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Examples of Town Planning in the Fayyum[1]

(Plates 8-18)

ABSTRACT

The Joint Archaeological Mission of Bologna and Lecce Universities has been working at the sites of Bacchias and Soknopaiou Nesos in the Fayyum since 1993. It is now possible to analyze and compare the plans and the stratigraphy of two of the best preserved town sites of the Fayyum: Soknopaiou Nesos and Bacchias. The survey allowed us to recognize new temples, public baths and granaries. Aerial photographs and satellite imagery also allowed us to examine the area in which these settlements were established. By comparing the new data collected through archaeological and topographical investigation with the record derived from hundreds of Greek and Demotic papyri, we are able to further our understanding and knowledge of these two important settlements and their role within the landscape of the North-Eastern Fayyum.

The Joint Archaeological Mission of Bologna and Lecce Universities, directed by S. Pernigotti and M. Capasso, has been working in Bacchias (Kom Umm el-Atl) since 1993, with P. Davoli as field director since 1995. The same Mission started working in Dime (Soknopaiou Nesos) in 2001.[2] By 2004, the topographical surface surveys of Bacchias and Soknopaiou Nesos were nearly complete and the two georeferenced plans with contour lines and all visible buildings had been drawn.[3] The Soknopaiou Nesos plan was completed during the 2005 season.[4]

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[1] paola.davoli@unile.it. I would like to thank Timothy Renner for his comments on a version of this paper and for correcting my English.

[2] The Joint Archaeological Mission completed its work in May 2004. At present, the Soknoapiou Nesos Project is directed by M. Capasso and P. Davoli of Lecce University. An expedition directed by S. Pernigotti of Bologna University continues to work at Bacchias.

[3] E. Giorgi, "Il rilievo per la documentazione dei siti archeologici," (paper presented at the VI Conferenza nazionale ASITA, Varese, 2002: http://www.asita.it/

The method used in the survey has been the same in both sites. The project involved four teams: the first team was composed of surveying researchers from the Dipartimento di Ingegneria delle Strutture, dei Trasporti, delle Acque, del Rilevamento del Territorio (DISTART) of Bologna University Engineering Faculty; the second, of archaeologists from the Department of Archaeology of Bologna University; the third, of archaeologists from Lecce University and from AR/S Archeosistemi; the fourth team consisted of Papyrologists of the Centro di Studi Papirologici of Lecce University.[5]

The first task of the field project was to collect geographic and spatial information for both sites. The sites were georeferenced with GPS (Global Positioning System), using absolute and relative high precision geodetic positioning techniques, thereby establishing a common reference frame and a local network connected to the national cartographic system. This approach permitted the team to frame the measurements derived from the topographical surveys carried out with the total station. A series of metric images, taken at low altitudes using a specially equipped aerostatic balloon and a specially developed kite system with an electronic remote control, permitted the creation of a digital elevation model (DEM) and digital photogrammetric products, such orthophotos, high resolution contour maps and 3D plotting.[6]

SITO_ASITA_2002/ASITA2002.htm); *id*., "Il rilievo planimetrico di Bakchias," in *Fayyum Studies* 1 (2004) 49-55.

[4] The contour lines of the kom will be surveyed in the season 2006. The Soknopaiou Nesos plan has been completed by Lecce University in collaboration with I. Chiesi and S. Occhi of the AR/S Archeosistemi (Reggio Emilia).

[5] G. Bitelli and L. Vittuari of DISTART, Bologna University carried out the GPS surveys and aerial and terrestrial photogrammetry. S. De Maria and his staff from Bologna University undertook the ground survey using a total station during the 2001 and 2002 seasons.

[6] G. Bitelli, P. Davoli, L. Vittuari, "Geomatics, Information Technologies and Archaeological Work: the Bakchias Experience," in *Proceedings of the 14th Table ronde Informatique et Egyptologie, Pisa 8-10 July 2002* (Pisa 2003 on CD-ROM); G. Bitelli, V.A. Girelli, M.A. Tini, and L. Vittuari, "Utilizzo di un sistema non convenzionale di fotogrammetria aerea per la produzione di ortofoto a grande scala in ambito archeologico," (paper presented at the VI Conferenza nazionale ASITA, Varese, 2002: http://www.asita.it/Sito_ASITA_2002.htm); G. Bitelli, M.A. Tini, L. Vittuari, "Low-Height Aerial Photogrammetry for Archaeological Orthoimaging Production," in *The International Archives of the Photogrammetry,*

As of 2004, the topographic survey was nearly complete, and the first scientific, topographic plans of Bacchias and Soknopaiou Nesos[7] are under development. These plans show contour lines and plans of all the buildings that are visible on the surface (Plates 8 and 13 show the portions of the sites that have been surveyed up to the present). The cartographic base for the plans derives from the total station and GPS survey of the site.

The second stage of the project, which is still in progress under the responsibility of DISTART, is to analyze the archaeological site and its surrounding area through satellite imaging at different geometric resolutions studied in tandem with low altitude photographs and the survey plan. Moreover, the office of SIBA (Servizi Informatici Bibliotecari di Ateneo) at Lecce University, a department that coordinates the computer services of the University,[8] collaborates with the mission in elaborating the survey and excavation data from Dime.

The topographic survey has enabled us to learn a great deal about the two archaeological areas. For example, we have been able to compare contemporary levels of preservation for single buildings and the archaeological area as a whole with archival photographs, drawings and plans. This allows us to better understand earlier descriptions of ancient sites and to formulate hypotheses about the causes of site decay. Moreover, this scientific documentation is particularly important for the future, as it attests the present state of preservation of areas that continue to be eroded by the weather and plundered by local inhabitants and tourists.

Remote Sensing and Spatial Information Sciences, XXXIV, Part 5/W12 (2003) 55-59; G. Bitelli, V.A. Girelli, M.A. Tini, L. Vittuari, "Low-Height Aerial Imagery and Digital Photogrammetrical Processing for Archaeological Mapping." (paper presented at the XXth International Society for Photogrammetry and Remote Sensing Congress, Istanbul 2004: http://www.isprs.org/istanbul2004/comm5/papers/605.pdf).

[7] The only complete plan of Dime was created by Lepsius in 1843: K.R. Lepsius, *Denkmäler aus Aegypten und Aethiopien I* (Berlin 1849) B1. 52.

[8] V. Valzano and her staff are working on this project in tandem with the Centro di Studi Papirologici.

Bacchias and Soknopaiou Nesos were similar settlements of the Graeco-Roman period.[9] Until now, we have not had a clear and thorough archaeological understanding of both sites, although we know much about their economic life, society and religion thanks to a great number of papyri found between the last decades of the 19th century and the first half of the 20th century. Many Demotic papyri from Dime are still unpublished, but recently, they have attracted the attention of scholars.[10]

Contemporary archaeological methods and aims are completely different from those of the past, and field research is significantly slower and more meticulous for numerous reasons. It is not possible to obtain a great amount of data from an extensive excavation that is only undertaken for a few years. For this reason the analysis of archaeological plans together with the available data from excavated sectors of the site is of great importance for understanding the urban development of the settlements. Such an analysis, integrated with data from written sources, is essential for a wide assessment of the individuals living in these settlements during the various periods and for understanding the causes of changes in settlement patterns and behavior.[11] The analysis of Bacchias and

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[9] Cf. P. Davoli, *L'archeologia urbana nel Fayyum di età ellenistica e romana* (Naples 1998) 39-71 and 117-37.

