

THETIS

MANNHEIMER BEITRÄGE
ZUR ARCHÄOLOGIE UND GESCHICHTE
DER ANTIKEN MITTELMEERKULTUREN

HERAUSGEGEBEN VON
REINHARD STUPPERICH UND CORINNA STUPPERICH

BAND 28

2023



2024

Harrassowitz Verlag · Wiesbaden

in Kommission

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Results of the Winter 2023 Excavation Season at Berenike (Red Sea Coast), Egypt

Steven E. Sidebotham – Rodney Ast – Olaf E. Kaper – Marta Bajtler –
Nicholas Bartos – Roderick C.A. Geerts

Abstract: *Results of the Winter 2023 Excavation Season at Berenike (Red Sea Coast), Egypt*

In winter 2023 the Berenike project excavated, in whole or in part, seven trenches. Four of them were at and adjacent to the entrance of the Isis temple; two were in the “Northern Complex”; an additional one was in the western-most part of the site at the Hellenistic/Ptolemaic hydraulic facilities.

Results furthered our knowledge about the appearance and dates of construction and repair of the Isis temple entrance, portico and adjacent areas in the 1st through 5th-6th centuries AD and documented further the religious activities that took place in the Northern Complex from the 1st century BC to the 5th century AD. Excavation of a trench in the western part of the site expanded our knowledge about the water supply system in Hellenistic/Ptolemaic times and transformation of that area into a cemetery in the early Roman period.

Introduction

The 2023 season of archaeological excavations at the Ptolemaic-Roman (3rd century BC-6th century AD) Red Sea port of Berenike, Egypt (Pl. I 1) extended from January 3 to February 2, 2023. The project obtained a permit from the Egyptian Supreme Council of Antiquities¹ through the Polish Centre of Mediterranean Archaeology (PCMA) in Cairo.² Project sponsors were the University of Delaware, USA (S.E. Sidebotham, co-director), the University of Heidelberg, Germany (R. Ast, co-director) and Leiden University, the Netherlands (O.E. Kaper, co-director). A number of organizations and individuals provided generous financial support.³ The project staff consisted of specialists and archaeologists from the USA, Germany, the Netherlands, Poland, Italy, Portugal and Australia.⁴

During this season the project excavated, in whole or in part, seven trenches and extensions: BE20/22/23-135, BE23-151 to BE23-156 (Pl. I 2). Trenches 135, 151, 152 and 156 were at the entrance of the Isis temple, in the temple portico and, in the case of trench 151 and its extension, partially outside of the portico to the north. Trench 156 lay completely outside and south of the Isis temple entrance and portico. Trenches BE23-154 and 155 were in the so-called “Northern Complex,” while trench BE23-153 lay in the area of the Hellenistic/Ptolemaic well, hydraulic installations and bath at the western side of the site.

Isis temple entrance and portico – trenches BE20/22/23-135, BE23-151, 152 and 156 (Pl. II 1)

Excavations in trenches 135, 151, 152 and 156 documented extensive architectural elements both in situ and recycled, and inscriptions from the Roman period. One of the latter, written in Greek and surviving in many fragments, dates to June 19, 95 AD, late in the reign of the Roman emperor Domitian (81-96 AD). Originally having adorned the architrave of the portico, it further elucidates the chronology of this area of the temple. Pieces of it had been initially recorded in trenches 120 and 135 in previous seasons (Pl. II 1-III 2).⁵

1 We want to thank the SCA, the Permanent Committee, Dr. Mostafa Waziri (Secretary-General of the Supreme Council of Antiquities), Dr. Nashwa Gaber Mohamed (Director of Foreign Missions Affairs and Permanent Committees) and, from the Red Sea area, Dr. Emad Abdel Hamid el-Adawi and Dr. Aiman Ashmawy, for granting permission to continue our work at the site, and them, together with our field inspectors Mohamed Azizy and Mohsen Mahmoud. Mahmoud Abdel Mahsen Ahmed was invaluable in smoothing the way for yet another successful excavation season. Our driver Ahmed Bargesh went above and beyond the call of duty to ensure that we always had enough supplies and equipment on hand.

2 We extend our sincere gratitude to PCMA in Cairo especially the director Dr. Anna Wodzińska and her assistant Karolina Wolszczak.

3 The Honor Frost Foundation (UK), the University of Delaware (Office of the Dean of the College of Arts and Sciences) and private donors (J. and V. Seeger, W. Whelan and N. Shelly) provided funding for the Delaware side of the project. Heidelberg funds derived from a no-cost extension from the F. Thyssen Foundation, and from the German Research Foundation: the Collaborative Research Centre 933 “Material Text Cultures.” Leiden University provided funding from “Grant of the Leiden University Fund/Fonds Chastelain-Nobach (SPL), www.luf.nl(.)”

4 In alphabetical order by last name: Rodney Ast (co-director and Greek-Latin epigrapher), Nicholas Bartos (ceramicist), Marta Bajtler (archaeologist), Marianne Bergmann (sculpture

specialist), Kamila Braulińska (small finds photographer), Mariana Castro (archaeologist), Angela Cervi (inlaid furniture specialist), Roderick Geerts (ceramicist), Olaf Kaper (co-director and Egyptologist), Julia Lougovaya (registrar’s assistant and Greek-Latin epigrapher), Marina Nuovo (chief registrar), Szymon Popławski (architect), Silvia Prell (archaeologist), Steven Sidebotham (co-director, numismatist, field and small finds photographer), Mathijs Smith (archaeologist), Joshua Wightman (archaeologist), Marek Woźniak (archaeologist).

5 For trench 120 cf. S.E. Sidebotham – I. Zych – R. Ast – O.E. Kaper – M. Hense – M. Bergmann – M. Osypinska – Cl. Newton – A. Carannante – R.S. Tomber, Berenike 2019: Report on the Excavations, Thetis 25 (2020) 16-17; for trench 135 cf. S.E.

Excavations in 2018-2020 and 2022-2023 provided extensive evidence for the appearance of the Isis temple entrance and of the portico behind it (to the west). They uncovered in trench BE23-152 a sloping staircase c. 3.80 m wide (N-S) in its current manifestation, lined with walls to the north and south, which led up from the east (Pl. II 2-III 2 outlined) – presumably joining the main east-west street visible on the geomagnetic map of Berenike (Pl. III 3).

North-south walls delineated the staircase as balustrades, which had been added at some later date as they comprised recycled architectural and epigraphic blocks including one from the Domitianic architrave that recorded, in part, a reference to the Egyptian prefect (ἑπαρχος Αἰγύπτου) (Pl. IV 1). The northernmost of these makeshift walls narrowed somewhat the width of the original staircase. The southern wall bordering the staircase also contained architectural and epigraphic remains, the latter of which recorded part of a dedication documented in 2022.⁶ Both walls retained 4th-5th century trash that would otherwise have overflowed onto the staircase.

The staircase itself then transitioned to a large portico (10.15 m N-S x 6.35 m E-W) with a paved surface. The southern part of the paving comprised ashlar of varying sizes. In the northern part there were missing ashlar as well as smaller stones, both roundish and semi-rectilinear. Fragments of pavers had sample dimensions of 0.31 m x 0.20 m, 0.34 m x 0.27 m and 0.24 m x 0.30 m. Those pavers that appeared to be unbroken ranged in size from 1.20 m x 0.74 m, 0.85 m x 0.64 m and 0.67 m x 0.52 m. They varied in thickness (where measurable) from 0.11 to 0.16 m. The wide variation in dimensions suggested that the paving stones had not originally been hewn for this purpose; more likely, they had been recycled from earlier architectural features. The smaller – likely fragmentary – paving stones in the north probably represented the latest repairs of that surface (Pl. III 1). There were also at least two robber holes that penetrated beneath the ashlar floor. These were in the southwestern corner of the portico – partially excavated this season as BE20/22/23-135 – and near the portal linking the portico to the temple courtyard to the west (Pl. II 2-III 2 circled). The robber hole near the entrance to the temple courtyard, excavated in 2020 (in trench 135) had, as part of its fill, a terra sigillata plate with an anepigraphic stamp of the mid-

1st century AD.⁷ The robber hole in the southwestern corner of the portico floor contained discarded architectural elements, stones preserving hieroglyphic texts and pictorial images, as well as a small stone head of Serapis, which dates to sometime during or after the 2nd century AD (Pl. IV 2-4).⁸

A series of screen walls and columns surrounded the portico (Pl. II 2-III 2). These screen walls varied slightly in height and thickness from one area of the portico to another: c. 0.85-0.90 m high x 0.12-0.14 m thick. The extant screens have no Egyptian architectural decorations, such as torus moldings or cavetto cornices on their exterior faces,⁹ and their style is, therefore, of the classical (Greco-Roman) type. The columns had toppled over while others – all fragmentary and broken off at the height of the screen wall or slightly higher – were attached to the screen wall itself. One fallen column had a base and capital intact as well as its entire length, albeit with one side worn away. It measured 4.20 m high x 0.64 m in diameter while its base was c. 0.50 m high as was its non-Egyptian style capital (Pl. II 2 and VI 2 arrow). These dimensions provided an approximate height for the architrave (of c. 5.20 m) that bore the Domitianic inscription, which was itself 0.27 m high.

