

Archaeological Work on Hellenistic and Roman Egypt, 1995–2000

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Some years ago, there was reason to grumble about the state of the archaeology of Egypt for the millennium that stretches from the arrival of Alexander the Great (332 B.C.E.) to the conquest of Egypt by the Arab forces (641 C.E.).¹ The papyrological millennium, as it is sometimes called (although accurately only from a narrowly Greek perspective), has never been a favorite of Egyptologists, for whom it occupied a place somewhere in the lower ranks of the morass once (and sometimes even today) called vaguely the Late Period. Nor has Egypt occupied a high place in the interests of classical archaeologists, for whom too much of what turns up from Greek and Roman levels is too Egyptian. The capital, Alexandria, was certainly the least known of the great metropolitan centers of the ancient world, thanks in large part to lying under the modern city. Not one of the nome capitals or Greek cities of Egypt had ever had full-scale excavation; some were now largely destroyed, often carried off for fertilizer,² others were buried under modern towns. Apart from the Fayyum, it was even hard to find an extensively studied village, and there one could hardly point to anything but Karanis. And few areas of Egypt had undergone systematic survey of the sort now common elsewhere in the Mediterranean, which might recover broader settlement patterns (fig. 1).

Much has changed for the better in the 1990s (even if Egyptological preferences for earlier periods remain), and there is a lot of progress to report. My brief in this chronicle is not to provide an exhaustive list of excavation and survey work. Such reports are provided annually by J. Leclant and G.

Clerc (from 1999 the second author is Anne Minault-Gout) in *Orientalia*,³ running each year to more than 100 sections (and many subsections) covering prehistoric to early Islamic remains. These reports also include abundant bibliography (the 1999 installment is even richer than earlier ones) of publications concerning earlier excavations. A faster, although necessarily briefer and much less complete, account is given by the "Digging Diary" compiled by Lisa Giddy, published in *Egyptian Archaeology* twice yearly.⁴ (Both of these, it should be noted, depend largely on submissions from excavators and thus either omit or report with considerable delay any project that does not send a report to the compiler.) Moreover, the French Institute in Cairo publishes a detailed account of work on its numerous projects each year in *BIFAO*.⁵ And the recent publication of Kathryn Bard's (1999) encyclopedia provides a convenient reference for a very wide variety of sites and topics in its nearly 1,000 pages (although it excludes sites that are exclusively late antique). Instead, I shall focus on a series of areas in which there have been important developments in fieldwork and publication, attempting to give the reader a sense of the main lines along which work has proceeded and the most important results. Many other projects are not included, but some of them may appear in future installments. Equally, in some instances I have gone back before my nominal starting date to include projects of note.⁶

Most salient among the omissions in the present report is most of the work done on sites in the Nile valley in Middle and Upper Egypt. This decision is

¹Bagnall 1988, esp. 199–201. My debts to scholars who have sent me relevant material of various sorts, discussed sites with me, or read a draft of this chronicle are numerous. I thank particularly Jean Bingen, Elizabeth Bolman, Gillian Bowen, Paola Davoli, Tomasz Derda, Tosha Dupras, W. Godlewski, Peter Grossmann, Colin Hope, Lynn Meskell, A.J. Mills, Renate Müller-Wollermann, Steven Sidebotham, and Jean Yoyotte. Diane Bergman of the Wilbour Library of the Brooklyn Museum helped me locate a number of items lacking at Columbia.

²On the subject of *sebakh*, see Bailey 1999.

³Leclant and Clerc 1994, 1995, 1996, 1997, 1998; Leclant and Minault-Gout 1999.

⁴To avoid tedium and conserve space, I do not generally give citations to these two chronicles for specific items mentioned here, and if I do not cite another source for something it should be understood to be one or both of these. They are geographically organized within each annual or semiannual report, making sites easy to find.

⁵The two most recent to appear are Grimal 1998 and 1999, but their predecessors can easily be found.

⁶Although this is not intended as a systematic bibliography of reports of archaeological work, I have included a number of reports published during this period but concerning earlier excavations, in the manner of *Archaeological Reports*.



Fig. 1. Outline map of Egypt

not entirely arbitrary, even if it seems paradoxical given the importance of the papyrological finds from those areas. In recent years, the archaeology of the valley has been dominated by pharaonic sites; by contrast, in the deserts, the Fayyum, and the Delta, the later periods have played a much more important role. All the same, it is worth recording that there has been work on the Graeco-Roman period in recent years at some of the main cities of the valley or their neighborhoods, including Oxyrhynchos, Hermopolis, Antinoopolis, Panopolis, and Syene.⁷ For the most part, however, this activity has made less of a difference to our knowledge of these areas than work elsewhere has, and of these only Oxyrhynchos appears still to be active. To some degree security problems in this part of the country are responsible for the relatively low level of activity, but undoubtedly the poor condition of Thebes after the early first century B.C.E. is also a factor, as it is in the Theban region that a large part of the archaeological activity has taken place.

Another area left undiscussed here is the substantial number of special exhibitions of material from Graeco-Roman Egypt in Western museums during the last quinquennium. No doubt mummies and mummy-portraits have been the biggest draws; the *Ancient Faces* exhibit in both its British Museum and its Metropolitan Museum versions received favorable critical notice and enormous crowds of visitors. Some exhibit catalogues that have come to my attention are included in the bibliography. Many have valuable introductions as well as abundant illustrations of rarely seen material.⁸

Because I am a historian and papyrologist, rather than an archaeologist, my account will of necessity have a strongly historical focus and will aim, where possible, to bring out connections between archaeological and documentary materials for the history of Graeco-Roman Egypt. It does not, however, seek to report on publications of texts. It is in this regard a personal view of the state of work rather than a comprehensive catalogue of sites and topics.

ALEXANDRIA, AT LAST

Although it has not had quite the media frenzy that the "Valley of the Golden Mummies" has en-

joyed (at least in the United States; see "The Western Oases," below), Alexandria has come close. It has thus received some measure of the attention needed to narrow the gulf between its historical importance and its archaeological intelligibility and visibility.⁹ The underwater finds of the two teams operating in the area have captured considerable press attention, and with reason. Most of all, we have come to see just how dramatic the impact of the subsidence of the land mass since antiquity has been. Much of what was once the harbor area of the ancient city is now under the water of the harbor, and the most recent press coverage reports that Franck Goddio's expedition (for the Institut Européen d'Archéologie Sous Marine) has found several ancient settlements several kilometers off the coast between Alexandria and the ancient mouth of the Nile, including Menouthis and the pre-Hellenistic port of Herakleion. No publication of these finds is available as of this writing.