[10] Among the most recent publications: G. Vittmann, "Ein Entwurf zur Dekoration eines Heiligtums in Soknopaiou Nesos (pWien D 10100)," *Enchoria* 28 (2002/2003) 106-36; Abd-el-Gawad Migahid, "Zwei spätdemotische Zahlungsquittungen aus der Zeit des Domitian," *BIFAO* 104/2 (2004) 477-90; S.L. Lippert and M. Schentuleit, "Die Tempelökonomie nach den demotischen Texten aus Soknopaiu Nesos," in S.L. Lippert and M. Schentuleit (eds.), *Tebtynis und Soknopaiu Nesos. Leben im römerzeitlichen Fajum* (Wiesbaden 2005) 71-78; B. Muhs, "The Grapheion and the Disappearance of Demotic Contracts in Early Roman Tebtynis and Soknopaiou Nesos," in Lippert and Schentuleit, *op.cit*. 93-104; G. Widmer, "On Egyptian Religion at Soknopaiu Nesos in the Roman period (P.Berlin P 6750)," in Lippert and Schentuleit, *op.cit*., 171-84; *ead*., "Sobek, who Arises in the Primaeval Ocean," in M. Capasso and P. Davoli (eds.), *Proceedings of the International Meeting of Egyptology and Papyrology: New Archaeological and Papyrological Researches on the Fayyum, Lecce 8th-10th June 2005* (forthcoming); M. Stadler, "Between Philology and Archaeology: the Daily Ritual of the Temple in Soknopaiou Nesos," in Capasso and Davoli, *op.cit.*

[11] Numerous articles and studies have been published on the papyri and it is not possible to list them all here. On urbanism cf. S. Daris, "Urbanistica pubblica

Soknopaiou Nesos proposed in this article is based on my personal knowledge of the sites and on the data collected by the end of 2004 excavation season.[12]

Bacchias

Bacchias measures ca. 500 x 600 m and is divided into two *kiman*, of which the largest is Kom North, where the main settlement of the Hellenistic and Roman periods stood. The second, Kom South, a small area situated near the modern village of Gorein where Late Roman and Medieval period settlement was centered, has been almost completely destroyed by the *sebbakhin*.[13] A surface study of the Kom North together with the stratigraphic data collected during 12 seasons enabled me to understand the real situation of the area from the point of view of conservation. Kom North is characterized by the presence of long and high dunes of sand along the north-west, north and north-east edges, on which very few remains of buildings are visible.

In contrast, the central and south area of Kom North is almost flat, and preserves many standing buildings as well as a number of deep trenches. Stratigraphic analysis of the excavated sectors suggests that a massive destruction of a great part of the *kom* was carried out according to the *sebbakhin* method of dismantling, probably in the first half of the 20th century. During this activity, the central and southern parts of the stratified settlement were destroyed, but some of the buildings of the Hellenistic period were left behind

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dei villaggi dell'Arsinoite," in *Atti del Convegno Internazionale 'Archeologia e papiri nel Fayyum.' Siracusa, 24-25 maggio 1996* (Syracuse 1997) 173-96; *eund.*, "Strutture urbanistiche di Soknopaiou Nesos nei papiri," in Capasso and Davoli, *op.cit.* (above, n. 10).

[12] The discovery during the 2005 season at Bacchias of other two temples has been announced: S. Pernigotti, "La cronologia di Bakchias," *REAC* 7 (2005) 44-45. These temples will be evaluated and assessed after the publication of a scientific report by the excavator. In fact, we are still waiting for the publication of one building found in 1993 season, which has been questionably identified as an Iseion.

[13] According to Pernigotti, Kom South should be identified as ancient Hephaistias, but there is as yet no evidence that can support this hypothesis: S. Pernigotti, *Gli dèi di Bakchias e altri studi sul Fayyum di età tolemaica e romana* (Bologna 2000) 34.

for unknown reasons. Among these preserved structures are the temples and auxiliary buildings of the sacred area.

The excavations of the Italian Mission were carried out in two sectors: the first was located on the north edge of Kom North and the second in its centre, focused around the main temple of Soknobkonneus found by B.P. Grenfell, A.S. Hunt and D.G. Hogarth in 1896.[14] I will concentrate my attention on this latter sector, which provided significant stratigraphic and religious information that can be compared with evidence from the Greek papyri and with the archaeological remains of other sites.

As is well known, Bacchias differs from many of the other Graeco-Roman settlements of the Fayyum because the *dromos* and the *temenos* are missing. Many articles have been written about the existence of one or more temples in Bacchias, following the discovery of the temple of Soknobkonneus by the British Mission and that of the archives of Soknobraisis' temple by *sebbakhin* during the 1930s.[15]

After eight excavation seasons in the temple area, I am able to propose a partial reconstruction of the principal building phases that occurred here.[16] We can recognize seven building phases in five levels from the Late period to the Late Roman period. From the surface to the bottom they are:

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[14] B.P. Grenfell, A.S. Hunt and D.G. Hogarth, *Fayûm Towns and Their Papyri* (London 1900) 36-38.

[15] For a re-examination of the sources, see M. Capasso, "I templi di Bakchias nei papiri," in *Proceedings of the XXIII International Congress of Papyrology, Wien 22-28 July 2001* (forthcoming).

[16] Unfortunately, the excavation of the temple area is not finished and many questions are still unanswered. For a survey of the finds, see G. Bitelli, M. Capasso, P. Davoli, S. Pernigotti and L. Vittuari, *The Bologna and Lecce Universities Joint Archaeological Mission in Egypt: Ten Years of Excavations at Bakchias (1993-2002*) (Naples 2003); P. Davoli, *Oggetti in argilla dall'area templare di Bakchias (El-Fayyum, Egitto). Catalogo dei rinvenimenti delle Campagne di Scavo 1996-2002* (Pisa/Rome 2005) 27-55. The preliminary reports were published after every season from 1993 to 2001: S. Pernigotti, M. Capasso, and P. Davoli (eds.), *Bakchias*, vol. I-IX (Pisa/Rome and Bologna 1994-2002).

Phase	Date (centuries)	Stratigraphic Level	Description
Phase I	ca. 4th-6th AD	Surface	Occupation following the abandonment of the temple
Phase II *Roman period (III)*	2nd-3rd AD	Level I (30.50 m a.s.l.)	House construction in area
Phase III *Roman period (II)*	second half 1st – first half 2nd AD	Level II (29.00 m a.s.l)	Construction of temple of Soknobraisis
Phase IV *Roman period (I)*	end 1st BC – beginning 1st AD	Level II	Temple of Soknobkonneus raised and propylon constructed in front of it
Phase V *Hellenistic period (II)*	2nd BC	Level III (25.80 m a.s.l)	Construction of temple of Soknobkonneus and minor temple XL
Phase VI *Hellenistic period (I)*	3rd BC	Level IV (25.20 m a.s.l)	Construction of houses in front of temple at different orientation
Phase VII *Late period*	pre-3rd BC	(23.00 m a.s.l)	Pottery kiln near the north corner of temple of Soknobkonneus[17]

To summarize the finds from the temple area (Plates 9 and 10): three temples were brought to light, two in mud-brick and one in sandstone blocks.[18] The largest is the temple of Soknobkonneus (41

[17] C. Tassinari, "Attestazioni di attività artigianali in età pretolemaica a Bakchias," *Fayyum Studies* 1 (2004) 57-68. The chronology proposed for the pre-Ptolemaic level (7th cent. BC) is based on the presence of one Canaanite amphora. Sherds from several unfired vessels were found near the kiln but were not examined or published.

[18] This reconstruction of the building phases is based on the interpretation of the complex stratigraphy found in front of the temple. For a different interpretation see Pernigotti, *op.cit.* (above, n. 12) 41-44, and figs. 2-3. In this article, how-

x 26, h 10 m, Plate 11.2), probably built in the 2nd century BC (Phase V) together with the smaller temple XL, dedicated to an unknown crocodile god (16.20 x 12.70, h ca. 3 m, Plate 12.2). After a period of decay during which the settlement was covered with sand from the nearby desert (probably at the end of the Hellenistic period), the floor of the temple of Soknobkonneus was raised three meters (Phase IV): the original rooms were filled with sand and new floors were set. A *propylon* in sandstone blocks was built in front of the renovated temple. The minor temple (XL) was completely covered by sand and was abandoned.

In the second building phase of the Roman period (Phase III), probably during the reign of Nero or shortly after, a new large temple (57.70 x 16.60 m) in sandstone blocks was built in front of the older one (Plate 12.1). Its position is quite unusual, but it seems evident that it was deliberately built in this way in order that the two gateways could be very close to each other. This latter temple has been dismantled considerably, as its superstructure was used as a stone quarry until very recently; only parts of the foundation walls survive. Elements of the decoration of the temple were found scattered throughout the destructions levels in the surrounding area: a lintel with an unfinished solar disc, several pieces of torus cornices,[19] a capital of a small column,[20] blocks decorated in rustica style[21] and one block decorated in Egyptian style and bearing a hi-

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ever, the description of the phases does not correspond, and is in contrast, with their graphic reconstruction made by C. Tassinari in figs. 2 and 3. In both the interpretations the stratigraphy and the elevations of the buildings are not always taken into account properly.

