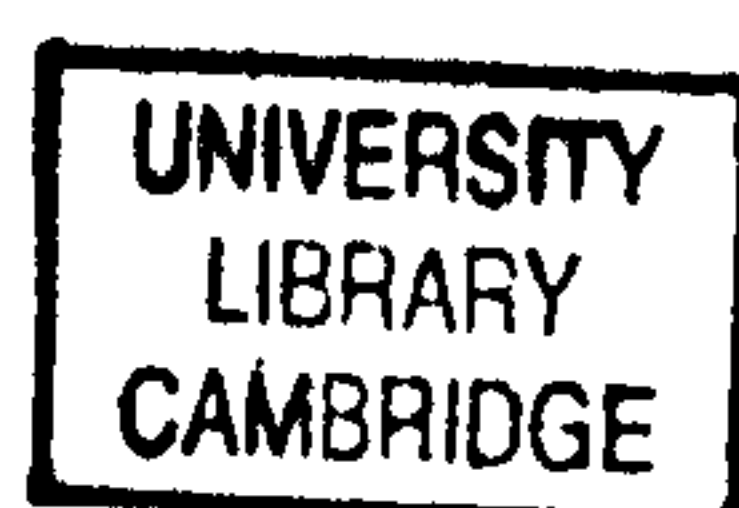


PhD. 25774

*THE IMPACT OF THE ARAB CONQUEST
ON LATE ROMAN SETTLEMENT IN EGYPT*

VOLUME I: TEXT



This dissertation is submitted for the degree
of Doctor of Philosophy in the
University of Cambridge, March 2002

ALISON GASCOIGNE
DARWIN COLLEGE, CAMBRIDGE

*For my parents
with love and thanks*

Abstract

The Impact of the Arab Conquest on Late Roman Settlement in Egypt

Alison Gascoigne, Darwin College

The Arab conquest of Egypt in 642 AD affected the development of Egyptian towns in various ways. The actual military struggle, the subsequent settling of Arab tribes and changes in administration are discussed in chapter 1, with reference to specific sites and using local archaeological sequences. Chapter 2 assesses whether our understanding of the archaeological record of the seventh century is detailed enough to allow the accurate dating of settlement changes. The site of Zawyet al-Sultan in Middle Egypt was apparently abandoned and partly burned around the time of the Arab conquest. Analysis of surface remains at this site confirmed the difficulty of accurately dating this event on the basis of current information.

Chapters 3 and 4 analyse the effect of two mechanisms of Arab colonisation on Egyptian towns. First, an investigation of the occupation by soldiers of threatened frontier towns (*ribats*) is based on the site of Tinnis. Examination of the archaeological remains indicates a significant expansion of Tinnis in the eighth and ninth centuries, which is confirmed by references in the historical sources to building programmes funded by the central government. Second, the practice of *murtaba' al-jund*, the seasonal exploitation of the town and its hinterland for the grazing of animals by specific tribal groups is examined with reference to Kharibta in the western Delta. Kharibta had apparently declined in size and prosperity by around the eleventh century. Chapter 5 considers the development of the important Pharaonic administrative centre of Edfu in Upper Egypt. Exposed archaeological sequences have clarified the movement of settlement in the town eastwards during the Islamic period.

The final chapter proposes two factors that have hitherto not been given sufficient weight. First, the importance of military settlement in promoting settlement change; and second, the flawed nature of our understanding of the urban archaeological record for this important period. The thesis concludes with a suggested paradigm of urban transition, which will allow greater understanding of the changes in settlement in Roman and Islamic Egypt.

Acknowledgements

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration. Nevertheless, I have received help and advice from many people over the last four years, not all of whom can be mentioned here. I would like to thank my supervisor, Barry Kemp, for his constant encouragement and guidance, and Pamela Rose for her support and for the many fruitful discussions about ceramics and other matters that took up so much of her time.

My fieldwork in Egypt was greatly aided by a number of people. Gillian Pyke provided advice and more practical aid in generously inking the sherd drawings in chapter 5. I am also grateful to Janine Bourriau, Peter French and Roberta Tomber for their help in identifying ceramic material, to Alan Clapham for many valuable suggestions relating to environmental archaeology and sampling techniques and to Will Schenck for lessons in pottery illustration. Peter Sheehan and Sara Montgomery have provided encouragement, guidance and hospitality during my visits to Cairo. Kate Spence, Amanda Dunsmore and Nadine Moeller drew some of the sherds from Zawyet al-Sultan; I am also indebted to Nadine for her company and cheerfulness at Edfu. The generosity of Jane Faiers in allowing me to use parts of her fabric classification system also deserves mention, while Salima Ikram and Nicholas Warner kindly discussed a variety of issues with me.

Of course, the fieldwork involved in this project would not have been possible without the help of the Egyptian Government's Supreme Council for Antiquities and its many representatives in Minya, Port Said, Alexandria, Cairo and Edfu. In particular, I should like to thank the inspectors Leila 'Abd al-Basit (who provided great help and company in Kharibta), Said 'Agami 'Arafa and 'Abbas 'Abbas al-Shinawi (for their help and accommodating approach at Tinnis), Ibrahim 'Abd al-Rahman at Fustat and Muhammad Said al-Din, Suzi Samir Labib and Nagwa 'Abd al-Magid 'Abd al-Basit at Edfu. Funding was provided by the Thomas Mulvey Egyptology Fund and the H. M. Chadwick Fund of Cambridge University and the Seven Pillars of Wisdom Trust; I am indebted to the administrators of all these funds. Another person who greatly facilitated the administration of the fieldwork was Rawya Ismael of the Egypt Exploration Society's Cairo office, who tirelessly visited various

government offices on my behalf; I am very grateful to her for all her help, and to the EES for permitting me the time of their personnel and the use of their facilities.

In Cambridge, I must acknowledge the generosity of members of the Middle Eastern Studies department. Kate Bennison has always been willing to answer my questions, and she, Rachael Harris and Nadira Auty gave much of their time to teach me Arabic. Rachael Harris also kindly looked over my translation of Ibn Bassam in the Appendix. I would like to thank Sarah Clackson for teaching me Coptic and for help and guidance through the field of papyrology, and John Ray and Kate Spence for their valuable comments on my research. I must also mention the staff of the Oriental Studies Faculty library, who have been a great help over the years.

Finally, I would like to thank my family for their constant encouragement and support. They also provided more practical help. Jo Gascoigne advised me on the more scientific aspects of the work, while Paul Wingfield supplied much guidance on style. I am most deeply indebted to my parents, David and Christine Gascoigne, for help with a wide range of factors, most importantly practical support and proof-reading. Without them, this thesis would never have been written.

Azase

List of Contents

Abbreviations

Chapter 1 – Egyptian Urbanism and the Arab Conquest	1
Chapter 2 – Source Problems: the Burning of Zawyet al-Sultan	20
Chapter 3 – <i>Ribat</i> Settlement: the Example of Tinnis	46
Chapter 4 – <i>Murtaba' al-Jund</i> : the Example of Kharibta	74
Chapter 5 – The Old Urban Order: Tell Edfu	87
Chapter 6 – Egyptian Urbanism: Causes of Change	113
Appendix – Translation of the <i>Anis al-Jalis</i> of Ibn Bassam al-Tinnisi	120
Bibliography	128

Abbreviations

Organisations

ARCE	American Research Center in Egypt
CCMAA	Comité de Conservation des Monuments et de l'Art Arabe
EEF	Egypt Exploration Fund (former name of EES)
EES	Egypt Exploration Society
IFAO	Institut Français d'Archéologie Orientale du Caire
SCA	Supreme Council for Antiquities, Egyptian Antiquities Service

Journals/books

ASAE	Annales du Service des Antiquités Égyptiennes
BAR	British Archaeological Reports
BASOR	Bulletin of the American School of Oriental Research
BIE	Bulletin de l'Institut d'Égypte
BIFAO	Bulletin de l'Institut Français d'Archéologie Orientale
BSAC	Bulletin de la Société d'Archéologie Copte
BSOAS	Bulletin of the School of Oriental and African Studies
BS(R)GE	Bulletin de la Société (Royale) de Géographie d'Égypte
CCE	Cahiers de la Céramique Égyptienne
FIFAO	Fouilles de l'Institut Français d'Archéologie Orientale
JARCE	Journal of the American Research Center in Egypt
JEA	Journal of Egyptian Archaeology
JNES	Journal of Near Eastern Studies
JRAS	Journal of the Royal Asiatic Society
JSSEA	Journal of the Society for the Study of Egyptian Antiquities
LÄ	Lexicon der Ägyptologie
MDAIK	Mitteilungen des Deutschen Archäologischen Instituts. Abt. Kairo
MIFAO	Mémoires (publiés par les membres) de l'Institut Français d'Archéologie Orientale
ZÄS	Zeitschrift für ägyptische Sprache
ZPE	Zeitschrift für Papyrologie und Epigraphik

Chapter 1

Egyptian Urbanism and the Arab Conquest

Conquest and colonisation: mechanisms for urban change

The conquest and control of lands by external groups of people are recurrent and widespread features of human history. They also represent a significant mechanism by which civilisations extend and maintain cultural dominance over others. The expansion of Arab influence throughout the Middle East in the seventh century AD is no exception. By 642, Arab armies had overrun and occupied lands from Yemen to Syria, Egypt to Iraq, and incorporated them into an imperial structure with its religious centre at Mecca and its political one successively at Medina, Damascus and Baghdad. The colonisation of Egypt was to result in great cultural changes which would mould the shape of the modern state, and it was inevitable that such an event would affect the country's urban configuration. As Loomba explains: 'The process of "forming a community" in the new land necessarily meant *unforming* or re-forming the communities that existed there already' (1998, 2).

A number of studies have been carried out concerning levels of social and economic change and continuity from the late Roman to the early Islamic period, mostly in areas east of Egypt (see for example Adams 1965; Morony 1984; papers in King and Cameron eds 1994; Schick 1995). Morony suggests that the tendency to regard the Muslim conquest as a cultural and political watershed is at least partly rooted in ignorance of developments during the period from c. 300–600 (1984, 3). The continuation of trends of urban change which began in late Roman times and continued into the early Islamic period has been archaeologically demonstrated in Syrian, Jordanian and Palestinian settlements (Zeyadeh 1994; Tsafirir and Foerster 1994; MacAdam 1994). In Egypt, an account of late antique Alexandria provides as an epilogue a brief description of the city's post-conquest urban development, and again highlights continuity (Haas 1997; see below, pp. 14–15). This emphasis on the evolution of the classical urban structure towards the 'medieval' city is, however, not generally applicable to Egypt, where only a small number of specialist settlements,

such as Alexandria and Antinoopolis, conformed to the Hellenic ideal of orthogonal layout. The danger of generalising too widely on the basis of local conditions prevents the direct application to Egypt, with its distinct cultural traditions, of results gained from another province. This thesis aims to initiate independent archaeological study of the post-conquest development of the towns of Egypt.

Morony's study of early Islamic Iraq identifies various mechanisms for continuity and change: 'there were two major forms of continuity: direct survivals from the period before the conquest, and continuity through transmission to the conquerors. Change likewise falls into two categories: the immediate short-term results of the conquest, and the more permanent changes introduced by the way certain aspects of life in pre-Islamic Arabia were institutionalized in Islam and brought by Muslim Arab conquerors to Iraq' (1984, 507). How do his mechanisms for change apply to Egypt? Butler's great work on the conquest of Egypt (1902, reprinted 1978) indicates that only a small proportion of Egypt's towns were the site of battles or sieges, and even fewer suffered significant damage to property and inhabitants. Among the towns taken by siege or storm were Bilbeis, Umm Dunain, Bahnasa in the Fayyum, Misr, Babylon, Terenouti, Kariun, Ikhna, Balhib and Tinnis, while at Nikiu and certain towns in the Fayyum, the garrison and much of the population was massacred. At Pelusium, where the walls were still in disrepair after their destruction by the Persians a few years previously, the fortress was dismantled and churches destroyed. That such events would have had long term impact on these settlements is, however, unlikely.

Robinson, in his recent study of post-conquest Mesopotamia, writes: 'Conquest can create new élites (through the distribution of offices, land and titles), as it can destroy (through violence and confiscation) or incorporate (through conversion or assimilation more generally) pre-existing élites' (2000, 59). It is arguable that where power is seized by a minority regime from outside, control will automatically become more centralised in response to the need to remove autonomy from places which are not directly regulated. Certainly, the foundation of the Arab garrison town and administrative centre of Fustat was the most visible change in the country's urban configuration. Alongside this new settlement, existing towns and their hinterlands

were during the early Arab period gradually occupied by a new administrative hierarchy. Initially, Coptic officials remained in place throughout Egypt, with only a few Arab administrators in key urban centres as replacements for the departed Roman governors. The proportion of Arabs in the administration was to increase during the second half of the Umayyad period (c. 715–40), when a reorganisation placed power more firmly into the hands of the Arab settlers (Frantz-Murphy 1991). The increasing Arabisation of the administration must have resulted in the foundation of institutions such as *diwan* offices in Egypt's provincial towns.

Unlike the administration, the military élite of the old regime had to be replaced immediately. By the end of Roman rule, Egypt's soldiery had become incorporated into native society, settling and farming land and marrying local women. Strong links existed between each unit and its locality and military officials were involved in local affairs (Maspero 1912; Alston 1995). Whether the majority of these soldiers, many of whom were not of Egyptian origin, left the country after the conquest, or simply laid down their arms and adopted civilian lives, is not clear. The great Roman forts, often situated centrally in towns and villages to dominate surrounding communities, do not appear to have been fully exploited by the Arabs. Post-conquest activity has been archaeologically demonstrated at Babylon, Pelusium and Nag' al-Hagar; however, these levels may reflect the incorporation of the fort-enclosures into the surrounding settlements, with the building of houses and churches, rather than a military occupation (see below pp. 6–13 for further discussion of Babylon; 'Abd al-Maqsoud 1985; Mustafa and Jaritz 1985; 'Abd al-Waseth and Zignani 1992). The abandonment of military outposts resulted in the removal of a level of autonomy from provincial towns, with more control being exercised by Arab military officials in Fustat.

Whatever the fate of the Roman army, it is clear that new Arab garrisons were installed at key towns such as Aswan and Alexandria, with the northern coastal region being particularly well defended. 'Athamina (1997) notes two specific mechanisms of military occupation in early Islamic times. One of these is based on the concepts of *ribat* and *thaghr*, statuses given to fortified frontier sites such as Alexandria to encourage the settlement of the town by Arab soldiers. The other, more exploitative,

system of colonisation is known as *murtaba' al-jund*, or 'pasturing of the army'. Agricultural activity was strongly discouraged among the Arab settlers, who were initially required to apply for a permit to farm land. They were, however, permitted to graze their horses and other animals in parts of the countryside during the spring. Ibn 'Abd al-Hakam (ed. 1922, 141–3; see also Caetani 1905–26, no. 223) records the assignation of various towns and their hinterlands to the tribal groups of Fustat; the inhabitants of these towns were expected to house members of the tribe and provide grazing land for its animals. Towns occupied as part of this system included Manf, Ahnas, Busir, Atrib, 'Ayn Shams, the Fayyum, Bahnasa, San, Kharibta, Sakha, and many more.

Morony's second category of change, the imposition of specifically Arab/Muslim activities or ideas onto the conquered territories, must have been tempered by continuities, i.e. the maintenance of indigenous practices. Identifying the realities behind these abstract concepts is problematic. It is not clear, for example, what changes were made to Egypt's provincial organisation in the early Islamic period. The old system of *nomes*, which existed until at least the fourth century (Bagnall 1993), was apparently no longer in official use by the Arab conquest but had been replaced by *pagarchies*. How closely these *pagarchies* corresponded to the former *nome* structure has been the subject of some debate, but where the names of *pagarchies* are preserved they correspond to *nomes* (Rouillard 1928). Hierokles, writing c. 535, divides Egypt into eight *eparchies*, the principal places of which are included in his account of Egypt's major towns. George of Cyprus lists the dioceses in each *eparchy* as they were c. 606; the religious divisions of the country, of course, need not have corresponded to the administrative ones (Ball 1942). The subdivisions of these *eparchies* are not clear, but may be reflected in the town-lists of Hierokles and George of Cyprus, which broadly overlap with the old *nome*-lists. That the *nome* system was still used after the conquest by some of the population is indicated by references to various *nomes* in texts from Deir al-Bala'izah in Upper Egypt, dating from c. 675–775 (Kahle 1954, nos 100, 103, 119, 152). After the conquest, Egypt was divided into two administrative regions, Upper and Lower Egypt (*al-sa'id* and *asfal al-ard*), but this division was abolished in 643/4 and the whole country placed under

one governor ('Athamina 1997). Smaller districts called *kurras*, probably from the Greek χώρα (meaning countryside) existed within the larger provinces, a system which Toussoun suggests lasted 'du commencement de la Conquête Arabe jusqu'à la fin de la première moitié du Ve siècle de l'Hégire, c'est-à-dire de l'année 641 à 1058 après J.-C.' (1926, xiv). In reality, it seems unlikely that extensive administrative reorganisation would have taken place immediately after the conquest, and the early Arab *kurras* may have differed only slightly from the old *nomes*. The earliest lists of the *kurras* of Egypt date from the ninth century (e.g. that of Ibn Khordazba from 874, ed. 1889, 59–60; Yaqubi from 893, tr. 1937, 185–9); there is no substantial evidence for the subdivisions of the country between George of Cyprus and these sources.

The administrative reorganisation of the second half of the Umayyad period included changes in the system of land-holding and taxation. Studies have revealed a retrospective redesignation of Egypt from a country conquered by treaty to one taken by force. The advantages of this to the central government were considerable. Twice the rate of tax was payable on conquered land, local landowners (especially the Coptic church) were displaced and tenants became state tenants. Economic influence in the provinces was thus transferred from Coptic to Arab institutions and officials, and the great estates of the Roman period finally dismantled (Bagnall 1992; Hardy 1931; Frantz-Murphy 1991; Noth 1984). Although the new system technically maintained a ban on free movement around the country, the need for labour in various new projects, especially the building of Fustat, probably meant that in practice illegal movement was tolerated. The fine for a runaway slave found in Fustat was a quarter of that for one found outside it (Kubiak 1987, 150, n. 36). This may have led to a reduction in the rural population in favour of urban centres.

Another factor which resulted in both change and continuity within the towns of Egypt was the gradual acculturation process between Copts and Arabs. The presence of numerous Coptic settlers in Fustat led to the construction of churches in several parts of the town, while Kubiak suggests that the evolution of the *khittas* of the town owed as much to the role of non-Arab elements as to Arab policy (1987, 80, 89). In the long run, however, it was the acceptance of aspects of Arab culture by the Copts which was to change the face of Egypt. Rates of conversion to Islam are probably the

most visible measure of this transition. Studies indicate that the numbers of new Muslims were initially low, only growing in the face of increased pressure on Christianity during 'Abbasid and Tulunid times and reaching something approaching the present-day proportions in the Mamluk period (Frantz-Murphy 1991; Lapidus 1972; Dennett 1950, reprinted 1973; see also Frantz-Murphy 1986). In the early Islamic period, the conversion of a Copt to Islam might have necessitated a move to Fustat; in later times, however, Islamic religious institutions were established in provincial towns. Al-Muqaddasi, writing c. 985, provides a list of the fifty-eight towns of Egypt which at that time contained mosques (Kamal 1932–4, vol. 3, fasc. 2).

To what extent were rates of urban change proportional to the level of Arab involvement in individual towns? Morony expresses reservations about metropolitan theories of cultural diffusion 'based on the assumption that all significant cultural change or innovation occurs at political capitals around the courts of rulers whence they are diffused to other places' (1984, 13). His caution concerning the applicability to the early Islamic Middle East of theories derived from studies of modern, western societies is understandable. However, it is worth considering the basic principle that the less attention a town gained from the Arabs, the lower the levels of interaction, and so change and acculturation. The invading forces, initially limited in size, concentrated manpower on key centres and relied on a minimal presence in places of lower strategic significance. Fustat and Alexandria were both occupied by large numbers of Arab troops, and their development must be understood in order for comparisons to be made with provincial towns.

The new capital: Fustat and Babylon

A feature of the early Islamic occupation was the foundation across the conquered territories of new settlements called *amsar* (sing. *misr*, confusingly a word which also denotes both Cairo and Egypt). Little archaeological analysis of the *amsar* has been possible: many of the early Islamic levels at, for example, Basra, Kufa, Shiraz and Fustat are under modern building. *Amsar* were originally military in character, permanent versions of temporary garrison encampments, and were apparently planned and laid out to a geometrical scheme. Settlement was based around open central areas

containing public buildings such as the congregational mosque and *dar al-imara* (governor's house), with tribal plots spreading outwards. The organisation of similar, smaller foundations in Jordan, such as Ayla and the desert castles, bear much resemblance to that of Roman forts, upon which they may have been based (Northedge 1994; Whitcomb 1994). Detailed accounts have been compiled of the foundation of Fustat based on information in the historical sources (see especially Kubiak 1987 and Guest 1907). However, the earliest settlement is not well preserved archaeologically except at Istabl 'Antar to the south, where the excavations of the Institut Français under Gayraud have revealed street plans of no obvious geometricality (Gayraud 1994; Scanlon 1994). In the *khittat ahl al-riya*, the central part of the Arab town, excavations directed by Peter Sheehan in 1999 as part of archaeological monitoring of the Old Cairo Wastewater Project indicated that later occupation of this area by Cairo's potters, particularly their digging of deep kiln pits, has all but destroyed intact archaeology above the water line (fig I.2b; for the activities of the potters, see Golvin 1982).

There is considerable variation between the *amsar*, which were often built next to existing settlements and so were probably adapted in the light of local traditions. The incorporation of the older settlement of Babylon into the new Arab town provides a significant insight into interaction between the two. Various accounts of the origin of the Roman fort of Babylon (also called Bab al-Yun or Qasr al-Sham' in Arab times) and its place within a larger urban conglomerate are available, the most thorough of these being without doubt Butler's examinations of 1884, 1902 (reprinted 1978) and 1914 (see also Abbate 1890; Herz 1918; Monneret de Villard 1923 and 1924; Toy 1937; fig I.2a). Despite John of Nikiu's assertion that the fort was founded by Trajan, the surviving remains are later in character. Monneret de Villard (1924) argued that Babylon is architecturally comparable with forts in eastern Europe, the Middle East and Egypt dating to the late Roman period and was possibly rebuilt by Cyrus after the Persian conquest of 610. However, recent archaeological studies by the Old Cairo Archaeological Project have concluded that the fort was one of a group, including those of Luxor, Nag' al-Hagar, al-Kab and Dionysias, built by Diocletian in

the late third century; it also resembles a group of Diocletianic forts on the Lower Danube.

There have been remarkably few excavations in the area of Old Cairo. The presence of modern buildings and thick layers of recent occupational debris causes all the logistical and interpretational problems involved in complex urban archaeology. The basement rooms in the north round tower of the west gate of Babylon (upon which the Greek Orthodox Church of St George sits: see fig. I.3b) were cleared by the Greek Orthodox Convent of St George in the 1940s (Solomonides 1945; published only in Greek and not widely available; a few paragraphs about the work, and some photographs are provided in Loukianoff 1952). The south-gate area (fig. I.3a) and the second tower of the west gate were also cleared during the first half of the twentieth century, but the work was not conducted in a stratigraphically controlled way. Over the last decade, a programme of scientific recording and limited excavation has been undertaken by the Old Cairo Archaeological Project under the auspices of various organisations (see Grossmann, Le Quesne and Sheehan 1994; Lambert ed. 1994; Sheehan 1996; Grossmann, Jones, Noeske, Le Quesne and Sheehan 1998). In 1994, a team monitored the sinking of boreholes by a commercial engineering company. The results demonstrate that the fort contains at least 15 m of deposits, including undated cultural material at a depth of 12 m. The late fourth-century ground level was some 4 m above this material, at about 8 m below modern ground level (m.g.l. is 23.07 m above sea level). The archaeological monitoring of the Old Cairo Wastewater Project (see below pp. 9–10, 11–13) is to a certain extent a continuation of this project.

So much for the history of the fort. But the sources also explicitly mention a town called Babylon. Early works place either the town on the plateau and the fort by the Nile (Butler 1884) or the fort on the plateau and the town by the Nile (Casanova 1919; this of course does not explain the presence of the surviving fort). Butler later changed his opinion and in his 1914 publication suggested the existence of a town of Pharaonic origin around the fort and spreading a considerable distance north, towards, and possibly into, the area which later became the Fatimid city. The Egyptian geographer Ptolemy, a contemporary of Trajan, states that the Amnis Trajanus canal flowed *through* the city of Babylon. Kubiak (1987) rejects the idea of a town outside

the fort, arguing that the fort had such an urban character, containing numerous churches, that it was called a town, and that the canal flowed through the fort itself. While it seems likely that the garrison had a religious building of some kind (comparable to the shrine to the imperial cult in Luxor fort) there is no actual archaeological evidence for churches inside Babylon before the conquest; also, topographical reconstructions based on the Arabic sources place the Amnis Trajanus considerably north of the fort (Denoix 1992). The town must have spread some distance north of the canal for the waterway to run through the town as Ptolemy stated. Ibn Duqmaq, although reporting events long in the past, states that Ain Shams in ancient times was contiguous to ancient Misr on the site of present Fustat, while al-Qudai mentions a gate of ancient Misr where al-Qahira now stands (Guest and Richmond 1903; Casanova 1919; Denoix 1992; Butler 1914). Ibn Duqmaq also writes that the area of Fustat called al-Hamra al-Quswa had been densely settled in pre-Arab times; the Trajanic canal apparently ran through this quarter as it had through the earlier town of Babylon, by implication on the same site. But the historical evidence for the location of this town remains obscure and no archaeological studies have been carried out in these areas, built up with modern housing and inaccessible as they now are.

The anachronistic presence of Babylon within the new Muslim urban entity of Fustat is hard to resolve. Clearly some element of treaty must have been involved in the taking of Babylon, despite accounts of Arab historians to the contrary, for the fort apparently remained in the hands of the Christian and Jewish population, as it is today, forming an enclave of non-Muslims in the new town. Whether or not Babylon retained a military function after the conquest is uncertain; Ibn ‘Abd al-Hakam records that ‘Abd Allah ibn ‘Amr ibn al-‘As delivered one of his *hadiths* while a member of the garrison of the fort of Babylon (ed. 1922, 63). Apart from this, there is no conclusive evidence that Roman forts were garrisoned by the Arabs; where re-use in the Arab period can be shown archaeologically, it is not demonstrably military in character. We know that Babylon continued to be occupied after the conquest but what its status was and how it developed as a settlement in relation to Fustat is not clear. Scanlon’s statement that ‘within a century Qasr al-Sham’ as an entity was fully

absorbed within al-Fustat' remains to be demonstrated archaeologically (1994, 173–4).

Opportunities for access to limited archaeological material in areas of Babylon and Fustat are provided by the Old Cairo Wastewater Project, a large-scale engineering programme designed to drain water from the soil in the Old Cairo area, collect it in shafts, pump it along pipes to a purification plant and recycle it back into the system. In order to collect groundwater, shafts of four-metre diameter have been sunk at regular intervals across the area (fig. I.4). Most of these shafts run down to the bedrock, although shaft 3, nearest the Nile, contained no bedrock even at a depth of around 20 m below the modern ground level (3 m above sea level). Apart from the highest levels, most of the shafts were excavated by machine, with archaeological samples being collected from known depths; this was not ideal, and mixing of deposits certainly occurred, but safety requirements and practical limitations allowed no other approach. Even so, proper scientific excavation was carried out to a considerable depth in areas inside and around shafts 4 and 5 near the Ben Ezra Synagogue. The archaeological monitoring is carried out by the Old Cairo Archaeological Project, under the auspices of the American Research Center in Egypt, and is directed by Peter Sheehan.¹

Archaeological studies cannot identify the ethnicity of the occupants of Babylon. However, they can enable comparisons between the development of the settlements of Fustat and Babylon. Fustat flourished until a series of events in the eleventh and twelfth centuries led to the abandonment of large areas of the site. The mad caliph al-Hakim had Fustat burned in 1019, and this was followed, during the governorship of al-Mustansir, by a period of famines and low Nile floods from 1052 to 1055 and again from 1064 to 1071. Arab writers refer to this second famine as *al-shidda al-'uzma*, 'the great calamity'. These events resulted in the depopulation of areas of Fustat as, for the first time, the population was allowed to move into the administrative capital, al-Qahira. Further fires are recorded in Fustat in 1164 and in 1168, when Cairo was threatened by a Crusader army. The date of the abandonment of

¹ A full account of the results will be published at a later date; in the meantime I am very grateful for permission to include some preliminary results here.

Fustat has been much debated due to confusion and disagreement in the historical sources. Kubiak (1976) presents evidence demonstrating that accounts of the 1168 fire (particularly that of al-Maqrizi) both exaggerate its seriousness and misrepresent its cause. These histories state that Fustat was deliberately burned by the vizier Shawar to prevent the approaching Crusader army sheltering there; but it now seems more likely that the fire was started by soldiers from Syria sent to reinforce Cairo against the Crusaders, who were indulging in a bit of looting. Kubiak also convincingly argues that large areas of Fustat were already in ruins after the 'great calamity', well before the fire of 1168. The catalyst for the abandonment of Fustat, then, seems to have been the opportunity to settle within the walls of al-Qahira in times of trouble.

Archaeological evidence indicates that occupation continued until later: Scanlon (1972) records finding a sherd marked with the date 1161 during excavations about 200 metres north of the area excavated by 'Ali Bahgat during 1912 and 1924, which lies between Babylon and the Ayyubid town wall. Scanlon also found a large number of wasters of imitation celadon, manufactured from c. 1200 to c. 1400 (1971), concluding that industrial activity such as pottery manufacture continued well into the fourteenth century on the site. The waterfront, site of docks and warehouses, may never have been abandoned: Guest and Richmond 1903, Garcin 1982 and the *Description de l'Égypte* maps all mark a settlement along the banks of the river in the fifteenth, fifteenth to sixteenth and late eighteenth century respectively, but no archaeological evidence is available for this area of the town. The 1999 excavations of the *khittat ahl al-riya*, an area which presumably extended to the waterfront before the Nile shifted westwards, indicated some form of reoccupation during the Mamluk period. Massive sherd dumps of this period covered the entire area, and the remains of walls were uncovered just above the water line.

To what extent do the remains inside Babylon correspond to this pattern? Excavations in the so-called 'Muqauqas' compound, an area in the south-east corner of the fortress still known by the title of the governor of late Roman Egypt, uncovered redeposited sherd dumps containing mixed pottery of the fifth to eleventh centuries. Sherds, including celadon, and coins from as late as the fourteenth century were also found, although the quantity of this material was much less than that of earlier periods

(Grossmann, Jones, Noeske, Le Quesne and Sheehan 1998; pers. ob.). Documents from the Geniza archive list medieval Jewish buildings inside Babylon and the fifteenth-century accounts of al-Maqrizi and Ibn Duqmaq describe churches, synagogues and mosques within the walls (Lambert ed. 1994, 59, 205). This indicates that the fort was still crowded, if becoming less so, in the fourteenth century; there was apparently more activity here than in Fustat.

Further evidence for the post-conquest development of Babylon is provided by the OCWP excavations around the Ben Ezra synagogue, which revealed a complex mass of interconnecting stone and brick structures and associated sherd assemblages. The earliest levels were dated to between the third century BC and the first century AD by the presence of fragments of Samian, Chian, and Rhodian amphorae, the last a stamped handle (Whitbread 1995; see fig. II.24 for an explanation of ceramic terminology). Samian and Chian amphorae both appear in the late seventh or early sixth century BC, going out of production during the late fourth and first centuries BC respectively; the Old Cairo examples probably date towards the later end of this range. Rhodian amphorae were manufactured between the late fourth century BC and the early second century AD, but the maker's stamp, a well-known type, enables a closer dating: the potter ΣΩΚΡΑΤΕΥΣ who used the motif of a flaming torch worked during the third century BC (fig. I.5a; Grace and Savvatianou-Petropoulakou 1970, E3). These deposits also yielded a collection of fine unguentaria: two small, tall-necked bottles with polished beige bodies and red-slipped necks, and between five and seven coarser (local?) imitations were collected (fig. I.5b). The earliest examples of the imported version of these bottles come from Cyprus and the ware may have been manufactured there. Both the imported vessels and local imitations have been found at Berenice/Benghazi in Libya, where they are called 'piriform unguentaria', and date to between the second half of the first century BC and the late first century AD (Riley 1979, 301–3). These strata were sealed off from higher ones by a layer of crushed limestone, perhaps a deliberate levelling layer; this would apparently indicate that the fort was built upon an older mound of remains.

Above the limestone rubble layer, which spreads across most of the excavated area, lie deposits containing material from around the fifth to the ninth or tenth

centuries. Occupation of the site during the third and fourth centuries AD cannot be clearly demonstrated, although material from this period should be present, especially given the fact that the current fort was founded during the late third century.

Reasonable quantities of Aswan sherds were found in these contexts, the majority of which were either late examples of Adams's (1986) group AI or AII, often found in the same contexts. Thus, one context contained sherds of both ware W24 (c. 200–400 in Nubia) and R4 (c. 550–850). It appears that W24, at least, continues in Egypt later than Adams's dating would suggest: a lamp in ware W24 is of a form not found before the sixth century. The common types of late Roman amphorae were well-represented, including LRA 1, Gaza Jars (Majcherek's 1995 form 3, dating from the late fifth to the sixth century) and LRA 5, a bag-shaped amphora with loop handles manufactured at Abu Mina between the seventh and eighth century AD (Engemann 1992). LRA 7 were common in these contexts but in an unusual tall, thin form, a relative of which is present at Elephantine where it dates from the sixth and seventh centuries (Gempeler 1992, K744). Only a few glazed wares were retrieved from these layers, including fragments of glazed Aswan ware and Old Cairo ware FG16, both eighth to ninth century in date. As one might expect, there is no evidence of any disruption during the seventh century.

Some evidence for post-tenth century occupation came from the machine-cleared deposits of shaft 4 (west of Ben Ezra) and shaft 3 (immediately west of the north tower of the west gate, outside the fort). These yielded fragments of Fustat Fatimid Sgraffiato, 'sphero-conical vessels' and thin-walled, green marl *qullas* with elaborate filters, while shaft 7 (in the playing fields of St Barbara) contained pieces of imitation celadon and brown-glazed wares of the Mamluk period. The fact that examples of distinctive Fatimid wares were found in the more westerly areas of the fort, in addition to the Muqauqas compound, may indicate that occupation was more continuous nearer the river than it was further east. The sherds from shaft 7 and a few pieces from the Muqauqas compound are the only evidence for Mamluk period activity in the fort so far uncovered. This is significant when compared to the mass of sherds uncovered during the *khittat ahl al-riya* excavations, which perhaps represent

centuries. Occupation of the site during the third and fourth centuries AD cannot be clearly demonstrated, although material from this period should be present, especially given the fact that the current fort was founded during the late third century.

Reasonable quantities of Aswan sherds were found in these contexts, the majority of which were either late examples of Adams's (1986) group AI or AII, often found in the same contexts. Thus, one context contained sherds of both ware W24 (c. 200–400 in Nubia) and R4 (c. 550–850). It appears that W24, at least, continues in Egypt later than Adams's dating would suggest: a lamp in ware W24 is of a form not found before the sixth century. The common types of late Roman amphorae were well-represented, including LRA 1, Gaza Jars (Majcherek's 1995 form 3, dating from the late fifth to the sixth century) and LRA 5, a bag-shaped amphora with loop handles manufactured at Abu Mina between the seventh and eighth century AD (Engemann 1992). LRA 7 were common in these contexts but in an unusual tall, thin form, a relative of which is present at Elephantine where it dates from the sixth and seventh centuries (Gempeler 1992, K744). Only a few glazed wares were retrieved from these layers, including fragments of glazed Aswan ware and Old Cairo ware FG16, both eighth to ninth century in date. As one might expect, there is no evidence of any disruption during the seventh century.

Some evidence for post-tenth century occupation came from the machine-cleared deposits of shaft 4 (west of Ben Ezra) and shaft 3 (immediately west of the north tower of the west gate, outside the fort). These yielded fragments of Fustat Fatimid Sgraffiato, 'sphero-conical vessels' and thin-walled, green marl *qullas* with elaborate filters, while shaft 7 (in the playing fields of St Barbara) contained pieces of imitation celadon and brown-glazed wares of the Mamluk period. The fact that examples of distinctive Fatimid wares were found in the more westerly areas of the fort, in addition to the Muqauqas compound, may indicate that occupation was more continuous nearer the river than it was further east. The sherds from shaft 7 and a few pieces from the Muqauqas compound are the only evidence for Mamluk period activity in the fort so far uncovered. This is significant when compared to the mass of sherds uncovered during the *khittat ahl al-riya* excavations, which perhaps represent

the activities of early *zebbalin*. Babylon was fully reoccupied during the Ottoman period, at which time a widespread revival appears to have taken place.

Thus, after the conquest, the fortunes of Fustat and Babylon broadly follow the same trends. The conquest itself had no discernable effect on the archaeological record inside the fort. The depopulation of Fustat during the eleventh century is paralleled by an equivalent (but slower and later) decline inside the fort; there was presumably less need for the inhabitants of Babylon to move to al-Qahira, protected as they were by the walls of the old fort. In both Fustat and Babylon some occupation continued until the fourteenth century. Then, despite the presence of numerous churches and other religious buildings within Babylon, widespread occupation here became untenable or undesirable. The settlement inside the fort, however, maintained its non-Muslim character throughout the entire period, and it appears likely that the waterfront remained inhabited after the desertion of more easterly areas.

The former capital: Alexandria

Prior to the foundation of Fustat, the centre of government was located in this great Mediterranean city, founded by Alexander the Great in 332 BC. Alexandria was not, of course, the earliest 'classical' settlement in Egypt, nor was it to be the last: the trading town of Naukratis in the western Delta was established during the time of the 26th dynasty while the Emperor Hadrian constructed Antinoopolis in Middle Egypt in 130 AD. Like the Arab *amsar*, these colonies tended to be located on or near the site of an existing Egyptian town (in the case of Alexandria the village of Rhakoti) and laid out with reference to certain urban ideals. In accordance with the traditional Hellenic pattern, the streets of Alexandria formed a grid with a large main street (the *Via Canopica*), central public buildings and ceremonial monuments (Fraser 1972; Tkaczow 1993; Haas 1997). As mentioned on p. 1 above, there is considerable evidence for the subsuming of such orthogonal plans into more organic development in the cities of Palestine during or before the sixth century. That Alexandria to some extent conformed to this trend is implied by the accumulation of sixth- and seventh-century debris in and around the fourth-century theatre at Kom al-Dikka (Rodziewicz

1984), although Abu al-Fida noted the ‘chessboard’ layout of the town as late as the fourteenth century (tr. 1848, 155).