Benches, whose tops were about 0.60-0.65 m above the level of the paved portico floor and about 0.48-0.58 m wide, abutted the northern, western, southern and portions of the eastern interior faces of the screen wall enclosing the portico. Many, if not all, of the benches had also been added after construction of the portico as several had been built using recycled architectural and epigraphic fragments, one of which dated to late in 130 AD, during the reign of Hadrian. The stone used in construction of the screen wall, its associated columns, the benches and flagstones was local anhydritic gypsum.

Also found fallen on the pavement of the Isis temple portico in trench 151 was part of a frieze depicting heads of the goddess Hathor (Pl. IV 7), measuring 0.83 m x 0.36 m x 0.30 m. Remains of red paint survived in several places. This stone clearly derived from the same frieze as a fragment recorded from trench BE20-135,¹⁰ and it should be reconstructed on top of the façade wall of the temple forecourt to which the portico had been added.

Epigraphic evidence from excavations since 2018 inside the Isis temple, in its courtyard, in the portico and at its entrance indicate periods of construction, renovation and repair during and after the reigns of Tiberius (14-37 AD), Titus (79-81 AD), Domitian (81-96 AD), Trajan (98-117 AD) and Hadrian (117-138 AD). The lengthy two-line inscription from 95 AD, originally

Sidebotham – I. Zych – R. Ast – O.E. Kaper – M. Bergmann – A. Carannante – M. Osypínska – J.A. Harrell – R. Kucharczyk – R.S. Tomber – E. Soriga, Results of the Winter 2020 Excavation Season at Berenike (Red Sea Coast), Egypt, *Thetis* 26, 2021, 18-19 Pl. XIV 2; XV. XVI 2; S.E. Sidebotham – R. Ast – O.E. Kaper – M. Bergmann – Sh. Bandare – A. Maurer – R. Hartmann – S. Popławski – J.M. Oleksiak – N. Bartos – R.C.A. Geerts – R. Kucharczyk – M. Castro with contributions of M. Stoye, Results of the Winter 2022 Excavation Season at Berenike (Red Sea Coast), Egypt, *Thetis* 27, 2022, 27 and Pl. XXVII 5-6, XXVIII-XXIX.

6 BE-22 135.009.02; cf. Sidebotham, et al. 2022 loc. cit. (n. 5) 27.

7 For photos of this robber hole cf. S.E. Sidebotham et al. 2021 loc. cit. (n. 5) Pl. XX 1-2.

8 Personal communication from M. Bergmann (see below).

9 D. Arnold, *Temples of the Last Pharaohs* (New York, Oxford 1999) 303.

10 S.E. Sidebotham et al. 2021 loc. cit. (n. 5) 19 Pl. XIX 6.

probably about 10 m long (Pl. V 1 arrows) sat atop the temple portico.

Reuse of a Hadrianic inscription as part of a bench provides a terminus post quem of 130 AD for repairs to the portico. A large block found to the east of this bench and inscribed with Greek on two sides, probably to be assigned to the late 3rd or the 4th century AD (Pl. VII 2 arrow), also points to this later period of use of the portico. This evidence is consistent with some of the epigraphic finds from the temple courtyard. They span the late 2nd until the early 4th century AD, many of them dating to the reign of Septimius Severus (193-211 AD), a period of considerable activity within the temple. Additional archaeological data, in the form of repaving of the portico and recycled stones serving as column bases in some instances, also indicates at least two and, possibly, three or more later periods of repair/reuse of the temple entrance and portico. The latest ceramic evidence for use of the area (though not necessarily associated with religious activities) dates from sometime in the 6th century AD. Just north and outside, but abutting the exterior temple portico wall (in trench BE23-151) was a large trash dump that had its latest deposit, based on ceramic dates, sometime in the 6th century AD. This trash dump extended to the front of the portico in BE23-152.

Trench 151 (3 m N-S x 11.5 m E-W) lay at the northern end of the temple portico and just outside it to the north (Pl. II 1; III 1 and VI 2). It included the northern portico wall, benches inside and abutting the northern and northwestern portico walls and large quantities of late Roman-era trash (noted above: 4th-6th centuries AD) discarded outside and abutting the temple's northern portico wall.

Atop one of the benches in the extreme northwestern corner of the portico in trench 151 excavations documented 28 *tricornis tricornis* shells¹¹ (Pl. V 2) that likely formed a deliberate deposit and did not appear to have been the discarded remains of a meal, though evidence for cooking and consumption of the contents of seashells in the portico area had been documented in 2019.¹² The 28 shells found atop the bench in trench 151 were the only deposit of seashells identified inside the Isis temple portico. Several other deposits found outside the portico in previous seasons and in the Isis temple courtyard comprised cowries; these may have been foundation deposits or some other type of dedications or may have, in some cases, served as curtains or as some other form of decoration.¹³ Excavations in previous seasons had recorded similar accumulations of cowry shells in the so-called Falcon

Shrine¹⁴ located in the Northern Complex c. 140 m north of the Isis temple and also in the Late Roman Harbor Temple/Lotus T (trench 61),¹⁵ which lies c. 230 m west-southwest of the Isis temple.

The top outside (northern) face of the podium/northern portico on which the screen walls rested preserved wooden building clamps in situ (Pl. VI 1). The trash north of the screen walls included some noteworthy ceramics. One depicted a stylized fish in raised relief (Pl. IV 5) and another sherd preserves graffiti which includes a swastika (Pl. IV 6). Accompanying characters could be Greek – possibly numerals (?) –, but they do not yield immediate sense as such. The piece is somewhat reminiscent of the 3rd-century dipinto from the fort of Didymoi on the road between Berenike and Coptos. It depicts a soldier with two swastikas on his shield, and also preserves alphabetic looking characters that have so far resisted explanation.¹⁶ The swastika was a traditional good luck symbol in ancient India, and was widespread in the Mediterranean world during the Greek Dark Ages, specifically during the Geometric period, and later with trade-related implications for South Asians (especially those from India and Sri Lanka) in the Early Historic Period (c. 600/500 BC-300 AD).¹⁷ A terminus post quem date for the trash was mid-6th century AD based upon a very diagnostic rim sherd of African Red Slip Ware (see below). This suggests that this dump was among the latest archaeological deposits at Berenike as occupation ceased at about that time.¹⁸

Trench 152 (9.70 m N-S x 2.5 m E-W) documented the sloping staircase noted above (Pl. II 2-III 2 outlined) that was clearly the main (eastern) entrance to the Isis temple. It probably linked the temple with a main east-west street that eventually terminated on the seaside near a 5th century church excavated in

11 Personal communication from Alfredo Carranante who identified the shells from photos.

12 Sidebotham et al. 2020 loc. cit. (n. 5) 17.

13 Examples (not exhaustive) of cowry shells documented from the Isis temple: Sidebotham et al. 2020 loc. cit. (n. 5) 17; Sidebotham et al. 2022 loc. cit. (n. 5) 27.

14 S.E. Sidebotham et al. 2020 loc. cit. (n. 5) 15 Pl. XII 3; J Oller Guzmán – D.F. Abella – F. Trevin Pita – O.E. Kaper – R. Ast – M. Osypisnka – S.E. Sidebotham, A Falcon Shrine at the Port of Berenike (Red Sea Coast, Egypt), *AJA* 126, 4, 2022, 569. 571 Fig. 5.

15 140 m in a straight line, and 180 m via the ancient streets, which led from the Isis temple eastward to the tetrastylon and then northward along the *cardo* to the Falcon Shrine (information provided by J. Rądkowska. S.E; Sidebotham – I. Zych, Berenike: Archaeological fieldwork at a Ptolemaic-Roman port on the Red Sea coast of Egypt 2008-2010, *Sahara* 21, 2010, 15-16 Figs. 24, 26; J. Rądkowska – S.E. Sidebotham – I. Zych, The late Roman harbor temple of Berenike: Results of the 2010 season of excavations, *Polish Archaeology in the Mediterranean* 22, 2013, 224-225).

16 H. Cuvigny (ed.), *Didymoi. Une garnison romaine dans le désert Oriental d'Égypte. II-Textes* (Cairo, 2012) 409; an image of the sherd is available at <https://www.ifao.egnet.net/bases/publications/fifao67/?&os=507>.

17 For use of the swastika in India in the Early Historic Period cf. K. Rajan, Transoceanic Cross-Cultural Relationship between Peninsular India and Sri Lanka 5th century BCE-3rd century CE, *Journal of Indian Ocean Archaeology* 5, 2008, 28. 29 Fig. 3; 30. 31 Fig. 5; 32. 139 Pl. 3 bottom.

18 S.E. Sidebotham, *Berenike and the Ancient Maritime Spice Route* (Berkeley, Los Angeles, London 2011) 279.

1996-2001 (Pl. III 3).¹⁹ In its latest manifestation, the staircase had been lined with walls to the north and south that delineated this sloping access to the temple (see above). It led to the portico, which was decorated with columns and screen/portico walls and paved with flagstones of various sizes, noted above (Pl. II 1-III 2 outlined). Immediately west of the staircase was a column fragment (3.10 m long), which had collapsed sometime after abandonment of the staircase; excavations eventually removed that (Pl. VII 1). Another larger column and an associated capital, the latter now partially in the eastern baulk, noted above (Pl. II 2 and VI 2 arrow), also collapsed across parts of both trenches BE23-151 and BE23-152. That column and capital, described above, remained in the trenches at the end of the season.

