

Overview of Fieldwork at Berenike 1994-2015

Sidebotham, Steven E.

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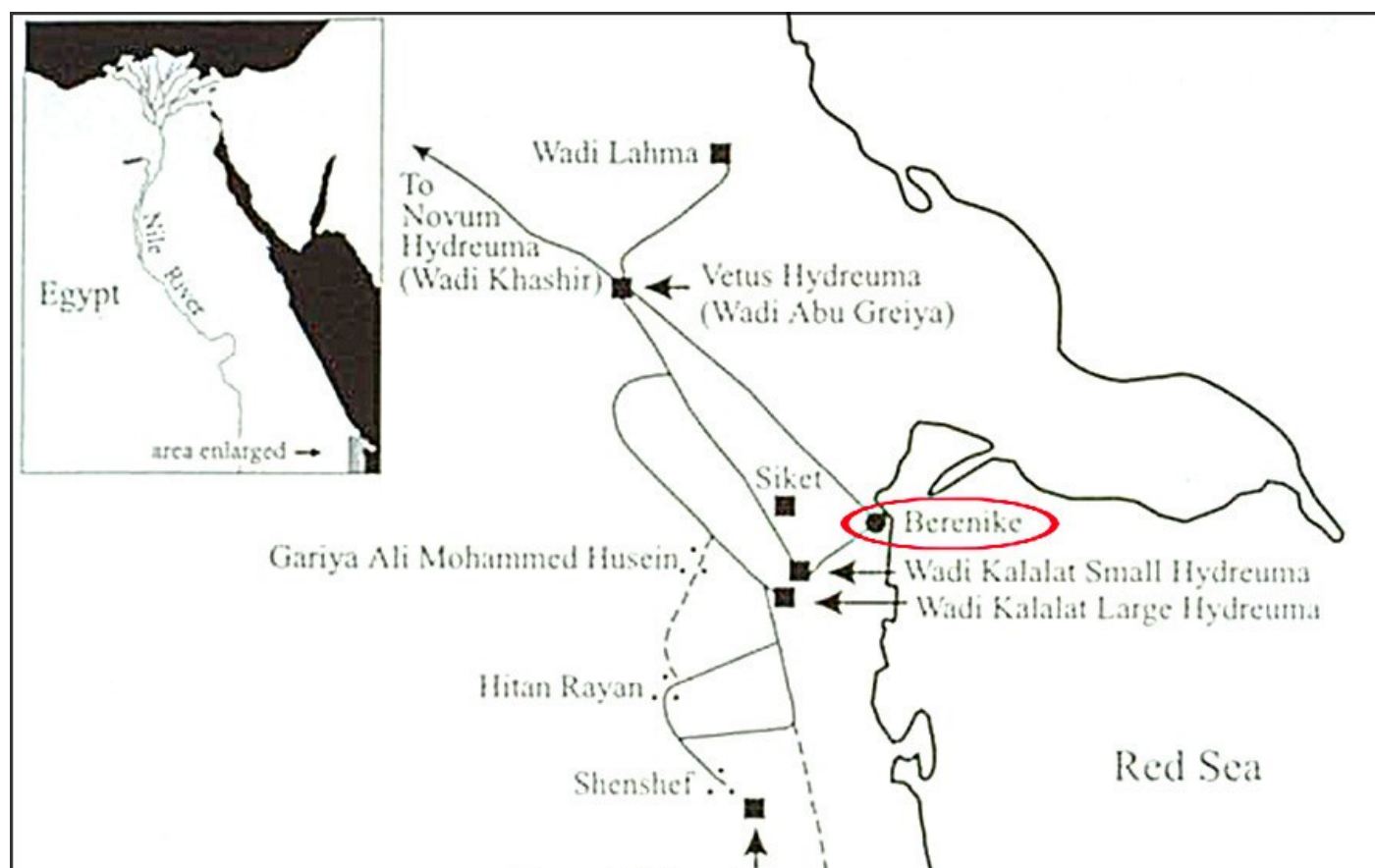
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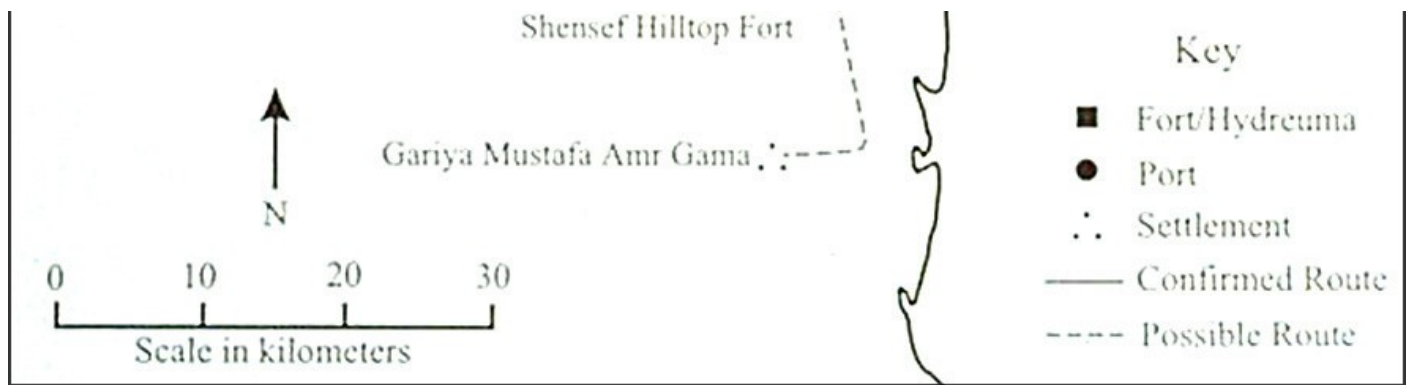
[Steven E. Sidebotham](#)

Texte intégral

1Fifteen seasons of survey and excavation (1994-2001 and 2009-2015) and one week of survey alone (2008) at Berenike (Fig. 1) have documented abundant evidence about this Egyptian Red Sea emporium that functioned for about 800 years.¹ Founded by Ptolemy II Philadelphus before the mid-third BC Berenike, located about 825 km south southeast of Suez and ca. 260 km east of Aswan, operated until its final peaceful abandonment sometime prior to the middle of the sixth century AD. Recent documentation from Berenike of two fragments of Middle Kingdom stelai may, however, suggest the existence of a roadstead or small harbor here that facilitated communications between the Red Sea coast of Egypt –especially the Middle Kingdom port of Saww in Wâdi Gawasis– and Punt ca. 1500 years prior to the Ptolemaic foundation.²

Fig. 1





Map of location of Berenike and environs. Drawing by M. Hense.

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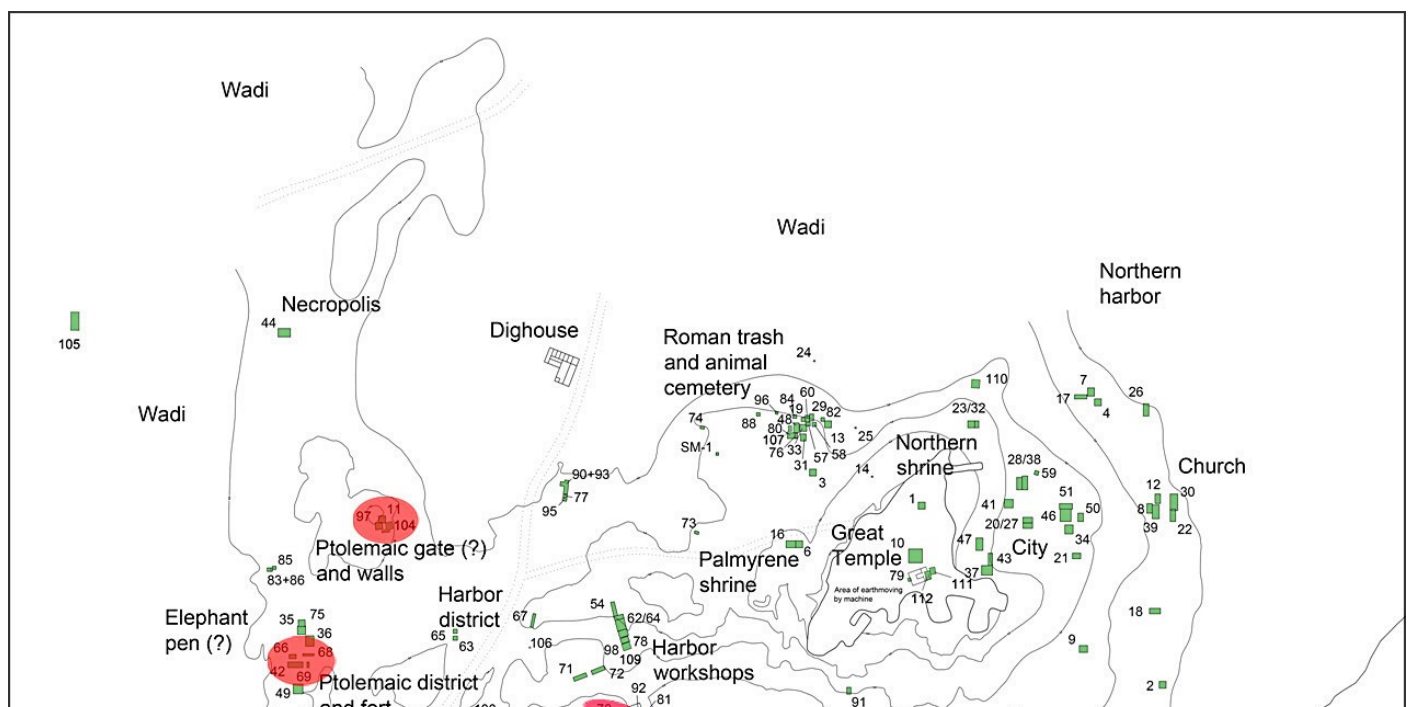
The role Berenike played in international, regional and local commercial and cultural exchanges was significant during most of its history. This brief overview discusses activities at the port based on nine functional roles as reflected in the architecture, artifacts and ecofacts documented from the excavations.

1. Hydraulic installations

1.1. Ptolemaic (Fig. 2)

A deep rectangular-shaped shaft artificially cut into bedrock behind portions of the extant Ptolemaic city wall at the western side of the site recorded five tunnels. Four –two penetrating the northern and two dug in to the southern sides of the shaft– have been incompletely excavated and their purposes remain unknown. A fifth, piercing the eastern end of shaft, revealed a narrow tunnel at least 6-7 meters long, that was clearly hydraulic in nature.

Fig. 2





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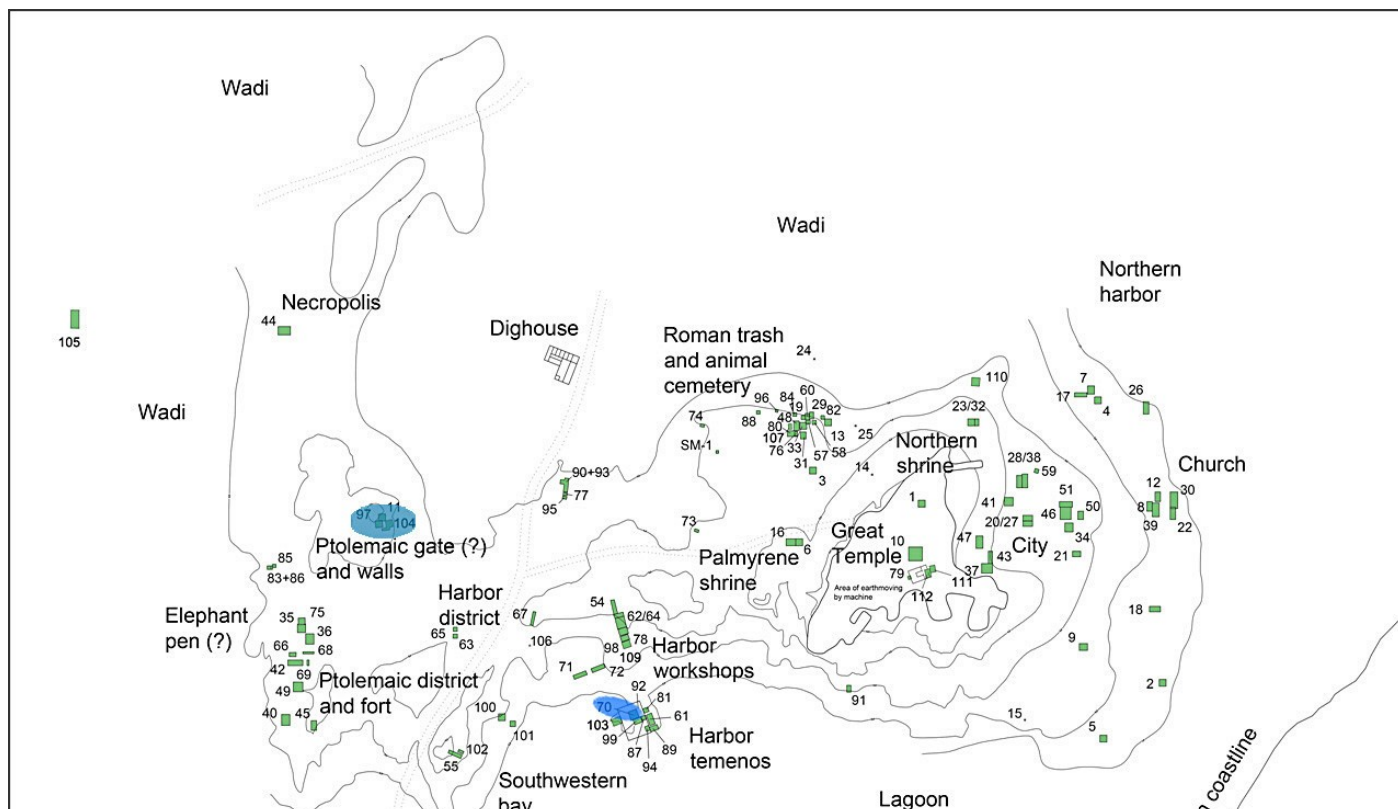
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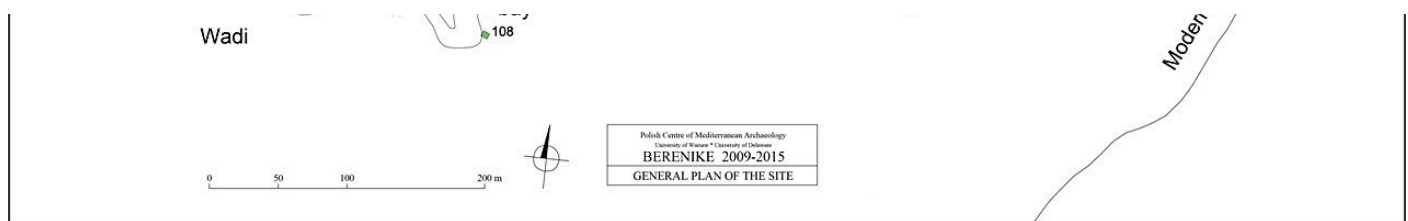
4Excavations documented the only other recognizable Ptolemaic-era hydraulic installation in the corner of a cistern in the Ptolemaic industrial area,³ which lay south southwest of the aforementioned shaft containing the five tunnels. This cistern undoubtedly provided water for metal working activities that took place in the vicinity. This part of the cistern contained the skeleton of an adult (gender unknown) human clearly deposited after the facility had ceased to function in its original capacity (on which see *infra*). The documentation of 95 kg of lead from the trench in which this portion of the cistern lay indicated intensive metal working in the immediate area.⁴