Little archaeological work has been carried out in Alexandria, and most of the ancient remains are inaccessible beneath modern building. Kom al-Dikka, excavated by a Polish team, remains the only extensive area uncovered. However, the post-conquest development of Alexandria has been analysed in the extensive literary study of Haas (1997). Ibn ‘Abd al-Hakam states that Alexandria, which was designated a *ribat*, was garrisoned by as many as 12,000 Arabs (ed. 1922, 130–1, 192). Despite this density of occupation, Haas concludes that ‘642 did not mark an important watershed in Alexandria’s history, except from the standpoint of political control’ (1997, 344). As with Fustat/Babylon, the turning point for the city was later, with a reduction both in population and occupied area around the ninth century. The population may have been as little as one third of the late antique figure by the early medieval period and, while the Roman city walls enclosed around 1,000 hectares, those of the ninth century surrounded only 300 hectares (Haas 1997, 339–40). There are many factors contributing to this: Alexandria’s position as a port was compromised due to shifting trade routes and contraction of contacts with the Mediterranean world following the movement of the imperial capital to Iraq in 750. The Canopic branch of the Nile dried up sometime during the ninth or tenth centuries, making transportation to and from the town more problematic. The occupation of Alexandria by Andalusian pirates between 814 and 827 further isolated the city, and its role as cultural capital was finally taken by al-Qata’i, the new Tulunid city north of Fustat, founded in the second half of the ninth century. With the exception of the disappearance of the Canopic Nile arm, these were all political developments external to the city.

Provincial towns: source problems

After the ‘Abbasid takeover in 750, a new series of towns was founded across the Middle East. These settlements differed from the original *amsar* in that they were intended as power bases and monuments of the ruling dynasty; indeed the ‘Abbasids founded no fewer than four towns called al-Hashimiya, after the ancestor through which they claimed the caliphate, before the building of Baghdad (Kennedy 1981, 86).

The new 'Abbasid capital 'became the prototype for numerous Islamic "new towns" (of which Samarra and Cairo are the best known) founded by rulers to house their followers and to generate income' (Kennedy 1986, 136). The effect of these new foundations on the development of both Alexandria and Fustat/Babylon, as we have seen, was a marked reduction in size, prosperity and population. Kennedy notes important differences between the distribution of Arab forces in the province of Egypt, as opposed to that of Mosul: 'the Arab population of Egypt, despite the attempt to settle some Qaysis in the eastern delta around Bulbays, seems to have been almost entirely urban and confined to the cities of Alexandria and Fustat' (Kennedy 1981a, 32). What, then, was the pattern of development in the provincial urban centres of Egypt after the conquest?

Little is known about Egyptian provincial towns in the late Roman period. The structure of local administration has been analysed from historical and papyrological sources (Rouillard 1928; Hardy 1931) but the urban milieu in which it was based is not well understood and few sites have been scientifically excavated. The limitations of ceramic evidence was a recurring theme at the second workshop on late antiquity and early Islam (King and Cameron eds 1994). Pottery, however, is by far the commonest surviving material on archaeological sites in Egypt, and much of the interpretation of remains which follows relies on comparisons with the published ceramic corpus for dating purposes. Those accounts which have been produced are often limited by the state of the sites themselves: large numbers of archaeological mounds have had their upper levels badly damaged by *sebakh*-digging and looting, leaving surviving stratigraphy incomplete and contaminated. In the most extreme cases, for example at Antinoopolis and Zawyet al-Sultan, a site can be reduced to vast mounds of surface sherds which are themselves without context and prevent access to what intact levels may remain beneath. Elsewhere, for example at Ashmunein, the later layers, where preserved, are so disturbed as to make accurate dating problematic. Other publications are limited by the interpretative approach of the excavator or ceramicist. At Fustat, Scanlon has tended to publish only pieces which are themselves *objets d'art*, glazed wares and incised *qulla* filters (the well-dated corpus from Gayraud's excavations at Istabl 'Antar is not yet available). Art historical publications

such as Philon's 1980 catalogue of sherds in the Benaki Museum, Athens, contain dates sometimes as much as two centuries too late. The ceramic catalogue produced by the author during archaeological monitoring of the Old Cairo Wastewater Project has been used to provide comparative material, but the Old Cairo excavations have so far produced little pottery dating from the tenth century to the Mamluk period.

The absence of good comparative material has led to the reinforcement of certain (imaginary?) patterns in the archaeological record. In order to establish the impact of the Arab conquest on a particular site, one has to be able to identify and interpret strata of the seventh century. From a ceramic point of view, however, this period is not distinctive. African red slip (ARS) ware, well-recorded and dateable, was manufactured from the fourth to the early seventh century, but the later forms are also found in deposits of the late sixth century and most are unusual in Egypt (Hayes 1972). Distinctive glazed wares do not appear until the eighth century (Rodziewicz 1983; Engemann 1988 and 1989; Whitcomb 1989). Fine wares of the seventh century are thus largely restricted to Aswan wares and red-slipped silt wares (M5/ERS B), neither of which is closely dateable. Adams (1986) places the production of Aswan white ware W3 from c. 650–850, but his evidence is taken from Nubian sites. Dates for this ware in Egypt vary: seventh to ninth century at Ashmunein (Bailey 1998, C575–82), c. 750 (or later)–1100 at Tod (Pierrat 1991, fig 55a, c and f), mid-sixth to eighth century at Elephantine (Gempeler 1992, T354). Poor recognition of the seventh-century corpus is a problem particularly for the analysis of surface material. The collection from Zawyet al-Sultan provided an opportunity to assess the difficulties associated with analysing such a corpus (see chapter 2).

A further problem is the lack of distinctiveness of Islamic utility wares. The late Roman corpus of utility wares (so-called for convenience despite their continued use into the early Islamic period) is highly visible and contains well-known amphora types, such as LRA 7, found in abundance on sites of the late Roman and early Islamic periods throughout Egypt. LRA 7 probably went out of production sometime during the eighth or ninth century. In a collection of archaeological material, it is the uniform mass of these late Roman utility wares which catches the eye, while the locally-made, undistinctive silt wares by which they were replaced are often overlooked. This results

in at best the dating of the latest phases of sites to an earlier period than is actually the case, or at worst the attribution of whole sites to the late Roman period where occupation actually continued well into the Islamic period. The problem is exacerbated by the numismatic situation. The closure of the mints of the eastern empire in the early seventh century restricted the circulation of new coinage to Asia Minor, Greece and Italy, while demand for cash was reduced particularly in the east and the volume across the empire decreased (Grierson 1982, 5, 85). It is arguable that increasing reliance upon transactions in kind (such as the payment of the army by the *annona militaris*) resulted in circulation of coinage for longer periods. That much of the cash in use during the seventh century was minted during the sixth is thus not unlikely.

A wide range of written sources is available for late Roman and early Islamic Egypt, ranging from the historical and geographical works of classical and medieval scholars to Greek, Coptic and Arabic ostraka and papyri. Some of these have been used to provide a framework for the archaeological studies in this thesis. The only contemporary account of the conquest is that of John, bishop of Nikiu, which survives in a fragmentary and confused Ethiopic version (tr. 1916). The Arabic sources originate from the ninth century or later, considerably post-dating the events they describe, and are concerned primarily with the affairs of the Muslim population. These texts, particularly the fifteenth-century accounts of Ibn Duqmaq and al-Maqrizi, are detailed enough to allow the reconstruction of Cairo street by street (Denoix 1992). But this does not generally extend to descriptions of other towns, and almost no information is available for smaller places, particularly those in the south of Egypt. Papyrological evidence has been used only where it casts light on a particular problem; the amount of work involved in assimilating this mass of disparate material is too great for such a limited study.

The existence of so many Arabic historical accounts has occasioned considerable debate about their reliability, and the problems involved in using the material they contain. Extreme views are held by Montgomery Watt (1956, 336), who argues that the information in these histories 'in general . . . is to be accepted', and Crone (1980, 17) who believes that 'the vast mass of information is gossip which

cannot be used for what it asserts, only for what it conveys'. More moderate positions can be found cited in Humphreys (1991). It is not within the scope of this thesis to reopen this debate. It must be stressed that although historical sources have been extensively used, this is primarily an archaeological study. No attempt has been made to consult all existing texts relevant to the sites examined, nor has a critical comparison of editions been carried out. Translations have been used where available but have usually been checked against the original text. For the same reason it has not been felt necessary to use a consistent system of Arabic transliteration: those interested will know the original Arabic spellings, while those who are not will be content without such a system. The plurals of Arabic terms have been anglicised to prevent confusion among non-Arabic readers, except where an Arabic plural is itself in common use (for example *mujahidin*).

It cannot be hoped to cover all aspects of the post-conquest development of the provincial towns of Egypt in the available space. This would require large-scale excavations at numerous sites, the task of several lifetimes. I have attempted to make use of currently accessible standing remains at a small group of sites chosen for their particular circumstances as indicated by the historical sources (see fig. I.1). The limitations of the ceramic corpus discussed above were tested at the late Roman settlement of Zawyet al-Sultan in Middle Egypt, most of which was destroyed by fire around the time of the conquest. The accurate dating of this conflagration is of obvious importance in assessing what relationship it may have had to the Arab conquest. Chapters 3 and 4 examine the impact upon the *ribat* of Tinnis and Khirbita, a centre of *murtaba' al-jund*, of Arab settlers. Finally, the development of the Upper Egyptian town of Edfu will be analysed. This last was chosen as a representative of the former Pharaonic administrative order, and as close as it is possible to come to a 'typical' provincial town.

Chapter 2

Source Problems: the Burning of Zawyet al-Sultan

Remains of the Roman town at Zawyet al-Sultan indicate that much of the settlement was destroyed by fire around the time of the Arab conquest. Standing house walls to the east of the site and broken mud-brick debris scattered across the site are scorched and reddened (fig. II.2a). With the exception of the small satellite site of Kom al-Dik to the south, this fire apparently coincided with the end of occupation in the area, which had first become established during the Old Kingdom more than thirty centuries earlier. It is unlikely that the fire directly caused the demise of the town; human attachment to place is strong enough to survive such destruction. Other circumstances, economic, political or social, must have led to the town's decline and made it impracticable to rebuild; the fire only dictated the timing of the desertion of the area. Clearly, archaeological survey will not uncover the circumstances of the fire, but it will perhaps be possible to clarify whether the abandonment of Zawyet al-Sultan took place before or after the conquest, or was roughly contemporary with it. Thus, the destruction of the town provides an opportunity to assess to what extent the ceramic corpus can be used for dating purposes.

The archaeological site of Zawyet al-Sultan is situated eight kilometres south of Minya on the east bank of the Nile, and is also known as Zawyet al-Maietin, Zawyet al-Amwat and al-Kom al-Ahmar (fig. II.1). Excavators of the site have noted Nagada I and II burials beneath an Old Kingdom step pyramid and cemetery (including shaft and rock tombs), a 19th dynasty tomb and blocks from monuments of Amenhotep III and Ramses III (Brugsch 1879, 490–1, 1252; Weill and Jouguet 1934; Varille 1938, 29; Gardiner 1947, vol. 2, 90–2; Montet 1961, 158; *LÄ* vol. 2, 1075–6, vol. 5, 497; Zibelius 1978, 167–9; Gomaà 1986, 310–1). Many of these remains were hidden under the ruins of the extensive Graeco-Roman town. At the southern end of the site are traces of the settlement known as Kom al-Dik, which was apparently in use until after the Arab conquest. Also later in date is a small ruined tower situated on the cliffs overlooking the site. Inscriptions from the site have allowed the firm identification of the Old Kingdom necropolis with the capital of the 16th *nome* of Upper Egypt, Hebenu, an important religious centre.

Greek, Coptic and Arabic Hebenu

The oryx and falcon standard of Hebenu appears in inscribed *nome*-lists in the main Ptolemaic temples (including Karnak, Edfu, Dendara and Philae; see Dumichen 1865; Barguet and Leclant 1954, 96). These consciously archaic hieroglyphic texts naturally record the Pharaonic form of the name. Hebenu's Greek and Coptic names have not been definitely identified in later sources, despite the town apparently being an important cult centre for the worship of Horus and Apollo. Various suggestions have been put forward, mainly based on their phonic similarity to Hebenu.

Some scholars have suggested that the Greek place-name Ibiu, found in the *Antonine Itinerary*, and Ibion/Ibium, from the *Geography of Ravenna* (ed. 1860), are late corruptions of the Pharaonic name Hebenu and so should be attached to Zawyet al-Sultan (Brugsch 1879; Daressy 1916; Gauthier 1925–31, vol. 4, 25). Gardiner (1947, vol. 2, 91) dismisses this on archaeological and philological grounds: 'There are no Graeco-Roman monuments at or near Kom el-Ahmar to support Brugsch's contention, which, moreover, assumes a serious corruption of the name in the Latin author [of the *Antonine Itinerary*]'. Despite the fact that there are plentiful Graeco-Roman remains, the site still cannot, in my opinion, be Ibiu. The *Antonine Itinerary* records routes taken down each side of the Nile valley, and where a stop is made opposite a town, it is marked *contra*-. The position of Ibiu in the *Itinerary*, between Oxyrhynchus and Hermopolis, both west bank towns, surely places Ibiu itself firmly on the west bank. If Ibiu and Hebenu were the same site, the *Itinerary* would have to read Contra-Ibiu. Furthermore, Weill and Jouguet (1934, 87) list a large number of places called Ιβίων in the area; the *Antonine Itinerary* does not specify to which one it refers.

Zawyet al-Sultan has also been proposed as the site of the Greek town of Alabastron(polis). Pliny mentions an Alabastron, which is presumably identical to Ptolemy's Alabastronpolis (Ball 1942, 78, 111). Ptolemy's (ed. 1901) co-ordinates place this site some distance into the eastern desert (as one might expect of what may have been a mining settlement) and north of Antinoopolis. The site is specifically described by Ptolemy as μεσόγειος, or inland (which Gardiner inexplicably finds incompatible with the

desert co-ordinates). Gardiner reluctantly rejects the alabaster quarries at Hatnub as being too far south and earlier in date (1947, vol. 2, 77–9). Despite its supposed desert location, Daressy (1916, 15), Ball, and Zibelius (1978, 167–9) all suggest that Alabastron(polis) was the Greek name for the riverside town of Hebenu. The same connection has been made on the basis of the ancient limestone and alabaster quarries which exist around the site, and debris of alabaster working which Jomard describes as comprising a significant part of the rubble mounds on the site (and other nearby sites; see *Description, Antiquités, Desc.* II, no. 16, 12). Pieces of broken alabaster vessels can occasionally be found on the surface, although the amount of alabaster debris to be seen is generally minimal.

Drew-Bear (1979, 56–60 and 1981), analysing the papyrological sources, identifies two separate toponyms: one, Αλαβαστρον πολις, is attested in documents from the third century BC and is last mentioned in a document dating to 117/8 AD; while the other, Αλαβαστρινη, appears in Greek sources from the second to the sixth centuries. These are, Drew-Bear suggests, early and late names for the same site, which she places at Zawyet al-Sultan; she notes a similar pattern for the town of Ακανθων πολις or Ακανθων (Yoyotte 1961, 75; a similar trend can be seen with Apollonius Magna (see chapter 5 below) but only a large-scale survey of Greek and Coptic sources will reveal whether or not the dropping of the Greek -πολις suffix was widespread in the Roman period). That this town is the same as those of Pliny and Ptolemy seems indisputable; it seems highly unlikely that two towns both called Alabastron(polis) should have existed simultaneously in the same area.

The argument against the identification of Alabastron(polis) with Zawyet al-Sultan is thus based purely on Ptolemy's evidence, demonstrably unreliable in places: only a few of the co-ordinates given by Ptolemy were actually derived from astronomical observation, the great majority being estimated on the basis of information about direction and duration of journeys undertaken by navigators and travellers (Ball 1942, 95–7). The site of Zawyet al-Sultan itself is close to the river, but the strip of cultivation along the bank is only a few metres wide; the mound is built over, and partly covered by, *gebel* limestone chippings and sand. Perhaps this lack of an agricultural setting was enough to qualify the town as being in the desert? The logistical problems of placing a

sizeable town any distance from the river would apparently rule out a literal interpretation of Ptolemy's evidence. A town with mining as a major industry would surely have satellite settlements in the surrounding area; the desert to the east of the area is heavily exploited by modern stone extraction, and doubtless many ancient remains here are undiscovered or have disappeared over the course of the last century. Perhaps Ptolemy was referring to such a satellite settlement when he described Alabastronpolis as inland.

Drew-Bear also suggests that the Coptic toponym ΠΜΑΝΖΑΒΙΝ (var. ΠΜΑΝΖΑΒΙΝΝΕ, ΤΑΖΖΑΒΙΝ, ΤΖΑΒΙΝ, ΘΑΒΙΝ meaning 'the place Habin') evolved from the Pharaonic Hebenu and thus must belong to the Graeco-Roman town at Zawyet al-Sultan (1979, 213). Situated in the Ashmunein *nome*, Habin was apparently renowned for the pagan beliefs of its inhabitants: a temple to, and high priest of, the god Horus are mentioned in a text of the seventh century or a little earlier (Kropp 1930–31, vol. 1, x–xi, vol. 2, 3–6). This might indicate identification with a pre-Christian cult centre such as Hebenu, where Horus, and later Apollo, were the main deities. Timm argues that Pmanhabin became a site of Christian pilgrimage in later times due to the burial of the martyr Apa Claudius in the town (1984–1992, vol. 4, 1975–7). Inaccessible rock chambers cut into the southern cliffs do imply the presence of Christian communities in this area (fig. II.2b). However, the text of a tale of the miraculous capture and redemption of pagan thieves from Pmanhabin suggests that Apa Claudius was, in fact, buried south of Pmanhabin, at a place called Pohé. Pmanhabin is described as a desert town inhabited by pagans and godless men (Drescher 1942; Godron 1970, 54–5 or 476–7). Although there is no concrete evidence for equating Pmanhabin with Hebenu, the similarity of the names and situation and reputation of the sites may well indicate that they were one and the same. The 'desert' location of Pmanhabin certainly provides some evidence for its equation with Alabastron(polis).

Zibelius (1978), Kessler (1981) and Timm (1984–1992, vol. 4) all mention Ramzi's attribution of the Arabic toponym الحَفْن al-Hafn to Hebenu (1953–60, vol. 1, 229–30). Ramzi provides a list of names applied, he claims, to al-Hafn at various times: Hat Bnou in the Pharaonic period (a confusion for Hatnub?), Hipponon under the Romans and Hebnou by the Copts, but he does not give reasons for equating these places.

Hipponon appears in the *Antonine Itinerary* and Hipponos in the *Notitia Dignitatum*, but this settlement must lie north of Zawyet al-Sultan: Ball places it at Ezbet Qarara (1942, 144, 150, 161). The original medieval works cited by Ramzi, those of Yaqut (ed. 1866–71, I.1, 356 and II.1, 295), Ibn Sa‘d (ed. 1904–40, I.2, 86 and VIII, 154) and Umar, the son of the more famous chronicler al-Kindi (Østrup 1896, 216), as well as Ibn ‘Abd al-Hakam (ed. 1922, 48), al-Tabari (1985–1999, vol. 8, tr. Fishbein 1997, 131) and al-Maqrizi (ed. 1911, 126), mention al-Hafn, in the *kurra* of Ansina (modern Sheikh Ibada), as the town from which Mariya the Copt and her sister Sirin, the slave-girls sent by the Muqauqas to the Prophet Muhammed, originally came. Mariya subsequently became the mother of the Prophet’s only son, Ibrahim. The relevant entries in each of these medieval works are so similar that it seems likely their authors all followed a single original source. Al-Hafn is not listed in Halm’s (1982) survey of toponyms in the Mamluk land registers and was apparently no longer in existence at this time. No further information about al-Hafn is available. The link between al-Hafn and Hebenu, then, is again based only on location and assonance; the lack of circumstantial evidence must make the equation of Zawyet al-Sultan with al-Hafn considerably less likely than that with Alabastron(polis) and Pmanhabin.

How, then, did the administrative districts in the area develop over time? Hebenu was the capital of its own *nome* during the Pharaonic and Ptolemaic periods, but it had apparently lost this status by the second century BC, its territory being divided between the Cynopolite and Hermopolite *nomes* (Weill and Jouguet 1934, 86). By the sixth century, Egypt was divided into eight *eparchies* as listed by Hierokles (c. 535) and George of Cyprus (c. 606); both sources include Hermopolis (Ashmunein) and Antinoopolis among the towns of the *eparchy* of Lower Thebaid (Ball 1942). The Coptic town of Pmanhabin is recorded as being a part of the province of Ashmunein c. 600 (Drescher 1942), while al-Hafn was in the *kurra* of Ansina (the latest inhabited part of Antinoopolis). Ashmunein and Ansina are both listed as *kurra* capitals by Ibn Khordazba, writing in 874 (ed. 1889, 59–60), and by Yaqubi in 893 (tr. 1937). *Kurras* were of a different order of magnitude to the late Roman *eparchies*; while classical writers used large, empire-wide regional divisions, the Arab authors referred to smaller, local ones.

There is also a chronological discrepancy: the *kurra* system was not in place when Mariya the Copt lived in al-Hafn, but later accounts nonetheless place the town within this context. Thus, the fact that Pmanhabin and al-Hafn were ostensibly in different areas does not rule out their being the same place.

Status of the town in the Graeco-Roman period

Although it is not possible definitely to name the town from the literary sources, we can draw some conclusions about its status and institutions. It was not a *nome* capital after the Ptolemaic period, nor does it appear in lists of bishoprics or garrison towns. If Hebenu was indeed the Coptic Pmanhabin renowned for its paganism, its appearance in lists of Christian centres would be rather surprising, although some fragments of carved acanthus blocks visible on the surface of the later settlement at Kom al-Dik apparently indicate the presence of a church. The military status of the town is less certain. It is not listed as a garrisoned town in the *Notitia Dignitatum*, but we know that army officers at least visited. The altar to Apollo uncovered and tentatively ascribed to the second or early third century AD by Weill was engraved with a dedicatory inscription by two junior Roman army officers, the *duplicarii* Ignatius Longus and Ignatius Ammonianos (Weill and Jouguet 1934, 97–8). No indication of the legion or corps to which the soldiers belonged is given on the altar. The presence of various cohorts in the area is documented by a number of papyri and ostraka; Ashmunein, Ibion and Hipponon were all garrisoned at various times (Alston 1995). Given the town's status as an important cult centre, it is quite plausible that people travelled from some distance to worship or endow the temple; the presence of military titles on the small altar does not necessarily imply the presence of a garrison in the town.

This town, then, was not of great provincial importance in the Roman period but rather represented the declining Pharaonic urban order. It does appear to have been a manufacturing centre for oil: large stone blocks from presses still lie scattered across the centre of the site (fig. II.3a), while preliminary examination of soil samples taken from the site has indicated the presence of many olive stones (Clapham pers. com.). The olives for these presses must have been grown locally, although no obvious traces of plantations

or irrigation can be seen today. Butzer notes a layer of Nile silt in the wadi bed to the south of the town which, he suggests, may indicate the presence of cultivation or garden plots during the Roman period (1961, 61).

Previous excavations at Zawyet al-Sultan

Apparently only the remains of the Graeco-Roman town and the Old Kingdom rock tombs were visible until quite recently. Jomard (*Description, Antiquités, Desc.* II, no. 16, 12), Wilkinson (1835, 372), Champollion (1844, vol. 2, 438–55), Nestor l'Hôte (a member of Champollion's expedition, published in Vandier d'Abbadie 1963, 27) and Lepsius (visited 1850, published 1904, vol. 2, 55–69) describe only the tombs, noting the sherd mounds in passing; they were unaware of the step pyramid and New Kingdom temple complex, clearly still buried beneath the later town. Lepsius's description of the area seems to imply that the site stretched some distance north beneath the modern cemetery, a view confirmed by Kessler's observation of sherd mounds at the eastern extremity of these cemeteries (1981, 223). Lepsius also describes the remains of an extensive medieval site a short distance north of the site: in good condition in 1999, by December 2000 large areas of this abandoned village had been bulldozed to make way for the road to New Minya. The height of the standing walls visible from the road would indicate a late medieval or early modern date.

The earliest recorded excavations at Zawyet al-Sultan are those of the Marquis of Northampton who worked there between 16 and 26 December 1899 (Northampton 1900). He investigated Graeco-Roman houses and burials in the north-west corner of the site, finding also a stone-faced wall with roughly engraved boats which he described as 'a pyramidal tomb' (1900, 192); he must have been referring to the temple ramp, on which the boats are still visible. Shortly afterwards, Garstang uncovered tombs of the 5th and 6th, and the 22nd to 25th, dynasties (1904). The step pyramid was discovered during excavations by Weill in 1911 (1912, 88–90) and seasons in 1912, 1913, 1929 and 1933 led to further discoveries including the altar to Apollo (Weill and Jouguet 1934). Many finds from these excavations are now in European collections (see Drew-Bear 1979). Simultaneous unpublished SCA excavations included the 1927 clearance of the tomb of

Ni-Ankh-Pepi, which was later recorded and published by Varille (1938). More recently, the SCA excavated New Kingdom areas at Kom al-Dik to the south of the main site; a military pumping station was subsequently built here. The present project was undertaken under the auspices of a joint mission to Zawyet al-Sultan by the Egyptian Antiquities Service at Minya and personnel from the Universities of Cambridge and Sheffield, directed by Barry Kemp and Mahmoud Hamza.

Aims of fieldwork undertaken between 28 November and 12 December 2000

Towards the eastern edge of the site are remains of late Roman houses at least two storeys high, well-built of mud brick. As mentioned above, these buildings show clear evidence of burning, the bricks being reddened; indeed there are fragments of this reddened brick across much of the site. This would seem to indicate that a large area of the town was at some stage destroyed by fire. My fieldwork aimed to clarify the date at which various areas of the settlement were abandoned: did the whole town cease to exist at the same time or does the date of abandonment vary from place to place? Knowledge of the town's development may also provide evidence for the Greek, Coptic and Arabic names of the site: the name Αλαβαστρινή, for example, disappears from papyrological sources during the sixth century, and whether or not this chronology conforms to that of the site at Zawyet al-Sultan is clearly a significant consideration. Most importantly, I hoped to assess whether the evidence provided by the ceramic corpus and other surviving remains is sufficient to address any of these questions.

Fieldwork Methodology

I carried out a ceramic survey to provide evidence about variation in dates of habitation from one quarter of the town to another. Discrete areas across the site were selected, and material from those areas was sampled and recorded. Where possible, I recorded exposed profiles, retrieving ceramics from stratified contexts; this material was supplemented by surface collection in randomly located circles, one metre in diameter. Larger circles were neither necessary nor practical since the depth of the sherd-mounds is up to three metres in places; what depth of material should be sampled in this case? It was clearly desirable

to collect more than the top layer: large amphora sherds covered a high proportion of the surface, finer wares having sunk lower down. As near as possible, when a circle was located on a tall mound, I collected the top twenty centimetres of the sherd deposits.

While random sampling gives a relatively unbiased cross section of surface wares, a major drawback is the high proportion of coarse wares to fine which it produces; coarse wares are not usually accurately dateable. In order to record sufficient fine wares to date a randomly collected assemblage, a huge quantity of coarser wares also have to be drawn. Time pressures at Zawyet al-Sultan did not allow for this, and the circle collections were kept small. However, in order to increase the amount of more accurately dateable pottery retrieved from each area, a certain number of sherds were collected from outside, but close to, the circle. While this system is clearly not without its problems, it was the only practical solution in the circumstances. The provenance of all surface sherds is clearly marked in their catalogue entries.

Since many of the vast sherd heaps which dominate Zawyet al-Sultan were redeposited by the actions of the *sebbakhin*, their methods must also be taken into account. Clearance of the site can be dated roughly to the second half of the nineteenth century and some way into the twentieth century: the pyramid and temple platform were still buried in 1850 when Lepsius visited, but the Marquis of Northampton reported in 1899 that the *sebbakhin* had ‘got very low’ in places (1900, 192). The current appearance of the site indicates that they did a very thorough job indeed. Aerial photographs, however, do not show the distinctive pattern of mounds resulting from the movement of material around the site with a light railway used by the *sebbakhin* elsewhere (for example Ashmunein, Karanis). We can probably assume that ceramic material was sieved out of the deposits near the original location to avoid unnecessary movement of heavy sherds and rubble.

Area C: the New Kingdom temple platform

The north end of the site is dominated by the New Kingdom stone temple ramp and mud brick town wall; on top of the wall, the remains of houses indicate the depth to which the Graeco-Roman town once covered the dynastic remains (fig. II.3b). The area behind the

wall, where the temple presumably stood, is now covered in tall sherd heaps left by the *sebbakhin*. A few Graeco-Roman house walls are still standing at the northern edge of the surviving site; this area does not seem to have been burned, unlike much of the central part of the town.

Profile 4:

A small exposure immediately south of the upper level of the New Kingdom temple ramp was recorded and sherds collected for dating purposes (see figs II.4–7). Deposits of rubble and limestone chips (layers 5 and 7) alternated with deeper strata containing abundant organic material such as goat droppings, straw and charcoal. It appears that the area was used for the keeping of animals and dumping of rubbish. The stony layers indicate intermittent dumping of rubble, perhaps resulting from the breaking up of large stones.

The earliest visible deposit, layer 8, contained sherds of LRA 7 including a square-shouldered form belonging to Peacock and Williams class 52 (1986), produced in great quantities in Egypt from at least the beginning of the fifth century onwards (Bailey 1998). Also collected from this layer were the flange of an M5 bowl, form 2 in the surface catalogue (fig. II.25) and dated by parallel to between the second half of the fifth and the sixth century, as well as a jar piece incised with vertical herringbone pattern. This latter is similar to the rocker-stamped example in the surface catalogue, which has parallels in the sixth and seventh centuries. This deposit can perhaps be dated tentatively to the sixth century, although the limitations of dating by parallel discussed in chapter 1 should be borne in mind. The profile was overlaid by a sterile dump of limestone rubble and chippings.

The ceramic assemblage retrieved from higher up the profile did not differ markedly from that of layer 1. LRA 7 sherds were common in layers 6, 5, 3, 2 and 1, but few diagnostic sherds were recorded from any level except 1, *sebbakhin*-deposited debris. Accurate dating of these levels is clearly not possible; however, the fact that pieces of a form 2 M5 bowl like that from layer 8 also came from layer 2 would seem to indicate that the entire profile was laid down over a relatively short period of time. This exposure,

then, is the remains of an area where large quantities of domestic rubbish were dumped, presumably from nearby housing and probably during the sixth century.

Area D: the Roman houses

Few houses remain among the sherd heaps. Apart from a small number of low walls in the north, the only significant standing habitations are to be found at the far eastern edge of the town. Partly buried in pottery, walls and vaulting are preserved up to two storeys high (fig II.8a). Occasional surviving intact deposits indicate that by the time of the town's abandonment deposits had filled the streets to the height of the upper floors. Time did not permit a full architectural survey, but a few observations on the method of construction were made. The mud-brick exterior walls were thick and laid in sloping courses. This technique, perhaps designed to prevent vertical cracking of the wall, is found in houses of the first to fifth centuries in the Fayyum (Husselman 1979, 70, pl. 13a; Kemp 2000, 91; Spencer 1979, 114, note 18; Clarke and Engelbach 1930, 211, fig. 256). The date of these buildings can perhaps be further clarified by looking at the deposits immediately below the house walls.

Profile 5:

A small section was exposed directly beneath a large house wall (figs II.8b–12); this was drawn and ceramics sampled¹. It unfortunately proved impossible to retrieve more than a few sherds from each layer, for fear of undermining the structure above. The earliest feature was a small wall running at an oblique angle out of the section, built of mud bricks (33×11×16 cm). The upper levels of the wall appeared to have collapsed, depositing mud-brick rubble around the base of the wall (layer 14), but unfortunately no sherds were retrieved from these deposits and the date of the wall remains unclear. The depth of sterile sandy deposits built up against the wall (layers 12 and 13) indicates a considerable period of abandonment after the building went out of use.

¹ I am grateful to Dr Pamela Rose and Amanda Dunsmore for help with the identification of New Kingdom material from profiles 5 and 6.

The first dateable deposit is layer 11, from which a distinctive, red-slipped marl bowl with black painted rim ticks was retrieved. Brissaud, in his study of ceramics from the reign of Amenhotep II to the end of the Ramesside period, includes rim ticking in a list of typical decorative features (1979). This bowl probably dates from the late 18th or early 19th dynasty. The sherd dump above, layer 10, is roughly contemporary; a bread mould and a red-rimmed, red-slipped bowl were found here. The bread mould rim is Amarna period or slightly later (Rose pers. com.). Another red-rimmed bowl came from layer 9. Bowls with red-slipped rims and uncoated bodies are common during the Ramesside period, but variants with darker red rim over matte red slipped bodies are unusual. A few examples come from Ramesside contexts at Qantir (Aston 1998, 77, 326, nos 1086–99); these have more strongly everted rims than the examples from profile 5, perhaps reflecting local variation. A few red-slipped body fragments from layers 6, 7 and 8 are also probably New Kingdom in date, as is the single diagnostic sherd, a small, silt, bowl rim, from layer 7. An apple-green glass bead, 2 mm in diameter, was preserved in layer 6. The packed floor, layer 5, seems to divide the New Kingdom deposits from Roman strata. The remaining layers, 2, 3 and 4, are similar in character, being dumps of mixed rubbish containing both New Kingdom and Roman sherds (layer 4 even contained the rim of an Old Kingdom bowl, perhaps from a decomposed brick). These deposits seem to have been deliberately laid down to level the ground for the building of the house above, which explains the mixed nature of the material.

This profile contains three separate periods of habitation. The earliest is represented by the small wall (layer 15) running north-west to south-east out of the profile. It is tempting to suggest an Old Kingdom date for this structure: the bricks have a significant quantity of crushed limestone in them, in common with the bricks of known Old Kingdom structures elsewhere on the site. After the abandonment of the early structure, the site remained out of use for a significant period of time, with bricks falling from the wall and desert sand and gravel building up around its base. The New Kingdom saw the area re-inhabited; no structures are visible in these layers of the profile, but the build-up of midden rubbish indicates domestic activity nearby. While the existence of a New Kingdom temple is well known, these strata provide the first record of in situ levels

of a contemporary town. The final stage of habitation took place during the Roman period, at which time the ground was levelled and houses built. The fact that these houses were constructed immediately above Ramesside deposits is striking; no traces exist of a Late Period or Ptolemaic town. The levelling of the slope indicated by layers 2, 3 and 4 suggests that no significant amount of material was actually removed from the area. The absence of diagnostic sherds in the Roman strata prevents accurate dating of the houses above, and the expansion or resettlement that they represent. However, the small amount of Roman material, and more specifically the absence of usually ubiquitous sherds of LRA 7, probably indicates that these houses were constructed before any significant amount of Roman debris had been deposited, and certainly no later than the fourth century.

Area E: the small temple area

Sample area E was located around a small stone structure resembling a shrine entrance; the dating and purpose of this building were not examined in detail (fig. II.13a). The surface scatter in this area contained a high proportion of unburned mud bricks; this contrasts particularly with area D above, where not just the standing structures, but all the surface rubble was scorched and reddened. This may indicate that this part of the town did not burn as it appears much of the rest of the town did.

Profile 6:

Situated slightly south-east of the stone structure, this profile again included dynastic strata (see figs II.13b–17). Layer 12 contained a strange fragment, very like a Canaanite jar in terms of its fabric but with a pinky-cream polished surface. This finish is typical of New Kingdom wares and, although unknown on this sort of vessel, is almost certainly of this date. The sherds collected from layer 10 were apparently roughly contemporary with layer 12 and included part of a normal Canaanite jar and New Kingdom silt wares. It is noteworthy that, as with profile 5 above, the New Kingdom strata are immediately above sterile sandy layers indicating the abandonment of the area. Layer 11, a strip of compacted and bonded limestone powder almost like a cement, is apparently the result of

water action, perhaps flooding. The New Kingdom habitation in this area did not last; these deposits are capped by more sterile, wind-blown sand.

Above this sand lie the remains of later habitation, but at what date the area was resettled is not entirely clear. Layer 8 contained a few silt sherds which could be either Ptolemaic or early Roman in date. These included uncoated utility wares similar to pieces retrieved from profiles A and B at Edfu (see pp. 103–5 below), as well as the handles of a brown amphora with extremely sandy fabric. This latter form is apparently an ancestor of the common LRA 7 and may be the same as Marchand's Middle Egyptian brown silt amphorae of the first to third century (Marchand and Laisney 2000, figs 95–103). Sherds of this amphora type were common in layers 7, 4 and 2, which are clearly similar in date. In layer 7, a single body sherd of a coarse, dark-grey utility ware with lots of sand and limestone, a gritty, paler-coloured firing surface and a narrow dark-brown core to the break is similar to a piece found associated with early Roman fine wares in Old Cairo (Gascoigne forthcoming). Layer 1 and the upper parts of layer 4 contained sherds of the larger form of LRA 7, Peacock and Williams class 53 (1986), dated to between the late fourth and the mid-sixth centuries (but Bailey cites examples dating to as early as the third, or even the second century (1998, 125–9). So we can see that after the abandonment of the New Kingdom town, the area again came into use during the early Roman period, continuing into perhaps the fourth century. The top of the profile is capped with tumbled sherds and rubble left by the *sebbakhin*; it is likely that higher layers were removed by them, along with the evidence of later habitation. The fourth century date is thus not significant.

Areas A and B: the late Roman outlier

At the southern end of the main site is an outlying settlement, separated from the town by a wadi bed (fig II.18a). Butzer suggests that this area had a shorter lifespan than the town centre (1961, 61). The sherd mounds are much lower here than further north, but at least part of the area was clearly a cemetery rather than a town, so a slower build up of deposits should perhaps be expected. Many grave pits are exposed, most of which were excavated by the SCA and found to contain large ceramic or limestone sarcophagi. Excavations in

the northern half of the outlier (area B) unearthed the remains of multi-phase buildings including large blocks presumably re-used from dynastic monuments. In area A, immediately north of the pumping station, lie large plastered walls, apparently from the New Kingdom with Roman additions, but a close study proved impossible due to military sensibilities. No surface collection was made from area A for the same reason. This outlier clearly has several phases, including New Kingdom, Ptolemaic and Roman, and a closer examination of the stratigraphy seemed desirable.

Profile 3:

Since parts of the area had already been pitted by excavations, many sections were accessible. The recording of profile 3 was undertaken in conjunction with an archaeobotanical study, the exposure being selected on the basis of the high levels of organic material in the deposits (figs II.18b–22). Unfortunately most of the standing walls had had trenches dug along them, clearing adjacent deposits, so it was not possible to incorporate any of the surviving structures into the dating scheme. However, a small number of sherds was retrieved from bricks in the area immediately around the exposure. These included a large cream-slipped jar rim and a piece of New Kingdom Cypriot base-ring ware, implying a New Kingdom date for at least some of the brick structures. Although not stratified, the sheer number of New Kingdom sherds found in profile 3 indicates considerable activity in the area at that time.