[19] P. Davoli, "Lo scavo 2000. Relazione preliminare," in S. Pernigotti, M. Capasso, and P. Davoli (eds.), *Bakchias VIII. Rapporto Preliminare della Campagna di Scavo del 2000* (Bologna 2001) figs. 52-53.

[20] P. Davoli, "Lo scavo 2001. Relazione preliminare," in S. Pernigotti, M. Capasso, and P. Davoli (eds.), *Bakchias IX. Rapporto Preliminare della Campagna di Scavo del 2001* (Bologna 2002) fig. 68.

[21] These blocks were initially associated with the temple of Soknobkonneus because they were found before the discovery of the Roman temple: E. Giorgi, "I materiali da costruzione e le tecniche edilizie del tempio di Soknobkonneus," in S. Pernigotti and M. Capasso (eds.), *Bakchias V. Rapporto Preliminare della Campagna di Scavo del 1997* (Pisa/Rome 1998) figs. 11-12.

eroglyphic inscription.[22] The plan and the architectural style of the sanctuary are Egyptian, datable to the Roman period; a pylon of an estimated height of 10 meters preceded the temple. Although there is no conclusive evidence concerning the god to whom the temple was dedicated, present archaeological and papyrological evidence allows us to state with high probability that he was Soknobraisis.[23]

A new *temenos* was probably also constructed during this last building phase (Phase III).[24] We do not know anything about the Hellenistic *temenos*, and only a few pieces of the Roman *temenos* remain due to the destruction caused by *sebbakhin* in this area; these survive in the area located in front of the Soknobkonneus' temple. Preservation of the east and south corners allows us to state that the *temenos* was about 96 m wide. In this Roman *temenos*, there were at least two gates, one placed in front of the entrance of Soknobkonneus' temple and the second one in front of the pylon of the Soknobraisis' temple.

The *dromos* has disappeared completely, but I think there must have been one or perhaps two *dromoi* in the Roman period, placed at right angles, one for each temple (Plate 11.1). If we examine the plan, we will realize that in both directions where the *dromoi* might have stood there are vast plundered areas with no buildings. It is

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[22] The inscription has been dated to the beginning of the Ptolemaic period according to palaeography: S. Pernigotti, "Bakchias IV: le iscrizioni geroglifiche," in S. Pernigotti and M. Capasso (eds.), *Bakchias IV. Rapporto Preliminare della Campagna di Scavo del 1996* (Pisa/Rome 1997) 53-54 and fig. 1. In my opinion, there is no real evidence to support this date. Instead, the block might have been part of the decoration of the Roman temple, as suggested by both the place where it was found (area AD) and its material (the same kind of sandstone used in the masonry of the Roman temple).

[23] For a discussion of the archaeological and papyrological evidence cf. Capasso, *op.cit*. (above, n. 15).

[24] According to Pernigotti, there are no traces of a *temenos* in satellite images of Bacchias: Pernigotti, *op.cit* (above, n. 12) 43 n. 27. However, sections of its east wall and two corners were found during the seasons 2002 and 2003: P. Davoli, "Dieci anni di lavoro a Bakchias, El-Fayyum: bilancio archeologico (1993-2002)," *RISE* 1 (2004) 53. The *temenos* seems to have had the same characteristics of that of the Karanis south temple, with sectors of different thickness and with outer walls of some houses served as *temenos* walls: A.E.R. Boak, *Karanis. The Temples, Coin Hoards, Botanical and Zoölogical Reports. Seasons 1924-31* (Ann Arbor 1933) 30-35.

evident that *sebbakhin* worked extensively in these zones. The presence of the Soknobkonneus *dromos* is, in my opinion, quite certain. A hypothetical line, traced from this point, would pass through a square building that is similar in construction to the foundation retaining walls of a similar gateway. It seems to me that this small building served as the foundation retaining walls of a similar gateway, probably placed at the beginning of the street. The building has not been excavated yet, but the visible remains and their elevation suggest a building phase datable to the Roman period. To the south along the *dromos* line lies a building facing north that, to judge from its plan, may have been a temple. Perhaps, here, a kiosk in sandstone blocks was placed on the *dromos*. The remains of a building in sandstone blocks are visible on the surface on top of a small hill along the line of the *dromos*.

The second *dromos*, south of the pylon of the Soknobraisis temple, is only hypothetical because the area was heavily exploited by the *sebbakhin*. Nevertheless, its presence in front of a monumental pylon is highly probable.

Of the numerous buildings spread over the area, we may notice that they follow a fairly regular orientation, the same of that of the three temples and of the two proposed *dromoi*. The elevation of these buildings suggests that they belong to different periods, ranging from Phase V (Hellenistic period II, 2nd century BC) to Phase II (Roman period III, 3rd/4th century AD). The earliest buildings (Phase VI, Hellenistic period I, probably 3rd century BC) had a different orientation. Some of these structures are apparent in the south corner of Soknobkonneus' temple (and in the deepest layer in the north sector that was excavated in 1995).[25]

In conclusion we may say that Bacchias was a pre-Hellenistic settlement. It was enlarged or refounded in the 3rd century BC during the project of land reclamation[26] under Ptolemy II. After a period of time, probably during the 2nd century BC, the general ori-

[25] P. Davoli, "Lo scavo 1995. Relazione preliminare," in S. Pernigotti and M. Capasso (eds.), *Bakchias III. Rapporto Preliminare della Campagna di Scavo del 1995* (Pisa 1996) 24 fig. 15 (feature 101).

[26] On the early Ptolemaic period in the Fayyum see K. Müller, "Ptolemaic Settlements in Space. Settlement Size and Hierarchy in the Fayum," *APF* 48 (2002) 121-22.

entation of the settlement was changed: two temples were built in mud-brick, both dedicated to crocodile gods.[27] The new rearrangement of the settlement and of the temple area followed a period of decay in which a heavy layer of sand covered streets and buildings. This crisis might have occurred during the reign of Cleopatra VII, when low floods are well attested by papyri.[28] At this time, the main temple of Soknobkonneus was raised. Despite the crisis attested in the documentary sources, the Soknobkonneus temple continued to be the most important religious structure on the site, and the orientation of streets and buildings remained the same. Around the middle of the 1st century AD, during the reign of Nero or slightly after it,[29] the temple area was enlarged and the temple of Soknobraisis and a new *temenos* were constructed.

Contemporary papyrological evidence attests the presence in Bacchias of the worship of Soknobkonneus from 3rd cent. BC (*P.Enteuxeis* 54.1 of 219/218 BC)[30] and of that of Soknobraisis from AD 113/114 (P.Berlin 21899). It is clear that the two gods were worshipped in two different temples, as *BGU* XIII 2215 and *P.Yale* 363 testify during the 2nd century AD. In particular the Berlin[31] papyrus attests the presence in Bacchias of two "important temples" (*hiera logima*). This papyrological data has prompted significant scholarly discussion of the two temples at Bacchias.[32] The discussion has focused either around the economic situation of the settlement, which often has been described as "a small and poor

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[27] No archaeological remains of previous temples were found in this area until the 2003 season. The existence of a "proto-Ptolemaic" temple in the same place of that of Soknobkonneus suggested by Pernigotti is not supported by any textual or archaeological evidence: Pernigotti, *op.cit.* (above, n. 12) 43.

[28] D.J. Thompson, "Cleopatra VII: the Queen in Egypt," in S. Walker, S.-A. Ashton (eds.), *Cleopatra Reassessed*, The British Museum Occasional Papers 103 (London 2003) 31-34.

[29] According to stratigraphic evidence: Davoli, *Oggetti in argilla*, (above, n. 16) 28-29.

[30] P. Bottigelli, "Repertorio topografico dei templi e dei sacerdoti dell'Egitto tolemaico. II," *Aegyptus* 22 (1942) 184-85.

[31] W. Brashear, *Greek Papyri from Roman Egypt* (Berlin 1976) 6-11.

[32] See P. Piacentini, "Les dieux de Bakchias: état de la question," *SEAP* 11 (1992) 37-46; M. Capasso, *op.cit.* (above, n. 15).

village," or the absence of a second temple, as the British expedition discovered only one temple in 1896. The discovery in 1998 of the monumental temple in sandstone blocks and its associated pylon, all dated securely to the Roman period, allows the attribution of this structure to the god Soknobraisis.