1.2. Roman (Fig. 3)

⁵Early Roman-era hydraulic installations or evidence of water-related activities have been documented, but not for the Middle or Late Roman periods.

Fig. 3





Plan of Berenike: Roman hydraulic installations. Drawing by Berenike Project.

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6 These included hydraulic facilities near the Ptolemaic city wall (see *infra*) and the Ptolemaic-era shaft containing the five tunnels noted above. Roman hydraulic installations consisted of a plaster lined rectilinear-shaped cistern and piping comprising the rims and necks of two amphoras abutting one another at their tops.⁵ This piping connected to several shallow plaster-lined channels. Whether these remains indicated an uninterrupted continuation of hydraulic operations from Ptolemaic times in this part of the site is uncertain.

7 A square sunken feature located in the southwestern harbor (see *infra*) was likely functionally and chronologically related to the Great Temple (see *infra*) as the materials (white gypsum ashlar) and construction methods (in part using wooden clamps) used in both were identical. This sunken structure may have served as a small-scale Nilometer and also a larger version of the miniature lustral basins with interior steps found elsewhere on site in religious contexts. These are features often closely associated with Serapis in the Hellenistic and Roman periods in Egypt.⁶ Its location in the harbor area near the Late Roman Harbor temple (see *infra*), which may also have been, in part, dedicated to Serapis, and the presence of extant holes toward the bottom of the face of the southern interior wall of the sunken feature, may well have measured the tides as symbolic representations of the rising and falling of the Nile similar to calculations made by traditional Nilometers. Detailed examination of the interior walls of this sunken feature, however, did not reveal that it had ever contained or had ever been affiliated with any lustral or hydraulic function. None of the ashlar preserved any type of waterproofing agent, but it seems that many extant Nilometers lacked such interior waterproofing as well.

8 A first century AD ostraka archive found in the Early Roman trash dump in 2009 and 2010 recorded the Roman army's control over aspects of potable water procurement and distribution in the city.⁷ Its existence, *ipso facto*, indicated the presence of hydraulic facilities in the city that have yet to be documented by excavation.

9 Additionally, a number of kiln fired bricks, some with mortar or plaster still adhering, have been recovered from excavations in various parts of the site.⁸ Such bricks lined hydraulic facilities elsewhere in the Eastern Desert and were likely used for that same purpose at Berenike. Thus, these bricks are indirect evidence for one or more hydraulic facilities, likely Roman in date, that lay somewhere in the city.

10 Fragments of Roman era glass bath flasks recorded from the excavations and broadly dated first-

fourth centuries AD⁹ may also provide evidence for the existence, somewhere in the city, of one or more Roman-era *thermae*.

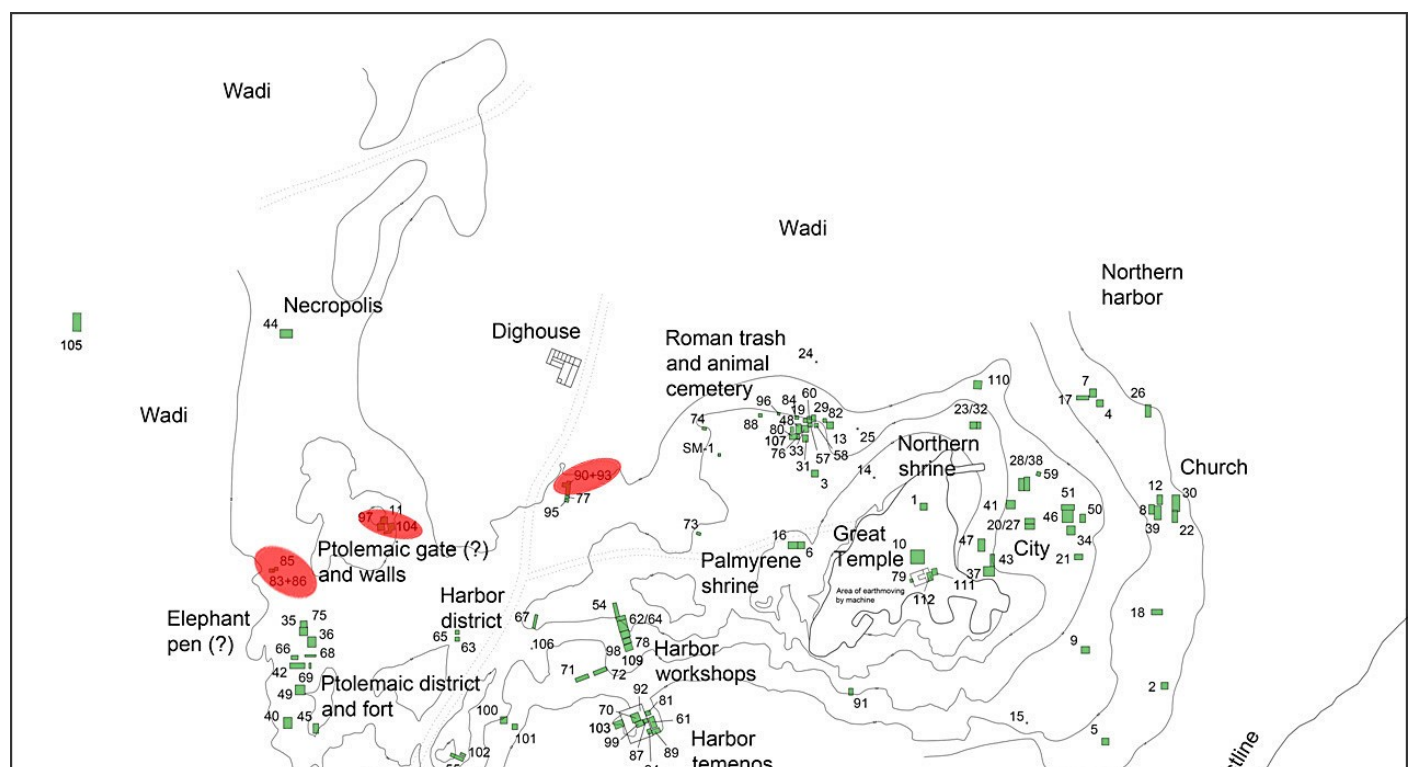
11North northwest, west and west southwest of Berenike were three *praesidia* that began operations in Early Roman times and must have provided at least some of the potable water required by the city. These lay at Siket (approximately 7 km west northwest of Berenike),¹⁰ a small *praesidium* in Wâdi Kalalat (about 7 km southwest of Berenike)¹¹ and, a large *praesidium* in Wâdi Kalalt (ca. 8.4 km southwest Berenike).¹² In addition to providing some of Berenike's potable water, these three forts, together with seven others, formed a defensive ring for the city ranging from the hilltop fort in Shenshef ca. 21.4 km in a straight line southwest of Berenike to the small installation in Wâdi Lahami about 30.37 km as the bird flies northwest of the port city.¹³

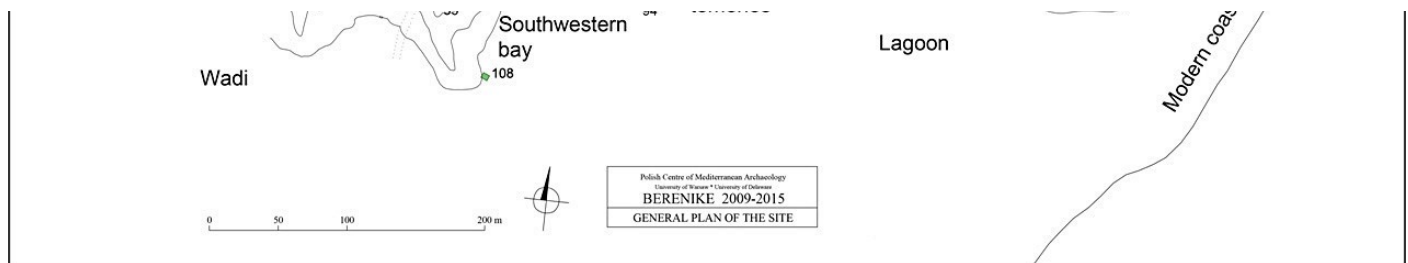
2. Military presence

2.1. Ptolemaic (Fig. 4)

12Evidence for Ptolemaic military presence at Berenike has been documented in three areas of the site; these included: portions of a badly robbed defensive tower,¹⁴ a short section of robbed enceinte, and an abbreviated segment of more or less intact wall. All dated to the early Ptolemaic period (second quarter to mid-third century BC) and, outside Alexandria, are the only known Ptolemaic city defenses recorded archaeologically anywhere in Egypt. Robbing of portions of these Ptolemaic military fortifications seems to have taken place in the Augustan period (30 BC-14 AD) indicating that the Romans felt secure enough to dismantle, at least in part, the defenses of their predecessors. No doubt the Roman-era inhabitants recycled much of the stone for use in other features constructed at Berenike at that time.

Fig. 4





Plan of Berenike: Ptolemaic military installations. Drawing by Berenike Project.

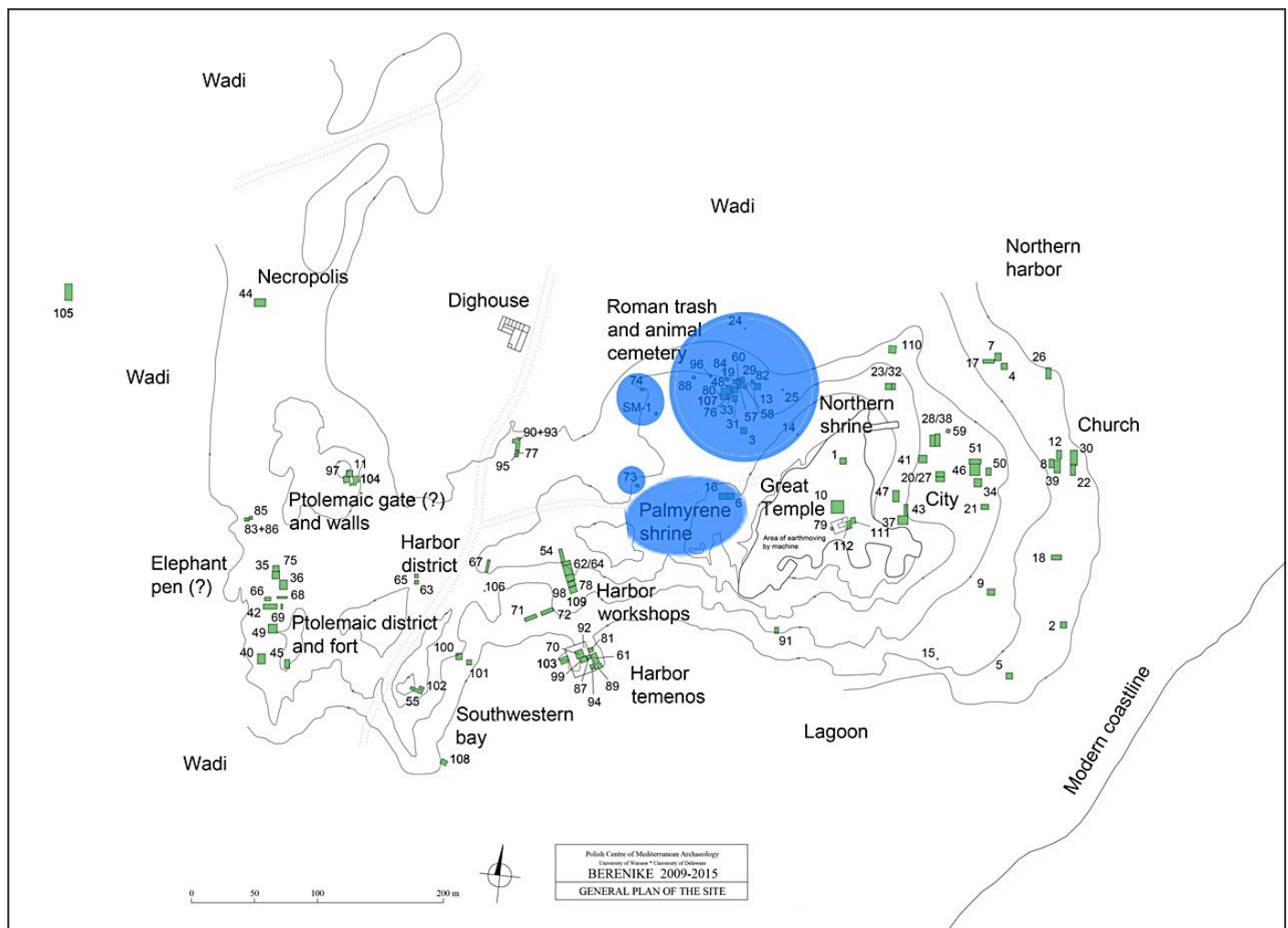
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2.2. Roman (Fig. 5)

Excavations in three areas of the site noted above indicated that Berenike's urban defenses from the Ptolemaic period were, in some cases, torn down in Augustan times, or were neglected, abandoned and fell into disuse; these were not, apparently replaced at any point during the Roman occupation of the city. This suggests that the Romans believed Berenike to be quite secure and did not require city walls during their occupation.