More can be said of the harbor itself. The work of the Centre d'Études Alexandrines (CEA), led by Jean-Yves Empereur, has been described and illustrated in lavish style,¹⁰ although we must still wait for systematic publication to see to what extent the thousands of blocks found underwater off Qaitbey actually illuminate the subject of the Pharos; at all events, their findspot was evidently dry land in antiquity. What is most striking here (and also true of Goddio's sector) is the vast quantity of pharaonic statuary, including obelisks and sphinxes, particularly of the New Kingdom and Saite periods, much of it originally set up in Heliopolis. Aswan granite featured prominently in the Alexandrian landscape. Some of the Egyptian-style sculpture, however, is said to be of the Ptolemaic period. Scholars have not been slow to offer opinions about what conclusions are to be drawn from this material; it is at least clear that some parts of Alexandria must have had a largely Egyptian appearance.¹¹ But it remains controversial just when these pharaonic remains were moved to Alexandria: from the earliest Ptolemaic times, or mainly under the Romans? On the whole, the recent finds tend to support the view that this pharaonic element is already Ptolemaic, even if more transfers occurred under Ro-

⁷To be noted is Donald Bailey's 1996 important publication of pottery from the South Church of Hermopolis. For Syene, see Jaritz and Rodiewicz 1994, 1996.

⁸A comprehensive discussion of recent work on funerary art and practices may be found in Riggs (forthcoming).

⁹See Empereur (1998c, which publishes a 1988 colloquium)

and the Daoud memorial volume in *BSAA* 45 (1993) for many aspects of archaeological work in and around Alexandria before the more recent and publicized discoveries.

¹⁰Empereur 1998a; see also 1998b (bibliography), 1999a.

¹¹See, e.g., Bianchi 1998; Grimm 1998; Abd el-Fattah and Gallo 1998; Pfrommer 1999; Yoyotte 1998, 199–219.

man rule. As Yoyotte states, "From the study of *pharaonica*, one is encouraged to suppose that specific temples, the typical works of art, the proper ritual practices, and the traditional conceptions of the Egyptians were far from marginal in Greek Alexandria, even at the time of the very first Ptolemies."¹² Although the Ptolemies certainly were active in the Greek world and represented themselves culturally as important parts and patrons in that world, the visual impact of their capital certainly also included an important Egyptian component. The programmatic character of that visual impact is likely to remain a central topic of discussion for years to come.

More recently, the CEA's work has shifted in part to dozens of shipwrecks (ranging from early Hellenistic to the seventh century C.E.) just outside the harbor. Those studied come from both the western and eastern Mediterranean (with Rhodes dominant in the Hellenistic wrecks), and they should ultimately contribute a great deal to our knowledge of Alexandria's trade over the whole of its ancient history. In some cases it is possible to reconstruct notional itineraries for these ships, which would have passed through several ports picking up cargo for Alexandria.

The other team, directed by Goddio in collaboration with the Egyptian authorities (now known as the Supreme Council for Antiquities, or SCA), has been active in the eastern part of the harbor and the area of the ancient palaces. A combination of magnetic sensing and underwater visual survey has allowed the reconstruction of the ancient shoreline in the central and eastern parts of the Great Harbor, all now some 8 m below their ancient level. This area includes Cape Lochias, where the main part of the royal palaces was located (along with the museum, according to Strabo), the subsidiary harbors mentioned by Strabo, and an island that (more speculatively) Goddio has identified with the Antirrhodos mentioned in the ancient sources. Vast quantities of ancient blocks and columns, some of limestone but more of granite and other hard Egyptian stone, have been found, along with ancient pavements. These do not yet yield a coherent picture. (Yoyotte: "We found what looked like a collection of empty lots, stacked with more or less dense concentrations of dismembered buildings, or else like abandoned demolition sites, in which a few

sculptures and inscription-bearing blocks dating from pharaohs prior to Alexander had been mislaid." As the literary sources tell us that the royal quarter was devastated in the third century C.E., such a picture is perhaps not surprising.) The elaborate main publication of this activity¹³ includes a compilation of ancient testimonia and publication of texts and objects found in the work. (The epigraphical chapter is disfigured by some remarkable errors introduced in translation or printing.) The inscriptions come mostly from the reign of Caracalla, whose time in Alexandria ended in conflict and carnage.

On land, the CEA has carried out a whole series of other excavations (in some cases jointly with the SCA), driven in each case by real estate or highway development and thus under time pressure. Most of these have taken place in the neighborhood of the Ramleh Station.¹⁴ In the grounds of the former British Consulate, a Ptolemaic insula with remains of four houses, including colonnaded courtyards, mosaics, and wells was uncovered; three major building phases within the Hellenistic period were identified. Another Ptolemaic building, with mosaic (painted red) and monumental staircase, flanked by a north-south street, was excavated on the former cricket ground close by. The site of the Diana Theatre yielded a Roman villa with mosaics¹⁵ with a late Ptolemaic house under it; above its level were glass, bone, and precious stonecutting workshops, evidently built after a late third-century destruction. Part of the site was used for a Coptic cemetery at a later date. Most recently, a salvage excavation in the old Greek Orthodox Patriarchate has been launched.

Another sizable rescue excavation has been carried out over several seasons in the Gabbari necropolis, where construction of an elevated roadway led to the discovery of numerous (43 as of 1999) collective tombs of the Hellenistic period, each with up to 250 loculi for burials.¹⁶ Most of the bodies found have been skeletons or cremations, but there are also some mummies in later parts of the cemetery, as Egyptian practices became more widely used. The onomastic repertory of painted inscriptions above the loculi is Greek. Empereur notes the presence of inscriptions of entrepreneurs, suggesting that (as at Palmyra) these large-scale burials began as commercial undertakings. The cemetery may con-

¹² Goddio et al. 1998, 202.

¹³ Goddio et al. 1998.

¹⁴ Empereur 1998a, 31 (map).

¹⁵ Including a notable Medusa, for which see Guimier-Sorbets 1998.

¹⁶ Empereur 1999b.

tain as many as 400,000 burials in all, and the skeletal material should give us the first significant body of evidence for the demography of the capital city. While we await the imminent beginning of systematic publication of these excavations, the study of Alexandrian funerary art and architecture in the Roman period has been advanced by two detailed studies by Marjorie Venit, in which the distinctive cultural complexity of the milieu is very effectively revealed.¹⁷

One of Empereur's other interests has been the recovery of Alexandria's enormous system of cisterns, which stored water brought from the Nile in high season by a feeder canal. A combination of study of historical records and some finds discovered during the salvage excavations of the 1990s has begun to produce a sense of the location of these vast cisterns and the underground network connecting them.¹⁸ The cricket ground and the grounds of the Coptic Patriarchate (1993 excavations) have both contributed to this project. The enormous investment in urban infrastructure, which is coming back to light as a result of this work, is of great interest for the history of Alexandria's development and its viability in its location.

The excavation that has defined visible Alexandria for the last generation is still active, namely the Polish mission at Kom el-Dikka. Much of the recent effort has gone into conservation of the already excavated remains in an effort to make them accessible to visitors,¹⁹ but the excavators have both carried out small-scale digging in conjunction with conservation and opened up a residential area (F) between the bath complex and the large cistern west of street R4.²⁰ These houses of the Roman period have been especially interesting for showing conclusively the existence of secondary east–west streets between the major ones. Alexandria's megablocks were thus (at least in residential and commercial areas, one may suppose) broken up into smaller, more accessible blocks.