Additionally the smaller Hellenistic temple XL was dedicated to a crocodile god, as some archaeological evidence testifies (the shape of the *naos*, several crocodile bones and a statuette of a crocodile found inside some rooms). Papyri of the Hellenistic period from Bacchias are scarce, however, and they do not mention any temples.[33]

Papyri from the Soknobraisis archives[34] attest the presence of two other crocodile gods at Bacchias: Suchos and Pnepheros (*P.Lund* IV 1; *P.Lund* IV 9; *P.Yale* 363; *P.Yale* 902+906, *P.Lund* III 5, *P.Lund* III 6, *P.Lund* IV 2). We must keep in mind that the majority of the papyri found in Bacchias belong to the Roman period, and for this reason we are well informed about the religion and cults of this period but not of the previous ones.

Soknopaiou Nesos

Dime measures 640 m from north to south and 320 m from east to west. It is divided into two parts by a paved *dromos* six meters wide that originally would have been 400 meters long but now measures 320 m.

The central area of the town is lower than the periphery, where the buildings are still completely covered (for this reason, on the borders of the plan few buildings are visible, Plate 13). The presence of exposed buildings and of numerous round holes of various dimensions suggests that *sebbakhin* and plunderers were active on the site. The *sebbakhin* probably worked in the south-western part

[33] A. Calderini and S. Daris, *Dizionario dei nomi geografici e topografici dell'Egitto greco-romano*, vol. II (Milano 1973) 22-30; Suppl. I (Milano 1988) 75-76; Suppl. II (Bonn 1996) 33; Suppl. III (Pisa/Rome 2003) 25.

[34] E.H. Gilliam, *The Archives of the Temple of Soknobraisis at Bacchias*, Yale Classical Studies 10 (New Haven 1947) 181-281.

of the kom, where the surface is now flat. We have found a similar situation inside the great *temenos* of the Soknopaios' temple.[35]

The *sebbakhin* have not worked on a massive scale at Dime since at least 1909; this is apparent when photographs taken by F. Zucker[36] in 1909-10 and those taken by the University of Michigan Expedition[37] in 1932 are compared with the present appearance of the mound.

Moreover, if we compare the town plan drawn by K.R. Lepsius in 1843 (Plate 14) with the new one, we can observe that Lepsius's plan is generally correct, and that the state of preservation at the site and of the buildings is almost the same. This evidence allows us to say that Dime was far less exploited by the *sebbakhin* than the other *kiman* in the Fayyum.[38] The shape of the *kom* is mainly due to the original stratigraphy, which is lower in the middle;[39] there may have been considerable differences in the elevation among the streets of the town.

The *dromos*, for example, seems to have been used from the time it was built until the town was abandoned. On the other hand, the living quarters excavated by the University of Michigan on both sides of the *dromos* show that the streets levels consistently rose over the centuries. The *dromos* itself was built on stone foundations which, as we can see along its western side, were deeper in the southern area. Along the *dromos*, the slope rises from 21 m above

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[35] B.P. Grenfell and A.S. Hunt, "Excavations in the Fayûm" in *Egypt Exploration Fund. Archaeological Report 1900-1901* (London 1901) 4-5; B.P. Grenfell, A.S. Hunt, and E.J. Goodspeed, *The Tebtunis Papyri II* (London 1907) 348; A.E.R. Boak, *Soknopaiou Nesos. The University of Michigan Excavation at Dimê in 1931-32* (Ann Arbor 1935) vi-viii.

[36] Some of these photographs will be published by G. Poethke, "Ulrich Wilcken (1862-1944) und Wilhelm Schubart (1873-1960)," in M. Capasso (ed.), *Hermae. Figures and Paths of Papyrology* (forthcoming).

[37] These photographs are now kept in the Kelsey Museum at the University of Michigan in Ann Arbor. Thanks to the kindness of T. Wilfong and R. Meador-Woodruff I have been able to examine most of them.

[38] There were no reasons for large scale exploitation of *sebbakh* before Lepsius' visit in 1843: P. Davoli, *Archeologia e papiri* (Naples 2001) 4-7.

[39] This happens also in other Graeco-Roman places in the Fayyum: cf. Davoli, *op.cit*. (above, n. 9).

sea level in the south to 24 m in the north, an increase in elevation of approximately one meter for every 100 meters in length.

In general, it is possible to assume that there was an increase in elevation along a north-south axis, with the northern end of the town at a higher elevation, probably due to the natural topography. The temple seems to have been built in the highest part of the settlement. Two other slopes were created over the centuries along both sides of the *dromos* through human occupation; the rising of the street levels was more apparent as one moved away from the *dromos*, which continued to be used.

The excavation of the University of Michigan (1931-32) took place in two sectors, one on the east side of the *dromos* and one on its west side, near the *temenos*. In the latter, five levels were found, dated from the 3rd century BC to the 3rd century AD. All the buildings of each level are oriented along the axis of the *dromos*. During the preliminary survey of the *dromos* undertaken by the Joint Archaeological Mission of Bologna and Lecce Universities, some relevant data were collected:[40] at present, the street is 320 m long and the pavement is quite well preserved along its length with some marks chiseled on the surface. At a distance of 170 m from the south gateway there are two shallow steps across the street, 5 and 8 cm high and 51 cm large, rising to north (Plate 17.1). Immediately south of them, on the borders of the street, there are five columns drums of the same stone as the pavement (Plate 17.2). On the east side one drum is circular with a diameter of 70 cm and a thickness of 21 cm; a second one is probably a block (95 x 81 cm) for a corner with a semi-column with a diameter of 74 cm and a thickness of 28 cm; a third one is a drum with a rectangular appendix in which is a seating for a vertical cramp. This drum has a diameter of 70 cm and a thickness of 25 cm. On the west side are two drums; one probably belonged to a corner of a door jamb with a semi-column. This drum has a diameter of 75 cm and a thickness of 25 cm. The second is a block with a semi-column with the same dimensions.

[40] Limited excavations were made by Major R.H. Brown in 1892 on the street and by G. Caton-Thompson and E.W. Gardner in 1925-1926 on the south gate: R.H. Brown, *The Fayûm and Lake Moeris* (London 1892) 51-52; G. Caton-Thompson and E.W. Gardner, *The Desert Fayum* (London 1934) 153-56.

With the current state of preservation, it is difficult to imagine what kind of building these architectural fragments belong to. The most likely possibility is that the remains should be associated with a kiosk in this location, as is normal on processional ways. We can recall the two kiosks at Tebtunis, as well as the kiosks preserved at both Narmouthis and Dionysias: a single kiosk was discovered at each site. In Dime there seems to have been a shortage of space on the paved street; therefore, we should imagine a wider kiosk with walls and foundations on each side of the *dromos*. At present, there are two trenches full of clean sand flanking the street, and we cannot verify this hypothesis. I think, however, that the elements we have are sufficient to suppose the existence of a kiosk of small dimensions,[41] probably located to the north of the two steps on the *dromos*.

Along the *dromos*, the slabs of the pavement are of different dimensions; the slabs located along the sides have an east-west orientation. On these side slabs, there are one or two parallel chiseled lines that probably mark the borders of the street. Another chiseled, but finer line, marks the middle of the *dromos*. Moreover, Greek letters are engraved on some slabs, particularly those along the border; until recently, it has not been possible to ascertain the purpose of these inscriptions. They may mark the positions where objects were placed; this may be the reason for the inscription Satabous, which was a common name at Soknopaiou Nesos. K. Lembke[42] suggested that some of the statues found in Dime and now in the Cairo, Alexandria and Berlin museums may have been placed on the *dromos*, but we do not have evidence of this. The pavement of the *dromos* at Tebtunis does not seem to have these kinds of marks.

It is quite certain that the *dromos* reached the *temenos* and its main gateway, but in the gap of 75 m the only things we can see are fragments of sandstone blocks, quarters of drums and lumps of white mortar scattered in the sand. There are no traces of the slabs

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[41] The Dime columns (diameter 0.70 m) can be compared with those found in the Tebtunis kiosk, which measure 1.00 m: V. Rondot, *Tebtynis II. Le temple de Soknebtynis et son* dromos (Cairo 2004) 154-55.