Fig. 5



Plan of Berenike: Indications of presence of Roman military. Drawing by Berenike Project.

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14 Nevertheless, Roman military presence at Berenike was evident in the faunal record. Quantities of pig bones appear in Early Roman contexts; pork was an important component of the military diet.¹⁵ *Terra sigillata* sherds of bowls/plates/other open forms¹⁶ and a terra cotta fragment of a statuette of a Roman auxiliary soldier¹⁷ may well have comprised some of the personal baggage of Roman soldiers stationed in the port. The documentation of iron weapons, including at least one bronze lance head and a number of arrowheads, from Early Roman contexts pointed to the presence of the Roman army in Berenike.¹⁸

15 The ostraka noted above dealing with the army's control of the city's water supply was a clear indication of the Roman military's presence in the city in the first century AD¹⁹ as were papyri and ostraka that recorded soldiers, officers and cohorts stationed in the port at that time.²⁰

16 The existence of ten walled installations ranging southwest to northwest of the city (and noted *supra*) indicated a military presence in the region that guarded the land approaches to Berenike.²¹ At least some of the garrisons of these forts may have been drawn from one or more units stationed in Berenike at that time; the men at these outlying forts may well have served on a rotational basis from the port itself. A fragmentary inscription, probably of the first or second century AD, but found recycled in to a Late Roman-era wall at Berenike, mentions a prefect of the garrisons and of Berenike.²² This text may lend support to the notion that overall command of these satellite forts was exercised by a high ranking officer residing at Berenike.

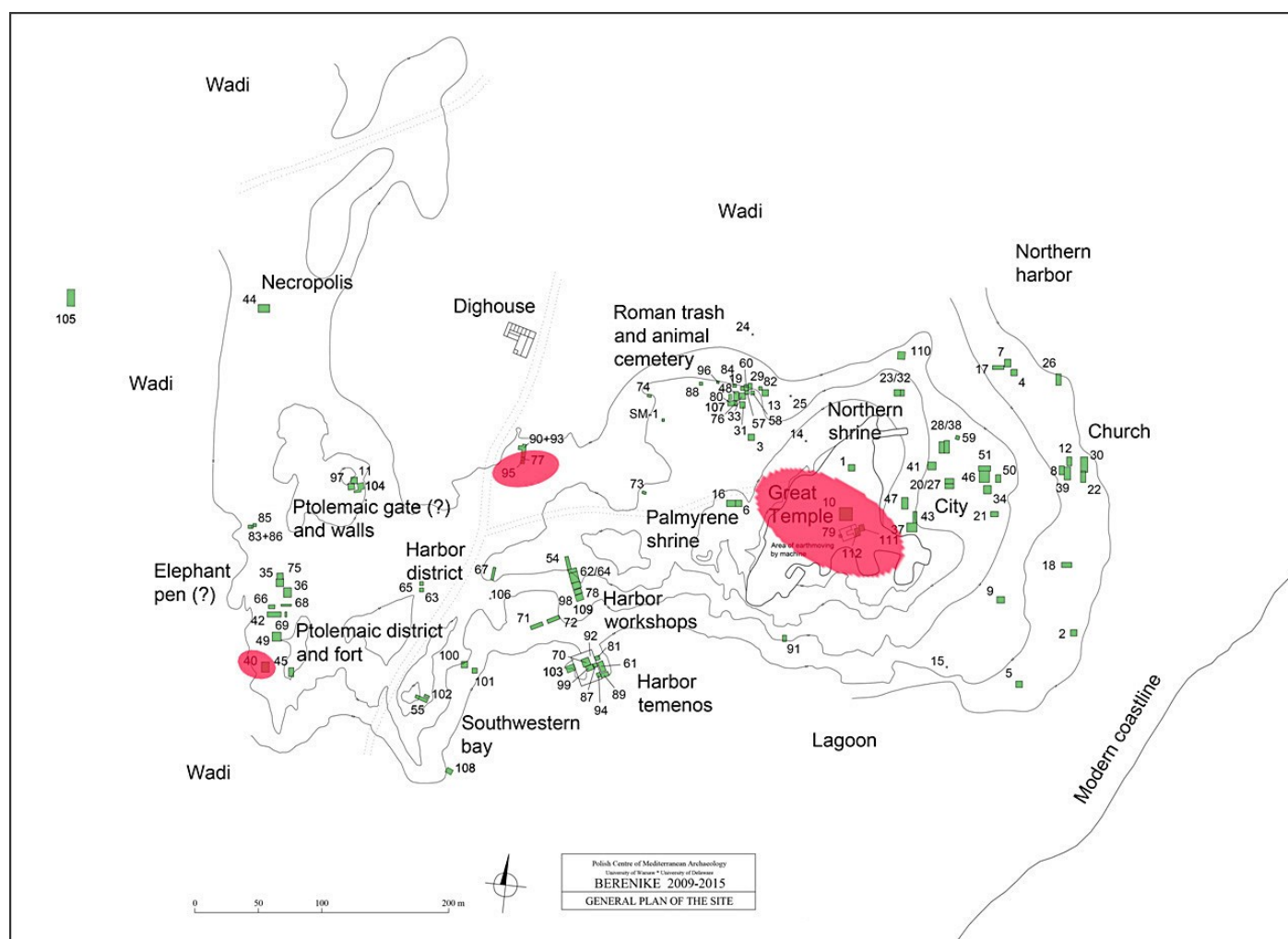
17 Roman military presence from at least the late second and early third centuries has been documented from the so-called "Shrine of the Palmyrenes."²³ Excavations recorded two dedicatory inscriptions from this installation. One dated to September 8, 215 AD, and carved in Greek on a stone statue base, had been dedicated by a Palmyrene archer named Marcus Aurelius Mokimos to the Roman imperial cult of Caracalla and Julia Domna.²⁴ The second was a bi-lingual Palmyrene-Greek text carved on stone and dedicated to the Palmyrene deity Hierobol/Yarhibol mentioning one Valerius Germanon, *chiliarch* of the *ala Heracliana* sometime between about 180/185 and 212 AD.²⁵ Both texts clearly indicated the presence of at least auxiliary mounted troops in Berenike at that time.

3. Religious structures/other evidence

3.1. Ptolemaic (Fig. 6)

18 There was little positively identifiable religious activity at Berenike in Ptolemaic times that has been documented by the excavations. There were a few small artifacts from the Ptolemaic industrial area that included a miniature temple door made of bronze²⁶ and from a Ptolemaic trash deposit two scarabs, one of which was broken and bore the cartouche of the 21st dynasty pharaoh Siamun (reigned ca. 986-967 BC).²⁷

Fig. 6



Plan of Berenike: Indications of Ptolemaic religious activity. Drawing by Berenike Project.

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19The Great Temple, previously identified as a Temple of Serapis by some earlier European explorers,²⁸ was very likely Ptolemaic in its original construction as a fragmentary inscription of Ptolemy VIII (reigned 169-116 BC) was found inside the building in the nineteenth century.²⁹ Perhaps not coincidentally, the reigns of Ptolemy VI-VIII (180-116 BC) were ones of intensive temple construction throughout Egypt.³⁰ This text of Ptolemy VIII may provide a more precise date for this temple's foundation. Strabo (*Geography* 2.3.4) –drawing on Poseidonius– reported towards the end of his reign that Ptolemy VIII sponsored Eudoxus of Cyzicus to explore the Red Sea and Indian Ocean. So the discovery of an inscription of that monarch at Berenike is not surprising, but corroborates what literary sources recorded about official interest in the Red Sea and Indian Ocean at that time.³¹

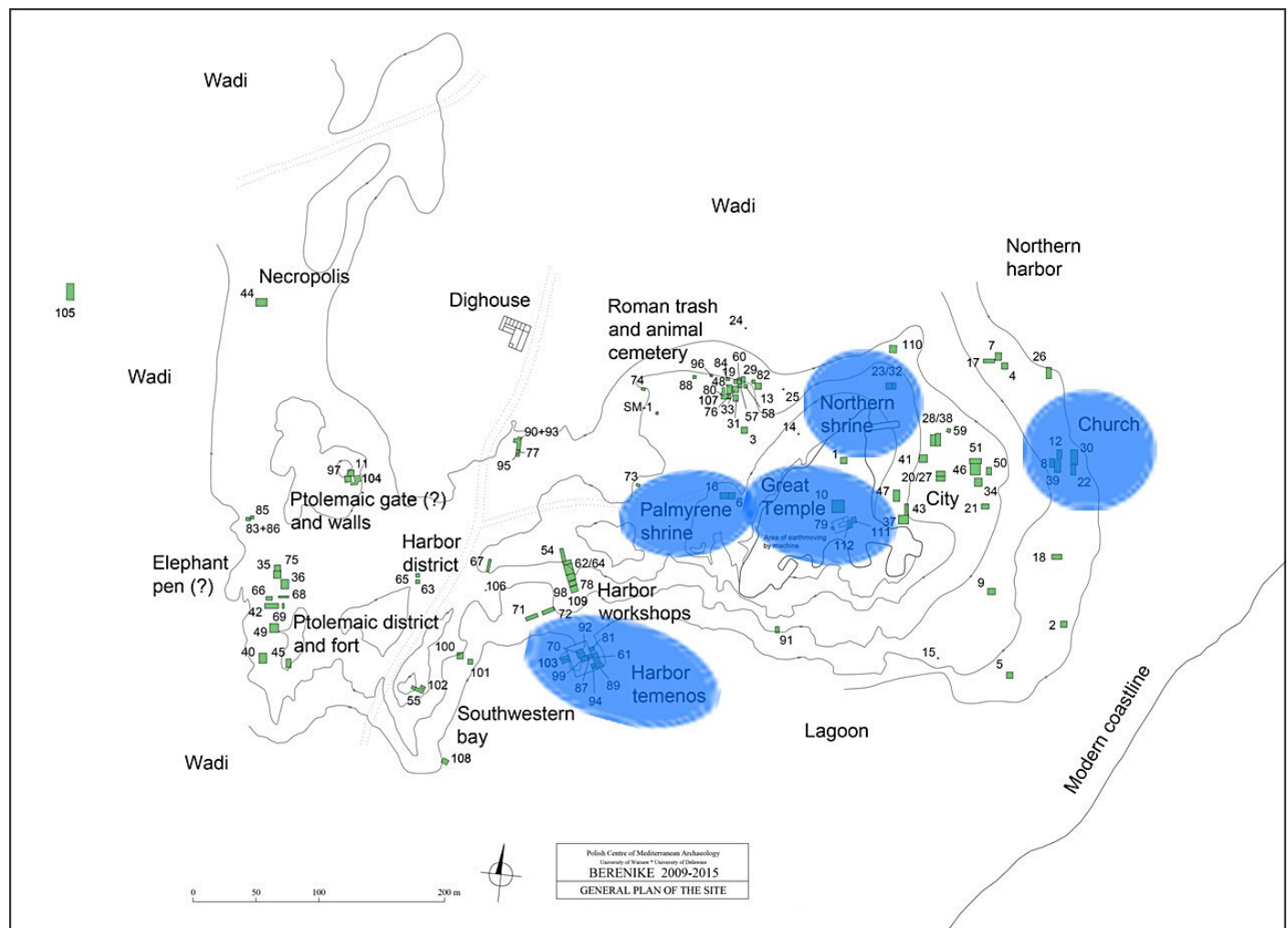
20Despite this evidence the preponderance of the data excavated thus far by our team dated most activity in the Great Temple from the Early to Middle Roman periods; cartouches on the temple walls noted by earlier European visitors also support this dating.³² The sunken feature in the southwestern harbor (noted *supra*) adjacent to the Late Roman harbor temple employed the same

type of white gypsum/anhydrite ashlar and similar construction techniques as used in the Great Temple.³³ It may also be Ptolemaic in origin. Like the Great Temple, the sunken feature seemed to have continued in use in Roman times. First through fourth century AD objects including black peppercorns, fired bricks and brick fragments, painted ostrich egg shell sherds, parts of bronze statues including bone eye insets and an inscription of Domitian had been discarded into the interior of the enigmatic square feature.³⁴ The objects found here suggested that the sunken feature had ceased to operate, at least in its original capacity, by the fourth century AD or, perhaps, earlier.