All habitation layers in the section were situated above a thick deposit of the limestone gravel which forms the natural fill of the wadi (layer 6). The only sign of human activity in this sandy deposit was a packed mud 'floor' (layer 5); a few tiny associated sherds may have been Ptolemaic. Whether this floor was part of a larger structure, the rest of which had been eroded away by the wadi run-off, or whether it was a chance deposit of silt is not clear. The floor was only visible in a projecting shelf running out from the front of the profile to the south-east end, in which layer 6 is capped by another sandy layer containing fragments of mud brick (layer 4). Above this, the section comprised a mass of rubble and silt (layer 3), cut with pits of various sizes, the largest (layer 2) containing a projecting cow horn and quantities of animal skin and hair (dotted

in fig. II.19). In the uppermost surface of the profile were three pits scorched by fire; the surrounding area was pock-marked with many other such pits.

A small number of sherds, including very few diagnostics, was retrieved from layer 3. By far the most common were pieces of LRA 7, apparently mainly from Peacock and Williams class 53 (1986). Layer 3 rim forms were closely paralleled in layer 2, the fill of the large pit cut into the section. The retrieval of the same forms from layers 2 and 3 implies that the pit was backfilled with more or less the same material that was dug out of it. The purpose of the large pit became clear during the sampling of the profile. The cow's horn and patches of skin and black hair protruding from the bottom of layer 2 were attached to an entire buried cow (fig. II.23b); the animal had apparently died calving, as the fragmentary bones of her offspring were found mixed with hers. This find is far beyond the scope of the current project and so will not be examined in detail here. The fill of the pit differed from that of layer 3 in one respect: a considerable number of New Kingdom sherds had become intermixed with the Roman deposit during the refilling of the pit. These included part of a meat jar; a late 18th dynasty cream-slipped and burnished body sherd (fabric III.5 in the Amarna series, Nicholson and Rose 1985); pieces of an oasis amphora; and a fragment of an 18th dynasty red-slipped bowl. A broken limestone block with variants on the cartouches of Amenhotep III had also been dumped into the pit, as had small fragments of what looked like a painted ceramic statuette, possibly from a Graeco-Roman funerary assemblage.

The date of the digging of the large pit, though, is defined by the Roman sherds, not the New Kingdom ones. The sample contained rims of LRA 7 (Peacock and Williams 1986 class 53) and various cooking pot and casserole fragments. The absence of the M5 red-slipped wares which dominate the fifth- and sixth-century assemblage probably indicates an earlier date than Roman strata in other profiles, certainly pre-fifth century. Several plain-rimmed bowls, probably mid-Roman in date (silt bowl form 16, fig. II.25) and the LRA 7, known from as early as the first century but not widespread until somewhat later, suggest that this is a third or fourth century assemblage.

Another unusual feature was presented by the small pits cut into the top of the section (fig. II.23a). They contained quantities of burned bone and charcoal, and had

apparently been lined with sherds, now scorched. The material proved hard to identify, but certainly included Roman wares such as LRA 7, some cooking-pot pieces and examples of bowl form 16, fig. II.25. The pits are, however, reminiscent of cooking pits used in the Sudan by certain nomadic tribes in the twentieth century.² Although no obviously post-Roman ceramics were identified, the significant number of vitrified, unidentifiable silt wares could easily have hidden more modern material. That the area was in more recent times used as a camping spot by Bedouin seems the most plausible explanation for the existence of the small pits.

Surface pottery from the main site

As noted above, surface collections were made in each of the areas listed above. Given the large volume of pottery recorded, and ultimately, the similarity of the corpus collected from each area, it was deemed more practical to present the material in catalogue form than area by area (figs II.24–6).

All the diagnostic sherds from the circle collections and the additional surface pieces are entered in the catalogue. The circle collections also produced a large number of body sherds, not all Roman in date. The table below is a summary of the samples taken in each area:

Circle	LR Diags		LRA 7		Other Roman		Dynastic		Total
C	21	20·8%	18	17·8%	28	27·7%	34	33·7%	101
D	14	15·4%	39	42·8%	34	37·4%	4	4·4%	91
E	22	21·4%	50	48·5%	27	26·2%	4	3·9%	103
B	34	26·6%	65	50·8%	20	15·6%	9	7%	128
KD 1	9	16·4%	35	63·6%	11	20%	0	0%	55
KD 2	10	28·6%	13	37·1%	11	31·4%	1	2·9%	35

² A report containing an ethnographic examination of pit stoves can be found at: http://www.idrc.ca/library/document/108310/chap2_e.html#fuelwood, entitled *Environmental Valuation and Management of Plants in Wadi Allaqi, Egypt: Final Report*. This report was prepared for the International Development Research Center, Canada, by a research team at the Unit of Environmental Studies and Development, South Valley University, Aswan, Egypt. I am grateful to Dr Alan Clapham for this information.

One striking feature is the very high proportion of dynastic material which was collected from the New Kingdom temple platform. This included many sherds from New Kingdom meat jars and New Kingdom and Late Period marl storage jars, as well as a few pieces of Hellenic imported amphorae. The presence of in situ New Kingdom strata in areas D and E clearly indicates that these areas were in use in dynastic times, but in comparison to area C, where no in situ dynastic material was recorded, this is barely reflected in the surface collections. The high number of fragments of large marl vessels from area C may indicate some storage or distribution facility based near the temple; the durability of these pieces may also explain the high percentage of dynastic material surviving in area C, as opposed to areas D and E, where New Kingdom sherds retrieved from profiles were mainly finer silt wares.

The remaining sherds collected from the main site constituted a fairly typical late Roman assemblage (the surface collection from Kom al-Dik is discussed separately below pp. 40–2). LRA 7 was the dominant ware; it is notable that the vast majority of the sherds, both body sherds and diagnostics, appeared to come from Peacock and Williams class 53 (1986). Fragments of LRA 1 and Gaza Jars were found in each circle; a handle of the latter from circle E was apparently an example of Majcherek's form 4 (1995), dating from the late sixth to early seventh century. Body sherds of ARS were collected from circles D (one) and E (three). Five ARS diagnostics were found outside the circle in area E; the number of body sherds of ARS observed here was also much greater than elsewhere, but only those in the circle were collected. Two sherds of Adams's Aswan ware R4 came from circle C, and one, from a large plate, from circle E (1986). The remainder of the circle collections comprised coarse silts.

While some third and fourth century (and earlier) pottery was collected, the vast majority of the surface material recorded in the catalogue can be dated by parallels from the fifth to sixth century. All but three ARS forms were manufactured during this period; the most common, forms 67 and 84, were produced in the fifth century. Other wares confirm this date: M5 bowl forms 1 and 2, among other forms, are paralleled from fifth and early sixth century contexts at certain sites (see fig. II.25 for a full lists of parallels).

The few sherds of Adams's (1986) Aswan ware R4 are apparently later, appearing in Nubia c. 550, but parallels from Ashmunein and Elephantine indicate that occasional sherds of R4 may have appeared in Egypt from as early as the fifth century. The town appears to have reached maximum pottery consumption during this period. However, there are a small number of late sixth- to early seventh-century sherds among those recorded: the form 4 Gaza Jar mentioned above, and a bowl of Adams's (1986) Aswan ware W3, dating from the mid-seventh century onwards, although it appears earlier at Elephantine (Gempeler 1992, T354). Both these pieces, as well as both examples of the latest ARS form, 99B, were collected from area E. If the reduction in the quantity of pottery from the late sixth century is attributed to the abandonment of significant areas of the town after the fire, it might tentatively be suggested that area E was inhabited for a few years after this event, although a mere handful of sherds is clearly an unstable base for any conclusion. At any rate, the presence of a certain amount of late sixth- or seventh-century pottery may indicate a reduced population at this time (but see below pp. 44–5 for further discussion of dating by means of the ceramic corpus).

Kom al-Dik

At the far south of the site, separated from the late Roman outlier by the modern military pumping station, lies another series of mounds, much shallower than those of the main town, and more limited in area (fig. II.27a). Known as Kom al-Dik, this area was clearly inhabited until a later period than were any of the northern mounds. New Kingdom structures and ceramics are preserved immediately south of the pumping station and were exposed during recent SCA excavations directed by Inspector Sami Farid. But ceramic material on the main mounds of Kom al-Dik itself is clearly Roman and early Islamic in date.

There are few standing remains on Kom al-Dik, but traces of some of the town's main structures are preserved. Fragments of limestone acanthus column capitals imply the presence of a church, the position of which may be indicated by a large (reused?) in situ stone threshold block. The most intact surviving features are a line of underground chambers across the south of the site. Three, apparently in a straight line, have been

revealed; lorries on the nearby quarry road have brought down the tops of their vaulted ceilings. Others may still be concealed. The walls are built of fired brick, unplastered, laid in a herringbone pattern and rising up into overhead vaults. If the purpose of these chambers is not clear, that they were tombs is a strong possibility. The exclusive use of fired brick is also notable; they are probably post-Roman in date. Only further examination will clarify the purpose of these enigmatic chambers.

Profile 1:

Two profiles were recorded at Kom al-Dik, one in the north and the other in the south. As with profile 3, ceramics were sampled in conjunction with an archaeobotanical study. The pattern of deposition found in profile 1 was reminiscent of that of profile 4, by the New Kingdom temple platform, despite the distance between them (figs II.27b–31). Both were built up of alternate levels of midden rubbish with abundant organic material including animal dung (layers 6, 4, 3 and 1), and layers of limestone chippings (layers 5 and 2), all covered with *sebbakhin*-dumped sherd mounds (layer 0). Layer 6, the earliest visible deposit of profile 1, was dominated by sherds of LRA 7; in total 568 pieces were collected. Fragments of an M5 bowl (fig. II.25 silt bowl form 2) and Adams's (1986) Aswan ware R4 permit only a very broad dating to the fifth or sixth century.

As with profile 4, the deposits of profile 1 seem to have been laid down over a fairly short period of time. All strata contained LRA 7 pieces, and LRA 1 appeared in layers 6, 4 (with a Gaza Jar sherd) and 1b. The most unusual find from the exposure was a gypsum jar stopper from layer 4 with the Coptic letters $\Phi\text{†}$ impressed on the upper surface (fig. II.32a). This is apparently an abbreviation for $\Phi\text{NOY}\text{†}$, meaning 'great god', common in the Fayyum dialect (Crum 1939, 230).

Profile 2:

This exposure was again made up of thick deposits of domestic rubbish (sherds and organic material including straw, dung and charcoal) but did not contain the layers of crushed limestone rubble found in profiles 1 and 4 (figs II.32b–6). Instead, thin dumps of ash and sand subdivided the wider midden deposits. At the southern end, the exposure

was capped by the lower courses of a small mud-brick wall on white mortar foundations; elsewhere it is overlaid with *sebbakhin*-deposited sherds and rubble. All levels contained LRA 7 as the dominant ware; the dating apparently largely conforms to that of profile 1.

The lowest visible layer, which continued below the modern ground level, contained significant quantities of ware M5, including a carinated bowl with painted and impressed decoration; this is paralleled from fifth- and sixth-century contexts at Ashmunein, as is a round-rimmed bowl with good red slip. Part of a chaff-tempered jar painted with a fish motif may be later sixth century in date. The assemblage in layer 2 was very similar: four further examples of the round-rimmed bowl were recorded, and flanged bowls (fig. II.25, bowl form 2) were also well represented. Body sherds of LRA 1 and a coarse Fustat ware were present in layer 2.

It is notable that neither recorded profile at Kom al-Dik contained in situ deposits or structures post-dating the sixth-century abandonment of the main city, given that the southern site was clearly in use considerably later than this period (see below pp. 41–2). This can only be explained by the actions of the *sebbakhin*, who have removed the upper levels in most places.

Surface Pottery:

As with the main city, ceramic material retrieved from exposed sections was supplemented by surface collection (figs. II.37–9a). Two circle collections were made from randomly selected locations towards the east and west of the site. The deposits at Kom al-Dik being much thinner than those in the main city, the circles were cleared down to the desert surface without accumulating even as much material as was collected from the top 20 cm of the main city circles. A summary of this material is presented with the main city circles on p. 36 above.

The assemblage from Kom al-Dik was similar in many ways to that collected in the main city; clearly these sites were in use simultaneously for much of their history. LRA 7 was again the dominant ware, although examples of Peacock and Williams class 52 (1986), almost completely absent on the main site, were reasonably common here. Fragments of LRA 1 and Gaza Jars, including handles from Majcherek's (1995) form 3

(late fifth to the end of the sixth century) were widespread. Also collected were pieces of the common M5 flanged bowl, present in considerable quantities both in the profiles and on the surface (fig. II.25, silt bowl form 2), an ARS body sherd, part of a painted fish jar, several sherds of AII, III and IV Aswan wares and a small number of thin-walled green marl sherds from qullas. The remainder of the material collected from the circles was coarse silt wares. The earliest identifiable sherds from Kom al-Dik were two bowls of Aswan ware R37, similar to the example from the main city. These would seem to indicate a fifth-century date for the post-New Kingdom re-settlement of the area. ARS forms 67, 103 and 104, as well as the M5 flanged bowls and late Roman utility wares date to the fifth and sixth century. This part of the assemblage is almost identical in character to that of the main site.

Kom al-Dik clearly remained in use long after the abandonment of Zawyet al-Sultan, and indeed seems to have flourished. More than half the Aswan wares collected fell into Adams's (1986) later groups, including sherds of wares R13 (c. 850–1250), W12 (c. 950–1300) and U6 (c. 950–1500). The sheer quantity of Aswan wares at Kom al-Dik, when compared with the small number recorded on the main site, is significant. In the fifth and sixth centuries, it appears that M5 was the dominant fine ware on both sites, Aswan wares only appearing occasionally. The importing of pottery from Aswan seems to have started on a larger scale only in about the late sixth or early seventh century. The decline of silt fine wares may indicate an absence of potters at Kom al-Dik after this date. While a town as large as Zawyet al-Sultan clearly supported its own ceramic industry (Ballet, Mahmoud, Vichy and Picon 1991), Kom al-Dik is much smaller, and its inhabitants may have bought pottery from outside traders.

The date of the final abandonment of Kom al-Dik can be established with reasonable accuracy. A certain number of glazed sherds were recorded, which correspond to the earliest periods of glazing technology in Egypt. The large number of glazed sherds found at Kom al-Dik is surprising, given that no such pottery was observed on the surface at the much larger contemporary site of Ansina to the south, and perhaps indicates that the former settlement had some special status. Engemann's account of glazed wares of the eighth and first half of the ninth century from Abu Mina includes a description of

‘wares decorated with different coloured glazes’, often glazed only on the interior in solid colours (white, turquoise or green) or dabs and streaks (turquoise, white, blue, black, manganese and green). The clay of these wares is usually a light red marl (1988, 63). Adams’s group GI includes similar wares (with thinly-glazed outside surfaces and beige Fustat fabrics) in addition to well-known Fatimid wares like FFS and lustreware; GI wares reached Nubia c. 900 (1986, 591–2). The glazes from Kom al-Dik fit these descriptions very closely, and it seems likely that they conform to Engemann’s Egyptian dating. The Fatimid wares mentioned above are absent, with the possible exception of fig. II.37 vessel 40, a grooved bowl reminiscent of, and perhaps ancestral to, FFS ware. Finally, the existence of a handful of sherds of Aswan wares W12 (probably from the late ninth century in Egypt; Pierrat 1992) and U6 (c. 950 onwards in Nubia), as well as a few fragments of thin walled green qulla ware (from c. 900 at Tod; Pierrat-Bonnefois 2000) imply that the final abandonment of Kom al-Dik must have taken place during the early tenth century.

The Watchtower

On the cliff above the site sits a small watchtower (figs II.39b–40). This unusual building is the latest historical structure at Zawyet al-Sultan, and includes the tomb of a Sheikh which is clearly less than a hundred years old. A rough flight of shallow steps has been cut into the rock at the south end of the cliff (fig. II.41); no way to date the stair exists but it is perhaps contemporary with the tower. The cliffs on which the tower is built provide a commanding view across both the valley and the desert; from the top of the tower, one would have been able to see a considerable distance.

The circular structure is about five metres across, and built of close-fitting stones irregular in size and shape. Wooden beams were at one time set into the walls at various heights, but these have mostly been removed or destroyed. The walls of the tower are plastered inside and out with a thick cream mortar, and are stepped inwards towards the top of the surviving building. Very few other archaeological remains are visible around the tower. The plateau is so steep and the wind so strong that this absence is not surprising; indeed the preservation of the building itself is remarkable. A few sherds were

collected from the clifftops and proved to be extremely mixed in date, including Maidum bowl pieces from the Old Kingdom and a New Kingdom marl jar rim. The late Roman period was represented by sherds of LRA 1, All Aswan wares and ribbed cooking pots. Later in date were fragments of a Ballas Jar and part of a thin-walled green marl qulla. No ceramics were found inside the tower, nor were sherds of any particular period more numerous than others.

The Zawyet al-Sultan watchtower is not unique. An almost identical structure is known from the port of Quseir, probably constructed by Muhammed Ali c. 1830; it is more complete and preserves traces of an interior spiral staircase to a parapet walkway around the top.³ The Quseir tower is located inside a larger fort; its purpose may have been for signalling. The placing of such a watchtower on the Red Sea coast seems logical enough, but reasons for the existence of one at Zawyet al-Sultan are less obvious, unless it was part of a chain stretching the length of the valley. Edward Lane noted that at the time of his visit between 1825 and 1828 a series of signalling towers had been recently constructed between Alexandria and Cairo (Lane 2000, 9). The late 1820s were a period of rural unrest, with desert raiding by displaced villagers, exacerbated by a plague outbreak near Minya, causing insecurity particularly in Middle Egypt (Lawson 1992, 122–3). Perhaps the Zawyet al-Sultan tower was built at the same time as those in the Delta to aid the suppression of brigandage in the area. The location of the nineteenth-century settlement to which the tower would have been linked is unclear. Walls of an abandoned village survive to the north, and it is possible that the modern village north of the site has been inhabited for more than 200 years. However, the location of the stairway to the south of the tower would imply that those who used the tower came from the south, an area now entirely covered by an extensive modern cemetery.

Conclusions

How, then, does this archaeological study clarify the problems of the identification of the town in later sources? As stated above, the last mention of Alabastrine appears in a sixth-

³ I am grateful to Charles Le Quesne (pers. com. and unpublished 1999, 41–2) and Dr Nicholas Warner for this information.

century document, and the latest reference to Habin in a text of the seventh century or a little earlier. The tale of Apa Claudius and the Thieves is preserved in a ninth-century manuscript, but Drescher (1942) suggests that it was first composed around 600 AD, during the life of bishop Constantine of Asyut. The existence of Pmanhabin c. 600 is just compatible with its identification with Zawyet al-Sultan. The disappearance of Alabastrine from the papyrological sources in the sixth century may relate as much to Greek names falling naturally out of use as with the destruction or abandonment of the town. The apparent existence of a priest and temple of Habin during the seventh century is more problematic; however, the relevant text is religious in nature and the reference to the cult of Horus may not actually preclude the abandonment of the town by this time.

The historical sources provide little information about the disappearance of al-Hafn; the toponym is only ever mentioned in connection with Mariya and Sirin. We know only that they were said to have come from al-Hafn, which must have been in existence during the early part of their lives, in the early seventh century. If al-Hafn is to be found at Zawyet al-Sultan, Mariya and Sirin must have lived there during the last days of the already much reduced settlement. We should further consider to what exactly the toponym al-Hafn, were it to be synonymous with Zawyet al-Sultan, referred: if the main town was abandoned before the Arab conquest, as seems possible, there would be no reason why an Arabic toponym should ever be applied to the site, unless it were either to place the town into an Arabic literary/historical tradition (as would be required for the story of Mariya and Sirin), or to refer to the later settlement at Kom al-Dik. It is not known whether Kom al-Dik shared the name of the main town, and if so whether it continued to be known by this name after the abandonment of the larger settlement. That al-Hafn is never mentioned except as the home town of Mariya and Sirin implies either that it was a place of little importance, or that there was no other context in which it might be mentioned, which would certainly be the case if it no longer existed at the time of the conquest. Nonetheless, the identification of al-Hafn with Zawyet al-Sultan must be regarded as uncertain.

Attempts to shed light on the problems of the sixth- and seventh-century ceramic corpus discussed in chapter 1 have not been very successful. The use of parallels for

dating purposes reinforces the dominance of the sixth-century material over that of the seventh century. While the sixth-century corpus could be potentially extended into the seventh century, the small number of sherds dated to the seventh century have been found in sixth-century contexts on other sites. However, a comparison of the assemblages of the main city and of Kom al-Dik is perhaps useful: certain forms of ARS collected from Kom al-Dik were manufactured later than those from the main city. If the beginning of large-scale importation of Aswan wares is accepted as a result of the abandonment of Zawyet al-Sultan, which is known to have had its own kiln sites, then the majority of the Aswan wares at Kom al-Dik must post-date the end of occupation of the Roman site.

Unfortunately, these ceramics are subject to the same inaccurate dating as other wares, but the sheer volume of Adams's (1986) ware R4 (c. 550–850), many examples of which are paralleled from the late sixth and seventh centuries, is surely significant. The evidence could perhaps indicate that most of Zawyet al-Sultan was destroyed by fire around the turn of the sixth and seventh centuries, well before the Arab conquest, but, given the source problems, it is equally arguable that the town survived for up to another century. This uncertainty is surely of great significance for other sites the abandonment of which has been dated to the sixth century, and should perhaps lead to a re-evaluation of settlement patterns at the time of the Arab conquest.

Chapter 3

Ribat Settlement: the Example of Tell Tinnis

Of the two mechanisms for Arab settlement of Egyptian towns mentioned by ‘Athamina (1997), it is the concepts of *ribat* and *thaghr* that apply to Tinnis. The town is included in lists of places so designated (al-Maqrizi, ed. 1911, 114 (*ribat*); 1913, 101 (*thaghr*)). Definitions of these terms are somewhat fluid (see *Encyclopaedia of Islam* articles ‘Ribat’ and ‘Thughur’ for a full discussion). In the early Arab period, a *ribat* was any area where military forces, particularly horsemen, gathered in preparation for an attack. By the Mamluk era it had become a religious teaching institution not unlike a small *madrassa* (see p. 91 below). During the period of Tinnis’s prosperity (roughly the eighth to the twelfth centuries), the term was used for specific threatened frontier fortifications such as Tinnis and Damietta, Alexandria, Farama and Aswan. Fighters who died in defence of *ribats* had the status of *mujahidin* in the after-life, and occupying and settling *ribats* was strongly encouraged (‘Athamina 1997, 109). While *ribat* is apparently used to denote structures, the term *thaghr* is applied more generally to an area: al-Maqrizi describes *thaghrs* as places with numbers of *ribats* (ed. 1911, 114). Tinnis was apparently designated a *ribat* because of a series of attacks on the Manzala region by the Byzantine navy in the eighth and ninth centuries, with particularly serious raids in 720, 735 and 853 (‘Athamina 1997, 103; al-Kindi, ed. 1912, 70, 201; Ibn Taghribirdi, ed. 1929–72, I, 244, 277; al-Tabari, 1985–1999 vol. 34, tr. Kraemer 1989, 125–6; al-Maqrizi, ed. 1922, 199). During this period, the town must have been under constant threat from the sea.

Sources concerning Pharaonic Tinnis

In order to understand the impact of Arab settlement brought about by *ribat* status on the town, we must examine the situation of the town in earlier times. The existence of Tinnis prior to the third century AD has never been convincingly demonstrated. Said states that Tinnis was already an important town ‘in early dynastic if not Predynastic time’ (1993, 77), but he provides no references for this statement. The archaeological evidence for predynastic or Pharaonic habitation at Tinnis is also sparse. There are two archaic round

schist palettes reportedly from Tinnis, which Kaiser dates to the time of Ka-Narmer or slightly earlier (1964, 112), in the Cairo Museum (44172, *Journal d'Entrée* volume 9: 24–5, registered in 1913), but these may have been brought from elsewhere. Despite the fact that the mound has been dug over and looted for centuries, no pre-Roman remains are visible on the surface. The only Pharaonic artefacts known from Tinnis are a single *shabti*-figure found during recent excavations by the SCA and a block carved with the Horus-name of Psusennes I listed by Porter and Moss (1934, 13). These also could have been brought from other sites nearby. The movement of stone blocks over considerable distances across the Delta is well attested, and Abu Salih the Armenian, quoting al-Kindi's *Fada'il Misr*, actually describes an excursion to bring stone to Tinnis from a monumental gateway at Pelusium/Farama (Abu Salih, tr. 1895).

Tinnis as the location of Herakleopolis Parva

Clédat (1923) argues that Tinnis was the site of Herakleopolis Parva, which he equates with the Pharaonic Nēn nsou(ten) or Henensou(ten) and the coptic Henes (Ⲭⲛⲏⲥ). Earlier scholars had already attempted to identify the location of Herakleopolis Parva. Griffith (Petrie 1888, 103, n. 2) writes concerning the route across the eastern Delta found in the *Antonine Itinerary* (Pelusium to Tanis via Heraclius): 'Tell Belîm (Tell esh Sherîg, Eng; Tell Sehrig, F.), visited by Mr. Petrie, is an important mound lying between Pelusium and Tanis, and must be Heraclius or Heracliopolis'. Naville (1894, 16) claims (without providing supporting evidence) that Herakleopolis Parva was to be found at modern Qantara on the Suez canal. He also discusses the location of the toponyms Hanes (mentioned in Isaiah 30, 4) and Khininsi (from the great inscription of Assurbanipal) in the Delta, but does not link these names with Herakleopolis Parva. Müller, in his 1901 edition of Ptolemy's *Geography*, like Griffith, names 'Tell el Serig' as the site of Herakleopolis Parva. Henensou and Herakleopolis Parva are first linked together by Daressy, but he locates them in the vicinity of Tell Moqdam, much further south-west (1917, 124–5). Daressy's paper does not refer to Griffith's suggested location; he was perhaps unaware of it. Toussoun, like Griffith, uses the *Antonine Itinerary* to identify Herakleopolis Parva (1922: 16–7). At this time, the Egyptian Antiquities Service

apparently accepted Tell Belim as its location; instead, Toussoun proposes the nearby site of Tell Ayid, slightly east of Tell Belim. However, it is clear that the *Itinerary* contains many inaccuracies, so Griffith, Toussoun and, later, Clédat, were all able to use it to support different conclusions.

Clédat's notes, part of an ongoing series, suggest locating Herakleopolis Parva and Henensou at Tell Tinnis. His arguments fall into three categories: etymological, geographical and topographical. The last of these is based on facile comparisons of features supposedly common to both Tinnis and Henensou, such as port facilities (1921, 183–4) and textile production (1923, 180). The second argument is based on the *Antonine Itinerary*. Clédat claims that the distances fit Tinnis better than elsewhere (although a route from Pelusium to Tanis via Tinnis would hardly be direct); he does not mention, and perhaps had not seen, Toussoun's publication of the previous year, where the same distances are used to argue for another site. In his remaining, etymological, arguments, he points out the distinct phonic similarity between Henensou and the coptic Thennesos (ΘΕΝΝΕCOC).¹ The Henensou – Herakleopolis Parva link he explains by religious similarities: the chief deity of Henensou was the 'Royal Child', a form of Horus/Harpocrates (Gauthier 1925–31, vol. 3, 93), associated by the Greeks with Herakles (this process is well-known from other cities, eg. Heliopolis, Leontopolis, Crocodilopolis). The equation Henensou – Henes – Thennesos – Tinnis is plausible in terms of assonance (the Thennesos – Tinnis link is well-documented in the Copto-Arabic *scalae*; see Timm 1984–1992, vol. 6, 2688; Munier 1943), while Clédat uses the *Itinerary* and religious parallels to link Herakleopolis Parva to the Egyptian names.

This line of argument is problematic. Clédat's conclusion that Tinnis is the Coptic town of Henes does not take into account the Coptic name Thennesos, which clearly belongs to the town; the latter is the only one used by classical writers such as John Cassian, who make no mention of Henes. It is reasonable to expect alternative spellings of the same place-name to be in simultaneous use, and it is likely that different ethnic

¹ Various etymological origins have been put forward for Tinnis: de Sacy (1810, 160) and Quatremère (1811, 333–4) link Tinnis with the Greek word for island, νησος, with the addition of the Coptic definite article, ΤΗΝCOC, while Champollion, favouring an Egyptian origin, suggests it is a corruption of Ta-n-Isis, the town of Isis (1814). Ignatio de Rossi had earlier suggested the etymological association of Tinnis with Bucolis (1808, 223) which now looks implausible.

groups will maintain parallel names in their own languages. The Hebrew name Hanes is applied to Tinnis, but only from the tenth century onwards, and this is apparently a deliberate attempt to link the settlement with a biblical town to provide legitimacy of occupation, as the Crusaders also did (Golb 1965, 270). But it seems implausible that two different Coptic names for one town should have existed simultaneously. Thus, Henensou – Henes can be linked with Herakleopolis Parva while Thennesos – Tinnis must be separate. It thus seems very unlikely that Tinnis could be Henensou and/or Heracliopolis Parva.

Clédat's suggestion has not been taken up by later scholars. Gardiner (1924, 95) dismisses his arguments as 'supported mainly. . .by an untenable etymology'. He assumes Herakleopolis Parva to be at Tell el-Sherig 'as is usually supposed', and goes on to give the alternative names as cited by Griffith (Tell Belim; Petrie 1888) and Grenfell (Tell Battik; Grenfell and Hunt 1915, Oxyrhynchus papyrus 1380, 56n). Gauthier, in his geographical dictionary (1925–31, vols 3, 94 and 4, 84), acknowledges Clédat's work but cites Gardiner's views.² Gauthier's later research ignores Clédat's suggestion altogether (1935). Daressy also disagrees with Clédat, suggesting that the site of Herakleopolis has not yet been identified or has long been lost beneath Lake Manzala (1933). It should be noted that the arguments in favour of locating Herakleopolis Parva or Henensou at Tell Belim/el-Sherig/Battik have never been aired: Ball agreed with Toussoun and argued for Tell Ayid on the basis of co-ordinates found in Ptolemy's *Geography* and distances in the *Antonine Itinerary* (1942). Toussoun's suggestion that Tell Belim may be the site of the Islamic town of Girgir demonstrates how little is known about the archaeology of this mound (1922, 86). The Egypt Exploration Society's ongoing survey at the site may end the controversy; either way it seems clear that evidence for placing either Henensou or Herakleopolis Parva at Tell Tinnis is slim.

The origins of Tinnis as an administrative centre

In the historical sources, Tinnis first appears in the *Conferences* of John Cassian who calls it an '*oppidum*' in the late fourth century, although whether he was using this term in

² Clédat's reference to Gardiner should read *JEA* 10, not *JEA* 5.

a technical, administrative sense is unclear (ed. 1955–1959, book 11, 1). The town may have come to prominence as a result of Diocletian's reorganisation of the provinces, probably at the end of the third century. At this time, administrative power was devolved to smaller units, with many towns becoming centres for the government of the surrounding area (Barnes 1982). Jones speculates that Tinnis's status was changed: 'It was only logical to separate such a town from the nome to which it was presumably attached under the old régime and give it a separate organization when cities were established. The origin of the city may therefore be dated with confidence to the end of the third century' (Jones 1971, 344). However, it is not until the Council of Ephesus in 431 that we get a clearer indication of the town's status. The attendance of 'Bishop Herakleides of Thinis' demonstrates that Tinnis was the centre of a diocese by this time (Munier 1943; Mansi 1760, cols. 1219–20; Gerland and Laurent 1936, no. 284). George of Cyprus, writing in c. 606, lists Thenessos among the dioceses in the *eparchy* of Augustamnica A, although the town is apparently absent from the works of Hierokles, writing in c. 535 (Ball 1942). An entry by the latter author for the unknown town of Pannis, in the *eparchy* of First Augusta, is linked by Ball to Tanis; it could equally be a mistake for Tinnis. It seems likely that Tinnis was a town of moderate importance by the mid- to late Roman period, but its history before then is obscure.

The Tinnis hinterland: environmental change

Historical sources (and academic studies: see Zahran 1992, 342) often cite seismic events to explain the flooding of reaches of land along the coastal littoral, alteration to the local environment and resulting changes in the condition of Tinnis. The well-documented earthquake and *tsunami* of 21 July 365, which hit Alexandria and much of the Delta, must also have caused some damage to Tinnis and its environs (Jacques and Bousquet 1984; Ambrayeses, Melville and Adams 1994, 22–3; Russell 1980). Descriptions of this event are clearly inaccurate; while the amount of damage was undoubtedly great, the area affected was limited. Later sources greatly exaggerate the range of the *tsunami*, with Georgius Monachus even stating that the British coast was hit (Ammianus Marcellius, tr. 1963, 649–50; Sozomenes, ed. 1860, 247–8; Theophanes, tr. 1997, 56; Cedrenus, ed.

1838, 543–4; Glycas, ed. 1836, 473–4; Georgius Monachus, ed. 1978, 196; Rebuffat 1980). The account of John Cassian (tr. 1997, 410), who visited Egypt during the last two decades of the fourth century, some fifteen years after the earthquake, is typical:

Its lands, and indeed the greater part of the neighbouring region, which was once very rich (since, as the report goes, everything was furnished for the royal table from it), had been overrun by the sea when it was shaken by a sudden earthquake. The villages were all destroyed, and once fertile lands were so covered with salt marshes that one would think that what is sung spiritually in the psalm was a literal prophecy about that region: “He turned rivers into a desert and springs of water into thirsty ground, a fruitful land into a salty waste for the wickedness of those who dwell in it.” In these places and in this way, then, the inundation made islands as it were of many towns located on high outcroppings that their inhabitants had fled from.

The lakes and swamps of the northern Delta were certainly present in some form prior to the earthquake of 365. Strabo (c. 63 BC–c. 21 AD) writes that the Nile mouths were ‘shallow and marshy’ (tr. 1859, 17.1.18), and that ‘Between the Tanitic and Pelusiac mouths lie lakes, and large and continuous marshes which contain many villages’ (17.1.21). This strongly suggests that the wetlands in the northern Delta were created by long-term environmental processes. The presence of marsh and lagoon is typical of delta environments; it is only the location and extent of these habitats that change (Stanley and Warne 1998). Thus, despite the description of the rapid inundation of the area with only towns on high ground surviving (notably Tinnis and Tuna) that is found in many historical works (for example that of Ibn Bassam; see Appendix), it is difficult to imagine that Tinnis was ever on dry land. The dimensions of the island may have changed over time and surrounding land must have all but disappeared during the flood season, but the local environment was surely never agriculturally productive. As John Cassian observed (tr. 1997, 409), on arriving by boat at Tinnis shortly after 380 AD, the inhabitants made their living in other ways, and probably always had done so:

having completed our voyage, we came to an Egyptian town named Thennesus. Its inhabitants are so surrounded by the sea and by salt swamps that, because there is no land, they have to

devote themselves to commerce alone and get their wealth and substance from sea trade. Indeed, when they want to build houses there is no land, unless it is brought from far away in boats.

Many factors may affect local environmental change, including sea level rises caused by climatic warming, underwater tectonic movement, changing rates of alluvial deposition and subsidence. Gradual climatic warming across the Middle East, Europe and Asia is attested both archaeologically and textually, peaking around 600 AD (Lamb 1995; Huzayyin 1986). This resulted in a rise in eustatic sea level to the present level or slightly higher, representing an increase of about a metre since 500 BC (Mörner 1971; Flemming 1992). Sea level rise results in the growth as well as the erosion of deltas (Moore 1966, 102–3); however, the Roman period is well documented as one of reduced alluvial deposition (Vita-Finzi 1972). The small quantities of fresh silt laid down across the Delta combined with the gradual subsidence of coastal regions must have combined to produce a rise in relative sea level (Vita-Finzi 1969; Stanley and Warne 1998). This slight rise may have prompted the extension of the Delta's coastal lagoons into some of the saline swamps across the northern reaches of the Delta. Today, roughly a third of the Delta lies below three metres elevation, and Lake Manzala (although 1,350 sq. km) is rarely deeper than a metre (Sestini 1992). Recent scientific reports indicate that much of the northern Nile Delta will be flooded in the next fifty years (Stanley 1997; Stanley and Goodfriend 1997; Stanley and Warne 1998; Frihy, Dewidar and El Banna 1998). Indicators of changing local environment might be looked for on the site itself in the form of plant and other organic remains. However, the salinity of soil does not allow the preservation of such material in large fragments and archaeobotanical studies or pollen analyses are beyond the scope of this work.

Tinnis as a Christian centre

Tinnis is recorded as the site of a siege and battle during the Arab conquest, dated by Butler to 19 July 642 (1902, reprinted 1978, 356–7). The local environment must have been a factor in the conquest of Tinnis; the invaders, at the very least, must have reached the town by boat, a means of transport with which they were not familiar. As the site stands at the moment, dry land outside the walls is limited to low mud flats edged with

shelly banks and reed beds, mainly on the seaward side of the island. Currently, any battle outside the walls would be at least partly fought from boats, or involve floundering in the shallow reaches of the lake. Various myths have arisen around these events, relating mostly to the character of the Christian Arab governor of the town, Abu Tur/Thur, and the conversion of many members of the besieged army to Islam after their defeat. The final recorded act of the conquering commander is the conversion of the main cathedral into a mosque. This desire to mythologise the impact of Islam on the town may reflect Tinnis's reputation as a religious centre: many of the historical sources relating to Tinnis concern church matters, and the town's population was clearly very involved in the religious issues of the day.

As stated above, Tinnis was certainly a bishopric by the early fifth century, being represented at the councils of both Ephesus (431) and Chalcedon (451). Many other bishops, both Coptic and Greek orthodox (Melkite), are mentioned by name in the *History of the Patriarchs* and elsewhere, from as late as the eleventh century. (Daressy's 1933 theory that the bishops of Tinnis were also those of Tanis is entirely implausible.) These accounts, as one might expect from ecclesiastical sources, are dominated by conflict and bad feeling between the different churches, and they emphasise the strong Greek influences on the town. A sixth-century letter records the persecution of a Copt from the region of Tinnis by the authorities (Crum 1905, no. 185).³ Butler (1902, reprinted 1978, 354) suggests that, at least initially, conversion and Arabisation were minimal at Tinnis, as little settlement took place in the area. Copts apparently remained in the majority at Tinnis until at least the tenth century, and perhaps beyond (Lev 1999). Wilkinson noted during his visit that certain of the inhabitants of the Manzala area still called themselves 'Malakeen' and so were presumably Greek Orthodox Christians (1843, 447); and even today, there is a large Christian minority with many churches in nearby Port Said. A Jewish population is known to have lived in medieval Tinnis, and the town is mentioned in a number of Geniza documents (Golb 1965 and 1974; Lev 1999).

³ For a thorough survey of the sources relating to Tinnis's ecclesiastical history, see Timm (1984–1992, vol. 6, 2686–94).