Most of the work described above will have little or no effect on the modern visage of Alexandria, which is not likely to remind the visitor of the great sites with extensive standing remains. Taken together, however, they pin down much more precisely many of the key aspects of the city plan that had been vague until now. The time may not be ripe yet

for a comprehensive new city plan, incorporating all of these discoveries, but that plan will eventually be much denser as a result of this work.

The environs of Alexandria have also begun to take shape. The discovery that a significant part of those known from literary sources is now under the waters of the Mediterranean has already been mentioned. Work in the 1980s showed a dense network of wine and oil-producing centers south of Lake Mareotis.²¹ The necropolis of Plinthine, to the east of Taposiris (on the north side of the lake), which was the subject of some still-unpublished Egyptian excavations 40 years ago, has received renewed attention from a team from Lyon.²² Further along the coast, the most noteworthy excavation has been at Marina el-Alamein, 100 km west of Alexandria, where a Polish mission and an SCA team have been at work since the mid 1980s.²³ To some degree, attention has shifted from excavation to conservation of the town (ancient Leukaspis or Antiphræ according to the excavators), which has yielded remains of the late Hellenistic and Roman periods, and the tomb monuments of the necropolis,²⁴ but there has been renewed excavation of tombs as well. Some of these were large and elaborate, in Greek style (Tomb 6's Ionic colonnaded portico is noteworthy); the site has also produced painted mummy portraits, extending the geographical range of that art form.

SETTLEMENTS IN THE DELTA

It was realized early that the comparatively higher humidity of the Delta made it a bad bet for the survival of papyrus and other organic materials, and the papyrus-hunting excavators of a century ago made it a low priority. A couple of finds of carbonized papyrus rolls have not changed that fundamental assessment, but development pressure has in recent years led some archaeologists to think that the Delta deserves more attention before what exists—and it is by no means trivial—disappears entirely.

As in Alexandria, a significant part of the activity has been driven by concerns to recover information about sites standing in the way of development, but in the case of the Delta the engine has been mainly the expansion of irrigation to land previously dry. A particular focus has been the northeast Delta and adjacent parts of Sinai, where major irri-

¹⁷ Venit 1997, 1999.

¹⁸ Empereur 1998a, 125–43.

¹⁹ Kolataj 1995, 1996, 1998, 1999.

²⁰ Majcherek 1995, 1996, 1998, 1999.

²¹ See Empereur 1998c, with six papers on this topic.

²² See Leclant and Clerc 1998, 317–8; Empereur (1998a, 227–8) argues vigorously that the town site itself would repay investigation.

²³ See Daszewski 1995, 1996, 1998, 1999.

²⁴ Medeksza 1996, 1998, 1999.

gation works (most notably the Peace Canal) have endangered many sites. A particular beneficiary of this activity has been the area of Pelusium. From the early 1990s, at least a half-dozen projects, mostly collaborations between foreign missions and the SCA, took on various sectors of this city, which was the second most important port of Egypt as well as the main military base of the Ptolemaic and Roman governments on the frontier toward Syria. Pelusium was certainly an important place, as occasional clues in the literary sources and papyri allow us to see,²⁵ but until now it has hardly been known at all archaeologically.

On the west side of Pelusium, a Canadian excavation uncovered late Persian and early Ptolemaic levels with extensive evidence for the purple-dyeing industry. Also on this side, German-Egyptian collaboration uncovered a very extensive church complex, perhaps a cathedral, with a crypt, baptistery, circular court, atrium, narthex, and basilica, the whole some 120 m in length, dating from the second half of the fifth to sixth century.²⁶ Brickwork with limestone facing was found, along with marble and mosaic floors. Peter Grossmann has compared this to churches in Carthage and Seleukeia for scale.²⁷ Also on Grossmann's agenda was the Late Roman military camp in this area, reported to be 190 × 380 m.²⁸ This quarter of Pelusium also produced evidence of industrial areas.

On the east side of Pelusium, a Swiss/SCA team excavated a Roman theater, said to have been formed out of an arena.²⁹ Baths and five cemeteries also were part of this sector. A French/Egyptian project studied another church on the east side, at Tell Makhzan, with a monumental staircase and portico. On the south of Pelusium, north of the al-Salaam canal, the Egypt Exploration Society studied a cemetery and irrigation system (brick cistern and channels, *saqqiya*) dated to the fourth through sixth centuries.

Because of the numerous sectors into which Pelusium was carved up in order to manage the time constraints of rescue excavation, it is more than usually difficult to form an overall picture of the results of this work. It is not yet apparent whether

there will be any attempt to synthesize this material into a readily usable treatment of Pelusium as a whole, but the volume of *Cahiers de la céramique égyptienne* (4, 1997) devoted entirely to the pottery from various excavations of the Pelusium to Qantara region is a promising sign. Even in its current fragmentary and disjointed state of preliminary publication, we probably have as coherent a sense of Pelusium as we do of any other Graeco-Roman city of Egypt—not much of an accolade, but considerably more than we had a decade ago.

A French-Egyptian joint expedition has been working for some time at Tell el-Herr, southwest of Pelusium (the Magdolos of Stephanus of Byzantium), a fortress settlement evidently first built by the Persians and succeeded by versions up to late Roman, with a lifespan from the fifth century B.C.E. to the fifth century C.E. Only some portions of this excavation are proper rescue work, with the main adversary being looting. Substantial parts of the habitation zones inside the fortress are preserved, and seven houses have been excavated so far; this is the only multi-period Persian fort in Egypt with such remains. The site also includes a Ptolemaic sanctuary and an extensive cemetery, in which largely Ptolemaic tombs have been excavated. Further southwest (nearer the modern Suez Canal), another fort at the ancient Sile (modern Qantara) has been excavated. It is Diocletianic in date, but outside it are the remains of a larger fortress, again going back to the Persian period.³⁰

At Tell al Luli in Sinai, the SCA has excavated a third-century C.E. bath with mosaics and inscriptions.³¹ The large cemetery at Kafr Hassan Dawood on the Wadi Tumilat, otherwise most notable for late Predynastic and Early Dynastic graves, has also yielded Late Period and Ptolemaic burials.³²

The rest of the Delta has not seen the same level of activity, at least for the Graeco-Roman period. But the Egypt Exploration Society has been sponsoring a multi-year survey of the known ancient sites of the Delta, seeking to determine how many of those indicated on the old Survey of Egypt maps still exist, and in what condition.³³ Some of these sites are still very impressive, particularly in areas

²⁵ Briefly, van Minnen 1991.

²⁶ Peter Grossmann tells me that there is a smaller and earlier basilica, perhaps Constantinian, some 30 m away on the same hill.

²⁷ See el-Taher and Grossmann 1997 and the dramatic reevaluation after further investigation in Grossmann and Hafiz 1998.