3.2. Roman (Fig. 7)

There were a number of clearly datable religious installations and artifacts of Roman date that have been excavated at Berenike thus far. These included the Great Temple and sunken feature noted above. The former certainly and the latter probably also functioned from Early Roman into Middle Roman times. There was archaeological evidence of continued operation, at least in parts of the Great Temple, into the Late Roman period: the fourth and, perhaps, the fifth century AD.

Fig. 7



Plan of Berenike: Indications of Roman religious activity. Drawing by Berenike Project.

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22 Of Middle and Late Roman date was the so-called “Shrine of the Palmyrenes,” discussed above.³⁵ Of fourth-fifth and, less likely, sixth century date was the Late Roman harbor temple. Here multiple cults including those of Bes, Isis, a South Arabian deity and links to Nubia and Meroë have been attested.³⁶ The deity or deities worshipped in the Northern Shrine, which was contemporary with and of similar size and internal plan to the Late Roman harbor temple, cannot be determined with certainty, though Isis has been suggested.³⁷

23 Finally, a large Christian ecclesiastical facility of the fifth century, including a church at its southern side, lay at the eastern end of the site.³⁸ This installation’s orientation and contents, including a number of terracotta oil lamps and fragments of a metal lamp all with Christian symbols, permitted identification of this large complex.

24 A number of associated inscriptions, statuettes and other artifacts also documented religious proclivities including a small stone head of Harpocrates from the Shrine of the Palmyrenes,³⁹ a broken stone figurine of Aphrodite from the Early Roman trash dump⁴⁰ and a wooden lid of a *pyxis* depicting Aphrodite *Anadyomene* inside a Greco-Egyptian style temple dating to ca. 400 AD;⁴¹ excavations documented the latter in a trench immediately north of the Great Temple. Inscriptions from outside temple/religious contexts included three from the courtyard of a house in the Late Roman commercial-residential quarter. These comprised one dedication to Isis by an interpreter/secretary late in the reign of Trajan and two, duplicates of one another, dedicated to Zeus by a woman named Philotera during the reign of Nero.⁴² These three inscriptions may well have been robbed from the Great Temple, which lay only about 50 m to the west; they were likely destined for recycling into one or more Late Roman era edifices somewhere in the Late Roman commercial-residential area (on which see *infra*). Excavations immediately north of the Great Temple documented an iron *uraeus* Fig. and depiction in metal either of the god Hapy or of Thoth. Both images were of Early Roman date and may have been associated with activities conducted in the Great Temple.⁴³

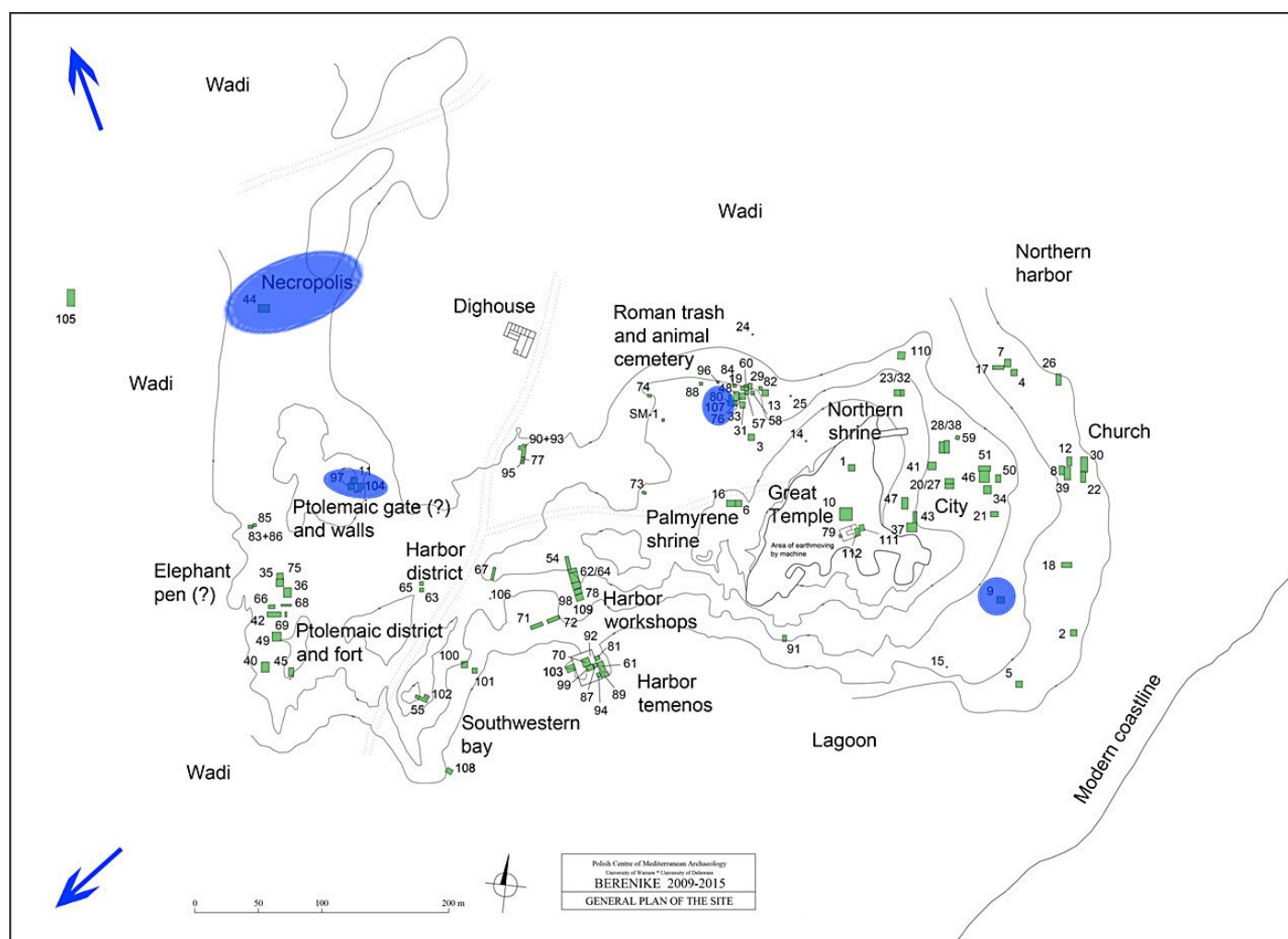
25 The range of deities venerated at Berenike, especially in Late Roman times and the number of the shrines that accommodated more than one cult clearly reflected a population in the emporium at that time generally tolerant of the religious traditions of their fellow urbanites.

4. Funerary remains

4.1. Roman (Fig. 8)

26 The bulk, if not all, human skeletal remains documented at and in the environs of Berenike that could be dated were from the Roman era. Three from the Early Roman period lay in the hydraulic area with the two amphora tops noted above. Of these, two were of adult males; one wore an iron ring on his left hand while the second was an older man who had a number of beads and an iron ring. The third was a tall woman whose head had been covered with a portion of an amphora.⁴⁴

Fig. 8



Plan of Berenike: Indications of human remains from the Roman period. Drawing by Berenike Project.

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27 Excavations documented the skeleton of 30-40 year old man in the putative “lighthouse” area dated to the fourth century AD.⁴⁵ This structure and the human remains it contained lay in the southeastern part of the city.

28 The remains of a prematurely born infant whose gender could not be ascertained had been discarded in a first or second century AD context⁴⁶ associated with a public building of uncertain function. It clearly had not received a formal burial.

29 Northwest of and close to Berenike in the area of modern, and now abandoned, Egyptian military bunkers, were ring-cairn tombs of Early and Middle (first-third century AD) date with artifacts, mainly pottery, but also a small finger ring intaglio depicting an Eros Figure milking a goat.⁴⁷

30 On the road leading northwest of the city towards the Nile excavations recorded a formal cemetery. The Late Roman portion of this necropolis contained two types of burials: cist and more

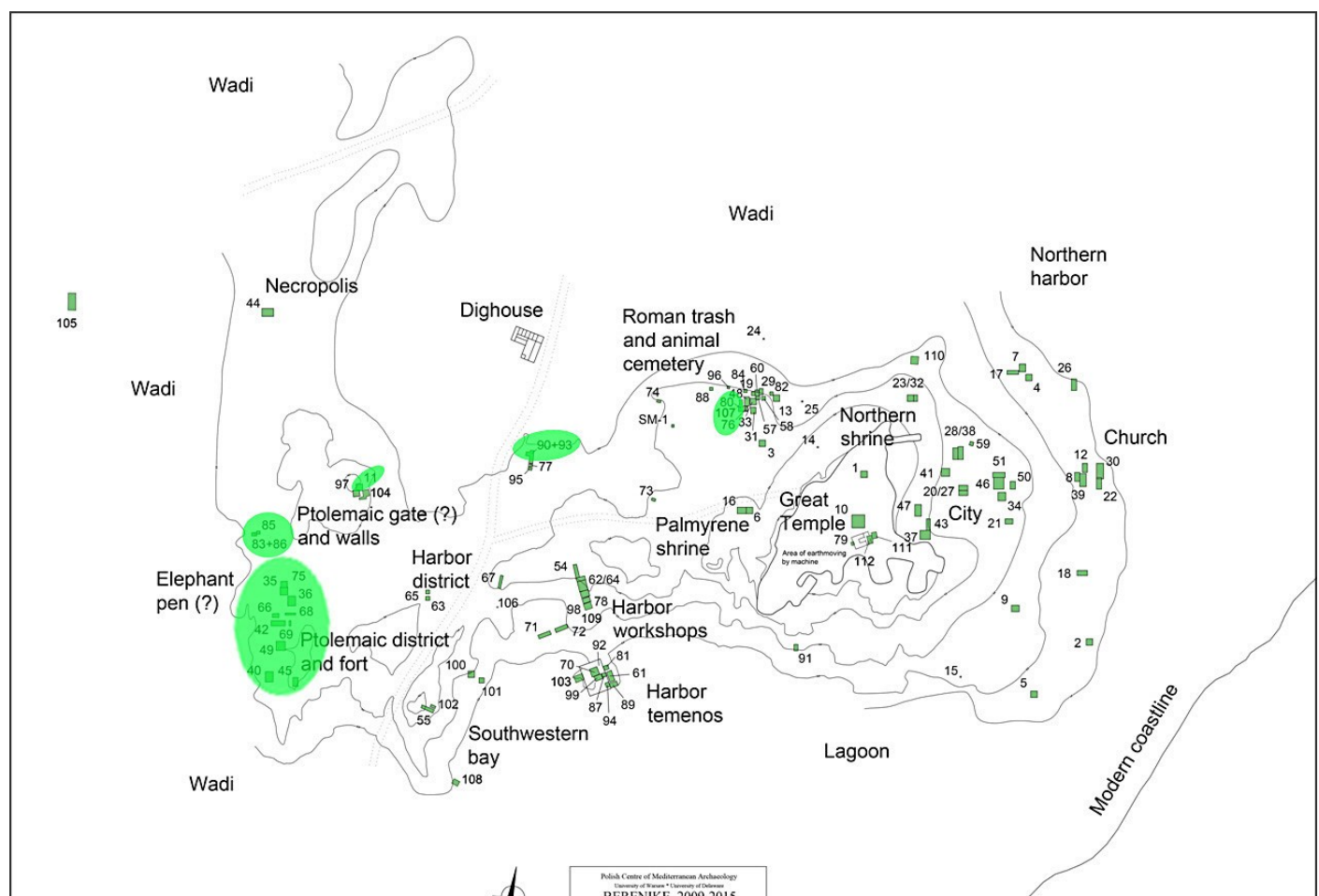
elaborate tombs built of coral heads and containing wooden sarcophagi, only tiny fragments of which survived robbing at some undetermined date. The cist graves contained the skeleton of a two year old girl with beads and portions of a burial shroud and the remains of an adolescent. The more elaborate sepulchers, which had been thoroughly looted, contained the scattered bones of adults, a few small scraps of wood and nails from the sarcophagi, but no grave goods. The project could not determine, however, if the two types of burials reflected differences in age, social-economic status, ethnicity or, perhaps, a combination of these factors.⁴⁸

31 West and southwest of Berenike and between the city and the installations in Wâdi Kalalat noted above were at least 640 ring tombs. These were primarily Late Roman in date judging by the associated pottery. The majority of these burials had been robbed at some undetermined period.⁴⁹

4.2. Unknown date (Fig. 9)

32 In the Ptolemaic industrial area excavations documented a number of human skeletons buried amidst abandoned ruins or in the sand, which had covered the earlier structures. One tall individual lay immediately west of the rectangular shaft with the tunnels noted above.⁵⁰ Two others appeared deposited above portions of the robbed out Ptolemaic curtain wall.⁵¹ A 40-50 year old female had been deposited atop an abandoned brick kiln; her pelvis had been covered by a large, undiagnostic, potsherd.⁵² There was another very disarticulated individual or individuals buried near the ground surface in the vicinity of the robbed Ptolemaic tower.⁵³

Fig. 9





Plan of Berenike: Indications of human remains of unknown date. Drawing by Berenike Project.