A rectilinear-shaped hole cut into the juncture of the northwestern part of the staircase with the portico was likely another robber pit into which had fallen a portion of a column that was 2.0 m long x 0.64 m in diameter. The column preserved two holes suggesting, perhaps, that portions of the screen wall had once been affixed to it (Pl. VII 2), probably on the eastern side of the portico towards its northern end. Beneath this fallen column were three steps of an earlier staircase (Pl. VIII 1). These stairs continued southward and, likely, eastward and were clearly an earlier entrance into the Isis temple. Lack of time prevented further exploration of this earlier feature. Pottery dates for trench 152 were, primarily, 4th-5th centuries AD.

The paved portico floor had been broken through in two places, as noted above. Into the one hole in the extreme southwestern corner (Pl. VIII 4 outlined), had been thrown a number of architectural elements, some of which preserved hieroglyphic texts and images including a head of Serapis made of anhydritic gypsum (Pl. IV 2-4). Its distinctive almond-shaped eyes and “bowtie” shaped mouth identified it as a product of the same local atelier as small, sculpted heads documented from the Isis temple²⁰ and from trench BE18/19-116 in the Northern Complex in previous seasons.²¹

Trench BE23-156 (2 m N-S x 4 m E-W) lay outside the southern end of the Isis temple portico (Pl. II 1; III 1 and IX 1). Documented here were large architectural fragments, many with dental moldings (Pl. IX 1), as well as large pieces of wood likely associated with some aspect of the temple’s portico construction. There was also a trash deposit, which included copper-alloy slag

and fragments of one or more crucibles with remnants of copper/copper alloy adhering to them (Pl. VIII 2), examples of which have been documented previously from various areas of the site.²² Also recorded from this trash deposit was the rim of an Aswan white bowl that preserved a rather elaborate graffito of a lotus flower (Pl. VIII 3). At the southern baulk of BE23-156 excavations documented the faces of two substantial roughly NE-SW-running walls that abutted one another (Pl. IX 2). Construction methods were typical of late Roman-era walls documented from other structures at Berenike. They comprised cobble-sized fossilized coral heads with ashlar defining the ends of the walls. Those, together with associated pottery, indicated that these walls dated sometime in the 4th-5th centuries AD.

Pottery from Isis temple trenches 135, 151-152 and 156

Most ceramics from trenches 135, 151-152 and 156 dated mid-4th into the 6th century AD, with the occasional presence of Early Roman material.²³ Almost all of the trash deposits adjacent to the temple entrance and portico dated to the 4th-6th centuries AD, as evidenced especially by numerous Late Roman 1 amphorae from Cilicia (dating to the 4th through 6th centuries AD at Berenike), Late Roman 3 amphorae from western Asia Minor (dating to the 4th through 6th centuries AD at Berenike, but most common in the 5th century AD), Aswan White Slip ware bowls (mid-4th through 6th centuries AD at Berenike), and from trench BE23-151, a piece of African Red Slip Ware Hayes 91C, which dated to the mid-6th century AD, making it the latest precisely dated fragment from the trash layers (Pl. XI 1).²⁴

The ceramic assemblage from these trenches reflected Berenike’s extensive contacts with the Persian Gulf, India, South Arabia, Axum, North Africa, the

19 S.E. Sidebotham, Religion and Burial at the Ptolemaic-Roman Red Sea Emporium of Berenike, Egypt, *African Archaeology Review* 31, 2014, 617-619.

20 S.E. Sidebotham – I. Zych – M. Hense – R. Ast – O.E. Kaper – M. Bergmann – M. Osypínska – A. Carannante, Results of the Winter 2018 Excavation Season at Berenike (Red Sea Coast), Egypt. The Belzoni Bicentennial Report, *Thetis* 24, 2019, 16 Pl. XXI 4; S.E. Sidebotham et al. 2020 loc. cit. (n. 5) 18-19 Pl. XXII 2 and XXIII 1-4;

21 Sidebotham et al. 2020 loc. cit. (n. 5) 14 Pl. VII 7 and XXII 2 (left).

22 Crucible fragments and copper alloy slag have been identified elsewhere on site, cf. for example A.M. Hense, Metal Finds, in: S.E. Sidebotham – W.Z. Wendrich (eds.), *Berenike 1994. Preliminary Report of the 1994 Excavations at Berenike (Egyptian Red Sea Coast) and the Survey of the Eastern Desert (Leiden 1995)* 56-57; A.M. Hense, Metal Finds, in: S.E. Sidebotham – W.Z. Wendrich (eds.), *Berenike 1995. Preliminary Report of the 1995 Excavations at Berenike (Egyptian Red Sea Coast) and the Survey of the Eastern Desert (Leiden 1996)* 225-226; S.E. Sidebotham, Excavations, in: S.E. Sidebotham – W. Wendrich (eds.), *Berenike 1999/2000. Report on the Excavations at Berenike, Including Excavations in Wadi Kalalat and Siket, and the Survey of the Mons Smaragdus Region (Los Angeles 2007)* 41. 76. 77; S.E. Sidebotham – I. Zych, Results of the winter 2014-2015 Excavations at Berenike (Egyptian Red Sea Coast), Egypt & Related Fieldwork in the Eastern Desert, *Journal of Indian Ocean Archaeology* 12, 2016, 5. 7 Fig. 8.

23 The total ceramic assemblage analyzed from the Isis temple during the 2023 season constitutes 27,918 sherds weighing a total of 141,363 g. Rim fragments were used to create an EVE (Estimated Vessels Equivalent) count of 7,655.

24 J.W. Hayes, *Late Roman Pottery. A Catalogue of Roman Fine Wares* (London 1972) 140-144; J.W. Hayes, *Supplement to Late Roman Pottery* (London 1980) 505; M. Bonifay, *Études sur la céramique romaine tardive d’Afrique* (London 2004) 177-181.

Eastern Mediterranean, and Italy. There was minimal material, however, from the Western Mediterranean, which has been consistently the case with ceramics, coins and other artifacts documented from earlier seasons.²⁵

In addition, there was a re-examination of several porcelain fragments recovered from earlier seasons in the Isis temple. Based on the inventories of two shipwrecks, these examples dated to the period 1817-1822 and could, therefore, have been left on site by Wilkinson's expedition in 1826, or even, in the case of the oldest fragments, by Belzoni's team in 1818.²⁶

Northern Complex (trenches BE23-154 and 155)

In the Northern Complex (trenches BE23-154 and 155) work continued in areas or trenches that had been partially excavated in previous seasons. Trench BE23-154 (6 m N-S x 2.5 m E-W) was a westward continuation of trench BE18/19-116, while BE23-155 (4 m N-S x 6 m E-W) focused on a room west of trench BE19-129 and south of BE19-131 (part of the so-called "Falcon Shrine").²⁷

Excavations in trench 154 documented a niche in the eastern/interior face of the western wall of the room (Pl. X 1-2 niche outlined). This wall had clearly been added after the northern and southern (east-west running) walls had been constructed. The niche contained broken pottery and other objects, including fragments of plaster, likely representing a seated figure of Serapis (Pl. XI 3) as well as a crudely made, and, apparently, unfinished, anhydritic gypsum sculpture of a seated falcon with folded wings.²⁸ It measured 38.4 cm long x; 31.6 cm high x 13.2 cm wide at the height of the wings x 14.5 cm wide at the base, which was 3.8 cm high. (Pl. XI 4 and XII 1-2). Excavations also documented the fragmentary torso of a standing statuette in black steatite carved in Pharaonic style that measured c. 21.5 cm high x 6 cm wide x 4.5 cm thick (Pl. XI 6). It may have joined with a Meroitic style head of Amun that had been recorded from excavations in trench BE18/19-116 (Pl. XI 5).²⁹ Pottery documented from trench 154 ranged in date from the first/second to the 4th centuries AD. Excavations in this trench were not completed this season.

Trench BE15-110, located in the Northern Complex and north of trench 154, had walls built of recycled

anhydritic gypsum ashlar similar to those in trench 154. Trench 110 also had a niche built into its western wall with remnants of marble revetment extant in a few locations. Although the trench 110 niche was empty, one might speculate that, at one time, it also served a function analogous to that in trench 154 and that it once housed one or more cult statues.³⁰

Excavations in trench BE23-155 (4 m N-S x 6 m E-W) also remained incomplete this season. However, important results included recording a large stone naos in the center of the trench, which took up much of a single room (Pl. XIII 1-2 naos outlined). The exposed room entrance faced east, and excavations documented most of the northern and southern walls of this room except at their extreme western ends. These comprised mainly fossilized coral heads. Excavations did not reach the room's western wall, which may have also had an entrance into the room.

In front of, i.e. east of the naos, and leaning against it, was a stele (53 cm high x 45.5 cm wide x 6.5 cm thick). Salt had destroyed the top one fourth to one third of it. The remainder, however, revealed a seated figure of the Ibis-headed god Thoth at the center-bottom and to the bottom right, a figure of a Pharaoh facing left and wearing a kilt. Recorded on the left side of the stela in Greek and Demotic was a late Ptolemaic dedication to Hermes (see below) (Pl. XIV 1).