[42] K. Lembke, "Dimeh. Römische Repräsentationskunst im Fayyum," *JDAI* 113 (1998) 109-37.

of the *dromos*, and a deep, wide pit lies in front of the gateway. We can suppose the presence of a stone building of squared sandstone blocks and decorated with columns. The kind of stone used in it is the same as that of the temple ST 20 inside the *temenos*, a building that is discussed in more detail below. The hypothetical structure at the end of the *dromos* may have been a propylon, a kiosk or a *vestibulum*, as is the case at Tebtunis.[43]

The great *temenos* (122.30 x 84.37 m, h 12 m) is not well known from an archaeological point of view, and the Italian Mission decided to begin its exploration there in 2003.[44] First we collected information on about twenty buildings that are still visible inside the walled area (Plate 15). In the middle of the area, three buildings can be identified as temples (labeled ST 18, ST 19 and ST 20) by their positions and plans.

ST 19 is a small, east-facing mud-brick sanctuary measuring approximately 14.30 x 9.96 m. Few of the limestone blocks from the doorway survive. This position of the building suggests that it was a *mammisi*.[45] The presence of a *mammisi* at the site of Dime is attested by a religious text written in Demotic (*P.Berlin* P 6750).[46]

The main temple ST 18 (32.53 x 18.90 m) faces south, opposite the original gateway in the *temenos* and the *dromos*. This temple is preserved to a height of at least five meters and was built in rough slabs of the local marl limestone. The walls were originally covered with a thick layer of plaster moulded to resemble isodomic blocks, now partially preserved in the central rooms and on the original façade. The building is surrounded by a mud-brick wall, and its general plan (Plate 16) is similar to that of other small temples of the

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[43] A.M. Badawy, "The Approach to the Egyptian Temple in the Late and Graeco-Roman periods," *ZÄS* 102 (1975) 79-90.

[44] P. Davoli, "New Excavations at Soknopaiou Nesos: the 2003 Season," in Lippert and Schentuleit, *op.cit.* (above, n. 10) 29-39; *ead.*, "Excavations at Soknopaiou Nesos (Dime)," *EA* 25 (2004) 34-36.

[45] For the discussion of this hypothesis, see P. Davoli, "The Temple Area of Soknopaiou Nesos," in Capasso and Davoli, *Proceedings* (above, n. 10). On religion and cults in Soknopaiou Nesos, see Widmer, *op.cit.* (above, n. 10); W.J.R. Rübsam, *Götter und Kulte in Faijum während der griechisch-römisch-byzantinischen Zeit* (Bonn 1974) 163.

[46] Widmer, *ibid.* 175.

Hellenistic period in the Fayyum.[47] This temple, however, has a second door in the northern wall, in front of the main entrance and at the rear of the *naos*. To the north of this door and in the middle of the enclosure, a large number of blocks and lintels of different kinds of local stone were discovered in an area that measures approximately 60 x 20 m. This situation leads us to believe that there might have been one or possibly more totally unknown monumental buildings present here (labeled ST 20). Travelers and scholars who previously worked at Dime noted and identified the ruins as a second temple. Further to the north of these ruins (Plate 15), we can recognize a colonnaded building: two rows of columns are visible, and each row preserves at least two columns and a half-column. A fragmentary *naos* is also visible in the sand.

The first two seasons of excavations (2003-2004) were concentrated on a sector of 20 x 7 m between ST 18 and the ruins of ST 20. A paved courtyard[48] and two subsidiary buildings were found. The courtyard connected buildings ST 18 and ST 20, which are certainly parts of the same temple but were constructed during different periods.

At this stage, we can hypothesize that building ST 18 was the original temple dedicated to the crocodile god Soknopaios and founded during the Hellenistic period. Although the inside of temple ST 18 awaits excavation, we can recognize subsequent building phases, which gradually altered its plan.[49] The five gateways, of which three are internal, were built with fine sandstone blocks on the longitudinal axis and probably can be dated to the last of these

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[47] Compare the plan with those of the temple XL at Bacchias, temple C at Narmouthis and a temple found by Zucker at Philadelphia, all built in mud-brick: E. Bresciani, "Rapporto sulle missioni archeologiche nel Fayum nel 1998. Il nuovo tempio di Medinet Madi," *EVO* 20-21 (1997-1998) 96, fig. 1b; Davoli, *op.cit.* (above, n. 9) 148 and figs. 64-65.

[48] The surface of the floor is an average of 25.60 m above sea level.

[49] Work on the temple is attested by Demotic papyri dated between 153 and 144 BC (reign of Ptolemy VI and VIII): E. Bresciani, *L'archivio demotico del tempio di Soknopaiou Nesos nel Griffith Institute di Oxford* (Milano 1975) 50, 51, 58.

restructuring phases. A fifth gateway was opened[50] in the rear wall of the *naos* and led into the courtyard, which was uncovered in 2003 (Plates 18.1 and 18.2). On the opposite side of the courtyard and along the same axis, there was another gateway in the sandstone block wall of building ST 20. It is therefore likely that the courtyard, building ST 20 and the sandstone gateways in ST 18 are all contemporary and can be dated to the end of the Hellenistic period or to the beginning of the Roman period. At this stage in our research, we are unable to date this building phase more precisely.

As part of our investigation of building ST 20, we have brought to light the façade of the southern external wall, which measures 20 m in length, 1.44 m in width and is preserved to a maximum height of 1.53 m in seven courses of blocks. A door, measuring 2.40 m in width, was located at the halfway point along the wall (Plate 18.2). The wall was built with isodomic blocks (67-77 x 40 x 20 cm), bounded with white and pinkish mortar. Its southern face is quite rough, with blocks showing bosses surrounded by four chiseled bands. This part of the building was not completely finished: stylized letters of the Greek alphabet were engraved on the bosses of some of the blocks as mason's marks. The masonry, similar to those of other Fayyum temples (such as Bacchias, the southern temple at Karanis, Dionysias, and the Roman kiosk at Tebtunis),[51] suggests that construction of this wall should be dated to the Roman period.

G. Vittmann has recently published a Demotic papyri from Dime, dated to the 1st-2nd century AD and now in the Vienna Collection (*P.Wien* D10100),[52] that provides us with a description of the internal decoration of the temple of Soknopaios, which was carried

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[50] Similar doors were opened in the *naoi* of Ptolemaic temples at Philae during the reign of Ptolemy VIII, in the temple of Hathor, the temple of Arsenouphis, and the mammisi of Isis. See D. Arnold, *Temples of the Last Pharaohs* (Oxford 1999) 202-4 and figs. 120, 127 and 141.

[51] On the characteristics of architecture in the Graeco-Roman period, see J.-Cl. Golvin and J. Larronde, "Etude des procédés de construction dans l'Egypte ancienne I. L'édification des murs de grès en grand appareil à l'époque romaine," *ASAE* 68 (1982) 166-90; J.-Cl. Golvin and R. Vergnieux, "Etude des procédés de construction dans l'Egypte ancienne IV. Le ravalement des parois, la taille des volumes et des moulures," in *Hommages à F. Daumas* (Montpellier 1986) 299-321.

[52] Vittmann, *op.cit*. (above, n. 10).

out in the Egyptian style. This papyrus seems to record a copy of a Ptolemaic project concerning the ornamentation of the temple's interior. According to the papyrus, the interior decoration was subdivided into registers, with an unspecified Ptolemy as the offering king. Current archaeological evidence does not allow us to know with certainty which structure was decorated as part of the project outlined in the papyrus. Building ST 20 is likely dated to the Roman period on the basis of masonry, and it would be extremely interesting to compare the ruins of this temple with the papyrological description. In the next season, we hope to investigate the interior of ST 20; our research should reveal new data about the temples that we will be able to compare with the evidence coming from papyri.

Preliminary publications of other religious papyri written in Demotic from the temple archives illustrate the richness of these sources. Several documents from the 1st to the beginning of the 3rd century AD are copies of an earlier text with the Daily Ritual of Soknopaiou Nesos. [53] According to this text, the priests had to pass five gates in a condition of purity and then enter into a broad hall and, finally, into the *naos*. If we compare this description with the buildings preserved in the *temenos*, we can provisionally suppose that the five gates mentioned in the text might refer to the five gates in ST 18, the Hellenistic temple transformed into a *pronaos*. The broad hall mentioned might be identified with the paved courtyard between ST 18 and ST 20, the *naos* or the temple proper.