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33 Other skeletons lay farther southwest of the Ptolemaic shaft and tunnels. Altogether, these individuals included two headless skeletons and several complete ones.⁵⁴ Another intact skeleton of unknown gender found in a fetal position lay inside an abandoned Ptolemaic-era cistern (noted *supra*).⁵⁵

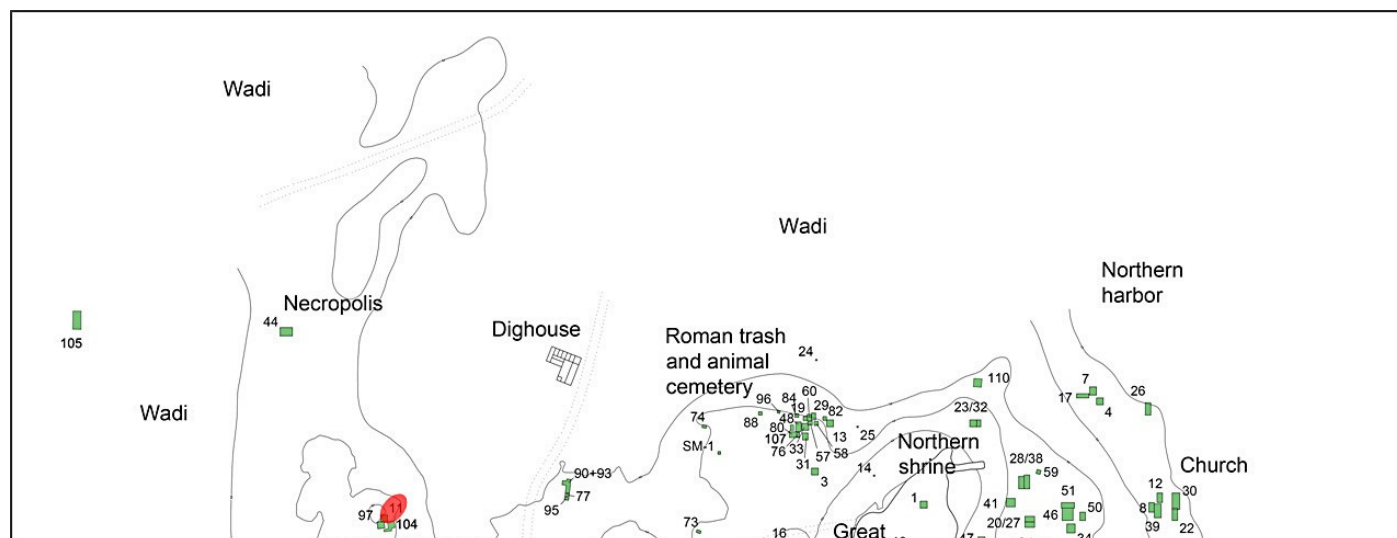
34 All human skeletons or portions thereof thus far identified at Berenike, both dated and undated, comprised adult males and females of varying ages, adolescents, infants, and a fetus. These remains suggested that Berenike's population came from a rather broad spectrum of the socio-economic groups. Several of the Early Roman burials contained grave goods (iron rings, beads, an amphora)⁵⁶ as did one Late Roman: the burial of the two year old girl found with beads and remains of a burial shroud.⁵⁷ However, all these remains, whether dated or not, provided insufficient evidence to enable excavators to determine the ethnicities of any of these individuals.

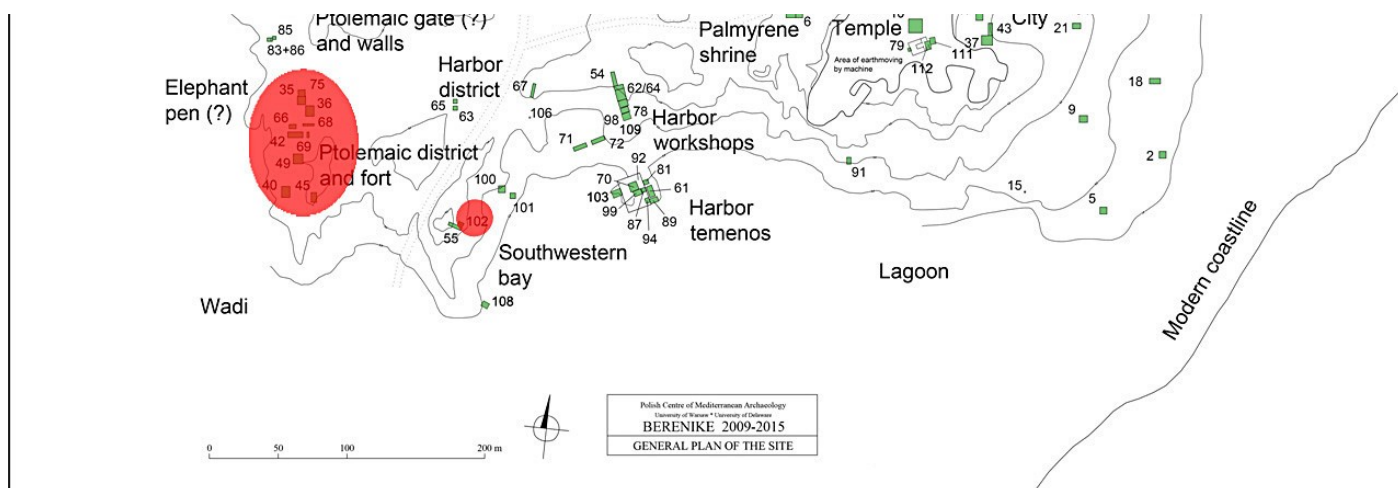
5. Industrial/commercial activities

5.1. Ptolemaic (Fig. 10)

35 Excavations in the Ptolemaic industrial area documented a brick kiln or a waste deposit from a brick kiln.⁵⁸ It lay immediately north of the intact stretch of Ptolemaic city wall and the hydraulic shaft with five tunnels noted above. It was atop this that the skeleton of the 40-50 year old female (see *supra*) had been recorded. Elsewhere in the Ptolemaic industrial area was a large quantity of lead; excavations in one trench alone recorded 95 kg of lead (see *supra*).⁵⁹ Excavations in nearby areas recorded additional quantities of lead,⁶⁰ which would have been used to manufacture pipes, fittings and as sheathing for the hulls of merchant ships.⁶¹

Fig. 10





Plan of Berenike: Indications of Ptolemaic commercial and industrial activity. Drawing by Berenike Project.

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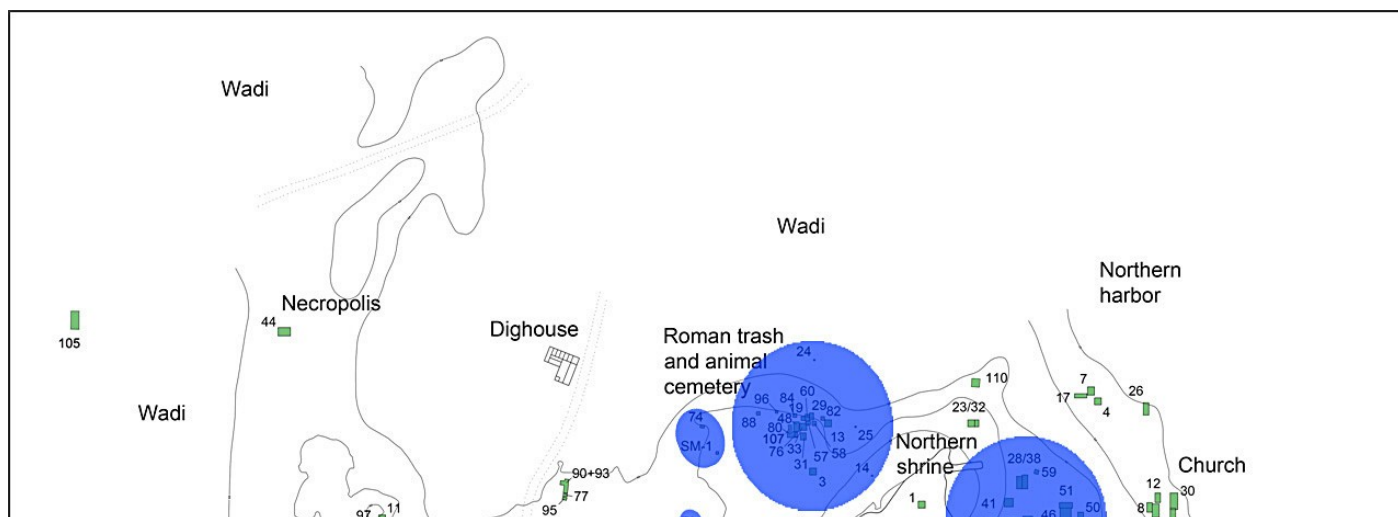
36 Other indicators of local industrial activity included large numbers of copper-alloy nails and tacks used for a variety of purposes; the longer ones would likely have been employed in ship repair.⁶² Excavations also documented iron and iron slag from the Ptolemaic industrial area.⁶³

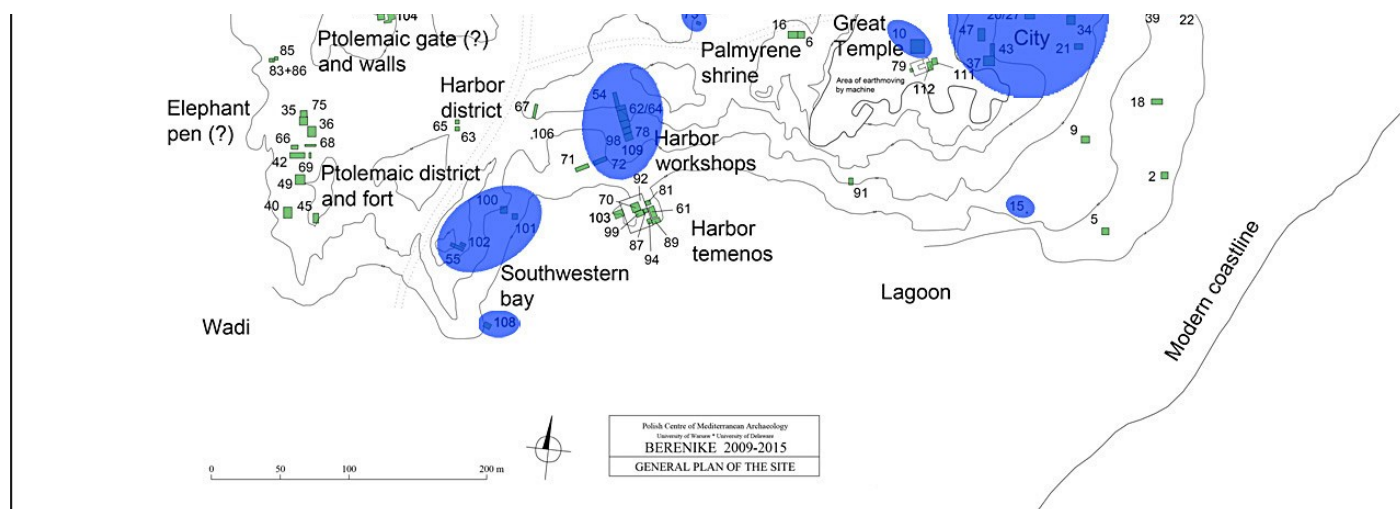
37 A small human head carved from local stone and found in the Ptolemaic industrial area indicated that a local sculpture workshop functioned in Berenike at that time.⁶⁴

5.2. Roman (Fig. 11)

38 There was far more evidence for industrial and commercial activities at Berenike in the Roman period than in the Ptolemaic. Metals (iron, lead and copper alloy) and terracotta crucibles used in metal manufacture,⁶⁵ turtle shell ornaments and wasters,⁶⁶ manufacture/repair of leather products⁶⁷ and the existence of a sculpture *atelier* as evidenced by a broken statuette of Aphrodite⁶⁸ made from local stone have been documented from Berenike in Early through Late Roman times. Recycling of glass also seems to have occurred in the Roman period.⁶⁹

Fig. 11





Plan of Berenike: Indications of Roman commercial and industrial activity. Drawing by Berenike Project.

