.

hand of man, but by the natural contour of the land, and for this reason it is not difficult for mariners to find anchorage wherever they happen to be."[85]

Similarly, however wet and sick Ibn Baṭṭuta may have been, nothing untoward actually happened to him. Despite the fact that his vessel went astray in an unfavourable wind, the captain steered it towards safety:

"We arrived at an anchorage called Raʾs Dawāʾir between Sawākin and ʿAydhāb. We disembarked and on the shore found a hut, built of reeds, in the shape of a mosque. Inside, there were many ostrich egg-shells full of water; we drank of that water and cooked our food. There we witnessed something which was very marvellous. In an arm of the sea which looked like the mouth of a river (*khawr*), people were casting their robes (like nets)... when they withdrew the robes, they were full of a fish called *būrī* (grey mullet), each fish one cubit in size. The people caught a great quantity of fish and roasted them."[86]

(ii) The geographical parameters of study are not simply bounded by the Red Sea littoral. Ports in general are dependent on their hinterland to varying degrees, so that it becomes necessary to define "where the coast ends and the hinterland begins and how much of the hinterland is relevant to an understanding of the coast."[87] In the case of the Red Sea, the hinterland becomes particularly important to understanding of the rise and demise of ports, given that the natural environment of the vast majority of

[85] Procopius, 1.19.1-7 (1914).
[86] Ibn Baṭṭuta, 253-57 (1964); trans. Vantini, 1975: 521.
[87] Bently, 1999: 234-35. Quoted by Potter, 2009: 7.

the littoral is so hostile to human settlement. Certainly no one prior to the second half of the twentieth century, when cheap package holidays brought streams of tourists into the beach resorts of Egypt and Israel, thought of visiting the shores of the Red Sea for their own sake. Throughout history and on into pre-history, the littoral has been inhabited by nomadic hunter-gatherers such as the Ichthyophagoi (lit. 'fish-eaters') of Hellenistic geographers or the Beja of the Arabic sources, respectively associated with shell-fish middens and brush-wood huts. Yet rulers and merchants from the complex urban civilisations of Egypt, western Arabia, Yemen and Ethiopia went to great lengths to establish ports along the inhospitable coasts of the Red Sea. These were not merely ports of entry for luxury goods of India and China, as they have tended to be understood in the secondary literature, but ports of export for the valuable local commodities to be found in the hinterland of the Red Sea.

The vast majority of the Red Sea hinterland on both shores is comprised of the Arabian-Nubian Shield (ANS), an exposed section of the mineral-rich continental crust **[Fig. 1.04]**. One thinks of the gold of the Pharaohs or the imperial purple stone of Mons Porphyrites, and the Arabic sources demonstrate an ample appreciation for this wealth. Al-Maqrīzī quotes *in extenso* the *ʿiyān* of the Fāṭimid *dāʿī* Ibn Sulaym al-Aswānī (fl. 975) regarding the mineral exploitation of the Eastern Desert of Egypt and Sudan:

"(The Beja) territories are rich in minerals: the further one penetrates the country the better and more abundant the gold is. They have silver mines, copper, iron, lead, magnetic ore (*mal-maghnaṭīs*), marcasite (*al-marqashitā*), amethyst (*al-jamshīt / al-ḥamsīt*), emerald (*al-zamurrud*), and asbestos stone (*ḥjiāra bīshtā*). If the asbestos is

soaked in oil, it kindles like a wick. In addition to these (mineral), there are others, but all the Beja work mainly to find gold, while they completely neglect the other minerals."[88]

Another aspect of the Red Sea hinterland often overlooked is its fluvial wealth. A network of broadly west-east flowing *wādī*s, with sufficient ground water to provide extensive well-digging activities, allowed for ready communications between the Nile Valley and Red Sea. Under the Roman Principate, a surprisingly dense road system was developed in the Eastern Desert of Egypt, and early Islamic communications probably benefitted from this; the stretch of coast from ʿAydhāb north to Qulzum particularly associated with the Nile Valley, so that – for instance – ʿAydhāb was considered the port of Aswān. The Eritrean coast gives access to a rich savannah region fed by a complex series of tributary streams and crossed by the Blue Nile and Atbara, all having their sources in the Ethiopian highlands. Further inland, a lush tropical climate tempered by altitude and a dense tangle of rivers supports extensive forests and a diverse ecosystem. These rich fluvial regions supported a large population which in turn fed a notably intense trade in African slaves. An eleventh-century Arabic treatise on slave-girls, written by Ibn Buṭlān of Baghdād (d. 1050), pays especial attention to the slaves produced by this region:

"Most of (the Ethiopian women) have a smooth, soft body, but are weak and often suffer from consumption... they are good natured and gentle, self-restrained and reliable... (The Beja women) have a golden complexion, beautiful faces, delicate bodies

[88] al-Maqrizī, Chp. 32, 267-80 (1911-27); trans. from French by Vantini, 1975: 622.

and smooth skins; they make pleasant bed-fellows if they are taken out of their country while they are still young and whole... Of all the blacks, the Nubian women are the most agreeable, tender and polite. Their bodies are slim with a smooth skin, steady an well-proportioned... they respect their master as if they were created to serve.... The Nubian woman is preferable as a nurse because she is kind and tender to the child and does not have a sharp tongue... Some physicians choose the Zanj (East African) women for suckling because the warmth of the breasts makes the milk properly cooked."[89]

Although African slavery was part of the pre-Islamic Red Sea scene, not only in Egypt and Arabia but also among the Beja and Ethiopians, it seems that the early Islamic period witnessed a great expansion of the slave trade. While the factors driving this expansion will be discussed below **[5.2]**, it is sufficient to note here that the fluvial wealth of the south-eastern Red Sea supported a ready supply of slaves, exported throughout the region itself and beyond into the Mediterranean and Indian Ocean. Slaves therefore belong among the natural resources of the pre-modern Red Sea hinterland.

All of this is to say that the natural environment of the Red Sea region was neither as barren nor as dangerous as has traditionally been understood, so that the opinions expressed by al-Masʿūdī can be substantially qualified. While the littoral itself was not nearly so readily productive as that of the Mediterranean or the Indian Ocean, its hinterland possessed considerable mineral wealth and significant supplies of black

[89] Ibn Buṭlān, 375-76, 387 (1954); trans. Vantini, 1975: 238-39.

slaves, and moreover included such densely populated centres of manufacture and consumption as Egypt and Yemen. This lends an internal dynamic to the Red Sea, wherein the rise and demise of ports was associated with regional demand for local produce, in addition to the vicissitudes of the transit traffic of a 'sea on the way to somewhere else.'

2. The Late Roman Erythra Thalassa (c. 325-525)

[2.1] *The formation of the late Roman Red Sea scene begins with the rise of hitherto peripheral peoples [2.1.1] and the spread of monotheism [2.1.2] in the third and fourth centuries, which was in some sense to culminate with the establishment of an Arab Muslim Caliphate based in the Ḥijāz. During this period Aksum and Ḥimyar emerged as significant military states, creating empires of unprecedented size in North-East Africa and South Arabia. From the mid-third century, aggressive Blemmyes and Saracen nomads appear at the fringes of Byzantium, Aksum and Ḥimyar to engage in raiding.*

[2.2] *This period witnessed the increasing importance of the Sinaitic Ports [2.2.1], including Aila, Clysma and Iotabe. While these ports undoubtedly had a commercial function, a military dynamic may further be identified, and this is the more so for certain ports of the Thebaid [2.2.2], where both Abū Shaʿar and Marsā Nakarī were associated with the operation of the limes in the Eastern Desert of Egypt. Ports need not therefore possess an intrinsic commercial aspect.*

[2.3] *A great revival of commerce and communications is in evidence from the fourth through the fifth centuries. Berenike remained the pre-eminent Byzantine emporium throughout this period [2.3.1]. While Graeco-Roman merchants operating out of Egypt and Palestine continued to engage in maritime trade in the Red Sea and beyond, it is clear that non-Roman agents, including Jews and Arabs, were active in the Sinaitic and Thebaid ports [2.3.2]. Indeed, the unusual settlement of Shenshef near Berenike may be associated with Arab merchants.*

[2.4] *The fourth and fifth centuries were further characterised by new patterns of trade, in which Ethiopian ports [2.4.1] such as Adulis and ʿAqīq, and Yemeni ports [2.4.2] including Aden and Qāniʾ were heavily involved. The Aksumites and Ḥimyarites appear to have increasingly acted as middlemen to the Byzantines in the 'India trade,' and it is possible that Justinian delegated this trade to the Aksumites just as it has been suggested he entrusted the Arabian frontier to the Ghassānids.*

[2.5] *The evidence suggests that the Late Antique 'India trade' peaked in the fourth and fifth centuries. During this period, the Red Sea became integrated into a sequence of overlapping but independent regional networks, turning about Ethiopia, Sri Lanka and Sumatra, which spanned for the first time the southern seas between Alexandria and Canton. This Late Antique 'world-system' possessed a globalising dynamic into which Islam emerged and spread in a matter of a few generations.*

[2.1] Formation of Late Antiquity in the Red Sea

[2.1.1] Rise of the Periphery

(i) Aksum achieved a position of politico-military hegemony in the southern Red Sea during the third and fourth centuries. Ethiopian expansion began in Yemen (c. 200-270), as evidenced by the inscriptions pieced together by Stuart Munro-Hay.[1] War between the four South Arabian kingdoms had erupted in the late second century **[Fig. 2.02]**, with Saba inviting Aksum to join against Ḥimyar at the start of the third,

[1] Beeston, 1937; Jamme, 1962; Robin, 1981; Munro-Hay, 1991: 71-75.

and though the chronology is not precise, the inscriptions attest to an Aksumite occupation of the Ḥimyarite capital of Ẓafār. A second phase of hostilities opened in the 240s, with the Ḥimyarites allying themselves with the Aksumites and the Tihāma tribe of ʿAkk against Saba. This probably supplies the context for the *Monumentum Adulitanum*, a Greek victory inscription set up by an anonymous Aksumite king at Adulis and transcribed by Cosmas Indicopluestes (fl. 525-50):

"Having after this with a strong hand compelled the nations bordering on my kingdom to live in peace, I made war upon the following nations, and by force of arms reduced them to subjection... I sent a fleet and land forces against the Arabitae and Cinaedocolpitae who dwelt on the other side of the Red Sea, and having reduced the sovereigns of both, I imposed on them a land tribute and charged them to make travelling safe both by sea and by land. I thus subdued the whole coast from Leuke Kome to the country of the Sabaean."[2]

Excavations at Qarayat al-Fāw, the ancient capital of the Kinda ('Cinaedocolpitae'), revealed occupation through the Hellenistic period and Roman Principate.[3] Final abandonment seems to have been around the third or fourth centuries, and it is tempting to associate this with the insecurity of the age. Aksumite military intervention in Arabia therefore hastened the destruction of the ancient South Arabian kingdoms. With the strong Ḥimyarite state blocking expansion in Arabia, the Aksumites turned their full attention to the African theatre: an inscription of the

[2] Cosmas, 65 (1912). *Cf.* Beeston, 1980; Munro-Hay, 1991: 79-80
[3] Ansary, 1982.

Aksumite king Ezana (fl. 330) found at Meroë records the destruction of the city, an event often interpreted as an apocalyptic end to Kushitic civilisation.[4]

(ii) Ḥimyar at length expelled the Aksumites and established a South Arabian empire stretching from Najrān to Khawr Rūrī.[5] The Ḥimyarites defeated another attempt on Ẓafār between the late 240s and c. 260, and repulsed two invasions personally led by Aksumite kings in the decade c. 260-70.[6] These victories were followed shortly by the Ḥimyarite occupation of Saba and then Ḥaḍramawt by c. 290, so that from c. 300 the king of Ḥimyar ruled supreme over the Yemen with the title: "King of Saba and Dhū Raydān and Ḥaḍramawt and Yamanat and the Arabs of the Highlands and Coast."[7] The Ḥimyarite kingdom reached the peak of its power and influence in the first half of the fifth century under Abū Kārib Asʾad, who campaigned in Central Arabia and is even thought to have reached Medina.[8]

The kingdom of Ḥimyar focused on the highlands stretching approximately from Ṣanʿāʾ to Aden, with the capital of Ẓafār occupying a roughly medial position. Archaeological survey of the Dhamār Plateau around Ẓafār demonstrates that, during the Ḥimyarite period (c. 115 BC – c. AD 525), settlement moved from the easily defended hill tops to the agriculturally richer valley bottoms, which were brought under intensive cultivation by the construction of a network of dams and cisterns.[9]

[4] Anfray *et al*, 1970; Burstein, 1980; 1995: 'Axum and the Fall of Meroë,' pp. 207-13. But see Welsby, 2002: 'The End of the Kushite State,' pp. 15-16.
[5] Ḥimyarite Yemen: Tindel, 1980; 1989; Müller, 1988; Wilkinson *et al*, 1997; Wilkinson & Edens, 1999; Barbanes, 2000; Hoyland, 2001: 49-57; Yule, 2007; de Maigret, 2008: 247-253.
[6] Munro-Hay, 1991: 71-75.
[7] Munro-Hay, 1991: 79.
[8] de Maigret, 2008: 250.
[9] Wilkinson & Edens, 1999: 7-12.

Stone-walled towns up to 15-20 ha in area and supporting a high population density became common features in the landscape.[10] A tradition of stone-built monumental architecture and sophisticated military engineering developed,[11] alongside notable epigraphic output and numismatic production marking an unprecedented height in formal civilisation.

(iii) Blemmyes nomads began to attack Egypt from the reign of Trajanus Decius (r. 249-251) and are to be equated with the Beja of contemporary Aksumite inscriptions.[12] First the Dodecaschoenus came under attack, followed by the Thebaid in 261,[13] and as far north as Ptolemais before being checked by Probus in 280 **[Fig. 2.03]**.[14] Upon the defeat of Zenobia in 272, a wealthy merchant called Firmus led Alexandria in revolt until Aurelian returned from the sack of Palmyra to reduce the city. According to the *Historia Augusta* (wr. 395?), he made his money in the Red Sea 'India trade,' and was rumoured to have contacts among the Blemmyes.[15] Under Diocletian, the Dodecaschoenus was abandoned and given over to the Nobatae in an attempt to prevent further encroachment by the Blemmyes.[16]

This frontier policy failed, and the Blemmyes were subsequently able to establish a presence in the Eastern Desert of Egypt and Sudan. Blemmyes raiding continued to be

[10] *Ibid*, 12.
[11] Barbanes, 2000.
[12] Munro-Hay, 1991: 221-32. On the Beja/ Blemmyes, see: Murray, 1923; 1927; 1935; Paul, 1954; Holt, 1960; Updegraff, 1978; Christides, 1980; Updegraff, 1988; Török, 1988; Sadr, 1991; Welsby, 2002: 14-30; Insoll, 2003: 99-105.
[13] *Historia Augusta, Tyranni Triginta* 22.6-8 (1921-32). Reproduced in Eide *et al*, 1998: 1060-63.
[14] *Historia Augusta*, *Probus* 17 (1921-32); reproduced in Eide *et al*, 1998: 1065-66. Zosimus, 1.71.1 (1971); in Eide *et al*, 1998: 1075-76.
[15] *Historia Augusta, Quadrigae Tyrannorum* 3.1-3; *Aurelianus* 33.4-5 (1921-32). Reproduced in Eide *et al*, 1998: 1063-65.
[16] Procopius, 1.19.29-33 (1914). *Cf.* Welsby, 2002: 'War and Peace with Rome,' pp. 18-20.

a problem throughout the fourth century. The monastery of Tabennesi was attacked in 323 and again in 346,[17] while a Demotic inscription at Philae records a raid against Kharga Oasis in 373,[18] and in the same year the Blemmyes are alleged to have perpetuated a unique maritime raid against Sinai.[19] They were firmly ensconced in the Eastern Desert by the early fifth century. Olympiodorus of Thebes (wr. 423) and Cosmas Indicopleustes (fl. 525-50) record their settlement in the region of the emerald mines of Mons Smaragdus / Jabal Zubāra, and Procopius (d. 554) writes that "the Blemmyes dwell in the central portion of the country (i.e. between the Nile and Red Sea), while the Nobatae possess the territory about the River Nile."[20] The Blemmyes do not, however, appear to have expanded beyond the Wādī Ḥammāmāt, which marks the southernmost limits of Saracen presence in the Eastern Desert **[6.1.1] (iii)**.[21]

(iv) Saracens, as the Byzantines termed nomadic Arabs, became increasingly active from the mid third century. According to Arab tradition – broadly supported by inscriptional evidence – the great tribal confederation of Tanūkh assisted in the Roman sack of Palmyra in 273 and subsequently settled along the Euphrates.[22] At almost exactly the same time, dated inscriptions in the Sinai and northern Eastern Desert of Egypt (fl. 266), cut in the Nabataean script but containing a pronounced Arabic linguistic component, have been attributed to the agency of nomadic Arabs.[23]

[17] *Vita Prima Graeca* 85 (1975). Reproduced in Eide *et al*, 1998: 1087-92.
[18] Ph. 371 (1937). Reproduced in Eide *et al*, 1998: 1110-12.
[19] Desanges, 1972; Devreesse, 1940; Ward, 2007.
[20] Olympiodorus, Frag. 35.2, pp. 200-01 (1983); Procopius, 1.19.29-33 (1914); Cosmas, 11.339 (1897).
[21] Power, 2005; 2007; 2010a; 2010c.
[22] al-Ṭabarī, i, 746; iv,138-50 (1879-1901). *Cf.* Ball, 2001: 72, 97; Hoyland, 2001: 231-236.
[23] Littmann & Meredith, 1953: 12, No. 23; 16, No. 46a; Negev, 1967: 254; 1980: 340. *Cf.* 1971; 1975; 1977; Meshel, 2000: 144-51; Power, 2005; 2007; 2010a; MacDonald, 2003a: 48.

The Saracen presence in this region may have been recognised by the creation of a province of *Nova Arabia* by the late third century.[24]

Nomadic Arab activities – often violent – in the northern hinterland of the Red Sea are attested in the fourth century.[25] Athanasius records that St. Anthony joined a Saracen caravan bound for the 'Inner Mountain' in 313, though according to Jerome they attacked the growing anchoritic community of the Egyptian Wādī ʿAraba in 357.[26] Sozomen relates that during the reign of Valens (r. 364-378), an Arab *foederatus* died and his wife Mawia acceded and rose in revolt, wherein she raided Palestine and the north Sinai coastal plain, "as far as the regions of Egypt lying to the left of those sailing up the Nile which are generally denominated Arabia."[27] Contemporary with this, the *Ammonii Monachi Relatio* describes a Saracen raid against the monks of the Wādī Fayrān in the southern Sinai.[28] By the end of the fourth century, Egeria describes the necessity of a military escort through the 'land of the Saracens' along the Wādī Ṭūmaylāt; indeed Peter the Deacon (fl. 1138) explicitly states that the fort at Clysma had been built as "defence and deterrent against Saracen raids."[29] The *Notitia Dignitatum* (c. 395) lists Saracen and Thamudaean military units stationed along the northern coastal plain of Sinai,[30] even as Sozomen (wr. 440-43) thereafter notes Saracens and Ismaelites throughout this region.[31]

[24] Barnes, 1982: 204-05; 213-24; Bowersock, 1983: 145-46; 1984: 221-22; Rea, 1983a: 183-7; 1983b: 46-7
[25] Graf, 1978; Mayerson, 1980; 1989; Eph'al, 1982; Bowersock, 1983; Shahid, 1984a & b; Parker, 1986; 1987a; Haiman, 1995b; Avni, 1996; Hoyland, 2001; Magness, 2003; Power, 2005; 2007; 2010a.
[26] Athanasius, 49-50 (2003). Jerome cited by Mayerson, 1989: 283.
[27] Sozomen, 6.38 (1891). *Cf.* Shahid, 1984: 138-202; Hoyland, 2001: 149.
[28] Devreesse, 1940: 218-20; Mayerson, 1980; Shahid, 1984b: 297-323.
[29] Egeria, *Itinerarium*, 7.2 & 7.6 (1981); Peter the Deacon in Wilkinson, 1981: 206.
[30] Respectively at Scennae Veteranorum (28:17, 26) and Birsama (72, 10-73, 22).
[31] Sozomen, 6:38 (1891). *Cf.* Figueras, 2000: 64-91.

[2.1.2] Spread of Monotheism

(i) Christianity spread from Egypt through the Red Sea during the fourth century. In Alexandria, one estimate suggests that 40% of the population was Christian by the fourth century, though Christopher Haas is less sanguine about the business of estimates, and notes instead the Christianisation of public space proceeded only from the late fourth century.[32] Roger Bagnall, using papyri recovered mostly from the Fayyūm, has produced quantitative estimates for the growth of Christianity in Egypt. In the years after the Edict of Milan (313), some 20% of the population may be reckoned as Christian, rising to over half the population by the time of Constantine's death in 337, and being as much as 80% by the early fifth century. Further, he links Constantine's support of Christianity to the ensuing retreat of paganism from public life and the emergence of "a society in which Christianity was predominant."[33]

Ethiopia adopted Christianity as the state religion during the lifetime of Constantine. Rufinus of Aquileia (wr. 403) records a tradition that a Christian youth of Tyre was shipwrecked in Ethiopia and taken in by the widow of the king, eventually to find passage on a ship bound for Egypt and be consecrated bishop by the newly appointed Athanasius of Alexandria (r. 328-73), who duly bade him return and establish the Church in Aksum.[34] Whatever the truth of the tale, it points to the role of Egypt in the spread of Christianity to Ethiopia. Munro-Hay's study of the Aksumite coinage shows that the early Christian issues respond to Constantine's coinage reform of 324,

[32] Finneran, 2002: 65; Haas, 1997: 206-14.
[33] Bagnall, 1993: 281.
[34] Rufinus, 478-80 (1849).

suggesting an approximate date for the adoption of Christianity by the Aksumite state.[35] According to the *Ecclesiastical History* of Philostorgius (wr. 425-33), of which only an epitome by Photius (d. 893) survives, the Ḥimyarites were converted in the following decade:

"He says that Constantius II (r. 337-61) sent ambassadors to those who were formerly called Sabaeans, but are now known as Homeritae... At the head of this embassy was placed Theophilus the Indian (d. 364)... Hereupon, the customary fraud and malice of the Jews was compelled to shrink into deep silence, as soon as ever Theophilus had once or twice proved by his wonderful miracles the truth of the Christian faith. The embassy turned out successfully; for the prince of the nation, by sincere conviction, came over to the true religion."[36]

The ethnic origin of Theophilus the 'Indian' is unclear. Photius reproduces Philostorgius's statement that he was from Divus, often identified with Diu off the Kathiawar Peninsula in Gujarat. Yet given that 'India' was used by the Byzantines to refer to Ethiopia and Yemen, it is possible that there was some confusion with Adulis. If Theophilus was indeed of Ethiopian extraction, then it would seem that Christianity came to Yemen by way of Ethiopia.

The Saracens of the northern Red Sea began to embrace Christianity from the mid fourth century. Sozomen (d. 450) writes that "some of the Saracens were converted to Christianity not long before Valens (r. 364-378)... the result of their intercourse with

[35] Munro-Hay, 1991: 189-91, 202-04.
[36] Philostorgius, 3.4 (1855).

the priests and monks who dwelt among them and practiced asceticism in the neighbouring deserts."[37] The revolt of Mawia was inspired, according to the same author, by the Arian heresy of Valens and only subsided when the authorities acquiesced to her choice of bishop. In the *Ammonii Monachi Relatio*, dealing with events in fourth-century Sinai, a Christian tribe of Arab *foederati* came to the rescue of monks attacked by brigands; this tribe had converted when a local holy man had driven a demon from their leader.[38] For all that, paganism was by no means eclipsed: some twelve and a half thousand Saracens are claimed by Antoninus of Piacenza (fl. 570) to have attended a religious festival in honour of a stone idol of the Sinai.[39]

(ii) Christians were much in evidence among the Byzantine ports of the northern Red Sea. Roberta Tomber has detailed the instances of church building in these ports, including an early fourth-century example at Aila, that of the late fourth-century at Abū Shaʿar, and a large fifth-century basilica at Berenike.[40] She further notes that both Aila and Berenike were sufficiently important to become bishoprics, with the bishop of Berenike attested in the *Synaxarion* – an early seventh-century compendium of Coptic saints – as residing at Coptos.[41]

Tomber goes on to examine the commercial role of Christians in the Byzantine 'India trade,' noting that ecclesiastical landholding in Egypt was pronounced by the mid

[37] Sozomen, 6.38 (1891). Quoted by Hoyland, 2001: 147-49. *Cf.* Shahid, 1984: 152-58;
[38] Devreesse, 1940: 218-20. *Cf.* Shahid, 1984b: 297-323.
[39] Antoninus Placentinus, 148 (1965).
[40] Tomber, 2007a: 220. *Cf.* Parker, 1999; 2000: 392, 332; Sidebotham, 1994a: 136-46; Sidebotham & Wendrich, 2001: 32-4.
[41] Tomber, 2007a: 222. *Cf.* Fournet, 2000: 208.

fifth century.[42] Two late fifth-century horoscopes attest to the involvement of the Alexandrian Church in long-distance trade, and the early seventh-century *Life of John the Almsgiver* refers to thirteen ships of 10,000 to 20,000 *modii* involved in the shipment of grain and luxury goods.[43] The *Liber Pontificalis*, meanwhile, details estates bequeathed to the Roman Church, some of which in Egypt paid their revenues in Indian spices.[44] The expansion of the Christianity in the Red Sea and beyond may therefore be linked, at least from the fifth century, to its commercial activities. For instance, when the Arian Theophilus came before the king of Ḥimyar, "he also asked for licence to build churches on behalf of the Romans who came thither by sea, and the inhabitants of the country who wished to embrace the Christian faith."[45] The various late Roman Churches were involved in business. This aspect of Christianity has been largely overlooked by historians, who alternatively stress the political and military role of the Churches and Christian *foederati* in the superpower conflict or great game between Byzantines and Sasanians.

(iii) Judaism spread throughout the Red Sea along commercial networks and trade diasporas. This process long antedates Late Antiquity.[46] While much later Arabic traditions and the secondary literature after them point to the destruction of the Second Temple, the archaeology attests to Judaism in the Ḥijāz prior to this event,[47] and it might better be thought that Judaism was carried by the Nabataean-Idumaean

[42] Tomber, 2007a: 225-26. She cites studies by Mango, 1999; Hopkins, 1983.
[43] Mango, 1999: 96-98. Cited by Tomber, 2007a: 226.
[44] Hopkins, 1983: 87. Cited by Tomber, 2007a: 226.
[45] Philostorgius, 3.4 (1855).
[46] Friedlander, 1910; Leszynsky, 1910; Horovitz, 1929; Goitein, 1955; 1958b; 1962b; Stillman, 1979; Ahrony, 1982; Gill, 1984; Newby, 1988.
[47] Hoyland, 2001: 146.

commercial nexus.[48] Maritime commerce very likely introduced Judaism to Yemen, despite the later Arabic traditions tracing it back to Yathrib.[49] Epigraphic evidence recovered from Jewish tombstones at Aden may represent the first attestation of Judaism in Yemen. Of some 200 epitaphs, about seventy clearly predate the nineteenth century, though there is some debate over the dating system employed; a 'low' chronology gives eighth to eighteenth centuries while a 'high' chronology supplies Hellenistic and Roman dates.[50] The earliest synagogue known in Yemen was found at the Ḥaḍramawt port of Qāniʾ. It bears a Greek votive inscription palaeographically dated to the fourth century, suggesting that its *minyan* was of Mediterranean rather than Iranian extraction.[51] This perhaps suggests that Judaism spread from the Mediterranean along the sea-lanes of the greater Red Sea during the period of Graeco-Roman mercantile hegemony.

Alexandria might have been the ultimate source of Yemeni Judaism. Haas notes that while estimates of the Jewish population of Alexandria are impossible, narrative and documentary sources attest to an active role of Jews in almost every social status and economic position in the city.[52] A violent bout of intercommunal violence culminated in 415 with the expulsion of Jews at the instigation of the odious demagogue Cyril.[53] The community reacted with dissimulation and it had recovered sufficiently by the mid fifth century to petition the authorities for the rebuilding of synagogues.[54] Ibn ʿAbd al-Ḥakam (d. 871) recounts the tradition that ʿAmr b. al-ʿĀṣ encountered a

[48] Ball, 2000: 47-59; 60-73.
[49] Ibn Hishām, 17 (1858-60); trans. Guillaume, 1955: 10.
[50] Klein-Franke, 2005: 174-5. *Cf.* Rehatsek, 1883; Subar, 1959; Goitein, 1962b.
[51] Sedov, 2002: 34-35.
[52] Haas, 1997: 113. *Cf. ibid.* 'Chp. 4 – The Jewish Community,' pp. 91-127.
[53] Haas, 1997: 299-304.
[54] Haas, 1997: 127.

population including some 40,000 Jews when he took the city, and while no faith can be placed in such a figure, it suggests that the size and wealth of the Alexandrian Jewish community assumed legendary proportions during Late Antiquity.[55]

Such a conclusion does not exclude the agency of Persian Judaism. Adam Silverstein summarises the evidence for the Sasanian and ʿAbbāsid periods.[56] He first quotes Theophylact Simocatta's (fl. 630) testament to the economically powerful Jewish community: "there was living in Persia a large number of the said race, who had abundant wealth... (obtained) by trading in valuables."[57] He then goes on consider the Babylonian Talmud, which includes references to Indian Ocean voyages recounted on the authority of Rabbi Judah of India, and notes the location of the great Mesopotamian *yeshivot* at the head of the Gulf.[58] Better evidence for Iranian Jewish mercantilism is available from the 'Silk Road,' for instance, an eighth-century Judeo-Persian merchant's letter was found at Khotan and a folded Hebrew prayer text at Dunhuang.[59] The Late Antique Iranian Jews were already involved in the 'India trade' and 'Silk Road' during the Sasanian period, and were therefore at least circumstantially well placed to engage in trade with Yemen.

[55] Ibn ʿAbd al-Ḥakam, 82 (1922).
[56] Silverstein, 2007b: 94-95.
[57] Theophlyact Simocatta, 140-41 (1986).
[58] Silverstein, 2007b: 95. *Cf.* Babylonian Talmud, Babā Bathrā, 74b.
[59] Silverstein, 2007b: 95. *Cf.* Utas, 1968: 123-36; Moreen, 2000: 22.

[2.2] Northern Ports & Hinterlands

[2.2.1] Sinaitic Ports

(i) Aila [sv, Aqaba] lies beneath the modern Jordanian city of Aqaba **[Figs. 2.04-.05]**, at the head of the gulf of the same name which links the southern Levant to the Red Sea, and is best known from Thomas Parker's excavations (1994-2002). It was established by the Nabataeans and became part of the Roman Empire only after the annexation of Arabia Petrae in 106, thereafter expanding steadily through the second century following the construction of the *Via Nova Traiana* in 111-114.[60] At the end of the troubled third century, the *Legio X Fretensis* was transferred from Jerusalem to bolster Diocletian's new *Limes Arabicus*, to the effect that the population increased substantially and the city emerged as a regional centre.[61] A church was built in c. 300 – one of the oldest in the world – testifying to the early progress of Christianity in Palestine; it was apparently destroyed by the earthquake of 363 and subsequently covered by the new city wall. This stone and mud-brick wall was complete by the late fourth or early fifth century, suggesting something of the seriousness which the continued threat of Saracen raiding was taken.[62]

Industrial production at Aila seems to have increased through the fourth and fifth centuries, with both copper slag and kiln wasters attested. Following the annexation of Arabia Petrae, a vigorous phase of mineral exploitation began in the Wādī ʿAraba

[60] Parker, 2000: 392.
[61] Parker, 1996: 234, 253; 2000: 392. Eusebius, *Onomasticon*, 6.17-21 (1904).
[62] Parker, 2003: 332.

region, with a second phase stretching the fourth and fifth centuries.[63] Numismatic evidence suggests that the large scale re-occupation of the copper mines at Wādī Faynān peaked between 330-60.[64] Faynān possessed a fortress and extramural settlement – including churches and a monastery – supported by an aqueduct, water reservoirs, a water-driven mill, and extensive outlying field systems **[Fig. 2.06]**.[65] Its massive series of slag heaps constitute the largest concentration of metallurgical waste in the Near East. Other Byzantine mining sites explored in the Negev and Sinai, with Timna being the best known, broadly conform to the chronology of Faynān.[66] The produce of these mines was found throughout Parker's excavations at Aila. In the 1994 season alone, 500 objects of copper and bronze were unearthed, and Parker notes that "copper ore and copper slag were recovered from Byzantine contexts, suggesting that copper extracted from the Wādī ʿAraba was still being processed at Aila."[67]

The commerce of Aila increased from the fourth century. Amphorae were imported from Gaza and Egypt, and Mediterranean fine wares, dominated by African and Egyptian Red Slip with smaller quantities of Cypriot Red Slip and Phocaean Red Slip, all testify to the vibrant trade of the city.[68] The contents of the amphorae are subject to debate. Gazan amphorae found at Aila (Classes 48 & 49) are reckoned to have carried wine, and less commonly olive and sesame oil, while the Egyptian amphorae (Classes 52 & 53) are thought to have been exclusively used for wine.[69] While the imports of Aila attest to extensive Mediterranean contacts, with particularly close ties

[63] Hauptmann & Weisgerber, 1987; 1992; Rothenberg, 1962; 1971; 1988b.
[64] Kind *et al* 2005: 188-92.
[65] Mattingly *et al,* 2007.
[66] Weisgerber, 2006.
[67] Parker, 1997: 40. *Cf.* Parker, 1996: 252-3; 1998: 389; Parker, 2006: 228.
[68] Parker, 1998: 388-89; 2000: 392-3; 2003: 332.
[69] Peacock & Williams, 1986: 196-99; 204-07.

to Egypt evidenced by the proportion of Gazan (200) to Egyptian (400) amphorae sherds, the exports of Aila are more especially associated with the Red Sea and beyond.

Ceramic slag and kiln wasters from Byzantine levels are indicative of local ceramic production, and indeed a seventh-century kiln site in an industrial area south of the circumvallation was found by Donald Whitcomb. The amphora type produced by this kiln and commonly found in later levels has become known as the Aila Amphora **[Fig. 2.07]**. Their association with other well dated ceramics suggests production between the late fourth and seventh centuries.[70] In her study of the distribution of Red Sea amphorae, Tomber describes this type as:

"Distinguished by a tapered, ribbed body, knob toe, upright lid-seat rim and loop handles... pale and off-white in colour, frequently with a pink or green core. The fabric is characterised by angular granitic fragments and, particularly, large gold mica flakes easily visible... (It has) very thick walls and (is) exceptionally hard-fired."[71]

Aila Amphora have been found at a range of sites across the Red Sea and Arabian Sea, including the Byzantine ports of Abū Shaʿar,[72] Berenike,[73] Shenshef;[74] the Aksumite ports of Adulis,[75] Aksum[76] and the Black Assarca wreck;[77] and at the Yemeni port of

[70] Melkawi *et al*, 1994; Hayes, 1996: 159-61; Whitcomb, 2001: 299; Tomber, 2004a: 397-400.
[71] Tomber, 2004a: 398. Cited by Tomber, 2004a: 397-400.
[72] Riley, 1989: Fig. 17, Nos. 20 & 24. Cited by Tomber, 2004a: 397-400.
[73] Hayes, 1996: 159-61, Table 6.10; Tomber, 1998: 180, Fig. 6.8; 1999: 148. Cited by Tomber, 2004a: 397-400.
[74] Hayes, 1996: Fig. 6.13, No. 13; Tomber, 1998: 170, Fig. 6.7, No. 80; Fig. 6.8, No. 84. Cited by Tomber, 2004a: 397-400.
[75] Paribeni, 1907: 549, Fig. 58; Anfray, 1965b. Cited by Tomber, 2004a: 397-400.
[76] Wilding, 1989: 468-70, Figs. 16; Phillipson, 2000: Figs. 283a, 283c, 343a; Manzo, 2005: 59-60.

Qāni'.[78] It was the only Roman amphora type produced in the Red Sea, and is all but ubiquitous at the Byzantine period sites of the region. Quite what it contained, however, remains a subject of some debate. Whitcomb associated it with Palestinian agricultural products and Parker suggested *garum*, dates or date wine. This may help account for the development of the hinterland of Aila in the fourth and fifth centuries.[79]

Contacts between Aila and the Aksumite empire appear to have been particularly close. The *Martyrium Arethrae* states that at the time of the c. 525 Aksumite invasion of Yemen, fifteen ships from Aila were moored in the Ethiopian emporium of Adulis, and further refers to the hermit Zonaeanus of Aila living in Sabi near Adulis.[80] Similarly, Cosmas Indicopleustes (fl. 525-50) found merchants from Alexandria and Aila engaged in regular trade with Adulis.[81] Two late Aksumite gold coins were found at Aila in contexts stratigraphically placed before the mid eighth century, with half a dozen sherds of Aksumite provenance from late Roman deposits,[82] while the Antoninus of Piacenza (wr. 570) states that "shipping from India (i.e. Ethiopia & Yemen) comes into port at Aila, bringing a variety of spices."[83] Clearly there existed a two-way traffic between Aila and Adulis, involving both Graeco-Roman and Aksumite merchants.

[77] Pedersen, 2000.
[78] Sedov, 1992: 113-14; 1997: 374, 376-77; 2001: 34-35.
[79] Melkawi *et al*, 1994: 463; Parker, 1998: 390-91; 2000: 380.
[80] *Martyrium Arethae*, 747 (1861). Ships sent by the other ports: Iotabe, 7; Clysma, 20; Berenike, 2; Farsān, 7; India (Aksum?), 9. *Cf.* Moberg, 1924: xxxiv.
[81] Cosmas, 54 (1897).
[82] Whitcomb, 1994: 16-18; 2001: 299.
[83] Antoninus of Piacenza in Wilkinson, 1977: 88. *Cf.* Parker, 1997: 21; Tomber, 2008: 80-81.

Aila also enjoyed close contacts with Yemen. At the Ḥaḍramawt port of Qāniʾ **[2.4.2] (iii)**, Aila Amphora account for 80% of identifiable amphorae types, and a full range of apparently Ailan kitchen wares are additionally attested.[84] Yemeni imports to Aila include a single sherd of Organic Storage Jar from a fourth century context, while fragments of steatite bowls thought to be from Yemen were retrieved from fourth through seventh century levels.[85] The Islamic historical tradition records that when Aila capitulated to the Muslims in 630, the Prophet granted the Yemeni merchants of the port safe passage by sea **[4.1.1] (i)**.[86]

(ii) Iotabe [sv] is known only from the sources as an island situated somewhere at the entrance to the Gulf of Aqaba, often assumed to be modern Tiran (despite the fact that nothing has ever been found there) **[Fig. 2.08]**, largely on the basis of Procopius' description:

"The boundaries of Palestine extend toward the east to the sea which is called the Red Sea. Now this sea, beginning at India, comes to an end at this point in the Roman domain there is a city called Aelas on its shore, where the sea comes to an end, as I have said, and becomes a very narrow gulf. And as one sails into the sea from there, the Egyptian mountains lie on the right, extending toward the south; on the other side a country deserted by men extends northward to an indefinite distance; and the land on both sides is visible as one sails in as far as the island called Iotabe, not less than 1,000 *stades* (100 miles) distant from the city of Aelas."[87]

[84] Sedov, 2001: 34-35.
[85] Tomber, 2004b: 353; Parker, 1998: 389. *Cf.* Tomber, 2008: 80-81.
[86] Ibn Hishām, 902 (1858-60); trans. Guillaume, 1955: 607. *Cf.* Crone, 1987: 44 & n. 136.
[87] Procopius, 1.19.4 (1914).

The chronological parameters of occupation can be only very roughly sketched from ecclesiastical sources referring to bishops of Iotabe, who attended Chalcedon in 451 and the Synod of Jerusalem in 536.[88] Theophanes states that "Roman traders lived there as an autonomous community, and exported cargoes from India to produce regular revenues for the emperor" Anastasius (r. 491-518), while Choricus (c. 534) writes that it "served as a port for cargoes from India, the taxes of which were considerable."[89] Similarly, the *Martyrium Arethae* records that Iotabe contributed seven ships to the Aksumite invasion of Yemen in 525, indicating that the merchants of the island were active in the southern Red Sea.[90] Philip Mayerson, in two articles on the location and function of Iotabe, concludes that it served as a Byzantine customs post controlling access to and from Aila: "to intercept the income that Ethiopian and other middlemen derived from receiving, taxing and transhipping foreign merchandise to Roman ports."[91]

(iii) Clysma [sv, Suez] is situated on the opposite flank of the Sinai Peninsula, giving access to the Eastern Delta and Babylon-in-Egypt through Trajan's Canal.[92] Suez was excavated in the early twentieth century and published half a century later, and the subsequent growth of modern Suez has most probably destroyed what remains of Clymsa.[93] Bourdon, who visited the site in 1925, describes the architectural remains of

[88] Mayerson, 1992: 2.
[89] Theophanes, 141 (1883); Choricus, 65 (1929). Quoted by Mayerson, 1992: 1-2.
[90] *Martyrium Arethrae*, 747 (1861). *Cf.* Moberg, 1924: xxxiv.
[91] Mayerson, 1992: 3.
[92] Cooper, 2005; 2010.
[93] Bruyère, 1966.

a sizeable port infrastructure and what he took to be a Justinianic church,[94] though these remains need not be Graeco-Roman. However, Tomber's examination of the published pottery leads her to suggest that the Ptolemaic and late Roman periods are most fully represented, and she further observes that the thousands of coins found date to the fourth and fifth centuries.[95]

The fifth century date is borne out by an inscription from Bostra dated to the reign of Anastasius. It records an edict that the *dux Palaestinae* be financed by the *commerciarus*, or 'controller of foreign trade' at Clysma, implying that the tax revenue generated by the 'India trade' remained considerable.[96] The prosperity of Clysma appears to have continued into the early sixth century, for the *Martyrium Arethae* states that twenty ships from Clysma – more than any other Red Sea port – assisted in the Aksumite invasion of Yemen in 525.[97] To the Bostra inscription can be added the testimony of Peter the Deacon's (fl. 1138) compilation of Late Antique pilgrimage accounts:

"Clysma itself is on the shore, right by the sea. It has an enclosed harbour which makes the sea come right inside the fort, and it is the port for India, which is to say that it receives ships from India, for ships from India can come to no other port but this in Roman territory. And ships there are numerous and great, since it is a port renowned for the Indian merchants who come to it. Also the official known as the *logothete* has his residence there, the one who goes on embassy each year to India by

[94] Cooper, 2005: 81. Cited by Tomber, 2008: 67.
[95] Tomber, 2008: 66; Bruyère, 1966: 90-95; Young, 2001: 77, 86.
[96] Sartre, 1982: 112, no. 9046: 12, 15. Cited by Mayerson, 1996: 123.
[97] *Martyrium Arethrae*, 747 (1861). *Cf.* Moberg, 1924: xxxiv.

order of the Roman emperor, and his ships lie there... the fort was built later on, to be a defence and deterrent against Saracen raids."[98]

The description of the sea coming 'right inside the fort' immediately recalls the situation at the Diocletianic fortress of Babylon-in-Egypt **[3.2.2] (iii)**, directly linked to Clysma via the Red Sea – Nile canal, and might imply that both structures were built at the same time. Indeed, the account of the pilgrim Egeria (fl. 381-84) suggests that Clysma was integrated into the Diocletianic *limes*:

"From Clysma and the Red Sea it is four desert staging-posts before you reach the 'City of Arabia' (i.e. Phacusa), and the desert is of a kind where they have to have quarters at each staging post for soldiers and their officers, who escorted us from one fort to the next... Pithom (Tall al-Maskhūta/ Heropolis) was pointed out to us... it was the point at which our route took us across the frontier of Egypt and we left the land of the Saracens, and it is now a fort."[99]

[2.2.2] Thebaid

(i) Abū Shaʿar [sv] lies on the Egyptian littoral beyond the Gulf of Suez, not far past the tip of the Sinai Peninsula. The site is not in fact a port, as was once thought, but rather an unknown Tetrarchic fortress **[Fig. 2.09]**. The fort enclosed an area c. 77.5 m x c. 64 m, with c. 3.5 m – 4 m high walls some 1.5 m thick, built largely of igneous cobbles

[98] Peter the Deacon in Wilkinson, 1981: 206. *Cf.* Mayerson, 1996: 124.
[99] Egeria, 7.2 & 7.6 (1981).

with upper courses of mud brick.[100] Internal structures included 54 barracks (*centuriae*), a headquarters (*principia*), a possible administrative building or else commandant's quarters, 5 storage magazines and a kitchen. Rooms abutting the inside of the walls were used for storage, and the *principia* was connected to the west gate by a colonnaded street. A Latin inscription from the west gate lists Galerius, Licinius I, Maximinus II and Constantine I together with Aurelius Maximinus, the *dux* of the Thebaid, giving a date of c. 309-11;[101] these dates are confirmed by the coinage, which include eleven *aes* minted between 293 and 307.[102]

The same set of Tetrarchs appears in inscriptions at the major legionary fort at Luxor, so that Sidebotham considers Abū Shaʿar to have been a satellite outpost. Based on the size and number of the *centuriae*, he further estimates that some 200 troops were housed in the fort, probably the *Ala Nova Maximiana* following Bagnall and Sheridan's reconstruction of a fragmentary Latin inscription.[103] The name would suggest a recently created cavalry unit, the function of which is suggested by a fragmentary inscription preserving the word *limitibus*. Since *limes* probably means 'road' or 'boundary' rather than the 'fortified line,'[104] it follows that the cavalry unit was intended to patrol the desert roads linking the Red Sea to the Nile.

Just such a road led away south-west from Abū Shaʿar to join the Nile at Kainopolis (= Qena), past the imperial quarries at Mons Porphyrites – located just c. 50 km from Abū Shaʿar – then along the Wādī Qena to the Valley **[Fig. 2.10]**. The road was surveyed by

[100] Sidebotham, 1994a: 133 & Fig. 2.
[101] Sidebotham, 1994a: 157; Bagnall & Sheridan, 1994: 159-63.
[102] Sidebotham, 1994a: 136.
[103] Sidebotham, 1994a: 157; Bagnall & Sheridan, 1994: 162-3.
[104] Bagnall & Sheridan, 1994: 160-61; Isaac, 1988.

Sidebotham together with Ronald Zitterkopf, who concluded from the surface sherds taken at the various stations that the road had most likely been established in the first century and extensively refurbished in the fourth century.[105] The course of the c. 125 km road was marked by 125 regularly placed rectilinear cairns / towers, of 1.6 – 1.7 m sides extant to a height of 0.5 – 1 m and probably not originally more than 1.5 m, and further by the clearance of stones to create a road-surface varying between 22 and 53 m.[106] During the late Roman period, the number of fortified watering stations (*hydreuma*) was reduced to three situated every 40 – 60 km or perhaps every second days' march. These forts differ from those of the Principate, employing irregular or rhomboid plans and mud brick architecture **[Fig. 2.11-.14]**. Those at Dayr al-ʿAtrāsh and al-Hayta are substantially built using sun-dried mud brick, often, but not always, with lower courses in stone.

How long Abū Shaʿar was occupied by the army is unclear, for it was converted into a monastery in the late fourth / early fifth century, perhaps following a brief intervening period of abandonment.[107] The *principia* was transformed into an apsidal basilica, complete with fragmentary human remains wrapped in cloth deposited in a brick installation in front of the apse, and interpreted by Sidebotham as a *martyrium*.[108] The old fort at Abū Shaʿar now lay on the road from the Thebaid to the Holy Land, and Sidebotham suggests that the continued relevance of the site lay in pilgrimage traffic.[109] Pilgrims arriving at the monastery of Abū Shaʿar could continue north along the coastal road, past the monasteries of St. Anthony and St. Paul and the

[105] Sidebotham, 1999g: 620-21. *Cf.* Riley, 1999: 600-19.
[106] Sidebotham, Zitterkopf & Riley, 1991: 596-98.
[107] Sidebotham, 1994a: 156.
[108] Sidebotham, 1994a: 138, 156.
[109] Sidebotham, 1994a: 158.

unknown monastery of Abū Darāg, so as to visit the site popularly believed to be where the Hebrews crossed the Red Sea near Clysma; alternatively, they could cross the water to Raithou and hence to St. Catherine's on Mount Sinai; or else simply embark for Aila and on to Jerusalem itself.

(ii) Marsā Nakarī [sv] is a port site spreading along both sides of a natural harbour situated south from Abū Shaʿar along the Egyptian coast **[Fig. 2.15-.16]**. The site is generally identified with Ptolemaic Nechesia and has been excavated by John Seeger.[110] Trenches exposed Graeco-Roman ashlars cut from the local coral limestone, many of which may be dated stylistically to the Hellenistic era and were re-used in later structures. Ceramics were dominated by Early and Late Roman amphorae. A few sherds of first- and second-century fine ware attest to contacts with the Mediterranean, and some small fragments of "blue fritted ware… too small to identify the vessel type but… (dating) to the early period"[111] likely represent Egyptian faience. Late Roman material is abundant: Sidebotham, who worked as site manager at Marsā Nakarī, notes "substantial late Roman activity at the site."[112] Particularly important is the presence of Eastern Desert Ware, a hand-made local ceramic tradition generally dated to the fifth and sixth centuries and associated with the Blemmyes, together with Late Roman 1 amphorae giving a fifth- to seventh-century date.[113] The chronological pattern of the coin finds from the 1999 season may further be significant: of eight coins found, six belong to the fourth century, and two of these date to the reigns of Constantine and Constantius II respectively. Although the

[110] Seeger, 2001. Of three seasons (1999, 2001, 2002), only the first has been published in a preliminary report. I worked at the site in 2002, and some of what follows is based on my observations.
[111] Seeger, 2001: 84.
[112] Sidebotham, 2002a: 239, n. 32.
[113] Sidebotham, *pers. comm.* in Tomber, 2008: 65.

publication of Marsā Nakarī remains in its preliminary stages, it may tentatively be suggested on the basis of the published evidence that the fourth and fifth centuries represent the major phase of occupation.

The reasons for this may be associated with Diocletian's reorganisation of the Egyptian frontier following the retreat from the Dodecaschoenus. It is plausible that the relocation of the *Legio II Traiana Fortis* to Apollinopolis Magna (= Edfu), as attested by the *Notitia Dignitatum* (c. 400), occurred at this time.[114] Edfu was further linked to Marsā Nakarī by a direct east-west road running c. 200 km to link the Nile Valley with the Red Sea **[Fig. 2.15]**.[115] Along the road, numerous gold mines, quarries, forts and semi-nomadic settlements are located, some of which evidence a late Roman presence.

Given that the threat of Blemmyes raiding was especially acute in the third and fourth centuries, it seems that the Edfu – Marsā Nakarī road was incorporated into the Diocletianic *limes*; it is known, for instance, that the *Legio II Traiana Fortis* together with unnamed *vexillationes* fell under the authority of the *Comes limitis Aegypti*.[116] Some way south of Marsā Nakarī, just off the *Via Hadriana* which ran along the coast towards Berenike, Sidebotham's survey team found a Greek graffito bearing the single name 'Adid Pharanites' preceded by a cross **[Fig. 2.18]**.[117] Sidebotham argues on the basis of firm epigraphic parallels that this represents the Graecised Semitic name 'Ḥadīd,' and

[114] *Notitia Dignitatum*, 28 (1876).
[115] Sidebotham, 1999f: 364-68.
[116] Sidebotham, 1991.
[117] Sidebotham, Zitterkopf & Helms, 2000: 124-26.

quite reasonably associates this individual with the Christian Arab *foederati* of the oasis of Pharan in the Sinai.[118] Antoninus of Piacenza (wr. 570) writes of Pharan:

"There are eight hundred guards in state service there, who have wives with them, and get their supplies and uniform from the treasury of Egypt. They cannot work the land, since there is nowhere suitable, and everything is just sand. Each day they go out on patrol with their Saracen horses, which are sent straw for stabling and barley from the treasury, in order to guard the monasteries and hermits against Saracen raids."[119]

A papyrus from Edfu refers to similar Pharanite military units active in the Thebaid in 524-25 and 529-30, while the archive of Dioscorus of Aphrodito (fl. 560) describes how they fought with the Dux of the Thebaid against the Blemmyes.[120] This would tend to suggest that the unnamed *vexillationes* operating out of Apollinopolis Magna were in fact Pharanites involved in patrolling the Edfu-Nakarī road.

The late Roman boom at Marsā Nakarī, suggested by numismatic and ceramic evidence, might therefore have been associated with military rather than commercial activities. Although full publication of the site is forthcoming, Red Sea amphorae of Ailan and Aksumite provenance, or else turquoise glazed sherds of Gulf origin – found at Berenike, Aksum and Qāniʾ – appear to be absent at the site suggesting that commerce was not the primary economic rationale. Eastern Desert Ware (EDW) is relatively common, which might indicate that there were closer contacts with the

[118] *Cf.* Shahid, 1984b: 295-324; 1995: 967-89.
[119] Antoninus of Piacenza in Wilkinson, 1977: 88.
[120] Remondon, 1961: 85; MacCoull, 1986a. Cited by Shahid, 1995: 970.

local population of the desert interior than the trade networks of the Red Sea and Indian Ocean, though EDW is also found in quantity at Berenike. Again, it should be stressed that there has been no detailed presentation of the ceramic material from Marsā Nakarī and any interpretation must remain highly conjectural.

The association with the Pharanite *foederati* is particularly interesting, and one wonders if regular maritime links between the Sinaitic ports and Marsā Nakarī could have existed. Certainly the *Ammonii Monachi Relatio* purports to describe a daring Blemmyes raid on the Sinaitic monasteries in the fourth-century, landing at Raithou (= al-Ṭūr) on the south-western coast, and it may further be significant that the oasis of Pharan was directly linked to the port of Raithou.[121] While it would be unwise to continue this speculation too far, this raises the possibility that Pharanite military units were shuttled by ship backwards and forwards between the Roman ports as and when they were needed, so that the ports themselves were incorporated into the *limes* system. This may not be as far-fetched as it first appears, given the letter of Synesius of Cyrene (fl. 370-413), describing "Arabs from the cavalry unit" involved in a shipwreck between Alexandria and the Pentapolis.[122]

(iii) Mons Smaragdus [sv, Jabal Zabara], literally 'Emerald Mountain,' in the Eastern Desert of Egypt was worked as early as the Ptolemaic period. The emerald mines are referred to in the early Roman sources[123] and later by Olympiodorus of Thebes and

[121] Devreesse, 1940: 218-20; Mayerson, 1980; Shahid, 1984b: 297-323.
[122] Synesius, No. 5, 112 (1979).
[123] Strabo, 16.4.20, 17.1.45 (1967); Pliny, 37.16-21, 37.17.65, 37.18.69 (1962). *Cf.* Sidebotham *et al*, 2004: 10-11.

Cosmas Indicopleustes.[124] Sidebotham worked at the associated mining settlement of Wādī Sikayt and established a ceramic sequence from the first to the sixth centuries, with the fourth and fifth centuries comprising the major phase of activity.[125]

Biʾr Umm Fawakhir [sv] in the Wādī Ḥammāmāt was excavated by Carol Meyer **[Fig. 2.17]**.[126] The mining settlement consists of c. 200 domestic structures stretched along the facing slopes of a *wādī*, with cemeteries of cist tombs located on the ridges above the site, a situation paralleling exactly contemporary Wādī Sikayt. Ceramics retrieved from the site give a date through the fifth and sixth centuries, including dishes stamped with crosses indicative of a Christian population. Meyer asserts that "(although) older accounts of Byzantine Egypt say that the Eastern Desert was virtually abandoned to nomadic tribesmen... (recent archaeological work) suggests that the Byzantine government not only ruled the desert, but maintained sizeable operations there."[127]

[2.3] Emporia & Merchants

[2.3.1] Berenike

(i) Berenike [sv, Madinat al-Ḥaras] lies at the south-eastern extremity of Egypt, sheltering in the crook of Raʾs Banās **[Fig. 2.19]**. The port was established by the Ptolemies and grew to become the principal Graeco-Roman *entrepôt*, through which

[124] Olympiodorus, 200-01 (1983); Cosmas Indicopleustes, 371 (1897).
[125] Sidebotham *et al*, 2004. *Cf.* Shaw, 1999.
[126] Meyer, 1995 a & b.
[127] Meyer, 1999: 176.

the greater part of the 'India trade' passed, via the Eastern Desert to Coptos then down the Nile to Alexandria **[Fig. 2.20]**.[128] The site was excavated over six seasons by Sidebotham together with Willeke Wendrich between 1994 and 2000, work which further included the survey of numerous mining sites and routes through the Eastern Desert hinterland. Excavation at Berenike produced evidence for occupation from the third century BC through to the early sixth century AD.[129] Particularly intense activity is apparent in the first and late fourth to fifth centuries respectively, as shown by the pottery and coinage: of 85 identifiable coins, 35 (41%) belong to the first century and 29 (34%) to the fourth and fifth centuries.[130] However, it seems that the first century represents the major phase at the site, for some 80% of the c. 3250 kg of pottery retrieved from 7 trenches in 1995 is of that date, and John Hayes notes that "the Early Roman Imperial levels of the site are remarkable for the quantity of material discarded."[131] While the early fourth century is in general poorly attested, from around the mid fourth century a boom in construction activity and an increase in imported ceramics and trade goods becomes distinctly discernable.[132] The site was abandoned, at length, between the late fifth and early sixth centuries **[3.1.1] (i)**.

(ii) Evidence for a busy commerce with India begins in the mid first century BC and continues to be well evidenced through the fourth and fifth centuries. Later levels include Indian archaeobotanical remains, including pepper, coconut, Job's Tear (a

[128] Sidebotham, 1995: 'Historical Sources,' pp. 5-12.
[129] Sidebotham & Wendrich, 1998: 'Chronology at Berenike,' pp. 453-54.
[130] Sidebotham, 2007a: 202, Table 8.6.
[131] Hayes, 1996: 147.
[132] Sidebotham & Wendrich, 2000b: 'Fourth Century AD Berenike,' pp. 415-16; Abraham, 2007: 'South Asian finds from Berenike,' pp. 289-93.

cereal) and rice.[133] Teak was used as a building material, most likely recycled from Indian ships.[134] More peppercorns have been retrieved from Berenike than any other Egyptian site. Particularly interesting is the presence of Indo-Pacific glass beads, whose production is first attested at Arikamedu in the second century BC, and thereafter moved to Mantai in Sri Lanka then Thailand and Vietnam in the following centuries.[135] Only five of these beads have been found in the early levels of Berenike, compared to some 368 from the later phases accounting for 51% of the total number of beads retrieved; half of all the Indo-Pacific beads were of the yellow-green colour suggesting production at Mantai, which could imply that late Roman Berenike's trade was principally with Sri Lanka.[136] Contemporary sources dealing with the Byzantine 'India trade' would largely appear to support the Sri Lankan connection **[2.5.2]**.

In addition to Sri Lanka, probable contacts with the western Deccan are evidenced. An Indo-Parthian Saka coin of Rudrasena III (r. 348-90) and minted in Saka year 285 / AD 362 was found in a late fourth century / early fifth century context.[137] During the expansion of the Gupta empire (c. 320-550) out of the Ganga-Yamuna Doab, the formerly hegemonic Sakas were pushed south into the Kathiawar Peninsula and Indus Delta where they survived as a local dynasty until their annexation by Chandragupta II in c. 400 **[Fig. 2.22]**.[138]

[133] Cappers, 1996: 327-32; Sidebotham & Wendrich, 1996b: 446, 443-47.
[134] Vermeeren, 1998: 343; 1999: 315-16, 319. Unfortunately, Vermeeren does not discuss the chronological distribution of teak finds.
[135] Francis, 1990; 1991.
[136] Francis, 2000: 22-23.
[137] Sidebotham, 2007a: 209, No. 115 & Pl. 8.15; Sidebotham, 2007b: 156, Trench BE 99/00-30.
[138] Sakas: Chattopadhyaya, 1955; Mohan, 1976; Margabandhu, 1985.

This region has further been suggested as the source of the cotton found exclusively in late fourth and fifth century contexts at Berenike.[139] Cotton makes up an unusually large proportion of the textile assemblage, and the seven or eight Z/Z spun blue resist-dyed fragments found have generally been identified as Indian imports. Curiously, the publishers tentatively identify the Indus valley as the likely source of the fourth / fifth century textiles upon the testimony of the first-century *Periplus*, which identifies the great port of Barbarikon (= Bhambore) in the Indus Delta as a centre of cloth exports **[Fig. 1.02]**.[140] Clearly this region remained an important centre of trade into Late Antiquity. Cosmas (fl. 525-50) later states that "Sindu is on the frontier of India, for the river Indus... forms the boundary between Persia and India" and he then lists it as among the "most notable places of trade in India."[141] To the south, he explicitly identifies the Deccani port of Kaliana (nr. Bombay) as an exporter of "cloth for making dresses... it is also a great place of business."[142] Procopius (d. 554) further writes of the Persians buying up all the Indian silk, "since they inhabit the adjoining country,"[143] which is suggestive of the emporia of the Indus Delta or Kathiawar Peninsula. The historical context might, therefore, suggest the western and north-western coasts of the Sub-Continent as the principal sources for the cotton found at Berenike.

(iii) Contacts with other regions of the Indian Ocean are less well evidenced. A broken translucent red ('ruby') glass cameo, engraved with a shorthand symbol for a

[139] Wild & Wild, 2000: 271-73; 2001. *Cf.* Wild, 1997. Interestingly, the earliest evidence for Indian cotton carpet has been found at Berenike (2007), pre-dating those found by Auriel Stein in the Tarim Basin.
[140] *Periplus*, 39 (1989).
[141] Cosmas Indicopleustes, 366 (1897). *Cf.* Periplus, 52-53 (1989).
[142] Cosmas Indicopleustes, 366 (1897).
[143] Procopius, 1.20.9-12 (1914).

Zoroastrian fire altar commonly used on Sasanian seals, was found on the surface.[144] Other possible evidence for contacts with the Gulf include six pearls, five of which were found strung on a gold wire as an earring in a second-century deposit.[145] Hayes records buff sherds covered with a thick glassy turquoise to green glaze from fourth century contexts; he was at a loss as to where to place these, suggested first South Arabia and then "Parthian connections."[146] There does not, however, appear to be evidence for strong commercial contact with Sasanian Iran.

An East Javanese mosaic bead was found on the surface during the 1999 season.[147] The dating of these beads is still uncertain, but they have been found in association with T'ang (c. 618-906) ceramics in Indonesia, so that the Berenike example probably comes from the latest phase of activity in the early sixth century. The beads have been found in the Philippines, Malaysia, Borneo and Sumatra,[148] where the Late Antique kingdom of Srivijaya grew wealthy on maritime trade with India and Sri Lanka **[2.5.2]**, so that the East Javan mosaic bead from Berenike most likely began its epic journey west in Srivijaya. Francis notes the possibility of Srivijayan agency, but further points to the Indonesian colonisation of Madagascar as an alternative vehicle for trade. However, the lack of Sanskrit loan words in Malagasy would suggests both that this historic settlement process was complete prior to the sixth century, and that contacts with the Indonesian mother land were not maintained.[149] The East Java bead at Berenike

[144] Francis, 2000: 223.
[145] Sidebotham, 1999d: 81; Francis, 2000: 223.
[146] Hayes, 1995: 36; 1996: 153.
[147] Francis, 2007: 254-55.
[148] Francis, 2001: 134-36.
[149] Francis, 2007: 255. *Cf.* Fage & Tordoff, 2002: 27. Indonesian settlers brought with them yam cultivation, which allowed the first significant settlement of the tropical jungles of Africa, thus

was almost certainly imported via Sri Lanka, having first been brought across the Bay of Bengal by one of the historically attested carriers of maritime commerce, viz. Pallavan Indian, Srivijayan Indonesian or even Sasanian Persian merchants.

(iv) Evidence for contact with Aksumite Ethiopia is relatively abundant in the later levels at Berenike. A single *dipinto* from a late fourth- / early fifth-century context bears a few ambiguous cursive South Arabian or Old Ethiopic characters, though the publisher of the text tends towards an Ethiopian provenance.[150] An Aksumite coin dated to the reign of Aphilas (r. 270-90) was retrieved from a fifth-century deposit, apparently washed in after occupational abandonment when only limited squatter activity is attested.[151] An Ethiopic *dipinto* on a Late Roman 1 sherds found the Berenike – Nile road, published erroneously by Enno Littman as a *graffito,*[152] further testifying to the activities of Aksumite merchants in Egypt. Aksumite ceramics were found in fourth- and fifth-century levels at Berenike.[153] Aksumite pottery conforms to two broad geographical traditions centred on the towns of Aksum and Matara / Adulis respectively,[154] and both traditions have been retrieved from Berenike. Tomber notes that the quantity of imported material is likely to be far higher than the 55 diagnostic sherds would suggest.

facilitating the Bantu expansion – another major historic transformation belonging to the 'long' Late Antiquity.

[150] Gragg, 1996. *Cf.* Sidebotham, 2002a: 230-34.

[151] Sidebotham, 2007a: 209, No. 114 & Pl. 8.14; Sidebotham, 2007b: 156, Trench BE 99/00-30.

[152] Tomber, *pers. comm.* Littmann, 1954.

[153] Tomber, 2007b.

[154] Aksumite Pottery: Anfray, 1963; 1966; 1967; Kobischanov, 1979: 26; Munro-Hay, 1989b: 234; Wilding, 1989; Phillips, 2000; Tomber, 2007b: 175.

However, it is the Aila Amphora which dominates the assemblage of Red Sea imports at Berenike **[Fig. 2.23]**. An unclassified slender-bodied ribbed amphora found in association with Late Roman Amphora 1 was first noted by Hayes in the 1995 season, and dubbed the 'Aila-Aksum Type' on the basis of its known find sites.[155] Hayes' Aila-Aksum Type is identical to Whitcomb's Aila Amphorae. This type has been found in all the seasons at Berenike and Tomber considers it to be among the most commonly encountered amphora types in late Roman levels **[2.2.1] (i)**, testifying to the importance of contacts between Berenike and Aila.[156]

(v) Despite being one of the most extensively published Red Sea port sites, the understanding of the late Roman city and its commerce remains in the shadow of the Julio-Claudian heyday. For instance, when discussing Indian cotton fragments found in fourth- / fifth-century levels or Indian carnelian from fifth- / sixth-century Shenshef, the publishers refer to Julio-Claudian historical sources instead of equally useful and altogether more pertinent Byzantine ones. Sidebotham notes that eight seasons' (1994-2001) excavation "has uncovered more of late Roman Berenike than any other phase in the city's history,"[157] and yet this period is summarised and discussed in a single article, of which commerce is accorded three laconic paragraphs. These may be condensed accordingly:

"(The late Roman) commercial renaissance did not reach the levels it had in early Roman times... Trade with India and Sri Lanka was extensive, though what amount

[155] Hayes, 1996: 159-61. He compared it to instances at Aila (Khouri & Whitcomb, 1988: 25), Adulis (Paribeni, 1907: Col. 549, Fig. 58); Aksum (Photo supplied by Chittick following 1973 season).
[156] Tomber, 1999: 148; 1998: 170 (at Shenshef); 180, Fig. 6.8 (from Berenike).
[157] Sidebotham, 2002a: 218.

was direct 'Roman Egypt – South Asian' and how much was conducted through 'non-Roman' middle men like the Aksumites, South Arabians and others cannot be determined... Pottery and mintmarks on coins indicate that Berenike's contacts with the Mediterranean basin had shrunk."[158]

Yet evidence for contact with the wider Indian Ocean world increases in the late Roman levels: 368 out of 373 Indo-Pacific beads were late; all of the foreign coins belong to later levels, including Indian and Ethiopian examples; Indian cotton textiles imports are exclusive to the late period; Gulf imports are more common in upper levels; the Javanese mosaic bead attests for the first time contacts with the Far East. Whether or not 'Roman' merchants were directly involved in the trade or not – and Philostorgius' references to churches for Romans who came to Yemen by sea and the mart of Rome at Aden would seem to suggest that they were – it is clear that the Indian Ocean trade networks to which Berenike belonged now stretched further than ever before. The reduction in contact with the western Mediterranean, meanwhile, is hardly surprising given the rise of Constantinople and the enduring wealth of Carthage, Alexandria and Antioch: 'Rome' had long since moved East. Indeed, just as the Principate had looked ever more to the eastern Mediterranean, it might be said that Byzantium increasingly looked still further east to the world of the Indian Ocean, and – even – that this anticipates the Islamic scene. The publishers of the fourth- / fifth-century indigo resist-dyed cotton fragments of Indian extraction, for instance,

[158] *Ibid.,* 230-34.

take this as the starting point of the burgeoning Muslim trade in Indian textiles so well evidenced by the Geniza and excavations at Fusṭāṭ and Quṣayr al-Qadīm.[159]

[2.3.2] Non-Roman Agents

While these ports were essentially Byzantine, which is to say established and maintained by Graeco-Roman provincial governments and merchants operating out of Egypt and Palestine, it is clear that Jews and Saracens were involved with Red Sea commerce and communications.

(i) Jewish merchants operating out of Alexandria and engaged in the trade of the Mediterranean are relatively well documented in the sources. Haas observes that "the economic status of Alexandrian Jews appears to have improved markedly during the course of the fourth and fifth centuries,"[160] precisely the time late Roman 'India trade' flourished. The Jewish quarter of the city is known to have clustered about the Eastern Harbour, dealing with private commerce as opposed to the government organised grain trade of the Western Harbour. The Jewish community appears to have been particularly associated with the production and export of textiles. Claudian admired Jewish tapestries and Cosmas praised Jewish workmanship, both writers being native Alexandrians and therefore intimate with the city.[161] An edict from the *Codex Theodosianus* (wr. 390) refers to Jewish shipmasters, which excuses them of the

[159] Wild & Wild, 2000: 271-73.
[160] Haas, 1997: 113. *Cf.* 'The Fourth-Century Community,' pp. 109-121.
[161] Claudian, *In Eutropium*, 1.357; Cosmas, 3.70 (1897). Cited by Haas, 1997: 35, 118.

unpopular grain-fleet duty.[162] A letter of Synesius (wr. c. 400) describing the bishop's voyage from Alexandria to Cyrenaica, includes the information that the ship's captain and half the crew were Jews, as well as the accusation that their strict observance of the Sabbath resulted in the wreck of the vessel.[163]

Evidence for Jewish mercantile activity in the Red Sea is not lacking. Hebrew and Aramaic *ostraca* were found in late fourth- to fifth-century deposits at Berenike,[164] and two Greek jar labels identify contents as 'Jewish' or 'Jewish delicacies.'[165] The fourth-century Greek votive inscription from the synagogue at Qāniʾ **[2.4.2] (iii)** contains the prayer of one Cosmas to the Almighty and His Temple to keep his caravan and ships safe during the journey and grant him success during his voyage.[166]

Iotabe possessed a strong Jewish connection. Procopius (d. 554) states "on this island Hebrews had lived from of old in autonomy, but in the reign of this Justinian they have become subject to the Romans."[167] An Aramaic inscription in north-eastern Sinai refers to one "Akrabos son of Samuel of Maqna, of son-of-Sadia of Iotabe,"[168] and includes representations of Jewish cultic equipment. Justinian's decision to take over the island may have been motivated by increasing Byzantine anti-Semitism, perhaps to be read into Choricius' praise of Aratius *dux* of Palestine ridding Iotabe of "an

[162] *Codex Thedosianus*, 13.5.18 (1952). Cited by Haas, 1997: 117-18.
[163] Synesius, No. 5, 112 (1979).
[164] Schmitz, 2000. A Hebrew name is similarly recorded on an *ostracon* from Myos Hormos (first century BC – third century AD). Copeland, 2006: 126.
[165] Bagnall *et al*, 2000: Nos. 99 & 109.
[166] Sedov, 1997: 375.
[167] Procopius, 1.19.4 (1914).
[168] Rothenberg & Ahroni, 1961: 181.

unholy people" in c. 534,[169] though it might equally well be interpreted as an opportunistic attempt to squeeze money from a community grown wealthy on Red Sea trade.

(ii) Arab involvement in the maritime trade of the Red Sea seems to have been limited to piracy from the late Hellenistic into the Julio-Claudian period. The geographer Artemidorus (fl. 100 BC) is quoted by Diodorus (fl. 50 BC), who writes of the "Arabs who are known as Nabataeans" that "after the kings of Alexandria had made the ways of the sea navigable for their merchants, these Arabs not only attacked the shipwrecked, but fitting out pirate ships preyed upon the voyagers."[170] Strabo (wr. AD 18-24) similarly cited Artemidorus on the Nabataean pirates, "(who) by means of rafts, went to plundering the vessels of people sailing from Egypt."[171] Conditions were no better by the time of the *Periplus* (c. AD 50), which states that the Arabian coast is "peopled by rascally men... by whom those sailing off the middle course are plundered, and those surviving shipwrecks are taken for slaves."[172] There is some further evidence for Saracen piracy in late Roman period. Malchus of Philadelphia records that in 473 a Saracen chief Amorkesos seized Iotabe and extorted protection money from Graeco-Roman shipping.[173] It was only in 498, so Theophanes' (wr. 810-15) sources record, that Romanus *dux* of Palestine was able to force out Amorkesos.[174]

[169] Foerster & Richtsteig, 1929: 65-67. Cited by Mayerson, 1992: 2.
[170] Diodorus, iii, 43.4 (1933).
[171] Strabo, xvi, 4.18 (1917).
[172] *Periplus*, 20 (1912).
[173] Malchus, 2.404-6 (1983).
[174] Theophanes, 141 (1883). *Cf.* Mayerson, 1992: 1-2.

The Qurʾān includes numerous references to the sea and seafaring, as discussed by Patricia Crone in an article on the economy of the pre-Islamic Ḥijāz.[175] She cites references to riding on ships (23:22, 40:80, 43:12), navigating by stars (6:97), sailing ships to 'seek God's bounty' (30:46, 16:14, 35:12, 17:66, 22:65, 31:31, 45:12) – which Crone reasonably interprets as meaning trade on the basis of Q. 2:198 & 62:10 – ships in storms at sea (10:22, 29:65, 31:32), fishing and pearling or coral collecting (16:14, 35:12, 7:163). Indeed, while Procopius (d. 554) states that "it is impossible to navigate in the darkness on this sea,"[176] the Qurʾān praises a God "who has made the stars for you that you might follow the right way thereby in the darkness of the land and the sea" (6:97). It might be objected that these represent no more than literary *topoi*, yet the maritime aspect recurs in such traditions as the wrecked Ethiopian ship used to rebuild the Kaʿba and the seaborne first Hijra to Ethiopia **[3.3.1] (ii)**.

(iii) Shenshef [sv], situated c. 25 km south-west of Berenike **[Fig. 2.25-.27]**, may be associated with this obliquely evidenced Arab involvement in Red Sea trade. Early visitors to the site variously thought it a satellite settlement of Berenike or else a medieval Arab slave dealer's stronghold, and Murray decided it was an "autumn station for the officials and merchants of Berenike."[177] He noted the lack of mines and quarries or millstones and slag-heaps, and considered that there was no ground to be cultivated in the immediate surrounds. Survey and excavations undertaken by the Berenike team in 1996 and 97 found some evidence for limited agricultural processing.[178] However, both the function of the site and the origin of its inhabitants

[175] Crone, 2005: 395-97.
[176] Procopius, *Wars*, 1.19.1-7 (1914).
[177] Murray, 1926b: 166.
[178] Aldsworth & Barnard, 1996; Aldsworth, 1999; Gould, 1999.

remained undetermined, so that the excavators confessed that "it is still not clear whether the population consisted of Romans, a Romanised local population – perhaps Blemmyes? – or a combination."[179]

Yet the large courtyard houses of Shenshef display an architectural typology without parallel in either the Graeco-Roman Mediterranean or the Hamito-Semitic Nilotic traditions. Richard Alston undertook a study of the domestic architecture of Roman Egypt based largely upon Karanis.[180] According to his analysis, ground plans have an average of about 70m^2 - much smaller than Shenshef. Typically, the houses possessed a small external yard for domestic work, while the flat roofs of these frequently multi-storeyed buildings were similarly employed as working space. Two types of larger house were attested. The first, known as *aithrion,* seems essentially Greek, with rooms arranged around an internal courtyard integral to the house. Such a house is uniquely illustrated on a ground plan from the Oxyrhynchus papyri **[Fig. 2.28]**. The second larger house type is a peculiarly Egyptian style characterised by two towers flanking the main gate. This seemingly goes back to Pharaonic times, when the gate was the cultic centre of a house, and recalls the pylons of temple architecture. Romano-Egyptian architecture, as briefly outlined here, seems to find no expression at Shenshef, which speaks against a Roman population. House plans from urban contexts, notably the Polish excavations at Kom al-Dikka in Alexandria, again show many small rooms grouped around a relatively small internal courtyard **[Fig. 2.29]**.

[179] Gould, 1999: 379.
[180] Alston, 1997; 2002. *Cf.* Husselman, 1979.

As for the Blemmyes / Beja, the Byzantine and Arabic sources agree that they were a nomadic people without architecture. For instance, al-Ṭabarī states that "the Beja are nomads, owners of camel and sheep. Their country is a sandy desert, devoid of all vegetation and water, without villages or fortresses."[181] Similarly Ibn Ḥawqal tells us "they dwell under hair tents and possess neither villages nor towns, nor cultivated fields."[182] In the early twentieth century, Murray described the *bayt bursh* of the Beja as being "in colour and shape like a hay-cock, built of matting from the dom-palm **[Fig. 2.30]**. The mats are stretched over long curved sticks, and fastened there with wooden skewers, while the door, only 2 or 3 feet high is curtained generally with a piece of sacking. The interior is only about 10 feet square in all."[183] This is a very different material culture to the domestic typologies of Shenshef **[6.1.1] (iii)**.

It falls, then, to consider other parallels for the courtyard houses of Shenshef, and such are readily found in the early Islamic architecture of the Umayyad Levant and North Africa. The point of noting such parallels is not to claim Shenshef for the early Islamic period, which the ceramic sequence would seem to preclude, but rather to place it in the architectural traditions of Arabia and so infer a pre-Islamic Arab presence on the coast of Egypt.

Umm al-Jimāl in Jordan provides a particularly useful parallel for Shenshef, for it has strong Arab associations in both the late Roman and Umayyad periods **[Fig. 2.31-.32]**. Famously, the third-century Jadhīmah al-Abrash ibn Malik is attested as 'king of the

[181] al-Ṭabarī, iii, 1430 (1879-1901).
[182] Ibn Ḥawqal, 48 (1938-39).
[183] Murray, 1935: 81.

Tanūkh' in an inscription from the site,[184] and Clive Foss associates this site and others in the Ḥawrān with the Ghassānids.[185] Burt DeVries' excavations have revealed continuous settlement through the 'long' Late Antiquity, which demonstrate extensive remodelling following the Arab conquest. The beaten floor of House 119, for instance, was found embedded with seventh-century Byzantine and Umayyad ceramics, and this and other evidence led DeVries "to warrant the labelling of House 119 as 'Umayyad' rather than 'Umayyad reuse of a Byzantine house.'"[186] The plan shows clear similarities with the houses of Shenshef, most obviously the massive open courtyard with narrow rectilinear rooms arranged around the perimeters. This is to provide clear parallels with an architectural tradition unattested prior to the Arab conquests, and so almost certainly belonging to the tradition of pre-Islamic Arabia.

Another early site with continuous occupation through the 'long' Late Antiquity is Setíf, in eastern Algeria **[Fig. 2.33-.34]**. A residential area was excavated by Elizabeth Fentress and though the buildings here date from the second-half of the tenth century to the mid-eleventh century, they are of the same basic type as those from seventh-century Umm al-Jimāl, and provide further analogies for the houses of Shenshef.[187] The same rooms flank the courtyards, and as at Shenshef, are furnished with *mastaba*s. What is significant about the Setíf houses is the clear break with the late Roman housing typology – here exemplified by Tipasa also in Algeria **[Fig. 2.35]** – so that they may be unambiguously identified as belonging to the material culture of

[184] Hoyland, 2001: 235.
[185] Foss, 1997: 253-56
[186] DeVries, 1995: 430. *Cf.* DeVries, 1993: 448; 1995: 422-24, 428-31.
[187] Fentress, 1991: 114-51.

the Arab settlers. Setíf therefore provides clear Arab comparanda for Shenshef, implying an Arab as opposed to a Romano-Blemmyes population.

As for the function of the site, Shenshef clearly had a pronounced commercial aspect. Some eighty Indo-Pacific beads were found, of which 43% were of the yellow-green colour associated with production at Mantai in Sri Lanka, together with three carnelian beads of likely Indian provenance.[188] Other Indian imports include peppercorns and teak,[189] though this last was used as a building material scavenged from Indian ships, and a worked piece of blue sapphire.[190] All the ceramics from the *wādī* settlement date to the fifth and early sixth centuries, and attest to wide-ranging contacts.[191] Most common are the Late Roman Amphora 1 from Cilicia and perhaps Cyprus, together with fine wares from Tunisia and Cyprus, and Late Roman Amphora 3 from western Asia Minor; a possible Aegean hollow-foot amphora, generally dated late second to fourth centuries, represents the only pre-fifth century type.[192] Shenshef was most probably importing this Sub-Continental and Mediterranean material via Berenike.

Tomber further notes "scraps of faience considered to be early Roman," which may or may not be identical to Hayes' fourth-century "buff sherds covered with a thick glassy turquoise to green glaze."[193] Indeed, Hayes warns of confusion with Egyptian faience as found in early contexts at Berenike, and identifies these sheds as being of Gulf

[188] Francis, 2000: 221-22.
[189] Cappers, 1999a; 1999b; Gould, 1999a: 377; Vermeeren, 1999b.
[190] Abraham, 2007: 291.
[191] Tomber, 1998: 170.
[192] Tomber, 1999: 146-49.
[193] Tomber, 1998: 170; Hayes, 1995: 36; Murray, 1926: 166.

origin. Tomber, however, notes the presence of earlier residual pottery in support of her faience identification.[194] This material may further have been indicated by Murray, who wrote of "green glaze (sherds) which I have come to consider as marking Arab rather than Roman influence."[195] The general descriptions of these sherds do rather resemble each other, but without colour photographs, Munsell chart values or further analysis of the fabric it is impossible to be sure. It remains possible, however, that these sherds originate in the Gulf.

More important is the presence of Late Roman Aila Amphorae.[196] As has been shown, this type was widely distributed throughout the Red Sea and Indian Ocean, and seems to have been the principal container of Byzantine export commodities. Its presence at Shenshef, in association with Mediterranean and possibly Iranian ceramics and together with Indian trade goods or materials, strongly suggests a commercial aspect – and an affluent one at that, given the rare fifth-century glass cameo retrieved in 1996.[197] The ruins at Shenshef may perhaps therefore represent an Arab mercantile settlement associated with the commerce of Berenike.

[194] Tomber, *pers. comm.*
[195] Murray, 1926b: 166.
[196] Tomber, 1998: 170.
[197] Nicholson, 1999: 239.

[2.4] Southern Ports & Hinterlands

[2.4.1] Aksum

The archaeology of the Ethiopian ports remains poorly understood. A workable relative chronology was only proposed with Munro-Hay's publications on coinage in 1984 and his posthumous publication of Neville Chittick's excavations at Aksum in 1989, together summarised in a chapter on Aksumite history in his seminal *Aksum: An African Civilisation of Late Antiquity* (1991).[198] Later excavations, respectively those of the British Institute in Eastern Africa and the University of Naples Orientale in the 1990s, have largely confirmed Munro-Hay's findings and further refined the ceramic sequence. Unfortunately the key coastal sites of modern Eritrea were dug when the chronology was still imperfectly understood and are today largely inaccessible so that these key sites cannot fully contribute to the discussion.

(i) Adulis [sv, Zula] lies on the western side of the Gulf of Zula in Eritrea. The narrative sources make it quite clear that Adulis was at all times the pre-eminent port of the Aksumite empire, though its excavation has remained limited and poorly published.[199] The *Periplus,* Procopius and Cosmas Indicopleustes concur that the city itself was situated two miles inland of its harbour, called Gabaza according to Cosmas and the *Martyrium Arethrae*.[200] Excavations of the city site by Paribeni in the early twentieth century ascertained that, at its greatest extent and excluding the harbour area, Adulis

[198] Munro-Hay, 1984b; 1984c; 1989b; 1991.
[199] Paribeni, 1907; Sundström, 1907; Anfray, 1974; Munro-Hay, 1982.
[200] *Periplus*, 20 (1989); Procopius, 183 (1914); Cosmas Indicopleustes, 364 (1968); *Martyrium Arethrae*, 747 (1861); Nonnosus in Photius, Codex 3 (1920).

occupied some 200 hectares.[201] The city's architecture included well appointed town houses, monumental public buildings and a number of large church complexes.[202] Both the lack of circumvallation or other fortified structures, and the relatively high frequency of gold-coins found in all levels suggest that the city enjoyed wealth and stability throughout its long life.[203] Ceramic evidence suggests an occupation pre-dating the Ptolemies, yet those illustrated by Paribeni belong primarily to the late Roman period, particularly the fifth century.[204]

From Adulis, a caravan route led south to the imperial capital at Aksum **[Fig. 2.36]**, from where further routes tapped into the ivory, gold and slave producing territories between the Tegeze and Blue Nile **[Fig. 2.01]**.[205] The early rise of Aksum lay in the control of the lines of supply bringing such commodities down to the coast, and their export from Adulis attracted considerable attention in the Graeco-Roman sources.[206] By Late Antiquity, the importance of these traditional exports was eclipsed by the 'India trade' now routed through the port of Adulis, as Cosmas Indicopleustes (fl. 525-50) suggests:

"The inhabitants of Barbaria (= Eritrea / Somalia), being near at hand, go up into the interior (of the Indian Sub-Continent) and, engaging in traffic with the natives, bring back from them many kinds of spices, frankincense, cassia, sugar cane, and many

[201] Paribeni, 1907: 443. Cited by Munro-Hay, 1991: 45.
[202] Paribeni 1907; Anfray 1974. Cited by Munro-Hay, 1991: 45.
[203] For the unsuccessful attempt to locate city walls, see Paribeni, 1907: 444. For the coins, see Paribeni, 1907; Sundström, 1907. Cited by Munro-Hay, 1991: 44-45.
[204] *Cf.* Tomber, 2004a: 397.
[205] Bent, 1893; Wainwright, 1942; Kobishchanov, 1979: 178-82.
[206] Kobishchanov, 1979: 171-73; Munro-Hay, 1982; 1989a: 406-07; 1991: 172-74.

other articles of merchandise, which they afterwards send by sea to Adulis, to the country of the Homerites, to Further India (= Inner Arabia?) and to Persia."[207]

While the passage is not unambiguous, it seems to indicate that Adulis lay at the terminus of a chain of ports extending down the Horn ('Barbaria'). Virtually nothing is known about these Aksumite ports south-east of Adulis owing to the lack of historical source material and the difficulties of field work in Somalia, but a little more can be said of those to the north-west of Adulis, though they remain but dimly perceived. Strabo mentions a port named Sabai on the ancient Ethiopian coast, while Ptolemy refers to a Sabat north of Adulis, perhaps to be equated with the Samidi similarly placed by Cosmas Indicopleustes, and probably also with the Sabi which appears in the *Martyrium Arethrae*.[208] The site has been identified with Girar near Maṣṣawaʿ and remains unexcavated.[209]

(ii) The **Dahlak Islands [sv]**, lying of the coast of Adulis, appear to have been settled by the Aksumites. Archaeological activity at on the Islands has been limited (not least owing to extensive mine-fields), though a number of typically Aksumite column capitals have been noted reused as *spolia*.[210] The situation in Late Antiquity remains poorly known.

[207] Cosmas, 51 (1897). *Cf.* Kobishchanov, 1979: 173.
[208] On Samidi: Strabo 16 (1917); Ptolemy, 108 (1932); Cosmas, 367 (1968); *Martyrium Arethrae*, 747 (1861). Cited by Munro-Hay, 1991: 46-47.
[209] Munro-Hay, 1991: 47.
[210] Puglisi, 1969: 37. Four capitals / column bases and a chamfered column at Gim'hilé; carved material at Dahlak Kebir. Cited by Munro-Hay, 1991: 45.

(iii) ʿAqīq [sv], a modern town on the Sudanese coast close by the Eritrean border, has produced evidence for Aksumite settlement. Walls built of ashlars and scattered fluted column drums were recorded at the village of Adobana, supporting identification with the Graeco-Roman port of Ptolemais Theron.[211] Extensive cemeteries were further noted, including rectilinear tombs carefully constructed with ashlar blocks, one of which appears to have been associated with a free-standing monolithic orthostat, 2.20 m x 0.60 m x 0.25 m. This may or may not be the same standing stone described by Crowfoot, almost a century earlier, at the ridge of ʿĪsā Deraheib outside of the modern town of ʿAqīq **[Fig. 2.37]**. Crowfoot records three more stones fallen on their sides, and interprets them as Aksumite mortuary stelae. Certainly there is a resemblance to the mortuary stelae best attested at Aksum itself, particularly at the Gudit Stela Field **[Fig. 2.38]**.[212] However, Sidebotham's brief survey noted only surface scatters of 'Islamic' pottery, so that until further work is done at the site Crowfoot's claim for an Aksumite occupation at ʿAqīq cannot be verified. It is perfectly plausible given the extent of Aksumite activity in the Red Sea, and would neatly account for the strategic imperative to establish on the island of al-Rīḥ the early Muslim port of Bāḍiʿ, facing Aksumite ʿAqīq and thus able to blockade it or else effectively sever Aksumite communications **[3.3.1] (v)**.

(iv) Aksum [sv], the ancient capital, is securely identified and remains to this day the centre of the Ethiopic Church **[Fig. 2.39]**. There the medieval emperors were crowned in the cathedral of Our Lady Mary of Zion – the last being Haile Selassie I (r. 1930-74) – where the Ark of the Covenant is popularly believed to be kept, having been

[211] Sidebotham *et al*, 2006: 11-13.
[212] Munro-Hay, 1989b: 142-49 & Pl. 8.10; 1991: 134-43; Michels, 1979: 9-10;

supposedly brought from the Holy Land by Menelik the son of Solomon and Sheba. The earliest evidence for settlement at the site dates back to the seventh century BC, with imported Graeco-Roman wares continuously attested from the first century BC. By Late Antiquity the area of settlement had grown to cover a considerable area: "Aksum itself must now be viewed as a metropolitan entity consisting of fourteen towns and villages within a three-kilometre radius."[213]

A good deal about Aksumite trade networks has been revealed by Andrea Manzo's study of the ceramics retrieved from Bieta Giyorgis, hill-side suburb of Aksum **[Fig. 2.40-.41]**.[214] Manzo charts the quantative synchronic distribution of imports, affording some reconstruction of the development of Aksumite foreign commerce. In the Early (c. 50 BC – AD 150) and Classical Akumite (c. 150-350) assemblages, the overwhelming majority of imported ceramics are Mediterranean types – including African Red Slip and Gallic amphora types – with a scant few sherds of Meroitic origin and the first attestations of Aila Amphorae.[215] The Middle (c. 350-500/50) and Late Aksumite (c. 500/50-800) assemblage is dominated by Aila Amphorae, while Mediterranean amphorae are no longer attested, and are joined by a steadily growing proportion of hand-made Post-Meroitic and blue-green Sasanian sherds.[216] Importantly Manzo notes that "there is no decrease in the presence of imported materials in the Middle Aksumite phase as compared to the Classic Aksumite phase, but, on the contrary, a strong increase."[217] The evidence from Bieta Giyorgis would therefore indicate that

[213] Phillipson, 2000: 272-73; Michels, 1988 (UNPUBLISHED) in Munro-Hay, 1991: 42.
[214] Manzo, 2005.
[215] Manzo, 2005: 56-57.
[216] Manzo, 2005: 59-63 & Figs. 21, 22. *Cf.* Wilding, 1989: 'Imported Wares,' pp. 314-16;
[217] Manzo, 2005: 63.

Aksumite commerce, between the fourth and sixth centuries, grew in volume and extended further than at any time previously.

[2.4.2] Ḥimyar

Yemen possesses two distinct littorals, the Tihāma coastal plain of the Red Sea and Ḥaḍramawt shore of the Arabian Sea, converging at the port of Aden **[Fig. 2.42]**. The Late Antique archaeology is poorly known, however sufficient evidence exists for a few comments on the commerce and communications of the Yemen at that time.

(i) Tihāma ports are suggested by fifth-century Late Roman ribbed amphorae from ʿAththar [sv] and Byzantine/ Aksumite columns reused in a mosque at Ghalāfiqa [sv].[218] A Latin inscription of the Principate was found on the Farasān Islands, off the Tihāma coast of modern Saudi Arabia, and the *Martyrium Arethae* later records that Farāsan contributed seven ships to the Aksumite armada, indicating that its share in Red Sea trade was not inconsiderable.[219] Procopius states that "the harbour of Homeritae from which they are accustomed to put to sea for the voyage to Ethiopia is called Bulicas; and at the end of the sail across the sea they always put in at the harbour of the Adulitae."[220] No trace of this port has yet been found, though it is sometimes assumed to lie in the vicinity of al-Mukhā.[221]

[218] Zarins & Zahrani, 1985: 83; Keall, 2008: 116.
[219] *Acta Sanctorum*. Vol. 24: 747, no. 29. Quoted by Mayerson, 1996: 123.
[220] Procopius, 1.19.22 (1914).
[221] Dewing, 1914: 183.

(ii) Ḥaḍramī ports are somewhat better understood.[222] Of the seven sites located between Mukallā and the Omani border in the course of a survey by Axelle Rougelle, five produced Late Antique ceramics, and two of these – Shiḥr East and Sharwayn – appear to have been considerable settlements.[223] Rougelle identifies Shiḥr East with the Trulla of Ptolemy (fl. 150 AD) and the al-Asʿāʾ attested in a Ḥimyarite inscription dated 511, and Sharwayn with Ptolemy's Pretos and the early Islamic ʿArkalān or Habāh, which Ibn Khurrādhbih gives as the last two ports before al-Shiḥr on the road from Oman.[224]

(iii) Qāniʾ [sv, Biʾr ʿAlī] was clearly the most important of the Ḥaḍramī ports, a position it appears to have enjoyed since the time of the *Periplus*, when it was the sole port of export for incense and closely controlled by the kingdom of Ḥaḍramawt **[Fig. 2.43]**.[225] It remained important under the Ḥimyarites, when the town reached its greatest extent and highest population, apparently serving as the principal port of Yemen.[226] Philostorgius (wr. 425-33) lists it as among the places "Romans came thither by sea" and as "the mart of Persian commerce… hard by the mouth of the Persian Sea,"[227] though whether he is referring to the situation of his own day or that of Theophilus Indus (d. 363) is unclear. Either way, it seems that Qāniʾ functioned as a port of Indian Ocean trade and was visited by both Byzantine and Sasanian merchants.

[222] For the Ḥaḍramawt coast in general, see: Rougelle, 1999; 2000a; 2001a; 2001b; Hardy-Guilbert, 2000; Hardy-Guilbert & Rougelle, 1995; 1997a; 1997b. For al-Shiḥr, see: Hardy-Guilbert, 2001a; 2001c; 2002. For Sharma, see: Rougelle, 2002; 2003.
[223] Rougelle, 2001b. Most sites were multi-phase, with the Iron Age, Pre-Islamic and early Islamic levels particularly well evidenced. Only one site continued after the twelfth century, the other abandoned at that time.
[224] Rougelle, 2001b: 205, 209.
[225] *Periplus*, 27-29 (1989).
[226] Sedov, 2001: 34-35.
[227] Philostorgius, 3.4 (1855).

Evidence for the foreign contacts of Qāniʾ has been uncovered in the course of the joint Soviet-Yemeni excavations directed by Alexander Sedov since 1985. Sedov first divided the chronology of the site into Lower (first to second centuries), Middle (third and fourth) and Upper (fifth to early seventh) Periods, though later revised this accordingly: 'Early Period' (first to second centuries), 'Period of Prosperity' (second to fifth), and Late Period (sixth to early seventh).[228] Ceramics from the Middle Period are dominated by North African Amphora types, and broadly Mediterranean fine wares include African Red Slip, Knidian and Aswan Wares.[229] Indian Red Polished Ware is attested between the late second and early fourth centuries. Particularly interesting are the number of imports to which Sedov ascribes an Iraqi-Iranian provenance, viz. Green Glazed sherds, Black & Gray storage jars, fine Orange Painted ware and Handle-Less Red Clay storage jars. If Sedov is correct – and the lack of detailed catalogues prevents ascertaining his interpretation – then the presence of Mediterranean and Gulf ceramics neatly bears out Philostorgius testimony.

The ceramics of the Upper or Late Period demonstrate changing patterns of trade **[Fig. 2.44]**.[230] A massive 80% of the amphorae assemblage is now made up of the Aila Amphora type, with the Gaza Amphora also common. In his most recent publication on Qāniʾ, Sedov further points to a full range of apparently Ailan kitchen wares, which further suggests that contacts between the two ports were close.[231] Iraqi-Iranian ceramics continue to be attested and are joined by Aksumite types; these last are characterised by hand-made kitchen wares, which Sedov interprets as evidence for

[228] Sedov, 1992: 113-124; 1997: 366;
[229] Sedov, 1992: 114; 1997: 374.
[230] Sedov, 1992: 113-114; 1997: 376-77.
[231] Sedov, 2001: 34-35.

"permanent and very close contacts between Qāniʾ and the north-east coast of the African continent during the last decades of the city's existence."[232]

The chronology of Sedov's Upper or Late Period, either between the fifth or sixth century and the early seventh century, seems rather high and in need of revision. Sedov believes that the city was abandoned because of "political and religious changes on the Arabian Peninsula,"[233] which rather hints at the rise of Islam as the cause of this ruin; this moreover appears to be reflected in the given date of abandonment in the early seventh century. Yet the ceramic evidence does not necessarily indicate that this should be the case. The chronology of the Aila Amphorae has been much refined since Sedov was writing, and it is now securely known that they were produced between the late fourth and seventh centuries, appearing as early as the late fourth century at Bieta Giyorgis in Aksum and Berenike in Egypt.[234] Both the refined chronology and southern find sites make a late fourth century date much more likely for the lower limits of Sedov's Late Period. Moreover, it is telling that at a great number of Red Sea sites, archaeologists have independently posited a major new phase of activity beginning in the mid fourth century. This regional economic trend would logically include Qāniʾ.

(iv) Aden [sv] remains poorly understood, there being little historical evidence and almost no archaeological evidence, with the modern city obscuring ancient settlement. Philostorgius writes of Theophilus that "he asked for licence to build

[232] Sedov, 1997: 377.
[233] Sedov, 1997: 376.
[234] Tomber, 2004: 397-98.

churches on behalf of the Romans who came thither by sea... One of these churches he erected... where the mart of Roman commerce stood, lying towards the outer sea. This place is called Adane; and it is the spot where everybody is in the habit of landing on coming out of the Roman territories."[235] This trade may account for a hoard of 326 Byzantine and 868 Aksumite coins, dated between the mid fourth and mid sixth century, discovered at al-Madhāriba some 70 km west of Aden.[236]

[2.5] Development of Commerce and Communications

[2.5.1] Internal Trends

There is good reason to conclude that Roman commerce in the Red Sea declined and communications contracted sharply amidst the political crises and barbarian invasions of the third century. Mons Porphyrites was temporarily abandoned, Mons Claudianus and Myos Hormos were never reoccupied, and documentary references to Leukos Limen cease.[237] At Berenike it was long thought that there was little activity from the later second to early fourth centuries, though some third-century activity was found around the Serapis temple in the 1999 / 2000 season.[238] Over the water, in Arabia, Leuke Kome and Muza are no longer mentioned in the Greek and Latin sources after the third century; Leuke Kome gets a last mention in the possibly third- or early

[235] Philostorgius, 3.4 (1855). *Cf.* Löfgren, 1960: 181.
[236] Munro-Hay, 1989c.
[237] Myos Hormos: Peacock & Blue et al, 2006: 176.
[238] At Berenike, Sidebotham & Wendrich (1998: 453-54; 2000: 415) note declining activity beginning c. 150-200, which they associate with the plague of 166 (*Cf.* Duncan-Jones, 1996: 119-25; 133-34). Of 85 identifiable coins, only 3 (= 4%) belong to the second century, just 4 (= 5%) to the third century. Sidebotham, 2007a: 202, Table 8.6.

fourth-century *Monumentum Adulitanum*. The number of port sites attested during the Principate is greater than the Dominate implying that the volume of commerce and density of communications fell. The third century, therefore, brings to a close the four centuries of growth which created a Red Sea regional economy.

Putting together the evidence for Red Sea commerce and communications from the start of Constantine's reign in 324 to the Aksumite invasion of Yemen in c. 525, it is possible to observe developmental trends and changing patterns of trade. It seems that at all of the well published sites – namely Aila, Berenike and Aksum – a major phase of renewed and intense activity begins in the mid-fourth century. At Aila, this may be pushed back slightly to the Diocletianic reform of the *limes*, but it is again clear here that the fourth century represents an intensification of activity. The archaeologically derived date of approximately the mid century coincides with the reign of Constantius II (r. 337-61), which then begs the question as to whether this emperor had a deliberate Red Sea policy, or simply that the economic boom followed from the general political stability and increased administrative efficiency of the Constantinian dynasty. That there was a policy is implied by the fact that a diplomatic mission was dispatched to Yemen resulting in the likely conversion of the elite to Christianity, though it might equally well be thought that the Arian Constantius moved to prevent the continued spread of Monophysitism which had lately won the souls of the Aksumite elite, even that it was fuelled by a personal enmity to Athanasius who had consecrated the bishop of Ethiopia.

A greater share of the revived commerce of the fourth and fifth centuries went to non-Roman agents, of whom Jews and Arabs seem to have played a secondary role to Aksumites and Ḥimyarites, generally referred to as 'Indians' in the Byzantine sources. Late Roman notions of 'India' are infamously vague, for the term was very often employed to refer to all of the lands bordering the southern Red Sea and western Indian Ocean, so that Ethiopians and South Arabians as well as Sub-Continentals fell under the rubric 'Indians'.[239]

Already in the Hellenistic period and under the Principate, the *Erythra Thalassa* or 'Red Sea' was often conceived as stretching from Egypt to India, its littoral universally if intermittently inhabited by Icthyophagoi or Troglodotoi. From the earliest times, this body of water was alternatively known as the 'Indian Sea,' and by extension those who hailed from its shores came to be known as 'Indians.' Even today archaeologists are often unable to distinguish between Ethiopian and Yemeni material culture, as – for instance – with a *dipinto* discovered in Berenike bearing characters equally well interpreted as cursive South Arabian or Old Ethiopic. The Byzantine sources repeatedly refer to 'Indian' merchants active in the northern ports of the Red Sea – Berenike, Aila, Clysma and Iotabe – but it is only occasionally that a more explicit ethnonym is used. When such ethnic markers are found, they reveal that both Ethiopian and Yemeni merchants were active in the maritime trade with Egypt and Palestine, though the general impression is of Ethiopian pre-eminence. It is notable, for instance, that the Scholasticus of Thebes (fl. 355-60), Palladius (wr. 420) and

[239] Mayerson, 1993; Warmington, 1974: 139-40.

Cosmas Indicopleustes (fl. 525-50) first must travel to the Ethiopian port of Adulis in order to find a ship bound for India proper.[240]

Moreover, the integration of the northern and southern Red Sea networks had never been greater. The uniform distribution of Late Roman amphorae types across the region speaks of intensive contacts, prompting one leading ceramicist to conclude: "it is clear that materially these Red Sea sites were much more united during the late Roman period, from the fourth century onwards, than in the early centuries."[241] These commercial contacts led to the emergence of a 'globalising' Hellenic and Judeo-Christian *koine* culture throughout the Red Sea basin, naturally to varying degrees of adoption and assimilation, but nonetheless universal in breadth. Churches and synagogues, Greek and Latin inscriptions, monks and martyrs are to be found the length and breadth of the region. Such trends are less visible in the Eastern Deserts of Egypt and Sudan, and facing them, the scattered oases of the Ḥijāz, marginal areas with a largely nomadic population which remained parochial and pagan, passed by the main arteries of maritime trade.

[2.5.2] External Factors

The literature on Late Antiquity is shot through by the strange paradox of globalism. From Peter Brown's *World of Late Antiquity* (1971) to Garth Fowden's *Empire to Commonwealth* (1993), the tendency has been to emphasise the globalism and universalism of the age while perversely failing grasp the full significance of those

[240] Derrett, 1962.
[241] Tomber, 2007a: 219.

very themes. Brown's *World* is that of the Mediterranean, not withstanding a chapter of twelve pages on the empires of the East in a book of twenty six chapters making up two hundred and three pages. Sasanian Persia, "above all, a Central Asian power,"[242] seems only to gain access to the world of Late Antiquity through Mesopotamia. But in a work which more generally affords Christianity so central a position, it is curious that Brown does not address the most successful of Late Antique Christian sects, Nestorianism, which spread throughout Central Asia and the Indian Ocean.

Fowden's *Commonwealth* picks up on this short-coming, and goes beyond Brown's focus on Christianity to examine the enabling ideology of monotheism, allowing him to consider the Zoroastrianism and Nestorianism of Sasanian Iran. Christianity transcended personal salvation theology with its adoption by the state as a tool for *etatismé*, becoming a legitimating ideology of rule whereby the state claimed universal authority. Fowden devotes a chapter to explore the universalising mission of Constantine, and finds it in a favorite Gospel quotation of Eusebius: "All authority in heaven and earth has been given to me. Go, therefore, make disciples of all nations."[243] His argument is neatly summarised in the introduction, and is worth quoting at length:

"In a phrase, then, late antique universalism aimed at politico-cultural domination and ultimately homogenization of an area large enough to pass for the 'world'... Both Iran and Rome aspired, at times, to be world empires in the Alexandrine-Achaemenid mold... the missionary monotheism ascribed to Christ is brilliantly married by

[242] Brown, 1971: 160.
[243] Matt. 28.19-20; Mark, 16.15; Luke, 24.47; Acts 1.8.

Constantine to Rome's imperial impetus... The Islamic empire owes its stupendous success and power to a combination of Cyrus' geopolitical achievement with a universalist monotheism... (It is through a subsequent commonwealth of Islamic and Orthodox successor states) that the ancient world's legacy is transmitted to us."[244]

Although the *Commonwealth* has a broader cultural scope than the *World*, both remain firmly preoccupied with *mentalité* and its repercussions in the geopolitics of the Fertile Crescent. Fowden states that "power was not projected nor knowledge disseminated unless people were prepared to walk, ride, or hoist sail"[245] and considers that the inhabitants of the late antique Fertile Crescent thought that "the earth's extremities were either as a matter of objective fact out of reach, or else deemed too 'poverty stricken and profitless' to be worth effort."[246] This seems very much at odds with the conclusions of other scholars. Consider Hegel on the *Philosophy of History*:

"The quest for India is a moving force of our whole history. Since ancient times all nations have directed their wishes and desires to that miraculous country whose treasures they coveted. These treasures were the most precious on earth: treasures of nature, pearls, diamonds, incense, the essence of roses, elephants, lions etc. and also the treasures of wisdom. It has always been of great significance for universal history by which route these treasures found their way to the West, the fate of nations has been influenced by this."[247]

[244] Fowden, 1993: 7-8.
[245] Fowden, 1993: 12.
[246] Fowden, 1993: 14. The 'poverty stricken and profitless' quote is from Appian, pref. 7 and Plutarch, *Theseus* i.1.
[247] Hegel, 1961: 215. As quoted in Kulke & Rothermund, 2004: 105.

It seems curious, too, if the wider world was thought of as 'poverty stricken and profitless' that the Theban Scholasticus or Cosmas Indicopleustes should bother to explore the Christian *ecumene* of the Indian Ocean, and find Persian Nestorians on Socotra and Ethiopian Monophysites in Sri Lanka. Or that Portuguese Jesuits would one day read a thousand-year old Syriac inscription in Chang-an: "(This is) the tablet of the spread of the Ta Ch'in (Syrian) Illustrious Religion in China... composed by Ching-Ching, monk of the Ta Ch'in (Syrian) monastery."[248] Similarly, its seems strange that Fowden should discuss the universalism of Ashokan Buddism as an antecedent of Constantine's Christianity, given that the two men are separated by over half a millennium.[249] Better to look for parallels in the contemporary Gupta-Vakataka empire (c. 300-500), under which Sanskrit literature and Hindu philosophy enjoyed their classical moment.[250] Samudragupta (r. 335-375) conquered most of northern India during his reign **[Fig. 2.45]**. After his 'conquest of the four quarters of the world' (*digvijaya*) he declared himself 'universal ruler' (*cakravartin*), and issued coins bearing the legend: "After conquering the earth the Great King of Kings with the strength of an invincible hero is going to conquer the heavens."[251] Here are far more substantial parallels for Fowden's argument, suggesting that India too was affected by the Late Antique *zeitgeist* of universalism and move towards monotheism, which raises significant questions as to the boundaries of the Late Antique world-system.

There have been few serious attempts to extend the boundaries of the world of Late Antiquity beyond the confines of the Byzantine Mediterranean. In a recent paper

[248] *Nestorian Stele* in Horne, 1917: 381-392.
[249] Fowden, 1993: 80-85.
[250] Maity, 1958; 1975; Goyal, 1967; Gupta, 1974-79; Smith, 1983; Agrawal, 1989; Bakker, 1997; Chhabra *et al*, 1992; Majumdar & Altekar, 1954.
[251] Kulke & Rothermund, 2004: 87-89.

given as part of the Oxford Centre for Late Antiquity lecture series, Michael Morony felt it necessary – almost forty years after Brown's *World* – to have to argue for the inclusion of Sasanian Iran in Late Antiquity.[252] Consensus opinion today largely accepts its inclusion, together with Aksumite Ethiopia and pre-Islamic Arabia. The inclusion of Ethiopia has been conclusively demonstrated by Munro-Hay in numerous works, including *Aksum: An African Civilisation of Late Antiquity* (1991). Pre-Islamic Arabia has received a great deal of attention, not least in the many volumes of Shahid's *Byzantium and the Arabs* (1984; 1989; 1995), and more recently by Hoyland in *Arabia and the Arabs: From the Bronze Age to the Coming of Islam* (2001). The general understanding of the world of Late Antiquity therefore now includes the Mediterranean, Iran, Arabia and Ethiopia.

Few scholars are prepared to go beyond this. Fowden and Morony do no more than gesture towards India and China, but to date no one has made a strong case for their inclusion in the world of Late Antiquity. This is beyond the scope of the present investigation, and yet the economic history of the Red Sea cannot be fully understood without some reference to its Indian Ocean context and its position in the Late Antique world-system.

Significant relations between India and the Gulf date back to the Bronze Age, while direct communications with the Mediterranean are traceable to the early Ptolemies, so that the westward bent of Indian commerce was already thousands of years old by Late Antiquity. During the first / second and fourth / fifth centuries, the Roman 'India

[252] Morony, 2008.

trade' was particularly significant, and has been the subject of a number of studies.[253] Much of the earlier trade focused on the Tamil kingdoms of the peninsular Sub-Continent, which flourished c. 300 BC – c. 200 AD, and bequeathed to posterity a rich literary tradition generally referred to as Sangam. This literature provides an evocative account of the Graeco-Roman merchants who settled in southern India:

"The sun shone over the open terraces, over the warehouses near the harbour and over the turrets with windows like eyes of deer. In different places of Puhar the onlooker's attention was caught by the sight of the abodes of Yavanas ('Ionians,' i.e. Graeco-Romans), whose prosperity never waned. At the harbour were to be seen sailors from many lands, but to all appearances they lived as one community."[254]

Even as Iranian and Graeco-Roman merchants were voyaging across the Arabian Sea, Sub-Continental mariners were pioneering the route across the Bay of Bengal. The increasing Indian influence in South-East Asia is usually referred to in the literature as 'Hinduisation' or 'Sanskritisation,' and has variously been attributed to cultural diffusion or direct colonisation, even claimed by some Indian historians of a nationalist inclination as the basis for a 'Greater India.'[255] From the fourth century, a pronounced influence from the early Pallavas (c. 275-500) of Kanchipuram is detectable in the material culture of Funan, an ancient state of the Lower Mekong,

[253] Graeco-Roman 'India Trade': Tarn, 1951; Wheeler, 1955; Majumdar, 1960; Derrett, 1961; 1962; Miller, 1969; Jones, 1974; Warmington, 1974; Raschke, 1978; Casson, 1980; Sidebotham, 1986; Kuhrt & Sherwin-White, 1987; Turner, 1989; Begley & de Puma, 1991; Boussac & Salles, 1995; Reade, 1995; Karttunen, 1997; Tomber, 2008.
[254] Wheeler, 1955. Quoted by Kulke & Rothermund, 2004: 107-08.
[255] 'Sanskritisation' of South-East Asia: Chhabra, 1965; Coedès, 1968; de Casparis, 1983; Kulke, 1990; 1993; Ray, 1994; Kulke & Rothermund, 2004: 153-161.

including Sanskrit inscriptions in the Pallava script.[256] Moreover, Funan seems not to have been a toponym, but rather a Chinese version of the abbreviated Old Khymer princely title meaning 'King of the Mountain,' which is itself a free translation of the Sanskrit title of the Pallava kings. It may therefore have been the case that the Gupta military expansion into Andhra Pradesh under Samudragupta (r. 335-375) provoked a flight of high-status Pallava refugees across the Bay of Bengal. Indeed, Chinese annals of the fifth century describe the arrival of one Kaundiya in Funan:

"He was originally a Brahmin from India. There a supernatural voice told him: 'You must go to Funan.' Kaundiya rejoiced in his heart... The people of Funan appeared to him and chose him king. He changed all the laws to conform to the system of India."[257]

This fourth-century opening of the Bay of Bengal to regular navigation by the Pallavas coincided with the expansion of Chinese maritime commerce in the Yellow Sea. Civil war and barbarian incursions in fourth-century northern China, a confused period known as 'The Sixteen Kingdoms of the Five Barbarians,' caused a massive southwards population movement. Some estimates suggest that upwards of a million people emigrated in the first quarter of the century.[258] From 317 the Eastern Chin established their capital at Chiang-h'ang (Nanking), at the mouth of the Yangtze, which rapidly became the major urban centre of southern China. Jacques Gernet notes that "the Nanking dynasty's interest in overseas countries was contemporaneous with the

[256] Pallavas in Funan: Chhabra, 1965; Hall, 1981: 24-26.
[257] Pelliot, 1903: 269. Quoted in Kulke & Rothermund, 2004: 157.
[258] Gernet, 1982: 180.

expansion of Indo-Iranian seafaring activities and with the development of commercial routes between the Middle East, the Indian Ocean, and South-East Asia."[259]

Overland trade with the Malay peninsula had long since existed in the south, and the emergence of a huge market facing the Yellow Sea served as a powerful stimulus to maritime trade. Accordingly, early fifth-century Chinese chronicles record that "precious things come from the mountains and seas by this way… thousands of varieties all of which the rulers coveted. Therefore ships came in a continuous stream, and merchants and envoys jostled with each other."[260] So it was that the eastwards maritime expansion of the Indians and great southwards movement of the Chinese began to create, precisely in Late Antiquity, the hybrid socio-cultural entity eventually known to the West as Indo-China. This meeting of Indian and Chinese merchants in Malaysia and Indonesia was to prove critical for the development of Indian Ocean commerce and communications.

Moreover, regional networks of maritime commerce began, for the first time, to link up and overlap so as to allow indirect communications across the southern seas. The Chinese chronicles list among the commodities arriving in Chiang-h'ang frankincense and myrrh – originating in Yemen and Ethiopia – and collectively known to the Chinese as 'Persian (Po-ssu) goods.'[261] Indeed, information passed along these overlapping regional networks alongside trade goods, so that Cosmas could estimate the distance from Spain to China, while Chinese sources record the collapse of Aksum

[259] *Ibid*, 197.
[260] Wolters, 1962. Summarised in Hall, 1981: 39-41.
[261] Wolters, 1962: 307-9.

half way the world away.[262] For all that, the known antipodes of the inhabited world assumed a mysterious quality. Cosmas describes China as a kind of earthly paradise, while the so-called Nestorian Stela (wr. 638) of Chang'an writes of Syria:

"According to the Illustrated Memoir of the Western Regions, and the historical books of the Han and Wei dynasties, the kingdom of Syria reaches south to the Coral Sea; on the north it joins the Gem Mountains; on the west it extends toward the borders of the immortals and the flowery forests; on the east it lies open to the violent winds and tide-less waters. The country produces fire-proof cloth, life-restoring incense, bright moon-pearls, and night-lustre gems. Brigands and robbers are unknown, but the people enjoy happiness and peace. None but illustrious laws prevail; none but the virtuous are raised to sovereign power. The land is broad and ample, and its literary productions are perspicuous and clear."[263]

The places where the constituent regional networks of maritime commerce stretching from Alexandria to Chiang-h'ang overlapped developed into emporia of global significance and strategic nodes of communication. Ethiopia, Sri Lanka and Sumatra were key to the system of indirect maritime trade spanning the southern seas. For the first time in such places, powerful dynasties emerged and were in each case invested by later centuries with the aura of a 'golden age,' establishing the core cultural traditions which have informed local identity ever since. Something of Ethiopia has already been mentioned, and while Sumatra lies perhaps too far east to be included in

[262] Cosmas Indicopleustes, 47-51 (1897).
[263] Cosmas Indicopleustes, 47-51 (1897); *Nestorian Stele* in Horne, 1917: 381-392.

a monograph on the Red Sea, the role of Sri Lanka in Indian Ocean commerce and communications is of direct relevance.

The rise of Sri Lanka is associated with the temporary eclipse of the Tamil kingdoms of the peninsular Sub-Continent between the third and sixth centuries. The sophisticated urban civilisation of the Tamilakam was a contemporary of the Hellenistic kingdoms and Roman Principate, and indeed the principal commercial partner and major beneficiary of the Roman 'India trade,'[264] until it collapsed before a southern migration of fierce Kalabhra highlanders from the interior **[6.1.2] (iii)**. Sri Lanka was spared from Kalabhra devastation and assumed the commercial position hitherto enjoyed by the Tamilakam, with the city of Anuradhapura expanding massively and assuming the aura of sacredness in Mahayana Buddhism. By the sixth century, it was a city of 18 km^2 surrounded by hundreds of Buddhist monasteries.[265] To this island flocked merchants and missionaries from Alexandria to Chiang-h'ang, and Cosmas (fl. 525-50) supplies a particularly vivid description of its position in the Indian Ocean and the associated maritime trade:

"The island (of Sri Lanka) being, as it is, in a central position, is much frequented by ships from all parts of India and from Persia and Ethiopia, and it likewise sends out many of its own. And from the remotest countries, I mean Tzinista (= China) and other trading places, it receives silk, aloes, cloves, sandalwood and other products, and these again are passed on to marts on this side, such as Male (i.e. Malabar coast), where pepper grows, and to Calliana (= Kalyana, near Bombay) which exports copper and

[264] Subrahmanian, 1966; Champakalakshmi, 1996.
[265] Weerakkody, 1997; Coningham, 1999; 2006; Tomber, 2008: 144-47.

sesame-logs, and cloth for making dresses, for it also is a great place of business. And to Sind also where musk and castor is procured and spikenard, and to Persia and the Himyarite country, and to Adulis. And the island receives imports from all these marts which we have mentioned and passes them on to the remoter ports, while, at the same time, exporting its own produce in both directions."[266]

Fowden holds that late antiquity possessed "a direction and even to a certain extent a sense of direction."[267] Rather than a "universalism aimed at politico-cultural domination and ultimately homogenization of an area large enough to pass for the 'world',"[268] it might be better to point to a globalizing dynamic which led to the emergence of a world-system incorporating the span of the Indian Ocean. This, I would argue, is the truly definitive characteristic of the Late Antique world out of which Islam emerged.

[266] Cosmas Indicopleustes, 365-66 (1897).
[267] Fowden, 1991: 8-9.
[268] Fowden, 1993: 7.

3. Contested Hegemony (c. 525-685)

[3.1] *Ethiopian hegemony (c. 525-70) began with the Byzantine devolution of the Red Sea 'frontier' to long-established Aksumite middlemen, which probably occurred in c. 530 at around the same time it has been suggested the limes Arabicus was given over to the Ghassānids. The Byzantine ports and mines of the Eastern Desert of Egypt were therefore abandoned during the first half of the sixth century as part of a staged withdrawal [3.1.1]. The Byzantine-backed Aksumite invasion of Ḥimyar in c. 525 may have anticipated this Justinianic policy of fiscal rationalisation [3.1.2]. However, the Byzantine Red Sea frontier policy did not succeed in the longer term. Both Ḥimyar and Aksum declined sharply during the second half of the sixth century. First inscriptions and then coinage ceased to be produced, with the capital cities and major ports abandoned in the late sixth century.*

[3.2] *Persian hegemony (c. 570-630) commenced with the invasion of first Yemen and then Egypt, so that nominally Sasanian armies of occupation were established at both ends of the Red Sea. While the occupation of Yemen [3.2.1] was an episode of superpower conflict between the Byzantines and Sasanians, it seems more particularly motivated by Persian demand for silver bullion. The occupation affected an enduring shift in settlement patterns, with the old Ḥimyarite political and commercial centres of Ẓafār and Qāniʾ being replaced by Persian colonies in Ṣanʿāʾ and Aden. The invasion of Egypt [3.2.2] is less well evidenced. An association with Babylon-in-Egypt may have been informed by communications with the Red Sea afforded by Trajan's Canal. In the longer term, the occupation seems to have facilitated the ensuing Muslim conquest.*

[3.3] *Arab hegemony (c. 630-85) may have begun in the last years of the Prophet's life. The co-option of Yemen [3.3.1] was critical to the success of the Muslim conquests, and Yemeni tribes were particularly active in the colonisation of Egypt and the southern Levant, a process possibly informed by pre-Islamic commercial contacts. Yemeni influence may have engendered Muslim conflict with Ethiopia, which seems to be associated with the abandonment of al-Shuʿayba and possibly Adulis, together with the foundation of Bāḍiʿ and Jedda. The conquest of Egypt [3.3.2] involved a Red Sea aspect, including the re-dredging of Trajan's Canal by ʿAmr and establishment of al-Jār on the Ḥijāzī coast, together with Ibn Abī Sarḥ's crossing the sea to take Aswān, to which ʿAydhāb may owe its inception. The Muslim conflict with Ethiopia and conquest of Egypt therefore provided the basis for a new maritime communications infrastructure spanning the Red Sea.*

[3.1] Ethiopian Hegemony, c. 525-70

[3.1.1] Byzantine Abandonments

(i) Berenike was abandoned in the early sixth century. Of the twenty-five trenches sunk by Sidebotham & Wendrich in the five seasons between 1994 and 1998, very few produced ceramics postdating the late fifth century. It seems clear enough that the population fell and the occupied area contracted, with what little structural activity remained limited to "unimpressive improvised structures such as wind breaks."[1] A *terminus ante quem* for abandonment is obtained from the *Martyrium Arethrae*, where two ships from Berenike were found moored in Adulis at the time of Kaleb's invasion

[1] Sidebotham & Wendrich, 2000: 417.

in 525, there being no later reference to the port in the historical sources.[2] The fact that there were only two ships from Berenike, compared to fifteen from Aila and twenty from Clysma, might imply that Berenike's share in Red Sea trade was on the wane. Certainly the well published ceramic sequence retrieved from the site quite clearly demonstrates that final occupation continues no later than the mid sixth century.[3] In attempting to account for abandonment, Sidebotham speculates that "continued silting of the harbour, weak economic conditions, and the possible effects of plague may have contributed to the port's ultimate demise."[4]

(ii) The **Farasān Islands [sv]** produced a second century Latin inscription referring to a military outpost and the *Martyrium Arethae* records that seven ships from Farasān joined the Aksumite armada in c. 525, indicating that its role in Red Sea communications was not inconsiderable.[5] Al-Hamdānī (d. 945) records that the Banū Farasān had once been Christian and had traded with Ethiopia, and that there were ruined churches on the islands.[6] However, when they were visited by Justinian's embassy to the southern Red Sea in the mid sixth century, very little trace of this military and commercial activity remained. An epitome of this account, the *History* of Nonnosus, is found in the *Myriobiblon* of Photius (d. 893):

"He there saw certain creatures of human shape and form, very short, black-skinned, their bodies entirely covered with hair. The men were accompanied by women of the same appearance, and by boys still shorter. All were naked, women as well as men,

[2] *Martyrium Arethae*, 747 (1861). *Cf.* Sidebotham & Wendrich, 1996b: 453.
[3] Sidebotham & Wendrich, 1998b: 454; Sidebotham & Wendrich, 2000b: 417.
[4] Sidebotham, 2002a: 220.
[5] *Martyrium Arethae*, 747 (1861). *Cf.* Mayerson, 1996: 123.
[6] al-Hamdānī, 53, 119 (1884-91). Cited by Beckingham, 1965: 787.

except for a short apron of skin round their loins. There was nothing wild or savage about them. Their speech was human, but their language was unintelligible even to their neighbours, and still more so to Nonnosus and his companions. They live on shell-fish and fish cast up on the shore. According to Nonnosus, they were very timid, and when they saw him and his companions, they shrank from them as we do from monstrous wild beasts."[7]

This account of the inhabitants of Farasān rather echoes earlier Graeco-Roman accounts of the Ichthyophagoi, and may merely be exotica for the entertainment of his readers. Yet if the account is assumed to represent an authentic eye-witness description of the mid sixth-century Farasān Islands, it rather implies that the military and mercantile outpost had been abandoned by the time of writing, leaving nothing worth mentioning save the savagery of the natives.

(iii) Marsā Nakarī was abandoned at much the same time. Excavations at the site have unearthed a fair amount of Eastern Desert Ware (EDW), a local ceramic tradition associated with the Blemmyes and produced between the fourth and sixth centuries, suggesting a *terminus ante quem* for abandonment.[8] No evidence for later occupation has yet been found, though work remains in the preliminary stages.

(iv) Mining sites in the Eastern Desert of Egypt and southern Levant were both abandoned in the sixth century. The gold mines at Bi'r Umm Fawakhir in the western

[7] Photius, Codex 3 (1920).
[8] Marsa Nakari excavations have been partially published by John Seeger (2002). I worked on the 2002 season and can personally attest to the EDW, similarly reported by Sidebotham, *pers comm* in Tomber, 2004: 396. For Eastern Desert Ware, see: Barnard, 2002; 2008; Hayes, 1995; Rose, 1995; Strouhal, 1982; 1984; 1991.

Wādī Ḥammāmāt and emerald mines of Mons Smaragdus on the old Coptos – Berenike road were both abandoned around the mid sixth century.[9] So too were the copper mines of the Wādī Faynān in the Wādī ʿAraba of southern Jordan, and certain of the mines in the Negev.[10] Similarly, the famous quarry at Mons Porphyrites was abandoned in the sixth century.[11] Graeco-Roman mineral exploitation of the Arabian-Nubian Shield therefore comes to an end around the mid sixth century.

(v) Clysma may also have declined in the sixth-century. Both Cosmas Indicopleustes (wr. 525-50) and the Antoninus of Piacenza (wr. 570) are more interested in the Biblical association, as the crossing place of the children on Israel fleeing Pharaoh, although the latter describes "a small city… called Clysma, and to this… come the ships from India."[12] The numismatic evidence further suggests a sixth-century decline in activity. However, the fortunes of Late Roman Clysma will likely remain a matter of speculation for the foreseeable future, until such time as more evidence becomes available.

(vi) Iotabe was probably abandoned in the first half of the sixth century. A *terminus ante quem* for abandonment may be derived from a reference to the local bishop's attendance of the Synod of Jerusalem in 536, constituting the final historical mention of the island.[13] No archaeological evidence is available since the site has never been located, but the chronological correspondence with the final occupation at Berenike is striking. Walter Ward picks up on this co-incidence and suggests that a hostile

[9] Meyer *et al*, 2000; Sidebotham *et al*, 2004.
[10] Hauptman & Weisgerber, 1987: 423-4; Kind *et al*, 2005: 188.
[11] Maxfeld, 2001.
[12] Piancenza pilgrim in Wilkinson, 1977: 88; Cosmas Indicopleustes in Wilkinson, 1977: 73.
[13] Mayerson, 1992: 2.

nomadic presence, whether Blemmyes or Saracens, severed communication with the hinterland. He notes that Clysma and Aila continued to function as ports while Berenike and Iotabe were abandoned, with proximity to the better defended provincial population centres representing the determining factor.[14] However, the sources which Ward marshals in support of hostile nomads mostly pertain to the third and fourth centuries, and do not therefore bear upon the immediate chronological context of the abandonment of Berenike and Iotabe. Nomadic aggression might alternatively have diminished in the face of sedentarisation and state-formation during the fifth and sixth centuries **[6.1.1] (iii)**, so that the semi-nomadic groups of the periphery had a vested interest in co-operation with the developed core.[15] That Olympiodoros of Thebes (fl. 412) was able to travel safely through the Blemmyes' territory in the hinterland of Berenike, having first requested permission to enter from their king, is indicative of the formalised and peaceful interaction between the Blemmyes and Byzantium.[16] This would suggest that hostile nomads in the hinterland of Byzantine ports were not a major factor in the early sixth-century occupational abandonments.

(vii) Aila was further affected by the Byzantine withdrawal, *contra* recent statements to the effect that the northern Red Sea ports boomed as the Eastern Desert was abandoned to the Blemmyes.[17] The hinterland survey undertaken as part of Parker's work on Roman Aila suggests a Nabataean / Early Roman peak occupation followed closely by Early Byzantine (i.e. fourth / fifth centuries) activity, with a marked drop in

[14] Ward, 2007: 168.
[15] Power, 2010a.
[16] Olypiodorus, frag. 35.2 (1983).
[17] Ward, 2007.

the number of sites in the Late Byzantine period (sixth / seventh centuries).[18] The survey team points to the findings of previous studies in the hinterland of Aila and elsewhere in Wādī ʿAraba, and conclude that such results might represent a significant decline in the local population.[19] Numismatic evidence from the Wādī Faynān mines drops off after 420, with only a handful of coins dated between 440-540, and none at all for the next century.[20] The view from the coinage, as proposed by Kind *et al*, suggests a peak of Roman activity between 330-60, which they link with the heavily garrisoned Arabian *limes* of the fourth century, to the effect that "the copper boom ended when the army withdrew the copper experts."[21] However, the reliance on coin finds for dating has been questioned, and the continued presence of Bishops from Faynān in Church councils and synods through the fifth and sixth centuries, together with an inscription from a church dated to 587-8.[22] The ceramics discussed by Tomber include Late Byzantine types which continue into the Early Islamic period.[23] David Mattingly *et al* are uncertain when, exactly, mining activities came to an end. The latest evidence for smelting activity comes from the very high levels of heavy metals contained by the bones of individuals buried in the South Cemetery, dated from the fourth to seventh centuries.[24]

The broader decline of settlement and mineral exploitation in the hinterland of Aila does not necessarily evidence a state and society in decline. The burgeoning

[18] Smith *et al*, 1997: 66-67.
[19] Fiema, 1991; Schick, 1995.
[20] Kind *et al*, 2005: 188.
[21] *Ibid.* 192. The cemeteries associated with Khirba Faynān do, however, suggest continued occupation through the fifth and into the sixth centuries; the economic rationale for settlement is unclear. *Cf.* Findlater *et al*, 1998.
[22] Mattingly *et al,* 2007: 333.
[23] Tomber, 2007d: 458-61.
[24] Mattingly *et al,* 2007: 333.

population of fourth-century Aila and associated expansion into the hinterland was, as Parker reasonably argues, a result of the reorganisation the frontier defences under the Tetrarchs. Accordingly, the increase of the local population and economy does not represent a natural growth, but rather the immigration of soldiers and their subsidiary demographic. Parker argues that when Justinian demobilised the *limitanei* in c. 530, the *Legio X Fretensis* stationed in Aila was most likely disbanded or transferred to the West,[25] where the Byzantines were engaged in the conquest of North Africa (c. 533-34) and Italy (c. 535-40). The decline of the local population in the sixth century was not, therefore, a result of the threat posed by plague or the fear of Saracens. The reorganisation of the frontier defences of the East accounts both for the fourth-century rise and the putative sixth-century demise, which has tended to be confused with population decline and economic contraction.

Procopius writes that in c. 530, "the Emperor Justinian put in command of as many clans as possible Arethas, the son of Gabalas, who ruled over the Saracens of Arabia, and bestowed upon him the dignity of king, a thing which among the Romans had never before been done."[26] The frontiers of the East were thus entrusted to the Ghassānids of Jābīya, semi-sedentary and assimilated Christian Arab allies of the Byzantines, in a move intended to reduce expenditure and free up resources, what in today's parlance would be roundly applauded as 'economic rationalisation.' Similarly, Justinian employed what have traditionally been regarded rather negatively as tax-farmers to run the Red Sea customs post at Iotabe – "trusted men who were appointed

[25] Parker, 1996: 253. *Cf.* Parker, 1986: 149-52; 1987b: 819-23.
[26] Procopius, 1.7.46 (1914).

to levy taxes for the emperor"[27] – though this situation might also be more positively perceived today as 'public-private partnership.'