²⁸ Grossmann (pers. comm.) thinks a date under Heraclius

most likely for the visible remains.

²⁹ Grossmann tells me that this is a space meant for animal or gladiatorial shows; there is another structure meant for theatrical performances, studied by him but not yet published.

³⁰ Abd el-Maqsooud et al. 1997.

³¹ Leclant and Clerc 1997, 241.

³² Hassan 2000.

³³ Spencer and Spencer 2000.

on the fringes of modern settlement (a photograph of Tell Belim shows that Herakleopolis Parva was not “small”). Eventually we may have a clearer sense of the settlement patterns of the Delta, which during the Graeco-Roman period became increasingly the dominant part of Egypt, although this pattern is not evident in the papyrological literature.

For the Hellenistic and Roman periods, the most extensive and informative excavation in the Delta (other than at Pelusium) has been the well-established Polish mission (still called “rescue excavations,” however) at ancient Athribis (Tell Atrib). The area studied has yielded a section of the Ptolemaic city as well as Roman levels (the water table makes it impossible to excavate earlier levels). Noteworthy are baths of the second century B.C.E., a pottery furnace, and signs of faience production from third century levels. The discovery of terracottas depicting soldiers with characteristic Macedonian dress has led the excavators to hypothesize that this was an area in which the early Ptolemies settled Macedonian cavalry.³⁴ Many Egyptian artifacts have been found along with the preponderance of distinctly Greek material, and this combination has been emphasized by the excavators.

Excavations have been conducted in other major cities of the Delta, but these have been minimally concerned with Ptolemaic and Roman levels, and nowhere (as far as one can judge from preliminary notices) is the material as extensive and coherent as at Athribis and Pelusium. Still, their cumulative evidence may add up to the beginnings of a picture of the cities of this region. Among those where excavations (sometimes in passing, or only in a necropolis) pertain to this period are Boubastos, Bouto, Mendes, and Tanis. At Bouto, a bathing establishment with mosaic floor was found; the earliest level of the building in which it was found is dated by the excavator to ca. 400 B.C.E., with later layers including Ptolemaic remains.³⁵ A pre-Hellenistic date for the baths is noteworthy. An SCA excavation at Thmouis has uncovered evidence of a pottery and glass production zone.³⁶

The importance of the work cited above comes in large part from the fact that the Delta amounted to about two-thirds of the inhabited land and population of Egypt in the Roman period, perhaps somewhat less under the Ptolemies. Most of the papyri come from the valley above Cairo and the Fayyum (and now parts of the desert), while the Delta has always been undervalued in historical treatments of Egypt because of the lack of papyri. Until now, the archaeological poverty of the region for the Hellenistic and Roman periods has only reinforced the documentary bias. But this is no longer entirely true,³⁷ and as the full reports of excavations carried out in the 1990s are published, the Delta may no longer be considered unknowable.³⁸

FAYYUM TOWNS, AGAIN

The ancient Arsinoite nome, located to the west of the Nile valley and fed by a branch of the Nile, was always an anomaly. The lake into which its runoff drained gave it its Egyptian name (from which its modern one derives), and the control of the inflow of water and thus the level of the lake have been central preoccupations for those states that sought to maximize the cultivated area of the Fayyum. Because many of its villages were built around the perimeter of the cultivated area and became (or remained) dry, papyri were preserved at some of the sites in great abundance. This fact was discovered early, and even before the enormous papyrological discoveries at Oxyrhynchus came to public attention, the Fayyum was feeding European papyrus collections from clandestine digging. The result was a wave of early excavation in search of papyrus, followed by more systematic excavations (particularly those of the University of Michigan at Karanis and the Italian mission at Tebtunis). After the 1930s, however, the Fayyum was no longer the scene of archaeological investigation of the Hellenistic and Roman periods, except for a long-standing (and, originally, explicitly papyrus-hunting) excavation at Narmouthis (Medinet Madi).

³⁴ See Mysliwiec 1996; after the 1995 excavations there was a hiatus of three years. On the resumed excavations, see Szymanska 1999.

³⁵ A brief summary appears in Leclant and Clerc 1997, 231–2, based on *DAI Rundbrief* (Deutsches Archäologisches Institut, Abteilung Kairo) 1996, 2. In *DAI Rundschrift* 1999, 8, the fact that magnetometer sensing has disclosed mainly “late” remains is noted, leading to a conclusion that borings are “besser geeignet.”

³⁶ Leclant and Minault-Gout 1999, 327, no. 11 (b).

³⁷ A straw in the wind is the devotion of a full issue of *Dossiers d'archéologie* (213 [1996]) to the Delta. Only a fraction of the articles concern the Hellenistic and Roman period, but the overall impression is considerable.

³⁸ To some extent this is also true in papyrology, where the publication of the carbonized papyri from Boubastos and Thmouis inches along. The documentation of the Delta in papyri found elsewhere in Egypt is also by no means negligible. There too we are running out of excuses.

Since the late 1980s, there has been a renaissance of interest in the Fayyum. In part this has taken the form of increased excavation activity, with the reopening of Tebtunis by Claudio Gallazzi's team (Milan-IFAO) and the development of another Italian project at Bacchias (Bologna-Lecce joint effort), another site investigated by the British a century ago. Both new documents and a reappraisal of the archaeological evidence³⁹ suggest that Karanis had a longer existence than previously thought, although its limits still remain unclear. In addition, for the first time there have been attempts to gain more systematic knowledge of the Graeco-Roman sites of the region, particularly in the face of possible agricultural redevelopment of these ancient sites.

The most striking discovery at Narmouthis is a new temple (Temple C), dedicated to a crocodile pair (perhaps "The Two Brothers," Psosnaus), adjacent to which a crocodile nursery, including eggs, has been found.⁴⁰ This establishment was probably part of an integrated enterprise that hatched crocodiles, grew them to appropriate size, and then mummified them for sale to worshippers wishing to make a dedication. Although the process is not surprising, discovery of the actual nursery is a novelty. Christian Narmouthis (hardly known from the papyri) had at least a dozen churches.⁴¹

The mission at Bacchias, now directed by Paola Davoli, has devoted most of its time to two endeavors. The first is the mapping of the site and all visible building remains, taking stock of the Grenfell-Hunt-Hogarth excavations a century ago and various other depredations. The other is the excavation of the large temple and its immediate surroundings.⁴²

Tebtunis is the largest and most ambitious Fayyum excavation over the last dozen years. It was the product of Claudio Gallazzi's conviction that rising water levels in Egypt (the result of the Aswan High Dam) would within our lifetime destroy most of what papyri remained to be found in the valley and the Fayyum. According to his reports, this excavation has produced large numbers of papyri and ostraca. Of these virtually nothing has yet been published, although brief descriptions of the contents have appeared in the preliminary reports.⁴³ Noteworthy is a large cluster of oracle questions

and the large amount of Demotic text discovered. Although the coexistence of Greek and Egyptian as written languages at Tebtunis is well documented from past finds, it should now be possible to see how far they are discovered in the same areas, buildings, and rooms. Areas dug thus far include a building identified as the Hellenistic customs-house and gate, a granary complex, baths, houses, and a large peristyle building. A separate exploration of a Byzantine and Islamic sector has been a salutary reminder of the vigorous survival of Tebtunis in late antiquity and beyond, despite the pattern shown by the Greek papyri excavated at the turn of the century, which peter out in the third century C.E.