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6. Residential structures

6.1. Ptolemaic

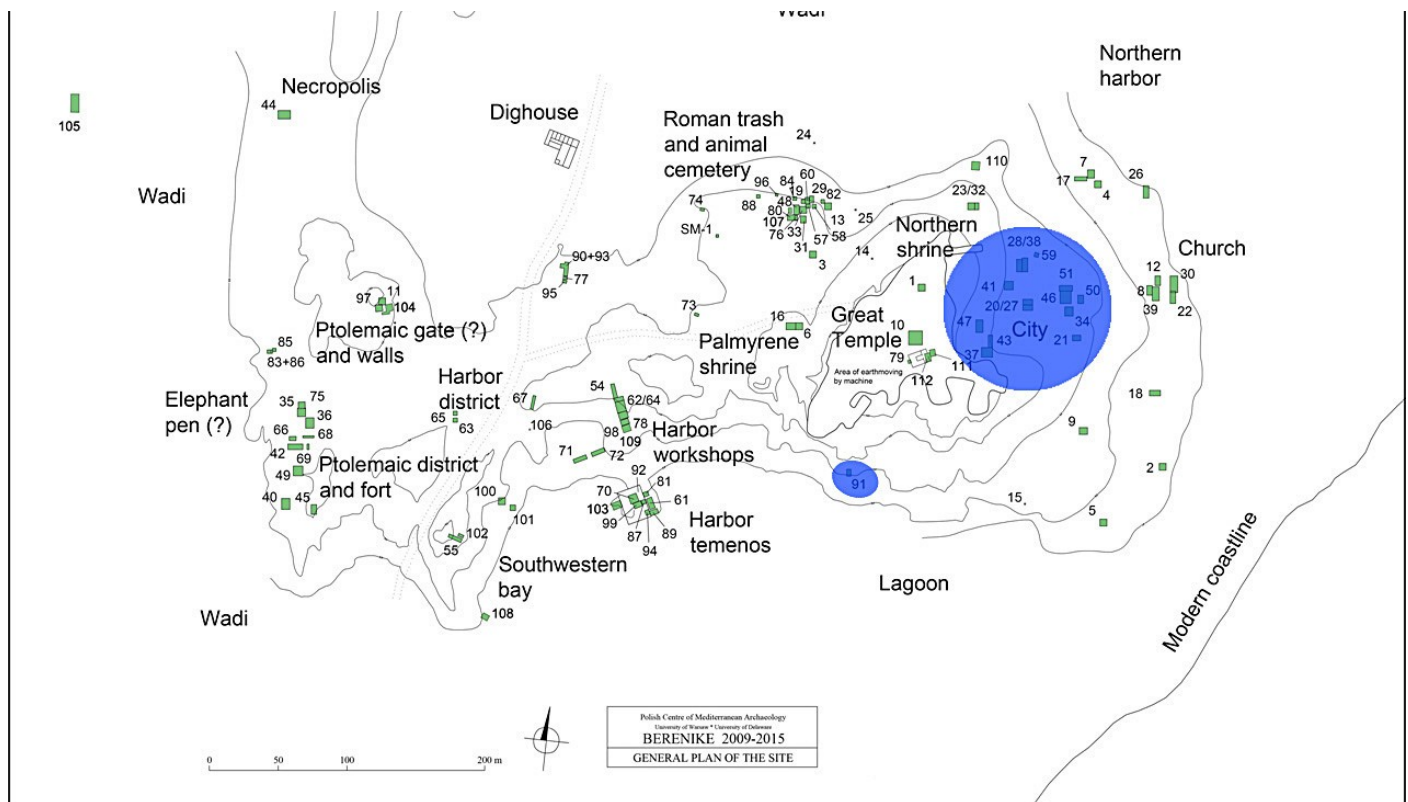
39 No identifiable Ptolemaic residential areas have been documented thus far in excavations at Berenike.

6.2. Roman (Fig. 12)

40 All evidence thus far recorded from Berenike for residential activities derives from Late Roman times (mid-fourth century on);⁷⁰ we know nothing about domestic dwellings from the Early or Middle Roman periods. There was substantial overlap between domestic/residential activities and industrial/commercial ones as evidence pointed to many multiple storied structures accommodating both types of pursuits. In the central eastern and portions of the southern parts of Berenike in Late Roman times, at least, it seems that many commercial activities took place on ground floors while upper floors of buildings were primarily, if not exclusively, residential/domestic in nature.⁷¹ Many staircases, made of gypsum/anhydrite stone recycled from earlier structures, survived attesting these intensively used multiple storied structures.⁷² It was in this quarter of the city that the three Early Roman inscriptions likely deriving from the nearby Great Temple (noted above) had been recorded.

Fig. 12





Plan of Berenike: Roman residential structures. Drawing by Berenike Project.

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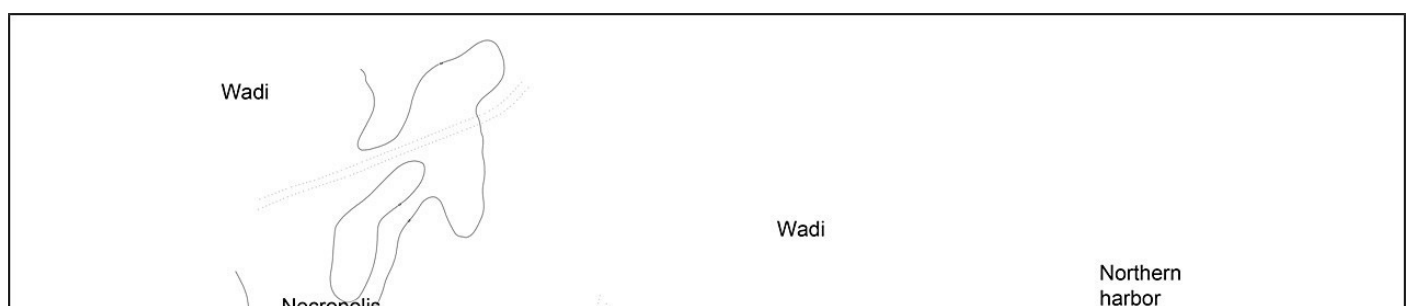
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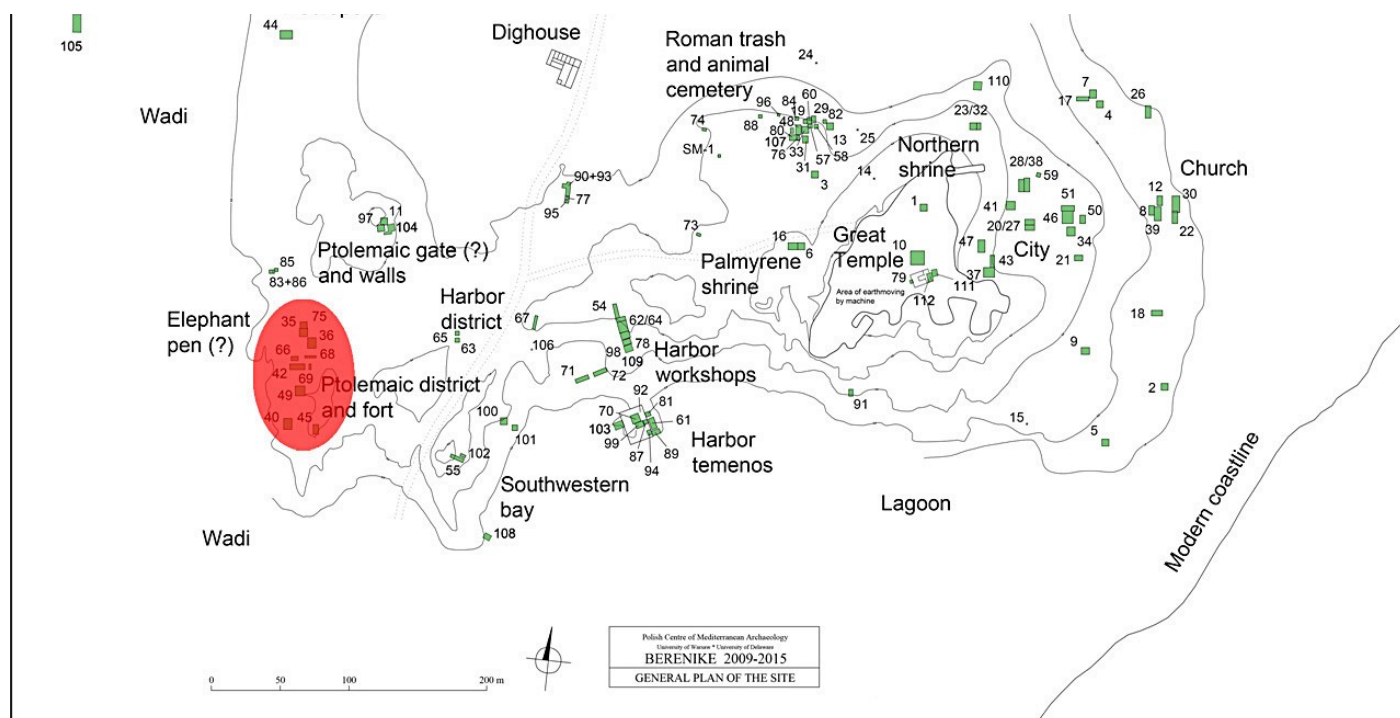
7. Maritime activities

7.1. Ptolemaic (Fig. 13)

41 Production of long copper-alloy nails suggested their use in ship repair; these derived from the Ptolemaic industrial quarter and were discussed above in the “industrial/commercial” portion of this paper. Indirect evidence for Ptolemaic maritime activities may be attested in the V-shaped ditch, a putative elephant retaining pen, and documentation of elephant molars.⁷³ More recent excavations have also recorded portions of a skull of an elephant.⁷⁴ If initial identification of this ditch is correct, then it indicated importation by sea of pachyderms in the Early Ptolemaic era, something several extant ancient written sources recorded in the third and second centuries BC⁷⁵ and as proven by the documentation of the elephant molars and the fragment of an elephant skull found near the ditch.⁷⁶

Fig. 13





Plan of Berenike: Indications of Ptolemaic maritime activity. Drawing by Berenike Project.

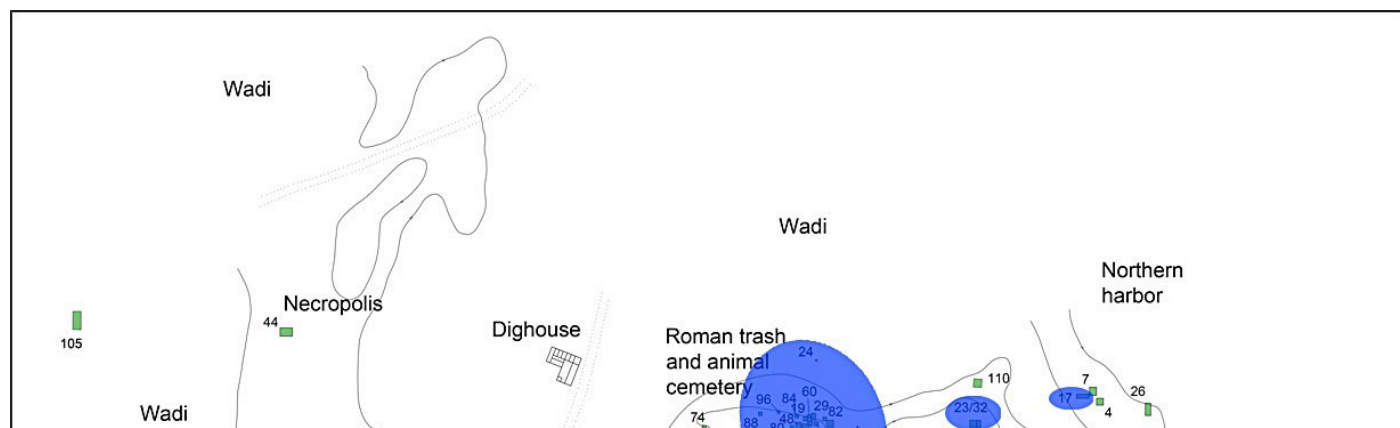
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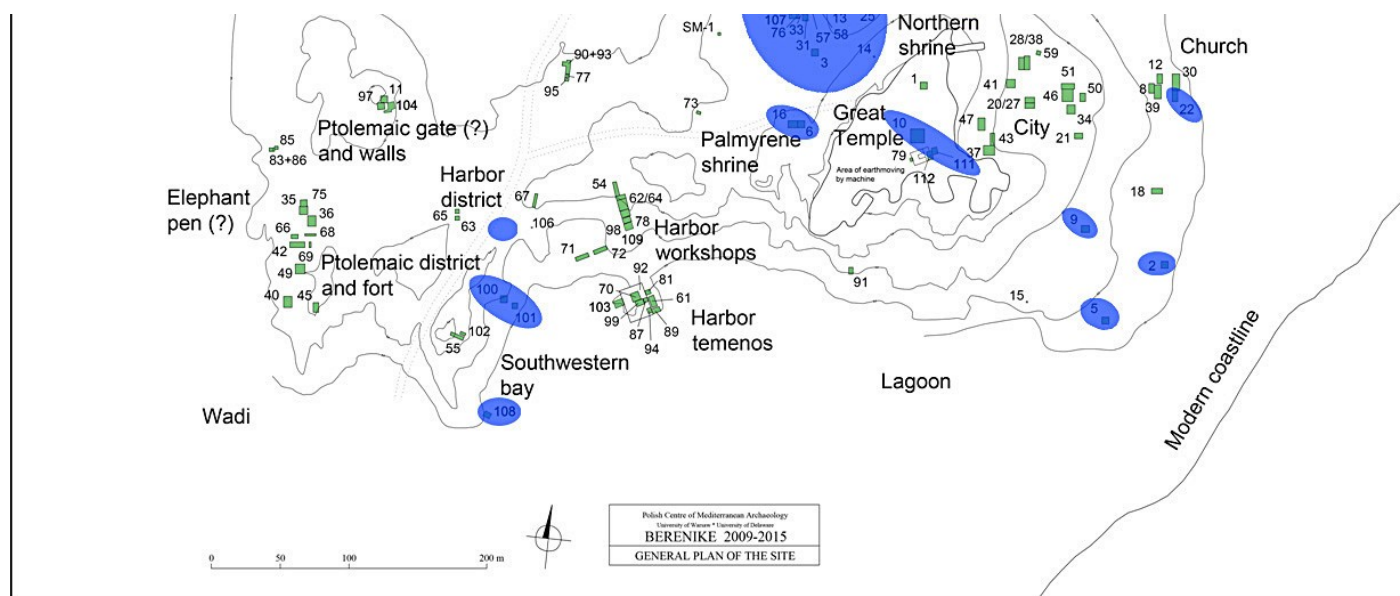
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7.2. Roman (Fig. 14)

There was far more, and quite substantial, evidence for maritime activity in both Early and Late Roman times at Berenike. Remains of dock, quay wall or breakwater structures have been located at three areas along the eastern edge of the site;⁷⁷ all seemed to be Early Roman. Other Early Roman evidence included ship timbers made of cedar wood –some put to other later uses– using (pinned) mortise-and-tenon construction methods,⁷⁸ a portion of a ship's frame made of cedar⁷⁹ and lengths of thick rope found in the southwestern harbor;⁸⁰ a putative ship's bollard or upright beam of unknown function made of cedar⁸¹ has also been recorded near the aforementioned ship timbers. A graffito carved on a potsherd of a ship at anchor,⁸² brailing rings, lead hull sheathing and possible loading nets made of rope/cordage have also been recorded from Early Roman contexts, mainly from trash dumps and from the southwestern harbor.⁸³

Fig. 14





Plan of Berenike: Indications of Roman maritime activity. Drawing by Berenike Project.