Conclusion

As a final point, I would like to make some observations on three temples areas in the Fayyum. The newly created, scientific plans of Bacchias, Soknopaiou Nesos and Tebtunis[54] provide us with some interesting data about their temples, the *temene* and the *dromoi*. Some conclusions can be drawn from a comparison of their dimensions:

[53] Stadler, *op.cit.* (above, n. 10).

[54] Rondot, *op.cit.* (above, n. 41).

Tebtunis

Temenos:	113 x 63 m
Temple:	37 x 20 m (reign of Ptolemy I)
Dromos:	210 m long, 6.35 m wide
	(North-South orientation, constructed in three phases: 3rd century BC; 2nd century BC; reign of Augustus)

Soknopaiou Nesos:

Temenos :	122.30 x 84.37 m
Temple:	32.53 x 18.90 m (Hellenistic period)
Dromos :	ca. 400 m long, 6 m wide.

Bacchias:

Temenos:	96 m ca. wide (Roman period)
Temple I:	41 x 26 m (Hellenistic period)
Temple II:	57.70 x 16.60 m (Roman period)
Dromos:	100 m long (at least)
	(East-West orientation)

It can be noted that the dimensions of the three temples that were founded in the Hellenistic period are surprisingly similar. The presence of a *dromos* in the Hellenistic period is certain at Tebtunis (3rd century BC) and probable at Soknopaiou Nesos. Therefore we can suppose a comparable *dromos* at Bacchias, likely from the 2nd century BC on the basis of the settlement plan.

The dimensions of the 3 *temene* are quite similar also. We do not know the exact date of each foundation, but it seems likely that at Bacchias and Soknopaiou Nesos, the *temene* belong to the Roman period,[55] and are contemporary with the construction of the new

[55] The wide *temenos* of Dendera was built during the Roman period: P. Zignani and D. Laisney, "Cartographie de Dendara, remarques sur l'urbanisme du site," *BIFAO* 101 (2001) 428-32. For a discussion of the possible date of the Soknopaios *temenos* see Davoli, *op.cit.* (above, n. 45); *IG Fay* I. 43 (24 BC).

temples in isodomic sandstone blocks. Surprisingly, the *temenos* of Bacchias seems to be the widest of the three; its general dimensions suggest that it was also the greatest in size.

The *dromos*, or the street of the god, is one of the characteristic features of the Egyptian temples. Virtually every temple would have possessed a *dromos* that was used for processions and feasts associated with the god worshipped in the sanctuary. In towns and cities with more than one important temple there were different *dromoi*.[56] The preserved *dromoi* at Tebtunis and Soknopaiou Nesos are paved and have approximately the same width. At Tebtunis, on both sides of the *dromos* there were sphinxes and trees, following traditional Egyptian practice[57] and two kiosks were set along its length. At Soknopaiou Nesos, remains of two buildings with columns, perhaps two kiosks or a *propylon* and a kiosk, are visible on the *dromos*; on both sides of the paved road, there were wide spaces that were free of buildings, perhaps used to house monuments and trees. At Dionysias, the *dromos* was about 320 m long and 5.7 m wide, with a kiosk on its end and statues of lions on both sides.[58] A similar situation might have also occurred at Bacchias.[59]

PAOLA DAVOLI

University of Lecce

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[56] At Soknopaiou Nesos the presence of a dromos of Pramarres is attested by an inscription dated to 104 BC (*IG Fay* I 69).

[57] Rondot, *op.cit*. (above, n. 41) 200-2; A. Cabrol, *Les voies processionnelles de Thèbes* (Leuven 2001) 453-67.

[58] At present, these monuments are in a poor state of preservation: J. Schwartz and H. Wild, *Fouilles franco-suisses. Rapports I. Qasr-Qarun/ Dionysias 1948* (Cairo 1950) 7 and plates II and VI.

[59] The forelegs of a lion or sphinx in red granite was discovered in the Kom South: P. Davoli, "Materiali fuori contesto da Bakchias," in S. Pernigotti and M. Capasso (eds.), *Bakchias I. Rapporto Preliminare della Campagna di Scavo del 1993* (Pisa 1994) 73 and fig. 2. Two smaller, additional fragments of statues of a lion or a sphinx in limestone were found inside and in front of the Soknobkonneus' temple during the 1997 season: P. Davoli, "Due frammenti di sculture dal tempio," in S. Pernigotti and M. Capasso, *Bakchias V.*, *op.cit*. (above, n. 21) 79-83.

Plate 8 **(to Davoli, "...Town Planning...")**

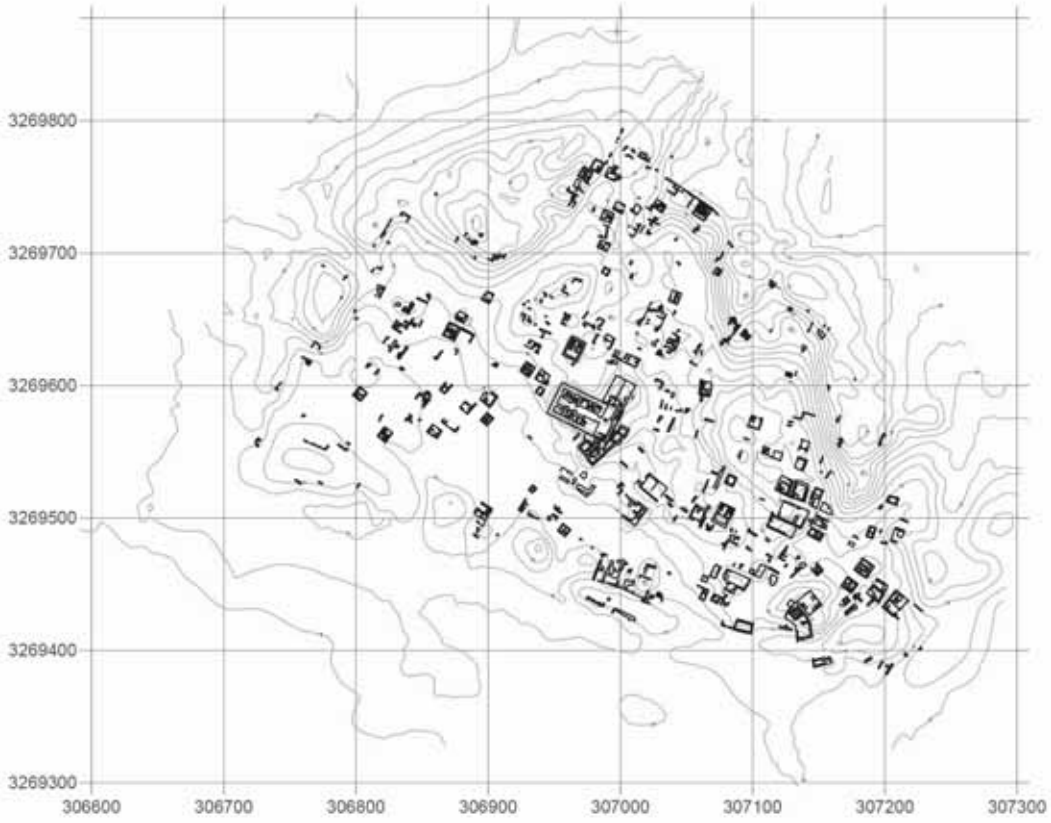

Plate 8: Bacchias, plan 2002.