Tebtunis has also benefited from a fair amount of archival archaeology concerning the Italian excavations of 1929–1936, which were never published (although many of the rich papyrological finds have been edited). Some of this investigation was done by Gallazzi himself in the papers of Carlo Anti and Achille Vogliano, but a rich lode of material has also turned up in the papers of Gilbert Bagnani at Trent University (Peterborough, Ontario). Anti's goals were "to excavate the town methodically in order to reveal its urban planning," and the records from that excavation have been of material use to the current mission.⁴⁴

In addition to these excavations, the Fayyum has hosted survey and synthesis work. The survey was carried out by a British-Egyptian team directed by Dominic Rathbone in an area roughly corresponding to the ancient Polemon district in the southwest of the nome. It attempted to record those sites still remaining, some in more detail than others, by planning the visible remains and collecting pottery for analysis. One of its results was recognition that Talei was initially created with a grid plan and water channels cut in the rock. The expedition also found evidence for the ancient presence of a lake occupying much of the Gharaq basin (but of variable level), which was also suggested in papyri from the area. Evidence also indicates an expansion of vineyard cultivation further out into the desert in Roman times. In 1999, Dirk Obbink and Cornelia Römer extended the survey into the Themistos division, located to the north of the Polemon.

³⁹ Pollard 1998.

⁴⁰ See Bresciani and Pintaudi 1999 for the temple; Giddy 1991–, (16 [2000] 34) for the hatchery (Giddy 1991–, hereafter referred to as *EA-DD*.)

⁴¹ Grossmann, pers. comm.

⁴² Pernigotti and Capasso 1994, 1995, 1996, 1997, 1998;

Pernigotti et al. 1999.

⁴³ On the most recent seasons see Grimal 1998, 522–34; 1999, 491–7. A treatment of the pottery of the beginning of the Hellenistic era can be found in Marchand 1996.

⁴⁴ See Begg (1998a, 1998b) for the Bagnani archives; the quotation is from 1998a, 389.

A major step forward in our understanding of the archaeology of the Fayyum is Paola Davoli's 1998 book, a systematic survey of work on all Graeco-Roman sites in the area. Fourteen sites get chapters of their own, setting out a description of the site, history of excavations, information on cemeteries, and conclusions. Other sites are grouped in miscellaneous sections at the end of the three divisions of the book (corresponding to the three ancient divisions). The bibliography is very complete, with about 600 items, and there are numerous figures with plans, maps, and views. Three chapters set forth conclusions, which are extensive and in some respects highly original.

Davoli regards only Karanis as satisfactorily excavated so far, and she points out how poorly pre-Roman levels are known (because they are usually covered by Roman remains). She argues convincingly that the lake was roughly at today's level (about 45 m below sea level), smaller than previously thought, throughout almost all the Graeco-Roman period and that its reduction to that level probably goes back to Ptolemy II's work regulating the flow of water in the Bahr Youssef. Contrary to what is sometimes written, the Fayyum was not a land of pure irrigation, but was in large part affected by the Nile flood. The villages located on the edge of the desert in antiquity have deeper habitation deposits than those further from the edge simply because they got more windblown sand.

One cannot draw conclusions about length or importance of occupation from the depth. Villages inside the Fayyum were mostly built on high points not reached by flood or irrigation, as in the valley; many of them no doubt sit under later occupation.

This is the best synthesis we have of the archaeology of any part of Hellenistic and Roman Egypt. But Davoli insists that there is still an immense amount to be done, despite the damage done to the sites of the region during the last century by seabakhin, archaeologists, and farmers. From the results of the current excavations, one would have to agree. If these are pursued ambitiously enough, they may yet give us two things that are still lacking: a sense of how villages other than Karanis were spatially organized, and a clear idea of the diachronic development of village sites from pre-Hellenistic times to the end of antiquity.

⁴⁵ Some are discussed in Kaper's (1998) conference proceedings, which also contains many contributions on the western oases.

⁴⁶ Peacock and Maxfield 1997.

⁴⁷ Bingen et al. 1997.

THE EASTERN DESERT: QUARRYING, MINING, AND TRADE

The last 15 years have been a golden age for the exploration of the territory lying between the Nile valley and the Red Sea. It has become clear that this region was composed of two zones: a northern area in which quarrying was the dominant activity and a southern one in which the desert itself was relatively unimportant except as a group of corridors to the ports on the Red Sea coast from which Egypt's commerce with East Africa and India sailed. All aspects of this region have gained important new light in recent years.⁴⁵

The quarries at Mons Claudianus were excavated in the years just before our target period (1987–1993), and an active publication phase has developed over the last five years. A volume of excavation reports has appeared,⁴⁶ and the process of publishing the many thousands of ostraca discovered around the camp has continued with a second volume also appearing in 1997.⁴⁷ The texts published in this volume contribute to our knowledge of eastern desert society in the second century, when the imperial government organized large-scale quarrying works and the supply and communications support services necessary to make quarrying possible in a hostile environment.⁴⁸

An investigation of Mons Porphyrites was carried out during the years 1994–1998, with a detailed survey of the quarries and villages as well as sampling excavations.⁴⁹ Other natural resources of the desert have also been investigated. During several seasons at Bir Umm Fawakhir in the Wadi Hammamat, a Chicago team located a Byzantine gold-mining settlement of several hundred buildings, including mines, roads, quarries, cemeteries, and guardposts. Following four seasons of survey, excavations began in 1998–1999.⁵⁰ Another mining station, in the desert east of Qena, has been studied recently by a Hungarian team at Bir Minach.⁵¹ A team jointly sponsored by the University of Toledo and the Egyptian Geological Survey has investigated ancient petroleum wells at Gebel Zeit on the coast, which may have provided a natural source of bitumen from Egypt, which has been assumed to have had to import it from Palestine. The same group has studied a

⁴⁸ I provide a more detailed analysis of the volume in my review (Bagnall 2000).

⁴⁹ Maxfield and Peacock 1998.

⁵⁰ Meyer and Heidorn 1998; Meyer 1999.

⁵¹ *EA* 16 [2000] 34.

number of quarries and mines, identifying sources for several types of stone previously unassigned.