Medieval Tinnis as an industrial centre

Tinnis flourished during the medieval period, becoming a great industrial and trading centre. The decline of the port of Pelusium due to the silting of its harbour in the ninth century may have contributed to the prosperity of Tinnis (Goodfriend and Stanley 1999; Carrez-Maratray 1999, 18). Tinnis was apparently already renowned for its wealth by the ninth century, when Patriarch Michael (881–889), also known as Khael, sought gold from the Christian population here in order to pay a debt of ten thousand dinars to Ahmad ibn Tulun (*History of the Patriarchs* tr. 1948, vol. 2, pt. 2). The prosperity of Tinnis led to several detailed accounts of the town being written during its later history. The most important sources are Ibn Hawqal (second half of the tenth century; tr. 1964), Nasir-i-Khusraw (tr. 1986), who visited Tinnis in 1047, al-Idrisi (completed book 1154; ed. 1970), Yaqut (completed book 1224; ed. 1866–71) and al-Maqrizi (1364–1442; ed. 1922). Space is not available for a full examination of these texts, and they deal largely with the same aspects of the city: its textile industries, its provision for water storage, its fishing industry. One particular historical source, though, is worthy of special attention. It is the *Anis al-Jalis fi Akhbar Tinnis*, written by an inhabitant of the town, and owner of one of the many water installations, Ibn Bassam al-Muhtasib al-Tinnisi. Although parts of Ibn Bassam's work are quoted by Yaqut and al-Maqrizi and discussed by Lev (1999), he provides many details about the layout of the town which are not repeated elsewhere, and so a full translation is given here (see Appendix).

Descriptions of the textile industry emphasise the wealth it produced and the fantastic prices which individual types of cloth could fetch (see Serjeant 1972). The basic material manufactured at Tinnis was linen, sometimes interwoven with different threads, such as silk; the richest cloths apparently contained gold thread. The town's factories produced a number of cloths for the *ka'ba* shrine in Mecca from the Fatimid period until the abandonment of the town. The industry was organised into workshops; according to Nasir-i-Khusraw, textiles from the royal workshop were not for sale. Lengths of cloth from Tinnis were held in store by the authorities in Cairo and played an important role in the economy of Egypt. The production of textiles appears to have been heavily regulated and taxed by the government, at least in Fatimid times (Lev 1999). Perhaps the central

significance of weaving to the area can best be seen in a poem by Abu al-Fath ibn Waqi al-Tinnisi (quoted by Ibn Battuta, tr. 1958, 35), which likens the watery landscape around Tinnis to the surfaces of various types of cloth. General Andréossi observed that the textile industry remained strong in Manzala town as late as 1798 (Denon 1807, cxlv). As well as textiles, metal goods were manufactured at Tinnis, the quality of which greatly impressed Nasir-i-Khusraw, and the town produced lime, gypsum, oil and salt (Ibn Bassam, see Appendix; Lev 1999).

The majority of the medieval writers listed above note the complex arrangements made by the townsfolk to keep themselves supplied with fresh water throughout the year. During the flood season, the lake became potable, and channels were opened, allowing water to enter the town's many underground cisterns. These cisterns stored the full annual allowance of water for the town, which was lifted, when required, by means of waterwheels or well-shafts through the cistern roofs. In 882–3, Ahmad ibn Tulun visited Tinnis and founded shops and cisterns, afterwards known as *al-Amir* (Yaqut, ed. 1866–71, vol. 1, 882–7; Ramzi 1953–60, vol. 1, 197–8). Water was bought and sold as required for the rest of the year. The large number of cisterns and water channels are the most notable feature of the remaining archaeology of the site (see below, p. 60–61, 67).

Such a rich and prosperous town was bound to be the site of some conflict. During the struggle for control of Egypt after the death of Harun al-Rashid in 809, 'Abd al-'Aziz ibn al-Wazir al-Jarawi, presumably a governor of Tinnis, led an army against rival factions in Fustat, Alexandria and Upper Egypt. Al-Jarawi, with his force of Yemeni Arabs from the north of Egypt, based his uprising in Tinnis. Fighting continued until c. 826 (Kennedy 1998, 80–2; al-Maqrizi, ed. 1922, 201–9; tr. 1811, 309–20; al-Kindi, ed. 1912, 154–7). The town was again the site of an unsuccessful anti-Fatimid revolt in 970–1, after which the inhabitants were charged one million *dirhems* blood money for dead Fatimid soldiers (Lev 1991, 17–8).

The abandonment of Tinnis and the history of the ruins

There is some disagreement about what caused the desertion of such a prosperous manufacturing centre. Gibb suggests that it was the extortionate duties charged on the

government monopoly trade that led to the ultimate decline of Tinnis; his theory is supported by al-Maqrizi, who writes that the financial exactions of a particular vizier destroyed the town's trade with Iraq (Ibn Battuta, ed. 1958, 35 n. 100; al-Maqrizi, ed. 1922, 200). Lev also attributes the failure of the town to a crisis in the textile industry, which he suggests was caused by the collapse of the Fatimid caliphate and resulting lack of demand for expensive *tiraz* cloth (1999, 95). However, had this been the case it is hard to believe that the weavers of Tinnis were not capable of diversifying into other areas of textile manufacture. While economic factors may have been involved in the town's decline, it is clear that the political situation placed the inhabitants of Tinnis in a precarious position.

The town is recorded in Crusader sources as the site of the biblical city of Taphnis; the adoption of this identity presumably justified the attacks that were made upon it. Tinnis was raided and taken by a small Frankish fleet in November 1168, perhaps in retaliation for the use of the town as a base by the Fatimid navy for raiding Crusader ships and ports in 1158 (Lev 1991, 114). According to William of Tyre, the town was plundered and many of the inhabitants killed or imprisoned.⁴ This attack and one in 1219 are the only raids on Tinnis noted in the western historical sources. However, al-Maqrizi records the pillaging of the town by Sicilians in 1153–4 AD (al-Maqrizi ed. 1922, 210; tr. 1811, 325). The Frankish army passed Tinnis again in 1169, and William of Tyre noted that what was formerly a great city had been reduced to a small town (Bk. 20, ch. 14). Presumably this decline was a direct result of the Crusader raids.

Attacks on Tinnis apparently continued regularly for the next fifty years. Again according to al-Maqrizi (ed. 1922, 210–3), the town was besieged briefly in 1175–6 by about forty Sicilian ships and fell to a similar force in 1177–8, who plundered and burned it, taking many of the inhabitants prisoner. The hinterland was pillaged and many captives taken in 1179–80 by ten Frankish galleys from Ascalon, although the leader of this raid was captured and executed by the Egyptian authorities. To counter the threat posed by the Crusader fleet, Tinnis was refortified and a strong citadel built (at considerable expense)

⁴ *Historia*, bk. 20, ch. 8; the Latin and French original text can be found in the *Recueil des Historiens des Croisades*, while a translation was published in 1943; Runciman 1952, 381 also discusses the raid on Tinnis.

in 1181–2. Al-Maqrizi states that the walls were rebuilt upon the foundations of the former enclosure. However, its vulnerable position meant that Tinnis was no longer a plausible base for the rich manufacturing industries that had been the town's main source of income, and it was no longer a viable settlement. In 1192–3 Salah al-Din ordered the evacuation of the population of the town to Damietta, leaving a garrison in the citadel of Tinnis to defend the fortifications.

The final desertion of Tinnis took place after the Fifth Crusade (1218–1221; see Runciman 1954). During the siege of Damietta in November 1219, Tinnis was visited by Frankish scouts, who, according to the Crusader Oliver of Paderborn, took control of its citadel, from which the garrison had withdrawn. At that time, the fortifications were clearly still impressive but were restricted to the fortress rather than enclosing the entire town (ed. 1971, 97–8):

Returning they declared to us that never had they seen a stronger fort on a plain; it had seven very strong towers, fortified by tortoises, and a breastwork; and besides it was surrounded by a twofold ditch, each part of which is protected by a wall. A lake stretches out in breadth round about to such an extent that approach is impossible to our horsemen in winter, and so difficult in summer that it would never be taken by our army in siege. The lake abounds in fish, and from fisheries four thousand silver marks were paid annually to the Sultan of Babylon, as was told to us by elders; besides, it abounds in birds and salt works; many casalia round about were subject to it. The city beyond the fort, greater than Damietta, once famous but now in ruins, bears witness to the size of its buildings.

Al-Maqrizi reports that in 1227 the Ayyubid Sultan al-Malik al-Kamil, realising the futility of continuing the defence of the citadel, razed the fortifications, and the town was finally abandoned.

Abu al-Fida, who visited Egypt between 1314 and 1319, described Tinnis as abandoned and ruined (Abu al-Fida tr. 1848) as did Ibn Battuta, who passed the site during the second quarter of the fourteenth century (Ibn Battuta, tr. 1958). But despite the official desertion of Tinnis, it appears that some buildings remained in use more than a century after the destruction of the city walls. In 1346, when Fra Niccolo da Poggibonsi arrived at the 'port of Tanis', he encountered people there (Poggibonsi, tr. 1945). He described the site as a very beautiful city on the banks of the Nile, abandoned after a

plague of flies and reached by travelling up-river ‘for several miles’. Fra Niccolo relates how the man in charge of the port demanded money for transporting him to land; probably he was not encountering state officials but rather freelance extortioners. He gives the impression that some buildings were at this point still in use, although he does not mention any standing remains. It is not unlikely that local residents, who to this day make a poor living fishing and plying what boat trade they can, should shelter in the remains of the town, or erect huts, and try to exact extra income from visitors.

Nearly eighty years later, Ghillebert de Lannoy visited Egypt, staying from 1421 to 1423; he passed through Tinnis on his way to Jerusalem. Ghillebert, who had considerable military experience, took the opportunity of his ambassadorial visit to Egypt to note many details of potential strategic importance. As a result, his account of the Manzala region concentrates on patterns of shipping: calm places to anchor, the safest routes along the coast, strategic defensive points on the Damietta Nile branch, canals into Damietta itself, trading patterns on the lake. His description of Tinnis (‘Thênes’), here translated from Lannoy’s fifteenth-century French, is as follows (ed. 1878, 138–9):

The port of Thênes is a very good port for small boats, galleys and flat-keeled barges; the entrance is very wide from one side to the other, and it lies, as one arrives by sea, towards the south-west. But slightly before the harbour entrance, there is a mouth two or three miles wide, almost as dangerous and perilous to enter and pass through as that of Damietta, because the sea flows against the current of the freshwater issuing into lake Lescaignon [Manzala] by the port. There is no access to this mouth except a single canal called the watercourse, which is only seven or eight *quarters* deep, and by which one must enter and leave even though the entrance of the mouth is extremely large. This canal changes from one place to another very often, due to the strange currents which move the sands here and there. Entry can be difficult for all boats of two hundred *bottes* without a pilot, but with a good pilot, boats of three or even four hundred can enter easily with a good, soft wind from the sea; and after one is inside the mouth there is a very good depth of two, three or four *braches*. [. . .]

On this port on land there is no town or village, but two or three poor houses, half fallen down and uninhabited. But it is known that, notwithstanding this, there are always people, boats, camels and merchandise which come and go by land and water in that place, because by land and by water, it is the standard route going from Cairo to Gaza and to Jerusalem.

Although portions of this account are somewhat obscure, it is clear that, despite having been technically uninhabited for nearly two hundred years at the time of Ghillebert de Lannoy's visit, the island was still an important maritime trading base.

Further mentions of Tinnis occur in the writings of Joos van Ghistele, Leo Africanus, and Gabriel Brémond. Joos van Ghistele, who was in Egypt between 1482 and 1483, merely notes that at that time a Nile branch still carried the name 'Tinees' (Van Ghistele, tr. 1976, chap. 30, 173/104). Leo Africanus probably visited the country three times and was there shortly after 1517. Irritatingly, he did not consider eastern Egypt as part of Africa, omitting it from his detailed *Description of Africa*, with the intention of including it in a book about Asia, which either he never produced or has been lost. He notes only that a branch of the Damietta Nile arm, which issues into the Mediterranean via a lake, has upon its banks 'the most ancient citie of Tenesse' (Leo Africanus, ed. 1896, 856). Whether he ever visited Tinnis is not clear; his reference could as well be to ruins as to a functioning town. However, Brémond (ed. 1974), who was in Egypt from 1643 to 1645, provides a description of 'Tenesse' as a well-populated, rich and pleasant town, which it certainly no longer was in the mid-seventeenth century. It seems unlikely that he ever visited the site.

The *savants* of Bonaparte's Egyptian expedition paid considerable attention to the region of Manzala, surveying in 1798 and publishing a full account of its geography and archaeology (Andréossi in Denon 1807). A description of Tinnis appears in appendix 7, clvii:

Tennys, ville Romaine, bâtie sur les débris d'une ville Egyptienne, florissait du temps d'Auguste. . .

Les villes de Tennys et de Toúnah, ruinées, sont maintenant au milieu des eaux, et elles appartiennent, ainsi que nous l'avons dit, au lac Menzaléh. Comme toutes les villes qu'atteignait l'inondation, elles étaient placées sur des levées artificielles. La terre mêlée de décombres sur laquelle on marche à présent est entièrement inculte, et sa surface est saisie par une sorte de cristallisation, en sorte que le terrain crie et cède sous les pieds comme la neige qui commence à geler, ce qui rend ces îles très pénibles à parcourir.

Tennys était une vaste cité; une enceinte de murailles, flanquée par des tours, avec un fossé plein d'eau, faisait sa défense. Elle ne présente aujourd'hui aucune habitation. Des vestiges de bains; quelques ruines de souterrains voûtés avec art, dont les murs sont recouverts d'un ciment très dur et très bien conservé; les fragments d'une cuve rectangulaire de granit rouge: tels sont les seuls monuments

que l'on distingue au milieu de débris immenses de briques, de porcelains, de poteries, et de verreries de toute couleur. Les habitants des pays circonvoisins font continuellement des fouilles dans cette île; ils y recueillent des matériaux propres à leurs habitations. C'est ainsi que se sont transportés les colonnes, les piédestaux, les chapiteaux et les autres monuments que l'on voit placés d'une manière si barbare dans les mosquées et les principaux édifices, ou bien jetés dans les constructions ordinaires. Le seuil des casernes de Damiette est un fragment d'un très bel obélisque à hiéroglyphes. Nous avons trouvé dans cette ville, aux côtés d'une porte, deux piédestaux chargés d'inscriptions, l'une Grecque, l'autre Latine; enfin, dans une mosquée, une colonne de marbre gris veiné, portant une inscription Grecque un peu altérée.

This is the earliest good description of the ruins, indicating what has been lost by the continuous digging of the site by local people.

Further large-scale reduction of the site is recorded by Wilkinson, who noted that archaeological material from Tinnis was dumped in the Mendesian mouth of the Nile to impede the entrance of hostile boats. He also recorded the presence of a slab in the mosque of 'Aboulata' outside Damietta inscribed in Greek with the name of Thennesus. His description of Tinnis contains details of archaeological interest (1843, 407–8):

They [the ruins] are of Roman time, and consist of baths, some tombs, and the vestiges of buildings, with an endless profusion of broken pottery, which covers the whole surface of the island. There are no traces of hieroglyphics. The tombs are curious, vaulted and painted, mostly in red on a white ground. Several earthenware pipes have also been discovered there, formed of square tubes fitting into each other, and stamped with a letter or mark, either of the owner or the maker. One part of the island is higher than the rest, and has been supposed to mark the site of a fort or acropolis.

Previous excavations at Tinnis

Tinnis has attracted minimal archaeological study to date. Patricolo (1911) carried out a brief survey of four cisterns of different types, apparently in a single day. However he does not give the location of the buildings in question, which have today disappeared without trace (unless they correspond to any of those uncovered by the SCA; see below, p. 67). The illustrations imply that Patricolo had to dig down to the cisterns, rather than their being surface structures; they are shown with a rubble overburden. What else he may

have uncovered during this exercise is not recorded, but it seems unlikely that he should have found only cisterns in each place he tried.

Another, rather mysterious, allusion to fieldwork at Tinnis is to be found in Munier's 1919 study of an engraved block from the site in the Cairo Museum. The stone is inscribed with the name of the martyr Procopius, of whom Munier says there is no other record in Egypt. Unfortunately, Munier merely mentions in passing the circumstances in which the stone was found: 'En 1912, une personne, autorisée à faire quelques fouilles dans le Tell, ne découvrit rien; mais elle ramena les colonnes en granit et en marbre qui gisaient depuis longtemps dans les ruines d'une église, celle qui fut convertie en mosquée' (1919, 73). The brief description clearly indicates that less than a hundred years ago sizeable remains were still being uncovered. As with the excavations of Patricolo the location and form of the church/mosque is not recorded, nor is the whereabouts of the columns, of which the local Inspectors know nothing.

The carved stone on which Munier wrote his article was at that point, according to him, in the Cairo Museum, and it seemed possible that its entry in the *Journal d'Entrée* might preserve the name of the excavator. I consulted all volumes covering the years from the discovery of the stone in 1912 to its publication in 1919, at which point it was stated to be in Cairo, but no entry for the stone was found. Either the stone was never brought to the Museum, which seems unlikely as Munier presumably saw it there, or it was never registered. The only objects from Tinnis registered during this period were the two schist palettes noted above on p. 47. The registration year (1913) suggests that these may well have come from the 1912 excavations, but no details of the excavator occur with the entry; the identity of this person must for the moment remain a mystery.

The only other areas cleared to date have been uncovered by the SCA. Excavations were carried out between 1979 and 1998 under the direction of 'Abbas 'Abbas al-Shinawi, Director of the Port Said Museum, and Said 'Agami 'Arafa, Chief Inspector for Tinnis, and unfortunately remain unpublished. However, the excavators were kind enough to give me copies of detailed reports relating to this work, the main subjects of which are descriptions and dimensions of structures uncovered and lists of registered objects. The SCA map of the exposed structures is useful, although it does not

show relative heights of the remains and is not completely without problems (fig. III.2). I am very grateful for permission to include it here.

Aims of fieldwork undertaken in spring 1999 and spring 2001

The site of Tinnis has never been properly surveyed, and I had hoped to map the town. Unfortunately, a full survey proved logistically difficult and only a sketch map based on satellite photographs was possible (fig. III.1); but this did allow the comparison of the physical remains with the detailed descriptions of the town provided in medieval sources. During the first season, I made surface collections around the site with a view to establishing the town's chronological range and potentially identifying areas of post-abandonment activity, and I recorded the layout and visible features of the site. A sizeable area at the south end of the mound has been cleared by the SCA, revealing many fired-brick structures and a large number of cisterns. In the absence of current excavations, this area provided access to the stratigraphy of the mound, and I hoped that examination and recording of exposed profiles in the area, many linked by the large network of water channels, would provide evidence for the development of this part of the site over time. This was carried out during the second season.

Layout of medieval Tinnis

The outline of walls and buildings can still be traced in some areas of the site, although much of it, especially the central areas, has been transformed into featureless mounds. Certain visible structures are known to have been remodelled just prior to the abandonment of the town and so must represent the latest phases of occupation. The existence both of substantial identifiable archaeological remains and of detailed descriptive accounts such as that of Ibn Bassam provides an opportunity for topographical study otherwise only available for Fustat.

The fortifications:

The entire site, with the exception of a few buildings, is enclosed by sizeable walls with horseshoe towers (fig. III.3). These walls, now robbed out, originally had at least one

course of limestone blocks as a foundation; a single stone survives in situ on the north-east side of the town. The upper courses were built of fired brick, some of which still survives along the edge of the robber trench (fig. III.4a). Apart from a section of about forty metres to the south-west which disappears into the lake, this ditch runs all round the town. There are what appear to be gates through the walls on all sides of the town. This surviving enclosure may be that constructed by Salah al-Din in 1181–2, although it is not clear whether he rebuilt the town walls or just the fort. Lev suggests that the amount of money the Sultan reportedly spent would not permit the full renovation of all the fortifications (1999, 94). Salah al-Din's fortifications were laid out on the line of the older enclosure, presumably over the walls built by al-Mutawakkil in 853–4 (al-Maqrizi, ed. 1922, 209, 212). The *History of the Patriarchs* records that most of this earlier wall was demolished after a revolt of Muslim youths in Tinnis during the reign of al-Mu'izz (*History of the Patriarchs* vol. 2, pt. 2, 131–3; Lev 1999, 94). If this account is accurate, the town would have been largely unwalled from the mid-tenth to the late twelfth centuries, after the worst Byzantine attacks of the eighth and ninth centuries but before the main Crusader attacks.

Salah al-Din certainly constructed a citadel, which Wilkinson suggests may be beneath one of the higher mounds of the site. There are two mounds which are considerably larger in height and width than the surrounding heaps and might thus be the location of the fort. The map of Tinnis in the *Description de l'Égypte* places the fort to the south-west of the island; the ground plan of the citadel, which is no longer clear, was apparently discernible in the late eighteenth century. The French surveyors depict a rectangular walled enclosure with its arms running south-west into the lake, containing a rectangular keep with four round corner towers, also noting a moat. The outer wall may correspond with one of those described by Oliver of Paderborn (ed. 1971) as protecting a ditch, but it is no longer visible on the ground. The more southerly of the two high mounds is suggested by the position of the fortifications on the French map. This feature is inside the town walls and is connected to a gate by what appears to be a wide street.

The remains of another fortified structure can be seen sitting in water on the north-west edge of the site (fig. III.4b). The ruins and mounds of fired-brick rubble do not

provide much insight into the original layout of the building, although part of a massive round tower is still standing. It is not implausible that it was intended to provide security for a harbour and/or control the shipping lanes. The brickwork of this fort is eroding very quickly in the damp, salty conditions.

The harbour(s):

The archaeological remains of Tinnis's waterfront facilities are not identifiable and have probably not survived. There are few visible structures outside the walls (see below, pp. 65–6), and the shores of the island have been eroded to mud flats by the waves of the lake. Ibn Bassam's account tells us something about shipping patterns: two locked harbours were reached by going under bridges (but he gives no clue as to their location), while at least eight hundred and eighty-five boats involved in trade and fishing were based in the town, presumably requiring considerable mooring space. The southern part of the town was apparently the centre of the fishing industry, containing a shantytown of (fishermen's?) huts, the *diwan* of fisheries and a fisheries storehouse. To the west, there were two great yards for cargo, perhaps implying that trading boats loaded and unloaded there. The lake immediately south of the island is very shallow, which would not have impeded flat-bottomed fishing-boats of the kind still used today, while to the west and particularly the north the channels are much deeper and so more suitable for sea-going vessels. Boats with valuable cargos were presumably moored in the locked harbours (protected by the small fort?), but small fishing-boats would doubtless have been tied up wherever was most convenient to the owner. The continuation of the use of the island as a trading post after its abandonment right up to at least the mid-fifteenth century has left no obvious traces in the archaeological record. These areas too may be under water or eroded.

The main town:

The absence of a map of Tinnis is a real problem, and it is hoped to rectify this in the near future. The SCA record the area of the mound as being around two hundred and fifteen *feddans*, equivalent to just over 0.9 sq. km (al-Shinawi and al-Hadidi 1979, 1). The

dimensions given by Ibn Bassam are contradictory and impossible to use: he records the length of the town from north to south as 3,227 *dhira*‘, but the circumference as only slightly more, 3,285 *dhira*‘. These are clearly inaccurate and confused figures.

Ibn Bassam’s account divides the town into several settlement areas along the walls and lists the notable buildings of each one. Each quarter contained installations for moving and storing water; some of these have been uncovered in the south of the site (see below, pp. 67–8). The presence of industrial installations such as lime kilns and gypsum mills inside the walls, as well as the metalworking workshops noticed by Nasir-i-Khusraw (tr. 1986, 40), is reflected in the large quantities of industrial slag and vitrified brick scattered on the surface. However, few architectural features are identifiable inside the town. The above-mentioned street running from the southernmost gate through the walls towards the high mound (the main fort?) can be followed for about three hundred metres after which it divides and disappears among the rubble. About one hundred metres inside the town are the remains of walls cutting across the path of this street, as if a tollway or customs house had once stood there. Traces of another street run in from the western side of the town, although this route is less well-defined. The location of what appear to be the major entrances into the town indicates that, as might be expected, Tinnis oriented itself towards mainland Egypt.

Outlying structures:

Some distance north of the main town are three shallow, round mounds, situated close together in an area apparently without other remains (fig. III.5). The fired-brick rubble covers areas with diameters of seventeen, nineteen and twenty metres, and the scarcity of the remains implies either that the structures were very limited in size or that bricks have been removed for reuse. The site guards refer to them as graves, and indeed they are reminiscent of ruined Sheikhs’ tombs or mausolea. A map of Lake Manzala published by the Survey Department of the Public Works Ministry in 1896 clearly marks a Sheikh’s tomb on the island. Among the debris on the surface of these ruins was almost no pottery, but I observed some fragments of glass, including pieces of plain, dark blue bracelets, light blue shards (pieces of lamps?) and a small bottle with handle. Apart from these

possible tombs, few architectural remains are discernable outside the town except on the east side, where the outlines of a medium-sized complex can be seen. In addition, on the north and east sides of the town, the ground outside the walls consists of featureless, salty silt mounds like low versions of those found in areas of the centre, surely indicating the presence of buildings.

Chronological development of the town

The layout of the town discussed above represents the later phases of occupation at Tinnis. We know that the settlement existed at least as early as the late fourth century, and the *Description* dates its foundation to the time of Augustus, although no supporting evidence is given. The medieval inhabitants were aware of their town's history, and al-Maqrizi notes that the town contained many antique monuments (ed. 1922, 199). Ibn Hawqal describes communal burial mounds containing bodies covered in shrouds or sheets of coarse cloth to which he attributes great age (tr. 1964, 158).

In the hope of clarifying the town's early history, I sought traces of Roman occupation on the site. The extensive plundering of Tinnis that started soon after its abandonment and continued until a few years ago has mixed much of the stratigraphy, so that finds of varying date are visible on the ground. The surface scatter is dominated by fired-brick rubble, but pottery, glass, corroded coins, stone fragments, shells, vitrified brick and industrial slag are all present in considerable quantities. A notable feature of the archaeology of Tinnis is the poor preservation of artefacts: organic material has disappeared without trace, so that the SCA, whose main original excavation aim was the retrieval of textile fragments from Tinnis's celebrated industry, has never found a single piece (al-Shinawi and al-Hadidi 1979, 5). Apart from tiny fragments in the recorded profiles, no wood or bone was observed on the surface of the mound or in the excavations. More robust materials have also perished: much of the pottery has become worn or flaked due to the dampness and saltiness of the soil, although glazed wares (especially porcelain) and glass have survived reasonably well and are thus over-represented in the surface collection catalogue. Even solid structures have been reduced to a crumbly mass by the conditions, so that an entire water channel of fired brick, cement

and pottery piping was cut through unnoticed by SCA workmen in front of profile 5. These conditions make interpreting the remains extremely difficult.

During the first season, surface collections of artefacts were made in two ten-metre-diameter circles, one by the wall to the north-east of the town (circle 1) and the other on the SCA spoil heaps immediately north-east of the excavations (circle 2; figs III.6–7). A high proportion of this material dates from the eighth/ninth to twelfth centuries, including significant quantities of porcelain from the Sung dynasty (eleventh and twelfth centuries). This chronological bias is largely due to the dominance of glazes in the surviving assemblage, a reversal of the usual process where recognisable late Roman utility wares overshadow less visible medieval equivalents. A small amount of earlier ceramic material was collected, including fragments of Gaza Jar, LRA 1 and LRA 7, as well as a single bowl rim of Hayes's (Waagé's) 'Late Roman C' Ware. The form of this last piece dates from the sixth century (Hayes 1972).

In order to elucidate the earlier phases of occupation on the site, some of the profiles exposed by the excavations at the south-west end of the site were examined and recorded (fig. III.8a). The architecture is dominated by water-storage facilities and, if this small area is typical of the whole town, there can have been few structures in Tinnis which were not built above cisterns. Since the Nile flood came from the south-west, however, the excavated area would have been the optimum place for cisterns, which might explain their large numbers. The lowest recorded exposure, profile 5, was immediately above the water level and as such represents the deepest easily accessible stratigraphy. Five sections were recorded; two were linked by water channels and a further two were connected to walls of the same complex, so that relationships between them could be ascertained. (See fig. III.2 for the location of all recorded profiles and linked structures.)

The 'Governor's house':

Among the features uncovered by excavation was a group of buildings surrounded by a substantial wall. This complex included a vaulted cistern beneath a structure with a carefully laid stone floor, designated the 'Governor's house' after the discovery of parts

of a marble stela, now in the Port Said museum (figs III.8b–9a). The stela records in Kufic script the name of ‘Abd al-‘Aziz ibn al-Wazir al-Jarawi, probably a governor of Tinnis, who revolted against the central authorities in 809 (see above, p. 55). However, the stone was not in situ, but lay on the ground inside the enclosure wall, making the designation of the house as that of the governor uncertain. North of the cistern-house complex, still within the main wall, are the remains of what is apparently a polygonal ornamental pool, of the type known from Fustat (for example, Scanlon 1981, 60, pl. 8d; grander examples from mausolea have also been excavated at Istabl ‘Antar: Gayraud 1999, figs 7 and 13; see fig. III.9b). An unplastered tank, possibly a cess pit, is located beneath and slightly to the south of the pool; the latter had been cut into layers of debris built up on the south side of a straight wall of unplastered fired brick. Although the junction between this side wall and the main wall around the ‘Governor’s house’ complex was not uncovered by the SCA, the angles and architectural similarity of the walls strongly suggest that this is the corner of the walled complex. The deposits north of the side wall have been removed, leaving an exposed profile at the west end (profile 2), while another, smaller exposure (profile 1) runs above the wall, perpendicular to profile 2. Profile 1 is beneath the remains of a small wall of fired brick, possibly part of the enclosure containing the ornamental pool, which was apparently built directly over the side enclosure wall. When combined, these profiles have a vertical height of 2 m (figs III.10–16).

The presence of a sherd of Adams’s glazed Aswan ware U6 (1986), manufactured from c. 950–1500, in layer 8 indicates that profile 1 dates from around the start of the Fatimid period or later. Other sherds from the profile – a thin-walled, green marl qulla neck and a Fustat-ware bowl base glazed pale green – confirm this date. If, as seems likely, the upper wall of profile 1 belongs to the structure that enclosed the polygonal pool, then the pool would also appear to have been built in the Fatimid period. The wall of the pool complex is directly above the side enclosure wall, which thus cannot have been an active boundary during Fatimid times.

The upper levels of profile 2, preserved only to the north, would appear to be broadly contemporary with the pool complex, although the base of the wall (layer 2) is

some 40 cm lower than the base of the wall on the top of profile 1. In profile 2, layer 4 and higher levels are dated by the presence of a glazed Aswan sherd, which, although not conforming to any of Adams's wares, has the dense, orange-brown fabric with coarse, angular inclusions typical of his group AIV (c. 950–1500). In the lower layers, the deposits apparently built up against the wall over a reasonably short period of time. Fallen rubble is present close to the wall through the entire depth of the exposure, implying that the deposits were laid down as the upper wall collapsed. Fragments of masonry with white mortar (rather than the pink used in the side walls) are preserved particularly in layer 8, similar to masonry of profile 1, layer 6. No trace of the structure from which this distinctive masonry came remains. There is unfortunately no clear ceramic evidence from these lower levels to indicate their date, and by extension that of the enclosure wall. Very few identifiable sherds, and no fine wares, were retrieved from these deposits. The rim of a brown silt jar from layer 11 (fig. III.15, profile 2, vessel 4) resembles vessels from Old Cairo of about the ninth century (Gascoigne forthcoming). Body sherds from the utility wares retrieved from these deposits are not related to the standard late Roman corpus, which would probably indicate a date not significantly earlier than the ninth century. Despite scanty evidence, it appears that the date of the enclosure wall conforms reasonably well to the late eighth- or early ninth-century date suggested by the presence of the stela of al-Jarawi.

The origin of the utility wares from these layers is worth attention. Dense, well mixed marl wares, unlike those commonly found in Egypt at this time, predominate. The closest parallel for these wares appears to be the corpus of the Abu Mina/Mareotis area, where large vessels of clay from the coastal desert edge west of the Delta are common (Ballet and Picon 1987; Engemann 1992). Ballet (1997) suggests on formal grounds that all these desert marl clays, even those found in north Sinai, originate from the west Delta region. However, that the east had its own production centres seems more likely, and these, with the well-established Palestinian and Gazan industries, may have supplied most of the town's ceramic needs.

The water installation:

The cistern beneath the 'Governor's house' was supplied with water through a series of fired-brick channels running from the south and east and passing through (built into) the main enclosure wall. Before reaching the cistern, the conduit from the south runs through what is clearly a small water-storage facility. Two profiles around this complex were recorded (figs III.17–23). The first, profile 3, preserves the outlines of a wide trench dug during construction of one of the water channels leading into the facility from the south. The brick and mortar conduit in this section is so badly decayed that SCA workmen cut through it, but it is still clearly visible in section. Profile 4 preserves the edge of another such cut, with a channel running below ground a short distance east of the eastern end of the exposure.

The eighth- to ninth-century date proposed above for the 'Governor's house' also fits these water channels. Most of the material in the deposits filling the trench in profile 3 is sixth or seventh century in date, but the ditch was presumably back-filled with the material taken out of it. There is a single body-sherd of glazed Aswan ware in the fill (layer 9), indicating that the channel was constructed, or at least the trench was filled, no earlier than the eighth century. The presence of a wall with similar water channel on the eastern end of the profile implies that the construction of the water installation was a two-phase process: initially, the wall was built and deposits accumulated against the side (from other excavation work nearby?) which were cut through shortly afterwards during the sinking of the second channel. The only in situ deposits are thus layers 21–24, which contained little diagnostic material. A single sherd of LRA 1 was retrieved from layer 24, indicating a fourth to sixth century date.

As with profiles 1 and 2, there was a later phase of building in the area. In profile 3, a second wall (layer 1) was placed above, and slightly south of, the lower wall (layer 20). A shallow layer of mud and shell foundations beneath the upper wall yielded an Aswan rim sherd which, while not conforming exactly to any of Adams's wares, must fall into his group AIV (c. 950–1500). The upper layers of profile 4 indicate the levelling of the area for the construction of a wall above the entire exposure, covering a collapsed marble column. It is perhaps surprising that this column should have been used as buried

fill, especially in such a stone-poor area; either re-useable columns were plentiful or they were not valued. One of the levelling deposits, layer 4, contained a red silt body sherd coated in a powdery yellow glaze. This ware has been designated FG8 in Old Cairo, where it usually appears in Mamluk levels (Gascoigne forthcoming). Whatever the exact date of the appearance of FG8, the wall must have been built close to the time at which Tinnis was abandoned. Whether it is contemporary with the wall above profile 3 is not clear.

The cistern:

The final recorded profile was associated with a cistern not linked to the previous complex by any obvious means (figs III.24–9). The builders of the cistern cut through earlier deposits during its construction, and it was hoped that these deposits would provide a *terminus post quem* for the cistern, in addition to providing an insight into the situation of the area prior to its construction. Apart from the rubble that had accumulated on the ground above the profile since its excavation (layer 1), the most recent deposit was layer 2, the fill of a pit dug through layers 4 and 5. This contained mixed ceramics from between the eighth and at least the tenth centuries (and quite possibly later) and was probably dug in recent times. Fortunately, the surrounding deposits are undisturbed. The only identifiable ceramic in layer 4, the highest intact layer, was a stamped Aswan sherd. The stamp design conforms most closely to Hayes's (1972) ARS style A, dating from the fourth and fifth centuries. Since the lowest visible material dates from the sixth century, the stamped sherd may be redeposited. This entire exposure contains a considerable quantity of masonry rubble and mortar chunks, as well as midden debris. The only trace of building activity is the shell deposits (shell was used elsewhere in the excavated area for the foundations of walls) and there was no evidence of brickwork above these strata. The section demonstrated that the area was abandoned and derelict, used as a rubbish dump, during the sixth and seventh centuries, and that the cistern must have been built after the laying down of this deposit.

Conclusions

Examined together, these exposures provide clear evidence for the changing use of the area over time. It was a midden wasteland during the sixth and seventh centuries and what structures there may have been during the sixth century or earlier had fallen and become rubble deposits. This contrasts with the fact that Tinnis was a bishopric, and therefore presumably a town of some importance, from the fifth century onwards. The presence of Roman stonework such as the repositioned column in profile 4 and the unlocated colonnade mentioned by Munier (1919) indicate that the town was well provided with elaborate architecture before the Arab conquest. It seems probable that the later expansion resulted in building on the uninhabited middens of the earlier, more compact town, or that Tinnis did have a brief contraction during the late Roman period. Whatever the explanation, great complexes for water storage and habitations were built here over the course of the eighth and ninth centuries. That the quality of this building was high and the expense presumably considerable is indicated by the careful paving in the 'Governor's house' and the marble facing (now looted) that the SCA originally found above the largest, central cistern. These complexes were expanded and altered during the Fatimid period at the high point of the town's prosperity, as can be seen by the high deposits around profile 1, where new water facilities and the pool were constructed. Building work continued until close to the evacuation of the population in 1192–3.

It is surely no coincidence that the apparently dramatic transformation of a barren midden into a built-up area dates to the eighth and ninth centuries, the time during which Arabs were being encouraged to settle in the *ribat*. Whether the influx of Muslim settlers brought new money for the improvement and expansion of the town, or whether the authorities improved the town's facilities to encourage or reward settling is not clear. The latter is suggested by the building of a water installation in the town centre by 'Abd al-'Aziz al-Jarawi, and of shops and cisterns by Ahmad Ibn Tulun as recorded by Ibn Bassam (see Appendix). These projects must represent part of the programme of investment and expansion evidenced by the archaeology presented above. The relationship between *ribat* settlement and the textile industry should also be considered: it is arguable that, as the town grew more prosperous, the need to defend it from attack

became greater, and thus that the former was a direct result of the latter. It seems unlikely that Tinnis would have been left in peace to develop into the prosperous industrial town it subsequently became without the high rate of Muslim settlement and investment seen during the eighth and ninth centuries.

Chapter 4

Murtaba' al-Jund: the Example of Kharibta

The town of Kharibta, now known as Khirbita, appears in the works of certain Arab historians and geographers in connection with a practice known as *murtaba' al-jund*, the seasonal movement of the army from the permanent settlement of Fustat to various places in Egypt in order to pasture their animals. This custom is listed by 'Athamina (1997), alongside the occupation of *ribat*, as an important mechanism by which Arab forces settled provincial towns in Egypt. The earliest account of this practice, which must have started very soon after the conquest, is that of Ibn 'Abd al-Hakam (ed. 1922, 141; see also Caetani 1905–26, no. 223):

When spring came, he ['Amr ibn al-'As] assigned to all the tribes any place they desired as pasturage. The villages in which the majority gathered were Manuf, Disbandis, Ahnas and Taha. The Ahl al-Raya were dispersed, with the family of 'Amr ibn al-'As and the family of 'Abd Allah ibn Sa'd gathering in Manf and Wasim.

A list of tribes and the towns on which they were billeted follows. Ibn 'Abd al-Hakam notes that certain tribes may have exceeded their permitted seasons in these towns or wandered into areas not officially allotted to them, actions which emphasise the fundamentally exploitative nature of the system. The exact terms of the arrangement, and thus the weight of the burden on the local people, is uncertain, but they presumably at least included the obligation to house the visitors and provide land for their animals.