The stela rested on top of a libation table/temple pool made of stone (Pl. XIV 1). Atop it was a small potsherd containing a minute amount of some unidentified residue, likely a burnt offering. Excavations in various religious edifices at Berenike over the years have recorded numbers of these libation tables.³¹ The libation table beneath the stela, in turn, rested atop a circular-shaped stone bowl, which remained mostly unexcavated this season due to lack of time. Quantities of broken, but unpainted, ostrich eggshells appeared throughout the trench, but especially in the southeastern corner. Broken ostrich eggshells, some painted and others not, as well as an intact ostrich egg, have also been recorded in other cult centers in Berenike.³² They served as dedications or magical incantations.³³ Perhaps those from trench 155 had similar purposes. Additionally, excavations in trench 155 documented quantities of iron nails, numerous examples of which have been recorded from across the site in previous seasons.³⁴ Associated pottery

25 For example, Sidebotham 2011 loc. cit. (n. 18) 261.

26 R.Ph. Straub – D. Freeman – N. Pickford, Nagel Auctions. Tek Sing Treasures (Stuttgart 2000); P. Tunstall-Behrens (ed.), Auction Catalogue Christie's: The Diana Cargo. Chinese Export Porcelain and Marine Artefacts (Amsterdam 1995). We would like to thank A. Kaneda (BAAC) for the identifications.

27 Sidebotham 2020 loc. cit. (n. 5) 15 Pl. X-XII; J.O. Guzmán et al. 2022 loc. cit. (n. 14) 567-591.

28 Berenike inv. no. BE23-154/008/002.

29 S.E. Sidebotham et al. 2020 loc. cit. (n. 5) 14 Pl. VII 3; O.E. Kaper, Berenike as a Harbour for Meroe; new evidence for Meroitic presence on the Red Sea Coast, *Der Antike Sudan* 32, 2021, 64.

30 S.E. Sidebotham – I. Zych, Results of the Winter (2014-15) Excavations at Berenike, Egypt and Related Fieldwork in the Eastern Desert, *Journal of Indian Ocean Archaeology* 12, 2016, 8-11.

31 Sidebotham 2014 loc. cit. (n. 19) 604-605. 608. 609. 613. 616.

32 Sidebotham 2014 loc. cit. (n. 19) 607-608. 609. 616; Sidebotham – I. Zych 2016 loc. cit. (n. 30) 19. 20 Fig. 35.

33 D. Wilburn, Inscribed Ostrich Eggs at Berenike and Materiality in Ritual Performance, *Religion in the Roman Empire* 1, 2, 2015, 263-285.

34 For examples (not exhaustive) cf. Hense 1995 loc. cit. (n. 22) 51; Hense 1996 loc. cit. (n. 22) 221-222 Table 11-11; A.M. Hense, The Metal Finds, in: S.E. Sidebotham – W.Z. Wendrich (eds.), *Berenike 1996. Report of the 1996 Excavations at Berenike*

from Trench BE23-155 ranged in date from the 1st to the 4th centuries AD.

Two low parallel walls, comprising recycled materials, connected the eastern entrance of the room with the naos and the stela. One of the stones on the low northern wall was a miniature Pharaonic style “false door” (Pl. XIII 1-2 circled, and XIV 2) that had been turned upside down and recycled here for its latest intended purpose.

West of the naos in trench 155 excavations recorded remains of a wooden bowl with a burnt offering inside. A white ring of salt outlined the bowl (Pl. XIV 3). There are numerous parallels for dedicatory wooden bowls containing burned offerings that have been recorded from excavations at other cult centers in Berenike in the 4th-5th centuries AD including from the Shrine of the Palmyrenes³⁵ and from the Late Roman Harbor/Lotus Temple.³⁶

Also west of the naos in trench 155 excavations documented a broken ceramic container filled with fragments of monkey bones of an unidentified species (Pl. XV 1),³⁷ likely a dedication. Remains of other offerings also lay west of/behind the naos.

There may have been another entrance from the west into this room with the naos, as noted above, which might explain the presence of these offerings; otherwise, it would have been very difficult for dedicants to squeeze between the naos and the northern wall of the room if the sole entrance had been to the east of the naos. Additionally, it was customary that only priests would have had access to the front of a naos.³⁸ Therefore, any dedications by laypersons would have been made behind the naos from a putative portal in the room’s western wall, which remained unexcavated this season.

Pottery from Northern Complex trenches 154-155

Ceramics excavated in the Northern Complex dated from the 1st into the 6th century AD.³⁹ The Early

(Egyptian Red Sea Coast) and the Survey of the Eastern Desert (Leiden 1998) 201-210; A.M. Hense, *The Metal Finds*, S.E. Sidebotham – W.Z. Wendrich (eds.), Berenike 1997. Report of the 1997 Excavations at Berenike and the Survey of the Egyptian Eastern Desert, including Excavations at Shenshef (Leiden 1999) 225. 227; A.M. Hense, *Metal Finds in: S.E. Sidebotham – W.Z. Wendrich* (eds.), Berenike 1998. Report of the 1998 Excavations at Berenike and the Survey of the Egyptian Eastern Desert, including Excavations in Wadi Kalalat (Leiden 2000) 191; A.M. Hense 2007 loc. cit. (n. 22) 212; Sidebotham – Zych 2010 loc. cit. (n. 15) 21; most recently S.E. Sidebotham et al. 2021 loc. cit. (n. 5) 18.

35 Sidebotham 2014 (loc. cit. (n. 19) 613.

36 Sidebotham 2014 (loc. cit. (n. 19) 605.

37 Personal communication from Marta Soyinka.

38 F. Dunand – C. Zivie-Coche, *Gods and Men in Egypt 3000 BCE to 395 CE* (Ithaca, London 2004) 86-87.

39 The total ceramic assemblage analyzed from the Northern Complex during the 2023 season constitutes 11,303 sherds weighing a total of 81,389 g. Rim fragments were used to create an EVE (Estimated Vessels Equivalent) count of 2,279.

Roman layers comprised especially Egyptian (e.g., AE 3-1.1A) and central Mediterranean (e.g., Campanian Dressel 2-4) amphorae as well as material from Rhodes and Knidos. Fine wares included glazed Persian Gulf bowls, ovolo-decorated Italian sigillata, and barbotine-decorated fragments from Aswan. The late antique material from the Northern Complex was very similar to that from the Isis temple.

The western/Ptolemaic area of Berenike (trench BE23-153)

Trench BE23-153 (6.0 m N-S x 6.5 m E-W) lay at the western edge of the site (the area of the Hellenistic/Ptolemaic well, hydraulic installations and bath) (Pl. I 2 and XVI 1) between trenches BE15-104 and BE19-125, which had been excavated in earlier seasons.⁴⁰

About 6 m east of the Hellenistic well, a vertical shaft (Pl. XVI 1 outlined, and XV 2), cut into the tunnel leading east from the well, contained large 3rd-2nd century BC amphora fragments (Pl. XVII 1) as did the area on the ground surface immediately adjacent to the top of this vertical shaft.

The vertical shaft (1 m N-S x 1.5 m E-W x 1.60 m deep) had portions of the tunnel cut into its eastern and western sides or, possibly, but less likely, cut into a pre-existing tunnel. The slope of the tunnels indicated that water ran gradually downhill from east to west into the Hellenistic well/cistern. As the eastern-most end of the tunnel complex has yet to be excavated, the source of this water has not been determined. It might be another well or some catchment system for rainwater.

Both tunnels were built using curves and were of varying heights and widths; neither ran in a straight line (Pl. XVI 2). The western tunnel (Pl. XVII 5) ran eastward from the Hellenistic well for about 6 m before entering the vertical shaft; its interior dimensions varied as did its western and eastern entrances. The tunnel entrance leading from the well was 1.40 m high x 0.57 m wide while its eastern entrance (from the shaft) was 0.73 m high x 0.60 m wide. The tunnel emanating from the vertical shaft towards the east (Pl. XVII 6) could be measured for about 8 meters and its (western) entrance from the shaft was 0.80 m high x 0.60 m wide. Due to time constraints, it could not be determined if there was a vertical shaft or some other feature at the eastern end of the eastern-most tunnel.

The extant shaft and tunnels may be remains of a short qanat/foggara. Qanats, which have many different names, were first attested archaeologically in western Iran, northern Iraq, and eastern Turkey sometime during or shortly before the rise of the Achaemenid Persians. The technology later spread to central Asia and China. Qanats also appear in southern Europe (Spain, Greece), Cyprus, Israel, across North Africa, (including southern

40 For trench 104 cf. Sidebotham – Zych 2016 loc. cit. (n. 22) 21-24; for trench 125 cf. Sidebotham 2020 loc. cit. (n. 5) 13.

Libya and Egypt's Western Desert) and the Arabian peninsula. This technology may have been introduced into those latter areas (Arabian Peninsula, southern Libya and the Western Desert) during the Achaemenid Persian period.⁴¹

A qanat is a tunnel connecting the groundwater recharge zone with lower lying irrigated land. It starts below water table in the groundwater recharge zone, the gradient of the tunnel being more gentle than that of the ground. Once excavated, ground water filters into the channel, runs down its gentle slope, and emerges at the surface as a stream or to be tapped along its course via vertical shafts cut along the water conduit. Some qanats are only a few tens of meters long, while others can stretch for many kilometres. As noted above with the currently known lengths thus far identified, the Berenike tunnel and well complex was extremely short. If future excavations of this hydraulic feature confirm that it was a qanat/foggara, then it would be the first ancient example ever documented in Egypt's Eastern Desert.