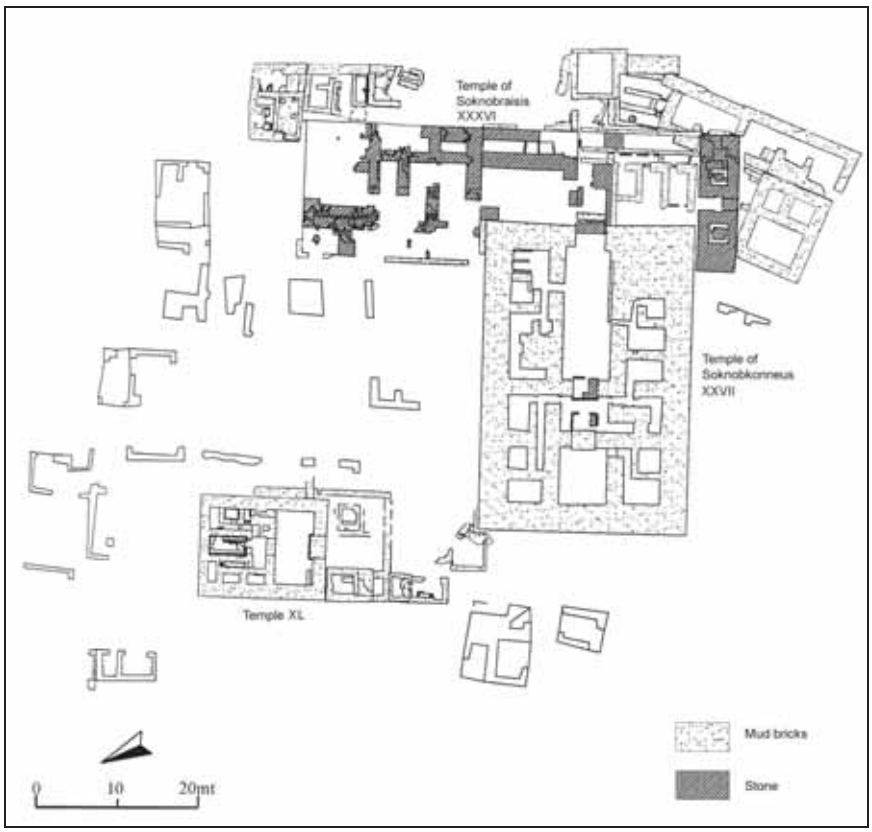

Plate 9: Temple Area of Bacchias.

Plate 10 **(to Davoli, "...Town Planning...")**

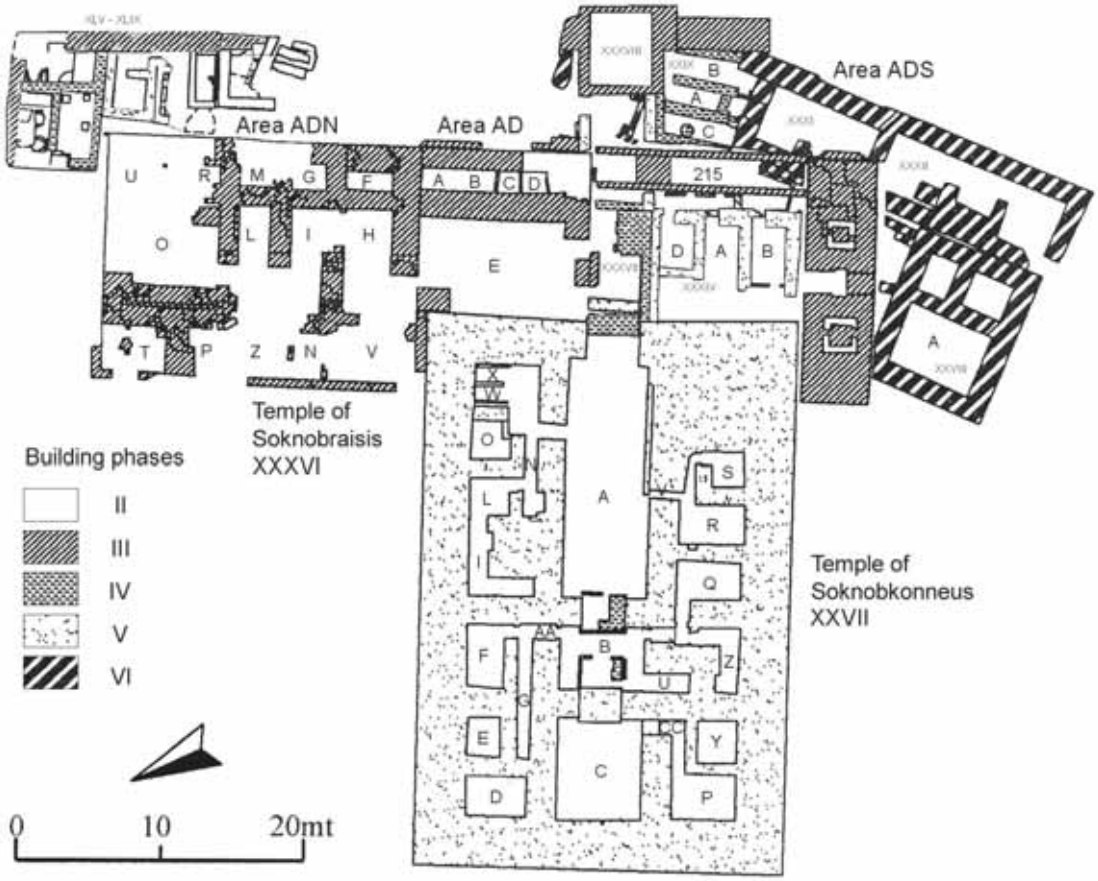

Plate 10: Temples of Soknobkonneus and Soknobraisis: building phases.

Plate 11.1: Proposed reconstruction of the *temenos* and *dromoi* at Bacchias.

Plate 11.2: View of the temple area from the east.

Plate 12 **(to Davoli, "...Town Planning...")**

Plate 12.1: Foundations of the temple of Soknobraisis and the gateway to the Soknobkonneus temple.

Plate 12.2: View of the Hellenistic temple XL from the top of the north corner of the Soknobkonneus temple.

Plate 13: Soknopaiou Nesos, plan 2005.

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Plate 14 **(to Davoli, "...Town Planning...")**

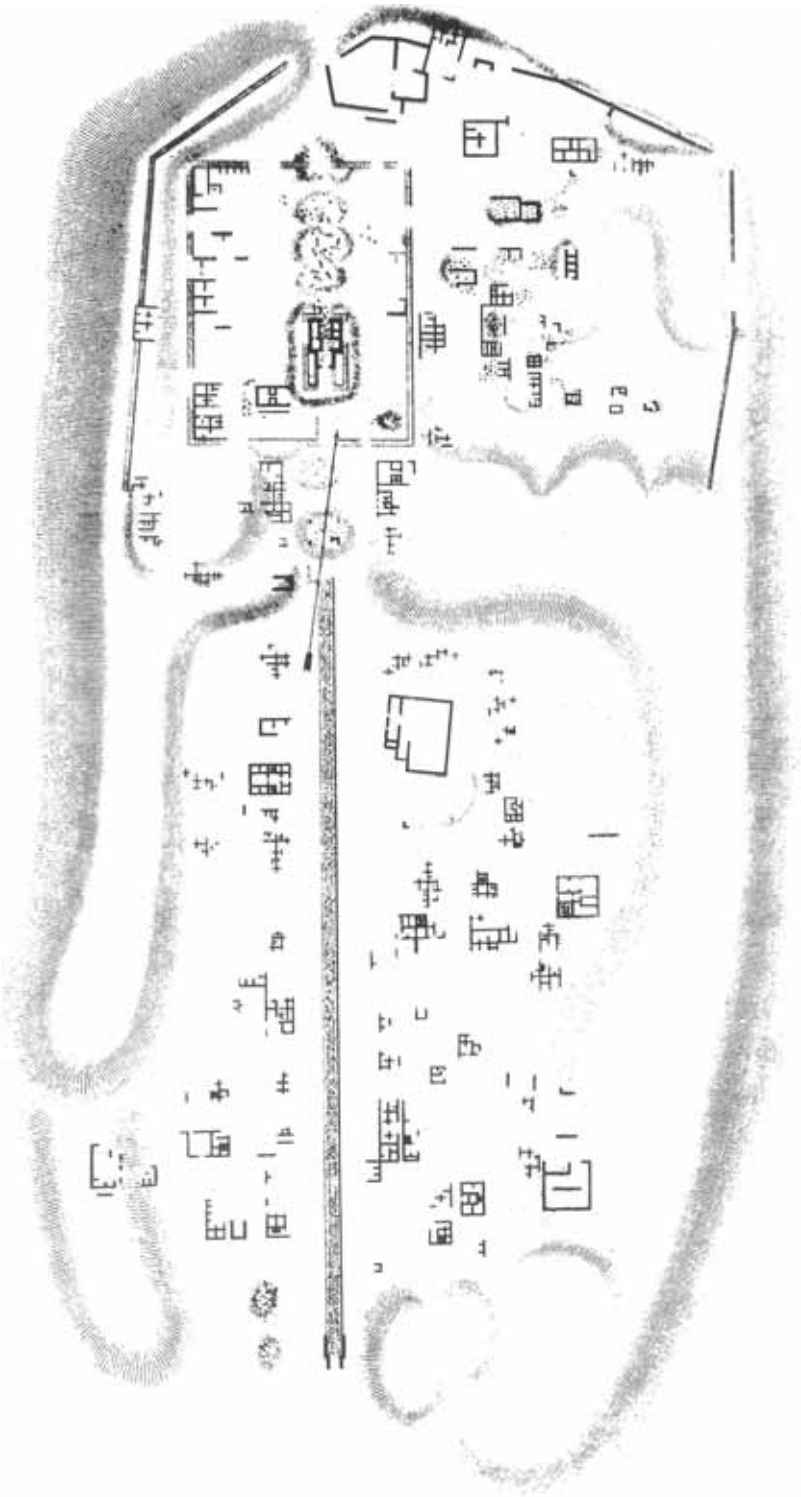

Plate 14: Soknopaiou Nesos: Lepsius' plan 1843.