The ports have also received due attention. The port at Quseir al-Qadim, now generally thought to have been Myos Hormos (rather than Leukos Limen),⁵² has come in for renewed study by a team led by David Peacock, in the face of threats from expansion of roads and tourist facilities. At Berenike, the southernmost port, excavations from 1994 to the present (University of Delaware and University of Leiden) have made a substantial contribution to understanding Mediterranean trade with India. Trenches in the dump of the early Roman period yielded ostraca of the Julio-Claudian and Flavian periods, comprising mostly customs passes for wine and other goods. The wine is mainly Italian and Laodicean, confirming the testimony of the *Periplus Maris Erythraei* about the export of those goods to the Indian court at Barygaza.⁵³ A dolium full of pepper gives graphic confirmation of one prominent import. Other finds, epigraphic and other, have extended the discoveries into periods when the Berenike record was previously blank, including the late second–early third centuries as well as late antiquity.⁵⁴ One noteworthy (although perhaps not surprising) find is the presence of military and civilian Palmyrenes. The remarkable state of preservation of organic materials has contributed information particularly to paleobotany and to the study of the cordage involved in maritime trade.

The Berenike expedition has also studied sites in the area surrounding Berenike, including a fort at Kalalat not far from Berenike itself⁵⁵ and an enigmatic village site at Shenshef, where many small stone houses on two sides of a wadi, supplied by a natural water reservoir, served an unidentifiable purpose and population.

Finally, a large amount of work has gone into the further exploration of the network of roads, forts, wells, and other parts of the infrastructure that made possible both the exploitation of stone and mineral resources and the conduct of the Indian trade. A number of people have contributed to this effort in various quarters, including Sidebotham⁵⁶ and members of the Mons Claudianus team. Exca-

vations by Hélène Cuvigny and Adam Bülow-Jacobsen at two forts, Didymoi (Coptos-Berenike road) and Maximianon (Coptos-Myos Hormos road), have yielded (among other finds) hundreds of ostraca with connections both to the quarrying work and to the transportation network supporting the Red Sea trade.⁵⁷ These recent investigations complement work carried out earlier by others, including a University of Michigan survey in the area east of Coptos.⁵⁸ As in the case of the multiparty effort at Pelusium, the numerous hands involved in survey work in the desert make it difficult to get a coherent view until synthesis advances further. Coptos itself was the subject of an exhibit at Lyon, the catalogue of which contains several chapters relevant to the role of Coptos as hub of activity in the desert.⁵⁹

THE WESTERN OASES

The unquestioned publicity champion in the archaeology of Graeco-Roman Egypt has been the late Hellenistic and early Roman cemetery in the Bahariya Oasis, currently under excavation by the SCA under the direction of Zahi Hawass. Early reports⁶⁰ state that the cemetery, near Bawiti, occupies several square kilometers with multi-chambered underground tombs, each containing numerous burials. Although the potential total burials may not quite equal the 10,000 claimed, no doubt they amount to several thousand, only a small percentage of which has yet been unearthed. The finds include a variety of burial types, simple to elaborate gilded masks, and some clay sarcophagi. It appears that the bulk of the burials are from the first two centuries C.E., but extension of the excavation could change that balance.⁶¹ The inscriptions of the temple of Herakles and Ammon at Bawiti have been studied by F. Colin (IFAO), who has identified Herakles as being equated here to Khonsu.⁶² Also in Bahariya, IFAO conducted an initial survey at Qaret el-Tub, a small settlement in the north of the oasis, indicated by the pottery to be Roman and Byzantine in date. Peter Grossmann has argued that a building at Qusur Muharib on the north edge of this oasis is not a temple (as Ahmed Fakhry thought) but a church of the later seventh century or even later.⁶³

⁵² Now confirmed by a papyrus described by W. van Rengen in Peacock et al. 2000, 51–2.

⁵³ Bagnall et al. 2000.

⁵⁴ See Sidebotham and Wendrich 1995, 1996, 1998, 1999.

⁵⁵ Sidebotham and Wendrich 2001.

⁵⁶ Sidebotham and Zitterkopf 1998.

⁵⁷ See most recently Grimal 1998, 534–43; 1999, 498–506.

⁵⁸ Leclant and Clerc 1997, 97.

⁵⁹ Ballet et al. 2000; three chapters in the section on “la cité

économique” deal with the desert economy.

⁶⁰ See Hawass 1999.

⁶¹ Emphasis has been predictably on the more glamorous gilded mummies. For a picture of a broader range of oasis mummification practices, see the report on Kellis by Aufderheide et al. 1999; they mention “the production of composite mummies, prepared by using parts from multiple, different bodies.”

⁶² Leclant and Minault-Gout 1999, 405.

⁶³ Grossmann 1997.

The supposed discovery in the Siwa Oasis of the tomb of Alexander the Great, by a woman who claimed mystical guidance from snakes, garnered the second-most publicity in recent Egyptian archaeology. In reality, the building in question bore a dedicatory inscription from the reign of Trajan and had nothing to do with Alexander.⁶⁴ More soberly, the German Institute has continued its work in the area around the oracle of Ammon in Siwa. Much of the effort of the last six years has been restoration work to ensure the stability of the major structures. But some new excavation has also been carried out, particularly in structures along a supposed processional route between the oracle temple (at Aghurmi) and the Temple of Nektanebo II (Umm Ubayda). The excavators have noted the presence of Greek building methods.⁶⁵ In the Kharga oasis, a number of projects have been active during the later 1990s. The French excavations at Douch, sustained over many seasons, have mainly concentrated on study and publication. At the nearby site of Ayn Manawir (5 km away), a brick temple has been excavated. As part of the exploration of the site, M. Wuttmann and his team have studied the system of underground water channels (*qanawat*) introduced by the Persians and kept in use through Roman times.⁶⁶ This Persian technology made agriculture possible in some parts of the Kharga oasis where other water sources were insufficient.

The connection between Kharga and Dakhleh oases via the Darb Ayn Amour has been surveyed by a Cambridge team led by Corinna Rossi. As part of its work, the group surveyed the remains of the Roman fort at Umm el-Dabadib, and its main focus was on the link between Umm el-Dabadib and Ayn Lebekha, before the road actually leaves the Kharga oasis.⁶⁷ The forts of the Kharga oasis are the subject of a recent article by Michel Reddé, who takes a much more minimalist view than the late Guy Wagner did in his 1987 study of the oases and in earlier articles.⁶⁸

The Australian exploration of Ismant el-Kharab, ancient Kellis, continued to be the main Roman-period excavation in the Dakhleh oasis. In the last few years, a number of volumes of results from the finds of the late 1980s and early 1990s have appeared, including on the excavation itself⁶⁹ and parts of Kellis's abundant and distinctive yield of texts on papyrus and wood. These texts include a volume of Greek papyri, two wooden codices, one with agricultural accounts and the other with three Isocratean orations,⁷⁰ and two volumes of Coptic texts, one literary and one mainly letters.⁷¹ The most recent work has concentrated on the temple of Tutu, on a large building of unknown purpose with several stages of development, and on house and production areas. Pre-third century areas have been explored for the first time. Work has also continued on the east church complex, which is argued in Gillian Bowen's dissertation and site report to be of Constantinian date.⁷²

One particularly interesting study based on skeletal material from the cemetery of Kellis may also be noted, Tosha Dupras's discovery that part of the population's diet must have come from a carbohydrate source other than the familiar wheat and barley.⁷³ Based on the isotopic composition of the bones, she proposed millet, which is known to have been grown at times in the oases,⁷⁴ although none yet had been found in the excavations at Kellis or elsewhere in Dakhleh. In 1999, a sizable cache of millet was indeed unearthed at Kellis. Because the oases depended on perennial irrigation rather than on the Nile flood, a summer crop like millet could be grown in a second growing season that would be impossible in the valley. Double-cropping could be a significant factor in the wealth of Dakhleh (and perhaps other oases) in the Roman period.