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43 Long iron nails from manufacturing areas in the southwestern harbor⁸⁴ and what must surely have been recycled ship timbers made of cedar and found in and near the Great Temple also derived from early Roman contexts.⁸⁵

44 From the Early Roman trash came numerous ostraka documenting the loading of supplies and cargoes onto ships⁸⁶ and a list of maritime equipment.⁸⁷ The name of one of the ships that put in to Berenike, *Gymnasiarchis*, also appeared on an ostrakon from the Early Roman trash dump.⁸⁸

45 From Late Roman contexts excavations documented several instances of teak wood timbers with dowel holes recycled into the walls of both religious and secular buildings; at least one also had remains of pitch or tar adhering to it.⁸⁹ The Northern Shrine preserved a teak wood beam over three meters long with dowel holes. One wall of the Shrine of Palmyrenes in its Late Roman phase also preserved a teak wood beam with dowel holes.⁹⁰ All these teak beams preserving dowel holes suggested that they had been recycled from one or more dismantled ships in the Late Roman period.⁹¹ A large chunk of iron, possibly an anchor fluke, had also been recycled into a late Roman-era wall immediately north of the Great Temple, while another portion of an iron anchor stock appeared associated with the fifth century Christian ecclesiastical building at the eastern side of the site.⁹²

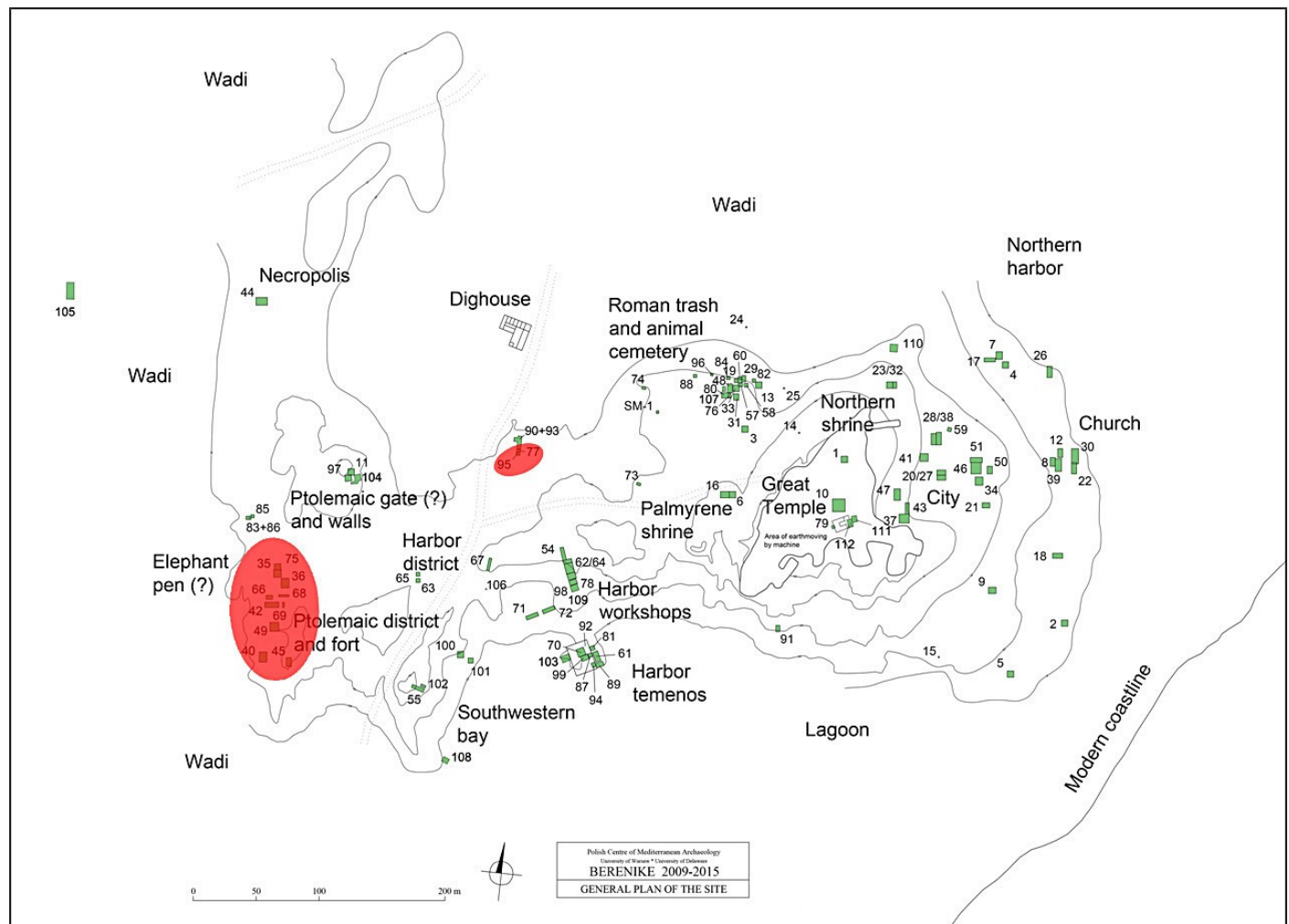
46 Vesicular basalt ships' ballast originating from Qana' on the Indian Ocean coast of South Arabia (modern Yemen) appeared on the surface in the southwestern harbor.⁹³ Unfortunately, the date of its deposition could not be ascertained.

8. Evidence for food procurement/storage

8.1. Ptolemaic (Fig. 15)

47 Evidence for food procurement and storage at Ptolemaic Berenike was indirect and comprised primarily botanical remains, but also, surprisingly, pork, imported from the Nile valley and beyond from the wider Mediterranean, Red Sea-Indian Ocean basin.⁹⁴ Several stamped amphora handles, including at least one from Rhodes suggested imports or recycling of those containers somewhere in the Nile Valley⁹⁵ or from the northern end of the Red Sea before their arrival at Berenike.

Fig. 15



Plan of Berenike: Indications of Ptolemaic food procurement and storage. Drawing by Berenike Project.

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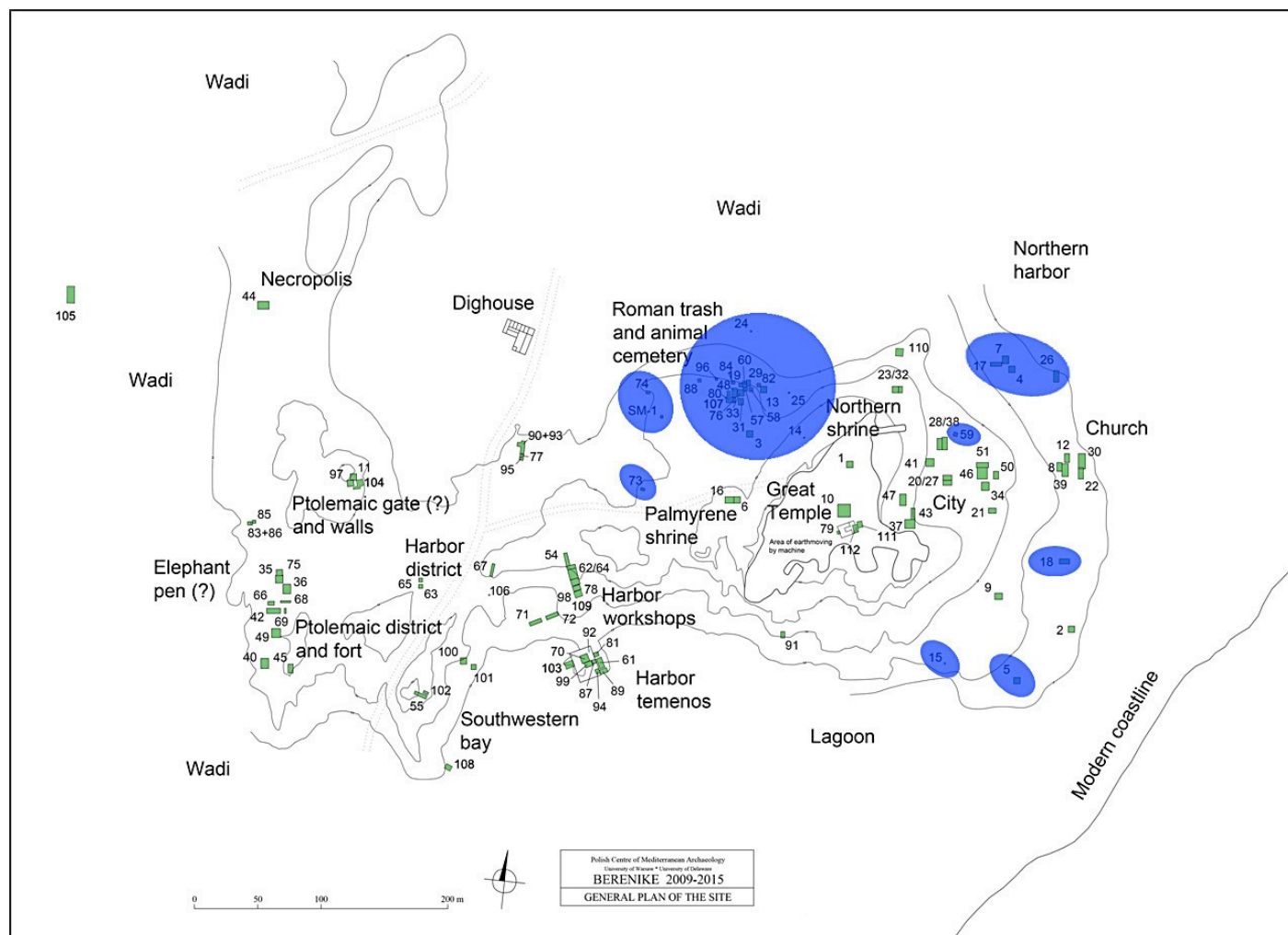
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8.2. Roman (Fig. 16)

48 The abundance of textual, botanical and faunal remains indicated a heavy reliance on food imports in Roman times from the Nile Valley and beyond from the Mediterranean basin and towards the south and east from South Asia and more broadly from the northwestern portion of the Indian Ocean. These comprised various nuts, fruits and vegetables, meat protein including Nile catfish and escargot from either northern Italy or southern France.⁹⁶ A number of epigraphic amphora stoppers, some with impressed and painted stamps and others with simple dipinti also

indicated importation of products from the Nile valley, the Fayum and elsewhere.⁹⁷

Fig. 16



Plan of Berenike: Indications of Roman food procurement and storage. Drawing by Berenike Project.

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49 Given the usually conservative nature of peoples' diets a general comparison of botanical and faunal remains from the Ptolemaic, Early and Late Roman periods provided a mirror on the ethnicities of some of those dwelling at Berenike in those periods.

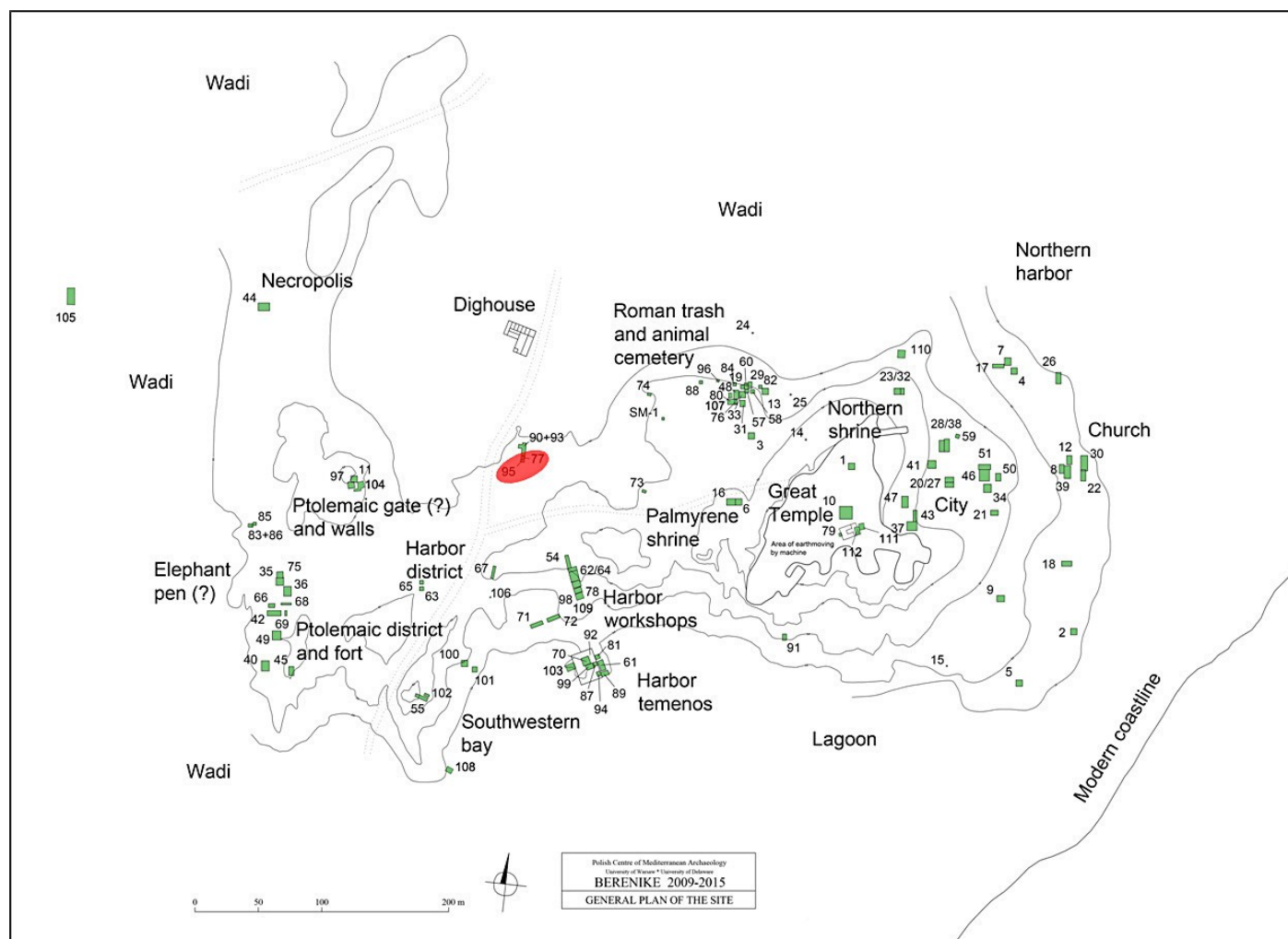
9. Trash dumps

9.1. Ptolemaic (Fig. 17)

50 Excavations revealed a large Ptolemaic trash dump found near a portion of the dismantled Ptolemaic city wall immediately north of the southwestern harbor.⁹⁸ Ceramic, botanical and faunal remains from this Ptolemaic refuse deposit, taken together, indicated a population of mainly Egyptian-Hellenistic individuals and of desert dwellers at that time.⁹⁹ Surprisingly, pork, though not a staple, was consumed at Berenike in this period. The recovery of a camel bone

documented the presence of that animal at Berenike at this time (Early Ptolemaic era), but did not indicate how many animals may have been on site at that time or in what capacity it/they may have been used.