Ibn 'Abd al-Hakam's entry for Kharibta reads: 'The Mudlij occupied Khiribta, settling it as a dwelling, and a group of Himyar of Dhu Bahan was with them, and others had entered into a confederation with them in it, for it was their settlement'. These two tribal groups, Mudlij and Himyar, were of very different origin. The Mudlij were a sub-tribe of Kinana, whose peninsular lands lay around Mecca, from the Tihama in the south-west (where they bordered on those of the Hudhayl) up to the territories of the Asad in the north-east. Kinana, related to the Quraysh, was a group of northern origin. They are not

mentioned among the recipients of land at the foundation of Fustat; either they have escaped notice by accidents of preservation, or more likely were a relatively insignificantly-sized group (Kubiak 1987). Himyar, on the other hand, was a large and important Yemenite confederation, which had previously controlled a centralised state in the south of the Arabian peninsula around the town of San‘a’. An assessment of the development of Kharibta during the early Islamic period may cast light on the impact of *murtaba‘ al-jund* on the host towns, the archaeological remains of few of which are accessible for such a study.

Kharibta as the site of Andropolis

Kharibta is located near the desert edge in the western Delta about halfway between Cairo and Alexandria, in the *markaz* of Kom Hamada. It has so frequently been named as the location of the Greek town of Andron or Andropolis that this identification has almost become accepted truth (Rougé 1891; Amélineau 1893; Grenfell and Hunt 1915; Maspero and Wiet 1919; Daressy 1931; Gauthier 1935; Ball 1942; Ramzi 1953–60, vol. 1; Timm 1984–1992, vol 3; see also Bernand 1970, who suggests that Andropolis was identical to another *nome* capital, Gynaikopolis). Andropolis was a *nome* capital, bishopric and the base of the Legio III Diocletiana, and it appears as such in Ptolemy’s *Geography*, the *Antonine Itinerary*, George of Cyprus’s account of the Roman world (where it is conflated with Nikiu), Hierokles’s *Synekdemos* and the *Notitia Dignitatum* (Ball 1942). These texts locate it in the region of the western Delta known as Ramses, north of Nikiu but south of Naukratis. The *Antonine Itinerary* places it 12 miles from both Taba and Nithine, 21 miles from Hermopolis and 31 miles from Nikiu. Rougé (1891) first proposed Kharibta as Andropolis on the basis of a Greek/Coptic/Arabic lexicon in the Bodleian Library, Oxford (no classmark is recorded), a list of episcopal sees which he interpreted as showing the Greek Andron, Coptic Arbat and Arabic Kharibta linked together as one town. This thesis was widely accepted, and Amélineau (1893), citing further such lists (Ms. Cop. Bibl. Nat. 53, fol. 171v; Ms. of Lord Crawford, fol. 330R, now Ms. 453 in the John Rylands Library, Manchester) agreed with de Rougé’s conclusions.¹ The inclusion

¹ Amélineau gives the wrong folio number, which is actually 323a.

of this equation in such standard reference works presumably explains why so many later scholars accepted the identification without questioning its basis.

However, in 1939 Munier published a collection of manuscripts including Rougé's lexicon and several others like it. Working from photographs or original manuscripts, Munier agreed that the link between Arbat and Kharibta was clear but concluded that the connection with Andron was not. This name appears on a separate line without Coptic or Arabic equivalent in the Oxford manuscript and Rylands 453, and it is not mentioned at all by Munier in his discussion of the other manuscripts. The only recent assessment of the question is that of Timm (1984–1992, vol. 3, 1092), who disagrees with Munier, commenting in passing that the detachment of Andron from the equation 'ist von der Anordnung der Liste her jedoch nicht zu rechtfertigen'; however, he does not discuss the question in any depth. The link between Andron and Kharibta rests only on the fact that they are in the same area of the Delta (but other sites remain unidentified in this region) and controversial manuscript evidence. The question remains to be resolved, and, for the purposes of this work (in which this is not a question of great significance) the location of Andropolis will be presumed unknown.

Coptic Kharibta: Arbat

The link between the Coptic and Arabic toponyms is less controversial; the names have a distinct assonance and the reliability of the lexicons has not been questioned. The Coptic name appears in several forms, most commonly ⲁⲣⲃⲁⲧ, but also ⲉⲣⲃⲁⲧ and, in the Arabic *History of the Patriarchs*, ⲁⲣⲃⲁⲧ (var. ⲁⲣⲃⲁⲧ; was the substitution of a 'w' for the 'b' a deliberate avoidance of confusion with *ribat*?). In the lexicons, Arbat is sometimes listed as ⲧⲃⲁⲕⲓ ⲉⲣⲃⲁⲧ (the town of Erbat), which Ramzi (1953–60, vol. 2, pt. 2, 334–5) suggests is the basis for Tamakhirbet and Zamakhir, later alternative names of Kharibta that appear in the writings of medieval Arab authors (Halm 1982, 422) and no earlier sources. He then goes on to contradict his hypothesis by claiming that Tamakhirbet is the ancient name for Kharibta and that Zamakhir is the Coptic one. This assertion is made on the basis of a 'citation' from Gauthier's geographical dictionary (1925–31), in which I have been unable to find any such statement.

The textual sources relating to Arbat and Kharibta are neither numerous nor detailed. Amélineau (1893) and Timm (1984–1992, vol. 3) argue that Arbat was a *nome* capital during the early fourth century. They do so on the basis of the same work, a life of the Saints Maximius and Dometius, but give different references to a Vatican manuscript (Cod. Cop. Vat. 63, fol. 59 and 68, fol. 34r.–58v. respectively) as their source. The text mentions a man who is from Djepro Menesine, in the *nome* of Arbat. However, Munier (1917, 111, 133), using a third manuscript discovered in the Monastery of Hamuli, published the same Coptic text with a French translation; his edition makes no mention of Arbat as the capital of the *nome* in which Djepro Menesine is situated. This omission is perhaps a copyist's error, in which case Arbat's status as a *nome* capital in the fourth century can provisionally be accepted. A passage in the chronicle of John of Nikiu may also refer to Kharibta (tr. 1916, chap. 105, 166). The bishop writes of the revolt of several Delta towns, including Kerteba, San, Basta, Balqa and Sanhur, during the reign of Phocas (602–10). If Kerteba is equated with Kharibta, then this is the earliest use of the Arabic form of the name, perhaps an unlikely occurrence prior to the conquest. The text of the entire account is corrupt and the relevant passage is worse than average, deteriorating into unintelligibility shortly after this list of towns. Viaud and Muyser (1979) suggest that Kerteba might be Farbet (the Greek Pharbaitos; also known as Horbeit or Qorbeit) which makes more sense both onomastically and geographically.

The post-conquest Coptic ecclesiastical tradition indicates that Kharibta was the centre of a diocese for much of the Islamic period. The *History of the Patriarchs* (tr. 1910, chap. 15, 20, 22) records the presence of several bishops at the death-bed of Patriarch John in 689, among them Abba James, Bishop of Arwat. Elsewhere in the *History of the Patriarchs* (vol. 2, pt. II, 134), it is related that a seven-year famine during the life of the Patriarch Mena (956–74) resulted in the depopulation of the Delta and subsequent amalgamation of a number of dioceses in the area. Awrat, presumably Arwat, was among those dioceses deprived of a bishop, but the name of the see with which it was combined is not recorded. The same text (vol. 2, pt. III, 322/207; 335/214) later mentions a Bishop Theodore of Kharbita, who was present at the selection of Patriarch Cyril II in 1078 and at the Cairo Synod of 1086. Timm (1984–1992, vol. 3) proposes that the

Greek/Coptic town of Andron/Arbat, weakened by the loss of its bishop, was abandoned during the ninth century, and that the new bishopric of Kharibta was founded nearby. This seems an unnecessarily complex way of explaining the hiatus, and the abolition of a bishopric would seem to be an effect, rather than a cause, of urban decline. It is equally possible that the amalgamation of dioceses by the church resulted from reduced resources after the famine. After a period of recovery a bishop may have been reassigned to the same town, the newly-formed diocese adopting the name Kharibta.

Kharibta during the Civil War

No mention of either Arbat or Kharibta is made in any of the accounts of the conquest of Egypt. However, during the fighting that followed the murder of ‘Uthman, the third caliph (656–7), the town was a centre of pro-‘Uthman, and therefore pro-Mu‘awiya feeling at a time when Egypt was under ‘Ali’s control (al-Kindi, ed. 1912, 20–1; al-Tabari, ed. 1879–1901, I, 3233–49, 3390–3; see also Kennedy 1998). These histories relate how the group of rebels gathered in Kharibta was pacified by ‘Ali’s governor, Qays ibn Sa‘d, who negotiated peace with them and maintained their allowances and provisions. The town continued to attract those opposed to ‘Ali’s caliphate, among them Maslama ibn Mukhallad al-Ansari, subsequently governor of Egypt. Al-Kindi and al-Tabari describe Mu‘awiya’s attempts to undermine ‘Ali’s control of Egypt by drawing attention to Qays’s treaty with the anti-‘Alid faction in Kharibta. When rumours of the pact reached his officials in Iraq, ‘Ali ordered Qays to massacre the inhabitants of Kharibta as proof of his loyalty. Qays refused and was recalled to Iraq. Al-Kindi writes: ‘in Kharibta at that time were ten thousands’ (ed. 1912, 21). His choice of words indicates that, as one might expect, the majority of these people were not permanent inhabitants of Kharibta but were gathered there temporarily. We must assume that the normal Coptic population of the town was rather smaller and was presumably not actively involved in the political uprising. Qays stated as much in a letter to ‘Ali, where he describes the rebels as ‘Egyptian notables and noblemen’ and then as ‘lions of Arabs’. This group subsequently easily defeated the force which Muhammad ibn Abu Bakr sent against them (al-Tabari ed. 1879–1901, vol. 1, 3248–9).

The reason for the choice of Kharibta as the gathering-place for these rebels can be found in their leadership. Al-Tabari (ed. 1879–1901, vol. 1, 3237) records that the forces in Kharibta were led by a man called Yazid ibn al-Harith from the Banu Harith ibn Mudlij of Kinana (see Ibn al-Kalbi, tr. 1966, I, 44 for a genealogy of Mudlij). The clan of Mudlij of Kinana were, of course, those billeted at Kharibta under the system of *murtaba' al-jund*. Thus the fact that Kharibta had been selected as a site of pasturing for the army resulted directly in its involvement in political affairs of little concern to the majority of the population. The impact of the situation on the town and its people is not clear, but the necessity of providing for ten thousand soldiers and their animals must have been a severe drain on the region's resources.

Aims of fieldwork undertaken in spring 1999

Of all the sites examined in the course of this work, the remains of Kharibta were the least well-preserved and accessible. Kharibta is not considered to be an archaeological site as such and the nearest SCA offices are at Tanta, some distance away on the other side of the Rosetta Nile arm. The modern village, which in common with all Delta settlements has expanded in recent times, overlies sizeable archaeological mounds (fig. IV.1a). The *tell* has built up to an estimated eight to ten metres in the central areas of the village and rubbish continues to accumulate in the narrow, winding streets. In places, archaeological deposits have been completely cleared for building purposes: an area on the eastern side of the town was levelled to facilitate the building of flats only two years before my visit. This situation inevitably affected the clarity of the results, but the wholesale removal of the remains also emphasised the necessity of recording what was left.

My aims were twofold. First, to record and examine any exposed deposits in or around the village in an attempt to elucidate the chronological development of the town. This was accompanied by surface collections from the fields immediately east of the settlement, where I was told material from beneath the flats had been dumped. Second, I visited the town's oldest surviving structures, including two mosques and two Sheikh's

tombs, in search of re-used blocks, inscriptions and other evidence of antiquities, as well as addition to information about the date at which the village took its present form.

Tell al-Krum

On the east side of the town is the main cemetery. Raised up on high mounds, in places as much as four metres above the surrounding cultivation, this area is locally known as Tell al-Krum (fig. IV.1b). Local people report finds of antiquities (including amphorae) during the construction of tombs and neighbouring buildings in this part of the village. Also dug up from here were preserved corpses wrapped in palm fronds, a method of burial practised by the poorer classes of society throughout the Roman period (Ikram, pers. com.). The junction between the fields and the *koms* of the cemetery was the only place in the village where archaeological material was accessible at the time of my visit; pottery is scattered around here in great abundance. I made a collection of sherds from a ten-metre diameter circle on the bare ground between the cemetery and the cultivation (figs IV.2–4a). The material retrieved from here was supplemented by sherds collected from the surrounding fields. The surviving pottery was dominated by coarse, chunky pieces such as amphora toes and handles which have survived well in the damp and frequently turned-over ground. The environmental conditions, although not as bad as those at Tinnis, have often caused the surfaces of the sherds to flake away, making identification difficult. Fine wares have rarely survived, and few traces of paint, or even slip, remained on any of the pieces. No Islamic glazed wares were found, despite the high survival rate of such material in the adverse conditions at Tinnis, but it is perhaps unlikely that such high-status pottery was ever abundant in provincial, agricultural settlements like Kharibta.

The only imported amphora certainly identified was the common LRA 1, manufactured in Cilicia or Cyprus from the early fifth to the mid-seventh century (Empereur and Picon 1989). This vessel type was represented by very numerous handle fragments, three rims and one body sherd. Two forms have been distinguished in this ware, one smaller than the other (Egloff 1977), but it was not possible to assign the finds to these sub-groups. The handles found at Tell al-Krum exhibited uniformity of fabric (although some variation in colour resulted from different firing conditions) with the

exception of one handle. This was made of a much heavier clay, equally coarse and full of inclusions but with an orange-brown matrix, almost resembling a coarse sandstone; it was also distinctly oval in section and may not, in fact, be from a LRA 1. Toes of LRA 7 were predictably numerous. Two different forms and several variants have been identified, and the majority of the rather worn toes from Kharibta apparently belonged to Peacock and Williams class 52 (1986). This amphora dates roughly to between the fourth and early ninth centuries. Adams reports that examples were imported into Nubia until c. 850 and links their disappearance to the interruption of the wine trade (1986).

As stated above (p. 80), fine wares were badly preserved, but a worn body sherd with traces of a glossy black surface was probably a Greek import of the Ptolemaic period. Also among the surface collection were a few fragments of M5/ERS B and the base of a Cypriot red-slipped bowl of the late fourth to mid-sixth century. A body sherd from an Aswan white-ware bowl is probably an example of Adams's W3 (c. 650–850), and also from Aswan was a tiny piece of what may be his W12 (c. 1000 to 1500), the fabric being orange-beige with abundant coarse inclusions. Few late Aswan wares have been retrieved from sites in the Delta; at Kom al-Dikka in Alexandria they appear only in seventh- and eighth-century contexts, and in such small quantities that Rodziewicz (1976) mistakenly suggested they were Nubian imitations of the Aswan red wares. However, recent excavations, such as those carried out by the SCA near the Saba' Banaat in Fustat, have turned up more of these wares; here they are associated with later material including Fatimid lustre ware (pers. obs.). The W12 sherd from Tell al-Krum is the only evidence for activity on the site between early Arab times and the Ottoman period, although doubtless a settlement continued to exist here.

Nearly all the pottery from Kharibta was locally made silt ware; with the exception of the LRA 1, the glossy black ware, Cypriot red slip ware and the Aswan wares, only a few sherds were made of fabrics other than Nile silt. These included fragments of coarse, thick-walled, Fustat wares, thinner-walled, pink-beige marl wares and a piece of an unidentified fabric excavated at Fustat (pers. obs.) and also noted by Faiers (pers. com.) during visits to Antinoopolis and Zawyet al-Sultan in Middle Egypt. A north African origin for this last fabric is a possibility, and all these fabrics could be late

Roman in date. The silt wares form an unusual corpus, and the fabric, surface treatment and low incidence of modelled rims indicate a Ptolemaic date for many of the pieces. The majority of the sherds are from large jar and basin forms; few of the diagnostics have direct parallels, but figs IV.2–3, vessel 27, comparable to New Kingdom funnel-necked jars, is possibly the earliest artefact from Kharibta.

Where the cemetery meets the cultivation there is a vertical drop, in places as high as four metres. Much of the length of this bank is obscured by thickets and reeds, and rubble, sand, and other debris associated with the digging of the tombs above has tumbled down the sides of the slope in places, obscuring the deposits. Occasionally though, exposed sections are still visible, and two of these were recorded and sampled for ceramics. The first of these, profile 1, was immediately north of a large concrete tomb structure; the south end of this exposure clearly shows the cut which was made during the digging of the tomb's foundations (figs IV.4b–5, 7). Profile 2, much smaller, is situated east of profile 1, slightly away from the edge of the cemetery and as such was slightly less overgrown with vegetation (figs IV.6–7).

Sherds of LRA 1 were retrieved from layers 3, 5, 7 and 8 of profile 1, implying that, with the exception of layers associated with modern tomb building, the section was laid down during the lifetime of this ware, broadly from the early fifth to mid-seventh century. Layers 5 and 6 resemble midden deposits, but the broken pieces of mud brick in layers 3 and 8 indicate earlier building in the area. The lowest accessible deposit was salty and waterlogged, yielding few identifiable sherds, but a small fragment of the red-slipped silt ware M5 confirmed a late Roman date. The uppermost intact deposit (layer 5) contained a small sherd of Aswan ware W3 (c. 650–850), providing a date towards the end of the lifetime of LRA 1 for the top of the section. Profile 2 also contained LRA 1 handles (layers 3, 8 and 9) and toes of LRA 7 (layers 3, 8 and 10), and thus reflects the dating of profile 1.

Architectural features

As well as the archaeological exposures at Tell al-Krum, the village also contains religious buildings of some antiquity. The main mosque, called the mosque of Abu al-

Hawl, is situated on the sloping sides of the mound beneath the modern settlement. Abu al-Hawl, meaning 'Father of Power' or 'Terror' (this name is also applied to the Sphinx at Giza), is described in local folklore as a man of exceptional strength and a companion of 'Amr ibn al-'As, who lost a leg during the battle for the town. His leg is believed to be buried in the large Sheikh's tomb attached to his mosque, although he himself allegedly died and was buried in Syria. An alternative name, the mosque of Muhammad Abu al-Nahwal, is also known to the locals. However, there are no known historical references to fighting at Arbat/Kharibta during the conquest of Egypt. It is not impossible that the conflict remembered is the first civil war: Abu al-Hawl's lost leg is reminiscent of the severing of limbs ordered in the Battle of the Camel (al-Tabari, ed. 1879–1901, vol. 1, 3194–5). That a mosque was founded in Kharibta by a companion of 'Amr's is not in itself implausible, given the settling in the town of members of the garrison of Fustat soon after the conquest. The presence of a significant group of Arabs, initially under the system of *murtaba' al-jund*, and later as part of the anti-'Alid rebellion, must surely have necessitated the foundation of a mosque of some kind during the second half of the seventh century. Kharibta does not, however, appear in al-Muqaddasi's list of towns with congregational mosques in the tenth century (Kamal 1932–4, vol. 3, fasc. 2). Assuming his list to be complete, Kharibta may thus no longer have had a mosque at this time, indicating a considerable reduction of the Muslim presence in the town between the late seventh and the tenth century.

The modern mosque of Abu al-Hawl is a complex of several connected structures of varying dates. The part currently in use is a concrete annex, built within living memory. Next to this recent building is what is referred to by the Imam of the mosque as a Sheikh's tomb, although it is large and provided with its own minaret (fig. IV.8). These buildings are all situated within an enclosed courtyard which contains a great deal of debris, not all recent. A number of granite and marble column pieces and a column base are lying in the courtyard; these had been recently excavated from below ground in the south-east corner of the enclosure (fig. IV.9a). They are apparently Roman in date and were probably reused in later structures in keeping with the common Arab practice. Inside the modern mosque are two inscriptions. One is a very recent renewal dedication but the

other is much earlier: a wooden panel above the *minbar*, unfortunately otherwise almost completely illegible, bears the date of 1111 AH (1699–1700 AD) and must have been taken from an earlier structure (the Sheikh's tomb?) when the modern mosque was built.

The Sheikh's tomb is certainly older than the mosque and its large central room contains a stone sarcophagus said to hold the leg of Abu al-Hawl. Unfortunately very little study of Egypt's vernacular architecture has been undertaken. This tomb is not dissimilar to, for example, the Sheikh's tomb at al-Marg and is probably reasonably typical of such buildings. The band of arched and square niches connecting the dome to the body of the building is not unlike transitional features of grander late Mamluk buildings (see *Mosques of Egypt*). The squat dome is reminiscent of Ottoman architectural forms. The minaret stands on a separate base but is connected to the tomb; it is in a poor state of repair, with the stairs almost completely eroded to a steep spiral slope and the platform at the top extremely fragmentary. An early modern date is very tentatively suggested for the building, perhaps seventeenth or eighteenth century; such a dating fits with the possibility that the wooden panel in the main mosque originates from this building.

The town's other mosque, al-Arba'in, is again very modern; the outside wall of the minaret has a 1991 inscription commemorating a programme of renovation. Even here, there remain small traces of an earlier structure on this site. An upright granite column fragment in the courtyard (perhaps still in situ? see fig. IV.9b) is again of Roman date, while a *mihrab* set into the exterior of the front wall may indicate that the facade of the current building was previously the rear inside wall of an older one (fig. IV.10a). Near this mosque is another small Sheikh's tomb (fig. IV.10b), the burial place of a man distantly remembered as either Ahmad al-Sinawi (الصيناوي) or Ahmad al-Sisawi (الصيصاوي). His epithet most likely records his geographical origins, and there are numerous possibilities: China is perhaps too far away, although contact between China and Egypt was well established throughout the medieval period (Scanlon 1970; Humphreys 1998) and his name is very close to the Arabic word for China or Chinese (الصين; صيني). Nearer to Egypt is Sinnar in the Sudan, whose Funj Sultanate had trading links with Cairo from the first quarter of the seventeenth century into the early eighteenth century (Adams

1977). Hoffmann (1880, 265, n. 2095) suggested that the sites of Sisar and Sinna in Kurdistan are early and late names for the same town (the transition taking place around the fifteenth century). If true, this could provide an explanation for the alternative forms remembered of the Sheikh's name. Even closer to home, another candidate is the Sinai peninsula.

One architectural feature common to both the tomb of Ahmad al-Sinawi and that of Abu al-Hawl is the band of arched and square niches just below the dome. However, while the dome of Abu al-Hawl's tomb is plain, that of Ahmad al-Sinawi's tomb is decorated with the type of zig-zagged ribbing favoured by Faraj ibn al-Barquq in his rather grander complex in the northern cemetery, Cairo, built during the period 1399–1411. This pattern is found on the Mosque of Sultan al-Mu'ayyad near Bab Zuweila (1416–21), the Mausoleum of al-Ashraf Barsbay (1432) and the Mausoleum of Sultan al-Ashraf Inal in the northern cemetery (1451). (The mosques of Sayyida Zeinab and Sayyida Nafisa, completely reconstructed in 1884/5 and 1897 respectively, also have domes decorated in this style.) The dome of Ahmad al-Sinawi's tomb is built not of stone but of plastered brick and certainly dates from a later period. I would tentatively suggest that this small tomb is broadly contemporary with the larger tomb attached to the mosque of Abu al-Hawl, and as such would date to the late seventeenth or early eighteenth century. Both these structures, especially the chevron roof of the small tomb and the pinnacle of the minaret, bear comparison with the Ottoman mosques and tombs of the north Delta town of Fuwwa.² The threshold of Ahmad al-Sinawi's burial chamber is a re-used marble column.

Conclusions

The archaeological evidence indicates that the site was almost certainly occupied during the Ptolemaic period and possibly earlier. Reused column pieces were numerous, although no sign of Pharaonic masonry or inscriptions was found. The Roman period was well represented both in the surface ceramic collection and in the recorded profiles, where LRA 1 and LRA 7 dominated. The palm-frond burials and amphorae described by the

² I am grateful to Dr Nicholas Warner for this observation.

villagers may be further evidence of a late Roman settlement on the site. This emphatically contradicts Timm's suggestion that Kharibta was a new foundation in the Arab period, away from the ruins of the Roman town; the remains of Arbat are clearly beneath the modern village. The presence of the Ptolemaic pottery might further imply that Andropolis was indeed located at Kharibta. The fact that only a small corner of the site was accessible means that even more than usual we have only a fragmentary picture of the history of the settlement.

As for the development of the town after the conquest, profile 1 would seem to indicate that the cemetery was constructed immediately over levels dating to the late Roman or early Islamic period. While it is always possible that deposits have been removed from this area, we might conclude that Tell al-Krum was abandoned from the early Arab period until the construction of the tombs. Gravestones dating from the late nineteenth century can still be seen in the cemetery. Very little material from the intervening periods was found, despite the fact that Kharibta remained a bishopric until at least the late eleventh century. However, the contraction of the town in early Arab times indicated by the Tell al-Krum evidence may mean that later Islamic deposits are to be found more centrally, i.e. beneath the modern village. To what extent this contraction was a direct result of the practice of *murtaba' al-jund* is not clear, but the two are apparently broadly contemporary. There was clearly considerable investment in the town in the late seventeenth or early eighteenth century, at which point the various historic tombs were built, and the town has continued to expand up to the present day.

Chapter 5

The Old Urban Order: Tell Edfu

The *nome* capital of Edfu

Edfu belonged to an administrative order pre-dating the Roman reorganisation and was an important place from the earliest periods of Egypt's history. Recent SCA landscaping work has uncovered a cemetery of the Nagada II period (Friedman pers. com.). During the Old Kingdom, a walled town known as Djeba, the capital of the second *nome* of Upper Egypt, grew up on the site. This town expanded during the First Intermediate Period, when it came under the control of the *nomarch* Ankhtifi (Vandier 1950), reaching a western limit only recently exceeded (Kemp 1977). Statuary, stelae and other objects of the Middle Kingdom and Second Intermediate Period from the site are quite numerous; their presence is not surprising given the existence of tombs from those periods at the edges of the mound (Henne 1924, 4, and 1925, 15; Michalowski et al 1938). A few carved blocks of the New Kingdom have also been discovered here, mainly associated with a Ramesside temple (Porter and Moss 1937 and 1939). A small area of New Kingdom settlement has been identified, including a group of granaries (Kemp 1977; Bruyère et al 1937), but it is not extensive enough to account for the importance of the town as implied by its prominence in the New Kingdom textual record. Kemp suggests that the bulk of the town was elsewhere, perhaps further east in front of the temple. The Ptolemaic temple, closed in 391/2 AD, was built over a smaller temple of Ramses III.

The remains of the ancient mound are extensively covered by a later town, excavated by a Franco-Polish mission. Apollonopolis magna or Apollonos is mentioned in Strabo, Pliny, Ptolemy, the *Antonine Itinerary*, the Peutinger map, the *Notitia Dignitatum* (which names Apollonos as the garrison town of the Second Traiana Legion) and the works of Hierokles, Stephanus of Byzantium and George of Cyprus (Ball 1942). The Coptic name was ⲁⲧⲉⲱ, ⲧⲉⲱ or ⲉⲃⲱ, a corrupted form of the hieroglyphic Djeba, from which the Arabic name اِدْفُو clearly derives. Michalowski (Bruyère et al 1937, 98) discerned a break in habitation between the second and late sixth or seventh centuries AD in various areas of their excavations: 'Les caves byzantino-coptes, de la fin du VIe et du

VIIe siècle, sont bâties immédiatement sur une couche de 0m,60 environ de *sebakh* au-dessus du bain. Pas un seul mur de l'époque intermédiaire entre le IIe et le VIIe siècle après J.-C. n'est attesté dans tout l'espace de ce secteur.' Michalowski goes on to note a total absence of ostraka datable to the third, fourth, fifth and first half of the sixth centuries, despite the presence of the second Traiana legion (Gascou 1999 gives a figure of around 560 men in the year 300) and cavalry units in the town. The explanation for, and extent of, the decline remain to be established: dating by ostraka alone is unsatisfactory given that they may not be discarded at a uniform rate. Michalowski himself did not conclude that the withdrawal was complete: 'Nous sommes loin de vouloir proposer ici une hypothèse générale sur l'histoire d'Edfou à la basse époque, hypothèse concernant l'abandon complet de cette partie de la ville à la fin du IIe siècle après J.-C. jusqu'à l'époque byzantine' (Bruyère et al 1937, 98). If we accept that part of the area was abandoned, however, Edfu must have been re-expanding to the west at the time of the Arab conquest.

At some point during the Islamic period the bulk of the settlement moved east towards the river, where the modern town now stands. The Franco-Polish excavators concluded that the old town mound ceased to be inhabited during the tenth century on the basis of caches of dated papyri including documents dated to 278, 320 and 324 AH (891/2, 932, 935/6 AD), found in the highest layers (Henne 1924, 20 and 1925, 2; Alliot 1933). Henne also excavated five or six burials in the top of the mound that were dated by Bahgat to the fourteenth or fifteenth century on the basis of a silk cap. The excavator noted that the bodies were not orientated according to Muslim practice; also, the location of the fourteenth and fifteenth century cemetery is known to be outside the town. These burials may thus be earlier. The deposits over the burials yielded fragments of Fatimid lustre ware dating to the tenth century in addition to fourteenth-century Mamluk sgraffiato ware and may be rather earlier than the supposedly Mamluk-period burials beneath (Henne 1924, 20, 37, plate 11).

Edfu's administrative position

The *Natural History* of Pliny the Elder (23/4–79 AD) is the most recent historical source to note the existence of the Apollonopolite *nome*. With the abolition of the Severan provincial system by Diocletian, Apollonius Magna became answerable to the governor of the province of the Thebaid rather than the Emperor's representative in Alexandria. At what stage the old *nome* system was finally abandoned is not clear: Bagnall provides a list of fourth-century *nomes* compiled from papyri that includes Edfu (1993). Gasco (1999) suggests that the replacement of the name Apollonius Magna by Apollon, Apollonos Superior or Apollonos Ano at some point in the late third or early fourth century may have been a punishment for its part in the Egyptian revolt during the reign of Diocletian. The name change seems equally likely to have been a result of an administrative reorganisation. Apollonos is listed by Hierokles (c. 535) and George of Cyprus (c. 606) as part of the province of the Upper Thebaid (Ball 1942). Edfu is not listed in many Arabic sources as a regional capital but appears to have retained some status until the mid-eleventh century. Ibn Khordazba (ed. 1889, 59–60), writing in 874, lists Esna and Aswan as provinces but not Edfu, while an unpublished manuscript in the Cairo Museum dating from 267 H (880/1 AD) mentions 'the town of Edfu in the *kurra* of Aswan' (Maspero and Wiet 1919). Yakubi's list (tr. 1937), compiled in 893, does include Edfu; however, it covers not only provincial capitals but other notable towns as well. The (possibly erroneous) inclusion of Edfu as a province in the writings of al-Qudama (d. 948/9 AD; ed. 1889, 188) may indicate that the town was still among the larger towns of the Said. The Greek designation *πολεος*, or Coptic *ⲡⲟⲗⲓϥ* is given to Edfu in papyrological sources up to the late tenth and early eleventh centuries, possibly indicating residual administrative status (Timm 1984–92, vol. 3).

By the time of Yaqut, who completed his dictionary in 1224, Edfu was designated a village (*quriya*) in the *kurra* of Buhayra (ed. 1866–71, vols 1, 168–9 and 4, 549); his list of provinces is given on the authority of al-Quda'i (d. 1062). The entry for Edfu itself contains little information but refers the reader to the work of al-Udfuwi (see p. 91 below); clearly, by this time the town merited attention only from local scholars. Al-Dimashqi (tr. 1874; 1256–1327) included Edfu as one of the villages of Aswan district.

Around 1300, a further administrative reorganisation took place, creating large provinces from small ones (Toussoun 1926, 217–220); Edfu became a part of Qus province. The subdivisions of these large provinces remain obscure, but it seems unlikely that Edfu was of any major administrative importance at the time. Indeed, during the *Recensement général de l'Égypte* (1885/98), Edfu was part of Esna *mudiriya*, while today it is part of the Aswan governorate. It appears, then, that Edfu was administratively downgraded twice, once perhaps during or shortly after the reign of Diocletian, and again in the eleventh century. It never regained its former importance.

Edfu's religious configuration

Christian institutions remained prosperous in Roman and Islamic Edfu; indeed, a Christian minority still exists today. A Pachomian monastery is known to have existed in the fourth century, but papyrological sources mentioning Christianity are all of the sixth century or later (unsurprisingly given the absence of second to sixth century written material from the French excavations). For the sixth and seventh centuries, the existence of a church is well attested and several monasteries are known by name. Many personal names appearing in graffiti in and around the temple are clearly Christian (Timm 1984–1992, vol. 3; Porter and Moss 1939, 119–177). George of Cyprus includes Apollonos in his list of dioceses, and the names of various sixth- and seventh-century bishops of τβω, Makarios, Shenute, Horame (c. 600–630) and Theodorus (649), are preserved (Worp 1994). The town remained a bishopric after the Arab conquest: Bishop Apa Theodore is known from c. 717 and Nikodemos from 988/9. There appear to have been a number of Coptic religious institutions in the town in the tenth and eleventh centuries, contemporary with the foundation of the Fatimid mosque (see below, pp. 110–1); the Christian population evidently flourished during this period (Timm 1984–92, vol. 3). The presence of a significant Jewish minority at least in the Roman period is also indicated by textual material uncovered by the Franco-Polish expedition (Bruyère et al 1937, 19–23; Golb 1974, 130).

Our knowledge of the town's configuration is not extensive for the Islamic period. Only a few travellers ventured to the southern part of Egypt and these provide few, if any,

details. Nasir-i-Khusraw, the eleventh-century Persian traveller, does not mention Edfu, though he must have passed through it. The main historical account of Upper Egypt at this time is Kamal al-Din Ja'far al-Udfuwi's *Al-Tali' al-Sa'id*, a collection of biographies of famous men of the region written during the reign of the Bahri Mamluks. Al-Udfuwi was born in Edfu in 1286 and died in 1348 of the plague, having spent much of his life in Qus and Cairo. Garcin's excellent urban study of medieval Qus (1976), which draws extensively on al-Udfuwi's work, is our major source for Islamic Edfu.

A Muslim community was certainly established at Edfu by the Fatimid period, at which time al-Udfuwi lists the town along with Aswan and Esna as a stronghold of Shi'ism. Edfu apparently remained largely Shi'ite even after the conversion of the institutions of Esna and Aswan to Sunni Islam during the Mamluk period, and it perhaps represents the last bastion of Shi'ism in Egypt. The strength of Edfu's adherence to Shi'ism is clearly shown by the visit in 1297–8 of a great-grandson of the last Fatimid caliph, who received pledges of loyalty from his partisans, while the religio-political isolation of the population is indicated by the small number of natives of Edfu belonging to institutions in Qus (Garcin 1976, 299–303). No *madrasa* is known to have existed in Edfu, but the role of diffusing Sunnism was taken by three *ribats*. During the Mamluk period, the term *ribat* referred to a religious teaching institution, less prestigious than a *madrasa*, usually founded by an individual spiritual master and catering for all levels of education. In the Bahri Mamluk period, three *ribats* were founded in Edfu, one by the *khatib*, or religious speaker, of Edfu. The position of *khatib* was connected to the religious establishment; the foundation of a teaching institution by such an official could be seen as an attempt by the government to persuade the population back to orthodox Islam. It was not until the fourteenth century that Shi'ism was more or less eradicated from Upper Egypt (Garcin 1976, 116, 319–1).

Edfu's legal and economic position

Although not a regional capital, Islamic Edfu is known to have possessed administrative and legal, as well as religious, institutions. Al-Udfuwi's biographies include that of a *diwan* official of Edfu, while the town also had a *qadi*, sometimes shared with Esna

(Garcin 1976, 247 n. 1, 335). Jurisprudence was practised in Edfu, but not by locals: of the town's judiciary (*fuqaha*) of twenty-three known people only one was a native. This was perhaps due to the small number of Sunnis in the area. One of the *madrasas* in Qus was apparently built by Shams al-Din al-Asna'i, who practised jurisprudence at Edfu (Garcin 1976, 299).

The land around the town was endowed as *iqta'* land by the early Mamluk period; this exploitative system resulted in the reversion of surplus revenue to the holding official. In 1298 the *iqta'* of Edfu was held by an *amir* called Mankutimur while between 1298 and 1305–6 it was in the name of *amir* Salar. *Amir* Sayf al-Din Kara al-Mansuri, the holder of the *iqta'* of Edfu in 1307–8, lost it to *amir* Sayf al-Din Batkhas al-Mansuri after pillaging the area. Other known holders were the deputy *amir* of Karak in 1309–10, the *amir* Qutluq Tamur 'Ala'i in 1375–6 (who held 24,000 *feddans*; Garcin 1976, 238, 43) and the *amir* Sayf al-Din Aytмыш, chief *mamluk* of Sultan Barquq. A decree dated 8 Dhu al-Qa'da 797 (25th August 1395) attributing to Aytмыш the *iqta'* of Edfu, worth 10,000 *dirhems*, is set in the wall of the sanctuary of Edfu's historic mosque (see Van Berchem 1903, no. 539, 745 for text and translation; also fig. V.2a). In 880 H (1475/6 AD) the *amir* Barsbay al-Muhammadi was authorised to collect 20,000 dinars from the people of Edfu as payment of *iqta'*. It is unlikely that any of these high officials ever visited Edfu: they would have sent employees to collect their revenue.

Edfu and its desert margins

Difficult relations between desert and valley in Upper Egypt were nothing new even in the Roman period, when raiding of valley towns by desert nomads such as the Blemmyes and the Beja was widespread. Remondon (1961) gives details of military action taken from Edfu against the Blemmyes in 565, at which time a task force of Scythian cavalry was stationed there (the second Traiana legion was no longer garrisoned in the town). These Σκυθαὶ Ἰουστινιανοὶ were apparently created by Justinian's thirteenth edict and initially stationed at Nicopolis but were moved to Edfu during the Blemmye wars. They appear to have been an urban militia for the protection of the city; their *annona* was provided by a church in the town and some of the troops were stationed in a

nearby monastery. These soldiers may not have been wholeheartedly welcomed in Edfu: accounts of rough treatment of locals at their hands have survived (Maspero 1912). Bruyère (1937, 22–3) assigns a late Roman date to one of the town walls surviving towards the west of Tell Edfu, concluding that the settlement was walled at that time. Michalowski (1938) goes into more detail, stating that the wall was constructed during the Ptolemaic era, then repaired and strengthened with bastion towers during the early Roman period, finally being superseded by the construction of an outer wall in the second century AD. This hypothesis is supported by the remains on the ground: the visible part of the wall is not the base and the brickwork continues down into the Ptolemaic strata on top of the mound. The wall must thus have been built rather earlier than Bruyère suggests and may well date to the Ptolemaic era, although this cannot be demonstrated with any certainty. If the fortifications do conform to Michalowski's suggested chronology, the later reinforcements must have been the work of the Second Traiana legion, but the defences were probably still in use against the Blemmyes in the sixth century. Raids from the desert continued unabated after the Arab conquest. Ibn Hawqal describes how Quft was taken and pillaged by the Beja with the massacre of part of the population in 819; he suggests that this may have been the reason for the construction of ramparts at Quft, Qus and Aswan around 827. A further raid on Kom Ombo in 847 is recorded (Ibn Hawqal tr. 1964, 50–1).