THE DESERT A CITY: CHRISTIAN EGYPT

It would be too much to say that the last five years have brought great advances in the archaeology of the Christian, and particularly monastic, sides of late antique Egypt. For one thing, the security situ-

⁶⁴ Some bits of the contemporary press coverage may be found at <http://www.1stmuse.com/alex3/siwa.html>, and <http://www.archaeology.org/9701/newsbriefs/fieldnotes.html>; no scientific reports known to me have appeared.

⁶⁵ See *DAI Rundbrief* (Deutsches Archäologisches Institut, Abteilung Kairo) 1996, 16. For a broader survey, see Kuhlmann 1998.

⁶⁶ See most recently and fully Wuttmann et al. 1998, with further work in Grimal 1999, 484–98.

⁶⁷ See Jenkins et al. 1999 for a report on survey work at Umm el Dabadib, noting grave damage to a church by plunderers.

⁶⁸ Reddé 1999; Wagner 1987 with bibliography.

⁶⁹ See Hope and Mills 1999; Hope 1999; Bowen 1999a. Summaries of the 1998–1999 and 2000 excavations can also be found in Hope et al. (2000a–b, 10 November) <http://www.arts.monash.edu.au/archaeology/Report98-99.htm>, and <http://www.arts.monash.edu.au/archaeology/Report2000.htm>.

⁷⁰ Worp 1995; Bagnall 1997; Worp and Rijksbaron 1997.

⁷¹ Gardner et al. 1999.

⁷² Bowen 1999b, forthcoming.

⁷³ Dupras 1999; Schwarcz et al. 1999.

⁷⁴ Wagner 1987, 288.

ation in Middle Egypt has made it difficult to pursue some of the interesting sites there, although publications of work done in earlier years have continued to appear. These include excavations by the SCA at the monastery of Shenoute⁷⁵ (near Sohag), a British investigation of monastic remains at Gebel el Haridi (east bank, between Antaiopolis and Panopolis), and excavations at Deir Abu Fano (north of Hermopolis).⁷⁶ Furthermore, the retirement of Peter Grossmann from the DAI appears to indicate, at least for the present, a diminution of that institute's activity in this area, most notably a drastic reduction in the scale of the excavations at Abu Mina (see below).⁷⁷ Fortunately, Grossmann is continuing (with the support of the Monastery of St. Catherine) the excavations of the extremely rich site of Wadi Firan (ancient Pharan) in Sinai, where a number of churches as well as residential areas have been studied so far. Pharan was the seat of a bishop; several other churches stood at no great distance from the episcopal church. Despite all difficulties a considerable amount of progress has been made, including a number of interesting churches mentioned in the appropriate geographical section earlier in this report.⁷⁸

The most prestigious monastic site was certainly Sketis, the spiritual home of the sayings of the desert fathers, today's Wadi Natrun. At the site now called the monastery of Moses the Black, a Dutch team led by Karel Innemée has excavated parts of a complex dating back to the fifth century C.E. and including a square building of at least three stories that has been interpreted as a defensive tower.⁷⁹ The excavators believe that this complex was originally called Deir el-Baramus, a name that subsequently migrated to another nearby monastery. It is perhaps the oldest monastic building present; so far nothing is visible of the hermitages and churches that must have served the more dispersed community in the

fourth and early fifth century, before the first great wave of nomadic raids that devastated Sketis and that perhaps were the inspiration for the defensive tower now being excavated. A church stood to the north of the tower.

There has also been excavation work at the monastery of St. John the Little under the auspices of the Scriptorium (Grand Haven, Mich.), directed by Bastiaan van Elderen. No scientific publication or notice of this excavation has come to my attention.⁸⁰ By way of balance, excavations of long ago at the great monastic site of Bawit that never received proper publication have started to be reconstructed, mainly through museum archaeology.⁸¹

The most famous ascetic of all, of course, was Antony. The monastery near the Red Sea that bears his name has always been claimed to stand below the location of his mountain hermitage, but its visible remains are all from considerably later periods. A restoration campaign under the Antiquities Development Project (U.S. government funding through ARCE), directed by Michael Jones, has transformed the church interior and revealed much that was obscured by the grime of centuries. Work in the side chapel, which is cut into the rock, showed that there was a late antique plaster level under the later paintings; the history of the complex is thus taken back roughly to the sixth or seventh century, and traditional monastic claims for the antiquity of the monastery look more plausible.

The leading pilgrimage site of late antique Egypt was Abu Mina, west of Alexandria, where a whole town grew up around the ecclesiastical complex focused on the grave of St. Menas. This long-standing DAI excavation continued on a substantial scale through 1998. The rise of groundwater levels because of encroaching agriculture poses a serious threat to the complex, particularly the lower levels. Excavations during recent years included a large

⁷⁵ Grossmann (1999, 39–40) remarks with exasperation that the visible buildings are only the churches of the monasteries and should not correctly be referred to as the White and Red Monasteries.

⁷⁶ A summary description of the monastery of Apa Bane by H. Buschhausen appears in von Falck et al. 1996, 59–69, although with some misleading statements about the textual tradition for Apa Bane (who does not appear in *Historia Monachorum* 4, which concerns Apa Bes).

⁷⁷ *DAIRundbrief* (Deutsches Archäologisches Institut, Abteilung Kairo) 1998, 16: "Die Stelle konnte aus Einsparungsgründen leider nicht wieder besetzt werden." Work by Grossmann continues on a small scale. In the 1999 issue there is no section on Abu Mina. A bibliography of Grossmann's publications is given in *BSAC* 37 (1998) 1–14, a volume dedicated to

him on his 65th birthday. In the same year appeared a *Festschrift* (Krause and Schaten 1998).

⁷⁸ See Grossmann 1999 for a well-documented general report on developments up to 1996, dealing mainly with already-published material. The period 1996–2000 was treated in a similar report delivered to the Seventh International Congress of Coptic Studies (Leiden, August 2000). The eight articles in Valbelle and Bonnet (1998, 115–70), dealing with the Christian remains of Sinai are also of interest.

⁷⁹ See Innemée 1999 with further information in *EA-DD* 16 (2000) 8, 33.

⁸⁰ See the brief abstract in *St. Shenouda Coptic Newsletter* 6 (n.s. 3).1 (Oct. 1999):8–9.