Fig. 17



Plan of Berenike: Ptolemaic trash dump. Drawing by Berenike Project.

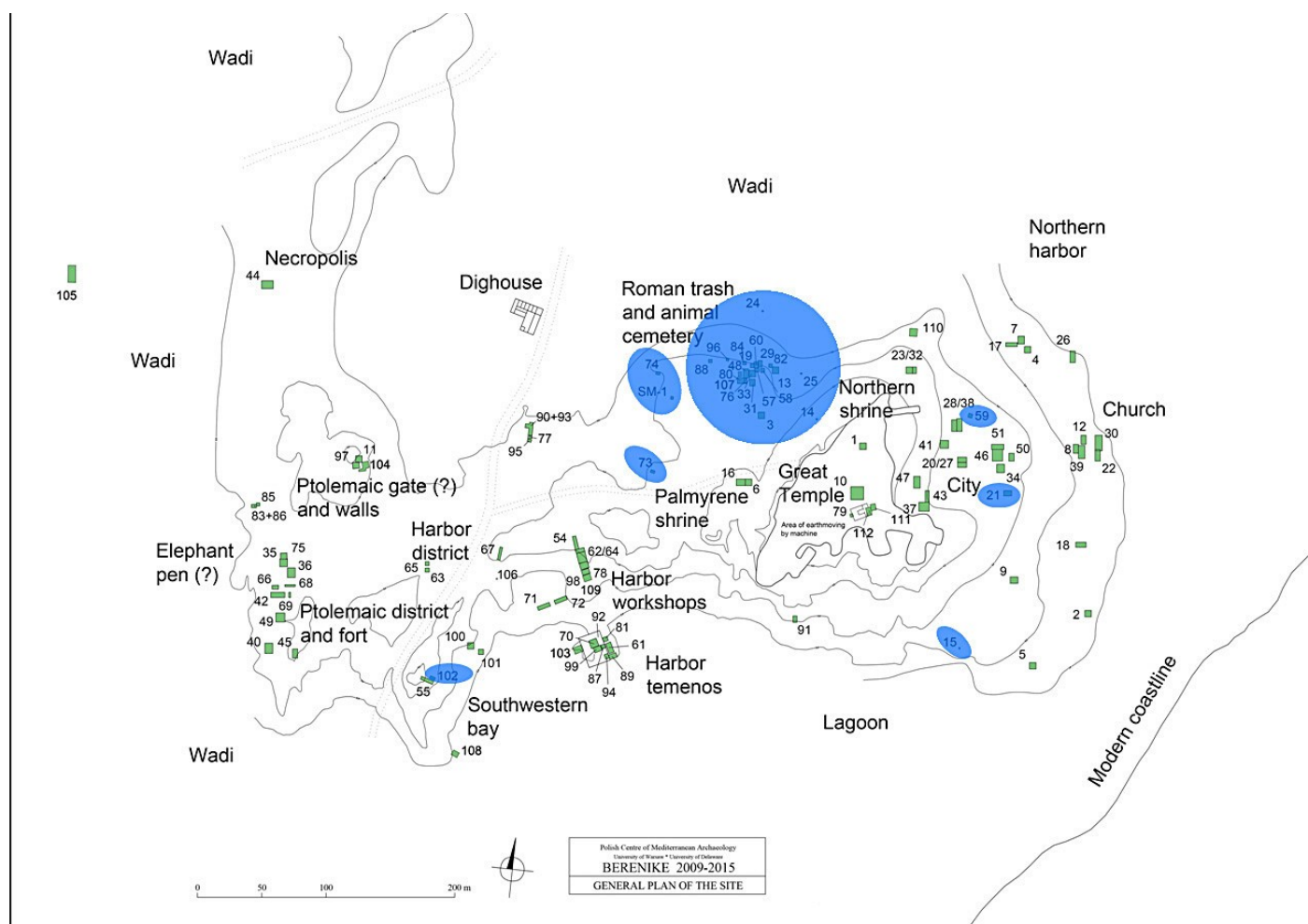
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9.2. Roman (Fig. 18)

51 Roman-era trash dumps have been found thus far from both Early and Late Roman times. The former lay generally north of the city center and were primarily first century AD (Tiberius, Claudius-Nero, the Flavians) in date.¹⁰⁰ Late Roman (mainly fifth century AD, but stretching into the fourth and sixth centuries) rubbish deposits have been found associated with the Late Roman residential/commercial quarter noted above.¹⁰¹ The huge volume of organic and inorganic artifacts and ecofacts deriving from these dumps provided a wealth of information about the populations dwelling at Berenike in those times.

Fig. 18



Plan of Berenike: Roman trash dumps. Drawing by Berenike Project.

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52The composition of the Ptolemaic population held true with an uptick of peoples of Mediterranean origin in the Early Roman period mixed with a small number of those hailing from elsewhere in the Near East, southern Arabia, sub-Saharan Africa and South Asia.¹⁰² Little is known about the Middle Roman period when Berenike suffered a nadir in its fortunes.

53In Late Roman times, the Mediterranean component of the population declined with a preponderance of the city's residents coming from Egypt, both desert dwellers and those who preferred marine sources for their food. Mixed with these were small numbers of individuals from southern Arabia, Nubia/Meroë, sub-Saharan Africa (especially the Kingdom of Axum) and South Asia (India and Sri Lanka).¹⁰³

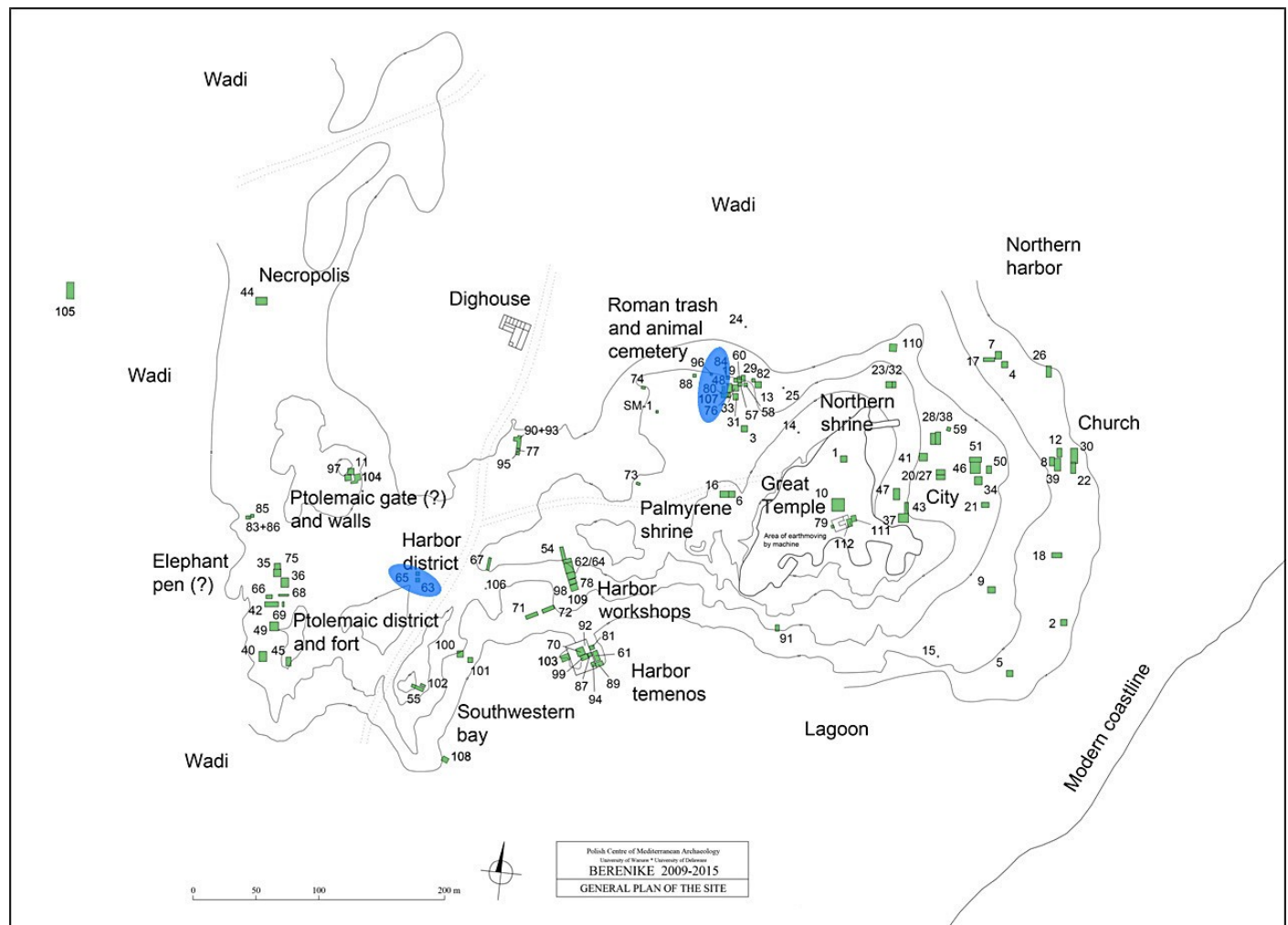
10. Animal burials

10.1 Roman (Fig. 19)

54Excavations recorded approximately 130 burials located in the Early Roman trash dump mainly of cats/kittens, followed numerically by dogs/puppies, then vervet or grivet monkeys, baboons and a bird of unknown species. Some still wore iron collars around their necks; at least one of these had

been decorated with beads, another with beads made of faience. Some of the animals had been buried under/in jars/amphoras or wrapped in cloth; others lay in the sand neither covered nor wrapped.¹⁰⁴ Excavations recorded the skeletons of four other dogs immediately north of the southwestern harbor.¹⁰⁵ The faunal specialist could not determine if these individuals had been buried here or had simply died in the positions in which they had been found.

Fig. 19



Plan of Berenike: animal burials from the Roman period. Drawing by Berenike Project.

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Conclusion

55 This paper has presented an abbreviated account of the nature of the remains thus far documented from excavations at Berenike and what they have revealed about hydraulic, military, religious, funerary, industrial/commercial, residential, maritime, food procurement/storage, trash dumping activities and animal burials at this emporium that operated for about eight centuries between the Eastern Desert and the Red Sea coast of Egypt.

56 Documentation of 12 different written languages, varying burial customs, and diverse religious

practices and culinary preferences indicated a cosmopolitan population of different ethnicities from various areas of the Mediterranean, Near East, Egypt, sub-Saharan Africa, South Arabia and South Asia. Skeletal remains of men, women and children as well as of the unborn also revealed the demographic range of the population at Berenike throughout its long history. This included both civilians and military personnel. We know the names of a number of these individuals both civilian and military, men and women. The recovery of a gold and pearl earring, escargot, marble floor and/or wall revetment, fine furniture coverings or wall tapestries, high end ceramic table ware, elaborately made glass ware, cloth imported from India and some of the finer metal artifacts indicated an element of the population at the upper end of the socio-economic spectrum. Clearly, the latter would have comprised a relatively small percentage of the city's population at any given time in its long history.

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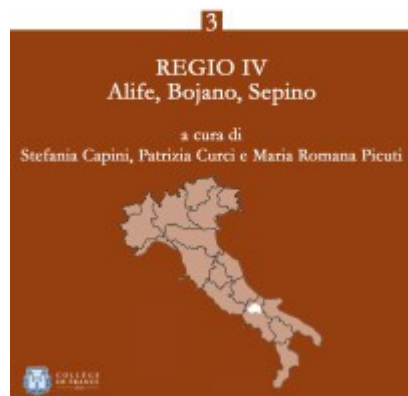


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