Excavations in trench 153 also recorded a number of early Roman-era human burials (Pl. XVIII 1) adding to over 20 recorded in this area since 2012.⁴² Excavations this season documented two burials containing skeletons and two empty burial pits. The find of an isolated human skull may indicate a further pit. The skull may have been part of a burial that had been disturbed while digging a later grave, a situation similar to two examples recorded in this same area in trenches BE15/18-104 and BE19-125.⁴³ There are parallels elsewhere in the ancient world for burial pits that had been excavated but were never used, perhaps in anticipation of future occupants.⁴⁴ The burials and unused burial pits in trench 153 had been

dug after the hydraulic facility was abandoned in the later Hellenistic/Ptolemaic period.

Pottery from the Ptolemaic hydraulic area trench 153

The majority of the ceramics excavated this season from the Ptolemaic hydraulic area dated to between the 3rd and 2nd centuries BC, with the occasional presence of intrusive Late Roman material and some Early Roman finds.⁴⁵ The Hellenistic ceramics were chiefly from the Nile Valley and the Aegean (e.g., Knidos and Rhodes). Pottery in the hydraulic structures themselves was exceptionally well-preserved, and in multiple instances, excavations recovered nearly complete vessels or examples that could be reconstructed. These included several Rhodian 1E (from the late 3rd to the 2nd century BC) and 1E-2 type amphorae (from the middle to the second half of the 3rd century BC) as well as AE 1-2.5 type amphorae from Lower Egypt (from the middle of the 3rd to 2nd century BC) (Pl. XVIII 2). Among the finds were two stamped Rhodian amphora handles (Pl. XVII 2-3).

One locus – securely dated from the middle of the 3rd to the 2nd century BC – yielded joining diagnostic fragments of a pot from East Africa, likely from the Ethiopian highlands, the location of the later Kingdom of Axum (Pl. XI 2). There are parallels from earlier seasons at Berenike⁴⁶ and similarly dated and provenanced sherds have been documented from excavations at Bir Samut, a stop on the trans-desert highway linking Berenike to the Nile emporium of Edfu.⁴⁷

Greek inscriptions

The 2023 excavation season documented 19 Greek inscriptions. Ten of these came from the nearly 10 m long, two-line Greek building inscription that adorned the architrave of the portico (described above; Pl. V 1 arrows). They were documented in trenches 151 and 152; earlier seasons had also recorded fragments of the same inscription from elsewhere in the portico.⁴⁸ The lines commemorate the building of the portico in the fourteenth year (95 AD) of the emperor Domitian (reigned 81-96 AD) during the prefecture of Marcus Iunius Rufus (Pl. IV 1). They also refer to a

41 A similar type of water transport system has also been documented in Mexico and South America. There is an abundant literature on the topic of Old World qanats/foggaras. For some more relevant examples cf. P.W. English, *The Origin and Spread of Qanats in the Old World*, *Proceedings of the American Philosophical Society* 112, no. 3, 1968, 170-181; F. Nasiri and M.S. Mafakheri, *Qanat water supply systems: a revisit of sustainability perspectives*, *Environmental Systems Research* 4, 13, 2015, 1-5; P. Briant (ed.), *Irrigation et drainage dans l'antiquité, qanāts et canalisations souterraines en Iran, en Égypte et en Grèce: Séminaire tenu au collège de France (Paris 2001)*; cf. especially the chapter on qanats in *Egypt's Western Desert: M. Wuttmann, Les qanāts de 'Ayn-Manāwīr (oasis de Kharga, Égypte)* 109-125.

42 For other burials in this area cf. S.E. Sidebotham – I Zych, *Berenike: Archaeological Fieldwork at a Ptolemaic-Roman Port on the Red Sea Coast of Egypt 2011-2012*, *Sahara* 23, 2012, 32; Sidebotham – Zych 2016 loc. cit. (n. 22) 21-24; Sidebotham et al. 2020 loc. cit. (n. 5) 13 Pl. III 2-3; IV 3; Sidebotham et al. 2022 loc. cit. (n. 5) 15 Pl. XVI 1.

43 Sidebotham et al. 2019 loc. cit. (n. 20) 9 Pl. IV 3; Sidebotham et al. loc. cit. (n. 5) 13 Pl. IV 3.

44 Cf. J.M.C. Toynbee, *Death and Burial in the Roman World* (Baltimore 1996) 77 refers to an inscription noting the purchase of a vacant burial space, and on p. 78-79 says the following: "Another practice...was for the owners of a family tomb to give to friends belonging to a different family a vacant grave-space for the burial of a relative. For example, at Ostia, Flavia Marcellina made a tomb for her sister ... in a place granted to her by Plotius Hermes and Valeria Saturnina"

45 The total ceramic assemblage analyzed from the Ptolemaic bath complex during the 2023 season constitutes 3,182 sherds weighing a total of 89,905 g. Rim fragments were used to create an EVE (Estimated Vessels Equivalent) count of 2,456.

46 J. Gates-Foster – R. Tomber, *Carried Over Desert and Sea: East African Pottery in Early Ptolemaic Egypt*, *Journal of Ancient Egyptian Interconnections*, forthcoming.

47 J. Gates-Foster, *New archaeological evidence for the indigenous peoples of the Eastern Desert in the Ptolemaic and Roman eras*, In H. Cuvigny (ed.), *Blemmyes. New Documents and New Perspectives* (Cairo 2022) 61-73.

48 Sidebotham et al. 2022 loc. cit. (n. 5) 27.

previously unknown prefect of the desert, Scribonius Galates.


Excavations in trench 152 documented three additional inscriptional blocks, two of which were badly damaged. They are clearly related, although their precise physical connection was unclear because of extensive erosion on two of the blocks. The better-preserved piece refers to an Adanite (someone from Aden, South Arabia).

In the makeshift wall on the southern side of the staircase leading to the portico, excavations recorded the badly damaged right side of BE-22 135.009.02 (see above), a block discovered in 2022 that had been reused as a bench on the southern end of the portico.


Excavations in trench 155 documented a bilingual, Demotic-Greek Egyptian-style stela (155.022.001) from the reign of Cleopatra VII, noted above (Pl. XIV 1). The Greek text, which is almost entirely preserved, commemorates the dedication of a shrine to Hermes/Thoth by a man named Sarapion son of Hermon on 11 October 46 BC. It represents only the second precisely dated Ptolemaic epigraphic find from Berenike.⁴⁹ The Demotic part includes the same information found in the Greek section but adds further details, including a toponym that has yet to be fully deciphered.⁵⁰



Hieroglyphic inscriptions

Several hieroglyphic texts on blocks and fragments were studied in 2023 including ones excavated during the previous season. The texts indicate the quality of the scribes employed in this remote location, and also attest the connectivity of the temple inscriptions with temples and scribes in the Nile Valley. Two inscriptions can be singled out in this respect.

The first (Pl. XVII 4) is a block from trench 151, belonging to the frieze decoration of the façade of the temple courtyard, from which the Hathor head frieze in Pl. IV 7 also derives. It measures 0.38 m wide x 0.23 m high x 0.26 m deep. Excavations recorded another part of the same block, which joins it on the left, but only a few lines of decoration survive on that fragment. Earlier finds from the temple area indicated that the cartouches in the frieze contain the names of local gods, because the name of Isis had been previously identified on another block. It is also possible that the name of the reigning Roman emperor was included in the frieze, but this is not the case on the newly recorded block. The new cartouche contains the name of Osiris, but in a highly remarkable spelling as . There are remains of three large signs, and these could be read

thanks to the texts in the temple of Esna on the Nile. In Esna, there is a convention that the names of gods in clearly recognizable contexts can be written with three unexpected signs, which can be read according to the principle of acrophony. The sign brings a word to the mind of the reader, of which only the first radical serves to write part of the name of the god or goddess involved. This system of acrophony only appears in Esna during the reigns of Domitian and Trajan, and again in Dendera in the time of Trajan.⁵¹ Now, the temple of Berenike has an example of the same system from the time of Trajan. It shows how the local scribes were not operating in isolation, but were conversant with the latest developments in the Nile Valley.

The first sign  is a plant folded in an s-shape, which is known from the word *wdn*,⁵² which is abbreviated to *w* in the present case. A similar sign is used with the same secondary reading in the name of Osiris at Esna.⁵³

The boat sign  has the value *s*, as also in Esna, but here the derivation is not as obvious. Sauneron suggested that its reading derived from the name of the day bark of the sun god, *(m)sktt*.⁵⁴ Leitz offered the additional suggestion that it could derive from *sAH*, 'Orion',⁵⁵ but this seems less likely. The image in Esna shows three vertical elements on top of the boat, as rendered in the hieroglyph , but the Berenike hieroglyph is slightly different because it has four elements inside. The stone has been damaged at this spot and the exact details remain uncertain, but it is certain that this number of elements cannot correspond to multiple masts. Therefore, the sign must depict a divine bark, and specifically the bark of the sun god, which may have a number of different symbols represented on board, also without including any images of gods.⁵⁶ The *(m)sktt* bark is also found as an offering to the gods represented in Greco-Roman temple reliefs.⁵⁷ It is depicted either with a sun disc on board or a series of papyrus stems

49 The other is I.Pan 70 from 133 BC (Ptolemy VIII), a further fragment of which was excavated in 2019, see R. Ast, I.Pan 70, A Dedication from the Year 133 BC, ZPE 213, 2020, 108-110.

50 We thank J.F. Quack (Heidelberg) for this preliminary information about the Demotic text. We aim to conduct Reflectance Transformation Imaging (RTI) in January 2024, which will, hopefully, aid decipherment of the Demotic part.