This clear policy towards gearing down the expensive state role may further have involved the abandonment of the southern Byzantine ports, while at the same time devolving to Aksum and Ḥimyar control of the import of Indian Ocean produce; in some sense, the Aksumites were to the Red Sea frontier what the Ghassānids were to the Syrian frontier. Clysma and Aila then became the leading Byzantine ports, visited by 'Indian' merchants who bore the cost and risk of shipping and policing in Red Sea waters, and were no doubt heavily taxed by Justinians officials. Taxation, already encountered in the context of Iotabe, may further be behind the curious statement reproduced by Peter the Deacon (fl. 1138), that "ships from India can come to no other port but this in Roman territory."[28] The archaeologically attested abandonment of mining, military and port sites in the Byzantine Red Sea hinterland and littoral does not, therefore, necessarily indicate a sixth-century crisis of state or economic decline. Instead, it belongs to an apparently Justinianic Red Sea frontier policy designed to minimise state expenditure and maximise state revenues, in which effective control of the Red Sea basin was devolved to Aksum.

[27] Foerster & Richtsteig, 1929: 65-67. Cited by Mayerson, 1992: 2.
[28] Peter the Deacon in Wilkinson, 1981: 206. Cf. Mayerson, 1996: 124.

[3.1.2] Fall of Ḥimyar & Collapse of Aksum

(i) The Ethiopian conquest of Yemen in c. 525 is described by a wide array of primary sources,[29] further giving rise to a sizeable secondary literature attempting to resolve discrepancies,[30] of which there are no small number. It is unclear, for instance, how many times the Ethiopians invaded Yemen. The Greek and Syriac chronicles refer to an invasion by the 'king of Adulis' following the murder of some Aksumite merchants *and* to an invasion of the Ethiopian king Kaleb Ella Eṣbeḥa[31] following the massacre of Christian community of Najrān by the Jewish king Yūsuf Asʾar Dhū Nuwās. The hagiographic sources record that Ella Eṣbeḥa invaded Yemen and returned to Ethiopia, leaving behind a garrison which was then massacred together with the Christians of Najrān, thus necessitating a second Aksumite invasion.[32] Certain recent historians discern still further invasions on the very slenderest of evidence,[33] which do not stand up to close scrutiny. Indeed Procopius and Cosmas Indicopleustes – who was actually in Adulis during the preparation for an Aksumite invasion force – together with the later Arabic historical tradition, refer only to a single military

[29] Syriac: Simeon of Beth Arsham in Shahid, 1971: 113-30; *Book of the Ḥimyarites* (1924); *Chronicle of Zuqnīn*, 54-68 (1999); Michael the Syrian, iv, 273-77 (1901). Greek: Cosmas Indicopleustes, 55-56 (1897); Procopius, 1.20.1-13 (1914); *Life and Works of Saint Gregentius* (2006); John Malalas, 432-34 (1986); Theophanes Confessor, 223 (1997); *Martyrium Arethrae*, 721-59 (1861). A detailed English synopsis of the *Martyrium Arethrae* is found in Moberg, 1924: xxvi-xxxvi. Arabic: Ibn Hishām, 20-41 (1858-60); trans. Guillaume, 1955: 14-31. *Cf.* Bibliography of sources in Shahid, 1971: 277-81; Moberg, 1924: 'The Muhammadan Tradition,' pp. xliii-xlvii.

[30] Moberg, 1924: xxiv-lxxvii; Smith, 1954: 431-41, 451-56; Ryckmans, 1956; Kobischanov,1979: 91-117; Shahid, 1971; Christides, 1972; Van Esbroeck, 1974; Shahid, 1971; 1979; Rubin, 1989; Munro-Hay, 1991: 85-94, 261-62; De Blois, 1990; Beaucamp *et al*, 1999-2000; Rubin, 2008.

[31] John Malalas, 432-34 (1986); *Chronicle of Zuqnīn*, 54-56 (1999); Theophanes, 223 (1997); Michael the Syrian, iv, 273-77 (1901). The king is named as 'Aidug,' which Rubin (1989: 394) argues is a copyist's error for 'Adul,' i.e. Adulis, based on the similarity of the Syriac letters *Gāmal* and *Lāmadh*.

[32] Moberg, 1924: xxvii; *Book of the Ḥimyarites,* Chps. V-IX (1924).

[33] Kobischanov, 1979: 91-117; Rubin, 1989: 392.

campaign against Dhū Nuwās.[34] There is insufficient evidence to resolve the matter. It is possible that the sources collectively describe a series of tit-for-tat military exchanges culminating in a much larger campaign, but however plausible – and as with so much else in this episode – this must remain no more than conjecture.

The invasion of Kaleb Ella Eṣbeḥa probably took place in 525, though again there is some debate as to the chronology.[35] The *Martyrium Arethrae* states that the Byzantines assembled a fleet through the requisition of merchantmen at anchor in their ports, including twenty from Clysma, fifteen from Aila, nine from India, seven from Iotabe, seven from Farasān and two from Berenike, totalling sixty vessels in all.[36] Such detailed information appears authentic. James Howard-Johnston points to the existence of official published reports of Byzantine campaigns, and notes, by way of example, that such reports were incorporated into the chronicles of Joshua the Stylite and Theophanes Confessor.[37] The reference to nine ships from India is curious, since Byzantine writers used 'India' to refer to Ethiopia, Yemen and the Sub-Continent. The Aksumites must have possessed their own sizeable mercantile fleet to have controlled the 'India trade,' so that the 'India' in question may have been Yemen, implying that certain of the Ḥimyarite coastal cities may have revolted against Dhū Nuwās.

Dhū Nuwās himself remains an enigmatic figure. The inscriptions name him as Yūsuf Asʾar, though he is better known from his *laqab* Dhū Nuwās, 'he of the locks,' which is

[34] Cosmas Indicopleustes, 55-56 (1897); Procopius, 1.20.1 (1914); Ibn Hishām, 20-41 (1858-60); trans. Guillaume, 1955: 14-31.
[35] The invasion is traditionally dated 525. Moberg, 1924: lxviii; Smith, 1954: 431-41, 451-56; Rubin, 2008: 188, n. 12. However, an alternative of 520 has been presented by Shahid, 1971: 235-42; 1994; followed by Munro-Hay, 1991: 85-94, 261-62.
[36] *Martyrium Arethae*, 747 (1861). *Cf.* Moberg, 1924: xxxiv.
[37] Howard-Johnston, 1995: 166.

preserved as Dimion or Dimnos in the Syriac and Greek sources.[38] It is possible that he was an usurper, since his royal lineage is nowhere proclaimed in the inscriptions, in marked contrast to established practice; the Arabic historical tradition alternatively recollects that Dhū Nuwās' predecessor was the imposter, which may echo his propaganda.[39] An inscription from Ḥiṣn al-Ghurāb near Qāniʾ records that Dhū Nuwās was cut down in battle, though the Arabic historical tradition more poetically has him taking his own life by riding his horse out to sea.[40] His religious persuasion has excited a good deal of debate. It is generally agreed that he was a convert to Judaism, though it should be noted that the most secure primary evidence – which is to say the royal inscriptions he commissioned – are ambiguous in this regard. One suspects that religion has been used by ancient observers and modern commentators alike to explain dimly perceived events occurring at considerable geographical or chronological remove.

He was replaced by Sumyafʿa Ashwaʿ of Dhū Yazan, for whom the inscriptions give a rule of around five years (c. 525-30).[41] Dhū Nuwās obviously thought it politically useful to advertise the fealty of the Ḥimyarite clan of Dhū Yazan in an inscription dated 518, including a Sumyafʿa Ashwaʿ identified by some as the future Aksumite puppet,[42] leading Zeev Rubin to label them "notorious opportunists prepared to turn coat whenever there was gain to be had."[43] In the following generation, Sayf b. Dhī Yazan is credited with a Sasanian alliance and expulsion of the Aksumites. It therefore

[38] al-Assouad, 243-45;
[39] Rubin, 1989: 398. *Cf.* Ibn Hishām, 19 (1858-60); trans. Guillaume, 1955: 13.
[40] CIH 621. *Cf.* Rubin, 1989: 393; Rubin, 2008: 188.
[41] CIH 621. *Cf.* Rubin, 1989: 393; Rubin, 2008: 188.
[42] Ryckmans, 1953: No. 508, pp. 295-303.
[43] Rubin, 2008: 194.

seems that the Banū Yazan constituted an ancient, if decadent, princely family of Ḥimyar, courted by outside powers in an attempt to lend the semblance of legitimacy to their occupation.[44]

The only source bearing upon Yemen under the rule of Kaleb Ella Eṣbeḥa and his client Sumyafʿa Ashwaʿ Dhī Yazan is the *Life and Works of Gregentius*. Opinons are divided over this text. Irfan Shahid believes that it was originally composed in Syriac in the first half of the sixth century and subsequently translated into Greek,[45] though its latest editors consider it to be a tenth-century Byzantine composition.[46] The detailed knowledge of the political geography of pre-Islamic Yemen, however, suggests that the manuscript either represents a substantially intact sixth-century core text or else drew heavily on sixth-century sources. It is recorded that Kaleb remained in Yemen for three years,[47] during which time he rebuilt numerous churches consecrated by Gregentius, three in Ẓafār, Najrān and Qāniʾ, with others briefly mentioned at Atephar and Legmia.[48] The *Martyrium Arethrae* and Michael the Syrian further record that the Alexandrian Patriarch appointed a bishop to Ẓafār.[49] Though the Greek hagiographical sources imply that the bishop was Chalcedonian, this amounts to a contestation of 'ownership' of the martyrs of Najrān with the Syriac Monophysite hagiographies. The Syriac tradition, traceable as far back as John of

[44] John Malalas, 432-34 (1986), and the *Chronicle of Zuqnīn*, 54-56 (1999), both state that there were three 'Indian' (i.e. Yemeni) empires, while al-Ṭabarī, 919 (1879-1901), refers to royal houses of Ḥimyar, suggesting regional or dynastic factions.
[45] Shahid, 1979: 26-27, 30-37. *Cf.* Christides, 1972: 117.
[46] Berger, 2006: 43-45. *Cf.* Rubin, 2008: 186.
[47] *Life of Gregentius,* 66, in Shahid, 1979: 61, alternatively follows the *Book of the Ḥimyarites* that Kaleb stayed for seven months.
[48] Shahid, 1979: 'The Churches,' pp. 38-53.
[49] *Martyrium Arethae* in Moberg, 1924: xxxv; Michael the Syrian, iv, 274 (1901). Severus does not mention the Najrān massacres in his life of Patriarch Timothy; perhaps the cult of the Najrān martyrs had faded by the tenth century.

Ephesus (wr. 588), records that the seat of Ẓafār remained vacant for twenty-two years upon the death of the bishop owing to the imposition of Chalcedonian doctrine on Alexandria, which is to say that Yemeni Christianity was staunchly Monophysite.[50] Given the political significance of bishops in the sixth and seventh centuries – the viceroy of Egypt and governor of Aila at the time of the Muslim conquests were both bishops – one suspects that the church structure described by the sources in fact represents the apparatus of colonial administration set up by Ella Eṣbeḥa.

The causes of the invasion have been much discussed. Though most scholars understand it to have been at once a holy war between Christians and Jews, a superpower conflict between the Byzantines and Sasanians, and a trade war between the Aksumites and Ḥimyarites, different stress is placed on one or other of these aspects.

(ii) The holy war hypothesis naturally follows from a rather literal reading of the Syriac and Greek hagiographical sources. The Byzantine chroniclers state that the Jewish convert Dhū Nuwās was motivated by the moral indignation that "the Romans wrong the Jews in their own country and kill them."[51] Similarly, John of Ephesus records that when the king of the Ethiopians learned of "the destruction of the Christians and tyranny of the Jews, he boiled with zeal. So he led his forces, marched out against the tyrant, seized him, killed him and annihilated his forces as well as all

[50] John of Ephesus preserved in *Chronicle of Zuqnīn*, 69 (1999). Repeated in Michael the Syrian, iv, 274 (1901).
[51] Theophanes, 223 (1997). *Cf.* John Malalas, 432-34 (1986); *Chronicle of Zuqnīn*, 54-56 (1999); Michael the Syrian, iv, 273-77 (1901).

the Jews who were in the territory of the Ḥimyarites."[52] For Irfan Shahid, such sources are "incontestably reliable primary sources hailing from the world of *Oriens Christianus*."[53] He further notes that Kaleb Ella Eṣbeḥa became a present day saint of the Eastern Church, and goes on to examine his role as a crusader, idoloclast, evangelist and initiator of the cult of the Martyrs of Najrān.[54] Shahid's whole tone is alive to the religious importance of events, as when he describes "the church in Najrān, dedicated to the Holy Martyrs and the Glorious Arethas... not far from the northern gate of the city which looked toward Jersusalem,"[55] or Kaleb as "a doughty warrior who waged wars as a biblical king, protected by the power of Jehovah."[56] Indeed, Shahid explicitly states that "the war was a crusade, which Kaleb waged not only as an Ethiopian negus... but as a Christian soldier who was intent upon the evangelisation of South Arabia."[57]

As a tangent of his holy war argument, Shahid suggests that Dhū Nuwās' alleged conversion to Judaism represented an ideological challenge to Aksumite kingship, which according to him was already based on a legitimating ideology of rule emphasising descent from the House of David.[58] He speculates that Biblical passages linking Ethiopia and Sheba may already have assumed importance by the time of Kaleb, even that the conquest of Yemen fulfilled Biblical prophesies.[59] To support this argument he proposes a sixth-century date for the *Kebra Negast*, the Ethiopic 'Book of

[52] John of Ephesus in *Chronicle of Zuqnīn*, 85 (1999).
[53] Shahid, 1979: 26.
[54] Shahid, 1979: 27, 53-56; 'The Saint,' pp. 61-66.
[55] Shahid, 1979: 29.
[56] Shahid, 1979:56.
[57] *Ibid.*
[58] Shahid, 1976: 139.
[59] Shahid, 1979: 62, n. 165; 63-64. Pslams 72:10-15; Isaiah 43:3; 60:6.

Kings' which recounts how the Queen of Sheba returned to Ethiopia carrying King Solomon's child, Menelik, from whom sprang the Ethiopian royal line.[60] However, Munro-Hay notes that nothing in the Aksumite inscriptions or coinage indicates an awareness of the Solomonic connection, which he conclusively demonstrates to have been a medieval innovation that could hardly have motivated a Late Antique war.[61]

Clearly there was a religious element to the conflict, though Shahid goes too far in his holy war argument. The protagonists are identified by the Byzantine hagiographies and ecclesiastical chronicles as Christians and Jews, though they might equally be well labelled according to their political affiliation as Aksumites and Ḥimyarites, by their racial characteristics as Africans and Asians, or linguistic distinctions between Hamito-Semitic and Semitic speakers. Things were no doubt more complicated as factors combined to produce multiple identities. Even religious affiliation was no means straight forward. The *Martyrium Arethrae* states that among those massacred at Najrān were "Christian Ethiopians and those Byzantine and Christian Persians who happened to be in the country,"[62] Procopius refers to adherents of the old South Arabian religion,[63] Vassilios Christides notes pagan elements (e.g. blood sacrifice) in the Christianity of Najrān,[64] and an enigmatic Judaising religion – dubbed 'Rahmānism' in the secondary literature[65] – is attested in the inscriptions.

[60] Shahid, 1976: 137-145.
[61] Munro-Hay, 2001: 48-49.
[62] Translated by Christides, 1972: 118.
[63] Procopius, 1.20.1 (1914).
[64] Christides, 1972: 120.
[65] 'Rahmanism': Beeston, 1979-84; Rippin, 1991; Rubin, 2000: 32-52; Hoyland, 2001: 156-47.

Indeed, the massacre of the Christians of Najrān in some sense represents an episode in a longer series of tit-for-tat military exchanges between Yemen and Ethiopia. It is possible that the Aksumites maintained possession of the Tihāma following their invasion in the third century **[2.1.1] (i)**, with an inscription dated 509 recording the construction of a house by Ethiopian envoys in Ẓafār,[66] and another referring to an Ethiopian church in Ẓafār.[67] Epigraphy from Najrān, meanwhile, testifies to the presence of a Christian community from at least the fifth century.[68] This may have been associated with the Ethiopian presence, especially given the possibility that Christianity was introduced to the Yemen by Philophilus of Adulis **[2.1.2] (i)**.

(iii) The superpower conflict hypothesis finds much favour in the secondary literature, with many standard reference works according the southern Red Sea conflict a brief mention.[69] The generally good relations enjoyed between the Byzantines and Sasanians from the late fourth through fifth centuries came to an end with the Anastasian (c. 502-06) and Iberian Wars (c. 526-32), fought along the frontier from Mesopotamia to the Caucasus.[70] Between these two major conflicts and especially during the reign of Justin I (r. 518–527), a kind of cold war or 'great game' was fought out among the client states of the periphery. An attempt to impose Zoroastrianism on the Christian Iberians resulted in their revolt against Sasanian rule in 524, indirectly supported by the Byzantines, who paid the Transcaucasian Huns to

[66] Maigret, 2002: 247, 251; Yule, 2007: 47.
[67] Simeon of Beth Arsham, Letter G, II.A (trans. Shahid, 1971: 17-111); Jamme, 1966: 39-42; Ryckmans, 1953: 33-35, Nos. 507 & 508. *Cf.* Shahid, 1979: 'Ẓafar,' pp.43-47.
[68] CIS 537 & RES 4919. Cited by de Maigret, 2002: 251.
[69] Moorhead, 1994: 166-67; Evans, 1996: 112-14; Mitchell, 2007: 132.
[70] Howard-Johnston, 1995: 163.

assist them.[71] It has further been claimed that the usurper Dhū Nuwās (fl. 523) was at that time sponsored by the Sasanians to undermine Byzantine commercial interests in the Red Sea and strategic influence in western Arabia,[72] to which the Byzantines responded by assembling a fleet to transport the Aksumite invasion force in 525. The Sasanians quickly retaliated by dispatching their Lakhmid clients to raid the Byzantine Levant in 525-26, by which time the cold war had escalated into the full blown conflict in Iberia. As James Howard-Johnston observes in a much cited article, "both regimes probably saw themselves as playing the great game, manoeuvring for advantage both in the theatres of war and in the diplomatic arenas on their flanks, gathering prestige wherever they could, preferably at their rival's expense."[73]

It is very much from this perspective that Rubin turns his attention to South Arabia in an attempt to discern a policy of Anastasius I (r. 491-518).[74] He argues that Byzantine control of the Red Sea route to India faded away in the fifth century, owing to nomadic aggression by the Blemmyes and Saracens, civil war resulting in the 'enfeeblement' of Aksum, and the 'loss' of Ḥimyar to Judaism. The Byzantines were therefore forced to buy Indian luxury goods at exorbitant prices from the Sasanians in Mesopotamia. Anastasius sought to reverse this dire situation by re-establishing the system of alliances in Arabia and Ethiopia, which he did so by encouraging two Aksumite invasions in the 490s and in 517, with a third in 525 under Justin. That he

[71] Mitchell, 2007: 122-24, 131-34.
[72] Rubin, 1989: 401.
[73] Howard-Johnston, 1995: 164.
[74] Rubin, 1989.

was ultimately successful is suggested by economic growth traditionally ascribed to his reign.[75]

Rubin's argument, ingenious as it is, does not bear close inspection. The key problem is that he fixes upon an inscription from Bostra dated to the reign of Anastasius, recording an edict that the *dux Palaestinae* be financed by the *commerciarus* of Clysma, implying that the tax revenue generated by the 'India trade' remained considerable.[76] Given his assertion that Byzantine trade declined in the fifth century with the 'loss' of Ḥimyar to Judaism, Anastasius must be responsible for a restoration of that trade. Accordingly, he pushes the primary sources and chronology to support his identification of the agency of Anastasius. Yet the archaeological evidence from Berenike and Aila, which only began to be published after Rubin's article, now leaves no doubt that the fifth century remained prosperous. There was no decline in trade for Anastasius to restore.

(iv) A trade war hypothesis was first put forward by Rubin as an adjunct to his articulation of the superpower conflict theory, wherein the economy becomes a weapon serving political purposes.[77] He argues that the Ḥimyarite elite converted to Judaism around the mid fifth century followed thereafter by their Kindite allies, and seized the Byzantine customs post of Iotabe by the end of century.[78] For Rubin, Iotabe "seems to have been only the northern outpost of a vast Jewish commercial enterprise which gained the upper hand all along the eastern shores of the Red Sea, putting the

[75] Bury, 1958: 441-47; Jones, 1964: 235-37.
[76] Rubin, 1989: 400.
[77] Rubin, 1989; 2008.
[78] Rubin, 1989: 388; 2008: 197. *Cf.* Lecker, 1995.

Christian merchants at a severe disadvantage."[79] Yet this surely takes the evidence too far. Judaism does not seem to have entirely eclipsed the ancient South Arabian religion, since the *Martyrium* states that the Ḥimyarites worshipped the stars,[80] and Procopius notes that "many of them held in reverence the old faith which men of the present day call Hellenic."[81] There is moreover no evidence that Jewish merchants in the Red Sea accepted Ḥimyarite political leadership and were antagonistic to their Byzantine counterparts, certainly nothing to link Iotabe with Yemen, while there is much more evidence for Hellenic (Alexandrian?) rather than Arabian Judaism in the Red Sea **[2.3.2] (i)**. Rubin's trade war hypothesis is not therefore convincing in light of supplementary evidence.

Yet evidence for a commercial aspect to the war may be gleaned from the source thread of contemporary observers. Procopius notes that Justinian despatched an embassy under Julian to encourage the Ethiopians to buy cargoes of silk from the Indians, which he implies was the cause of the war, and describes Abraha as "a slave of a Roman citizen who was engaged in the business of shipping in the city of Adulis."[82] Similarly, the chroniclers all quote an unknown earlier source, perhaps Nonnosus, which explicitly states:

"When some traders crossed into Homerite borders, as usual, Damianos [Dhū Nuwās], the emperor of the Homerites, killed them and took away all their goods, saying, 'The Romans wrong the Jews in their own country and kill them.' As a result the trade of

[79] Rubin, 1989: 388.
[80] Christides, 1972: 119-20. He further notes elements of pagan rituals among the Christians of Najrān.
[81] Procopius, 1.20.1 (1914).
[82] Procopius, 1.20.4 (1914).

the inland Indians (i.e. Arabian Peninsula) and of the Axoumite region ceased. The emperor of the Axoumites, Adad (copyists' error?), announced his resentment to the Homerite, saying, 'You have harmed my empire and inland India by preventing Roman traders from reaching us.' Great enmity developed and war broke out between them."[83]

As will be shown, the volume of the 'India trade' was probably declining in the early sixth century owing to disturbances in the Sub-Continent **[6.1.2]**. Intensified commercial competition between Aksum and Ḥimyar for the remaining trade could plausibly have triggered the conflict, which would likely have exacerbated ethnic and religious tensions. A trade war hypothesis based on the premise that economic change forced political action can now be put forward.

(v) The consequences of the invasion do not at first make themselves apparent, since the rule of Abraha seems to have been remarkably successful. Depending on the chronology, he came to power in c. 530 and is last attested by the Murayghān inscription of c. 552, giving him a rule of around twenty years.[84] According to Procopius, Kaleb despatched two punitive expeditions, the first of which defected and the second was roundly defeated; Kaleb's successor subsequently recognised Abraha's independence in return for an annual tribute.[85] His dam inscriptions (wr. 544) record the annexation of the Ḥaḍramawt and the reception of embassies from the Byzantine,

[83] Theophanes, 223 (1997). *Cf.* John Malalas, 432-34 (1986); *Chronicle of Zuqnīn*, 54-56 (1999); Michael the Syrian, iv, 273-77 (1901).
[84] Ryckmans, 1953a & b. The date is given as 662 of the Ḥimyarite era. Beeston (1954) argues this corresponds to AD 552, though Ryckmans and Shahid (1971: 235-42) arrive at AD 547. *Cf.* Smith, 1954: 435-6; Conrad, 1987: 227-30; Munro-Hay, 1991: 87. The latest revision holds the Ḥimyarite era to have begun in 110 BC, dating the Murayghān inscription to AD 552. Robin *et al*, 1999-2000: **PAGE?**
[85] Procopius, 1.20.8 (1914). *Cf.* Smith, 1954: 431-32.

Sasanians, Aksumites, Lakhmids, and Ghassānids, while the Murayghān inscription shows that he campaigned as far north as the Ḥijāz, even claiming that he forced the Lakhmids to recognise his authority there.[86] John of Ephesus states that he even petitioned Khusrow for the release of the bishops jailed at Nisibis.[87] The Maʾrib dam inscriptions and folklore transmitted by Wahb b. Munnabbih relate that he was succeeded by first one then the other of his sons, which might indicate that he succeeded in establishing a dynasty.[88] By the mid sixth century, therefore, Abraha had become the most powerful man in the southern Red Sea and was, arguably, contesting hegemony with the great Arab *phylarchs*.

By contrast, the last years of Kaleb are obscure. Central authority seems to break down in the years following his death, only dateable – significantly – to sometime in the 540s. The last inscription of a king of Aksum was commissioned by a son of Kaleb, and includes the ominous prayer, "O Lord! fight against them who make war against me, take hold of shield and spear and stand up to help me."[89] Similarly, the high quality gold coinage first becomes debased then replaced by gilded bronze issues, with numerous rulers resulting in a confused chronology, while the issues of the last two known kings are of a degenerate appearance.[90] Final occupation at Aksum city has most recently been dated to the late seventh century on the basis of numismatic evidence,[91] though already in the later layers "the large residences were occupied or built around by squatters, even, apparently, in the time of the last coin-issuing kings,

[86] Smith, 1954: 437-41; 435-6. Procopius (*op. cit.*) further mentions this campaign.
[87] *Chronicle of Zuqnīn*, 54-68 (1999).
[88] Ibn Hishām, 315 (1978). *Cf.* Rubin, 2008: 192.
[89] Munro-Hay, 1991: 231.
[90] Munro-Hay, 1991: 89-91; Phillipson, 2000: 485.
[91] Phillipson, 2000: 485.

then gradually covered by material brought down by run-off from the deforested hills."[92] Firm evidence for a functioning state in Aksum therefore falters in the second half of the sixth century and is entirely absent by the end of the seventh century.

The very length and success of Abraha's career may well have undermined the political stability of Aksum. Munro-Hay speculates that Kaleb's failure to exert his authority over Abraha unleashed centrifugal forces among the numerous local rulers and subject peoples of the vast and ethnically diverse empire.[93] Numerous other causes have been put forward for the decline and fall of Aksumite civilisation, including the Justinianic plague, environmental degradation of the Yeha plateau, Beja and Agaw nomadic aggression, declining volume of the 'India trade,' and the rise of Islam.[94] Civilisational collapse results when *longue durée* contributing factors reach a 'tipping point' achieved by a perhaps arbitrary *evenement*, yet can only gain a critical mass if socio-political formations possess an inherent structural weakness or *conjoncture*. In the case of Aksum, it may be that weakness came from an economic reliance on the 'India trade,' which began to dwindle in the sixth century **[6.1.2] (i)**. The declining volume of trade and resulting increase in competition may have constituted a major cause of the Aksumite invasion of Ḥimyar, the ultimate failure of which appears to have turned an economic crisis into a political collapse.

[92] Munro-Hay, 1991: 269. Based on the Neville Chittick excavations 1972-74 published by Munro-Hay, 1989.
[93] Munro-Hay, 1991: 260.
[94] Kobishchanov, 1979: 117-21; Munro-Hay, 1991: 90-93, 258-64.

[3.2] Persian Hegemony, c. 570-630

[3.2.1] Yemen & the 'India Trade'

(i) The Persian invasion of Yemen in c. 570 is much less well evidenced than its Ethiopian precursor. Aside from a few contemporary though fragmentary Byzantine sources, the details of the campaign must be gleaned from the much later Arabic sources. The earliest testimony is that of Theophanes of Byzantium (wr. 581), whose account survives only as a synopsis in Photius (d. 893), wherein it is recorded:

"Khusrow launched a campaign against the Ethiopians, allies of the Romans, formerly known as Macrobioi but now called Homerites. Through the agency of Miranus, a Persian general, he took captive Sanatourkes, the (Ethiopian) king of the Himyarites, pillaged their city and made the people subject to him."[95]

The names of the protagonists do not well accord with the later Arabic evidence, which has Wahriz as the Persian general and Aksum or Masrūq b. Abraha as the Ethiopian king. This does not necessarily invalidate one or the other of the source traditions, since it appears that the Byzantine chroniclers used official or throne names while the transmitters of Arabic oral history used 'nicknames' (*laqab*). Shahid identifies Miranus with Abū Murra, the *kunya* of the Ḥimyarite prince Sayf b. Dhī Yazan,[96] although this identification is far from certain. As for Sanatourkes, his name

[95] Theophanes of Byzantium in Photius, iv, 270-71 (1851-70); in Greatrex & Lieu, 2002: 137.
[96] Shahid, 1995: 362-72.

is not elsewhere attested and is difficult to decode; it may plausibly have been a throne name for one of the sons of Abraha whose *laqab*s are given in the Arabic sources.

Given the lack of contemporary evidence, the Arabic historical tradition assumes greater importance. Three alternative threads of ostensibly older source material are preserved by the ninth and tenth century Arabic sources, as elucidated by Rubin in his article on Islamic traditions on the Sasanian conquest.[97] The oldest thread was transmitted by Wahb b. Munabbih (d. 725-37?) and used by Ibn Hishām (d. 833) and Nashwān b. Saʿīd al-Ḥimyarī;[98] thereafter comes Ibn Isḥāq (d. 761) in Ibn Ḥishām and al-Ṭabarī (d. 923);[99] finally Ibn al-Kalbī (d. 819), probably used by al-Masūdī (d. 956) and again in al-Ṭabarī.[100] Essentially the same narrative appears in all three threads of source material, though there are some differences in the detail which attract discussion.

All agree that a Ḥimyarite prince first approached the Byzantines, before he went to the Sasanians, in search of an alliance against the occupying Aksumites. Wahb b. Munabbih and Ibn Isḥāq record that this prince was Sayf b. Dhī Yazan, while Ibn al-Kalbī states that it was his son Maʿdī Karib. It striking that the Arabic historical tradition places the Banū Yazan at the head of Ḥimyar, a position confirmed by the inscriptions a generation earlier.[101] Similarly, the Ethiopian king of Yemen is named by Wahb b. Munnabih as Yaksūm b. Abraha, which finds support in a reference from

[97] Rubin, 2008: 190-91. *Cf.* al-Madʿaj, 1988: 2, 5-7; Morony, 2001-02: 34-37.
[98] Ibn Hisham, 314-21 (1979); al-Ḥimyarī, 149-51, 162-64 (1978). Cited by Rubin, 2008: 191.
[99] Ibn Ḥishām, 28-47 (1858-60); al-Ṭabarī, i, 946-48 (1879-1901). Cited by Rubin, 2008: 191.
[100] al-Masūdī, iii, 162-64 (1966-79); al-Ṭabarī, i, 950-57 (1879-1901). Cited by Rubin, 2008: 191.
[101] Rubin, 2008: 194.

Abraha's dam inscription to 'Aksūm son of the King.'[102] Ibn Isḥāq and Ibn al-Kalbī, however, state that his name was Masrūq.[103] Rubin notes that this name is given in the *Book of the Ḥimyarites* as an alternative form of Dhū Nuwās, and argues on this basis that the Ethiopian king had converted to Judaism in an attempt to garner Ḥimyarite support.[104] He goes on to argue that this apostasy afforded the Banū Yazan opportunity to approach the Byzantines.

Yet emissaries to great powers appear elsewhere in the Arabic historical tradition with an alarming frequency, suggesting that the Byzantine connection is no more than a literary *topos*. In Ibn Hishām's telling of the story, Sayf b. Dhī Yazan travelled first to the Byzantium to meet the Emperor himself, and being refused he then continued on to al-Ḥīra to put his case to al-Nuʿmān b. al-Mundhīr, who recommended him in turn to Khusrow Anushirvān at Ctesiphon.[105] It is a story of far-flung travel to the great palaces and noble personages of the pre-Islamic world in which, seen from an eastern Arabian perception, the Yemeni prince finds himself at ever more glittering courts, his early failures lending dramatic tension to his ultimate success. The literary aspect is still more pronounced in Ibn al-Kalbī, who has Sayf forced to surrender his wife to the Ethiopian king, so that Maʿdī Karib possessed a personal enmity to his half-brother Masrūq. Perhaps already in these accounts the romantic character of Sayf b. Dhī Yazan familiar from medieval stories was taking shape.[106]

[102] *CIH* 541, ll. 82-82. *Cf.* Smith, 1954: 439; Rubin, 2008: 192-94; Robin, 2005: 36.
[103] Ibn Hishām, 43 (1858-60); trans. Guillaume, 1955: 31.
[104] Rubin, 2008: 194-95.
[105] Ibn Hishām, 43 (1858-60); trans. Guillaume, 1955: 31.
[106] Guillaume, 1997: 101-02.

The sources continue that Khusrow ordered eight-hundred prisoners condemned to death be released and carried on eight boats to Aden, of which just six arrived safely under the command of a Sasanian aristocrat named Wahriz, whereupon they were joined by the Ḥimyarite insurgents and roundly beat the Ethiopians to take Ṣanʿāʾ. Wahriz returned to Khusrow bearing booty and Sayf was made king of Yemen. In the absence of Wahriz, Sayf embarked on a bloody retribution against the Ethiopian settlers, until at length he was assassinated by his bodyguard of Ethiopian slaves. This force briefly assumed control of the country in another round of bloody reprisals, until Khusrow despatched Wahriz at the head of 4000 Persians who at last subdued Yemen.[107] The *nisba*s of their descendents as recorded in later Islamic biographies suggest that they were largely of Daylamite stock, renowned in Iran as rugged mountain fighters, suggesting that the Sasanians carefully selected a fighting force appropriate to the highlands of Yemen from among the disparate peoples of their empire.[108] Wahriz established himself in Ṣanʿāʾ and established a line of *marzban*s which lasted until the fall of the Sasanian empire.

(ii) The causes of the occupation, as discussed in the secondary literature, have been found both in the superpower conflict between Sasanians and Byzantines, and in a trade war fought over control of the 'India trade.'

The superpower conflict continued to simmer after the 'Eternal Peace' of 532, with the rebellion of a Byzantine client state in the Caucasus escalating into the Lazic War (c.

[107] al-Ṭabarī, 957 (1858-60); trans. Guillaume, 1955: 33.
[108] Morony, 2001-02: 34.

540-62), brought to a close by the 'Fifty Years' Peace' of 562.[109] Relations were strained by an opportunistic war between the Lakhmids and Ghassānids following the death of Ḥārith in 569, compounded by an alliance formed between the Byzantines and Turks the same year, and another (secret) alliance brokered with Sasanian controlled Armenia in 570.[110] The Persians may have responded in kind, for Theophylact Simocatta states that they had first attempted to incite the Ḥimyarites to revolt, and only when this policy failed did they invade the Yemen.[111] According to Menander (wr. 582):

"There were many other reasons for the war between the Romans and Persians, but the Turks were the nation which encouraged Justin to open hostilities against the Persians. For they attacked the land of the Medes and laid it waste, and sent an embassy to Justin to urge him to fight with them against the Persians. They asked him to destroy, in concert with them, those hostile to both of them, and so embrace the cause of the Turks. For in this way, with the Romans attacking from one direction and the Turks from another, the (state) of the Persians would be destroyed in the middle. Aroused by these hopes, Justin thought that the power of the Persians would easily be annihilated. He therefore made every preparation to keep his friendship with the Turks as firm as possible."[112]

There may also have been some move to stir up the Arabian front, since Theophanes Confessor records that in 572 Justin II despatched an embassy under Julian to the

[109] Greatrex & Lieu, 2002: 102-34.
[110] Greatrex & Lieu, 2002: 135-50.
[111] Theophylact Simocatta, iii, 9.6 (1986).
[112] Menander, frg. 13.5 (1985); in Greatrex & Lieu, 2002: 137.

southern Red Sea, urging the Ethiopian king Arethas to make war on the Persians.[113] However this passage is taken from John Malalas, where it corresponds to Procopius' dating of the embassy early in Justinian's reign **[3.2.1] (iii)**,[114] being thereafter incorrectly re-dated by Theophanes to the seventh year of Justin II. It is perhaps possible that this confusion over the date of Julian's embassy follows the existence of two discrete initiatives, though this is conjectural and reasons internal to Theophanes' text have been put forward.[115] Either way, the Sasanians may well have feared being flanked on two sides – in Arabia and Turkestan – by hostile Byzantine clients, and indeed Theophanes of Byzantium explicitly writes that "Justin sent Zemarchus as an ambassador to the Turks... For this reason Khusrow launched a campaign against the Ethiopians."[116] The superpower conflict argument for the Persian occupation of Yemen seems therefore eminently plausible.

(iii) The trade war hypothesis encountered in the secondary literature is again predicated on the manipulation of the economy towards political ends.[117] There is, moreover, a tendency among historians to reduce the Late Roman 'India trade' to the trade in silk, following an important passage in Procopius (wr. 545), quoted here *in extenso*:

"(In c. 528-31) the Emperor Justinian sent an ambassador, Julian... (to the Ethiopians and Yemenis) demanding that both nations should on account of their community of religion make common cause with the Romans in the war against the Persians; for he

[113] Theophanes Confessor, 244-45 (1997).
[114] John Malalas, 457-58 (1986); Procopius, 1.20.9 (1914).
[115] Mango, 1997: 363, n. 7.
[116] Theophanes of Byzantium in Photius, iv, 270-71 (1851-70); in Greatrex & Lieu, 2002: 137.
[117] Rubin, 2008: 195.

purposed that the Ethiopians, by purchasing silk from India and selling it among the Romans, might themselves gain much money, while causing the Romans to profit only in one way, namely, that they be no longer compelled to pay over their money to their enemy... (But) it was impossible for the Ethiopians to buy silk from the Indians, for the Persians merchants always locate themselves at the very harbours where the Indian ships first put in, since they inhabit the adjoining country, and are accustomed to buy whole cargoes."[118]

The apparent failure of this policy prompted Justinian to seek out alternatives to the Red Sea route, especially during the 540s when the Sasanians increased the charge for raw silk sold in the markets of Mesopotamia.[119] He successfully employed some Nestorian monks to bring back silk-worm eggs from Serinda (Sogdiana), and was able to establish a state-controlled silk industry after 552, though the Byzantines remained heavily dependent on imports for some decades afterwards.[120] Away in Central Asia, Turkish military victories over the Chinese forced open the silk markets, to the effect that by 569 the Chou court was supplying 100,000 bales of raw silk a year.[121] A Sogdian-Turkish embassy arrived in Constantinople that very year, offering ready access to silk and an alliance against the Persians, prompting Justin to despatch Zemarchus to Turkestan.[122] Rubin argues that these events prompted a shift in Byzantine foreign policy, away from the Red Sea and Indian Ocean towards the Black Sea and Caspian, with Sogdians and Turks replacing Ḥimyarites and Aksumites as the preferred

[118] Procopius, 1.20.9-12 (1914).
[119] Greatrex & Lieu, 2002: 129.
[120] Procopius, 8.17.1-8.
[121] Harmatta & Litvinsky, 1996: 367.
[122] Menander, Frg. 10.1 (1985). In Greatrex & Lieu, 2002: 137.

middlemen.[123] From this time on, according to Rubin, the Red Sea was no longer the primary route of the Graeco-Roman 'India trade.'

There are, however, numerous problems with this interpretation. Procopius' testimony as to the inadequacy of Ethiopian and Yemeni merchants is open to criticism, since it could be argued that his very purpose in writing history was to defame Justinian, a man he (arguably) believed to have been a demon and whom he certainly blamed for the ruin of the Roman empire.[124] Any policy of Justinian's was therefore likely to be interpreted in a negative light.

More seriously, the notion that the Persians enjoyed an advantage in the procurement of silk in India does not bear close scrutiny. As has been shown **[2.5.2]**, Chinese silk was bought in Indonesia and carried across the Bay of Bengal by merchants operating out of Tamil Nadu and Sumatra. It was then sold directly to Ethiopian, Yemeni and Persian merchants in Sri Lanka, or sold on the Indian market and so disbursed throughout the Sub-Continent. Silk could, therefore, be bought at a number of ports in western India, most notably Broach and Kalyana, which according to Cosmas (fl. 525-50) exported "cloth for making dresses, for it also is a great place of business."[125] These ports were indeed closer to Persia, as Procopius notes, but the same cannot be said for the great emporium of Sri Lanka, where most of products brought across the Bay of Bengal were sold. In fact the distance from Qāniʾ compared with Sīrāf to Sri Lanka is roughly the same, so that Persian merchants can have enjoyed no great

[123] Rubin, 2008: 195.
[124] Kaldellis, 2004: 154-57. *Cf.* Cameron, 1985.
[125] Cosmas Indicopleustes, 365-66 (1897).

advantage in the procurement of Chinese silks at their point of entry to the Arabian Sea network.

Indeed Ethiopian merchants may have, *contra* Procopius, enjoyed an advantage in buying silk on the open market. The fine gold currency of the Byzantines and Aksumites, in a fascinating story related by Cosmas, was preferred by the king of Sri Lanka to the silver coinage of the Sasanians:

"Now I must here relate what happened to one of our countrymen, a merchant called Sopatrus... Once on a time he came to this island of Taprobane (i.e. Sri Lanka) on business, and as it chanced a vessel from Persia put into port at the same time with himself. So the men from Adulis with whom Sopatrus was, went ashore, as did likewise the people of Persia, with whom came a person of venerable age and appearance. Then, as the way here was, the chief men of the place and the custom-house officers received them and brought them to the king. The king having admitted them to an audience and... inquired: 'Which of your kings is the greater and the more powerful?' The elderly Persian snatching the word answered: 'Our king is both the more powerful and the greater and richer, and indeed is King of Kings, and whatsoever he desires, that he is able to do.' Sopatrus on the other hand sat mute. So the king asked: 'Have you, Roman, nothing to say?' 'What have I to say,' he rejoined, 'when he there has said such things? But if you wish to learn the truth you have the two kings here present. Examine each and you will see which of them is the grander and the more powerful.' The king on hearing this was amazed at his words and asked, 'How say you that I have both the kings here?' 'You have,' replied Sopatrus, 'the

money of both – the *nomisma* of the one, and the drachma, that is, the *miliarision* of the other. Examine the image of each, and you will see the truth.' The king thought well of the suggestion, and, nodding his consent, ordered both the coins to be produced. Now the Roman coin had a right good ring, was of bright metal and finely shaped, for pieces of this kind are picked for export to the island. But the *miliarision*, to say it in one word, was of silver, and not to be compared with the gold coin. So the king after he had turned them this way and that, and had attentively examined both, highly commended the *nomisma*, saying that the Romans were certainly a splendid, powerful, and sagacious people."[126]

Another take on the trade war has been put forward by Michael Morony.[127] In focusing on the Arabian Peninsula, he tries to shift the debate away from Sasanian attempts to control the 'India trade' and argues for an exploitation of resources according to a colonial paradigm. Accordingly, he points to Arabic sources stressing the natural wealth of Yemen as a prime motivator towards the Sasanian invasion, such as al-Kalbī having Sayf b. Dhī Yazan tell Khusrow that his homeland is "one of the most fertile of lands and most amply endowed with resources."[128] More particularly, Ibn Isḥāq recounts that Sayf was dismissed by Khusrow with a gift of 10,000 *dirham*s and a robe of honour, saying that Yemen was too far distant and has little of worth. Sayf then went among the people and gave away all the silver. Khusrow was astounded at this and recalled him for an explanation, to be told "What use is silver to me? The

[126] Cosmas Indicopleustes, 369-70 (1897).
[127] Morony, 2000-01.
[128] al-Ṭabarī, i, 951 (1901); trans. Bosworth, 1999: 243. *Cf.* Morony, 2001-02: 34.

mountains of my country from which I come are nothing but gold and silver."[129] This won him his alliance.

There is much to commend Morony's argument. Touraj Darayaee notes that "silver mines appear to have been scarce in Fars... (but) the sheer amount of drahms minted in Fars in the late Sasanian period makes the province important as a financial centre."[130] He resolves this apparent contradiction with reference to the commercial contacts with the Gulf, to which might be added in particular the wealth of the silver mines of Yemen, as described dramatically by the Yemeni geographer and antiquarian al-Hamdānī (d. 945): "There is not in Khurasān, nor anywhere else, a mine like al-Raḍrāḍ... (Once) two men from Khurāsān (visited the mine). When they looked at the mine and traces of pagan and Muslim there, one of them said to the other 'O, lost wealth of God in this place!', or 'O wealth of God, perishing in this place!'"[131] Whether or not the silver from the likely five mints of Fars was, in fact, of Yemeni origin might eventually be established by testing of samples, though it might be suggested at this stage that the weight of ingots recommended their transport by sea rather than overland. Still, the traditions recorded by al-Hamdānī independently attest to a Sasanian involvement in the development of a silver mining industry in Yemen:

"(The miners) had from old times high standing and houses and estates in Ṣanʿāʾ... The people of the mine were all Persians who had arrived there in the Jāhilīya and the days of the Umayyads and ʿAbbāsids. They were called 'Persians of the mine.' Of those

[129] Ibn Hishām, 43 (1858-60); trans. Guillaume, 1955: 31.
[130] Darayaee, 2003: 11. On the scarcity of silver in Fars, he notes the *Hudūd al-ʿĀlam* (1937: 131) mentions only two mines, while Iṣṭakhrī (1927: 135) explicitly states Fars had little silver.
[131] al-Hamdānī, fol. 25a & 26a (MS Upsala); trans. Dunlop, 1957: 41 & 43.

in Ṣanʿāʾ were the Banū Sardawaih, Banū Amhadwaih, Banū Bājwaih, Banū Bardwaih and Banū Jadwaih."[132]

Christian Robin associates al-Raḍrāḍ with the modern site of al-Jabalī, about 40 km north-east of Ṣanʿāʾ, where seventh-century C^{14} dates were retrieved.[133] The site and dates are further discussed in the context of the early Islamic mining industry **[4.3.2] (iv)**. For now it suffices to note that silver mines of Yemen, so far as can be told, appear to have been established by the Sasanians and to have been on a considerable scale.

(iv) The consequences of the occupation have generally received less attention in the secondary literature. Persian communities, known as the Abnāʾ or 'sons,' were established in Ṣanʿāʾ, Dhamār and Aden, where they were remembered as having controlled trade and levied *ʿushr*.[134] The *marzban* of Yemen ruled from Ṣanʿāʾ, though the extent of his rule beyond the centres of Persian settlement is uncertain. Probably already in the late Ḥimyarite period the Aksumites had split the Tihāma from the Jawf al-Yaman, and Ḥaḍramawt appears to have contested Ethiopian dominance during Abraha's reign, so that the unity of Ḥimyarite Yemen was already crumbling in the Ethiopian period. By the end of the Persian period, the Arabic historical tradition remembers a Yemen fractured into numerous tribal territories. For al-Ṭabarī, the pre-Islamic Yemen was a land of *mulūk al-tawāʾif*,[135] Ibn Ḥabīb (d. 859) notes that "nobody can travel in the area unless he has the protection (*khafāra*) of its people, because it is

[132] al-Hamdānī, fol. 25a (MS Upsala); trans. Dunlop, 1957: 41.
[133] Robin, 1988: 123-124.
[134] Ibn Ḥabīb, 266 (1942). Cited by al-Madʿaj, 1988: 2.
[135] al-Ṭabarī, 901-58 (1879-1901); trans. Brockett, 1997: 164-252.

not controlled by any one ruler,"[136] and al-Yaʿqūbī later records its fragmentation into a staggering eighty-four provinces.[137] It might be imagined that the Abnāʾ deliberately encouraged dissension among the tribes as part of a 'divide and rule' policy.

However, the Abnāʾ appear to have become increasingly isolated and vulnerable. The last *marzban*, Bādhān, is said to have sent to Medina for an alliance and converted to Islam in the time of the Prophet, though this did not save his son and successor, Shahr b. Bādhān, from being killed during the occupation of Ṣanʿāʾ by the false Prophet ʿAbhalah b. Kaʿb al-ʿAnsī in 632.[138] It seems that the Persians lost the offensive initiative in the years following the invasion and increasingly found themselves on the defensive. Yemen was apparently easier to take than to hold.

A change in settlement patterns is discernable during the Persian period. It has generally been thought that the old Ḥimyarite capital of Ẓafār was abandoned for Ṣanʿāʾ during the Ethiopian occupation. The Arabic historical tradition states that Abraha moved his capital to Ṣanʿāʾ and built a great cathedral, al-Qalīs, to rival Mecca as a pilgrimage centre, and that the defilement of this cathedral by the jealous Quraysh prompted Abraha to embark on the expedition referred to in *Sūrat al-Fīl*.[139] Given Crone's well-known demolition of the Meccan trade hypothesis, I would argue that Mecca's significance as a pilgrimage centre was limited to the Ḥijāz, and suggest that the emphasis on Abraha's cathedral more likely represents largely ahistorical Qurʾānic exegesis, the action being retrospectively projected onto Ṣanʿāʾ by the local

[136] Ibn Ḥabīb, 266 (1942). Quoted by al-Madʿaj, 1988: 8. He is describing the situation in the pre-Islamic Ḥaḍramawt, admittedly an opportunity to emphasis the dichotomy of *jāhilīya* and Islam.
[137] al-Yaʿqūbī, i, 162 (1892). Cited by al-Madʿaj, 1988: 5.
[138] al-Madʿaj, 1988: 27, 31.
[139] *Cf.* Beeston, 1965: 895.

traditionalists of the eighth century keen to emphasis the rarefied Islamic credentials of their city.

Yet Ronald Lewcock accepts the Islamic historical tradition uncritically and finds material support for Abraha's cathedral in the seven Aksumite column capitals and a Byzantine influenced carved wooden lintel incorporated into the Great Mosque.[140] Of course, there is nothing explicit in any of the several inscribed blocks re-used as *spolia* linking Abraha with these monuments, nor is the discovery of Christian architectural fragments particularly unusual: the mosque at Ghalāfiqa, the port of Zabīd, reuses apparently Aksumite capitals. Paul Yule further raises the possibility that Abraha deliberately destroyed Ẓafār following the Ḥimyarite revolt mentioned in his Maʾrib dam inscription, though it might be objected that there is no mention of this 'victory' in the inscription itself, nor of any new royal foundation at Ṣanʿaʾ.[141]

Only Shahid questions the received wisdom of the Abraha connection. He notes that the Arabic writers were ambiguous as to the location of al-Qalīs; for instance, Yāqūt states that Ṣanʿāʾ was known as Ẓafār during the *Jāhilīya*.[142] Najrān or Ẓafār, he continues, are circumstantially more compelling locations, since the first was a noted pilgrimage centre and home to a celebrated *martyrium*, while the second appears in the contemporary hagiographic sources as the location of the Great Church of the Holy Trinity built by Kaleb and seat of the Monophysite bishop of Ḥimyar.[143] Ṣanʿāʾ did indeed have a church, which al-Azaqī records as having been pulled down in the

[140] Lewcock, 1986: 23-25.
[141] Yule, 2007: 52.
[142] Yāqūt, iii, 577 (1867). Cited by Shahid, 1979: 81.
[143] Shahid, 1979: 81-83.

eighth century by the governor and with the compliance of a son of Wahb b. Munabbih and a noted Jewish scholar,[144] though this was not necessarily, or even likely to have been, the cathedral of Abraha.

Indeed, there is evidence to suggest that Ẓafar was only reduced during the Persian occupation, at the same time as the abandonment of Qāniʾ. Given that the *Life of Gregentius* suggests that Aksumite settlement focused on the old Ḥimyarite centres of Ẓafār and Qāniʾ, it might well be imagined that the political and economic centres of the incumbent regime were singled out for destruction, or at least treated to an 'active neglect.' The archaeology of Ẓafār was the subject of an unpublished doctoral thesis by Raymond Tindel,[145] in turn based on only partially published survey work. This briefly refers to surface finds of Late Roman ribbed amphorae and alkaline turquoise wares, which if correctly identified, suggests a broadly fifth through seventh century date.[146] Subsequent survey work in the Dhamār plateau has targeted the Prehistoric period and is generally unhelpful with regards the end of the Ḥimyarite kingdom.[147] Nevertheless, the historical sources all agree that the Persian invasion was destructive. Theophylact Simocatta states that the Ḥimyarites "suffered irreparably from attacks by the Persians"[148] and Theophanes of Byzantium writes of the Ḥimyarites that the Persians "pillaged their city (i.e. the capital, Ẓafār) and made the people subject to him,"[149] perhaps inferring that Ẓafār was deliberately reduced.

[144] al-Azraqī, i, 139-41 (1965). Cited by Shahid, 1979: 82.
[145] Tindel, 1989.
[146] Tindel, 1980: 102. Similar types dominate the Middle (c. 350-550) and Late (c. 500-800) Aksumite periods at Beta Giyogis. Manzo, 2005: 59-63. His description of local wares does not readily fit Tomber's, 2008: 50-51, characterization of first through late fourth-/ early fifth-century South Arabian types.
[147] Wilkinson *et al*, 1997; 1999; Barbanes, 2000.
[148] Theophylact Simocatta, iii, 9.6 (1986).
[149] Theophanes of Byzantium in Photius, iv, 270-71 (1851-70); in Greatrex & Lieu, 2002: 137.

The Arabic historical tradition might even preserve the memory of ethnic cleansing, since Ibn Isḥāq relates that Khusrow ordered Wahriz "to kill every Ethiopian or child of an Ethiopian and an Arab woman, great or small, and not leave alive a single man with crisp curly hair."[150] The uppermost layers at Qāniʾ were dominated by hand-made Aksumite kitchen wares, which Sedov interprets as evidence for "un afflux important de population d'origine éthiopienne dans le sud de l'Arabie."[151] This material is probably therefore associated with the Ethiopian community suggested by the *Life of Gregentius*, so that end of occupation at Qāniʾ immediately following the layers associated with this material takes on an ominous significance.

An alternative hypothesis for the final years of Ẓafār and Qāniʾ would have them peacefully replaced by new political and economic centres along the Jawf al-Yaman, namely Ṣanʿāʾ and Aden, which were particularly associated with Abnāʾ settlement. It has been shown that a Persian mining community settled in Ṣanʿāʾ, just c. 40 km from the great silver mines of al-Raḍrāḍ, in the heart of the mineral rich ʿAsīr mountains. It may thus be significant that the city's name connotes industry and manufacture; *maṣnʿa*, for instance, means 'factory' in modern Arabic. Accordingly, Ṣanʿāʾ may have first eclipsed Ẓafār as an economic centre and only gradually appropriated its political role. This silver was only of use to the Sasanians if it could be exported, and to this end the port of Aden may have grown, linked to Ṣanʿāʾ by a road guarded in an approximately medial position by the Abnāʾ colony at Dhamār. The role of Qāniʾ as the principal port of Ḥimyar at so great a remove from the capital Ẓafār was, in some

[150] al-Ṭabarī, 957 (1858-60); trans. Guillaume, 1955: 33.
[151] Sedov, 2001: 35.

sense, a historical oddity – inherited from the ancient kingdom of Ḥaḍramawt which Ḥimyar subdued in antiquity – but more especially associated with the frankincense producing lands of Ẓufār.[152] If the primary economic motivation for Persian occupation was indeed silver, then it surely made much more sense to transport bullion a shorter distance along garrisoned roads[153] than attempt the longer journey through difficult territory, to the effect that Aden became the principal port of Yemen. Without state backing and protection, the security situation in the Ḥaḍramawt appears to have declined, and with it the commerce of Qāniʾ.

The situation in the Tihāma, which was beyond Persian control and dominated by the ʿAkk and Ashāʿir tribes, seems to have been relatively stable. A number of ports are mentioned by al-Ṭabarī in connection with the 632 rebellion of ʿAbhalah b. Kaʿb al-ʿAnsī, constituting the sole evidence for their existence at this time. This historically attested early seventh-century occupation of ʿAththar and Ghalāfiqa probably represents a continuation with the fifth- and sixth-century archaeologically evidenced settlement, including Late Roman ribbed amphorae from ʿAththar and Byzantine / Aksumite columns in a mosque at Ghalāfiqa.[154] These ports very likely survived the Persian occupation precisely because they were not occupied with the 'India trade' or important to the superpower conflict, but rather represent locally controlled centres of the 'country trade.'

[152] Tomber, 2008: 100-08.
[153] al-Thenayian, 1996.
[154] For the amphorae, see Zarins & Zahrani, 1985: 83. As for the *spolia*, Ed Keall and I drove out to Ghalāfiqa during the 2005 winter season at Zabīd; Keall links them to the Aksumite occupation of Yemen (*pers. comm.*).

[3.2.2] Egypt & Superpower Conflict

(i) The occupation of Egypt is notoriously ill-evidenced. None of the contemporary Byzantine narrative histories provide detailed accounts of the occupation.[155] The c. 610-30 section from John of Nikiu (fl. 696) is unfortunately missing, and Theophanes merely notes that "the Persians occupied all Egypt and Alexandria and Libya as far as Ethiopia and, after taking many captives and immense booty and money, returned home."[156] The Arabic historical tradition barely mentions the Sasanian occupation; al-Ṭabarī only includes a very brief tradition that the Persian general Shāhīn "proceeded onwards until he captured Egypt and Alexandria and the land of Nubia, and sent back Kisrā the keys of the city of Alexandria."[157] Whereas oral traditions regarding the Sasanian conquest of Yemen were preserved among the Abnāʾ of Ṣanʿāʾ, being retold as a shared narrative of origin informing communal identity, the occupation of Egypt seems not to have fostered a comparable Persian community with an interest in preserving memories of the conquest. The *Khuzistan Chronicle* (wr. < 660s), *History of the Patriarchs* and Leontitus' *Life of John the Almsgiver* all briefly describe the fall of Alexandria;[158] no Persian sources are available other than Pahlavi papyri found in Egypt.[159] Indeed, the evidence is slight, so that – for instance – there remains some confusion as to the identity of the Persian leader, with both Shāhīn and Shahrbarāz

[155] Butler, 1978: 69-92; Altheim-Stiehl, 1998; Greatrex & Lieu, 2002: 196-97.
[156] Theophanes, 432 (1997). *Cf.* Michael the Syrian, ii, 401 (1901). Theophanes may have taken this passage from an older Syriac source, the so-called 'Chronicle of 750.' *Cf.* Mango & Scott, 1997: lxxxii-lxxxiv.
[157] al-Ṭabarī, i, 1002 (1879-1901); trans. Bosworth, 1999: 318-19.
[158] *Khuzistan Chronicle*, 235 (2002); Severus, 485-87 & 490 (1904); Leontius, 52 (1974). *Cf.* Hoyland, 1997: 182-85.
[159] Altheim-Stiehl, 1992; Daryaee, (NO DATE); Hardy, 1929; MacCoull, 1986b; Venetis, 2004.

suggested. Nevertheless enough survives to pass comment on a few aspects of the occupation.

The occupation of Egypt belonged to the last great Sasanian assault on Byzantium. Taking advantage of a Byzantine civil war, Khusrow II Parvez (r. 590-628) launched an invasion of the Near East under the generals Shahrbaraz and Shāhīn, beginning with the capture of Antioch in 611. A Byzantine counter attack was routed in 613 and Jerusalem seized the following year – wherein the Church of the Holy Sepulchre was destroyed and relic of the True Cross carried away – before Alexandria fell in 619 followed by Upper Egypt around 621. The Persian triumph was short-lived, however, for between 622-27 Heraclius (r. 610–641) carried the fight to the heart of the Sasanian empire, culminating in the violent overthrow of Khusrow in 628. Egypt was returned to the Byzantines in 629, the same year that Muslim forces appeared east of the Jordan at Muʾta, anticipating a fresh round of Middle Eastern conquests and occupations.

(ii) It is difficult to write about the Sasanian occupation of Egypt without an eye to the Muslim conquest, for the decade of Persian rule was too short to develop a character of its own. In particular, it might well be argued that the Persian occupation hastened the end of Byzantine rule. The fact that the Melkite patriarch John III and the imperial magistrate and commander Nicetas fled Alexandria by sea,[160] rather than attempt to organise a resistance in the face of the advancing Persian army, can only have alienated the Egyptians from Constantinople. Too often this has been cast as a rift between Coptic speaking Monophysites and Greek speaking Melkites, ignoring a

[160] Ven, 1953: 81. Cited by Butler, 1978: 79.

demographic diversity which included Hellenised Jews and Christian Arabs, together comprising a broadly Egyptian population: one wonders if the failure of the Byzantines before the Sasanians raised an issue of 'home rule.' Though notions of a 'social contract' were hazy in antiquity, the people expected the state to defend their person and property in return for the burdens of taxation and labour requisition. The seemingly violent nature of the Persian occupation may have served to underscore the miserable failure of the Byzantines and effectively strip them of their political legitimacy.

In a late seventh-century biography of Anba Shanūdah, the literary device of a prophecy is used to describe the devastation: "The Persians shall come down into Egypt and make great slaughter: they shall plunder the goods of the Egyptians and shall sell their children for gold – so fierce is their oppression and inequity."[161] Severus is similarly graphic about Persian atrocities: "He commanded all the young men of the city, from the age of eighteen to fifty, to go out... (and) he commanded his troops to surround them, and slay them all with the sword. And the number of those that were thus slaughtered was eighty thousand men."[162] The stories Severus relates of the massacre of monks and the ruin of monasteries – "which have remained in ruins until this day"[163] – are corroborated by the papyri. A number of these contain references to outrages perpetrated by the occupying army. The father of a family fled to the Fayyūm complained to his master that the Persians had abducted him from his home, tortured him to unconsciousness and robbed him of his children.[164] A woman

[161] Unpublished manuscript. Cited by Butler, 1978: 88.
[162] Severus, 485-87 (1904).
[163] *Ibid.*
[164] Zereteli, 1966: 99-105. Cited by Altheim-Stiehl, 1992.

beseeched the bishop of Hermonthis for help, unable to pay her taxes and so fearing imminent eviction, following the murder of her son and seizure of her livestock by the Persians.[165] Similarly, a man reported to his employer that he had been unable to work because he had fallen in the hands of the Persians.[166] Violence was therefore perpetrated, at times at least, against both communities and individuals. Other papyri, including the Middle Persian examples, mostly comprise requisition orders and manpower levies.[167] That section of the population which was not extorted was clearly expected to work.

Having been abandoned to the Persians, the Egyptians did not take kindly to the re-imposition of Byzantine rule in the aftermath of the occupation, despite Heraclius' Monothelitist policy of appeasement, and the Melkite patriarch Cyrus was bitterly resented. Coptic tradition later held that Heraclius "tried the inhabitants of Egypt with hard trials, and like a ravening wolf devoured the reasonable flock, and was not satiated."[168] The Persian occupation could therefore be posited as the moment when the Byzantine state and Egyptian people parted company, a conceptual revolution sown by Shahrbarāz and reaped by ʿAmr.

The available narrative histories further point to an involvement of local nomadic Arabs of the Sinai and sedentary Arabs of the East in the Persian conquest. According to an epitome of the *Life of John*, Patriarch of Alexandria at the time of the Persian conquest, numerous Saracens fled before the invaders and sought refuge in

[165] Crum, 1939: no. 67. Cited by Altheim-Stiehl, 1992.
[166] Kalbfleisch, 1912-14: ii, no. 22. Cited by Altheim-Stiehl, 1992.
[167] MacCoull, 1986b: 310, 312.
[168] Severus, 493 (1904).

Alexandria.[169] In his discussion of this episode, Walter Kaegi wonders whether these were Sinaitic Arabs or those of Palestine;[170] it might equally well be wondered if they were nomadic Arabs from the Eastern Desert.[171] In the Nestorian Syriac chronicle attributed to Elias, bishop of Merv, it was a Christian Arab from the Sasanian provinces along the north-east littoral of Arabia who betrayed Alexandria to the Persians.[172] Kaegi goes on to suggest that these Arab refugees may have subsequently been a source of information for the invading Muslims, to which might also be added the tradition that ʿAmr was familiar with Egypt having traded there during the *jāhilīya*.[173] In some sense, the Persian conquest served almost as a blue print for the Muslims scarcely a generation later.

(ii) Babylon-in-Egypt [sv] is associated with the Persian occupation by narrative and documentary evidence **[Fig. 3.01].** It seems that Shahrbarāz made first for Babylon before turning his attention to Alexandria, so that one Cypriot monk then in the city departed by ship immediately upon hearing the news of the fall of Babylon.[174] Two of the published Middle Persian papyri refer to Babylon, which stands out given the otherwise scant evidence, and suggests that Babylon may have been an administrative centre of some note.[175] A Persian community is further recorded as having lived in the *Ḥamrā*ʾs – areas of indigenous settlement – at al-Fusṭāṭ.[176] Though these were later believed to have been exclusively descended from the Abnāʾ of Ṣanaʿāʾ, one wonders of

[169] Lappa-Zizicas, 1970: 272.
[170] Kaegi, 1998: 56.
[171] Power, 2005; 2007; 2010a; 2010c.
[172] *Chronicon Anonymum*, 25 (1960). Cited by Altheim-Stiehl, 1998.
[173] Ibrahim, 1981 (UNPUBLISHED): 192. Cited by Christides, 1993: 153.
[174] Ven, 1953: 81. *Cf.* Butler, 1978: 79.
[175] Hansen, 1938: no. 51; Weber, 1992: 45. Cited by Darayae, (NO DATE): 4-6.
[176] Kubiak 1987: 61-64.

some at least might trace their ancestry back to a Persian community associated with the Sasanian occupation. Certainly, it is worth noting a tradition recorded much later by al-Maqrīzī (d. 1442) that a Zoroastrian fire temple was built atop one of the towers, and that this may be the origin of the Arabic name for the fortress of Babylon, Qaṣr al-Shamʿa.[177] Though the evidence is far from conclusive, it at least seems that Babylon constituted an important garrison, possibly even the centre of Persian rule in Egypt. Severus writes that the Persian commander "built at Alexandria the palace which is called *Tarâwus*, the interpretation of the name being 'House of the Ring,' and it is now named Castle of the Persians."[178] However it seems unlikely that Alexandria, vulnerable to Byzantine maritime assault, would have been chosen as the primary residence.

There is some evidence to suggest that Babylon was still connected to the Red Sea via Trajan's Canal **[Fig. 3.02]**, which would have provided the Persians with a sea-link to occupied Yemen and so on to the Gulf. It has traditionally been believed that the canal silted up in the sixth century, since no further references in the papyri have been found later than that fifth century.[179] John Cooper's recent study of the canal points to a possibly contemporary description reproduced by Gregory of Tours (d. 594), further noting that one of the traditions recorded by Ibn ʿAbd al-Ḥakam (d. 871) explicitly states that "before Islam, ships used to come to us (the Quraysh) carrying traders of the people of Egypt. When we conquered Egypt, that canal was cut, having been

[177] Butler, 1978: 246.
[178] Severus, 486 (1904).
[179] Mayerson, 1996: 121.

blocked off, and the traders had abandoned it."[180] This rather implies that there was a living memory of a still functioning canal from the years before the Muslim conquest.

The Persian conquest of Egypt in many ways betrays the centrifugal forces implicit in the Sasanian political structure, for in Egypt as in Yemen, the local governors quickly established their virtual independence and indeed Shahrbarāz may have used Egypt as a springboard to seize the throne. This species of military feudalism therefore precluded the Shāhenshāh from driving home his victories in Yemen and Egypt, so that there was no determined policy in the Red Sea theatre of the war with Byzantium. Persian hegemony in the Red Sea did not therefore amount to Sasanian hegemony, merely that the political elite in Yemen and Egypt were of Persian stock, and the most powerful armies in the Red Sea region were of broadly Iranian extraction.

[3.3] Arab Hegemony (c. 630-685)

[3.3.1] Co-Option of Yemen & Conflict with Ethiopia

(i) Yemen was brought into the fold of the early Muslim community through co-option and not conflict. It is striking that the later Arabic sources preserve traditions to the effect that the Prophet guaranteed the position and property of the post-Ḥimyarite chiefs, and did not require them to adopt Qurʾānic law and become

[180] Gregory of Tours, i, 10 (1974); Ibn ʿAbd al-Ḥakam, 164-5 (1922). Cited by Cooper, 2010 (IN PRESS).

Muslims.[181] The modern Yemeni historian ʿAbd Allāh al-Muhsin al-Madʿaj argues that, given the lack of central authority and power rivalry among the local chiefs, conversion was fastest among those weaker tribes with most to gain.[182] One tradition records that a delegation of 50 members from the Tihāma tribe of al-Ashāʿir set sail for the Ḥijāz and arrived at Medina in 628-29, which al-Madʿaj considers to represent the first significant contact between Muḥammad and the Yemeni tribes.[183] Whether or not the tradition carries any truth, it points to the importance of the Red Sea at the dawn of Islam.

Minority groups also entered early into alliances with the Medina. The Christian city of Najrān is said to have signed a peace treaty with the Prophet in 631-32, wherein they undertook an annual tribute to two thousand garments of stipulated value, and provide thirty suits of mail, thirty horses and thirty camels in case of war.[184] It might be significant that the traditions record that the Najrānīs approached the Prophet asking for an alliance, perhaps hoping to find greater security amidst still volatile ethnic and religious tensions. The Persian Abnāʾ of Ṣanʿāʾ were later claimed as the first Yemeni converts to Islam, largely on the authority of their pious descendents. One tradition holds that the last Persian governor, Bādhān, converted in 629 following the death of Khusrow,[185] while another relates how the Abnāʾ converted in 632 during

[181] al-Ṭabarī, i, 1718 (1879-1901); Ibn Ḥabīb, 75 (1942); Ibn Ḥajar, ii, 182 (1323-25). Cited by al-Madʿaj, 1988: 9. *Cf.* Watt, 1956: 126.
[182] al-Madʿaj, 1988: 'The Beginnings of Yemeni-Muslim Relations,' pp. 8-13. After Arnold, 1943: 43.
[183] al-Madʿaj, 1988: 9. *Cf.* Ibn Saʿd, i, 348 (1957).
[184] Ibn Saʿd, i, 357 (1957); al-Balādhurī, 75 (1959); al-Yaqʿūbī, ii, 66 (1358). Cited by al-Madʿaj, 1988: 11. *Cf.* Watt, 1956: 127, 359; Trimingham, 1979: 306.
[185] Ibn Isḥāq in Ibn Hishām and al-Wāqidī in al-Ṭabarī, i, 1763 (1879-1901), are further reproduced by Ibn Ḥajar, i, 176 (1323-25). Cited by al-Madʿaj, 1988: 31.

the brief occupation of Ṣanʿāʾ by a hostile Yemeni tribe.[186] The controversial new chronology for the fall of the Sasanian Empire recently proposed by Parvaneh Pourshariati suggests that the Muslim conquest of Iraq was achieved 628-32;[187] this rather neatly fits with – and helps to explain – the traditional date for the conversion of the Persians of Yemen. The Abnāʾ may well have sought out an alliance with the Muslims to preserve their increasingly precarious position.

The extent of Muḥammad's influence in Yemen by the time of his death seems to have been limited, however, since the powerful Ḥimyarite confederation was not yet reconciled to Islam. The later Arabic traditionalists record that Ḥimyar did not convert to Islam until after the Prophet's death,[188] that they did not assist the Muslims during the *ridda* wars,[189] nor participate in the opening of hostilities against the Sasanians.[190] Indeed, it is not until the Iraq campaign achieved notable success – Khālid b. al-Walīd's capture of far-famed al-Ḥira in 633 – that Ḥimyar approached the Muslims at Medina. Thus Dhū al-Kalāʿ al-Ḥimyarī is portrayed by al-Wāqidī as arriving before Abū Bakr with noble words: "Ḥimyar has come to you with their wives and their children, people of good reputation in the past and high rank."[191] Thereafter, Ḥimyar and the other Yemeni tribes took an active role in the conquests. At so pivotal a battle as Yarmūk, for instance, al-Azdī states "the majority of the people were from

[186] Ibn Saʿd, v, 533 (1957); al-Ṭabarī, i, 1763, 1798 (1879-1901); Ibn Ḥajar, v, 313 (1323-25). Cited by al-Madʿaj, 1988: 31.
[187] Pourshariati, 2008: 281-83.
[188] Ibn Saʿd, i, 265 (1957). Cited by al-Madʿaj, 1988: 11.
[189] al-Ṭabarī, i, 1989 (1879-1901); Ibn al-Athīr, ii, 255 (1348). Cited by al-Madʿaj, 1988: 46.
[190] al-Madʿaj, 1988: 66, notes that there is no mention of Yemeni troops in the conquests before 634.
[191] al-Wāqidī, i, 2 (1948). Quoted in al-Madʿaj, 1988: 83.

Ḥimyar, also Hamdān, Khawlān, Madhḥij, Khathʿam, Ḥaḍramawt and Kinda were there."[192] **[Fig. 3.04]**

The Yemenis appear to have been equally active in colonisation. According to al-Wāqidī, 17,000 of them remained in Bilād al-Shām after the fall of Jerusalem when the Muslim armies were demobilised, and al-Yaʿqūbī states that the majority of the population of Damascus were of Yemeni extraction.[193] Indeed, it is striking that the Arabic historical tradition relates that the Yemeni troops had much more enthusiasm for the Levantine as opposed to the Mesopotamian theatre of war.[194] As has been shown, pre-Islamic Ḥimyarite merchantmen had put into the Byzantine ports of Aila **[2.2.1] (i)**, even as Byzantine embassies and traders had been active in Ẓafār, Qāniʾ and Aden **[2.4.2] (iii) (iv)**. Such links between Ḥimyarite Yemen and the Byzantine Levant may therefore have inspired and informed early Islamic Yemeni settlement in Bilād al-Shām.

Yemeni involvement in the conquest and colonisation of Lower Egypt is still more pronounced. Again, it is significant that there were pre-Islamic Ḥimyarite commercial contacts with Byzantine Clysma, with deeper historic contacts going back to the Hellenistic South Arabian kingdoms **[1.3] (i)**. Late Roman amphorae have been found at ʿAththar on the Tihāmat al-Yaman, the homeland of the ʿAkk tribe who appear to have spear-headed the invasion of Lower Egypt, so that commercial contacts may have again inspired aspirations of conquest. After Babylon was taken, ʿAmr appointed

[192] al-Azdī, 195 (1854). Similarly, al-Wāqidī writes that "the right flank of the army consisted of men of al-Azd, Madhḥij, Ḥaḍramawt and Khawlān", i, 155 (1948), and al-Kūfī concludes: "Thus the Yemeni tribes were spread among all the divisions of the army," i, 255 (1968). Quoted by al-Madʿaj, 1988: 70.
[193] al-Wāqidī, i,155 (1948); al-Yaʿqūbī, 326 (1892).
[194] al-Balādhurī, 253 (1959); al-Ṭabarī, i, 2183, 2186, 2187, 2218 (1879-1901). Cited by al-Madʿaj, 1988: 68.

four Yemeni chiefs to divide out the cantonments (*khiṭaṭ*) **[Fig. 3.03]**,[195] so that the Yemenis were to dominate the *jund* and comprise the notables (*wujūh*) of al-Fusṭāṭ for the next two centuries.[196] The *miṣr* of Egypt was therefore, in essence, a Yemeni colony.

(ii) The co-option of post-Ḥimyarite Yemen by the Muslims of the Ḥijāz would logically have introduced elements of a Yemeni agenda to the direction of the conquests. It might be thought that part of this hypothetical Yemeni agenda would have involved conflict with their old enemy, Ethiopia. Of course, ancient contacts and conflicts with Ethiopia were not the preserve of Yemen, and both the pagan Arabs and Muslims of the Ḥijāz had experience of the Aksumites. The Murayghān inscription of 547 or 552 celebrates Abraha's victories in the Ḥijāz, often identified with the expedition remembered in the exegesis of *Sūrat al-Fīl*.[197] An Ethiopian named Bāqūm (= Enbāqōm in Ge'ez) is believed to have rebuilt the Kaʿba in 608 using the beams of an Ethiopian ship wrecked as al-Shuʿayba; the alternating layers of stone and wood, and projecting beam ends dubbed 'monkey heads,' are characteristic of Aksumite architecture.[198] Ethiopian material culture repeatedly appears in *Jāhilīya* poetry, including spears from Shamhar south of Adulis,[199] and Ge'ez loan words are found in the Qurʾān, attesting to frequent contact. Moreover, Ethiopian slaves were well integrated into pre-Islamic Ḥijāzī society, and the mother of ʿAmr b. al-ʿĀṣ was

[195] On the Yemeni chiefs, see: Ibn Duqmāq, i, 3 (1893); al-Maqrīzī, ii, 76 (1324); Ibn Taghrī Bardī, i, 74 (1851). Cited by al-Madʿaj, 1988: 88, & n. 44, n. 45.
[196] On the foundation of al-Fusṭāt, see: Yāqūt, iv, 261-66, esp. 262 (1957). Also, Guest, 1907; Kubiak, 1987; Denoix, 1992. Raymond, 2000: 11-16.
[197] Ryckmans, J., 1953; Ryckmans, G., 1953.
[198] al-Azraqī (d. 858), i, 107-110 (1857-61); Yāqūt, iii, 301 (1866-73). *Cf.* Cresswell, 1951; Hawting, 1984: 318 & n. 4; Cresswell & Allan, 1989: 3-4. Note Ibn Hishām has a Greek merchant cast ashore at Jedda and a Coptic carpenter in Mecca, 123 (1858-60); trans. Guillaume, 1955: 84.
[199] Trimingham, 1952: 42-48; Ullendorff, 1960: 154; Pipes, 1980: 88-90; Munro-Hay, 1989: 409-10; Pankhurst, 2004. Note that the Prophet's spear was said to be a gift from the Negus.

reported to have been one such.[200] A first – maritime – *hijra* to Ethiopia is said to have set sail from al-Shuʿayba in 615, with most *muhājirūn* returning in 622 and a second wave in 628.[201] It is tempting to speculate that they served as mercenaries for one or other of the post-Aksumite groups, since the last of the inscriptions describes barbarian invaders and civil war, though there is nothing explicit about the *muhājirūn*.[202]

Conflict with Ethiopia, whether inspired by a hypothetical Yemeni agenda or following conjectural Muslim involvement in an Ethiopian civil war, may even have begun in the lifetime of the Prophet. Al-Wāqidī states that in 630, "news reached the Messenger of God that people from Ethiopia were seen by the people of al-Shuʿayba – a port in the district of Mecca – in ships... so he dispatched ʿAlqama b. Mujazziz al-Mudlijā at the head of 300 men."[203] Though in the account of al-Wāqidī the expedition of Ibn Mujazziz appears to directly follow the encounter off al-Shuʿayba, so that it is included among the campaigns of the Prophet, al-Ṭabarī records an alternative tradition that ʿUmar dispatched Ibn Mujazziz to Ethiopia by sea in 641.[204] Either a later expedition has been attributed to the initiative of the Prophet as an exercise in hagiography, or else al-Ṭabarī has conflated two separate expeditions apparently under the same leadership. He further quotes another source mentioning a "raid of

[200] Pipes, 1980: 88.
[201] Ibn Hishām, 208-217, 217-21, 241-43 (1858-60); trans. Guillaume, 1955: 146-50; 150-53; 167-69. al-Ṭabarī, i, 1181-2 (1879-1901). *Cf.* Watt, 1961: 65-70; Hawting, 1984: 319 & n. 6.
[202] Munro-Hay, 1991: 231-32.
[203] al-Wāqidī, 983 (1965). Strangely, Hawting (1984: 319) reads this passage as meaning 300 Ḥabsha: «بلغ رسولَ الله أنّ ناساً من الحبشة تَراياهم أهل الشُّعيْبَة – ساحل بناحية مكّة – في مراكب؛ فبلغ النبيّ فبعث عَلْقَمَة بن مُجَزّ المُدْلِجيّ في ثلاثمائة رجلٍ»
[204] al-Balādhurī, 431-32 (1924); al-Ṭabarī, i, 2546-48, 2595 (1879-90). *Cf.* Hourani, 1995: 54; Hasan, 1967: 30; Munro-Hay, 1982; Glazier, 2008: 11.

the blacks in the sea in the year 31 (i.e. 651),"[205] which together with the account of al-Wāqidī suggests a pattern of tit-for-tat maritime expeditions over twenty years.

There is some evidence for conflict between the Muslims and Ethiopia in a near contemporary Syriac source, namely the *Apocalypse* attributed to Methodius (wr. 691?), which states that the king of the Greeks will attack the Children of Ishmael "from the sea of the Kushites, and will cast desolation and destruction on the wilderness of Yathrib... and the Greeks will descend upon them from the countries of the west and finish off with the sword the remnant left over from them in the Promised Land."[206] This has been taken to refer to a historical post-Aksumite assault on the Ḥijāz and may correspond to one of the maritime raids referred to in the Arabic traditions.[207] The Greek assault from the west may refer to the Mardaites, who were active in Bilād al-Shām at much the same time the *Apocalypse* is believed to have been written, even attacking the eschatologically significant city of Jerusalem in 677.[208] It has been suggested that the Byzantines were still in contact with Ethiopia,[209] and though neither the post-Aksumites or Mardaites were in a position to overturn the Arab hegemony as Methodius clearly wished, it is possible that Constantine IV or Justinian II attempted to use the Ethiopians to put pressure on the Arabs, perhaps even instigating a feint for Medina to relieve pressure on Constantinople.

[205] al-Ṭabarī, i, 2546-48, 2595 (1879-90).
[206] Methodius, 237-38 (1993).
[207] Kobishchanov, 1979: 117.
[208] Theophanes, 496 (1997). *Cf.* Moosa, 1969: 597-99.
[209] Krirov, 1977: 121-22. Cited by Kobishchanov, 1979: 117.

(iii) Dahlak is believed to have been occupied by the Muslims in 702. [210] Victories against the Ethiopians may be celebrated in the frescoes of Quṣayr ʿAmra, now attributed to al-Walīd (r. 743-44),[211] where the Negus of is possibly depicted as an acquiescent king. The *Kitāb al-Aghānī* further relates that the Umayyads and early ʿAbbāsids used Dahlak as a place of exile.[212] It is therefore possible to speculate that the Muslim capture of the islands belonged to a wider contestation of hegemony in the Red Sea. Generally, however, the early Islamic history of Dahlak remains confused.

(iv) Adulis has traditionally been believed to have been destroyed by the Muslims in the mid seventh century, so that Francis Anfray attributed the thick ash layer marking final occupation to the 641 Ibn Mujazziz naval expedition.[213] More generally, Tomber picks up on the seventh-century ceramic date provided by Adulis and other sites to argue that the Arab conquest brings to an end the Red Sea 'India trade' and its attendant maritime communications infrastructure.[214] While David Peacock and Lucy Blue, in their recent survey of Adulis, have published imported pottery of fifth- through seventh-century production,[215] they note the apparent failure of the 641 expedition and point to a coin dated c. 700 by Munro-Hay to conclude that Adulis was probably not destroyed by the Muslims.[216]

[210] Hasan (1967: 30) cites al-Fākihī, ii, 44 (1859) & Qināʾī, 15 (1903). I have not been able to find this event in al-Fākihī and could not find al-Qināʾī at all. Also, Hasan states that the islands were occupied by Sulaymān b. ʿAbd al-Malik (r. 715-17), which must be a mistake given the stated date of 702. *Cf.* Munro-Hay, 1982: 121.
[211] Fowden, 2004: 42-62.
[212] Ibn al-Farrāj al-Iṣfaḥānī, iv, 239, 246, 248-50, 255 (1350 / 1931); al Ṭabarī, iii, 135 (1879-1901). Cited by Trimingham, 1952: 47.
[213] Anfray, 1974: 753;
[214] Tomber, 2008: 161.
[215] Peacock & Blue, 2007: 37, 56-64; Peacock, 2007: 95-102
[216] Glazier & Peacock, 2007: 11-12; Munro-Hay, 1982: 117.

However, the chronology of the final occupation at Adulis remains very much open to interpretation. Aside from the single coin found on the surface, which could plausibly post-date the primary occupation, the upper limit of the ceramic assemblage is provided by the presence of Aila ware. This amphora type was produced from the early fifth through seventh centuries, meaning that the sherds found on the surface at Adulis could have been fired and transported any time within a space of three-hundred years, and therefore need not necessarily be of seventh-century provenance. Indeed, given that the Aila amphora represents the only possibly seventh-century type at Adulis, with the remainder of late material found on the surface consisting of Late Roman 1 and 2 amphorae each supplying a fifth- and sixth-century date, it might be better to re-date the upper limit of the assemblage to the sixth century. Such a date would be in keeping with the final occupation at Aksum and the cessation of Aksumite epigraphic and numismatic evidence more generally.

(v) Bāḍiʿ [sv, al-Rīḥ] may have been seized and settled by the Muslims to further the conflict with Ethiopia. A medieval Muslim port identified with Bāḍiʿ is located on the island of al-Rīḥ opposite the remains of a possible pre-Christian Aksumite coastal settlement near the modern town of ʿAqīq **[Fig. 3.05-.06]**. The date and relationship between these sites remain unclear, however. It might be posited that if ʿAqīq was indeed Aksumite and was still occupied in the early seventh century, which is at this point only plausible rather than proven, then it would have constituted an obvious target for Muslim aggression. This would further account for the tradition recorded by al-Wāqidī that, in 637, Abū Mihjān al-Thaqafī went to Bāḍiʿ.[217] It might additionally

[217] al-Ṭabarī, i, 2379-80 (1879-1901); trans. Vantini, 1975: 95.

be noted that the Ethiopian Abraha's grand razzia in the Ḥijāz reached as far as Turaba, 130 km south-east of Ṭāʾif, the principal city of the Arab tribe of Thaqif.[218] Moreover that ʿUrwah b. Masʿūd al-Thaqafī sought assistance from the Yemeni town of Jurash during the Muslim siege of Ṭāʾif in 630.[219] Could old enmities and alliances have led the Banū Thaqif to subscribe to the hypothetical Yemeni agenda *vis-à-vis* the Ethiopians?

(vi) Jedda [sv] was most often reckoned to have been established by ʿUthmān in 646 as the main port of provision of Mecca, replacing the earlier port of al-Shuʿayba a little to the south.[220] Alternative traditions state that Jedda was built by Persian merchants who converted to Islam at the time of the Prophet, or even that it was established by a Sasanian king.[221] A pre-Islamic Persian presence is, of course, attested in Yemen and perhaps even in western Arabia: al-Ṭabarī records that Shāpūr I (r. 241-72) raided the Ḥijāz, Ibn Isḥāq mentions silver as driving Sasanian interest in Arabia, and al-Hamdānī refers to 'thousands of Magians' mining in the Najd.[222] Moreover, Ibn Isḥāq reproduces the legend of Salmān al-Fārisī, a Persian companion of the Prophet who played a key role in the Battle of the Trench. Salmān, however, was probably no more than a 'culture hero' associated with the spread of Islam in Iran, and there is no good evidence to support a pre-Islamic Persian origin for Jedda.[223] A more likely origin of Jedda lies in the Ethiopian naval activity attested off the coast of al-Ḥijāz, namely the

[218] Smith, 1954: 435-36.
[219] Ibn Saʿd, i, 312 (1957). Cited by al-Madʿaj, 1988: 66.
[220] Hawting, 1984.
[221] Ibn al-Mujāwir, 42-3 (1951-54) and Ibn Farāj, 5 (1984).
[222] al-Ṭabarī, i, 836-46 (1879-1901), trans. Bosworth, 1999: 'Sabūr II Dhū al-Aktāf,' pp. 50-66; esp. Ṭab. 839/ Bos. 55: "He approached the neighbourhood of Medina and killed the Arabs he found there and took captives." Ibn Hishām, 42 (1858-60), trans. Guillaume, 1957: 31; al-Hamdānī, fol. 25a, trans. Dunlop, 1957: 40. *Cf.* Crone, 1987: 46-47.
[223] Ibn Hishām, 136-43 (1858-60); trans. Guillaume, 1957: 'Salmān the Persian,' pp. 95-98. *Cf.* Levi della Vida, 2004: 701-702.

raiding fleet of 630 described by al-Wāqidī. Accordingly, Ibn al-Mujāwir states that al-Shuʿayba is "a closer harbour (to Mecca) than Jedda and is consequently not protected."[224] The port of Mecca was therefore moved to a more easily defended site at the outset of the conquest period, and seems at first to be most associated with the Ethiopian conflict.

The foundation of Bāḍiʿ and ʿAydhāb on the African littoral facing the Ḥijāz may have had a strategic role in contesting Ethiopian hegemony in the southern Red Sea. It was customary in the Graeco-Roman period for north-south maritime traffic to follow the African coast, never more so than during the Aksumite hegemony, when direct communications between Egypt and Ethiopia were important to both countries. The position of the Sudanese ports would have severed communications between these two key allies, and prevented the kind of maritime alliance which had facilitated the Aksumite invasion of Ḥimyar. Moreover, Bāḍiʿ is located at a medial position between Jedda and Adulis, and may have been established in preparation for the 641 expedition against Ethiopia. This would be in keeping with the Muslim military strategy suggested by the conquests of Syria and Egypt, whereby a strong forward position was first established in the years preceding invasion – Aila in the case of Syria and Gaza in that of Egypt – from where the Muslims might extort tribute and launch raids.

Oblique evidence for a conflict with Ethiopia may be found in the apparently burgeoning population of black slaves in the pre- and early Islamic Ḥijāz, as suggested

[224] Ibn al-Mujāwir, 43 (1951-54).

by later Arabic sources. According to Khalil ʿAthamina, notable Arabs in the seventh-century Ḥijāz took to surrounding themselves with Sūdānī militias.[225] An Ethiopian corps fought for Ibn al-Zubayr during the siege of Mecca, while Muʿāwiya's governor of Medina owned a Sūdānī private militia, and the army of Yazīd b. Muʿāwiya dispatched to Medina in 682-3 included numerous Sūdānī troops. Al-Jāḥiẓ relates that nine months after the campaign, 800 babies were born of Sūdānī fathers and dubbed the *awlād al-ḥarra*.[226] Of course 'Sūdānī' does not necessarily mean 'Ethiopian,' and indeed the Nubian *Baqt* treaty makes mention of an annual tribute of slaves from 651. However, the Muslims were repeatedly defeated by the Nubian kingdom of al-Maqurrā and the Nubian slave trade cannot be documented before the mid-eighth century **[4.4.2]**. It seems more likely, therefore, that the Sūdānī troops attested in the late seventh-century Ḥijāz were a product of the conflict with Ethiopia.

Despite the evidence for conflict, the *ḥadīth* surrounding the Prophet's life alternatively record excellent relations with the Ethiopians. The Prophet is said to have written to the Negus,[227] who is duly supposed to have converted to Islam and sent his son to live in Madina,[228] so that the Prophet mourned his death[229] and prayed for his soul.[230] He appointed the Ethiopian Bilāl b. Rabah as *muʾadhdhin*, and his own spear was a gift from the Negus of Ethiopia.[231] Indeed, his affection was such that Abū Daʿūd records a 'sound' *ḥadīth*: "Leave the Ethiopians in peace so long as they do not

[225] ʿAthamina, 1998.
[226] 'Athamina, 1998: 366.
[227] al-Ṭabarī, i, 1569-71 (1879-1901); trans. Fishbein, 1997: 108-10.
[228] al-Ṭabarī, i, 1570 (1879-1901); trans. Fishbein, 1997: 110. *Cf.* Ibn al-ʿAthīr, ii, 144; v, 273 (1285). Cited by Trimingham, 1952: 46, n. 2.
[229] al-Ṭabarī, i, 1720 (1964); trans. Poonawala, 1990: 77.
[230] Ibn Hishām, 224 (1858-60); trans. Guillaume, 1955: 155. *Cf.* al-Wāḥidī, 103-4 (1315/ 1897). Cited by Trimingham, 1952: 46, n. 2.
[231] Ibn Hishām, 235-36 (1858-60); trans. Guillaume, 1955: 235-36. ʿAmru al-Qays and Labīd mention spears of Shamhari manufacture. Shamhar is south of Adulis.

take the offensive."[232] These traditions may be understood as almost entirely ahistorical, instead serving much later socio-political purposes. Since they effectively serve to release the Muslims from the obligation of *jihād* against Ethiopia,[233] it might be imagined that they were composed in response to an inglorious *volte-face* on the part of the Umayyads, who may simply have abandoned as unprofitable an Ethiopian conflict instigated by the Rashīdūn Caliphs.

[3.3.2] Red Sea Routes & Conquest of Egypt

(i) The considerable literature inspired by the Muslim conquest of Egypt overwhelmingly focuses on events in and around the Nile Delta.[234] It is broadly agreed that in 639 a Muslim army led by ʿAmr b. al-ʿĀṣ took Pelusium and was there reinforced by Zubayr b. ʿAwwām, before defeating the Byzantines at Heliopolis to take Babylon-in-Egypt in 640, and then finally entering Alexandria in 641. The Nile Valley, in so far as it is mentioned, is believed simply to have been delivered to the Muslims by the Byzantine Patriarch Cyrus following the surrender of Babylon. The conquest of Egypt has therefore been generally reduced to a single linear march up the Nile.

However, there is some evidence to suggest that Upper Egypt in fact fell to a Muslim army as part of a second invasion force, for Ibn Ḥawqal (d. 988) states that "ʿAbd Allāh

[232] Abū Dāwūd, ii, 133 (1948-50). Cited by Trimingham, 1952: 46, & n. 3.
[233] The notion of *jihād* cleared possessed resonance in the Umayyad *milieu*. A Kufic inscription from the Negev, dated AD 735, makes mention of 'obligatory *jihād*" (*jihād wājib*) and a desire for martyrdom. Sharon, 1990: 22; Site 66, Text I. *Cf.* Firestone, 1999; Mottahedeh & al-Sayyid, 2001.
[234] Butler, 1978; Donner, 1981; Noth, 1994: 183-4; Hoyland, 1997: 574-90; Kaegi, 1998; Kennedy, 1998: 62-69; Christides, 1993: 153-56.

b. Abī Sarḥ, coming by sea from the Ḥijāz, conquered the town of Aswān."[235] Presumably, he travelled via the Red Sea and Eastern Desert, along a sea-lane and caravan route well attested into the sixth century and again from the eighth century on.[236] Indeed from the very outset of the conquest of Egypt, Aswān and the Ṣaʿīd appear to have formed a governorate quite distinct from that of Fusṭāṭ and the Ḥawf; al-Kindī clearly states that ʿAmr was appointed governor "over all of Egypt except the Ṣaʿīd, for ʿUmar appointed Ibn Abī Sarḥ as governor of the Ṣaʿīd."[237]

The conceptual duality of Egypt has largely been lost on Western observers, whose perception remains ultimately shackled to Biblical exegesis and Classical learning, which is to say external rather than internal source traditions. The Greek word behind the English 'Egypt' refers not to any country, but to the 'White Walls of (the temple to the God) Ptah' or *Inbu Hedj Ptah* contracted to *Hedj Ptah* in colloquial Middle Egyptian, which dominated the capital city of Memphis. There is in fact no autochthonic Egyptian toponym designating the Valley together with Delta and so corresponding to the Graeco-Roman 'Aegyptos,' the nearest being *Kemet* or 'Black Land' (alluvium), which again exists only as a binary opposite to 'Red Land' (desert). It is further worth noting that Lane provides an alternative translation of the Arabic *miṣr* as 'the limit or boundary between two lands,'[238] though this is usually translated

[235] Ibn Ḥawqal, 50 (1938-39); trans. Vantini, 1975: 152.
[236] For the Aydhāb – Aswān route see, *inter alia*: al-Yaʿqūbī, 335 (1892); al-Iṣṭakhrī, 40 (1927); al-Muqaddasī, 84 (1906); Ibn Ḥawqal, 50 (1938-9). *Cf.* Couyat, 1911.
[237] al-Kindī, 11 (1912). *Cf.* Ibn ʿAbd al-Ḥakam, 173 (1920). Both al-Muqaddasī, 194-5 (1906), trans. Collins, 2001: 165, and Yāqūt, i, 191-2 (1957) later describe Aswān as the capital of the Ṣaʿīd. *Cf.* Garcin, 1995: 861-66.
[238] Lane, 1863-93: vii, 23-4.

as 'Egypt,' derived from its meaning of 'cantonment' or 'city' and used as a synonym for *the* city, al-Fusṭāṭ.[239]

This represents a striking continuation of long-established practice. The Pharaohs had styled themselves 'Lords of the Two Lands,' a division reflected in the Tetrarchic provinces of *Aegyptus Jovia* and *Aegytpus Herculia*, and preserved in the Arabic distinction between Ḥawf and Ṣaʿīd. It is moreover clear that this dichotomy was born not just of the peculiar Egyptian topography of Nile Delta vs. Valley, but that the two represent a very real division of human geography, since Lower Egypt comprises a socio-cultural extension of south-western Asia and the Mediterranean world, just as Upper Egypt belongs to north-eastern Africa and looks out to the Red Sea. It is, therefore, entirely plausible that the conquering Muslims of the seventh century recognised the duality of Egypt to the effect that they despatched two armies for the two lands, that of ʿAmr for the Ḥawf and that of Ibn Abī Sarḥ for the Ṣaʿīd.

(ii) ʿAydhāb [sv] may have been established during Ibn Abī Sarḥ's invasion of the Ṣaʿīd **[Figs. 3.07-.08]**. According to al-Bakrī (d. 1094), "it is inhabited by a tribe called Banū Būlus: it is said that these belong to the Beja, but others claim that they are related to the Arabs and that they actually are the Marāziyya, a section of which was expelled by Abū Bakr al-Siddīq (r. 632-34)."[240] Such a late oral tradition might easily be dismissed as an invention of the identity politics of medieval Beja tribes, though it is strange for the Banū Būlus to doctor their lineage with an Arab group so undesirable as to be deported. Alternatively, the association of ʿAydhāb with Abū Bakr parallels that of

[239] Bosworth, 1993: 146; Wensinck, 1993a: 146; 1993b: 147.
[240] al-Bakrī, 167-68 & MC fol. 730 v. (1913); trans. Vantini, 1975: 244.

Bāḍiʿ with ʿUmār, who is believed also to have ordered the establishment of al-Qulzum and al-Jār **[3.3.2] (iv)**, with ʿUthmān recorded as having founded Jedda and ʿAyla, so that these ports may be posited as part of the maritime infrastructure of conquest.

Naval expeditions in other theatres of war lend circumstantial support to this hypothesis. It might be significant that none other than Ibn Abī Sarḥ was responsible for the construction of the first Muslim fleet in the Mediterranean, ostensibly following a Byzantine attempt to re-take Alexandria by sea in 645, to be followed shortly by a second fleet built by Muʿāwiya in Syria during the Cyprus expedition of 648.[241] There followed naval raids against Sicily (652) and Rhodes (653), culminating in the great victory at the 'Battle of the Masts' in 654, and Constantinople itself was blockaded between 672 and 678.[242] The great arsenal on the island of Rawḍa opposite Babylon was similarly established in 672-3.[243] Less well known are the Arab maritime expeditions launched in the Gulf and Arabian Sea.[244] In 637 ʿUthmān b. ʿAlī, the governor of Baḥrayn and ʿUmān, sent a raiding fleet to Tana near Bombay, and later in the year another was despatched against Broach, while his brother, Mughira b. ʿAlī, led a maritime expedition against Daybul.[245] Further maritime activities in the Gulf include the foundation of a naval base off the coast of Persia in 634, and an ʿAzdī armada of 3,000 men who set sail from Julfār in 639 to seize Abarkāwān (= Qishm).[246] Given that naval expeditions were despatched by both Caliphs and governors with

[241] al-Wāqidī states the two fleets combined for the first Cyprus expedition, quoted in al-Ṭabarī, i, 2826 (1879-1901); trans. Humphreys, 1990: 31. *Cf.* Fahmy, 1950: 52, n. 1.
[242] Lewis, 1951; Christides, 1985.
[243] al-Kindī, quoted by al-Qalqashandī, iii, 339 (1913-18); al-Maqrīzī, ii, 178 & 196 (1911-27); al-Suyūtī, ii, 264 (1882). Cited by Fahmy, 1950: 35.
[244] Christides, 1994.
[245] al-Balādhurī, ii, 209 (1924). Cited by Christides, 1994: 36.
[246] Kennedy, 2007: 181-82; 324-43.

relative frequency through the seventh century, there is nothing exceptional about the establishment of ports in the Red Sea at this time, especially given the impermanent nature of such anchorages.

(iii) al-Fusṭāṭ [sv] was founded by ʿAmr in 642 as the principal cantonment of the Muslim army of occupation in Egypt. It was later popularly imagined that the etymology of Fusṭāṭ derives from the Arabic word for tent, and that the city developed out of the Muslim siege camp centred on the tent of ʿAmr.[247] Another interpretation holds that it comes from the Greek *phossaton* or Latin *fossatum*, often translated as 'entrenchment' and so taken as a reference to the military camp of Babylon. It might alternatively be translated as 'canal' in reference to Trajan's Canal, the southern extent of which seems to have still run through the fortress of Babylon and the outlying low-density city to the north extending towards Heliopolis.[248]

At some point after the conquest Trajan's Canal was re-dredged to afford economic and political communications with the Muslim bases of the Ḥijāz. Later tradition ascribes this to ʿAmr, acting on the orders of the Caliph ʿUmār in order to alleviate the Ḥijāzī famine of 643, so that the canal was dubbed Khalīj Amīr al-Muʾminīn, or the 'Canal of Commander of the Believers' (i.e. the Caliph).[249] Cooper estimates that the 170 km long and 60 m wide canal would have taken 2,000 workers a year to complete, assuming a depth of 2.5 m and based upon an early twentieth-century observation that a canal digger could excavate 3.5 m^2 per day.[250] This estimate seems unduly

[247] Raymond 2000: 11-16.
[248] Sheehan, 2009: 4-7.
[249] al-Balādhurī, 216 (1866); Ibn Saʿd, iii/ I, 139 (1905-40). Cited by Dietrich, 1965: 454. *Cf.* Fahmy, 1950: 24.
[250] Cooper, 2010.

sanguine, however, given that the 80 km long Maḥmūdīya Canal took three years to dig and is reckoned to have cost the lives of some 20,000 labourers. Such a major engineering feat as the re-dredging of Trajan's Canal could not have been completed as quickly as the Arabic sources suggest. It is therefore possible that the canal was merely blocked rather than entirely silted up, and indeed Ibn ʿAbd al-Ḥakam (d. 871) explicitly states that "the canal was cut having been blocked off,"[251] implying that sections of the canal had been deliberately blocked by the Byzantines during the conquest. All ʿAmr had to do, it might therefore be conjectured, was remove the Byzantine defensive backfill to ship Egyptian grain to the Ḥijāz.

The canal was to play a role in the peopling of the new city, which once again became a port connected to the Red Sea. According to later Arabic sources, Fusṭāṭ was settled predominantly by South Arabian tribes, who were joined by other southern Red Sea groups, including Yemeni Persians and Ethiopians.[252] Egyptian grain was despatched to al-Jār, just as Ḥijāzī governors were sent in the opposite direction, as in the case of al-Ashtār, a new governor of Egypt appointed by ʿAlī in 657 who died in al-Qulzum *en route* to taking up his position Fusṭāṭ.[253] The re-digging of the canal therefore helped orientate Egypt away from the Byzantine Mediterranean to the Muslim Red Sea, with the grain shipments no longer leaving from Alexandria for Constantinople, but from Babylon-Fusṭāṭ bound for Mecca and Medina.

[251] Gregory of Tours, i, 10 (1974); Ibn ʿAbd al-Ḥakam, 164-5 (1922).
[252] Kubiak 1987: 61-64.
[253] al-Ṭabarī, 3244 (1879-1901); trans. Brockett, 1997:184. *Cf.* Kennedy, 1998: 69. Note that Silverstein considers that maritime routes of the *barīd* only became important in the tenth and eleventh centuries; 2007a: 116-121.

Recent archaeological work suggests that the southern section of the canal running through Babylon was deliberately backfilled and its Nilotic terminus moved north, to the region of modern Sayyida Zaynab, so that the line of the former canal appears to have become became the main thoroughfare of al-Fusṭāṭ.[254] The cantonments of the Muslim armies extended from the northern gate of the fortress of Babylon along the backfilled canal, which subsequently became known as al-Ṭarīq meaning simply 'the road,' leading up past the mosque of ʿAmr and the elite quarter known as Ahl al-Rāya, on to the regions of indigenous settlement known as the Ḥamrās. The archaeological evidence suggests that the Arab elite dismantled the northern wall of the fort, taking over the administrative and grander buildings in the northern part of the fortress, so that the mosque was therefore located in the middle of this new urban centre. Over the centuries al-Fusṭāṭ continued to expand to the north-east along the line of the old canal, with the main avenues of Ṭūlūnid al-Qatāʿiʾ and Fāṭimid al-Qāhira placed along this central axis leading directly to Babylon **[Fig. 5.08]**.

(iv) al-Jār [sv] was the port of Medina and main terminus for the grain exported from al-Qulzum **[Fig. 3.09]**. The Western Province survey undertaken by Killick *et al* and published in *Aṭlāl* describes surface scatters of 'Hellenistic' ceramics. Though Roman pottery types were not found, the place seems to be mentioned by Ptolemy, and two Roman coins have been found, one dated as late as 350-53.[255] Owing to the exploratory nature of the excavations, it is not known if the site was continuously occupied throughout this period. Ali Ghabban, who sank a single sondage at the site in the

[254] Sheehan, 2009: 4-7.
[255] Killick *et al*, 1981: 52; Dietrich, 1965: 454.

1980s, concludes that the site was not inhabited in the years preceding Islam.[256] However, the Islamic historical tradition relates that al-Jār was the port of return for the Muslim 'refugees' to Ethiopia in 628, suggesting that something existed at the time of the Prophet.[257] Tradition further credits ʿUmar with the effective re-establishment of the port, by building two *quṣūr* sufficient to store 20 ship-loads of grain, and appointing his *mawlā* Saʿad b. Nawfal to oversee continued expansion.[258] These traditions need to be treated with caution, however, and it is more likely the currently visible structures belong to the early eighth century, broadly in phase with the new town of ʿAyla **[4.1.1] (i)**. The plan of the city walls – of unknown date – is perhaps modelled on the fortress of Babylon, testifying to close links between Egypt and the Ḥijāz; al-Muqaddasī later (wr. 985) described al-Jār as being "fortified on three sides by a wall, the quarter facing the sea being open."[259] Al-Jār was at the centre of the Red Sea naval infrastructure during the conquest period, when Medina was the capital of the Rashīdūn Caliphate, very likely maintaining direct maritime communications with al-Qulzum so onto Fusṭāṭ and ʿAydhāb so onto Aswān.

(v) However plausible Ibn Abī Sarḥ's maritime expedition against the Ṣaʿīd and associated foundation of ʿAydhāb, the general silence of the early Islamic Egyptian historical school needs to be accounted for. Al-Fusṭāṭ appears to have been the main focus of Muslim settlement following the conquest, which may be why it was in Fusṭāṭ rather than Aswān that a school of traditionalists first emerged, including Ibn Lahīʿa

[256] Ghabbān, 1988: 355-6.
[257] Ibn Hishām, 241-43 (1858-60); 167-69; al-Ṭabarī, i, 1571 (1879-1901).
[258] al-Yaʿqūbī, ii, 177 (1883). Cited by Dietrich, 1965: 454, & Ghabbān, 1988: 356.
[259] al-Muqaddasī, 83 (1906); trans. Collins, 2001: 75.

(d. 790) and al-Layth b. Saʿd (d. 791).[260] The traditions collected and transmitted by such traditionalists belong to the formation of a shared myth of origin among the Muslim community of al-Fusṭāṭ, prompted perhaps by the need to respond to the still strong ethnic and religious identity of the Copts,[261] and do not amount to a general history of Egypt. It is further curious that one of the earliest traditionalists to write a *Kitāb al-Maghāzī*, Mūsā b. ʿUqba al-Asadī (d. 758), whose much-cited efforts earned him the sobriquet *Imām al-Maghāzī* or 'expert on the early Muslim expeditions,' was a *mawlā* of the family of none other than Zubayr b. al-ʿAwwām.[262] Could something of the considerable reputation of Zubayr as a Companion and his prominent role in the conquest of Egypt be attributed to the panegyric of al-Asadī?

That other local histories beside those of al-Fusṭāṭ once existed is implied by the anonymous *Futūḥ Bahnasāʾ*, believed to have been written in the eighth century,[263] precisely the time suggested by the papyri for the first significant Muslim settlement of the Fayyūm.[264] Importantly, the *Futūḥ Bahnasāʾ* does not appear in the great collections of earlier traditionalists undertaken by Ibn ʿAbd al-Ḥakam (d. 871) and Muḥammad b. Yusūf al-Kindī (d. 961), of whom Kennedy notes "(their) accounts have a very limited focus, and their interests are almost entirely confined to the activities of the ruling group in the capital, Fusṭāṭ, with occasional references to Alexandria."[265] It was possibly at this time that *Miṣr*, having perhaps originally meant 'the boundary between two lands' came to refer more narrowly to al-Fusṭāṭ, which duly became

[260] Kennedy, 1998: 63; Khoury, 1981.
[261] A 'sectarian milieu' argument. *Cf.* Hoyland, 2001: 243-47.
[262] Dunlop, 1971: 72.
[263] Dunlop, 1971: 76-77; Kennedy, 1998: 62.
[264] Sijpesteijn, 2007: 195.
[265] Kennedy, 1998: 63.

synonymous with Egypt itself. Assuming that other local histories once existed for such undoubtedly important towns as Aswān and Qifṭ, their failure to be integrated into the ninth-century compilations – subsequently preserved as 'national' histories[266] – reflects the political and economic dominance al-Fusṭāṭ had assumed by that time, and effectively served to relegate alternative conquest traditions of Upper Egyptian provenance to oblivion.

[266] See Robinson, 2003: 30-38, on selection and survival.

4. The 'Long' Eighth Century (c. 685-830)

[4.1] *The Sinaitic ports of ʿAyla and al-Qulzum represent a continuation of Graeco-Roman settlement at Aila and Clysma, with no evidence for destruction or depopulation resulting from the Muslim conquest. ʿAyla [4.1.1] represents a new town laid out on a grid next to the Byzantine city, supporting considerable hinterland development characterised by mineral exploitation and agricultural establishments, with further evidence for a textile trade with Yemen. Al-Qulzum [4.1.2] owed its importance to the re-dredged Trajan's Canal now known as the Khalīj Amīr al-Muʾminīn, which allowed grain to be shipped to the Ḥijāz and possibly warships to be built in al-Qulzum.*

[4.2] *Ḥijāzī ports become important for the first time since the Nabataean period. Those of the Wādī al-Qurā [4.2.1] include ʿAwnīd and al-Ḥawrāʾ, which rose to prominence in the eighth century to join the seventh-century ports of al-Jār and Jedda. The Wādī al-Qurā comprised a comparatively well-watered and densely populated hinterland, with the regional capital of Qurḥ becoming the largest town in the Ḥijāz after Mecca, supported by significant mineral exploitation and extensive agricultural development. The Darb Zubayda [4.2.2] further belongs to the hinterland of the Ḥijāzī ports, again producing evidence of a booming eighth-century mining industry.*

[4.3] *The Yemeni ports of the Tihāma [4.3.1] include ʿAththar and Ghalāfiqa the harbour of Zabīd. ʿAththar probably represents a continuous occupation from pre-Islamic times, though becomes increasingly well attested from the eighth century, while the round city of Zabīd was established in the early ninth century to garrison the rebellious Tihāma and access the interior.*

The mineral rich ʿAsīr [4.3.2] mountains comprised the hinterland of these ports, so that such cities as Ṣaʿda and Ṣanʿāʾ rose to prominence largely – but not exclusively – as a result of significant local mining industries.

[4.4] *The Sudanese ports of ʿAydhāb and Bāḍiʿ were possibly established during the seventh century to further the conquest of Egypt and conflict with Ethiopia. These ports had as their hinterland the Beja territories between the Nile and Red Sea from Egypt to Eritrea. The 'long' eighth century is characterised with Muslim conflict with the Beja, as Arab settlers moved into the Eastern Deserts in search of gold [4.4.1] and slaves [4.4.2]. The caravan routes which they pioneered were sufficiently well established by the eighth century for the defeated Ummayads to attempt to reach the Red Sea coast and take ship to the Ḥijāz.*

[4.1] Sinaitic Ports

[4.1.1] ʿAyla

(i) Aila is said to have surrendered to the Prophet in 630. The *Legio decima Fretensis* had been withdrawn by Justinian a century earlier so that local authority rested in the hands of the bishop, the 'king' of Aila with a gold cross round his neck remembered in the Islamic historical tradition.[1] Ibn Hishām reproduced an alleged treaty agreed between the Prophet and the bishop, Yuḥanna b. Ruʾba:

[1] Mayerson, 1964: 169-77.

"In the name of God the Compassionate and Merciful. This is a guarantee from God and Muḥammad the prophet, the apostle of God, to Yuḥanna b. Ru'ba and the people of ʿAyla, for their ships and their caravans by land and sea. They and all that are with them, men of Syria, and the Yemen, and seamen, all have the protection of God and the protection of Muḥammad the prophet. Should any one of them break the treaty by introducing some new factor then his wealth will not save him; it is the fair prize of him who takes it. It is not permitted that they shall be restrained from going down to their wells or using their roads by land or sea."[2]

ʿAyla [sv, Aqaba] represents a new establishment to the south of the existing Graeco-Roman settlement of Aila. Donald Whitcomb points to later Arabic narrative sources stating that ʿAyla was established by ʿUthmān (r. 644-56), and further claims that it was one of the *amṣār*,[3] which a standard reference work defines as "settlements developing out of the armed encampments established by the Arabs in the conquered provinces outside Arabia and then, subsequently, the capital towns of the conquered provinces."[4] Yet it is telling that none of the Arabic sources explicitly describe Ayla as a *miṣr*. Whatever settlement may or may not have been established by ʿUthmān, it cannot therefore have been a *miṣr*, nor does it appear to have left any archaeological trace.

Excavation has revealed a new town was laid out on a rectangular grid, intersected by axial streets lined with shops, and bounded by well-built walls (170 m x 140 m)

[2] Ibn Hishām, 902 (1858-60); trans. Guillaume, 1955: 607.
[3] Whitcomb, 1987: 266; 1989b; 1995: 277.
[4] Bosworth, 1993: 146.

provided with centrally placed gates and projecting towers **[Fig. 4.02]**. Its exact foundation date is open to interpretation, since the ceramic evidence is not typologically sensitive enough to settle the matter and the earliest levels underlie the water table, while numismatic and epigraphic evidence have not so far proved particularly useful. Alan Walmsley highlights clear architectural parallels with well-dated Marwānid establishments, most obviously Anjār in Lebanon, and has more plausibly re-dated it to the early eighth century.[5]

(ii) It has generally been assumed that the primary function of ʿAyla was as a port of the 'India trade,' despite the lack of ceramic or other evidence. Whitcomb quotes the eye-witness account (*ʿiyān*) of the traveller al-Muqaddasī (wr. 985) that ʿAyla was a "city on the edge of a branch of the China Sea... the port of Palestine and *entrepôt* of the Ḥijāz,"[6] though of course this late tenth-century account cannot be taken as representative of the eighth-century scene. Walmsley similarly goes too far when he states that "the port of ʿAyla is an early manifestation of the major role of Indian Ocean trade in the economy of the Middle Islamic world."[7] There is in fact no material evidence for the 'India trade' at ʿAyla prior to the Fāṭimid period **[5.1.1]**, so that the *raison d'être* of the early Islamic port must be found elsewhere.

Textile evidence from nearby Naḥal ʿOmer suggests that ʿAyla was involved in trade with Yemen. The site consists of 18 rectilinear structures associated with ceramics and coinage dated c. 650-810, and has feasibly been interpreted as a way-station at the

[5] Walmsley, 2000: 295-96;
[6] al-Muqaddasī, 178 (1906); trans. Collins, 2001: 149. Whitcomb, 1987: 247; 1995: 278.
[7] Walmsley, 2000: 296.

cross-roads of routes leading from Petra to Gaza and from ʿAyla to Gaza or Jerusalem **[Fig. 4.03]**.[8] Alisa Baginsky and Orit Shamir present some 251 textile fragments discovered in middens, of which 73 were analysed and catalogued (comprising 33 cotton, 10 linen, 24 wool, 3 goat hair & 3 silk pieces) with a further 178 too small or delicate to be treated. Particularly interesting are the cotton fragments, both for their unusually high ratio (153 pieces or 61% of the total assemblage) and their likely place of production. Most of the cotton pieces are Z-spun and find parallels with fragments from Fusṭāṭ accepted as being Indian or Yemeni imports.[9] Indeed, two pieces are decorated using the *ikat* technique, pre-dating the hitherto earliest known pieces, discovered in Egypt bearing *tirāz* inscriptions with the date 862-64 and stating their origin in Ṣanʿāʾ.[10] Baginsky & Shamir conclude that "the fragments from Naḥal ʿOmer resemble the Yemeni *ikat*s in pattern, material (cotton) and thread count."[11] The assemblage therefore attests to an otherwise undocumented trade in cotton textiles between Yemen and the southern Levant.

(iii) Mineral exploitation in the hinterland of early Islamic ʿAyla was restarted in the 'long' eighth century following the abandonment of Byzantine mines in the sixth century **[3.1.1] (iv)**. A total of six settlement sites associated with mine workings or ore processing have been located in the north-eastern Sinai and southern Negev, at no great distance from ancient ʿAyla **[Fig. 4.04 & 4.07]**. Three are situated at the mouths of *wādī*s flowing into the Gulf of Aqaba, namely the Taba, Tweiba and Merah, and three

[8] Nahlieli, 1992; Negev, 1966; Cohen, 1982; 1991; Baginski & Shamir, 1998.
[9] Golombeck & Gervers, 1977: 83; Mackie, 1989: 88. Cited & discussed by Baginsky & Shamir, 1995: 28.
[10] Bühler, 1972: 23; Golombeck & Gervers, 1977: 92, 98, 99. Cited & discussed by Baginsky & Shamir, 1995: 29.
[11] Baginsky & Shamir, 1995: 29.

are located in the Wādī ʿAraba, viz. Kibbutz Eilot, Nahal Shehoret and Beer Ora.[12] The sites have been dated by Avner & Magness to the eighth and ninth centuries on the basis of their ceramics. The assemblage is characterised both by a 'predominance' of Mahesh ware, which Whitcomb dates between 750 and 800, and by the 'apparent absence' of Hayes' Late Roman wares.[13] However, ceramics from only four sites are explicitly discussed – Eilot, Beer Ora, Wādī Ṭawāhīn and Wādī Tweiba – and even then the ceramic reports are not published; Magness' '*Atiqot* reports were referenced as 'in press' but never actually appeared in the journal. Radiocarbon dates broadly bear out the ceramic evidence **[Fig. 4.06]**, further pointing to Byzantine and Mamlūk periods of exploitation, either unattested at the sites or unmentioned in the reports.

Only the Kibbutz Eilot has been published to any degree, though Avner & Magness consider this to be typical of the other settlements, if somewhat larger than the rest.[14] The site comprises several dozen structures arranged in clusters, many of one room and others up to five rooms grouped around a courtyard. Settlement at the Wādī Tweiba included a house, 15.6 m x 20.5 m in plan and with mud-brick walls 2.25 m, comprised of eight rooms around a courtyard.[15] Avner & Magness conclude that "the degree of uniformity among the buildings in the six villages suggests a common architectural experience and social organisation."[16] However, publication is so patchy

[12] Avner & Magness, 1998: 39-40. Only Nahal Shehoret and Beer Ora survive to any extent, the other victims of modern development and military activities.
[13] Avner & Magness, 1998: 50-1.
[14] Avner & Magness, 1998: 40. The Eilot site was discovered by Rothenberg, 1967a: 284-5; five buildings were partially excavated by Cohen, 1974: 39; then nine more by R. Avner, 1995: 105-6, and Rapuano, 1993. Of the several doven structures, only 15 survived in 1998 owing to the expansion of modern Eilat.
[15] Avner & Magness, 1998: 40. Avner partially excavated the site in 1982, and in his 1998 article with Magness lists its publication as being 'in press' in '*Atiqot*. Despite having checked subsequent issues, I have not been able to find it; the same is true of Magness' publications of the pottery from Beer Ora, Wādī Ṭawāhīn, Wādī Tweiba, and Wādī Taba.
[16] Avner & Magness, 1998: 40.

that we are forced to accept their conclusions without much in the way of evidence to support them.

Regarding the copper industry, a number of mines are known in the Nahal Amram, only one of which has been explored to any degree, consisting of galleries and halls totalling some 3 km.[17] Mines at Nahal Tsfunot were examined but not published by Avner, who found galleries up to 40 m long, now mostly filled with sand.[18] The mine at Nahal Rehavam was mentioned in passing by A. Rothenberg as part of a survey of Eilat,[19] while the mines at Wādī Tweiba and Jabal Merah received some brief attention by F. Frank.[20] In addition, several ore processing sites are known, including the so-called 'slag valley' near Beer Ora found by Rothenberg, and estimated to contain some 5,000 tons of slag, suggesting a total production of around 300-500 tons of copper.[21] Smaller slag heaps are known near Yotvata, to the south of Beer Ora, in Nahal Amram and north of Kibbutz Eilot; another, now destroyed, lay close to Umm Rashrash in Eilat.[22]

As for gold production, a tributary of the Nahal Roded near Eilat known as Wādī Ṭawāhīn ('millstone valley') has produced the most dramatic evidence, and has naturally received most attention.[23] Dozens of hammer stones and rotary querns used for smashing and grinding the gold bearing quartz, prior to flotation to separate out

[17] Avner & Magness, 1998: 40; Willies, 1990.
[18] Avner & Magness, 1998: 40, n. 5. See below, al-Bakrī on the Eastern Desert of Egypt: "The caverns of that desert are distant and sanded up, and have been abandoned because of their remoteness from any inhabited country." al-Bakrī, MC 730 v (1913); trans. from French by Vantini, 1975: 243.
[19] Avner & Magness, 1998: 40; Rothenberg, 1967a: 294.
[20] Frank, 1934: 247-48.
[21] Avner & Magness, 1998: 42; Rothenberg, 1972: 212-23; 1988.
[22] Avner & Magness, 1998: 42. For Umm Rashrash, see Glueck, 1970: 94-96.
[23] Avner & Magness, 1998: 44. Discovered by Frank, 1934: 261, it was resurveyed by Glueck, 1970: 15-16, then by Rothenberg, 1967b: 154, and again by Avner & Nahlieli, 1993.

the gold dust, were found scattered across the valley floor. An unpublished, yet apparently similar site lays c. 2 km north of Wādī Ṭawāhīn. The most detailed publication of the material appears in Gilat *at al*, where a number of apparently unique industrial installations point the way to further archaeological research in the Arabian-Nubian Shield. First, the grouping of four rotary querns (millstones) in the respective corners of a 4 m x 4 m square building, together with saddle querns (anvil stones) grouped together opposite the entrance **[Fig. 4.05]**. Second, a single bell-shaped pit, 2 m high and 1.55 m wide at the base, containing the residual processed ore – a quartz powder with a high concentration of gold dust.[24] Given that similar millstones have been found throughout the Arabian Nubian Shield in quantities, it might logically be expected that further archaeological work turn up analogous industrial installations and storage pits at other sites. Whether this does, in fact, prove to be the case would help clarify the character and significance of gold production in the Sinai, for the organisation implicit in such features appears to be substantially more developed than at other sites, raising intriguing questions which cannot at present be met with anything more than insubstantial conjecture.

(iv) Mining was not the only economic activity of ʿAyla's hinterland. Hundreds of eighth-century farmsteads were discovered in the course of Mordechai Haiman's 1979-89 Negev Emergency Survey, which focused on the southern Negev region lose to the border with the Egyptian Sinai **[Fig 4.08-.10]**.[25] Four farms were surveyed along the Nahal Mitnan tributary of the Nahal Horsha about 30km west of Mizpe Ramon **[Fig. 4.11]**, and the farmstead at Nahal Mitnan was excavated **[Fig. 4.12]**. Excavation

[24] Gilat *et al*, 1993: 432-34.
[25] Haiman, 1986; 1991; 1995a: 5-9.

produced a ceramic assemblage dated between the sixth and eighth centuries, though the presence of Mahesh and Khirbat al-Mafjār wares, together with an undated Umayyad post-reform coin and a glass weight bearing the name ʿAbd al-Malik b. Yazīd **[Fig. 4.13]**, led Haiman to interpret the Nahal Mitnan farms as evidence for a deliberate Marwanid policy of agricultural expansion.[26] The farms fell within the steppe ecological zone of the western highlands of the Negev, where crops were cultivated on terraced *wādī* slopes fed by cisterns. As this required considerable starting capital, and probable continued subsidies owing to the marginal ecology, they argued that "...these farms should be regarded as evidence of an Umayyad state-sponsored enterprise to sedentary a semi-nomadic population which had inhabited the margins of permanent settlement since Byzantine times."[27] That these sites were directly incorporated into the economy of ʿAyla is suggested by the epigraphic evidence. Umayyad period graffiti from Reḥovoth in the Negev and Hadhbat Ḥajjaj in the north-eastern Sinai refer to al-Badr b. Hāshim al-ʿAylī, the *nisba* implicitly indicative of links between the ʿAyla and its hinterland.[28]

[4.1.2] al-Qulzum

(i) Al-Qulzum [sv, Suez] most likely represents a direct continuation of Graeco-Roman Clysma, though not having received any archaeological attention this is impossible to ascertain. The port regained some of its former importance following the re-dredging of Trajan's Canal by the Muslims, though there no evidence to support the oft

[26] Haiman, 1995a: 5-9.
[27] Haiman, 1995a: 11.
[28] Sharon, 1993: 53-57.

encountered assertion that the canal furthered an early Islamic 'India trade.' Fahmy considered that "the importance of Clysma must not be overlooked, for it was a link between the Mediterranean and Eastern seas, as ships could pass through by way of the Khalīj Amīr al-Muʾminīn."[29] The Aphrodito papyri afford a wealth of information as to the operation of the Khalīj in the eighth century, and it is striking that there is no mention of anything which might be construed as an 'India trade,' nor of traffic between the Mediterranean and Red Sea: the Khalīj was not an early Islamic prototype for the Suez Canal.

(ii) The Ḥawf to Ḥijāz grain trade constituted the mainstay of activity for al-Qulzum. The grain traffic had clearly assumed some political and strategic importance by the time of the ʿAbbāsids. Al-Manṣūr may well have been motivated by the threat of ʿAlid revolt in the Ḥijāz when he backfilled the Khalīj Amīr al-Muʾminīn in 775.[30] A decade earlier, Muḥammad b. ʿAbd Allāh al-Nafs al-Zakīya had lead a rebellion in Medina, accompanied by a failed uprising under his brother Ibrāhīm in Baṣra during 763, and an aborted putsch in al-Fusṭāṭ the same year.[31] The affair had been ended when al-Manṣūr cut off the flow of Egyptian grain to the Ḥijāz, so that the backfilling of the canal may have been intended to definitively discourage further uprisings. Since al-Manṣūr died in the same year, one might well imagine that the termination of the canal belonged to al-Mahdī's putative 'carrot and stick' policy *vis-à-vis* the ʿAlids, which further involved the buying off of prominent ʿAlids in the Ḥijāz, the rebuilding of the mosque at Mecca and the recruitment of some 500 *Anṣār* of Medina as a special

[29] Faḥmy, 1950: 23-24. The importance of the canal as the *raison d'etre* of al-Qulzum appears axiomatic in standard accounts of Honigmann & Ebeid, 1986; Mayerson, 1996. Compare such statements as Kister, 1972: 76: "Mecca owed its existence to trade."
[30] Mayerson, 1996: 126.
[31] al-Ṭabarī, iii, 129-33 (1879-1901). *Cf.* Hitti, 1970: 290-91; Kennedy, 1998: 77; 2004: 131.

guard to the Caliph.[32] The Khalīj and al-Qulzum were therefore involved in the early Islamic politics of 'bread and circuses.'

Mayerson takes the backfilling of the Khalīj in 775 as the beginning of the end for al-Qulzum.[33] Yet already in the early eighth century, Ibn al-Ḥabhāb had settled Qaysi Bedouin in the region to work as cameleers,[34] perhaps to supplement the seasonal navigation of the Khalīj and ensure a year-round flow of grain. Certainly Egyptian grain continued to reach the Ḥijāz irrespective of the closure of the Khalīj, for in early ninth-century Medina we hear of "Dhū Marwān and Dhū Yazīd, two places containing food supplies that had been brought to the army by sea."[35] The grain trade of al-Qulzum remained important into the late tenth century, when al-Muqaddasī observed that great quantities of grain were exported each week: "Al-Mashtūl (in the Ḥawf) has many mills, whence come most of the supplies of the Ḥijāz in the way of flour and biscuits... This trade amounted to 3,000 camel loads every week, entirely of grain and flour."[36] Indeed, as he notes elsewhere, "al-Ḥijāz, with its inhabitants, depend upon it."[37] Arabian demand for Egyptian grain, therefore, was sufficiently high to make this a lucrative trade, even when the cheap bulk transportation afforded by the canal came to an end.

(iii) The Aphrodito papyri infer that al-Qulzum may have functioned as a naval base for a Red Sea fleet. Warships were used in the annual maritime raids (*cursus*)

[32] *Ibid*, 136.
[33] Mayerson, 1996: 126.
[34] Ibn ʿAbd al-Ḥakam, 143 (1920). *Cf.* Kennedy, 1998: 75.
[35] al-Ṭabarī, i, 267 (1879-1901); trans. McAuliffe, 1995: 233. The context is that of the black slave rebellion in Medina in 762-3, see below, p. 26.
[36] al-Muqaddasī, 195 (1906); trans. Collins, 2001: 165.
[37] al-Muqaddasī, 163 (1906); trans. Collins, 2001: 163.

instigated in 704 on the initiative of Mūsā b. Nuṣayr, the governor of Egypt, and the Aphrodito papyri make mention of the raiding fleets of Egypt, Africa and Oriens.[38] A Red Sea fleet would likely have been involved in escorting grain shipments to the Ḥijāz, since piracy appears to have become a problem by the mid eighth century; in 768, Ethiopian pirates known as the Kurk attacked Jedda, prompting al-Manṣūr to dispatch a naval expedition against Ethiopia two years later.[39]

It is also possible that the dockyards of al-Qulzum were involved in the building of warships. One letter reminds the *pagarch* of Aphrodito: "If you delay anything of the said articles and supplies and the waters subside, you will have to convey them speedily (by land) to the said Clysma, paying for them out of your own property."[40] Three different kinds of warships are mentioned in the Aphrodito papyri, as, for instance, in this letter of 709:

"In the name of God. Qurra b. Sharīk, Governor, to you, the people of the village of Aphrodito. Furnish for the cleaning of the *carabi* and *acatenaria* and *dromonaria*, which are in the island of Babylon under the superintendence of ʿAbd al-Aʿlā b. Abī Ḥakīm the superintendent in the present 8th indiction and the raid of the 9th indiction 4 = four skilled workmen with supplies for 3 months, viz. 2 = ship's carpenters as 2 S. per month, 1 = one carpenter at 1 1/3 S. per month, 1 = one caulker at 1 ½ S. per month,

[38] Fahmy, 1950: 'Disposition of Fleets,' pp. 87-92. Instances of warships from Babylon used in the raiding fleets: Bell, 1911: No. 1371, p. 375. Bell, 1913: No. 1435, p. 96.
[39] al-Ṭabarī, iii, 359, 370 (1879-90); trans. Kennedy, 1990: 51, 64. *Cf.* al-Qināʾī, 15 (1903), cited by Hasan, 1967: 30.
[40] *Aphrodito Papyri*, No. 1346; trans. Bell, 1911: 277.

and if you compound in money, pay for their wages and supplies as above specified only. Written the 6th Hathyr, 8th indiction."[41]

Different classes of warship are further mentioned in the Armenian history attributed to Sebeos (wr. 661), as noted by Hoyland, which may correspond to those mentioned in the Aphrodito papyri: "Muʿāwīya ordered 5,000 ships to be built, and he put in them (only) a few men for the sake of speed, 100 men for each ship, so that they might rapidly dart to and fro over the waves of the sea around the very large ships."[42] This invites speculation that the ships in question were ancestors of the medieval *jalba*, a lateen-rigged vessel smaller than the Indian Ocean merchantmen and specific to Red Sea waters, noted for its manoeuvrability. There is nothing explicit in the papyri or narrative sources attesting to the production of warships in al-Qulzum, but given that Sebeos records that "they prepared warships in Alexandria and all the coastal cities,"[43] it seems that ships were built in as many ports as possible. The large stone harbour of late Roman Clysma, assuming of course it had not become silted up by the early Islamic period, and sheltered location away from Byzantine raids in the Mediterranean would have commended the port. Although the evidence is rather oblique, then, it is quite possible that eighth-century al-Qulzum was involved in the war effort against the Byzantines in the Mediterranean.