⁸¹ See Benazeth 1997, on gathering up those antiquities scattered through Egyptian museums, and Clédât et al. 1999.

peristyle building, which is interpreted as a guest house for poorer pilgrims, who could sleep under porticos and use the adjacent large latrines. Separate wings have been interpreted as men's and women's (with children) quarters. The complex south of the great basilica is now interpreted as the palace of the hegoumenos of the center, with an atrium and triclinium. Three phases in the development of the baptistery have been identified. A whole complex of wine presses, with underground vaulted storage rooms, was also excavated, dating to the sixth to seventh century C.E. Investigations under the Great Xenodocheion found further underground chambers that supported the view of the area as having been originally a cemetery.⁸²

Finally, one of the most rewarding excavations of the last decade has been the exploration of a less famous monastery, Naqlun (Neklone in Coptic) near the entrance to the Fayyum, by a Polish mission directed by Włodzimierz Godlewski. A cenobitic monastery in Medieval and modern times, Naqlun was originally of the *laura* type of establishment, with hermitages spread through the wadis behind a central church building. During 1995–1997, a large hermitage complex probably dating to the earliest days of monastic settlement at Naqlun was explored; the excavators date it to the second half of the fifth century. The complex comprises two courtyards and three groups of rooms, not all of which were in use simultaneously (the rock-cut rooms collapsed easily). The complex is perhaps to be explained as the hermitage of the first ascetic on the site, with adjoining space for one or more disciples. There are many signs of wealth, including glass and expensive imported pottery; these indications fit with the general sense that anchorites and residents of *lauras* tended to be wealthier than cenobitic monks. The excavations also (and in 1998 exclusively) were concerned with the central mound near the modern church, where buildings from a wide span of time were investigated. Although these largely fall outside this article's time frame, it is worth mentioning the discovery of a sizable archive of family business papers in Arabic from the 10th to 11th centuries, which will make an important contribution to the social history of the Medieval Fayyum.

All of these sites have a contribution to make to general questions of the nature of monastic space—the location and organization of monks' cells and

monasteries. Darlene Hedstrom has undertaken a general study of the spatial dimensions of ascetic practice in late antique and early Medieval Egypt.⁸³

Clearly the 1990s have been an extremely productive decade for the study of the physical remains of Hellenistic and Roman Egypt, and the second half of the decade has been particularly striking for the number of finds that attracted significant press attention. One important aspect of all this work that is noticeable in many of the more sustained efforts is the integration of research in the natural sciences. We are, for example, in the midst of a dramatic growth in our knowledge of the diet of Graeco-Roman Egypt, thanks to the paleobotanical studies carried out at a number of sites, including Mons Claudianus, Berenike, Kellis, and Amarna, and to investigation of the human remains for what they tell us about the diet of the deceased. Generally speaking, most expeditions seem to be making a real effort at interdisciplinary collaboration to provide a richer description of their sites. It is also very heartening to see the growth of regional survey work, which can give us a much better sense of settlement patterns than excavation, given the limits of the resources available for excavation.

There remain worrisome aspects about the state of research in Egypt. One of these is that the reactive and emergency nature of many excavations gives them too short a time and too small a space to generate anything except small tesserae of the larger mosaic. These excavations cannot usually be sustained over many years, and (particularly in Alexandria) they are often spatially constrained. Aside from these factors, human and financial factors sometimes lead to the termination of projects long before they yield the kind of overall understanding of sites that would be possible with a greater investment of time. Only rarely is it possible to have any sense of the development of a settlement over a long period. How many of the sites mentioned in this report will be looked back upon in 40 years as having the impact of a site such as Karanis? To be sure, excavators bring diverse sets of questions to their sites, and more limited forays are often desirable; but over-excavation is not a threat. Equally, regional contextualization of specific excavated sites is still the exception rather than the rule. And such contextualization is made much more difficult in the Nile valley (including the Delta) and the Fayyum by the sherd scatter produced by use of

⁸² See Grossmann 1998a, 1998b for up-to-date general descriptions of the site.

⁸³ Hedstrom 1999. In a more limited vein, architectural organization of monastic space is also studied by Thirard 1999.

sebakh as fertilizer on fields; Donald Bailey has recently argued that "large-scale field surveys are in all probability not worthwhile in the cultivated areas of Egypt."⁸⁴

Even when effort is sustained and sites are studied in context, however, the finds are not always published, or they are not published in a timely fashion. This is not a new problem, but it seems that the generation of data has accelerated while the pace of publication has changed little. Annual volumes of the sort published for Berenike and Bacchias are one possible answer, provided that two dozen contributors can finish their work punctually. These volumes have their drawbacks, including a risk of rushing to conclusions, but these seem relatively small compared to the advantages. Another possibility, which seems still more attractive, is the rapid publication of preliminary reports on the Internet, where extensive illustration is easy and inexpensive. Electronic publication lacks the stability of the printed book, no trivial matter either for substance or for citation, but this instability can also allow for ongoing correction and augmentation of reports, alleviating the concerns that rapid preliminary publication may elicit.

If the publications of archaeologists who have all the advantages of European and American-style institutional support suffer from such problems, matters are on a different plane altogether for excavations carried out by SCA staff, sometimes under emergency conditions. Very few of these are fully published, and most do not even get reported in brief to the annual surveys of archaeological work. Many factors are involved, but anyone who has worked in Egypt is familiar with the lack of material and financial resources with which the SCA staff must cope except in the rarest of instances. Where expeditions are conducted jointly by a foreign mission and the SCA, the foreign mission can at least take responsibility for making sure that the finds are published, using their libraries, technology, staff, and time. IFAO and the DAI have enviable records in this regard. But the complete loss to science of almost everything done by the SCA on its own is a chronic illness for the archaeology of Egypt, and perhaps of Graeco-Roman Egypt more than earlier periods. The president of the SCA, G.A. Gaballa, for whom this problem is a significant priority, has proposed addressing it

by publishing their reports in Arabic in the revived *Annales du Service des Antiquités de l'Égypte*, but he notes ruefully that the rebirth of ASAE has so far not produced that result.⁸⁵ Although the obstacles are substantial, we need to think seriously about how to provide our Egyptian colleagues with the support and assistance necessary to rescue their data from oblivion.

This conundrum is only one part of a larger problem of the relationship of the Western archaeologist to modern Egypt. True collaboration is less common than it ought to be, in part because it would require a much larger investment of outside resources into the training of Egyptian archaeologists and into making it possible for them to spend periods of time with good libraries and leisure to use them effectively. It would also require a much greater engagement of foreign archaeologists with the task of communicating their discoveries to the people of Egypt, building in this way the base of support in public opinion for a greater local investment in the work of studying the remains of the Hellenistic and Roman periods. But those investments will be necessary for the future health of the field, and deferring them will not make them less difficult or costly.

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⁸⁴ Bailey 1999, 218.

⁸⁵ See the prefaces to ASAE 73 (1998) and 74 (1999). In the latter volume for the first time in many years we find re-

ports on work of the last few years, but so far mainly by foreign archaeologists.

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