51 D. Kurth, Einführung ins Ptolemäische: Eine Grammatik mit Zeichenliste und Übungsstücken, Vol. 1, Hützel 2008, 59-62. For Esna cf. now Ch. Leitz, Hieroglyphika latopolitana: Eine Studie zu mehrdeutigen Schreibungen in Esna (Wiesbaden 2023).

52 Kurth, Einführung ins Ptolemäische, 303 [36]; Ch. Leitz, Einleitung in die Litaneien von Esna, Teil 3. Analytischer Teil und Indices (Wiesbaden 2022) 1450 [M11].

53 Esna 208, 24; S. Sauneron, L'écriture figurative dans les textes d'Esna, Esna VIII, Cairo 1982, 78 [O 51]; 159 [221]. Parallel in Esna 217.25 [O 30], according to Sauneron, L'écriture figurative, 77, 216.


54 Sauneron, L'écriture figurative, 169.

55 Leitz, Einleitung in die Litaneien von Esna 3, 2022, 1456 [P113].

56 E.g. in the Book of the Day; E. Hornung, Die Unterweltbücher der Ägypter, 3rd ed., Zürich and München 1989, 486-488; and in G. Maspero and H. Gauthier, Sarcophagus des époques persane et Ptolemies: nos. 29307-29323, Catalogue general des antiquités égyptiennes du Musée du Caire 2 (Cairo 1939) Pl. XIX 1.

57 H. Beinlich, Handbuch der Szententitel in den Tempeln der griechisch-römischen Zeit Ägyptens. Die Titel der Ritualszenen, ihre korrespondierenden Szenen und ihre Darstellungen, SRaT 3, Dettelbach 2008, Vol. 1, 13-15; S. Cauville, L'offrande aux dieux dans le temple égyptien (Leuven, Paris, Walpole 2011) 204-205.

on which perches a falcon. The depiction of the night bark *manDṯ* differs from this only in small details.⁵⁸ The translation of *msktt* is problematic.⁵⁹

The third component of the name is the sign , which has the value *r*, because this is the spelling for a common title of Osiris, *rs-wDA*, “who awakens intact,” also seen elsewhere in the Berenike inscriptions recording Osiris. There is a parallel occurrence for this sign in the name of Osiris in Esna.⁶⁰

One of the larger blocks from trench 135 surviving from the façade of the temple, decorated in the name of the emperor Trajan, presented several surprises. Apart from the inclusion of a Greek inscription on this part of the wall, about which the previous report provided some details,⁶¹ this year entailed studying and copying of the Egyptian texts. The longest text belongs to an image of Osiris (Pl. XVIII 3), and it provides the name and titulary of this god in three columns and three horizontal lines of hieroglyphs. The titles provide the names of Osiris’ mother, Nut, and it describes that the god was born in the city of Thebes. Parallels for nearly the entire sequence of these titles of the god may be found in almost identical words in Thebes itself, upon the monumental gateway in front of the Montu temple complex.⁶²

This part of the titulary translates: “Osiris, king of the gods, sovereign who is at the head of the great harem, great one (when already) in the womb of his mother Nut, the firstborn of the five gods, who was created in Thebes, his *mammisi*.” The five gods are the children of Shu, whose birth was celebrated during the five epagomenal days, which close the Egyptian year. They are Osiris, Horus, Seth, Isis and Nephthys. The birth of Osiris was said to have taken place in the temple of Opet at Karnak, where this was celebrated annually.

It is very rare to find the same wording in a titulary like this in two different temples. The gateway of Montu was decorated in the name of Ptolemy IV Philopator (reigned 221-205 BC), which makes it more than three-hundred years older than the Berenike inscription. At the same time, the Berenike text is not a faithful copy of the Theban one. Although the text is identical, the hieroglyphs chosen for the rendering on the wall are completely different. It seems likely that the text was transmitted in a different format. Books about examples of temple decoration were kept in temple libraries, and they could be written in Hieratic or even in Demotic script and could clearly be copied for use elsewhere.⁶³ In

this way, the priest who prepared the decoration for the Berenike temple could make use of an already existing text about Osiris, but adapt the spelling according to his local preferences and needs.

Coins

Excavations documented approximately 30 coins, but the project lacked a conservator this season to clean them. We plan to have a conservator on site during the 2024 season to clean and conserve the coins to permit their identification.

Conclusion

The 2023 season conducted excavations in seven trenches and their extensions (BE20/22/23-135, and BE23-151-156), which further clarified a number of architectural features and their sizes and functions in three main areas of the site: the Isis temple, the Northern Complex, and the western Hellenistic/Ptolemaic hydraulic system.

Trenches BE20/22/23-135, BE23-151, 152 and 156, at the entrance and in and just outside the portico of the Isis temple, provided a complete picture of the size and appearance of the portico and revealed that visitors approached the temple entrance on a low staircase (only the western portion was excavated this season). Excavations also revealed a section of an earlier staircase beneath the one currently visible. Numerous architectural elements and large fragments of a lengthy inscription from the reign of Domitian (81-96 AD) permitted a tentative reconstruction of the appearance of the portico and its decoration. Egyptian reliefs and some Greek inscriptions from the reigns of Tiberius and Trajan decorated the original entrance wall of the temple forecourt. The addition of the portico under Domitian would have made some of these reliefs and inscriptions partly invisible to those approaching from outside the temple. The completion of the Egyptian wall decoration under Trajan took place while the roof beams of the portico were in place. Still later, most or all of the benches lining the interior faces of the portico walls had been added after initial construction of the portico and the addition of the Trajanic reliefs, as they comprised recycled architectural stones and, in some cases, recycled inscriptions, one of which dated to 130 AD, i.e. in the reign of Hadrian.

Excavations in trenches BE23-154 and 155 added to our knowledge of the appearance, dates of use and functions of two rooms in the Northern Complex. Trench BE23-154 - a westward extension of trench BE18/19-116 - recorded the western wall of that room. Built of large anhydritic gypsum ashlar recycled from some earlier structure/s, the western wall included

58 Beinlich 2008 loc. cit. (n. 57) 325-327.

59 P. Wilson, *A Ptolemaic Lexikon: A Lexicographical Study of the Texts in the Temple of Edfu* (Louvain 1997) 467.

60 Sauneron, *L'écriture figurative*, 178 [329]; Leitz, *Einleitung in die Litaneien von Esna*, 3, 2022, 1459 [T13].

61 S.E. Sidebotham et al. 2022 loc. cit. (n. 5) 27.

62 S.H. Aufrère, *Le propylône d'Amon-Rê-Montou à Karnak-Nord*, MIFAO 117, Cairo 2000, 255-257 [§ 196].

63 H. Kockelmann, *Die „Grammatik des Tempels“: wie Religion und Kult Architektur und Dekoration bestimmen*, in: D. von Recklinghausen – M.A. Stadler (eds.), *KultOrte: Mythen,*

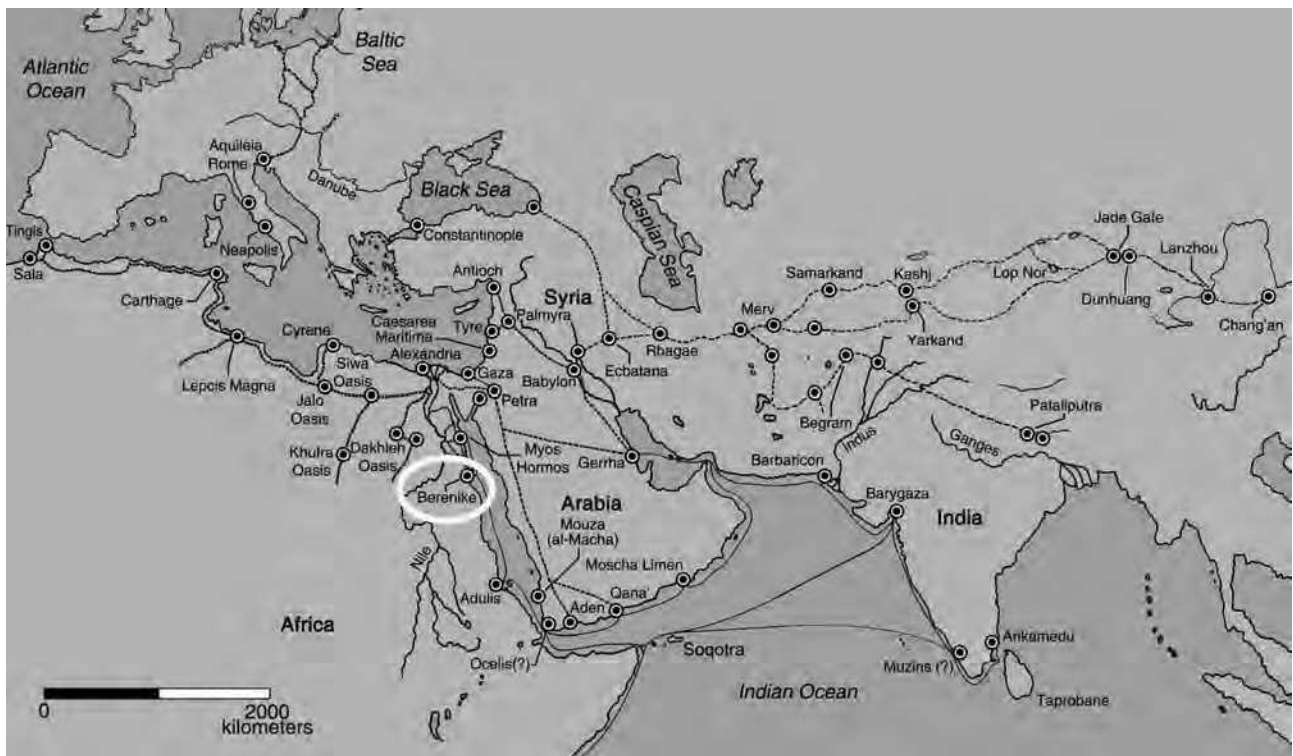
Wissenschaft und Alltag in den Tempeln Ägyptens (Berlin 2011) 23-24.

a large rectilinear-shaped niche. The wall with the niche had been added later than the perpendicular and abutting east-west running northern and southern walls of that room. Used over a lengthy period of time (at least 1st/2nd to 4th centuries AD), the room, based on finds from 2018, 2019 and this season, seems to have had a cultic function.