[41] Bell, 1912: No. 1410, pp. 132-33. Other references to Babylon include, Bell, 1911: No. 1334, p. 270; No. 1371, p. 375; No. 1376, pp. 376-77; No. 1386, pp. 380-81; Bell, 1912: No. 1407, p. 1407; No. 1414, pp. 137-40; Bell, 1913: No. 1434, p. 87; No. 1435, p. 93. References to the superintendent ʿAbd al-Aʿlā b. Abī Ḥakīm include, Bell, 1912: No. 1408, p. 132. A second superintendent of the shipyards at Babylon, al-Qāṣim b. Kaʿb, is mentioned later in Bell, 1913: No. 1434, p. 89.
[42] Sebeos, 144 (1999). Quoted by Hoyland, 2006: 204, n. 36.
[43] Sebeos, 144 (1999).

[4.2] Ḥijazī Ports

[4.2.1] Wādī al-Qurā

(i) ʿAwnīd [sv], **al-Wajh [sv]** and **al-Ḥawrāʾ [sv]** developed in the eighth century as ports of the Wādī al-Qurā.[44] While no excavation has been undertaken at ʿAwnīd, four trenches were sunk at al-Ḥawrāʾ and marked on the site plan drawn by Ghabbān **[Fig. 4.14]**, who provides a brief summary of work in his unpublished doctoral thesis.[45]
Al-Ḥawrāʾ has been associated with the Nabataean port of Leuke Kome, since both mean 'white,' and are in broadly the same location. However, no trace of pre-Islamic occupation was discovered by Ghabbān, though he notes that this cannot be ruled out given the size of the site. References to the Nabataean port end in the third century, when it was likely abandoned as part of a wider regional decline, so that there does not appear to have been a continuity of settlement or function. Ghabbān concludes that al-Ḥawrāʾ was occupied from the eighth through twelfth centuries. This parallels the better known situation at Qurḥ and broadly supports the hypothesis that al-Ḥawrāʾ (and most likely ʿAwnīd) were established as part of the same development project in the Wādī al-Qurā.

In addition to the provision of a maritime communications infrastructure, the putative Wādī al-Qurā development project included the renovation of ancient

[44] ʿAwnīd is given as the port of the *wādī* by al-Muqaddasī, 84 (1906); trans. Collins, 2001: 76. Another tradition gives al-Ḥawrāʾ, see al-Bakrī, fol. 22 (Nur Osmaniye, No. 3034). Cited by Wohaibi, 1973: 297. Wohaibi is troubled by the apparent contradiction, though I do not see why the *wādī* could not have had two ports given its geographical extent, population size and agricultural / mineral resources.
[45] Ghabbān, 1988: 337-55.

caravan routes linking the Ḥijāz with Bilād al-Shām. Starting from the north, four roads entered the Ḥijāz: the first 'Egyptian' or coastal route passed from ʿAyla via Madyan to al-Jār **[Fig. 4.15]**;[46] the second 'Egyptian' or inland route split at Madyan and continued past Qurḥ **[Fig. 4.16]**;[47] the 'Syrian' or inland route passed from Damascus via Tabūk onto Qurḥ;[48] the Wādī Sirḥān route emerged at al-Jawf and so onto Taymaʾ.[49] All three interior routes converge on the well-watered Wādī al-Qura before running on to Medina, with the coast road heading as far south as al-Jār before striking inland **[Fig. 4.17-.20]**.

Development of the communications infrastructure seems only to have begun in earnest under the Marwānids. Al-Walīd (r. 705-15) had reservoirs built along the road to the Ḥijāz, and ordered the governor to Medina to undertake the levelling of mountain trails and the provision of wells; al-Qalqashandī credits him as the first Umayyad to erect milestones, though the archaeology would seem to contradict this.[50] Hishām (r. 724-43) had aqueducts and water tanks built on the Syrian road to Mecca, and certain of the *quṣūr* attributed to him in Bilād al-Shām have been interpreted as caravanserai.[51] Saad Rashid therefore concludes that during the Umayyad period old roads were improved and new roads established, furnished with mile-stones, wells, water-tanks, reservoirs, way stations and inns.

[46] Wohaibi, 1974: 329-36; Ghabban, 1988: 179-86; 196-226; 280-83; 292-322; Peterson, 1994.
[47] Wohaibi, 1973: 315-28; Ghabban, 1988: 179-86; 187-95; 284-91; Peterson, 1994.
[48] Wohaibi, 1973: 367-74; King, 1987; Ghabban, 1988: 135-76; 230-79; Carte VIII; Peterson, 1994.
[49] King, 1987; Potts, 1988: 148.
[50] Ibn al-Faqīh, 106 (1885); al-Ṭabarī, ii, 1195-6 (1879-1901); al-Qalqashandī, i, 136 (1964). Cited by Rashid, 1980b: 7-12.
[51] al-Masʿūdī, v, 466 (1861-1930). Cited by Rashid, 1980b: 7-12.

However, this does not seem borne out by Ali Ghabban's survey of the Egyptian and Syrian pilgrimage routes. It is immediately striking that of the dozens of seventh- and eighth-century Arabic inscriptions, none record any state investment of the sort known from Muʿāwīya's Ṭāʾif dam inscription.[52] Moreover, little trace of Umayyad activity was recorded aside from a limited number of large constructions. At al-Akhḍar, on the Syrian route, a 9000 m^2 site including stone walls associated with Late Roman / Umayyad ceramics was located, and subsequently identified with the historically attested station of al-Muḥdatha.[53] The ruin field of al-Maʿabiyāt or ancient Qurḥ was also a likely Marwānid foundation **[4.2.1] (ii)**. Finally, a cluster of four *quṣūr* like structures was found associated with Umayyad and ʿAbbāsid ceramics at al-Mundassa, identified with the station of Dhū Khushub, where Samhūdī records that Marwān b. al-Ḥakam al-ʿUmanī and others lived in some splendour.[54] The first *qaṣr* was square in plan, measuring 45 m x 45 m, built of basalt with semi-circular towers flanking entrance gate; the second, 40 m x 40 m again of basalt, with 1 m thick walls enclosing a undefined interior space; the third, 80 m x 80 m, of brick and stone, reminded Ghabban of al-Mulalīh; the fourth, 60 m x 60 m, closely resembled the third.

The majority of hydraulic installations and fortified structures found by Ghabban on the Syrian road were Ayyūbid and later, though this does not preclude the possibility that earlier occupation levels have been obscured by later activity. Assuming that this is not the case, Umayyad activity does not seem to have been marked. Moreover, there is nothing explicit to link al-Muḥdatha, Qurḥ and Dhū Khushub with the

[52] Ghabban, 1988: 'Les Graffiti Commemoratifs sur la Route Syrienne et Egyptienne,' pp. 477-547; Miles, 1948b. The inscriptions instead overwhelmingly contain a declamatory pious content, of the type described by Hoyland, 1997b: 82-87.
[53] Ghabban, 1988: 249.
[54] Ghabban, 1988: 270-71.

Umayyad state, no inscriptions or historical references proclaim them as Caliphal establishments. Such evidence as to patronage as exists rather tends to imply private initiative, such as the estates of Marwān b. al-Ḥakam al-ʿUmanī built at Dhū Khushub, and indeed many Companions of the Prophet and other notables are known to have established estates in the Wādī al-Qura and northern Ḥijāz. A linear settlement pattern may therefore be discerned along the Syrian road, strategically located between the old and new centres of power and patronage in Medina and Damascus. It is perhaps for this reason that the ʿAbbāsids chose to build their estate at Humayma.

(ii) Qurḥ [sv, al-Maʿabiyāt] was the principal settlement of the Wādī al-Qurā and is identified with the ruin-field of al-Maʿabiyāt in the Wādī al-ʿUla **[Fig. 4.21-.22]**, 18 km southeast of the oasis of the same name.[55] There are numerous references to the place in the Arabic sources, usefully compiled by al-Wohaibi (1973) and later by Cornu (1985). Archaeological work includes a number of surveys and some excavation. Early surveys of the northern Ḥijāz undertaken by Orientalist antiquarians remain useful, particularly those of Jaussen and Savignac (1909 & 1914), Musil (1926) and Philby (1957). Modern archaeological survey work begins with Parr (1970), and continued with the preliminary surveys of Ingraham (1981), Gilmore (1982) and Kisnawi (1983) published in *Aṭlāl* as part of the Comprehensive Archaeological Survey Program of Saudi Arabia. Excavations at al-Maʿabiyāt were undertaken by Gilmore (1985), providing an outline stratigraphic and ceramic sequence, and Talhi (1986), who was sadly preoccupied with chasing walls and finding mosques.

[55] Grohman, 1934; Nasif, 1983.

The ruin-field of al-Maʿabiyāt represents the largest of a number of archaeological sites in the vicinity. It lies in the Wādī al-ʿUla, a tributary of the south-flowing Wādī Jizl which empties into the Wādī al-Ḥamd about 50 km distance from al-Maʿabiyāt. This region would appear to be that referred to in Arabic geographical writing as the Wādī al-Qurā, a name meaning 'Valley of Villages'[56] and so is immediately evocative of a heavily settled locale. This is made explicit in the *ʿiyān*. The most detailed account is that of al-Muqaddasī (d. 985), who describes Qurḥ as "the largest (town) in the Ḥijāz at the present time after Mecca, as well as the most flourishing and populous... villages encircle it on all sides."[57] This is echoed by al-Iṣṭakhrī (d. 950), who states that after Mecca and Medina among the towns of the Ḥijāz, Wādī al-Qurā is second only to al-Yamāma in size and production.[58] Similarly, Yāqūt (d. 1229) quotes Ibn al-Kalbī to the effect that it was a very fertile valley covered in villages from end to end.[59]

There appears to have been some confusion as to the nature of the Wādī al-Qurā, since al-Muqaddasī actually calls it a town while most other writers state that Qurḥ is the town of the *wādī*, and many refer to the town and valley indiscriminately under either appellation. Burkhardt's note on the villages of nineteenth-century Sudan helps clear up the situation:

"All the villages, as far as Dóngola, are called *Wady*, or valley. There are always three or four of them comprised under one general name: thus, Wady Dehmyt extends about four miles along the bank of the river, and includes upwards of half a dozen

[56] Parr *et al*, 1970: 204.
[57] Wohaibi, 1973: 295-6.
[58] al-Iṣṭakhrī, 23 (1870). Ibn Ḥawqal reproduces his account verbatim, 21 (1938-39). Cited by Wohaibi, 1973: 294.
[59] al-Yāqūt, iv, 76 & 82 (1866-73). Cited by Wohabi, 1973: 299.

hamlets, each of which has its particular name. Travellers, therefore, who note down the names of villages in these parts, will easily be led into mistakes, by confounding the collective appellation with that of the single hamlet."[60]

The archaeological evidence is patchy, but generally bears out the narrative sources' emphasis on high population density. Kisnawi draws attention to the Wādī Jizl as "an area rich in archaeological sites... (with) a great number of agricultural settlements."[61] He further records some ten separate mining settlements, of which six or seven produced Islamic ceramics.[62] Ingraham's survey shows 'Islamic sites' consisting of settlements and forts dotted about every 10 to 15 km, which are dealt with cursorily in a call for further survey work.[63] The ruin-field of al-Maʿabiyāt itself covers 64 hectares, consisting a fortress and town enclosed behind a circumvallation and fosse, and so by no means an insignificant town.[64] Both the historical and archaeological evidence suggest a population large by the standards of western Arabia.

(iii) The Arabic sources mention alongside the great population of Wādī al-Qurā its agricultural and hydraulic wealth. In Muqaddasī's account "palm trees skirt it (i.e. Qurḥ) about... it is possessed of very cheap dates and excellent bread and copious springs of water."[65] Al-Iṣfahānī writes in a similar vein when he mentions its two famous springs, Ghālib and Zayyān, and names the various tribes who owned the local

[60] Burckhardt, 1822: 4.
[61] Kisnawi *et al*, 1983: 80-81.
[62] Kisnawi *et al*, 1983: 81-82, Pls. 80 & 81.
[63] Ingraham *et al*, 1981: 78-9 & Map 3.
[64] Gilmore *et al*, 1985: 111.
[65] Wohaibi, 1973: 295-6.

palm groves.[66] These feature again in the story of al-Bakrī, whereby the Jews who settled in Wādī al-Qurā after the destruction of Thamud first tilled the land, discovered its springs and planted its palm groves.[67] Yāqūt further cites al-Sakūni to the effect that Muʿāwiya b. Abī Sufyān rediscovered eighty spring in the valley.[68] Palm trees and springs thus appear everywhere in the sources.

Again, the archaeology is rather limited, but clearly attests to the significance of agriculture. Kisnawi writes of "a great number of agricultural settlements... the remains of boundary walls and irrigation systems attest to a densely populated region."[69] Not all of these are Islamic, however, and he observes Iron Age and modern agricultural activity in the area. There is clear archaeological evidence at al-Maʿabiyāt for hydraulic installations associated with irrigated cultivation. Parr's survey records an irregular 350 x 250 m area of low-mounds c. 700 m southeast of the circumvallation, with higher mounds covered with occupational debris forming a perimeter, "suggesting that the original plan of the site was that of a series of structures surrounding an open central space."[70] Gilmore further identified 80 m x 80 m of silty accretions in this area, truncated by a modern bulldozer trench to reveal some 2 m of silt, and which he took to be a standing water deposit. He recorded the presence of small spiral snail shells, and interpreted this feature as a *birka*. Some 50 m east of this, bulldozer truncation revealed a small stone lined trench 2.5 m below the

[66] *Ibid*, 293. al-Iṣfahānī, 397-99 (1968).
[67] al-Bakri, 10 (1945-51), references Ibn al-Kalbī with regards the tradition of Jewish origins, which appears elsewhere. Cited by Wohaibi, 1973: 297.
[68] Yāqūt, iv, 76 & 82 (1866-73). Cited by Wohabi, 1973: 299.
[69] Kisnawi *et al*, 1983: 80-81.
[70] Parr *et al*, 1970: 199.

surface, interpreted as a *qanāt*.[71] Further evidence is sadly lacking, though it is clear that large scale water management systems were in place at Qurḥ, most likely indicative of significant agricultural investment.

Settlement was located so as to profit from the natural communications network afforded by the *wādī* system. The Arabic sources suggest that the road to Syria ran north up the Wādī al-ʿUla and the road to Egypt passed west along the Wādī al-Ḥamd, so that Ibn Khurradādhbih – for instance – places Wādī al-Qurā at the convergence of the Syrian and Egyptian Ḥajj caravans.[72] To the north, Ḥijr Ṣāliḥ was but a day's journey whereupon the road stretched up past Taymāʾ to Iraq;[73] to the south, Medina lay between five and seven days journey south down through Wādī al-Ḥamd.[74] At the same time, the Wādī Jizl heads northwest towards the Wādī Azlam and so down to the Red Sea, where the ancient port of ʿAwynīd is given by al-Muqaddasī as the port of Qurḥ.[75] Ingraham's survey discovered a 'track / highway' leading directly from Qurḥ to the port of Wajh, and while the Arabic geographers make scarce mention of the place, Wohaibi suggests a possible etymological link with Wādī al-Qurā: "The name al-Wajh might have been a later development of Wajj by which the area of Wādī al-Qurā was once known."[76] Interestingly, al-Ḥawrāʾ is also considered a port of Qurḥ by al-Bakrī, which might logically have been accessed through the Wādī al-Ḥamd.[77]

[71] Gilmore *et al*, 1985: 112 & Pl. 97.
[72] Ibn Khurradādhbih, 129 (1889). Cited by Wohaibi, 1973: 293.
[73] al-Isṭakhrī gives a days' journey from Wādī al-Qurā to al-Ḥijr. Al-Isṭakhrī, 21 (1870). Cited by Wohaibi, 1973: 77. Yāqūt reproduces al-Sakūnī that four days' lie between Taymāʾ and Wādī al-Qurā. Yāqūt, iv, 76 (Beirut, 1957). Cited by Wohaibi, 1973: 281.
[74] al-Masʿudī gives seven, 265 (1938); al-Muqaddasī gives six, 107 (1906); Hamdānī gives five, 130 (1884). Cited by Wohaibi, 1973: 294 & 296.
[75] Wohaibi, 1973: 296; Cornu, 1985: 71. al-Muqaddasī, 84 (1906).
[76] Ingraham *et al*, 1981: 78-79, Maps 3 & 4. Wohaibi, 1973: 303.
[77] al-Bakrī, fol. 22 (1913). Cited by Wohaibi, 1973: 220.

That this communications infrastructure supported heavy commercial traffic is evident in the Arabic sources. Again, al-Muqaddasī gives the fullest account: "(Qurḥ) is the market of both Syria and Iraq... and the most abounding (among the towns of the Ḥijāz) with merchants, commerce and riches... (It has) pretty houses and busy markets."[78] To the anonymous author of the *Hudūd al-ʿAlam*, Wādī al-Qurā seemed a very prosperous region.[79] Al-Muqaddasī further states that the majority of the inhabitants of Wādī al-Qurā are Jews.[80] So large was the Jewish population that there was debate as to whether Wādī al-Qurā could at all be considered of the Ḥijāz and Arabia, because the Jews had never been ejected in the manner of those at Khaybar and Najrān.[81] The Jewish community aside, it seems that Wādī al-Qurā enjoyed a notably heterogeneous population, as is explicitly stated by Wākiʿ on the authority of Ibn al-Sabbah.[82] Similarly, al-Muqaddasī writes that "it is a Syrian, an Egyptian, an Iraqi and a Ḥijāzī town all in one."[83] Such a heterogeneous population clearly attests to international connections, which though perhaps partially a product of the sacred nature of the Ḥijāz and proximity to the Ḥarāmayn, might also be used circumstantially as a reflection of the extensive trade links converging on and coursing through the Wādī al-Qurā.

(iv) At least some of this commercial activity was underwritten by the local gold mining industry. Al-Balādhurī notes that the one fifth of the proceeds of the gold

[78] al-Muqaddasī, 84 (1906). Cited by Wohaibi, 1973: 296.
[79] *Hudūd al-ʿAlam*, 148 (1937). Cited by Wohaibi, 1972: 298.
[80] *Ibid.*
[81] al-Balādhurī, 39 (1959); Abū Dawūd, iv, 247 (1948-50). Cited by Wohaibi, 1973: 300.
[82] al-Wakiʿ, fol.39 (Shrine Library, Persia). Cited by Wohaibi, 1973: 294.
[83] al-Muqaddasī, 84 (1906). Cited by Wohaibi, 1973: 296.

mines of Wādī al-Qurā were passed on to Iraq,[84] and al-Iṣfahānī states that "all the inhabitants (of the *wādī*) take part in the exploitation of its gold, silver and copper mines."[85] Despite the fact that Gilmore found no evidence for the processing of ore or of metal working in the course of his excavation at Qurḥ, Kisnawi found extensive mine-workings clustered in the Wādī Jizl during his survey.[86] In this area, which comprises the immediate hinterland of Qurḥ, some ten separate mining sites were located – six or seven small settlements or mining camps which produced Islamic ceramics. There is, then, good evidence for modest gold mining activities in the Wādī al-Qurā region.

Yet it is only when the wider distribution of archaeologically attested mine sites is compared with the dependencies of Qurḥ as listed in the Arabic sources that some sense of the scale of operations is gained **[Figs. 4.23]**. Inland from ancient ʿUwaynid, which Muqaddasī gives as the port of Qurḥ, a cluster of six mining sites stretches up the Wādī Ḍāmā; two of these produced Islamic ceramics. Not only was ʿAwnīd a port of Qurḥ, but al-Yaʿqūbī refers to it as a populous place with palm groves and gold mines.[87] Up from al-Wajh along the Wādī Miyah, where from Ingraham found a track leading to Qurḥ, are a total of eleven mining settlements; between eight and ten are associated with Islamic pottery. Then from al-Ḥawrāʾ (modern Umm Lajj), linked to Qurḥ by al-Bakrī, a line of eight sites reaches across the coastal plain up towards the Wādī al-Ḥamd; at least seven and possibly all of these produced Islamic sherds. At each 'cluster' of mining sites the same general settlement pattern was observed:

[84] al-Balādhurī, 13-14 (1866). Quoted by Burton, 1879: 71-72.
[85] Quoted in Gilmore *et al*, 1985: 110. *Cf.* Wohaibi, 1973: 293.
[86] Kisnawi *et al*, 1983: 81-82, Pls. 80 & 81.
[87] al-Yaʿqūbī, 341 (1892). Cited by Wohaibi, 1973: 59.

"In the Islamic period workings seem to have clustered around a central site... Around it were numerous gold mining settlements that became smaller and less numerous as one moved outward. Hence, while settlements were to a certain extent independent, they appear to have belonged to some kind of organised unit, perhaps a central authority."[88]

This notion of a settlement hierarchy reflecting the administrative system on the ground seems borne out in the *Masālik* literature, which tends to organise roads and settlements into provinces and provincial capitals. Thus al-Bakrī explicitly states that Wādī al-Qurā is one of the large dependencies of Medina, and has in turn dependencies of its own.[89] According to Ibn al-Kalbī, the Wādī al-Qurā was one of six Arabian provincial capitals in which Arab music developed, and was allegedly one of the great markets of the Jāhilīya alongside Mecca.[90] As a provincial capital, al-Muqaddasī places five towns and a port under its jurisdiction, while al-Iskandarī explicitly states that Qurḥ functioned as the regional market.[91] It follows that it may have been to this market that the hierarchical cascade of archaeologically attested agricultural and mining settlements brought their produce. In this regard the 'central place' theory of human geography suggests itself. Qurḥ therefore lay at the centre of a network of some thirty-five capillary mining sites, of which between twenty-three

[88] Wohaibi, 1973: 77.
[89] al-Bakrī, 10 (1945-51). Cited by Wohaibi, 1973: 297. Wohaibi is not aware, however, of any such statement in 'Arram. Further references to Qurḥ as the dependency of Medina are in Ibn Khurradādhbih, 129 (1889); Ibn al-Faqīh, 7 (1885); Wakiʿ, *Manāzil*, fol. 39 (Shrine Library, Persia); al-Idrisī, fol. 36 (Bibl. Nat., No. 2222). Cited by Wohaibi, 1973: 297.
[90] Quoted by Ibn ʿAbd Rabbī, iii, 167 (1903). Cited by Wohaibi, 1973: 298. A case for Qurḥ as one of the Jāhilīya markets has been made by Nasif, 1983: 12.
[91] al-Muqaddasī lists the town as al-Ḥijr, Bada Yaʿqūb, Dabbah and Nabk Naṣr, with ʿAwnīd as port, 53 & 84 (1906); al-Iskandarī, fol. 122 (Brit. Mus., No. Add. 23603). Cited by Wohaibi, 1973: 396 & 300.

and twenty-seven are associated with Islamic ceramics. Even admitting a diachronic sequence, this is more than a modest operation, and recalls to mind Iṣfahānī's observation that "all the inhabitants (of the Wādī al-Qurā) take part in the exploitation of its gold, silver and copper mines."[92]

The date of this activity in the Wādī al-Qurā necessarily hinges about Qurḥ, the only site with published ceramics and the best attested in the historical sources. Although the Jewish community of ninth-century Qurḥ claimed to have settled there after the destruction of Thamūd, just as the Muslims traced their community back to the conquest of the Prophet in 628, these claims have a rather apocryphal flavour. Even as al-Bakrī records that the Jews of Madyān had a letter said to be in the handwriting of either ʿAlī or Muʿawiya, and written on sheep's skin blackened with age,[93] so al-Muqaddasī writes on Qurḥ: "The mosque is in the middle of the main streets of the town, there is a bone in the *miḥrāb* of this mosque said to be the bone which spoke to the Prophet saying 'Do not eat me, I am poisoned!'"[94] Such reports should be considered as the retrospective projections of upwardly mobile and competitive communities, intending to establish rarefied lineage and pride of precedent, and must therefore be treated with caution.

The first historic reports pertaining to the Wādī al-Qurā are associated with the Sufyānids and their allies. Accordingly, ʿAmr b. al-ʿĀṣ was awarded governorship of the *wādī*, and Yazīd b. Abī Sufyān made changes to its administrative status.[95] Yāqūt

[92] Quoted in Gilmore *et al*, 1985: 110. *Cf.* Wohaibi, 1973: 293.
[93] al-Bakrī, fol. 77 (Nur Osmaniye, No. 3034). Cited by Wohaibi, 1973: 143.
[94] al-Muqaddasī, 84 (1906). Cited by Wohaibi, 1973: 296.
[95] Caetani, 1907: 49-50.

similarly quotes al-Sakūnī to the effect that Muʿāwīya was responsible for the discovery of eighty springs in the valley.[96] There are no further references to the Wādī al-Qurā until the late ninth century, which leads Nasif and Gilmore to conclude that it was rather neglected under the Marwānids and went into economic decline with the shift of the Caliphate to Iraq.[97] This may or may not be the case. If so, then it suggests that Wādī al-Qurā was established as a Sufyānid agricultural estate associated with dynastic aggrandisement, perhaps thereafter being treated to a 'studied neglect' by the rival Marwānid branch of the Umayyad family, who were more concerned with their own establishments on the Syrian steppe.

Gilmore's earliest ceramic phase at al-Maʿabiyāt consists of mainly unglazed, coarse red and buff slipped wares, with only 16% of the assemblage made up of glazed wares. He associates glazed ceramics with the ʿAbbāsid period, concluding that the upper levels of the earliest phase belong to that period, with the bulk therefore of Umayyad date and earlier.[98] Parallels are sought with Umayyad levels at Qaṣr al-Ḥayr East, while Parr notes surface sherds recalling eighth-century Khirbat al-Mafjār and Umayyad Amman.[99] Yet given that neither Parr's survey nor Gilmore's excavation discovered any Late Roman imports, and that survey suggests that major pre-Islamic settlement was concentrated further north,[100] it would seem most likely that the Wādī al-Qurā settlement is of Umayyad inception – as indeed Parr's team concluded during the initial survey.[101]

[96] Yāqūt, iv, 76 & 82 (1866-73). Cited by Wohabi, 1973: 299.
[97] Nasif, 1983: 14; Gilmore *et al*, 1985: 110.
[98] *Ibid.*
[99] Gilmore *et al*, 1985: 118-19; Parr *et al*, 1970: 201.
[100] Parr *et al*, 1970.
[101] *Ibid*, 201.

The Wādī al-Qurā was abandoned by the time of Yāqūt (d. 1229), and he notes the extensive ruins, general depopulation and neglect of irrigation systems.[102] This seems corroborated by the ceramic assemblage, with Gilmore's latest ceramic phase dominated by solid colour glazes associated with the late Fāṭimid to Ayyūbid periods.[103] The last of the imported Chinese ceramics are Northern Sung (c. 960-1126). Final occupation and abandonment is therefore probably twelfth-century, which fits into a broader pattern of abandonment throughout much of the Red Sea at this time.

[4.2.2] Darb Zubayda

(i) Communications between the Red Sea and Caliphal heartland of Iraq were significantly strengthened by a significant overhaul of the ancient caravan route between Ḥīra and the Ḥijāz.[104] This route was consistently and massively improved under the first four ʿAbbāsid Caliphs (c. 749-809), and the wife of the last of these, Zubayda bt. Jaʿfar al-Manṣūr, was supposed to have been particularly associated with the patronage of the pilgrimage.[105] By the twelfth century, Zubayda had assumed an almost legendary status, and the Kūfa – Mecca road had become commonly referred to as the Darb Zubayda:

[102] Yāqūt, iv, 76-82 (1866-73). Cited by Wohaibi, 1973: 299.
[103] Gilmore *et al*, 1985: 118.
[104] Wohaibi, 1973: 381-84; Knudstad, 1977; al-Dayel & Helwa, 1978; al-Dayel & Mackenzie, 1979; Mackenzie & Helwa, 1980; al-Rashid, 1979; 1980a; 1980b; 1986; Morgan & Helwa, 1981; Helwa, al-Sheikh & Murad, 1982; Gilmore, al-Hiwah & Reseeni, 1984; Potts, 1988: 142; Peterson, 1994; Whitcomb, 1996.
[105] Rashid, 1980b: 17-25; 31-35.

"These tanks, pools, well and stations on the road from Baghdād to Mecca are monuments to Zubayda... who applied herself to this throughout her life, leaving on this road facilities and useful works which from her death until today have been of service to all who every year go on an embassy (= pilgrimage) to God most High. But for her generous acts in this direction this road could not have been traversed. God in his His satisfaction will ensure her reward."[106]

(ii) The Darb Zubayda was not only important as a pilgrimage route. Some attention has been paid to the series of mines that stretch along its southern portion, the 250 km or so between Maʿdin al-Nuqra and Maʿdin b. Sulaym **[Fig. 4.24]**.[107] Gene Heck argues that the whole of this mining region belonged to the Banū Sulaym, and that the apparent confusion as to the exact location of the mine most probably reflects that a plurality of pits and slag heaps fell under the rubric *maʿdin.*[108] He references al-Iṣfahānī and Samhūdī to the effect that the Banū Farān [sv, al-Suwārqīya] mine lay in the vicinity of the Wādīs al-Suwārqīya and Qurān, and marks it on his map near modern al-Suwārqīya as Site I **[Fig. 4.25]**.[109] To the northeast, he identifies modern Mahd al-Dhahab [sv] as the Maʿdin Banī Sulaym *par excellence*, located by al-Hamdānī and al-Ḥarbī, appearing as Site II on his map.[110] His Site III is located at Biʾr al-ʿUmaq [sv] on the authority of al-Samhūdī, who calls it Maʿdin Banī al-Sharīd.[111] Finally, Site

[106] Ibn Jubayr, 208 (1907); trans. Broadhurst, 216 (1952). Cited by Rashid, 1980b: 33.
[107] Wohaibi, 1973; Rashid, 1980b; Cornu, 1985; Heck, 1999; Péli, 2006.
[108] Heck, 1999: 373.
[109] Heck, 1999: 374.
[110] Heck, 1999: 377.
[111] Heck, 1999: 377.

IV is the Maʿdin al-Nuqra [sv], of which he cites al-Ḥarbī and Ibn Khurradādhbih to the effect that the northern extension of this mine was known as Maʿdin al-Qurashī.[112]

However the sources are more confused than Heck acknowledges. For instance, al-Hamdānī writes of "the mine on the pilgrim-road to Iraq, between al-ʿUmaq and Ufayʿīya. I do not know if it is the same as the mine of al-Naqra on the way to Iraq, or different, or a mine in name only. And the mine of the Banī Sulaym and the mine of the Banū Farān in the country of Balīy."[113] The author is clearly aware of the broad extent of the Darb Zubayda mining region, though when it comes to the details of topography and ownership he is rather hazy. Similarly, the Maʿdin Banī Sulaym is variously placed between Ufayʿīya in the south and Rabāda or al-ʿUmaq in the north. Wohaibi presents a swathe of such sources describing the location of the mine, and notes they "by no means coincide" **[Fig. 4.26]**.[114] It seems that geographers from Ibn Khurradādhbih to al-Muqaddasī wrote about Maʿdin Banī Sulaym on the Darb Zubayda, a shifting plurality of pits and heaps worked by a changing aggregate of tribes and clans, producing disjointed 'snap-shots' of a complex diachronic socio-economic process.

Archaeological survey, on the other hand, can provide a quantifiable data set allowing an informed analysis of distribution and date. Just such a survey is available for the Maʿdin al-Nuqra, the northernmost cluster of sites in the Darb Zubayda mining region. Some 11 mining sites were explored by de Jesus *et al*, focusing on the historically

[112] Heck, 1999: 373. *Cf.* Rashid, 1980: 124.
[113] al-Hamdānī, fol. 24a (MS. Upsala); trans. Dunlop, 1957: 39.
[114] Ibn Khurradādhbih, 131 (1889); al-Yaʿqūbī, 312 (1967); Ibn Rusta, 179 (1967); Qudāma, 186 (1889); al-Hamdānī, 185 (1884); al-Muqaddasī, 108 (1906); Wakīʿ, fols. 14-16 (The Shrine Library, Persia). Cited by Wohaibi, 1973: 133-137. *Cf.* Péli, 2006: 39-40.

attested site of al-Nuqra and its hinterland **[Fig. 4.27]**. The site (Nuqra South) lies on the Darb Zubayda and was first examined as part of the Ḥajj-road survey,[115] while sources bearing on its historical geography were later compiled by Cornu.[116]

Nuqra South occupies c. 10 - 15 ha, comprising two large pits c. 30 m dia x c. 25 m deep surrounded by spoil dumps, extensive copper slag heaps and some associated settlement **[Fig. 4.28]**. However, the full extent of the site has been obscured by the encroachment of a modern village and industrial mining. The area of ancient settlement has suffered particularly. Bulldozer trenches have exposed occupation strata c. 2 m deep, indicative of intensive habitation. Similarly, while no furnaces were discovered, the quantity of copper slag – and its use as a building material in the local village – attest to the local processing of ores; rotary querns associated with crushing gold bearing quartz were also found in quantities.[117] A subsidiary (Nuqra North) site was found c. 3 km north of al-Nuqra, consisting of prominent copper slag heaps and associated furnaces, and a mining pit c. 75 m x 35 m^2 and currently 12 m deep but apparently going deeper **[Fig. 4.29]**.[118]

The pottery suggests that the Nuqra mines were entirely ʿAbbāsid.[119] At the main site of al-Nuqra, neither the mining survey or earlier Darb Zubayda survey found anything earlier than the ninth century, though de Jesus inserts the proviso that soundings were limited and settlement extensive. While not dismissing the possibility of pre-

[115] Mackenzie & al-Helwah, 1980.
[116] al-Iṣṭakhrī, 22, 27 (1927); Ibn Ḥawqal, 34, 40 (1873); Ibn Khurradādhbih, 127-31, 147 (1889); Qudāma, 186-190 (1889); Yaʿqūbī, 312 (1967); Ibn Rusta, 176-182 (1892); al-Muqaddasī, 94, 107-108 (1906); Yāqūt, iv, 804 (1866-73); al-Hamdānī, 184, 185 (1884). Cited by Cornu, 1985: 78-79.
[117] de Jesus *et al*, 1982: 64-71.
[118] *Ibid,* 71-76.
[119] de Jesus *et al*, 1982: 63 & Pl. 92.

Islamic occupation, he concludes that the last intensive mining operation was in the ninth century, so that "all the sites fall within the ʿAbbāsid period and confirm that the ʿAbbāsids were highly committed to the exploitation of copper and gold on the Arabian Shield."[120]

Nine other mining sites were found in a c. 150 km radius from al-Nuqra, of which two were copper and seven were gold mines. These sites received very limited attention, the survey team fully intending to return to finish the job in further publications, which were sadly never forthcoming. Some appear to have been comparatively large, such as the copper mining site of Musaynaʾa, with several kilometres of remains including some 3 ha of slag and pits over 15 m deep. Importantly, several sites preserve areas of inhabitation, and so provide a possible model for the lost settlement of al-Nuqra. At two sites, barrack-like structures were uncovered, consisting of rows of single rooms.[121] As de Jesus notes, "open pit mining requires a large labour force... the population of al-Nuqra was greater than that of a simple village."[122] The barrack-like structures might therefore be understood as housing just such a work force, and given the low returns of so labour intensive an industry, it logically follows that such a labour force was readily available and relatively affordable.

(iii) Just such a source of labour might have been drawn from the settlements of the Darb Zubayda itself. Donald Whitcomb has argued that the Darb Zubayda may be conceived as "a special type of linear settlement... in marginal areas, supported by

[120] *Ibid,* 71, 63.
[121] *Ibid*, 76-78.
[122] *Ibid*, 65.

government patronage... (intended) to shift functions from specialised facilities to more developed urban settlements."[123] Whitcomb believed that this 'settlement system' was about rather more than making the desert bloom, and belongs to the ʿAbbāsid reorientation of the Middle East away from Umayyad Bilād al-Shām. However, Whitcomb takes no account of the extensive local mining industry outlined by de Jesus, believing that the only economic rationale for the Darb Zubayda settlements was associated with the caravan traffic. The building of palaces, mosques, reservoirs and caravanserais by the central authorities was intended as a broad economic foundation for settlement, in order to foster a genuine 'urban' character to settlement. Yet given the proximity to an apparently thriving local mining industry, which would logically have served as a 'pull factor' fuelling immigration, it might contrarily be argued that the appearance of such 'urban' elements as palaces and mosques responded to an autonomous autochthonic growth. The government policy that Whitcomb reads into the evidence may, therefore, be more apparent than real.

This 'mining hypothesis' explaining the growth of the Darb Zubayda settlements finds some support in the Rashid's work at Rabāda.[124] The site is characterised by a number of fortified structures and several clusters of residential buildings, and excavations produced evidence for the manufacturing of metal and glass. Tellingly, Rabāda is situated approximately mid way between Maʿdan al-Nuqra and Maʿdan Banī Sulaym, at the very heart of the Southern Darb Zubayda mining region outlined above. This invited speculation that Rabāda functioned as a 'central place' analogous to Qurḥ in the Wādī al-Qurā mining region. Work on the Darb Zubayda has hitherto focused on

[123] Whitcomb, 1996: 25.
[124] al-Rashid, 1979; 1980a; 1986.

its role as a Ḥajj route, despite Whitcomb's argument for a linear settlement system, and the existence of an extensive local mining industry has largely been neglected. Moreover, given the stark lack of mineral resources in the Mesopotamian heartland of the ʿAbbāsid empire, it might be wondered if the Darb Zubayda was in some way intended as a conduit for the mineral wealth of the Arabian-Nubian Shield. The political capital to be gained by provisioning the Ḥajj route and strategic value of a road opening up the troublesome ʿAlid 'flash-point' of the Ḥaramayn cannot, of course, be put aside, but the steady flow of gold to the mint of Baghdād should not be ignored.

[4.3] Yemeni Ports

[4.3.1] Tihāma

(i) ʿAththar [sv] was excavated by Zarins & Zahrani, who found ten layers of stratigraphy in Area B, of which the top five included ʿAbbāsid glazed ceramics providing a date of c. 850-1075 – i.e. from their date for the emergence of Islamic glazed wares to the historically attested date of abandonment.[125] The lower five levels do not demonstrate any clear affinity with well known Umayyad type sites in Syria-Jordan, but are instead "characterised by primarily unglazed wares of regional tradition which changed slowly over a long period of time," with Late Roman ribbed

[125] Zarins & Zahrani, 1985: 81-83. They further state (*Ibid*, 70) that al-Hamdānī puts the abandonment date at AD 1061, which must be a mistake given that al-Hamdānī died in 945.

amphorae appearing in the earliest level(s?).[126] Their stratigraphic position therefore makes it highly likely they belong to the seventh and eighth centuries. Further evidence for eighth-century activity in the region is limited to two Marwānid *dirham*s found in a sandy embayment at Tall al-Minjara, about 20 km to the south of ʿAththar. The first is of ʿAbd al-Malik, dated 86 / 705 and minted in Wāṣit, and the second of al-Walīd, the year 90 / 712 from Rayy.[127] Alhough Zarins & Zahrani are quick to use the coins as evidence for maritime commerce, other explanations need to be borne in mind, especially the unsettled conditions in Yemen which brought a constant stream of Umayyad troops – together with their pay – into the region.

(ii) Zabīd [sv] and its hinterland has been explored by Ed Keall in a survey which revealed a scant few glazed sherds of Umayyad date **[Fig. 4.30-.31]**. The survey work of Zarins and Keall together indicates a degree of eighth-century activity, however its significance is difficult to assess given the limited area of survey. The city of Zabīd was established in the Yemeni Tihāma in c. 820 by Muḥammad b. Ziyād, an ʿAbbāsid general despatched at the head of a military expedition by al-Maʾmūn in c. 817. It seems that since the reign of Harūn al-Rashīd, the powerful Tihāma tribes of ʿAkk and al-Ashāʿir had been in revolt,[128] and that the long since unsettled conditions in Yemen had made it a natural resort for all manner of rebels – including troublesome ʿAlids. Al-Ṭabarī reproduces Abī Mikhnaf's claim that ʿAbd Allāh b. ʿAbbās advised Ḥusayn b. ʿAlī: "If you decide definitely to revolt (against Yazīd b. Muʿāwīya), go to the Yemen, where there are forts and mountain paths, where the land is extensive, where you will

[126] Zarins & Zahrani, 1985: 83. They do not explicitly state where the amphorae sherds were found.
[127] Riyadh Museum Cat. No. 3823 & 3822. Cited by Zarins & Zahrani, 1985: 89.
[128] al-Madʿaj, 1998: 186-88.

have supporters and be isolated from the people."[129] His descendent Ibrahīm b. Mūsa al-Khāẓim ensconced himself in the highlands of Yemen, where his military successes earned him the sanguinary sobriquet of al-Jazzār, 'the butcher.' This was intolerable to al-Maʾmūn, who having recently flushed out and massacred the ʿAlids in a rouse involving ʿAlī al-Ridda, clearly could not allow a brother of the murdered eighth *imām* to establish an ʿAlid emirate in the provinces.

Alhough no contemporary source deals with the expedition of Ibn Ziyād, it attracted a good deal of attention in later medieval Yemeni writing, starting with the *Taʾrīkh al-Yaman* of ʿUmāra al-Ḥakamī (d. 1174).[130] The story goes that Ibn Ziyād was descended from ʿUbayd Allāh b. Ziyād b. Abī Sufyān (i.e. Ziyād b. Abīhi, Muʿāwiya's governor of Iraq), and had been arrested by al-Maʾmun together with other notable Umayyads due to be executed. They were brought before the Caliph, only to be saved by some eleventh hour eloquence on the part of Ibn Ziyād, and at length packed off to the Yemen.[131] Ibn Khaldūn, in an epitome of Yemeni history based largely on al-Ḥakamī, adds that al-Maʾmun entrusted these particular Umayyads with the expedition because they held an especial antipathy towards the ʿAlids.[132]

Opinions on Ibn Ziyād and Zabīd differ. Keall believes that Ibn Ziyād turned on the ʿAbbāsids and declared himself independent in spite of al-Maʾmūn, while Brockelmann

[129] al-Ṭabarī, ii, 275 (1879-1901). Quoted by al-Madʿaj, 1988; 160.
[130] Note that al-Ḥakamī does cite the slightly earlier, but now lost, *Kitāb al-mufīd fi akhbār Zabīd* of Abū'l-Ṭāmī Jayyāsh b. Najāh (d. 1104), together with two learned shaykhs "well acquainted with the histories of the people, with their genealogies and with their poetry" – بايام الناس وانسابهم واشعارهم – al-Ḥakamī, 2 (1892). Later Yemeni writers reproduced and elaborated on Ḥakamī's account, but provide nothing new. *Cf.* Ibn al-Mujāwir (fl. 1230), i, 66 (1951-54); al-Khazrajī (d. 1410), 99 (1979); Ibn al-Daybaʿ (d. 1537), i, 320 (1979); Abū Makhrāma (d. 1540), ii, 216 (1936-50). Cited by al-Madʿaj, 1988: 226, n. 61.
[131] al-Ḥakamī, 3 (1892).
[132] Ibn Khaldūn, iv, 115; reproduced by Kay, 1892: 218. On the ʿAlid context, see Geddes, 1963-64: 105.

and others argue that al-Maʾmūn deliberately delegated Caliphal authority in Yemen to his appointee Ibn Ziyād.[133] Either way, following the assassination of al-Mutawakkil in 860, the Ziyādids of Zabīd were little bothered with Sāmarrāʾ and Baghdād. In many ways, the foundation of Zabīd at the end of the 'long' eighth century neatly brings this section to a close, for Zabīd was the last of the early Islamic military establishments, which include ʿAydhāb, Bāḍiʿ, al-Fusṭāṭ, al-Qulzum and al-Jār. Zabīd was no more founded as a port of commerce than any of the others, but was instead a strategically sited garrison town.[134]

The city of Zabīd was described by al-Muqaddasī as "a splendid, well-built town, popularly called the Baghdād of Yemen,"[135] most likely because of its circular city-plan clearly shown in Ibn al-Mujāwir's map **[Fig. 4.32-.33]**. The eastern half of the city was raised by the Ottomans to make a *cordonné sanitaire* east of their new citadel, though the medieval city limits can be still traced by the curvilinear line of cemeteries, mosques and middens.[136] The al-Ashāʿir mosque is reputedly the oldest in the city, a tradition broadly supported by its central position again reminiscent of Baghdād. Keall's trench sunk into the courtyard of the Ottoman citadel reached natural after some 8 m, but no sign of the Ziyādid city was discovered; indeed the few sherds of eighth- / ninth-century ceramics found were abraided, suggesting that they been rolling about on open ground.[137] If the traditions that the al-Ashāʿir mosque lay at the centre of Ibn Ziyād's circular city are correct, then the lack of Ziyādid remains under

[133] Keall, 1983: 379; Geddes, 1964: 106; al-Madʿaj, 1988: 211.
[134] al-ʿAmīd, 1970.
[135] al-Muqaddasī, 84 (1906); trans. Collins, 2001: 76. For the archaeology, see: Keall, 1983a; 1983b; 1984; 1989; 1991; 1993; 1994; 1999a; 1999b; 2001a; 2002.
[136] Keall, *pers comm.*
[137] I worked as trench superisor at Zabīd in the 2005 season, when we bottomed the main Trench ZSE 36 nw V.

the Ottoman citadel suggests a settlement radius of c. 200 m, which is to say that Zabīd was really a very small 'city' in the first two hundred years of its existence. This further suggests the character of a fortress and garrison. Again, commerce had very little to do the development of the 'long' eighth-century communications infrastructure.

[4.3.2] al-ʿAsīr

(i) A number of mining sites are attested along the flanks of the ʿAsīr Mountains, which is to say the Tihāmat al-Shām and the far western Najd, roughly extending for a c. 300 km longitudinal stretch between Bīsha and Najrān along the highland road **[Fig. 4.34-.35]**. Little attention was paid to this region by the Orientalist antiquarians, perhaps because it lacks the Biblical associations of the land of Midian or Sheba,[138] while the lack of post-war synthetic academic accounts might follow from the general dearth of primary material and written evidence. The exception is Niebuhr (1792), sole surviving member of the Royal Danish Expedition, who published the first detailed account of south-western Arabia since Ibn al-Mujāwir. Archaeological evidence is limited to three surveys in the south-western province of Saudi Arabia published as preliminary reports in *Aṭlāl*. The western Najd was surveyed under Zarins (1980), as was the southern ʿAsīr and Red Sea coast (1981), while a mining survey in the area of the Wādī Tabāla and hinterland of al-Baha was undertaken by James Hester (1984). However, only Hester's survey is sufficiently detailed to bear analysis;

[138] Not withstanding some intriguing - if highly speculative - attempts to associate the Wādī Bīsha with Eden's Pishon and the Khawlān with Havilah: "The name of the first (river) is the Pishon; it is the one that winds through the whole land of Havilah, where there is gold." (Gen. 2:11)

sadly it is rather poorly organised and the information is not always internally coherent. Although rather slight, the evidence allows for some assessment of the significance of the mining industry, and a reconstruction of its operation *vis-à-vis* the markets and ports.

Despite the fact that the earliest Jāhilī poets and the first Arabic narrative histories are of Yemeni provenance, sources for the pre- and early Islamic Yemen do not become abundant until the twelfth century AD. Such works as the *Kitāb al-Mulūk wa Akhbār Māḍīn*, or the *Kitāb al-Tījān fī Mulūk Ḥimyar* and *Kitāb al-Isrā'īlīyāt*, respectively by the Yemenis ʿUbayd b. Sharya (d. < 705) and Wahb b. Munabbih (d. 732), are of only limited utility owing to repeated reworking by later editors. Indeed, the *Kitāb al-Tījān* may very well have been composed by Ibn Hishām (d. 833), perhaps along the same lines as Jāḥiẓ's cynical observation that the only way he could sell books was to pretend to be Ibn Muqaffaʿ.[139] Certainly retrospective projection could be used to appropriate the authority lent by antiquity. Not until the tenth century does pertinent indigenous material become available, in the shape of the so-called *Lisān al-Yaman*, one Abū Muḥammad al-Ḥasan al-Hamdānī (d. 955).[140] His *Ṣifat Jazīrat al-ʿArab* may have been written as a supplement to a lost *Kitāb al-masālik wa'l-mamālik*, but stands alone as an important and early description of Arabia.[141] More particularly, the *Kitāb al-jawharatayn al-ʿatīqatayn al-māʾiʿatayn al-ṣafrāʾ wa'l-bayḍāʾ* deals explicitly with sources of precious metals, and is most detailed in its account of the Arabian sources.[142]

[139] Dunlop, 1971: 47.
[140] Löfgren, 1971: 124.
[141] al-Hamdānī, (1884).
[142] al-Hamdānī, (MS Upsala); partial trans. Dunlop, 1957.

Yet this detail is a mixed blessing. Given that al-Hamdānī spent most of his life in Rayda in the northern Yemen, it might well be expected that he would write at length on those regions closest and best known to him, and so unwittingly appropriate a disproportionate importance for the mines of the ʿAsīr region.[143] For instance, he can broadly point to distant Ghana as a source of gold in *Kitāb al-Jawharatayn* but is unable to name individual mining regions, as he does for much nearer Nubia and Arabia. Similarly, despite undertaking the *Ṣifat Jazīrat al-ʿArab* he is unable to give more than a sketch of mines in the Najd and Ḥijāz, and cannot provide the sort of detail as appears in his account of Yemeni mines, wherein the production, ownership and history of individual mines is discussed.[144] With this phenomenon of a 'disappearing point' of detail noticeable in Hamdānī's writing, the economic significance of the ʿAsīr mines is difficult to assess.

Attempts to corroborate his information with other sources prove futile because of the exceptional nature of Hamdānī's work. Not only is he the earliest extant Arabic writer on south-western Arabia, but his is among the most wide ranging of intellects, so that the next Yemeni writer of significance – ʿUmāra al-Ḥakamī (d. 1174) – never gets beyond folk-loreish tales of nefarious sultans and their hoarded treasures.[145] It is to compare apples with oranges. Moreover, as will be shown, the Arabian mining 'boom' was already in decline in Hamdānī's day, so that when al-Ḥākamī came to write *Taʾrīkh al-Yaman* there was virtually no mining activity to speak of – nothing,

[143] Dunlop, 1957: 34, has it that "this is perhaps connected with his South Arabian provincialism, or, if one prefers it, his provincialism." *Cf.* Löfgren, 1971: 124.
[144] al-Hamdānī, fols. 21a-26b (MS Upsala); trans. Dunlop, 1957: 36-44.
[145] al-Ḥakamī, (1882). In his introduction, Kay compares this book to *Alf Layla wa Layla*.

therefore, to attract his attention and feed his antiquarian inquiry. Yet al-Ḥakamī is the most important source for the reconstruction of early Islamic political history in south-west Arabia, and were it not for his stories of the rise and fall of the various dynasties, little would be known. Al-Ḥākamī therefore provides valuable political context for Hamdānī's sketch of mining in Yemen and the ʿAsīr, which affords some comment of the political economy of the region.

(ii) Three gold mines are mentioned among the northern ʿAsīr mountains in the account of al-Hamdānī, which can be placed on the map while admitting a margin of error. The northernmost is the abandoned mine of Bīsha followed by that of al-Hujayra.[146] Bīsha exists as a current toponym and appears on Cornu's map in the corresponding position, and so provides no difficulty in identification, while Cornu places the Hujayra region a little to the south-east. Next, al-Hamdānī mentions "the mine of al-ʿAqīq, ʿAqīq of Jarm, between Najrān and al-Falaj... It is very productive."[147] There is today an al-ʿAqīq c. 50 km north-east of al-Baha and c. 100 km west of Bīsha, though whether this can be equated with Hamdānī's al-ʿAqīq is debateable. Banāt Jarm appears on Cornu's map about 75 km south of Bīsha, and as a likely eponymous tribal toponym, broadly places the mine of al-ʿAqīq in the territory of the Banū Jarm. However, Cornu places al-Falaj away into the Najd on the road to al-Yamāma, which does not concur with such an interpretation. This might be resolved be substituting al-Falaj for al-Falja, a town on the Mecca-Baṣra road marked on Conu's map, which would indeed put modern al-ʿAqīq in a medial position.

[146] al-Hamdānī, fols. 23b (MS. Upsala); trans. Dunlop, 1957: 38.
[147] *Ibid.*

Two gold mines are mentioned on the coastal plain west of the ʿAsīr. The northernmost is "the mine of ʿAshām in the country of Kināna... Its gold is red and excellent," and some way to the south "the mine of Ḍankān in the country of Kināna and al-Azd, between the two.... It is inferior to the mine of ʿAshām."[148] Now ʿAshām appears on Cornu's map in the place of modern Tihāmat al-Shām, while Ḍankān is identified with Tihāmat al-ʿAsīr, so that these two regions can be located with some confidence. Kināna might further be equated with Cornu's Qanawna, the modern al-Qunfudha; the confusion of long vowels / dipthongs and *Qāf / Kāf* is not be unprecedented.

Four gold mines are given in the southern ʿAsīr. The first is easily located, "in the country of the Banū Sābiqa in the boundary between Ṣaʿda and Najrān is another excellent mine."[149] Although its exact location is uncertain, the broader locality between these two famous towns is clear enough. Less certain is "the mine of al-Qufāʿa in the country of al-Jurayba of Khawlān. It is near to al-Khaṣūf, the town of Ḥakam. It is sometimes called the mine of al-Bār. Al-Bār is at the head of the Wādī Khulib, the *wādī* of al-Khaṣūf. It is the best of all mines."[150] Ironically, despite the fact that this mine is located with perhaps more detail than any of the others, it is difficult to equate specifically with any modern locale. Yet here, as elsewhere, al-Hamdānī is referring to eponymous tribal territories, which can be rather transient and amorphous entities. Today the Khawlān region straddles Yemen and Saudi Arabia, and was described by Niebuhr as follows:

[148] al-Hamdānī, fols. 23a & b (MS. Upsala); trans. Dunlop, 1957: 37-38.
[149] *Ibid.*
[150] al-Hamdānī, fols. 23b (MS. Upsala); trans. Dunlop, 1957: 38.

"The small district of Khawlān, which comes to be here taken notice of, and which is to be carefully distinguished from that of the same name near Ṣanʿāʾ, lies among the mountains westward from Ṣaʿda, upon the road from Ṣanʿāʾ to Mecca, four days journey from Ḥalī, the extreme city upon that side of the Sharīf's territory."[151]

This suggests that the mine of al-Qufāʿa lay somewhere in the south-central ʿAsīr. A second mine is given in the immediate proximity, "like it and near it is the mine of al-Mukhallafa in the country of Ḥajūr in the country of Hamdān," and he further notes that "there are others which are unworked, among them the mine of Maʿān in Ḥajūr... It is similar to the mine of Ḍankān."[152] This brings the total number of mines in the southern ʿAsīr up to at least four. In addition, a fleeting reference to a gold mine in the region of Najrān found in al-Balādhurī, providing rare textual corroboration for the account of al-Hamdānī.[153] To this can be added the far famed silver mine of al-Raḍrāḍ, of which al-Hamdānī writes:

"There is not in Khurāsān, nor anywhere else, a mine like that of al-Yaman... The village of the mine was extensive, with irrigation and palm-trees. Provisions came to it from Baṣra. Files of camels came to it and went from it... They obtained in a week a load of silver amounting to 20,000 *dirham*s. This means a yield in a year of approximately 1,000,000 *dirham*s... There were in it 400 furnaces. When birds came near the village of the mine, they dropped dead because of the fire from the

[151] Niebuhr, 1792: Section 18, Chp. 6, Para. 59.
[152] al-Hamdānī, fols. 23b (MS. Upsala); trans. Dunlop, 1957: 38.
[153] Burton, 2004. al-Balādhurī, 13-14 (1866).

furnaces... The merchants of Iraq, Persia, Syria and Egypt carried off the silver of al-Yaman in those days and gained great profit by it."[154]

He gives its location as "on the boundary of Nihm and the district of Yām in the country of Hamdān... The Banu al-Ḥārith and upper Khawlān are near neighbours to it."[155] Again, al-Hamdānī refers to eponymous tribal territories. The Banū Hamdān were a clan of the sub-tribe of al-Yām, who were to establish themselves as rulers of Ṣanʿāʾ throughout the eleventh and twelfth centuries, and who appear to have been associated with the territory between Ṣaʿda and Ṣanʿāʾ at the time al-Hamdānī was writing.[156] As for the upper Khawlān, this would seem to mean a southern extension of the Khawlān territory – described above by Niebuhr – for al-Hamdāni almost always lists places from north to south, which recalls the practice of placing south at the top of maps in Arabic manuscripts. Finally, al-Hamdānī states that it lay on "the road of al-ʿAtīq and al-Falaj and al-Yamāma and Baḥrayn to Baṣra."[157] This road is well attested in the literature. It appears on Potts' map of the main pre-Islamic Transarabian routes and Cornu similarly marks it on her map, where it terminates in the region of Ṣaʿda. Both the tribal territories and road system given by al-Hamdānī are evocative of the south-central ʿAsīr, somewhere in the mountains in the hinterland of Ṣaʿda.

(iii) An ʿAsīr mining region can thus be pieced together from the account of al-Hamdānī, with some nine gold mines and a single silver mine attested. The

[154] al-Hamdānī, fol. 25a-26a (MS. Upsala); trans. Dunlop, 1957: 41-43.
[155] *Ibid*, 41.
[156] Löfgren, 1971: 124.
[157] Dunlop, 1957: 42.

archaeological evidence provides some means of corroborating this picture, and in fact supplies a good deal more information on the exploitation of non-precious metals, particularly copper – which is at no point mentioned by al-Hamdānī.

Hester's survey mining survey of the south-western province of Saudi Arabia, published as a preliminary report in 1984, focused on the region between Bīsha and al-Baha **[Fig. 4.36-.37]**. Some 21 mining and smelting sites were recorded, attesting a range of sizes, with 12 sites 1 hectare or more and 4 sites 10 ha or more - size here referring to the area of slag-heaps and settlement.[158] This is indicative of some sort of settlement hierarchy, perhaps analogous with the Wādī al-Qurā, and Hester's team note that the largest copper mines appear to have more slag than their galleries would allow for, suggesting that they functioned as regional smelting centres.[159] Moreover, of the 21 sites, 14 were associated with copper exploitation, these being generally much larger than the 4 known gold mining sites **[Fig. 4.38]**.[160] Hester *et al* note that the copper ores contained only 1 - 4% copper, so estimate that even the largest mines produced no more than a few tonnes, and most a few hundred kilograms. At the same time, large quantities of charcoal would have been necessary for the industrial scale of the smelting process, probably necessitating the importation of fuel. The expense of mining was therefore considerable. They conclude that it would only have been economically viable with either an abundant supply of slave labour or the extremely high sales value of copper ingots.[161] Yemen's position

[158] Hester *et al,* 1984: 115 & Table 4. The report is rather poorly organised and frustrating to use, necessitating a good deal of flicking backwards and forwards. Worse, the information is not always internally coherent.
[159] *Ibid,* 129.
[160] *Ibid,* 131 & Table 4. N.B. Hester's transliteration of place names.
[161] *Ibid,* 130.

opposite Ethiopia and the Horn gave it ready access to large quantities of slaves, and it might be wondered whether their labour made mining economically viable in the ʿAsīr.

Certain of the gold mines given by al-Hamdānī for the northern ʿAsīr region may be identified with archaeological sites with varying degrees of confidence. Hester *et al* note of ʿAshām that "historical sources report this was a source of gold mining,"[162] though do not actually state which historical sources these might be. Nor do they state the grounds upon which the equation between historical reference and archaeological site is made. Nor even are they convinced this ruined village of 200 structures was associated with gold mining at all; there is no evidence of mining activities or ore processing **[Fig. 4.38]**. It might logically be inferred that their historical source is al-Hamdānī, given both his mineralogical treatise and his local roots, and certainly he does write of the mine at ʿAshām (see above). However, Cornu cites numerous sources placing this as a *mikhlāf* (province, Yemeni) of the Tihāma,[163] and not up in the ʿAsīr mountains south of al-Baha. Hester's treatment of this site leaves a lot to be desired, and there is little or nothing to support his interpretation.

Earlier it was suggested that Hamdānī's gold mine al-ʿAqīq of Jarm might be lie near the modern town of al-ʿAqīq. Hester did indeed find a gold mining site in the vicinity, in fact, the largest gold mine found in the course of their survey. The 6 ha site consists of c. 100 structures and 5 mining pits, with a satellite mining camp of 6 structures

[162] *Ibid,* Table 4.
[163] Ibn Ḥawqal, 133 (1938-39); al-Yaʿqubī, 316 (1892); al-Muqaddasī, 88 (1906); Yāqut, iii, 681, 1.4-6 (1866-73); Hamdānī, 120, 121, 188 (1884). Cited by Cornu, 1985: 70.

near a mine shaft and pit.[164] It therefore accounts for 2 out of the 4 gold mines recorded, the others having an area of between 60 - 75 m^2. The veins of gold-bearing quartz dip at 75° to the south and are less than a metre thick. They were mined to a depth of 25 m, and Hester's team note that they were unusually rich, with up to 24 g of gold and 8 g of silver per ton.[165] Could this mine of which al-Hamdānī writes: "It is very productive. They call a portion there a 'grain of dust' (*duqqa*) even though it contains several *ruṭl*s"?[166] The persistence of the name, topographic fit with Hamdānī's account, and the size and quality of the gold mine recorded by Hester *et al* together support the equation.

In addition, Christian Robin has made a claim for the discovery of the mine of al-Raḍrāḍ.[167] He associates Hamdānī's mine with al-Jabalī in the c. 50 km long Wādī Ḥarīb / Nihm, the entrance of which lies c. 40 km north-east of Ṣanʿāʾ. This does broadly agree with the human geography in the account of al-Hamdānī (see above), moreover, it places the mine very near his 'home-town' Rayda and so helps account for the mass of information on the site. The al-Jabalī site is around 10 ha, including some 30 shafts over 10 m long. An apparently unique gallery was discovered, c. 150 m long x 30 m - 40 m wide and 'several metres' high, with c. 10 shafts 10 m - 25 m deep connecting the gallery with the surface.[168] About 5 km north-west of the mine, a 6 ha slag-field and 'traces of buildings' were found; Robin identifies these as the furnaces and village referred to by al-Hamdānī.[169] Although the region has not been systematically

[164] Hester *et al*, 1984: Table 4. No plan of the site was published.
[165] *Ibid,* 136.
[166] al-Hamdānī, fol. 24a (MS. Upsala); trans. Dunlop, 1957: 38-39.
[167] Robin, 1988: 123-124,
[168] *Ibid,* 124.
[169] "...there were 400 furnaces." al-Hamdānī, fol. 25b (MS. Upsala); trans. Dunlop, 1957: 42.

surveyed by archaeologists, the surface area of the al-Jabalī mines is certainly large by the standards of the sites recorded in Hester's survey, and the gallery seems really quite exceptional. It might therefore be concluded that the balance of probability weighs in favour of Robin's identification. However, the lack of an extensive settlement site, explicitly mentioned by al-Hamdānī, remains problematic.

Finally, two further gold mining sites have been found in the north-eastern ʿAsīr region during geological surveys. The first lies in the Wādī Ṣaʿda and was dubbed al-Maṣāniʿ (factories) by the geologists on account of the extensive evidence for smelting operations.[170] The second is at al-Ḥamḍa, where the geologists estimated a million ounces of gold had been mined in antiquity.[171] Yet the mines were not recorded by archaeologists, so that little pertinent information is gained from their discovery. Nothing is known of their size or relation to surrounding settlements, and neither ceramic or chemical dates are provided, effectively precluding any contribution to a synthetic archaeological study.

(iv) Regarding the date of Hester's mining sites, between six and ten of the total twenty-one sites demonstrated Islamic occupation, of which between three and seven also attested Iron Age material, suggesting that in many cases Islamic period prospectors reopened long abandoned mine workings **[Fig. 4.38]**.[172] In fact, Hester's team concluded that the major periods of exploitation were "the South Arabian civilisation of the first centuries before the Christian era and the ʿAbbāsid period of

[170] Heck, 1999: 367. He cites the article 'More than 1000 Mines Found,' *Arab News*, Jeddah, Dec 5 1996.
[171] Heck, 1999: 386. He cites Roberts, 1975: 27.
[172] Hester *et al*, 1984: Tables 1, 2 & 4.

the Islamic era."[173] A further 4 sites were considered late Islamic (Ottoman).[174] Dating methods focused on architectural and ceramic typologies, with some inscribed tombstones from settlement sites, but no C^{14} or archaeomagnetic sampling was attempted.[175] However, there is no detailed presentation of this material, and one is forced to take their conclusions on trust. The inception of mining in historic times is therefore poorly attested in the archaeological material presented by Hester *et al*.

A date for the al-Raḍrāḍ / al-Jabalī mines was put forward by Robin on the basis of C^{14} sampling. Two charcoal samples were taken, one from the bottom of an ore heap and one from a shelter in one of the shafts, which gave 613 ± 70 AD and 1052 ± 69 AD respectively. Robin then returns to Hamdānī's account, which mentions the Jāhilīya and the date 883, and concludes: "From his testimony and the carbon datings we can assume that in al-Raḍrāḍ silver was being mined from the sixth to the ninth century AD, but that some sporadic mining activity was going on even later."[176]

Historical evidence suggests a broadly Sasanian (c. 570-630) inception. The date 883 bears scrutiny, however.[177] Not only does it fall within the generation prior to al-Hamdānī, but the abandonment of the mine is linked explicitly to the well attested tribal anarchy that erupted upon the death of Muḥammad b. Yaʿfūr in 882. Yet if the mine of al-Raḍrāḍ was abandoned in the later ninth century, al-Hamdānī testifies to the continued utilisation of the ʿAsīr mines into the mid tenth century, despite

[173] *Ibid,* 130.
[174] *Ibid*, 126. Of which 3 comprised fortified hill-top villages in association with mine works. Hester *et al* contrast this with the lack of fortifications and *wādī* bottom locations of the early Islamic settlements, indicative of peaceful and prosperous conditions.
[175] Hester *et al* devote a single paragraph to 'dating and periods of exploition.' *Ibid*, 130.
[176] Robin, 1988: 124.
[177] al-Hamdānī, fol. 25a (MS. Upsala); trans. Dunlop, 1957: 41.

making repeated references to the abandoned mines of the early Islamic period. It might be thought that these were abandoned not too long before al-Hamdānī came to write, for the memory of their productivity and location was still current. Although the evidence is insufficient to attempt a quantitative analysis, the general qualitative content would suggest a decline of the ʿAsīr mining industry over the tenth century.

[4.4] Sudanese Ports

[4.4.1] Conflict with the Beja

(i) The Muslims probably first encountered the Beja during the conquest of Egypt. The *Futūḥ al-Bahnasāʾ* relates that certain of the Beja and Nūba assisted the Byzantines, and Ibn ʿAbd al-Ḥakam notes some sort of Beja campaign in 641 led by Nāfiʿ b. ʿAbd al-Qays al-Fihrī (the half-brother of ʿAmr).[178] He further states that when ʿAbd Allah b. Abī Sarḥ encountered a party of Beja on the return from Dongola in 652, "he inquired about them and was told about their country; he found it was not worthwhile attacking; so he went on and left them."[179] These early encounters probably constituted no more than a tit-for-tat pattern of raids and counter-raids with few long-term ramifications.

The earliest incidence of Beja conversion to Islam appears in Ibn Ḥawqal, who records that Ibn Abī Sarḥ "subjected the Beja chieftainships and other rulers who were in this

[178] *Futūḥ Bahnasāʾ*, 60 (1900); Ibn ʿAbd al-Ḥakam, 169-70, 74 (1920). Cited by Christides, 1993: 154.
[179] Ibn ʿAbd al-Ḥakam, 189 (1920); trans. Vantini, 1975: 59.

land and in the Ṣaʿīd. The majority of the Beja embraced Islamic institutions: but they uttered the double profession of faith only with their lips and accepted only some of the religious tenets."[180] Paganism seems to have survived until quite late, however, for Ṭabarī relates of a captured Beja king paraded in Sāmarrāʾ: "Some people state that they saw him carrying a small stone idol in the form of a child, to which he prostrated himself sometimes."[181] This may, on the other hand, simply be a *topos* of the savage with little or no historical content. It seems likely that the Beja maintained their political and cultural independence from the Caliphate into the eighth century.

The first really significant Muslim encounter with the Beja was at the instigation of Hishām's powerful *sāḥib al-kharāj*, Ibn al-Ḥabḥāb (r. 724-34). This may have been part of a wider Nubian strategy, for an apparently separate campaign into the territory of Marīs is known, though given a cursory treatment as "there was only a fight resulting in plunder and the seizure of prisoners."[182] His Beja campaign, however, appears to have been altogether more successful:

"The first who made a peace-treaty with them (i.e. the Beja) was ʿUbayd Allāh b. al-Ḥabḥāb. Some *shaykhs*, who claimed to have read the text of al-Ḥabḥab, said it contained what follows: '(They should deliver) 300 young men every year, so that they (Beja) be permitted to go to Upper Egypt (*rīf*), in transit, for trade purposes, without settling; that they should not kill any Muslim, or any *dhimmī*. If they killed any, the agreement would cease; they should not offer shelter to any slaves (*ʿabīd*) of the

[180] Ibn Ḥawqal, 50-1 (1938-39); trans. Vantini, 1975: 152.
[181] al-Ṭabarī, iii, 1433 (1879-1901); trans. Vantini, 1975: 103.
[182] Ibn al-Furat, vii, 45 (1936-42); trans. Vantini, 1975: 529. Also mentioned by al-Nuwayrī, Paris MS 1578, fol. 113 r – 114 v; trans. Vantini, 1975: 476. *Cf.* Welsby, 2002: 73.

Muslims, and should return their (the Muslims') fugtives (*ʿubbāq*) if any of them ever went to their country.' I came to know this in the days when (the agreement) was applied: for every sheep which a Bijāwī took, he had to pay four *dīnār*s, and for every cow, ten (*dīnār*s). Their representative (*wakīl*) was living in the Egyptian countryside (*rīf*) as a hostage to the Muslims."[183]

(ii) Nothing is heard of the Beja again for another seventy years, and one can only assume that the treaty succeeded in provided a framework for peaceful and profitable relations between the Beja and the Muslims. Ibn Ḥawqal writes that, in the early ninth century, "the Beja used to obtain their provisions from Qifṭ, a town not far from Qūṣ. They had a chieftain, by name of Muḥā, who often came to Qifṭ for wheat and dates; he was held in great esteem there."[184] Clearly, desert and sown were at ease with each other, their interactions regulated by trade agreements and commercial agents. During the troubled early ninth century, it is known that Arab tribes such as the Balīy began an unregulated and at times violent expansion into the Ṣaʿīd,[185] so that this new and unpredictable element may very well have upset the hitherto cordial relations. None of this, of course, is mentioned in the stories told at the time Ibn Ḥawqal was writing, when the violent occupation of Beja territory and right to take Beja as slaves required legitimation:

"The chieftain of the town of Qifṭ was one Ibrāhīm al-Qifṭī. The aforesaid chieftain, when he went on pilgrimage at the head of his countrymen... asked Muḥā al-Bijāwī

[183] Ibn ʿAbd al-Ḥakam, 189 (1920); from Vantini, 1975: 59.
[184] Ibn Ḥawqal, 51-52 (1938-39); trans. Vantini, 1975: 153.
[185] Garcin, 1995: 863.

and his men to accompany him on his journey. Ibrāhīm knew the country very well. The Beja tribesmen said to Muḥā, their chieftain: 'By all means, we must kill this Muslim who knows so well our country, our camps and our watering points: for we do not trust him.' He tried to deter them from this project, but they prevailed and agreed to let Ibrāhīm get lost and then abandon him. He actually died of thirst with his party. He had a young son, whom one of the Beja, having pity on him, secretly took to Edfu in Upper Egypt. From there, he was able to reach his family in Qifṭ, and informed them about the death of his father. The family kept this story secret, telling no man. Muḥā, as was his habit, came to take his provisions, at the head of thirty prominent members of his tribe. The inhabitants of Qifṭ gave them lodging in one of their churches (*biyaʿ*) and there they massacred them all. The Beja, on learning the incident, marched on Qifṭ; but the majority of the inhabitants fled. The Beja raid took place in the year 204 (AD 819); they seized seven hundred prisoners, after a great massacre."[186]

The unopposed raid on Qifṭ opened the way for a wave of serious Beja raids throughout the Upper Ṣaʿīd. Again according to Ibn Ḥawqal, both Qūṣ and Aswān were sacked in addition to Qifṭ, and all had to be rebuilt. Indeed, city walls had to built for the first time since the late Roman period.[187]

Ibn Ḥawqal continues that the people of Qifṭ petitioned the authorities in al-Fusṭāṭ to no avail – "the government at that time was worried by other problems" – for some seven years, until at last in 827 a "wealthy, courageous and warlike man" came to their aid. This was Ḥakam al-Nābighī of Qays-ʿAylān, one of the Syrian tribes settled in

[186] Ibn Ḥawqal, 51-52 (1938-39); trans. Vantini, 1975: 153.
[187] *Ibid.*

the Ḥawf al-Sharqī by Ibn al-Ḥabḥāb, now pushed south by troubles in the Delta. If Ibn Ḥawqal's chronology is correct, the movement of the Qays-ʿAylān sept in 827 corresponds exactly to the beginning ʿAbd Allāh b. Ṭāhir's aggressive campaign against the Arabs of the Ḥawf, which may be posited as the real reason behind Ḥakam al-Nābighī's 'assistance' of the Qifṭīs. The account continues:

"(Ḥakam al-Nābighī) left for Qifṭ in the year 212 (AD 827). He led a force of 1,000 men of his own tribe, viz. 500 horsemen and 500 footmen, and carried out raids into the territory of the Beja; he spent three years in their country harrying through their territory and taking prisoners. His headquarters were the place which is now called Māʿ al-Ḥakam ('the watering point of Ḥakam), one day's journey from ʿAydhāb and four days' from ʿAllāqī. He compelled the Beja to surrender the captives to the last man and went back to Aswān, where he stopped, then he journeyed following the river and took up his residence at Ṭawd, a town near Qūṣ. He became lord of the town and died there."[188]

Again, while Ibn Ḥawqal cites the Qifṭī captives as the motivation for Ḥakam al-Nābighī, it is clear that he had more practical reasons to move into the Eastern Desert. The fact that he spent three years taking prisoners strongly implies that he was a slaver, as does the proximity of his base to ʿAydhāb, by whose agency he gained access to the growing Red Sea slave market **[4.2.2]**. It significant that Ḥakam al-Nābighī was a contemporary of Ibn Ziyād, who was actively engaged in raising a slave army. Later, al-Muqaddasī notes that the blacks of Zabīd were of Nubian, Beja and Ethiopian

[188] Ibn Ḥawqal, 51-52 (1938-39); trans. Vantini, 1975: 154-55.

extraction, and he elsewhere explicitly locates the Beja as living "beyond ʿAydhāb."[189] It is further striking that the base of Ḥakam al-Nābighī was located close to the gold mining centre of the Wādī al-ʿAllāqī, right in the midst of the area which came to be known as the *Arḍ al-Maʿādin*, or 'land of the mines.' Although the mines are generally reckoned to have been reopened following the 831 Ibn Jahm Beja campaign, and so after the three-year career of Ḥakam al-Nābighī in the Eastern Desert, too much faith should not be invested in the chronology and omniscience of the sources. The context provided by time and place are enough to suggest the probability that he was involved in gold mining.

Ibn Ḥawqal's account of the career of Ḥakam al-Nābighī provides a paradigm for understanding the 'push' and 'pull' factors behind the Arabisation of Upper Egypt. Qaysī Arabs were settled in the Ḥawf al-Sharqī in the eighth century by the imperial government to counterbalance the Yamanī *jund* of the province, only then to be displaced in the early ninth-century when power struggles between the provincial and imperial governments became increasingly violent. At the same time, the emergence of local dynasties maintained by slave soldiers created a massive increase in the demand for African slaves, which certain of the Ḥawfī tribes determined to profit from by moving into the Bejaland. Mining may also have been a factor but does not appear to have been pronounced at this stage. Yet slaves and gold seemed to have represented opportunities to 'get-rich-quick,' and it is interesting that Ḥakam al-Nābighī is said to have spent no more than three years in the Eastern Desert, before setting himself up as a country gentleman in the Nile Valley. This pattern is again

[189] al-Muqaddasī, 102 & 241 (1906); trans. Collins, 2001: 87 & 176.

observable, to some extent, in the career of al-ʿUmarī **[5.2.1] (iii)**. These Egyptian Arab gold-mining and slave-trading entrepreneurs therefore had a very different attitude to making money than their Iraqi, Persian and Jewish counterparts who were active in the same period **[6.3.1] (ii)**.

(iii) The imperial government at length took action against the restive Beja. Ibn Ḥawqal's account becomes confused at this point, though al-Maqrīzī provides a clear narrative.[190] Accordingly, the governor of Aswān complained to al-Maʾmūn with regards continued Beja raiding, to the effect that the Caliph dispatched his freed man, ʿAbd Allāh b. Jahm, in 831 to deal with the situation. The Beja were defeated in a series of engagements, and a treaty imposed on the chief of the Beja of Aswān, Kānūn b. ʿAbd al-ʿAzīz. Interestingly, the treaty contains clauses that they must not pull down the mosques built at Ṣinja and the Beja 'capital' Hajar, testifying to the extent of Arab settlement in the Eastern Desert already in the early ninth century. That this is not a retrospective projection on the part of al-Maqrīzī is suggested by the appearance of Ṣinja and Hajar in ninth and tenth century sources. Ṣinja is given as the landing place of al-Qummī's amphibious Beja campaign in 855 by al-Ṭabarī,[191] and may perhaps be identified with either modern Sinkāt or the nearby early Islamic ruins at Khawr Nubt **[5.2.2] (ii)**, c. 50km inland of Sawākin. Hajar is given as the capital of the Ḥadāriba by al-Yaʿqūbī, who may be the source for al-Maqrīzī, who writes that "in the past they

[190] Ibn Ḥawqal, 52 (1938-39); trans. Vantini, 1975: 156. al-Maqrīzī, *Khiṭaṭ,* 'Chp. 32 – The Beja,' pp. 267-80 (1911-27); trans. Vantini, 1975: 618-633. On Ibn Jahm, see pp. 625-28.
[191] al-Ṭabarī, iii, 1432 (1879-1901).

had a chief whom all the (other) chiefs obeyed, and who used to reside in a village called Hajar in the remotest part of the Beja land."[192]

The campaign inadvertently led to the re-discovery of Byzantine gold mines in the Eastern Desert of Egypt. Ibn Ḥawqal writes that "when ʿUbayd b. Jahm... arrived there (in 831), many of his men noticed that the peninsula was rich in gold, for they discovered traces of mining activity carried out by the Greeks. Therefore, they came back to that region the next year."[193] The re-imposition of ʿAbbāsid authority following a serious Egyptian rebellion culminated with the abolition of the *jund* of al-Fusṭāṭ in 833 **[6.2.2] (iv)**,[194] leaving the Egyptian Arabs politically marginalised and financially bereft. Thus the 'pull' and 'push' factors were in place to create what Yūsuf Ḥasan describes as an Arab 'gold rush' into the Eastern Desert of Egypt and Sudan, in particular to the Wādī al-ʿAllāqī which broadly stretches between Aswān and ʿAydhāb **[5.2.3] (ii)**.[195]

(iv) The ensuing influx of aspirant miners from among the Arabs of Egypt and the Ḥijāz placed tremendous strain on Muslim / Beja relations, and violence erupted in the mid ninth century. A number of accounts exist of this episode, which while agreeing on the basics, record alternative traditions as regards the origin of the conflict. The earliest is that of al-Balādhurī, who merely states that al-Mutawakkil sent Muḥammad b. ʿAbd Allāh al-Qummī to take charge of the Wādī al-ʿAllāqī.[196]

[192] al-Yaʿqūbī, *Taʾrīkh*, 191 (1967); *Buldān*, 120 (1892); al-Maqrīzī, *Khiṭaṭ*, 267 (1911-27); trans. Vantini, 1975: 619.
[193] Ibn Ḥawqal, 52 (1938-9); trans. Vantini, 1975: 156.
[194] al-Kindī, 193-4 (1912). *Cf.* Kennedy, 1998: 84.
[195] Hasan, 1967: 'Mining Activities,' pp. 50-63.
[196] al-Balādhurī, 381-82 (1916).

Nothing is mentioned of any Beja act of aggression, suggesting that the imperial government was simply moving to secure newly developing sources of revenue at the frontier of the Caliphate. The next – and fullest – account is found in al-Ṭabarī, who supplies a water-tight *casus belli*:

"(The Beja) had killed many Muslims who were working in the mines to extract gold and stones, had made prisoners from among children and women and had ostentatiously claimed that the mines belonged to them because they were in their own country, and that they would not permit the Muslims to settle there: so they had harassed the Muslims who were working in the mines, that these withdrew, fearing for their lives and for their children. As a consequence, the payment of the tribute ceased. The duty collected by the Sultan on the gold, silver and precious stones was one-fifth of the output of the mines. His anger increased and he became furious."[197]

It is further mentioned that in 855 the Beja raided an unidentified town called Ḥ-R-SH, presumably in the Upper Ṣaʿīd. This may well be a conflation of an incident referred to by Ibn Ḥawqal, when the Beja sacked Kom Ombo in 857, and of course two separate raids could have occurred – al-Maqrīzī states that the Beja "resumed their raids (N.B. plural) into the country of Upper Egypt."[198] The Beja had, therefore, reversed the expansion of Muslim settlement into their ancestral homeland and, at the same time, taken the offensive in the Nile Valley.

[197] al-Ṭabarī, iii, 1428-33 (1879-1901); trans. Vantini, 1975: 99-103. Quote, p. 100.
[198] Ibn Ḥawqal, 52 (1938-39); trans. Vantini, 1975: 156. Maqrīzī, *Khiṭaṭ,* 277 (1911-27); trans. Vantini, 1975: 628-29.

The 855 al-Qummī Beja campaign marks the climax of the tit-for-tat military exchanges between the Muslims and Beja. It seems that al-Mutawakkil followed established Caliphal precedent on the Red Sea frontier, for as Abū Miḥjān al-Thaqāfī and Ibn Ziyād before him, al-Qummī was a convict offered an opportunity to make amends.[199] The force he led was comprised of the survivors of the Arab mining community based on the Wādī al-ʿAllāqī, together with volunteers eager to seek their fortune in the gold mines found in the Beja territory, both equipped and reinforced with mercenaries by the governor of Egypt.[200] It is clear, therefore, that al-Mutawakkil – so far as he concerned himself with the issue at all – believed it to be a local matter which did not require the dispatch of an imperial army. Yet this expeditionary force of Arab tribesmen, volunteers and mercenaries led by a prisoner released from a Sāmarrān jail achieved notable success.

Critical to the success of the campaign was the dispatch of seven supply ships from al-Qulzum. The destination of these ships is variously given as ʿAydhāb[201] and Ṣinja by different sources. Hasan, in his treatment of the episode, dismisses Ṣinja as a confusion on the part of al-Ṭabarī since it is an inland location.[202] In fact al-Ṭabarī writes that "they landed at a port (*sāḥil*) near a place called Ṣinja"[203] and does not claim it as the landing place itself, thus resolving the apparent contradiction. Given that a mosque at Ṣinja was mentioned in Maqrīzī's version of the 831 Ibn Jahm treaty, it would likely have been a strategic objective for the al-Qummī campaign. Finally, the

[199] Ibn Ḥawqal, 52 (1938-39); trans. Vantini, 1975: 156. Note, however, that this information is only found in Ibn Ḥawqal, who may have inserted it as literary device.
[200] al-Ṭabarī, iii, 1428-33 (1879-1901); trans. Vantini, 1975: 99-103. On the Arab tribes whom accompanied al-Qummī, see Ibn Ḥawqal, 54 (1938-39); trans. Vantini, 1975: 158-59.
[201] al-Balādhurī, 381 (1916).
[202] Hasan, 1967: 51 & n. 55.
[203] al-Ṭabarī, iii, 1428-33 (1879-1901); trans. Vantini, 1975: 101.

identification of Ṣinjat with modern Sinkāt, c. 50 km inland of Sawākin, would therefore suggest that this more southerly port was used by al-Qummī's relief fleet. Indeed, since ʿAydhāb and Bāḍiʿ seem to have been established in the context of the Muslim conquests, it may even have been the case that Sawākin was founded as part of Qummī's 855 Beja campaign. Military operations were concluded with the imposition of another treaty and the Beja king taken in triumph to Sāmarrāʾ, to the effect that the Bejaland became a short-lived and rather nominal province of the Caliphate between 855-861 – an event commemorated by a special medallion struck by al-Mutawakkil **[Fig. 4.39]**.

[4.4.2] Early Trade in Slaves

(i) ʿAydhāb and **Bāḍiʿ** in the eighth century are poorly known.[204] In the mid century, the defeated Marwānids fled to Medina via Bāḍiʿ, having first travelled across the Eastern Desert of Sudan from Dongola, suggesting that there was already an established caravan route and sea-lane linking Nubia with the Ḥijāz.[205] Indeed, Ibn Sulaym al-Aswānī (fl. 975) – who provides the earliest *ʿiyān* available for this region – explicitly states of this route:

"From this place (i.e. Berber, near the junction of the Nile and Atbara, at the southern end of the Shendi reach) begins the road leading to Sawākin, Bāḍiʿ, Dahlak and the

[204] Hasan, 1967: 64, states that Bāḍiʿ is mentioned in Ibn al-Ḥabḥab's treaty with the Beja recorded by Ibn ʿAbd al-Ḥakam, 189 (1920). This does not, in fact, appear to be the case.
[205] al-Yaʿqūbī, *Taʾrīkh*, ii, 415-16 (1883); al-Ṭabarī, iii, 46 (1879-90); al-Masʿūdī, *Tanbīh*, 329 (1894); Ibn ʿAbd Rabbih, iv, 470-4 (1942-50). Cited by Hasan, 1967: 29-30, n. 53.

islands of the Red Sea. The Umayyads who escaped death by fleeing to Nubia passed along these roads."[206]

Clearly, however, the traffic of these roads must have consisted of something rather more substantial than fleeing Umayyad princelings, though the Arabic sources are silent as to exactly what this may have been in the eighth century. Derek Welsby, in his discussion of the economy and foreign contacts of the medieval kingdoms of Nubia, observes that the trade goods recorded in ninth- and tenth-century Arabic accounts are essentially unchanged from those listed in the *Annals* of the New Kingdom Pharaoh Thutmose III (r. 1479-1425 BC), namely cattle, gold, slaves, ivory, ebony and harvests.[207] Unfortunately, evidence bearing on the commodities passing through the Eastern Desert of Sudan and its ports in the eighth century is rather oblique, with only the slave trade comparatively well evidenced for this period.

The Nubian slave trade is as old as history and was perpetuated by the conquering Muslims in the *Baqt* treaty, agreed by Ibn Abī Ṣarḥ with the king of al-Maqurra after his retreat from Dongola in 652. Under the *Baqt* agreement, the Nubians annually supplied the Muslims with 400 slaves, among other things: the Arab historians seem quite fascinated by giraffes. The Aphrodito papyri (fl. 709-15) also refer to slaves, requesting that the villagers pay 9 ¾ *solidi* "for the price of 18 yokes for the conveyance of government slaves,"[208] but these need not have been of Nubian extraction. Despite the *Baqt* treaty, both the Muslim state in Egypt and local Arab

[206] Abū Sulāym al-Aswān (fl. 975) reproduced by al-Maqrīzī (d. 1442), *Khiṭaṭ*, ii, 258 (1911-27); trans. Vantini, 1975: 608.
[207] Emery, 1965: 184. Cited by Welsby, 2004: 204-5.
[208] Bell, 1913: No. 1435, p. 94.

freebooters undertook slave raids into al-Marīs (Lower Nubia, i.e. the territory south of Aswān), such as the 'invasion' led by Hishām's powerful *sāḥib al-kharāj*, ʿUbayd Allāh b. Ibn al-Ḥabḥāb (r. 724-34): "there was only one battle of pillage and the capture of prisoners."[209] Somewhat later comes Severus' reproduction of John the Deacon (d. 770) on events in the year 747, including an aside that "the Muslims were in the habit of kidnapping the Nubians and selling them as slaves in Egypt."[210] Similarly, Ibn ʿAbd al-Ḥakam (d. 871) quotes Ibn Lahīʿa (d. 790) to the effect that "(the Nubians) have no objection if slaves are bought from them," which might further seem to bear upon the mid eighth century scene.[211] It might well be thought, therefore, that the caravan route and sea-lane connecting Bāḍiʿ with the Nubian kingdoms of the Middle Nile owed its existence primarily to the eighth-century trade in slaves.

(ii) The principal market for the slaves passing from Dongola and Soba through ʿAydhāb and Bāḍiʿ can have only really been the Ḥijāz, though again the evidence is often inferred and rather oblique for the eighth century. Following the ʿAbbāsid occupation of Medina in 763, a result of an unsuccessful revolt by Muḥammad b. ʿAbd Allāh, the local black slave population rose up to eject the ʿAbbāsid troops.[212] They first forced a retreat to nearby Nakhl then beat the ʿAbbāsid army of occupation a second time, freed an ʿAlid from jail to be their leader, and barricaded themselves in the market place. They eventually backed down at the behest of the notables of Medina,

[209] al-Nuwayrī, Paris MS 1578, fol. 113 r – 114 v; trans. Vantini, 1975: 476. A similar account is found in Ibn al-Furat, vii, 45 (1936-42); trans. Vantini, 1975: 529: "There was only a fight resulting in plunder and the seizure of prisoners." *Cf.* Welsby, 2002: 73; Hasan, 1967: 29.
[210] John the Deacon in Severus, i, 185 (1904). Reproduced in Vantini, 1975: 44. John was the secretary and biographer of the Coptic Patriarch Michael I (r. 744-768).
[211] Ibn Lahīʿa in Ibn ʿAbd al-Ḥakam, 188 (1920); trans. Vantini, 1975.
[212] al-Ṭabarī, iii, 265-71 (1879-1901); trans. McAuliffe, 1995: 'The Uprising of the Blacks in Medina in AH 145 and what Incited it,' pp. 231-37. *Cf.* Pipes, 1980: 92-3.

having negotiated with them that only the leaders of the blacks were to be punished. Later, during the 816 rebellion of Abū'l-Saraya in the Ḥijāz, a rebel governor was appointed to Mecca who ruled through the support of the local black slaves.[213] The military effectiveness and political significance of the black slave population of the Ḥijāz – or at the very least of the Ḥaramayn – testifies that it was of some considerable size and was, moreover, fully integrated into the local society and culture. In turn, this suggests something of the scale and duration of the African slave trade, which in the context of the Red Sea means that of Nubia, Bejaland and Ethiopia.

Arabian demand for African slaves is likely to have grown through the 'long' eighth century as the mineral exploitation of the Arabian Shield gained pace. A coin dated to the first year of Hishām's (r. 723-43) rule bearing the legend *maʿdin amīr al-muʾminīn bi'l-Ḥijāz* constitutes the first evidence for Islamic period mining activities.[214] This is circumstantially borne out by a jump in the gold content of the coinage, perhaps resulting from the switch from re-cast metals to mined ores; the specific gravity rises to an average of 98% under Hishām, while only 5 out of 57 tested pre-Hishām *dīnār*s reached this level.[215] A passing reference in al-Ṭabarī to Marwān II's (r. 744-50) governor of Maʿdin Banī Sulaym completes the evidence for Umayyad mineral exploitation.[216] However, the predominance of ʿAbbāsid ceramics taken from Ḥijāzī mining sites in the course of survey suggests a peak exploitation c. 750-850.[217] Arabian mining thereafter declined sharply, with al-Ḥarbī noting the abandonment of the Banū Sulaym mine on the Darb Zubayda in the early ninth century, and al-Hamdānī

[213] al-Ṭabarī, iii, 992 (1879-90). Cited by Pipes, 1980: 93.
[214] Miles, 1948a: 101.
[215] Ehrenkreutz, 1959; 1963.
[216] al-Ṭabarī, vii, 438 (1879-1901).
[217] de Jesus *et al*, 1982; Killick *et al*, 1981; Kisnawi *et al*, 1983; Hester *et al*, 1984.

the demise of the Raḍrāḍ mine in the late ninth century.[218] The latest C^{14} dates attested at Mahd al-Dhahab on the Darb Zubayda are AD 830, while those at the Yemeni mine at al-Raḍrāḍ give 1052 ± 69 AD.[219] It is unlikely to be a coincidence that the Arabian mining industry went into terminal decline at the very moment when the gold mines of the Nubian Shield were opened for the first time to Muslim exploitation.

[218] al-Ḥarbī, 335 (1981). Cited by Heck, 1999: 381. al-Hamdānī, fol. 25a (MS. Upsala); trans. Dunlop, 1957: 41.
[219] Hilpert, 1984: 3; Luce, 1975: 1-2. Cited by Heck, 1999: 381.

5. The Early Islamic Baḥr al-Qulzum (c. 830-970)

[5.1] *The northern Red Sea ports remained prosperous though the ninth and tenth centuries. ʿAyla maintained its position as the principal Levantine entrepôt. Chinese ceramic imports began in the tenth century, with one contemporary describing ʿAyla as a 'port of the China sea' [5.1.1]. Although contemporary descriptions of Qurḥ attest to its continued affluence, with a few Chinese sherds found at al-Maʿabiyāt, the economic base of the Ḥijāz contracted as the local mining industry declined [5.1.2]. The economies of the Levant and Ḥijāz were definitively overtaken by Egypt in the ninth century [5.1.3]. An expanding Egyptian textile industry helped underwrite a busy foreign trade. Fusṭāṭ became the largest population centre and fastest growing market in the Red Sea region, with demand for with Chinese ceramics, African slaves and gold helping to drive the expansion of Muslim commerce.*

[5.2] *The Sudanese ports emerged from obscurity to become among the most important in the Red Sea basin, owing both to a ninth-century 'gold rush' to the Eastern Desert and increasing demand for slaves from the newly independent dynasties of Egypt and Yemen. ʿAydhāb gave access to the rich mines of the Wādī al-ʿAllāqī, the nucleus of a short-lived emirate rivalling Ṭūlūnid Egypt under the freebooter al-ʿUmarī, and, as the port of Aswān, became the entrepôt of Ṣaʿīd Miṣr [5.2.1]. Sawākin was linked to the Shunqayr mines [5.2.2]. Bāḍiʿ appears to have been particularly important as a source of Beja slaves from the Wādī Baraka, a trade which was to effect a socio-political transformation of Bejaland [5.2.3].*

[5.3] *The southern Red Sea began to emerge from the 'dark age' which had followed the collapse of Ḥimyar and Aksum in the sixth century. Aden and the Ḥaḍramī port of al-Shiḥr became the*

principal entrepôts not just of Yemen but the wider Red Sea [5.3.1]. Yemeni imports were underwritten by an expansion of textile production and aromatics. Published pottery from Zabīd and ʿAththar attests to commercial contacts with Sudan and the Gulf [5.3.2]. This period witnessed the revival of Ethiopian maritime commerce, with Zaylaʿ and Dahlak appearing in the Arabic sources as exporters of gold and aromatics [5.3.3]. Trade seems to be in the hands of Muslim settlers, however; Dahlak was to become a key player in the Fāṭimid 'India trade' as revealed in the Geniza.

[5.1] Northern Ports & Hinterlands

[5.1.1] ʿAyla: Port of the 'China Sea'

(i) The most important development in the commerce of the Red Sea during the ninth and tenth centuries was the integration with long-distance maritime networks stretching to India and China. Broadly contemporary with the Umayyad and ʿAbbāsid dynasties, the T'ang empire (c. 618-907) extended from Central Asia to Indo-China with its capital at Chang'an (= Xi'an) south of the Yellow River, and is notable for its involvement in both the trade of the 'Silk Road' and Indian Ocean **[Fig. 5.02]**.[1] The southern coastal cities grew in importance during this time, including Yangzhou (Ar. Zaytūn) at the juncture of the Yangtze River and Grand Canal, and especially Guangzhou (= Canton) at the end of the Canal and head of the Pearl River. Arab,

[1] *Cf.* Gernet, 1982: 281-89; Schefer, 1963: 7-39; 'Ships and Sea Routes,' pp. 11-13.

Persian and Indian mercantile settlements flourished in these cities between c. 750-850, and T'ang texts refer to the Ḥaḍrāmī port of al-Shiḥr[2] **[5.3.1] (iii)**.

The empire fragmented into the Five Dynasties and Ten Kingdoms (c. 907-960), when the ethnic Khitan dynasty of Liao (c. 907-1125) established control over much of northern China and built a second capital at Beijing, with a port at Tianjin on the Grand Canal and Hai River. Direct contacts with the ʿAbbāsids were apparently maintained, and it is even said that the Caliph at Baghdād once asked for a Khitan bride. The Northern Sung (c. 960-1127) re-established the empire with a new capital at Kaifeng where the Yellow River meets the Grand Canal, thereby connecting Kaifeng with the great port of Yangzhou. By all accounts the Northern Sung maintained a powerful navy and a mercantile fleet actively engaged in the trade of the Indian Ocean.

(ii) ʿAyla seems to have developed an involvement in this trade by the tenth century. When al-Muqaddasī visited ʿAyla in the late tenth century, he observed that ʿAyla was a "city on the edge of a branch of the China Sea... (and) the port of Palestine."[3] Though the Red Sea was generally known under such local names as Baḥr al-Qulzum or Baḥr al-Ḥabash, it was additionally referred to as both Baḥr al-Ḥind and Baḥr al-Sīn, indicative not just of physical boundaries but of human geography.

Chinese ceramics appear in late ninth- to mid tenth-century contexts at a number of Red Sea sites. Excavations in the 'Pavilion Building' at ʿAyla found four types of

[2] Hardy-Guilbert, 2001a: 74. They call al-Shiḥr 'Sheguo' while later texts use 'Shi-ho.'
[3] al-Muqaddasī, 178 (1906); trans. Collins, 2001: 149. Whitcomb, 1987: 247; 1995: 278.

Chinese imports.[4] The Yue is a fine green stoneware produced throughout the tenth century; Coarse Green stoneware belongs to the later tenth century; White ware porcelain to the tenth century; Qingbai porcelains comprise the most common sherds, produced between the early tenth into the eleventh centuries at Jingdezhen. Though the number of sherds is not given, Whitcomb's general tone suggests we are not dealing with large quantities. Significantly, these Chinese imports were found on the floor or else in the overlying ashy layer, which is to say in the final occupation and destruction phases; the coin of al-Ḥākim (r. 996-1020) was found in a post-abandonment soil layer.

The majority of the 'Pavilion Building' assemblage, of course, was made up on unglazed ware **[Fig. 5.03-.05]**.[5] Some 60% of the assemblage is comprised of storage jars characterised by heavy rims and loop handles, jugs and juglets by folded-over rims and wavy comb incised decoration – further employed on the unglazed bowls – with an orange-buff body and cream surface.[6] Whitcomb suggests that the closest parallels for these may be found at Alistair Northedge's excavations at the Amman citadel.[7] A further 15% of the assemblage consisted of hand-made sherds, some with irregular red-painted surface decoration, which Whitcomb interprets as anticipating the Ayyūbid-Mamlūk painted geometric hand-made ceramics of Syria-Palestine. The greater part of the assemblage, about 75%, therefore comprises utilitarian wares evidencing close contacts with Bilād al-Sham.

[4] Whitcomb, 1988a: 212, 222 & Fig. 8.
[5] Whitcomb, 1987; 1988: 207-11.
[6] Whitcomb, 1988a: 212, Figs. 4, 5, 6.
[7] Northedge, 1984: 46.

Glazed wares account for somewhat under 10% of the total found at the 'Pavilion Building.'[8] They are divided into monochrome, splashed decorated and sgraffiato wares variously associated with ninth- and tenth-century Iraq and Egypt. Of especial interest are the monochrome lustre wares, dated to the late ninth or early tenth century by comparison with Philon's analysis of the Benaki collection from Egypt.[9] Also significant is the presence of two nearly complete large storage jars with a blue-green glaze and barbotine decoration. Whitcomb dates this sub-type of the alkaline turquoise tradition to the ninth and tenth centuries, though it is more commonly dated to the eighth and ninth centuries.[10] This might suggest that the 'Pavilion Building' assemblage is better dated to the late ninth and early tenth centuries, and would therefore be pre-Fāṭimid.

[5.1.2] al-Maʿabiyāt & the Ḥijāz

(i) The opening of the Sudanese gold fields in the early ninth century was contemporary with the abandonment of mining sites in the northern Ḥijāz and southern Darb Zubayda. Indeed, it may well be thought that the two phenomena are causatively linked, that the Sudanese 'gold rush' of the mid ninth century **[5.2]** further prompted a second great wave of Arab migration out of northern Arabia. Ibn Ḥawqal writes:

[8] Whitcomb, 1988a: 212 & Fig. 7.
[9] Whitcomb, 1988a: 212 & Fig. 8. Philon, 1980: 72, 76.
[10] Whitcomb, 1988a: 212 & Fig. 3. *Cf.* Whitehouse, 1979b: 881; Zarins & Zahrani, 1985: 76; Mason & Keall, 1991: 52; Kennet, 2004: Table 15, p. 30; Watson, 2004: 160, Cat. Ba.4.

"(The discovery of gold) coincided with the invasion of al-Yamāma by Muḥammad b. Yūsuf al-Ḥasanī al-Ukhayḍir and the consequent emigration of some of the inhabitants (of Yamāma) towards Egypt and towards the mine, who escaped tyranny. They numbered several thousands. In the same year, they overwhelmed some (Arab natives of) the Ḥijāz who were already there. Therefore, in the year 238 (852 AD) two sections of the Rabīʿa and the Muḍar tribes, both originally of Yamāma, were found together at ʿAllāqī."[11]

It is further possible to trace the movement of the Balīy out of Arabia at this time. Al-Bakrī (d. 1094) records that "the Sulaym mine (of the southern Darb Zubayda) was operated by Farān b. Balīy, of a group of Balīy."[12] According to al-Ḥarbī (d. 898), these mines were already being abandoned in the course of the ninth century, apparently because they were increasingly cost inefficient.[13] It is curious, then, that at roughly this sort of time al-Yaʿqūbī, writing in al-Fusṭāṭ c. 872-91, attests to this very tribe in the Eastern Desert of Egypt: "There is a branch of the Balīy tribe living at Raḥm; moreover, there are Juhayna and other tribes intermingled, all traders."[14] He further places the Balīy, again with the Juhayna, at the Nubian Desert mine of Mirāb (Mibrāt?) four days south of Wādī al-ʿAllāqī.

The Balīy of western Arabia, so far as it is possible to tell from the sources, were not subject to any of the violent privations that affected the *jund* of Miṣr or the Rabīʿa of al-Yamāma in the ninth century. None, that is, other than the increasing running

[11] Ibn Ḥawqal, 52 (1938-9); trans. Vantini, 1975: 156.
[12] al-Bakrī, 1.28-9 (1983). Quoted in Heck, 1999: 374.
[13] al-Ḥarbī, 335 (1981). Cited by Heck, 1999: 381.
[14] al-Yaqʿūbī, 331-334 (1892); trans. Vantini, 1975: 76. The mine of al-Raḥm lay in the desert east of Aswān.

costs of their mines in the southern Darb Zubayda. It is further curious that al-Yaʿqūbī takes the time to note that the Balīy were 'all traders,' a label by no means universally employed in his extensive description of the region; he divides up the population of the Wādī al-ʿAllāqī, for example, into 'merchants and non-merchants.'[15] This does rather invite speculation that the Balīy chose to move to the recently discovered gold fields of the Nubian Desert, motivated not by the negative logic of 'push' factors but rather by the positive reason of 'pull' factors, or put another way, they transferred their mining expertise and pooled resources towards an entrepreneurial venture across the water. The flip-side of this expansion was the decline of the Ḥijāzī mining industry. Wohaibi puts the case well in section entitled 'Rise and Decline of Towns and Villages in the Northern Ḥijāz':

"Emigration was easy after Islam and the Arab tribes became free, and sometimes were paid, to emigrate to other parts of the empire, especially to Egypt and North Africa where they were sometimes politically useful... There had been numerous mines in Northern Ḥijāz, but they appear to have been deserted by the ninth century as they were neglected by their ancient owners, and disregarded by the nomadic new comers... Thus while the Arab miners were busy exploiting the mines of North Africa, the mines of the Northern Ḥijāz fell into the hands of inexperienced immigrants."[16]

Whether or not one accepts the concept of a 'brain drain' of mining expertise, it is not an uninformed conjecture with which to account for the abandonment of north-west Arabian mines in the ninth century. Though the worsening security situation in the

[15] al-Yaqʿūbī, 331-334 (1892); trans. Vantini, 1975: 77.
[16] Wohaibi, 1973: 428.

tenth-century Ḥijāz is usually presented as the signalling the end of the region's prosperity, the decline of the major local industry and therefore principal employer may have exacerbated this problem, helping to fuel a 'Bedouinisation' whereby recently unemployed miners were pushed towards brigandage.

Gold and slaves presented opportunities to the Arabs of Egypt and the Ḥijāz to 'get-rich-quick,' so that the Eastern Deserts of Egypt and Sudan very quickly assumed something of the character of the American 'Wild West.' It is striking, however, how little the Egyptian Arabs seem to have been involved in the expansion of Muslim commerce in the ninth and tenth centuries. Much more important to the economic growth of Egypt and Yemen and development of an affluence private sector was the re-location of Iraqi-Iranian capital and expertise which accompanied the ʿAbbāsid restoration.

(ii) al-Maʿabiyāt, the site of ancient Qurḥ in the Wādī al-Qurā, represents the most significant settlement to have been dug in the Ḥijāz. The published ceramics afford some comment on the commercial contacts of north-western Arabia in the Early Islamic period. Very few Chinese sherds were found.[17] These included fine white porcelain bowl with external lotus-blossom moulding together with celadons; no further information is given nor are accompanying photographs or drawings provided. Gilmore *et al* instead cite Gyllensvard's study of the Fusṭāṭ material, and refer the reader to Zarins & Zahrani's discussion of ʿAththar which appears in the

[17] Gilmore *et al*, 1985: 116.

same volume of *Aṭlāl*.[18] They conclude on this basis that the limited number of Chinese imports at al-Maʿabiyāt stretch the T'ang and Northern Sung dynasties.

The glazed assemblage was dominated by monochrome lustre wares accounting for some 30% of the total.[19] Rounded bowls with slightly everted rims and ring bases predominate, though other types include deep straight-sided bowls, small cups and closed forms. The most common decorative motifs consist of scallop banded-rims and dotted backwards, contour panels with occasional Kufic inscriptions, circles or dots on the exterior, and palmettes. Gilmore *et al* point to parallels with Ṭūlūnid types published by Alil and Philon, and so implicitly suggest that contacts were closer between the northern Ḥijāz and Egypt rather than Iraq; they further note the presence of Fāṭimid lustre, characterised by a more complex and finer line style, greater variety of forms and bowls with horizontally banded inscriptions.[20]

Second only to the monochrome lustre ware in quantity are the splash glazed wares, of which a number of different types are attested.[21] Forms are limited to rounded bowls with ring bases, with a yellowish or buff body overlain first by a white tin glaze and then mottled or streaked splashes of yellow, green or blue. Rounded or straight sided bowls with ring bases of a reddish-buff body and covered with a white tin glaze are also common, together with a variety of less frequently encountered other forms. Gilmore *et al* use Whitehouse at Sīrāf to date these wares, whereby first the white tin glazes and then the splash wares begin to appear in the late eighth or early ninth

[18] Gyllensvard, 1975: 99-100; Zarins & Zahrani, 1985:79-80.
[19] Gilmore *et al*, 1985: 115-16.
[20] Philon, 1980: 163-66.
[21] Gilmore *et al*, 1985: 116.

century.[22] Less common are the large storage jars of a sandy yellow to buff body with incised, stamped and/ or appliqué decoration under an alkaline blue-green or green glaze. Gilmore *et al* note that such jars are associated with strata at Sīrāf numismatically dated to c. 803-25, though follow Zarins & Zahrani to suggest a broad ninth to mid eleventh century production.[23] Later glazed ceramics include solid colour glazes and under glazed painted wares (rare), which Gilmore *et al* found in the upper layers and date to the eleventh and twelfth centuries.[24]

Four types of unglazed ceramics are attested **[Fig. 5.06]**.[25] First, fine and medium buff slipped wares comprising cups, bowls and especially long-necked loop-handled jugs; decoration includes incised designs and hand-combed lines. Gilmore *et al* suggest possible parallels with the Light Faced Ware from Qaṣr al-Ḥayr al-Sharqī.[26] Second, buff slipped and unslipped chaff ware, characterised by heavy, reddish storage jars decorated by band-combed wavy lines. The excavators notes that this is most prevalent in the lower levels but continues to a lesser extent in later strata; they point to parallels with Qaṣr al-Ḥayr al-Sharqī, dated by Grabar *et al* up to the tenth century, and to Umayyad and ʿAbbāsid ceramics from Jordan.[27] Third, medium to fine grit tempered red ware, of brick red colour occasionally with a red slip, but devoid of incised decoration and limited to closed forms, such as jugs and jars. Fourth, green slipped and green wares both with a chaff temper, the former has a dark brown to black body covered by a green slip, the latter has a soft and distinctly green body.

[22] Whitehouse, 1979: 51-56; Tampoe, 1989: 88; Kennet, 2004: 31-32; Watson, 2004: 171.
[23] Whitehouse, 1971: 10; Zarins & Zahrani, 1985: 77.
[24] Gilmore *et al*, 1985: 116-17.
[25] Gilmore *et al*, 1985: 117, Pl. 103.
[26] Grabar *et al*, 1978: 113 & 161, Pl. C.
[27] Grabar *et al*, 1978: 111. Sauer, 1971; 1982.

Gilmore *et al* suggest no parallels for these wares and note that they are rarely found at al-Maʿabiyāt.

The commercial contacts suggested by the published ceramics from al-Maʿabiyāt broadly bear out the historical sources considered above **[4.2.1] (ii)** & **(iii)**. By far the most substantial contacts were with the Levant, which appears to have been a source of low value agricultural produce imported in large storage jars, together with low-end tablewares and porous water jugs. High-end tablewares were imported principally from Egypt. Again, the rise of Egypt in the ninth-century to regional hegemony, cultural as well as politico-economic, is noteworthy.

[5.1.3] Fusṭāṭ: A Red Sea Metropolis

(i) Egypt emerged as a major production centre under the Ṭūlūnids and Ikhshīdids **[Fig. 5.07]**. These locally based dynasties needed to maintain large slave armies to safeguard their independence from the ʿAbbāsids, a massive cost which may have stimulated the exploitation of natural resources and investment in 'industrial' activities, most notably textiles. An impression of the Egyptian textile industry may be gained from Ibn Ḥawqal's (d. 988) description of the factories in the Fayyūm region:

"In Fayyūm there are large fine towns and well-known *ṭirāz* factories as well as great estates, belonging to the sultan and the public. In it are to be found wares, too famous to require repetition, such as Bahnasā, where curtains, brocade (*istabraqāt*), awnings (or sails), tents (*khayma*), cloaks (*ḥulla*), hangings (or veils, *sitāra*), carpets (*busuṭ*), large

tents (*miḍrab*), and great pavilions (*fusṭāṭ*) are made with wool, linen, and dyes that do not fade, and colours in which you can see figures, (ranging from) the gnat to the elephant. Those servants of the sultan, who worked in the *ṭirāz* factories, were never in want of Caliphs, people of distinction, or merchants from all ends of the earth to indulge their tastes therein, in the way of costly long curtains (*sutūr*), the length of a single one of which was thirty *dhirāʿ*, more or less, and the price of a pair was about three hundred *dīnār*s."[28]

Gladys Frantz-Murphy argues that the textile industry was crucial to the economic growth of Egypt under the Ṭūlūnids and Fāṭimids, comparing Egypt to the much better studied instances of medieval Europe, where "agricultural wealth was invested in the textile industry. The role of the textile industry in the economic growth and development of medieval and renaissance Italian cities, the Low Countries, and in England has, in fact, been central to the study of the economic history of medieval Europe. Also in Egypt agricultural wealth was the major source of investment capital."[29]

Textiles appear to have been among the most important of Egypt's exports. A number of cultivation centres are attested in the 'greater' Fayyūm, and Goitein notes that Fayyūmī flax was the second-most popular variety among the Geniza merchants, who traded between the Mediterranean and Indian Ocean.[30] The Upper Egyptian industry was linked particularly to the Red Sea. Ibn Ḥawqal writes of Aswān that "it has

[28] Ibn Ḥawqal, 159 (1938-39). Quoted by Serjeant, 1948: 108.
[29] Frantz-Murphy, 1981: 280.
[30] Goitein, i, 1967: n. 61, p. 455-57. In addition to Fayyūm (= Madīnat al-Fayyūm, anc. Arsinoe or Crocodilopolis), the Geniza mentions Aṭfīḥ / Tfīḥ, Būsh, Dallāṣ to the east along the Naḥr Yūsuf.

supplies of linen manufactured into pieces of cloth (*shiqqa*) and kerchiefs (*mandīl*) which are taken to the Ḥijāz,"[31] while Nāṣir-i Khusraw states that "in this Asyut, they weave cloth (*dastār*) of sheep wool, which has no equal in the world, and fine wools which are taken to Persia which they call Miṣrī (Egyptian)."[32] This rather suggests that when al-Muqaddasī writes of "the superb cloth of Ṣanʿāʾ known as Ṣaʿīdī,"[33] he is actually referring to imported fabrics from Ṣaʿīd Miṣr.

Cloth also functioned as a medium of exchange. Textiles were used to pay troops[34] and to pay taxes:[35] al-Yaʿqūbī lists 4,300,000 *dīnār*s total tax revenue in 871 of which 2,200,000 comprised *ṭirāz* and tenting.[36] It has even been suggested that the widespread use of textiles as a medium of exchange may explain the low output of Ṭūlūnid mints.[37] By the time of the Geniza (fl. 1002-1266) textiles had become a preferred means of financial speculation and capital investment.[38] Silk, in particular, was used in this way, and Goitein points to a 'standard' silk variety worth 2 dinars per pound, which remained at this exchange rate between the 1030s and 1150s: "This standard silk must have had a stabilising influence on the economy comparable in a measure to that of the gold dinar itself. In the 'India trade' it sometimes replaces the cash usually sent from the West."[39]

[31] Ibn Ḥawqal, 159 (1938-39). Quoted by Serjeant, 1948: 109.
[32] Nāṣir-i Khusraw, 61 & 173 (1881). Quoted by Serjeant, 1948: 109.
[33] al-Muqaddasī, 98 (1906); trans. Collins, 2001: 83.
[34] al-Kindī, 146 (1912); Ibn Taghrī Birdī, 76 (1851). Cited by Frantz-Murphy, 1981: 291, n. 64.
[35] al-Yaʿqūbī, ii, 508 (1892); Ibn Ṣaʿīd, 87 (1954). Cited by Frantz-Murphy, 1981: 290, & n. 60.
[36] al-Yaʿqūbī, ii, 508 (1960). Cited by Frantz-Murphy, 1981: 285, n. 44.
[37] Frantz-Murphy, 1981: 292. *Cf.* Ehrenkreutz, 1977.
[38] Goitein, i, 1967: 222-23.
[39] Goitein, i, 1967: 222.

(ii) Mining activities in the Eastern Desert further fed into the Egyptian 'India trade.' **Jabal Zubara [sv]** is the modern toponym for Mons Smaragdus **[2.2.2] (iii)**. Curiously, *zubar* means 'pieces of iron,' and the name is not found in the medieval Arabic sources. Yet there can be little doubt that these were the emerald mines worked from at least the late ninth century, for al-Yaqʿūbī writes:

"From Qifṭ you walk to the mine of emeralds also known as Kharabit al-Malik, 8 days' journey from Qifṭ. There are two mountains, the one called al-ʿArūs and the other al-Khasūm, where emeralds are mined. There is a place called Kum al-Ṣābūnī and (another called) Kum Mahrān, and (others called) Makābir and Safsīd. All these mines yield precious stones."[40]

It seems that emerald was not the only semi-precious stone mined in the Eastern Desert. The *Ḥudūd al-ʿĀlam* (wr. 983) notes that in the mountains near Aswān, "mines of emeralds and chrysolites (*zabarjad*) are found, and in all the world they are found nowhere else."[41] Ibn Ḥawqal provides more detail:

"In Upper Egypt, south of the Nile (bend), there is a mine of topaz (*zabarjad*) in a desert off the inhabited country. The mine stretches from the island of Banī Ḥadān (= Shadwān off the southwest of Sinai?) to the environs of ʿAydhāb... Nowhere else in the world is another topaz mine to be found. North of the Nile (bend), there is a mountain range which continues down to al-Fusṭāṭ and is called al-Muqaṭṭam. In this mountain and near it, one can find (a kind of) stone called *al-jamāhir* and a small quantity of

[40] al-Yaʿqūbī, 333-34 (1892); trans. Vantini, 1975: 76. *Cf.* al-Masʿūdī, iii, 44 (1962-65).
[41] *Ḥudūd al-ʿĀlam*, 152 (1937); reproduced in Vantini, 1975: 173.

beryl (*billār*). It neighbours on the region of the emerald (*zumurrud*). This mountain range extends up to the remotest land of the Nūba."[42]

It is possible that these mines were worked continuously through the 'long' Late Antiquity. Islamic period lamps were found in the mine shafts at Jabal Zubara, with some less securely placed Islamic ceramics from excavation in the settlement.[43] Sidebotham's team made no attempt to date these and generally give short shrift to the medieval occupation. Yet al-Maqrīzī states that the Byzantines "left some obvious remains (of their mine workings). Their mines and the managers were still there, when Egypt was conquered by the Arabs."[44] Similarly, al-Yaʿqūbī writes of the emerald mines that "in one of these places there was an ancient mine called Birumit (?), which was in operation in the days before Islam; the same is true of the Makābir mine."[45] This Birumit may be identified with modern Barramīya, c. 100 km north-west of Jabal Zubara and c. 150 km south-east of Qifṭ. Not only does the contemporary name resemble the Arabic root B-R-M found in al-Yaʿqūbī, but the Graeco-Roman rock-cut temple might have singled it out for comment. The mines appear to have been significantly abandoned during the eleventh century, for al-Bakrī (d. 1094) states:

"It is said that in the desert which stretches from Qūṣ to Aswān there is a mountain with a mine of green emeralds. But the danger arising from the fear of the Beja, the Nūba, and other tribes of Nūba and Arabs who dwell in those plains, prevents (travellers) from visiting the mine, besides the fact that the caverns of that desert are

[42] Ibn Ḥawqal, ii, 88 (1938-39); trans. Vantini, 1975: 168. *Cf.* Levicki, 1967.
[43] Sidebotham *et al*, 2004: Fig. 10, pp. 10; pp. 14.
[44] al-Maqrīzī, 267-80 (1911-27); trans. Vantini, 1975: 623.
[45] al-Yaʿqūbī, 333-34 (1892); trans. Vantini, 1975: 76.

distant and sanded up, and have been abandoned because of their remoteness from any inhabited country."[46]

Emerald mining directly contributed to the Egyptian 'India trade.' Pliny observed that "the Indians are extraordinarily fond of elongated beryls,"[47] and the Central Asian polymath al-Bīrūnī (d. 1048) – who wrote a vast monograph on India – was aware of their origin.[48] Al-Masʿūdī describes four qualities of emerald mined in the Eastern Desert. Emeralds of second-rate quality were called *baḥrī* because they were desired by the kings of the Indian Ocean, Hind, Sind, Ṣīn and Zanj; it is striking that Chola merchants active in Sumatra were involved in the emerald trade **[6.3.1] (iii)**. Those of third-rate quality were dubbed *maghribī* on account of their demand in the Mediterranean; the Franks, Lombards, Spaniards, Galitians, Basques, Slavs and Russians apparently competed with each other in purchasing these emeralds.[49]

(iii) Chinese ceramics were among the luxury goods imported to the increasingly wealthy and continuously growing metropolis of al-Fusṭāṭ **[Fig. 5.08]**.[50] George Scanlon, who directed the American Research Center in Egypt's excavations at the site, argues that the earliest evidence for Chinese ceramics in Egypt is the production of local imitations of imported material. Undisturbed contexts associated with a coin weight of al-Mahdī (r. 775-85) revealed two glass 'spittoons' of form clearly derived from T'ang porcelains, while a lead glazed 'chamber pot' from another pit dated to the second half of the eighth-century finds parallels in a Chinese type attested in the

[46] al-Bakrī, MC 730 v (1913); trans. Vantini, 1975: 243.
[47] Pliny, 37.19 (1962).
[48] al-Bīrūnī, 162 (1934); trans. Vantini, 1975: 230.
[49] al-Masʿūdī, iii, 45 (1962-65); trans. Vantini, 1975: 135, n. 14.
[50] Gyllensvard, 1973; 1975; Scanlon, 1970; 2002.

tenth century. Scanlon goes so far as to assert that "as copies, they prove the presence of T'ang models in Egypt in the eighth century."[51] Be that as it may, it is not until the end of the following century that more concrete instances of imports are found at al-Fusṭāṭ, such as the grey-green sherd of celadon from the sanitation canal of a Ṭūlūnid domestic complex, and a small porcelain bowl with a greyish-white paste and bluish-grey off-white glaze from a late ninth- / early tenth-century context.[52]

Chinese ceramics become steadily more common at al-Fusṭāṭ from the tenth century. Particularly interesting are the off-white porcelains engraved with zoomorphic designs, including a sherd from the ARCE excavations and an ewer in the British Museum bearing depictions of a phoenix. Scanlon considers that these belong either to the Five Dynasties or the early Northern Sung, i.e. pre-1000, and points to stylistic parallels with a well-dated sherd of grey-green celadon from the Ṭūlūnid house.[53] Other instances include a white porcelain water bottle dated to the tenth century upon the basis of parallels with ceramics from Liao tombs, with a plain greyish celadon from the same pit; another tenth-century pit produced a small Ting dish.[54] Moreover, the imports were being locally imitated on an increasingly large scale, as is graphically evidenced by the hundreds of monochrome glazed wares of a whitish-buff clay found in a tenth-century pit, which Scanlon links to T'ang porcelain originals.[55] Glass makers also sought to emulate Chinese imports, so that two fair copies of the

[51] Scanlon, 1970: 84 & n. 11; Fig. 4 & 5; Pl. 10d; 11a & b.
[52] Scanlon, 1970: 85; Pl. 12b; 83; Pl. 8d.
[53] *Ibid,* 84; Pl. 12a.
[54] *Ibid,* 81; Pl. 7a; 82; Pl. 8a; 83; Pl. 8b.
[55] *Ibid,* 84; Pl. 9c & d.

Liao bottle characterised by an elongated neck, wide sloping shoulder and outflaring lip have been retrieved from tenth-century contexts.[56]

At al-Fusṭāṭ, Chinese imports therefore first appear in late ninth-century deposits and continue to be attested throughout the tenth century. The late eighth-century imitations may very well be based upon Iraqi imports imitating in their turn Chinese originals, and cannot be taken as sound evidence for contacts with the Indian Ocean. Scanlon notes that "after *circa* 1000 the volume of trade and range of imitation increase considerably. Certainly the sherd count of Chinese ceramics is far greater for the period 1000-1300 than for the preceding two and a half centuries."[57] Though most traditional accounts of the Red Sea assume that Indian Ocean trade was only restored following the establishment of the Fāṭimids in Egypt, they do not pause to consider that ceramic assemblages throughout the basin already contain Chinese material from the late ninth century.

(iv) Slaves and gold were further in much demand in the markets of al-Fusṭāṭ, a demand which was to have far reaching effects throughout both the African and Arabian hinterlands of the Red Sea. The trade in African slaves was given further impetus in the ninth century by the emergence of independent Muslim emirates supported by the institution of slave soldiery. Both free black militias and slave soldiers had existed in pre-Islamic Arabia and under the Umayyads, though the corps of Turkish *ghilmān* first raised by al-Muʿtaṣim (r. 833-42) represent a revolution of scale and application, for slave soldiers increasingly became the basis of Muslim

[56] *Ibid,* 84; Pl. 9a; Scanlon, 1967: 81; Pl.6d.
[57] *Ibid,* 85.

armies throughout the Dār al-Islām.[58] The emergence of independent emirates began early in the Red Sea, with the Ziyādids of Yemen (c. 818-1021) and the Ṭūlūnids of Egypt (c. 868-905) both relying heavily on African slave soldiers.

In Egypt, Ibn Ṭūlūn raised an army of Nubian slaves whom he settled about his palace in al-Qaṭa'iʿ, and al-Balawī (d. 950) records that "the Nūba had their own quarter named after them."[59] Since these Black troops were traditionally trained as infantry units, they tended to constitute the greater part of the army, with the more expensive Turks forming the cavalry. Estimates of the Ṭūlūnid army vary at around 40-45,000 Africans and 24,000 Turks, implying that very considerable numbers of Africans were taken as slaves.[60] The Mamlūk encyclopaedist al-Nuwayrī (d. 1332) states that Kāfūr al-Ikhshīd (r. 946-68), the African eunuch and ruler of Egypt, assembled "the greatest army of blacks ever seen" and reproduces a poem from the time:

"When Kāfūr invaded Dongola, early in the morning
He went up with an army so big as to cover the length and width of the earth;
The Black invaded the Blacks in the brightness of the morning,
Yet, when the two armies clashed in battle, the earth became dark like night."[61]

African military slaves continued to be important under the Fāṭimids, when some 50,000 slave soldiers are said to have been recruited by the African mother of al-

[58] ʿAthamina, 1998; Pipes, 1980; 1981.
[59] al-Balawī, 52 (1939). *Cf.* Ḥasan, 1933: 165-75.
[60] Bacharach, 1981: 478.
[61] al-Nuwayrī, fol. 113r-114v (Paris MS 1578); trans. Vantini, 1975: 476.

Mustanṣir (r. 1036-1094).[62] Jere Bacharch, in his study of early Islamic African military slavery, argues conclusively that their use only came to an end under the Ayyūbids when infantry units became largely obsolete.[63] For some four hundred years beginning in the ninth century, African slaves therefore supplied the military manpower of the independent emirates of the Red Sea region.

[5.2] Sudanese Ports & Hinterlands

[5.2.1] ʿAydhāb & Wādī al-ʿAllāqī

(i) ʿAydhāb was identified in 1896 by Theodore Bent, who sunk a single trench "...but found nothing earlier than Kufic remains," and opened a few graves which "...unfortunately contained nothing but bones."[64] He further notes a system of 'Kufic' towers and associated cairns, yet given the proximity of Greek and South Arabian inscriptions, these are most likely multi-period. Although early Islamic coastal watch towers are known in the Mediterranean,[65] it would be unwise to speculate too far on the nature of Bent's 'Kufic' towers without more detailed information. George Murray's excavations (1926) involved the clearance of a mosque and a count of some 3,000 blank grave stones, together with three cisterns each capable of holding an estimated 25,000 gallons.[66]

[62] al-Maqrīzī, 276-79 (1911-27); trans. Vantini, 1975: 659.
[63] Bacharach, 1981: 488.
[64] Bent, 1896: 336.
[65] Madigan, 1922. *Cf.* Khalilieh, 1999.
[66] Murray, 1926a.

Fifty years later, a Franco-Sudanese expedition led by Ahmed Hakim undertook three seasons (1979-81) at ʿAydhāb, published in a single preliminary report.[67] Work focused on tracing the geomorphological development of the site, and was able to prove that recent coral growth has obscured the ancient harbour. A detailed survey of the sizeable cemeteries revealed around 6,000 Muslim graves, none of which bore any inscriptions, and – interestingly – some non-Muslim graves were also found. Mutsuo Kawatoko (1993) thereafter completed a preliminary survey, including a single test-trench to establish a pottery sequence, though nothing earlier than the twelfth to fourteenth centuries was discovered.[68] Asides from Murray's all too cursory observations, this represents the sole discussion of ceramics and small finds from any of the various expeditions. Further work at ʿAydhāb became impossible in the 1990s, owing to an ongoing border dispute between Egypt and Sudan, though it is very much to be hoped that the situation will change so as to allow excavation of this key Red Sea site. Until then, any discussion of early Islamic ʿAydhāb must remain limited to the historical evidence.

(ii) Wādī al-ʿAllāqī [sv, Deraheib] and its mines are first described in some detail by al-Yaʿqūbī (d. 897). His account was written in Fusṭāṭ c. 872-91 and based on a wealth of carefully sifted anecdotal information, together with – perhaps – the Ṭūlūnid state archives.[69] It is clear that he considered the town of al-ʿAllāqī to be pre-eminent in Bejaland and the mine region, stating "(it) is like their great town, where Arabs and non-Arabs (*ʿajam*) live together; there are markets where business is transacted."[70]

[67] Hakim, 1981.
[68] Kawatoko, 1993a.
[69] Zaman, 2002: 257-58.
[70] al-Yaʿqūbī, 331-34 (1892); trans. Vantini, 1975: 77.

Somewhat later, al-Iṣṭakhrī (d. 950) describes al-ʿAllāqī as "a flat sandy plain, the meeting place for all those who work in the mines."[71]

The town of al-ʿAllāqī has been identified with the 3 km long ruin-field of Deraheib,[72] meaning 'buildings' in the Tu-Bedawie (Beja) language. The settlement area is laid out according to a grid plan over an area of c. 7.5 ha on the eastern side of the *wādī*, comprised of an estimated 300 structures **[Fig. 5.09]**. An extensive cemetery, with graves orientated north south, spreads out on the opposite side of the *wādī*. To the south of the main settlement lie the substantial remains of two rectilinear forts, complete with circular corner towers and centrally placed projecting portals **[Fig. 5.10-.11]**. Monneret de Villard described them as 'Arab castles,' and noted architectural parallels with Umayyad and ʿAbbāsid *quṣūr*: "Il più grande dei castelli almeno meriterebbe uno studio, in quanto la forma della sua torre ove si apre la porta d'ingresso ricorda strettamente quelle di construzioni della Transgiordania e della Mesopotamia, Ukhaydir, ʿAṭshān, Kharāna."[73] He further refers to a Kufic inscription on one of the 'castles,' bearing the date 372 / 982-3, which sadly has not been published in full.

The brothers Castiglione have equated these remains with the Berenike Panchrysos of Pliny the Elder, who describes a gold mining town established by Ptolemy II famed for its capacity to produce twenty-fold more than any other known mine. The grid plan of the settlement area has therefore been interpreted as "a typical Ptolemaic town

[71] al-Iṣṭakhrī, 40 (1927); trans. Vantini, 1975: 113. *Cf.* Ibn Ḥawqal, 50 (1938-9).
[72] Monneret de Villard, 1935: i, 276.
[73] *Ibid.*

plan."[74] This Hellenistic establishment, according to the Castigliones, later became the capital of the Blemmyes king mentioned by Olympiodoros, and only declined "during the Middle Ages, when the Arabs conquered the Sudan and Egypt, (and) gold production came to a grinding halt because the Arabs believed it was evil and corrupt."[75] Such conclusions have not been well met by the academic community. Hans Barnard notes that the Eastern Desert Ware ceramics associated with the Blemmyes are not found at Deraheib itself, precluding its identification as the capital of a Blemmyes kingdom, whilst Sidebotham dates the site to the Islamic period on the strength of the historical evidence.[76]

The main branch of the Wādī al-ʿAllāqī has its origins in the Red Sea Hills around Jabal Alba, flowing north-west for c. 400 km to join the Nile at Qurta c. 100 km south of Aswān. The *wādī* is therefore bounded by the ports of Aswān and ʿAydhāb, and was clearly seen as such by the ancient Arabic authors; Ibn Ḥawqal, for instance, states that "emerald and gold mines extend from the outskirts of Aswān... to the sea, near a fortress called ʿAydhāb."[77] Similarly, al-Iṣṭakhrī writes that "the gold mine is at fifteen days distance from Aswān. It does not lie within Egyptian territory, but in the land of the Beja and it ends near ʿAydhāb."[78]

Communications between the Wādī al-ʿAllāqī and Aswān were close. Al-Yaʿqūbī states that at "the great town of Aswān... traders dwell who deal with the products of the gold mines. Many wares coming from Nubia and the Beja country are to be found

[74] Wagner, 1995: 19, 21.
[75] Quoted in an interview by Wagner, 1995: 21.
[76] Barnard, 2002; Sidebotham, 2001: 137.
[77] Ibn Ḥawqal, 50 (1938-39); 48 (1965); trans. Vantini, 1975: 151.
[78] al-Iṣṭakhrī, 54 (1927); trans. Vantini, 1975: 115.

there."[79] Papyri from Aswān include correspondence between these merchants. An undated letter from Muḥammad b. Muʿāwīya asking permission to enter the mine region; Ḥasan considers this to date to the early ninth century, though doesn't state his reasons.[80] A letter of the mid-ninth century accompanied an assignment of gold entrusted to a Nubian, containing sixty *dīnār*s worth in the shape of thirty heavy pieces and four bars, and intended for one Abū Yaʿqūb Isḥāq b. Ibrāhīm.[81] Clearly the Wādī al-ʿAllāqī mines fed directly into the economy of Aswān, which grew in the first few centuries of Islam to be one of the largest and most prosperous of Egyptian towns.[82] This economic relationship became political when al-Mutawakkil installed in Aswān a governor over the newly conquered territories of the interior following the al-Qummī campaign **[4.4.1] (iv)**.[83] Aswān therefore became for a short time the administrative centre of the *wādī.*

From the town of al-ʿAllāqī, it was a four day journey to ʿAydhāb, which al-Yaʿqūbī states was "situated on the coast of the Red Sea. From there people sail to Mecca, the Hijāz and Yemen, and from there traders ship their gold dust (*tibr*), ivory and other goods."[84] Somewhat later, al-Iṣṭakhrī states that the "the products of this mine are shipped to Egypt,"[85] presumably through ʿAydhāb. Conversely, al-Maqrīzī (d. 1442) – reproducing the now lost *Kitāb Akhbār al-Nūba* of Abū Sulaym al-Aswānī (fl. 975) – records that, in the second half of the ninth century, al-ʿAllāqī was provisioned by al-

[79] al-Yaʿqūbī, 331-33 (1892); trans. Vantini, 1975: 77-78.
[80] Margoliouth, 1933: 35-36. *Cf.* Monneret de Villard, 1938a: 110; Hasan, 1967: 57-58.
[81] Karabacek, 1894: 204. *Cf.* Monneret de Villard, 1938a: 110; Hasan, 1967: 57-58.
[82] *Cf.* Garcin, 1995: 863.
[83] al-Ṭabarī, 1433 (1879-1901); trans. by Vantini, 1975: 103.
[84] al-Yaʿqūbī, 333 (1892); trans. Vantini, 1975: 78. *Cf.* Hasan, 1967: 67.
[85] al-Iṣṭakhrī, 40 (1927); trans. Vantini, 1975: 113. *Cf.* Ibn Ḥawqal, 50 (1938-9); trans. Vantini, 1975: 151.