We know that much of the population of Edfu was Shi'ite from the Fatimid period onwards but no mention is made of specific tribes settling in the town. By the thirteenth century, the region from Manfalut to Qus was mainly inhabited by tribes of Yemeni origin, while Qus to Nubia was largely held by the Qaysite Banu Hilal. A small Yemenite enclave apparently existed, which Garcin situates around or near Edfu, and which was occupied by members of the Tha'aliba of Tayy (1976, 362, 363 note 10). A study of the *nisba* names in the biographies of al-Udfuwi does indeed reveal mainly Qaysite names north of Edfu; at Edfu itself seven members of the Tha'aliba, one Fadali of Bali and one Ghassani are recorded, all tribes of Yemenite origin (Garcin 1976, 362–5). The town was the starting-point for one of the desert roads to Aidhab, the most frequently used route of pilgrimage at least until 1192 when the northern route became more accessible (Couyat

1911). The fourteenth century traveller Ibn Battuta took the road from Edfu to Aidhab but does not describe Edfu at all, although he does give the tribal origins of people he encountered in the desert outside Edfu. These were apparently all Qaysites, despite the occupation of the neighbouring valley by Yemenites. Ibn Battuta met Dughaym, Banu Hilal and Rifa'a (tr. 1958, II, 109). (Ibn Jubayr, on the other hand, met members of the Yemenite Bali tribe in the desert outside Qus; tr. 1952, 60.) Garcin (1976, 379) suggests that local rivalries were not purely tribal, being exacerbated by the different lifestyles of the ethnic groups: the Tayy were sedentary while the Qaysite desert-dwellers were nomadic. The area around Edfu retained a nomadic population until very recently: the *Recensement général* of 1898 recorded 12,150 out of a total 25,143 Bedouins in Nubia Province based in Edfu.

So it is clear that, from the early Roman period onwards, the town's existence became gradually more precarious. The third century or soon after saw the loss of Edfu's *nome* capital status. Shortly afterwards the legion was removed, to be replaced by a smaller group of German auxiliaries only during a time of warfare in the region. A period of some unrest, with more raiding, followed the Arab conquest, and the administrative status of the town may have declined further during the eleventh century. Despite this, Edfu appears to have experienced something of a renaissance under the Fatimids and may have benefited from Badr al-Gamali's building programme in the area (see below pp. 110–1). But we find Mamluk Edfu in a position of some isolation, inhabited by an ethnic and religious minority, surrounded by a semi-hostile nomadic population, governed by people from other parts of Egypt and financially exploited by high officials for their own gain. Under these circumstances the development of the town in the Roman and Islamic periods becomes a subject of special significance.

Previous excavations at Edfu

Tell Edfu has seen a considerable number of excavations. Early attempts to uncover the temple paid little attention to the town site; Mariette's clearance work of c. 1860 and Barsanti's 1902–5 'renovation' of the western temple enclosure wall saw the removal of houses from around and above the temple (Barsanti 1904). Excavators then turned their

attention to the retrieval of papyri: digging in 1914 under the direction of Lacau by Collomp and Saint-Paul Girard remains unpublished, although a very brief description is given by Henne (1924). Several Coptic/Roman houses on the south-west side of the mound were uncovered, as well as a Roman house with murals in the flank of the mound south of the temple. Finds included ostraka, pottery, lamps and terracotta, wood, metal and leather objects.

The most extensive excavations undertaken at Edfu, from 1921 until 1939, began as the supervision of the ongoing activities of the *sebbakhin* and site guards with a view to the retrieval of papyri and finds. This monitoring was carried out by a French (later Franco-Polish) team that started systematic excavations of the early Islamic town in February 1922 in order to clarify the stratigraphy of the upper layers (Henne 1924 and 1925; Guéraud 1929; Alliot 1933 and 1935; Bruyère et al 1937; Michalowski et al 1938 and 1950; *Tell Edfou* 1999). Large-scale clearance was undertaken, with the upper levels being demolished to provide access to the Ptolemaic town beneath. Many finds from these excavations are registered in the *Journal d'Entrée* of the Cairo Museum. It was hoped that some pottery from these excavations would be stored locally but antiquities kept in the temple pylon post-date the French work and are all labelled in Arabic and English; they clearly derive from later SCA clearance work (fig. V.2b). Some ceramic material from the excavations has been published: as well as the relevant sections of the Franco-Polish reports, see Kalinowska-Habdas (1957); Rodziewicz's 1970 treatment of a single sherd from a large ARS plate; and Ruszczyk's 1962 publication of two spheroidal vessels of the Mamluk period, now in the Warsaw Museum.

Current situation of the archaeological remains

Remains of the ancient town are preserved as a mound, in places as high as 104.78 m above sea level (nearly 20 m above bedrock), situated between the Ptolemaic temple and the modern Muslim cemetery to the west. This mound represents only the western part of the old town: the centre may have been cleared to allow construction of the Ptolemaic temple, although the presence of an earlier temple beneath the Ptolemaic one perhaps indicates that this area was never built up like the surrounding mound. Such a layout

would closely correspond to the description given by Herodotus of the Delta town of Bubastis: 'The temple stands in the centre of the city, and, since the level of the buildings everywhere else has been raised, but the temple itself allowed to remain in its original position, the result is that one can look down and get a fine view of it from all round' (tr. 1972, book 2, 138). To the east and south of the temple, where modern houses cluster closely around the enclosure wall, the ground level is almost at the height of the western mound (102.24 m above sea level). The presence of ancient remains under the modern buildings in these areas cannot be doubted, although SCA plans to clear the whole area over the next two years, if carried out, will destroy this part of the ancient mound.

While the remains of the ancient town to the east and south are largely inaccessible, the western mound has been badly denuded over the course of the twentieth century. *Sebbakhin* cut two huge quarries, one from the north and one from the south, almost cutting the mound in two and destroying much of its archaeology (see fig. V.1). The sheer sides of the mound left by the quarrying display extensive profiles that, although difficult to access, preserve stratigraphic sequences covering much of the history of the site. Unfortunately, the Roman and Islamic layers of the western mound are not preserved in situ (the Franco-Polish excavators made a very thorough job of their demolition) and later occupation is now represented on the western mound only by a scatter of surface sherds. The Franco-Polish spoil heaps, which it was thought would contain many Islamic sherds, could not be located with any certainty, despite a photograph of workmen dumping spoil from a light railway on the western slopes of the mound in Henne's report (1925, pl. 1, fig. 2). These mounds may have been cleared away, or have eroded and been covered by earlier material.

Aims of fieldwork undertaken during spring 2001

The dating of changes in occupation patterns given by the Franco-Polish mission was not based on a detailed investigation of the evidence across the mound, but rather on spot-dating of exceptional finds in specific locations. It is impossible to tell from this if the entire tell was abandoned at the same time, and losses to *sebakh*-mining have now destroyed so much of the ancient town that we can never gain a complete picture. One

aim of my fieldwork was to try and clarify this point by sampling surface ceramics in various places across the site. In this way, I investigated the date at which the western mound was abandoned in favour of the site of the modern town. Furthermore, I hoped to assess the character of the remains beneath the current settlement, examining exposed archaeological remains and standing architectural features. By these means I hoped to clarify the history of settlement in the town from the Roman period to the present day.

Fieldwork methodology

I made surface collections in several areas of the mound. The low density of sherds of a late date and the mixing of ceramics of all periods on the surface made random sampling impracticable; instead, circles of five-metre diameter were laid out and all late Roman and Islamic sherds within them collected and the diagnostics recorded. These areas were limited in size to prevent the collection of more material than could be processed in the available time. While the small number of sherds recorded from each area cannot allow any definite conclusions, when supplemented with observations of the surface corpus, it is hoped that an accurate impression of the date of the latest activity in each area can be achieved.

Collections were made at intervals across the mound in order to demonstrate the presence, if any, of geographical variation. The areas sampled were: area A (on top of, and around, the north wall); area B (the central part of the western slope by the Franco-Polish spoil heaps); area C (the upper surface of the mound); and area D (between the north quarry and the top of the mound by the temple enclosure wall). A discrete cache of later material was found dumped in the south quarry among modern rubbish and was also recorded.

Area A:

Very little remains of the north end of the ancient town; a large town wall is all that was left by the *sebbakhin* (fig. V.3a). The wall is built of large mud bricks (37×20×12 cm), while towards the west on the south side (inside the town) a structure built of smaller bricks (28×13×6 and 28×8×7 cm) is preserved, built up against the earlier wall. The

relationship between these two structures and the fill between them (which contains bread moulds of the First Intermediate Period) indicate that at least this part of the town wall is FIP or earlier in date. On top of the wall, a number of large profiles are preserved; these are apparently Pharaonic in date but their location – several metres above the base of the wall and on unstable, crumbling ground at the edge of the mound – prevented any close inspection. There thus seem to be no in situ strata of the Roman period or later in area A.

The ground around the base of the mound and the top surface of the wall itself were scattered with a certain number of later sherds. A sample of this material was collected and recorded (figs V.4–5). Fine wares were selected in preference to coarse wares because of their relative ease of dating. A single fragment of African Red Slip ware (ARS) was retrieved from area A and probably dates from around the third quarter of the fifth century (vessel 1). The majority of the fine wares at Edfu are, however, products of the Aswan workshops (Adams 1986). The Aswan ceramics from area A include a single body sherd of Adams's group AI, red-washed ware R30 (c. 100–500), in which small bowl and cup forms are common. Four sherds of group AII, ware R4 (c. 500–850) were also collected, all standard sigillata-influenced forms (vessels 2–5). Other wares present in the square included AII (U2) ribbed Aswan amphorae in great abundance, while LRA 1 and LRA 7 were also numerous.

This assemblage would seem to indicate the abandonment of area A around the mid-ninth century. Examples of later Aswan amphorae and other Islamic wares were absent, with the exception of a sherd of Adams's ware R13 from groups AIII and AIV (c. 850–1250). The form of vessel 6 is again probably sigillata-derived, although the string-marked rim is typical of ware R13; the bowl thus may be transitional between wares R4 and R13 (group AIII, c. 850–950). Occupation in this area may thus come to an end slightly earlier than the tenth-century date suggested by the Franco-Polish mission, but it is difficult to be certain on the basis of so few sherds, especially taking into account the possible inaccuracies of applying a Nubian ceramic typology to Egyptian sites.

Area B:

The western slope of the mound, a scree of rubble and sherds, has no visible structural remains (fig. V.3b). I had hoped that a collection from here might reveal a considerable quantity of later ceramic material discarded over the edge of the mound during the Franco-Polish excavations, but this was unfortunately not the case. A large, self-contained dump of LRA 7, Gaza Jar and LRA 1 fragments was mixed with a certain amount of modern rubbish, but apart from this, the density of late Roman and Islamic wares was fairly low. Fine wares were again collected in preference to utility wares (figs V.6–7).

A single sherd of 'Late Roman C' sigillata, probably manufactured in Asia Minor, was of Hayes's form 3 (1972), a common bowl accounting for at least half the output of the workshops between the first half of the fifth and the mid-sixth century (vessel 1). The form probably indicates a mid-fifth century date. As in area A, Aswan ceramics were numerous, but only a single example of Adams's group AII was found, a jug or jar of ware W3 (vessel 2, c. 650–850) group AIII wares were better represented here than in area A. Two sherds of the brown-fired Aswan-related ware found at Zawyet al-Sultan (the fabrics having the same inclusions as well as abundant limestone and a dark brown firing colour) were also retrieved from this area (vessels 7 and 8). A single piece of a small bowl with decoration related to that of FFS ware was the most recent sherd; this fragment does not fit into Mason's typology (1997) and can be dated no more accurately than to the mid-eleventh to the end of the twelfth century (vessel 9). Altogether, this assemblage appears slightly later in date than that from area A. Unsurprisingly, the material is very mixed, coming as it does from slopes of rubble and spoil. It is not possible to date most of the wares accurately enough to indicate the date of abandonment of this area.

Area C:

The top surface of the mound itself has been greatly disturbed over the last century, and the demolition of the highest layers to allow access to Ptolemaic structures was apparently total: no in situ archaeological material of the Roman or Islamic periods was identified anywhere in the ancient town (fig. V.8). What may be the latest surviving

profile in this area contains sherds of the Ptolemaic period. Only a few pieces were gathered from here (figs V.9–10), although some sherds of the ubiquitous LRA 7 were also noted, as well as a single example of Adams's Aswan group AI ware W32 (vessel 1, probably dating to between c. 400–500). Examples of this ware were also found in profile C (see below fig. V.26, vessels 12 and 21), suggesting that it was common in Edfu. Group AII was represented by a sherd of ware R4, the base of a bowl with stamped decoration and external rouletting (vessel 2). The flange-rimmed bowl (vessel 3), although a sigillata-type form, has a fabric more typical of group AIII (c. 850–950). The remaining sherds may all post-date the tenth century, and some certainly do: a green marl *qulla* base from the ninth to eleventh century (vessel 7); two sherds of Adams's ware W12 (vessels 5 and 6); a brown-slipped Aswan bowl dating to the eleventh or twelfth centuries (vessel 4); and a fragment of imitation celadon (vessel 8).

Since none of these pieces was found in situ, it is impossible to demonstrate that this part of the town was still inhabited after the tenth century. The material is unlikely to have been associated with the later burials mentioned by Henne (1924) but may have been deposited as rubbish from the inhabited area nearby. But it is clear that area C was the scene of some activity after the tenth century, more so than the northern end of the mound where no such later ceramic material was found.

Area D:

Some late and post-Roman sherds were collected from the scree to the west of the Ptolemaic temple enclosure wall, designated area D (figs V.11–12). A single fragment of Adams's group AII, ware R4 and two sherds of his AIV ware W12 were collected (vessels 1–3), as were other well-known Islamic wares: the rim of a FFS bowl similar to that found in area B (vessel 4); a bowl of so-called 'Fayyumi' ware, probably Mason's (1997) 'polychrome-painted opacified-glaze' ware (vessel 5). Two examples of plain bottle-green glazed bowls were recorded (vessels 6 and 7), one of a beige marl clay and the other a silt. These are difficult to date, being paralleled from the eighth and ninth centuries, the Fatimid period and even later. Glazing of siltwares does not really become common until the Mamluk period, and it seems probable that at least one of these pieces

is of late date. That the eastern edge of the mound was in use until relatively recently is demonstrated by the presence of the rim of a pale turquoise and purple glazed siltware of distinctly modern appearance and part of an Ottoman smoking pipe (vessels 8 and 9).

This sample was noticeably more modern than those taken from areas A to C. The proximity of area D to the later settlement to the east may explain this. It seems likely that the locality was used as a dump by the inhabitants of the Islamic town.

Pot cache, south quarry:

On the east side of the south quarry a small dump of Roman and Islamic material was noted, mixed with modern rubbish. Much of this dump was of LRA 7 but among them were Arabic and Coptic ostraka (figs V.13–14a), a stone inscribed in a Semitic script (fig. V.14b) and a collection of ceramic fragments (figs V.15–16). The origin of this material is obscure: it seems implausible that such a discrete group of striking pieces could have accumulated in one place by chance. Perhaps the material was dumped after SCA clearance of part of the mound (excavations have been progressing as part of the new landscaping of the area around the temple and the creation of an outdoor museum; the whole south end of the mound as mapped by the Franco-Polish expedition no longer exists). This collection, then, has possibly been moved from elsewhere and cannot tell us about the development of the site. Given the interest of some pieces present here, it was nevertheless considered worth recording. (The cache also contained some glazed wares and porcelains clearly of eighteenth-century origin or later; these were collected and stored but are not discussed here.)

The earliest sherd collected from the cache was the base of an Aswan amphora of Adams's group AI, ware R30 (vessel 2, c. 200–400). A rather worn piece of an ARS bowl of Hayes's form 91, apparently type A, was manufactured during the second half of the fifth century (vessel 1). Later wares include a string-marked, flange-rimmed bowl of Adams's group AIII, ware R13, and an example of the unusual AIII ware W22 (vessels 3 and 4). The dump also included a single sherd of an eighth- or ninth-century Aswan glazed ware (vessel 5; fig. V.17a); this ware has been excavated in great quantity at Fustat (pers. obs.). Gayraud has suggested that these wares were transported from Aswan as

‘biscuit’ wares and glazed in Cairo (pers. com.). However, I recently saw an example of the same ware, excavated by the German Institute in Aswan itself, and many more sherds have been found on Elephantine, usually from unstratified contexts; this increases the likelihood of their being manufactured in the south, perhaps largely for a northern market.¹ Another example of the ninth- or tenth-century glazed ware designated FG16 in the Old Cairo typology was found here, and this is comparable to examples collected at Kom al-Dik, Zawyet al-Sultan (vessel 6; Gascoigne forthcoming). Also collected were two fragments of FFS, almost certainly from the same bowl (vessel 7); Mamluk wares including slip-underpainted ware (vessel 8); imitation celadon (vessel 9); and a yellow-glazed piece with brown and dark green pattern, unparalleled but similar in style to known Mamluk wares (vessel 10). Last, there was a trio of glazed wares known from late Mamluk to Ottoman contexts at Fustat (vessels 11–13). When the eighteenth-century porcelains, not recorded here, are considered, it is clear that this pot cache contains sherds dating more or less up to the present day.

This regionalised examination of pottery across the surviving areas of the mound has not provided enough information to re-date conclusively the abandonment of the town. But it has indicated the existence of details of chronological variation across the site missed by the Franco-Polish excavations and now largely lost. The results imply that the northern edge of the town was the first to be abandoned, and that the settlement shrank gradually towards the south-east of the mound, an area which clearly remained in use, if not inhabited, until recent times. It seems likely that later use of the mound involved dumping of rubbish; this would explain why areas nearest to the modern town yielded later material than the northern end.

The eastern mound

We know that the town had spread to lower ground by the seventh century: a text dated 618 notes a particular house as being situated in the upper part of the town (Gasco 1999). For any discussion of the development of the town during the late Roman and Islamic periods to be complete, the area beneath the modern town east and south of the

¹ I am grateful to Dr Kai Bruhn for showing me this material.

temple, where extensive ancient remains also exist, must be taken into consideration. Access to archaeological deposits below the modern housing is not easy: there were unfortunately no building works taking place during the period of the fieldwork, and the desire of the SCA for tidy monuments has led to the concreting of all exposed profiles around the temple. This is not the case, though, further south. A large scree remains visible to the south of the *mammisi*, from the town down to the south quarry, above the site of a late 5th or early 6th dynasty stone *mastaba*-tomb, demolished since 1977 (fig. V.17b). Some mud-brick walls protrude from the rubble, partly covered by the modern rubbish thrown down the slope by householders above. Among the debris were a few exposed profiles, and these were recorded and ceramic material from them sampled. A full description of all illustrated pottery can be found in the catalogue.

Fig. V.18a shows a sketched outline of the entire slope as seen from the roof of the new project building in the south quarry, with the recorded profiles marked. No exposed archaeological deposits were visible lower than profile A, so it was impossible to tell how much of the mound dates to the Old Kingdom or First Intermediate Period. In the absence of a theodolite it was impossible to take spot heights but fairly accurate estimates were made based on measurements taken in the field and the Franco-Polish spot heights. The latter record the foot of the mound by the stone mastaba as being 84.14 m above sea level, while the street level at the top slopes from 102.24 m at the north end to 100.24 m to the south. Thus, the slope at its highest is 18.1 m tall, a figure which almost matches measurements made in the field. My calculations place the highest point of the slope at around 19 m above its base, and, since the uppermost deposits of the mound are clearly very recent (see profile E), the slope will have grown slightly since the spot heights were taken. The relative locations of the profiles are shown in fig. V.18b.

Profile A:

Situated about two thirds of the way up the slope, this is the lowest visible exposure (fig. V.19); the base of the section is approximately 11.2 m above the foot of the slope, the whole being 1.65 m tall (the black and white markers on profiles A–D are 50 cm apart). The deposits are sealed by intact masonry built of bricks of reasonably large dimensions

(32×11×16 cm). Although brick size is not a tool for accurate dating, these measurements fall into the centre of Spencer's diagram of brick sizes for the Ptolemaic and early Roman periods (1979). This wall is constructed on top of what appears to be a midden; the organic material in layer 3 and the trampled sherds separating different horizons would seem to confirm this. Lastly, the rubble of layer 8 indicates earlier building on the site. The profile provides evidence for habitation extending across this part of the mound during the Ptolemaic era, unsurprisingly given the proximity of remains of that period on the archaeological mound nearby.

The examination of sherds retrieved from each layer clarified the dating of the exposure (figs V.20–1). Ceramic material collected from layers 2, 3, 4 and 6 was apparently all Ptolemaic, but only a small number of diagnostics were among the sample, the majority of the sherds being uncoated silt wares with organic temper. Layer 6 contained a bowl with distinctive rolled rim and smoothed interior surface, paralleled from the late third and second century BC contexts on many sites (vessel 4). The other diagnostic sherd from this layer may be part of a late third to second century ring-stand (vessel 5). The large bowl from layer 4 is puzzling, being apparently considerably earlier than the previous deposit (vessel 3, c. 1000–700 BC). Either this piece is residual or it is an unusual form of later date. Layer 3 produced the rim of a distinctive black, burnished bowl of Spencer's (1996) 'Memphis black ware', manufactured in the Delta during the third to first century BC (vessel 1). Despite the small number of sherds retrieved from profile A, it has proved possible broadly to date the deposits. The structure (layer 1) built over these Ptolemaic strata must thus date to the second century BC or later.

Profile B:

The base of profile B is more or less level with the wall which tops profile A; B has a total height of 0.7 m. This second exposure comprises deposits laid down against a standing wall, eventually burying it (fig. V.22). The wall, here designated layer 1, is built of smaller bricks than layer 8 above (25×7×11 cm) and is covered on the south side with rough mud plaster. The brick dimensions are unusually small but are paralleled by measurements taken from Coptic houses at Hermopolis (Spencer 1979, 102). The plaster

and the presence of a hard-packed floor (layer 7) suggest that the south surface would have been the interior of the enclosure. The deposits immediately above the floor (layers 3 and 6 to the south and north respectively) contain a lot of organic material, perhaps suggesting that animals were kept here. North of the wall, this organic deposit lies across mud-brick tumble (layer 4), perhaps from the upper part of the wall; in this case, the structure was already in a state of disrepair by the time deposits 3 and 6 were laid down. The dumping of rubbish apparently caused further rises in ground level, for example the discarded sherds of layer 2. Although it is hard to draw conclusions with only a small area of the mound visible, this profile may indicate a gradual receding of habitation from the area of the south slope.

As expected, the sherds indicate a slightly later date than that of profile A (figs V.23–4). Uncoated silt wares similar to those present in profile A were found throughout profile B, but these local utility wares have little value for dating purposes. Layers 3 and 6, the thick deposits on each side of the wall, were full of Adams's group AI Aswan body sherds, including pieces of the thin-walled amphora of ware R30. Layer 6 also contained the rim of an inturned bowl related to a common Ptolemaic bowl type (vessel 2), while an R30 amphora rim was retrieved from layer 2 (vessel 1). The date of the wall (layer 8) is not easy to establish: the absence of Aswan ceramics, common elsewhere, from layer 7 (the related floor) may indicate a date before the appearance of these wares, c. 100 BC. The assemblages from layers 6, 3 and 2 are closely related; R30 amphorae were in use until around the mid-fifth century, when they were replaced by U2 unslipped amphorae. These strata cannot be dated more accurately than the lifetime of ware R30. However, it is tentatively suggested that the wall and floor may be close in date to profile A. The absence of LRA 7 sherds in profile B prevents the conclusion that the upper levels are the same date as profile C. The presence of R30 amphorae in layers 6, 3 and 2 suggests that the structure of which the wall and floor were a part fell into disuse some time after 100 BC.

Profile C:

There is a vertical gap of about 0.5 m between the top of profile B and the base of profile C, which is itself around 1.1 m tall (fig. V.25). This exposure is made up of large sherd dumps overlaying each other and occasionally separated by deposits with a high level of organic material, such as bone, chaff, string, charcoal and animal droppings, in addition to layers of mud-brick tumble. The profile apparently cuts through a midden, created by the dumping of rubbish on waste ground. The sherd dumps provided plenty of ceramic material for dating purposes (figs V.26–7); however, it was not always possible to distinguish clearly between the top of one dump and the bottom of the higher one, for example at the north end of layers 6 and 8.

Layer 9 contained sherds of LRA 7, in addition to body sherds and a rim of Adams's R30 amphorae (vessel 64). This is the earliest appearance of LRA 7 sherds in the sequence of sections. Two types of this common amphora exist, Peacock and Williams (1986) classes 53 and 52. The sherds from layer 9 are mainly unribbed, suggesting they come from class 53 amphorae. Since Adams's R30 Aswan amphorae went out of use around the mid-fifth century, this deposit cannot be dated with any greater accuracy than between the first and early fifth centuries.

The first of the large dumps, layer 8, again contained a large number of LRA 7 sherds, this time apparently including some ribbed body sherds and two rims of class 52, as well as a few pieces of the R30 amphorae (vessel 52). A single sherd of the common LRA 1, which appears from the late fourth or early fifth century, was present, as were a small number of the early, unribbed variety of a later Aswan amphora (Adams's group AII ware U2, which gradually replaced R30 amphorae over the course of the fifth century) and two bowls of the AI red ware, R30 (vessels 44 and 45). Pieces of two small bowls of the uncommon AI white ware W32, recorded in Nubia from c. 400–500, confirm the date of this layer as around the mid-fifth century (vessels 46 and 47). The presence of both LRA 7 and R30 amphorae body sherds in layer 7 indicates that this deposit is close in date to layer 8, but only a few pieces of pottery were found in this layer.

The second big sherd dump, layer 6, again contained many R30 amphorae and LRA 7 pieces including four toes and five rims of Peacock and Williams (1986) class 53 (vessels 37–41). AI Aswan fine wares were also present: two R30 plain-rimmed bowls (vessels 20 and 23); a W32 bowl with recessed-spot base (vessel 21) and a shiny red-slipped equivalent possibly of ware R30 (vessel 24); a body sherd probably from a W24 jar with geometric painted decoration (vessel 26); and two painted bowls which conform to Adams's description of R30 except that they are painted on the interior, not the exterior, surface (vessels 22 and 25). The coarse wares are generally very similar to those from layer 8, and layer 6 must have been laid down more or less simultaneously to layer 8, in the mid-fifth century.

Fewer sherds were retrieved from the remaining layers. Layer 5 contained only a few sherds but these included LRA 7 and R30 amphorae fragments, as well as AI fine wares. The presence of a bowl rim of the AI ware W32 (c. 400–500) implies that this layer, too, is of mid-fifth century date (vessel 12). R30 Aswan amphorae pieces and LRA 7 sherds were again found in layer 4, as was a plain-rimmed R30 bowl (vessel 4), demonstrating that layer 4 is broadly contemporary with layers 5–9. Layers 3 and 2 contained a few pieces of LRA 7 and a *qadus* base, but nothing else diagnostic. The wall in layer 3, roughly constructed from what appear by their large dimensions to be re-used bricks, may be a temporary or crude animal shelter. The uppermost level, layer 1, is a mix of pottery of apparently late fifth- or early sixth-century date, including a few pieces of LRA 7, and modern rubbish dumped down the slope by the inhabitants of the houses above.

Profile D:

This small, stepped profile immediately above profile C really represents the upper layers of the same exposure. Due to the angle and position of profile D, it was easier to record it individually (fig. V.28). This section is 0.6 m of ashy deposits with a few small dumps of well broken-up pottery. The character of the ceramic assemblages from profile D is similar to those of profile C, LRA 7 and R30/U2 Aswan amphorae being found throughout. The Aswan amphorae in layers 3 and 4 of this profile exhibit slight ribbing,

which is not found on ware R30; ribbing appears on later U2 amphorae, of group AII, from the seventh century onwards. However, the silt utility wares in layers 3 and 4 mirror the forms found in profile C. Also in layer 2 is a small silt bowl of a type commonly found in fifth century contexts at Qasr Ibrim (Rose pers. com.; vessel 4). The similarities between utility-ware forms imply a date close to that of profile C, as does vessel 4, but this date is contradicted by the presence of the ribbed Aswan amphora. Either the bowl is residual and the utility wares from long-lasting traditions, or ribbed amphorae appeared earlier in Egypt than in Nubia. Thus, the date of this profile cannot be calculated with any more accuracy than late fifth to seventh century.

Profile E:

Situated towards the north end of the southern slope, profile E is separated from the other recorded profiles by a long horizontal distance and about 1.15 m vertically; it is 2.1 m tall, and the black and white markers are a metre, rather than 50 cm, apart (fig. V.31). The base of the section, layer 6, is scorched, making identification of the ceramics difficult. A small number of LRA 7 pieces and especially of unribbed U2 amphora fragments suggest a date before the mid-eighth century, after which ribbed U2 amphorae are more common. A single piece of what may be a LRA 1 is probably residual. Layer 5 yielded a large number of fragments from Aswan amphorae, including later examples of the AII ware, U2, and early U8 amphorae of group AIII. Only a tiny number of LRA 7 fragments were found. This layer was thus probably laid down during the ninth and tenth centuries.

A little ceramic material was collected from layer 4. This consisted of a single body sherd of a coarse Ballas utility ware and a bowl of black-and-red painted hand-made ware, further examples of which were collected from the surface of the slope (fig. V.34a). Relatives of this last ware have been found in the west bank tombs and temples at Luxor associated with the reuse of the chambers as dwellings in Islamic times; it is apparently restricted to Upper Egypt and may relate to a Nubian tradition (Rose in Strudwick and Strudwick 1996). Rose dates similar sherds to the tenth century, while stratified examples from Tod came from deposits of c. 1000–1200 (Pierrat 1991). The presence in layer 3 of a

mud-plastered bird coop of a type still seen in villages today, and a fragment of a Coca Cola bottle in layer 2, confirm a recent date for the upper parts of the profile.

Temple scrape

The only other exposed area on the south-eastern slopes of the modern town is a small scrape about six metres above the pavement to the east of the temple birth house (fig. V.34b). An investigation of this area revealed no visible intact deposits but a surface scatter of mixed ceramic material. A pottery collection was made; it contained Late Period marl wares; LRA 7; fragments of Adams's Aswan group AII, ware R4; sherds of eleventh- and twelfth-century Aswan amphora; more of the red-and-black painted, hand-made ware from profile E; body sherds from a bottle-green glazed FFS bowl; and pieces of a turquoise-glazed ware designated FG6 at Fustat and dating to the late Mamluk and Ottoman periods. This material covers a date range from the late Pharaonic period almost to the present day and indicates that deposits under the concrete cladding immediately east of the temple were badly disturbed during the landscaping of the area.

Discussion

Clearly the extrapolation of settlement patterns for the whole southern part of the town from a few exposed profiles is not without its problems. The intact masonry and associated ceramics of profile A demonstrate that part of the southern mound was inhabited during the Ptolemaic period. The structure built over this exposure, actually several phases of brickwork abutting together, may be part of a house. The lack of an accurate date for profile B is unfortunate: the absence of LRA 7 suggests a pre-fourth century date. The vertical distance of only 1.2 m between the top of profile A and the base of profile C (dated respectively to the second century BC and the fifth century AD) demonstrates either that there was little activity in the area during this period or that the deposits were laid down on a slope. The midden-like character of profile B would imply that use of the area was restricted to rubbish dumping at this time. That the volume of rubbish dumped in the area increased in the fifth century is perhaps reflected in the thickness of the deposits of profile C, all apparently of roughly the same date. It is

tempting to think that the layers of profile C, and at least layers 3 and 4 of profile D, were all laid down over a short period of time. The depth of deposit between the top of profile D, layer 3 (late fifth century) and the bottom of profile E, layer 5 (ninth or tenth century) is only 1.4 m, which represents a very low rate of deposition. The question of whether the chronological hiatus of about a century above the burned strata of profile E (layers 5 and 6) was a result of the fire is not answerable. In populous and prosperous times, one would expect rebuilding to commence immediately after a disaster; the implication that this area of the town was run-down and depopulated is thus probably accurate. The most striking feature of profile E, however, is the absence of archaeological material from the period between the eleventh or twelfth century and recent times; moreover, no ceramic material from this period was found on the surface of the slope. It may be that for the duration of this period—some seven centuries—abandonment of the southern area was total, or at least that the rate of deposition was very low.

Architectural remains in modern Edfu

When viewing the town from the top of the west pylon of the Ptolemaic temple a number of minarets can be seen on the skyline. One of these belongs to an historic mosque now known either as al-'Umariya or al-'Amriya after the second caliph or the conqueror of Egypt (figs V.35–6). This building clearly should be included in Creswell's (1952) group of Fatimid minarets/towers, comprising the minarets of the Great Mosque of Esna, the Mosque of Abu al-Haggag at Luxor, the Mashhad al-Bahri and the Mosque of Bilal at Shellal and a watchtower at Aswan, all probably founded by the Armenian vizier Badr al-Gamali. Creswell notes common features between these buildings: a square base, with a second storey in the form of a tapering round tower, a wooden balcony attached by means of beams jutting out of the wall and distinctive 'horns' and dome at the top. A closer look at the Edfu minaret shows the presence of all these features; why Creswell failed to include it in his list is baffling, unless the explanation is merely that he never visited Edfu. It is not possible to fix the position of the minaret of al-'Umariya exactly within Creswell's typology but it is closest to the minarets of the Mosques of Bilal, Abu al-Haggag and Esna which belong to the later end of Creswell's chronology. Creswell

suggests that these monuments were built between 1077 and 1082 to commemorate Badr al-Gamali's victory over the Nubians; perhaps they were also a reward for the strong adherence to Shi'ism shown by the inhabitants of Aswan, Edfu and Esna? The absence of Edfu (and Luxor) from al-Muqaddasi's (ed. 1906) list of towns with mosques, written in c. 985, would imply that Badr al-Gamali's structure was the first mosque in Edfu.

The location of this mosque raises questions about the development of occupation within the town. In Cairo, new religious institutions were positioned within the Fatimid-founded administrative centre to endow the area with the prestige appropriate to its origins and connections. Given this attitude, it seems unlikely that Badr al-Gamali would have constructed his mosque anywhere but in the middle of the town. The position of the congregational mosque of al-Umariya to the east of Edfu temple could perhaps indicate that the town centre was in this area during the Fatimid period. (Alternatively, one might suggest that the construction of the prestigious new mosque gave the eastern part of Edfu a new importance, and that the movement of the town eastwards was a direct result of the foundation.) It is not clear how far ground level around the minaret has risen since the late eleventh century. The mosque itself is built on a raised platform, but this building post-dates the attached minaret. The stairway inside the tower gives no indication of having ever descended further than its current level.

Conclusions

Ceramic sampling at Tell Edfu has revealed an outline of the development of the town from the late Roman period to the present day. In Ptolemaic times it appears that the town extended right across the mound, both west and south: the excavations of the site in the west, and recording of Ptolemaic buildings in profile A support this. The study did not confirm the conclusion that there was a temporary reduction in activity over much of the western mound during the late second and third centuries. While activity during this period was found to be severely limited in the southern area of the town, the dating does not conform accurately to the second to sixth century period given by the French; rather, little identifiable material came from deposits dating to between the second century BC and the fifth century AD. If the suggested date for profile B, post-c. 100 BC, is accepted,

the gap can be narrowed; the thin deposits perhaps indicate little activity in the area throughout this longer period. It should be borne in mind, however, that the thin deposits might reflect the sloping terrain rather than reduced activity. The question of a sixth-century re-expansion is also problematic. Profiles C and D indicate dumping of rubbish in considerable quantities on the southern slopes during the fifth century, but there is no evidence of a resettlement. Nowhere in the area are significant intact walls post-dating the Ptolemaic period. The increased use of the southern slopes as a midden may indicate that nearby areas, previously abandoned, were resettled at this time, but this is impossible to demonstrate. The desertion of the western mound in the tenth century as recorded during the Franco-Polish excavations does, however, seem to be relatively accurate. To the south, use of the area continued sporadically between the fifth and eleventh or twelfth centuries, the date of abandonment being fixed by the presence of two only slightly overlapping Aswan utility wares in the same stratum, layer 5 of profile E. The reduction of activity in the area was apparently almost as total as that of the western mound; it has only been resettled in the last couple of centuries.

How, then, did the town develop after the tenth century? We know that dumping of rubbish continued in area D throughout later periods, presumably due to its proximity to the houses built on and around the temple itself, some of which were apparently inhabited until Mariette's 1860 clearance. The founding of the new congregational mosque to the east, simultaneous with the abandonment of western and southern parts of the town, almost certainly indicates a shift of activity to this eastern centre. Unfortunately archaeological deposits under the modern town are inaccessible: the development of the settlement after Fatimid times remains the subject of speculation. In recent times a large-scale re-expansion has resulted in the reoccupation of areas not widely used since the eleventh or twelfth century.

The above examination of the remains at Edfu, both those on the main archaeological mound and, where possible, those under the modern town, has provided insights into the developing structure of the town throughout its long history. Such information highlights our lack of understanding of early Islamic urbanism and allows the construction of a theoretical model, which is discussed in the next chapter.

Chapter 6

Egyptian Urbanism: Causes of Change

In the light of the fieldwork reported above, an examination of the extent to which elements relating directly or indirectly to the Arab conquest affected towns in Egypt can be made. The main purpose of this final chapter will be to propose two factors that have hitherto not been accorded sufficient weight. First, the significance of military settlement in promoting settlement change; and second, the flawed nature of our understanding of the urban archaeological record for this important period. Lapidus has stated that 'Not the Arab conquest itself, but the ninth century was the great watershed in the history of Egypt' (1972, 260). This observation relates to rates of conversion to Islam rather than to settlement development. On the other hand, Adams's study of land use on the Diyala Plains in Iraq emphasises important trends in habitation and indicates a decline in prosperity, demonstrated by lower tax receipts and the abandonment of entire areas, in the mid-ninth to early tenth century (1965, 110). This situation apparently resulted from neglect of the agricultural infrastructure at a local level, but this negligence may itself represent wider political circumstances. The 'Abbasid caliphate, ruling Egypt between 750 and 868, increased the taxes raised in the provinces and especially in Egypt, to fund the centralised government in Iraq, and contributions to the 'Abbasid treasury apparently continued even under the semi-autonomous Tulunid and Ikhshid dynasties (Kennedy 1986, 134, 311). It is not implausible that such a political climate might be a further factor in urban change throughout the empire, a larger-scale phenomenon of which the Diyala Plains evidence is just one indication.

Some aspects of the fieldwork described above broadly support settlement dislocation at a later date: the latest occupation of the west mound at Edfu dates to the tenth century; the satellite settlement of Kom al-Dik at Zawyet al-Sultan was abandoned during the early tenth century; and the expansion at Tinnis took place during the eighth and ninth centuries. This corresponds to the time at which provincial settlement on the Diyala Plains was retracting in favour of a large metropolitan

population at Samarra and Baghdad (Adams 1965, 116). Morony (1984, 212) notes that 'The overall effect of the events of the seventh century on the distribution of the Persian population in Iraq was relocation'. The movement of peoples in the post-conquest period is here attributed to the removal of native garrisons and the settlement of non-Arabs in the new capitals. In Egypt, the 'Abbasid capital of al-'Askar, founded in 750, and Tulunid al-Qata'i', founded in 870, were intended as administrative centres and their settlement by the general populace was initially banned. However, it appears that this separation was not maintained to any great extent; both foundations quickly became absorbed within Fustat, implying rapid urban growth in the entire area (Kubiak 1987, 11–2). The expansion of the Fustat urban conglomerate presumably resulted from settlement, both by incoming Arabs and by the Coptic population. The movement of Copts to Fustat was likely to be at the expense of Egypt's smaller urban centres.