Trench BE23-155, which lay immediately south of trench BE19-131 (part of the so-called Falcon Shrine) and west of trench BE19-129, also had a cultic function. Although incompletely excavated this season, the presence of a naos and a pictorial stela with texts in Demotic and Greek recycled from the Late Ptolemaic period, together with pottery dating from the 1st to the 4th centuries AD suggested an extended period of use of this room.

Excavations in trench BE23-153 provided additional information about the length and course of the hydraulic tunnel leading eastward from the Hellenistic/Ptolemaic well and identified one vertical shaft about 6 m east of the well that was associated with the tunnel. The well-tunnel and shaft complex may be remains of a qanat/foggara or simply a conduit that moved surface water from the east to the well/cistern, which lay downslope to the west. After abandonment and partial robbing, this hydraulic area had been used for early Roman-era burials, none of which contained grave goods. These interments added to approximately 20 burials from the early Roman period that have now been documented from this area.

The Berenike Project plans to continue excavations in these three areas during the winter 2024 season.



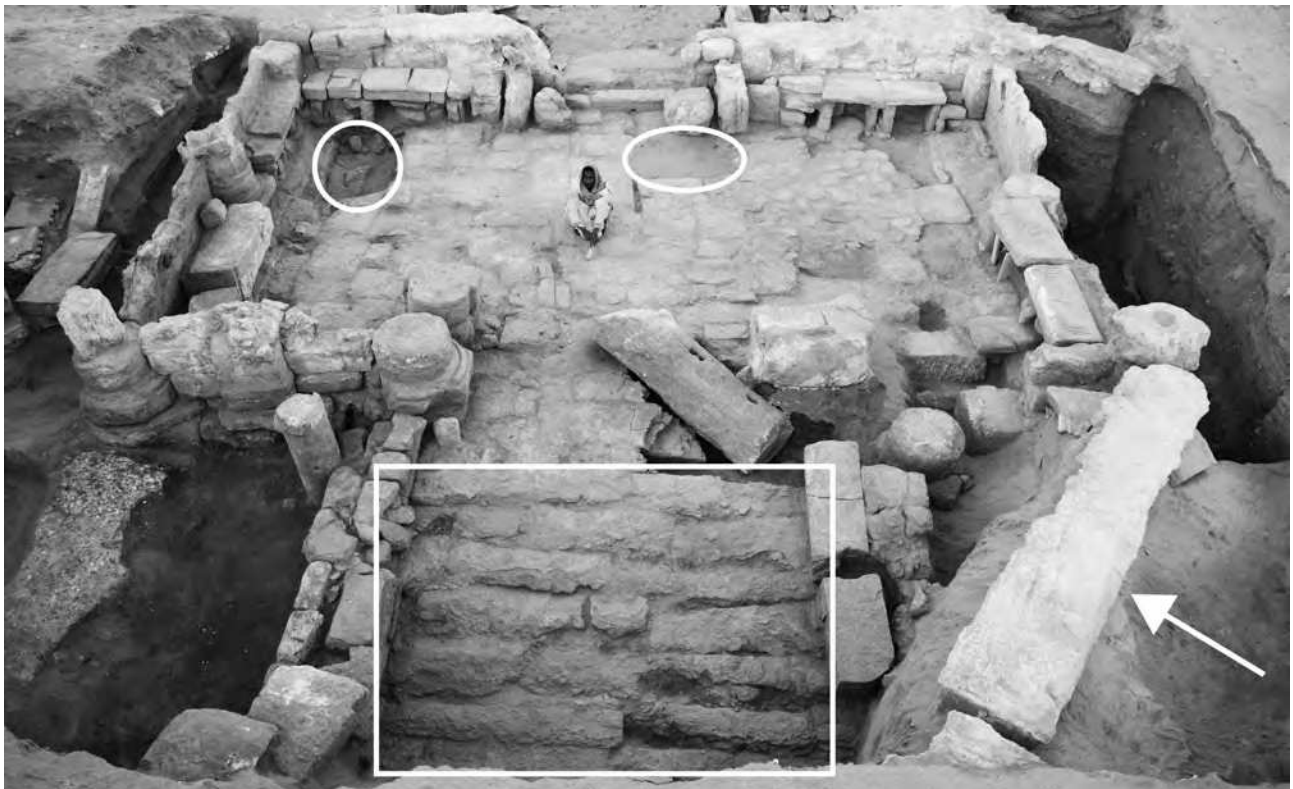
1: Map of the trade routes – Berenike circled (drawing by M. Hense)



2: Plan of Berenike locating trenches BE20/22/23-135 and BE23-151-156 excavated during the 2023 season (drawing by S. Popławski)



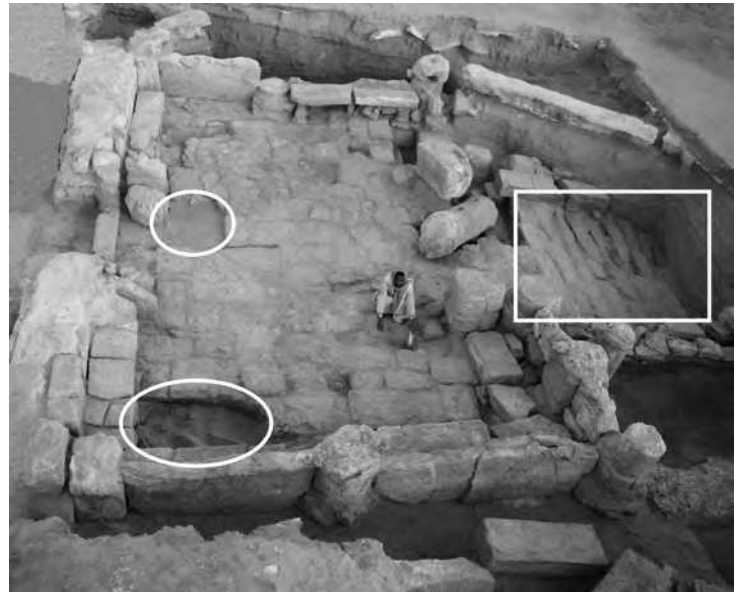
1: Orthophoto of the Isis temple locating trenches BE20/22/23-135 and BE23-151, 152 and 156 excavated in 2023 (created by S. Popławski)



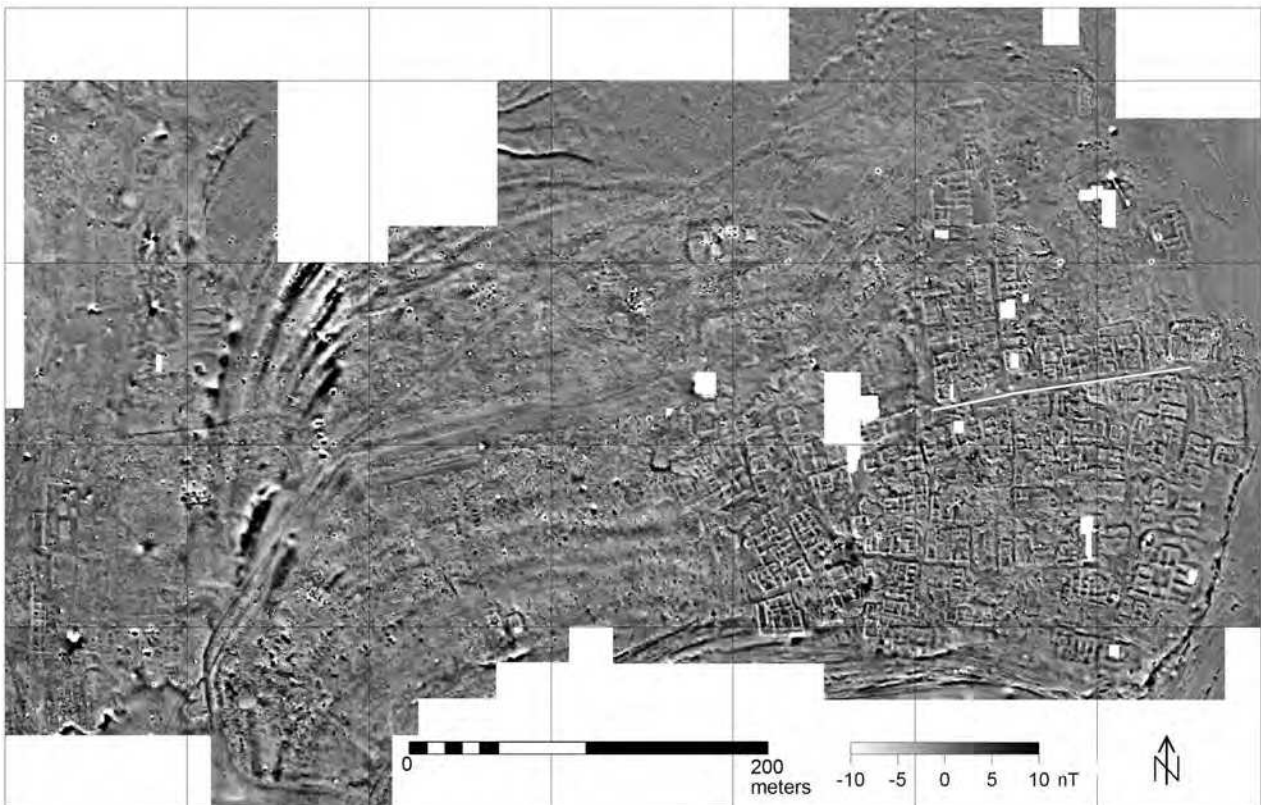
2: Isis temple entrance and portico (trenches 151, 152 and 156/trenches 120 and 135 from previous seasons); staircase/entrance outlined; robber pits are circled; large fallen column with capital indicated by arrow. View to the west (photo by S.E. Sidebotham)