Qulzum via ʿAydhāb.[86] Clearly the development of the Wādī al-ʿAllāqī mines lent a new economic rationale to ʿAydhāb.

(iii) The Sudanese 'gold rush' which furthered the Arab penetration of the African hinterland **[4.4.1] (iii)**, at the same time created a huge demand for labour met by the African slave trade. The link between mining and slaves is particularly evident in the career of ʿAbd al-Raḥmān b. Abū Ḥamīd al-ʿUmarī (fl. 855-70) in the gold fields of the Nubian Desert.[87]

Certainly al-ʿUmarī attracted a fair amount of attention in the years after his death, appearing in the works of the principal historians of the Ṭūlūnids, namely al-Balawī (d. 940-41) and Ibn al-Dāya (d. 941 or 951), to which can be added al-Kindī (d. 961), and, much later and most extensive, al-Maqrizī (d. 1441).[88] He appears in these accounts as a major thorn in the side – or 'bone planted in the ribs' as al-Balawī calls him – of Ibn Ṭūlūn, as the ruler of a virtual kingdom encompassing the Nubian Desert and a host of Arab and Beja tribesmen, and strong enough to defeat in the field any Ṭūlūnid and Nubian army sent against him. In Maqrīzī's account he appears as very much the Renaissance man, with an impeccable lineage and cultural pedigree:

"'Abd al-Raḥmān, son of ʿAbd al-Ḥamīd, son of ʿAbd Allāh the holy man (*nāsik*), son of ʿAbd al-ʿAzīz, son of ʿAbd Allāh, son of the Caliph ʿUmar, commonly called Abū ʿAbd al-Raḥmān al-ʿUmarī al-Adwī al-Qurayshī, was born and brought up in Medina. Thence,

[86] al-Maqrīzī, f. 167A (1811); trans. Vantini, 1975: 719. *Cf.* Hasan, 1967: 67.
[87] al-Maqrīzī, 59-80; 81-86 (1811); trans. Vantini, 1975: 706-20. *Cf.* Monneret de Villard, 1938a: 109-115; Ḥasan, 1967: 52-56.
[88] al-Balawī, 63-7, 230-1 (1939); Ibn al-Dāya, 27-8 (1894); al-Kindī, 214 (1912); al-Maqrīzī, 164B - 167B (1811).

he moved to Fusṭaṭ, was a pupil of Muḥammad b. ʿAbd Allāh b. ʿAbd al-Ḥakam and became a master in the science of *ḥadīth*. He then went to Qayrawān to the court of Ibrāhīm b. Aghlab and wrote poems in praise of that prince, who gave him a reward of a thousand *dinār*s. He then returned to Egypt, after he had acquired a vast knowledge of jurisprudence, arts, poetry, astronomy, and philosophy."[89]

Thus equipped, he embarked on a career of bloodshed and atrocity, ending in assassination by his own men. Although the tenth-century accounts are considerably more laconic that Maqrīzī's, which verges on hagiography at times, all agree that al-ʿUmarī claimed an exalted lineage for himself, though whether as a descendent of ʿUmar or ʿAlī is a matter of some confusion. He arrived in Egypt already in possession of wealth, investing it in Black mine-slaves and moving to the environs of Wādī al-ʿAllāqī, only to become involved in the violent factionalism he encountered there. This went ill for him, and he retreated south to the Shunqayr region, which al-Maqrīzī makes clear corresponds to modern usage as the stretch of Nile between Abū Ḥamad and Berber, whereupon he "fell upon the Nubians, killed a great number and ravaged the country. His men took so many slaves that, when one of them had a hair-cut, he paid the fee of the barber by giving him a slave."[90]

He began mining operations at Shanka and wrote to the merchants of Aswān to send provisions, with the result that a caravan of 1,000 beasts of burden arrived via the Korosoko road.[91] With his supply lines secure, al-ʿUmarī spent the next seven years

[89] al-Maqrīzī: 59-80; 81-86 (1811); trans. Vantini, 1975: 706.
[90] al-Maqrīzī: 59-80; 81-86 (1811); trans. Vantini, 1975: 709.
[91] *Ibid.*

raiding the Nubian kingdom of al-Muqurra and working the gold mines east of Shunqayr, sending a steady stream of slaves and gold north to the great market of Aswān. Al-Maqrīzī writes that "both in the mine region and in the town of Aswān, Nubian slaves were a countless multitude. The concubines of the Aswān townsmen were almost all from this nation, and were sold at a very low price."[92]

Meddling in a Muqurran civil war ended with his ejection from Shunqayr and massacre or defection of many among his followers, so that 868 found him back in Aswān licking his wounds. His presence in Egyptian territory disturbed Ibn Ṭūlūn, who was sufficiently concerned to despatch an army against him, though this only ended in two humiliating defeats and acknowledgement of a triumphant al-ʿUmarī. At any rate, he withdrew into the desert and based himself near the Wādī al-ʿAllāqī once again. What al-Maqrīzī writes next needs to be taken with a pinch of salt, but raises intriguing questions about just how extensive mining on the Nubian Shield had become by the second half of the ninth century:

"The (mining) region at that time was so thickly populated that sixty thousand beasts of burden were employed to carry the provisions from the town of Aswān, without counting those which arrived by boat from al-Qulzum to the harbour of ʿAydhāb. Aḥmad b. Ṭūlūn put a ban on the export of cereals, because of his ill-feeling towards al-ʿUmarī. But the latter wrote to him that he had more than one hundred thousand men under his command. Therefore, (Ibn Ṭūlūn) lifted the ban."[93]

[92] *Ibid.*
[93] al-Maqrīzī, 164B - 167B (1811); trans. Vantini, 1975: 719.

Yet it seems that al-ʿUmarī again became involved in feuding and factionalism, to the effect that the Arab tribes took up internecine warfare, in the course of which al-ʿUmarī was ambushed and killed by his own men. His head was brought to Ibn Ṭūlūn, who supposedly had it embalmed and buried, repaying the treachery of those who had delivered it with their summary execution.[94]

The career of al-ʿUmarī is at once familiar and extraordinary, recalling that of Ḥakam al-Nābighī **[4.4.1] (ii)** a generation earlier. Al-ʿUmarī was in many ways little different to the Sāmarrān general al-Qummī **[4.4.1] (iv)**, the one being a privateer and the other an out and out pirate, but is set apart by his remarkable success. At the height of his power he ruled over an area larger than modern Ireland and was able to defeat both the Ṭūlūnids and Nubian kingdoms, lording it over an empire of gold and slaves. In the opinion of Ḥasan: "al-ʿUmarī almost succeeded in establishing the first Arab principality in that region. It is no exaggeration to state that his success stimulated further migrations which followed the same pattern."[95] The role of private initiative in state formation processes at the frontiers of the Caliphate was therefore significant, and obvious parallels with the 'unofficial empires' of the Portuguese and British Empires spring readily to mind.[96] Famously, men such as James Brooke or Cecil Rhodes operated on their own initiative to carve-out territories which were subsequently absorbed into the body of the 'official empire.' This provides a very pertinent model for the 'Arabisation' of the Sudan – even for the Yemen – and further demonstrates

[94] al-Maqrīzī, 164B - 167B (1811); trans. Vantini, 1975: 720.
[95] Ḥasan, 1967: 56.
[96] *Cf.* Newitt, 2001.

the degree to which the expansion of the Dār al-Islām followed its own diffuse and diffusing logic beyond the policies of the Caliphal *diwān.*

[5.2.2] Sawākin & al-Shunqayr

(i) Sawākin [sv] first makes its appearance in the Arabic sources in connection with the tenth-century Sudanese gold trade, though probably had its origins somewhat earlier in the ninth-century 'gold rush,' particularly following the opening of the Shunqayr mines.[97] The Yemeni geographer al-Hamdānī (d. 945) lists "the places where gold dust is thought to be: Dahlak, ʿAydhāb, Bāḍiʿ and Sawākin,"[98] and al-Aswānī similarly writes of "the road (from Berber by al-Shunqayr) leading to Sawākin, Bāḍiʿ, Dahlak and the islands of the Red Sea."[99]

This road was still used in the early nineteenth-century, given by the explorer Bourchier as being 12 days' journey over 264 miles, and further described by John Lewis Burckhardt in his *Travels in Nubia* (1814).[100] Another source of gold for Sawākin may have been the Khawr Baraka, for Ibn Ḥawqal (fl. 977) states that "the Baraka River has its sources in Ḥabasha... heads towards the land of the Beja and flows into the sea between Sawākin and Bāḍiʿ."[101] At any rate, these two ports are often

[97] Hasan, 1967: 82-89.
[98] al-Hamdānī, fols. 24b (MS. Upsala); trans. Dunlop, 1957: 40.
[99] al-Aswānī in al-Maqrīzī, ii, 258 (1911-27); trans. Vantini, 1975: 608. Bloss, 1936: 280, provides a slightly different version of al-Maqrīzī: "(from) the mines called Shenkir... are roads leading to Souakin, Nahda and Dahalac, and the Islands of the Sea."
[100] Anonymous review of Bourchier in the *Journal of the Royal Geographical Society of London*, 1832: 318.
[101] Ibn Ḥawqal, 57-8 (1938-39); trans. Vantini, 1975: 164.

mentioned together, and it may be thought that they essentially supplied the same goods from similar sources.

The island of Sawākin is covered by the ruins of a late medieval and Ottoman town **[Fig. 5.12]**, only abandoned following the establishment of the Port Sudan by the British in 1951. In recent years, a British team has undertaken some architectural survey and limited excavations on the island, which has thus far not made its way into publication. The origin of the settlement and early Islamic period more generally remain very poorly understood. When Greenlaw undertook to sketch the Ottoman town in the mid twentieth century, he included a plan and elevation of the mosque of Magīdī on the mainland by the causeway **[Fig. 5.13]**. The mosque is reputed to be the oldest in Sawākin, and Greenlaw notes parallels in the plan with the mosque excavated by Hebbert at al-Rīḥ **[Fig. 5.14]**, likely to have been built before the twelfth century **[5.2.3] (i)**. This may imply that the Magīdī mosque is of a similar date, though dating on stylistic grounds alone must be regarded with caution.

(ii) Khawr Nubt lies around 90 km east inland of Sawākin, hard by the medieval road to Berber **[Fig. 5.15]**. It constitutes a historically unattested settlement site with associated cemetery including dated tombstones, the location of which implies that contacts between Sawākin and the Shunqayr were relatively intense in the ninth century. No archaeological work has been carried out at the site, though Sanders & Owen produced a sketch map and noted the approximate co-ordinates; they describe a series of ruined structures and mounds "on which were found pottery, glass and

beads... very like those found at ʿAydhāb."[102] The associated cemetery has attracted a fair amount of attention in the secondary sources on account of its ninth- and tenth-century inscribed tombstones **[Figs. 5.16-.17]**. Monneret de Villard read the earliest date as 147 / 764-65, making it by far the oldest Arabic inscription from the Sudan, and leading him towards an argument that Arab penetration of the African shores of the Red Sea had commenced as early as the seventh century.[103] However, Gaston Wiet re-read the date as 247 / 861-62, the confusion laying in a provincial variant of the dual form of the word مِائَة, *miʾa*, 'a hundred.' Wiet argues, upon the basis of firm parallels with contemporary epigraphic practice in Egypt, that the inscription should be read مِائَتَي, *miʾatay*, a mistake for مَائَتَيْن, *miʾatayn*, 'two hundred.'[104] Such a date fits neatly with the career of al-ʿUmarī (fl. 855-70) in the Shunqayr mining region, while the site's location bears out the conclusion drawn from the narrative sources: that the origins of Sawākin lay in the Nubian gold trade.

(iii) al-Shunqayr and its gold mines lay at around fourteen stages from the Wādī al-ʿAllāqī **[Fig. 5.01]**. One of these may be associated with the large mining settlement discovered by J. Theodore Bent, in the course of a survey of the north-eastern Sudan on behalf of the Royal Geographical Society. The site, which he calls Wadi Gabeit, is located to the north-west of Mt. Erba, less than 100 km south-east of ʿAydhāb. He describes the Wādī Gabeit settlement as follows:

[102] Sanders & Owen, 1951: 327.
[103] Monneret de Villard, 1938b: 324.
[104] Wiet, 1952. *Cf.* Glidden, 1954: 64.

"For two miles up the river bed of the main valley, and up all the smaller collateral valleys, are to be found the foundations of miners' huts, dry built and small, but representing what must once have been a very large population. The traces of at least seven or eight hundred of these huts can still be seen... Traces of slag and burnt quartz, and fragments of quartz with red veins in it, lay about among the huts; and the hills on either side, which were formed of igneous rock with deep veins of quartz in it, had been quarried at some time to an enormous extent. There was no room for doubt that here we had come across a very extensive ancient gold-mine..."[105]

This mining settlement, if Bent's figures are to be trusted, is huge. The largest mining site known in Arabia is Ablah in the ʿAsīr, with slag heaps covering c. 100 ha and a village of c. 300 structures.[106] The remains at Wādī al-ʿAllāqī extend for 3 km, with a settlement of c. 7.5 ha comprised of c. 300 huts. Thus the 3.2 km (= 2 m) settlement of c. 700-800 huts at the Wādī Gabeit would make it over twice the size of the next largest mining settlement, and by far the largest known mining village from any period of exploitation of the Arabian-Nubian Shield.

The date, however, remains open to question. Bent failed to mention any ceramics, and though he found an illegible inscription which he decided was Greek, he wisely abstains from making a spot date of the site.[107] Potentially rather better dating evidence comes in the shape of the rotary querns that he found in abundance throughout the area of settlement in association with crushed quartz. The querns

[105] Bent, 1896: 344.
[106] Hester *et al*, 1984: 135.
[107] Bent, 1896: 345.

were used to crush the gold bearing quartz prior to floatation, the resulting gold dust was then sometimes melted into ingots – both dust and ingots are mentioned in the sources. Luckily, Bent thought to photograph some of these querns **[Fig. 5.18]** and they interested him sufficiently to elicit a detailed description:

"(The) crushing stones (are) made of rough blocks of a hard igneous stone with a hole in the middle, into which the upper grindstone has been fitted, and a handle for turning had been fixed into the upper stone."[108]

Such rotary querns have been found in quantities at the Wādī al-ʿAllāqī, and throughout the mining sites of western Arabia **[Fig. 5.19]**. Kisnawi contends that the circular grinder was introduced at the start of the early Islamic period and replaced the Iron Age saddle quern, a view to which Zarins also subscribes, generally taking the presence of rotary querns as indicative of Islamic occupation.[109] This could be used as the basis of an argument claiming the Wādī Gabeit remains as Islamic, especially if it can be proved that rotary querns were not used prior to the Arab conquest. Sadly, both the re-use of Graeco-Roman sites in the Islamic period and the tendency of 'Classical' archaeologists to forget this fact means that the issue is by no means simple, especially as rotary querns usually represent unstratified surface finds. They

[108] *Ibid,* 344.

[109] Kisnawi *et al*, 1983: 77; Zarins *et al*, 1981: 34. Note that Hester *et al*, 1984: 137, entertain rather idiosyncratic notions about the querns: "(The fact that) grinding stones are not common implies that grindstones were not necessary to the ore smelting... (and) sites with large number of grinding stones had a large number of stone structures implying a large permanent population and use of the grindstones in food preparation." The majority of the mining sites they explored were copper mines, which involved smelting the ore, so the dearth of querns should come as no surprise. The larger settlements might have functioned as local processing sites so that a correspondingly large number of querns is in keeping.

may – or may not – be indicative of Islamic occupation in the Eastern Desert of Egypt and Nubian Desert of the Sudan, and more particularly at Wādī Gabeit.

Only renewed survey work holds out the prospect of resolving the date of Wādī Gabeit, and is especially attractive given the outstanding size of the site. In fact, if Bent's figures do transpire to be accurate, then the scale of operations does rather call into question the long-standing association of Deraheib with ʿAllāqī. The use of the name ʿAllāqī to designate the modern *wādī* is does not necessarily conform to ancient usage. Bent was similarly advised as to this matter:

"Professor Goeje of Leyden, the greatest authority on early Arabian literature, pointed out to me further discrepancies in the distances from Aydab to the gold mines of Allaki in early Arab geographers, and suggests that the mines found by MM. Bonomi and Linant (at Deraheib) and ours (at Wādī Gabeit), though several hundred miles apart, may have belonged to the same reef, and have been known by the same name."[110]

That toponyms move has long been recognised in the Gulf. Ibn Baṭṭuta writes on "the city of Qays, also called Sīrāf"[111] implying that when Sīrāf was abandoned following the 977 earthquake a community at Qays laid claim to the name. Hormoz, of course, provides the best documented case. Something similar seems to have been at work in the Red Sea. Al-Janadī (fl. 1300), for instance, notes of the Arabian port of ʿAththār that

[110] Bent, 1896: 346. Heck independently arrived at this perfectly reasonable conclusion over the Maʿdin al-Sulaym, see above. Bent, meanwhile, thought he detected two locations in the Arabic sources – an inland and a coastal – though this does not bear close inspection.
[111] Ibn Baṭṭuta, 99, n. 34 (2002).

it had long been in ruins and the name transferred to the nearby Farasān islands; Zarins further points out that the name of the early Islamic Tihāma port of Sirrin today only applies to the facing island.[112] Could the ruin fields of Wādī Gabeit and Deraheib represent different spatial aspects or temporal phases of the historically attested ʿAllāqī, with only the latter preserving the name? Further survey work may help settle the matter, though time is short: the Sudanese government has granted extensive mining concessions to the Chinese.

[5.2.3] Bāḍiʿ & Wādī Baraka

(i) Bāḍiʿ was similarly noted for its gold exports in the ninth and tenth centuries.[113] Al-Yaʿqūbī writes of a Beja tribe called the Baqlīn, whose territory "extends from Bāḍiʿ on the Red Sea coast to the frontier of Barakāt,"[114] this last is most likely to be equated with the modern Khawr Baraka running south inland towards the Ethiopian highlands. Elsewhere, he notes that "it is 30 days' journey from al-ʿAllāqī to Barakāt, the remotest mine where the Muslims go to seek gold."[115] Later, al-Masʿūdī (d. 956) describes Bāḍiʿ as situated "on the coast of the mine region and the Bejaland."[116] In addition to the gold of Barakāt, the port of Bāḍiʿ may well have exported gold dust from the Shunqayr – a section of the Nubian Desert east of the Berber - Abū Ḥamād stretch of the Middle Nile – whose mines were first exploited by the Arab adventurer al-ʿUmarī (fl. 855-70). Certainly, the tenth-century Fāṭimid *dāʿi* Abū Sulāym al-Aswānī

[112] Zarins, 1985: 70.
[113] Hasan, 1967: 64-66.
[114] al-Yaʿqūbī, i, 192 (1960); trans. Vantini, 1975: 72.
[115] al-Yaʿqūbī, 333 (1892); trans. Vantini, 1975: 78. Actually, the B-R-K-Ā-T has been corrupted to B-R-K-Ā-N, a slight matter of losing a diacritical mark which can fairly confidently be restored.
[116] al-Masʿūdī, 330 (1894); trans. Vantini, 1975: 140.

explicitly states that a road led directly from Berber to Bāḍiʿ from at least the mid eighth century,[117] and is highly plausible that some gold was passing along from at least the time of al-ʿUmarī. For all that, neither the mine of Barakāt nor those of al-Shunqayr seem to have been as well known as those of the Wādī al-ʿAllāqī, and consequently Bāḍiʿ attracts a good deal less attention in the narrative sources than ʿAydhāb, suggesting a rather secondary role in the Nubian gold trade.

Bāḍiʿ was first identified with the island of al-Rīḥ by Crowfoot in 1911, who tied the prominent mound pointed out to him as Mashatiri with lines from Ibn Qalāqis quoted in Yāqūt (fl. 1224): "Then the dune of Mashātīrā and the two cisterns of Dasā, and the ruins of Bāḍiʿ."[118] The death of Ibn Qalāqis (at ʿAydhāb) in 1172 provides a *terminus post quem* for abandonment at Bāḍiʿ, even as a tombstone found on al-Rīḥ bearing the date 1037 furnishes a *terminus ante quem*. Though a century or more of Fāṭimid occupation would have provided ample opportunity for an extensive remodelling of earlier levels, something of the character of ninth- and tenth-century Bāḍiʿ may well have survived. Certainly it was not obscured by the super-abundance of Mamlūk material everywhere encountered at ʿAydhāb, which lends the extant archaeology of al-Rīḥ island a greater relevance to this study.

This potential relevance, unfortunately, is undermined by the lack of detailed publication. Excavations were undertaken by Crowfoot (1911) and more particularly Hebbert (1935), while Kawatoko (1993) conducted a season's survey including a test pit. The site consists of still discernable streets of large courtyard houses, 25 m^2, built

[117] Abū Sulāym al-Aswān reproduced by al-Maqrīzī, ii, 258 (1911-27); trans. Vantini, 1975: 608.
[118] Yāqūt, i, 471 (1866-73). Cited by Crowfoot, 1911: 542.

of petrified coral ashlars laid in mortar.[119] Hebbert published a plan of one of the largest of these structures, 19 m x 15 m, fronting a town square, and which he hoped had been a public building.[120] This building had been rebuilt and repaired at least once, the earliest phase being notably better built, with well worked columns of choice limestone and a courtyard surface of imported fine gravel. In fact, Hebbert's 'public building' does rather resemble the plan of a mosque, divided as it is between an open courtyard and columned sanctuary.

The open courtyard of each house was further provided with a roof-fed underground cistern, of which around 200 were identified by Kawatoko and several typologies recorded by Hebbert **[Fig. 5.20]**.[121] Indeed, the hydraulic system of al-Rīḥ seems to have been highly developed, with municipal reservoirs built to the north of the settlement area. The water harvesting technique was characterised by the careful levelling of the coral bedrock to create a series of basins, each feeding one or more covered cisterns. Among the better preserved of these basins, Crowfoot points to an example some 2000 m^2, its oblong cistern rock cut and lined with lime-plaster covered by a barrel arched roofs of coral blocks. Hebbert, meanwhile, gives other instances, whether rectilinear 12 m long x 2 m wide with further undercutting and a substantially intact coral block superstructure, or circular in plan with a diameter of 9 m.[122] Though no plans or photographs – or even detailed descriptions – are available, the presence of circular cisterns instantly recalls the famous Aghlābid tanks at

[119] Crowfoot, 1911: 542-47, gives the best description of the site.
[120] Hebbert, 1911: 310-12, Pl. XIII, Pl. XIV.
[121] Kawatoko, 1993a: 207-09; Hebbert, 1935: 312-13, Pl. XV, XVI, XVIII.
[122] Crowfoot, 1911: 543-44; Hebbert, 1935: No. 9, Pl. XVIII.

Qayrawān or those found in the course of the Darb Zubayda survey.[123] This might suggest an Early Islamic date for the circular cisterns mentioned in passing by Hebbert at al-Rīḥ, though only future archaeological work can settle the matter.

Between the municipal reservoirs and area of settlement lay a number of large middens, arranged in a semi-circular pattern. Crowfoot estimates that these reach a height of 30 feet, and endeavoured to investigate: "The men who were with me dug a trench in one of the biggest, which they declared to conceal the palace of the ruler, and found, as I had foretold, nothing but the bones of domestic animals, shells, potsherds, glazed earthenware, and glass – the refuse, in fact, of a kitchen midden."[124] Hebbert, meanwhile, notes that the size of these mounds is much larger than those at ʿAydhāb, which could perhaps suggest that the permanent population of Bāḍiʿ was more significant.[125] The excavation of these middens would provide a wealth of information not just about the local subsistence strategies and economic life of al-Rīḥ, but also of the foreign contacts and date of occupation.

The final aspect of the site which has attracted the interest of its excavators, is the corpus of inscribed gravestones now in the Khartoum museum **[Fig. 5.21-24]**. Though Crowfoot notes some 24 inscriptions from the cemetery to the north of settlement on al-Rīḥ island, only four have received some treatment – particularly by Combe – though only three bore dates: 997, 1015 and 1037; a fifth appears semi-published in one of Hebbert's plates without further comment.[126] The dates are neatly paralleled by

[123] Rashid, 1980b: 153-211. His discussion of the water tanks in other regions is useful here.
[124] Crowfoot, 1911: 543.
[125] Hebbert, 1935: 309.
[126] Crowfoot, 1911: 544; Combe, 1930; Hebbert, 1935: No. 4, Plate XVII; Kawatoko, 1993b: 190-94.

the angular and floriated Kufic script of the type well known from the Fāṭimid cemeteries at Aswān and Cairo, and further attested at the contemporary cemeteries of Dahlak.[127] Though a thorough discussion of these mostly eleventh century inscriptions lies beyond the scope of this thesis, it is worth noting that such clear stylistic links with Fāṭimid Egypt most likely reflect commercial ties, which continue to be evidenced into the early twelfth century by the Geniza documents.[128]

(ii) Assarema Derheib, about 20 miles inland of al-Rīḥ, constitutes a cemetery site displaying further stylistic links with Fāṭimid Egypt.[129] The tombs are of the classic three-tier *qubba* type, of square plan surmounted by an octagon and topped by a dome. Crowfoot later briefly refers to an "enormous cemetery close by in Khawr Gamarota, containing graves of various types, but for the most part surrounded with upright slabs."[130] Similar *qubba* structures, unseen by Crowfoot, were reported to him by the local Beja tribe of Banī ʿAmr, with others described by British officers on the road between Tokar and Enkowit, and at Khawr Langab between Kasala and Tamiam. These tombs and cemeteries therefore line the myriad caravan routes connecting this stretch of the Red Sea to the Middle Nile.

No further publication of the Assarema Derheib tombs has been undertaken, so far as I am aware, but a superficial resemblance to the Fāṭimid tombs at Aswān can be detected in Crowfoot's photographs – particularly outwards curving corners beneath

[127] Bassat, 1893; Malmusi, 1895-98; 1898; Wiet, 1951; 1952; Oman, 1974; Schneider, 1967; 1973; 1983.
[128] A Geniza document accounting for expenditure made by Abū'l-Barakāt b. Joseph Lebdi for the merchant Isḥāq al-Nafūsī, dated 1132, lists expenditures in Baḍiʿ, Dahlak, Nizāla, Sawākin and ʿAydhāb. MS Heb. b11, f. 21/ I.33/ IB.20. Quoted by Margariti, 2004: 188.
[129] Crowfoot, 1911: 'Appendix on Assarema Derheib,' pp. 549-60 & plates after p. 534.
[130] Crowfoot, 1911: 550.

the domes – which may, upon closer inspection, perhaps support an argument for Aswān providing inspiration for Assarema Derheib. Indeed, given that the Shunqayr mines were exhausted in the eleventh century and Bāḍiʿ abandoned during the twelfth century, with no significant local settlement known in the following centuries, it is unlikely that these tombs could be anything other than Fāṭimid in date. Crowfoot further makes the point that "the buildings of Assarema Derheib are variously explained as houses and forts and treasuries (by the Banī ʿAmr); in other words they belong to a past as utterly forgotten as the ruins of Bāḍiʿ."[131]

(iii) Beja slaves are attested in the Arabic narrative sources. There is, however, some uncertainty as to the sources of Beja slaves and the trade routes used to export them. For instance, when al-Iṣṭakhrī (fl. 932-50) states that "their (i.e. the Beja's) slaves (*raqīq*) are exported to Egypt,"[132] the caravan routes to Aswān may well have been assumed. Maritime routes, however, are implied by Ibn Ḥawqal (wr. 977) who records – having listed slaves as among the chief exports of the Bejaland – that "the farthest limit reached by traders into their country is the district of Qalʾīb, where there are many streams of water descending from a mountain called Malāḥīb; the largest of the valleys is the Wādī Baraka."[133] This rather echoes Yaʿqūbī's earlier observation that Wādī Baraka is "the remotest mine where the Muslims go to seek gold."[134] Given that both Bāḍiʿ and Sawākin were situated not far from the mouth the *wādī*, it follows that Muslim merchants were taking or buying slaves from among the Beja of the upper reaches of the Wādī Baraka. As al-ʿUmarī (d. 1348), the Mamlūk *qādī* of Cairo was well

[131] *Ibid.*
[132] al-Iṣṭakhrī, 54 (1927); trans. Vantini, 1975: 115.
[133] Ibn Ḥawqal, 55 (1938-39); trans. Vantini, 1975: 159.
[134] al-Yaʿqūbī, 333 (1892); trans. Vantini, 1975: 78.

aware, "it is said that this *wādī* (i.e the Baraka) leads to a region called Sahart, formerly called Tigrāy. Here there was the ancient capital of the kingdom, called Akshum (*sic*) in one of their languages... It was the residence of the earliest Najāshī, who was king of the entire country."[135]

The Baraka is one of four main water courses draining north and east from the Eritrean Highlands (the others being Gash, Setit and Anseba), carrying sufficiently large volumes of water to support montane forests in the Eritrean foothills and irrigate extensive floodplains in eastern Sudan. The Setit (Tekeze) further flows into the Atbara, which makes its way to the Nile in the ancient region of Shunqayr. It is significant that of five Beja 'kingdoms' (*mamlakat al-Buja*) placed in the deserts east of the Nile by ninth- and tenth-century Arabic geographers, the territories of four converge on this richest of ecological zones, while a fifth was compelled to expand towards it by conquest. The most evocative description of this verdant territory appears in Ibn Ḥawqal:

"The territory of Kushā... is crossed by the river Sansabī, a tributary of the Nile, which has its source in Ḥabasha, and by the river Dujn, which too comes from Ḥabasha, and waters the district of Dujn... (which is) covered uninterrupted by villages, supplied with water, forests, cultivated lands and game."[136]

Father Vantini, who translated this passage in his compilation of *Oriental Sources Concerning Nubia* (1975), suggests the Sansabī river be equated with the Atbara, and

[135] al-ʿUmarī, MS Paris 5867, fol. 19 v (1924); trans. Vantini, 1975: 507.
[136] Ibn Ḥawqal, 58 (1938-39); trans. Vantini, 1975: 163.

notes that Dujn is today used by some Eritreans to refer to the territory between Tessenei (Eritrea) and the Atbara.[137] Kushā, meanwhile, needs little explanation: Noah begot Hām begot Kūsh. From the Red Sea coast, the fastest means of communication with the resource rich district of Dujn was up along the Wādī Baraka. Ibn Ḥawqal explains that "the Baraka river has its source in Ḥabasha... (and) heads towards the land of the Beja and flows into the sea between Sawākin and Bāḍiʿ,"[138] and elsewhere notes that "Baraka is not far from Bāḍiʿ island, only one day's journey."[139] Indeed, it was no doubt proximity to the Baraka and the access it affords to the interior which first attracted human settlement in the vicinity of Bāḍiʿ, for this port represents merely the medieval continuation of Aksumite and Ptolemaic settlement.

That Muslim merchants were active in the upper reaches of the Baraka is first mentioned by al-Yaʿqūbī, who noted that "Muslims sometimes went there for commerce,"[140] and is subsequently treated by Ibn Ḥawqal in greater detail. He states that the 'king' of the local Beja tribe "is a Muslim, who speaks Arabic... There are among them many Muslims, who originally came from many countries where this religion prevails; they are traders and often travel to Mecca and other parts."[141] However, there is nothing in al-Yaʿqūbī or Ibn Ḥawqal explicitly stating that these merchants were slavers, and in fact neither writer mentions the export of Beja slaves. This is rather curious, given that al-Iṣṭakhrī, al-Muqaddasī and – of course – Ibn Buṭlān all attest to Beja slaves in the late tenth and early eleventh centuries. It may have been that Beja slavery was so obvious to al-Yaʿqūbī and Ibn Ḥawqal that they did

[137] Vantini, 1975: 163, n. 12 & 13.
[138] Ibn Ḥawqal, 58 (1938-39); trans. Vantini, 1975: 164.
[139] Ibn Ḥawqal, 55 (1938-39); trans. Vantini, 1975: 159.
[140] al-Yaʿqūbī, 125 (1892); trans. from French by Vantini, 1975: 79.
[141] Ibn Ḥawqal, 58 (1938-39); trans. Vantini, 1975: 164.

not bother to mention it. While ʿAydhāb achieved some fame as a primary exporter of gold, Bāḍiʿ and Sawākin seem to have played a secondary role in this trade, perhaps implying that these ports were more especially associated with the slave trade. Indeed, the history of the Beja between the mid ninth and mid eleventh centuries suggests that slavery was of a considerable enough scale to impact significantly on their social and political structures.

(iv) The increasingly prevalent Arab mercantile presence in Bejaland during the second half of the ninth century effected socio-political changes which may plausibly be linked to slavery on the basis of analogy with the Atlantic slave trade in Africa. In the earliest informed Arabic account of the Beja tribes, that of al-Yaqūbī written in al-Fusṭāṭ c. 872-91, their society appears to have been broadly egalitarian, ethnically homogenous and resolutely pagan. Al-Ṭabarī, writing of the mid ninth-century scene, describes the Beja as nomads "owners of camel and sheep... (living in) a land devoid of all vegetation and water, without villages and fortresses."[142] He continues that a captured Beja chief paraded in Sāmarrāʾ was seen "carrying a small stone idol in the form of a child, to which he prostrated himself sometimes." Of their five kingdoms, al-Yaqūbī writes of the northernmost that it "begins from the Aswān frontier... south to the frontier of Barakāt; (it is) called Naqīs... some of their tribes and clans are al-Ḥadarāt (*sic* al-Ḥadāriba), Suhāb, al-ʿAmāʾir, Kūbir, Manāsa, Rasʿa, Arbariʿa and al-Zanāfij."[143] A century later, Abū Sulaym al-Aswānī (fl. 975) records nothing of the Naqīs, but instead describes a tribe called Ḥadāriba:

[142] al-Tabarī, iii, 1428-1433 (1879-1901); trans. Vantini, 1975: 100.
[143] al-Yaʿqūbī, i,191 (1960); trans. Vantini, 1975: 72.

"Many Beja of the tribe known as Ḥadārib professed Islam superficially. They live in the territory next to Upper Egypt, i.e. from the frontier up to al-ʿAllāqī and ʿAydhāb... There is another tribe among them called Zanāfij, who are more numerous than the Ḥadārib, but they are subject to them as serfs (*khufarāʾ*),[144] escorts and guards and the Ḥadārib entrust their cattle to them. Every chieftain of the Ḥadārib owns a number of Zanāfij as patrimony (*ḥumla*): they are like slaves (*ʿabīd*) and may be bequeathed from one to another."[145]

The spread of monotheism and increasing social stratification were quite probably the result of intensifying interaction with the more developed Muslim peoples. Already al-Yaʿqūbī writes of the Naqīs territory that "the majority of the population of Wādī al-ʿAllāqī are Rabīʿa from the Bānū Ḥanīfa, who came from al-Yamāma with their numerous families (*ʿiyyālāt*) and children (*dhurrīya*)."[146] Fifty years later al-Masʿūdī observed that in 943, the army of the Rabīʿa chief included "3,000 Rabīʿa horsemen... as well as 30,000 Beja spearmen on camels... They are Ḥadāriba, the only Muslims among the Beja..."[147] Clearly, there were large numbers of Arabs living in the northern Beja territory, and indeed the rise of the Ḥadāriba described by al-Aswānī was a direct consequence of their alliance with the Arabs: "many Arabs of the tribe of Rabīʿa migrated to that country and became powerful. They took Beja women as wives and the Beja became powerful as a result of their relationship with the Rabīʿa..."[148] By the mid tenth century Arab mining, mercantilism and market demand had transformed

[144] *Khufarāʾ* is the usual plural of *khafīr*, 'guardian.' Although *makhfūr*, 'under protection,' is used today, Lane, i, 772 (1863-93), finds an irregular plural *khufarāʾ* giving the same sense.
[145] al-Aswānī in al-Maqrīzī (1911-27), 'Chp. 32 – The Beja who are said to be a Berber People,' pp. 267-80; trans. Vantini, 1975: 618-33, esp. P. 625.
[146] al-Yaqubi, 334 (1892); trans. Vantini, 1975: 77.
[147] al-Masʿūdī, iii, 34-5 (1962-65); trans. Vantini, 1975: 131.
[148] *Ibid.*

the egalitarian and pagan Beja society into something approaching a feudal Muslim one. The Arabs constituted the ruling class and the Ḥadāriba a military elite, while the Zanāfij comprised a serf population with a constantly replenished stock of slaves taken from neighbouring peoples.

The homeland of the Ḥadāriba seems to have been in the environs of the Wādī al-ʿAllāqī between Aswān and ʿAydhāb, to which was added by the late tenth century the territory of the Zanāfij to the south. Al-Yaʿqūbī writes that "from al-ʿAllāqī one goes to the land of the branch of the Beja known al-Zanāfij, also called Baqlīn,"[149] and elsewhere states that "(it) has many towns and is very large... the frontier of Baraka (is) in the territory of the Baqlīn."[150] Given that al-Aswānī states that the Ḥadāriba – and, one assumes, their Rabīʿa aristocracy – ruled over the Zanāfij / Baqlīn, Ibn Ḥawqal's statement that the king of the Baqlīn "is a Muslim, who speaks Arabic"[151] may refer to the Rabīʿa chief.

Broadly contemporary with al-Aswānī, Ibn Ḥawqal records that "(on the mainland) opposite Sawākin, there are the Raqābat and Ḥandiba clans, who are serfs (*khufarāʾ*) of the Ḥadrabiyya and are subjects of... the maternal uncle of the children... of the ruler of ʿAllāqī."[152] Clearly, of all the Beja 'kingdoms' encountered in the Arabic narrative sources, only that of the Ḥadāriba in the tenth century began to approach the full political sense of the term. The Ḥadāriba had, by closely allying themselves with the Arab gold miners of the Wādī al-ʿAllāqī, extended their rule as far south as the upper

[149] al-Yaʿqūbī, 125 (1892); trans. from Vantini, 1975: 79.
[150] al-Yaʿqūbī, i, 191 (1960); trans. Vantini, 1975: 72.
[151] Ibn Ḥawqal, 58 (1938-39); trans. Vantini, 1975: 164.
[152] Ibn Ḥawqal, 55 (1938-39); trans. Vantini, 1975: 161.

reaches of the Wādī Baraka, a process of expansion which must have created large numbers of slaves and culminated by securing the prime slave producing lands.

(v) The slaves sold at the Sudanese ports were not necessarily of Beja extraction. Al-Iṣṭakhrī notes that "the countries of the blacks are very extensive... The slaves (*khadam*) who are sold in the counties of Islam come from there: they are neither Nubians, nor Zanj, nor Ethiopians, nor Beja; they are from another race of blacks, whose complexion is darker than any other."[153] Similarly, Nāṣir-ī Khusraw (fl. 1050) writes that "if one travels from Egypt southwards and crosses the Nūba province, one arrives.... (in) a vast country rich with pastures and domestic animals; its inhabitants are blacks of tall stature and strongly built; many soldiers in Egypt come from that people."[154] Slaves from the interior were therefore brought down the Wādī Baraka to the coast.

It is unclear, however, who exactly was responsible for transporting the slaves to the Sudanese ports. One possibility is that the Beja were involved in the capture and trafficking of slaves. This seems to be rather passively implied by al-Iṣṭakhrī, who records that the Beja "are nomads and own well-bred camels... Their slaves (*raqīq*) and their camels are exported to Egypt."[155] Certainly, the Ḥadāriba were later to play an active role in the capture of slaves, as al-ʿUmarī testifies: "The *shaykh* of the Ḥawāriba (sic)... rules over innumerable people and has considerable power. He carries out raids in Ethiopia and among the peoples of *sūdān*, and comes back with booty and

[153] al-Iṣṭakhrī, 40 (1927); trans. Vantini, 1975: 114.
[154] Nāṣir-ī Khusraw, 41 (1881); trans. Vantini, 1975: 233.
[155] al-Iṣṭakhrī, 41 (1927); trans. Vantini, 1975: 115.

prisoners."[156] Yet the Ḥadāriba not only took slaves from the Ethiopians and *sūdānī*s, for Ibn Baṭṭuṭa later recalled meeting an Arab slave boy among the Beja of the Eastern Desert of Egypt.[157] Of course, it would be inappropriate to project the situation described by these fourteenth century sources onto the tenth century, especially as there is nothing explicit in the earlier sources stating the Ḥadāriba played a major role in the acquisition and export of slaves. It would, however, help explain the Ḥadāriba drive south to the slave producing territories of the Upper Baraka.

Alternatively, Muslim merchants took for themselves slaves from among the Beja, as is apparent from Nāṣir-ī Khusraw's statement that "the Beja who live in the desert (regions west of ʿAydhāb) are not bad people... it is the Muslims and others who kidnap their children and take them to the towns of Islam where they sell them."[158] Clearly, slaves were taken from the upper Baraka by Beja intermediaries and Muslim merchants alike, while others were taken directly from among the Beja in the hinterland of ʿAydhāb, and more must have been produced by inter-Beja warfare.

(vi) It seems that the hinterland of Bāḍiʿ was further a source of valuable aromatics derived from sea shells. *Operculum* in Latin means 'little lid,' the name given to the retractable seal of gastropods used to close the opening of the shell. In the Red Sea, the opercula of the conch *Strombus tricornis* were collected to be used as incense, as dealt with Hiroshi Nawata's paper *An Exported Item from Bāḍiʿ on the Western Red Sea Coast in the Eighth Century: Historical and Ethnographic Studies on Operculum as Incense and*

[156] al-ʿUmarī, 29 (1894); trans. Vantini, 1975: 515.
[157] Ibn Baṭṭuṭa, 256 (1929) ; reproduced by Vantini, 1975: 522.
[158] Nāṣir-ī Khusraw, 72 (1881); trans. Vantini, 1975: 236.

Perfume (1997). Unfortunately, this otherwise excellent article makes one key mistake with regards the date. Nawata read Yāqūt's entry for Bāḍiʿ – wherein the flight of the Umayyad princes is first described, followed then by an account of the port's commerce – and seems to have assumed that the section on commerce reflected the mid eighth-century scene. However, Yāqūt is notorious for drawing uncritically upon a wide chronological range of evidence with no regard for context; Ibn Qalāqis (d. 1172) is quoted alongside the eighth-century tradition, for instance. The information on commerce could, therefore, have originated in any particular period between the eighth and twelfth centuries, or even represent a garbled synthesis of a number of diverse traditions. However, the broader historical context would suggest that it pertains to the period of commercial efflorescence between the ninth and eleventh centuries.

Yāqūt writes that "the Ethiopians bring ivory, ostrich egg-shell and other things from their land and sell to the people of Bāḍiʿ; and the Ethiopians buy medicine (*qusṭ*), perfume (*aẓfār*) and combs (*amshāṭ*)."[159] With regards this perfume, Nawata examines references to this last in medieval Arabic medical tracts. He quotes al-Birūnī (d. 1048), which I reproduce here at greater length because of its importance to the discussion:

"There are several kinds of *al-aẓfār*. The best is *al-qurashīyat*. The people of India desire it, and call it *tah kurshī*. It is also known as *al-ẓufr al-qurshī* and is brought from the area between Jedda and Aden. It is small and inclined to be yellowish. And it is almost equal in size to white gentian, and can be squeezed inside a pistachio nut husk. One of

[159] Yāqūt, i, 324 (1957).

the apothecaries claimed that *al-hāshmīyat* is next to *al-qurahīyat* in quality. It is larger that *al-qurashīyat* and bears a red colour. Then it is followed by one known as *aẓfār al-ḥimār*, because of its bigness and thickness. It is the same size as a *dirham* coin and blackish. Al-Khushkī says that *al-aẓfār al-makkīyat* is brought from Jedda and the coastal area of Mecca. It is inferior to *al-bahrainīyat* and is not praiseworthy in fumigation. It is a kind of shell, and its colour is inclined towards redness. After detaching from molluscs, it is processed to give off a pleasant smell and is sold."[160]

Whether or not *al-aẓfār* was actually collected along the Arabian coast is unclear. Elsewhere, al-Muqaddasī states that Yemen was a producer of slaves – which it clearly was not – and what seems to be meant instead is that slaves could be bought from Yemen. Something similar could be read into this passage of al-Bīrūnī, especially when Burckhardt's account of the early nineteenth century opercula trade is considered:

"The most substantial of all the traders who at present frequent the Shendy market are the people from Souakin... the Hadharebe (= Ḥadāriba)... They also bring the Dhofer (= *al-ẓufr*), which is taken by the Sennaar and Darfour merchants (at Shendy). It is the shell of an animal found in the Red Sea, cut into small pieces, and used as a perfume, emitting a pleasant odour when held over the fire. The pieces of the Dhofer, cut like beads, are much esteemed in the Hedjaz and Egypt, where the ladies wear

[160] al-Birūnī, 50-53 (1973); trans. Hamarneh, 1973: 33-34. Quoted by Nawata, 1997: 312.

them as necklaces; they are of a black, or dark blue colour, with veins of a lighter hue. The people of Souakin export them likewise to Djidda."[161]

Between the evidence of Yāqūt and al-Bīrūnī – interpreted in the light of Burckhardt – it is clear that the Sudanese ports were pre-eminent in the collection and export of opercula. The main markets for Sudanese opercula during the ninth- to eleventh-century commercial efflorescence were apparently in Arabia and Ethiopia, though Burckhardt's testimony suggests that Egypt and Nubia should also be considered as potential markets. Moreover, opercula seems to have enjoyed a wide distribution, there being a demand for it as far away as India and – only later? – Darfur. In the early Islamic period, it appears that Bāḍiʿ played a leading role in this trade, as is suggested by the shell middens found by Crowfoot and Sidebotham on al-Rīḥ island, evidence for the collection of opercula on a commercial scale.

[5.3] Southern Ports & Hinterlands

[5.3.1] Aden & al-Shiḥr as Red Sea Entrepôts

(i) Aden probably only overtook Qāniʿ as the principal port of Yemen in the late sixth century **[3.2.1] (iv)** and its trade does not thereafter appear to have been significant through the 'long' eighth century. By the second half of the ninth century, however, it had emerged as the principal *entrepôt* of Yemen. Ibn Khurradādhbih (wr. 870) wrote that "Aden is one of the important ports... (It has) goods from Sind, Hind and

[161] Burckhardt, 1822: 285-86. *Cf.* Nawata, 1997: 316.

China."[162] The Geniza documents suggest a segmented structure of maritime commerce, with given traders active along given routes. Goitein observes that "the trade routes within the Arab world were characterised by the overlapping of long- and short-distance itineraries."[163] Elsewhere, he notes that the ship used by al-Lebdi on his return from India went straight to Dahlak and did not call at so important a port as Aden, which "again seem to show that the ocean going vessels... had their fixed routes."[164] Margariti discerns four segmented structures in the western Indian Ocean in a Geniza fragment mentioning "ships from every sea, from India and its environs, from the land of Zanj and its environs, from Berbera and Ḥabash and environs, from al-Shiḥr (at the mouth of the Haḍramawt) and al-Qamr (in Dhufār) and environs."[165]

Significantly, the Red Sea is not mentioned here, and Margariti notes that of the many *nakhūda*s (sea captains) referred to in the Geniza, only two plied the Red Sea routes. In particular, ʿAlī al-Dibajī[166] and al-Sharīf[167] were active between the ʿAydhāb and Aden stretch. She concludes that "this very silence surrounding the names and the owners or captains of the boats that put into Aden from Zabīd and other Red Sea ports bespeaks a separate network"[168] not dealt with by the Geniza merchants. Indeed, she suggests that navigational skills and boatbuilding technologies were specific to

[162] Ibn Khurradādhbih, 52 (1889). Quoted by Serjeant, 1948**:** 80.
[163] Goitein, 1967: 211.
[164] Goitein, 1954: 194.
[165] Margariti, 2004: 219-20, n. 55.
[166] Bodl MS Heb d66, f. 108/ IB.131/ V.8, l. 11: a voyage to Dahlak, possibly from ʿAydhāb. BM Or5566 d, f. 6/ IB.152/ VI.39, ll. 6-7 and ENA 4020, f. 8/ IB.153/ VI.38, l. 9: a voyage from ʿAydhāb to Aden. ULC Or1080 J180/ IB.244/ V.5, margin: a voyage to ʿAydhāb ending in shipwreck and salvage. *Cf.* Margariti, 2004: 219, n. 54.
[167] Bodl MS Heb d66, f. 108/ IB.131/ V.8, l. 16: his ships sailing in convoy with al-Dibajī. Westmin. Frag. Cairens Misc. 13/ IB.96/ VI.32, ll. 9ff and margins: two vessels of al-Sharīf, one large and one small, and a shipwreck between Sawākin and Dahlak. *Cf.* Margariti, 2004: 219, n. 54.
[168] Margariti, 2004: 218-19.

particular waterways; in the Geniza, the word *jalba* designates Red Sea boats, while *markāb* refers to the boats of the Arabian Sea.[169] This seems borne out by the testimony of Sulaymān al-Tājir (wr. 851), who notes that "when the Sīrāf ships arrive in this sea... they put into Jedda, where they remain, for their cargo is thence transported to al-Qāhira by ships of al-Qulzum, who are acquainted with the navigation of the Red Sea."[170]

The archaeology of Aden is obscured by contemporary occupation. However, a number of sites within its hinterland have been explored, the ceramics of which reflect something of the early Islamic trade of Aden. Lane and Serjeant note the presence of Yüeh Chou celadon at Abyan: "Grey or occasionally brownish stoneware with glaze varying from greenish grey to olive brown. Easily recognised by the marks under the glazed bases caused by the oblong clay pellets or heaps of sand on which vessels, here all bowls, were fired. Designs incised or occasionally carved."[171] They consider this type to have been produced between the ninth and twelfth centuries, they point to similar instances found at Fusṭāṭ and particularly Sāmarrāʾ, where the primary occupation is dated between 836-92.[172]

(ii) Aden appears to have been a major export centre of the Yemeni textile industry, for which there is abundant historical evidence, as summarised by Serjeant **[Fig. 5.25]**. The earliest source is ostensibly al-Aṣmaʿī (d. 828), quoted by Yāqūt (d. 1229): "There are four things which have filled the world and which are only to be found in Yemen.

[169] Margariti, 2004: 220-21.
[170] Sulaymān al-Tājir, 93 (1733).
[171] Lane & Serjeant, 1948: 125.
[172] Sarte, 1925: Pl. xxiii, 9, 13, 15.

These are *wars* dye, frankincense (*kundur*), woad (= black dye, *khiṭr*), and *ʿaṣb* (*ikat*) cloth."[173] Similarly, al-Jāḥiẓ (d. 868) mentions among the exports of Yemen the black (*khiṭr*) and yellow (*wars*) dyes, together with the famous cloaks (*burūd*) of the province.[174] Ibn Khurradādhbih (wr. 845) thereafter simply states that "the exports of Yemen are figured *washī* stuffs and other garments... and *wars* dye."[175] Examples of Yemeni textile have further been discovered at Fusṭāṭ bearing *tirāz* inscriptions with the date 862-64 and statement of production in Ṣanʿāʾ.[176]

Ibn al-Faqīh (wr. 902-03) subsequently writes that "the people of Yemen have Yemen cloaks (*ḥulla*), Ṣaʿīdī and Aden garments."[177] The reputation of Yemeni textiles even reached distant al-Andalūs, where Ibn ʿAbd Rabbihi (d. 940) quoted poetry to the effect that "many a garden... Aden has clothed with its *washī* silk."[178] The Yemeni geographer and antiquarian al-Hamdānī (d. 945) describes the "heavy clothes (*ṣakrawī*) of wool and silk" worn during summer by the people of Ṣanʿāʾ, and observes that "in the Yemen are the precious kingly articles of silk (*ḥarīr*)... and the carpets of al-Rīḥ of this silk, and it is marvellous."[179] Ibn Rusta (fl. 903-13) records that "from Ṣanʿāʾ are imported... the valuable striped material (*burūd*), the cloth of single colour (*muṣmat*), and the striped cloaks (*ardiya*), a striped cloak fetching a hundred *dīnār*s there."[180] By far the fullest account appears in al-Muqaddasī (fl. 985):

[173] Yāqūt, iv, 1036 (1866-73).
[174] al-Jāḥiẓ, 334, 342 (1932). Quoted by Serjeant, 1948: 79.
[175] Ibn Khurradādhbih, 52 (1889). Quoted by Serjeant, 1948: 80.
[176] Bühler, 1972: 23; Golombeck & Gervers, 1977: 92, 98, 99. Cited & discussed by Baginsky & Shamir, 1995: 29.
[177] Ibn al-Faqīh, v, 252 (1885). Quoted by Serjeant, 1948: 80.
[178] Ibn ʿAbd Rabbihi, iii, 187 (1876). Quoted by Serjeant, 1948: 82.
[179] al-Hamdānī, i, 11 & 202 (1884). Quoted by Serjeant, 1948: 80.
[180] Ibn Rusta, vii, 112 (1892). Quoted by Serjeant, 1948: 80.

"Aden receives ambergris, *shurūb* (fine linens), etc... Among the specialities of the districts of this region are the leather of Zabīd, and its indigo, incomparable because it is azure, the *shurūb* (fine linens) of Aden preferred over the soft linen of Egypt, the fibers of al-Maḥjara called *līf* (bast), the *burūd* (striped cloths) of Suḥūl and al-Jurayb... the superb cloth of Ṣanʿāʾ known as Ṣaʿīdī... and the *wars* (yellow dye) of Aden."[181]

Ibn Ḥawqal (d. 988) expands on the wars dye, grown at Mudhaykhira near Suḥūl, stating: "On its slopes *wars*, which is a red plant of the same type of saffron, is planted. Two maunds of it are sold for a *dīnār*, and it is used for dyeing."[182] With Ibn Hawqāl, the early Islamic sources for the production and trade in Yemeni textiles come to an end, though Serjeant continues his survey of the available narrative sources into the Rasūlid period. The production and exchange of textiles in the hinterland of Aden appears, therefore, to have contributed significantly to the commerce of the port and helped support the import of luxury goods from the Indian Ocean networks.

(iii) al-Shiḥr [sv] has been dug by Claire Hardy-Guilbert, who published the ceramics in a series of preliminary reports **[Fig. 5.26]**.[183] Dateable imported ceramics reach back to the late eighth century,[184] though the ninth century assemblage is much more complete, suggesting that occupational activity only became significant in that century. In particular, alkaline turquoise wares of possible Baṣran provenance, together with 'egg-shell' jars of the type found at Sāmarrāʾ and Sūsa, suggest that

[181] al-Muqaddasī, 97-98 (1906); trans. Collins, 2001: 83. *Cf.* Serjeant, 1948: 80. For Suḥūlā, see: Cornu, 1985: 'as-Suḥūl,' 86. Yāqūt, iii, 50 (1957); Ibn al-Mujāwir, ii, 175 (1951-54).
[182] Ibn Ḥawqal, 37 (1938-39). Quoted by Serjeant, 1948: 85.
[183] Hardy-Guilbert, 2001a; 2001c; 2002.
[184] Hardy-Guilbert, 2001a: 70.

commercial ties with the Gulf were prominent.[185] Hardy-Guilbert notes that quantities of similar Iraqi and Chinese ceramics have been retrieved from Sīrāf and Ṣuḥār, and seems to imply that such material arrived in al-Shiḥr via the Gulf ports.[186] The site produced the greatest quantities of Chinese ceramics from the wider Red Sea region. It seems that Chinese imports first appear in small quantities in the ninth century. Hardy-Guilbert published as a representative example a base sherd from a glazed stoneware bowl, characterised by a grey-yellow body covered by a yellow glaze on slip, decorated by painted vegetal designs on the interior in an iron brown and copper green glaze.[187] She further identifies this as the product of the workshops of Changsha, on the Xiang tributary of the Yangtze, upstream of the great T'ang port of Yangzhou. Chinese imports become more common in the course of the tenth and into the eleventh century.

(iv) Aden and al-Shiḥr alike were noted sources of aromatics. According to al-Muqaddasī, ambergris was exported from Aden.[188] He continues that ambergris is found "tossed onto the seashore from Aden to Mukhā, and in the direction of Zaylaʿ also. Anyone who finds any of it, little or much, takes it to the deputy of the governor, who pays him for it... The ambergris is not found except when the south wind blows."[189] This reference to the south wind suggests that ambergris was being expelled by sperm whales in the Arabian Sea rather than in the Red Sea. While ambergris had – and still has – an exorbitant commercial value, the method of collection was rather

[185] Hardy-Guilbert, 2001a: 74, & Fig. 5.
[186] Hardy-Guilbert, 2001a: 74. For Changsa in Ṣuḥār, see Pirazzoli-t'Serstevens, 1988: Fig. 20, n. 27; and at Sīrāf, Whitehouse, 1968: Pl. VIb.
[187] Hardy-Guilbert, 2001a: 74 & Fig. 7.
[188] al-Muqaddasī, 97 (1906); trans. Collins, 2001: 83.
[189] al-Muqaddasī, 102 (1906); trans. Collins, 2001: 86.

haphazard and effectively beyond human control, so that the worth of the ambergris trade was undoubtedly less than that of the more reliable opercula and frankincense.

Frankincense is perhaps the most renowned aromatic produced in the Red Sea region. Though Ẓufār in the far south of modern Oman seems to have been the pre-eminent source of frankincense, important secondary sources were to be found in the Ḥaḍramawt and Somalia. The Ḥaḍramī centre of production focused upon the coastal hinterland of the Mahra region and its capital al-Shiḥr, as noted by al-Masʿūdī: "the land of al-Shiḥr and al-Aḥqāf from the coast of Ḥaḍramawt to Aden... is without resources, and its one export today is the incense called *kundur* (frankincense)."[190] Further information is found in al-Muqaddasī: "al-Shiḥr is a town on the sea, an important centre for enormous fishes, which are exported to Oman and Aden, thence to al-Baṣra, and to the towns of Yemen. Here are the trees of which the resin is frankincense."[191] Ibn Ḥawqal later referred to its production, stating that "the country of Mahra has as its capital al-Shiḥr... The wealth of the inhabitants consists of camels and goats... It produces frankincense (*lubān*) used in the whole world: the houses are full of it."[192] These statements attest to maritime trade with Aden – and so the Red Sea – though appear to indicate that frankincense was only part of the local economy, not a cash crop upon which al-Shiḥr depended.

While the evidence of al-Shiḥr testifies to the intensification of Indian Ocean trade in the ninth century, it does not apparently bear upon the frankincense trade, for no

[190] al-Masʿūdī, 61-62 (2007).
[191] al-Muqaddasī, 87 (1906); trans. Collins, 2001: 78. Also: "Among the specialities of this region (i.e. Jazīrat al-ʿArab)... is the frankincense of Mahra and its fish." al-Muqaddasī, 98 (1906); trans. Collins, 2001: 84.
[192] Ibn Ḥawqal, 38 (1938-39); trans. Kramers & Wiet 1965: 36-37.

evidence of the storage or processing of frankincense was discovered to indicate even personal use. The only evidence for economic activities included a fourteenth-century glass workshop and extensive post sixteenth-century surfaces for drying fish.[193] However, there is some rather oblique evidence for the importance of frankincense exports to al-Shiḥr. Indian Ocean material continues to be attested at al-Shiḥr into the sixteenth-century, though Chinese ceramics are curiously absent through the twelfth century. This may have been a result of the rise of Ẓufār, whose sultan sought to monopolise the frankincense trade; Yāqūt (d. 1229) writes of the frankincense: "they gather it and carry it to Ẓufār, where the ruler takes his share. They cannot carry it elsewhere under any circumstances, and if he hears of someone who has carried it to some other town, he kills him."[194] It may therefore have been that without frankincense exports, al-Shiḥr was no longer attractive to the Indian Ocean traders carrying Chinese ceramics, obliquely testifying to the importance of frankincense in the local economy.

There is further some evidence for contact with the Rea Sea. Sherds of reddish-brown Yemeni egg-shell ware of the Zabīd type have been found at al-Shiḥr, suggesting that the two cities were – whether directly or not – in commercial contact with each other.[195] In the twelfth century, ʿUmāra al-Ḥakamī believed that the Ziyādids of Zabīd had in the ninth century extended their authority throughout the Ḥaḍramawt including al-Shiḥr, and that a tributary relationship existed between them.[196] The produce of al-Shiḥr was exported to Aden in the tenth century according to al-

[193] Hardy-Guilbert, 2001a: 71.
[194] Yāqūt, iii, 577 (1957); trans. Crone, 1987: 21, n. 35.
[195] Hardy-Guilbert, 2001a: Fig. 5, No. 5.
[196] al-Ḥakamī, 4-5 (1892).

Muqaddasī, though the passage is a little confused and may be taken as a specific reference to fish exports. At any rate, there can be no doubt that frankincense was reaching Egypt and the Ḥijāz, most likely exported from al-Shiḥr and carried by ship.

The value of the frankincense trade is difficult to assess. The fact that al-Muqaddasī and Ibn Ḥawqal refer first to the fish of al-Shiḥr and Mahrī goats, with only a passing comment on frankincense production, does not well accord with the 'Orientalist' mythology surrounding ʿUbar, the 'Atlantis of the Sands.'[197]

[5.3.2] Zabīd, ʿAththar & the Tihāma

(i) Zabīd's publication included Ciuk & Keall's *Zabid Pottery Manual 1995* (1996), which constitutes the fullest treatment of Islamic ceramics in the Red Sea region. A full sequence has been published from the pre-Islamic period (Qaḥṭān, 1500 BC – AD 500) through to twentieth century, divided into eight arbitrary two-hundred year Islamic phases according both to the historically known dynasties and the stratigraphy of sites in the Zabīd region.[198] Nothing has been found of Islam 1 (c. 550-750) at Zabīd itself, although glazed Umayyad period sherds were found in the immediate hinterland.[199] The two phases which are relevant to the discussion of the early Islamic Red Sea include Islam 2 (c. 750-950) and Islam 3 (c. 950-1150). As with other sites, unglazed ceramics absolutely dominate the assemblage. Though no quantative data is available, neither glazed Islamic nor Chinese imports are particularly well attested at

[197] As popularised by Fiennes, 1992.
[198] Ciuk & Keall, 1996: 5-6.
[199] Keall, 1983: 386 & Fig. 4.1 & .3.

Zabīd. Generally speaking, Ciuk & Keall observe that Islam 2 is associated with a few classic Sāmarrāʾ lustre sherds suggesting a ninth to tenth century date, while Islam 3 is characterised by the appearance of Chinese porcelains at the port of Zabīd at Ghalāfiqa.

The Zabīd pottery manual is organised according to vessel form rather than chronological sequence, and the sections dealing with Islam 2 & 3 will here be briefly summarised **[Fig. 5.27-.35]**. Particularly interesting are the small pitchers, characterised by a fine and well fired clay of a cherry red colour, with no slip or surface decoration asides from a small button at the top of the handle.[200] Horizontal grooves around the body of the vessel may have be produced in the process of being thrown on a wheel; Ciuk & Keall note that these are the only unglazed vessels from Islam 2 which were entirely wheel thrown. Indeed, they further state that the small pitchers represent the most technically accomplished type among the Islam 2 assemblage, and point to parallels with the ubiquitous Kūfa pitchers of ʿAbbāsid Iraq.[201] This leads them to speculate that the pitchers were made by Iraqi potters, who perhaps accompanied Ibn Ziyād to Zabīd.

This connection with the ceramic traditions of ʿAbbāsid Iraq continues to manifest itself in other forms discussed in the Zabīd pottery manual. Ciuk & Keall find little uniformity of type among the corpus of Islam 2 jugs and gourds, though cite Northedge *et al* for comparenda.[202] However, the base sherd deeply incised with

[200] Ciuk & Keall, 1999: 40-41 & Pl. 95.11.
[201] Northedge *et al*, 1988: Fig. 40.6; 45.3 & .4; Pl. 14d.
[202] Northedge *et al*, 1988: Fig. 45.3, .4, .7 & .8.

geometric diamond motifs seems ill-placed with the jugs and gourds, while altogether stronger parallels can be made with ʿAththar and the well known Jurash cut ware of Bilād al-Sham.[203] Stylistically similar surface decoration further appears in the category of Islam 2 stationary water containers, reaching up to 120 cm high and holding an estimated 150-200 litres; they are further characterised by handles with 'antler' hooks (for the hanging of drinking vessels?), some of which had 'turban' tops similar to those on the large storage jars at ʿAththar.[204] Again, Ciuk & Keall point to parallels with ʿAbbāsid Iraq displayed in the National Museum of Baghdād, though do not provide catalogue numbers.

The category of Islam 2 and 3 stationary water containers are characterised by ribbed surface treatment and incised decoration, including horizontal bands of cross hatching; this last decorative device commonly appears in Islam 2 ceramics, including the butter churners, large crocks with wide orifice, mixing bowls.[205] In Islam 3 and Islam 4 (c. 1150-1350), the developmental trend of incised decoration is towards increased complexity and the appearance of *horror vaccui* geometric motifs on a range of vessel forms.[206] Other Islam 2 decorative designs include bands of chevron and dot incision, such as appears on cooking vessels.[207] Though Ciuk & Keall cite no comparenda for these incised designs, a similar decorative repertoire is attested at ʿAththar.[208]

[203] Ciuk & Keall, 1996: 44-45, Pl. 95.13d; Zarins & Zahrani, 1985: 80-81 & Pl. 77.4, .5, .13, .16; Watson, 2004: Cat. AA.6, 99.
[204] Ciuk & Keall, 1996: 54-55, Pl. 95.18; Zarins & Zahrani, 1985: 80-81 & Pl. 73.1 & .2.
[205] Ciuk & Keall, 1996: 56-57, Pl. 95.19b & c; 62-63, Pl. 95.22d; 66-67, Pl. 95.24g; 82-83, Pl. 95.32a.
[206] Ciuk & Keall, 1996: 100-01, Pl. 95.41; 102-03, Pl. 95.42.
[207] Ciuk & Keall, 1996: 96-97, Pl. 95.39a.
[208] Zarins & Zahrani, 1985: 80-81 & Pl. 76.13, .14 & .16.

By far the most common decorative design for the unglazed pottery of Zabīd involves incised wavy lines. Single wavy lines appear beneath rims and on the shoulders of Islam 2 large crocks with wide orifices, large jars with wide orifices, mixing bowls, large mixing bowls.[209] Combed wavy lines first appear on Islam 3 mixing bowls and Islam 3 and 4 large water jars, becoming much more common on Islam 4 serving bowls and medium sized serving bowls.[210] These often appear between straight parallel lines and gave rise to Keall's name for this ware, viz. 'trackware.' As with the incised cross-hatching, the developmental trend is towards increased complexity and *horror vaccui* geometric designs.

It is striking that the commonest types of unglazed pottery attested at ʿAyla, al-Maʿabiyāt, ʿAththar and Zabīd include surface decoration below the rim of incised wavy lines and painted or incised cross-hatching. These decorative schema appear on a variety of forms in apparently different of clays, both wheel-thrown and hand-made, with both organic and inorganic tempers. It would therefore seem that the simultaneous occurrence of directly analogous decorative devices across western Arabia, broadly from Yemen to Palestine, was the result of stylistic diffusion. Attempting to isolate a production centre and exchange networks is ill-advised. However, it is notable that the earliest occurrence I have been able to find for both wavy and cross-hatched lines is from the pre-Islamic Ḥaḍramawt, namely the sites of Kidmat Yarūb, Sharwayn and Khalfūt. Could this tradition have spread north with the Yemen tribes who settled in Egypt and Syria-Palestine in the seventh and eighth

[209] Ciuk & Keall, 1996: 64-65, Pl. 95.23d; 66-67, Pl. 95.24; 78-79, Pl. 95.30; 80-81, Pl. 95.31; 84-85, Pl. 95.33; 86-87, Pl. 95.34a.
[210] Ciuk & Keall, 1996: 82-83, Pl. 95.32b, c, d & h; 50-51, Pl. 95.16d; 92-93, Pl. 95.37a & b; 100-01, Pl. 95.41d, g & k; 102-03, Pl. 95.42f.

centuries? Such a suggestion must remain highly conjectural, though it may be relevant that that only kiln site so far known to have produced these ceramics is at Zabīd, the capital of the Ziyādids who dominated much of Yemen – including the Wādī Ḥaḍramawt – at the very time this ceramics tradition finds its fullest extent. Moreover, the incised combed wavy line reached its fullest development and survived the longest in Yemen, which may be indicative of a conservative indigenous tradition.

(ii) ʿAththar and its ceramics have received a comparatively full treatment, and aside from Zabīd, constitute the best published catalogue from western Arabia **[Fig. 5.36-.38]**.[211] Zarins and Zahrani's description of a particularly common type is worth quoting *in extenso*:

"The largest single type (Type 1) found at ʿAththar is a basic, wheel-made, red ware with a black core and grit temper. No slip is usually applied. Forms include large bowls with out-turned triangular rims and flat bases. Folded-over triangular rims are also common. Smaller, ribbed jars and holemouths are also popular. Decoration is usually by incision and most commonly consists of a single wavy line around the neck. The overhanging rims are on occasion deeply incised with either a single wavy line or multiple wavy and straight lines. Another popular motif is combing on the shoulder with either a series of straight lines or a combination of straight and wavy lines. A less common decoration involves the use of angular vertical lines or lines in combination with hatched triangles."[212]

[211] Zarins & Zahrani, 1985: 80-81, Pl. 75, 76, 77.
[212] Zarins & Zahrani, 1985: 80.

Other classes of non-glazed ceramics from ʿAththar quote these features. Types 2 and 4 differ only in their tempers, the first being chaff and the second steatite. Unglazed painted wares are also common, with irregular designs including pendant triangles, hatched and cross-hatched lines in black paint. Zarins & Zahrani point to parallels with Sīrāf, where an unglazed painted ware of soft gritty fabric, cream slip and painted with broad stripes, triangles and cross-hatching was commonly found. Less common but very distinctive, is the brown-red ware with deep, excised triangles, rectangles, wavy lines, and other geometric designs. Zarins & Zahrani suggest that this belongs to the same tradition as examples found at Najrān and at Umayyad sites in Bilād al-Sham, including Tiberias and Khirbat al-Mafjār.[213]

Particularly interesting are a few sherds of what Zarins & Zahrani consider to be African wares, namely the black ware with geometric incised patterns of white-filled lines, together with paddle stamped and black burnished wares. Given the historical evidence for commercial contacts between western Arabia and north-east Africa, particularly Nubia, Bejaland and Ethiopia, it is curious that more ceramics evidence has not been retrieved. Those sherds found at ʿAththar recall the post-Meroitic traditions of the Middle Nile, including the Eastern Desert Ware commonly found in late Roman sites in Egypt. If this interpretation is accepted, then ʿAththar has importantly produced the first Arabian evidence for the contacts with Nubia suggested by the narrative histories. A good deal more work remains to be done on the unglazed ceramics, which will very likely produced more evidence for intraregional trade in the Red Sea basin.

[213] Zarins *et al*, 1981: Pl. 24; Zarins *et al*, 1983: 35-36; Oren, 1971; Dayton & Dayton, 1979.

The glazed assemblage was similarly characterised by a preponderance of monochrome lustre wares,[214] as at other sites in the Red Sea. Most of the glazed sherds were retrieved from the Area H building, a typical Arabian courtyard house or *dār*, which Zarins & Zahrani compare to Houses E, R and W in Site F at Sīrāf.[215] The underglaze is usually lead / tin white with olive-gold lustre paint, with geometric and zoomorphic designs (rosette, palmette, peacock eye, stroked circles), and some decorated or signed with Kufic calligraphy. Shapes are principally small cups and fine bowls with a low ring base. Zarins & Zahrani suggest numerous parallels for these lustre wares, including Aden and al-Maʿabiyāt in western Arabian, and further suggest that the absence of anthropomorphic designs is indicative of pre-Fāṭimid date.[216] More specifically, they date the monochrome lustre ware at ʿAththar from the late ninth to late tenth century.

As for the non-lustrous glazed wares, tin-glazed white wares are especially common.[217] Forms include ring-based bowls and plates, with a buff clay body and opaque white glaze; Zarins & Zahrani cite numerous parallels including the Darb Zubayda, and date this to the ninth century based upon the stratigraphic sequence at Sīrāf.[218] Other glazed wares include sgraffiato and splashed wares. The sgraffiato at ʿAththar is characterised by bowl and plate forms with everted or flared rims and ring bases, of a reddish to buff body and slip painted with incised geometric designs under a mustard or green glaze. Zarins & Zahrani note discrepancies over the date, with

[214] Zarins & Zahrani, 1985: 76-78.
[215] Zarins & Zahrani, 1985: 73-74; Whitehouse, 1970b: 151, Fig. 7.
[216] Lane & Serjeant, 1947-48; Gilmore *et al*, 1985; Schnyder, 1963; Philon, 1980: 63, nn. 6-7; 64-65.
[217] Zarins & Zahrani, 1985: 77-78.
[218] Rashid, 1980: 257; Whitehouse, 1972: 72.

early studies ascribing a late eighth century origin and later work suggesting a late tenth inception, and further note its continuation into the thirteenth century.[219] The splashed wares largely consist of bowls with out-turned rims and ring bases, of a buff clay covered by a white lead glaze subsequently overlain by mottled, spotted, splashed, striped and streaked colour glazes; blue streaks or stripes dripped over the rim are most frequently attested at ʿAththar, though more complex polychrome splashed examples in greens, browns and tans are also found. Again, Zarins & Zahrani observe chronological discrepancies, with some authorities suggesting a mid ninth century date and others a mid tenth century inception.[220]

Important markers of contact with the Gulf, though not frequently found at ʿAththar, are the alkaline turquoise glazed types.[221] Forms include large storage jars with loop handles and large bowls, the body is of soft buff clay with a sandy temper, with its most characteristic feature being the alkaline blue-green glaze with appliqué, stamped and incised decorative techniques employed on the exterior. These imports may have inspired local earthenware imitations, namely the type of large storage jar characterised by a flat base and very short neck, often with appliqué decoration around the mid section and less frequently with 'turban' topped handles.

Zarins & Zahrani's discussion of alkaline turquoise types is particularly full and remains useful. They list the following find sites: Sāmarrāʾ, al-Ḥasāʾ, Dammam,

[219] Early: Lane, 1947; Fehervari, 1973; Rosen-Ayalon, 1974; Whitehouse, 1979: 54, 59-60. Late: Whitehouse, 1968: 258; Schnyder, 1973: 90; Rashid, 1980: 258. Thirteenth century: Whitcomb & Johnson, 1982: 136.
[220] Philon, 1980: 35-41; Whitehouse, 1979: 52. Zarins & Zahrani, 1985: 78, further note the presence of the same splashed wares at Sharjah and Sirrin.
[221] Zarins & Zahrani, 1985: 76-77.

Baḥrayn, Sīrāf, Sūsa, Oman, Qaṭar in the wider Persian Gulf region; Qaṣr al-Ḥayr al-Sharqī in Syria; Wadakh in the Arabian Najd; al-Maʿabiyāt, Darb Zubayda and Dhurma in the Ḥijāz and al-Jār, Sirrin and Sharjah along its coast; Kharj, Najrān and Tathlith in greater Yemen; Fusṭāṭ and Wādī Ḥammamāt in Egypt; Manda and Unguja Ukuu in East Africa; and finally in Pakistan and Malaysia.[222] More sites can now be added, making this perhaps the very widest glazed Islamic ware and synonymous with the expansion of Muslim commerce. Zarins & Zahrani further summarise the debate as to the chronology of this ware. Accordingly, Adams and Whitehouse labelled it 'Sasanian-Islamic' and trace it back to the Partho-Sasanian tradition.[223] However, the earliest western find site is apparently Fusṭāṭ, where it was found in a deposit dated to the first half of the eighth century and labelled 'Sasanian;' further sherds from a steatite mine at Wadakh in the Najd were found in association with a C^{14} sample giving the date 1165 ± 85 BP or c. AD 785.[224] Whitehouse associates the beginning of this ware with the level at Sīrāf numismatically dated 803-825, so that Zarins & Zahrani conclude that the alkaline blue-green ware was produced from the start of the ninth through to the mid eleventh century, a position followed – as we have seen – by Gilmore *et al* at al-Maʿabiyāt.[225]

[222] In corresponding order: Sarre, 1925; Whitcomb, 1978: 98; Potts *et al*, 1978: 13-14; Larsen, 1980: 343-53; Whitehouse, 1968: Pl. 6c; 1972: Pl. 10b; Rosen-Ayalon, 1974: 162-64; Whitcomb, 1975: 125; Hardy-Guilbert, 1980: 56, 61; Grabar *et al*, 1978: 149; Zarins *et al*, 1980: 27-28; Gilmore *et al*, 1985; Rashid, 1980: 258-60; Zarins *et al*, 1980: 29; 1979: 37; 1983: 37; 1981: 34; Bianquis *et al*, 1974: 171, Fig. 4; Whitehouse, 1968: 14.
[223] Whitehouse, 1968; Adams, 1980.
[224] Bianquis *et al*, 1974: 171, Fig. 4; Zarins *et al*, 1980: 27-28.
[225] Whitehouse, 1971: 10; Zarins & Zahrani, 1985: 77; Gilmore *et al*, 1985: 115.

Also useful is Zarins & Zahrani's discussion of Chinese imports to the Red Sea.[226] A profusion of Chinese sherds were found in Area B, which was accordingly indentified with the port, customs and market of the settlement; further parallels in the plan of this area were made with the *sūq* complexes at Dhurma and Sīrāf.[227] Commonly found was an unglazed gray stoneware, with either a flat or ring base; a variant of this type had an exterior olive drab glaze, which Zarins & Zahrani link to the Dunsun Jars found at Sīrāf.[228] Plain white porcelain bowls and cups constitute a high proportion of the Chinese corpus. Other common porcelains include white and bluish-white lotus-petal moulded bowls, and further types with foliate or cut rims. The majority of decorated pieces, however, were celadons of olive green to brown hues. Often, the interior of the base was incised with a wide variety of designs, including willows, lotuses, butterflies and dragons. A final type of interest consists of a green celadon resembling jade, with moulded relief both inside and outside. Zarins & Zahrani make comparisons with the Chinese material from Fusṭāṭ and Sīrāf, and date the ʿAththar corpus to the T'ang and Northern Sung, more precisely to the period c. 950-1100.[229]

[5.3.3] Dahlak, Zaylaʿ & Ethiopia

(i) Zaylaʿ [sv], identified with modern Saylac just over the Djibouti border in Somalia, was one of the main sources of slaves in the wider Red Sea region. An alternative identification would equate it with modern Zula in Eritrea, already referred to as the

[226] Zarins & Zahrani, 1985: 79-80. *Cf.* Zarins et al, 1981: Pl. 27, No. 21.
[227] Zarins & Zahrani, 1985: 74-75; Zarins et al, 1980: 29; Whitehouse, 1970: 153, Fig. 8.
[228] Whitehouse, 1968: 18.
[229] Gyllensvard, 1973: 92 (Fusṭāṭ); 1975: 99-100, Pl. 73.1.2 (moulded lotus); 105-06, Pl. 13 (porcelain); Whitehouse, 1968: 17 (Dusun jars).

site of ancient Adulis; Munro-Hay further argues that the Greek Adulis comes from the Ge'ez Zula, implying that the modern toponym is of considerable antiquity. The identification of Zaylaʿ with Saylac, however, seems secured by Ibn Ḥawqal's observation that it lies on "the land opposite Aden."[230] Like ʿAqīq on the Sudanese littoral, the origins or at least early development of Zaylaʿ most likely lie in the expansion of the Akumsite maritime communications system in the fourth and fifth centuries. Yet unlike ʿAqīq, Zaylaʿ remained under the political domination of the post-Aksumite successor states of the interior as late as the twelfth century, after which time hegemony was contested with the Muslims of the coast, eventually becoming the seat of the powerful ʿAdal sultanate in the fifteenth century.[231]

The Arabic narrative sources attest to regular contacts with western Arabia, which appear to have been based upon the export of slaves and aromatics. Al-Iṣṭakhrī notes that the Ethiopians "live scattered on the coastal region opposite Aden. All frankincense, variegated skins (*julūd mulammaʾa*) and most of the skins which are tanned to make shoes in Yemen, come from their country… On their coast is a place named Zaylaʿ, a port for embarkation for al-Ḥijāz and Yemen."[232] Ibn Ḥawqal writes of the "land opposite Aden" that "the people are friendly (to the Muslims)… Zaylaʿ is their port of embarkation for al-Ḥijāz and Yemen."

The African slaves exported from Zaylaʿ included both broadly 'Ethiopian' peoples brought down to the coast from the interior, and 'Berbers' from the regions of

[230] Ibn Ḥawqal, 56 (1938-39); trans. Vantini, 1975: 162.
[231] Rouaud, 2002: 481; Pankhurst , 2004: 20.
[232] al-Iṣṭakhrī, 37 (1927); trans. Vantini, 1975: 113.

modern Somalia. Muslim merchants were apparently active in the procurement of slaves from the interior, as already noted with reference to al-Iṣṭakhrī **[5.2.5] (v)**. Al-Muqaddasī observes that "the slaves (*khadam*)... exported to Aden, consist of Barbar and these are the worst slaves."[233] Later, al-Ḥakamī records that one thousand slaves were given as tribute to the Ziyādids in 977, half of which were Nubian and the other half Ethiopian.[234] Some historical traditions place the foundation of the famous Muslim city of Harar on the eastern plateau of Ethiopia to the ninth century, and certain of the city's mosques are said to date back to the tenth century, so that – if there is any truth in such reports – the origin of this settlement might be found in the early Islamic slave trade.

(ii) Ambergris was widely famed in the medieval Muslim world, though little understood; al-Muqaddasī, for instance, believed it to be dragon's blood.[235] In fact, ambergris is a biliary secretion of sperm whales, found floating at sea or washed up on the shore as a greyish black waxy substance, in irregular lumps weighing up to 45 kg.[236] It seems to have been especially collected in the southern Red Sea and Gulf of Aden from at least the mid ninth century. The merchant Sulaymān al-Tājir (wr. 851) records that ambergris (*al-ʿambar*) was to be found large quantities at al-Shiḥr on the Arabian Sea coast of Yemen, and further observed that the Red Sea "touches Zaylaʿ where the ambergris and the tortoise shells are found."[237]

[233] Ibn Ḥawqal, 56 (1938-39); trans. Vantini, 1975: 162; al-Muqaddasī, 241 (1906); trans. Vantini, 1975: 176.
[234] al-Ḥākamī, 40 (1882).
[235] al-Muqaddasī, 102 (1906); trans. Collins, 2001: 86.
[236] Ralph, 2004-05.
[237] Sulaymān al-Tājir, MC fol. 562 v (845); trans. Ferrand, 1922: 136.

Frankincense is also known to have been grown in Somalia from early times, though does not feature prominently in the Arabic narrative sources. Agapius (d. 941-2), for instance, perhaps hints at the production of frankincense when he writes of Ethiopia's 'aromatic plants' (*ʿaqāqīr*).[238] Similarly, al-Iṣṭakhrī states that the Ethiopians "live scattered on the coastal region opposite Aden. All frankincense (*bakhūr*)... comes from their country."[239] The Arabic *kull al-bakhūr* does indeed translate as 'all the frankincense,' yet this may be a copyist's error for *kull bakhūr* meaning 'every (type) of frankincense.' This could even be translated more loosely as 'every (type) of incense,' which might make more sense given the references to opercula, ambergris and frankincense produced in Ethiopia.

(iii) Dahlak was to emerge in the Fāṭimid period as among the most wealthy and politically developed mercantile polities of the Red Sea. However, little historical or archaeological evidence is available for the 'long' Late Antiquity, though it is likely that to this period belongs the rise to significance of the islands and is therefore included here. Possibly settled by Muslims in the eighth century and thereafter tributary to Zabīd through the ninth and tenth centuries, the islands attained to a sultanate in the eleventh and twelfth centuries.[240] In 977, the governor of Dahlak is said to have made a gift of one thousand Nubian and Ethiopian slave girls to Ibn Ziyād.[241] The necropolis has received a great deal of attention, both for the quantity and quality of inscribed tombstones and *qubba* tombs.[242] The epigraphic evidence

[238] Agapius, 610-11 (1910); trans. Vantini, 1975: 120.
[239] al-Iṣṭakhrī, 37 (1927); trans. Vantini, 1975: 113.
[240] Puglisi, 1969: 35-47; Tedeschi, 1969: 49-74; Insoll, 1997; 2003: 49-58.
[241] al-Ḥākamī, 40 (1882).
[242] Bassat, 1893; Wiet, 1951; Oman, 1974.

appears to suggest a peak of activity in the tenth and eleventh centuries.[243] Insoll claims Dahlak as a base for pirates and slavers, pointing to the Islamic historical tradition concerning the seventh century and the well provisioned system of cisterns at the site.[244] The Geniza evidence at first appears to support such suppositions, as in a letter from Samuel al-Majjānī to Abū Zikrī:

"When we reached the Bāb al-Mandāb, the ruler of Dahlak sent his *jilāb* (Red Sea vessels) against us. He had imposed unreasonable demands on us, and took some of our possessions, so we were fleeing from him. They fought us a great battle, and they injured the *goyim* (Muslims) and plundered the ship. They took the ship (?) and let us go, and took the bales of cloth that were in it."[245]

Yet in another letter, the *wakīl al-tujjār* of Aden takes action to prevent a debtor absconding: "As for the illustrious *shaykh*, my lord Madmun, (he sent forth) 4 *jashūjīyāt* (troop transports) to Zabīd and he charged their commander with the capture of al-Fawāfalī, or the (confiscation?) of his *jilāb* and his bales, because he was bent on (fleeing to) Egypt."[246] This rather suggests that the various emporia were similarly zealous in the pursuit of dues and debtors, so that such activity ought not to be considered piratical or to pertain especially to Dahlak.

[243] Of 74 inscribed tombstones dated between the tenth and thirteenth centuries, 23 stelae are of the tenth century, 36 of the eleventh century, and only 3 to the twelfth century. Oman, 1974: 294.
[244] Insoll, 2003: 49-58.
[245] Bodl. MS Heb. d66, f. 108/ IB.131/ V.8, ll. 15-19. Margariti, 2004: 240-45; 176, n. 50.
[246] ULC Or1080 J171/ IB.243/ V9, top margin. Margariti, 2004: 239, n. 96.

6. The 'Long' Late Antiquity from the Perspective of the Red Sea

[6.1] *The decline of Byzantium, Aksum and Ḥimyar in the Red Sea has been attributed to a number of factors, including natural disasters, environmental degradation, nomadic aggression, superpower conflict and the rise of Islam [6.1.1]. None of these factors fully satisfy, however. An alternative theory can be proposed, based upon the integration of the Red Sea with Indian Ocean networks, which were damaged by the collapse of the Gupta-Vakataka Empire and Tamilakam states [6.1.2]. The late Roman 'India trade' appears to have come to an end around the mid-sixth century, almost a century before the Muslim conquests. A declining volume of trade therefore prompted numerous internecine regional conflicts in the Red Sea, which afforded opportunity to outside powers and ultimately overturned the late Roman order.*

[6.2] *The Muslim conquest of the Red Sea has traditionally been conceived as a violent Bedouin eruption fuelled by religious ideology, which swept through first Yemen then Egypt and gave way to violent raids in Sudan and Ethiopia. However, this can be shown to be the product of a much later literary valorisation of the Bedouin subsequently developed by European 'Orientalists.' Earliest Islam instead possessed a co-optive ideology which secured the reserves of manpower available in Yemen and from among the 'have nots' of Byzantine Egypt and the Levant [6.2.1]. Under the early Caliphate, collective punishment meted out to the Egyptians and Yemenis by the Marwānids for their support of the Zubayrid cause, then the short-sighted and ruthless fiscal policy of Hishām, and ultimately the failure of the ʿAbbāsids to redress unpopular and discredited administrative practice effectively undermined the political stability and economic prosperity of the Red Sea [6.2.2].*

[6.3] *The 'India trade' returned to the Red Sea during the second half of the ninth century. The decline of the Gulf and rise of the Mediterranean prompted a Western movement of Iraqi-Iranian capital and expertise. At the same time, the Eastern expansion of Tamil dynasties across the Bay of Bengal reinvigorated Indian Ocean trade. These trends culminated under the Fāṭimids under whom the medieval Islamic Red Sea 'India trade' peaked [6.3.1]. The fragmentation of the Caliphate created a new political framework of dynastic aggrandisement and princely particularism, with the Ṭūlūnids of Egypt and Ziyādids of Yemen introducing a shared courtly culture and unitary commercial practice to either end of the Red Sea. These dynasties provided investment capital and attracted mercantile expertise, affording the spread of the early Islamic 'bourgeois revolution' to Red Sea, out of which the world of Cairo Geniza emerged [6.3.2].*

[6.1] Decline and Fall of the Roman Empire in the Red Sea

[6.1.1] Causes of Decline Considered

(i) Natural disasters attested during the 530s-40s may have served to undermine the Red Sea economy. The first of these is the 'mystery cloud' of 536, discussed by Antti Arjav, wherein "the sun became dark and its darkness lasted for one and a half years... Each day it shone for about four hours, and still this light was only a feeble shadow... The fruits did not ripen, and the wine tasted like sour grapes."[1] It does not, however, appear to have directly affected the Red Sea basin, since "India (i.e. Ethiopia &Yemen)

[1] John of Ephesus quoted by the twelfth-century Michael the Syrian, 9.26.296 (1899-1910). Quoted by Arjava, 2005: 79. *Cf.* Keys, 1999.

and the Persian realm... were not troubled at all. And it was not even likely that those regions would be affected by the calamity because it was in Europe that the... clouds dimmed the light of the sun."[2] Nor can it have undermined Mediterranean markets, since Arjava concludes – after an extensive survey of all available evidence – that "the historical implications remained limited."[3] The Red Sea, then, was neither directly not indirectly disturbed by the 'mystery cloud.'

The Justinianic plague beginning in 541 was a much more serious matter.[4] Estimates for the death toll in Byzantium and the Levant vary between a quarter and a third of the population,[5] which though in keeping with the better known Black Death, are undermined by methodological issues and interpretative latitude. There is some evidence to suggest that the plague started in the southern Red Sea. The *Chronicle of Séert* (wr. 828 or 1228) states that it spread through Persia, India and Ethiopia (al-Ḥabasha); Michael the Syrian (d. 1199) quotes John of Ephesus (d. 586) to the effect that it started in Ethiopia (Kush) and Yemen (Ḥimyar); Zacharias of Mitylene (d. > 536) and Evagrius Scholasticus (d. > 594) both record that it began in Ethiopia.[6] Indeed, Cassius Dio (wr. 229) had earlier referred to plague in Ethiopia c. 200, and John Zonaras' (wr. 1118) compilation of antique sources describes another outbreak in 250-53: "Pestilence struck the lands (c. 250-53)... beginning in Ethiopia and spreading to almost every country, east and west. It emptied many of the towns of their

[2] John Lydos, 25 (1897). Quoted by Arjava, 2005: 79.
[3] *Ibid.,* 93.
[4] Dols, 1974; Bray, 1996; Conrad, 1981; 1986; 1994; Foss, 1997: 260; Morony, 2007; Kennedy, 1985: 18; 2007b; Little, 2007.
[5] Treadgold, 1997: 276-78; Morony, 2007: 72-73.
[6] *Chronicle of Séert*, 182-3 (1908-19); Michael, 2:235, 4:305 (1899-1924); Zacharias, 2:129 (1899); Evagrius, 4.29 (1898). *Cf.* Morony, 2007: 63.

inhabitants during the fifteen years it lasted."[7] Similarly, Michael Dols draws upon a number of medieval Arabic medical tracts to conclude that "plague was endemic to Ethiopia during the Middle Ages and Ethiopia may have served initially as the centre of transmission from other parts of Africa to the Mediterranean littoral by trade."[8] It is possible, therefore, that the plague contributed directly to the decline of Aksum, yet it should be stressed that there is no internal evidence for the plague in Ethiopia.[9]

Arabia was also affected by the plague. Abraha's Maʾrib dam inscription (wr. 543) records that death and sickness prevented repair,[10] while the "stones of baked clay" (Q. 105:4) mentioned in the *Sūrat al-Fīl* have been understood as buboes,[11] and it has even been argued that the plague began in the ʿAsīr mountains.[12] Yet a received wisdom holds that the plague either passed over Arabia or failed to spread among the Bedouin, who then emerged like locusts to devastate a fatally weakened 'Classical' civilisation.[13] This argument does not bear close inspection, since the Muslim armies of conquest were drawn largely from the oases farmers of the Ḥijāz and townsfolk of the Yemen **[3.3.1] (i)**, whose numbers would have presumably been as devastated by the plague as their Byzantine and Sasanian counterparts. Moreover, the degree to which natural disasters fatally weakened the pre-Islamic empires is frankly impossible to gauge from the evidence, yet the fact remains, as Morony notes, that "wars were

[7] Cassius Dio, 76.13.1 (1927). In Eide *et al*, 1998: 960-61. John Zonaras, 12.21B (1868-75). In Eide *et al*, 1998: 996-97.
[8] Dols, 1974: 373.
[9] Munro-Hay, 1991: 260.
[10] Piotrovski, 1994: 220.
[11] Dols, 1974: 375.
[12] *Ibid.*
[13] Treadgold, 1997: 276-78; Keys, 1999; Little, 2007: 3, 8; Kennedy, 2007.

conducted in the middle of plagues, the Maʾrib dam was repaired after the fatal epidemic was over, Antioch was rebuilt after each earthquake."[14]

(ii) Environmental degradation or climatic desiccation has further been associated with many of the reversals outlined above. Karl Butzer's study of the geomorphology of the Aksum city is often cited as evidence for environmental degradation contributing to socio-political collapse.[15] He notes a series of aggradations, of which the second is most relevant:

"Interpretation seems unequivocal: soil and slope instability in response to overintensive land use, particularly of marginal surfaces, combined with widespread field and settlement abandonment... many slopes that had thin cambisols were now reduced to lithosols which allowed no more than marginal browsing or charcoaling activities; extensive agricultural surfaces on top of or at the foot of Beta Giyorgis and Mai Qoho were either destroyed or reduced to a small fraction of their agricultural potential."[16]

The chronology here is vital. Butzer dates the second aggradation to c. 650-800 on the basis of Michels' chronology, therefore falling into his Middle Aksumite period (450-800), during which time Aksum reached its peak to become a "metropolitan entity consisting of fourteen towns and villages within a three-kilometre radius."[17] However, this chronology is now thought to be too 'high,' and a revised 'low' chronology

[14] *Ibid*, 86.
[15] Munro-Hay, 1991: 258-60.
[16] Butzer, 1981: 487.
[17] Michels, (UNPUBLISHED). Quoted in Munro-Hay, 1991: 42.

supported by Phillipson and Manzo redates the Middle Aksumite period to c. 350-500 / 550 **[2.4.1] (iv)**. The second aggradation would therefore belong to the late fifth and first half of the sixth century, so that the agricultural base of Aksum would have been much reduced through the later sixth and seventh centuries, when in fact the city was abandoned. This might at first appear to suggest a causative link between environmental degradation and socio-political decline, but it should be noted that Butzer states that "widespread field and settlement abandonment" contributed to slope instability, suggesting that Aksum was already in decline during the second aggradation. In other words, socio-political collapse – the neglect of field systems and irrigation channels – caused environmental degradation.

Environmental factors have long been posited as contributing to the collapse of Ḥimyarite civilisation. Yule believes a gradual climatic desiccation exacerbated political disturbances, though since he provides no evidence, this appears to be no more than conjecture.[18] Of particular significance, of course, was the destruction of the famous Maʾrib dam: "Without the dam to distribute rainfall through Maʾrib, the water tended to run off into the deserts nearby and disappear. Trees, vegetables and grains grew no more and, inevitably the sands moved in. Today, Maʾrib grows no more than a little wheat and, during the rainy season, some sorghum, sesame and a kind of alfalfa fed to animals. The people whose ancestors once fed a large part of the Middle East (*sic.*) now import much of their food, and the town of Maʾrib is largely in ruins."[19] More recent studies show that neither to dam itself nor the associated agricultural system were not, in fact, irreparably damaged by the final collapse in 575; Jürgen

[18] Yule, 2007: 55.
[19] Stewart, 1978: 24-29. *Cf.* Doe, 1971: 97.

Schmidt suggests that "the irrigation systems could easily have functioned for another 200 years, thus keeping full-scale agricultural production going."[20] He points instead to the loss of political autonomy and enervation of social cohesion worked by foreign occupation, and singles out the Persian invasion as "the final blow which effectively brought Sabaean civilisation to an end."[21] As with Aksum, political collapse caused environmental degradation, and not the other way around.

(iii) Nomadic aggression is again often cited as a cause of abandonment. Ward argues that the Byzantine ports of the Eastern Desert were abandoned in favour of the Sinaitic ports precisely because of the security threat posed by Blemmyes and Saracens,[22] while Kobishchanov and Munro-Hay both speculate that that the Beja and Agaw expanded at the expense of Aksum,[23] just as Walter Müller argued that "the growing influence of the Bedouin element (i.e. Kinda) through the influx of horsemen and tribes from North Arabia (i.e. Lakhmids)"[24] undermined the Ḥimyarite state. There is no doubt that the third and fourth centuries witnessed a rise in nomadic activity on the periphery of the great states **[2.1.1] (iii)** & **(iv)**, wherein violent raiding was met by punitive expeditions. Yet during the fifth and sixth centuries, when the Byzantine ports were abandoned and Aksumite state collapsed, nomadic aggression had given way to sedentarism and even state-formation. A number of instances can be cited.

[20] Schmidt, 1988: 62.
[21] *Ibid.*
[22] Ward, 2007: 164-67.
[23] Kobishchanov, 1979: 118-19; Munro-Hay, 1991: 93, 260.
[24] Müller, 1988: 53.

In Lower Nubia and the Eastern Desert of Egypt the historical evidence seems particularly clear. Already in the early fourth century, Blemmyes appear at the *tricennalia* of Constantine (c. 336) and a federate group is attested in the papyri (c. 337),[25] marking the beginnings of normalised relations. Greek inscriptions from the temple of Mandulis at Kalabsha (beginning c. 394) attest to lines of Blemmyes and Noubades kings,[26] while the diplomatic mission of Olympiodorus (c. 423) to the Eastern Desert[27] and Greek letter from King Phonen of the Blemmyes to King Abourni of the Noubades (c. 450),[28] suggests the emergence of centralised and semi-bureaucratic polities respecting treaty agreements with the Byzantines. Other letters from Qaṣr Ibrīm (c. 450) mention a Christian *phylarch* of the Dodecaschoenus and a Noubades monk of Philae bearing the common Judaeo-Christian name Mouses,[29] attesting to the spread of Christianity among individuals at least. Christianity appears to have become more widespread during the sixth century, with a bishop of the Noubades appointed in 566[30] even as the Gebelein papyri – written for or even by non-royal Blemmyes individuals – employ introductory Christian monograms as standard, with one letter addressed to Amnas, "her whose Christian name is Sophia."[31] Accordingly, the progress of partial sedentarisation and state-formation in the fifth and sixth centuries is relatively well evidenced for the Blemmyes and Noubades, who now feature much less prominently in the Byzantine sources as aggressive nomads.

[25] Eide *et al*, 1998: no. 293, pp. 1079-81; no. 295, pp. 1083-87.
[26] Eide *et al*, 1998: no. 310, pp. 1128-31; no. 311, pp. 1131-32;
[27] Eide *et al*, 1998: no. 393, pp. 1126-28.
[28] Eide *et al*, 1998: no. 319, pp. 1158-65.
[29] Eide *et al*, 1998: no. 320, pp. 1165-71; no. 322, pp. 1172-75. *Cf.* Welsby, 2002: 'The Arrival and Impact of Christianity,' pp. 31-67; Török, 2009: 'Post-Merotic Lower Nubia before the Advent of Christianity,' pp. 515-30.
[30] John of Ephesus, iv, 7 (1860). Garcin, 1986: 99, refers to a bishop of the Blemmyes in Coptos, though does not cite his source.
[31] Eide *et al*, 1998: no. 339, pp. 1212-14.

To this can be added the archaeological evidence of the Eastern Desert, where a material culture of the Blemmyes become more visible in the fifth and sixth centuries.[32] A corpus of hand-made incised geometric pottery, dubbed 'Eastern Desert Ware' (EDW), is found at sites across Lower Nubia and the Eastern Desert as far north as the Wādī Ḥammāmāt, in an area neatly corresponding with the Blemmyes territory as adduced from the Byzantine sources.[33] Importantly, this is found at numerous Graeco-Roman port and mining sites, while the zooarchaeological assemblage is dominated by caprid remains, suggesting extensive commercial relations between the Byzantine and Blemmyes.[34] Also important are the monumental ring-graves and imported Graeco-Roman luxury items used as grave goods,[35] testifying to social stratification and possible diplomatic links with Byzantium. Finally, a number of low density settlements of crude sub-rectangular structures have been identified as semi-permanent encampments of the Blemmyes.[36] I have argued elsewhere that these might better be interpreted as evidence for Saracen sedentarism:[37] (i) no EDW was found at these settlements; (ii) they cluster along or north of the Wādī Ḥammāmāt, which the sources imply might have provided a tribal boundary between Saracens and Blemmyes; (iii) analogies of typology and construction can be found in contemporary structures in the Negev and Sinai. Whatever the ethnic origin of the nomads in

[32] *Cf.* Barnard, 2008; Barnard & Duistermaat, 2010; Krzywinsky, 2010; Lassányi, 2010.
[33] Barnard, 2002; 2008; Hayes, 1995; Rose, 1995; Strouhal, 1982; 1984; 1991.
[34] Sidebotham, 2002: 239, n. 32.
[35] Krzywinsky, 2010. Grave goods: "The princely tombs of Qustul and the royal burials of Ballana present a rich evidence of gift exchange with Rome, including luxury objects, which were traditional items of imperial/ official *largito* such as, e.g., silver plate, calcite vessels and ornamental horse trappings as well as more special items such as folding chairs, which were status indicating presents to 'barbarian' federates." Török, 2009: 530.
[36] 'Enigmatic settlements': Murray, 1925: 149; Peacock, 1997: 149-62; Sidebotham *et al*, 2002; Earl & Glazier, 2006. They are alternatively often thought to be early Christian monastic settlements.
[37] Power, 2010a; 2010c.

question, the archaeology broadly bears out the historical evidence for sedentarisation and social stratification.

In the Negev and Sinai, archaeological studies by Avni and Haiman have proposed a phase of sedentarisation among the local Saracens, beginning in the sixth century and continuing into the eighth.[38] Avni argues that the nomad-sedentary symbiosis was upset by the decline of towns in the Negev, so that the sedentarists could no longer afford to exchange their agricultural surplus for pastoralist produce, effectively 'pushing' the nomads to supplement their flocks with fields. However, Magness has since challenged the assumption of urban decline in the Negev, seriously undermining Avni's argument. Haiman alternatively argues that the distribution of semi-permanent settlements in the northern Negev highlands comprises a belt running some way south of Nessana, Shivta, Oboda and Mampsis – an area devoid of water resources sufficient to support commercial grazing or subsistence cultivation – so that that the only viable economic activity can have been hired labour. He further points to contemporary Bedouin sedentarisation, whereby temporary settlements have sprung up close to the labour markets presented by Israeli towns.[39] Whatever the cause, whether the 'boom' or 'bust' of the Negev towns, it seems clear enough that the local Saracens were settling rather than raiding.

It is possible that something similar was at work in the fifth- and sixth-century Ḥijāz, though given the lack of evidence any attempt to understand this period must remain

[38] Avni, 1996; Haiman, 1995a; 1995b. *Cf.* Finkelstein, 1988; 1994; 1995; Finkelstein & Perevolotsky, 1990; Magness, 2003: 4-5.
[39] Haiman, 1995b: 33-4.

highly conjectural. Crone has recently toned down her argument against Meccan trade as remembered by the Islamic historical tradition, and examines the trade in leather between the Quraysh and Roman army in Syria-Palestine.[40] She notes that Diocletian (r. 284-305) linked the 560 km Bostra – Dūmat al-Jandal road with the *Strata Diocletiana*, and further equipped the Wādī Sirḥān with watch-towers and patrols, thereby establishing a definite Roman military presence deep into Arabia **[Fig. 1.03]**.[41] Crone argues that these forward positions were involved with the import of nomadic pastoralist produce of the northern Ḥijāz, particularly leather, which was the plastic of the age and consumed in great quantities by the Roman army.[42]

From the late third and throughout the fourth centuries an estimated 150,000 to 300,000 men were stationed along the Arabian frontier,[43] and it might be argued that the correspondingly massive demand for leather worked to maintain a nomadic subsistence strategy in the Ḥijāz. The archaeology of the Arabian frontier evidences a steady abandonment through the fifth and sixth centuries, as expensive *limitanei* were increasingly replaced by cheaper *foederati*, culminating in the Justinianic military reorganisation of c. 530.[44] Walter Kaegi suggests that this trend left just 5,000 men guarding the frontier by the early seventh century.[45] Returning to the Avni hypothesis, a collapse in demand for leather might 'push' the nomadic section of Ḥijāzī population towards a more sedentary subsistence strategy. Taking this conjecture further, one wonders if the social ferment attending the process of

[40] Crone, 2007.
[41] Crone, 2007: 74. *Cf.* Speidel, 1987;
[42] Crone, 2007: 69-70.
[43] Crone, 2007: 66-67.
[44] Parker, 1986.
[45] Kaegi, 1992: 39.

sedentarisation, including perhaps increasing social stratification and growing disparities of wealth, provides the context for the career of the Prophet. Again, such a scenario is highly speculative and no more than a heuristic proposition. It might well be hoped that opportunities for archaeological work, addressing the sedentarisation hypothesis and other issues, open up in Saudi Arabia in the coming years.

Nomadic aggression did not, of course, completely stop in the fifth and sixth centuries. The Blemmyes attacked the White Monastery in c. 451 and were again active in the Upper Ṣaʿīd in the reign of Justin (r. 518-27); the Saracens, meanwhile, seized the island of Iotabe in the northern Red Sea in 473 and were again in arms c. 498 **[2.2.1] (ii).** But there is nothing on the scale of the loss of the Dodecaschoenus or the grand razzia of Mawia. The Blemmyes and Saracen raids were on a smaller scale and more sporadic, representing the actions of individual groups or a temporary breakdown of otherwise harmonious relations, for which there is altogether more evidence. Although nomadic aggression could be an occasional nuisance for peasant farmers, it cannot be considered a major cause of abandonment and collapse in the Byzantine and Aksumite territories of the Red Sea.

(iv) Superpower conflict in the Red Sea region focuses especially on the Persian occupation of Yemen, traditionally considered to mark the eclipse of Byzantine and Aksumite maritime commerce and the declining importance of the Red Sea route to India. Spencer Trimingham, for instance, claimed that the Sasanians conquered of all Arabia and mastered the eastern coast of Africa.[46] David Whitehouse, in a much cited

[46] Trimingham, 1952: 42.

article on Sasanian maritime activity in the Indian Ocean, later concluded that under Khusrow II Parvez (r. 590-628) "the entire coast from Aden to Karachi was in the hands of a single ruler… the Byzantines were shut out… Sasanian merchants dominated the ports of Sri Lanka and were probing the markets of South-East Asia."[47] The extent to which the Sasanian's dominated maritime trade at the expense of the Byzantines remains open to question, however, with recent studies taking the debate beyond Whitehouse's focus on the 'India trade.'[48]

The ceramic evidence from India has been investigated by Tomber, who notes that many imported sherds hitherto thought to be Late Roman amphorae are in fact Torpedo Jars of Mesopotamian manufacture.[49] Torpedo Jars emerge from Tomber's reclassification as the most common type of imported pottery in north-western India, exceeding both Early and Late Roman amphorae,[50] which might lend some support to Procopius observation that "it was impossible for the Ethiopians to buy silk from the Indians, for the Persians merchants always locate themselves at the very harbours where the Indian ships first put in, since they inhabit the adjoining country."[51] Archaeological evidence for Sasanian commerce is still more pronounced in Sri Lanka, especially at Anuradhapura, where Torpedo Jars and alkaline turquoise glazed types dominate the imported assemblage, with other finds attesting to a Persian presence including a Pahlavi inscription, Nestorian cross and clay *bulla*.[52] However, the

[47] Whitehouse, 1989: 347. *Cf.* Whitehouse & Williamson, 1973.
[48] For the Sasanian involvement in Arabia, see: Daryaee, NO DATE; Kennet, 1997; 2007: 86-89; Morony, 2001-02; Potts, 1990: 197-263, 264-348. For Africa, see: Compareti, 2002; Smith & Wright, 1988; Horton, 1986. For India, see: Kröger, 1979; Tomber, 2007c; 2008: 39-40.
[49] Tomber, 2007c; 2008: 39-40.
[50] Tomber, 2008: Fig. 21 (Map), p. 127; Table 3, p. 166.
[51] Procopius, 1.20.9-12 (1914).
[52] Tomber, 2008: 146.

chronological parameters of Torpedo Jar production are very wide, from the late Parthian through early Islamic periods, meaning that not all of this material need pertain to Sasanian commerce.

The ceramic chronology has been further examined by Derek Kennet, dealing especially with the case of Oman, where he argues against a Sasanian date for very similar material.[53] He points to St. John Simpson's earlier study on the Nestorian churches of the Arabian littoral of the Gulf, once thought to be Sasanian largely because of the wealth of historical data for Nestorianism at that time, but now convincingly shown to be eighth / ninth century.[54] More controversially, Kennet disputes the published ceramic chronology of Ṣuḥār, long since believed to be a Sasanian colony, which he instead dates to the Parthian and early Islamic periods respectively.[55] He goes on to conclude that there was, in third- through sixth-century eastern Arabia, a "decline in population, coinage, economic activity and demise of large centres (of settlement)... It is into this rather desolate sounding eastern Arabia that Islam spread."[56] In many ways, this reflects the situation in the southern Red Sea during the sixth and seventh centuries, wherein both Yemen and Ethiopia were visited by a severe crisis amounting to a collapse of complex society. Kennet attributes the decline of eastern Arabia in the Sasanian period to a number of possible causes, including a general decline of the Roman 'India trade' via Mesopotamia from the third century, the collapse of the major Arabian ports of the Indian Ocean such as

[53] Kennet, 2007.
[54] Simpson, 2010. *Cf.* Kennet, 2007: 89.
[55] Kennet, 2007: 97-100.
[56] Kennet, 2007: 111. He points to Potts' observation, 1990: 48-49, 97, that settlement density & maritime commerce peaked in the Helenistic and Parthian periods.

Khawr Rūrī (Ẓufār) and Qāniʾ (Ḥaḍramawt) in the late sixth century, and simultaneous urban decline in India.[57]

It can no longer be assumed that Sasanian commerce dominated the Indian Ocean, much less that it did so at the expense of the Byzantines, since Kennet's findings imply that the Gulf region was no more successful than the Red Sea through the sixth and seventh centuries. The Persian occupation of Yemen in c. 570 was most plausibly motivated by mineral exploitation rather than the 'India trade,'[58] and indeed the very need to acquire bullion may hint that tax revenues were falling short, hardly indicative of an expanding economy. Nor can the Sasanian presence at the head of the Red Sea be considered to have strangled the Aksumite 'India trade,' since that trade already appears to have been in terminal decline and Aksum itself bankrupt and fragmenting.

(v) The rise of Islam has traditionally been regarded as a cause of decline in the Near East. Sir Williams Muir described the scene in typically exuberant prose: "Onward and still onward, like swarms from the hive, or flights of locusts darkening the land, tribe after tribe issued forth and hastened northward, spread in great masses to the East and West."[59] Yet such opinions are based on 'Orientalist' prejudice rather than sound research. Jeremy Johns has shown that the savants of Enlightenment Europe sought to reconcile the grandeur of the Levantine Graeco-Roman ruins with the desolation which surrounded them, having recourse – no doubt prompted by the Ottoman

[57] Kennet, 2007: 109.
[58] Morony, 2001-02: 34.
[59] Muir, 1898: 45.

administrators and Arab notables – to the agency of the Bedouin, who in many cases were to be found encamped about the strewn column-drums and fallen entablatures.[60] In fact Bedouin hordes played little part in the Muslim conquests **[6.2.1] (v)**, and can in no way be blamed for the ruin of 'Classical' civilisation.

Despite the progress of debate in the post-war years, the rise of Islam is still occasionally returned to as a cause of decline. The Castigliones write of the mines of Deraheib that "when the Arabs conquered the Sudan and Egypt, gold production came to a grinding halt because the Arabs believed it was evil and corrupt."[61] Tomber's recent synthesis of the archaeological evidence for the Indo-Roman trade, while in many ways excellent, reproduces the conventional wisdom that "in the Roman / Byzantine world the Arab conquest marks the disruption of trade routes and the end of Roman involvement."[62] This seems an awkward conclusion, since the Byzantine, Aksumite and Ḥimyarite Red Sea ports were all either entirely abandoned or much reduced during the sixth century. Moreover, as will now be shown, the Indian evidence for maritime trade with Byzantium comes to an end at precisely this time. The Graeco-Roman 'India trade' was therefore significantly over as much as a century before the rise of Islam.

[60] Johns, 1994: 1-3.
[61] Quoted in an interview by Wagner, 1995: 21.
[62] Tomber, 2008: 161.

[6.1.2] World-System Dynamics

(i) By the sixth century, there existed almost a millennium of sustained commercial contact between the Sub-Continent and the Mediterranean, much longer indeed with the Gulf, so that a degree of economic interdependence between these trade zones had very likely emerged over the centuries. This has important ramifications for the rise and demise of the societies most involved with the Indian Ocean trade, and indeed the origin of complex urban civilisation in Ethiopia and South India has been convincingly linked to the Graeco-Roman 'India trade,'[63] so that a heuristic model predicated on the world-systems paradigm may be proposed:

"Most interregional interaction networks constitute one form or another of a 'world-system'... They are 'worlds' in the sense that they are far more self-contained than anything outside of them... [it follows that] a fundamental unit of social evolution is the world-system or core / periphery system. The claim is dialectic. The system itself evolves, and as it evolves it transforms its constituent members. Conversely, changes in the constituent members collectively produce change in the overall system. To focus solely on the constituent members (conventional 'societies') is to miss a good deal of the action, and to fundamentally misunderstand social evolution."[64]

It therefore follows that a significant contraction of the Sub-Continental means of production or sharp fall in Mediterranean demand could affect a drop in the volume of the 'India trade,' and that a declining volume of trade might prove politically

[63] Champakalakshmi, 1996.
[64] Hall, 1996: 5.

deleterious to those societies most heavily involved in that trade, which in the case of the Red Sea would mean Ḥimyar and Aksum. Given that the majority of late Roman material found in India and Sri Lanka belongs to the fourth and fifth centuries, with comparatively little archaeological evidence to suggest that trade continued far into the sixth century, it may be argued that the demise of the 'India trade' preceded and so possibly precipitated socio-political collapse in Ḥimyar and Aksum. However, since most traditional accounts of the Graeco-Roman 'India trade' erroneously take the Arab conquests as the cut-off point, it is first necessary to establish the terminal chronology for the trade and examine the causes for its retreat, which given the size of the Sub-Continent must proceed on a region by region basis.

A brief methodological note is in order first, since the chronology is based on coin finds and imported amphorae, which present interpretative problems.[65] Coins can remain in circulation for many years, so that the year they were struck does not necessarily closely correspond to the episode of deposition. Moreover, gold coins possessed an intrinsic value and it is possible that older issues were exported as bullion. These issues are compounded by the fact that many coins were obtained on the antiquities market rather than excavated from stratified contexts. Coin dates cannot therefore be used to propose an absolute chronology and must be treated with caution.

Similarly, ceramic dates supplied by the Late Roman amphorae from India are open to interpretative latitude. It is increasingly recognised that the upper limit of the Late

[65] *Cf.* Tomber, 2008: 'Coins,' pp. 30-37; 'Pottery,' pp. 38-54.

Roman types continues into the Early Islamic period. The Aqaba amphora continues into the eighth century,[66] as do the LR 1, 2, 5, 7 and 13 amphorae in the Mediterranean,[67] and LR 1 may even stretch into the early ninth.[68] A secure ceramic date is therefore dependent on the examination of a complete assemblage from stratified contexts. This is in many cases absent from the publication of Indian sites. The ceramic dates given below should therefore be regarded as provisional. A great deal of work remains to done on the Indian sites and the following conclusions represent no more than a hypothesis to be tested by future field work.

(ii) The Kathiawar Peninsula and the Konkan comprise the north-western coastline giving onto the Gupta-Vakataka empire. Tomber's extremely useful map of Late Roman amphora find sites draws upon unpublished material, including sherds of Late Roman 1 from the Barygaza, Somnath, Hathab and Kamrej, Late Roman 3 from Ajabpura, and Aqaba Amphora from Kamrej.[69] While Barygaza (mod. Broach) is believed to have been the most important port of north-western India, most archaeological evidence comes from Elphanta near Bombay, which might be identified with the Kaliana of the *Periplus* and Cosmas.[70] Late Roman 2 and Aqaba Amphorae have been found in quantity here, with smaller amounts on LR 1 and 7, leading the excavators to conclude that a peak of activity was reached in the sixth

[66] Melkawi *et al*, 1994; Hayes, 1996: 159-61; Whitcomb, 2001: 299; Tomber, 2004a: 397-400.
[67] Reynolds (2003) gives eighth-century contexts for: LR 2 at Beirut, Rome and Naples, pp. 726-31; LR 13 at Beirut and Paphos (Cyprus); LR 5 from Beirut, Caesarea (Palestine) and Lower Egypt, p. 731; LR 7 AT Beirut and al-Fusṭāṭ, p. 732.
[68] Armstrong (2009: 163-64) points to Emporio (Chios). My thanks to Roberta Tomber for these references on the Late Roman amphorae chronology.
[69] Tomber, 2008: Fig. 21 (Map), p. 127; Table 3, p. 166.
[70] Cosmas Indicopleustes, 366 (1897).

century.[71] However, Broach appears to have declined at this time, so that the Phase 4 Kshatrapa / Gupta city ends in the late fifth century with an occupational hiatus.[72]

The Ganges Delta constituted the north-eastern littoral of the Gupta empire. Although no late Roman material has yet been found, the region's principal port, Tamralipta (mod. Tamluk), is thought to be a production centre for some of the Indo-Pacific beads found at Berenike, which were shipped down to the Tamilakam and Sri Lanka prior to export. Studies of this eastern coastal trade suggest a peak in the fourth and fifth centuries, implying that the sixth century witnessed a reduction in the volume of trade.[73]

This putative commercial decline may have been caused by the collapse of the Gupta-Vakataka empire. Already in the mid fifth century the 'White Huns' or Hephthalites were crossing the Hindu Kush to raid the Sub-Continent, which, when joined by such internal pressures as tribal uprisings and succession disputes, worked towards the demise of central authority in northern India.[74] By the late fifth century, the Hephthalite king Toramana had carved out a kingdom stretching from the Panjab to Kashmir, while his son and successor Mihirakaula (c. 510-42) established his rule across the Gangetic plains and reduced the Gupta princelings to tributary status.[75] Hephthalite hegemony in turn collapsed around the mid sixth century before the rising power of the Turks, leaving the former Gupta domains politically fragmented

[71] Tripathi, 2004: 122. Followed by Tomber, 2008: 128.
[72] Mehta, 1981.
[73] Ray, 1996: 23, 355; Jahan 2002: 131-32; Tomber, 2008: 130.
[74] Agrawal, 1989; Thakur, 1967; Litvinsky, 1996b: 141-43; Chakrabarti, 1996: 187-89;
[75] Litvinsky, 1996b: 142-43.

and lawless.[76] Such conditions can hardly have been conducive to international trade, which consequently declined.

(iii) The Malabar and Coromandel Coasts gave onto the Tamilakam, comprised of such Tamil kingdoms as the Cheras, Cholas, Pandayas and, later, the Pallavas of Kanchipuram. Ceramics are limited to Late Roman amphorae from Karur[77] and a likely fifth-century Late Roman 1 amphora handle from Arikamedu.[78] Coins finds include some 4,500 Byzantine issues of the mid-fourth to fifth centuries found at Karur and Madurai,[79] a horde of early fourth-century Aksumite and fifth-century Byzantine coins from Mangalore,[80] and 6 late fourth- to early fifth-century Byzantine issues from Alagankulam opposite Sri Lanka.[81] It is striking that in each case the sequence of Aksumite / Byzantine imports comes to a close with the sixth century. Indeed, the port of Muziris – which Pliny had described as the pre-eminent port of India and featured prominently in the *Periplus*[82] – is not mentioned by Cosmas Indicopleustes (fl. 525-50) in his description of Malabar, suggesting that the port was abandoned before the mid-sixth century.[83]

This apparent cessation of trade and abandonment of ports may be associated with the Kalabhras, obscure tribal groups who fought the Tamil kingdoms from the fourth century, eventually imposing their rule over the entire Tamalakam in the sixth

[76] Sinor & Klyashtorny, 1996: 332.
[77] Nagaswamy, 1995: 62-63. *Cf.* Tomber, 2008: 140.
[78] Will, 2004: 383, No. 279. *Cf.* Tomber, 2008: 137.
[79] Krishnamurthy, 2007: 19, 91. *Cf.* Tomber, 2008: 30-37.
[80] Hahn, 2000: 287-8, n. 25. *Cf.* Tomber, 2008: 140.
[81] Sridhar, 2005: 23, pl. 1, 83-6. *Cf.* Tomber, 2008: 139.
[82] Pliny, 6.104 (1938-62); Periplus, 53 (1989). *Cf.* Tomber, 2008: 140-43.
[83] Gurukkal & Whittaker, 2001: 338; Tomber, 2008: 143.

century. The 75 year Kalabhra dominion was later remembered by the Tamil historians as a barbarous 'Dark Age,' when the millennial tradition of the Sangam poets was destroyed.[84] Sharma proposes that the Kalabhras who occupied the Tamilakam in the sixth century represent an anti-Brahminical 'peasant movement' reacting to an increasingly feudal political structure and growing inequalities of wealth.[85] Such socio-political disturbances can only have been detrimental to court-orientated mercantilism of the Tamil kingdoms.

(iv) Sri Lanka was indiscriminately referred to as Taprobane by the Graeco-Romans, despite its division into two main kingdoms; Anuradhapura and its port Mantai controlled the north, with Mahagama (mod. Tissamaharama) functioning as both capital and port of the southern kingdom. Coin finds include over 200,000 Byzantine 'third brass' and Indo-Roman imitations of the fourth and fifth centuries from the western littoral,[86] 5 late Roman bronze issues from Anuradhapura,[87] and 40 fourth- and fifth-century Byzantine coins, with an Aksumite example and an Egyptian imitation of an Aksumite coin, from Tissamaharama.[88] The numismatic sequence ends, in the now familiar regional pattern, with the sixth century. Early and Late Roman amphorae have been retrieved from Tissamaharama, together with broadly Graeco-Roman 470 coins from its greater hinterland.[89] Strikingly, a decline of the port commenced in the early sixth century. Anuradhapura, however, generally bucked the trend of the sixth century, and appears to have flourished throughout this time. It

[84] Nilakanta Sastri, 1950: 147-48; 1958: 138-39; Subrahmanian, 1966; Champakalakshmi, 1996; Thapar, 2002: 327; Kulke & Rothermund, 2004: 104-05.
[85] Sharma, 1988: 9.
[86] Bopearachichi, 1997: xvii, xix; 1998: 70. Cited by Tomber, 2008: 145.
[87] Bopearachichi, 2006: 13. Cited by Tomber, 2008: 146.
[88] Walburg, 2001; 2008: 54. Cited by Tomber, 2008: 147.
[89] Schenk, 2001: 74. Cited by Tomber, 2008: 145-46.

might be imagined that this kingdom assumed the trade of the Tamil and Sinhalese kingdoms.

(v) Although the evidence is patchy and there are notable exceptions, the general trend appears to be towards a sixth century decline in the volume of trade which may be attributed to politico-military disturbances beginning in the late fifth century. In fact, Indian economic historians have long since noted that the late Gupta and Hephthalite period was accompanied by a retreat of urbanism, demonetarisation of the economy and a definitive shift towards feudalism.[90] With regards the demise of the Graeco-Roman 'India trade,' the Hephthalite occupation was particularly damaging since it undermined Sub-Continental systems of production and exchange, thus affecting a general ruin of the hinterland which lay beyond the ports.

Guilds were central to the manufacture of goods in the Gupta Empire, a case in point being the silk industry, of which the economic historian Chakrabarti observes that "the production of silk decreased towards the end of the Gupta period (in the late fifth to mid sixth centuries) since many members of an important guild of silk-weavers in western India abandoned their traditional occupation and took to other professions."[91] The declining volume of silk production would have forced up its market value, and may explain the sharp rise in prices in the Sasanian markets of Mesopotamia in the 540s, as well as Byzantine's apparent concern to ensure a cheap supply of raw silk through the 530s-570s.

[90] Sharma, 1965; 1969; 1980; 1987; Maity, 1958; 1975; Thakur, 1967; Agrawal, 1989; Chakrabarti, 1996: 193.Thapar, 2002: 245-53, argues that trade & urbanism peaked in the first couple of centuries before and after Christ, which corresponds closely with Potts, 1990: 48-49, 97, observation for the Arabian Gulf.
[91] Chakrabarti, 1996: 191-92. On the central role of guilds (*shreni*) in production and exchange see Thapar, 2002: 248-51.

Buddhist monasteries were similarly crucial to the exchange of goods, for they functioned rather as banks to the Gupta merchants, whereby "the rate of interest varied according to the purpose for which money was required... (any) lowering of the interest rate implies an increased confidence in overseas trade as well as a greater availability of goods."[92] Yet the account of the famous Chinese pilgrim Hsüan-Tsang, supported by the *Rajatarangini* chronicle of Kashmir and Jain sources, describes the repeated ransacking of Buddhist monasteries by the Hephthalite king Mihirakula.[93] In effect, the banking system underwriting mercantile activity was destroyed during the Hephthalite occupation, so that goods increasing failed to reach the 'India trade' emporia.

The destruction of Sub-Continental systems of production and exchange probably began in the late fifth century with the first Hephthalite conquests. Cosmas Indicopleustes' (wr. 525-50) account therefore represents not just the last Graeco-Roman description of India, but a snap-shot of the 'India trade' in its last phase, when such trade as remained was now funnelled through Sri Lanka. The diminished returns of the trade may have prompted the Byzantine withdrawal from the Red Sea, which probably occurred around 530 when the army was pulled out of Aila **[3.1.1] (vii)**. By the mid-sixth century both Ḥimyar and Aksum were in trouble, with first inscriptions then coinage coming to an end, and finally the capital cities and major ports abandoned in the late sixth or early seventh century. The chronology of events suggests a domino effect, moving east to west across the Arabian Sea over the course

[92] Chakrabarti, 1996: 192. *Cf.* Kulke & Rothermund, 2004: 103.
[93] Litvinsky, 1995: 142-43.

of the sixth century, during which time all of those societies orientated largely or wholly towards the late Roman maritime 'India trade' collapsed.

[6.2] Muslim Conquests and the Caliphate in the Red Sea

[6.2.1] Co-Option and Conquest

(i) The origin of the Muslim politico-religious entity remains the subject of a still hotly contested debate which lies far beyond the scope of the present work. Discussion has essentially polarised between those who believe Islam was created in the Ḥijāz, as revealed by Muḥammad in early seventh-century Mecca and Medina, and those who argue it evolved in the aftermath of the conquests, in the sectarian milieu of Damascus and Baghdad during the 'long' eighth century. If the latter perspective is adopted – as it is here – then it becomes necessary to find a communal name for those people retrospectively labelled Muslims by the later Arabic sources. Patricia Crone and Michael Cook famously supplied just such a label with reference to the contemporary Syriac sources: Hagarenes.[94] This implied both an Arab appropriation of the patrimony of Abraham through the line of Hagar and Ishmael, as well as a punning reference to the Muhājirūn who followed Muḥammad to Medina. Another label has recently been suggested by Fred Donner, who argues from within the Islamic tradition for the communal name Believers or Muʾminīn.[95]

[94] Crone & Cook, 1977.
[95] Donner, 2002-03.

Donner argues that Muḥammad's role as *rasūl* and *nabī* did not originally possess connotations of supernatural power and intimate contact with the divine, and points to seventh-century Syriac sources describing him as a guide and teacher, or even king of the Arabs.[96] This very neatly accounts for the notorious absence of documentary evidence for Muḥammad during the first seventy years of the Islamic era.[97] Such early official texts as are available repeatedly refer not to the Muslimūn but to the Muʾminīn, including Muʿāwiya's inscriptions containing the title "commander of the Believers" and a papyrus dated to "year forty-two of the rule of the Believers."[98] Importantly, Donner considers that the Believers' movement only began to redefine itself during the second *fitna*, to the effect that a distinct Muslim identity emphasising Muḥammad's prophesy emerged, heralded by the introduction of a second line to the *shahāda* in c. 685.[99]

He further argues that the essentials of Muḥammad's message may be found in such Meccan *sūra*s as al-Baqara and al-Māʾida: "Those who Believe, and Jews, and Sabians, and Christians – those who Believe in God and the Last Day and who act righteously – upon them shall be no fear."[100] He interprets this to suggest that Muḥammad originally conceived of a community of Believers independent of confessional identifies, predicated on an intense belief in one God and the impending arrival of the Last Day, who had joined together to carry out the urgent task of establishing

[96] Donner, 2002-03: 34-48.
[97] Donner, 2002-03: 40-41. *Cf.* Johns, 2003.
[98] Donner, 2002-03: 40-41. *Cf.* Miles, 1948b; Green & Tsafrir, 1982. The reference to the papyrus is a personal communication to Donner from Yusuf Raghib.
[99] Donner, 2002-03: 47. First full *shahāda* on a coin from Bishapūr dated 66 AH/ AD 685.
[100] Donner, 2002-03: 19. Qurʾān, 2:62; 5:69.

righteousness on earth in preparation for the End.[101] Donner then points to the so-called 'Constitution of Medina,' wherein Jews and Muslimūn belong equally to the community of Believers, to argue that Muʾminīn and Muslimūn were not coterminous groups, understanding Muslimūn to refer to those monotheistic Arabs who obey Qurʾānic law.[102] This inclusive ideology afforded the Believers' movement a co-optive capacity which was to prove crucial to its success.

(ii) Co-option worked to provide the Believers' movement with reserves of manpower and military technology beyond that possessed by the Ḥijāz. One did not need to be an Arab, much less a Muslim, to fight for the lord of Medina. Indeed Rex Smith, a pre-eminent authority on the Yemen, points to the uniquely large population and military expertise of South Arabia. [103] In terms of sheer numbers, nomadic pastoralism in such marginal environments as the Ḥījaz and Najd could never rival the population density of Yemen, a vast area stretching from the ʿAsīr to Ẓufār washed by monsoon rains supporting sophisticated urban irrigation economies. As for military expertise, only the Yemenis possessed a millennial tradition of monumental stone architecture,[104] together with its bellicose adjunct: siege technology. Ibn Saʿd records a tradition that when the people of Ṭāʾif learned of an imminent Medinan assault, they despatched certain of their number to Jurash, a Yemeni town in the ʿAsīr, to be instructed in the use of catapults (*manjanīq / ʿarrāda*) and some sort of armoured vehicle (*dabbāba*).[105] Surely this technology would have been far more effective against the walled cities and stone fortresses of the Byzantines and Sasanians than the bravado of the

[101] Donner, 2002-03: 10-11.
[102] Donner, 2002-03: 28-34.
[103] Smith, 1990: 134.
[104] Barbanes, 2000.
[105] Ibn Saʿd, i, 312 (1957). Cited by al-Madʿaj, 1988: 66.