Fustat was not the only place growing in population and prosperity during this period. The garrison town of Aswan, for example, developed into an important urban entity during the ninth and tenth centuries (Garcin 1976, 49). Other thriving settlements include the great industrial ports of Damietta and Tinnis and the regional capitals Ansina and Qus, but the archaeological remains of many such towns are beneath modern settlement, preventing analysis of their development. The rise of such provincial centres, which were not themselves completely Arab but were occupied by military, administrative or mercantile elements of the Arab population, resulted in the superseding of existing towns that had previously served the same function. It may be more than coincidence, for example, that the rise of Ansina to prominence was broadly contemporary with the decline of Ashmunein across the river.

Was the transfer of administrative or mercantile roles from existing towns to centres such as Ansina and Qus the result of a deliberate government policy? Butzer (1960, 32) considers the administrative reforms of Diocletian, which abolished the *nomes* as units of regional administration, to have been the primary cause of settlement abandonment from the late Roman to the Mamluk period. The economic primacy of the *nome* capitals being removed, new towns in more advantageous

geographical locations were able to prosper. While the changes in the regional configuration of the country introduced by Diocletian were not insignificant, there are indications that Butzer's cause-and-effect theory is too simplistic an explanation. First, Antinoopolis, which did not lose its administrative status but rather was 'promoted' to capital of a larger area, the diocese of the Thebaid (Rouillard 1928, 33–4), was abandoned earlier than many towns that no longer functioned as administrative centres. Thus, administrative status alone did not guarantee prosperity. Second, as discussed in chapter 1 (pp. 4–5), it appears that in reality the old *nomes* differed little from the new *pagarchies*, which were themselves similar to the *kurras*, at least in early Arab times. In certain circumstances the loss of administrative status might have had a detrimental effect upon a town's viability, but Butzer's theory does not have as wide an application as he claims.

It does appear that patterns of military settlement played an important part in the expansion of new towns. That frontier areas should have special military status was not unique to the Arabs: under the Roman empire, Egypt's frontiers, and those of other provinces, were known as *limes* and were heavily fortified. By the late Roman period incursions into imperial territory were sufficiently common that interior towns were also garrisoned and the term *limes* came to refer to entire frontier provinces (Maspero 1912, 17–22). The Arab government again concentrated their military forces in frontier towns (*ribat*, *thaghr*); this policy may explain the apparent Arab disregard of Roman fortifications within the Nile Valley. The great prestige of soldiery in Arab society was presumably further emphasised by ethnic differences, and the situation at Tinnis indicates the way in which a town could benefit from military-related investment. As such settlements grew richer, they would become more desirable places of residence for Copt and Arab alike and expand accordingly. The exceptions to this were of course Kharibta, where the relationship between the army and the town was fundamentally exploitative and accompanied by no investment, and Alexandria, which, despite high levels of military settlement, had declined to a third of its late antique size by the ninth century. The loss of trade and the silting of the Canopic Nile arm apparently had more significance for the prosperity of the city than did its military

situation. In general, the evidence might suggest that the urban population of Egypt in the early Islamic period became concentrated in fewer, larger settlements at the expense of the medium-sized provincial towns that had dominated the configuration of the country in Pharaonic and Ptolemaic times.

While the centrality of the city to Islamic culture was probably a factor in settlement change in Egypt, non-political issues such as population change must also be considered. In fourteenth-century England, the high number of plague deaths played a significant part in the widespread abandonment or decline of rural villages. Russell, using land tax records, has similarly attempted to clarify changes in the population of Roman and medieval Egypt (1966). This inevitably speculative study compares population levels with data on flood heights, historical events such as epidemics and the political situation in order to assess the prosperity of the country between the end of Hellenic rule and the Mamluk period. Russell notes a sharp drop in population in the sixth century and continuing low levels during the seventh century, attributing these trends to an outbreak of plague between 542 and 600 and low Nile floods between 642 and 731 which prevented recovery. During the eighth and ninth centuries, the population apparently showed no increase, reaching its lowest point in the tenth and eleventh centuries; Russell cites the war with Byzantium, low Niles (822–921), high Niles (922–1021) and weak government in the eleventh century as possible reasons. The twelfth and thirteenth centuries saw an increase in population, which Russell suggests was a result of colonisation from further east, and then a significant drop during the fourteenth century, contemporary with plague outbreaks and exacerbated by high Niles and famine. He offers no specific events to explain the trends of the mid-eighth to eleventh centuries; the Coptic tax revolts of the mid-eighth to mid-ninth century should be borne in mind, although how such events might have affected the urban population is not clear (Lapidus 1972). Erratic Nile floods and the resulting abandonment of marginal land might in theory have resulted in a growth of urban population at the expense of the countryside. Perhaps those cultivators who were unable to make a living went not to their local town but to one of the newly prosperous and rapidly expanding settlements favoured by the Arabs?

It is clearly dangerous to try to explain widespread changes in settlement patterns with reference to a single catastrophic event. Even with regard to fourteenth-century England, the fate of the so-called 'deserted medieval villages' has in recent times been attributed not just to the Black Death, but also to changes in the legal position of the rural population; moreover, rates of abandonment are no longer estimated as high as they once were (Lewis, Mitchell-Fox and Dyer 2001, 203–4). On the subject of continuity of settlement in post-Roman England, these authors note that 'the evidence is very limited, and the way in which it is retrieved and recorded often makes continuity of occupation difficult to observe' (2001, 77). Is it possible, then, that mechanisms intrinsic to the formation and excavation of the sites themselves have exaggerated the impression of dislocation in early Islamic Egypt?

A high proportion of settlements of the Pharaonic to Hellenic periods were compact towns, often walled; the mounds of Dionysias, Bacchias and Theadelphia, for example, do not exceed 300×500 metres (Butzer 1960, 26). (Notable exceptions are a group of east bank settlements in Middle Egypt – Amarna, Antinoopolis, Zawyet al-Sultan – which have minimal hinterland, even taking into account possible movement of the Nile; this perhaps implies that one of the reasons for the restriction of building land was to avoid the loss of agricultural productivity.) The confining of settlement to an area limited by walls results in the formation of the high *tells* of which Edfu is a good example. The walling of towns was not general practice in Islamic times, with even Fustat being unfortified for much of its history; building could thus cover a wider area than in confined settlements. Under these circumstances, the configuration of the settlement can be seen as an important factor in defining the characteristics of the archaeological site.

My fieldwork at Edfu has demonstrated the mechanics by which the walled, compact towns of the Pharaonic tradition developed into the more sprawling urban configuration which characterises the Islamic period. It thereby facilitates the construction of a theoretical model of site formation and development over time (fig. VI.1). The main archaeological mound to the west comprises the remains of a walled Pharaonic settlement of the type discussed above, the occupational debris having

reached a height of nearly twenty metres. Such a mound of loosely-packed rubble would not provide a stable base for the construction of monumental buildings in particular. Whether the foundation of the Ptolemaic temple or the Fatimid mosque was a catalyst for the shifting of settlement east and south is not clear. It may be that the disadvantages of continuing to occupy the high ground, such as difficulties of access for water and materials, and the instability of building ground may have been sufficient to encourage movement away from the mound when it reached a certain height. The spot-heights indicate that Ptolemaic deposits on the southern slope are several metres lower than those on the main mound, implying that occupation was at that time already sprawling towards the river on the eastern slopes of the mound.

The act of occupying and building on land beside a high *tell* of itself lengthens and makes more shallow the side of the mound. Deposits are laid down at an angle, reaching a greater depth towards the bottom of the hill, and the increasing thickness of occupational debris down the slope reduces the angle of the next layer. The measurement of thickness of deposit thus becomes problematic as an indicator of density of occupation: in a vertical cut at any level, the lower strata will in theory be thicker than those above them, while settled areas move gradually away from the original mound. The apparent absence of activity between the twelfth and eighteenth centuries in the recorded exposures at Edfu probably indicates, not an abandonment, but that settlement had by that time shifted entirely east of the south slope. The flank of a mound formed in this way, still connected to the older mound, would be of greater area and lower height and would remain largely covered by modern settlement. On many sites, the activities of the *sebbakhin* have cut off the modern town from the original mound, emphasising the impression that one site was occupied, then abandoned in favour of the emplacement of the modern village. Many of Egypt's towns are situated on low mounds; in the light of the model proposed above, the juxtaposition of such settlements with abandoned sites may in fact be a result of continuous occupation.

Clearly such a paradigm will not be applicable to all sites abandoned during early Islamic times. It does, however, call into question the evidence for widespread

dislocation of settlement, which Butzer described as ‘already obvious in the Coptic era and dominant in Islamic times’ (1960, 32). Butzer’s theory that the loss of *nome*-capital status led to the decline of towns does highlight the fact that many of the affected towns belonged to the old Pharaonic urban order; it may be that some of the sites apparently deserted during the early Islamic period were formed by the same mechanisms of sideways shifts as was Edfu. The ‘dislocation’ would thus reflect not the decline of the sites themselves, but rather a lack of understanding of the changes in their structure which ultimately led to the development of the modern provincial configuration of Egypt.

I set out to investigate through local archaeological sequences the effects of the varied strategies followed by the Arab conquerors on settlement configuration in Egypt. Despite the limitations of the evidence, it is clear that such an approach can provide valuable insights into the development of archaeological sites during the late Roman and early Islamic periods. This study has initiated the examination of Islamic provincial urban development, and, in the light of our imperfect understanding of the sites as indicated by the examination of Edfu, it demonstrates that the search for local or regional variation should be a key to future fieldwork.

Appendix

Anis al-Jalis fi Akhbar Tinnis by Ibn Bassam al-Tinnisi

The only known version of this source is contained in a manuscript compilation of sections of various geographical works, copied (or summarised?) some time after their original composition.¹ A transcription of the Arabic text has been published by Gamal al-Din al-Shayyal (Ibn Bassam ed. 1967) and it is this text which is used here.

Al-Shayyal provides a detailed account of the background to Ibn Bassam's account of Tinnis: it is one of a group of texts, now mostly lost, dealing with the history and topography of the *thaghrs* of Egypt. The date at which it was written is not certain, but parts of the *Anis al-Jalis* are quoted by Yaqt, who completed his opus in 1224. The latest dates specifically mentioned by Ibn Bassam are 403 AH (1012–3 AD), in which year churches in Tinnis were closed by order of the Fatimid caliph al-Hakim, and 405 AH (1014–5 AD), when he notes the building of covered markets in the town. Thus, the *Anis al-Jalis* must have been composed during the eleventh, twelfth, or early thirteenth century. Despite noting much of the above information, al-Shayyal concludes that Ibn Bassam lived during the seventh to eighth centuries AH (roughly the thirteenth and fourteenth centuries AD), which seems too late given that his work appears in Yaqt. Ibn Bassam was clearly a Muslim and deeply involved in the town's commercial life. He writes that he himself owned one of the water storage facilities in the town, perhaps rendering his detailed figures on the quantities of water raised and stored during the flood season more credible.

Large sections of Ibn Bassam's account are, in accordance with the Arab tradition, lists of the names of types of boat and varieties of birds and fish that could at that time be found in the vicinity of Lake Manzala. These passages have been left untranslated. While some of the names are easily recognisable, the larger part comprises nonspecific, descriptive, colloquial terms. For example, fish called 'water dog', 'mother of teeth', 'water kite' or 'water sword' are not easily identifiable. Since any serious analysis of

¹ Dar al-Kutub, Cairo (ms. no. 1852 *adab*).

these lists would clearly require reference to the Arabic original, it was not considered worthwhile translating these unscientific labels.

Translation of the Text

The book '*Anis al-Jalis fi Akhbar Tinnis*'² by the *imam*, the learned scholar, the writer, the *hafiz* [one who has memorised the Quran] Shams al-Din Muhammad ibn Sheikh Shihab al-Din Ahmad, known as Ibn Bassam al-Muhtasib al-Tinnisi, may God have mercy on him, Amen.

In the name of God, the Compassionate, the Merciful:

O God, bless our Lord Muhammad and his family and companions and give peace! Sheikh Shams al-Din Muhammad ibn Ahmad ibn Bassam al-Tinnisi who was the *muhtasib*,³ the scholar in Tinnis (may God have mercy on him), mentioned in his book concerning the description of Tinnis:

That it is in the fourth climate, because its air is healthy and the disposition of its inhabitants and their industries is amiable.⁴

That the corpse of a dead person in it does not rot rapidly and its hair does not fall out from its body.

That most of those who make the products in it have a habit of eating fish and greasy food and they do not wash their hands on going back to their place and their weaving; but nothing is smelt of this stench in these cloths and their scent is agreeable and spreading them out is pleasant. This is evidence for the health of the climate, and the low incidence of disease.

They store Nile water at its time of purity near them, in cisterns which they have ready.

² 'The companion of the companion in the affairs of Tinnis'.

³ The *muhtasib* was a municipal official charged with maintenance of public morality; in practice this involved regulation of the markets and prevention of fraud. Ibn Bassam wrote a second treatise on this subject (Lev 1999, 90, n. 29; see also the *Encyclopaedia of Islam* under 'Hisba').

⁴ The world was divided into climates according to Greek and Arabic geographical tradition; see the *Encyclopaedia of Islam* under 'Iklim'.

The length of this town from the north side to the south side from the gate known as the ‘Qurt’ Gate is three thousand, two hundred and twenty-seven *dhira*’, measuring with the large *dhira*’, the length of which is twenty-four thumbs.⁵

Its width from the small gate to the gate known as ‘Dirniya’ is three thousand and eighty-five, measuring with the previously mentioned *dhira*’.

Its walls measure three thousand, two hundred and eighty-five *dhira*’ which in miles is two and a half miles and an eighth of a mile and half of an eighth of a tenth of a mile.⁶

The number of the gates of this town—the gates in the walls through which one enters and leaves—is nineteen, one of them being plated with copper and the others plated with iron. There are two bridges under which two harbours are reached, each harbour having an iron-plated gate to prevent any from going in or out except with permission.

The total of its mosques and its *mihlabs* inside and outside, apart from the Great Mosque, is one hundred and sixty.

As for the Great Mosque, its length from the south side to the north side is one hundred and twelve *dhira*’, and its width from east to west is seventy-one *dhira*’, and the length of the *ziyada* attached to it, and the distance to it, stretches seventy *dhira*’, and its width twenty-nine *dhira*’. During the month of Ramadan, three thousand one hundred lamps and two hundred and fifty candles are lit in it. Every [other] night, two thousand eight hundred lamps were lit in it.

In each of its local mosques is a minaret.

There were seventy-two churches in Tinnis until al-Hakim bi-Amr Allah (may God have mercy on him) ordered that they be destroyed, in year 403, and replaced with mosques.

⁵It is not clear which *dhira*’ is meant here: Lev suggests a length of 66.5 cm (1999, 91, n. 30), while the *Encyclopaedia of Islam* article on ‘Dhira’ notes, among others, a ‘legal cubit’ of 49.8 cm and a ‘black cubit’ of 54.04 cm. However, this is largely irrelevant in the face of the obvious inaccuracy of the figures.

⁶This is equal to about 2.63 miles. Lev gives Ibn Bassam’s figure as ‘over a mile and a half long’; his reasoning is not clear (1999, 90). There are about 4000 *dhira*’ to a mile, which clearly makes nonsense of Ibn Bassam’s statement.

There were fifty *funduqs* and locked markets; then, in the year 405, six extensions [?] for merchants were built for great commerce, making altogether fifty-six.

In it are two thousand five hundred shops [?].

In it are one hundred [oil-] presses; the number of their men differs, the smallest of them having two, the greatest twenty.

In it are one hundred and fifty shops which sell linens and types of clothes.

In it are one hundred and sixty mills—meaning flour mills—some with one grinding place, some two, and some comprising five stones, for husking and dough-making.

In it are thirty-six baths, and additional private baths in people's houses.

As for weaving mills in which the clothes are made, there are five thousand mills; the number of their workers is twenty thousand, not including those who striped [?] and softened [decorated? perfumed?] the cloth, both male and female. The quantity of chests there is one thousand five hundred, and one thousand bales. In the inventory of the Sultan's treasury there are four hundred chests in which are goods the like of which is not seen, namely: gilded clothes woven in the form of those that are sewn, so that a single cloth costs one thousand dinars, and head-cloths each costing five hundred dinars, and there are also throws costing one thousand dinars, and there are scarves and drapes and velvet curtains and gauze, *dabiqi*- and *'attabi-siqlatun* and unpatterned cloths, and more which cannot be described.⁷

As for the permanent settlements by the town walls to the west [there are] an industrial installation and the *dar al-imara*, and between them a men's bathhouse and two great yards in which were kept cargo from towns far and near.

And in the other [western?] settlement is the great *diwan* which contained a number of offices, mechanisms to move water at times of its absence and supply it to the installations and baths of this town, gypsum mills, lime kilns and the Sultan's stable.

In the southern settlement are mechanisms to raise water to the installations and the baths, and innumerable shantytown huts; also in it are the *diwan* of fisheries [lit.

⁷ All these terms are clearly technical names for types of textile. A cloth called *Dabiqi* after the town of *Dabiq* near *Damietta* is described by al-Maqrizi, and was apparently in fashion during the late tenth century (tr. in Abu Salih, ed. 1895, 62; Ibn Haukal, tr. 1964, 150).

hunting] and a fisheries storehouse, and near it, lands producing salt which exceeds all other salt by its brightness, sweetness and quantity.

In the eastern settlement is a mechanism for bringing water to the installations and the baths.

In the northern settlement are mosques and churches, facilities for bleaching/whitening commodities, many stones carved out [?] for hitting the textiles against and cleaning them, a shooting target and two open prayer areas, one of them for funerals and the other one for prayers of the two *'ids*.

In it there are boats marked for catching fish in the lake, boats of different names: [here follows sixteen named types of boat] making altogether three hundred and seventy-two boats. The greatest of these boats carries sixty men, and the smallest three men. These boats sometimes fish catches worth one hundred dinars or more.

The names of the fish in it [the lake]:
[here follows sixty-one named fish varieties].

In the days of Ibn Abu Rish, a fish [whale?] was caught, twenty-eight and a half cubits in length, with no scales and no shell, black in colour with a white belly. The length of its head was six and a half cubits, and the breadth of its tail tip five cubits. It was taken to the capital, and the person who was salting it could walk into its mouth without bending.⁸

The revenue from catching fish was fifty thousand dinars annually.

In this lake are birds which arrive at different times, including those which have been seen in the east and the west, and in the lands of the Byzantines and other places. The proof of this is that they are found when hunting them, thin, and then they get fat when they stay on this lake.

The names of the birds in it:
[here follows one hundred named bird varieties].

⁸ Perhaps a lost orca? The description and dimensions of this creature conform closely to that of another caught near Tinnis; the account is al-Maqrizi's (ed. 1922, 210).

The smaller birds which provide for and nourish the people are hunted by means of birdlime. The number of boats which hunt birds for a living is one hundred and thirteen. The number of exporting *qawarab*- and *kama'm*- and *'ashariat*-boats which come in from the Syria connection each year is near five hundred, and more than this [most of them?] come in to Al-Salibia and Al-Rabi'ia.⁹

They come in from the regions of Cairo, Upper Egypt, Alexandria and the remote *rif*, their number not fixed because of its greatness. They come in with types of commodity such as fruit and others.

At Tinnis are two great open-air installations attributed to 'Amr ibn Hafs. The westernmost of these comprises twenty-one houses, and the easternmost eighteen houses. And there is a roofed installation in the centre of the town, built by 'Abd al-'Aziz al-Jarawi, and water is transported to it by means of a waterwheel, holding 60 *qaduses*, over a period of two entire months by day and night. Each *qadus* has the capacity to carry in a day and a night one thousand jar-allotments of water. Thus, the installation [contained] three thousand million six hundred jars-worth.¹⁰

Another installation apart from this one [belongs] to the author of this.

Ibn Tulun [built] three workshops, one in the vicinity of the *sug*, and the other in the *ziyada* of the mosque.

What the people of Tinnis need for provisions every year of wheat, barley and maize is two hundred thousand *ardabs*. We found the 'Persian' threshing floor grinding each day and night six *ardabs*, each *ardab* being ninety-six *qadahs*. And if these *qadahs* were multiplied by all the *ardabs* and the *waybas* that are ground, and each person is given one *qadah* as a daily ration, the load of the town would be fifty thousand. It [the ration] may increase over this a lesser or greater rise with the different years, because the weavers improve the dried, crushed bread in the sun that they store for the winter and the shortness of the days. They are free from having to grind it.

⁹ Perhaps *Al-Salibia* and *Al-Rabi'ia* are names of ports or harbours?

¹⁰ Sixty *qawadis* emptying one thousand times each every twenty-four hours for sixty days would actually transport three million six hundred thousand jars-worth of water; perhaps the last thousand has been transposed from the six hundred?

And no destructive creature or harmful insect is found in its bread or in its ground or its earth or its building.

The ascendant at the foundation of this town was the constellation of Pisces and his ruler Jupiter, the great fortune, and the ruler of the east, Venus, and because of this, the joy of the souls of its people is great, and their happiness, and their wish for the enjoyment of pleasures, and their listening to songs and the continuation of cheer, and the desire for leisure and the rejection of that which requires hard work and toil, and love of engraving and drawing and striping and colouring with dyes, and the low level of dissatisfaction and the leaving of conflict with those with whom they keep company, and great strengthening to those with whom they are familiar, and the excellence of the assistance to those whom they employ, and their love for strangers and travellers, and their persistence for their happiness and their benefits, and their setting aside of envy for one they love, and the [omission of] censure of his lapses; they commend him and prefer him, and blame themselves because of the shortfall in brotherliness and what he deserves, and the carrying out of all that.

The length of the lake is forty miles with what it surrounds [in circumference?] and its channels are shallow except the 'Yustumana' channel, which is immersed to a depth of thirty fathoms. The depth of this entire lake is not greater than a fathom, not exceeding this except in this place.

Tinnis, the daughter of Sain Tadaras, one of the Coptic kings, built this town. The lake was brackish and there was a channel of Nile water which penetrated into it from [the time of] the destruction of habitation and abundant fields over which the salt sea gained supremacy. It [the lake] increases its roughness, for it rushed from the al-Ashtum sea-mouth upon its lands and its habitations and they were flooded; the places which were its exploited land perished, and the sea came over them, and places upon a mound such as Tinnis and Tuna and others which survive, were not occupied by water and their health remains.

This flood was one hundred years before Islam. Al-Mas'udi, in his book *Maruj al-Thahab*, mentioned the influx of the sea to the wastelands, and we have already seen in our time that which proves the truth of what he said: that which has become sea on the

path of al-Jafar, places which were waste and became sea, and this is the destiny of the Mighty Knowing One.

Those who transmit knowledge claimed that it was Lake Tinnis of which God most-high said: 'He began to wring his hands over what he had spent on it, and it was empty upon its trellises'.¹¹ That is because it was gardens and parks divided between two brothers, a believer and a non-believer. The believer spent his wealth on piety and alms, and the non-believer remained rich. The believer addressed him one day; then he [the non-believer] behaved arrogantly towards him, and said: 'I'm richer than you in wealth, and stronger in respect of people'. The place where the Nile empties into the sea was between its estates, and the sea shook up with a trembling in the night with which it brought its waves through al-Ashtum, and all its exploited land and its ground was submersed; and what was high in it on the back of a mound of earth remained. This was three hundred and fifty years before Islam.¹²

¹¹ This quotation and the story of the two brothers is taken from the 18th *sura* of the Quran, called the Cave.

¹² Ibn Bassam here contradicts the previous paragraph, where he stated that the land flooded only a hundred years before Islam.

Bibliography

Primary Sources

Abu al-Fida (1848).

Taqwin al-Buldan (Géographie), tr. M. Reinaud. Paris: Imprimerie Nationale.

Abu Salih the Armenian (1895).

Churches and Monasteries of Egypt and some Neighbouring Countries, tr. B.

T. A. Evetts (1895). Oxford: Clarendon Press.

Ammianus Marcellius (1963).

History, tr. J. C. Rolfe. Cambridge, Ma.: Harvard University Press; London: William Heineman Ltd.

Antonine Itinerary.

See: Ball, J. (1942).

Brémond, Gabriel (1974).

Voyage en Égypte, 1643–1645, ed. G. Sanguin. Cairo: IFAO.

Cassian, John (1955–1959).

The Conferences, ed. E. Pichery. Paris: Éditions du Cerf.

—— (1997).

The Conferences, tr. B. Ramsey. New York: Paulist Press.

Cedrenus (1838).

Historiarum Compendium, ed. I. Bekker. Corpus Scriptorum Historiae Byzantinae 15–6. Bonn: Weber.

al-Dimashqi (1874).

Nukhabat al-Dahr (Manuel de la Cosmographie du Moyen Age), tr. A. F.

Mehren. Copenhagen: C. A. Reitzel.

Geography of Ravenna (1860).

Ravennatis Anonymi Cosmographia et Guidonis Geographica, eds M. Pinder and G. Parthey. Berlin: F. Nicolai.

George of Cyprus.

See: Ball, J. (1942).

Georgius Monachus (1978).

Chronicon, ed. C. De Boor. Stuttgart: Teubner.

Glycas (1836).

Annales, ed. I. Bekker. Corpus Scriptorum Historiae Byzantinae 17. Bonn: Weber.

Herodotus (1972).

Historiae, tr. A. de Sélincourt, rev. J. Marincola. London: Penguin.

Hierokles.

See: Ball, J. (1942).

History of the Patriarchs of the Egyptian Church, attributed to Sawirus ibn al-Muqaffa (1948).

Tr. A. S. Atiya, Y. ‘Abd al-Masih and O. H. E. Burmester. Cairo: Société d’Archéologie Copte.

—— (1910).

Tr. B. Evetts. *Patrologia Orientalis* 5. Paris: Firmin-Didot.

Ibn ‘Abd al-Hakam (1922).

Futuh Misr wa’l-akhbaruha (The History of the Conquest of Egypt, North Africa and Spain), ed. C. C. Torrey. New Haven: Yale University Press.

Ibn Bassam al-Tinnisi (1967).

Anis al-Jalis fi Akhbar Tinnis, ed. G. al-D. al-Shayyal, *Majalla al-Majma‘ al-‘Ilmi al-‘Iraqi* 14: 151–89. Baghdad: Iraqi Academy.

See also Appendix, pp. 120–7.

Ibn Battuta (1958).

The Travels of Ibn Battuta, tr. H. A. R. Gibb. Cambridge: CUP.

Ibn Hawqal (1964).

Kitab Surat al-Ard (Configuration de la Terre), tr. J. H. Kramers and G. Wiet. Beirut: Commission Internationale pour la Traduction des Chefs-d’oeuvre; Paris: Éditions G.-P. Maisonneuve et Larose.

Ibn Jubayr (1952).

Travels, tr. R. J. C. Broadhurst. London: J. Cape.

Ibn al-Kalbi (1966).

Gamharat al-Nasab (Das genealogische Werk des Hisam ibn Muhammad al-Kalbi), tr. W. Castel and G. Strenziok. Leiden: E. J. Brill.

Ibn Khordazba (1889).

Kitab al-Masalik wa'l-Mamlik, ed. M. J. de Goeje. Bibliotheca Geographorum Arabicorum 6. Leiden: E. J. Brill.

Ibn Sa'd (1904–40).

Kitab al-Tabqat al-Kubra, ed. C. Brockelmann. Leiden: E. J. Brill.

Ibn Taghribardi (1929–72).

Al-Nujum al-Zahira. Cairo: Dar al-Kutub al-Misriya.

Al-Idrisi (1970).

Nuzhat al-Mushtaq (Opus Geographicum), ed. E. Cerulli. Naples/Rome: Istituto Universitario Orientale di Napoli/Istituto Italiano per il Medio ed Estremo Oriente.

John of Nikiu (1916).

Chronicle, tr. R. H. Charles. London: Williams and Norgate.

Al-Kindi (1912).

Kitab al Wulat (al-Umara) Misr wa Kitab al-Qudah (The Governors and Judges of Egypt), E. J. Gibb Memorial Series, ed. R. Guest. Leiden: E. J. Brill.

Lannoy, Ghillebert de (1878).

Oeuvres (Voyages et ambassades), ed. C. Potvin. Louvain: Imprimerie de P. et J. Lefever.

Leo Africanus (1896).

The History and Description of Africa, tr. J. Pory (1600), ed. R. Brown (1896). London: Hakluyt Society.

Al-Maqrizi (1911, 1913 and 1922).

Al-Mawa'iz wa'l-I'tibar fi Dhikr al-Khitat wa'l-Athar, MIFAO 30, 33 and 46, ed. G. Wiet. Cairo: IFAO.

—— (1811).

See: Quatremère, E. (1811).

Al-Muqaddasi (1906).

Ahsan al-Taqaṣim fī Ma'rifat al-Aqlim, ed. M. J. de Goeje. Leiden: E. J. Brill.

Nasir-i-Khusraw (1986).

Book of Travels (Safarnama), Persian Heritage Series 36, tr. W. M.

Thackston. New York: Columbia University (Bibliotheca Persica).

Notitia Dignitatum.

See: Ball, J. (1942).

Oliver of Paderborn.

See: Peters, E. ed. (1971).

Peutinger map.

See: Ball, J. (1942).

Pliny.

See: Ball, J. (1942).

Poggibonsi, Niccolo da (1945).

A Voyage Beyond the Seas (1346–1350), tr. T. Bellorini and E. Hoade.

Jerusalem: Franciscan Press.

Ptolemy (1901).

Geographia, ed. C. Müller. Paris: Firmin-Didot.

al-Qudama (1889).

Kitab al-Kharaj, ed. M. J. de Goeje. Bibliotheca Geographorum Arabicorum
6. Leiden: E. J. Brill.

Recueil des Historiens des Croisades: Historiens Occidentaux (1844).

Paris: Imprimerie Royale.

Renseignement général de l'Égypte 1882 (1885).

Ministère de l'Intérieur. Cairo: Imprimerie nationale de Boulaq.

Renseignement général de l'Égypte 1897 (1898).

Ministère de l'Intérieur. Cairo: Imprimerie nationale de Boulaq.

Sozomenes (1860).

Ecclesiastical History, tr. W. E. Walford. London: H. G. Bohn.

Stephanus of Byzantium.

See: Ball, J. (1942).

Strabo (1859).

Geography, tr. H. L. Jones. Cambridge Ma.: Harvard University Press;
London: William Heinemann Ltd.

Al-Tabari (1879–1901).

Ta'rikh al-Rusul wa'l-Muluk, ed. M. J. de Goeje. Leiden: E. J. Brill.

—— (1985–1999).

Ta'rikh al-Rusul wa'l-Muluk (The History of al-Tabari). tr. various. Albany:
SUNY Press.

Theophanes (1997).

Chronographia, tr. C. Mango and R. Scott. Oxford: Clarendon Press.

Umar ibn al-Kindi.

See: Østrup, J. (1896).

Van Ghistele, Joos (1976).

Voyage en Égypte 1482–1483, tr. R. Bauwens-Préaux. Cairo: IFAO.

William, Archbishop of Tyre (1943).

A History of Deeds done beyond the Sea, tr. E. A. Babcock and A. C. Krey.
New York: Columbia University Press.

Yaqubi (1937).

Kitab al-Buldan (Les pays), tr. G. Wiet. Cairo: IFAO.

Yaqut (1866–71).

Kitab Mu'ajam al-Buldan (Geographisches Wörterbuch), ed. F. Wüstenfeld.
Leipzig: F. A. Brockhaus.

Secondary Literature

Abbate, W. (1890).

‘Esquisse historique sur Babylone et Fostatt’, *BIE* 3rd series 1: 5–18.

‘Abd al-Maqsoud, M. (1985).

‘Preliminary report on the excavations at Tell el-Farama (Pelusium): first two seasons (1983/4 and 1984/5)’, *ASAE* 70: 3–8.

‘Abd al-Waseth, U. and Zignani, P. (1992).

‘Nag’ al-Hagar: a fortress with a palace of the Late Roman empire. Second preliminary report’, *BIFAO* 92: 185–210.

Adams, R. McC. (1965).

Land Behind Baghdad: a History of Settlement on the Diyala Plains.
Chicago/London: University of Chicago Press.

Adams, W. Y. (1977).

Nubia: Corridor to Africa. London: Allen Lane.

—— (1986).

The Ceramic Industries of Medieval Nubia. Memoirs of the UNESCO
Archaeological Survey of Sudanese Nubia 1. Lexington, Kentucky: University
Press of Kentucky.

—— (unpublished).

Pottery Wares of the Ptolemaic and Roman Periods at Qasr Ibrim:
Preliminary Ware Descriptions.

Alliot, M. (1933).

Rapport sur les fouilles de Tell Edfou, 1932. IFAO 9, Part 2. Cairo: IFAO.

—— (1935).

Rapport sur les fouilles de Tell Edfou, 1933. IFAO 10, Part 2. Cairo: IFAO.

Alston, R. (1995).

Soldier and Society in Roman Egypt: a Social History. London/NY:
Routledge.

Ambrayeses, N. N., Melville, C. P. and Adams, R. D. (1994).

The Seismicity of Egypt, Arabia and the Red Sea; a Historical Review.
Cambridge: CUP.

Amélineau, E. (1893).

La géographie de l'Égypte à l'époque copte. Paris: Imprimerie Nationale.

Assmann, J. (1991).

Das Grab des Amenemope, TT 41. Mainz: Philipp von Zabern.

Aston, D. A. (1998).

Die Keramik des Grabungsplatzes QI. Mainz: Philipp von Zabern.

—— (1999).

Elephantine XIX: Pottery from the Late New Kingdom to the Early Ptolemaic Period. Mainz: Philipp von Zabern.

‘Athamina, K. (1997).

‘Some administrative, military and socio-political aspects of early Muslim Egypt’, pp. 101–13 in Y. Lev ed. *War and Society in the Eastern Mediterranean, 7th–15th centuries.* Leiden: E. J. Brill.

Ayers, J. (1968).

The Baur Collection, Geneva: Chinese Ceramics 1. Geneva: Collections Baur.

Azim, M. (1980).

‘La fouille de la cour du VIIIe pylône’, *Les Cahiers de Karnak* 6: 91–127.
Cairo: Centre Franco-Égyptien d’études des temples de Karnak.

Bagnall, R. S. (1992).

‘Landholding in Late Roman Egypt: the distribution of wealth’, *Journal of Roman Studies* 82: 128–49.

—— (1993).

Egypt in Late Antiquity. Princeton, NJ: Princeton University Press.

Bailey, D. M. (1996).

‘The pottery from the south church at El-Ashmunein’, *CCE* 4: 47–112.

—— (1998).

Excavations at el-Ashmunein 5: Pottery, Lamps and Glass of the Late Roman and Early Arab Periods. London: British Museum Press.

Ball, J. (1942).

Egypt in the Classical Geographers. Cairo: Government Press, Bulaq.

Ballet, P. (1997).

‘La céramique romaine (haut et bas-empire)’, *CCE* 5: 145–9.

Ballet, P. and Picon, M. (1987).

‘Recherches préliminaires sur les origines de la céramique des Kellia (Égypte): importations et productions égyptiennes’, *CCE* 1: 17–48.

Ballet, P., Mahmoud, F., Vichy, M. and Picon, M. (1991).

‘Artisanat de la céramique dans l’Égypte romaine tardive et byzantine. Prospections d’ateliers de potiers de Minia à Assouan’, *CCE* 2: 129–44.

Ballet, P. and Von der Way, T. (1993).

‘Exploration archéologique de Bouto et de sa région (époques romaine et byzantine)’, *MDAIK* 49: 1–22.

Barguet, P. and Leclant, J. (1954).

Karnak-nord 4. Cairo: IFAO.

Barnes, T. D. (1982).

The New Empire of Diocletian and Constantine. Cambridge, Ma. and London: Harvard University Press.

Barsanti, A. (1904).

‘Rapport sur les travaux exécutés à Edfou en 1902–1905 (réparations et consolidations)’, *ASAE* 7: 97–109.

Bernand, A. (1970).

Le Delta égyptien d’après les textes grecs 1: Les confins libyques. MIFAO 91. Cairo: IFAO.

Bissing, F. W. von (1902).

Catalogue général des antiquités égyptiennes du Musée du Caire, nos. 3618–4000, 18001–18037, 18600, 18603 Fayencegefässe. Vienna: Imprimerie Adolf Holzhausen.

Bourriau, J. (1981).

Pottery from the Nile Valley before the Arab Conquest. Cambridge: CUP.

Brissaud, P. (1979).

‘La céramique égyptienne du règne d’Aménophis II à la fin de l’époque Ramesside’, pp. 11–32 in J. Vercoutter ed. *Hommages à Serge Sauneron I: Égypte Pharaonique*. Cairo: IFAO.

Brugsch, H. (1879).

Dictionnaire géographique de l'ancienne Égypte. Leipzig: J. C. Hinrichs.

Bruyère, B. et al (1937).

Tell Edfou 1937. Cairo: IFAO.

Butler, A. J. (1884).

The Ancient Coptic Churches of Egypt. Oxford: Clarendon Press.

—— (1902, reprinted 1978).

The Arab Conquest of Egypt and the Last Thirty Years of Roman Dominion,
ed. P. Fraser. Oxford: Clarendon Press.

—— (1914).

Babylon of Egypt: A Study in the History of Old Cairo. Oxford: Clarendon
Press.

Butzer, K. W. (1960).

‘Remarks on the geography of settlement in the Nile Valley during Hellenistic
times’, *BSGE* 33: 5–36.

—— (1961).

‘Archäologische Fundstellen Ober- und Mittelägyptens in ihrer
geologischen Handschaft’, *MDAIK* 17: 54–68.

Caetani, L. (1905–26).

Annali dell'Islam. Milan: Ulrico Hoepli.

Carrez-Maratray, J.-Y. (1999).

Péluse. Cairo: IFAO.

Casanova, P. (1919).

Essai de reconstitution topographique de la ville d'Al Fostat ou Misr.
MIFAO 35. Cairo: IFAO.

Champollion, J.-F. (1814).

L'Égypte sous les Pharaons. Paris: De Bure.

—— (1844).

Monuments de l'Égypte et de la Nubie: notices descriptives. Paris: Firmin
Didot.

Clarke, S. and Engelback, R. (1930).

Ancient Egyptian Masonry: the Building Craft. London: OUP.

Clédat, J. (1921).

‘Notes sur l’isthme de Suez’, *BIFAO* 18: 167–97.

—— (1923).

‘Notes sur l’isthme de Suez’, *BIFAO* 22: 135–89.

Coulson, W. D. E. (1996).