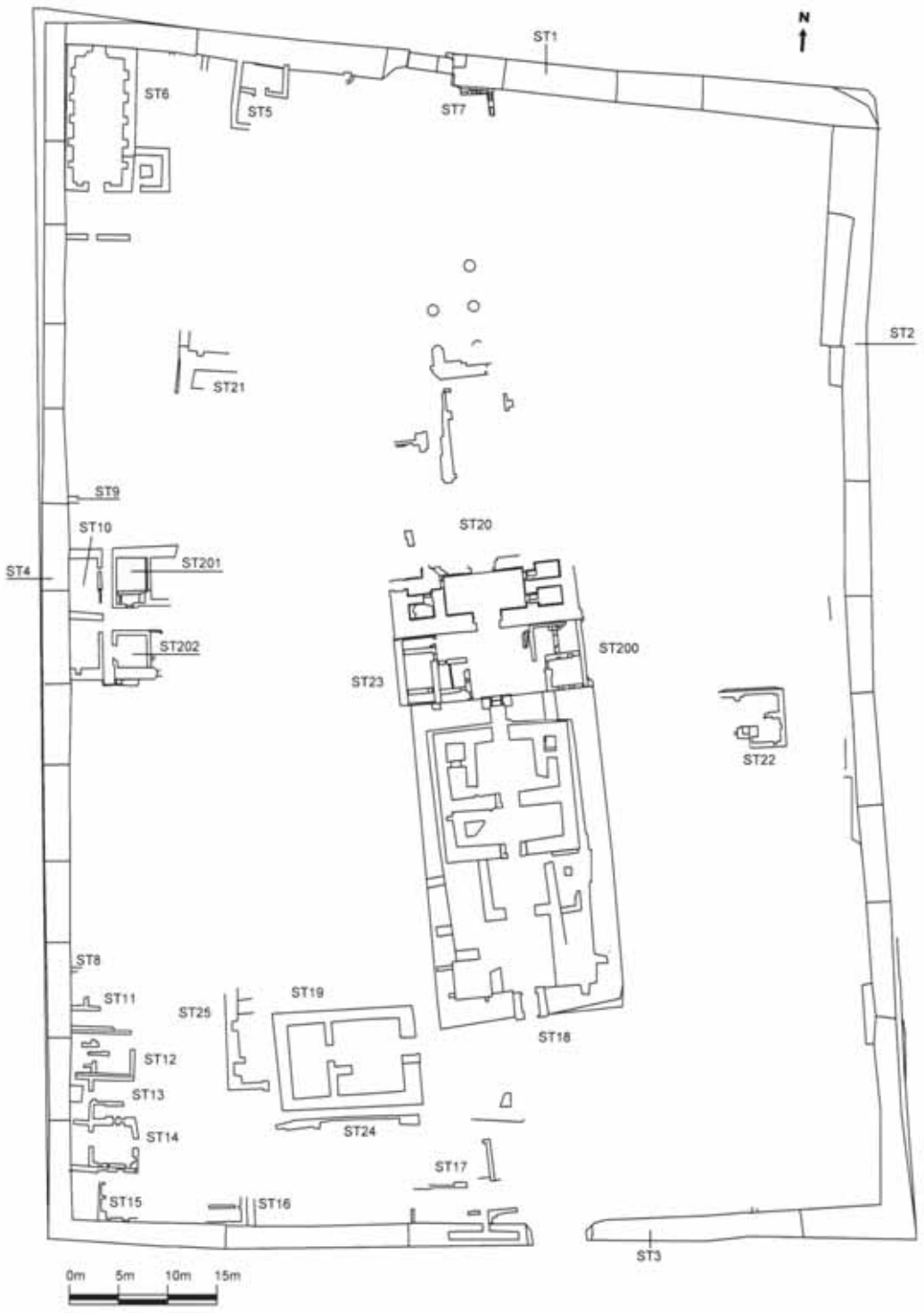

Plate 15: Soknopaiou Nesos: plan of the temenos 2005.

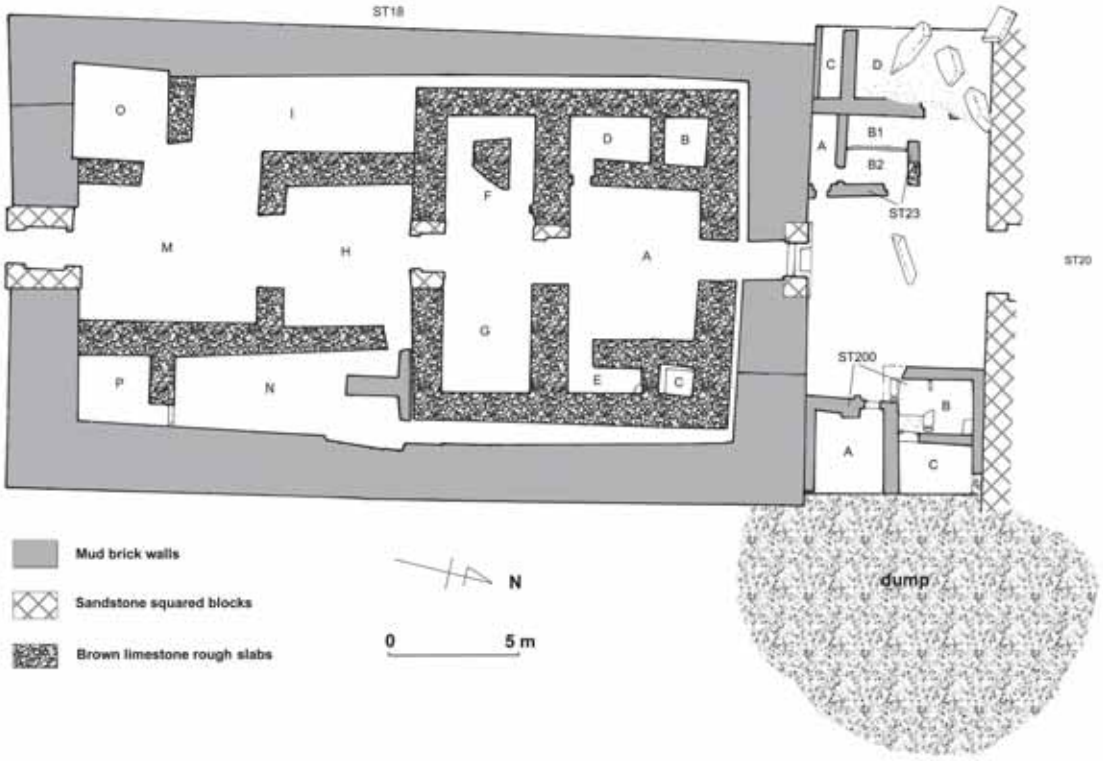

Plate 16: Soknopaiou Nesos, plan of ST 18 and the excavated sector (2004).

Plate 17.1: View of Soknopaiou Nesos and the *dromos* from south.

Plate 17.2: Soknopaiou Nesos: drums of columns on the *dromos*.

Plate X **(to Author, Title)**

Plate 18.1: Soknopaiou Nesos; building ST 18 and its north gateway, from north.

Plate 18.2: Soknopaiou Nesos: the paved courtyard and the façade of ST 20.