Bedouin? Indeed, Yemeni catapult crews appear to have been involved in the reduction of the great fortress of Babylon-in-Egypt, remembered in a line of poetry attributed to ʿAmr himself: "One day for Hamdān and another for al-Ṣadif, while the catapult (*manjanīq*) goes around Balīy."[106] Of course, by the time of the conquest of Egypt, the armies of the Believers had had plenty of opportunity to acquire Byzantine and Sasanian siege technologies, but it seems equally plausible that there was no need for external inspiration.

(iii) Co-option further provided the Believers' movement with the troops necessary for the initial invasion of Egypt. Traditions regarding the composition of ʿAmr's army suggest that it was remarkably heterogeneous, with almost no Arab Muslims mentioned. Ibn ʿAbd al-Ḥakam records that ʿAmr's initial force consisted of between 3,500 and 4,000 Yemenis, drawn entirely from the Tihāma tribe of ʿAkk, while al-Kindī gives 3,500 of which a third were of Ghāfiq, a sept of ʿAkk.[107] Yemenis of Persian extraction were also present;[108] later, they settled in the area just north of Babylon-in-Egypt.[109] Ibn Duqmāq further lists among ʿAmr's troops Byzantine (*Rūmī*) converts to Islam from Syria, which Ibn ʿAbd al-Ḥakam states joined his army at Caesarea, and according to al-Maqrīzī later settled in Fusṭāṭ.[110] Some support for this might be found in Sebeos, who writes that the 5,000 strong Byzantine army of re-conquest which landed in Egypt in 664-5 caused panic in the Muslim army, prompting many to join

[106] Ibn ʿAbd al-Ḥakam, iii, 62 (1920); quoted by al-Madʿaj, 1988: 87. All the mentioned tribes are Yemeni. *Contra* Kennedy, who explicitly states that "it is striking that siege engines are not mentioned at all in the accounts of the Arab conquest of... the great Roman fortess at Babylon in Egypt" (2007: 61).
[107] Yāqūt, iv, 262 (1957) references Ibn ʿAbd al-Ḥakam, iii, 56 (1920) and al-Kindī, 8 (1912).
[108] Ibn Duqmāq, iv, 4-5 (1893). Cited by Butler, 1978: 198.
[109] Ibn ʿAbd al-Ḥakam, 125, 128, 129 (1920). Cited by Kubiak, 1987: 63.
[110] Ibn Duqmāq, iv, 4-5 (1893). Cited by Butler, 1978: 198. Ibn ʿAbd al-Ḥakam, 129 (1920); al-Maqrīzī, i, 289 (1911-27). Cited by Kubiak, 1987: 63.

the Byzantines and convert to Christianity.[111] It might be thought that those troops who went over to the Byzantines were in fact their former subjects, though it must be confessed that there is no explicit evidence for this. Other Levantine troops included the Bedouin. Theophanes Confessor records that those who "guard the approaches to the desert... went over to their fellow tribesmen, and it was they that lead them to the rich country of Gaza."[112] This event might form the basis for Maqrīzī's much later claim that the armies of ʿAmr were reinforced by the local Bedouin after the fall of Pelusium.[113] According to al-Qudaʿī, 'Ethiopian' (*Ḥabshī*) soldiers were involved in the conquest and settled in Fusṭāṭ,[114] and Ibn ʿAbd al-Ḥakam further points to the presence of black soldiers in ʿAmr's army of conquest:

"When ʿUbada b. al-Samit got on the ship to speak with the Muqawqas and approached him, the Muqwaqas felt dread for his blackness (... He) said to ʿUbada, 'Advance, black man, and speak gently to me for I am in dread of your blackness; if you speak severely, it will increase my dread.' ʿUbada advanced toward him and said, 'I have heard your speech. Among those I command are a thousand men, all them black, every one blacker than I and yet more hideous to look at. If you saw them, you would dread them excessively."[115]

(iv) It can be argued that these heterogeneous troops were drawn from among the 'have nots' of the Late Antique Red Sea. The Tihāma tribes were hardly among the most illustrious of Yemen: ʿAkk and al-Ashāʿir were said to have been among the first

[111] *Anonymous Chronicle of 1234*, §114 (1993); Sebeos, 176 (1999). Cited by Sijpesteijn, 2007: 186.
[112] Theophanes, 335-36 (1997). Quoted by Hoyland, 1997: 584.
[113] Butler (1978: 213) cites al-Maqrīzī that Egyptian sections of Rāshida and Lakhm joined ʿAmr.
[114] al-Qudaʿī in Ibn Duqmaq, iv, 126 (1893); al-Maqrīzī, i, 206 (1911-27). Cited by Kubiak, 1987: 63.
[115] Ibn ʿAbd al-Ḥakam, 66 (1920). Quoted in Pipes, 1980: 90-91.

to revolt following the death of the Prophet.[116] Indeed, the posited Ethiopian occupation of the Tihāma from the third through sixth centuries may have resulted in a mixed population,[117] unable to echo Dhū al-Kalāʿ al-Ḥimyarī's boast that his ancestors were "people of good reputation in the past and high rank,"[118] and likely subject to all the prejudice visited upon ʿAntara b. Shaddād al-ʿAbsī and the other *ghirbān.*[119] Given that ʿAmr is reckoned to have spent two years in Gaza before embarking on the conquest of Egypt, and that he was apparently paid 200,000 *solidi* each year by Cyrus to stay away,[120] it might reasonably be imagined he had both the time and money to raise what amounts to a mercenary army, drawn from among the urban discontents of Palestine and the unruly Bedouin of the desert fringe. The social context of the Black troops implies that they were slaves or mercenaries, possibly captured during or fleeing from internecine conflict in post-Aksumite Ethiopia. ʿAmr himself, in certain traditions, is believed to have been born of an Ethiopian slave-girl.[121] The Muslim conquest of Egypt therefore appears to have had aspects of a 'peasant revolt' in that it largely involved the dispossessed and discontented of the Late Antique Red Sea order.

Magness has already noted the theoretical parallels between the study of the Iron Age Israelite and Late Antique Muslim conquests, in which a 'peasant revolt' model has been put forward. She points to earlier studies suggesting that the Biblical Hebrews

[116] al-Ṭabarī, i, 1985 (1964); Ibn al-ʿAthīr, ii, 254 (1348). Cited by al-Madʿāj, 1988: 53.
[117] Note a leader of ʿAkk during the *ridda* bore the name Masrūq, which may well be Ethiopian since it is the same as one of Abraha's sons. al-Madʿāj, 1988: 53.
[118] al-Wāqidī, i,2 (1948). Quoted in al-Madʿaj, 1988: 83.
[119] Sing. *ghurāb,* 'raven.' A racist slur applied to Indian, Ethiopians and Arabs of mixed heritage. E.g. Ibn Hishām, 42 (1858-60); trans. Guillaume, 1955: 30.
[120] Kaegi, 1998: 46, 60; Hoyland, 1997: 574-90.
[121] Pipes, 1980: 88.

were in fact the *ʿapiru*, or marauding bands of the late Bronze Age Levant mentioned in the Amarna archives: "The true Israelite conquest was accomplished when large numbers of Canaanite peasants overthrew their masters and became 'Israelites.'"[122] Although Magness states that the 'peasant revolt' model had thus far received little attention among scholars of the Muslim conquest, Donner's more recent articles have gone some way to repair that situation, together with Parvaneh Pourshariati's exciting recent study of the Muslim conquest of Iran.

Pourshariati argues that the Sasanian state was not nearly so centralised as the secondary literature maintains.[123] Instead, the royal Sasanian dynasty presided over a confederation in which the local Parthian dynasties remained prominent, giving rise to a military-political dynamic characterised by Pārsig-Pahlav factionalism.[124] She continues that *étatiste* monarchs, such as Qubād and Khusrow I, could upset the delicate balance of power. In particular, Khusrow II's "blind pursuit of imperialistic aims against the Byzantines... led the Parthian dynasts into the bosom of the enemy, with the result that important Parthian families made their peace with the shrewd Heraclius."[125] The Muslim invasion, which Pourshariati argues took advantage of the chaos following the murder of Khusrow II in 628,[126] presented the local Parthian dynasties an opportunity to rid themselves of a Sasanian suzerainty made discredited and unpopular by Khusrow. These local families represent the *dihqān*s, or landed gentry, who recognised Muslim rule in exchange for retaining their position: "the

[122] Magness, 2003: 3.
[123] Christensen, 1944.
[124] Pourshariati, 2008: 454-55.
[125] *Ibid*, 456.
[126] *Ibid*, 281-83.

demise of the Sasanians, therefore, did not mean the demise of the Parthians."[127] These self-same *dihqān*s were not only able to preserve their position, but came to form a powerful socio-economic group under the ʿAbbāsids to whose agency has been attributed the 'Persianisation' of early Islam.

(v) Returning to Egypt and the Red Sea with these conquest models in mind, it can be argued that the early victories were largely won by a coalition of the disparate and dispossessed, who were very likely neither Arabic speakers nor converts to Islam. The Yemenis who fought in the conquests, for instance, probably did not at that time consider themselves Arabs; indeed, the historic 'Arabisation' of the Yemen seems only to have followed the conquest period.[128] The eighth- and ninth-century re-casting of events as an 'Arab' or 'Muslim' conquest of Egypt represents a largely ahistorical retrospective projection. The crystallisation of the Arabic historical tradition was perhaps unduly influenced by a parallel literary valorisation of the Bedouin, as noted by Hoyland. He argues that the sedentary Arab Muslim majority, being strong on religion but short on identity, only appropriated the history and characteristics of the minority nomads in the social-cultural crucible of eighth-century Iraq.[129] So it is that an Iranian courtier interrupts a recitation of *jāhilīya* poetry at the court of Ḥarūn al-Rashīd, "'I beseech you by God not to interrupt our enjoyment of this nightly gathering of ours by describing a scabby camel!' 'Shut up!' said al-Rashīd. 'It is the

[127] *Ibid*, 463.
[128] Hoyland, 2001: 243-47.
[129] Hoyland, 2001: 243-47. His argument thus represents a secular version of Wansburgh's 'sectarian milieu.'

camels who have driven you from your home and power, taking away the crown of your kingship.'"[130]

This fictional scene is indicative of a literary valorisation of the Bedouin, which has been reproduced uncritically in the secondary literature. Hugh Kennedy, for instance, asserts that "without the military capabilities and numbers of the Bedouin, the elite of the Ḥijāz would never have become a world power."[131] Traditional accounts of the rise of Islam and Arab conquests have further been influenced, wittingly or not, by recent events such as the nineteenth-century Wahhābī movement, the Arab Revolt of 1916-18 or the Ikhwān of Ibn Saʿūd, whereby the Bedouin are unified by a charismatic leader and emerge from their sandy wastes to devastate 'some Strip of Herbage strown / That just divides the desert from the sown.' Yet aside from variously making a nuisance of themselves in Najaf and plundering Ottoman baggage trains, Bedouin troops time and again proved ineffective against regular armies. During the First World War, for instance, a report by the Arab Bureau on the Ḥijāz revolt in 1918 observed that local Bedouin tribes only rose against the Turks when British forces had already arrived, and scathingly concluded that "the extent of the Sherif's revolt depends entirely on the British to advance."[132] Similarly Colonel Meinertzhagen, the head of General Allenby's intelligence, wrote that "it is safe to say that Lawrence's Desert Campaign had not the slightest effect on the main theatre west of (the river) Jordan."[133] Bedouin troops cannot be reckoned any more effective against the Byzantines and Sasanians, especially not against the great stone-built fortresses which

[130] al-Marzubānī, 130 (1964). Quoted by Hoyland, 2001: 244.
[131] Kennedy, 1986: 18-19.
[132] Quoted by Fromkin, 1989: 328.
[133] *Ibid.*

had mushroomed during the later Graeco-Persian wars, so that the success of the Muslim conquests must rest on something more concrete than an ill-conceived Bedouin tsunami.

[6.2.2] Fiscal Policy of the Early Caliphate

(i) While the nature of the Caliphate in the first seventy years of Islam remains a subject of debate, it is universally acknowledged that ʿAbd al-Malik b. Marwān (r. 685-705) oversaw a deepening of the state that was to prove definitive. At the same time, the Marwānids are credited with a general economic revival which put the state on a sound footing.[134] Alan Walmsely, in a very useful article published in an edited volume on *The Long Eighth Century* (2000), points to a whole 'package' of reforms which created an economic boom between c. 685 & c. 830. These began under ʿAbd al-Malik and his immediate successors with the introduction of a unified monetary system and the refurbishment of roads, together with large and numerous building projects, such as new towns (Anjār & ʿAyla) and monumental imperial structures.[135] Thereafter, Walmsley singles out the reign of Hishām (r. 724-43) as a period of considered attention to economic development, characterised by new urban market places and rural agricultural development programs. Such projects included the re-modelling of existing urban commercial spaces (Palmyra, Baysān, Jarash, Bayt Rās & Pella), or else the establishment of entirely new ones (Arsūf, Baysān, Tabarīya & Pella).[136] He similarly interprets the *quṣūr* – while accepting a variety of functions – variously as

[134] Hitti, 1970: 206-223; Hawting, 2000: 61-66; Walmsley, 2007: 117-20.
[135] Walmsley, 2000: 270.
[136] *Ibid*, 276-83.

caravanserai and agricultural development projects, and concludes that "the size and number of constructions under Hishām and al-Walīd II would suggest a deliberate policy to stimulate commerce and trade through infrastructure."[137] Walmsley's observations on Marwānid economic policy are drawn mostly from the archaeology of Bilād al-Shām, and it remains to be seen how far they can be applied to other regions.

(ii) Something of the wider political situation of the Red Sea in the 'long' eighth century must be considered before concluding statements on the development of communications and volume of commerce can be made. The 'long' eighth century was turbulent, to say the least, for both Egypt and Yemen. Whatever concern for peaceful conditions and economic growth the Umayyads demonstrated in Bilād al-Shām and the Ḥijāz did not extend to their Red Sea provinces. Quite the reverse, in fact, and there are hints at a deliberate policy of collective punishment following the Second Fitna:

"There arose from the land of the Muslims a prince, whose name was Marwān, who rushed forth like a lion when he comes out of his den hungry, and devours the rest or tramples them under foot... And there was great enmity between Marwān and the Egyptians, because they had set their hopes on the arrival of another man, whose name was Ibn al-Zubayr."[138]

The Yemen had fallen to Ibn al-Zubayr and the majority of Yemenis had pledged the oath of allegiance to him, with a total of nine governors appointed to Ṣanʿāʾ during his

[137] *Ibid,* 285.
[138] Severus, v, 11-12 (1904).

Caliphate (r. 683-92).[139] Collective punishment may again be read into the actions of the first Marwānid governor of Yemen, Muḥammad b. Yūsuf al-Thaqafī (r. 692-708), of whom al-Baladhūrī writes "he oppressed the subjects by confiscating their lands," moreover forcing them to pay *kharāj* despite the fact that theirs were *ʿushr* lands.[140] In no way did the early Marwānids display the sound political judgement and economic stewardship which characterises their policies in their power base of Bilād al-Shām and the Ḥijāz.

(iii) Indeed, just as Walmsley singles out the reign of Hishām (r. 724-43) as a period of particularly effective economic management and development in Bilād al-Shām, the absolute opposite may be observed for his rule in Egypt and Yemen. Certainly Hishām was concerned to increase the revenues of these provinces, but he did this through a crude policy of ruthlessly efficient taxation rather than extending the economic base. In Egypt, he created the post of *ṣāḥib al-kharāj* precisely to increase the tax yield. The first holder of this office, ʿUbayd Allāh b. Ḥabḥāb (r. 724-34), immediately raised taxes and demanded that Christian men wear numbered badges to prevent them escaping taxation and forced labour – both practices amply documented by the Aphrodito papyri.[141] This directly resulted in the first major Coptic rebellion (c. 725-26), while at the same time Severus complains bitterly of the general ruin of the economy: "through anguish and distress (the people) were minded to sell their own children."[142] At precisely this moment in Yemen (i.e. 725-26), a revolt erupted under ʿAbbād al-

[139] al-Baladhūrī, iv, 353 (1979); Ibn Samura, 53 (1957); al-Baghdādī, 31 (1910); al-Khazrajī, 66 (1979); Ibn ʿAbd al-Majīd, 16 (1965). Cited by al-Madʿaj, 1985: 159 & 161.
[140] al-Baladhūrī, 84 (1959). Cited by al-Madʿaj, 1985: 163.
[141] Severus, v, 67, 69; 321-5 (1904); *P.Lond, passim.* Cited & discussed by Sijpesteijn, 2007: 195-97; Kennedy, 1998: 72-74.
[142] Severus, v, 69 (1904). Quoted by Sijpesteijn, 2007: 196. *Cf.* Kennedy, 1998: 73.

Ruʿaynī, which while easily put down by the Umayyad governor of Ṣanʿāʾ, represents the first open rebellion since the Ridda.[143]

These parallel uprisings in Egypt and Yemen in the opening years of Hishām's reign were followed by much more serious disturbances upon his death, clearly suggesting the depth of dissatisfaction his short-sighted fiscal policies had incurred. In 743 the governor of Egypt, Ḥafṣ b. al-Walīd al-Ḥaḍramī, expelled the immigrant Syrian Arabs who had settled in the Ḥawf and migrated into al-Fusṭāṭ over the past twenty years. Kennedy views this episode as an Arab dispute between Qays and Yaman, but it can equally well be understood as a political struggle between the central authority in Syria and the local government in Egypt, especially when it is remembered that the Syrian immigrants had originally been brought in by Ibn al-Ḥabḥāb to counterbalance the power of the Yamanī *jund* of al-Fusṭāṭ.[144] Having expelled the Syrians, Ḥafṣ went so far as to create a local militia some 30,000 strong, which refused to disband at the order of the new Caliph Marwān b. Muḥammad (r. 744-50), who was consequently obliged to send a large army and new governor to restore central authority in Egypt.

A second, even more serious, Yemeni revolt under Ibāḍiyyā auspices and led by ʿAbd Allāh b. Yaḥyā spilled out of the Ḥaḍramawt after 743. It culminated in Mecca during the Ḥajj of 746 with the declaration of a rival Caliph, which found popular support in Baṣra and so constituted a regional threat to Umayyad authority. The revolt spread to Ṣanʿāʾ and required an Umayyad field army be dispatched to Yemen, where it met and

[143] al-Maʿdaj, 1985: 164.
[144] Kennedy, 1998: 75.

defeated some 30,000 men under arms outside Ṣaʿda.[145] Hishām's reign, so successful in Bilād al-Shām and the Ḥijāz, was therefore bracketed by increasingly dangerous rebellions in both Egypt and Yemen testifying to his widespread unpopularity in the provinces, a fact which can only have hastened the demise of the Umayyad Caliphate.

Finally, it remains to note that the ʿAbbāsids did not seriously address the troika of rapacious taxation, forced labour and land confiscation driving the cycle of rebellion and sedition in Egypt and Yemen. The authoritarian rule of al-Manṣūr (r. 754-75) engendered a mushrooming of localised insurrections in Yemen from around 760, to the effect that Maʿn b. Zāʾida (r. 760-69) was dispatched to stamp out dissidence, visiting a series of brutal massacres on the populous: over 2,000 dead in al-Janad and many more in the Ibāḍī Ḥaḍramawt.[146] Under al-Mahdī (r. 775-85) the situation worsened still, with a serious Egyptian uprising lead by Diḥyā b. Muṣʿab in 784. The Caliph replaced his governor with Mūsā b. Muṣʿab al-Khathʿamī, who had earned a reputation for ruthlessly effective taxation as governor of the Jazīra. He immediately imposed raised taxes on the land and imposed new ones on markets and riding animals, only to meet his death when the *jund* joined with the rebels, necessitating an ʿAbbāsid army be dispatched to impose order.[147]

(iv) Things reached their nadir in Egypt and Yemen during the reign of Hārūn al-Rashīd (r. 786-808). In 802 the Qaysī Arabs of the Ḥawf marched on al-Fusṭāṭ, the *jund* refused to fight, and the governor found himself quite unable to project his authority

[145] al-Maʿdaj, 1985: 166.
[146] al-Maʿdaj, 1985: 184.
[147] Kennedy, 1998: 78.

beyond the capital.[148] By 807 the Balīy had taken to unchecked brigandage in the countryside, ʿAyla was in revolt c. 806-10 leaving the Ḥajj road unsafe, open warfare broke out between coalitions of Arab tribes between 809 and 826, with Alexandria lost to Andalusian freebooters between 815 and 827.[149]

The province was effectively re-conquered by ʿAbd Allāh b. Tāhir in 827, but in 830 the occupying ʿAbbāsid army was defeated by the Ḥawfīs and the governor killed. Thereafter Abū Isḥāq (later al-Muʿṭasim) arrived in 831 with a force of 4,000 Turks which defeated the Ḥawfīs, only then to provoke a mass rising of Arabs and Copts known as the great Bashmūric rebellion. Al-Maʾmūn himself arrived in 832 to supervise the campaign, which was concluded with great difficulty and terrible loss of life, to the effect of the general ruination of the Delta canal systems and its fabled agricultural wealth.[150] There followed the first mass conversions among the Copts, while the Arabs' *jund* was dissolved and their *ʿaṭāʾ* stopped, so that the ʿAbbāsids at last ruled over a humbled and quiescent populous in Egypt.

The ʿAbbāsids had never really established a firm hold over Yemen, and such as they had became increasingly tenuous during the reign of al-Rashīd. Upon the revolt of al-Hayṣam b. ʿAbd al-Ṣamad in 800, Ḥammād al-Barbarī (r. 800-10) was appointed governor with a mandate of violence, prompting the people of Ṣanʿāʾ to write to al-Amīn in Baghdād informing him of the nature of their new governor's rule: "His first act of injustice towards the Muslims and treachery towards the Caliph was that he

[148] Kennedy, 1998: 78. *Cf.* al-Kindī, 43 (1912); al-Maqrizī, i, 336-8 (1911-27).
[149] Kennedy, 1998: 80-81. *Cf.* al-Kindī, 151 (1912); Severus, 428 (1962).
[150] al-Maqrizī, i, 339 (1911-27).

used – in ruling the country – some Yemenis and his own followers who are arrogant, tyrannical, treacherous, immoral, ignorant and straying from what is right, who know no kindness and do not oppose what is forbidden." [151] It can be inferred that the governors were no better than the brigands they claimed to oppose.

In the event, it took seven years for Ibn ʿAbd al-Ṣamad to be apprehended, and even this was achieved by subterfuge and not pitched battle.[152] Throughout this period, an uprising of the ʿAkk and al-Ashāʿir tribes of the Tihāma raged fiercely, to be put down at length in 817-20 by the establishment of the garrison town of Zabīd by Ibn Ziyād on the orders of al-Maʾmūn. By this time, however, the province of Yemen was already fragmenting into independent emirates, to which soon would be added the Ziyādid dynasty of Zabīd. Yemen had finally won its independence from the Caliphate.

(v) Caliphal policy with regards Egypt and Yemen through the 'long' eighth century (c. 685-830) was not, therefore, conducive to economic growth. First the putative collective punishment meted out to the Egyptians and Yemenis by the early Marwānids for their support of the Zubayrid cause, then the short-sighted and ruthless fiscal policy of Hishām, and ultimately the failure of the ʿAbbāsids to redress unpopular and discredited administrative practice effectively undermined the political stability and economic prosperity of the Red Sea. Throughout this period, economic policy in the Red Sea provinces – so far as one existed at all – was geared towards the intensive exploitation of the tax base, rather than the extensive

[151] *Taʾrīkh al-Yaman,* f160b. Cited by al-Maʿdaj, 1985: 203.
[152] al-Hamdānī, ii, 322 (1967); al-Ṭabarī, iii, 712 (1879-1901). Cited by al-Maʿdaj, 1985: 186-88.

expansion of provincial productive capacities, or the advancement of commercial networks through a sustained investment in communications infrastructure.

This is in such marked contrast with the situation in Umayyad Bilād al-Shām and ʿAbbāsid Iraq that one is almost given to wondering if the successive Caliphal dynasties each pursued a policy of active neglect in the outlying provinces, squarely intended to prevent the emergence of rival power centres. At the same time, heavy investment in the provincial hinterland of their respective dynastic capitals was aimed at the cultivation of a loyal following or power-base upon which Caliphal authority might rest. Such a policy would go some way to explaining the frequency of provincial uprisings in the early Caliphate and the startling success of local dynasties as central authority began to falter. The rapid emerge of a number of local dynasties in the Red Sea region was to provide the political environment for a veritable commercial revolution, freeing resources and keeping capital in the region.

[6.3] Legacies: Creating the World of the Cairo Geniza

[6.3.1] World-Systems Dynamics

(i) The appearance of luxury ceramics from the Gulf region and Far East during the ninth and tenth centuries marks the return of the 'India trade' to the Red Sea. World-systems dynamics may be usefully explored to account for the resurgence of long-distance maritime trade.

Gulf trade began to decline after the mid ninth century. Richard Hodges and David Whitehouse argue for direct maritime communications between Iraq and China between c. 750-850. They note that Chinese ceramic imports at Sīrāf begin shortly before c. 750-75 and account for 0.1% of the assemblage, rising to 0.2% before c. 815-25; a peak of 0.7% is observable c. 815-25, falling slightly to 0.5% before c. 850.[153] Curiously, the peak period follows the ʿAbbāsid civil war (c. 811-13), and it might be thought that Sīrāf benefited from resultant political disturbances in Iraq.[154] The wider Gulf trade may therefore already have been retreating. ʿAbbāsid coin finds from Scandinavia drop off after c. 820, which Hodges & Whitehouse take as marking the first material signs of decline.[155] They argue that the vast building projects at Sāmarrāʾ (est. 832), extravagance of Caliphal largess, and expensive new army of *ghilmān* all helped to bankrupt the state by the accession of al-Muʿtaḍid in 892.[156] The Zanj slave uprising (c. 868-83) – during which the pre-eminent Gulf *entrepôt* of Baṣra was sacked in 871 – and Qarāmiṭa 'peasant revolt' (c. 873-907) further hastened the decline of Gulf trade.[157]

The Mediterranean economy began to grow in the ninth century after approximately three centuries of general stagnation.[158] Trade was stimulated by the foundation of the Aghlābid Emirate of Ifrīqīya (c. 800-909), which undertook the conquest of Sicily from 827 and entered into a profitable relationship with Amalfi, so that Qayrawān became the hub of Mediterranean commerce. A renewed Byzantine involvement in the

[153] Hodges & Whitehouse, 1983: 147.
[154] *Cf.* Waines, 1977: 299-301.
[155] Hodges & Whitehouse, 1983: 149.
[156] Hodges & Whitehouse, 1983: 156-57.: 156-57.
[157] Waines, 1977: 301-06.
[158] Hodges & Whitehouse, 1983; Wickham, 2004.

Adriatic was instigated by the Macedonian dynasty (c. 867-1056) and the Egyptian economy became more orientated towards the Mediterranean under the Ṭūlūnids (c. 868-905). Venice grew wealthy on the sale of Adriatic slaves to the eastern Mediterranean; an Alexandrian connection is evident both in the early cult of St. Menas and the theft of the remains of St. Mark in 828. At the western end of the Mediterranean, southern Spain under ʿAbd al-Raḥmān III (r. 912-61) of the Umayyad Caliphate of Cordoba became perhaps the most prosperous region of Europe. The Mediterranean economic recovery was therefore well advanced by the time the Fāṭimids established Cairo in 969, an event which in some sense completes the rise of the Mediterranean.

(ii) Deteriorating conditions in the Gulf coupled with opening opportunities in the Mediterranean prompted a Western flight of Iraqi-Iranian mercantile capital and expertise which transformed Red Sea trade. Historical sources attest to the activities of Iranian and Jewish mercantile communities in the Red Sea during the ninth and tenth centuries. With regards the Iranians, al-Muqaddasī observed that "the Persians are the predominant class (in Jedda)" and that "the majority of the people in Aden and Jedda are Persian yet their language is Arabic."[159] Ibn al-Mujāwir traces the origin of this community back to the pre-eminent port of the Gulf: "when Sīrāf was destroyed (by an earthquake in 977) the people of Sīrāf travelled about the shores of the ocean, and a tribe of them arrived (at Jedda)... and so they lived in Jedda."[160] Evidence for organised maritime trade between the Red Sea and Indian Ocean begins with the

[159] al-Muqaddasī, 79 (1906), trans. Collins, 2001: 72; 96 (1906), 82 (2001).
[160] Ibn al-Mujāwir, 43 (1951-54). For Sīrāf, see: Whitehouse, 1970; 1973.

much-quoted passage from Ibn Khurradādhbih (wr. 845) on the enigmatic Jewish merchants known as the Rādhānites:

"They speak Arabic, Persian, Greek, Frankish, Andalusian and Slavic, and they travel from the East to the West and from the West to the East, by land and sea. From the West, they carry servants, slave-girls, slave-boys, brocade, beaver skins, furs, sable, and swords. They sail from Firanja on the Western Sea, docking at al-Farāma (Pelusium). (From there) they carry their merchandise on their backs to al-Qulzum, between them it is twenty-five parasangs. Then they sail on the Eastern Sea from al-Qulzum to al-Jār and Jedda, passing from there to al-Sind, al-Hind (India) and al-Ṣīn (China). From al-Ṣīn, they bring back musk, aloe wood, camphor, cinnamon, and other commodities that are brought back from those parts. They return to al-Qulzum, they carry (their goods) to al-Farāma whence they sail on the Western Sea."[161]

The passage has aroused considerable interest and no small amount of controversy. Diverse origins for the Rādhānites have been proposed, including the Rhone valley in France (Lat. *Rodhanus*)[162] and city of Rayy in Iran,[163] while various Persian etymologies have been supplied: *rāh-dān*, 'knower of the way;'[164] *rahdānīya*, 'cloth merchants.'[165] None of these really stand up to close inspective, however. Moshe Gill argues instead for a straight-forward association with the town / region of Rādhān in the Sawād of

[161] Ibn Khurradādhbih, 153 (1889). Quoted by Silverstein, 2007b: 96.
[162] Rhone hypothesis. Heyd, 1879: 127; Simonsen, 1907: 141; Fischel, 1937: 31; Roth, 1966: 25; Lombard, 1971: 290.
[163] Rayy hypothesis. Katz, 1937; Jacobs, 1971.
[164] Courier (*Rāh-dān*) hypothesis. Reinaud, 1848: 58, n.1.
[165] Cloth-merchant hypothesis: De Goeje, 1879: 251; Dozy, 1927: 562b; Marqart, 1903: 24.

Baghdād, mentioned by a number of Arabic geographers.[166] Given that precisely this area had been the epicentre of the Iraqi-Iranian commercial expansion of the mid eighth century, Gill's argument seems circumstantially compelling. Indeed, the Jewish mercantile community had deep roots in the Persian Gulf. Theophylactus Simocatta testifies to an economically powerful Iranian Jewish community in the Sasanian period – "there was living in Persia a large number of the said race, who had abundant wealth... (earned) by trading in valuables"[167] – prompting enlightened speculation on the part of Goitein:

"The ancient Jewish merchants' company of the Rādhānites... by-passed Egypt, using for transit only the Isthmus which is at present cut through by the Suez Canal. So unimportant commercially was Egypt in their time that when we compare the sums which were handled by Jews in southern Persia and Iraq – recorded by the Muslim historians – with those appearing in the Geniza papers, we come to the conclusion that the really great Jewish wealth had its seat in the countries around the Persian Gulf."[168]

The engagement of the Jewish Rādhānite merchants in the commerce of the Red Sea therefore most likely belongs to the historic western movement of Iraqi-Iranian investment capital and mercantile expertise, as with the better evidenced careers of Iraqi-Iranian Jews such as Yaʿqūb b. Killīs and the Banū Tustar **[3.6.2] (iii)**.

[166] Rādhān hypotheis. Gill, 1974: 'The Land of the Rādhānites, i.e. Rādhān,' pp. 314-23.
[167] Theophlyact Simocatta, 140-41 (1986). Quoted by Silverstein, 2007b: 94.
[168] Goitein, 1955: 117-18.

(iii) Indian Ocean trade was stimulated by the expansion of Tamil kingdoms into the Bay of Bengal, especially under the medieval Cholas (c. 848-1279) of the Kaveri valley. The Chola empire was created by the conquest of the Tamilakam, Sri Lanka and Andhra Pradesh under Rajaraja I (r. 985-1014), and extended to include Bengal, Burma, Malaya and Sumatra by Rajendra I (r. 1012-44).[169] The Cholas despatched embassies to Cambodia and China as well as sponsoring a network of guilds spanning the Bay of Bengal.[170] An inscription dated 1055 from a Chola mercantile guild in Sumatra captures something of their confidence:

"Famed throughout the world... born to be wanderers over many countries, the earth as their sack, the eight regents at the points of the compass as the corner tassels, the serpent race as the cords, the betel pouch as a secret pocket, the horizon as their light... and by land routes and water routes penetrating into the regions of the six continents, with superior elephants, well-bred horses, large sapphires, moonstones, pearls, rubies, diamonds, lapis lazuli, onyx, topaz, carbuncles, coral, emeralds and various such articles: cardamoms, cloves, sandal, camphor, musk, saffron and other perfumes and drugs."[171]

Although this goes beyond the chronological limits of this thesis, certain of these commodities are known to have been exported from the Red Sea region, including especially emeralds from the Eastern Desert of Egypt **[5.1.3] (ii)**. It has been noted that the Fāṭimid and Chola dynasties were contemporaries and that the Geniza merchants

[169] Thapar, 2002: 364-67; Kulke & Rothermund, 2004: 122-27.
[170] Hall, 1978: 79-84.
[171] Nilakanta Sastri, 1932: 421-5. Quoted by Kulke & Rothermund, 2004: 126-27.

dealt extensively with the Tamil guilds.[172] Eleventh-century copper-plate charters record that one Issuppu Irappan (Joseph Raban) was granted tax exemptions and princely privileges in Cranganore;[173] numerous Geniza documents of Ben Yiju (fl. 1130-50), a business associate of the *wakīl al-tujjār* of Aden, deal with his life as a factory owner in Mangalore.[174] The division of the Indian Ocean between Fāṭimids in the Arabian Sea and Cholas in the Bay of Bengal drove the great expansion of trade in the eleventh century.[175]

The deeper origins of this mutually profitable division of Indian Ocean trade belong to the 'long' Late Antiquity, however. The later Pallavas (c. 575-897) of Kanchipuram were heavily involved in South-East Asian trade.[176] An inscription from the reign of the Pallava king Nandivarman III (r. 844-66) found at Takuapa in Thailand refers to a military camp and guild of merchants.[177] The Arabs appear to have been similarly involved in South India. Sulaymān al-Tājir (wr. 851) notes that Gulf merchants stopped at Quilon before making the voyage to Canton, and ninth-century Arabic inscriptions have been found in Kerala.[178] The Mappilas or Malabar Muslims further claim descent from Arab traders – particularly Yemenis from the Ḥaḍramawt – believed to have settled there in the eighth and ninth centuries.[179] The Fāṭimid / Chola Indian Ocean scene therefore marks a culmination of historic trends already apparent in the ninth century.

[172] Hall, 1978: 75; Chakrabarti, 2000: 44-49.
[173] Thapar, 2002: 369; Kulke & Rothermund, 2004: 126. Note that Cranganore has been associated with the Muziris of the *Periplus.*
[174] Margariti, 2004: 21; Goitein, 1980; Ghosh, 1994: 153-62, 174-79, 226-30, 241-45, 275-81, 295-305, 313-17, 324-28.
[175] Hall, 1985: 194-213; Kulke, 1999: 33; Hall, 2004: 218.
[176] Thapar, 2002: 328-33; Kulke & Rothermund, 2004: 105, 120-22.
[177] Sastri, 1949: 25-30. *Cf.* Kulke & Rothermund, 2004: 122; Guy, 2001: 292; Hall, 1978: 82-83.
[178] Sulaymān al-Tājir, 9 (1733); 38 (1989); Brown, 1956: 89.
[179] Dale, 1990: 157; Thapar, 2002: 332.

[6.3.2] Bourgeois Revolution

(i) The political framework for the expansion of Muslim commerce was provided by the pattern of princely particularism and dynastic aggrandisement which took shape during the fragmentation of the Caliphate. A number of local dynasties emerged in western Arabia over the course of the ninth and tenth centuries **[Fig. 5.01]**. The Ziyādids of Zabīd (c. 818-1018) established their hegemony throughout Yemen, a position gradually lost with the emergence of rival dynasties. First the difficult to control highlands fell away to the Yuʿfrids of Ṣanʿāʾ (c. 847-997) and Zaydī *imām*s of Ṣaʿda (c. 897-1962), and then, as the dynasty began to dissolve into internecine conflict, the northern Tihāma was lost to the Sulaymanids of ʿAththar (c. 960-1173).[180]

The Ḥijāz slipped from ʿAbbāsid control in fits and starts. Tribal unrest became an increasingly serious problem from the mid ninth century, with the Banū Sulaym and Ṭayy severely testing ʿAbbāsid control along the Darb Zubayda, which was effectively abandoned to its fate after al-Muqtadir (d. 932).[181] This already unstable and often violent situation was exacerbated by the infamous Qarāmiṭa of Baḥrayn (c. 900-78), who repeatedly raided the Ḥijāz and Bilād al-Shām, even at the peak of their power seizing the 'Black Stone' and setting up Ḥasāʾ as an alternative pilgrimage centre (c. 930-51).[182] The ʿAlids of the Ḥarāmayn had always been influential and at length

[180] Serjeant, 1988; Smith, 1995; Zarins & Zahrani, 1985: 69-70.
[181] Rashid, 1980b: 29-31; 47-58.
[182] al-Ṭabarī, iii, 2124 (1879-1901); Kennedy, 2004: 287-89; Rashid, 1980b: 53-57.

succeeded in establishing a local dynasty, the Mūsāwī Sharīfate of Mecca (c. 960-1061), which broadly accommodated Fāṭimid claims to the Caliphate.[183]

Most of these Arabian dynasties were of limited local importance. Only the Ziyādids appear to have had a more than local importance, controlling Aden and influencing Ethiopia, to the effect that they assumed a somewhat legendary quality in the narrative sources of the high middle ages. No contemporary account survives, so that Ziyādid Yemen remains poorly understood, a 'missing piece of the puzzle' with regards the early Islamic Red Sea. In Egypt, however, there emerged a series of powerful dynasties – Ṭūlūnids (c. 868-905), Ikhshīdids (c. 935-69) and Fāṭimids (c. 969-1171) – which transformed that country's standing in the Red Sea and beyond. For the first time since the Ptolemies, Egypt became the seat of a regional empire, even a contender for the Caliphate.[184] The Ṭūlūnids effectively controlled Bilād al-Shām, the Ikhshīdids projected their power into Nubia, and Fāṭimid influence reached from North Africa to Yemen. From the eleventh century, Fāṭimid power was such that client dynasties were installed in Yemen, the Ṣulayḥids of Ṣanʿāʾ (c. 1047-1138) and Zurayʿids of Aden (c. 1080-1173), and indeed in the Ḥijāz, for the Ṣulayḥids forcibly installed the Hawāshim Sharīfate (c. 1063-1200) in Mecca. At length, the Ayyūbids established an Egyptian-based empire including all these disparate elements, from Syria through the Ḥijāz to Yemen, with a much reduced Nubia to the south. Although this lies well beyond the scope of the thesis, the transformation of Egypt from a provincial to metropolitan centre of power began in the mid ninth century and was

[183] Wensinck & Bosworth, 1986: 148; Peters, 1994: 127.
[184] *Cf.* Bianquis, 1998: 86-90.

well in advance by the end of the tenth, emerging as the clear hegemon of the Red Sea basin.

The emergence of independent Muslim emirates during the ninth century had important ramifications for the development of commerce in the Red Sea. The first of these emirates – the Ziyādids of Yemen and Ṭūlūnids of Egypt – were established by ʿAbbāsid generals of broadly Iraqi extraction. Their respective attempts to reproduce the culture of ʿAbbāsid Iraq at opposite ends of the Red Sea resulted in a greater degree of regional integration, moving towards a shared courtly culture which facilitated commercial exchange. Both Ibn Ziyād and Ibn Ṭūlūn quoted the ʿAbbāsid architecture of power, so that circular plan of Baghdād re-appears at Zabīd and the spiral minarets of Sāmarrāʾ adorned al-Qaṭaʾiʿ. Whether this is interpreted as a claim to represent Caliphal authority or, otherwise, an attempt to appropriate it, the reference point remains ʿAbbāsid Iraq.

(ii) There is some evidence to suggest that a unitary commercial practice in the Red Sea grew up in the shadow of this ʿAbbāsid internationalism. The Cairo Geniza refers to a textile market near the old fortress of Babylon-in-Egypt known as the Qayṣārīya, which Goitein considers to be a survival from Roman times.[185] Goitein notes that this structure is always referred to with the definite article, indicative of a unique and well known location. The word later came to designate a market hall, and several such *qayṣārīya* are known from Mamlūk times. Other *qayṣārīya* are attested in Yemen, representing a southern diffusion of Egyptian commercial practices. A *qayṣārīya* at

[185] Goitein, 1967: 194; 1983: 28-29.

Zabīd is attested in the Geniza (fl. 1002-1266). Roxanna Margariti, in her thesis on *The Medieval Port of Aden and Indian Ocean Trade* (2004), describes it as "a terminus, storehouse, and marketplace for imported merchandise of all kinds."[186] Further *qayṣārīya* were built at Aden by the Ayyūbid *nāʾib* al-Zinjālī, and the Rasūlids are known to have built one outside Zabīd in the fourteenth century; whether or not these represent new builds or the renovation and restoration or early Islamic structures is unclear. Serjeant describes a ruined *qayṣārīya* next to the al-Ashāʿir mosque in Zabīd:

"Constructed in burned brick, it consists of a rectangular court entered by a massive arched tunnel, to the left of which are shops opening on to the street, the right flank of the *qayṣārīya* also consists of a row of shops. On the interior side facing the gate is a row of (probably) store chambers. Over the exterior arms of the arch on each side is a six-pointed star, and on the wall to the right of the arch is what may most nearly be described as an hour glass pattern; all these are done in relief in brick. I wondered if the latter might perhaps be a heraldic device. The building belongs to the *waqf*."[187]

There is not sufficient evidence to support a detailed discussion of the institutions and agents of commerce in the early Islamic Red Sea, yet something may still be extrapolated from the Geniza. A number of well known commercial districts in and around the Qaṣr al-Shamʿa in al-Fusṭāṭ are mentioned by the Mamlūk topographers and the Geniza, many of which were likely to have been already active by the end of

[186] Margriti, 2004: 140-1.
[187] Serjeant, 1988: 164. His description follows a visit made in 1986.

the late Roman period.[188] The Great Market of al-Fusṭāṭ lay in the Tujīb district immediately east of the old fortress of Babylon, connected by a road leading to the church of St. Sergius at its heart. Immediately south of the fortress lay the wharf accessed by the Iron Gate, from where the Great Market began and ran north-west into Tujīb. Another road led from St. Sergius through the north gate and up to the mosque of ʿAmr, which constituted the focal point of the prestigious Ahl al-Rāya district where luxury items and rare commodities could be bought. In addition to these principal commercial districts, a host of subsidiary institutions are attested. Certain of these were of Graeco-Roman origin and maintained into the Fāṭimid period.

The Dār Mānak was situated by the arsenal (*ṣināʿa*) and customs house (*maqs*) of al-Fusṭāṭ, therefore close to the waterfront where ships unloaded their produce. Goitein takes its unusual name as an Arabic approximation of the Greek *monach(os)*, monk, upon which basis he further equates the Dār Mānak with the pre-Fāṭimid Market of the Greeks.[189] The Dār Manak is not attested in the Geniza beyond the eleventh century, and while al-Makhzūmī refers to it in his discussion of Fāṭimid revenues, it was not thereafter known to the Mamlūk topographers.[190] When, exactly, it was built is unclear, though it is mentioned in connection with the massacre of merchants from Amalfi in 996, and a Market of the Greeks appears in a document dated 959.[191] Its proximity to the arsenal, allegedly founded on Rawḍa Island in c. 672-3,[192] may be relevant. Butler notes the presence of numerous churches and monasteries in the

[188] Goitein, iv, 1983: 12-14; 15-21; 26-31.
[189] Goitein, iv, 1983: 27.
[190] Goitein, iv, 1983: n. 134, p. 355.
[191] Goitein, iv, 1983: 16.
[192] al-Kindī, quoted by al-Qalqashandī, iii, 339 (1913-18); al-Maqrīzī, ii, 178 & 196 (1911-27); al-Suyūtī, ii, 264 (1882). Cited by Fahmy, 1950: 35.

vicinity, and it may be supposed that one of these monasteries (a Melkite one?) assumed a commercial role in response to its changing circumstances.[193] The market had ceased to function by the time of the Geniza and had become instead a toll station associated with export and transit trade, particularly flax and Indian spices.[194] Again there is no direct evidence, but the most likely date for the change in function would be Ibn Ṭūlūn's fortification of Rawḍa island in 876, as part of a general overhaul of the state apparatus.[195] Indeed, it might well be thought that his fortification of ʿAkka, Alexandria and Rawḍa was as much to control and tax the growing volume of maritime trade as it was to ward off ʿAbbāsid invasion.

The location of the flax market of Qālūs is unknown, but it must have lain somewhere at towards the outskirts of the city, for it included a large open space for the drying of dyed and tanned materials (*miṣṭah*).[196] Goitein argues for a Graeco-Roman origin based upon the name, another Arabic approximation of the Greek, viz. *kalōs* or welcome.

The Ṣaffayn or 'Two Rows' – which Goitein reasonably interprets as a colonnade – extended from the church of St. Sergius in the Qaṣr al-Shamʿa.[197] It is unclear whether it stretched to the east towards the Great Market or else to the north in the direction of the Ahl al-Rāya; if the later, then it may have fed directly into the Ṭarīq constituting the 'spine' of al-Fusṭāṭ. Either way, it was in a prime commercial location. The Ṣaffayan was an important centre for both the production and sale of textiles and hides; a dyer of purple cloth is known to have had his workshop there. Additionally,

[193] Butler, 1978: 243.
[194] Goitein, iv, 1983: 27.
[195] Butler, 1978: 242; Bianquis, 1998: 98.
[196] Goitein, i, 1967: 194; iv, 1983: 28-29.
[197] Goitein, i, 1967: 194; iv, 1983: 28-29.

repeated references to 'the accounts of the Ṣaffayn' led Goitein to the conclusion that it was also a focal point for various agents and bankers. References to the Ṣaffayn in the Geniza end with the Ayyūbid material and the site is not mentioned by the Mamlūk topographers.

(iii) The establishment of unitary commercial practice and a shared courtly culture at opposite ends of the Red Sea in the course of the ninth century was conducive to mercantile activity, as were the new opportunities for partnership or patronage afforded by the vigorous *étatisme* of the *amīr*s. These opportunities were enthusiastically embraced by Iraqi-Iranian merchants, fleeing the deteriorating political and economic conditions in Iraq and the Gulf. Something of the historic western movement of investment capital and mercantile expertise can be evidenced with the careers of a number of individuals, who first emigrated to Egypt in the generation following the restoration of ʿAbbāsid authority in Yemen and Egypt, and indeed continued to do so into the first century of Fāṭimid rule (c. 969-1060s).

Yūsuf b. Ibrāhīm had been a courtier at the ʿAbbāsid court in Baghdād and established a flax dynasty at Ahnās in the 'flax belt' of the Lower Ṣaʿīd.[198] He appears in the land registers of 844, reproduced by Ibn al-Dāya (wr. 905), as a land-contractor; a papyrus receipt further lists taxes paid on the estate.[199] His son, Aḥmad b. Yūsuf, appears to have significantly expanded the family land-holdings. In addition to the Ahnās estates, he owned land at al-Maḥalla, and had business agents in Tinnīs, where the

[198] Ibn al-Dāya, 204 (1924); Ibn Abī Uṣaybiʿa, 187-201 (1965). Cited and discussed by Frantz-Murphy, 1981: 'Quasi-Officials,' pp. 282-85.
[199] *Papyri Schott-Reinhardt an der Universitäts bibliothek Heidelberg*, 251. Cited by Frantz-Murphy, 1981: 283, n. 28.

state *ṭirāz* factories were located.[200] The wealth of this flax dynasty was immense, if the cited figures are to be believed. Ibn Yūsuf was once short of 200 *dīnār*s owed tax, which given a standard land tax of 10-20% suggests an annual income of thousands of *dīnār*s.[201] Another textile tycoon was Maʿmar al-Jawharī, more generally known as a renowned international financier with offices in Iraq and Egypt as well as the banker of the Ṭūlūnids.[202]

Aḥmad b. Ibrāhīm al-Mādharāʾī was from a Persian family originating outside of Wāsiṭ in Iraq. He arrived in al-Fusṭāṭ with Ibn Ṭūlūn and was appointed governor of finances in Egypt and Syria between c. 879-84, and established a dynasty of high ranking administrators and merchants. The fullest treatment of the Mādharāʾī dynasty appears in Gottschalk's *Die Madaraijjum* (1931). Goitein considered that they held all but supreme power through much of the tenth century.[203]

Yaʿqūb b. Killīs[204] was born into a mercantile Jewish family in Baghdād in 930, thereafter moving to al-Ramla in his minority, where he eventually attained the prestigious position of the merchant's representative (*wakīl al-tujjār*) for the local Jewish community. He subsequently re-located to al-Fusṭāṭ; Ibn Khallikān provides the date 942-3, though this date seems too early for the Palestinian career detailed by al-Maqrīzī.[205] At any rate, his mercantile activity continued apace and he became a leading supplier to Kāfūr, who paid him with requisitions from rural estates

[200] Ibn al-Dāya, 37, 41, 50 (1924). For Maḥalla, see Goitein, i, 1967: 349. For Tinnīs, Serjeant, 1948: 'Part I – The Tinnīs-Damietta Group,' pp. 91-100.
[201] Ibn al-Dāya, 50 (1924). The estimate of annual income is from Frantz-Murphy, 1981: 283.
[202] Frantz-Murphy, 1981: 281.
[203] Bianquis, 1998: 97; Goitein, 1957: 601, cf. n. 85.
[204] Fischel, 1937: 45-68; Bianquis, 1998: 117; Sanders, 1998: 162.
[205] Ibn Asākir in Ibn Khallikān, ii, 440, 442 (1843-71); al-Maqrīzī, ii, 442 (1911-27).

necessitating his frequent presence in the countryside. It was this agrarian expertise which lead to his elevation. He was duly appointed vizier by Kāfūr, a position which required his conversion to Sunnī Islam, only then for Kāfūr to die and Ibn Killīs be briefly imprisoned in the ensuing squabble for power. Upon release he left Ikhshīdid Egypt for Fāṭimid Ifrīqiya, returning in triumph in the entourage of al-Muʿizz (r. 953-75), who in 973 entrusted Ibn Killīs to oversee a far-reaching restructuring of the land-tax (*kharāj*). By the time he died, in al-Fusṭāṭ in 990, he had become one of the most powerful men of state, and the agricultural wealth of Fāṭimid Egypt has often been attributed to his success as a reformer.

The Banū Sahl of Tustar[206] were two Jewish brothers who are first heard of in the reign of the Fāṭimid al-Ḥākim (r. 996-1021), and who maintained an important banking and commercial house under al-Ẓahir (r. 1021-36) and al-Mustanṣir (r. 1036-94). Indeed, Abū Saʿd Ibrāhīm b. Sahl al-Tustarī was a favourite of al-Ẓahir, and sold him the Black concubine who was to be the mother of al-Mustanṣir. The *nisba* indicates a familial association with Tustar, referring most likely to the south Iranian town of that name, or else the Tustar quarter of Baghdād.[207] Fischel notes that Tustar was known for its large Jewish mercantile community, and suggests that the origins of the family's wealth lay in Iran.[208] By all accounts, the brothers enjoyed close relations with Iraqi merchants throughout their remarkable career, which effectively served to help manage the move of Iraqi-Iranian capital to Egypt.

[206] Fischel, 1937: 68-89; Gill, 1981.
[207] al-Maqrīzī, i, 424 (1911-27).
[208] Goitein, 1955: 117-18.

(iv) The westwards flight of Iraqi-Iranian investment capital and mercantile expertise was not only of short-term benefit to the Red Sea economy, but furthered sustainable long-term growth in the region by the ensuring the diffusion of a commercial culture associated with the 'bourgeois revolution' of Iraq and Iran. In his classic paper entitled *The Rise of the Near-Eastern Bourgeoisie in Early Islamic Times* (1957), Goitein traces the emergence of a mercantile class back into eighth-century Iraq, to the *Kitāb al-Kasb* ('On Earning') of Muḥammad b. Ḥasan al-Shaybānī (d. 804).[209] This, he believed, represents an Islamic apology for commerce, the need for which implies the existence of a mercantile *milieu*, something quite different from the mere existence of merchants:

"This class developed slowly during the first hundred and fifty years of the Muslim era, emerged into the full light of history at the end of the second, became socially 'admitted' during the third and exerted itself as the most socio-economic factor during the fourth."[210]

The origins of the early Islamic bourgeoisie lie in the foundation of Baghdād and the expansion of Indian Ocean trade from the mid eighth century galvanised this trend and led to the creation of a mercantile *milieu.* Although it would be unwise to be too categorical, it would appear that this bourgeoisie was essentially an Iraqi-Iranian phenomenon. Mesopotamia and Susiana had since remotest antiquity developed in parallel, so that Babylon became the Achaemenid administrative capital, and after it Ctesiphon the Partho-Sasanian seat of empire. Baghdād (est. 764), as is well known, became the heir to this millennial Iraqi-Iranian legacy, so that the ʿAbbāsid dynasty

[209] Goitein, 1957: 586-90.
[210] Goitein, 1957: 586-90.

was duly percolated by Iranian tradition and culture. Indeed the absorption of the old Sasanian gentry (*dihqān*s) of the Sawād into the rapidly expanding administrative apparatus of the Caliphal capital represents an importance contribution to the 'bourgeois revolution.'[211]

There is little by way of strong evidence for commercial activity in the Red Sea basin at this time; al-Fusṭāṭ seems to have been a bastion for a rather atavistic Arab chauvinism than a crucible of cosmopolitan commerce. It is only under the Ṭūlūnids that a mercantile bourgeoisie may be identified in Egypt, and when it appears in the narrative sources and documentary evidence, it does so suddenly and wholly formed. This raises the possibility that the economic systems and social mores pertaining to the mercantile bourgeoisie of Iraq were introduced wholesale to Egypt by the Iraqi venture capitalists in the tow of Ibn Ṭūlūn in particular. There was, therefore, no steadily increasing volume of commerce informing incremental social transformations between the eighth and ninth centuries. The western diffusion of the Iraq-Iranian 'bourgeois revolution' preceded the expansion of Muslim commerce in the Red Sea basin, and represents a foreign introduction rather than an indigenous development.

[211] *Cf.* Bulliet, 1972.

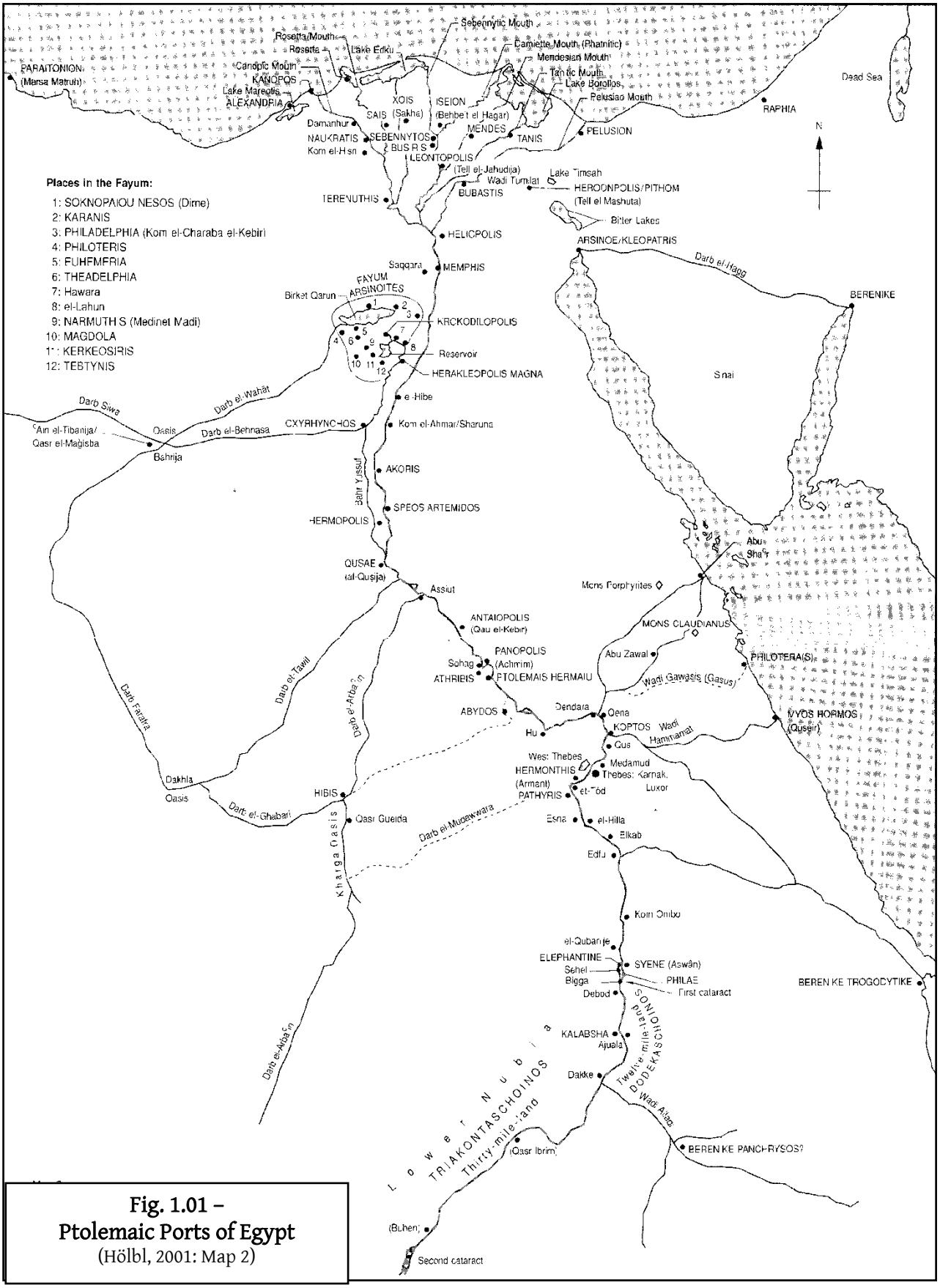


Fig. 1.01 –
Ptolemaic Ports of Egypt
(Hölbl, 2001: Map 2)

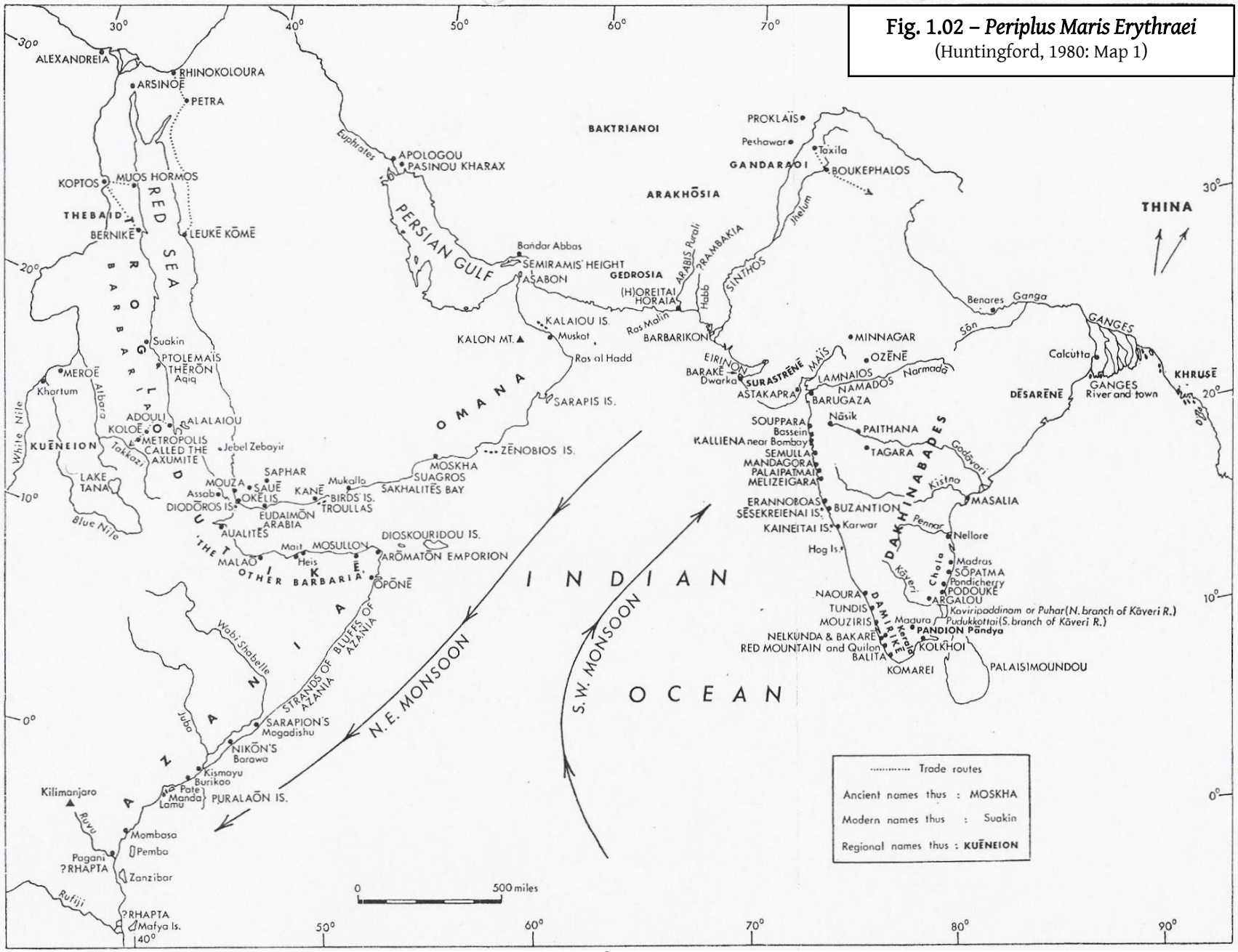


Fig. 1.02 – *Periplus Maris Erythraei*
(Huntingford, 1980: Map 1)
ALEXANDREIA
RHINOKOLOURA
ARSINOE
PETRA
KOPTOS
MUOS HORMOS
THEBAID
BERNIKE
LEUKE KOME
RED SEA
BARBARIA
Suakin
PTOLEMAIS THERON
Aqiq
MEROE
Khartum
White Nile
Atbara
ADOULI
KOLOE
METROPOLIS CALLED THE AXUMITE
ALALAIOU
KUENEION
Takkaze
Jebel Zebayir
LAKE TANA
Blue Nile
SAPHAR
MOUZA
SAUE
Assab
OKELIS
KANE
Mukalla
BIRDS IS.
TROULLAS
DIODOROS IS.
EUDAIMON ARABIA
AUALITES
MOSKHA
SUAGROS
SAKHALITES BAY
ZENOBIOS IS.
SARAPIS IS.
OMANA
Ras al Hadd
KALON MT.
Muskat
KALAIOU IS.
Bandar Abbas
SEMIRAMIS' HEIGHT
ASABON
PERSIAN GULF
Euphrates
APOLOGOU
PASINOU KHARAX
BAKTRIANOI
ARAKHOSIA
GEDROSIA
(H)OREITAI HORAIA
Ras Malin
BARBARIKON
Habb
ARABIS Purali
PRAMBAKIA
SINTHOS
Jhelum
PROKLAIS
Peshawar
Taxila
GANDARAOI
BOUKEPHALOS
THINA
Benares
Ganga
Son
GANGES
Calcutta
GANGES River and town
KHRUSE
DESARENE
MINNAGAR
OZENE
EIRINON
BARAKE
Dwarka
SURASTRENE
MAIS
LAMNAIOS
NAMADOS
Narmada
ASTAKAPRA
BARUGAZA
SOUPPARA
Bassein
KALLIENA near Bombay
SEMULLA
MANDAGORA
PALAIPATMAI
MELIZEIGARA
Nasik
PAITHANA
TAGARA
Godavari
DAKHINABADES
Kistna
MASALIA
ERANNOBOAS
SESEKREIENAI IS.
KAINEITAI IS.
BUZANTION
Karwar
Penner
Nellore
Hog Is
Madras
SOPATMA
Pondicherry
PODOUKE
ARGALOU
Chola
Kaveri
Kaviripaddinam or Puhar (N. branch of Kaveri R.)
Pudukkottai (S. branch of Kaveri R.)
NAOURA
TUNDIS
MOUZIRIS
Magura
PANDION Pandya
Korkai
Tamraparni
NELKUNDA & BAKARE
RED MOUNTAIN and Quilon
BALITA
KOLKHOI
KOMAREI
PALAISIMOUNDOU
INDIAN OCEAN
N.E. MONSOON
S.W. MONSOON
DIOSKOURIDOU IS.
AROMATON EMPORION
OPONE
MOSULLON
Mait
Heis
MALAO
'THE OTHER BARBARIA'
BLUFFS OF AZANIA
STRANDS OF AZANIA
Webi Shabelle
Juba
SARAPION'S
Mogadishu
NIKON'S
Barawa
Kismayu
Burikao
Pate
Manda
Lamu
PURALAON IS.
AZANIA
Kilimanjaro
Ruvu
Mombasa
Pemba
Pagani
?RHAPTA
Zanzibar
Rufiji
?RHAPTA
Mafya Is.
Trade routes
Ancient names thus : MOSKHA
Modern names thus : Suakin
Regional names thus : KUENEION
0
500 miles
30°
40°
50°
60°
70°
80°
90°
20°
10°
0°

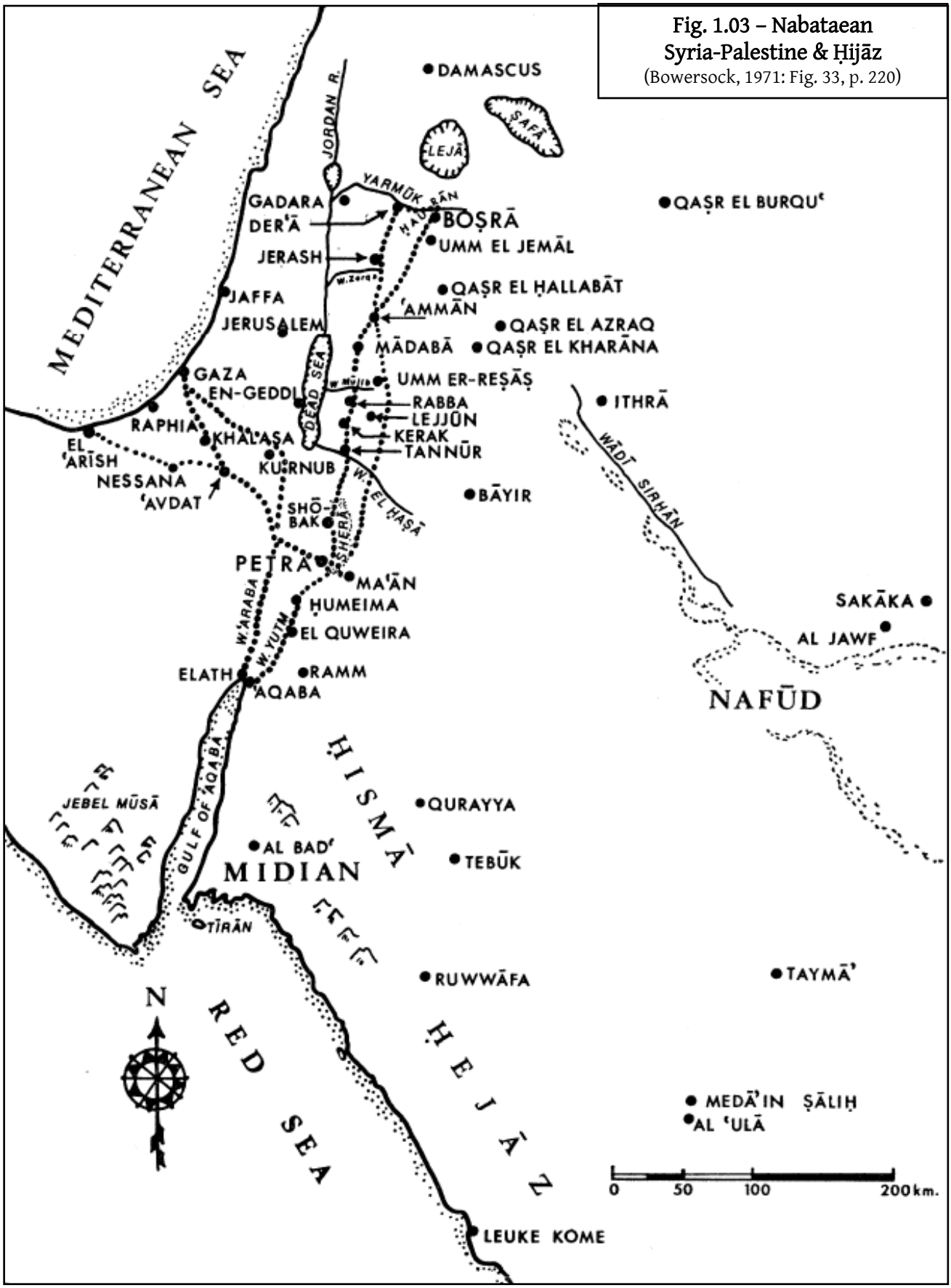


Fig. 1.03 – Nabataean Syria-Palestine & Ḥijāz
(Bowersock, 1971: Fig. 33, p. 220)

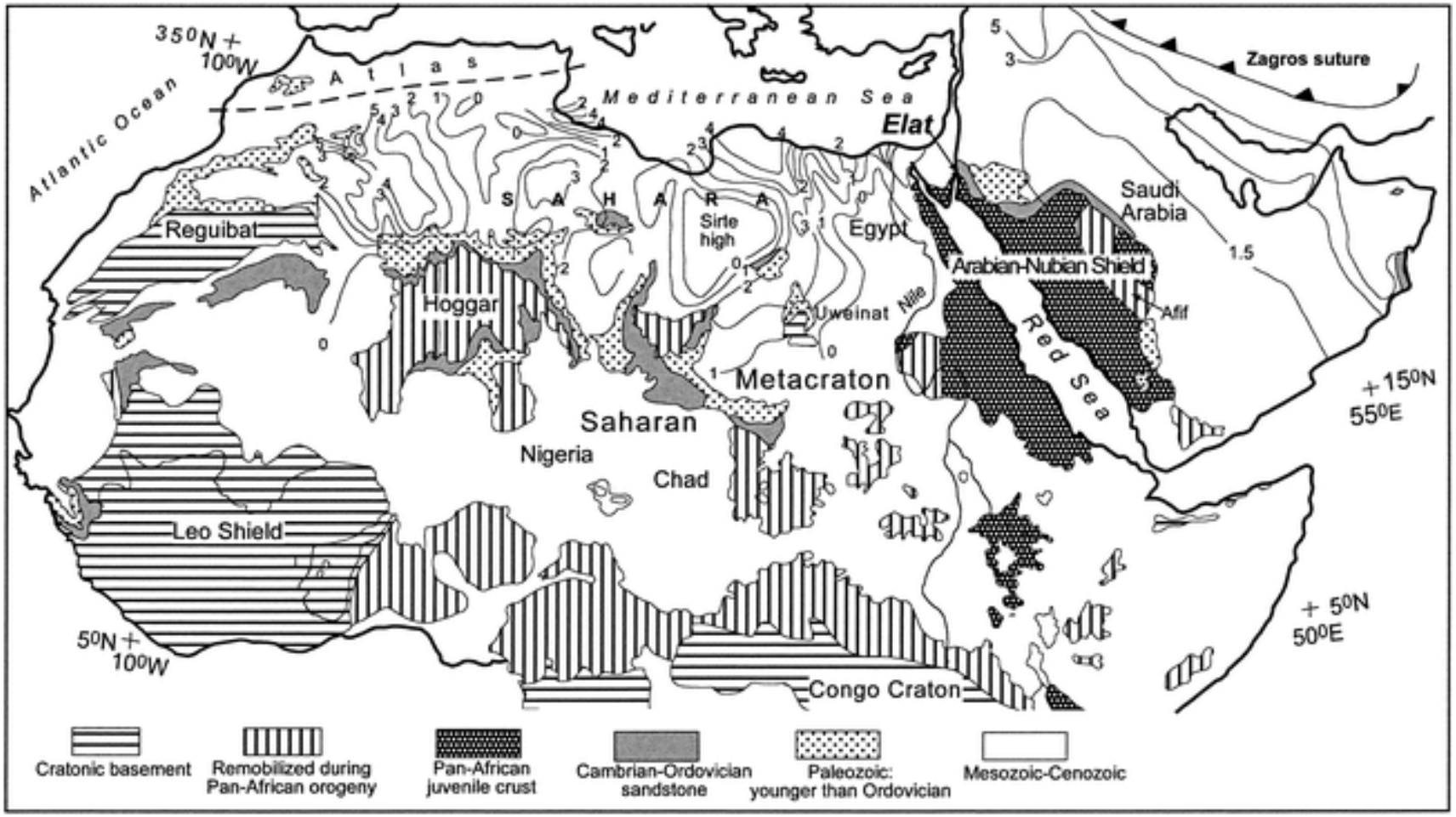
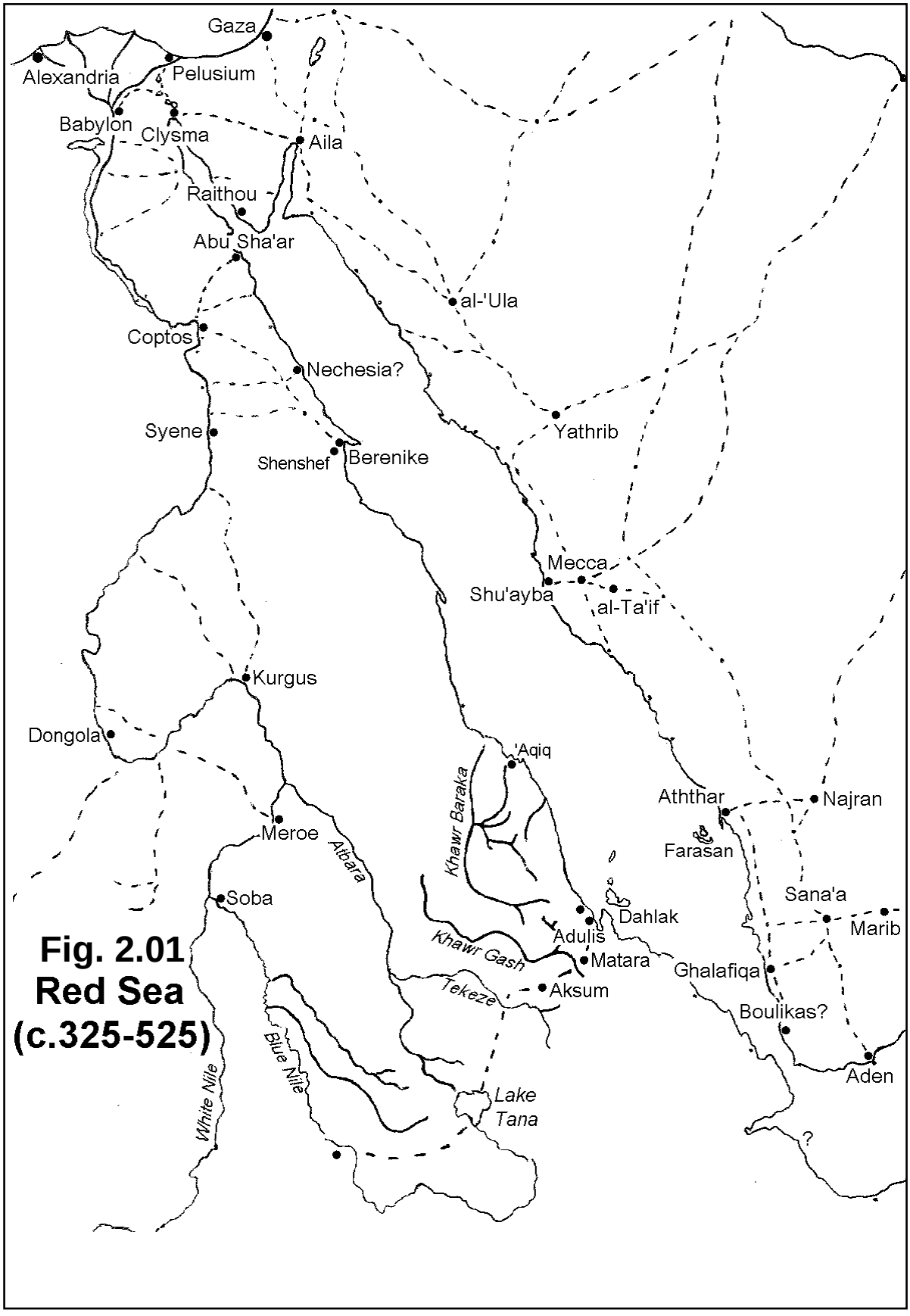


Fig. 1.04 – The Arabian-Nubian Shield (ANS)
(Avigad *et al*, 2003: Fig. 1, pp. 228)

Figures 2. The Late Roman Erythra Thalassa (c. 325-525)



Figures 2. The Late Roman Erythra Thalassa (c. 325-525)

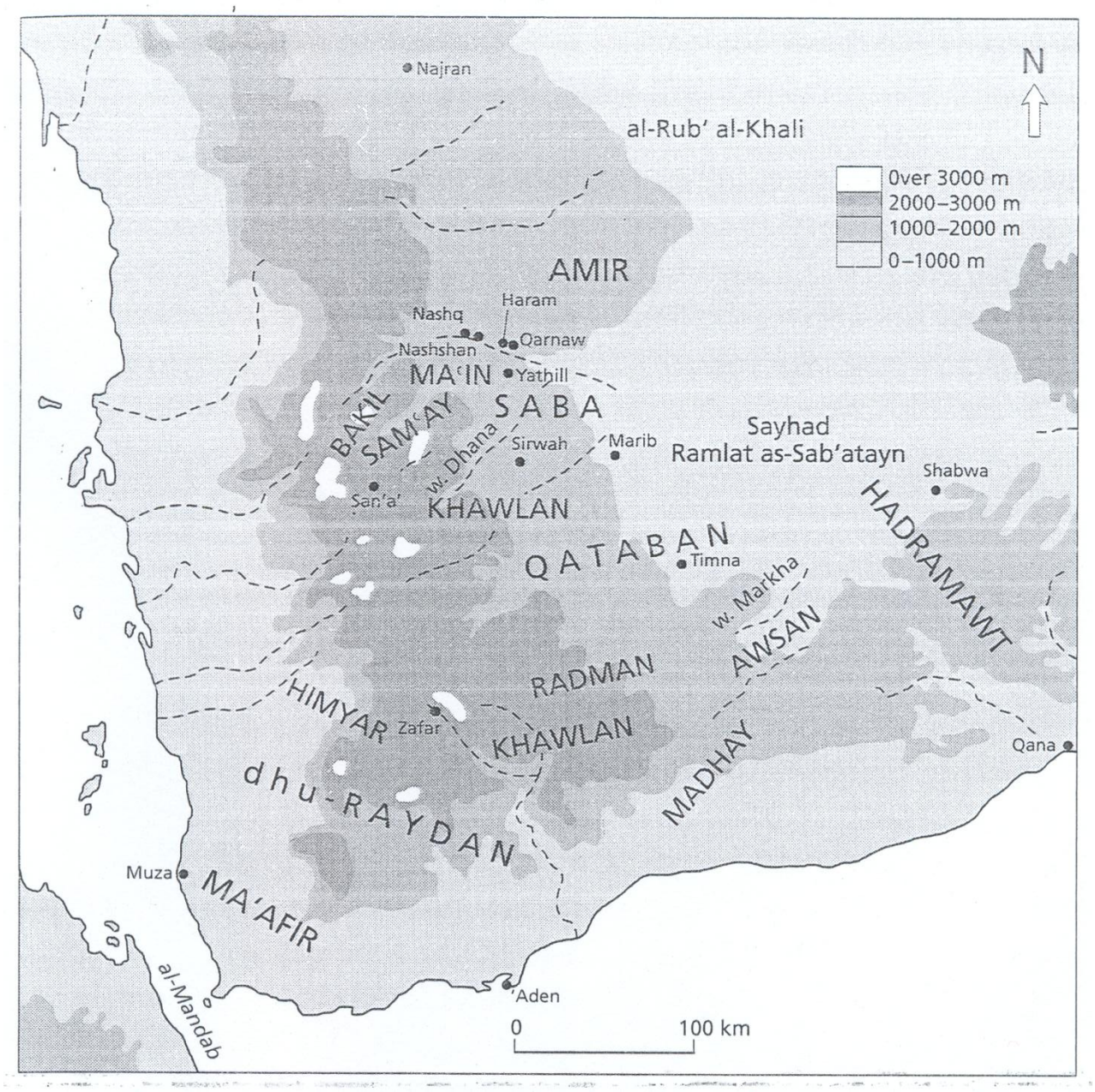


Fig. 2.02 – Pre-Islamic Kingdoms of Yemen
(Hoyland, 2001: Map 3, p. 37)

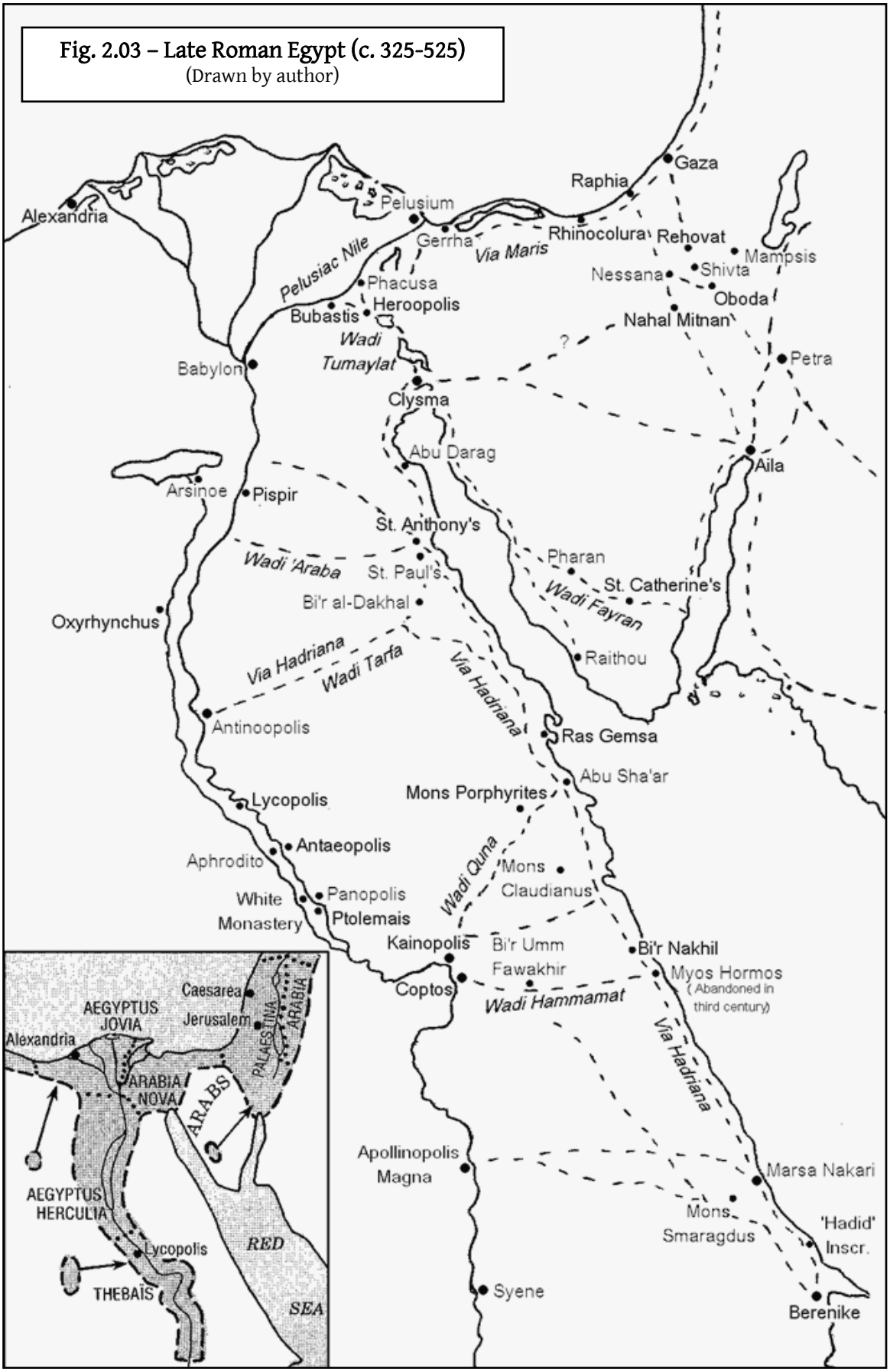


Fig. 2.03 – Late Roman Egypt (c. 325-525)
(Drawn by author)
Alexandria
Pelusium
Gaza
Raphia
Rhinocolura
Rehovat
Mampsis
Shivta
Nessana
Oboda
Nahal Mitnan
Petra
Gerrha
Via Maris
Pelusiac Nile
Phacusa
Heroopolis
Bubastis
Wadi Tumaylat
Babylon
Clysma
Abu Darag
Aila
Arsinoe
Pispir
St. Anthony's
Wadi 'Araba
St. Paul's
Pharan
St. Catherine's
Wadi Fayran
Bi'r al-Dakhal
Oxyrhynchus
Raithou
Via Hadriana
Wadi Tarfa
Antinoopolis
Ras Gemsa
Abu Sha'ar
Mons Porphyrites
Lycopolis
Antaeopolis
Aphrodito
Wadi Quna
Mons Claudianus
White Monastery
Panopolis
Ptolemais
Kainopolis
Bi'r Umm Fawakhir
Bi'r Nakhil
Myos Hormos
(Abandoned in third century)
Coptos
Wadi Hammamat
Via Hadriana
Apollinopolis Magna
Marsa Nakari
Mons Smaragdus
'Hadid' Inscr.
Syene
Berenike
Caesarea
AEGYPTUS JOVIA
Jerusalem
PALAESTINA
ARABIA
Alexandria
ARABIA NOVA
ARABS
AEGYPTUS HERCULIA
Lycopolis
RED SEA
THEBAIS

Figures 2. The Late Roman Erythra Thalassa (c. 325-525)

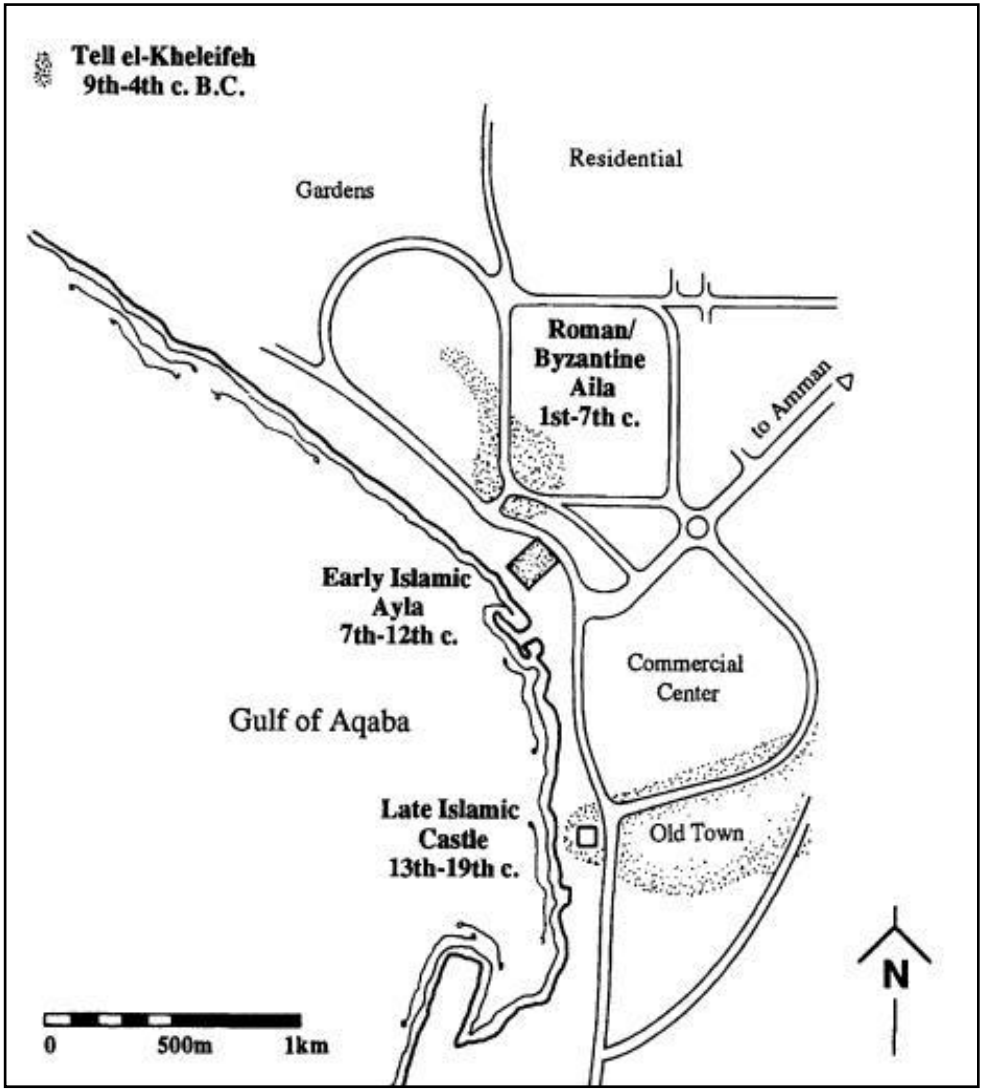


Fig. 2.04 – Plan of Aqaba and Aila
(Parker, 1997: Fig. 2, p. 23)

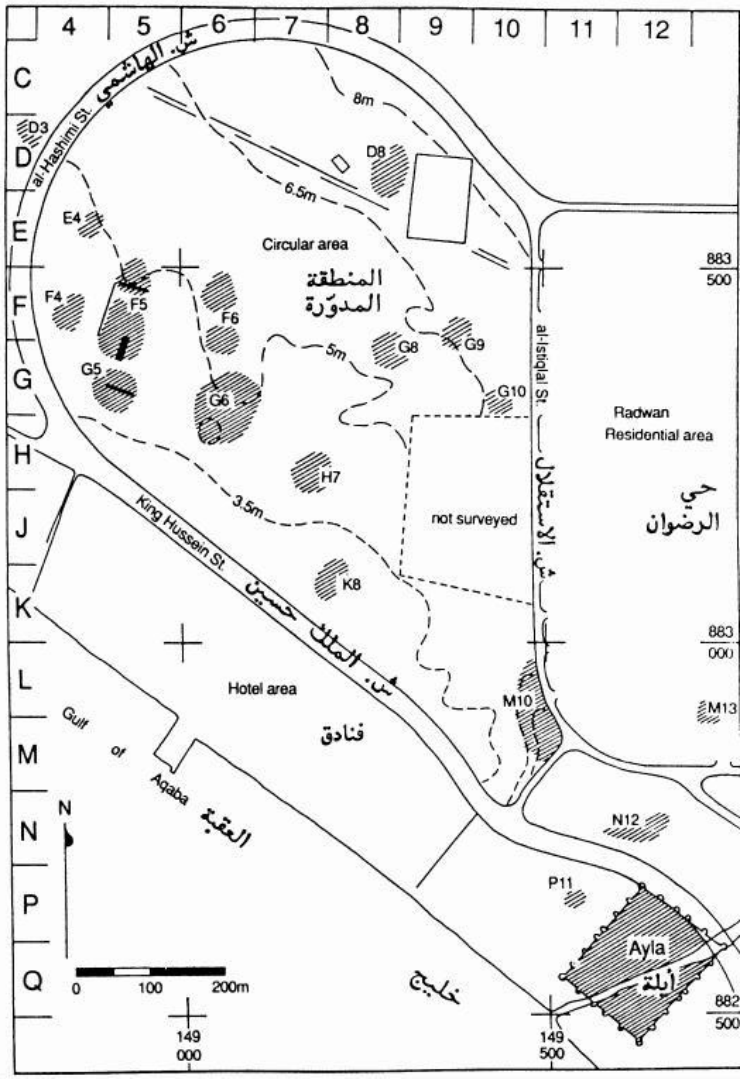


Fig. 2.05 – Plan of Roman Aila
(Parker, 1997: Fig. 3, p. 25)

Figures 2. The Late Roman Erythra Thalassa (c. 325-525)

Fig. 2.06 – Wādī Faynān

(Barker *et al*, 2007: Fig. 10.9, p. 314)

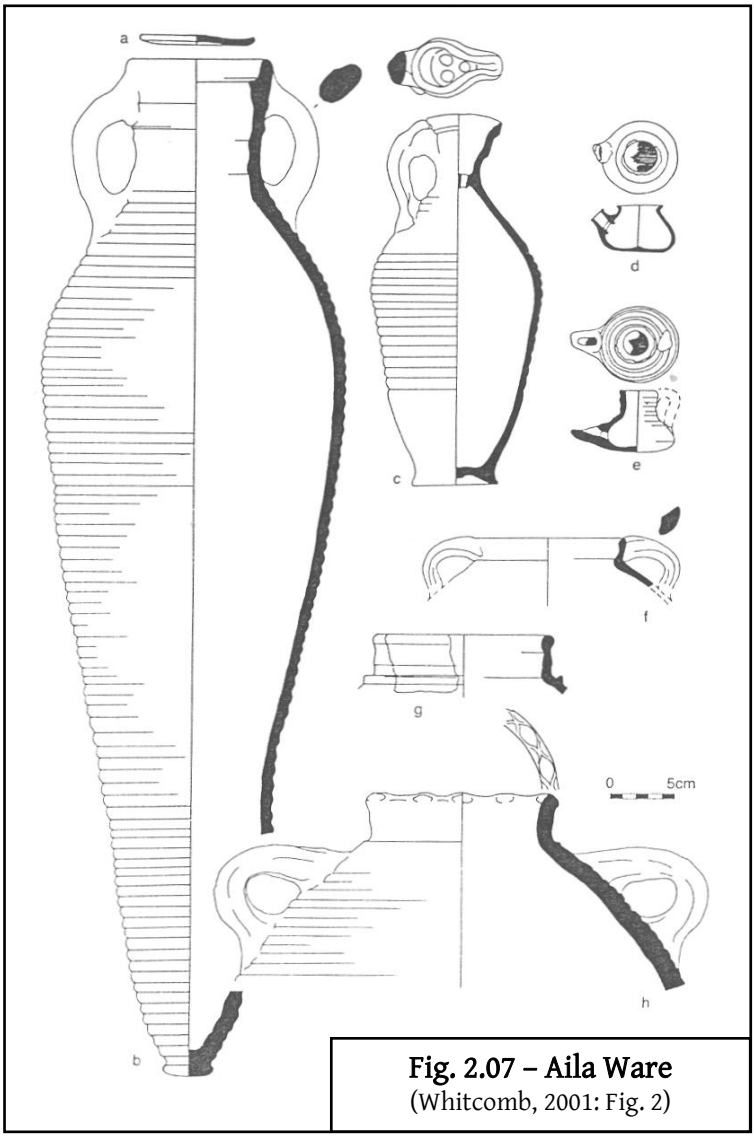


Fig. 2.07 – Aila Ware
(Whitcomb, 2001: Fig. 2)

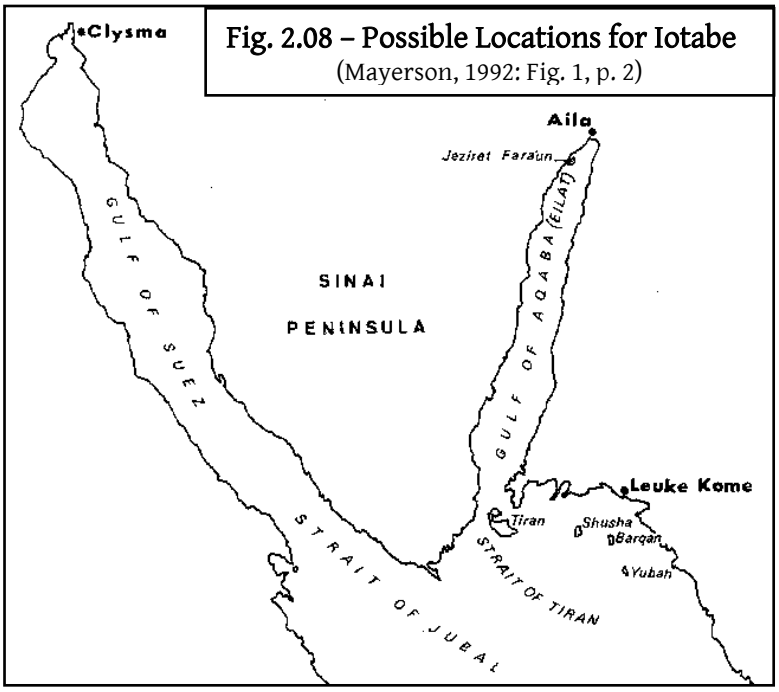


Fig. 2.08 – Possible Locations for Iotabe
(Mayerson, 1992: Fig. 1, p. 2)

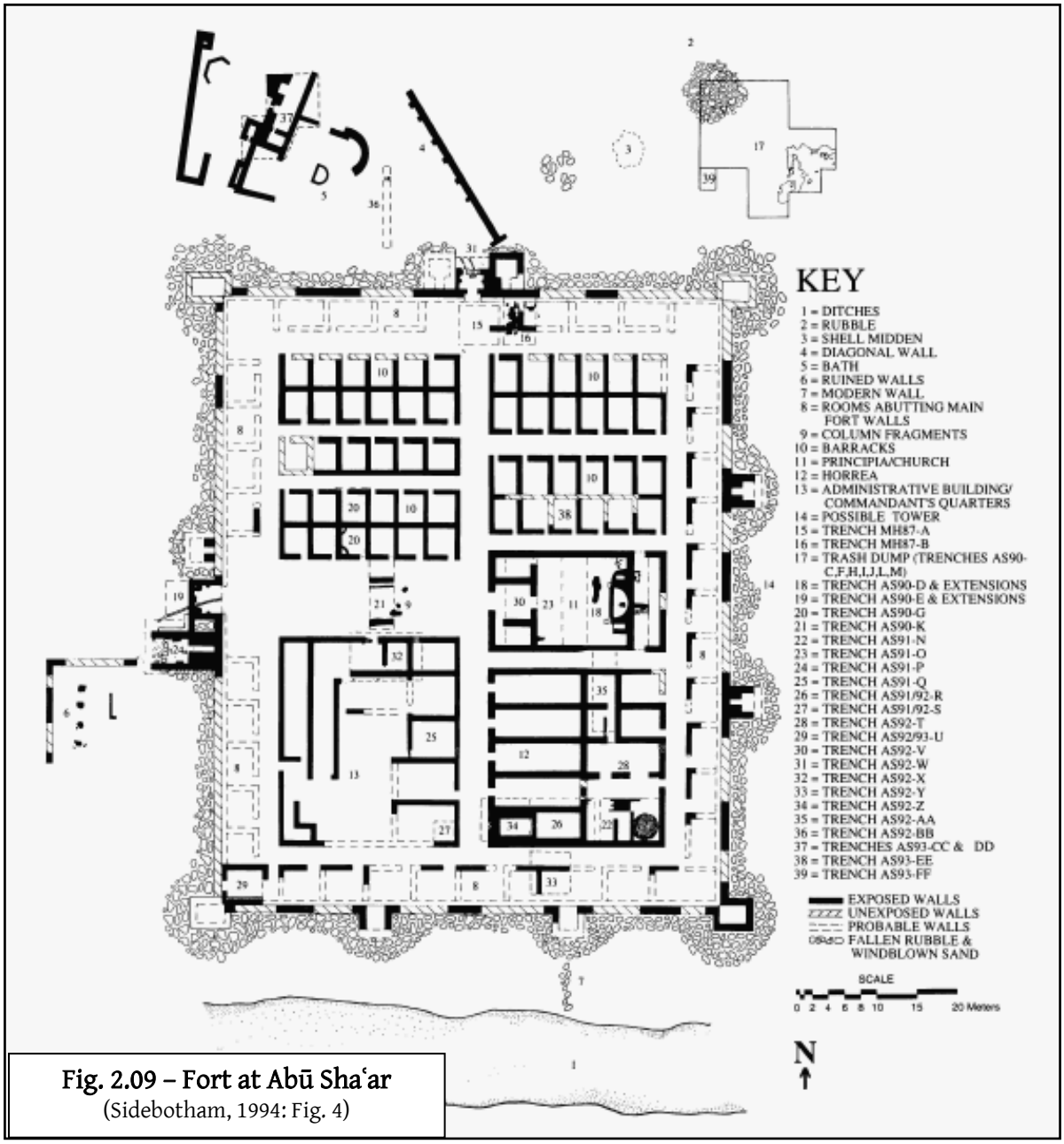
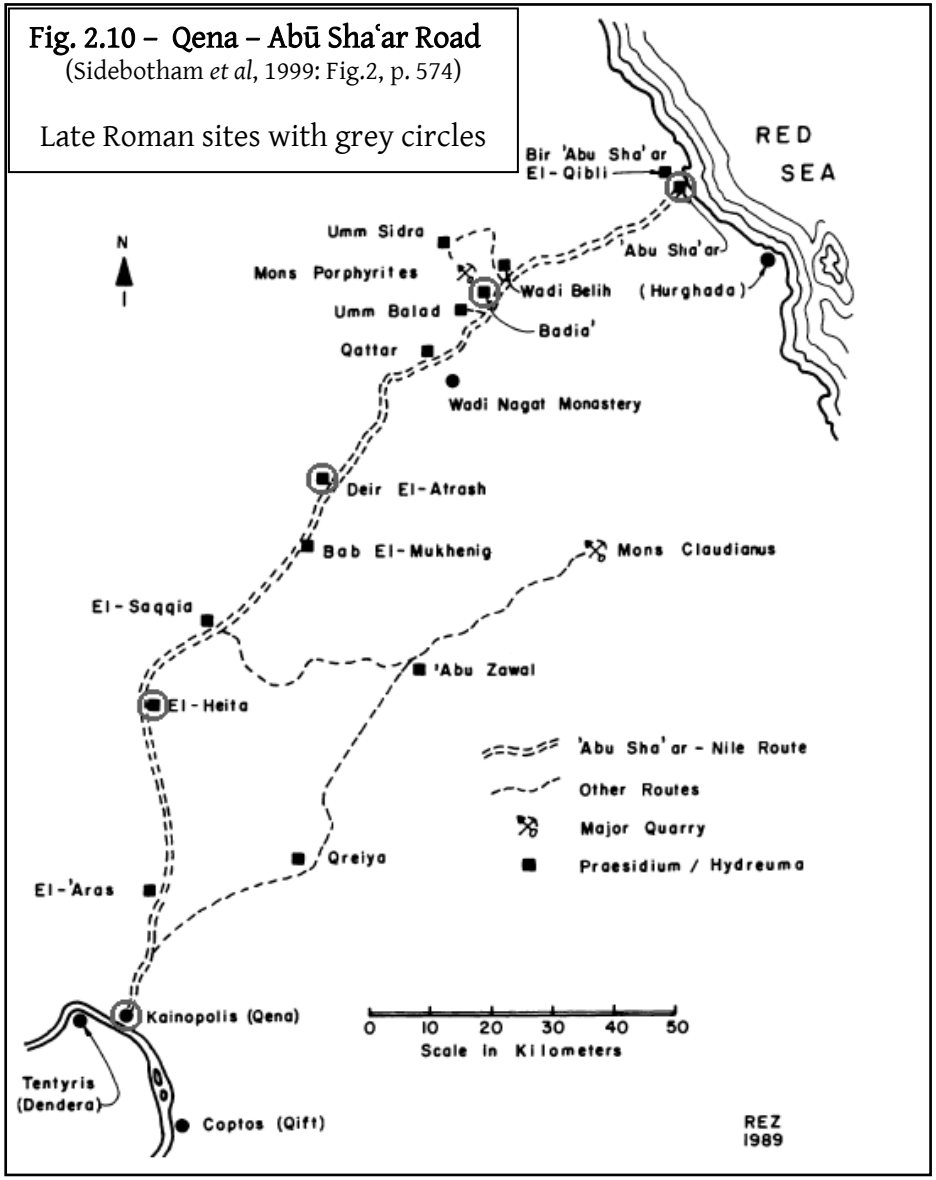


Fig. 2.09 – Fort at Abū Shaʿar
(Sidebotham, 1994: Fig. 4)

Fig. 2.10 – Qena – Abū Shaʿar Road
(Sidebotham *et al*, 1999: Fig.2, p. 574)

Late Roman sites with grey circles



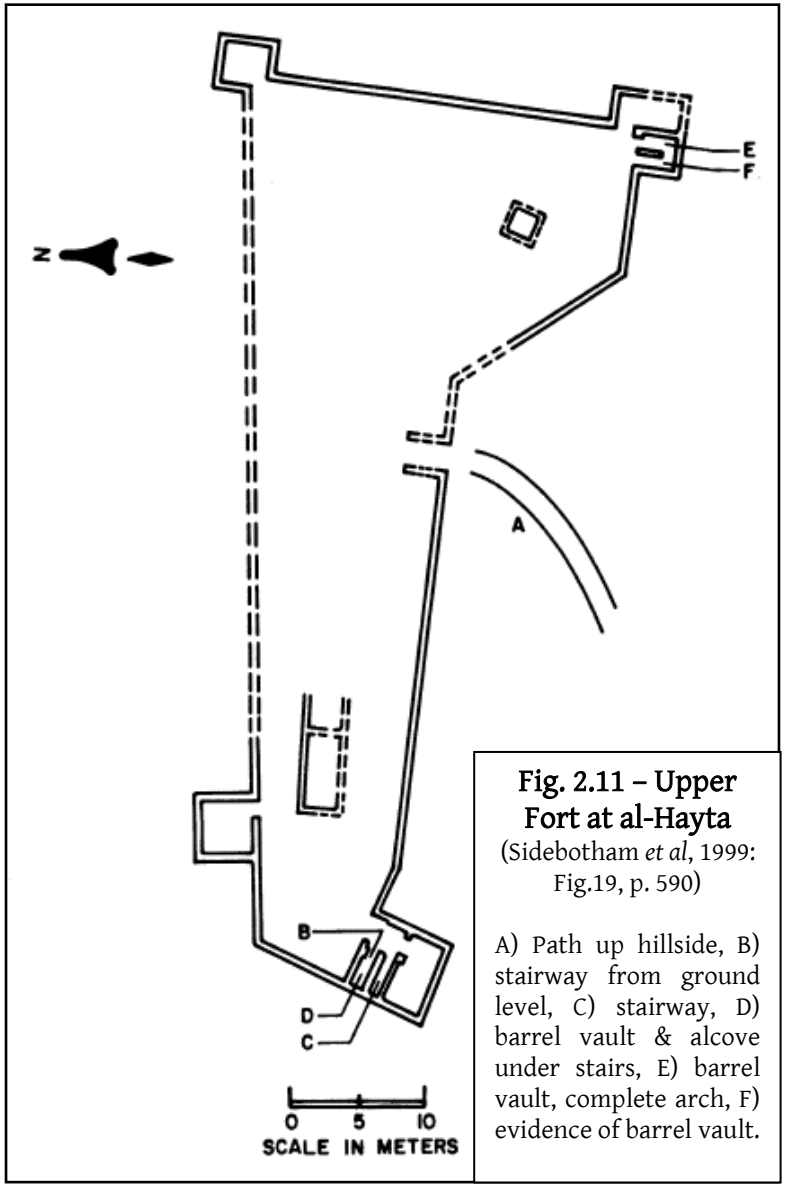


Fig. 2.11 – Upper Fort at al-Hayta
(Sidebotham *et al*, 1999: Fig.19, p. 590)

A) Path up hillside, B) stairway from ground level, C) stairway, D) barrel vault & alcove under stairs, E) barrel vault, complete arch, F) evidence of barrel vault.

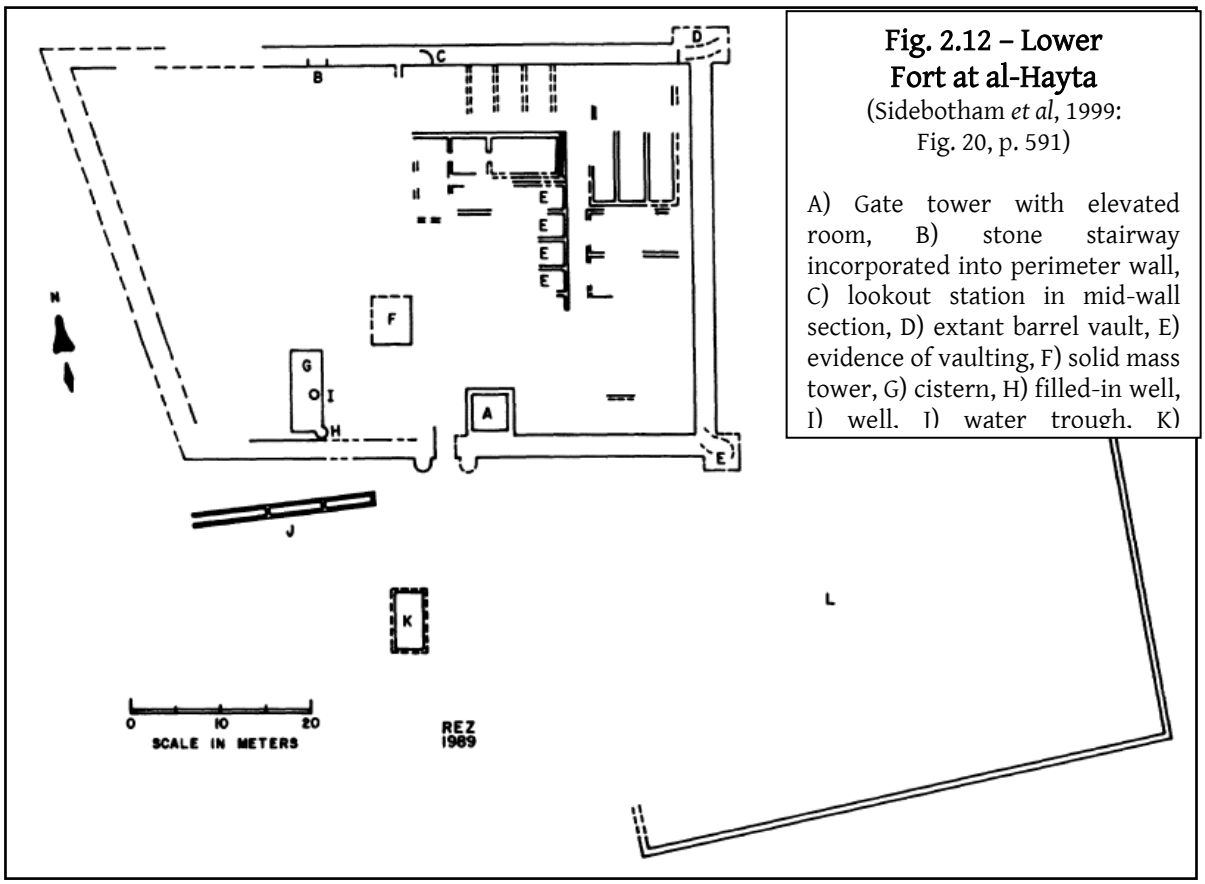
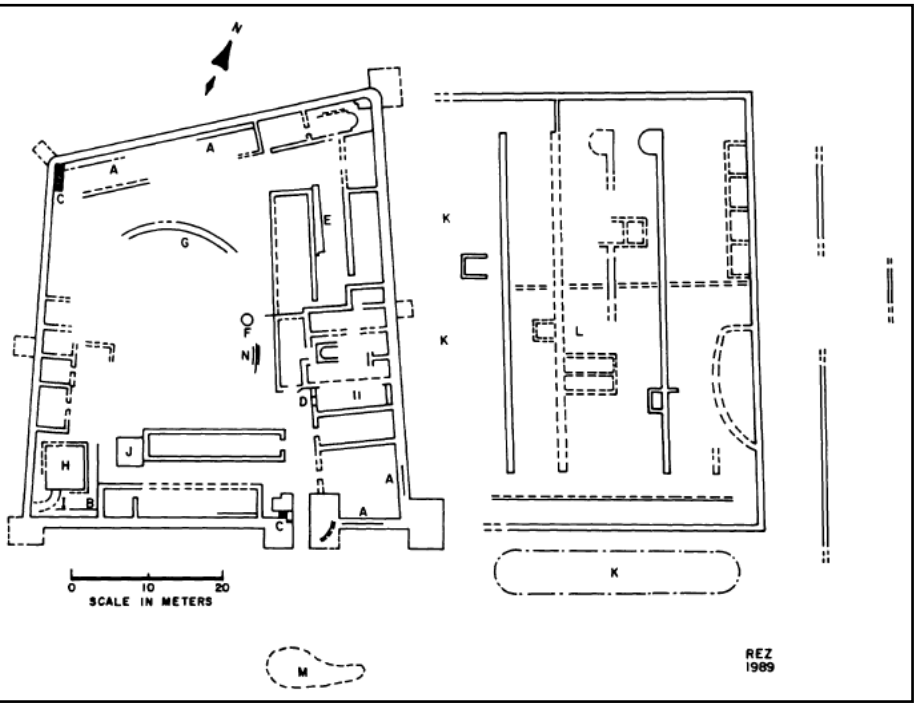


Fig. 2.12 – Lower Fort at al-Hayta
(Sidebotham *et al*, 1999: Fig. 20, p. 591)

A) Gate tower with elevated room, B) stone stairway incorporated into perimeter wall, C) lookout station in mid-wall section, D) extant barrel vault, E) evidence of vaulting, F) solid mass tower, G) cistern, H) filled-in well, I) well, J) water trough, K)

Fig. 2.13 – Dayr al-ʿAtrāsh
(Sidebotham *et al*, 1999: Fig. 13, p. 584)

A) Stone parapet, B) stone parapet filled with mud brick, C) stairs, D) blocked arch, E) bench, F) brick-lined well, G) retaining wall for well depression, H) cistern, I) mud brick platforms, J) massive mud brick towers, K) scattered stones, L) animal lines, M) trash dump, and N) water channel.