Ancient Naukratis II: the Survey at Naukratis and Environs. Part 1: the Survey at Naukratis. Oxbow Monograph 60. Oxford: Oxbow Books.

Couyat, J. (1911).

‘Les routes d’Aidhab’, *BIFAO* 8: 135–43.

Creswell, K. A. C. (1952).

Muslim Architecture of Egypt. Oxford: Clarendon Press.

Crone, P. (1980).

Slaves on Horseback: the Evolution of the Islamic Polity. Cambridge: CUP.

Crum, W. E. (1905).

Catalogue of the Coptic Manuscripts in the British Museum. London: British Museum.

—— (1939).

A Coptic Dictionary. Oxford: Clarendon Press.

Daressy, G. (1916).

‘L’Égypte céleste’, *BIFAO* 12: 1–34.

—— (1917).

‘La demeure royale en basse-Égypte’, *ASAE* 17: 123–9.

—— (1931).

‘Léontopolis, métropole du XIXe nome de la basse-Égypte’, *BIFAO* 30: 625–49.

—— (1933). ‘Les branches du Nil sous la XVIIIe dynastie’, *BSGE* 18: 169–202.

Dennett, D. C. (1950, reprinted 1973).

‘Conversion and the poll tax in early Islam’, (originally Cambridge, Ma.: Harvard University Press), pp. 1–136 in *Islamic Taxation: two studies*. NY: Arno Press.

Denoix, S. (1992).

Décrire le Caire: Fustat-Misr d’après Ibn Duqmaq et Maqrizi. Etudes urbaines 3. Cairo: IFAO.

Denon, V. (1807).

Voyages dans la Basse et la Haute Égypte pendant les campagnes de Bonaparte en 1798 et 1799. London: S. Bagster.

Description de l’Égypte (1809–18).

Paris: Imprimerie Imperiale.

Drescher, J. (1942).

‘Apa Claudius and the thieves’, *BSAC* 8: 63–86.

Drew-Bear, M. (1979).

Le nome Hermopolite: toponymes et sites. American Studies in Papyrology 21. Missoula, Montana: Scholars’ Press for the American Society of Papyrologists.

——— (1981).

‘Le nome Hermopolite et sa métropole à l’époque Greco-Romaine’, *Revue des études anciennes* 83: 21–33.

Dumichen, J. (1865).

Geographische Inschriften. Leipzig: Hinrichs.

Egloff, M. (1977).

Kellia: La poterie copte. Quatre siècles d’artisanat et d’échanges en Basse-Égypte. Recherches Suisses d’Archéologie Copte 3. Geneva: Georg/Librairie de l’Université.

Egyptian Antiquities Organisation (1979).

The Luxor Museum of Ancient Egyptian Art Catalogue. Cairo: ARCE.

Empereur, J-Y. and Picon, M. (1989).

‘Les régions de production d’amphores impériales en Méditerranée orientale’, *Amphores romaines et histoire économique: dix ans de recherche*. Collection de l’École Française de Rome 114, ed. M. Lenoir. Rome: École Française.

Encyclopaedia of Islam, Second edition, (1960–present).

Leiden: E. J. Brill.

Engemann, J. (1988).

‘Early Islamic glazed pottery of the eighth century A.D. from the excavations at Abu Mina’, *Coptic and Nubian Pottery part 1*. International Workshop, Nieborów, August 29–31, 1988, ed. W. Godlewski, 1990. Warsaw: National Museum Occasional Paper 1: 63–70.

—— (1989).

‘Das Ende der Wallfahrten nach Abu Mina und die Datierung früher islamischer glasierter Keramik in Ägypten’, *Jahrbuch für Antike und Christentum* 32: 161–77.

—— (1992).

‘À propos des amphores d’Abou Mina’, *CCE* 3: 153–9.

Faiers, J. (in press).

Excavations at Amarna, Byzantine Remains. Part 1: A Corpus of Late Roman Pottery and Related Studies. London: EES.

Faiers, J. and Pyke, G. (forthcoming). *A Corpus of Late Roman Pottery from Kom el-Nana*. London: EES.

Feucht, E. (1985).

Das Grab des Nefersecheru (TT 296). Mainz: Philipp von Zabern.

Flemming, N. C. (1992).

‘Predictions of relative coastal sea-level change in the Mediterranean based on archaeological, historical and tide-gauge data’, pp. 247–281 in L. Jeftic, J. D. Milliman and G. Sestini eds *Climate Change and the Mediterranean*. London: E. Arnold.

Frantz-Murphy, G. (1986).

The Agrarian Administration of Egypt from the Arabs to the Ottomans.

Supplément aux *Annales Islamologiques* 9. Cairo: IFAO.

—— (1991).

‘Conversion in early Islamic Egypt: the economic factor’, pp. 11–7 in

Documents de l’Islam médiéval: nouvelles perspectives de recherche. Textes Arabes et Études Islam 29. Cairo: IFAO.

Fraser, P. (1972).

Ptolemaic Alexandria. Oxford: Clarendon Press.

Frihy, O. E., Dewidar, K. M. and El Banna, M. M. (1998).

‘Natural and human impact on the northeastern Nile Delta coast of Egypt’,
Journal of Coastal Research 14 (3): 1109–18.

Garcin, J.-C. (1976).

Un centre musulman de la Haute-Égypte médiévale: Qus. Textes Arabes et Études Islamiques 6. Cairo: IFAO.

—— (1982).

‘Habitat médiéval et histoire urbaine à Fustat et au Caire’, pp. 145–216 in
Palais et maisons du Caire I: Époque mamelouke. Paris: Éditions du Centre National de la Recherche Scientifique.

Gardiner, A. (1924).

‘The geography of the exodus: an answer to Professor Naville and others’, *JEA* 10: 87–96.

—— (1947).

Ancient Egyptian Onomastica. Oxford: OUP.

Garstang, J. (1904).

‘Excavations at Beni Hassan (1902–1903–1904)’, *ASAE* 5: 215–28.

Gascoigne, A. L. (in press).

‘The Roman and medieval pottery’, appendix in E. van den Brink, *A Geo-Archaeological Survey in the Environs of Tell el-Dab’a Qantir: Regional Diachronic Investigations into Settlement Patterns in the Northeastern Nile*

- Delta*. Untersuchungen der Zweigstelle Kairo des Österreichischen
Archaeologischen Instituts. Vienna: Denkschriften der Gesamtakademie.
- (forthcoming). *The Old Cairo Wastewater Project: a Ceramic Typology from
the Late Period to the Ottoman Era*. ARCE monograph series.
- Gascou, J. (1999).
‘Edfou au bas-empire d’après les trouvailles de l’IFAO’, pp. 13–20 in *Tell
Edfou*. [See below for publication details.]
- Gauthier, H. (1925–31).
*Dictionnaire des noms géographiques contenus dans les textes
hiéroglyphiques*. Cairo: IFAO/Société Royale de Géographie d’Égypte.
- (1935).
Les nomes d’Égypte depuis Herodote jusqu’à la conquête arabe. Mémoires de
l’Institut d’Égypte 25. Cairo: Imprimerie de l’IFAO.
- Gayraud, R.-P. (1994).
‘Istabl ‘Antar (Fostat) 1992: rapport de fouilles’, *Annales Islamologiques* 28:
1–27.
- (1999).
‘Le Qarafa al-Kubra, dernière demeure des Fatimids’, pp. 443–64 in M.
Barrucand ed. *L’Égypte Fatimide: son art et son histoire*. Paris: Presses de
l’Université de Paris-Sorbonne.
- Gempeler, R. D. (1992).
Elephantine X: die Keramik römischer bis früharabischer Zeit. Mainz: Philipp
von Zabern.
- Gerland, E. and Laurent, V. (1936).
*Corpus notitiarum episcopatum Ecclesiae orientalis graecae 1: Les listes
conciliaires*. Constantinople: Socii Assumptionistae Chalcedonenses.
- Ghouchani, A. and Adle, C. (1992).
‘A sphero-conical vessel as *Fuqqa* ‘a, or a gourd for “beer”’, *Muqarnas* 9: 72–
92.

Godlewski, W. (1988).

‘Coptic pottery from Deir el Naqlun (Fayum)’ pp. 49–62 in *Coptic and Nubian Pottery part 1*. International Workshop, Nieborów, August 29–31, ed. W. Godlewski, 1990. Warsaw: National Museum Occasional Paper 1.

Godron, G. (1970).

Textes coptes relatifs à Saint Claude d’Antioch. Patrologia Orientalis 35, fasc. 4, no. 166. Turnhout, Belgium: Brepols.

Golb, N. (1965).

‘The topography of the Jews of medieval Egypt’, *JNES* 24: 251–70.

—— (1974).

‘The topography of the Jews of medieval Egypt’, *JNES* 33: 116–47.

Golvin, L. (1982).

Les potiers actuels de Fustat. Bibliothèque d’étude 89. Cairo: IFAO.

Gomaà, F. (1986).

Die Besiedlung Ägyptens während des Mittleren Reiches 1: Oberägypten und das Fayyum. Beihefte zum Tübinger Atlas des Vorderen Orient 66/1. Wiesbaden: Ludwig Reichert.

Goodfriend, G. A. and Stanley, D. J. (1999).

‘Rapid strand-plain accretion in the northeastern Nile Delta in the 9th century A. D. and the demise of the port of Pelusium’, *Geology* 27 (2): 147–50.

Górecki, T. (1988).

‘Coptic painted amphorae from Tell Atrib: introductory remarks on decoration’, pp. 34–48 in *Coptic and Nubian Pottery part 1*. International Workshop, Nieborów, August 29–31, ed. W. Godlewski, 1990. Warsaw: National Museum Occasional Paper 1.

—— (1989–93).

‘Deir el Naqlun (Nekluni), 1988–1989, second preliminary report: the pottery 1988–1989’, *Nubica* III/1: 223–63.

- Grace, V. R. and Savvatianou-Petropoulakou, M. (1970).
 ‘Les timbres amphoriques Grecs’, pp. 277–382 in *Exploration archéologique de Délos faite par l’École française d’Athènes 27: L’Îlot de la Maison des Comédiens*. Paris: E. de Boccard.
- Grataloup, C. (1991).
 ‘Karnak. Temple d’Amon-Rê, 1990’, *Bulletin de Liaison du Groupe International d’Étude de la Céramique Égyptienne* 15: 22–7.
- Grenfell, B. P. and Hunt, A. S. (1915).
The Oxyrhynchus Papyri 11. London: EEF.
- Grierson, P. (1982).
Byzantine Coins. London: Methuen and Co. Ltd.
- Grimm, G. (1975).
 ‘Zur Chronologie der spätantiken Bebauung des Chnumtempel-Hofes’, in W. Kaiser et al ‘Stadt und Tempel von Elephantine’, *MDAIK* 31: 70–80.
- Grossmann, P., Jones, M., Noeske, H.-C., Le Quesne, C. and Sheehan, P. (1998).
 ‘Zweiter Bericht über die Britisch-Deutschen Grabungen in der Römischen Festung von Babylon, Alt-Kairo’, *Archäologischer Anzeiger*: 173–207.
- Grossmann, P., Le Quesne, C. and Sheehan, P. (1994).
 ‘Zur Römischen Festung von Babylon, Alt-Kairo’, *Archäologischer Anzeiger* Heft 2: 271–87.
- Guéraud, O. (1929).
Rapport sur les fouilles de Tell Edfou, 1928. Cairo: IFAO.
- Guest, R. (1907).
 ‘The foundation of Fustat and the *khittahs* of that town’, *JRAS*: 49–84.
- Guest, R. and Richmond, E. T. (1903).
 ‘Misr in the fifteenth century’, *JRAS*: 791–816.
- Haas, C. (1997).
Alexandria in Late Antiquity: Topography and Social Conflict. Baltimore: Johns Hopkins University Press.

Halm, H. (1982).

Ägypten nach den Mamlukischen Lebensregistern. Beihefte zum Tübinger Atlas des Vorderen Orient, Reihe B, 38. Wiesbaden: Ludwig Reichert.

Hardy, E. R. (1931).

The Large Estates of Byzantine Egypt. New York: Columbia University Press.

Hayes, J. W. (1972).

Late Roman Pottery. London: The British School at Rome.

—— (1976).

Roman Pottery in the Royal Ontario Museum. Toronto: ROM.

—— (1992).

Excavations at Saraçhane in Istanbul 2: the Pottery. Princeton, NJ: Princeton University Press.

Henne, H. (1924).

Rapport sur les fouilles de Tell Edfou (1921–1922). Cairo: IFAO.

—— (1925).

Rapport sur les fouilles de Tell Edfou (1923 et 1924). Cairo: IFAO.

Herz, M. (1918).

‘Babylon und Qasr eš-Šam’, *Der Islam* 8: 1–14.

Hoffmann, G. (1880).

Auszüge aus Syrischen Akten persischer Märtyrer. Leipzig: Brockhaus.

Hölscher, U. (1954).

The Excavation of Medinet Habu 5: Post-Ramessid Remains. Chicago: University of Chicago Press.

Hope, C. A. (1981).

‘Dakhlah Oasis project: report on the study of the pottery and kilns, 3rd season–1980’, *JSSEA* 11, 4: 234–41.

Hope, C. A. and Eccleston, M. A. J. (2000).

‘Kegs and flasks from the Dakhleh Oasis’, *CCE* 6: 189–210.

Humphreys, R. S. (1991).

Islamic History: a Framework for Enquiry. Princeton, NJ: Princeton University Press.

—— (1998).

‘Egypt in the world system of the later Middle Ages’, pp. 445–61 in C. F. Petry ed. *The Cambridge History of Egypt 1: Islamic Egypt 640–1517*. Cambridge: CUP.

Husselman, E. M. (1979).

Karanis Excavations of the University of Michigan in Egypt 1928–1935: Topography and Architecture. Ann Arbor: University of Michigan Press.

Huzayyin, S. A. (1986).

‘The spread of the Arabs and of Islam: its relation to climatic changes and other factors’, *BIE* 62/3: 1–21.

Jacques, F. and Bousquet, B. (1984).

‘Le raz de marée du 21 Juillet 365: du cataclyse local à catastrophe cosmique’, *Mélanges de l’École Française de Rome: Antiquité* 96: 423–61.

Jacquet-Gordon, H. (1972).

Les ermitages chrétiens du désert d’Esna: céramique et objets. IFAO 29/3. Cairo: IFAO.

Jaritz, H. and Rodziewicz, M. (1994).

‘Syene: review of the urban remains and its pottery’, *MDAIK* 50: 115–41.

Jones, A. H. M. (1971).

The Cities of the Eastern Roman Provinces. Second edition. Oxford: Clarendon Press.

Jones, R. E. (1986).

Greek and Cypriot Pottery: a Review of Scientific Studies. Athens: British School of Archaeology.

Kahle, P. E. (1954).

Bala’izah: Coptic Texts from Deir el-Bala’izah in Upper Egypt. Oxford: Griffith Institute.

Kaiser, W. (1964).

‘Einige Bemerkungen zur ägyptischen Frühzeit’, *ZÄS* 91: 86–125.

Kalinowska-Habdas, E. (1957).

‘Ceramika koptyjska z Edfu’, *Rocznik Museum Narodowego* 2: 253–77.

Kamal, Y. (1932–4).

Monumenta Cartographica Africae et Aegypti: époque arabe. Cairo: s. n.

Keall, E. J. (1981).

‘Some observations on the Islamic remains of the Dakhleh Oasis’, *JSSEA* 11, 4: 213–23.

Kemp, B. J. (1977).

‘The early development of towns in Egypt’, *Antiquity* 51: 185–200.

—— (2000).

‘Soil (including mud-brick architecture)’, pp. 78–103 in P. T. Nicholson and I. Shaw eds *Ancient Egyptian Materials and Technology*. Cambridge: CUP.

Kennedy, H. (1981).

The Early Abbasid Caliphate: a political history. London: Croom Helm.

—— (1981a).

‘Central government and provincial élites in the early ‘Abbasid caliphate’, *BSOAS* 44: 26–38.

—— (1986).

The Prophet and the Age of the Caliphates: the Islamic Near East from the Sixth to the Eleventh Century. London/NY: Longman.

—— (1998).

‘Egypt as a province in the Islamic caliphate, 641–868’, pp. 62–85 in C. F. Petry ed. *The Cambridge History of Egypt 1: Islamic Egypt, 640–1517*. Cambridge: CUP.

Kessler, D. (1981).

Historische Topographie der Region zwischen Mallawi und Samalut. Beihefte zum Tübinger Atlas des Vorderen Orient, Reihe B, 30. Wiesbaden: Ludwig Reichert.

King, G. R. D. and Cameron, A. eds (1994).

The Byzantine and Early Islamic Near East II: Land Use and Settlement Patterns. Papers of the Second Workshop on Late Antiquity and Early Islam. Princeton, NJ: Darwin Press.

Kropp, A. M. (1930–31).

Ausgewählte koptische Zaubertexte. Brussels: La Fondation Égyptologique Reine Élisabeth.

Kubiak, W. (1976).

‘The burning of Misr al-Fustat in 1168: a reconsideration of historical evidence’, *Africana Bulletin* 25: 51–64.

—— (1987).

Al-Fustat: its Foundation and Early Urban Development. Warsaw: Warsaw University Press.

Kurth, D. and Rößler-Köhler, U. (1987).

Zur Archäologie des 12. oberägyptischen Gaues. Wiesbaden: Otto Harrassowitz.

Lamb, H. H. (1995).

Climate, History and the Modern World. Second edition. London: Routledge.

Lambert, P. ed. (1994).

Fortifications and the Synagogue: the Fortress of Babylon and the Ben Ezra Synagogue, Cairo. London: Weidenfeld and Nicolson.

Lane, E. W. (2000).

Description of Egypt, ed. J. Thompson. Cairo: American University in Cairo Press.

Lapidus, I. M. (1972).

‘The conversion of Egypt to Islam’, *Israel Oriental Studies* 2: 248–262.

Lawson, F. H. (1992).

The Social Origins of Egyptian Expansion During the Muhammad ‘Ali Period. New York: Columbia University Press.

Lepsius, C. R. (1904).

Denkmäler aus Aegypten und Aethiopien 2. Leipzig: Hinrichs.

Le Quesne, C. (unpublished 1999).

Quseir Fort Visitors Centre, Archaeological Report for the Antiquities Development Project at the American Research Center in Egypt.

Lev, Y. (1991).

State and Society in Fatimid Egypt. Leiden: E. J. Brill.

—— (1999).

‘Tinnis: an industrial medieval town’, pp. 83–96 in M. Barrucand ed. *L’Égypte Fatimide: son art et son histoire*. Paris: Presses de l’Université de Paris-Sorbonne.

Lewis, C., Mitchell-Fox, P. and Dyer, C. (2001).

Village, Hamlet and Field: Changing Medieval Settlements in Central England. Macclesfield: Windgather Press.

Lexicon der Ägyptologie (1975–92).

Wiesbaden: Otto Harrassowitz.

Loomba, A. (1998).

Colonialism/Postcolonialism. London/NY: Routledge.

Loukianoff, E. (1952).

‘La forteresse romaine du Vieux Caire’, *BIE* 33: 285–93.

MacAdam, H. I. (1994).

‘Settlements and settlement patterns in northern and central Transjordan, ca. 550–ca. 750’, pp. 49–93 in G. R. D. King and A. Cameron eds *The Byzantine and Early Islamic Near East II: Land Use and Settlement Patterns*. Papers of the Second Workshop on Late Antiquity and Early Islam. Princeton, NJ: Darwin Press.

Majcherek, G. (1995).

‘Gazan amphorae: typology reconsidered’, pp. 163–78 in *Hellenistic and Roman Pottery in the Eastern Mediterranean—Advances in Scientific Studies*.

- Acts of the II Nieborów Pottery Workshop. Warsaw: Research Centre for Mediterranean Archaeology, Polish Academy of Sciences.
- Mansi, G. D. (1760).
Sacrorum conciliorum nova et amplissima collectio 4. Florence: expensis Antonii Zatta Veneti.
- Marchand, S. and Laisney, D. (2000).
 'Le survey de Dendara (1996–1997)', *CCE* 6: 261–98.
- Mason, R. B. (1997).
 'Medieval Egyptian lustre-painted and associated wares: typology in a multidisciplinary study', *JARCE* 34: 201–42.
- Maspero, J. (1912).
Organisation militaire de l'Égypte byzantine. Paris: Librairie ancienne Honoré Champion.
- Maspero, J. and Wiet, G. (1919).
Matériaux pour servir à la géographie de l'Égypte, MIFAO 36. Cairo: IFAO.
- Michalowski, K. et al (1938).
Tell Edfou, 1938. Cairo: IFAO.
- (1950).
Tell Edfou, 1939. Cairo: IFAO.
- Mond, R. and Myers, O. H. (1934).
The Bucheum. London: EES.
- (1940).
The Temples of Armant: a Preliminary Survey. London: EES.
- Monneret de Villard, U. (1923).
 'Ricerche sulla topographia di Qasr eš-Šam', *BSRGE* 12: 205–32.
- (1924).
 'Ricerche sulla topographia di Qasr eš-Šam', *BSRGE* 13: 73–94.
- Montet, P. (1961).
Géographie de l'Égypte ancienne II: la haute Égypte. Paris: C. Klincksieck.

Montgomery Watt, W. (1956).

Muhammad at Medina. Oxford: Clarendon Press.

Moore, D. (1966).

‘Deltaic sedimentation’, *Earth-Science Reviews* 1: 87–104.

Mörner, N.-A. (1971).

‘Eustatic changes during the last 20,000 years and a method of separating the isostatic and eustatic factors in an uplifted area’, *Palaeogeography, Palaeoclimatology, Palaeoecology* 9: 153–181.

Morony, M. G. (1984).

Iraq after the Muslim Conquest. Princeton, NJ: Princeton University Press.

The Mosques of Egypt from 21 H (641) to 1365 H (1946). (1949; second edition 1992, Ministry of Waqfs, Egypt). London: Hazar.

Munier, H. (1917).

‘Une relation copte sa’idique de la vie des Saints Maxime et Domèce’, *BIFAO* 13: 93–140.

—— (1919).

‘Vestiges chrétiens à Tinnis’, *ASAE* 18: 72–4.

—— (1939).

‘La géographie de l’Égypte d’après les listes coptes-arabes’, *BSAC* 5: 201–43.

—— (1943).

Recueil des listes épiscopales de l’église copte. Cairo: Société d’Archéologie Copte.

Mustafa, M. el-D. and Jaritz, H. (1985).

‘A Roman fortress at Nag‘ el-Hagar: first preliminary report’, *ASAE* 70: 21–32.

Myśliwiec, K. (1987).

Keramik und Kleinfunde aus der Grabung im Tempel Sethos I. in Gurna. Mainz: Philipp von Zabern.

Naville, E. (1894).

Ahnas el Medineh. London: Trübner and Co.

Nicholson, P. T. and Rose, P. J. (1985).

‘Pottery fabrics and ware groups at el-Amarna’, pp. 133–74 in B. J. Kemp ed. *Amarna Reports 2*. London: EES.

Northampton, Marquis of (1900).

‘Extrait d’une lettre du Marquis de Northampton’, *ASAE* 1: 192.

Northedge, A. (1994).

‘Archaeology and new urban settlement in early Islamic Syria and Iraq’, pp. 231–65 in G. R. D. King and A. Cameron eds *The Byzantine and Early Islamic Near East II: Land Use and Settlement Patterns*. Papers of the Second Workshop on Late Antiquity and Early Islam. Princeton, NJ: Darwin Press.

Noth, A. (1984).

‘Some remarks on the ‘nationalisation’ of conquered lands at the time of the Umayyads’, pp. 223–228 in T. Khalidi ed. *Land Tenure and Social Transformation in the Middle East*. Beirut: American University of Beirut.

Østrup, J. (1896).

‘Umar ibn Muhammed al-Kindis Beskrivelse af Aegypten’, *Oversigt over det Kongelige Danske Videnskabernes Selskabs Fornandlinger*, pp. 173–245. Copenhagen: F. Dreyer.

Patricolo, A. (1911).

‘Rapport sur les anciennes citernes de Tell Tinnis, dans le Lac Menzaleh’, pp. 62–8 in *Comité de Conservation des Monuments et de l’Art Arabe*, Exercise 1910, Fas. 17. Cairo: CCMAA.

Peacock, D. P. S. and Williams, D. F. (1986).

Amphorae and the Roman Economy. London and New York: Longman.

Peters, E. ed. (1971).

Christian Society and the Crusades 1198–1229. Philadelphia: University of Pennsylvania Press.

Petrie, W. M. F. (1888).

Tanis 2: Nebesheh and Defenneh. London: Trübner and Co.

—— (1905).

Ehnasya 1904. London: EEF.

—— (1909).

Memphis I. London: British School of Archaeology in Egypt.

—— (1911).

Roman Portraits and Memphis. London: British School of Archaeology in Egypt.

—— (1923).

Lahun II. London: British School of Archaeology in Egypt.

Philon, H. (1980).

Early Islamic Ceramics. Benaki Museum, Athens Catalogue of Islamic Art 1. London: Islamic Art Publications.

Pierrat, G. (1991).

‘Essai de classification de la céramique de Tod de la fin du VIIe siècle au début du XIIIe siècle ap. J.-C.’, *CCE* 2: 145–204.

—— (1992).

‘Peintres potiers d’Assouan du IXe au XIIe siècle ap. J.-C.’, *Revue du Louvre* 4: 30–7.

—— (1995).

‘Peintres potiers d’Assouan du IVe au VIe siècle ap. J.-C.’, *Revue du Louvre* 5/6: 31–42.

—— (1996).

‘Évolution de la céramique de Tôd du IIe siècle au VIIe siècle apr. J.-C.’, *CCE* 4: 189–206.

Pierrat-Bonnefois, G. (2000).

‘La céramique dynastique et Ptolémaïque des fouilles du Louvre à Tod’, *CCE* 6: 299–352.

Pollard, N. (1998).

‘The chronology and economic condition of late Roman Karanis: an archaeological reassessment’, *JARCE* 35: 147–62.

Porter, B. and Moss, R. L. B. (1934).

Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings 4: Lower and Middle Egypt. Oxford: Clarendon Press.

—— (1937).

Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings 5: Upper Egypt, Sites. Oxford: Clarendon Press.

—— (1939).

Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings 6: Upper Egypt, Chief Temples. Oxford: Clarendon Press.

Quatremère, E. (1811).

Mémoires Géographiques et Historiques sur l'Égypte. Paris: F. Schoel.

Quibell, J. E. (1912).

Excavations at Saqqara (1908–9, 1909–10): the Monastery of Apa Jeremias. Cairo: IFAO.

Ramzi, M. (1953–60).

Al-Qamus al-jughrafi lil-bilad Misriyah. Cairo: Matba‘at Dar al-Kutub al-Misriyah.

Rebuffat, R. (1980).

‘Cuicul le 21 juillet 365’, *Antiquités africaines* 15: 309–28.

Remondon, R. (1961).

‘Soldats de Byzance d’après un papyrus trouvé à Edfou’, *Recherches de papyrologie* 1: 41–93.

Riley, J. A. (1979).

‘The coarse pottery from Berenice’, pp. 91–467 in J. A. Lloyd ed. *Excavations at Sidi Khrebish, Benghazi (Berenice) 2. Supplement to Libya Antiqua*. Tripoli: Libyan Department of Antiquities.

—— (1981).

‘The pottery from the cisterns 1977.1, 1977.2 and 1977.3’, pp. 85–124 in J. H. Humphreys ed. *Excavations at Carthage 1977 conducted by the University of Michigan* 6. Ann Arbor: Kelsey Museum, University of Michigan.

Robinson, C. F. (2000).

Empire and Elites after the Muslim Conquest. Cambridge: CUP.

Rodziewicz, M. (1970).

‘Fragment późnoantycznej tacy z Edfu’, *Rocznik Museum Narodowego* 14: 251–60.

—— (1976).

Alexandrie I: la céramique romaine tardive d’Alexandrie. Warsaw: Éditions Scientifiques de Pologne.

—— (1983).

‘Egyptian glazed pottery of the eighth to ninth centuries’, *BSAC* 26: 73–5.

—— (1984).

Les habitations romaines tardives d’Alexandrie à la lumière des fouilles polonaises à Kom el-Dikka. Alexandrie 3. Warsaw: Éditions Scientifiques de Pologne.

Roeder, G. et al (1937).

‘Bericht über die Ausgrabungen der Deutschen Hermopolis-Expedition, 1935’, *MDAIK* 7: 1–56.

Rossi, I. de (1808).

Etymologiae Aegyptiacae. Rome: s.n.

Rougé, J. de (1891).

Géographie ancienne de la Basse Egypte. Paris: J. Rothschild.

Rouillard, G. (1928).

L’administration civile de l’Égypte byzantine. Paris: Librairie Orientaliste Paul Geuthner.

Runciman, S. (1952).

A History of the Crusades 2: the Kingdom of Jerusalem. Cambridge: CUP.

—— 1954).

A History of the Crusades 3: the Kingdom of Acre. Cambridge: CUP.

Russell, J. (1966).

‘The population of medieval Egypt’, *JARCE* 5: 69–82.

Russell, K. W. (1980).

‘The earthquake of May 19, A. D. 363’, *BASOR* 238: 47–64.

Ruszczyc, B. (1962).

‘Des bombes mamelukes’, *Bulletin du Musée National de Varsovie* 3: 87–8.

Sacy, A. I. S. de (1810).

Relation de l'Égypte par Abd-Allatif, medecin arabe de Baghdad. Paris:
Imprimerie imperial.

Said, R. (1993).

The River Nile: Geology, Hydrology and Utilization. Oxford: Pergamon Press.

Scanlon, G. T. (1970).

‘Egypt and China: trade and imitation’, pp. 81–95 in D. S. Richards ed.
Islam and the Trade of Asia. Oxford: Bruno Cassirer Ltd.

—— (1971).

‘The Fustat mounds: a shard count 1968’, *Archaeology* 24: 220–33.

—— (1972).

‘Fustat: archaeological reconsiderations’, pp. 413–28 in *Colloque
International sur l'Histoire du Caire 27 Mars–5 Avril 1969*. Gräfenhainichen:
Ministry of Culture of the Arab Republic of Egypt/VEB Druckerei Gottfried
Wilhelm Leibniz.

—— (1974).

‘The pits of Fustat: problems of chronology’, *JEA* 60: 60–78.

—— (1981).

‘Fustat expedition: preliminary report, 1972, part 1’, *JARCE* 18: 57–84.

—— (1984a).

‘Moulded early lead glazed wares from Fustat: imported or indigenous?’, pp. 65–96 in A. Green ed. *Studies in Honour of Prof. Muhammad al-Nuwayhi*. Cairo: AUC.

—— (1994).

‘Al-Fustat: the riddle of the earliest settlement’, pp. 171–9 in G. R. D. King and A. Cameron eds *The Byzantine and Early Islamic Near East II: Land Use and Settlement Patterns*. Papers of the Second Workshop on Late Antiquity and Early Islam. Princeton, NJ: Darwin Press.

—— (1999).

‘Fustat Fatimid sgraffiato: less than lustre’, pp. 265–83 in M. Barrucand ed. *L’Égypte Fatimid: son art et son histoire*. Paris: Presses de l’Université de Paris-Sorbonne.

Schick, R. (1995).

The Christian Communities of Palestine from Byzantine to Islamic Rule. Princeton, NJ: Darwin Press.

Serjeant, R. B. (1972).

Islamic Textiles: Material for a History up to the Mongol Conquest. Beirut: Librairie du Liban.

Sestini, G. (1992).

‘Implications of climatic changes for the Nile Delta’, pp. 535–601 in L. Jeftic, J. D. Milliman and G. Sestini eds *Climatic Change and the Mediterranean*. London: E. Arnold.

Sheehan, P. (1996).

‘The Roman fortress of Babylon in Old Cairo’, pp. 95–7 in D. Bailey ed. *Archaeological Research in Roman Egypt*. Ann Arbor: Journal of Roman Archaeology.

Al-Shinawi, ‘A and al-Hadidi, M. (1979).

‘Tinnis min khilal al-hafa’ir min 1/5 ila 22/7 li-sana 1979’, unpublished report for the Egyptian Antiquities Service.

Solomonides, A. (1945).

The Holy Monastery of St George in Old Cairo, 3 vols. in Greek. Publishing details unknown.

Spencer, A. J. (1979).

Brick Architecture in Ancient Egypt. Warminster: Aris and Phillips.

—— (1993).

Excavations at el-Ashmunein 3: the Town. London: British Museum Press.

—— (1996).

Excavations at Tell el-Balamun 1991–1994. London: British Museum Press.

Spencer, A. J., Bailey, D. M. and Burnett (1983).

Ashmunein (1982). British Museum Occasional Paper 46. London: British Museum Press.

Stanley, D. J. (1997).

‘Mediterranean deltas: subsidence as a major control of relative sea level rise’, *Bulletin de l’Institut océanographique, Monaco*. Special Issue 18: 35–62.

Stanley, D. J. and Goodfriend, G. A. (1997).

‘Recent subsidence of the northern Suez canal’, *Nature* 388: 335–6.

Stanley, D. J. and Warne, A. G. (1998).

‘Nile Delta in its destruction phase’, *Journal of Coastal Research* 14 (3): 794–825.

Strudwick, N. and Strudwick, H. M. (1996).

The Tombs of Amenhotep, Khnummose and Amenmose at Thebes. Oxford: Griffith Institute.

Tell Edfou: soixante ans après (1996).

Actes du Colloque Franco-Polonais, Le Caire, 15 Octobre 1996. Fouilles Franco-Polonais 4, 1999. Cairo: IFAO.

Timm, S. (1984–1992).

Das christliche-koptische Ägypten in arabischer Zeit. Beihefte Tübinger Atlas des Vorderen Orients, Reihe B Nr. 41/1–41/6. Wiesbaden: Ludwig Reichert.

Tkaczow, B. (1993).

The Topography of Ancient Alexandria: an Archaeological Map. Travaux du Centre d'Archéologie Méditerranéenne de l'Académie Polonaise des Sciences 32. Warsaw: CAMAPS.

Tomber, R. (1992).

'Early Roman pottery from Mons Claudianus', *CCE* 3: 137–42.

Toussoun, O. (1922).

Mémoire sur les anciennes branches du Nil. Mémoires de la Société Archéologique d'Alexandrie 1. Cairo: IFAO.

—— (1926).

La géographie de l'Égypte à l'époque arabe. Mémoires de la Société Royale de Géographie d'Égypte 8. Cairo: IFAO.

Toy, S. (1937).

'Babylon of Egypt', *Journal of the British Archaeological Association*, 3rd series 1: 52–77.

Tsafir, Y. and Foerster, G. (1994).

'From Scythopolis to Baysan: changing concepts of urbanism', pp. 95–115 in G. R. D. King and A. Cameron eds *The Byzantine and Early Islamic Near East II: Land Use and Settlement Patterns*. Papers of the Second Workshop on Late Antiquity and Early Islam. Princeton, NJ: Darwin Press.

Van Berchem, M. (1903).

Matériaux pour un corpus inscriptionum arabicarum, part 1: Égypte. Mémoires de la Mission Française au Caire 19. Paris: Ernest Leroux.

Vandier, J. (1950).

Mo'alla: la tombe d'Ankhtifi et la tombe de Sebekhotep. Bibliothèque d'étude 18. Cairo: IFAO.

Vandier d'Abbadie, J. (1963).

Nestor l'hôte (1804–1842). Leiden: E. J. Brill.

Varille, A. (1938).

La tombe de Ni-Ankh-Pepi à Zaouyet el-Mayetin. MIFAO 70. Cairo: IFAO.

- Viaud, G. and Muyser, J. (1979).
Les pèlerinages coptes en Égypte, d'après les notes du Qommos Jacob Muyser. Bibliothèque d'Études Coptes 15. Cairo: IFAO.
- Vita-Finzi, C. (1969).
The Mediterranean Valleys. Cambridge: CUP.
- (1972).
 'Supply of fluvial sediment to the Mediterranean during the last 20,000 years', pp. 43–6 in D. J. Stanley ed. *The Mediterranean Sea: a Natural Sedimentation Laboratory*. Stroudsburg, Pa.: Dowden, Hutchison and Ross.
- Weill, R. (1912).
 'Fouilles à Tounah et à Zaouiet el-Maïetin', *Comptes rendus des séances de l'année 1912, Académie des Inscriptions et Belles-Lettres*. Paris: A. Picard et fils.
- Weill, R. and Jouguet, P. (1934).
 'Horus-Apollon au Kom el-Ahmar de Zawiet el-Maïetin', *Mélanges Maspero* II-1: 93–103.
- Whitbread, I. K. (1995).
Greek Transport Amphorae: A Petrological and Archaeological Study. Fitch Laboratory Occasional Paper 4. Athens: British School.
- Whitcomb, D. S. (1989).
 'Coptic glazed ceramics from the excavations at Aqaba, Jordan', *JARCE* 26: 167–82.
- (1994).
 'The *Misr* of Ayla: settlement at al-'Aqaba in the early Islamic period', pp. 155–70 in G. R. D. King and A. Cameron eds *The Byzantine and Early Islamic Near East II: Land Use and Settlement Patterns*. Papers of the Second Workshop on Late Antiquity and Early Islam. Princeton, NJ: Darwin Press.
- Whitcomb, D. S. and Johnson, J. H. (1982).
Quseir al-Qadim 1980 Preliminary Report. Malibu: Undena Publications.

Wilkinson, J. G. (1835).

Topography of Thebes and General View of Egypt. London: J. Murray.

—— (1843).

Modern Egypt and Thebes. London: John Murray.

Winlock, H. E. and Crum, W. E. (1926).

The Monastery of Epiphanius at Thebes I. New York: Metropolitan Museum of Art.

Worp, K. A. (1994).

‘A checklist of bishops in Byzantine Egypt (AD 325–c. 750)’, *ZPE* 100: 283–318.

Yoyotte, J. (1961).

‘Études géographiques 1: la cité des acacias (Kafr Ammar)’, *Revue d'Égyptologie* 13: 71–105.

Zahran, M. A. (1992).

The Vegetation of Egypt. London: Chapman and Hall.

Zeyadeh, A. (1994).

‘Settlement patterns, an archaeological perspective: case studies from northern Palestine and Jordan’, pp. 117–31 in G. R. D. King and A. Cameron eds. *The Byzantine and Early Islamic Near East II: Land Use and Settlement Patterns*. Papers of the Second Workshop on Late Antiquity and Early Islam. Princeton, NJ: Darwin Press.

Zibelius, K. (1978).

Ägyptische Siedlungen nach Texten des Alten Reiches. Beihefte zum Tübinger Atlas des Vorderen Orient 19. Wiesbaden: Ludwig Reichert.

CAMBRIDGE
UNIVERSITY LIBRARY

Attention is drawn to the fact that the copyright of this dissertation rests with its author.

This copy of the dissertation has been supplied on condition that anyone who consults it is understood to recognise that its copyright rests with its author. In accordance with the Law of Copyright no information derived from the dissertation or quotation from it may be published without full acknowledgement of the source being made nor any substantial extract from the dissertation published without the author's written consent.