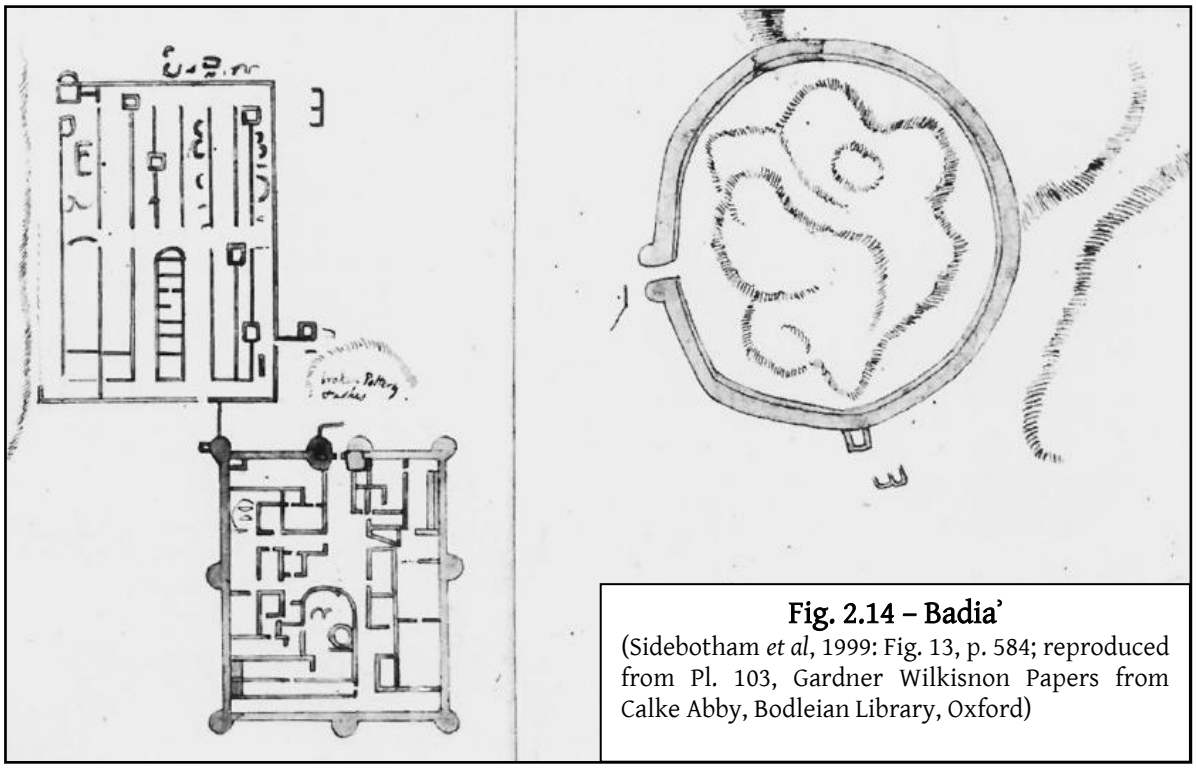


Fig. 2.14 – Badia'
(Sidebotham *et al*, 1999: Fig. 13, p. 584; reproduced from Pl. 103, Gardner Wilkisnon Papers from Calke Abby, Bodleian Library, Oxford)

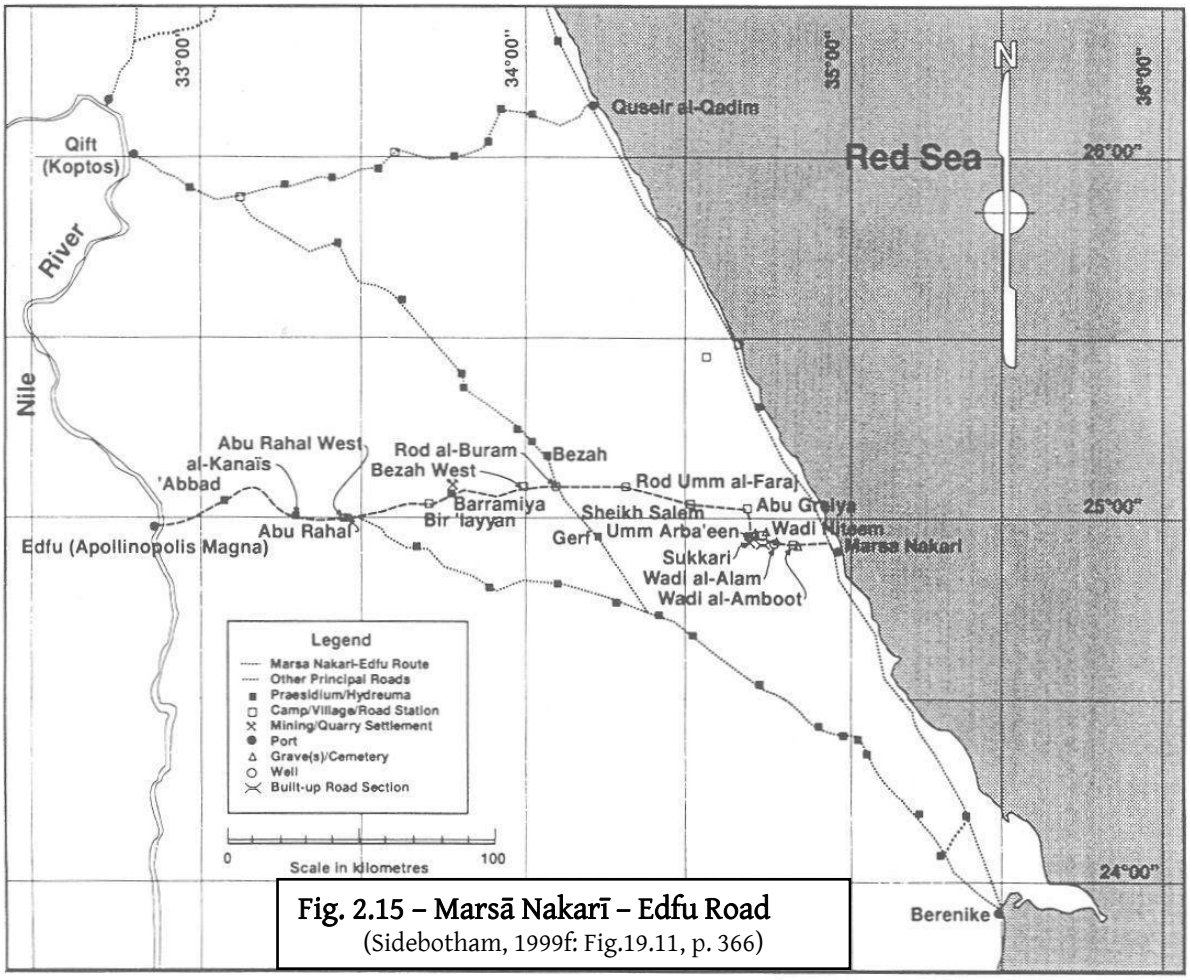


Fig. 2.15 – Marsā Nakarī – Edfu Road
(Sidebotham, 1999f: Fig.19.11, p. 366)

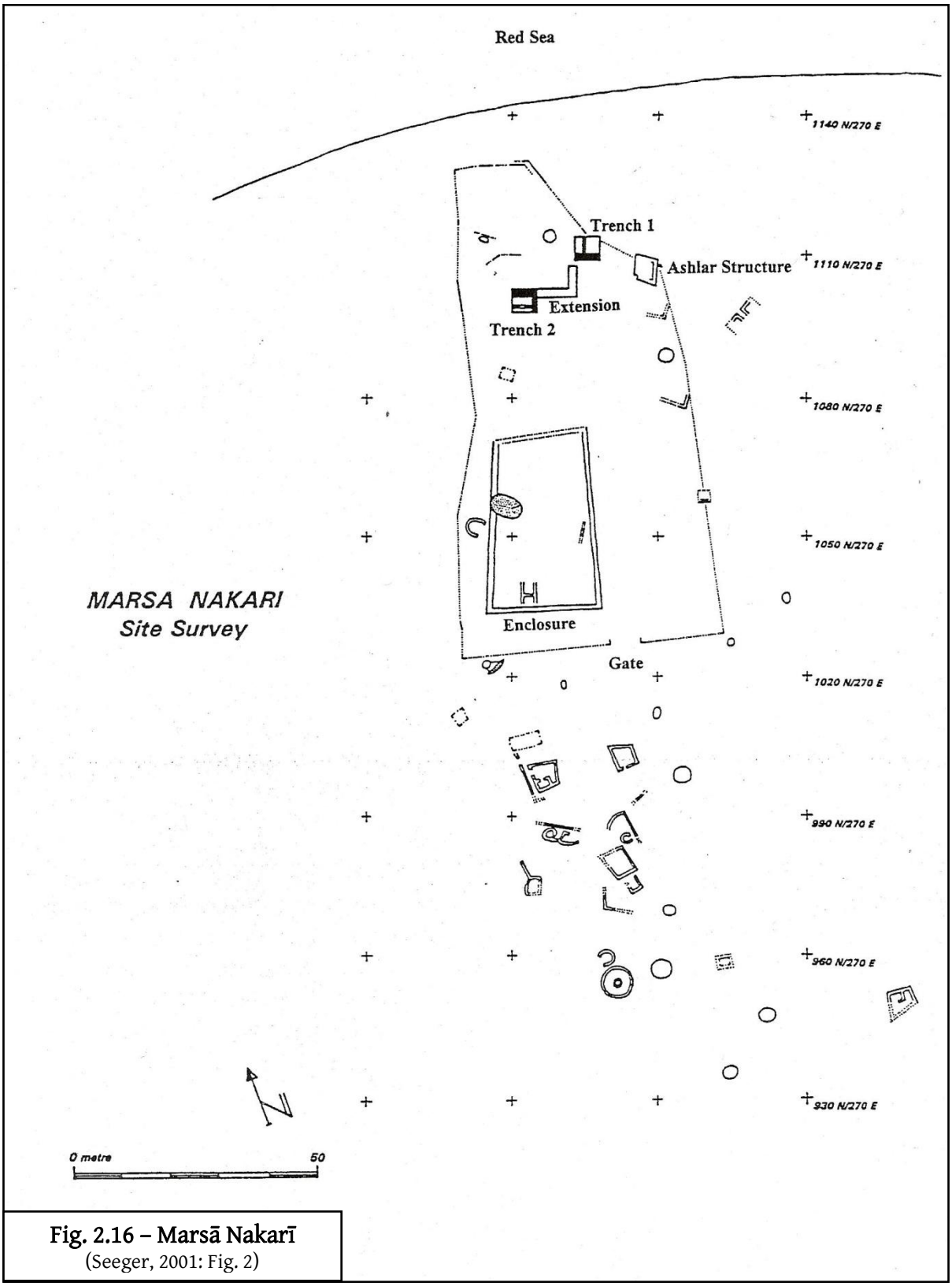


Fig. 2.16 – Marsā Nakarī
(Seeger, 2001: Fig. 2)

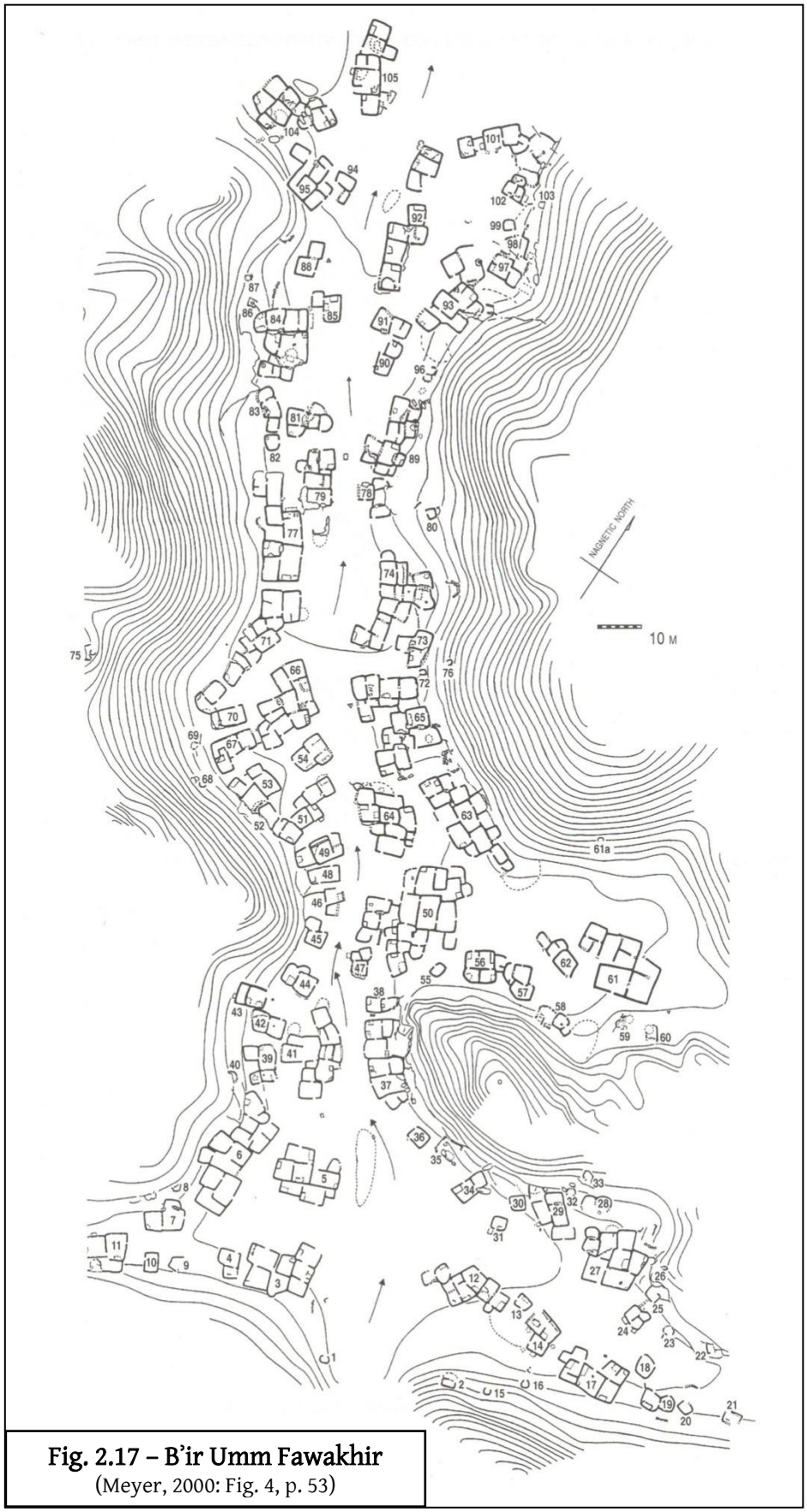


Fig. 2.17 – B'ir Umm Fawakhir
(Meyer, 2000: Fig. 4, p. 53)

Fig. 2.18 –
(H)adidos Pharanites
(Sidebotham *et al*, 2000: Fig. 9, p. 124)

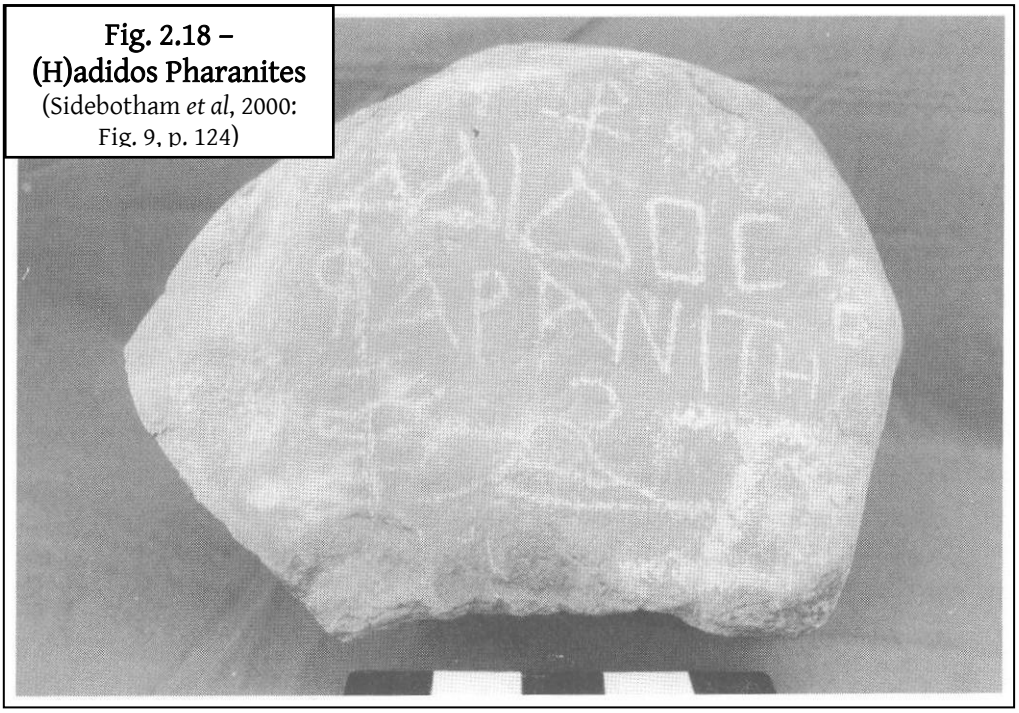


Fig. 2.19 – Central Berenike
(Sidebotham & Wendrich, 1995: Fig. 66, p. 126)

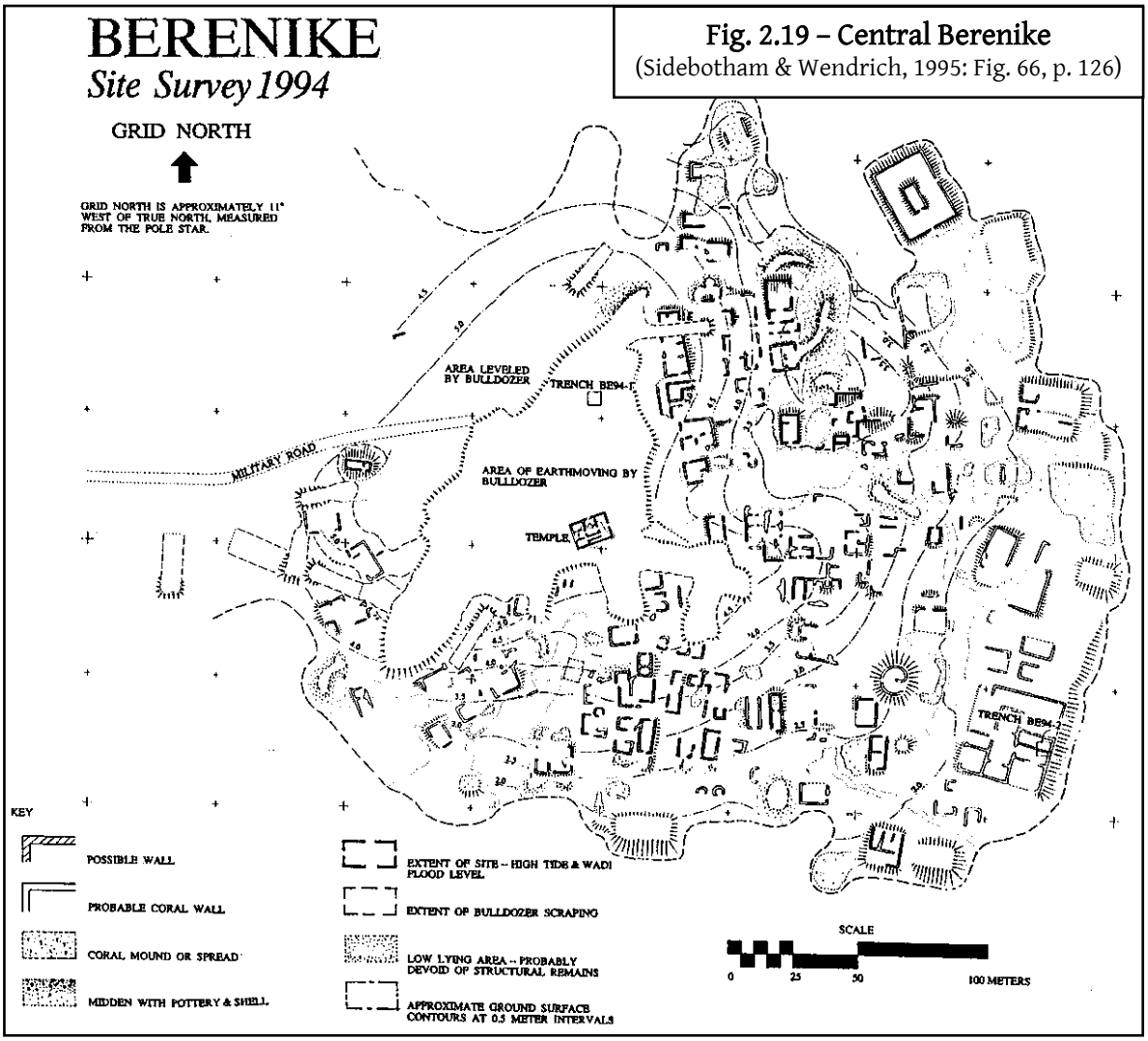
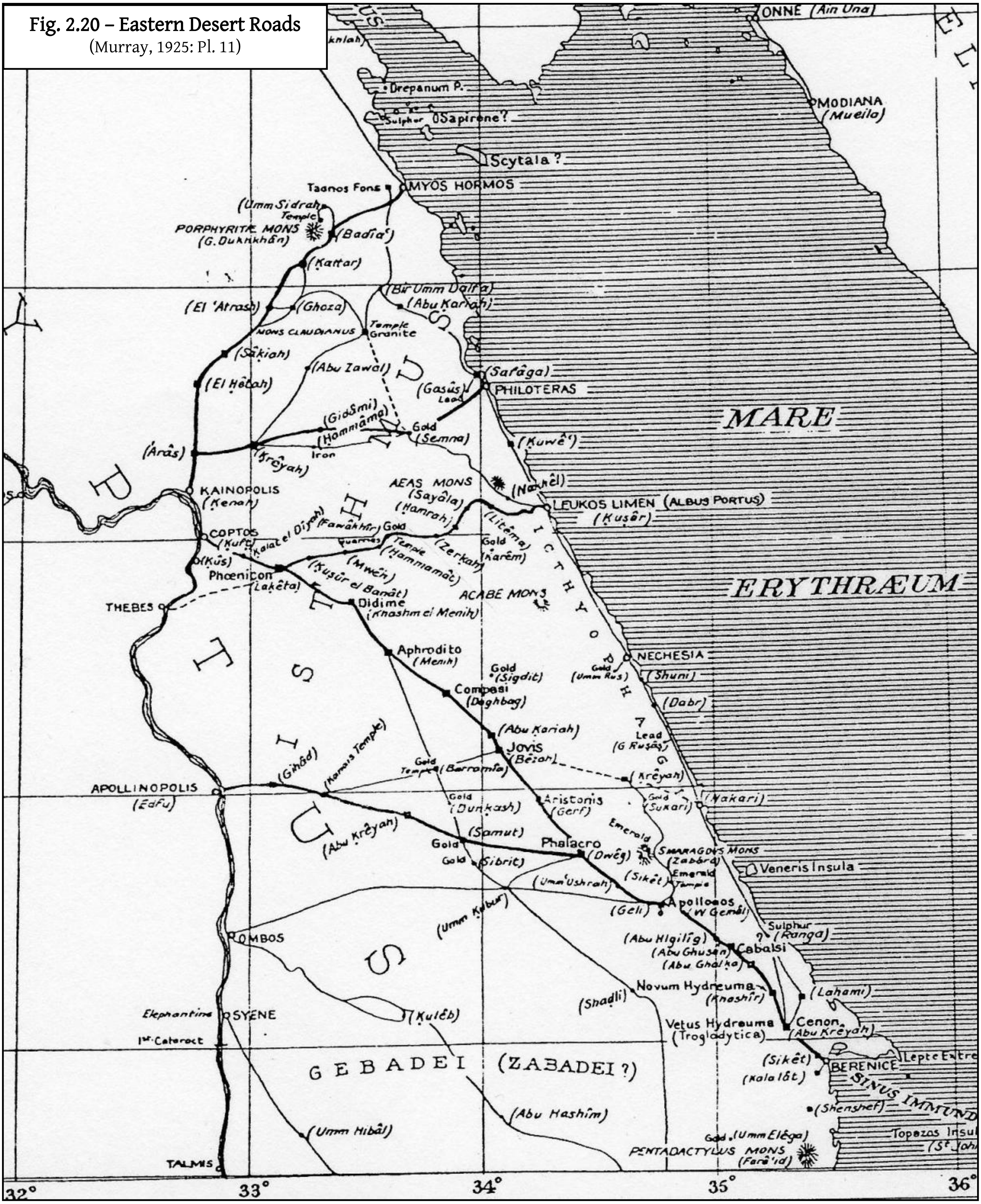


Fig. 2.20 – Eastern Desert Roads
(Murray, 1925: Pl. 11)



Figures 2. The Late Roman Erythra Thalassa (c. 325-525)

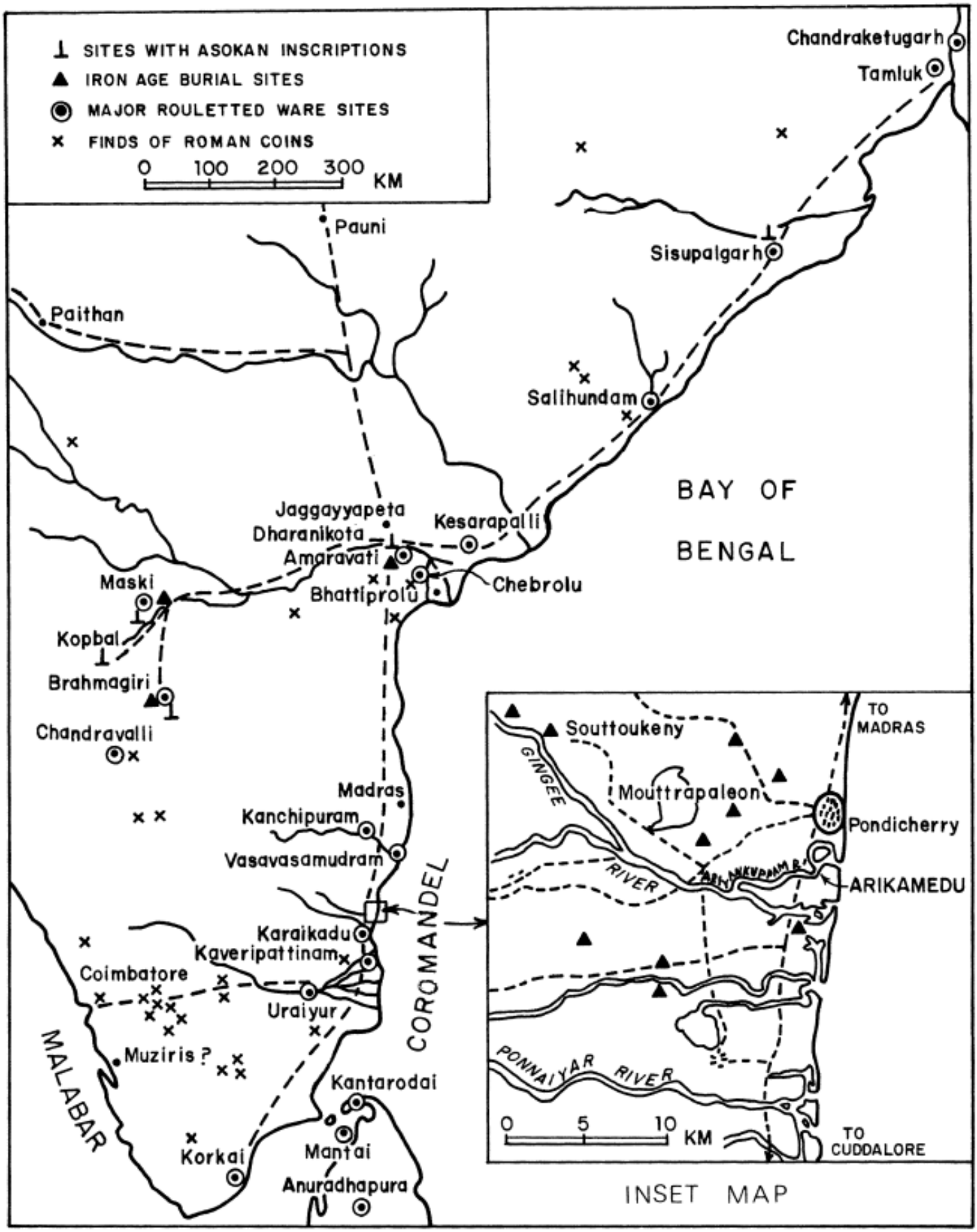


Fig. 2.21 – Distribution of Rouletted Ware Find Sites
(Begley, 1983: Illustration 1, p. 463)

Figures 2. The Late Roman Erythra Thalassa (c. 325-525)

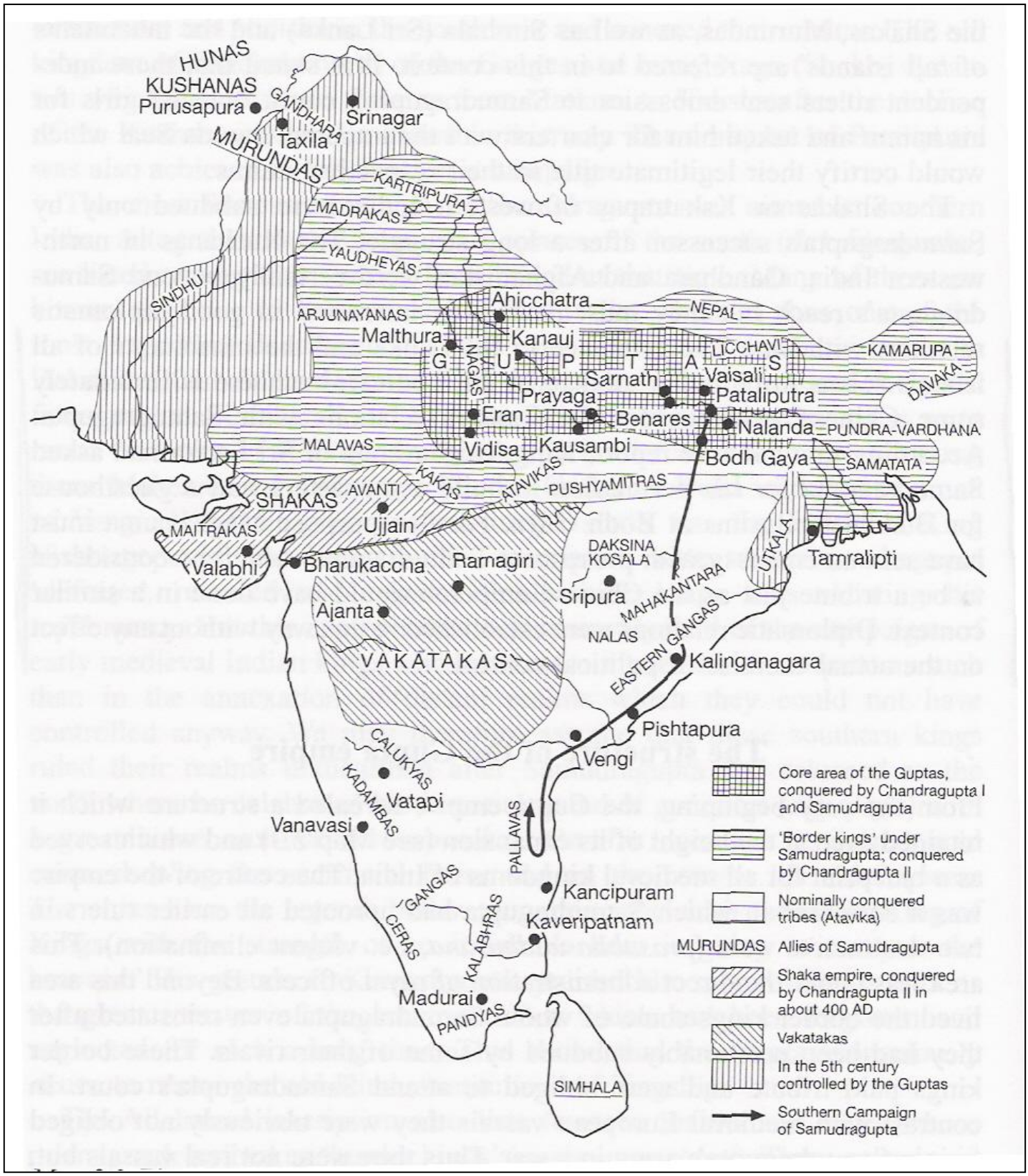


Fig. 2.22 – Late Antique India, showing Sakas Territory and Gupta-Vakataka Empire
(Kulke & Rothermund, 2004: Map 2.3, p. 90)

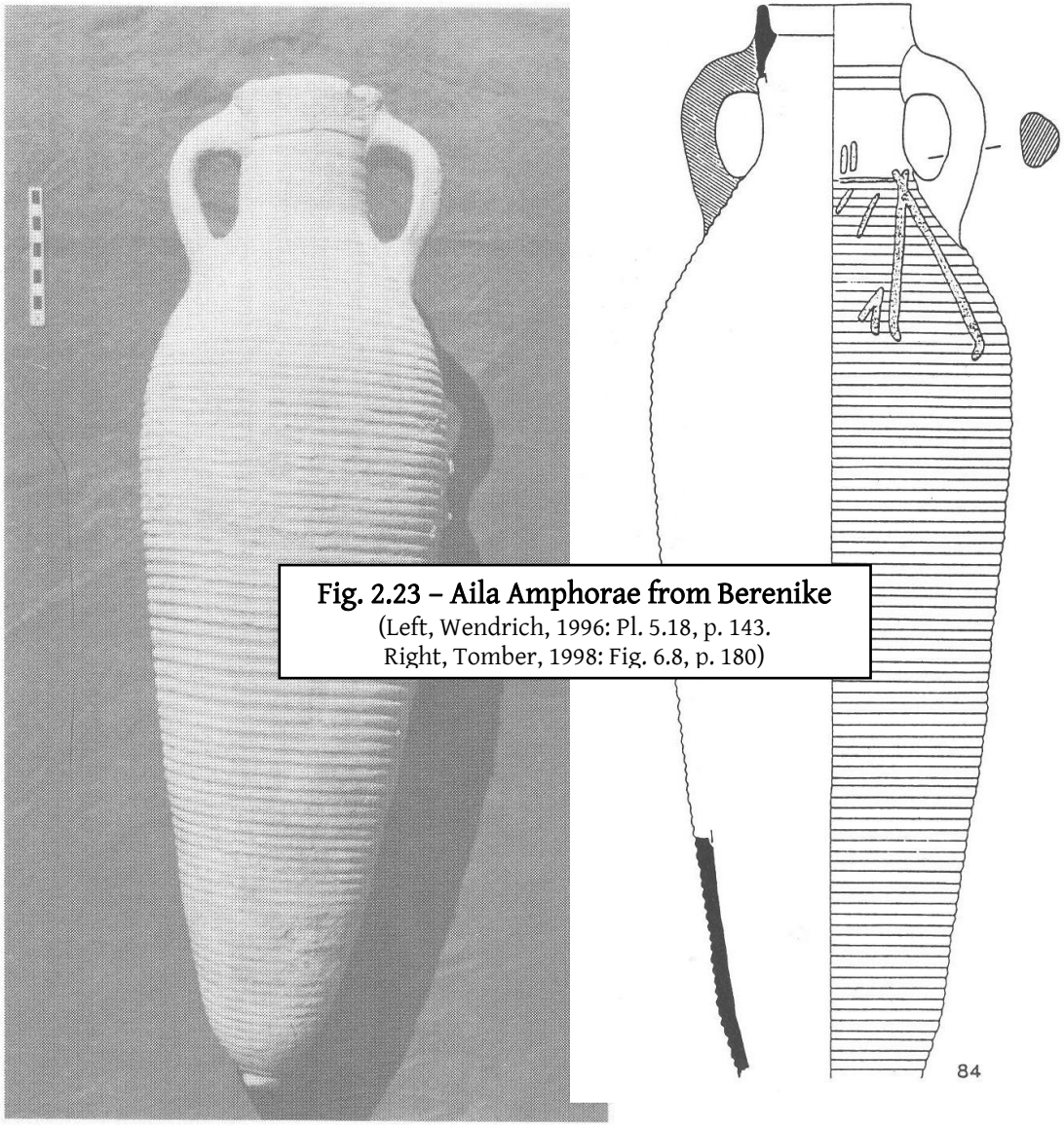


Fig. 2.23 – Aila Amphorae from Berenike
(Left, Wendrich, 1996: Pl. 5.18, p. 143.
Right, Tomber, 1998: Fig. 6.8, p. 180)

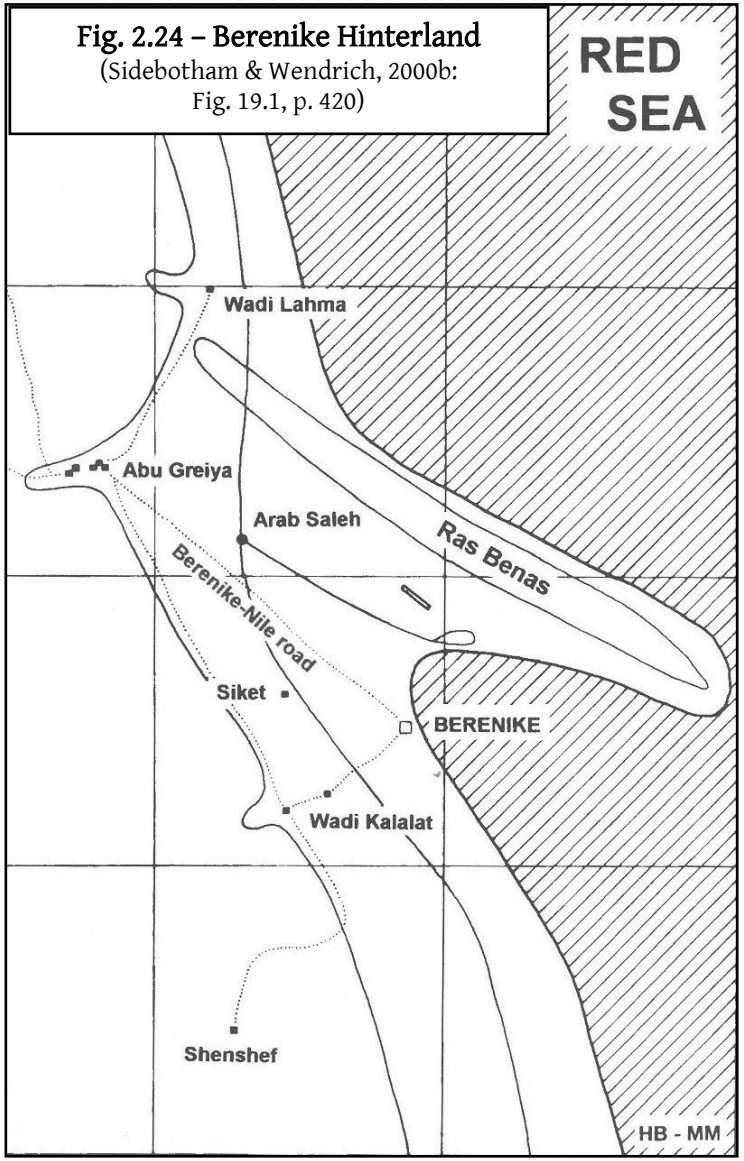


Fig. 2.24 – Berenike Hinterland
(Sidebotham & Wendrich, 2000b:
Fig. 19.1, p. 420)

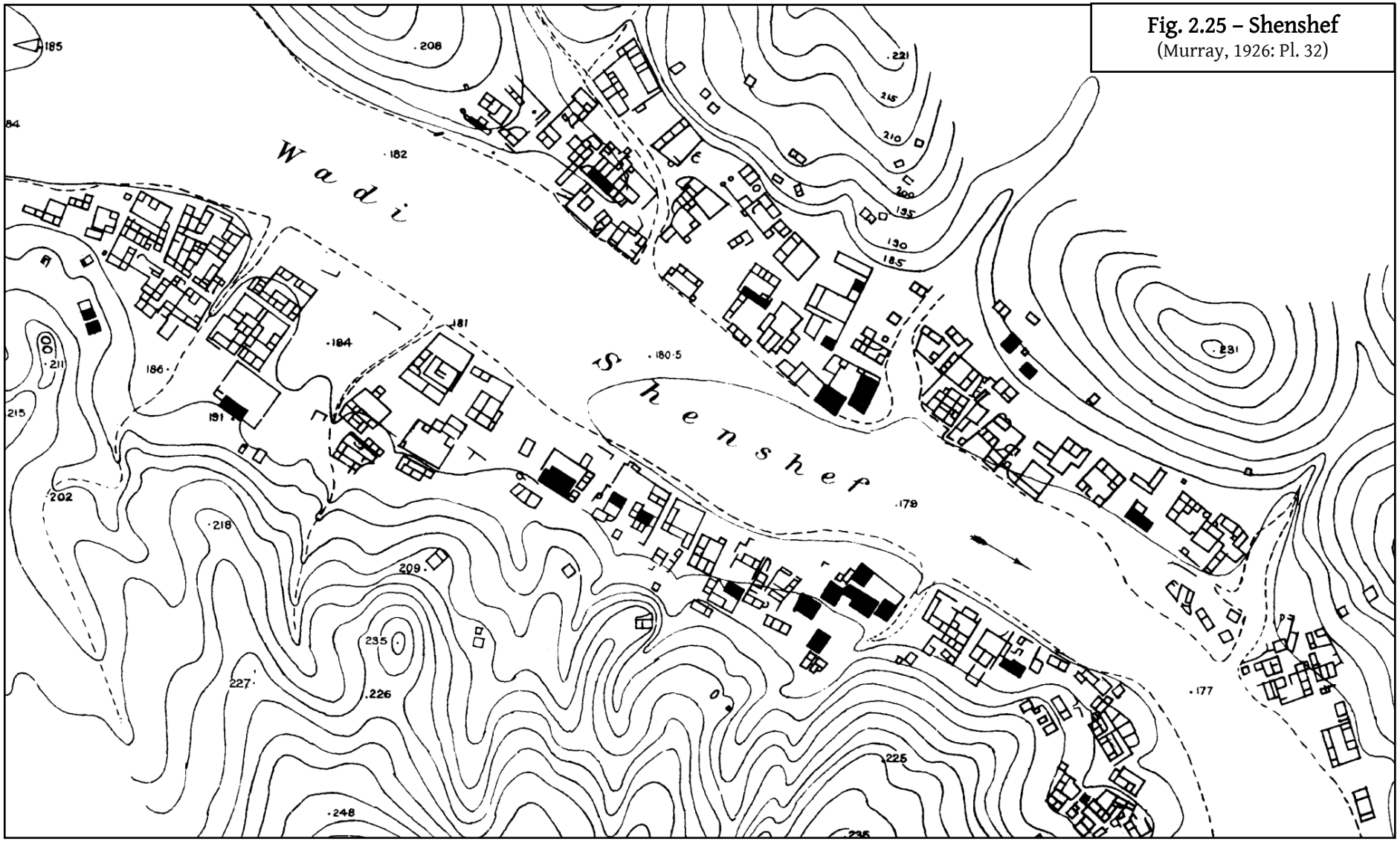


Fig. 2.25 – Shenshef
(Murray, 1926: Pl. 32)

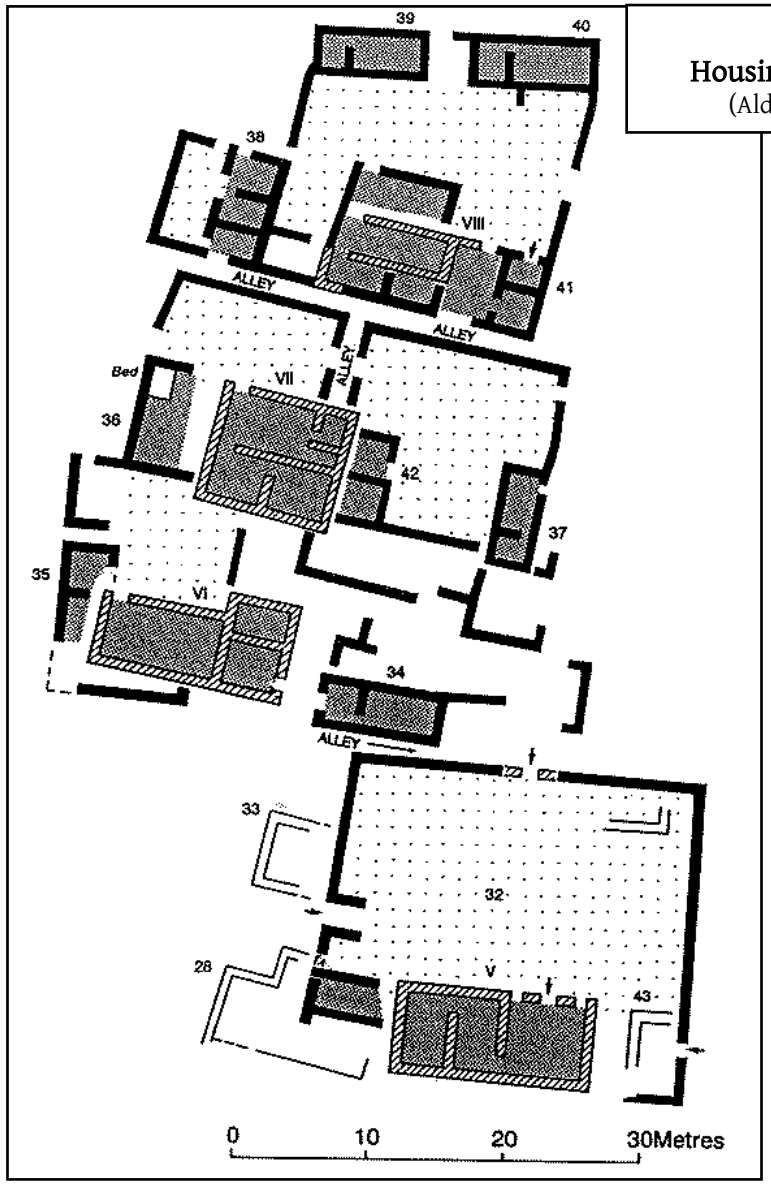


Fig. 2.26 –
Housing Cluster at Shenshef
(Aldsworth, 1999: Fig. 21.3)

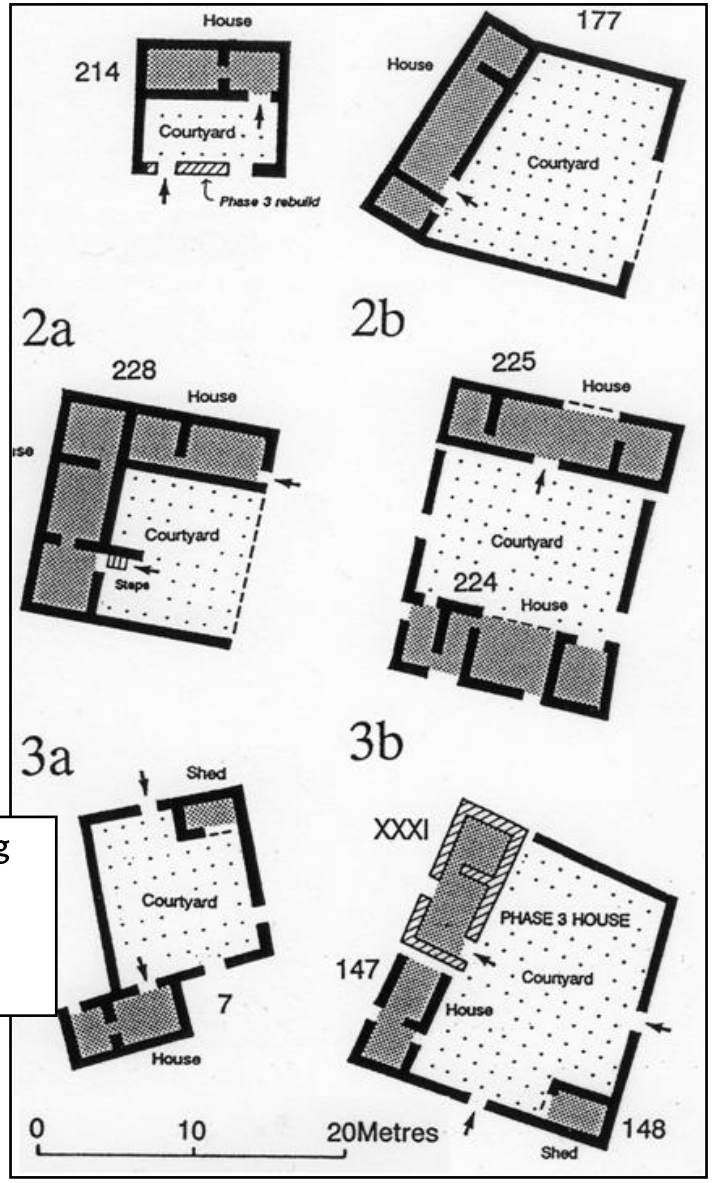


Fig. 2.27 – Housing Typologies at Shenshef
(Aldsworth, 1999: Fig. 21.7)

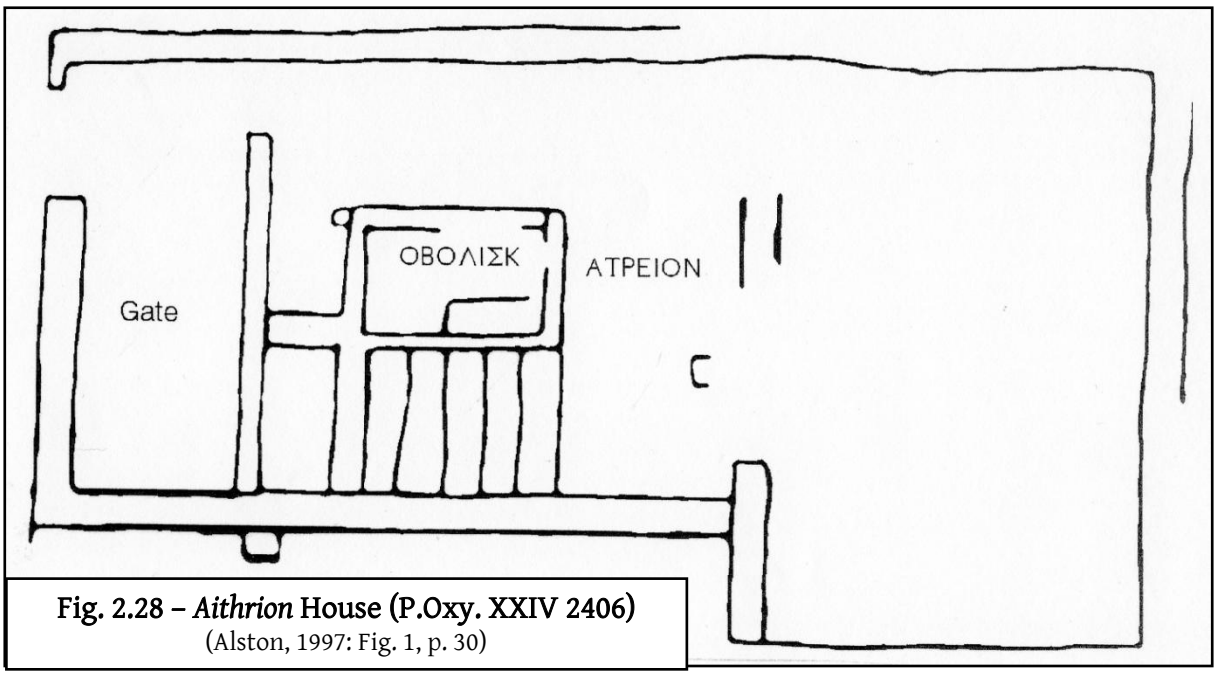


Fig. 2.28 – *Aithrion* House (P.Oxy. XXIV 2406)
(Alston, 1997: Fig. 1, p. 30)

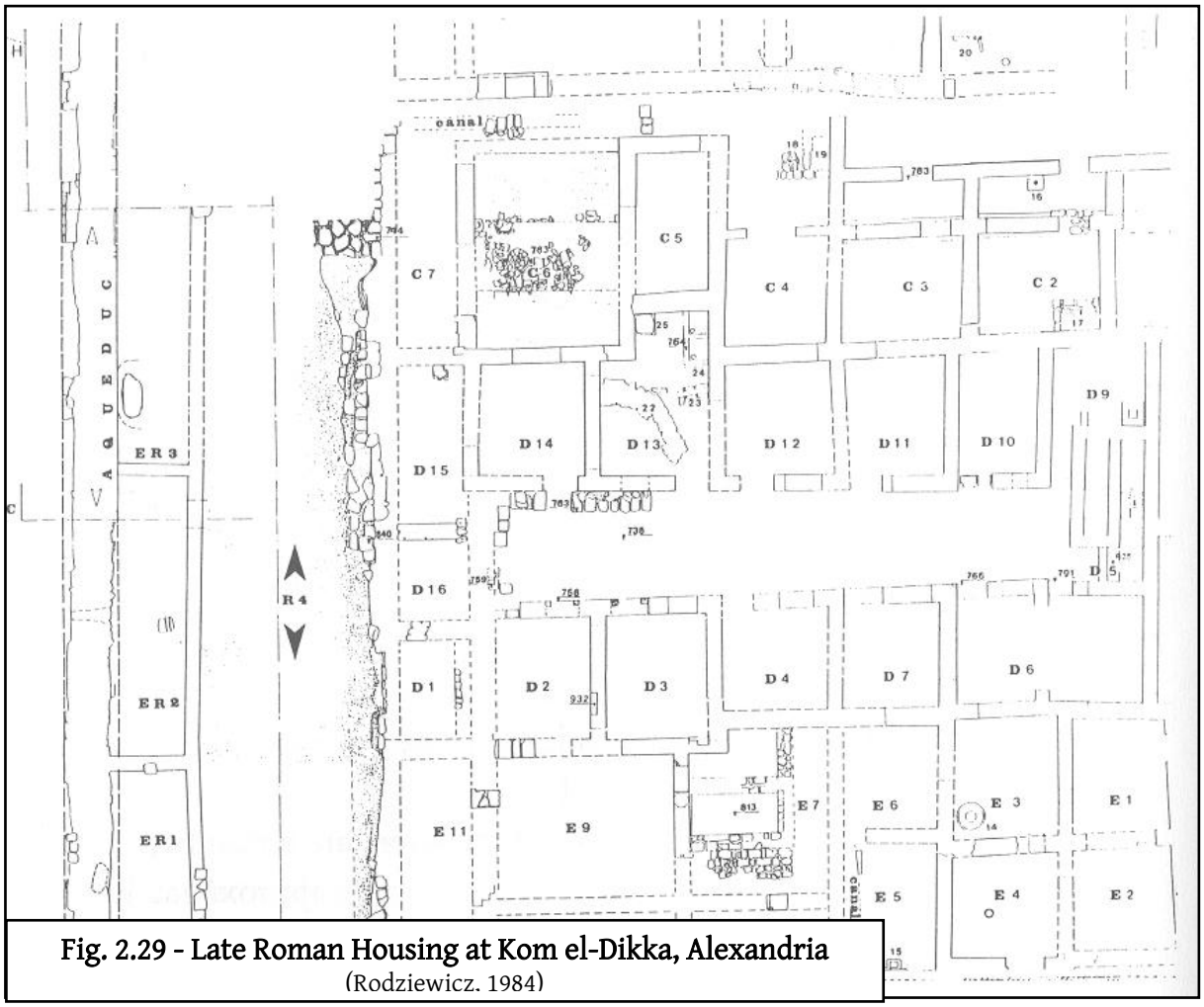


Fig. 2.29 - Late Roman Housing at Kom el-Dikka, Alexandria
(Rodziewicz, 1984)

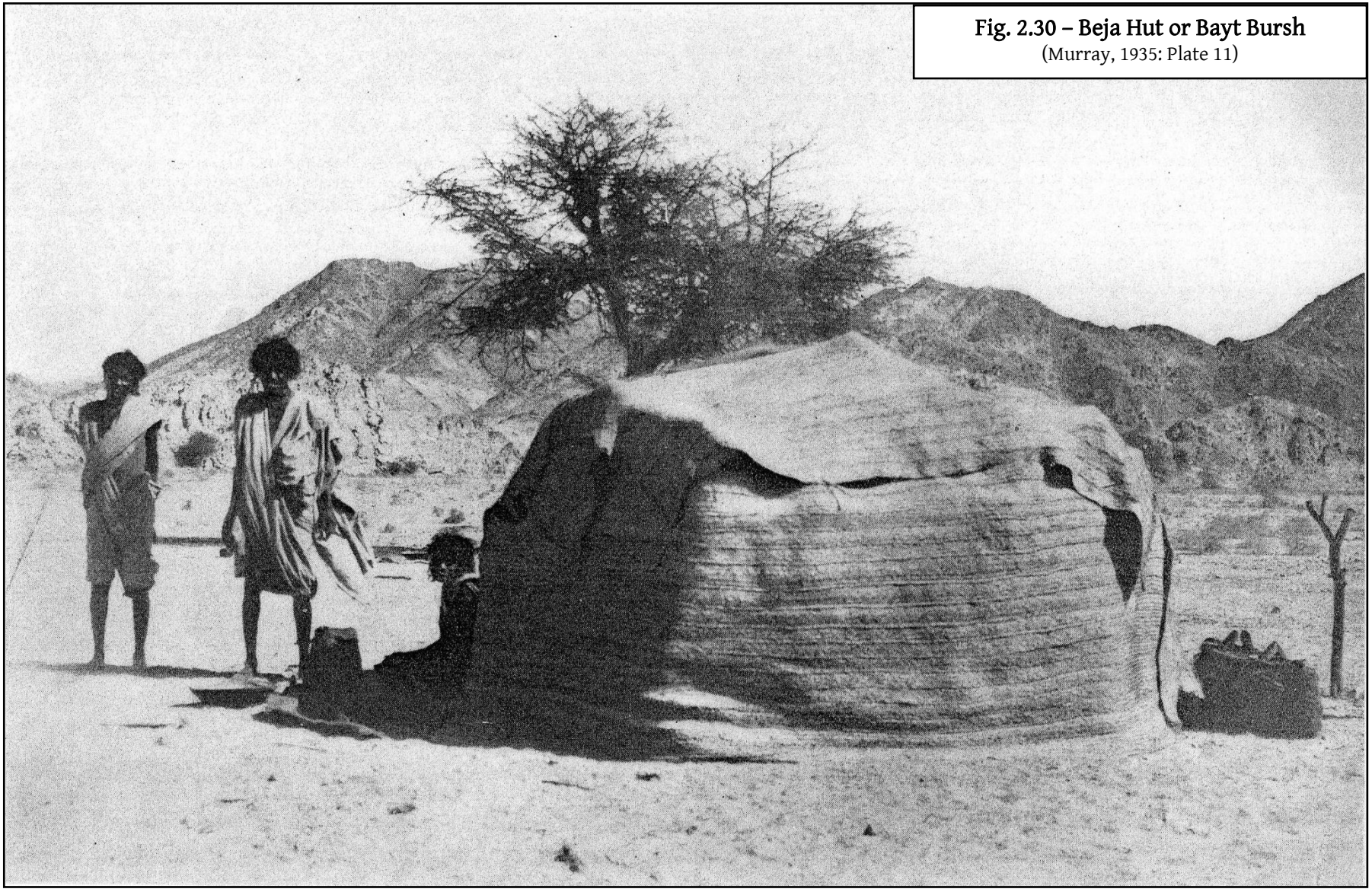


Fig. 2.30 – Beja Hut or Bayt Bursh
(Murray, 1935: Plate 11)

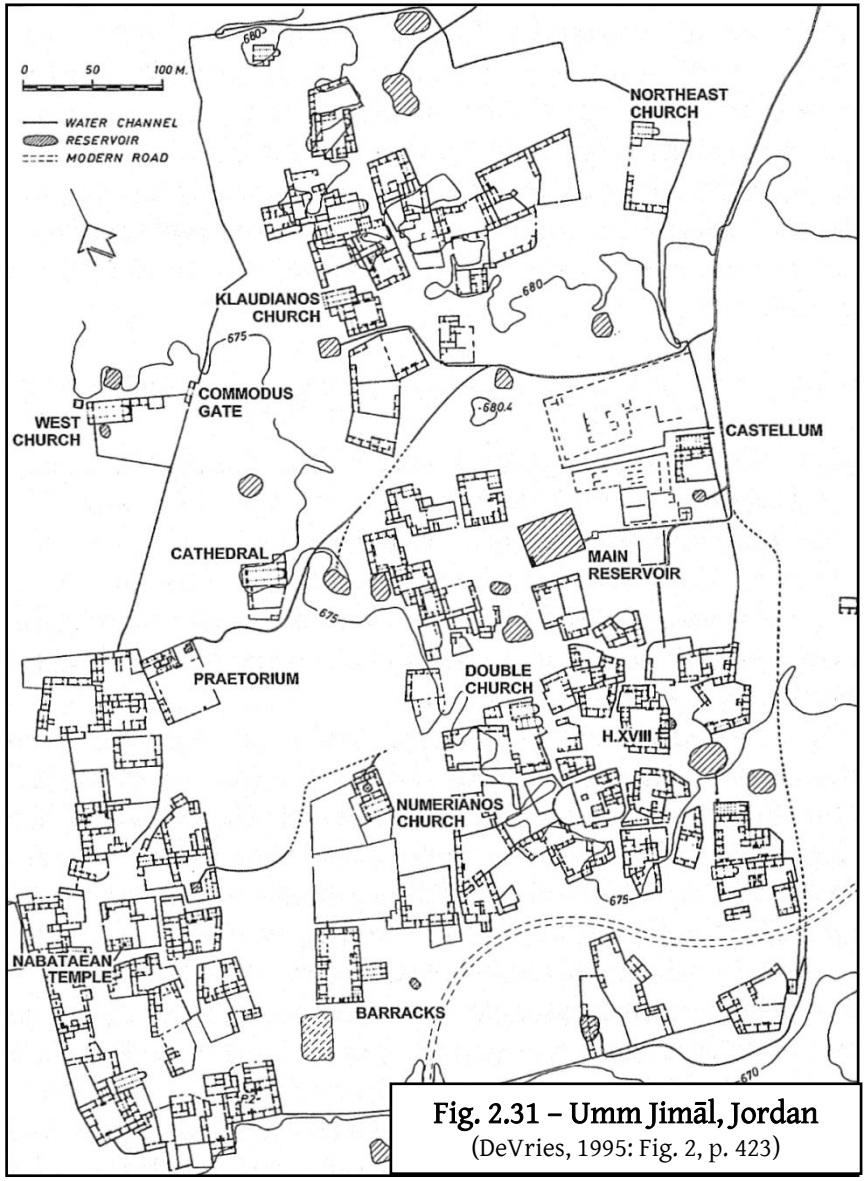


Fig. 2.31 – Umm Jimāl, Jordan
(DeVries, 1995: Fig. 2, p. 423)

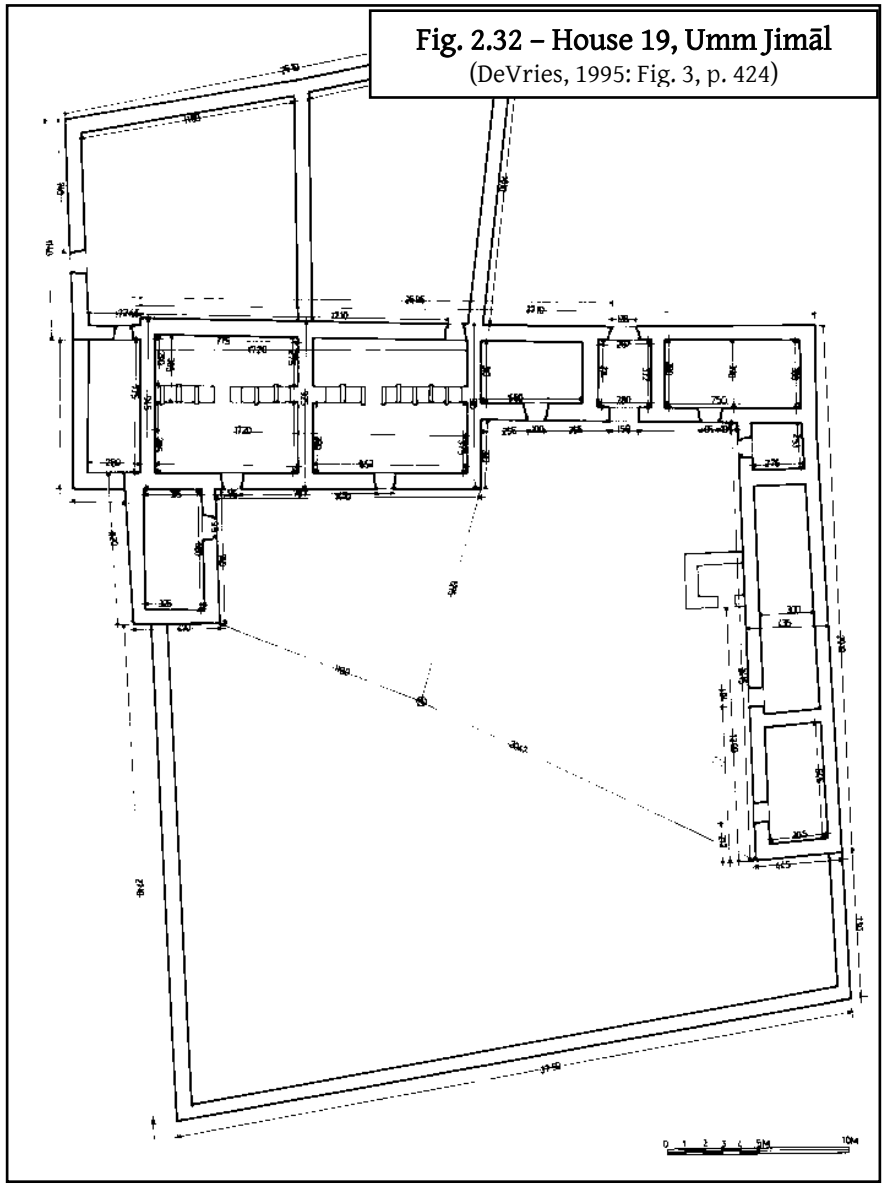


Fig. 2.32 – House 19, Umm Jimāl
(DeVries, 1995: Fig. 3, p. 424)

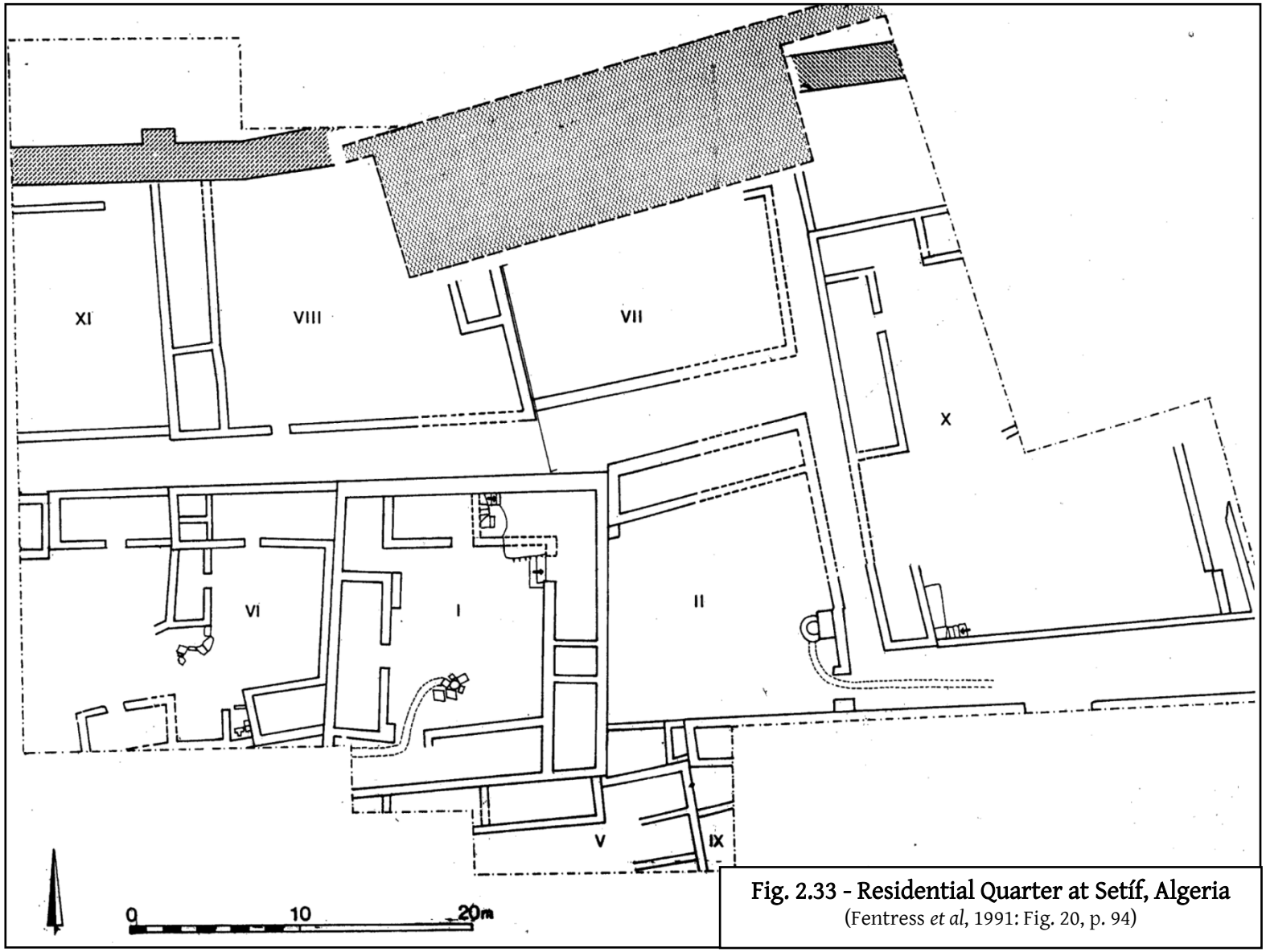


Fig. 2.33 - Residential Quarter at Setíf, Algeria
(Fentress *et al*, 1991: Fig. 20, p. 94)

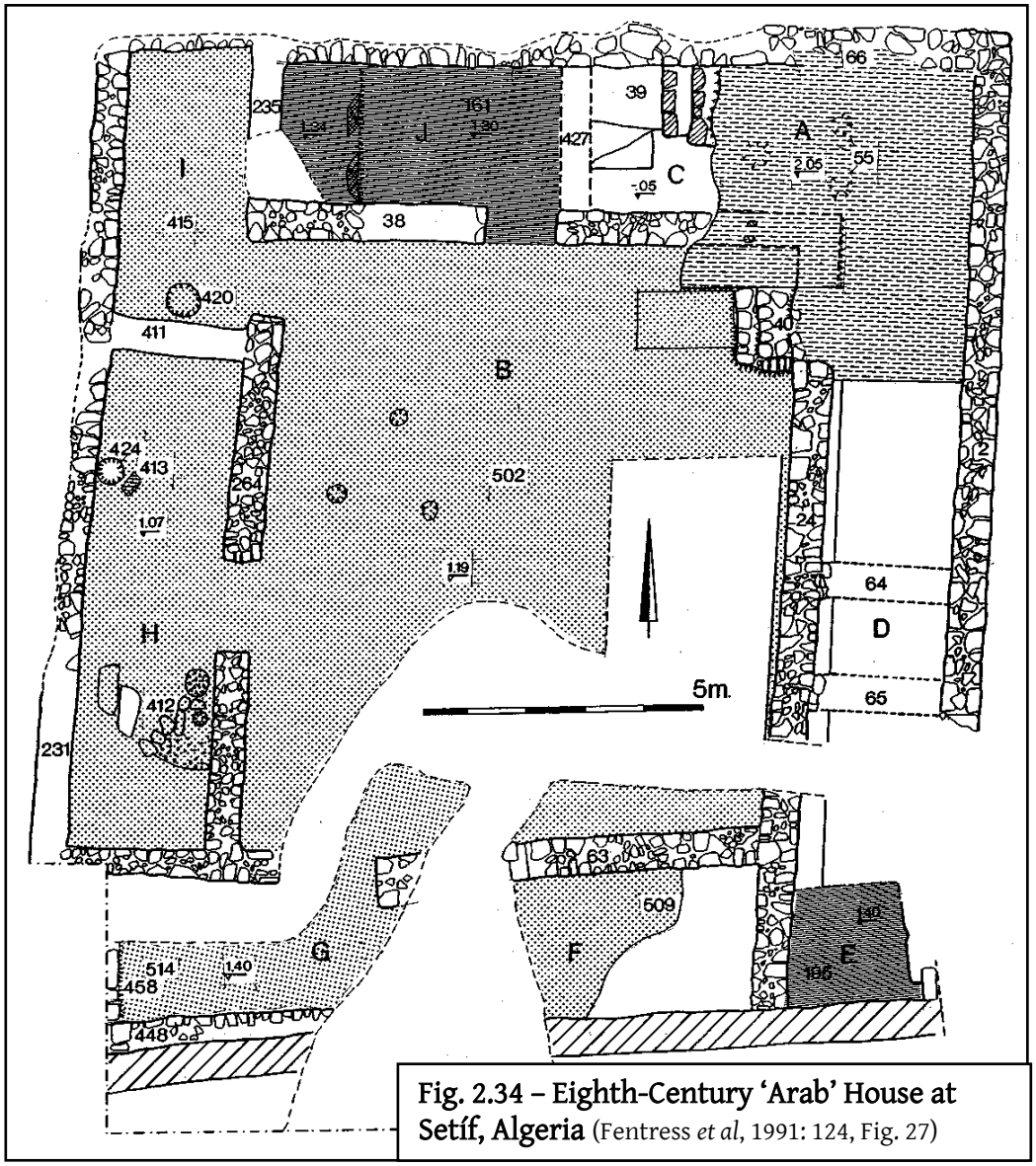


Fig. 2.34 – Eighth-Century 'Arab' House at Setíf, Algeria (Fentress *et al*, 1991: 124, Fig. 27)

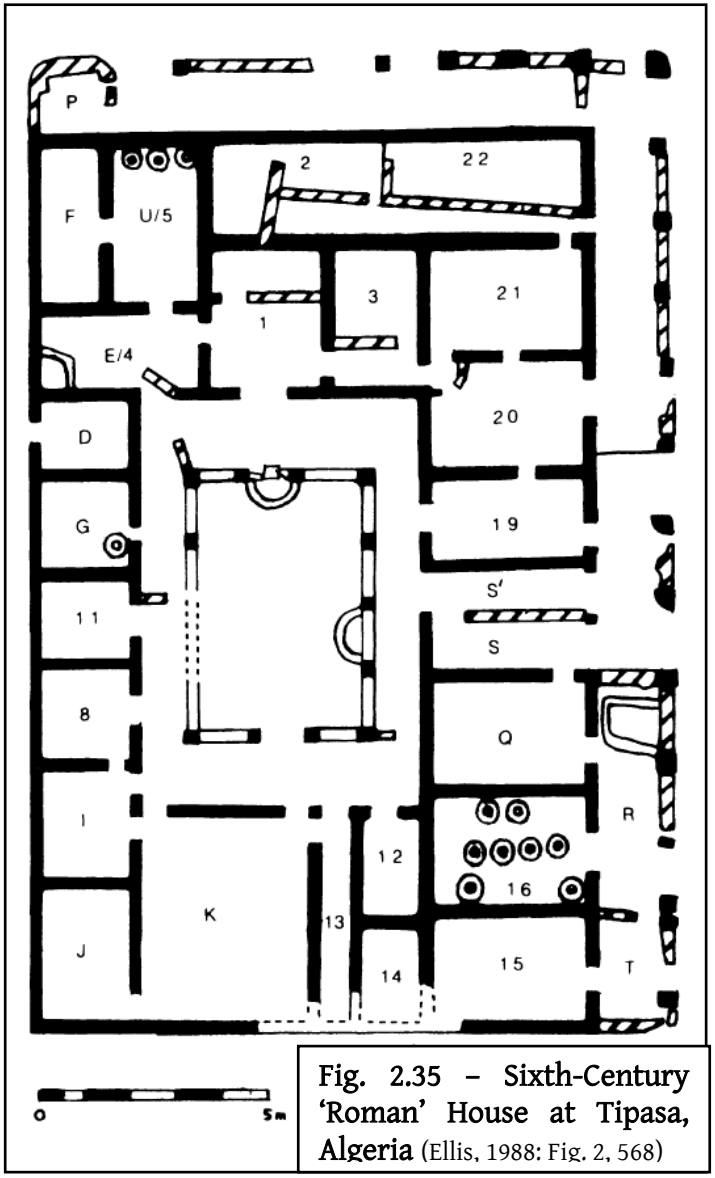


Fig. 2.35 – Sixth-Century 'Roman' House at Tipasa, Algeria (Ellis, 1988: Fig. 2, 568)

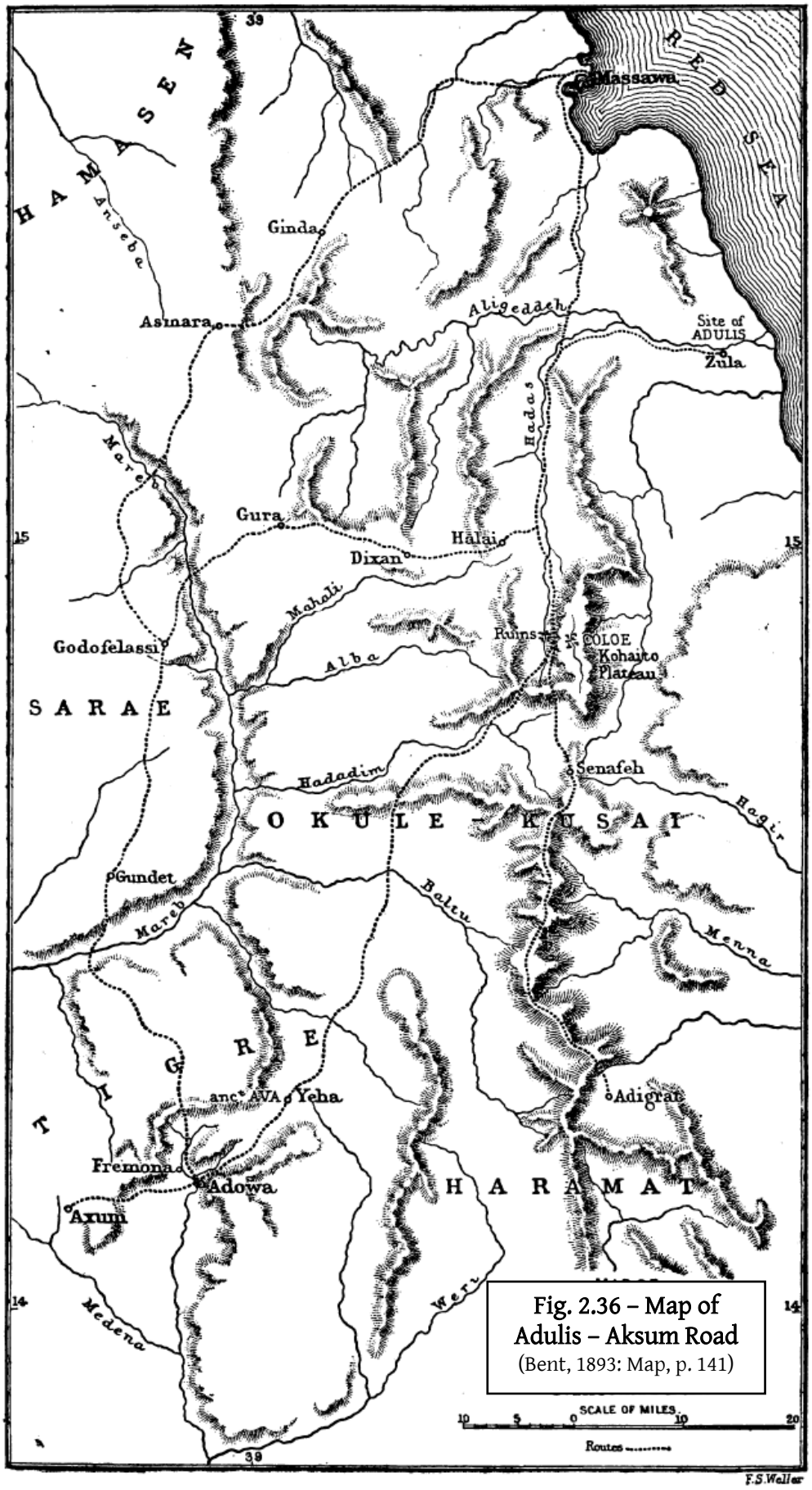


Fig. 2.36 – Map of Adulis – Aksum Road
(Bent, 1893: Map, p. 141)

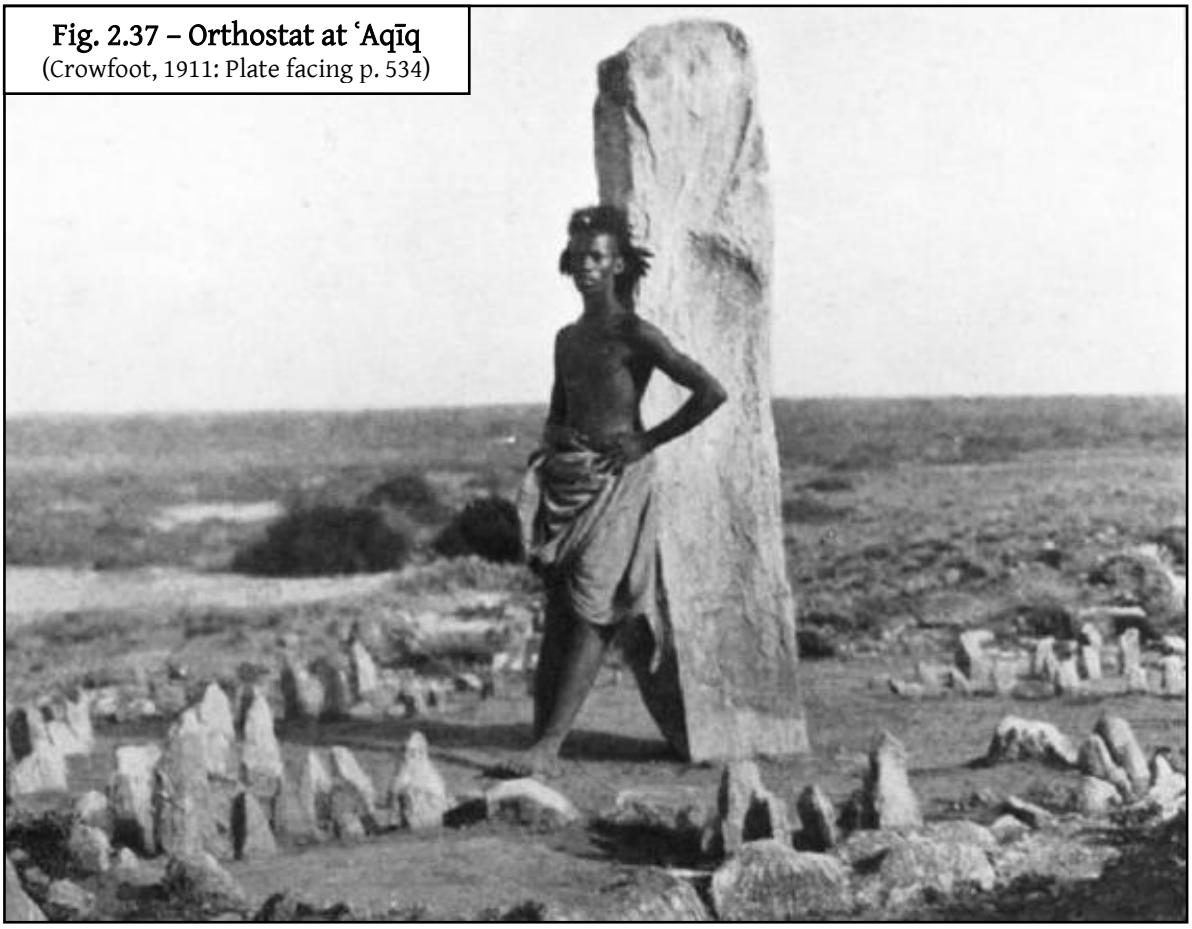


Fig. 2.37 – Orthostat at ʿAqīq
(Crowfoot, 1911: Plate facing p. 534)

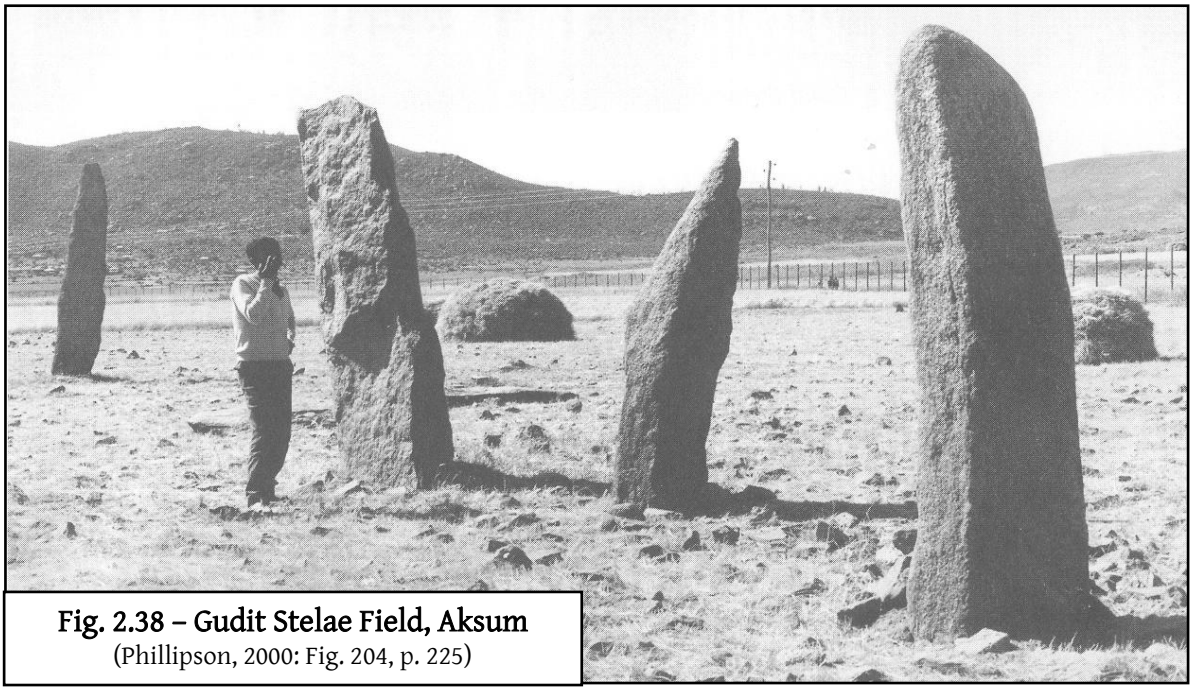
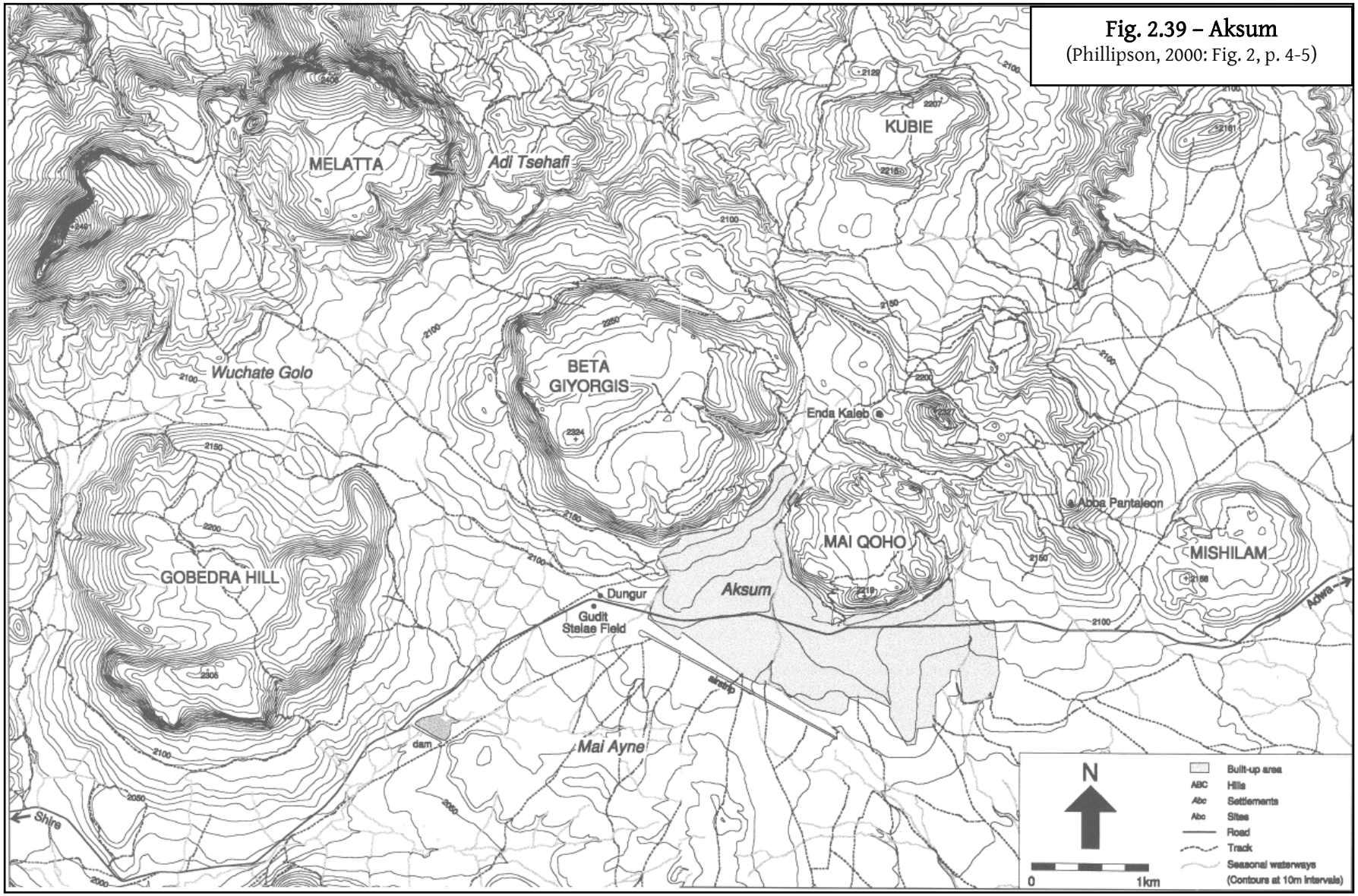


Fig. 2.38 – Gudit Stelae Field, Aksum
(Phillipson, 2000: Fig. 204, p. 225)

Figures 2. The Late Roman Erythra Thalassa (c. 325-525)



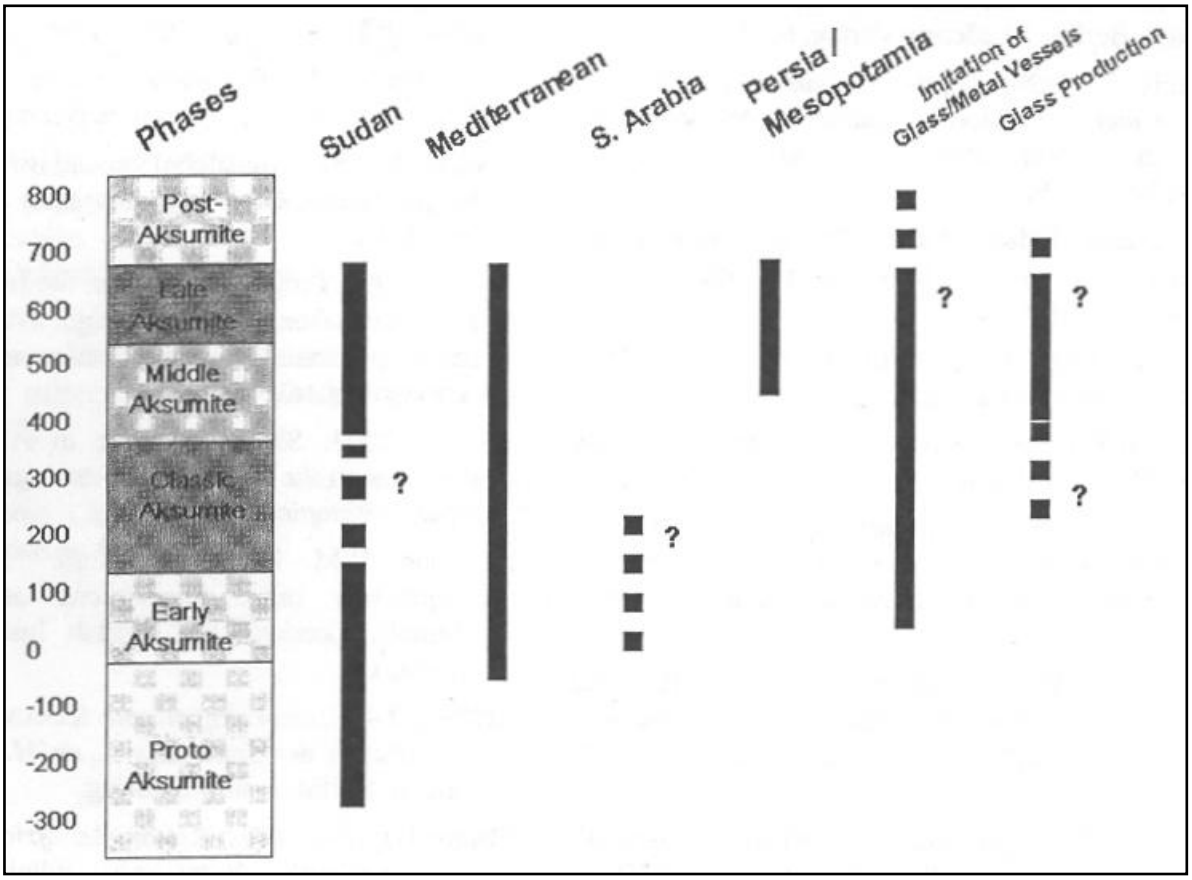
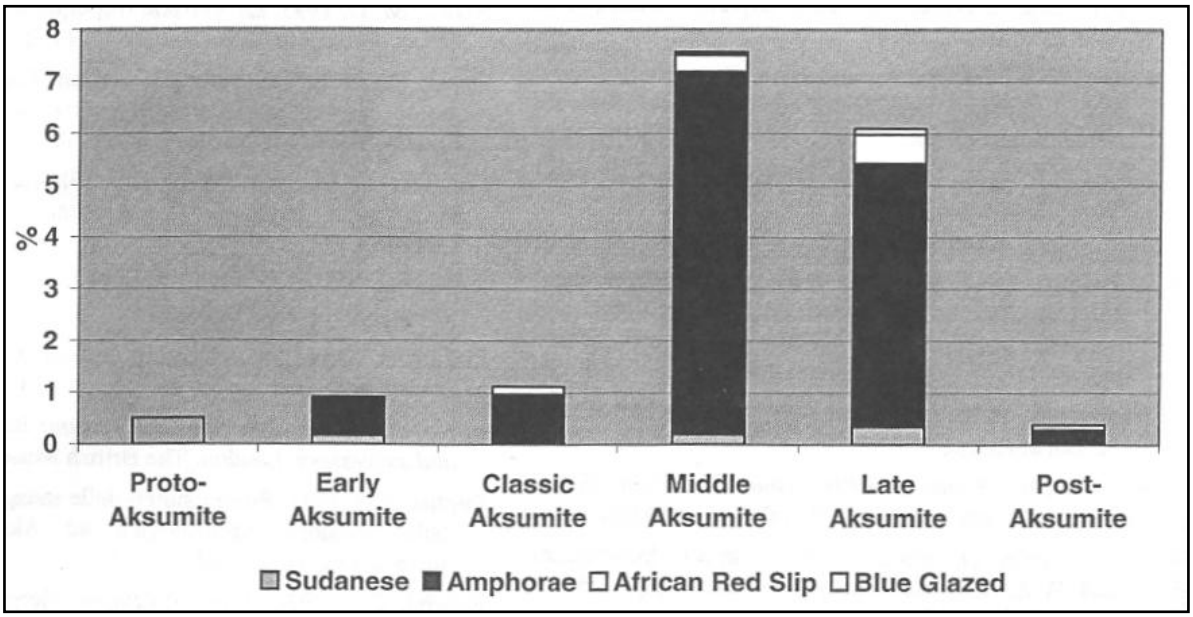


Fig. 2.40 – Foreign Contacts at Bieta Giyorgis, Aksum
(Manzo, 2005: Fig. 21, p. 62)

Fig. 2.41 – Quantative Synchronic Distribution of Foreign Imports at Bieta Giyorgis
(Manzo, 2005: Fig. 22, p. 62)



Figures 2. The Late Roman Erythra Thalassa (c. 325-525)

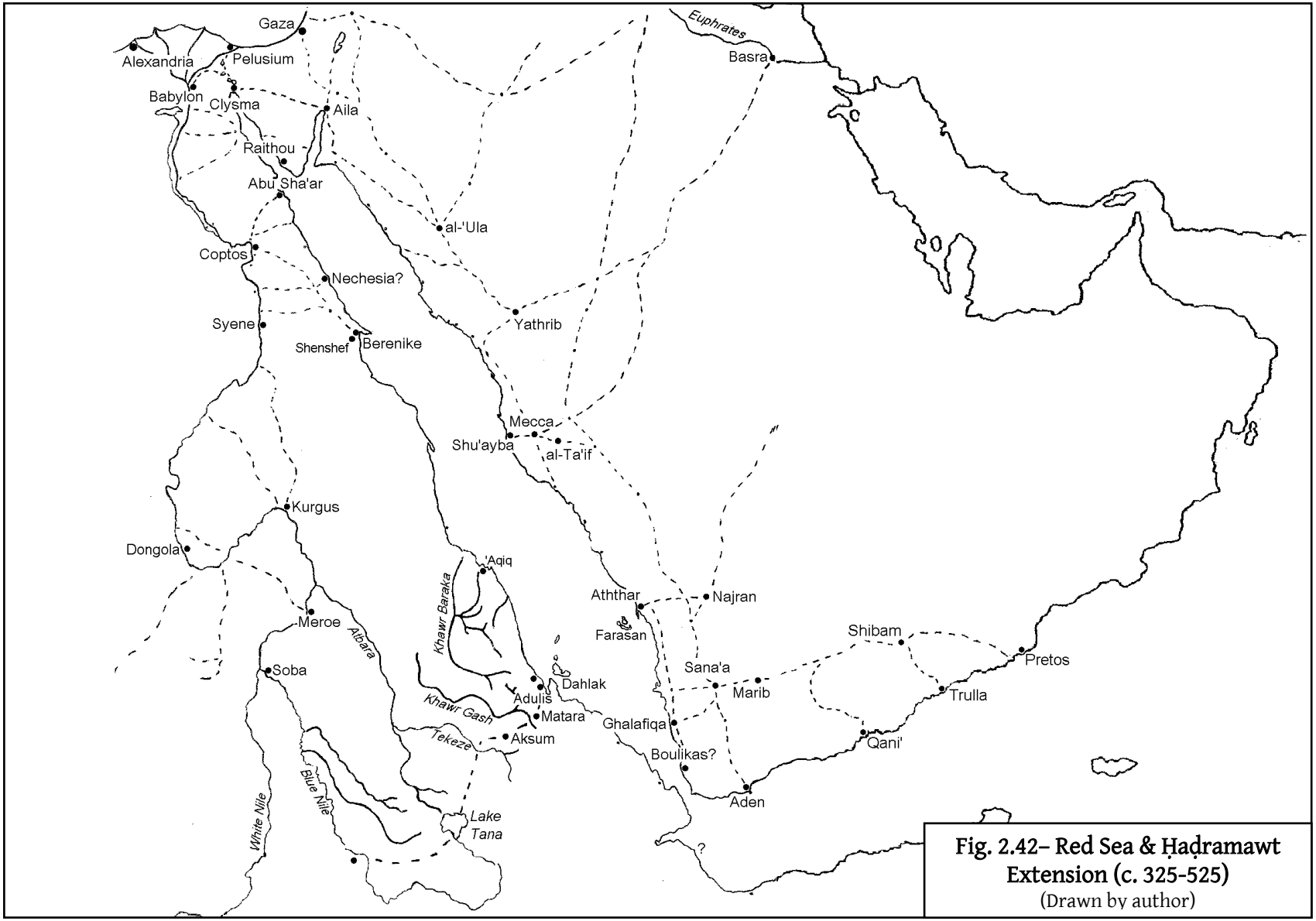


Fig. 2.42– Red Sea & Ḥaḍramawt Extension (c. 325-525)
(Drawn by author)

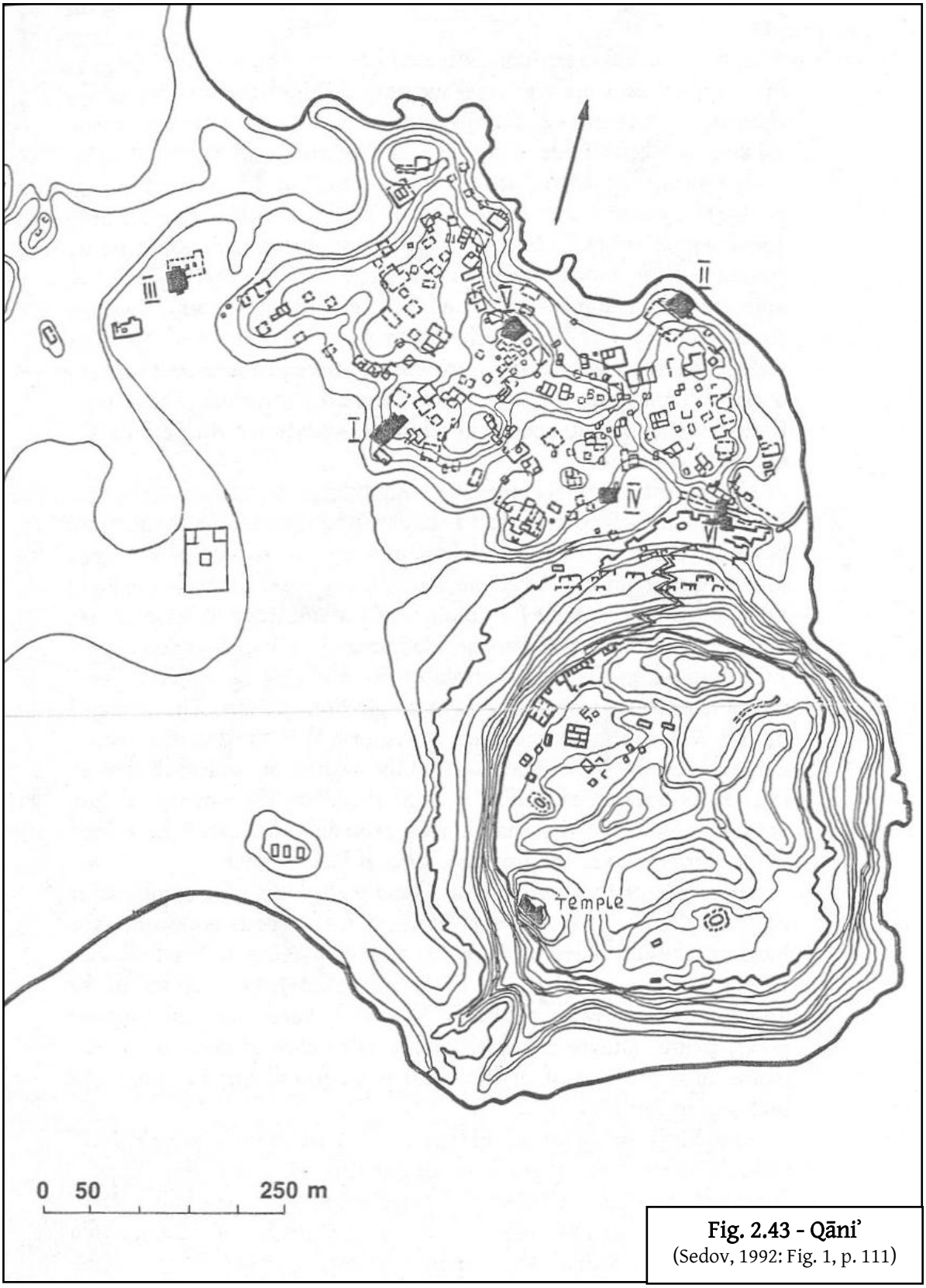


Fig. 2.43 - Qāni'
(Sedov, 1992: Fig. 1, p. 111)

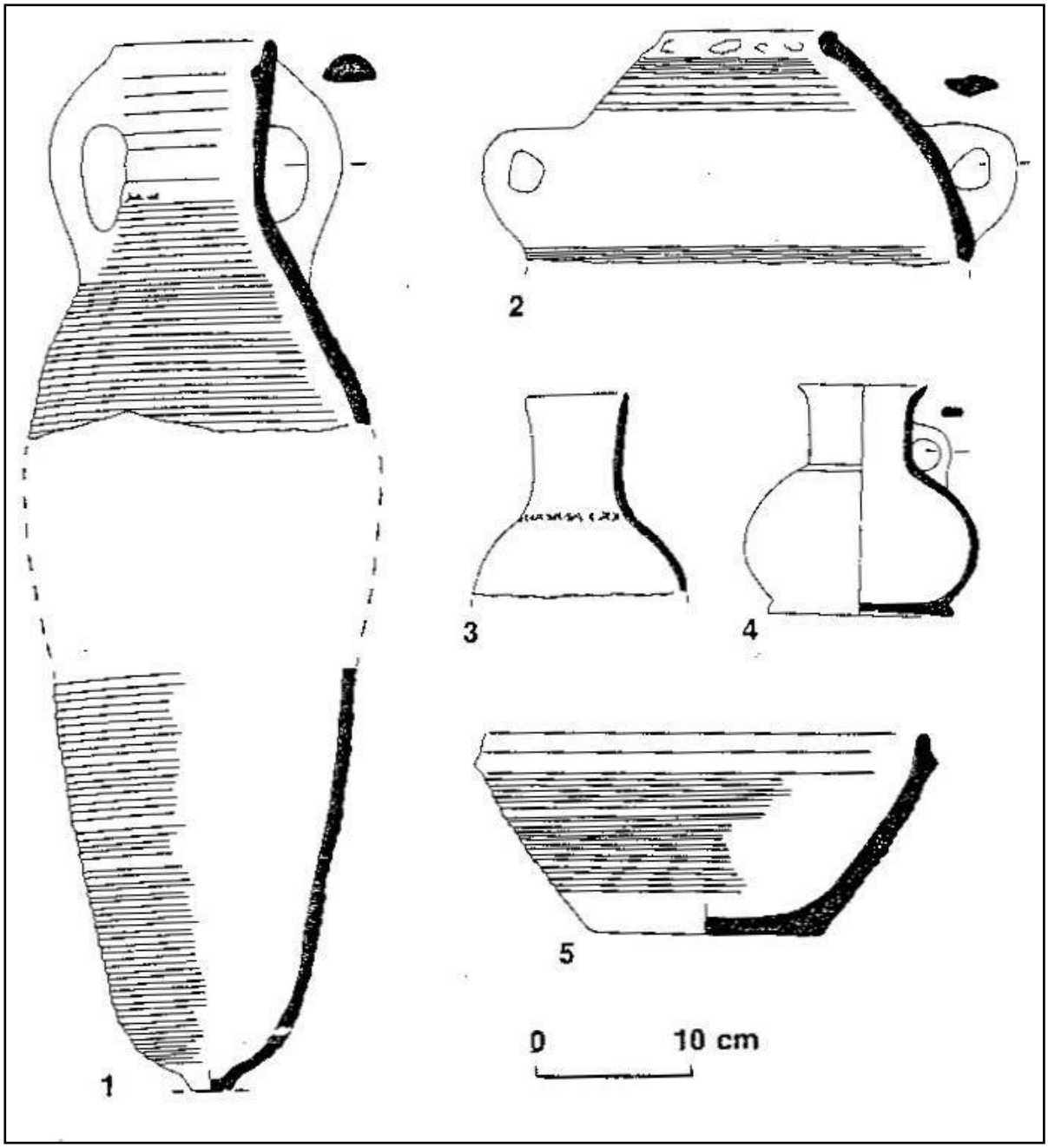


Fig. 2.44 – Ceramics from Upper Levels at Qāniʾ
(Sedov, 1992: Fig. 2, p. 113)

Figures 2. The Late Roman Erythra Thalassa (c. 325-525)

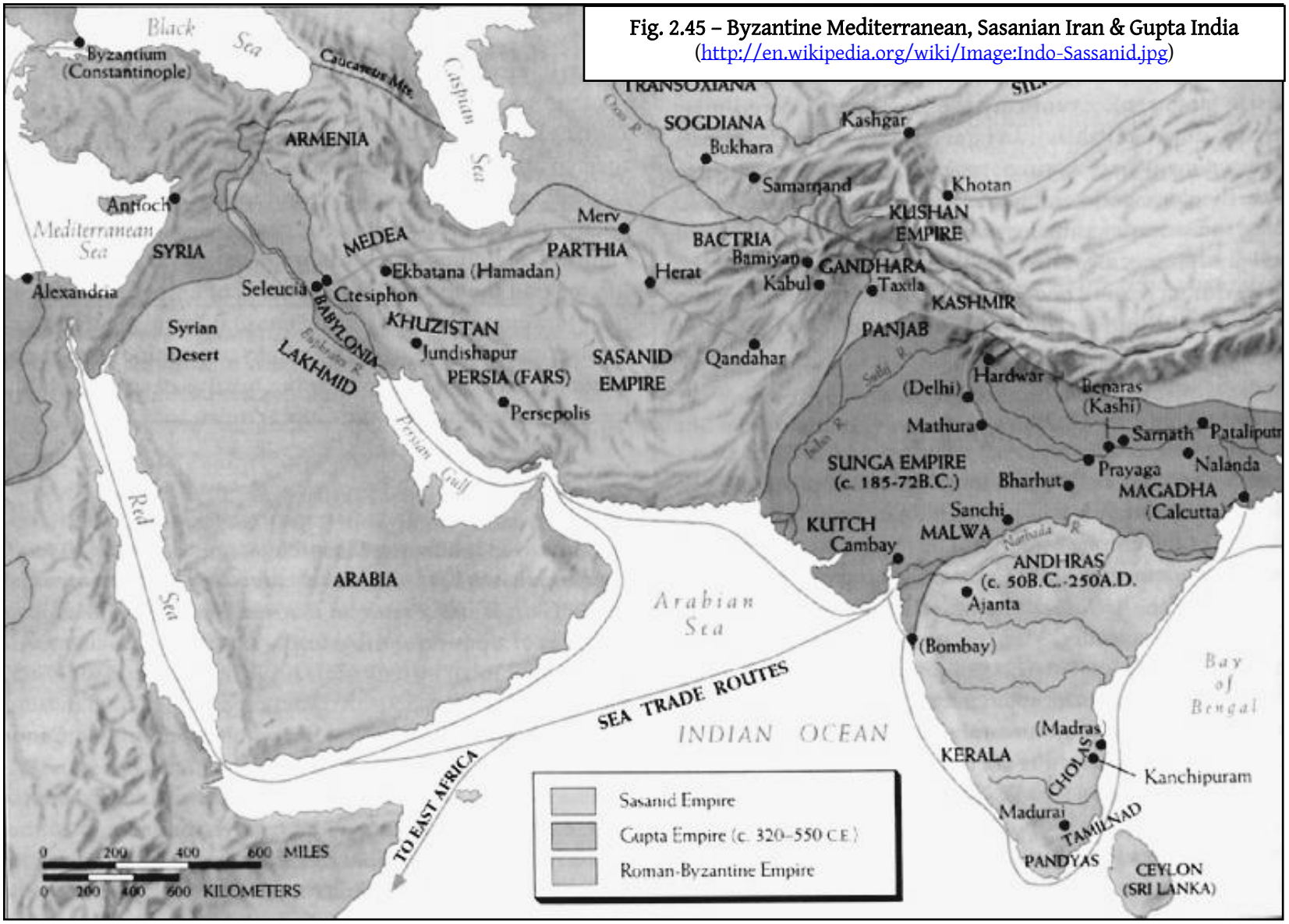


Fig. 2.45 – Byzantine Mediterranean, Sasanian Iran & Gupta India
(http://en.wikipedia.org/wiki/Image:Indo-Sassanid.jpg)

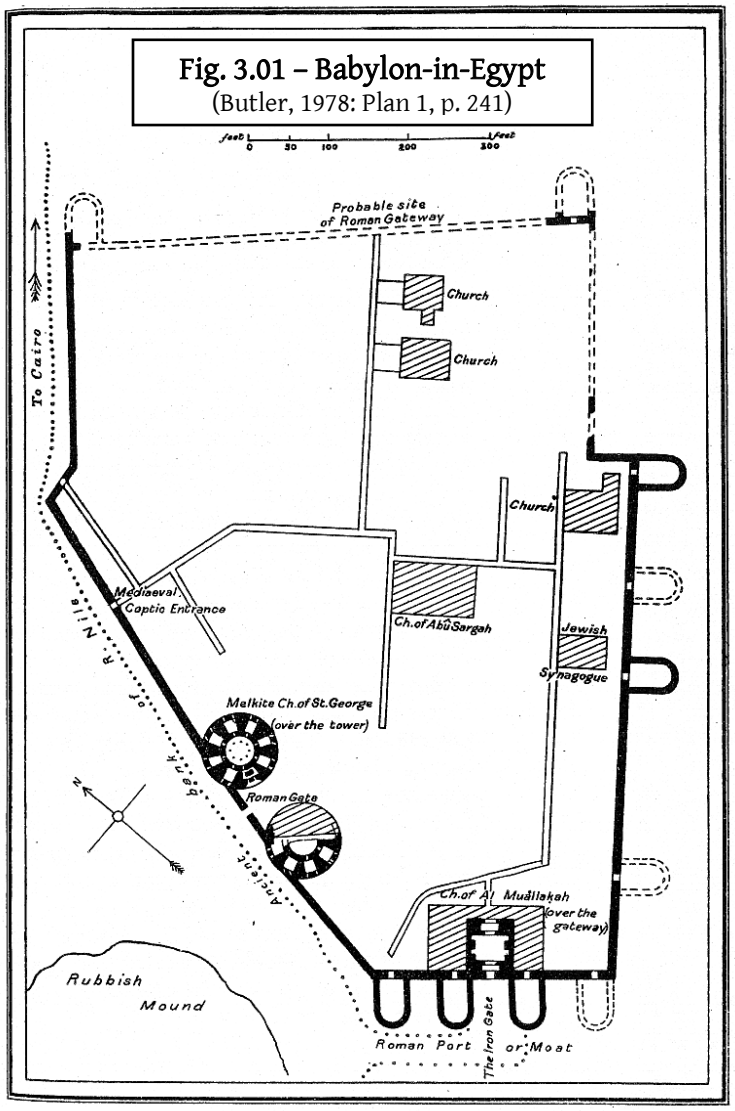


Fig. 3.01 – Babylon-in-Egypt
(Butler, 1978: Plan 1, p. 241)
Probable site of Roman Gateway
Church
Church
Church
To Cairo
Mediaeval Coptic Entrance
Ch. of Abū Sargah
Jewish Synagogue
Melkite Ch. of St. George (over the tower)
Roman Gate
Ch. of Al Muallakah (over the gateway)
Rubbish Mound
Roman Port or Moat
The Iron Gate

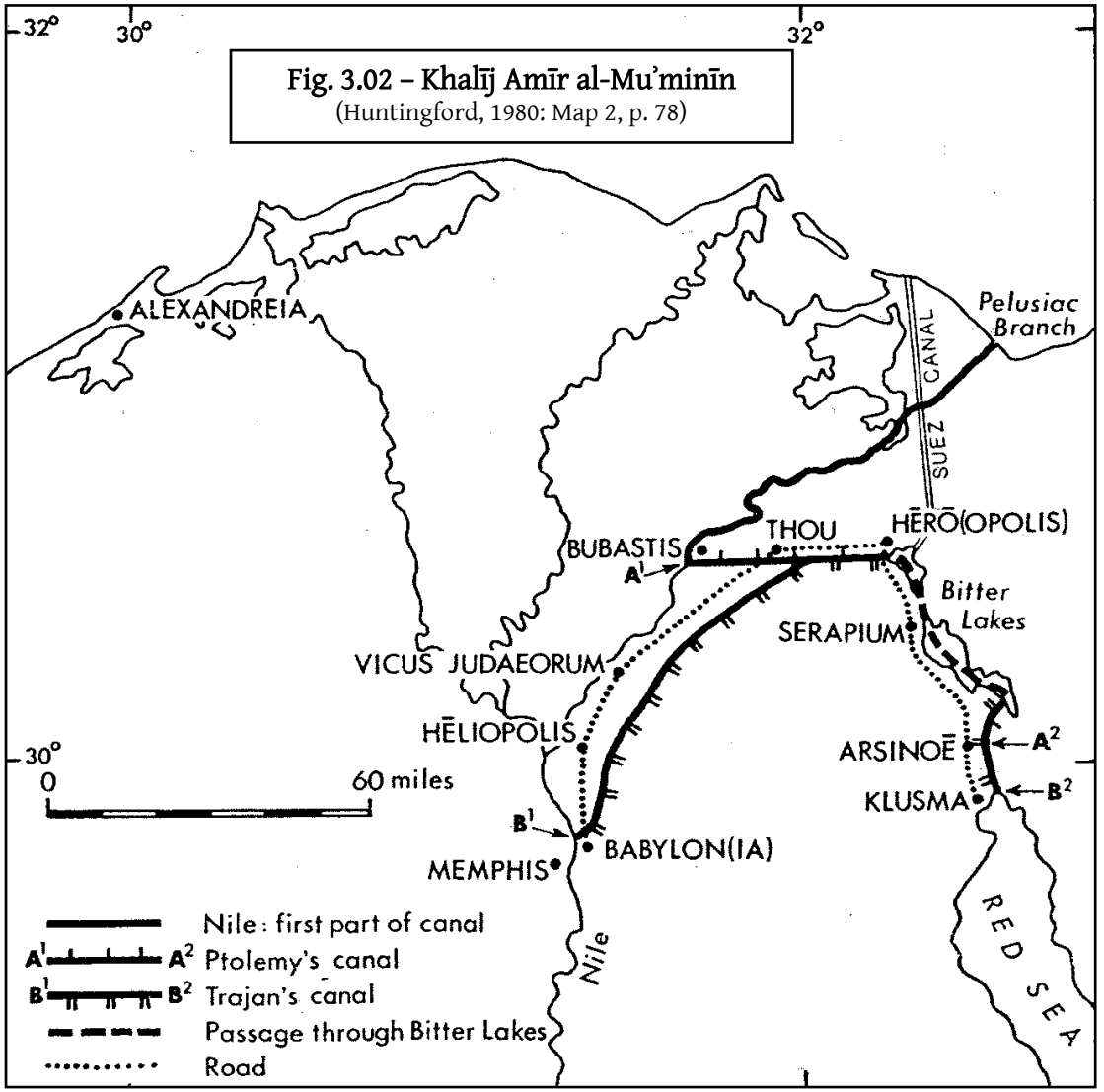


Fig. 3.02 – Khalīj Amīr al-Mu'minīn
(Huntingford, 1980: Map 2, p. 78)
32°
30°
32°
ALEXANDREIA
Pelusiac Branch
CANAL
SUEZ
BUBASTIS
THOU
HĒRŌ(OPOLIS)
A¹
Bitter Lakes
SERAPIUM
VICUS JUDAEORUM
HĒLIOPOLIS
ARSINOĒ
A²
KLUSMA
B²
B¹
BABYLON(IA)
MEMPHIS
30°
0
60 miles
Nile
RED SEA
Nile : first part of canal
A¹ A² Ptolemy's canal
B¹ B² Trajan's canal
Passage through Bitter Lakes
Road

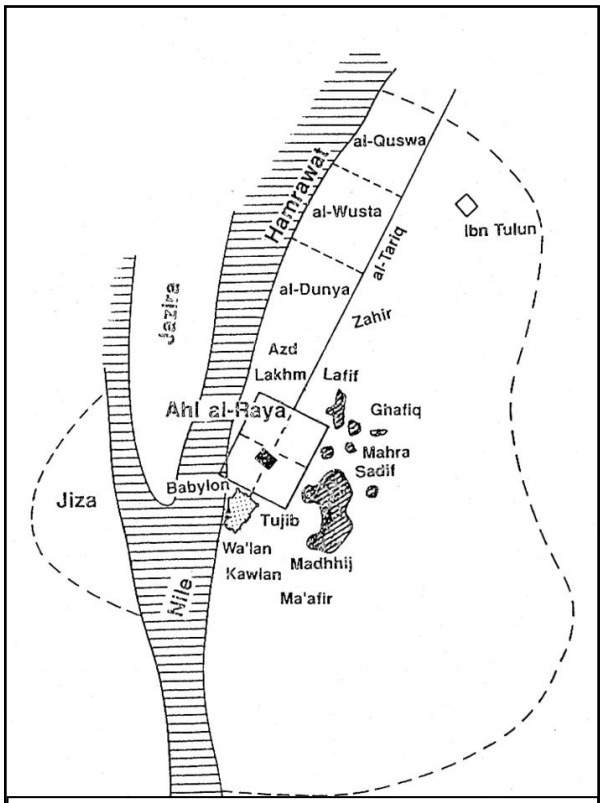


Fig. 3.03 – Fusṭāṭ in the Seventh Century
(After Kubiak, 1982: Plan 1)

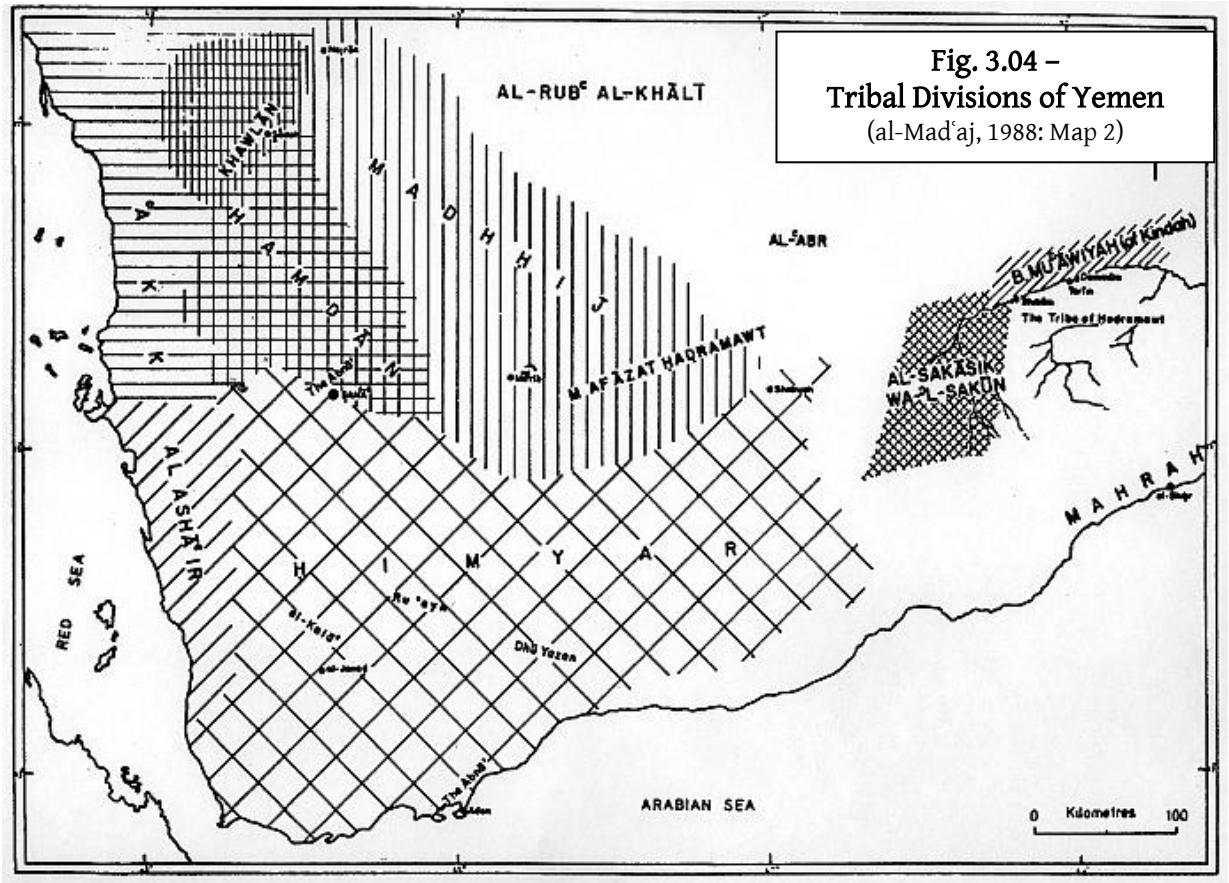
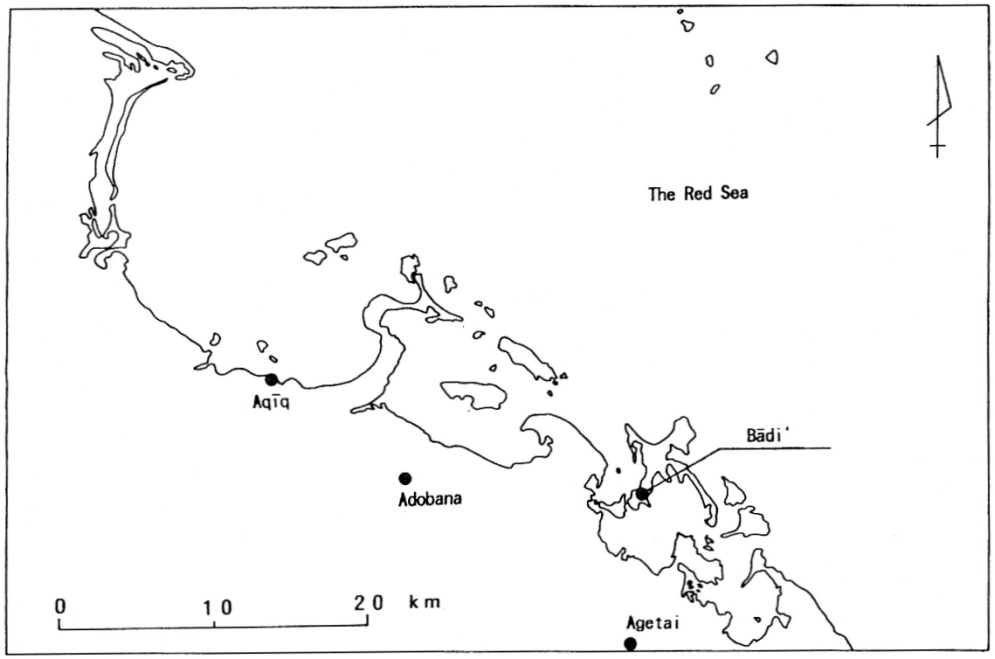


Fig. 3.04 –
Tribal Divisions of Yemen
(al-Madʿaj, 1988: Map 2)



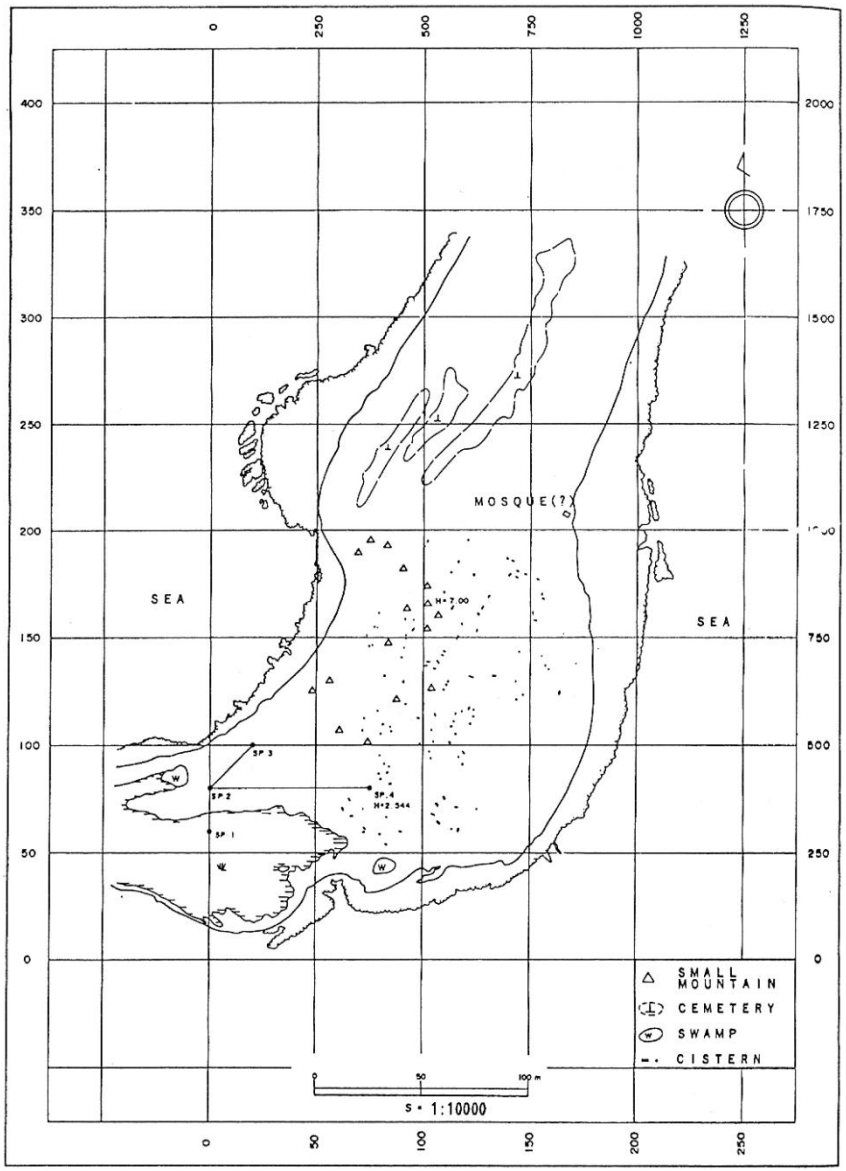


Fig. 3.05 & 3.06 – Bāḍi'
(Kawatoko, 1993a: Map 3 & 4)

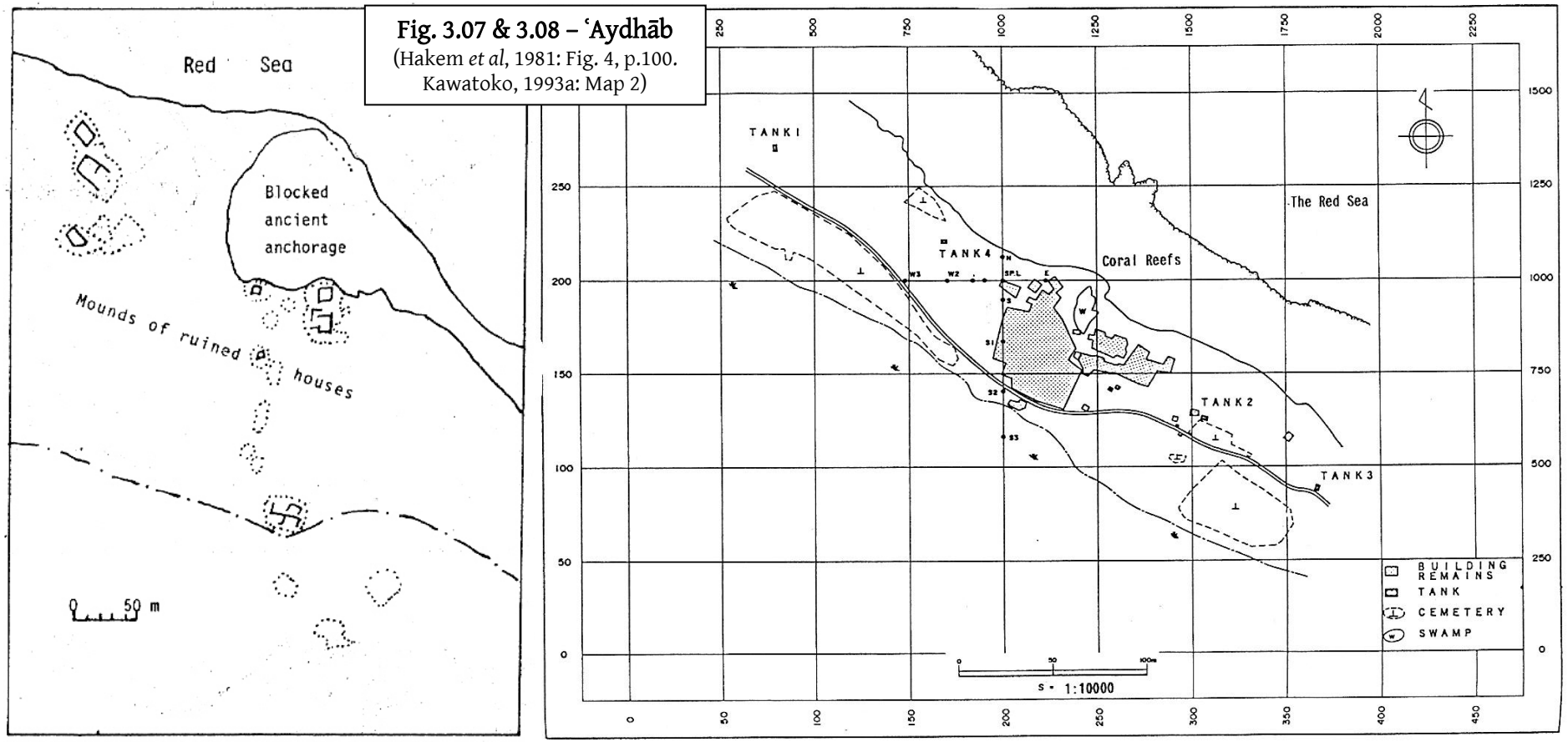


Fig. 3.07 & 3.08 – ʿAydhāb
(Hakem *et al*, 1981: Fig. 4, p.100.
Kawatoko, 1993a: Map 2)

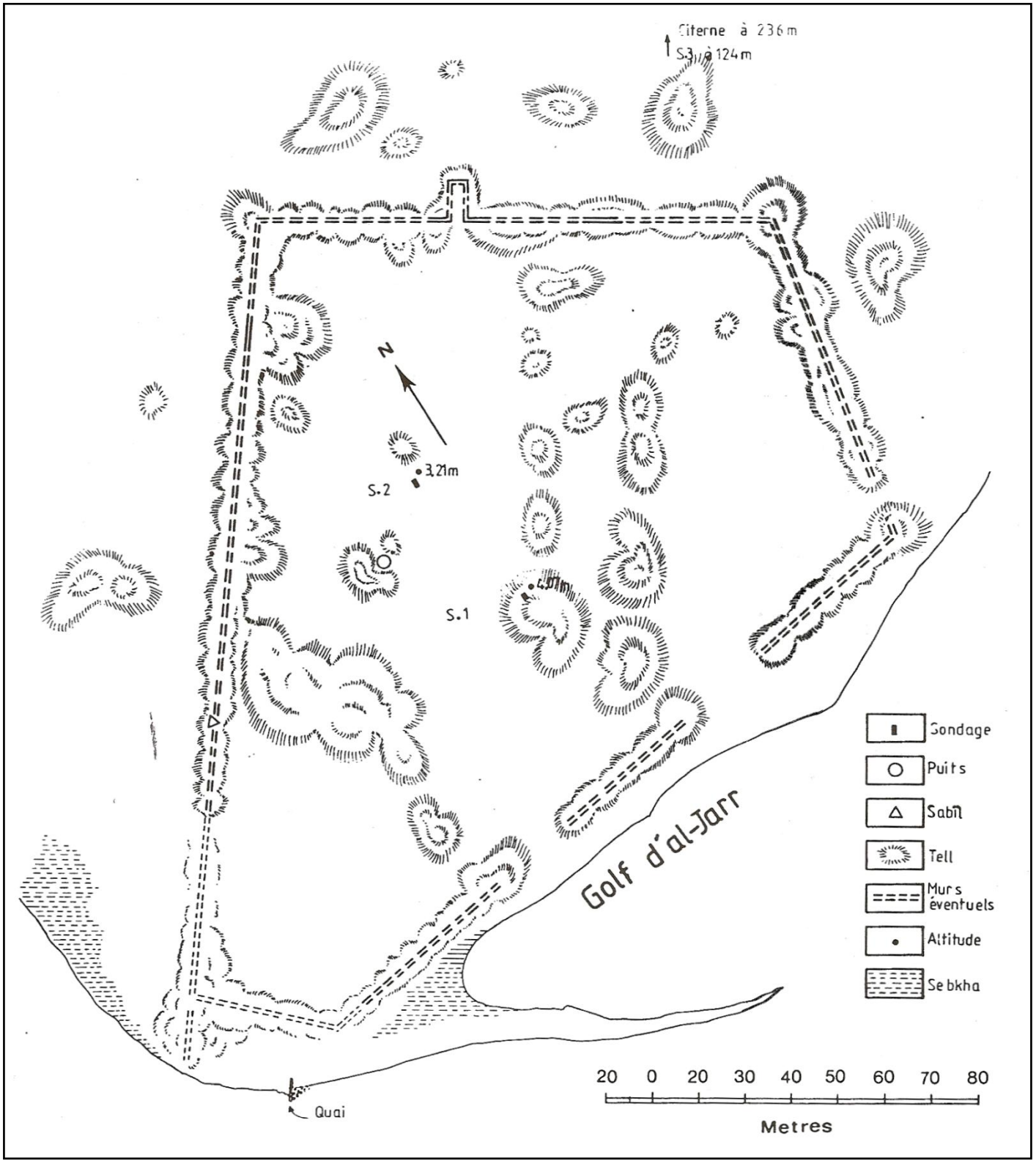
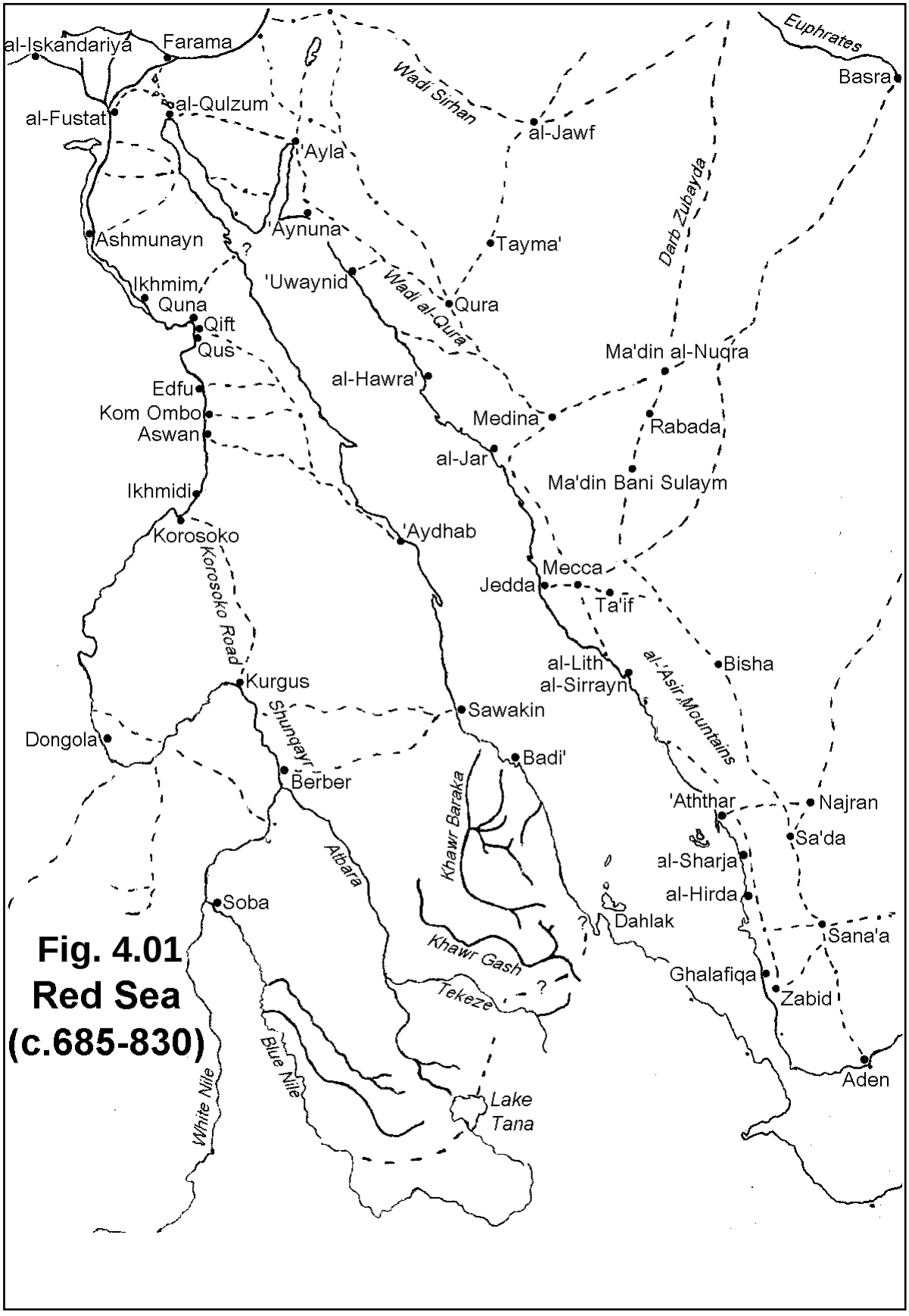


Fig. 3.09 – al-Jār
(Ghabban, 1988: Pl. 139)

Figures 4. The 'Long' Eighth Century (c. 685-830)



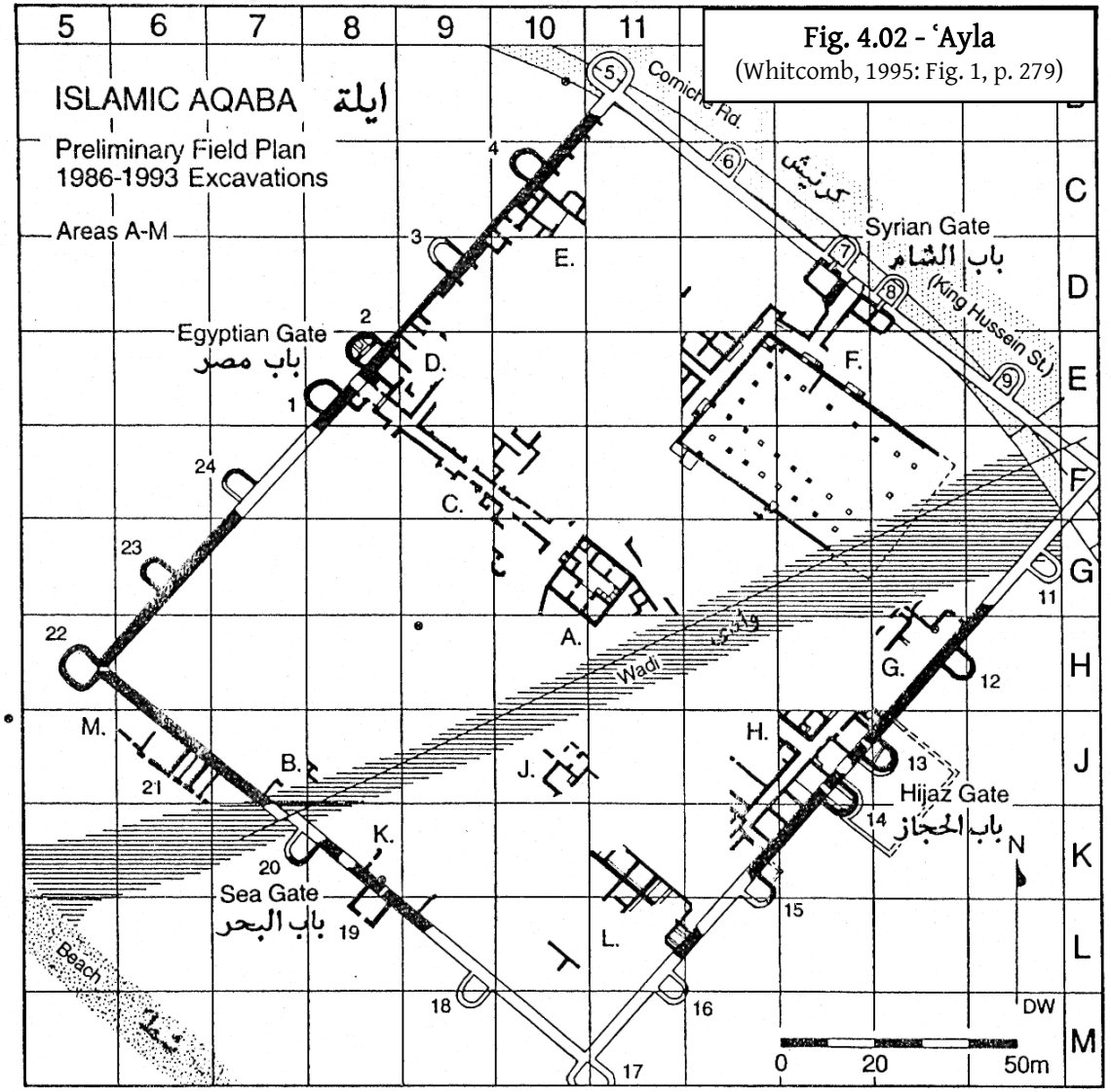


Fig. 4.02 - ʿAyla
(Whitcomb, 1995: Fig. 1, p. 279)

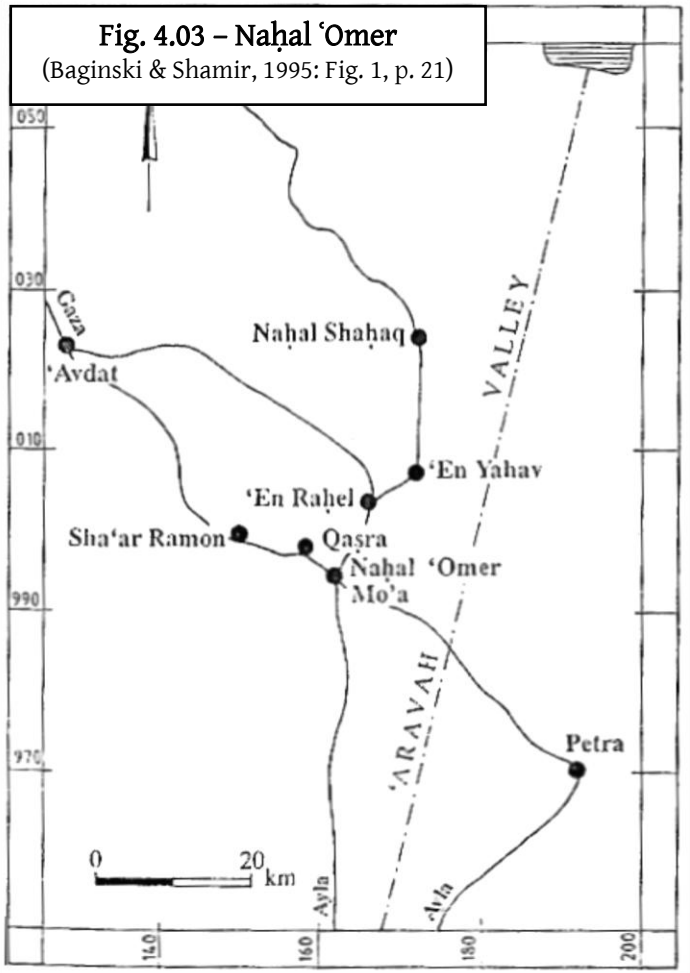
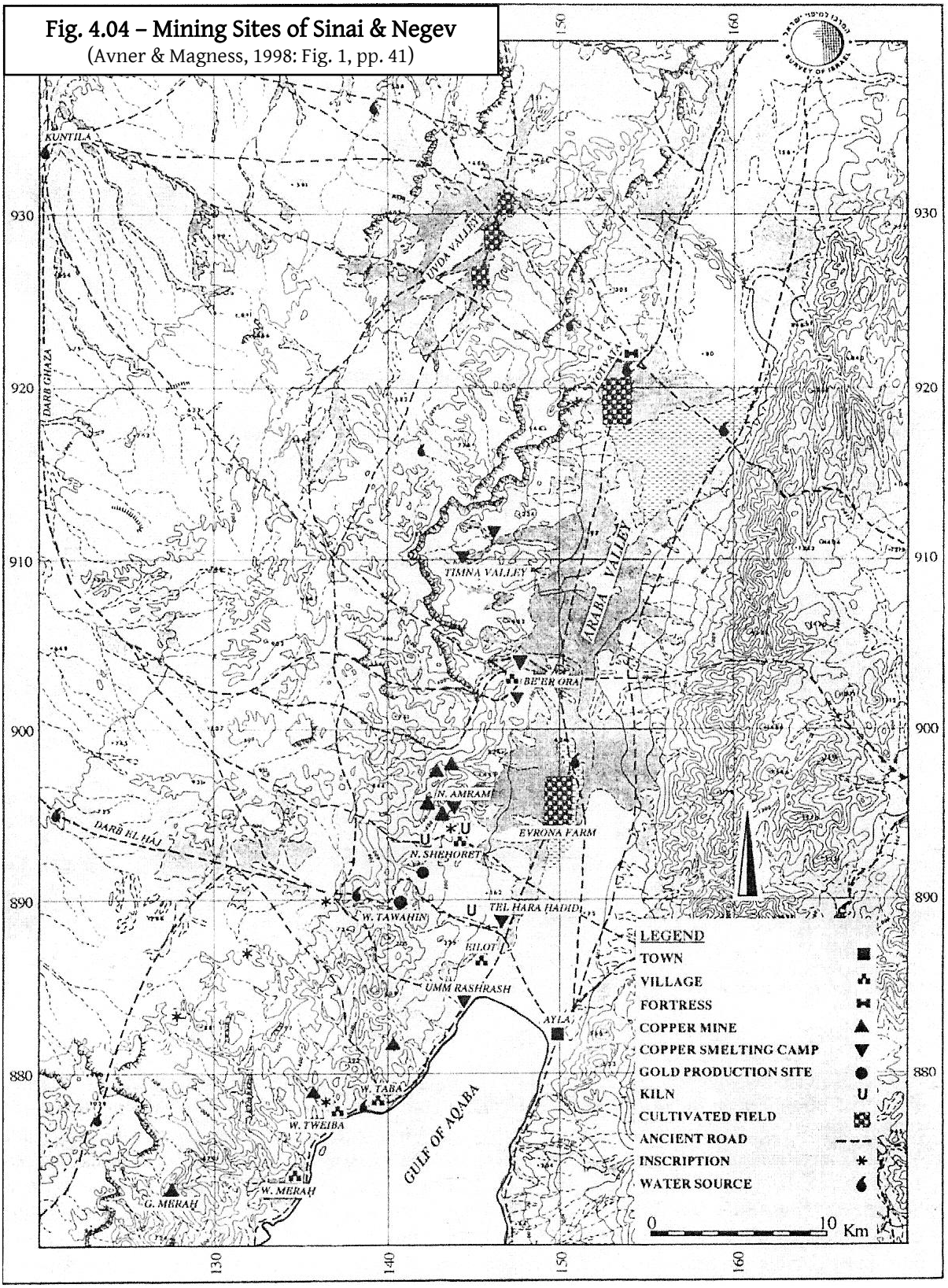


Fig. 4.03 – Naḥal ʿOmer
(Baginski & Shamir, 1995: Fig. 1, p. 21)

Fig. 4.04 – Mining Sites of Sinai & Negev
(Avner & Magness, 1998: Fig. 1, pp. 41)



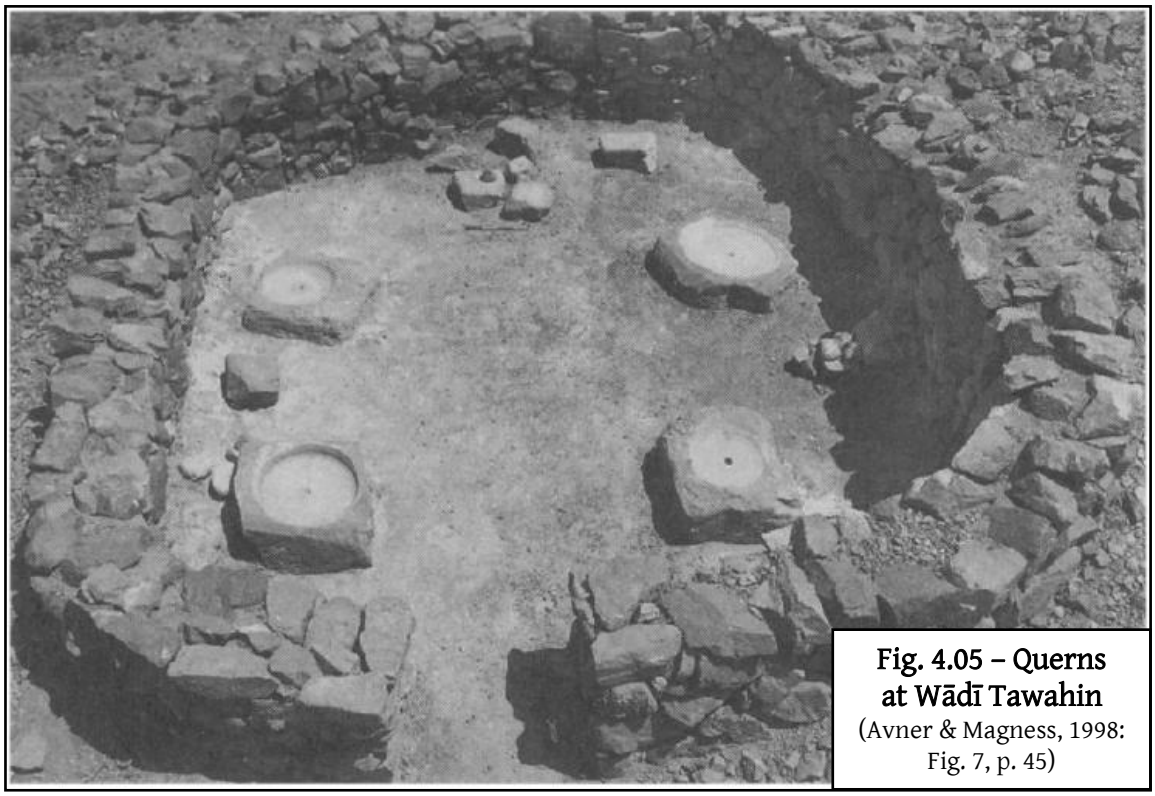


Fig. 4.05 – Querns at Wādī Tawahin
(Avner & Magness, 1998: Fig. 7, p. 45)

SITE	B.P.	Cal. A.D.	% PROBABILITY
Evrona	1415 ± 50	606 – 667	100
Timna 2, FuZ	1400 ± 100	552 – 720	89
Timna 2, Ful	1350 ± 50	649 – 716	83
Nahal Amram	1240 ± 36	769 – 868	88
Be'er Ora	1390 ± 50	615 – 682	100
Be'er Ora	1370 ± 20	655 – 670	100
Be'er Ora	1270 ± 55	680 – 810	100
Be'er Ora	1210 ± 40	785 – 881	100
Be'er Ora	1115 ± 45	893 – 979	100
Be'er Ora	1150 ± 45	864 – 976	96
Eilot	1405 ± 60	597 – 684	100
Eilot	1325 ± 45	663 – 765	100
Eilot	1305 ± 45	673 – 771	100
Wādī Tawāhin	1065 ± 37	965 – 1018	98
Wādī Tawāhin	1075 ± 47	955 – 1017	81
Wādī Tweiba	1520 ± 45	531 – 619	88
Wādī Tweiba	1380 ± 45	626 – 686	100
Wādī Tweiba	1240 ± 45	765 – 872	85
Wādī Tweiba	1055 ± 45	963 – 1024	96
Wādī Tweiba	925 ± 45	1043 – 1148	89
Be'er Ora	915 ± 50	1042 – 1149	83
Be'er Ora	730 ± 55	1238 – 1305	93
Shahmon	585 ± 25	1317 – 1407	100
Shahmon	375 ± 50	1460 – 1628	100
Jabal Fara'ūn	775 ± 45	1234 – 1285	100
Eilot	305 ± 50	1514 – 1654	100

Fig. 4.06 – Radiocarbon Dates from Sinai & Negev Mines
(Avner & Magness, 1998: Appendix, p. 57)

Fig. 4.07 – Hinterland of 'Ayla
(Whitcomb, 2006: Fig. 19.1, p. 239)

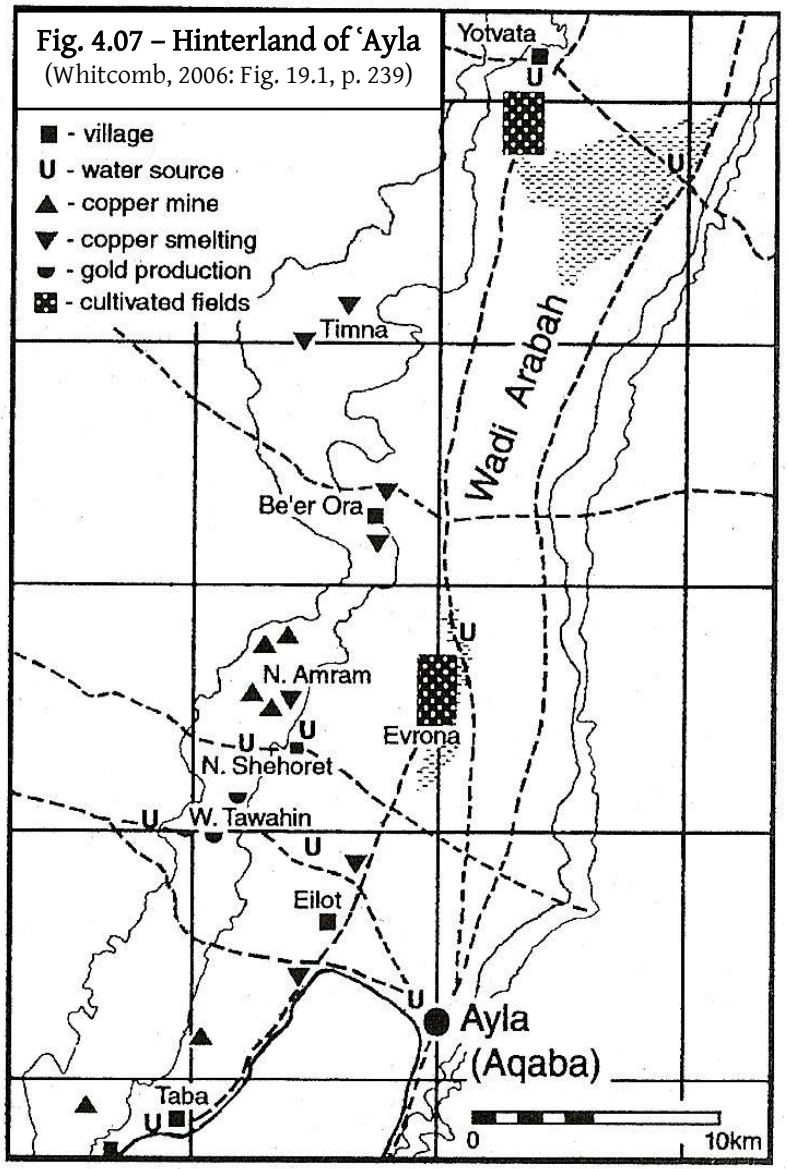
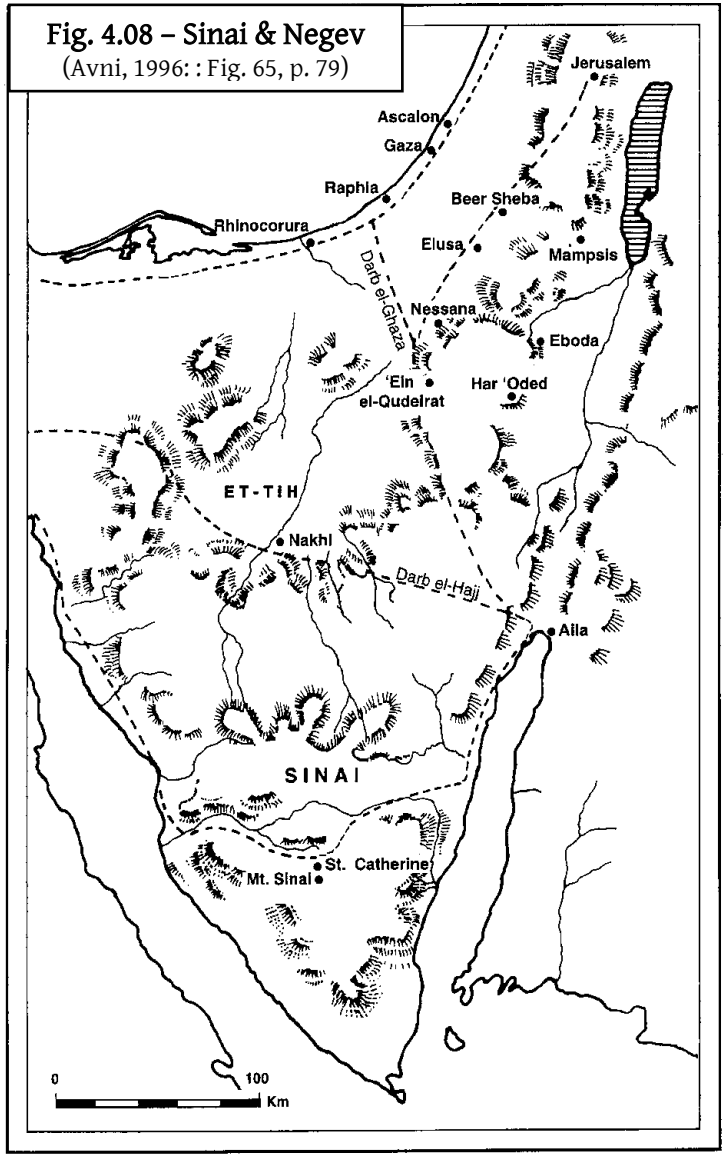


Fig. 4.08 – Sinai & Negev
(Avni, 1996: : Fig. 65, p. 79)



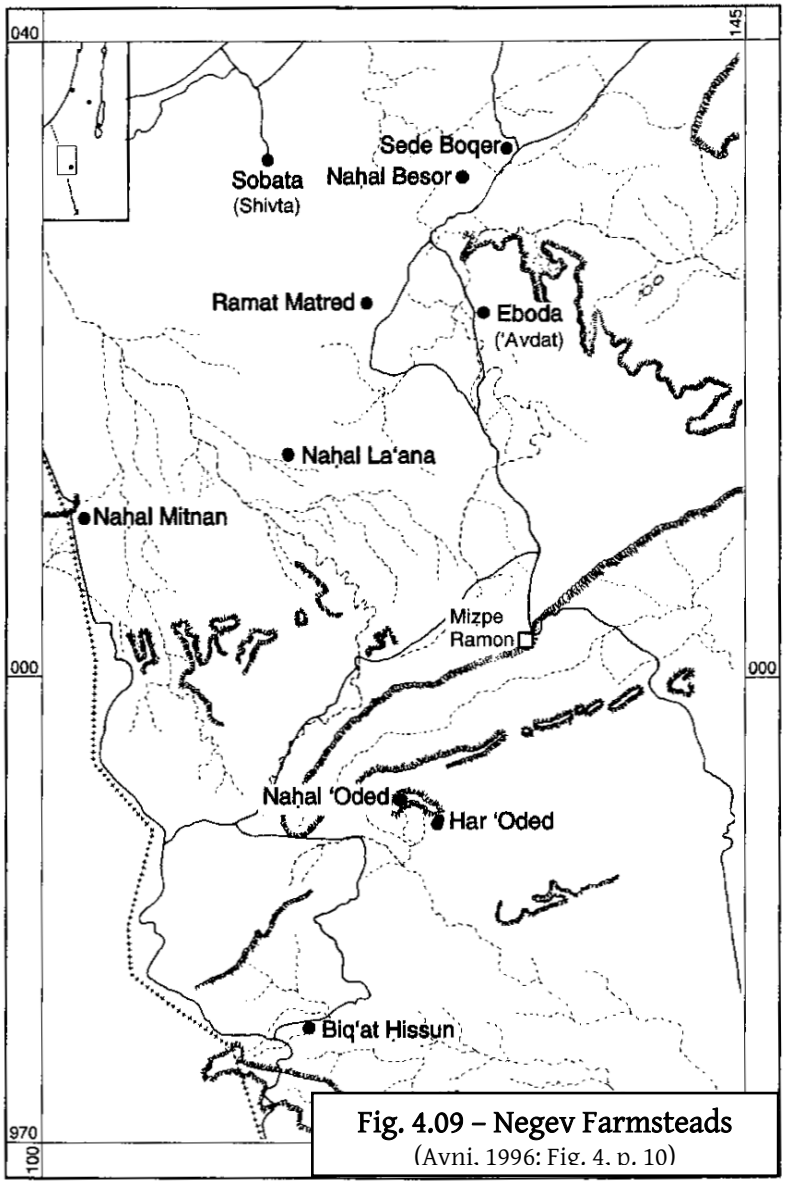


Fig. 4.09 – Negev Farmsteads
(Avni, 1996: Fig. 4, p. 10)

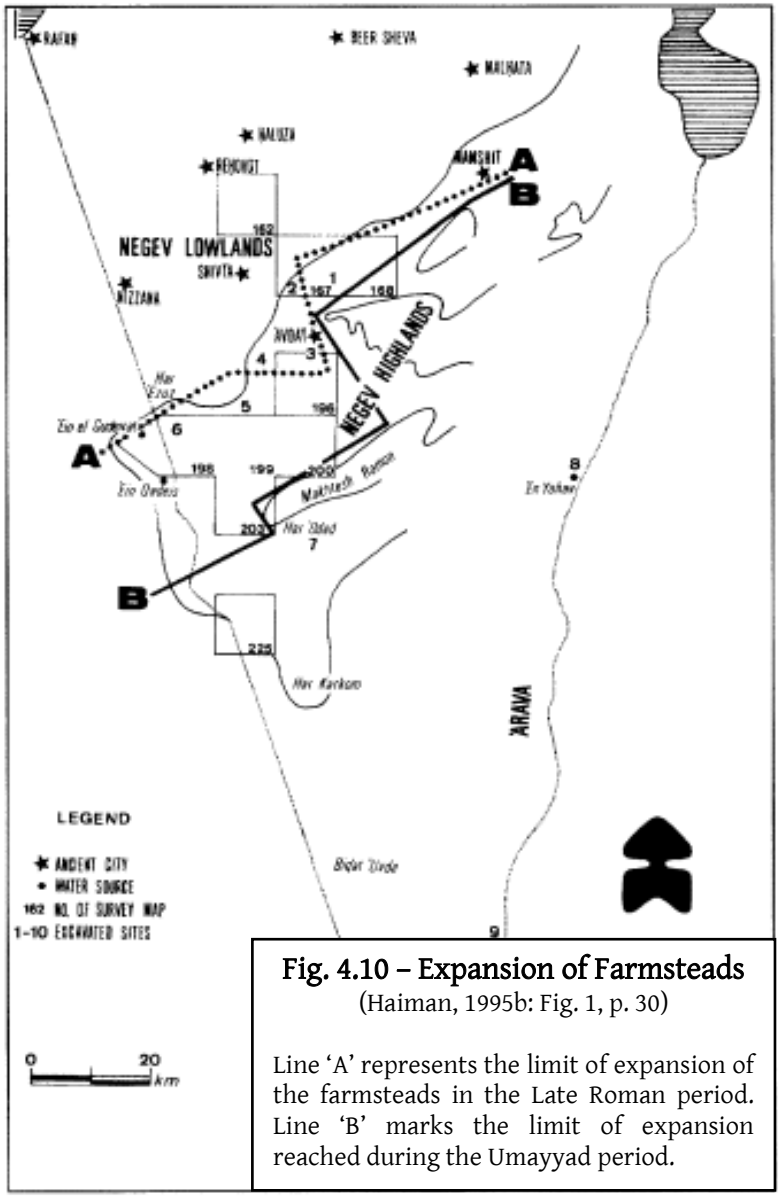


Fig. 4.10 – Expansion of Farmsteads
(Haiman, 1995b: Fig. 1, p. 30)

Line 'A' represents the limit of expansion of the farmsteads in the Late Roman period. Line 'B' marks the limit of expansion reached during the Umayyad period.

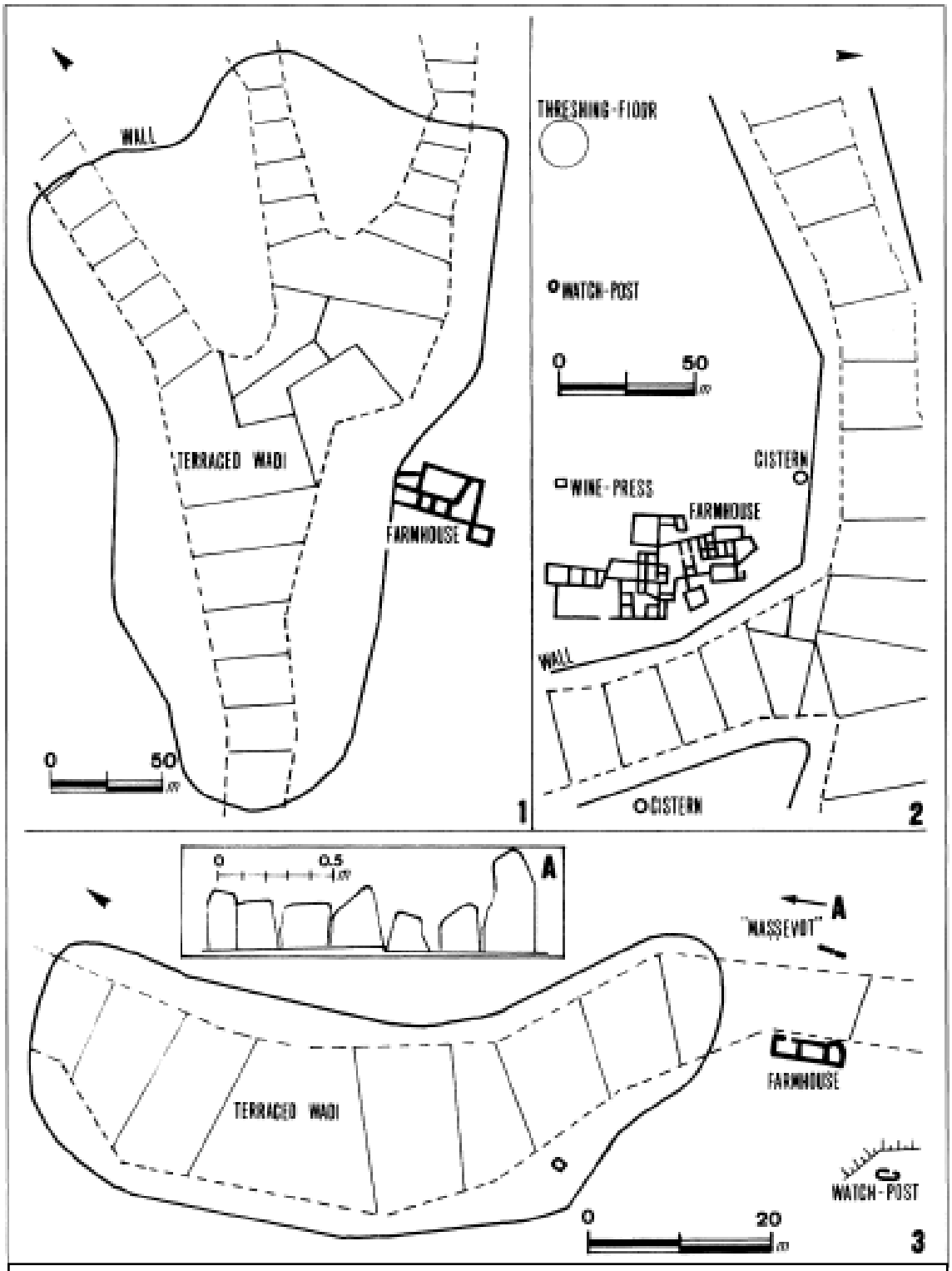


Fig. 4.11 – Eighth-Century Farmsteads of the Negev
(Haiman, 1995b: Fig. 10, p. 38)
1. Wadi el-Gudeirat; 2. Nahal Qadesh Barnea; 3. Nahal Mitnan.

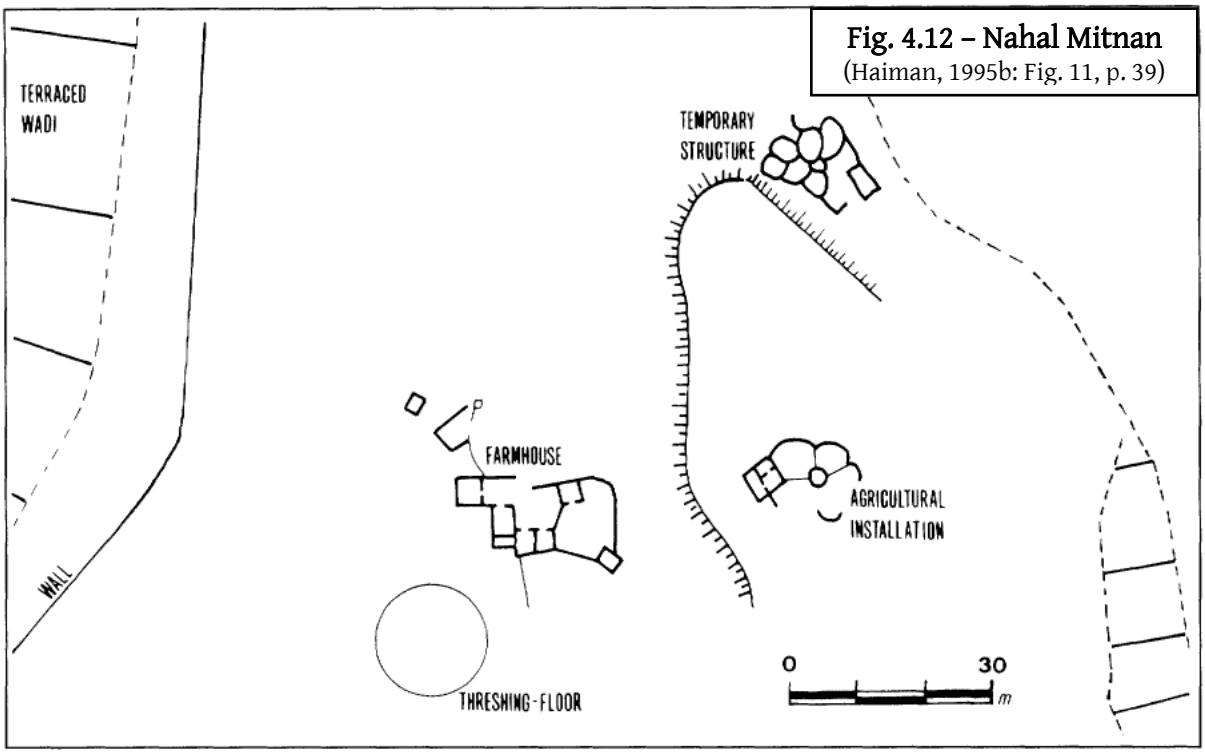


Fig. 4.12 – Nahal Mitnan (Haiman, 1995b: Fig. 11, p. 39)

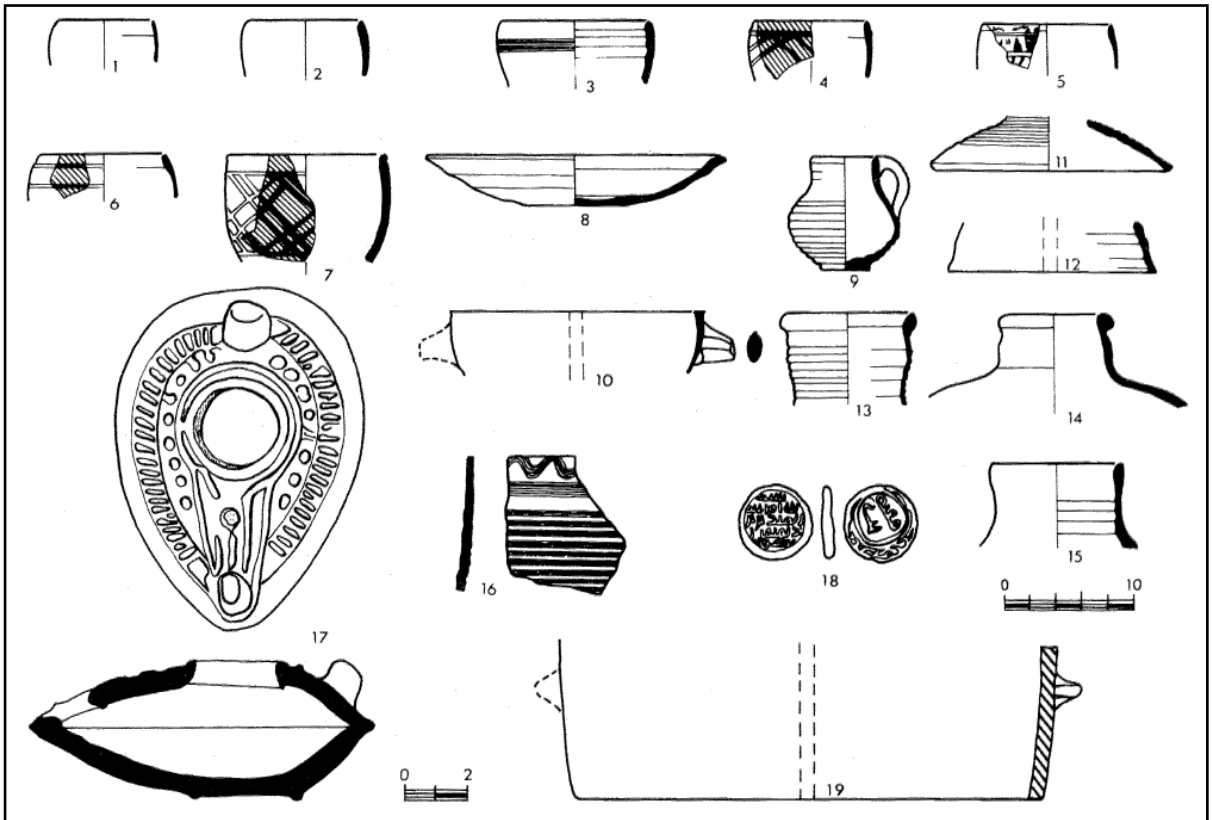


Fig. 4.13 – Finds from Nahal Mitnan (Haiman, 1995b: Fig. 16, p. 40)
Item 18 is a glass weight bearing the name ʿAbd al-Malik b. Yazīd

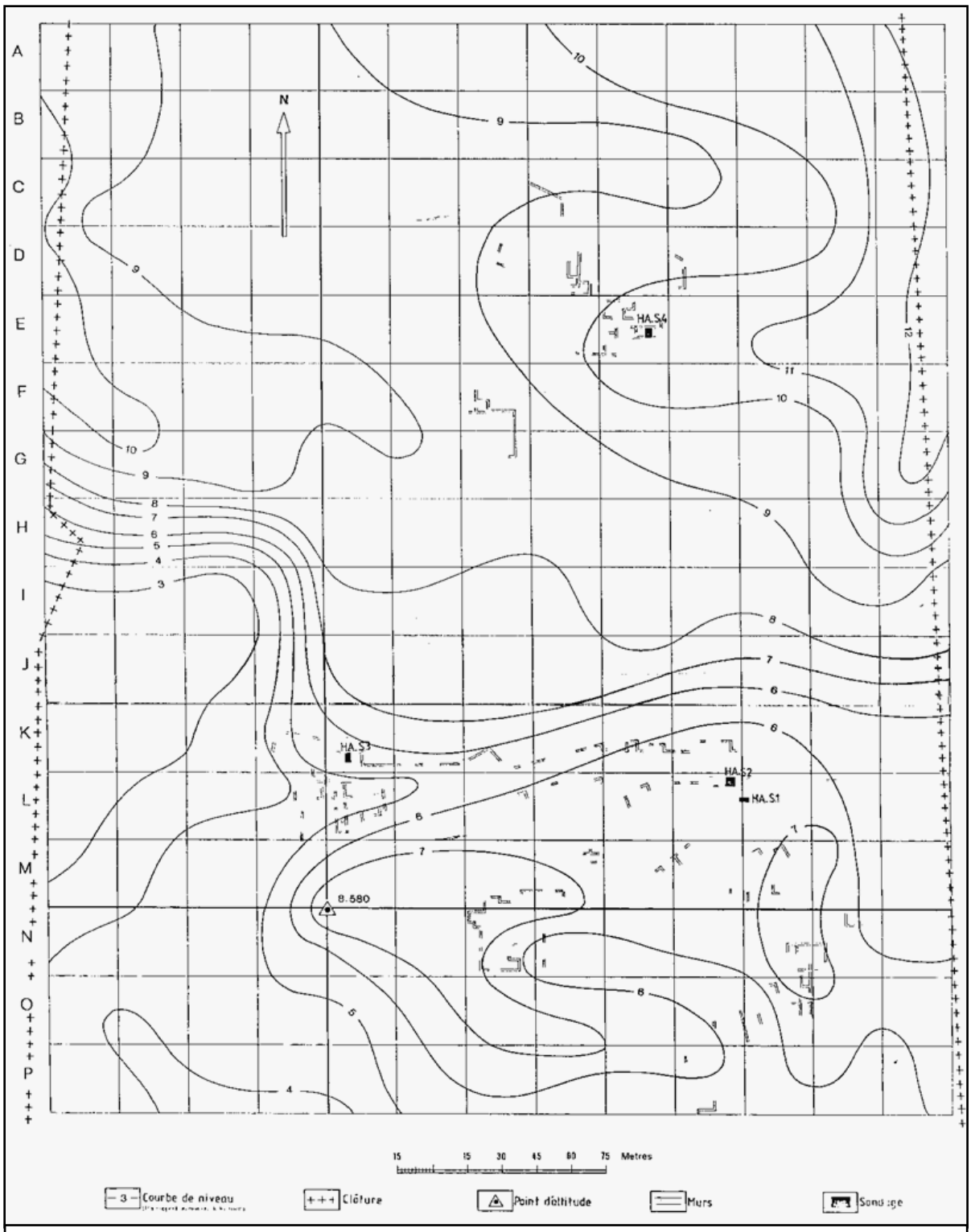


Fig. 4.14 – al-Ḥawrā'
(Ghabban, 1988: Pl. 117)

Wakiʿ	al-Yaʿqūbī (d. 902)	Qudāma (d. 930)	al-Muqaddasī (d. 985)	al-Idrisī (d. 1170?)
ʿAyla	ʿAyla	ʿAyla	Wayla	ʿAyla
ʿAynūnā	Sharaf al-Baʿl	Sharaf al-Baʿl	Sharaf Dhu Naml	Al-Ḥaql
al-Muṣallā (al-Ṣilā)	Madyan	al-Ṣilā	al-Ṣilā	Madyan
al-Nīl	ʿAynūnā	al-Nabk	al-Nabk	al-Ḥawrāʾ
Tayba (Ḍubā)	ʿAwnīd	Ẓuba	Ḍubba	al-Jār
al-Madda	al-Ṣilā	ʿAwnīd	al-ʿAwnīd	Qudayd
ʿAwnīd (ʿUwaynid)	al-Nabk	al-Wajh	al-Ruḥba	ʿUsfān
al-Rajja (al-Wajḥ)	al-Quṣayba	Munkhūs	Munkhūs	Baṭn Marr
Munkhūs	al-Buḥra	al-Jarra	al-Buḥayra	Mecca
al-Ḥawrāʾ	al-Mughitha	al-Aḥsāʾ	al-Aḥsāʾ	II
Quṣayba	Ẓuba	Yanbuʿ	al-ʿUshayra	ʿAyla
al-Buḥra	al-Wajḥ	Masʾūlān	al-Jār	ʿAwnīd
Yalbaʿ (Yanbuʿ)	Munkhūs	al-Jar	Medina	Ḍuba
(Masʾūlān)	al-Jār	Medina		al-ʿUṭūf
al-Jār	al-Juḥfa			al-Ḥawrāʾ
Medina	Qudayd			
	ʿUsfān			
	Baṭn Marr			
	Mecca			

Fig. 4.15 – The ʿAyla – Medina Coastal Road
(Wohaibi, 1973: Table 2)

Figures 4. The 'Long' Eighth Century (c. 685-830)

Ibn khurradādhbih (d. 870?)	Waki'	al-Ya'qūbī (d. 902)	Ibn Rosteh (d. 913)	Qudāma (d. 930)	al-Muqaddasī (d. 985)	al-Bakrī (d. 1094)	al-Idrīsī (d. 1170?)
ʿAyla	ʿAyla	ʿAyla	ʿAyla	ʿAyla	ʿAyla	ʿAyla	Ayla
Ḥaql	Saraf al-Baʿl	Sharaf al-Baʿl	Sharaf al-Naml	Sharaf al-Baʿl	Sharaf Dhul Naml	Ḥaql	Ḥamal
Madyan	Madyan	Madyan	Madyan	Madyan	Madyan	Wādī al-Ghurrāb	Madyan
al-Aghrāʾ	Qālis	al-Aghrāʾ	al-Aghrāʾ	al-Aghrāʾ	al-Aʿrāʾ	Ashrāf al-Baʿl	al-A'dā'
'a station'	al-Aʿarr (al-Agharr)	Qālis	'a station'	'a station'	'a station'	Madyan	'a station'
al-Kilāba	al-Kalābina (al-Kilābab)	Shaghb	al-Kilāba	al-Kilāba	al-Kilāya	ʿAynūna	Ankilāya
Shaghb	Badā	Badā	Shaghb	Shaghb	Shaghb	al-Nabk & al-Ṣilā	Sa'b
Badā	al-Shaghab	al-Suqyā	Badā	Badā	Badā	Ḍubā	al-Bayḍā'
al-Sarḥatayn	(al-Sarḥatayn)	Dhul Marwah	al-Sarḥatayn	al-Sarḥatayn	al-Sarḥatayn	Bāda Yaʿqūb	Wādī al-Qurā
al-Bayḍaʾ	al-Sīfyā (al-Suqyā)	Dhu Kushub	Wādī al-Qurā	Wādī al-Qurā	Wādī al-Qurā	Suqyā Yazīd	al-Ruḥayba
Wādī al-Qurā		Medina	al-Ruḥba	al-Ruḥayba	II	al-Marwah	Dhul Marwah
al-Ruḥayba			Dhul Marwah	Dhul Marwah	al-Aʿrāʾ	al-Suwaydāʾ	Marr
Dhul Marwah			al-Marr	al-Suwaydāʾ	al-Kilāya	Naqā Dhu Khushub	al-Suwaydā'
al-Marr	ʿAnāb		al-Suwaydā'	Dhu Khushub	Shaghb		Dhu Khushub
al-Suwaydāʾ	al-Marwah		Dhu Khushub	Medina	Badā		
Dhu Khushub	al-Mayy (al-Marr)		Medina		al-Sarḥatayn		
Medina	al-Suwaydāʾ				al-Bayḍāʾ		
	al-Arāk (Uwāl)				Qurḥ		
					Suqyā Yazīd		

Fig. 4.16 – The Ayla – Medina Inland Road
(Wohaibi, 1973: Table 1)

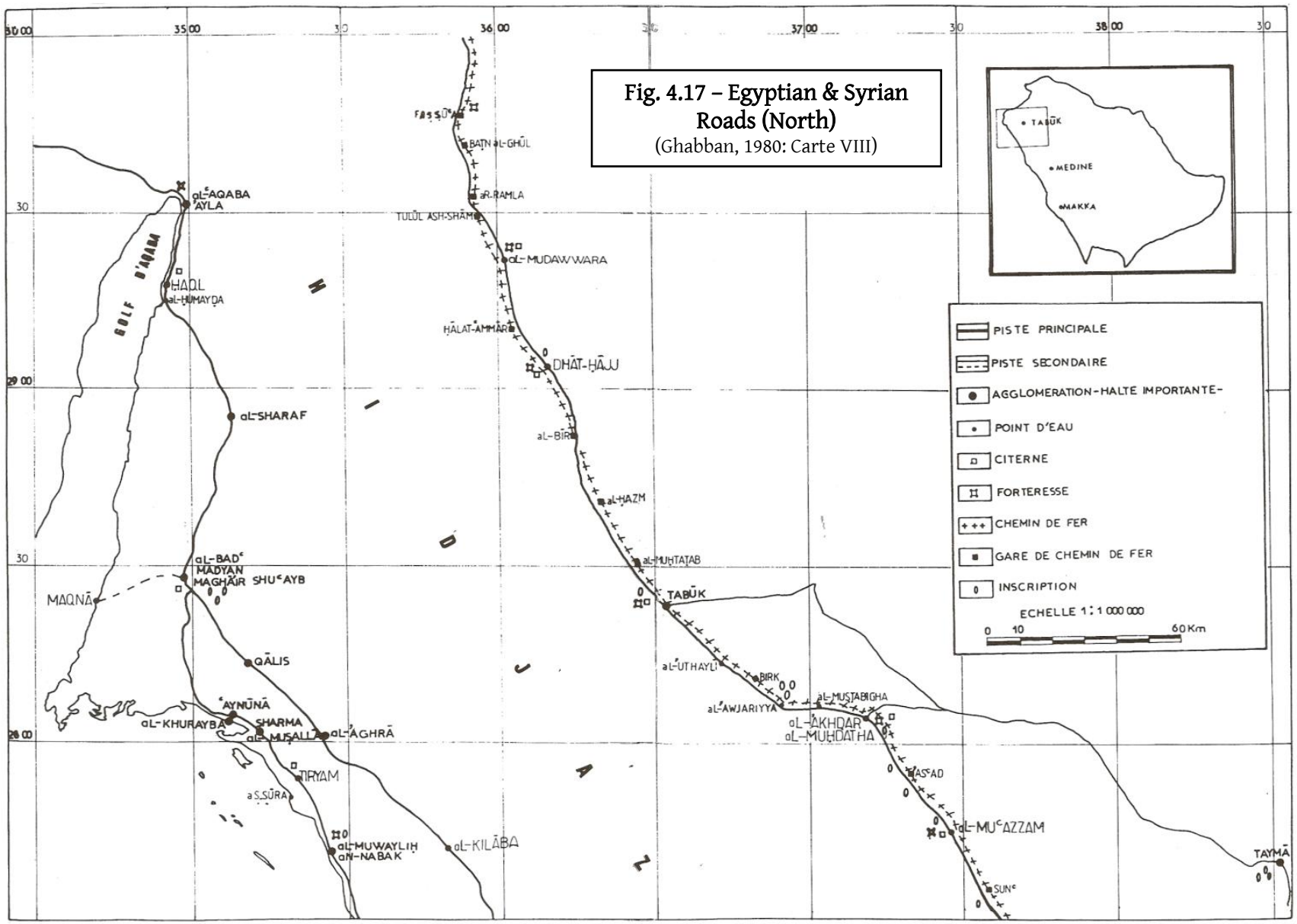
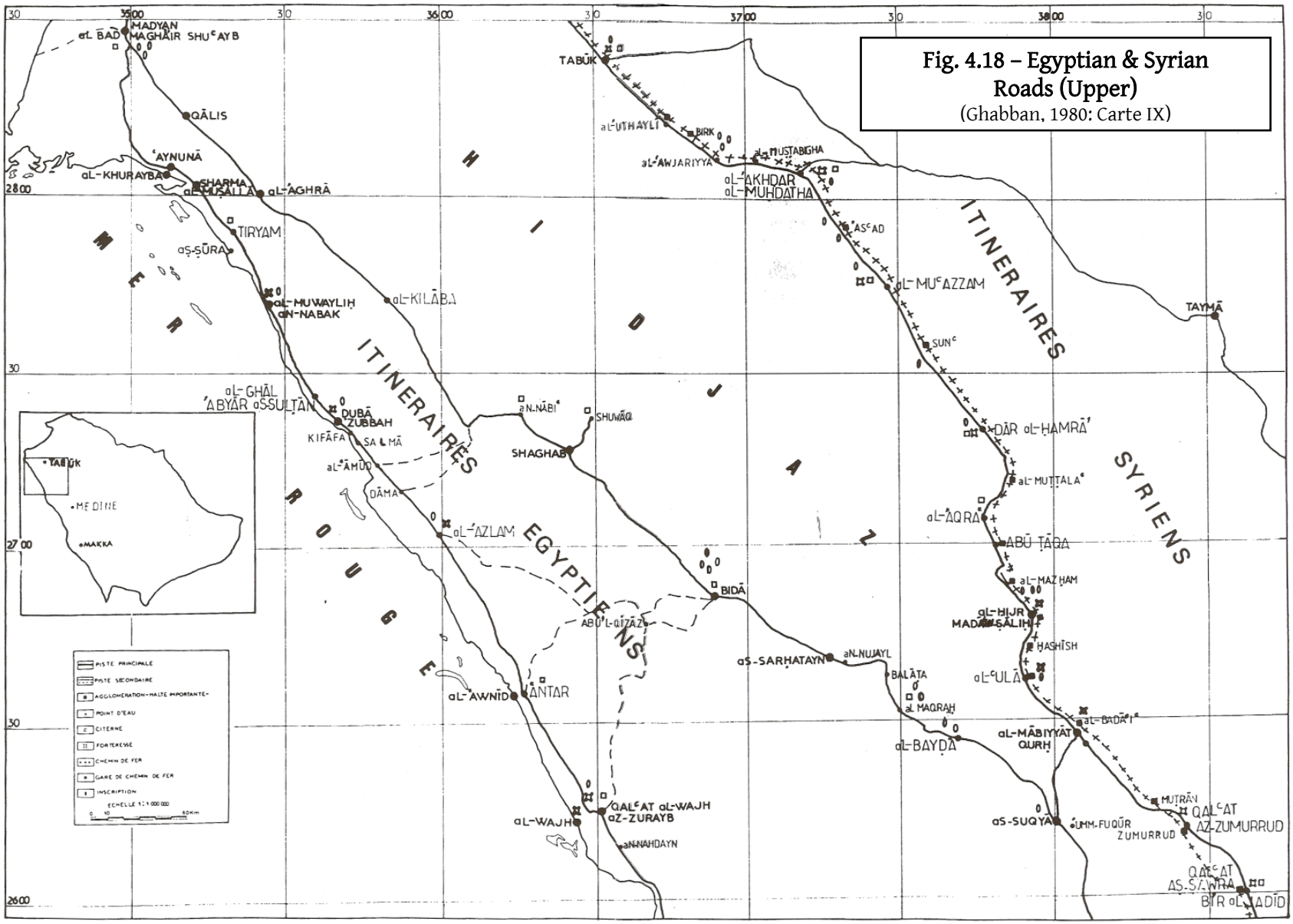


Fig. 4.17 – Egyptian & Syrian Roads (North)
(Ghabban, 1980: Carte VIII)
TABŪK
MEDINE
MAKKA
PISTE PRINCIPALE
PISTE SECONDAIRE
AGGLOMERATION-HALTE IMPORTANTE-
POINT D'EAU
CITERNE
FORTERESSE
CHEMIN DE FER
GARE DE CHEMIN DE FER
INSCRIPTION
ECHELLE 1 : 1 000 000
0 10 60 Km
35 00
36 00
37 00
38 00
30
29 00
GOLF D'AQABA
FAṢṢŪ'A
BAṬN aL-GHŪL
aR-RAMLA
TULŪL ASH-SHĀM
aL-MUDAWWARA
ḤĀLAT-'AMMĀR
DHĀT-ḤĀJJ
aL-BĪR
aL-ḤAZM
aL-MUḤTAṬAB
TABŪK
aL-'UTHAYLĪ
BIRK
aL-'AWJARIYYA
aL-MUSTABIGHA
aL-'AKHDAR
aL-MUḤDATHA
'ASC AD
aL-MUCAZZAM
TAYMĀ
SUNC
aL-'AQABA
'AYLA
ḤAQL
aL-ḤUMAYḌA
aL-SHARAF
aL-BADC
MADYAN
MAGHĀIR SHUCAYB
MAQNĀ
QĀLIS
'AYNŪNĀ
aL-KHURAYBA
SHARMA
MUṢALLĀ
aL-'AGHRĀ
TIRYAM
aS-SŪRA
aL-MUWAYLIḤ
aN-NABAK
aL-KILĀBA

Figures 4. The 'Long' Eighth Century (c. 685-830)



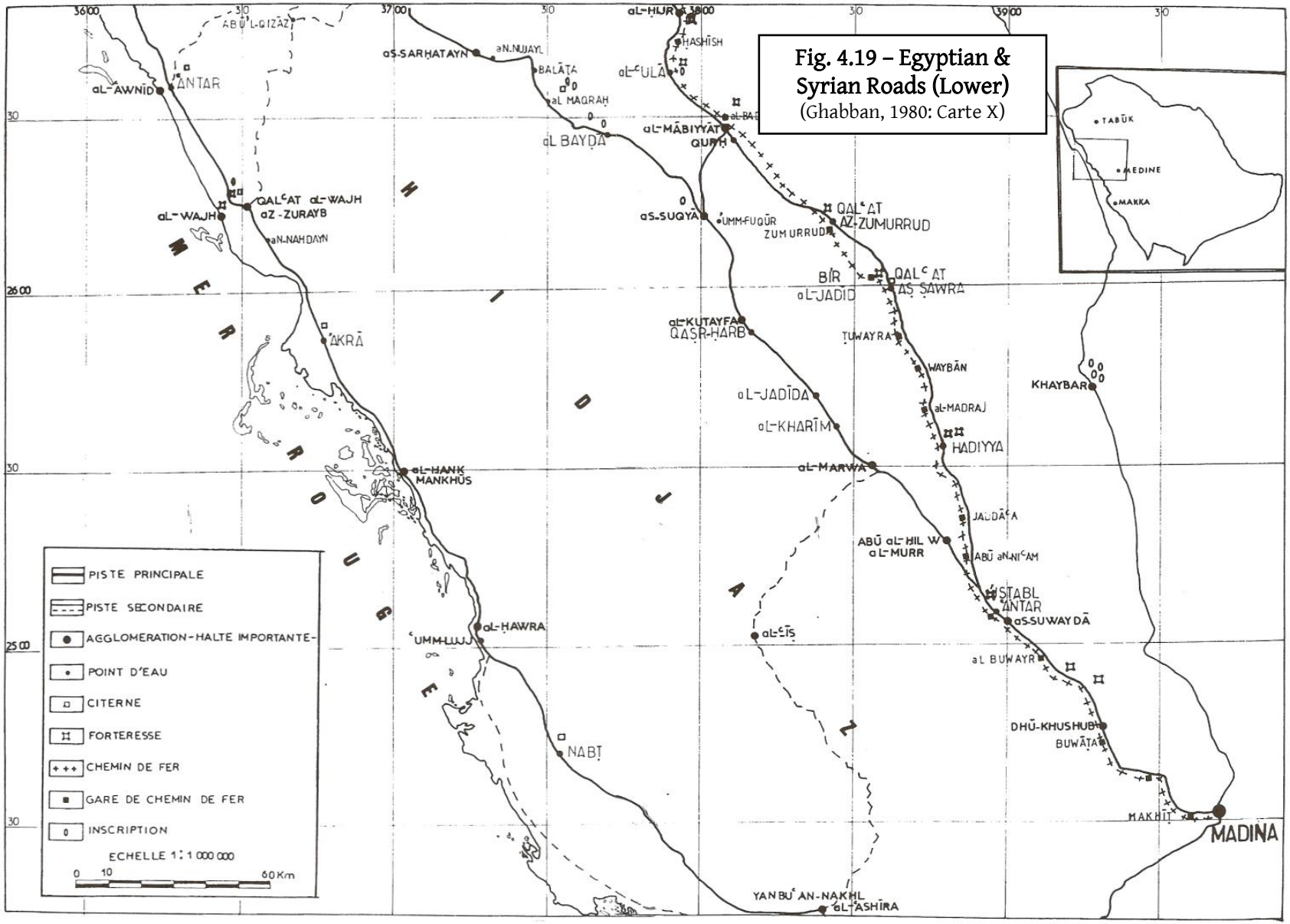


Fig. 4.19 – Egyptian & Syrian Roads (Lower)
(Ghabban, 1980: Carte X)
TABŪK
MEDINE
MAKKA
ABŪ L-GIZĀZ
ANTAR
aL-AWNID
aS-SARḤATAYN
aN-NUJAYL
BALĀṬA
aL MAQRAḤ
aL BAYḌĀ
aL-ḤIJR
HASHĪSH
aL-ʿULĀ
aL-MĀBIYYAT
QURḤ
aS-SUQYĀ
UMM-FUQŪR
QALʿAT AZ-ZUMURRUD
ZUMURRUD
BĪR aL-JADĪD
QALʿAT AṢ ṢAWRĀ
aL-KUTAYFA
QAṢR-ḤARB
ṬUWAYRA
WAYBĀN
aL-JADĪDA
aL-KHARĪM
al-MADRAJ
HADIYYA
KHAYBAR
aL-MARWA
JADDĀʿA
ABŪ aL-ḤIL W aL-MURR
ABŪ aN-NIʿAM
ISTABL ANTAR
aS-SUWAYDĀ
aL-ʿĪS
aL BUWAYR
DHŪ-KHUSHUB
BUWĀṬA
MAKHĪṬ
MADINA
aL-ḤANK MANKHŪS
aL-ḤAWRA
UMM-LUJJ
NABṬ
YANBUʿ AN-NAKHL
aL-ʿASHĪRA
AKRĀ
aL-WAJH
QALʿAT aL-WAJH aZ-ZURAYB
aN-NAHDAYN
HIJAZ
MERROUGE
NEFOUD
PISTE PRINCIPALE
PISTE SECONDAIRE
AGGLOMERATION-HALTE IMPORTANTE-
POINT D'EAU
CITERNE
FORTERESSE
CHEMIN DE FER
GARE DE CHEMIN DE FER
INSCRIPTION
ECHELLE 1 : 1 000 000
0 10 60 Km
36 00
37 00
38 00
39 00
30
26 00
25 00

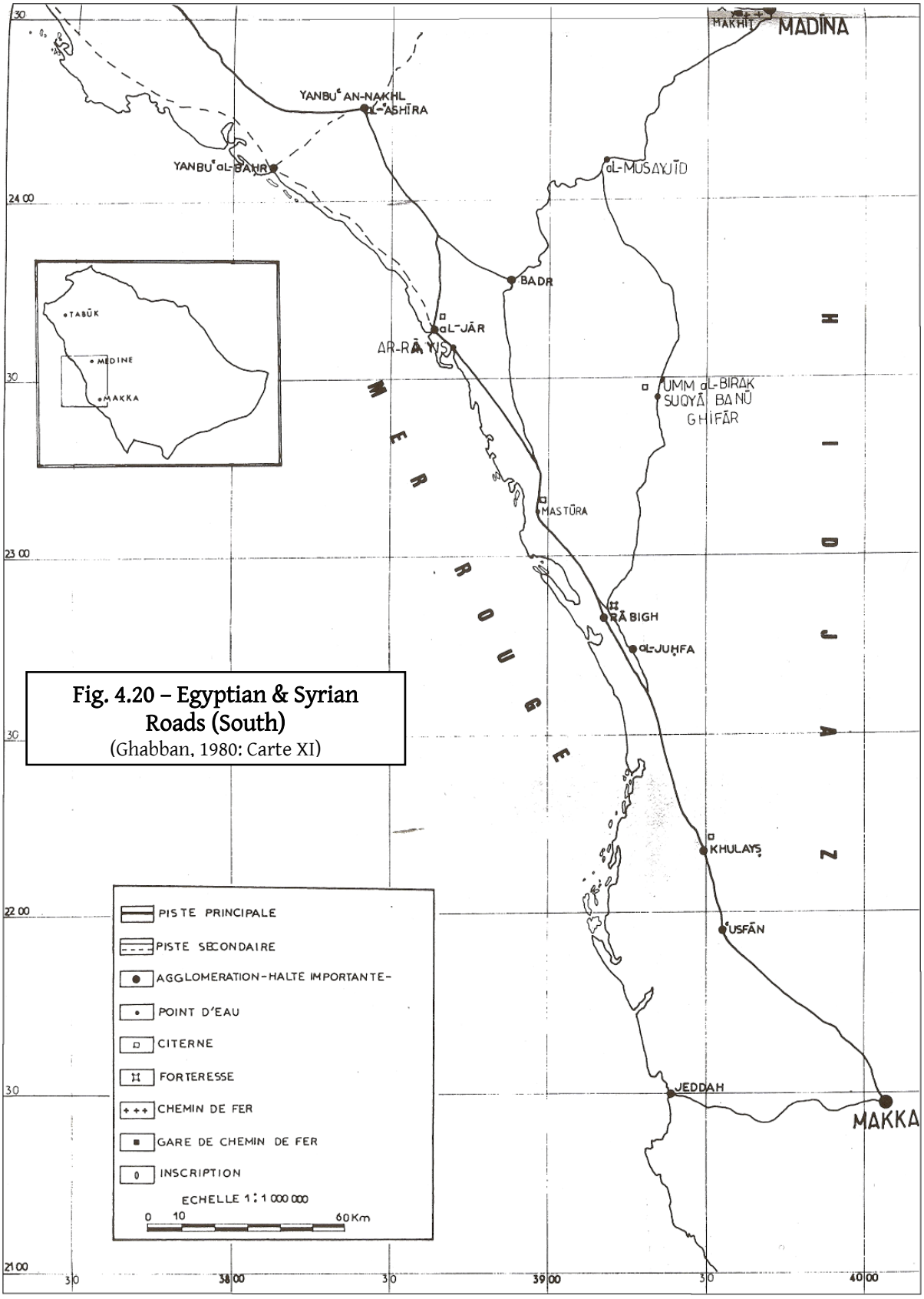
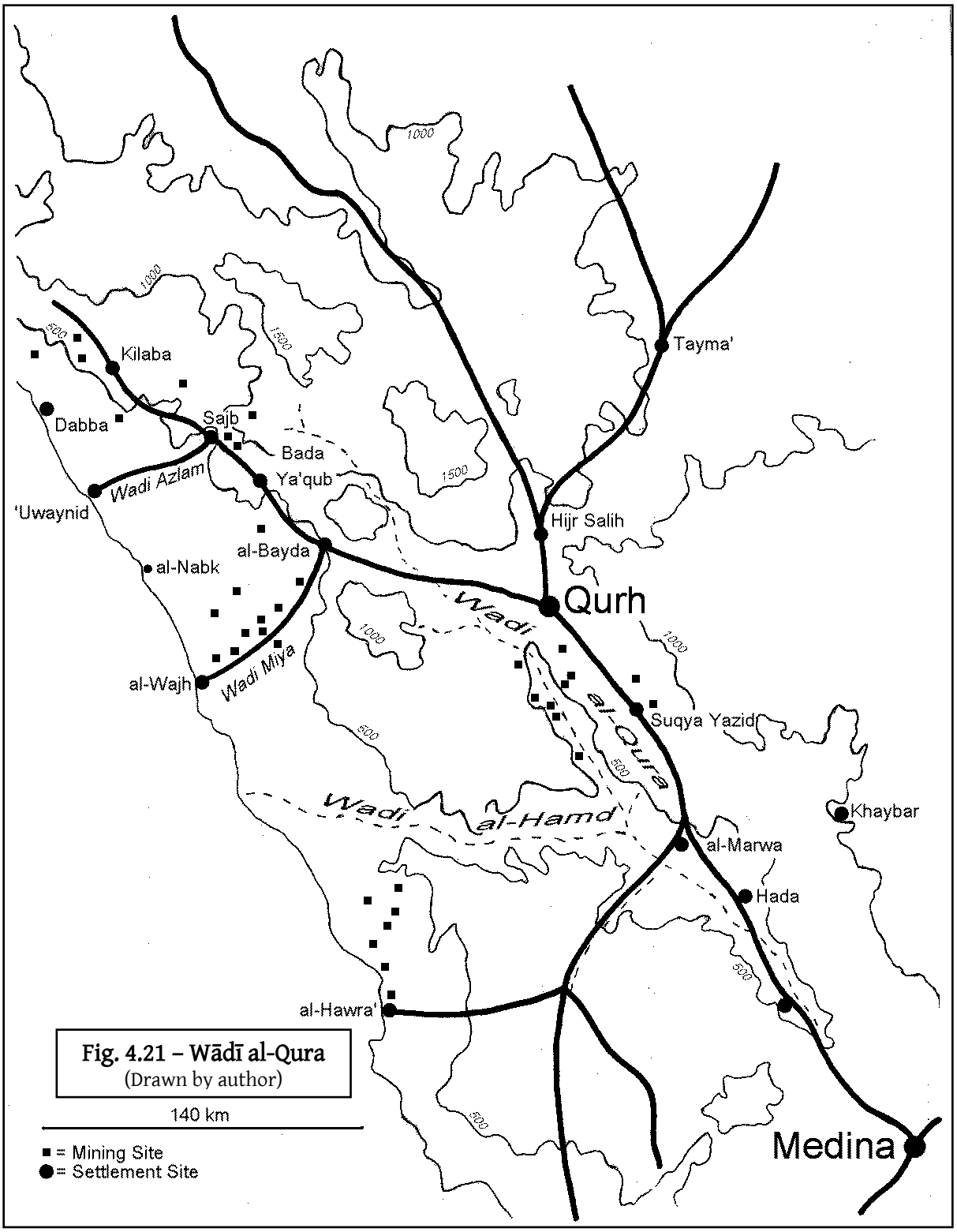


Fig. 4.20 – Egyptian & Syrian Roads (South)
(Ghabban, 1980: Carte XI)


Kilaba
Dabba
Sajb
Bada
Ya'qub
Wadi Azlam
'Uwaynid
al-Nabk
al-Bayda
al-Wajh
Wadi Miya
Tayma'
Hijr Salih
Qurh
Wadi al-Qura
Suqya Yazid
Khaybar
Wadi al-Hamd
al-Marwa
Hada
al-Hawra'
Medina
1000
1500
500
Fig. 4.21 – Wādī al-Qura
(Drawn by author)
140 km
■ = Mining Site
● = Settlement Site

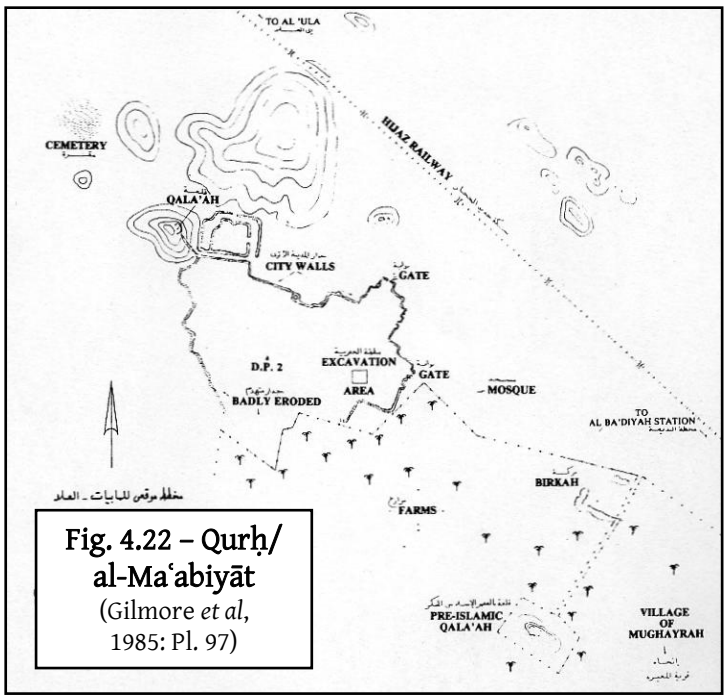


Fig. 4.22 – Qurḥ/ al-Maʿabiyāt
(Gilmore *et al*, 1985: Pl. 97)

Fig. 4.23 – North-West Ḥijāz Mining Survey
(Kisnawi *et al*, 1983)

Umm Lajj Area

SITE NAME	SITE No.	TYPE	MINERAL	DATE
Umm Rihi	204-1001	Settlement	Gold	Isl
Umm Laji	204-1002	Settlement	Unknown	Isl
Ḥawrā'	204-1003	Settlement	Unknown	Pre-Isl, Isl
Wādī Layhat	204-1004	Settlement	Unknown	Pre-Isl, (Isl)
Hammam	204-1005	Mine	Gold	Isl
Jabal Zurayb	204-1006	Quarry	Basalt	Isl
Jabal Khubeb	204-1007	Quarry	Steatite	Isl
Jabal Huray'im	204-1008	Quarry	Steatite	Isl

Al-Wajḥ Area

SITE NAME	SITE No.	TYPE	MINERAL	DATE
al-Khawr	204-1009	Mine	Gold	(Isl)
Jabal al-Khawr	204-1010	Settlement	Gold	(Isl)
Umm Qarayat	204-1011	Settlement	Gold	(Pre-Isl), Isl
Wādī 'Arja	204-1012	Settlement	Gold	(Iron), Pre-Isl, Isl
Fishegh	204-1013	Settlement	Gold	Isl
Umm Ḥuwayṭat	204-1014	Settlement	Gold	(Pre-Isl), Isl
Umm Ḥawwit	204-1015	Settlement	Gold	(Pre-Isl), Isl
Umm Harab	204-1016	Settlement	Gold	(Pre-Isl), Isl
al-Haqata	204-1017	Settlement	Gold	Isl
Tuffaya	204-1018	Settlement	Gold	Isl
Humayra	204-1019	Quarry	Granite	Unkown

Al-Muwayliḥ

SITE NAME	SITE No.	TYPE	MINERAL	DATE
Wādī Ḥafayer	204-1020	Settlement	Gold	Pre-Isl
Umm 'Amil	204-1021	Settlement	Gold	(Pre-Isl), Isl
Jabal Shar	204-1022	Settlement	Unknown	(Pre-Isl)
al-Mahjar	204-1023	Quarry	Lime	Modern
Khashim al-	204-1024	Settlement	Gold	(Iron), Pre-Isl, Isl
al-Mesherif	204-1025	Settlement	Gold, (Copper)	(Iron), Isl
al-Zuwaydiya	204-1026	Mine	Copper	Pre-Isl
Dhiyaqa Sa'ud	204-1027	Mine	Gold	Iron

Jadīda

SITE NAME	SITE No.	TYPE	MINERAL	DATE
Jethyuth	204-1028	Settlement	Gold	Pre-Isl
Eksaib al-'Alwej	204-1029	Settlement	Gold	Isl
Wasq al-Sidr	204-1030	Settlement	Gold	Pre-Isl
al-Marma	204-1031	Settlement	Gold	(Iron), Pre-Isl
Tel Umm Hidim	204-1032	Settlement	Unknown	Iron
Umm Zuraib	204-1033	Mine	Gold	(Iron), Pre-Isl,
Umm Fuqur	204-1034	Settlement	Gold	(Pre-Isl), Isl
Jabal al-Kibritiya	204-1035	Settlement	Gold	(Iron), Pre-Isl, Isl
Kibritiya al-	204-1036	Settlement	Gold	(Pre-Isl), Isl
Abu Judur	204-1037	Settlement	Gold	(Pre-Isl), Isl

Al-Muwaylih

SITE NAME	SITE No.	TYPE	MINERAL	DATE
'Imsaywiq	200-1001	Settlement	Copper	Iron, Pre-Isl
Jabal Abyad	200-1002	Mine	Gold	(Isl)

Al-Bad'

SITE NAME	SITE No.	TYPE	MINERAL	DATE
Wādī Maswat	200-1003	Settlement	Gold	(Iron), Isl
Jabal Maqda al-	200-1004	Quarry/ Mine	Granite/ Gold	Isl
Jabal al-Mith	200-1005	Settlement/	Turquoise	(Iron), Pre-Isl,

Tabūk

SITE NAME	SITE No.	TYPE	MINERAL	DATE
al-Mihaybel	200-1006	Settlement		Iron

Fig. 4.24 – Southern Darb Zubayda
(Drawn by author)

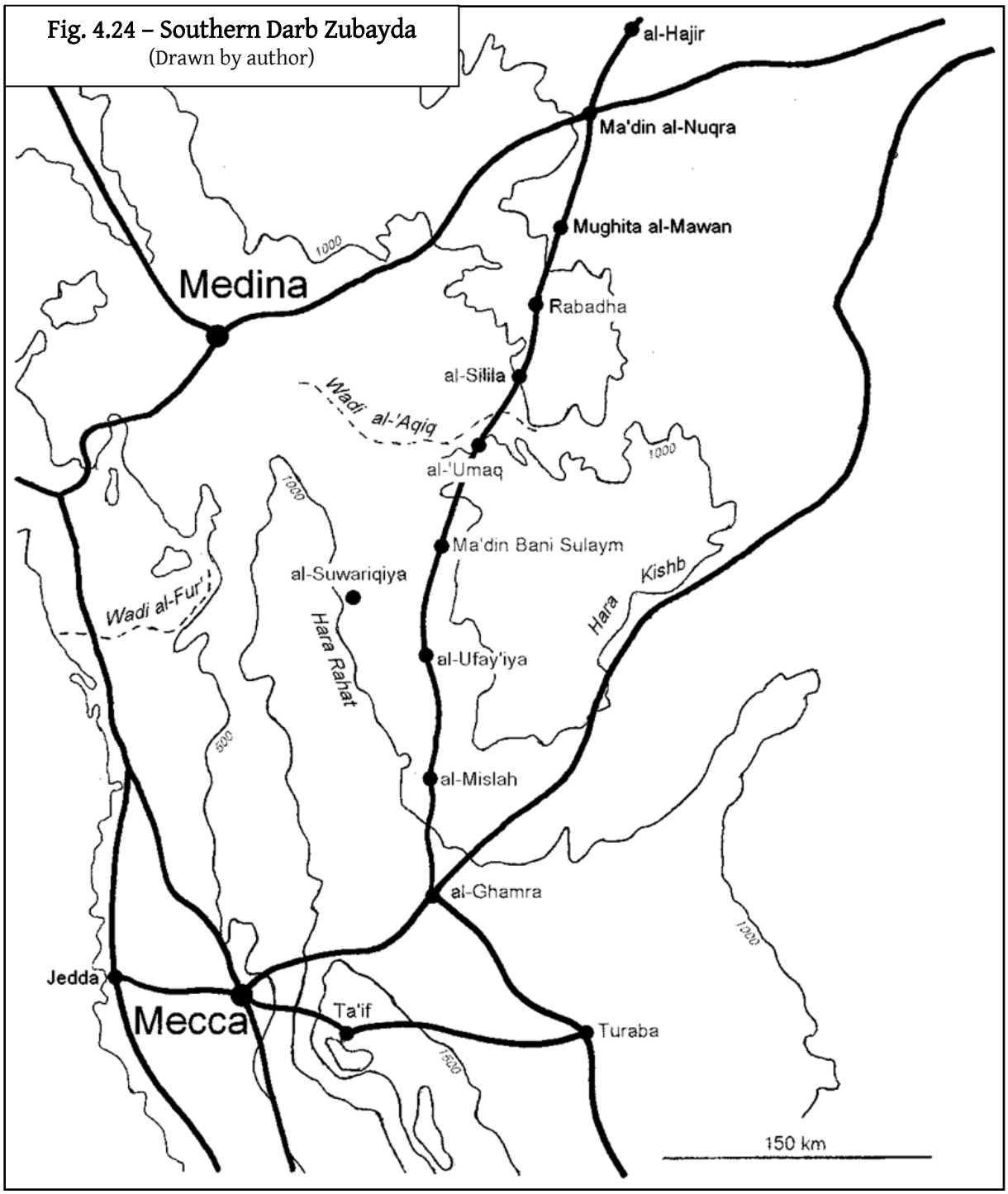
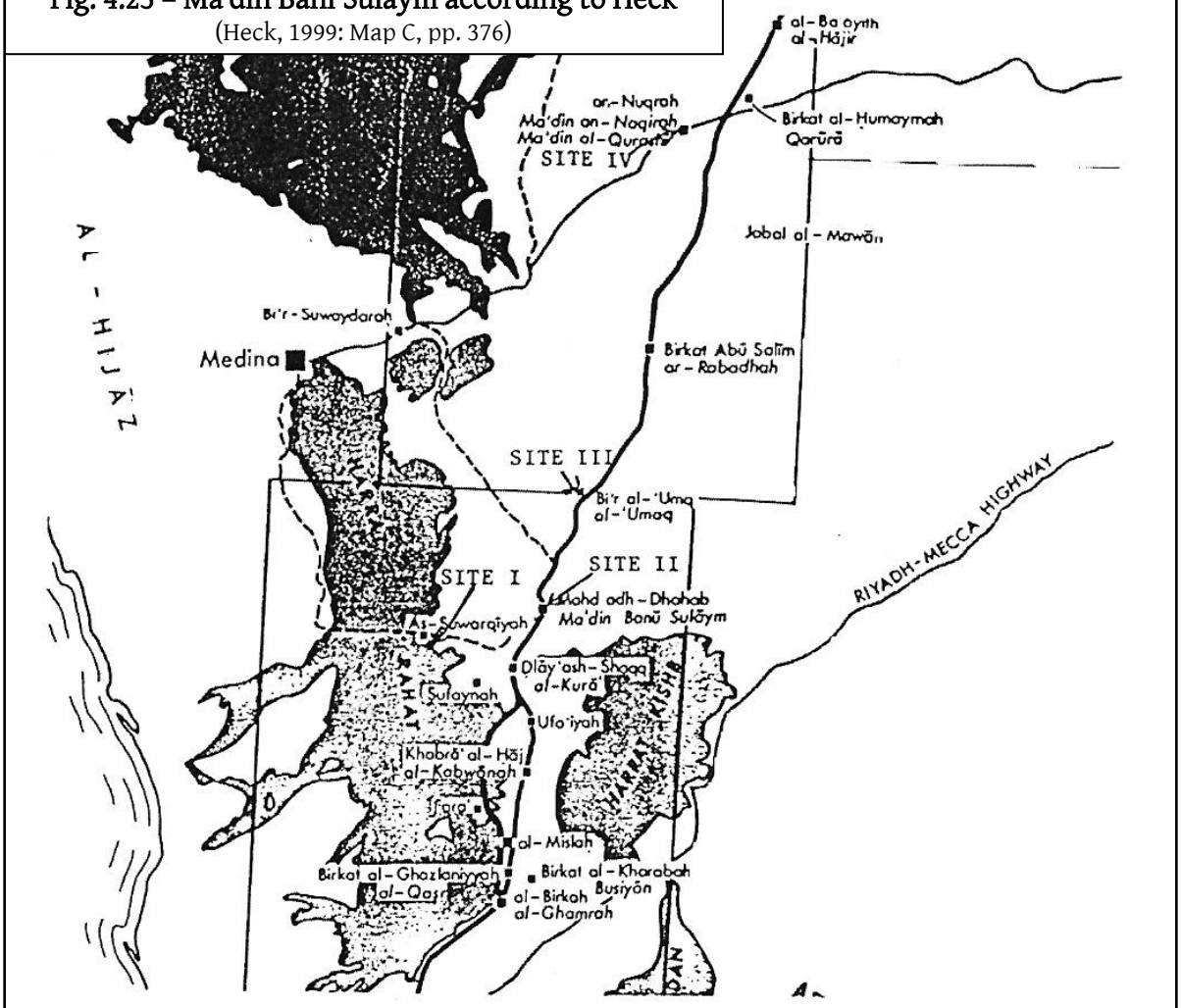


Fig. 4.25 – Maʿdin Banī Sulaym according to Heck
(Heck, 1999: Map C, pp. 376)



SITE I: Ma'din banī Farān at Qurān, 23 degrees, 24 minutes N latitude; 40 degrees, 28 minutes E longitude
SITE II: Ma'din Mahd al-Dhahab, 23 degrees, 55 minutes N latitude; 40 degrees, 50 minutes E longitude
SITE III: Ma'din banī al-Sharīd at Bi'r 'Umaq, 23 degrees, 58 minutes N latitude; 40 degrees, 59 minutes E longitude
SITE IV: Ma'din al-Nuqrah (al-Naqīrah), 25 degrees, 32 minutes N latitude; 41 degrees, 24 minutes E longitude

Ibn Khurradādhbih	Wakīʿ	al-Yaʿqūbī	Ibn Rosteh	Qudāma	al-Hamdānī	al-Muqaddasī
Nuqra	Nuqra	Nuqra	Nuqra	Nuqra	Nuqra	Nuqra
33	27		34	27	20	33
Mughīthat al-Māwan	Mughīthat al-Māwan	Mughīthat al-Māwan	Mughīthat al-Māwan	Mughīthat al-Māwan	al-Māwan	Mughīthat
24	20		23	24	26	24
al-Rabada	al-Rabada	al-Rabada	al-Rabadha	al-Rabada	al-Rabada	al-Rabada
24	23.5		26	19	23	24
al-Maʿdan	al-Salīla	al-ʿUmaq	al-Salīla	al-Maʿdan	al-Salīla	al-Maʿdan
25	18		21	26	13	26
al-Salīla	al-ʿUmaq	al-Maʿdan	al-ʿUmaq	al-ʿUmaq	al-ʿUmaq	al-Salīla
21	22		19	32	22	13
al-ʿUmaq	al-Maʿdan	Ufaiʿiya	al-Maʿdan	Ufaiʿiya	al-Ḥarra	al-ʿUmaq
32	26.5		32	34	26	32
Ufaiʿiya	Ufaiʿiya	al-Mislaḥ	Ufaiʿiya	al-Mislaḥ	al-Ufaiʿiya	al-Ufaiʿiya
34	26.5		28	18	28	24
al-Mislaḥ	al-Mislaḥ	al-Ghamra	al-Mislaḥ	al-Ghamra	al-Mislaḥ	al-Mislaḥ
18	17		18	26	17	18
al-Ghamra	al-Ghamra	Dhāt ʿIrq	al-Ghamra	Dhāt ʿIrq	al-Ghamra	al-Ghamra
26	20	21	26		20	
Bustān B. ʿĀmīr	Dhāt ʿIrq	Bustan Ibn ʿĀmīr	Dhāt ʿIrq	Bustan Ibn ʿĀmīr	Dhāt ʿIrq	
24	21		22		24	
	al-Bustān		Bustān B. ʿĀmīr		al-Bustān	
	28		24		29	
Mecca	Mecca	Mecca	Mecca	Mecca	Mecca	

Fig. 4.26 – Stages of the Southern Darb Zubayda
(Wohabi, 1973: Table 6)

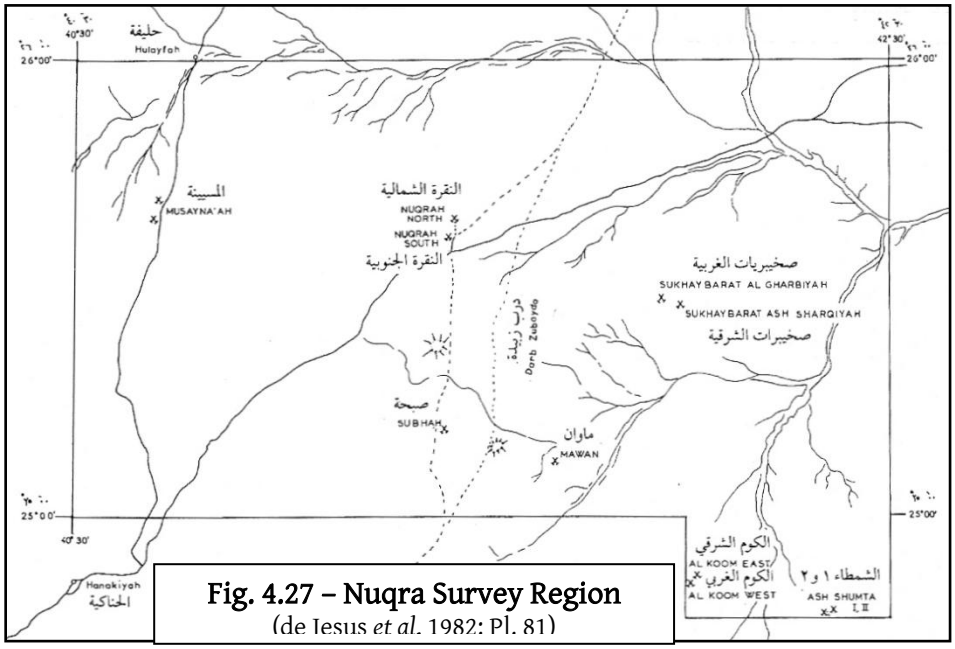
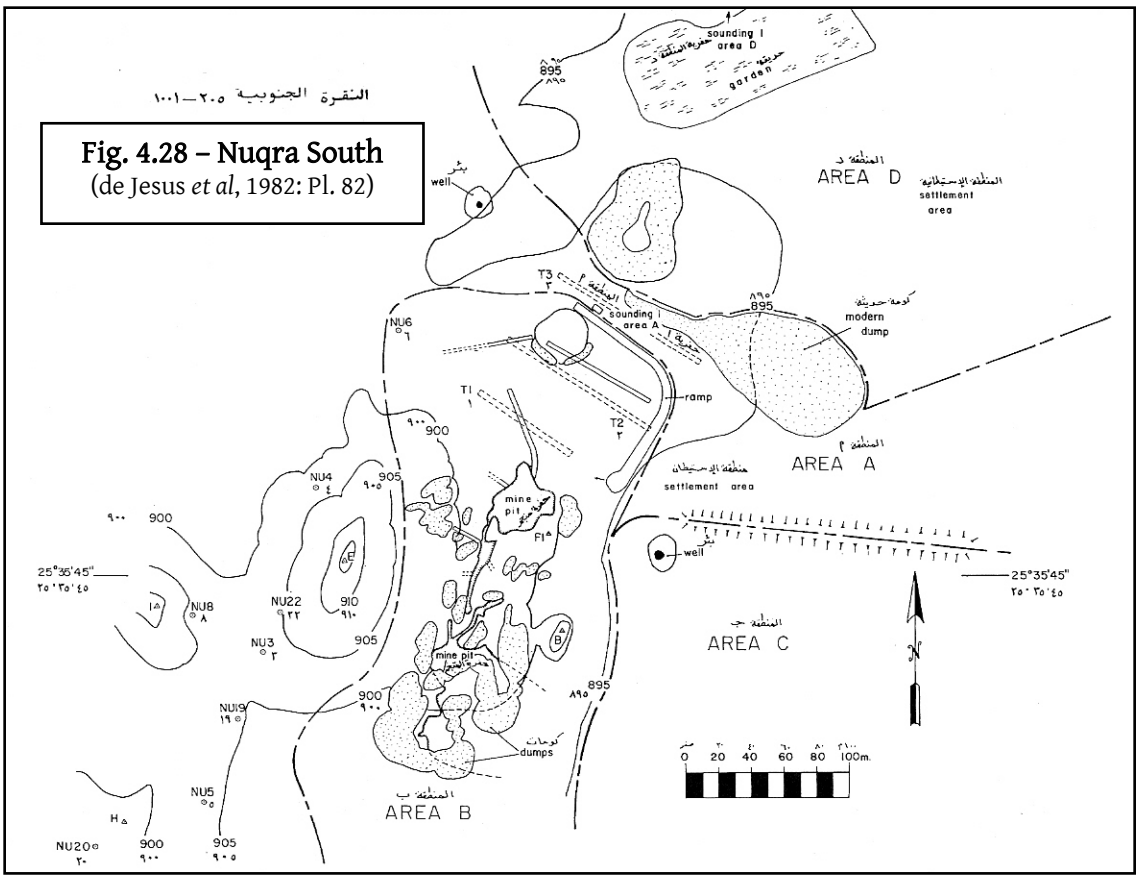
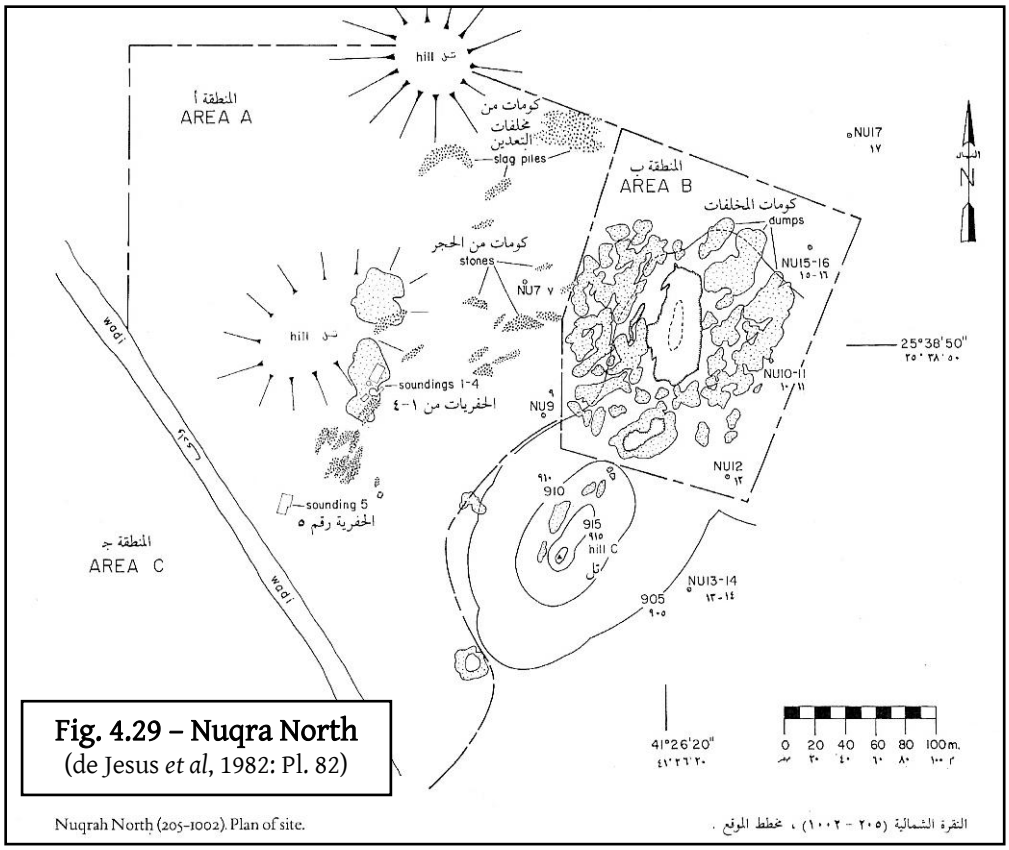


Fig. 4.27 – Nuqra Survey Region
(de Jesus *et al*, 1982: Pl. 81)


النقرة الجنوبية ٢٠٥—١٠٠١
Fig. 4.28 – Nuqra South
(de Jesus *et al*, 1982: Pl. 82)
sounding 1 area D
garden
AREA D
settlement area
well
sounding 1 area A
modern dump
ramp
AREA A
mine pit
AREA C
AREA B
dumps
0 20 40 60 80 100m.
25°35'45"
N


hill
AREA A
slag piles
AREA B
dumps
stones
soundings 1-4
sounding 5
wadi
AREA C
hill C
25°38'50"
41°26'20"
0 20 40 60 80 100m.
Fig. 4.29 – Nuqra North
(de Jesus *et al*, 1982: Pl. 82)
Nuqrah North (205-1002). Plan of site.

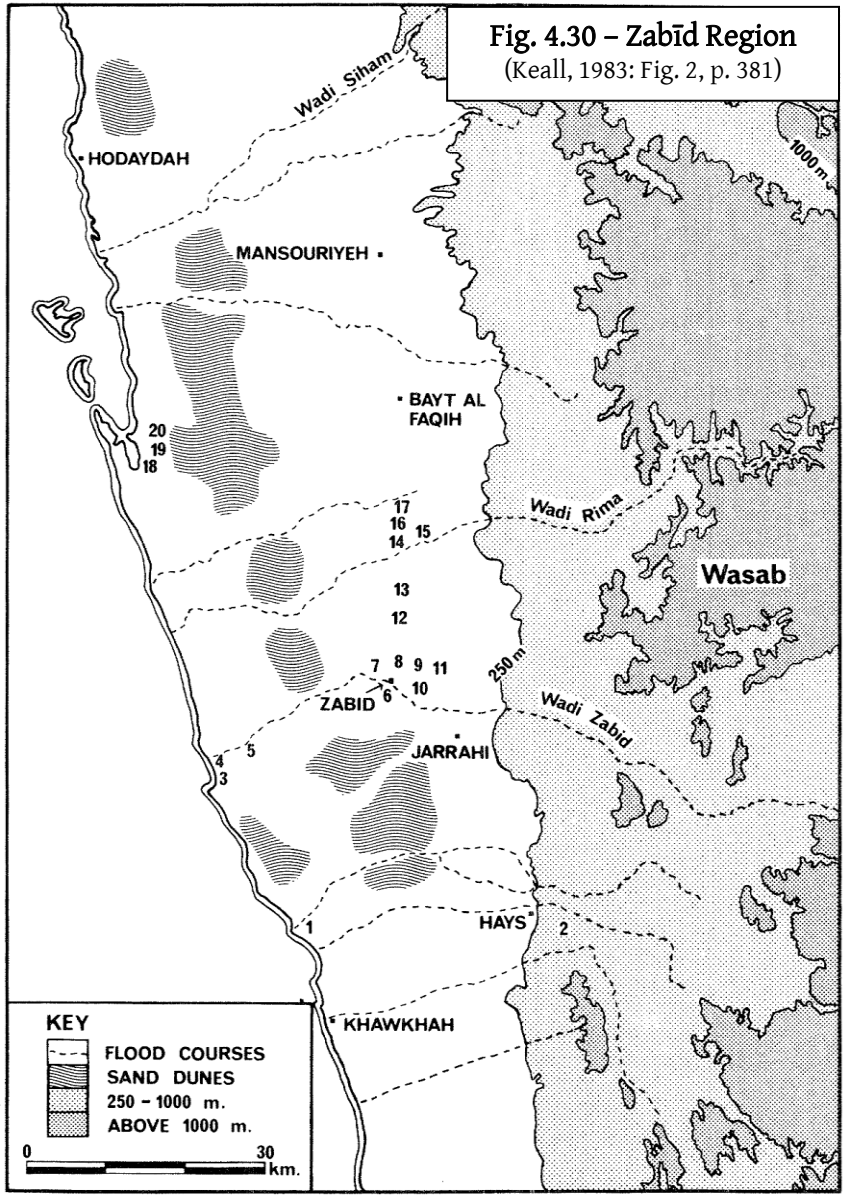


Fig. 4.30 – Zabīd Region
(Keall, 1983: Fig. 2, p. 381)

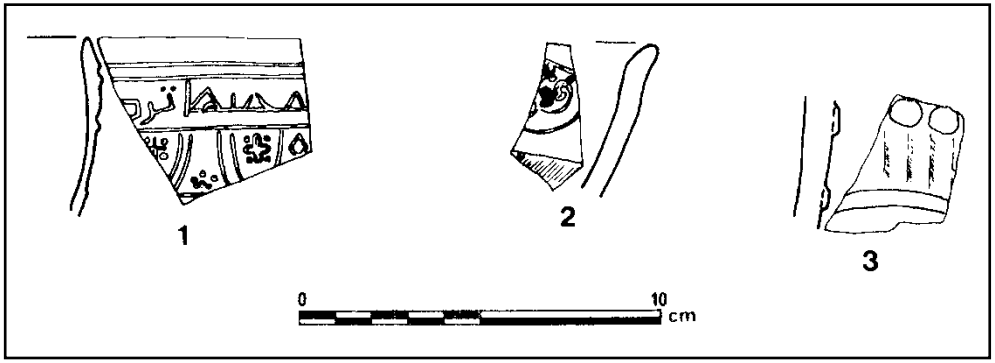


Fig. 4.31 – 8th & 9th Century Sherds from Zabīd Hinterland Survey
(Keall, 1983: Fig. 4, p. 387)

1. Red clay, green glaze, relief decoration with Arabic inscription. N36 W03, near Ḥusayniyya (Area 16 on map, left). Umayyad.
2. Buff clay, lustre paint in golden brown and greenish yellow. N01 W02, Zabīd East (Area 10 on map, left). ʿAbbāsid, ninth century
3. Yellow clay, turquoise glaze outside, paler inside, with applied studs. N01 W02, Zabīd East (Area 10 on map, left). Umayyad.

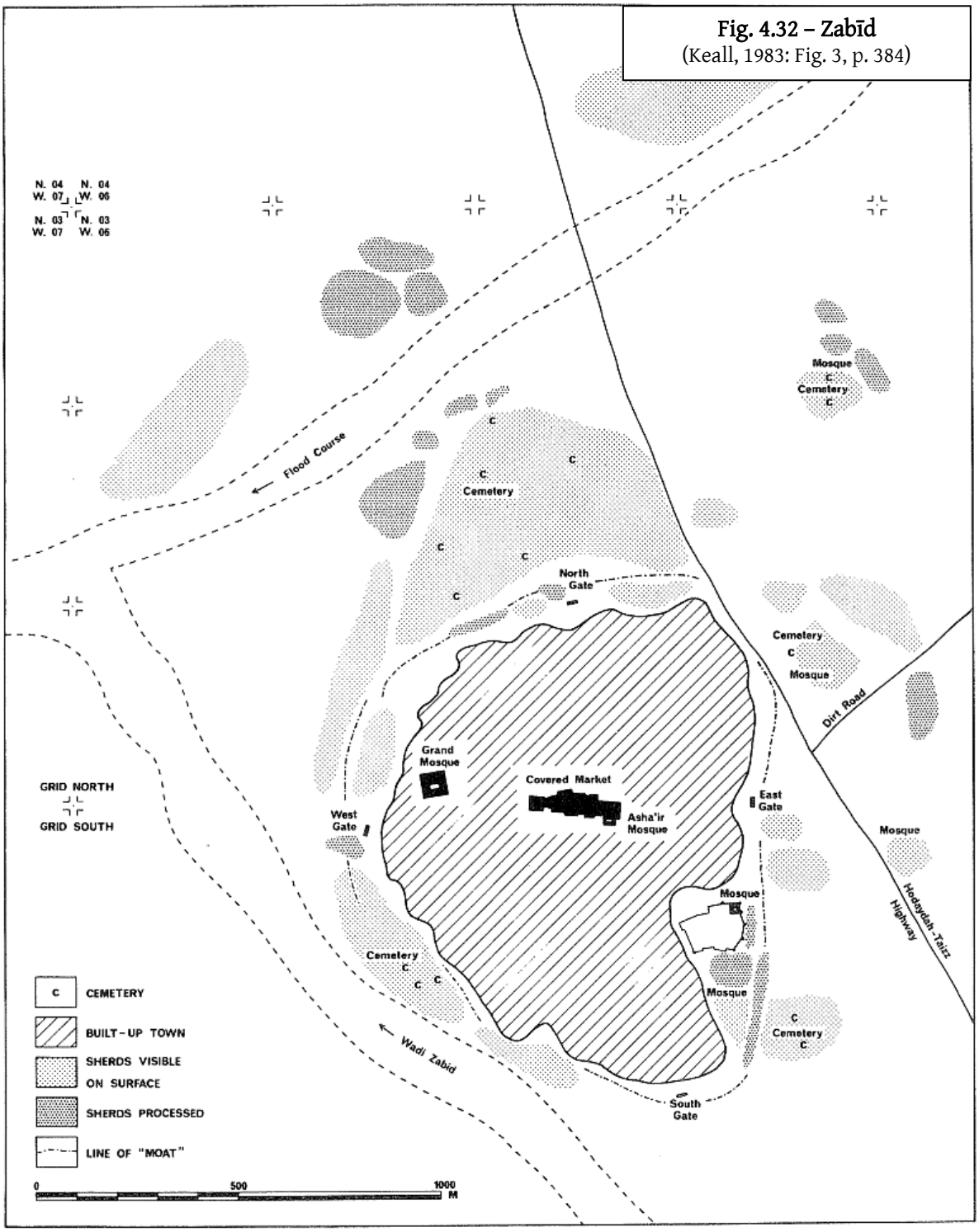


Fig. 4.32 – Zabīd
(Keall, 1983: Fig. 3, p. 384)
N. 04 W. 07
N. 04 W. 06
N. 03 W. 07
N. 03 W. 06
Flood Course
Cemetery
Mosque
Cemetery
North Gate
Cemetery
Mosque
Dirt Road
Grand Mosque
Covered Market
Asha'ir Mosque
East Gate
West Gate
GRID NORTH
GRID SOUTH
Mosque
Hodeydah-Taizz Highway
Mosque
Cemetery
Mosque
Cemetery
Wadi Zabid
South Gate
CEMETERY
BUILT-UP TOWN
SHERDS VISIBLE ON SURFACE
SHERDS PROCESSED
LINE OF "MOAT"
0
500
1000
M

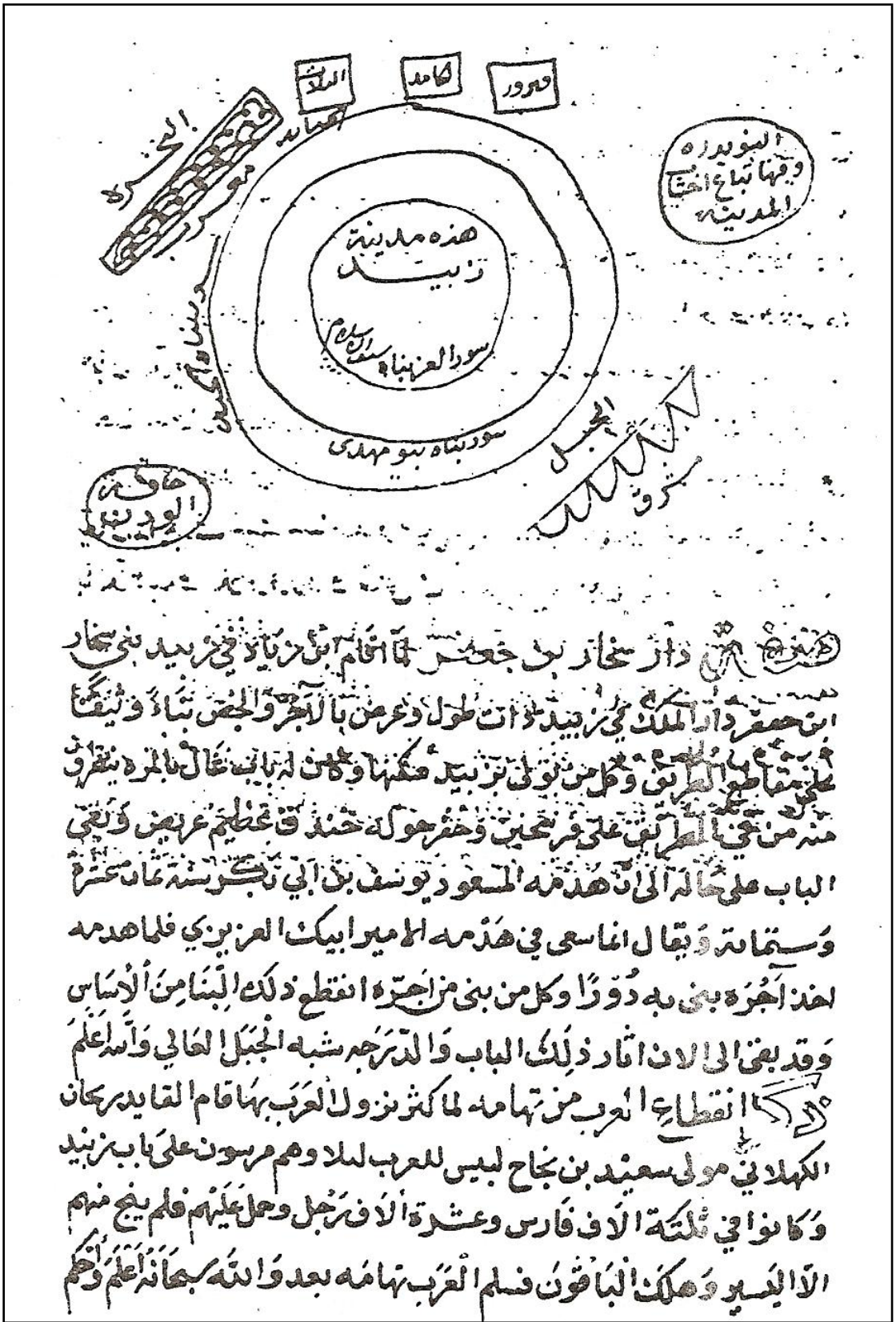


Fig. 4.33 – Ibn al-Mujāwir's Sketch Plan of Zabīd
(Ibn al-Mujawir, *Sifat bilād al-Yaman*)

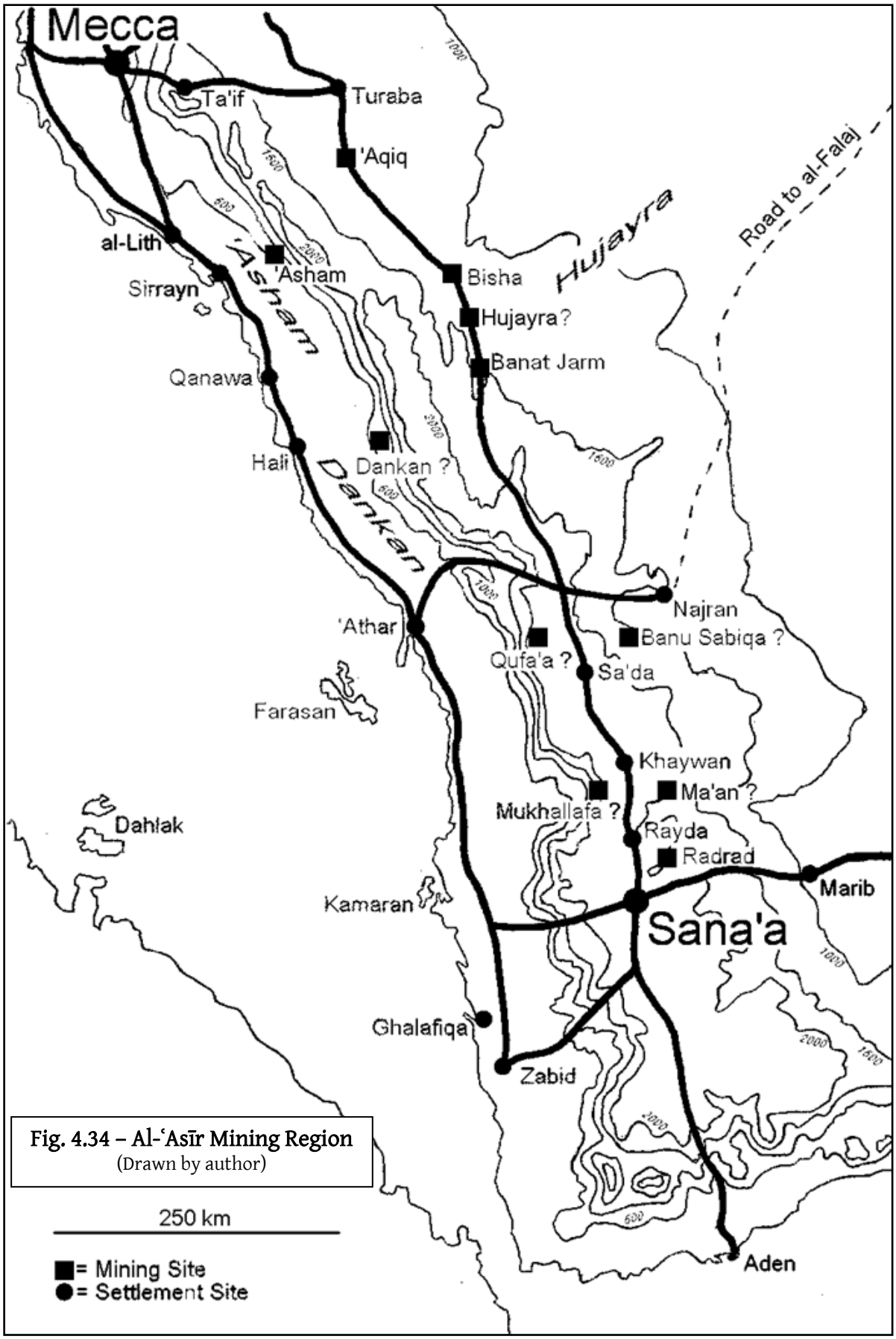
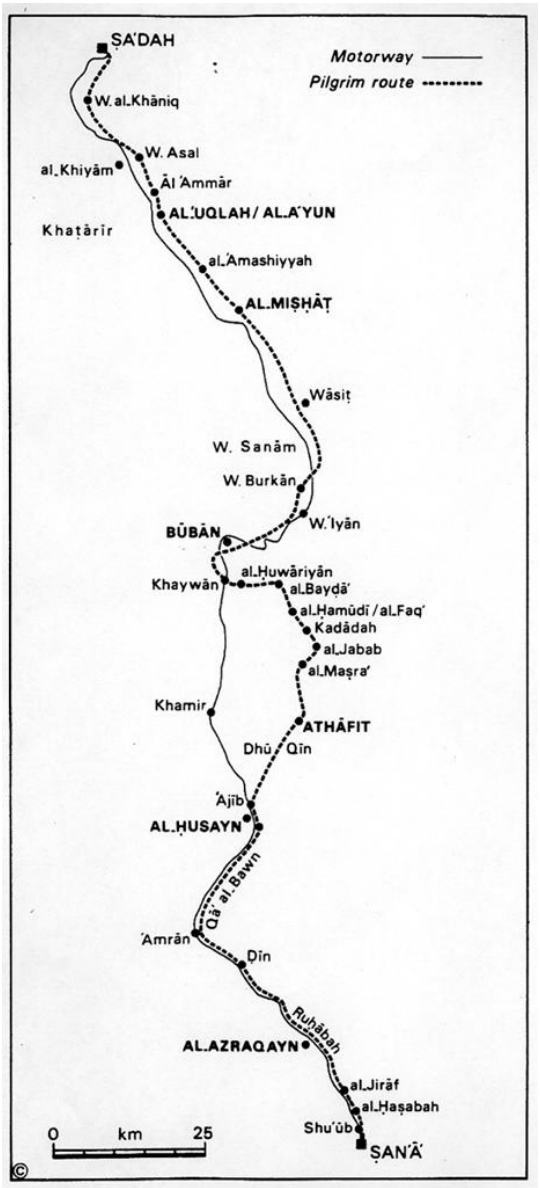


Fig. 4.34 – Al-'Asīr Mining Region
(Drawn by author)



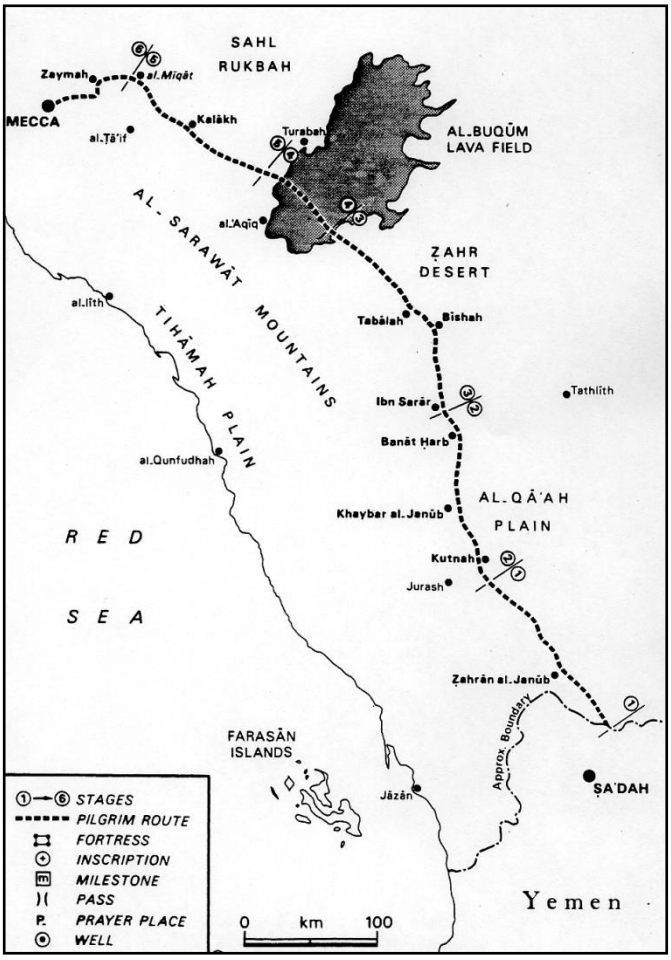
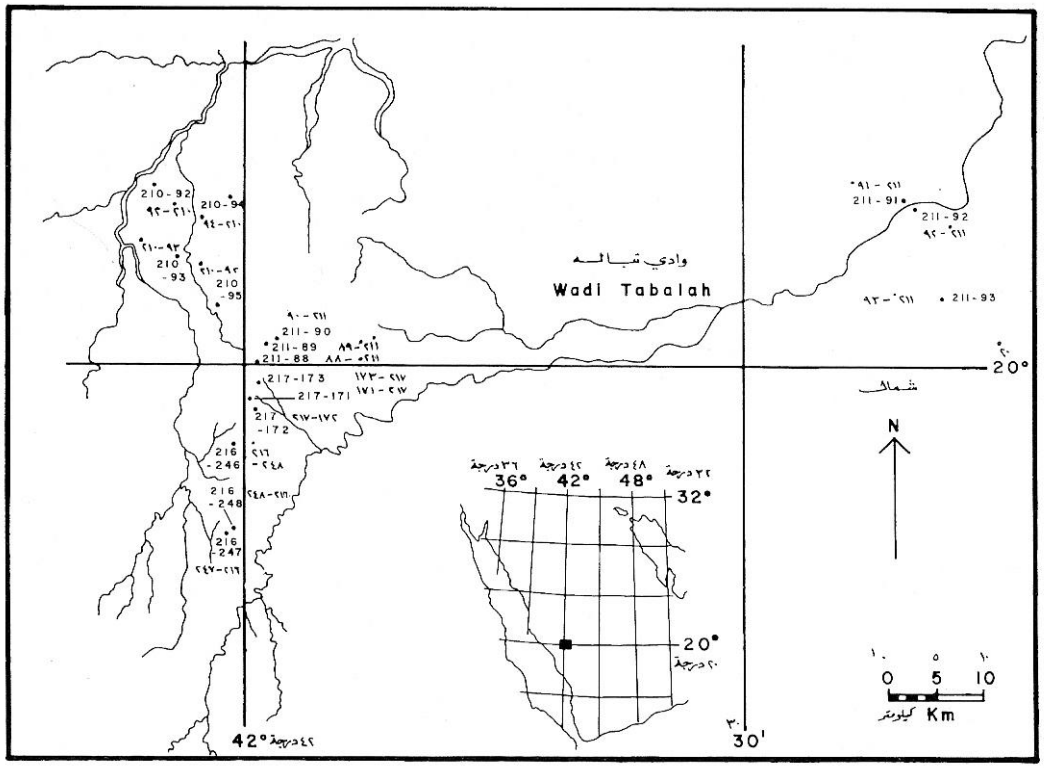


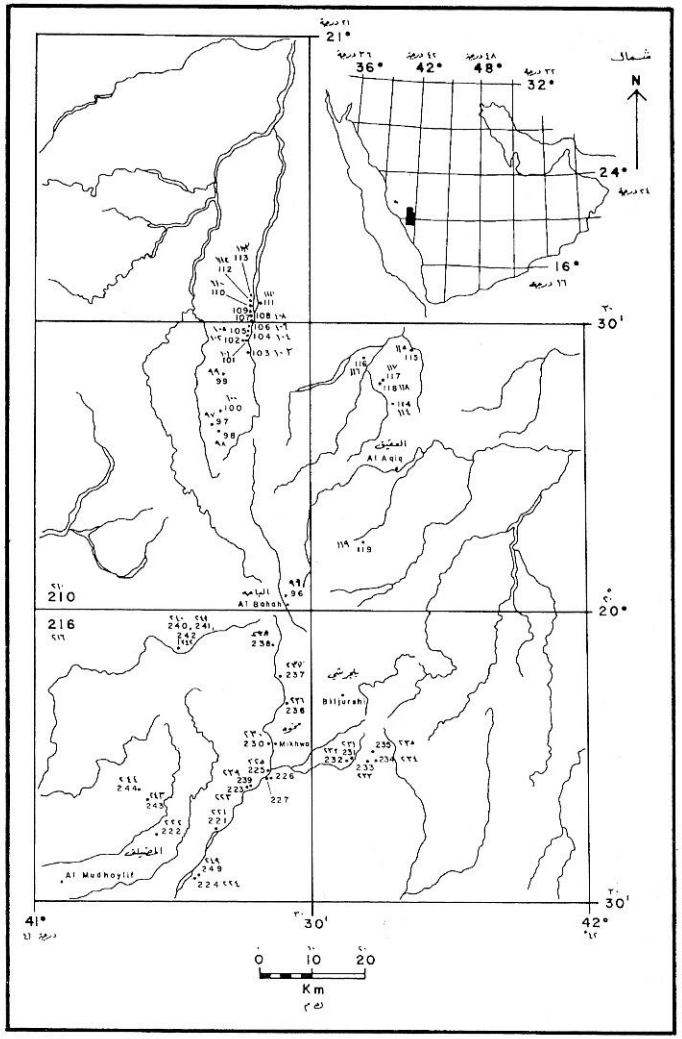
Fig. 4.35 – Yemeni Highland Road
(Thenayian, 1996: Map 2, pp. 7; Map 3, p. 8)



A: Site locations in the Tabalah-Ablah region.

أ : خريطة لمواقع التعدين القديم في منطقة تبالة/العبلة

Fig. 4.36 & .37 - Bīsha Mining Survey
(Hester *et al*, 1984: Pl. 101, a & b)



ب : خريطة لمواقع التعدين القديم في منطقة الباحة / المخواة

B: Site locations in the Mikhwa-Al Bahah region.

SITE NAME	SITE No.	TYPE	SIZE	No. of HUTS	MINERAL	PITS & SHAFTS	SLAG & DUMPS	No. of TAPPINGS	POT SHERDS	DATE
Ablah	210-92	M, V, S	1 km^2 (100 ha)	300	G, C, F	3 & 5	39 Sl	4000	Y	Iron, Islamic
Qurtinah	210-94	M, S	100 x 100 m (1 ha)	4	C	2 Pt	2 & 3	100	N	Iron, Islamic
al-Manazil	210-95	M, S	600 x 20 m (1.2 ha)	3	C	2 Pt	1 Sl	50	N	(Iron)
al-Mahawiyah	210-97	M, S	300 x 400 m (12 ha)	12	C	-	20 Sl	4000	N	(Islamic)
Hush al-Salman	210-98	M, S	250 x 100 m (2.5 ha)	6	C	1 & 2	1 Sl	50	Y	Islamic
Khayal al-Mana'ah	210-99	M, S	100 x 500 m (5 ha)	12	C	1 & 1	3 & 1	350	N	(Islamic)
al-Minhal	210-100	-	50 x 100 m (0.5 ha)	-	C	3 Pt	-	10	N	Unknown
al-Mashouga[1]	210-102	M	25 x 10 m	5	C, I	-	1 Sl	20	N	Islamic
No mame[1]	210-111	M	3 x 25 m	-	G	3 Pt	-	-	N	Unknown
No name[2]	210-113	M	3 x 20 m	-	G	1 Pt	-	-	N	Unknown
al-Aqiq	210-114	M, V	200 x 300 m (6 ha)	100	G	5 Pt	-	-	Y	Iron
al-Aqiq	210-115	M	8 x 30 m & 25 x 35 m	6	G	1 & 1	-	-	Y	-
al-Misha	211-93	M, S	200 x 200 m (4 ha)	10	C, I	3 & 1	15 & 1	1000	N	Unknown
Fatih al-Far	211-96	M, S	60 x 100 m (0.6 ha)	2	C	2 Sh	-	50	N	Unknown
al-Drain	216-231	S	20 x 30 m	10	I	-	1 & 1	20	N	Islamic
Wadi Sahwa	216 - 234	S	12 x 35 m	-	I	-	1 Sl	10	N	Islamic
al-Waqba	216-246	M, S	300 x 400 m (12 ha)	10	C	3 & 2	15 & 1	3000	Y	(Iron)
al-Jabra	216-247	M, S	100 x 100 m (1 ha)	6	C, S	1 Pt	1 Sl	150	Y	(Islamic)
No name	216-248	M	7 x 30 m	-	C	1 Pt	-	-	N	Unknown
al-Sada	217-171	S	80 x 80 m (0.6 ha)	2	C	-	24 Sl	300	N	Unknown
al-Sada	217-172	M	100 x 200 m (2 ha)	8	C	2 & 1	-	-	N	Unknown
'Asham	216-249	M?, V	200 x 600 m (12 ha)	200	G?	-	-	-	-	Islamic

This table represents an adapted version of *Table 4: Features at Mining Sites* from Hester *et al*, 1984: 123.

TYPE - M = mine, V = village, S = smelting

MINERAL - G = gold, C = copper, F = fluorite, S = serpentine

[1] c. 50 room late Islamic village nearby

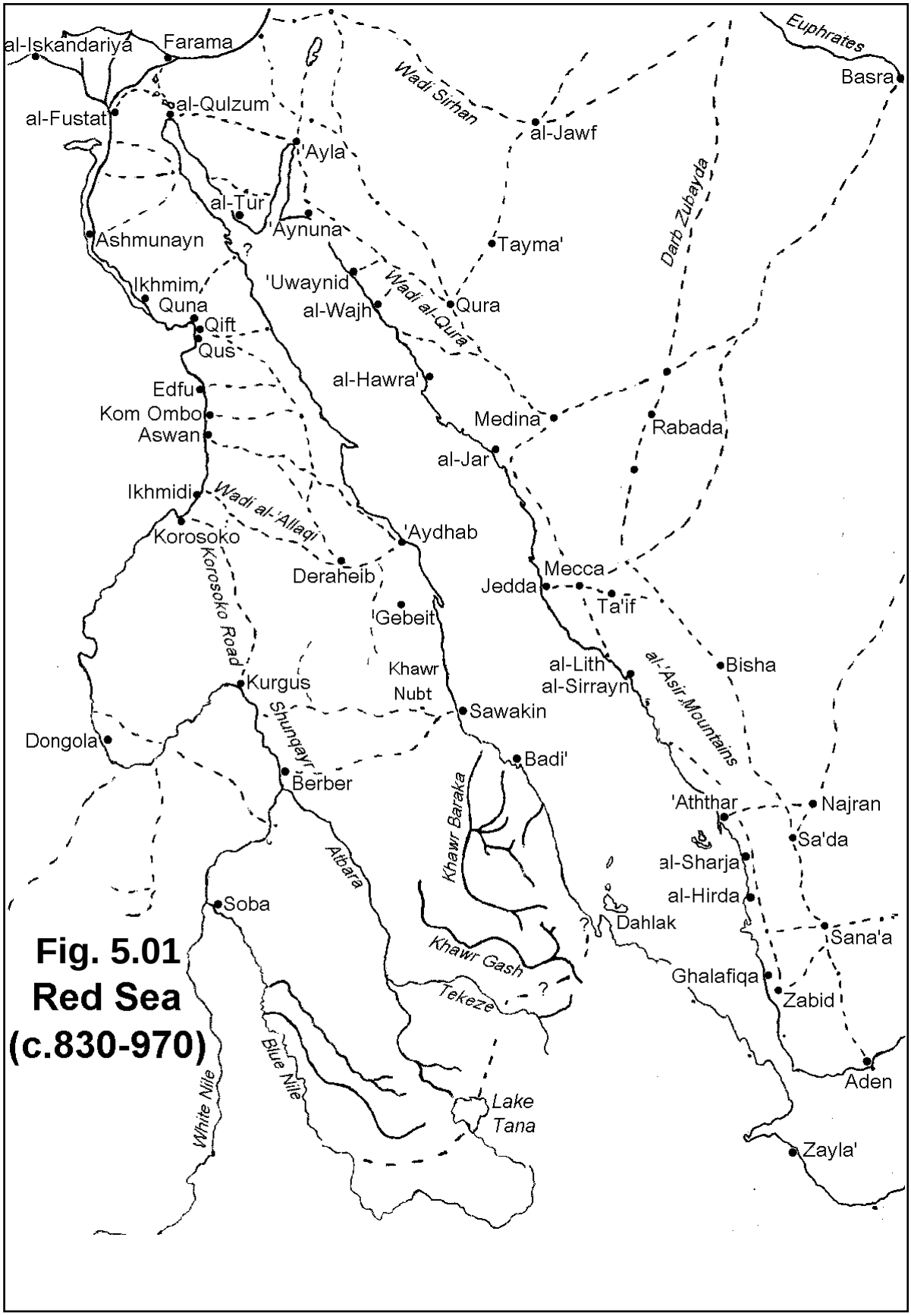
[2] c. 20 room late Islamic village nearby

Fig. 4.38 – Sites Recorded during Bīsha Mining Survey

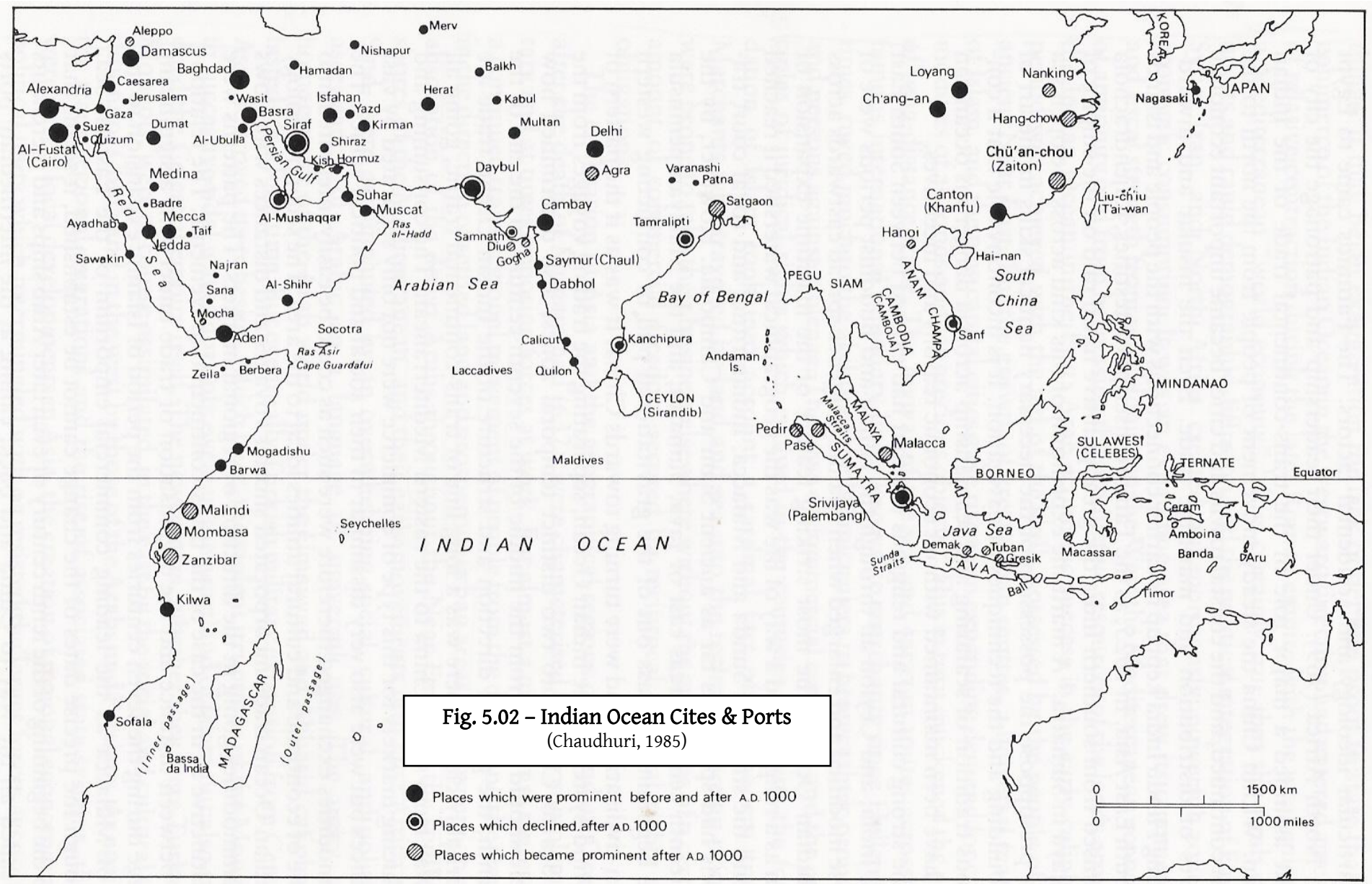
(Hester et al, 1984: Table 4, pp. 123)

Fig. 4.39 – Beja Medallion of al-Mutawakkil
(Daftar, 1977)

Figures 5. The Early Islamic Baḥr al-Qulzum (c. 830-970)



Figures 5. The Early Islamic Baḥr al-Qulzum (c. 830-970)



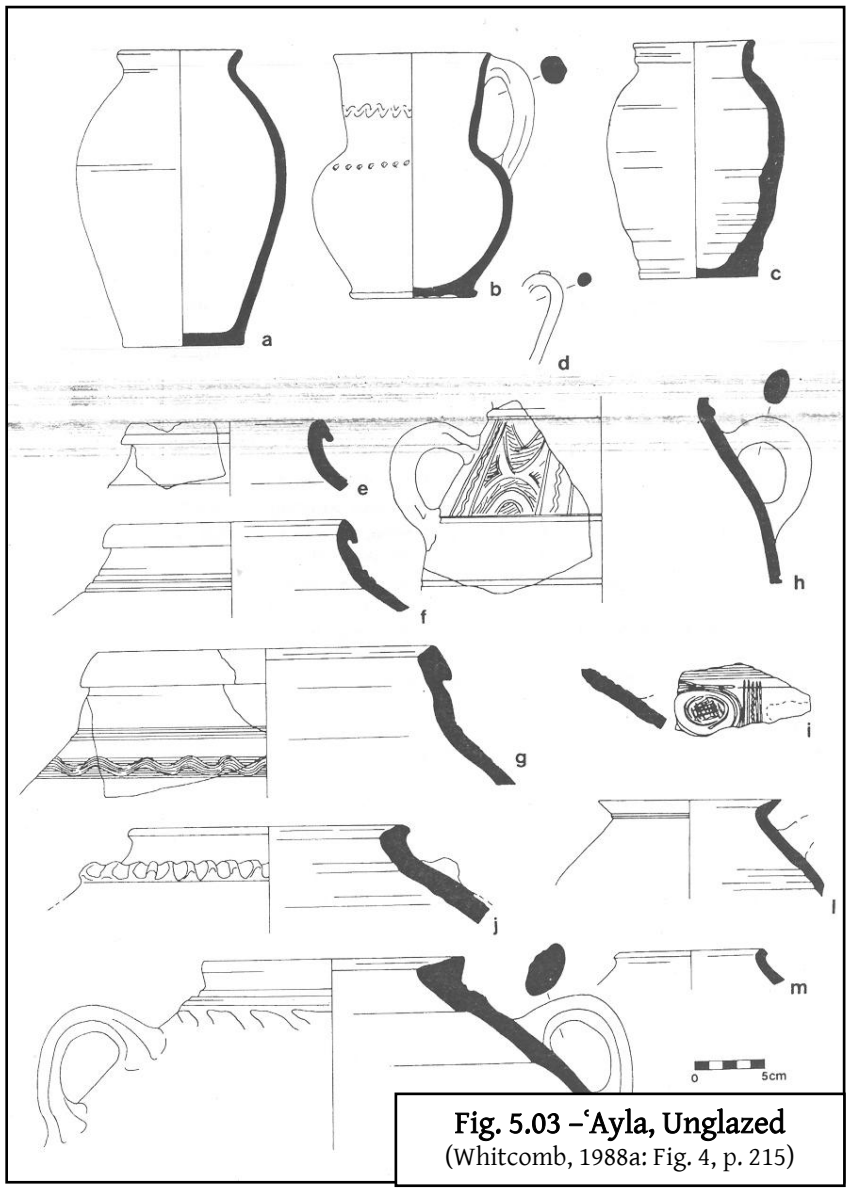


Fig. 5.03 –ʿAyla, Unglazed
(Whitcomb, 1988a: Fig. 4, p. 215)

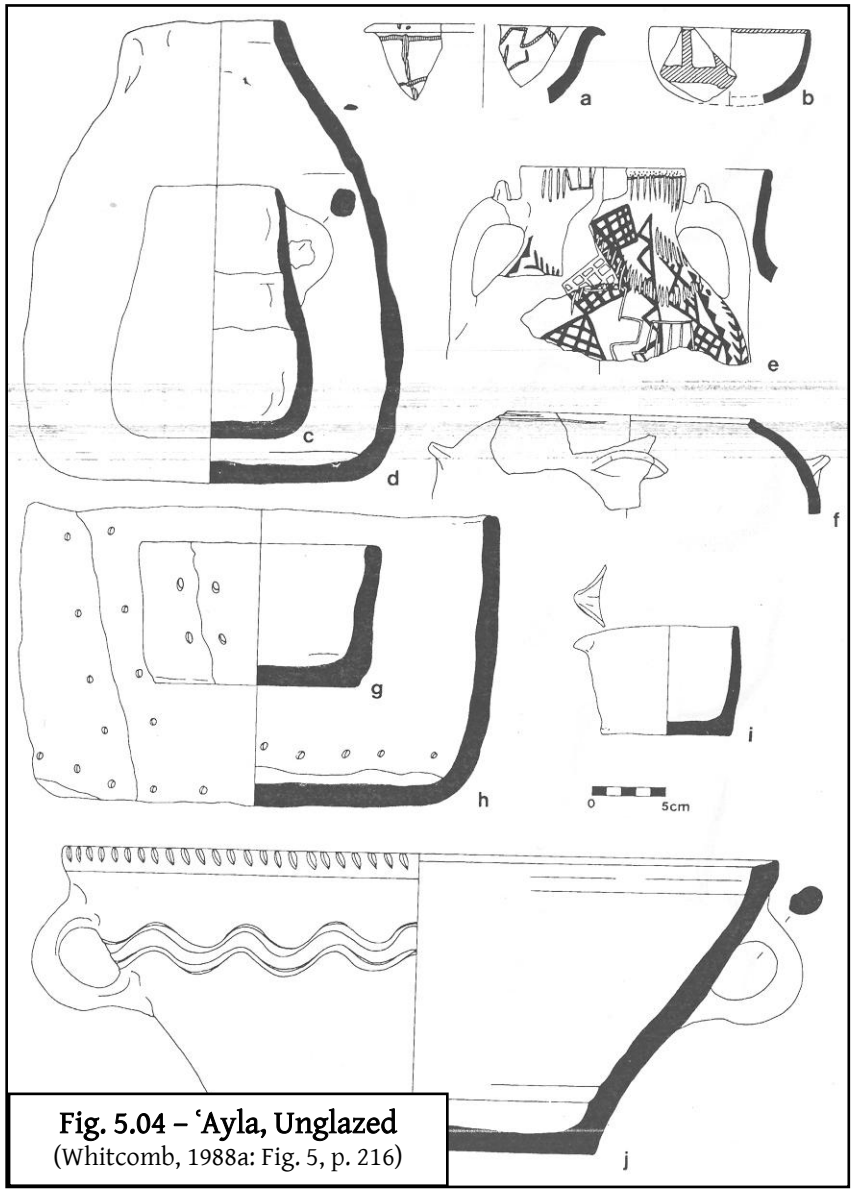


Fig. 5.04 – ʿAyla, Unglazed
(Whitcomb, 1988a: Fig. 5, p. 216)

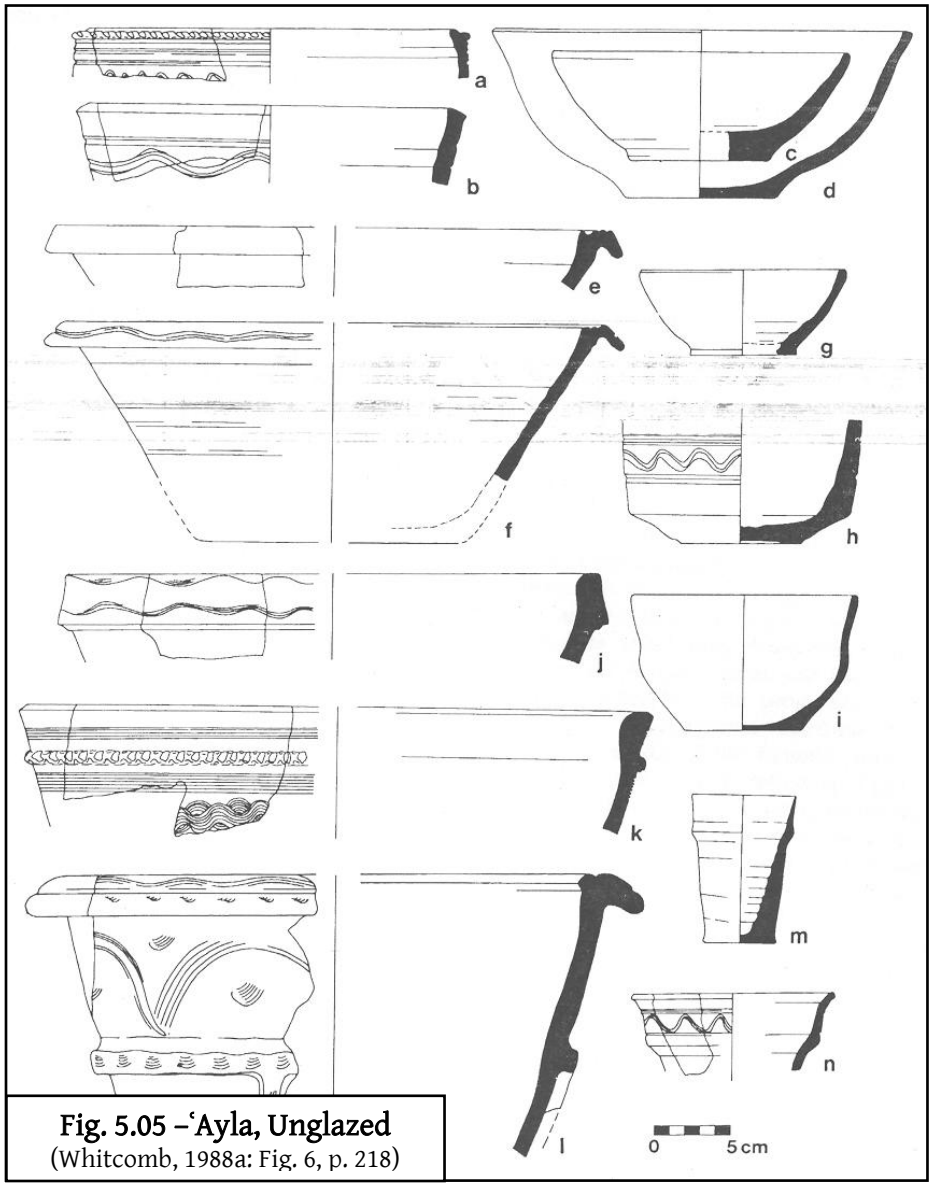


Fig. 5.05 –ʿAyla, Unglazed
(Whitcomb, 1988a: Fig. 6, p. 218)

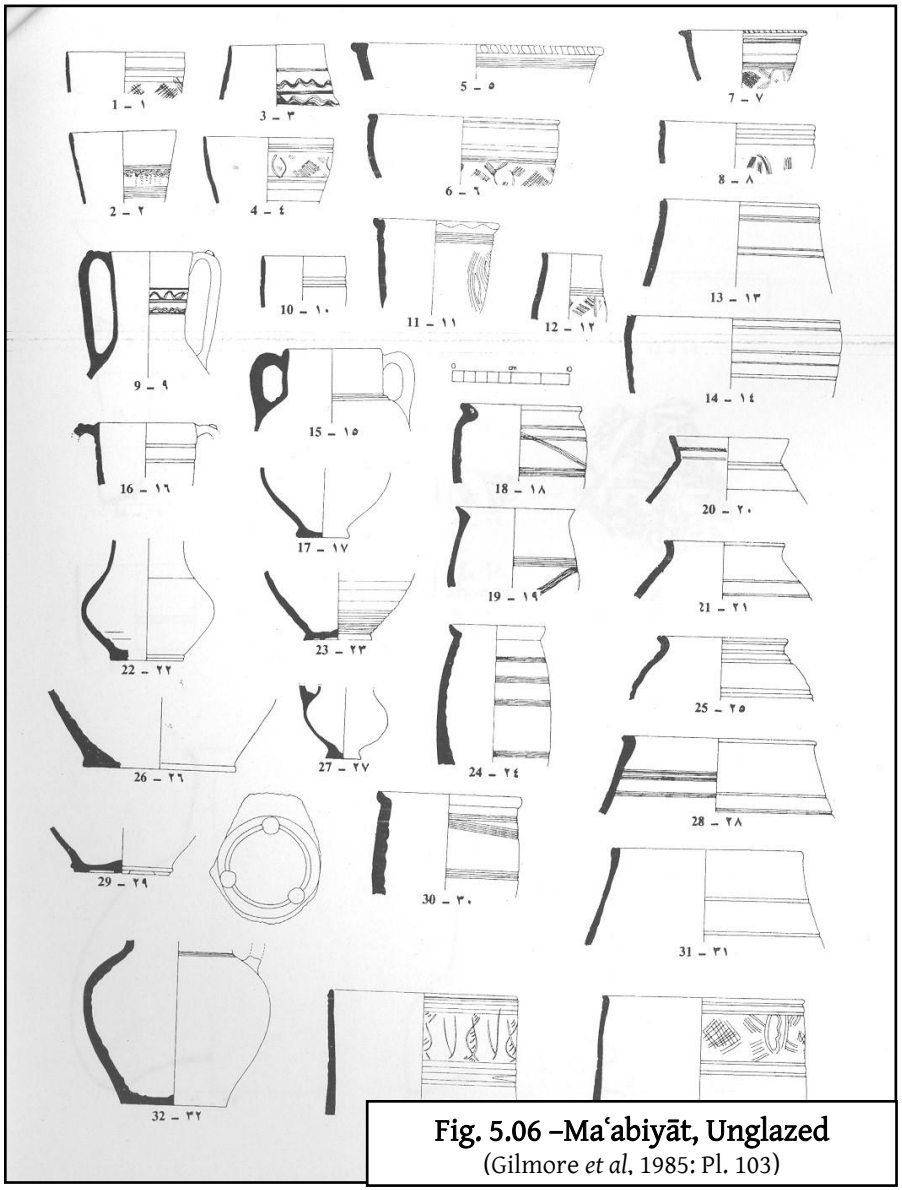
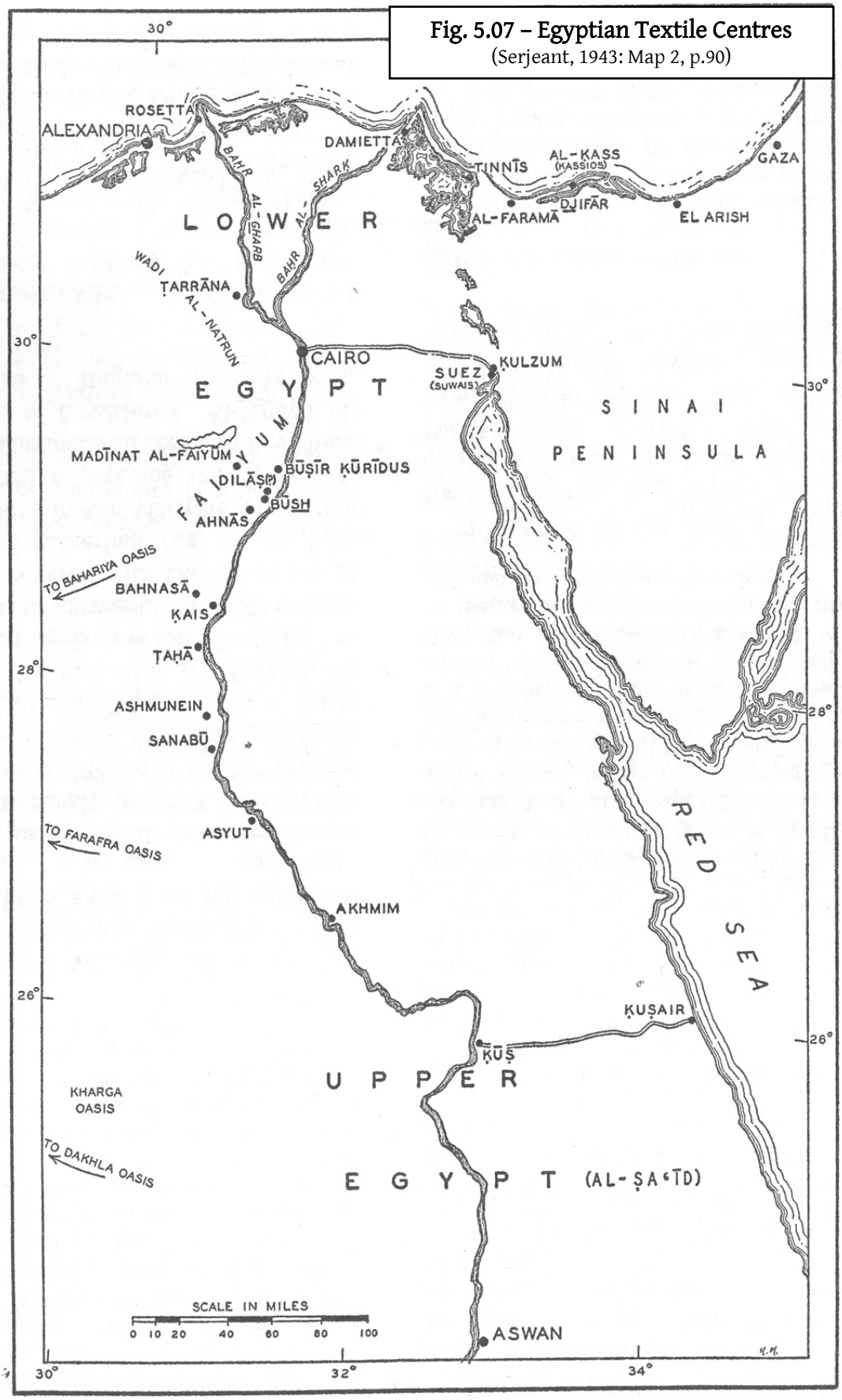


Fig. 5.06 –Maʿabiyāt, Unglazed
(Gilmore *et al*, 1985: Pl. 103)

Fig. 5.07 – Egyptian Textile Centres
(Serjeant, 1943: Map 2, p.90)



Figures 5. The Early Islamic Baḥr al-Qulzum (c. 830-970)

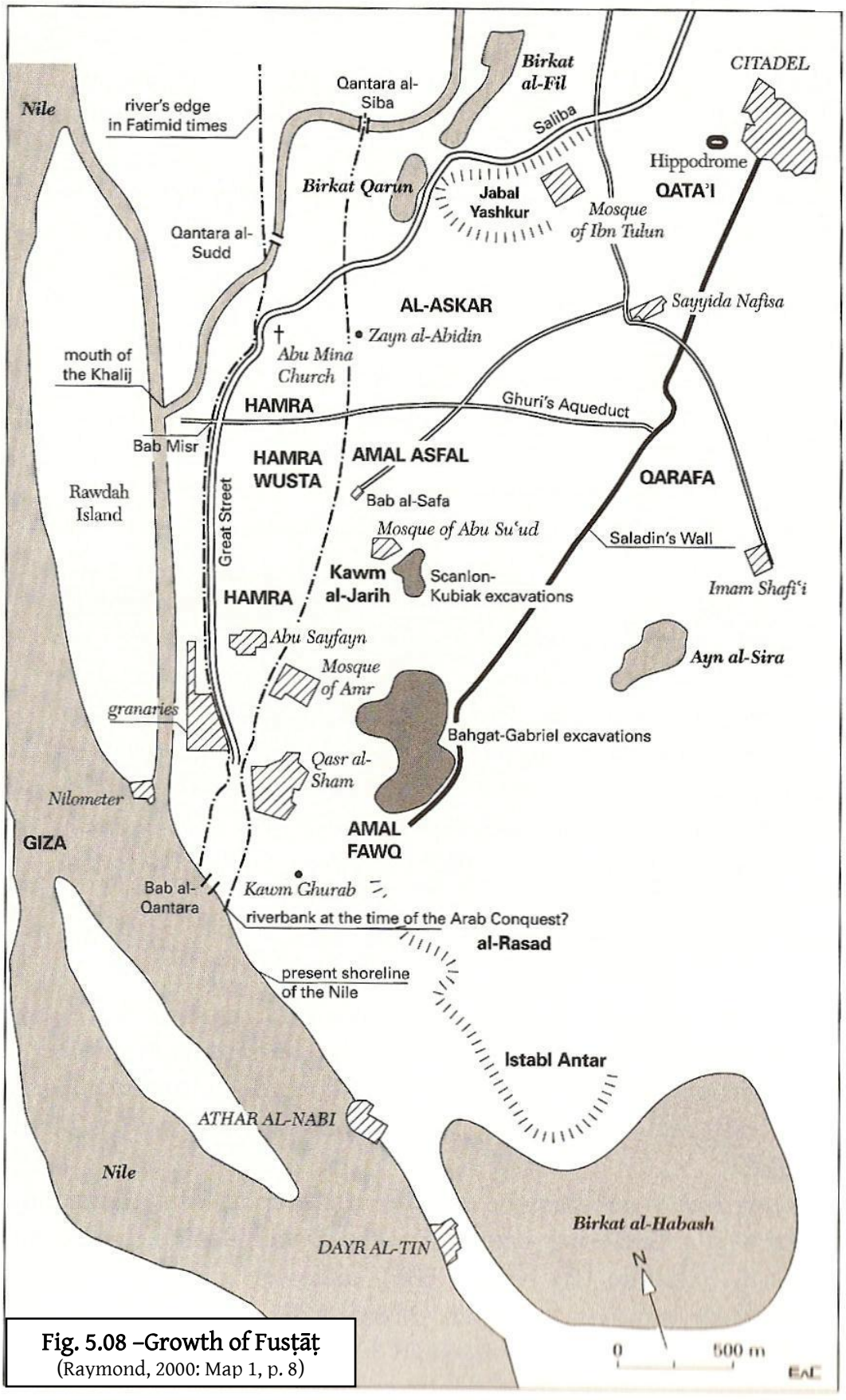
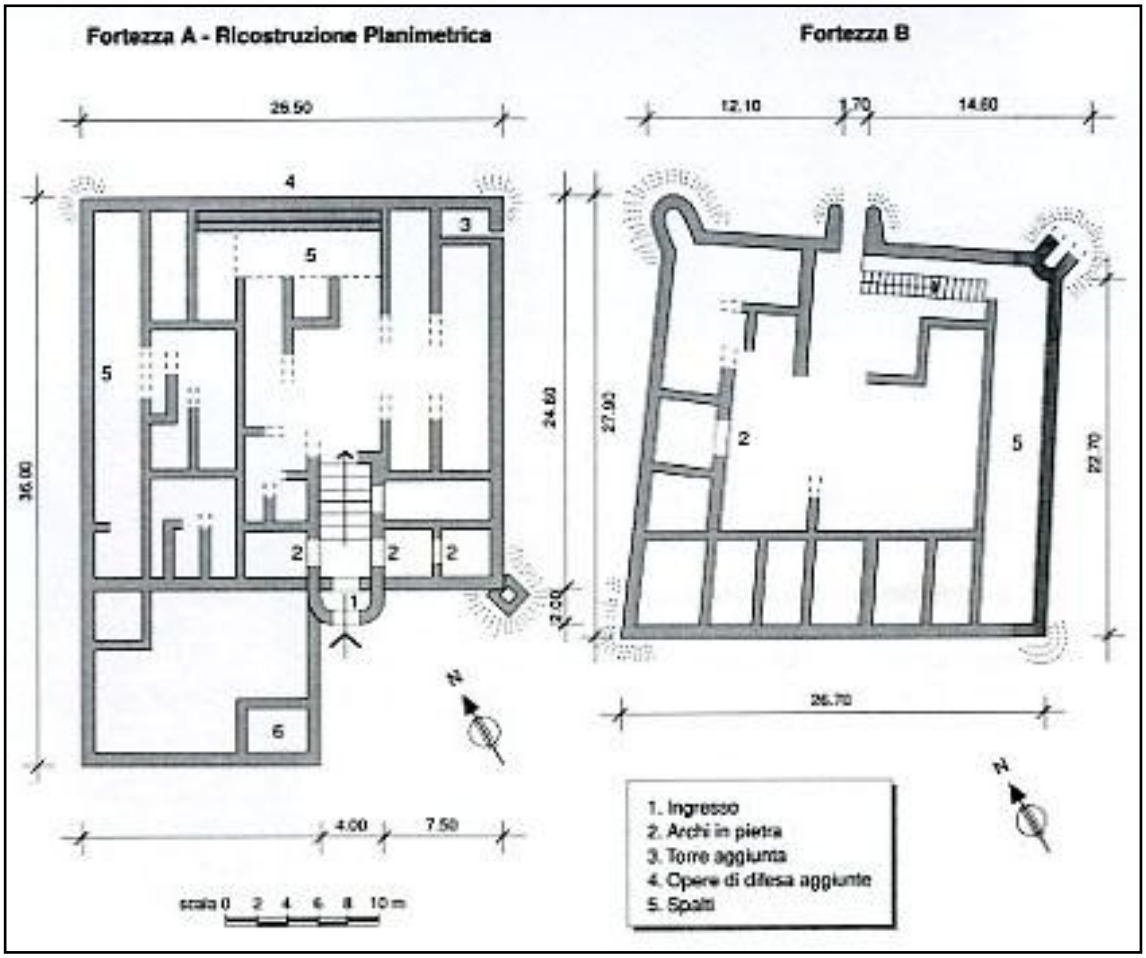


Fig. 5.08 –Growth of Fusṭāṭ
(Raymond, 2000: Map 1, p. 8)

Fig. 5.09 – Deraheib/ Wādī al-ʿAllāqī
(Linant de Bellefonds, 1868: Pl. 2)

Fig. 5.10 & 5.11 – Deraheib 'Arab Castles'
(Castiglione *et al*, 1995)



Figures 5. The Early Islamic Baḥr al-Qulzum (c. 830-970)

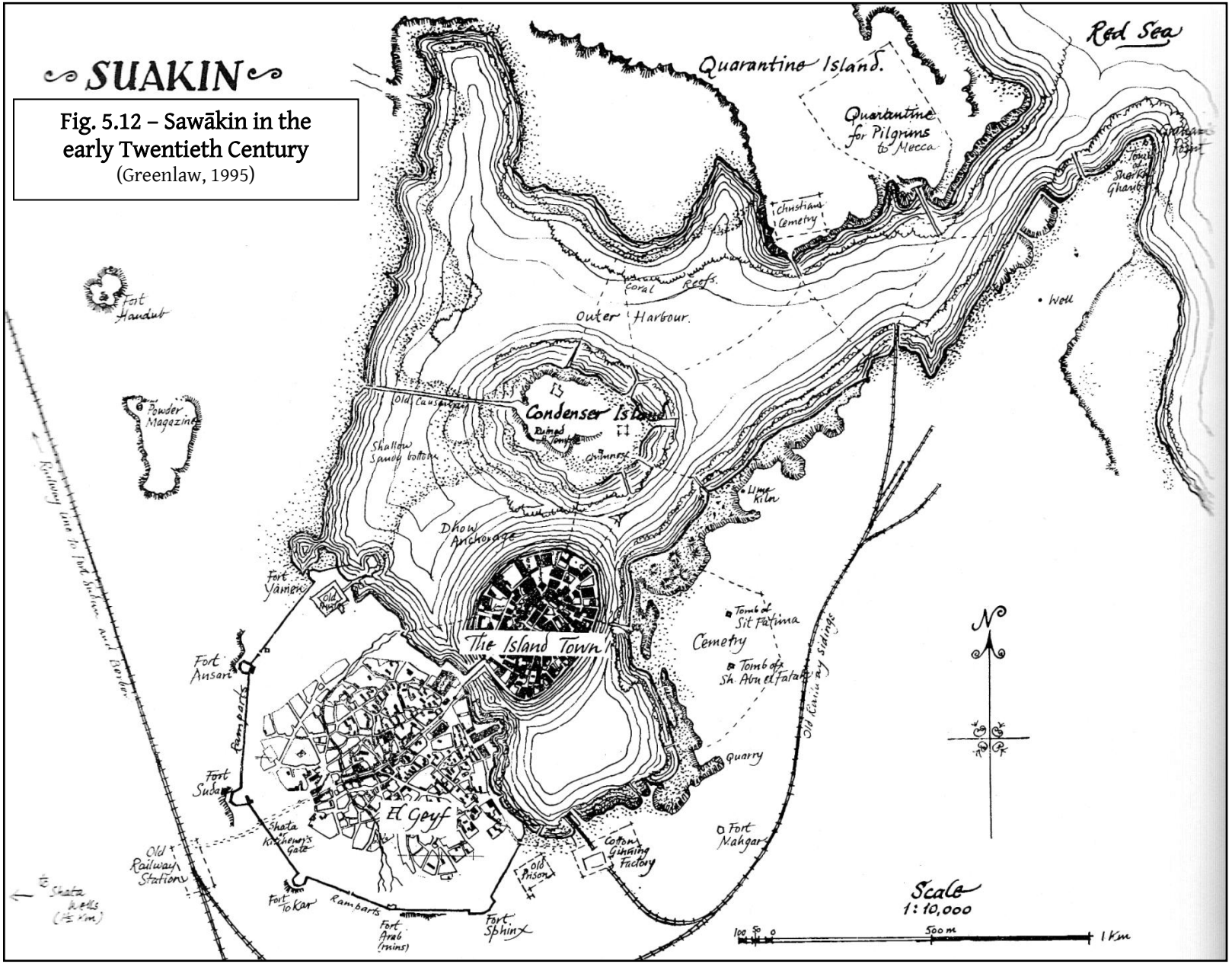
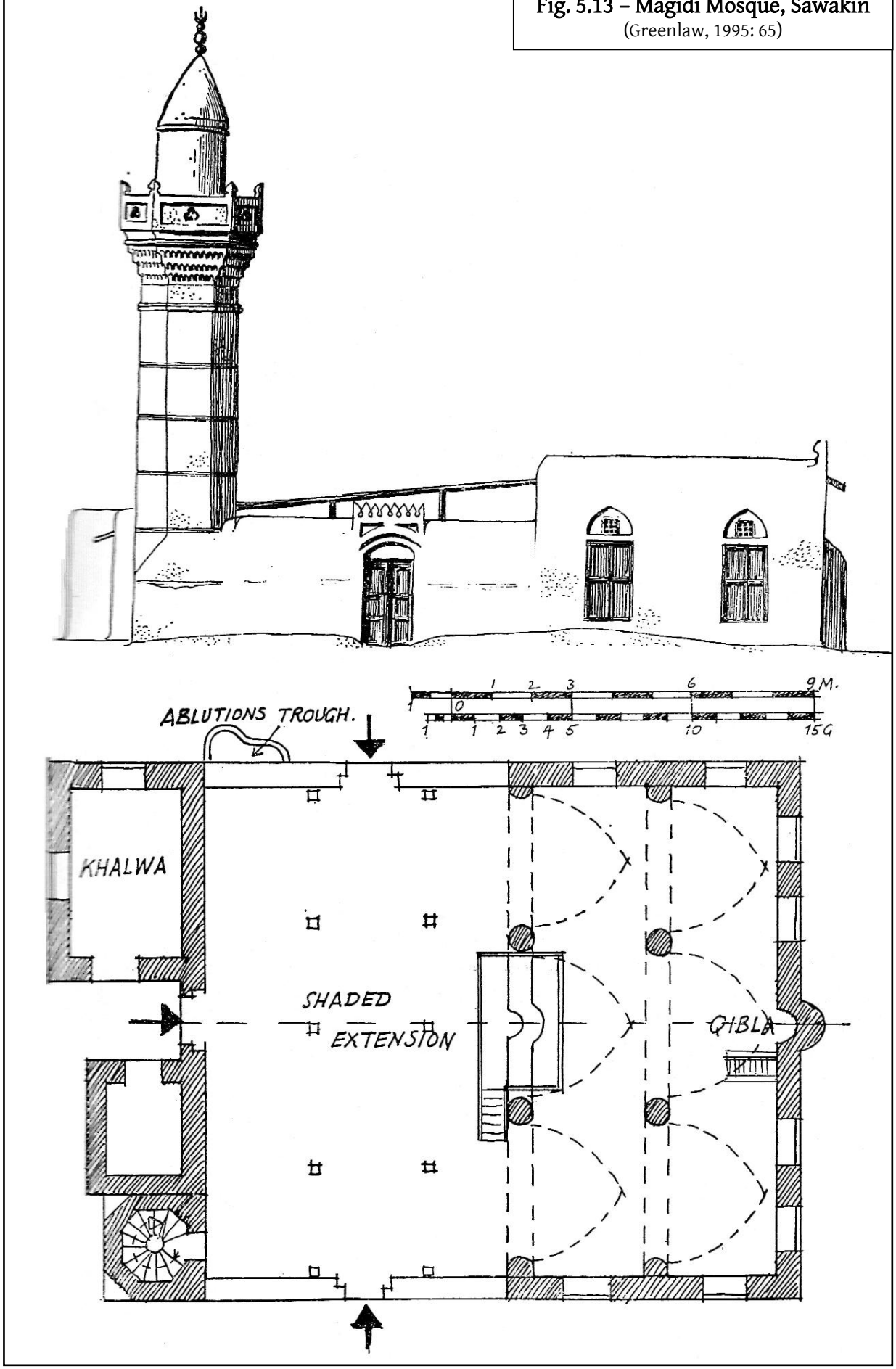


Fig. 5.13 – Magīdī Mosque, Sawākin
(Greenlaw, 1995: 65)



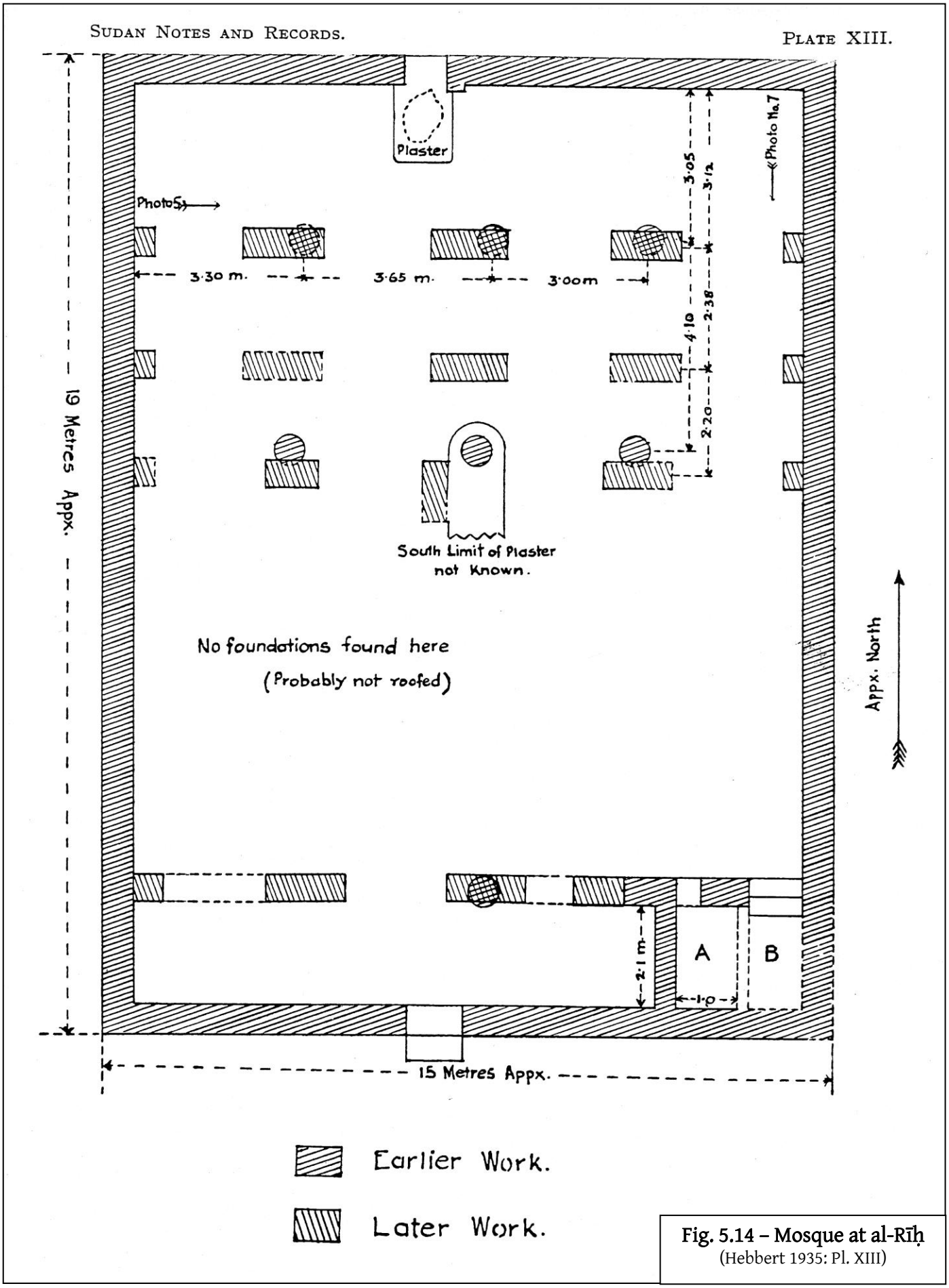


Fig. 5.14 – Mosque at al-Rīḥ
(Hebbert 1935: Pl. XIII)

Fig. 5.15 – Khawr Nubt
(Sanders & Owen, 1951)

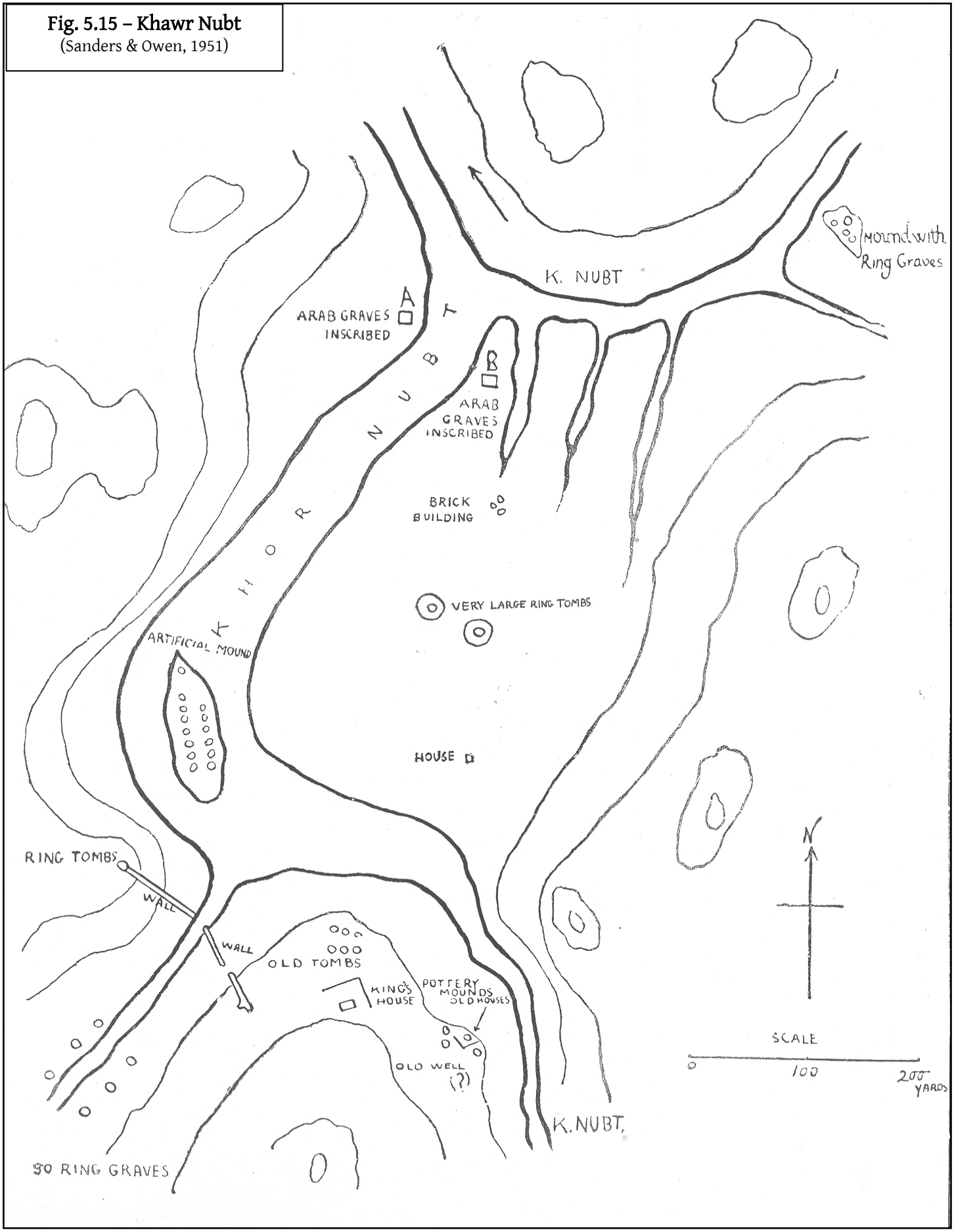


Fig. 5.16 – Khawr Nubt Tombstones (Wiet, 1952: Pl. I)
Right, first half ninth century; left, dated 264 H/ AD 878.

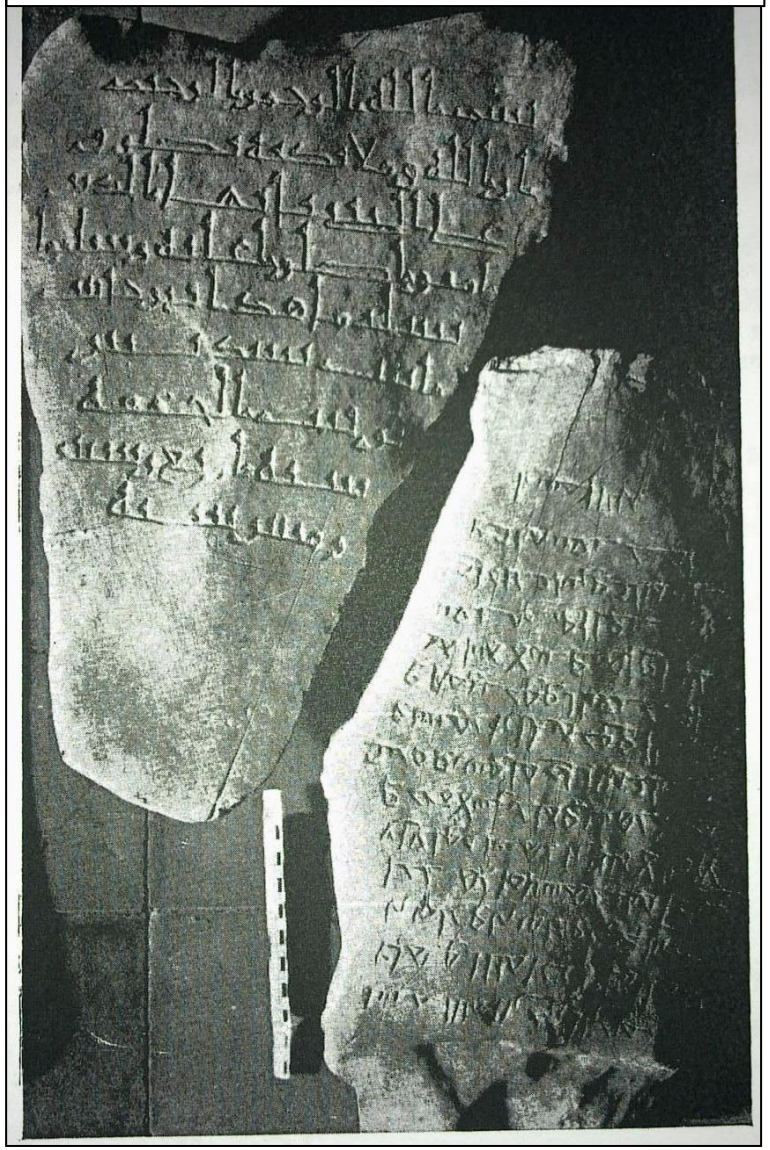
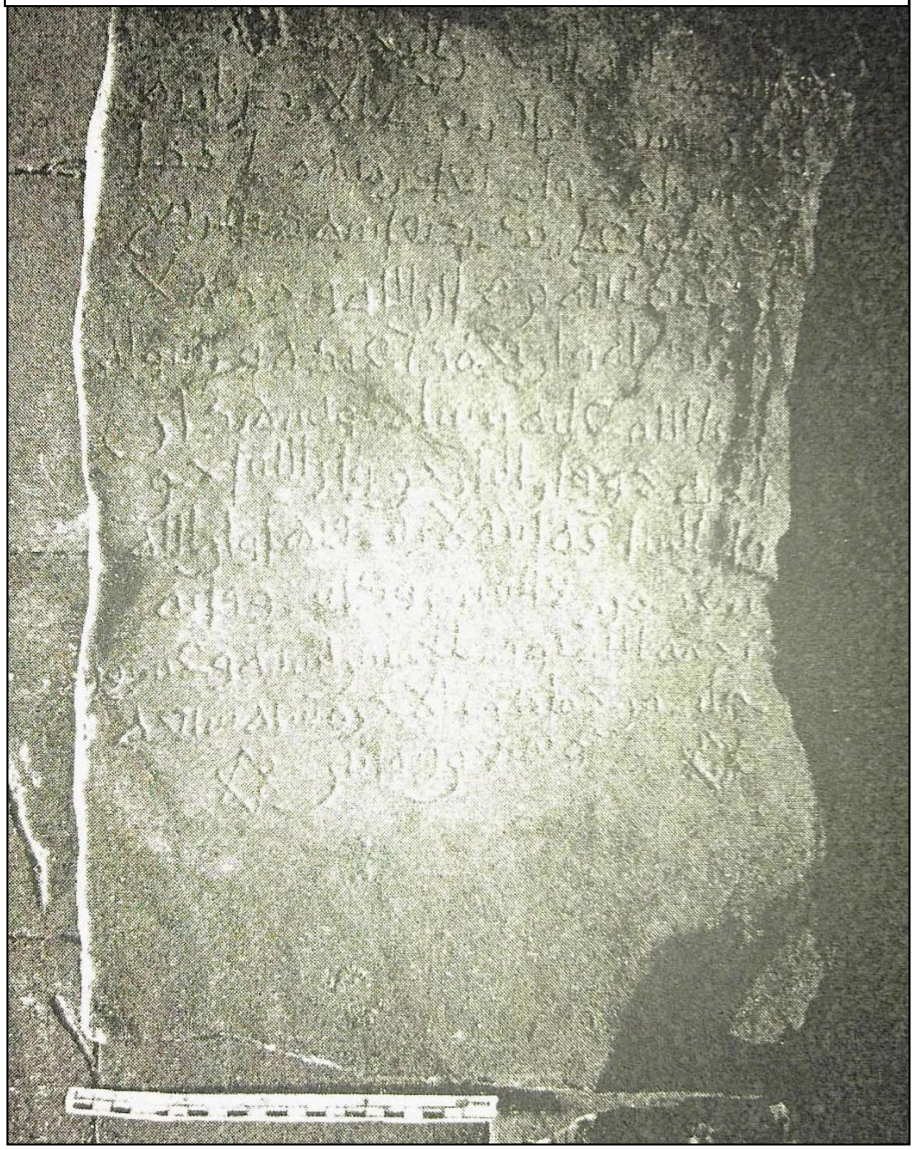


Fig. 5.17 – Khawr Nubt Tombstone (Wiet, 1952: Pl. II)
Dated 277 H/ AD 890.



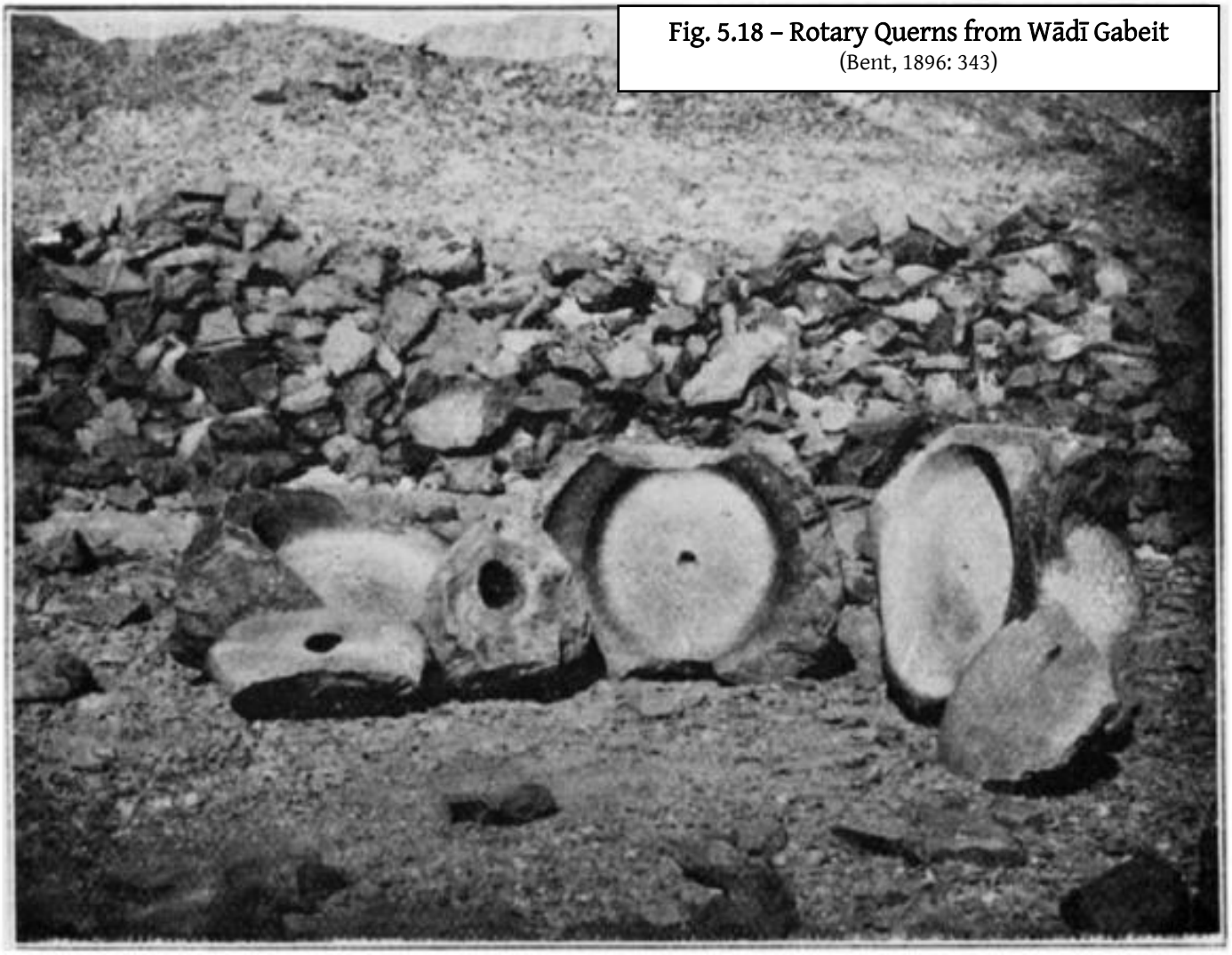


Fig. 5.18 – Rotary Querns from Wādī Gabeit
(Bent, 1896: 343)

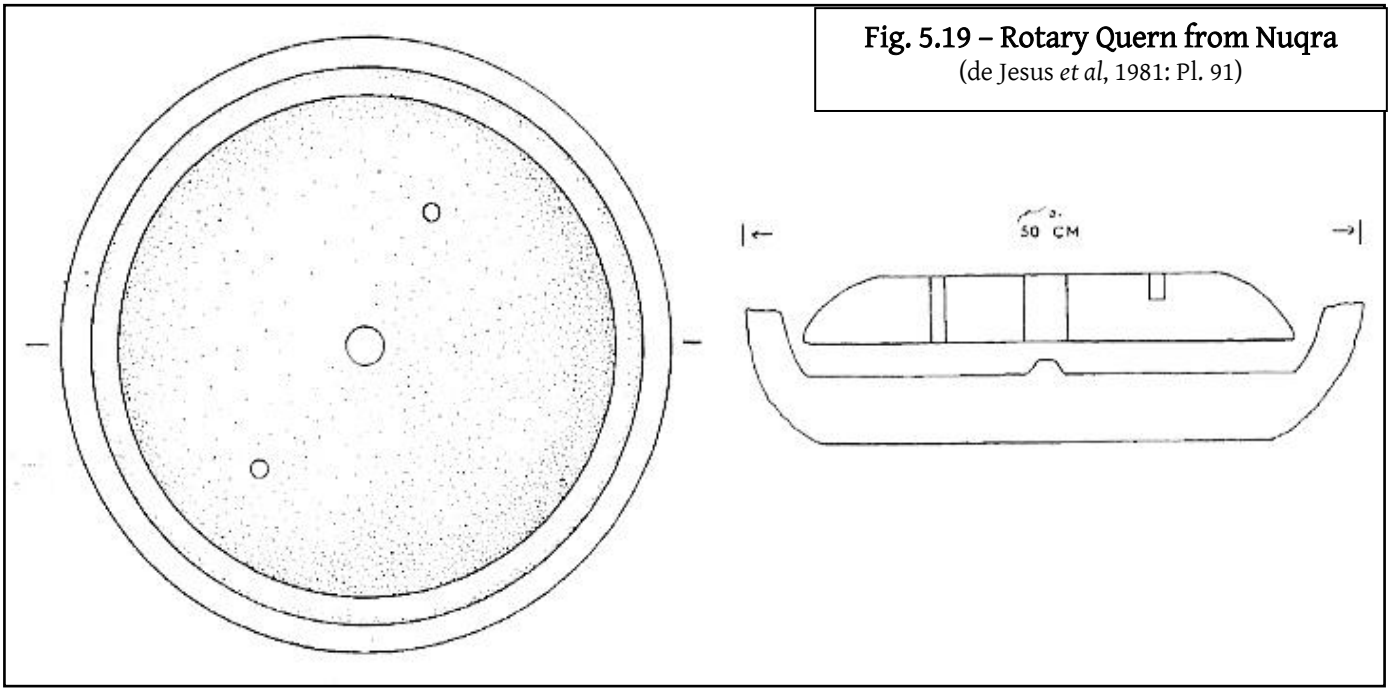


Fig. 5.19 – Rotary Quern from Nuqra
(de Jesus *et al*, 1981: Pl. 91)

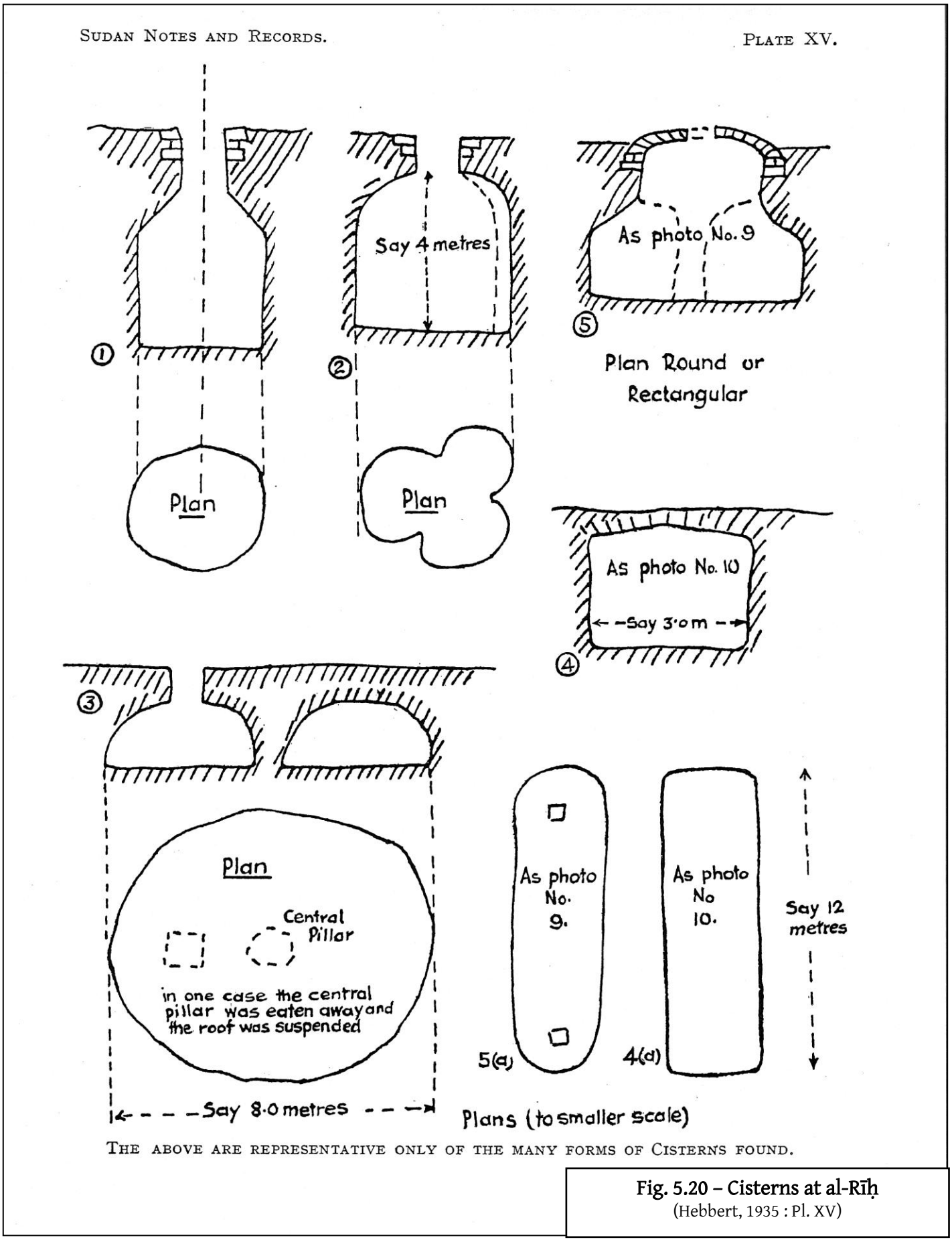


Fig. 5.20 – Cisterns at al-Rīḥ
(Hebbert, 1935 : Pl. XV)

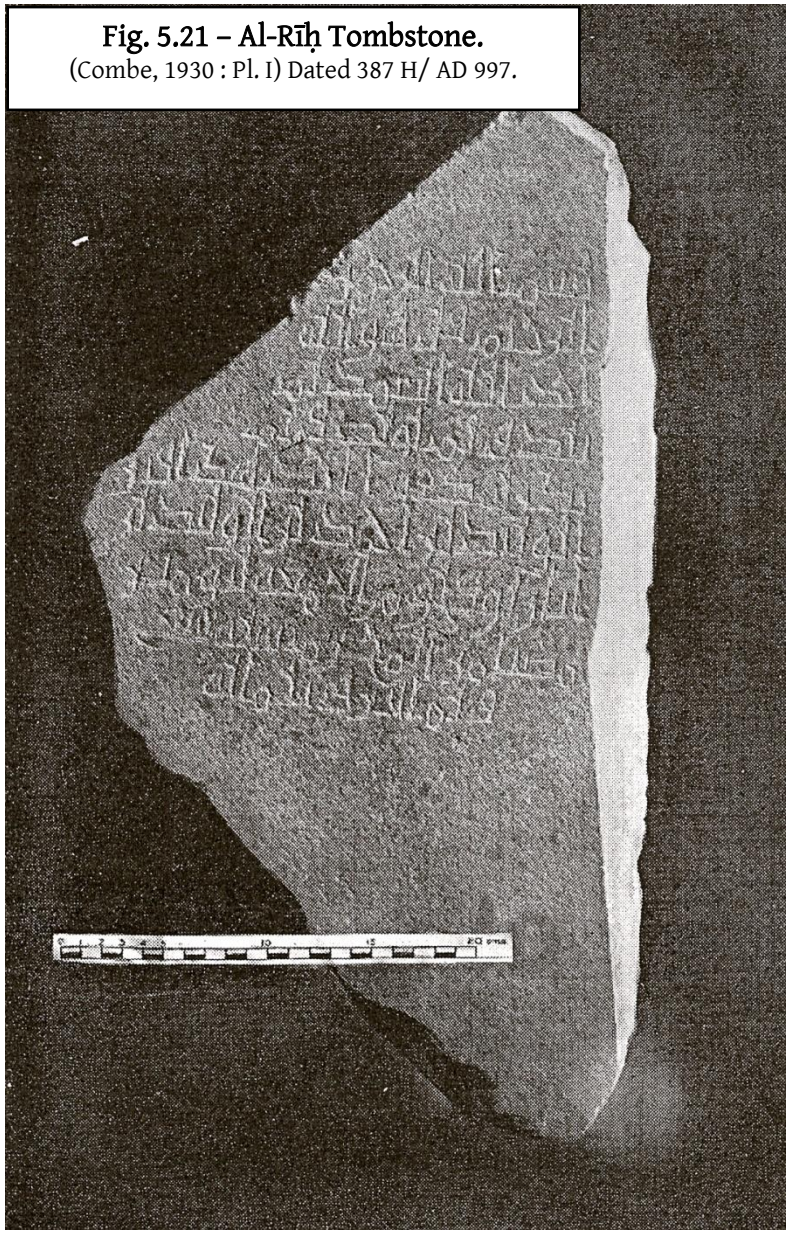
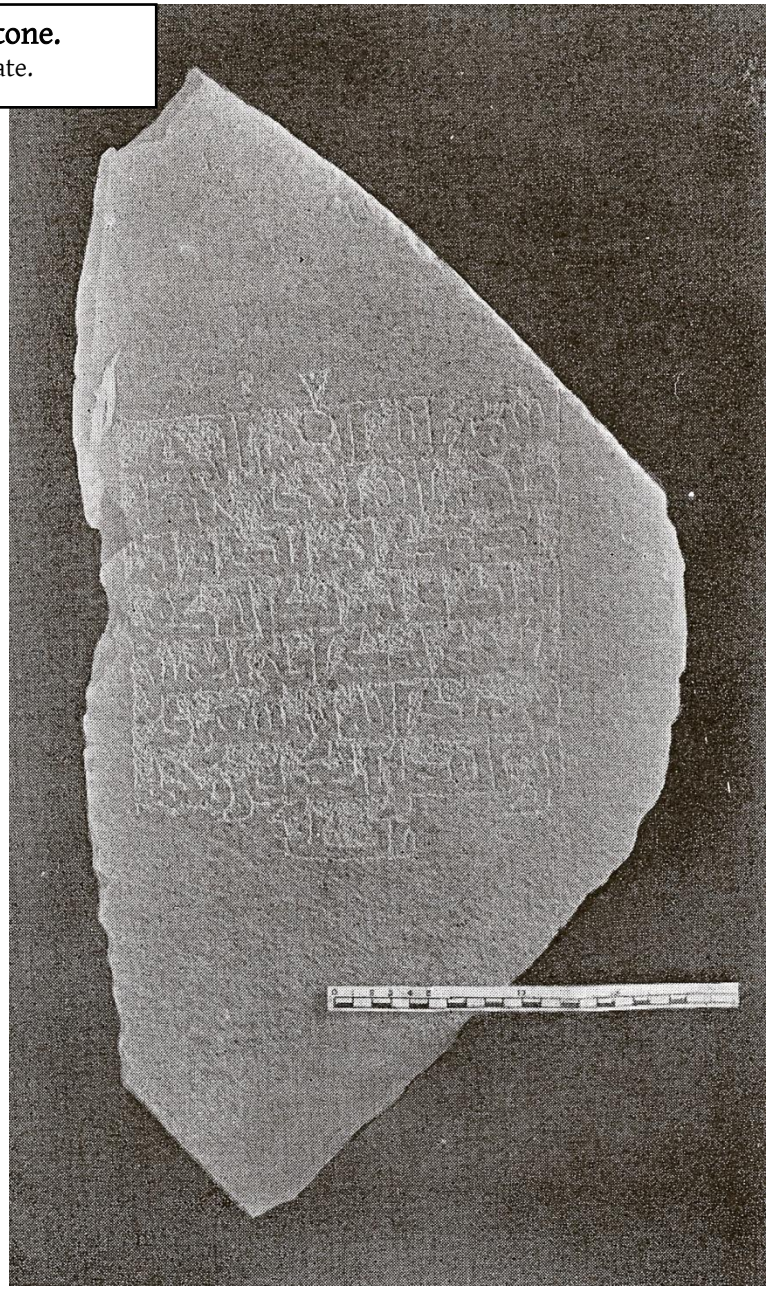


Fig. 5.21 – Al-Rīḥ Tombstone.
(Combe, 1930 : Pl. I) Dated 387 H/ AD 997.

Fig. 5.22 – Al-Rīḥ Tombstone.
(Combe, 1930 : Pl. II) Dated 405 H/ AD 1015.

Fig. 5.23 – Al-Rīḥ Tombstone.
(Combe, 1930 : Pl. III) Dated 427 H/ AD 1037.

Fig. 5.24 – Al-Rīḥ Tombstone.
(Combe, 1930 : Pl. IV) No date.



Figures 5. The Early Islamic Baḥr al-Qulzum (c. 830-970)

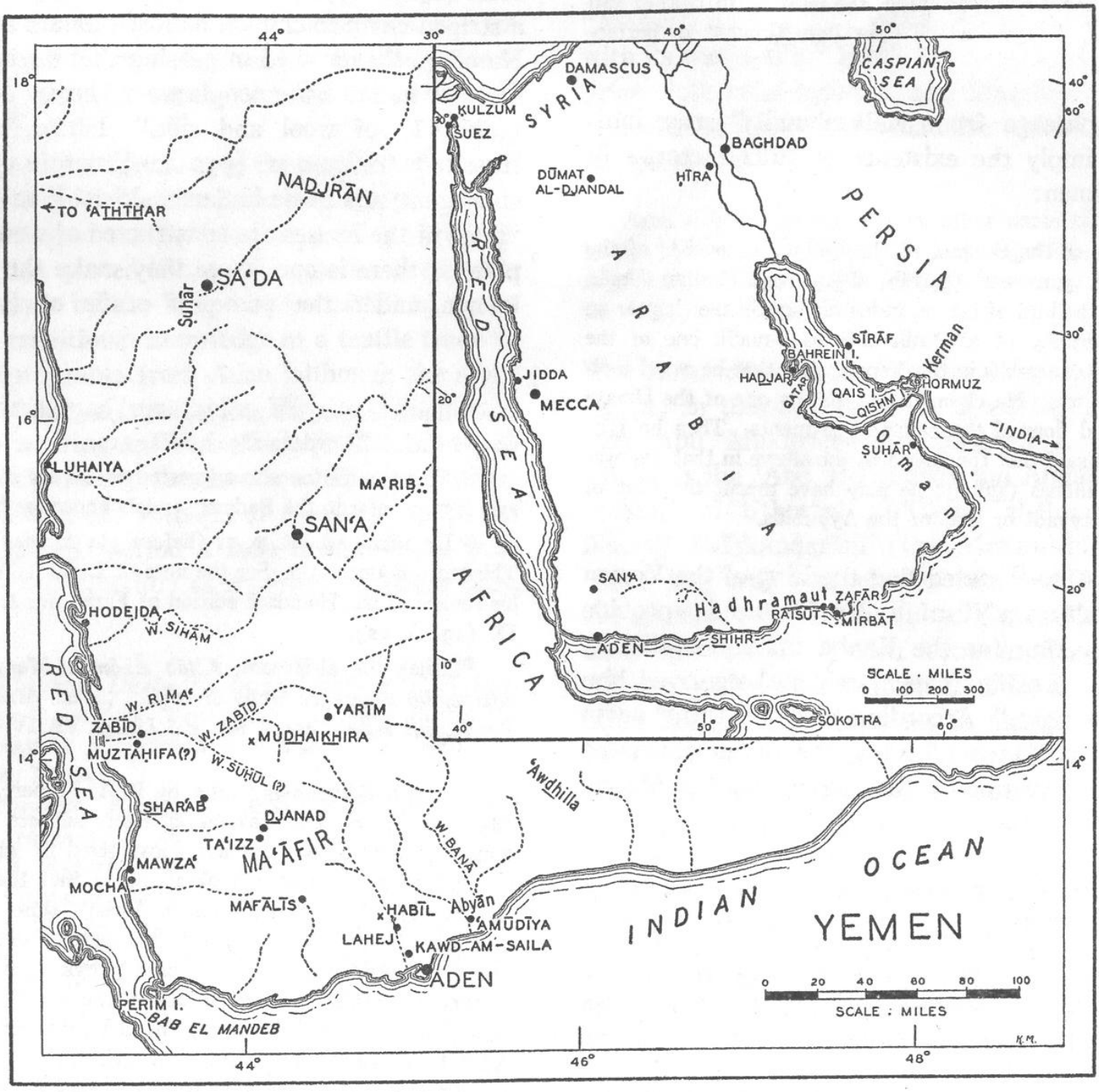
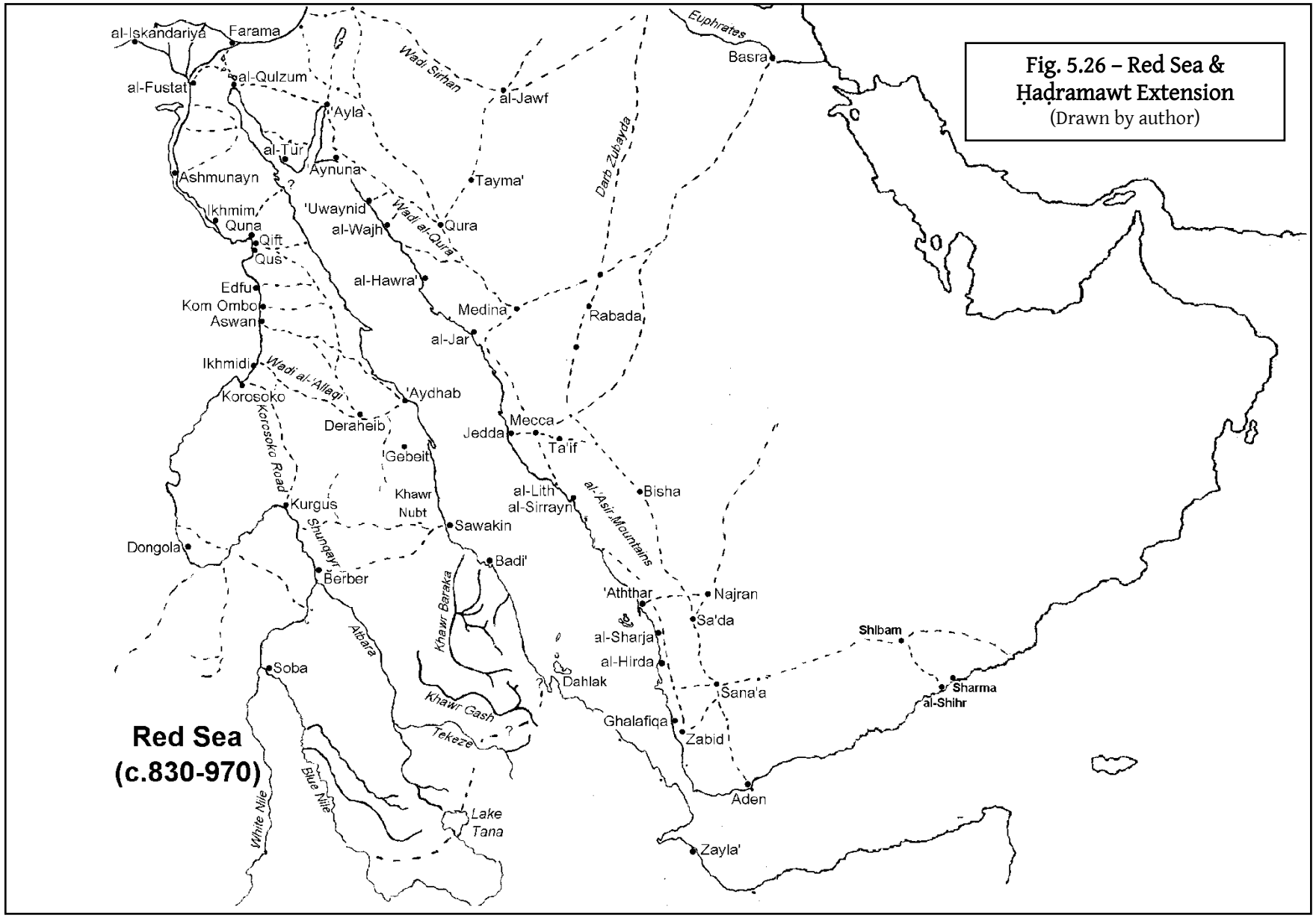


Fig. 5.25 – Yemeni Textile Centres

(Serjeant, 1943: Map 1, p. 78)

Figures 5. The Early Islamic Baḥr al-Qulzum (c. 830-970)



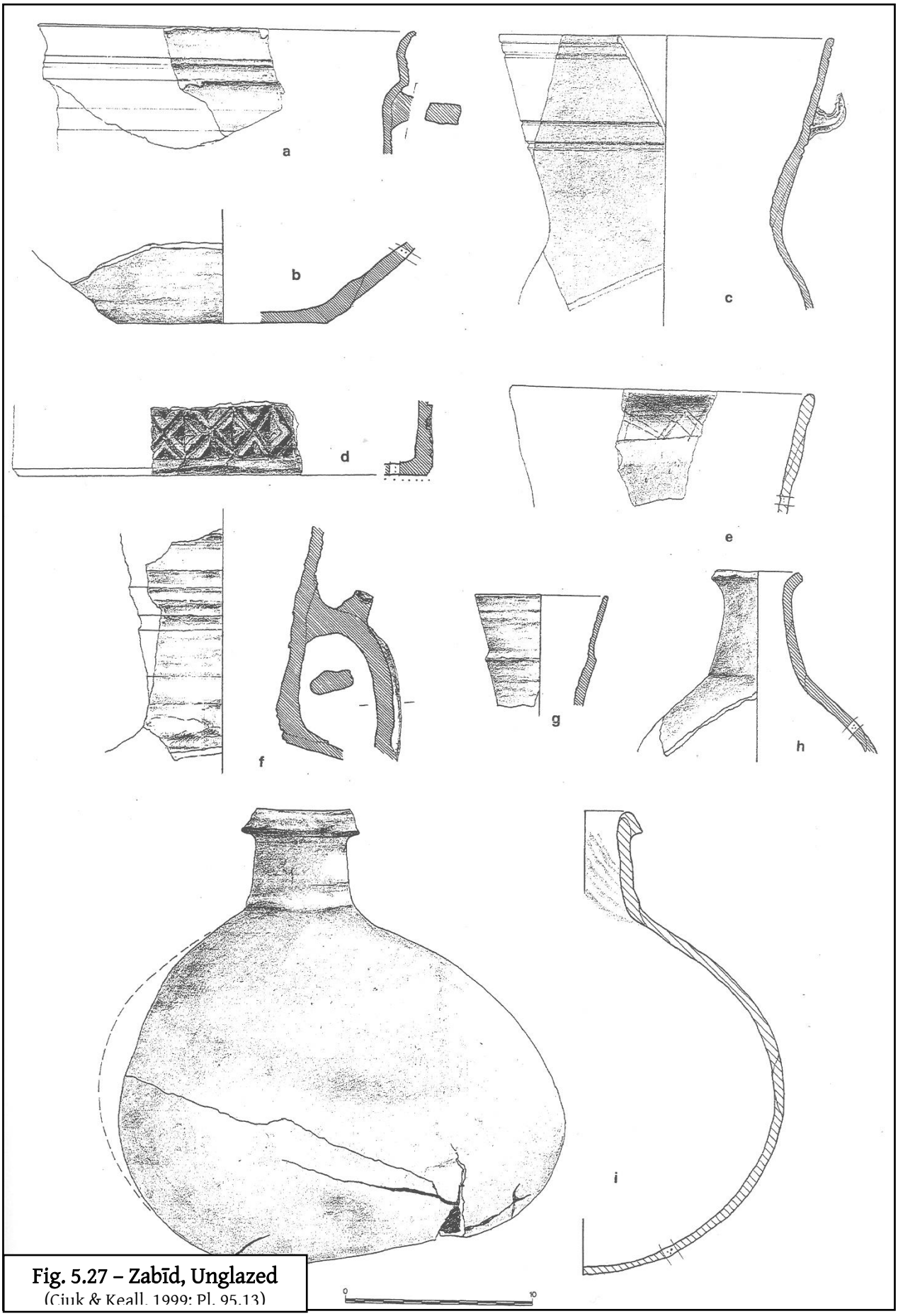
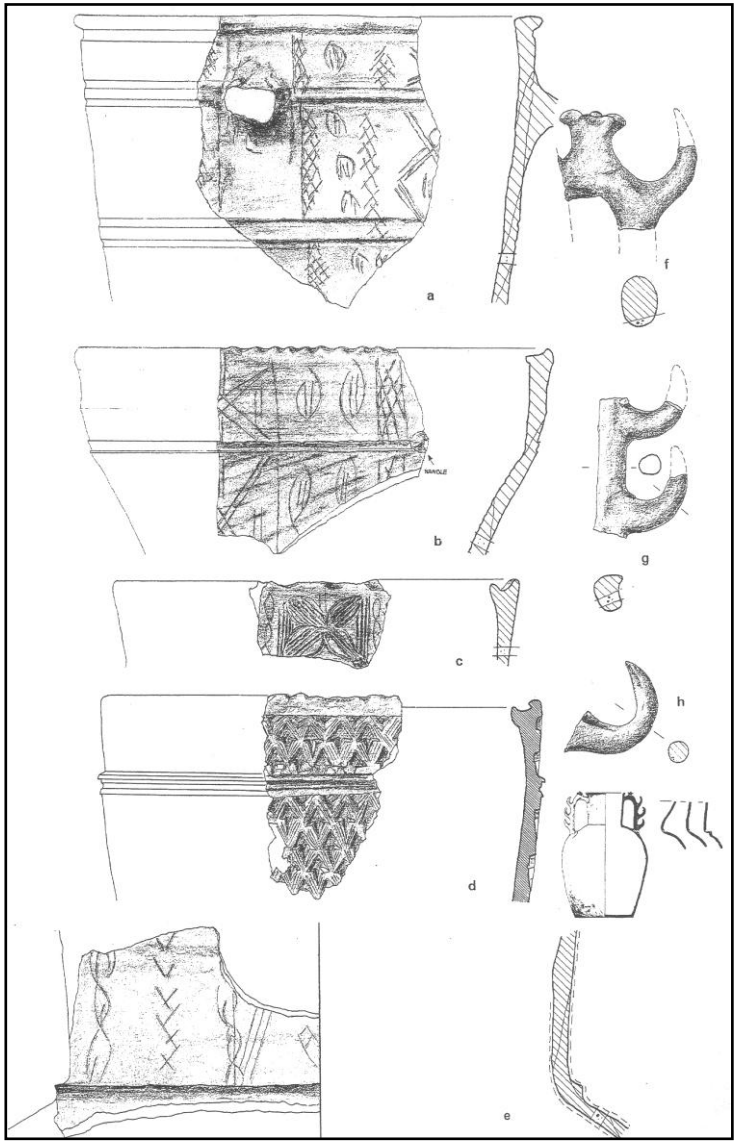
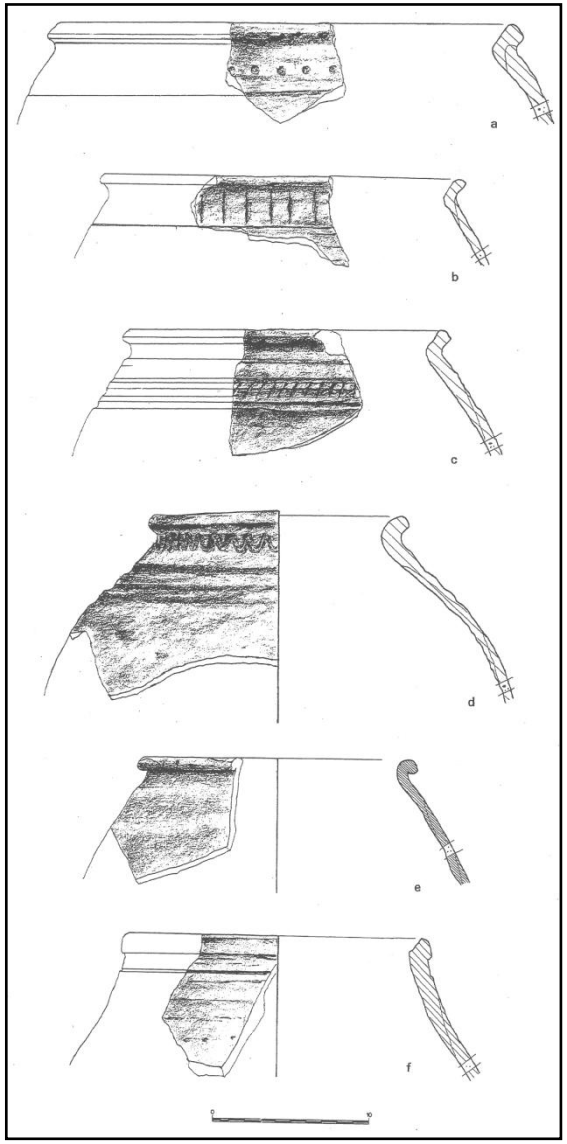


Fig. 5.27 – Zabīd, Unglazed
(Ciuk & Keall, 1999: Pl. 95.13)





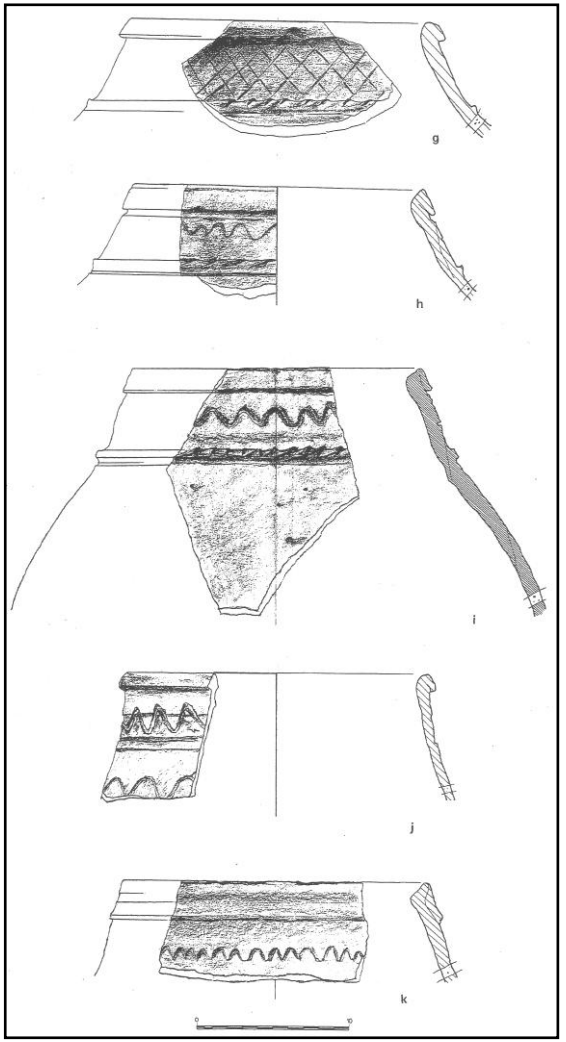


Fig. 5.28-.30 – Zabīd, Unglazed
(Ciuk & Keall, 1999: Pls. 95.18, .23, .24)

Fig. 5.31 – Zabīd, Unglazed
(Ciuk & Keall, 1999: Pl. 95.30, p. 78-79)

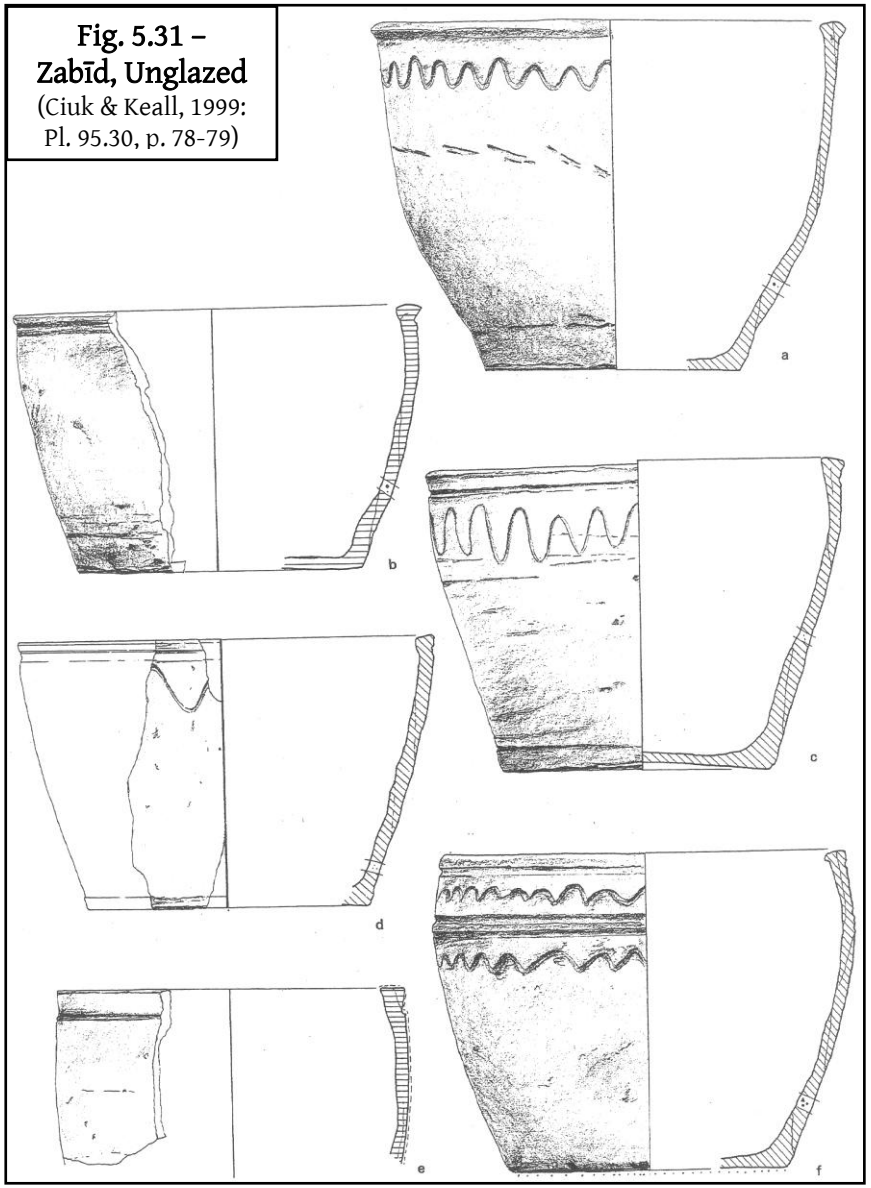
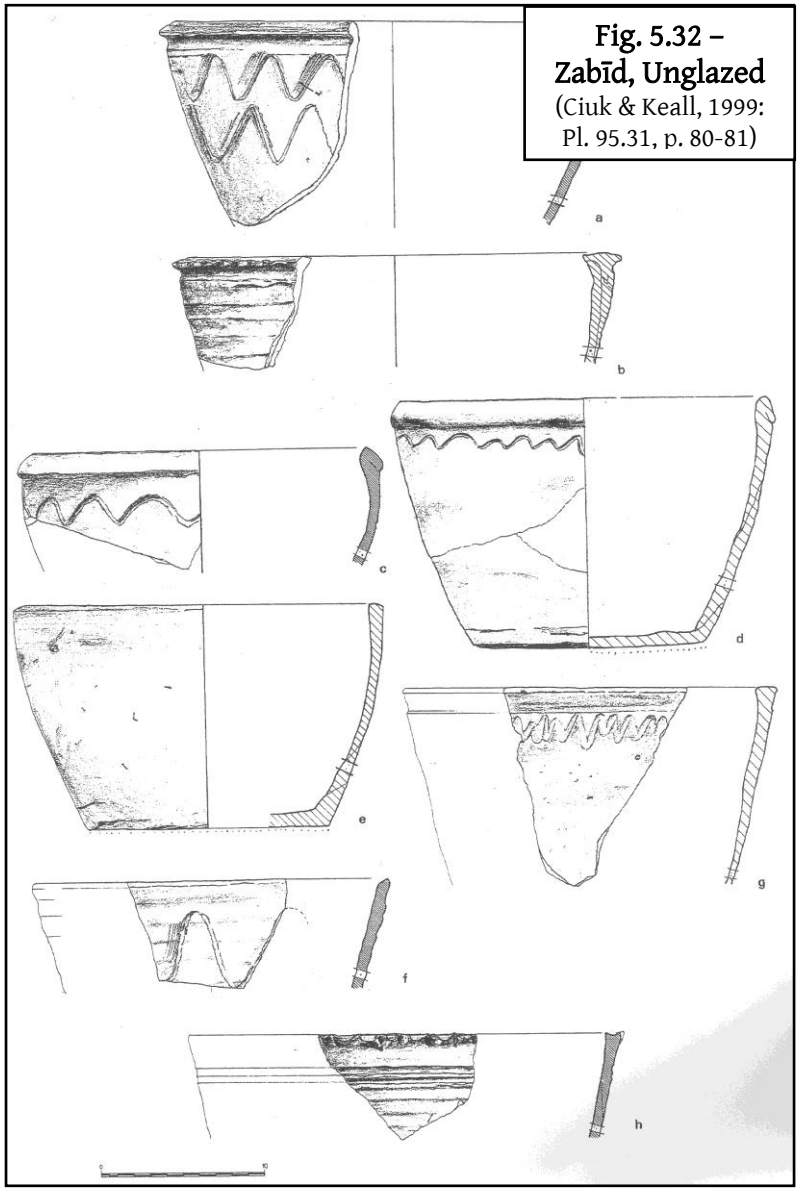
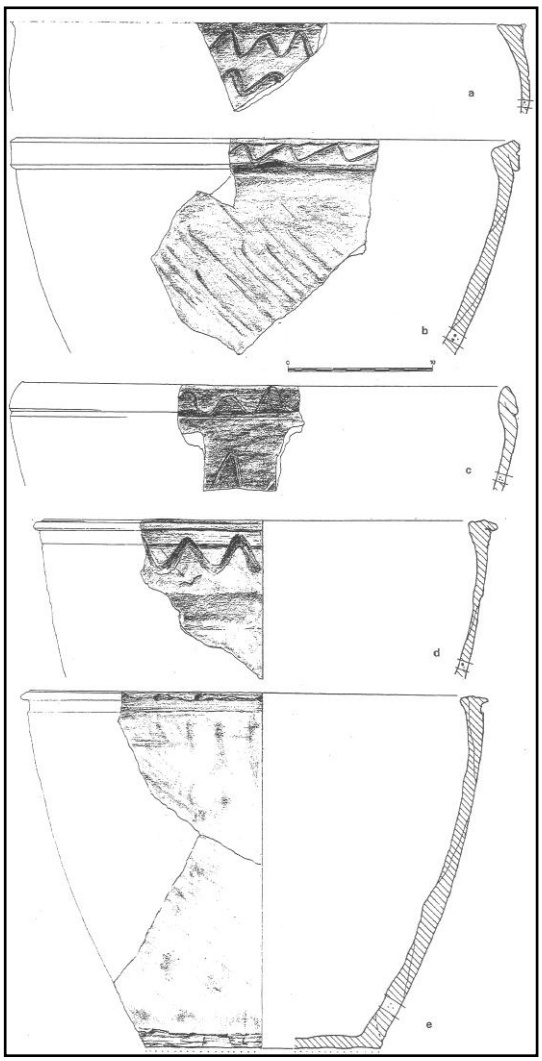


Fig. 5.32 – Zabīd, Unglazed
(Ciuk & Keall, 1999: Pl. 95.31, p. 80-81)





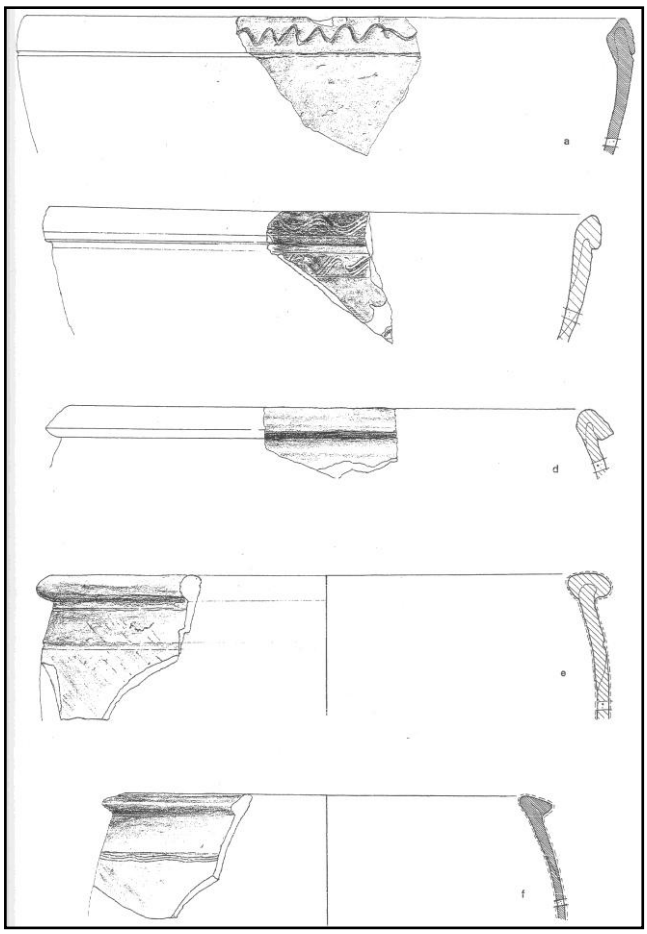
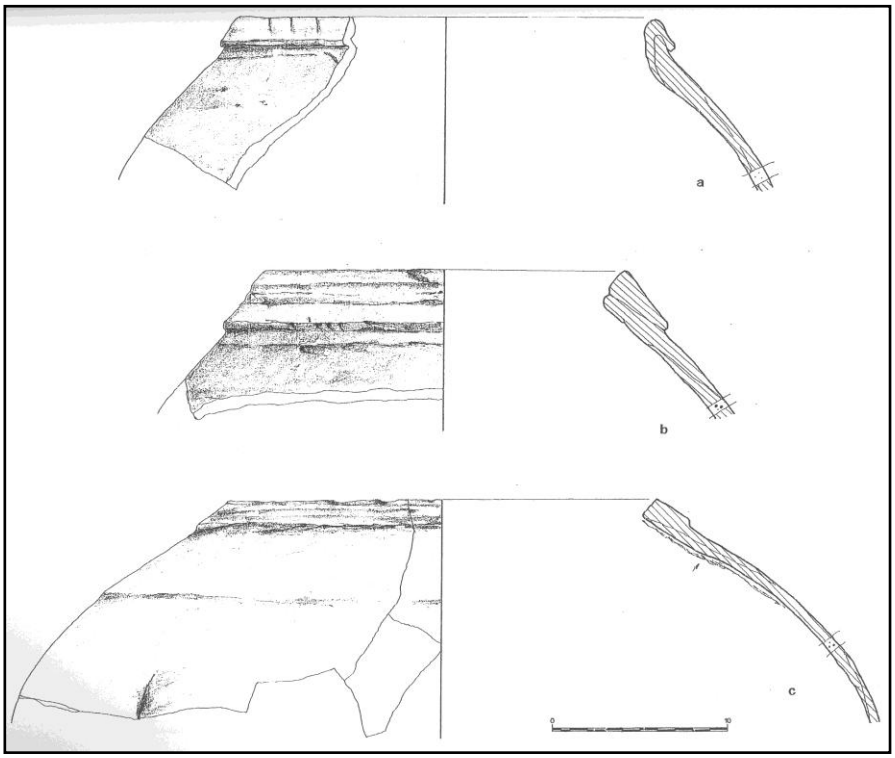


Fig. 5.33-.35 – Zabīd, Unglazed
(Ciuk & Keall, 1999: Pl. 95.33, .34 & .29)



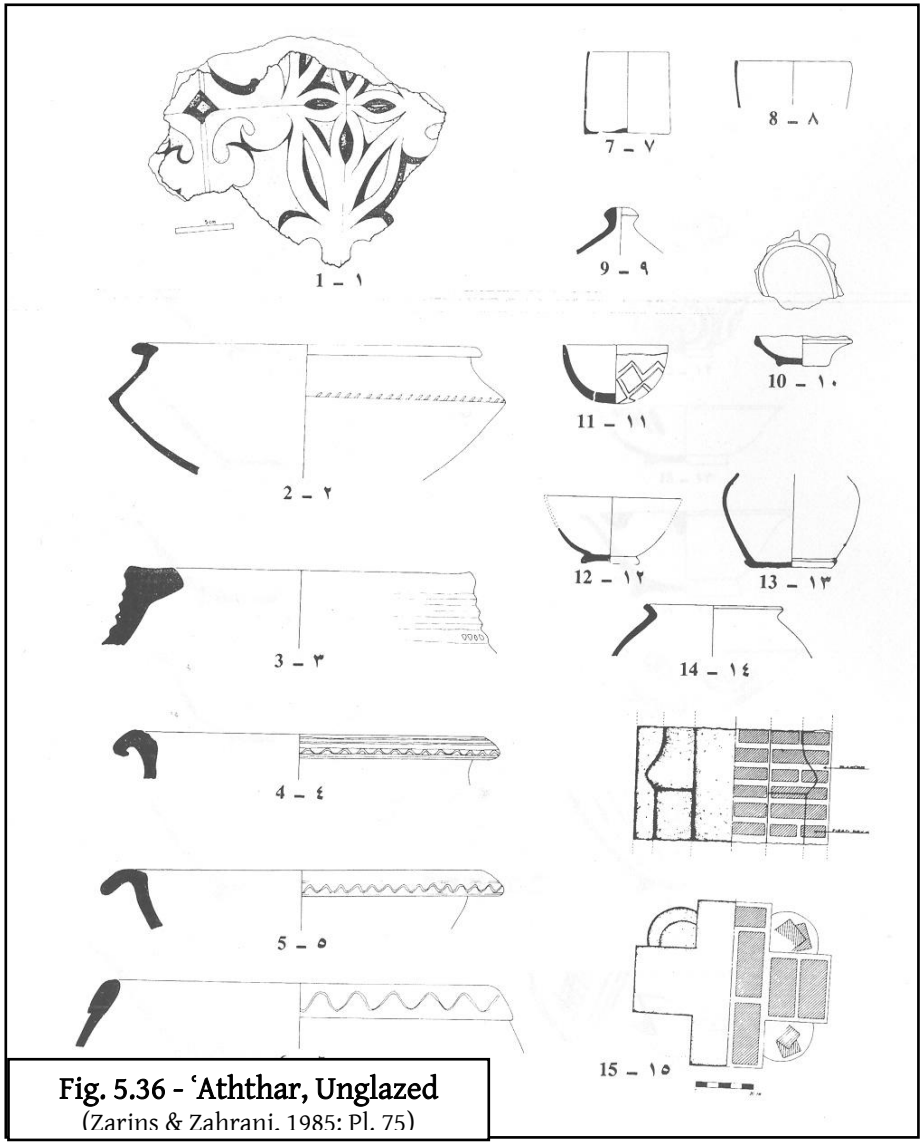


Fig. 5.36 - ʿAththar, Unglazed
(Zarins & Zahrani, 1985: Pl. 75)

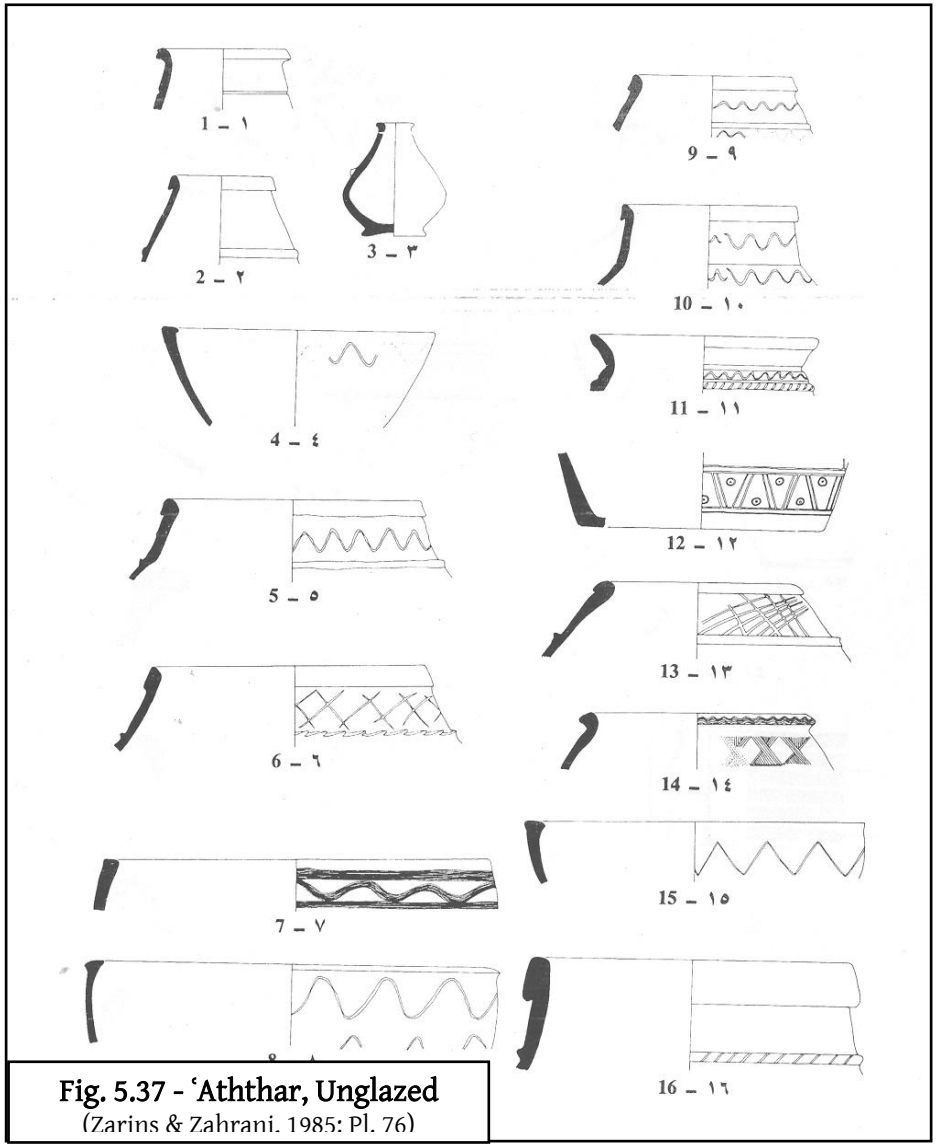


Fig. 5.37 - ʿAththar, Unglazed
(Zarins & Zahrani, 1985: Pl. 76)

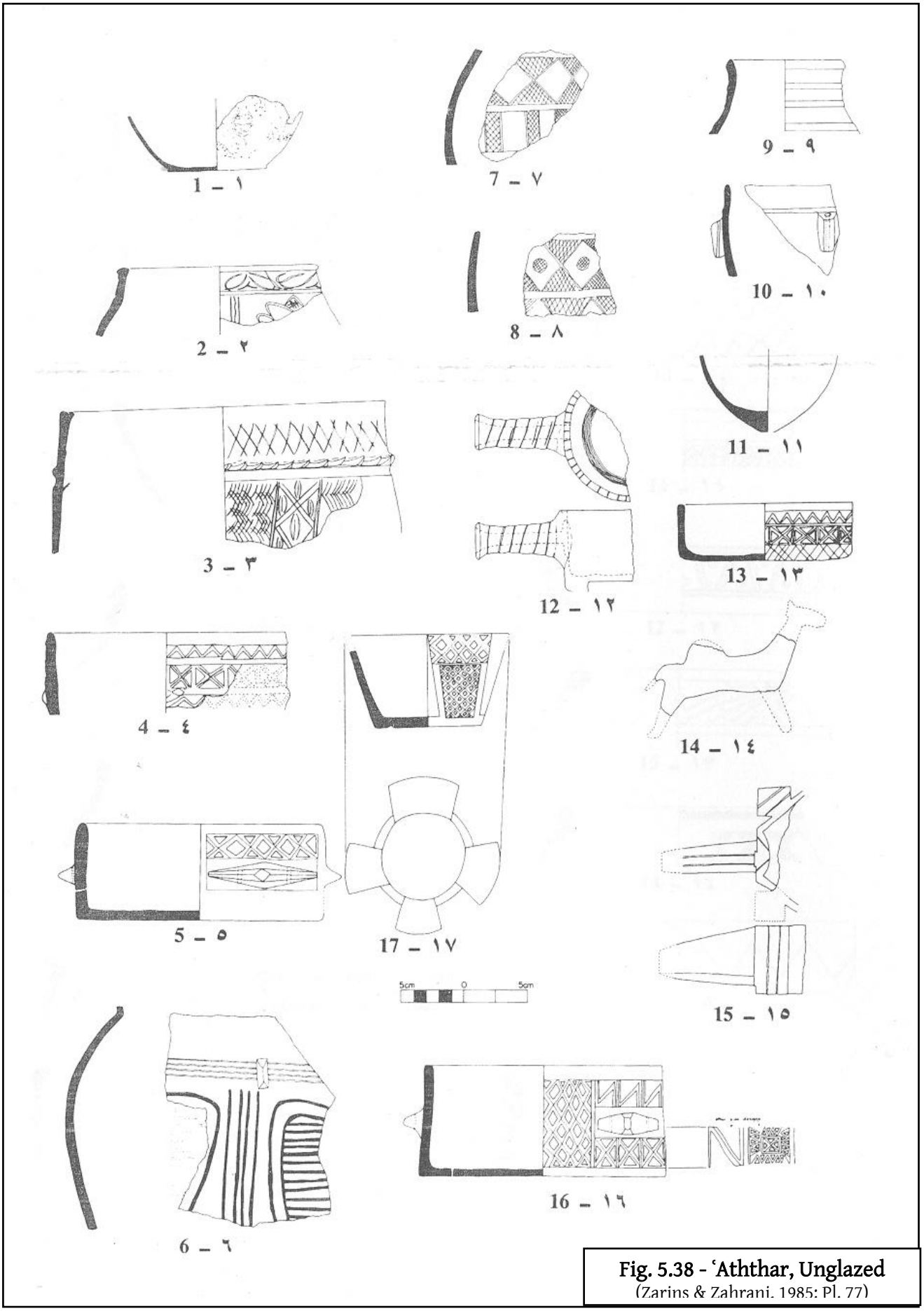


Fig. 5.38 - ʿAththar, Unglazed
(Zarins & Zahrani, 1985: Pl. 77)

Gazetteer of Sites

Entries are listed under the modern site name spelt according to general usage and provided with the various ancient names. Classical sources are given first followed by Islamic sources, arranged in accordance with the English alphabet. References are reproduced from the pertinent geographical dictionaries and local studies, including Bagnall & Rathbone (2008), Bard (1999), Cornu (1985), Hasan (1967), al-Madʿaj (1988), Munro-Hay (1991), Pankhurst (1982), Smith (1854), Vantini (1975), Wohaibi (1973), together with the *Encyclopaedia of Islam* (2nd Edn., 1960–2005), the *Coptic Encyclopedia* (Atiya, 1991) and the *Barrington Atlas of the Greek and Roman World* (Talbert, 2000). Exact site coordinates are given when available which may be entered into Google Maps, in many cases providing detailed images of ruined standing structures.

Abū Shaʿar [2.2.2] (i)

Egypt: 27° 22′ 13″ N, 33° 40′ 97″ E **[Fig. 2.01], [Fig. 2.03], [Fig. 2.09], [Fig. 2.10]**

Bibliography: Bagnall & Sheridan; 1994; Sidebotham *et al*, 1989; Sidebotham & Riley, 1991; Sidebotham, 1991; 1994a; 1999.

Aden = Eudaimon Arabia (?), ʿAdan [2.4.2] (iv), [3.2.1] (iv), [5.3.1] (i)

Yemen: 14° 7′ 0″ N, 38° 44′ 0″ E **[Fig. 2.42], [Fig. 3.04], [Fig. 5.25], [Fig. 5.26]**

Sources: Periplus, 26 (1989); Philostorgius, 3.4 (1855). Abū Makhrama (1936-50); Ibn al-Faqīh, 27 (1885); al-Hamdānī, 54, 124, 185 (1884-91); Ibn Ḥawqal, 19, 22, 23, 37 (1938-39); Ibn Khurradādhbih, 61, 139, 143, 148 (1889); al-Iṣṭakhrī, 25, 27, 28, 29, 31, 32, 35 (1927); al-Masʿūdī, 32, 225 (1894); al-Muqaddasī, 67, 70, 85, 87, 94, 96, 97, 98, 99, 100, 101, 102, 103, 104, 113 (1906); Qudāma, 192, 248 (1889); al-Ṭabarī, i, 144, 1855 (1879-1901), trans. Donner, 1993: 23 & n. 148; al-Yaʿqūbī, 319, 367 (1892); Yāqūt, iii, 110, 622 (1866-73).

Bibliography: Casson, 1989: 158-59; Cornu, 1985: 69; Goitein, 1971; King & Tonghini, 1996; Klein-Franke, 2005; Lane & Serjeant, 1947-48; Löfgren, 1960: 180-82; Margariti, 2004; 2007; Serjeant, 1974; Subar,1959; Tomber, 2004b: 356; 2008: 78, 102-03; Whitcomb, 1988.

Adulis [sv, Zula]

Aksum = Axum

Ethiopia: 14° 7′ 0″ N, 38° 44′ 0″ E

[2.4.1] (iv), **[3.1.2] (v)**

[Fig. 2.01], **[Fig. 2.38]**, **[Fig. 2.39]**

Sources: Nonnosus in Photius, Codex 3 (1920).

Bibliography: Littmann *et al,* 1913; Manzo, 2005; Munro-Hay, 1989b; 1991: 'Chapter 5: The Capital City,' pp. 104-143; Pedersen, 2000 ; 2008 ; Philips, 2000; Phillipson, 2000; Sutton, 1989; Tomber, 2007b; Wilding, 1989.

Aqaba = Aila, ʿAyla, Wayla, ʿAqaba

Jordan: 29° 31′ 0″ N, 35° 0′ 0″ E

[2.2.1] (i), **[3.1.1] (vii)**, **[4.1.1]**, **[5.1.1]**

[Fig. 2.04], **[Fig. 2.95]**, **[Fig. 4.02]**, **[Fig. 4.07]**

Sources: Diodorus, 3.43.4 (1933); Eusebius, *Onomasticon*, 6.17-21 (1904); Josephus, 8.6.4 (1981); Pliny, 5.12.65, 12.32.64-5 (1938-62); Procopius, 1.19.3, 1.19.23 (1914); Ptolemy, 5.17.1 (1991); *Notitia Dignitatum Or.* 34.40 (1876); Strabo, 16.2.30, 16.4.18, 16.4.4 (1917). Ibn Ḥawqal, 18, 21, 40, 42, 46, 48, 158, 170, 173 (1938-39); Ibn Ḥishām, 902 (1858-60); Ibn Khurradādhbih, 81, 83, 149 (1889); Ibn Rusta, 84, 183 (1892); Ibn Taghrī Birdī, ii, 239 (1908-36); al-Iṣṭakhrī, 13, 14, 15, 29, 30, 31, 33, 55, 59 (1927); al-Maqrīzī, iii, 228-35 (1911-27); al-Masʿūdī, 51, 272 (1894); al-Muqaddasī, 10, 11, 54, 109, 112, 155, 178, 179, 186, 192, 215, 249, 252, 254 (1906); Qudāma, 192, 248 (1889); al-Ṭabarī, i, 1702 (1879-1901); al-Yaʿqūbī, 330, 340, 341 (1892); Yāqūt, i, 422-23 (1866-73).

Bibliography: Cornu, 1985: 2; Damgaard, 2009; Freeman-Grenville *et al*, 2003: 14; Hahn, 2000: 286; Ghawanmeh, 1986; Glidden, 1960: 783-84; Mayerson, 1964: 169-77; 1996a; 1996b; Melkawi, ʿAmr & Whitcomb, 1994; Millar, 1993: 387; Parker, 1996; 1997; 1998;

2000; 2002; 2003; 2006; 2009; Tomber, 2004: 353; 2008: 69-71; 80; Ward, 2007: 163; Whitcomb, 1987; 1988a; 1988b; 1989a; 1989b; 1989c; 1990; 1990-91; 1994; 1995; 1998; 2001; 2006; Wohaibi, 1973: 43-51; Woolley & Lawrence, 1936: 145-47.

ʿAqīq = Ptolemais Theron **[2.4.1] (iii), [3.3.1] (v)**

Eritrea: Approx. 18° 10′ N, 38° 16′ E **[Fig. 2.01], [Fig. 2.37], [Fig. 3.05]**

Sources: Pliny, 2.183, 6.168 (1938-62); Ptolemy, 1.8.1, 4.7.7, 8.16.10 (1991); Strabo, 16.4.7 (1917).

Bibliography: Combe, 1930; Cornu, 1985: 97; Crowfoot, 1911; Donzel, 1991; Hebbert, 1935; 1936; Kawatoko, 1993a; 1993b; Sidebotham *et al*, 2006; Smith, 1854: 677; Tedeschi, 1984.

ʿAththar **[2.4.2] (i), [2.3.1] (i), [5.3.2] (ii)**

Saudi Arabia: Approx. 17° 8′ N, 42° 26′ E **[Fig. 4.01], [Fig. 4.34], [Fig. 5.01]**

Sources: al-Ḥākamī, 7, 11, 141, 240, 241 (1882); al-Hamdānī, 76 (1884-91); Ibn Ḥawqal, 21, 24 (1938-39); Ibn Khurradādhbih, 148 (1889); Ibn al-Mujāwir, 54 (1951-54); al-Muqaddasī, 47, 53, 70, 86, 98, 104, 113 (1906); Qudāma, 192 (1889); al-Ṭabarī, i, 1855 (1879-1901); al-ʿUdhrī, fol. 6a (manuscript cited by al-Madʿaj, 1988: 28 & 37, n. 52); al-Yaʿqūbī, 316, 319 (1892); Yāqūt, iii, 615 (1866-73).

Bibliography: Cornu, 1985: 71; Löfgren, 1960: 737-38; al-Madʿaj, 1988: 28 & 37; Zarins & Zahrani, 1985; Zarins, 1989.

al-ʿAwnīd = ʿUwaynid **[4.2.1] (i), [4.2.1] (iv)**

Saudi Arabia: Approx. 26° 35′ N, 36° 14′ 57 E **[Fig. 4.01], [Fig. 4.18], [Fig. 4.21]**

Sources: al-Muqaddasī, 69, 84, 110, 112 (1906); al-Yaʿqūbī, 341 (1892); Yāqūt, iii, 748 (1866-73).

Bibliography: Cornu, 1985: 71; Musil, 1926: 257; Wohaibi, 1973: 58-61.

ʿAydhāb **[3.3.2] (ii), [4.4.1] (iv), [4.4.2] (i), [5.2.1] (i)**

Egypt: 22° 19′ 51″ N, 36° 29′ 25″ E **[Fig. 4.01], [Fig. 5.01], [Fig. 3.07], [Fig. 3.08]**

Sources: al-Maqrīzī, ii, 258 (1911-27); al-Bakrī, 167-68 & MC fol. 730 v. (1913); al-Balādhurī, 382 (1968); al-Hamdānī, fols. 24b (MS. Upsala), partially trans. Dunlop, 1957: 40; Ibn ʿAbd al-Ḥakam, 189 (1920); Ibn Ḥawqal, 50 (1938-9); al-Iṣṭakhrī, 28, 40, 54 (1927); al-Kindī, 214 (1912); al-Masʿūdī, i, 237-38 (1962-65); al-Muqaddasī, 78, 84, 215 (1906); Qudāma, 172 (Bibl. Nat. MS Ar, 5907, trans. Vantini, 1975: 106); al-Yaʿqūbī, 334 (1892).

Bibliography: Bent, 1896; Couyat, 1911; Gibb, 1960; Hakim *et al*, 1981; Hasan, 1967: 66-82; Kawatoko, 1993a; Murray, 1926; Paul, 1955; Power, 2008; Yajima, 1989.

ʿAynūna = Leuke Kome (?), ʿAyn Āna

Saudi Arabia: Approx. 28° 5′ N, 35° 11′ E

Sources: Strabo, 16.4.23 (1917); Periplus, 19 (1989); al-Muqaddasī, 47, 53, 70, 86, 98, 104, 113 (1906); al-Yaʿqūbī, 341 (1892); Yāqūt, iii, 765 (1866-73).

Bibliography: Cornu, 1985: 71; Ingraham *et al*, 1981: 76-78; Kirwan, 1979; Musil, 1926: 322-23; Sidebotham, 1986: 106-7; Tomber, 2008: 68-69; Ward, 2002: 115; Young, 1997; 2001: 96, 100, 103-4.

Berenike [sv, Madinat al-Ḥaras]

Biʾr ʿAlī = Qāniʾ **[2.4.2] (iii), [3.2.1] (iv),**

Yemen: 14° 0′ 36″ N, 48° 19′ 30″ E **[Fig. 2.01], [Fig. 2.43]**

Sources: Periplus, 27-28, 57 (1989).

Bibliography: Davidde & Petriaggi, 1998; Mouton, Sanlaville & Suire, 2008; Sedov, 1992; 1997; 1998; 2001; 2007; Tomber, 2008: 103-05, 107-08,

Bi'r Umm Fawakhir **[2.2.2] (iii), [3.1.1] (iv)**

Egypt: **[Fig. 2.03], [Fig. 2.17]**

Bibliography: Meyer, 1995a; 1995b; 1999; Meyer & Omar, 1995; Meyer *at al*, 2000.

Bi'r al-ʿUmaq = Maʿdin Banī al-Sharīd (?) **[4.2.2] (ii)**

Saudi Arabia: 23° 58′ N, 40° 59′ E **[Fig. 4.24], [Fig. 4.25], [Fig. 2.26]**

Sources: al-Bakrī, i, 28 (1945); al-Hamdānī, 363, 375, 414 (1987); Ibn Ḥazm, 172 (1983); al-Samhūdī, 1268 (1955).

Bibliography: Heck, 1999: 377.

Clysma [sv, Suez]

Dahlak Islands **[2.4.1] (ii), [3.3.1] (iii), [5.3.3] (iii)**

Eritrea: 15° 50′ 0″ N, 40° 12′ 0″ E **[Fig. 2.01], [Fig. 4.01], [Fig. 5.01]**

Sources: al-Ḥākamī, 40 (1882); al-Hamdānī, 47, 52 (1884-91); al-Hamdānī, fols. 24b (MS. Upsala), trans. Dunlop, 1957: 40; Ibn al-Farrāj al-Iṣfaḥānī, iv, 239, 246, 248-50, 255 (1350/ 1931); Ibn Khurradādhbih, 142 (1889); al Ṭabarī, iii, 135 (1879-1901); Yaʿqūbī, 319 (1892); Yāqūt, ii, 634 (1866-73); al-Maqrīzī, ii, 258 (1911-27).

Bibliography: Bassat, 1893; Conti Rossini, 1928; Goitein, 1954: 194; Hasan, 1967: 30; Insoll, 1997; 2003: 49-58; Longrigg, 1965: 91-92; Malmusi, 1895; 1898; Margariti, 2004: 176, n. 50; 239, n. 96; 240-45; Margariti, 2009; Oman, 1974; Puglisi, 1969: 35-47; Schneider, 1967; 1973; 1983; Tedeschi, 1969: 49-74; Trimingham, 1952: 47; Wiet, 1951; 1952.

Deraheib = Wādī al-ʿAllāqī, Berenike Panchrysos **[4.4.1] (iii)**, **[5.2.1] (ii)**, **[5.2.1] (iii)**

Sudan: 21° 57′ 2″ N, 35° 8′ 27″ E **[Fig. 5.01]**, **[Fig. 5.09]**, **[Fig. 5.10]**, **[Fig. 5.11]**

Sources: Pliny, 6.34 (1938-62); Strabo, 16.771 (1917). Ibn Ḥawqal, 50, 57, 58, 132 (1938-39); Ibn al-Faqīh, 77, 78 (1885); Ibn Rusta, 183 (1892); al-Idrīsī, 26-7 (1866); al-Iṣṭakhrī, 40 (1927); al-Masʿūdī, 57 (1894); al-Maqrīzī, f. 167A (1811); al-Yaʿqūbī, 331-36 (1892).

Bibliography: Castiglioni & Castiglioni, 1999; Castiglioni, Castiglioni & Vercoutter, 1995; Cornu, 1985: 95; Hasan, 1967: 50-63; Monneret de Villard, 1935: i, 276; Smith, 1854: 392; Wiet, 1960: 418; Sidebotham, 2001; Wagner, 1995.

Farasān Islands **[3.1.1] (ii)**

Saudi Arabia: 16° 46′ 21″ N, 41° 58′ 0″ E **[Fig. 2.01]**

Sources: Photius, Codex 3 (1920); *Martyrium Arethae*, 747 (1861). Hamdānī, 53, 119 (1884-91); Yāqūt, iii, 873-4 (1866-73).

Bibliography: Beckingham, 1965: 787; Phillips, Villeneuve & Facey, 2004.

al-Fusṭāṭ **[3.3.2] (iii)**, **[5.1.3] (ii)**

Egypt: 30° 0′ 0″ N, 31° 14′ 0″ E **[Fig. 4.01]**, **[Fig. 5.01]**, **[Fig. 3.03]**, **[Fig. 5.08]**

Sources: Ibn Ḥawqal, 133, 143, 146 (1938-39); Ibn al-Faqīh, 59, 60, 67, 69, 71, 75, 78 (1885); Ibn Khurradādhbih, 80, 84, 117, 149, 176 (1889); Ibn Rusta, 81, 90, 97, 115, 118, 183 (1892); al-Iṣṭakhrī, 48, 49, 51, 54 (1927); al-Masʿūdī, 43, 47, 48, 57, 151, 174, 226, 302, 328-31, 359 (1894); al-Muqaddasī, 7, 20, 30, 34, 36, 55, 194, 197-200, 202, 203, 209, 211, 213, 214 (1906); al-Yaʿqūbī, 330, 331 (1892); Yāqūt, iii, 893-901 (1866-73).

Bibliography: Guest, 1907; Kubiak, 1987; Denoix, 1992; Raymond, 2000: 11-16.

Ghalāfiqa

[2.4.2] (i), [3.2.1] (iv), [4.3.1] (ii)

Yemen: 14° 6′ 10″ N, 43° 6′ 1″ E

[Fig. 4.01], [Fig. 5.01], [Fig. 4.30]

Sources: al-Hamdānī, 52, 119 (1884-91); Ibn Ḥawqal, 21 (1938-39); Ibn Khurradādhbih, 141, 148 (1889); al-Muqaddasī, 63, 86, 91, 95, 101, 105 (1906); al-Ṭabarī, i, 1855 (1879-1901); al- al-ʿUdhrī, fol. 6a (manuscript cited by al-Madʿaj, 1988: 28 & 38, n. 55); Yaʿqūbī, 319 (1892); Yāqūt, iii, 808 (1866-73).

Bibliography: Cornu, 1985: 74; al-Madʿaj, 1988: 28 & 38; Keall, 2008.

al-Ḥawrāʾ = Leuke Kome (?), Umm Lajj

[4.2.1] (i), [4.2.1] (iv)

Saudi Arabia: Approx. 25° 1′ N, 37° 16′ E

[Fig. 4.01], [Fig. 4.14], [Fig. 4.18], [Fig. 4.21]

Sources: al-Muqaddasī, 69, 83, 103 (1906); al-Yaʿqūbī, 341 (1892); Yāqūt, ii, 359 (1866-73).

Bibliography: Cornu, 1985: 76; Wohaibi, 1973: 74-76.

al-Ḥirda

Saudi Arabia

Sources: al-Hamdānī, 120 (1884-91); Ibn Ḥawqal, 21 (1938-39); Ibn Khurradādhbih, 137, 148 (1889); al-Maqrīzī, i, 61 (1911-27); al-Muqaddasī, 70, 86, 89 (1906); Qudāma, 192 (1889); al-Ṭabarī, i, 1855 (1879-1901); al-Yaʿqūbī, 319 (1892); Yāqūt, iv, 1036 (1866-73).

Bibliography: Cornu, 1985: 77; al-Madʿaj, 1988: 28 & 38, n. 54.

Iotabe = Isle of Tīrān (?)

[2.2.1] (ii), [2.3.2] (i), [3.1.1] (vi), [3.1.2] (iv)

Saudi Arabia: 27° 57′ 0″ N, 34° 33′ 0″ E

[Fig. 2.01], [Fig. 2.08]

Sources: Choricus, 65 (1929); *Martyrium Arethrae*, 747 (1861); Procopius, 1.19.4 (1914); Theophanes, 141 (1883).

Bibliography: Mayerson, 1992; 1994; Rubin, 1989; Ward, 2007.

Jabal Zabara = Mons Smaragdus, Wādī Sikayt **[2.2.2] (iii), [3.1.1] (iv), [5.1.3] (ii)**

Egypt: 24° 37′ 53.09″ N, 34° 47′ 45.20″ E **[Fig. 2.03]**

Sources: Pliny, 37.16-21, 37.17.65, 37.18.69 (1962); Strabo, 16.4.20, 17.1.45 (1967); Cosmas Indicopleustes, 371 (1897); Olympiodorus, 200-01 (1983). Al-Bakrī, MC 730 v (1913); al-Bīrūnī, 162 (1934); *Ḥudūd al-ʿĀlam*, 152 (1937); Ibn Ḥawqal, ii. 88 (1873); 50 (1938-39); 48 (1965); al-Idrisī, 26-41 (1970-71); al-Maqrīzī, 267-80, 299-303 (1911-27); al-Masʿūdī, iii, 44, 45 (1962-65); al-Qalqashandī, ii, 107-108 (1913-19); al-Yaʿqūbī, 333-34 (1892).

Bibliography: Levicki, 1967; MacAlister, 1900; Shaw, 1994; 1999; Shaw et al, 1999; Sidebotham *et al*, 2004.

al-Jabalī = al-Raḍrāḍ **[3.2.1] (iii), [4.3.2] (iv)**

Yemen **[Fig. 4.01], [Fig. 4.34]**

Bibliography: Dunlop, 1947: 40-42; Benoit *et al*, 2003; Christmann *et al*, 1983; Péli, 2006: 31, 34-35; Robin, 1988; Téreygeol *et al*, 2006; Téreygeol & Péli, 2007.

al-Jār **[3.3.2] (iv)**

Saudi Arabia: Approx. 23° 35′ N, 38° 32′ E **[Fig. 4.01], [Fig. 3.09]**

Sources: Abū al-Farāj al-Iṣfahānī, ix, 25 (1936); al-Bakrī, ii, 355-57 (1945-51); al-Balādhurī, 216 (1866); al-Hamdānī, 47, 182, 218 (1884-91); *Ḥudūd al-ʿĀlam*, 81, 148, 414 (1937); Ibn Ḥawqal, 21, 31, 40 (1938-39); Ibn al-Faqīh, 78 (1885); Ibn Khurradādhbih, 153, 191 (1889); Ibn Rusta, 96, 313, 341 (1892); Ibn Saʿd, i, 139 (1905-40); al-Iṣṭakhrī, 12, 19, 27 (1927); al-Muqaddasī, 12, 53, 69, 83, 97, 107, 110 (1906); Qudāma, 191 (1889); al-

Ṭabarī, i, 1571, 1855; iii, 257, 1336, 1941 (1879-1901); al-Yaʿqūbī, 319, 341 (1892); *idem*, ii, 177 (1883); Yāqūt, ii, 5 (1866-73).

Bibliography: Dietrich, 1965: 454-55; Walen *et al,* 1981; Ghabban, 1988; Wohaibi, 1973: 84-90.

Jedda = Judda **[3.3.1] (vi), [5.2.5] (vi), [5.3.1] (i), [6.3.1] (ii)**
Saudi Arabia: 21° 30′ 0″ N, 39° 11′ 0″ E **[Fig. 4.01], [Fig. 5.01]**

Sources: al-Hamdānī, 6, 47, 218-22 (1884-91); Ibn Ḥawqal, 21, 31, 32 (1938-39); Ibn Hishām, 136-43 (1858-60); Ibn al-Faqīh, 78 (1885); Ibn Farāj, 5 (1984); Ibn Khurradādhbih, 61, 132, 148, 153 (1889); Ibn al-Mujāwir, 42, 43 (1951-54); Ibn Rusta, 57, 87, 96, 183 (1892); al-Iṣṭakhrī, 12, 19, 27, 28 (1927); al-Masʿūdī, 55, 830 (1894); al-Muqaddasī, 69, 73, 86, 96, 97, 104, 105, 106, 107 (1906); Qudāma, 193 (1889); al-Yaʿqūbī, 316, 318 (1892); Yāqūt, ii, 41 (1866-73).

Bibliography: Cornu, 1985: 74; Facey, 2009; Hartmann, 1965: 571-73; Wohaibi, 1973: 91-101.

al-Maʿabiyāt = Qurḥ, Wādī al-Qurā **[4.2.1] (ii) & (iii)**
Saudi Arabia: Apprix. 26° 26′ N, 38° 8′ E **[Fig. 4.21], [Fig. 4.22]**

Sources: al-Hamdānī, 130, 131, 137, 180 (1884-91); Ibn Ḥawqal, 22, 32, 158 (1938-39); Ibn al-Faqīh, 26 (1885); Ibn Farāj, 5 (1984); Ibn Khurradādhbih, 129, 150 (1889); Ibn Rusta, 177, 183 (1892); al-Iṣṭakhrī, 19 (1927); al-Masʿūdī, 253, 257, 259, 262, 265, 278, 304, 327 (1894); al-Muqaddasī, 30, 53, 68, 69, 83, 84, 94, 96, 97, 98, 99, 101, 107, 110, 112, 249, 250, 252, 255 (1906); Qudāma, 191, 248 (1889); al-Yaʿqūbī, 316, 318 (1892); Yāqūt, iv, 53-54, 878-79 (1866-73).

Bibliography: Bosworth, Cornu, 1985: 83; Gilmore *et al*, 1985; Grohmann, 1934; Musil, 1926: 137; Nasif, 1983; Talhi *et al,* 1986; Wohaibi, 1973: 220-21; 293-300.

Maʿdin al-Nuqra = Maʿdin al-Qurashī (?) **[4.2.2] (ii)**

Saudi Arabia: (Nuqra S.) 25° 35′ 45″ N, 41°26′ 35″ E **[Fig. 4.27]**, **[Fig. 4.28]**, **[Fig. 4.29]**

Sources: al-Hamdānī, 184, 1.4; 185, 1.8 (1884-91); al-Ḥarbī, 333-335 (1981); Ibn Ḥawqal, 34, 40 (1873); Ibn Khurradādhbih, 127-31, 147 (1889); Ibn Rusta, 176-182 (1892); Ibn Saʿd, iii, 213 (1957); al-Iṣṭakhrī, 22, 27 (1927); al-Muqaddasī, 94, 107-108 (1906); Qudāma, 186-190 (1889); al-Wāqidī, ii, 702 (1965); Yāqūt, iv, 804 (1866-73).

Bibliography: Cornu, 1985: 78-79; Heck, 1999: 373; Péli, 2006: 36, 37-38; Rashid, 1980: 124.

Madinat al-Ḥaras = Berenike Troglodytica **[2.3.1]**, **[3.1.1] (i)**

Egypt: 23° 54′ 37″ N, 35° 28′ 25″ **[Fig. 2.01]**, **[Fig. 2.03]**, **[Fig. 2.19]**, **[Fig. 2.20]**

Sources: Agatharchides, 137-38 (1989); Diodorus, 3.39.3 (1933); Strabo, 2.5.12, 16.4.4, 17.1.13, 17.1.45 (1917); Periplus, 1, 2, 18, 19, 21 (1989); Pliny, 6.24.84-85, 6.26.101, 6.33.168, 12.30.54, 12.34.63-65, 12.41.84, 12.42.85 (1938-62); Ptolemy, 4.5.8 (1991).

Bibliography: Belzoni, 1820: 330; Bent, 1900: 296; Cappers, 1998; Daressy, 1922; Golénischeff, 1890: 87-89; Johnson & West, 1949: 138; Kirwan, 1937: 87; Letsios, 1988: 254-56; Maspero, 1912: 10-11; Meredith, 1957; Purdy, 1886; Sidebotham, 1995; 1999; 2002a; 2002b; 2007a; 2007b; Sidebotham & Wendrich, 1995; 1996; 1998a; 1998b; 1999; 2000; 2001-2002; 2002; 2007; Smith, 1854: 391-92; Wellstead, 1936: 98; 1838: 338-339; Wilkinson, 1835: 418; Wendrich *et al*, 2003.

Mahd al-Dhahab = Maʿdin Banī Sulaym (?) **[4.2.2] (ii)**

Saudi Arabia: 23° 30′ 12″ N, 40° 51′ 34″ E **[Fig. 4.24]**, **[Fig. 4.25]**, **[Fig. 2.26]**

Sources: al-Ḥarbī, 332-36 (1981); Ibn al-Athīr, ii, 290 (1985); Ibn Ḥazm, 262 (1983); Ibn Rusta, 178 (1892); Ibn Saʿd, iii, 213 (1957); al-Iṣfahānī, xxiii, 227-28 (1927-74); al-

Masʿūdī, 243 (1894); al-Muqaddasī, 98 (1994); al-Ṭabarī, vii, 438 (1879-1901); Yāqūt, v, 154 (1957).

Bibliography: Heck, 1999: 377; Lecker, 1989b: 198-201; Miles, 1953-54; Péli, 2006: 39-40; Rashid, 1980: 26; Zarins *et al*, 1980: 8, 28-29.

Marsā Nakarī = Nechesia? **[2.2.2] (ii), [3.1.1] (iii)**

Egypt: 24° 55′ 29″ N, 34° 57′ 44″ E **[Fig. 2.01], [Fig. 2.16]**

Sources: Ptolemy, 4.5.8 (1991).

Bibliography: Seeger, 2001; Sidebotham, 2002a: 239, n. 32; Tomber, 2008: 65.

Old Cairo **[3.2.2] (ii)**

= Babylon-in-Egypt, Bāb Alyūn, Bābilyūn, Qaṣr al-Qadīm, Qaṣr al-Shamʿa

Egypt: 30° 1′ 0″ N, 31° 14′ 0″ E **[Fig. 3.01], [Fig. 3.03], [Fig. 5.08]**

Sources: Ibn Khurradādhbih, 81 (1889); Yāqūt, i, 450-51 (1866-73).

Bibliography: Butler, 1914; 1978; Cornu, 1985: 97; Kubiak, 1987; Sheehan, 2009; 2010; Power & Sheehan, 2010; Toy, 1937; Raymond, 2000: 11-16.

al-Qulzum [sv, Suez]

al-Rīḥ = Bāḍiʿ **[3.3.1] (v), [4.2.2] (i), [4.4.2] (i), [5.2.3] (i)**

Eritrea: 18° 9′ 19″ N, 38° 26′ 3″ E **[Fig. 3.05], [Fig. 3.06], [Fig. 5.14], [Fig. 5.20]**

Sources: Al-Hamdānī, fols. 24b (MS. Upsala), partially trans. Dunlop, 1957: 40; Ibn Ḥawqal, 55 (1938-9); al-Maqrīzī, ii, 258 (1911-27); al-Masʿūdī, iii, 2-3, 34-35 (1962-65); *idem*, 329-30 (1894); al-Ṭabarī, i, 2379-80 (1879-1901); al-Yaʿqūbī, i, 192 (1960).

Bibliography: Combe, 1930; Cornu, 1985: 97; Crowfoot, 1911; Donzel, 1991; Hebbert, 1935; 1936; Kawatoko, 1993a; 1993b; Nawata, 1997; Hasan, 1967: 64-66; Insoll, 2003: 91-94; Power, 2009; Sidebotham *et al*, 2006; Tedeschi, 1984.

Sawākin

[5.2.2] (i)

Sudan: 19° 6′ 0″ N, 37° 20′ 0″ E

[Fig. 5.12], **[Fig. 5.13]**

Sources: al-Aswānī reproduced by al-Maqrīzī, ii, 257, 258, 272 (1911-27); al-Hamdānī, fols. 24b (MS. Upsala), partially trans. Dunlop, 1957: 40; Ibn Ḥawqal, 55, 57, 58 (1938-39); Yaqūt, iii, 182 (1866-73).

Bibliography: Bloss, 1936; Burkhardt, 1819: 431-58, 510; Hasan, 1967: 82-89; Hofheinz, 1997: 87; Greenlaw, 1995; Insoll, 2003: 97-99.

al-Sharja

Saudi Arabia

Sources: al-Hamdānī, 119f (1966); al-Muqaddasī, 86 (1906), trans. Collins, 2001: 77; al-Ṭabarī, i, 1855 (1879-1901), trans. Donner, 1993: 23 & n. 148; Yāqūt, iii, 334 (1957).

Bibliography: Cornu, 1985: 85; al-Madʿaj, 1988: 28 & 38, n. 53.

Shenshef

[2.3.2] (iii)

Egypt: 23° 44′ 15″ N, 35° 22′ 46″ E

[Fig. 2.24], **[Fig. 2.25]**, **[Fig. 2.26]**, **[Fig. 2.27]**

Bibliography: Aldsworth, 1999; Cappers, 1999b; Gould, 1999; Murray, 1926b; Vermeeren, 1999b.

al-Shiḥr **[2.4.2] (ii), [5.3.1] (iii)**

Yemen: 14° 45′ 39″ N, 49° 36′ 25″ E **[Fig. 5.01], [Fig. 5.26]**

Sources: al-Hamdānī, 64 (1884-91); Ibn Ḥawqal, 38 (1938-39); Ibn al-Faqīh, 78 (1885); Ibn Khurradādhbih, 60, 147, 148 (1889); Ibn al-Mujāwir, 67 (1951-64); al-Iṣṭakhrī, 25 (1927); al-Masʿūdī, 32, 51, 60, 79, 225 (1894); al-Muqaddasī, 70, 87 (1906); Qudāma, 192, 249 (1889); al-Yaʿqūbī, 366 (1892); Yāqūt, iii, 263, 264 (1866-73).

Bibliography: Cornu, 1985: 85; Hardy-Guilbert, 2000; 2001a; 2001b; 2001c; 2002; Hardy-Guilbert & Rougelle, 1995; 1997a; 1997b; Serjeant, 1974; Smith, 1997: 438-39.

Suez = Arsinoe, Clysma, al-Qulzum **[2.2.1] (iii), [3.1.1] (v), [4.1.2]**

Egypt: 29° 58′ 0″ N, 32° 33′ 0″ E **[Fig. 2.01], [Fig. 2.03], [Fig. 3.02], [Fig. 4.01]**

Sources: Pliny, 6.33.167-8 (1938-62); Strabo, 16.4.5 (1917); Lucian, 44; Egeria in Wilkinson, 1981: 206; *Piacenza Pilgrim* in Wilkinson, 1977: 88; Cosmos Indicopleustes in Wilkinson, 1977; Peter the Deacon in Wilkinson, 1981: 206. Al-Balādhurī, i, 269, 282 (1956); Ibn al-Faqīh, 7, 69, 78, 270 (1885); Ibn Ḥawqal, 11, 18, 42-50, 132, 166 (1938-39); Ibn Khurradādhbih, 61, 71, 81, 153-55 (1889); Ibn Rusta, 97 (1892); al-Idrīsī, 25, 141, 143, 164 (1866); al-Iṣṭakhrī, 28, 30, 33, 48 (1927); al-Masʿūdī, 20, 51, 55, 143 (1894); *idem*, iv, 97 (1861-77); al-Muqaddasī, 55, 194-96, 209, 213-15 (1906); al-Yaʿqūbī, 340 (1892); Yāqūt, iv, 158-61 (1866-73).

Bibliography: Bourdon, 1925; Bruyère, 1966; Cooper, 2010; Cornu, 1985: 105; Gatier, 1989: 502; Grossmann *et al*, 2005; Honnigmann & Ebied, 1986; Johnson & West, 1949: 137, 143, 148; Tomber, 2008: 66; Ward, 2007; Wilkinson, 1977: 88, ; 1981: 206; Young, 2001: 77, 86.

al-Suwārqīya = Maʿdin Banī Fārān (?) **[4.2.2] (ii)**

Saudi Arabia: 22° 24′ N, 40° 28′ E **[Fig. 4.24]**, **[Fig. 4.25]**, **[Fig. 2.26]**

Sources: al-Bakrī, i, 28-29 (1983).

Bibliography: Heck, 1999: 374; Péli, 2006: 36.

al-Ṭūr = Raithou

Egypt: 28° 14′ 30″ N, 33° 37′ 20″ E

Yanbuʿ = Iamba Kome, Yanbuʿ al-Baḥr, Sharm Yanbuʿ

Saudi Arabia: 24° 5′ 0″ N, 38° 0′ 0″ E

Sources: Al-Bakrī, i, 425 (1945-51); Ibn Ḥawqal, 33 (1938-39); Ibn Jubayr, 145 (1907); Ibn Khurradādhbih, 191 (1889); al-Iṣṭakhrī, 12, 19, 27, 28 (1927); al-Masʿūdī, 236 (1894); al-Muqaddasī, 46, 53, 69, 83, 94, 98, 101, 102, 107 (1906); al-Ṭabarī, i, 1269, 1271 (1879-1901); Yāqūt, iv, 1038-39 (1866-73).

Bibliography: Cornu, 1985: 89; Van Donzel, 2002: 282; Wohaibi, 1973: 304-12.

Bibliography: Cornu, 1985: 88; Musil, 1926: 128, 136, 203, 208, 211, 217, 299, 322. Wohaibi, 1973: 303.

al-Wajh **[4.2.1] (i)**, **[4.2.1] (iv)**

Saudi Arabia: 26° 17′ 0″ N, 36° 25′ 0″ E **[Fig. 4.21]**

Sources: Qudāma, 191 (1889).

Bibliography: Cornu, 1985: 88; Musil, 1926: 128, 136, 203, 208, 211, 217, 299, 322. Wohaibi, 1973: 303.

Zabīd **[4.3.1] (ii), [5.3.2] (i), [6.3.2] (ii)**

Yemen: 14° 12′ 0″ N, 43° 19′ 0″ E **[Fig. 4.30], [Fig. 4.32], [Fig. 4.33]**

Sources: Abū Makhrāma, ii, 216 (1936-50); al-Hamdānī, 71, 72, 119 (1884-91); Ibn Ḥawqal, 22 (1938-39); al-Khazrajī, 99 (1979); Ibn al-Dayba' (d. 1537), i, 320 (1979); Ibn Khurradādhbih, 141, 142, 148 (1889); Ibn al-Mujāwir, i, 66 (1951-54); al-Mas'ūdī, 260 (1894); al-Muqaddasī, 7, 39, 53, 69, 84, 86, 87, 92, 94, 96, 101, 102, 105, 113, 142, 314 (1906); Qudāma, 192, 248 (1889); al-Ya'qūbī, 318 (1892); Yāqūt, ii, 915-16 (1866-73).

Bibliography: Ciuk & Keall, 1996; Hehmeyer, 1995; Keall, 1983a; 1983b; 1984; 1989; 1991; 1993; 1994; 1999a; 1999b; 2001a; 2001b; 2002; Keall & Hehmeyer, 1993; 1998; al-Mad'aj, 1988: 226, n. 61; Sadek, 1998.

Zayla' = Avalites **[5.3.3] (i)**

Somalia: 11° 12′ 38″ N, 43° 17′ 8″ E **[Fig. 5.01]**

Sources: Pliny, 6.29, 34 (1938-62); Ptolemy, 4.7, 27, 39 (1991). Ibn Ḥawqal, 56 (1938-39); Yāqūt, ii, 966-67 (1866-73).

Bibliography: Cornu, 1985: 108; Pankhurst, 1982: 54-57; Rouaud, 2002: 481.

Zula = Adulis **[2.4.1] (i), [3.3.1] (iv)**

Eritrea: 15° 15′ 0″ N, 39° 40′ 0″ E **[Fig. 2.01], [Fig. 2.36]**

Sources: Cosmas Indicopleustes, 364 (1968); *Periplus*, 20 (1989); Procopius, 183 (1914); *Martyrium Arethrae*, 747 (1861); Nonnosus in Photius, Codex 3 (1920).

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