1: Orthophoto of Isis temple entrance, portico and adjacent areas at the end of the 2023 season – circled are robber holes; the area in the box is the staircase (created by S. Poplawski)



2: Isis temple entrance and portico (trenches 151, 152 and 156/trenches 120 and 135 from previous seasons); staircase/entrance outlined; robber pits are circled. View to the north (photo by S.E. Sidebotham)



3: Geomagnetic map of Berenike. The white line denotes a main east-west street linking the Isis temple (in the west) with a church to the east (survey by D. Swiech and R. Ryndziewicz; processed by T.M. Herlich)



1: Inscribed block from the northern wall bordering the staircase entering the Isis temple. Inscription (from the reign of Domitian, whose name has been removed) had been recycled upside down, but has been turned right side up for the photo shown here. It reads, in part, *επάρχου Αιγύπτου*. Scale = 50 cm. (photo by S.E. Sidebotham)



2: Head of Serapis – frontal view. Scale = 5 cm (photo by S.E. Sidebotham)



3: Head of Serapis – left profile. Scale = 5 cm (photo by S.E. Sidebotham)



4: Head of Serapis – right profile. Scale = 5 cm (photo by S.E. Sidebotham)



5: Trench BE23-151: Sherd with fish in relief. Scale = 5 cm (photo by S.E. Sidebotham)



6: Trench BE23-151: Sherd with swastika and graffiti. Scale = 5 cm (photo by S.E. Sidebotham)



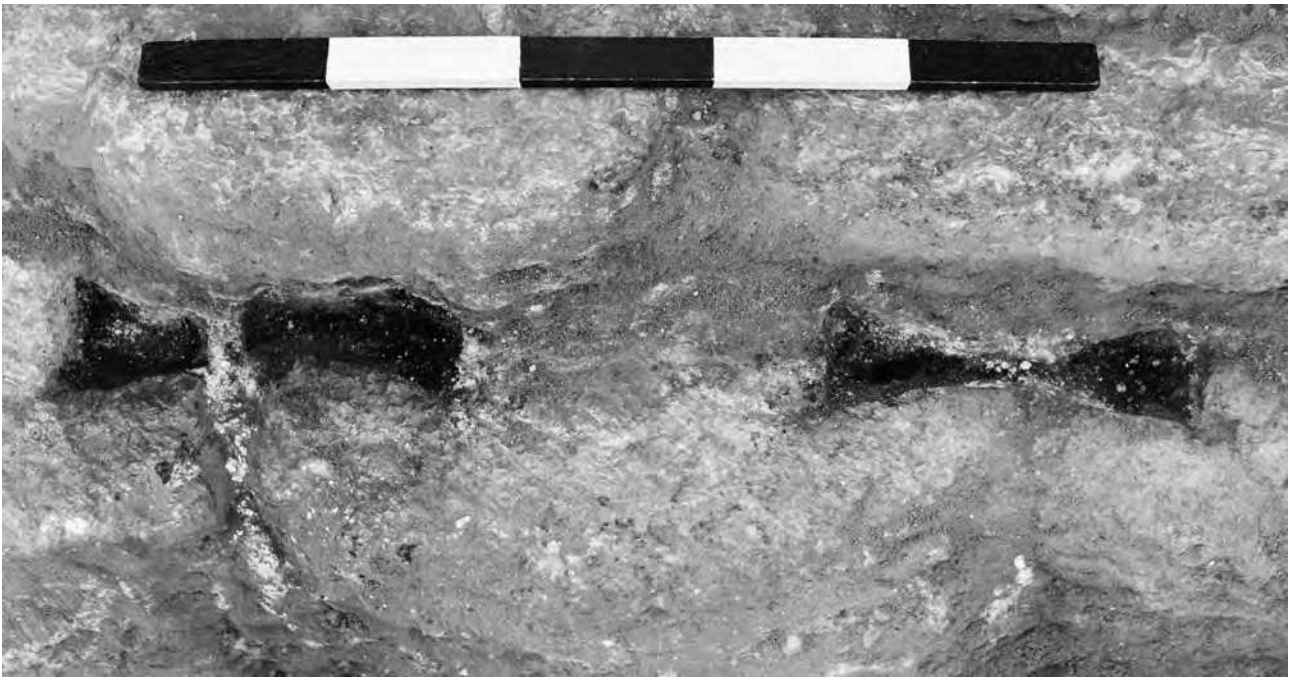
7: Frieze with Hathor heads and red paint. Each black and white increment on the scale = 10 cm (photo by S.E. Sidebotham)



1: Orthophoto and reconstruction of the Isis temple portico. Note fragments of Domitianic inscription (indicated by arrows) above the portico colonnade (created by S. Popławski)



2: Trench BE23-151: 28 tricornis tricornis shells atop a bench in the northwestern corner of the temple portico. View looking west northwest. Scale = 20 cm (photo by S.E. Sidebotham)



1: Trench BE23-15: Wooden dovetail building clamps. View looking south. Scale = 50 cm (photo by S.E. Sidebotham)



2: Trench BE23-151 looking southwest towards trenches 135, 152 and 156. Large fallen column indicated by arrow (photo by S.E. Sidebotham)



1: Trench BE234-152 looking west with fallen column fragment (later removed). Scale = 1 m (photo by S.E. Sidebotham)



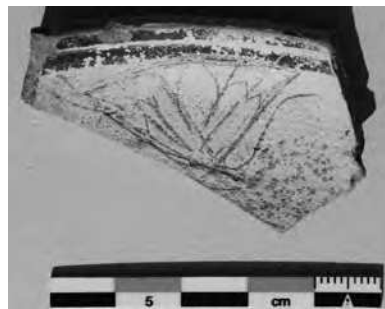
2: Trenches BE20/22/23-135 and BE23-152: Column fragment with two holes, only one of which is visible in the photo, and late 3rd or 4th century AD Greek inscription (indicated by arrow). View looking east southeast. Scale = 50 cm (photo by S.E. Sidebotham)



1: Trench BE23-151: Earlier staircase beneath column fragment with two holes. View looking southeast (photo by M. Batjler)



2: Trench BE23-156: Crucible fragments. Scale = 5 cm (photo by S.E. Sidebotham)



3: Trench BE23-156: Fragment of Aswan White Slip Ware bowl with lotus flower graffito. Scale = 5 cm (photo by S.E. Sidebotham)



4: Detail of robber hole (outlined) dug through the southwestern corner of the portico floor into which architectural elements, hieroglyphic texts and a small head of Serapis had been discarded. View looking southwest. Scale = 50 cm (photo by S.E. Sidebotham)



1: Trench BE23-156: Scale = 50 cm. View looking southwest (photo by S.E. Sidebotham)



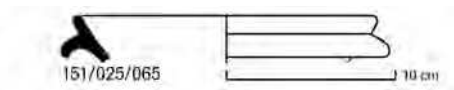
2: Trench BE23-156: Back walls/southern baulk of trench. Scale = 1 m. View looking southwest (photo by S.E. Sidebotham)



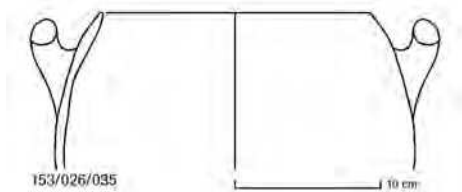
1: Trench BE23-154: Niche indicated by box (orthophoto by S. Popławski)



2: Trench BE23-154: Western wall of room with niche (emptied of finds and indicated by box) and portions of the northern and southern walls. View looking west. Scale = 50 cm (photo by S.E. Sidebotham)



1: Trench BE23-151 (trash): Profile of African Red Slip Ware bowl Hayes 91C dating to the mid-sixth century AD (drawing by R.C.A. Geerts)



2: Trench BE23-153: Profile of an East African pot (drawing by R.C.A. Geerts)



3: Trench BE23-154: Plaster fragments of seated Serapis statue from niche in western wall. Scale = 20 cm (photo by S.E. Sidebotham)



4: Trench BE23-154: Falcon statue in stone – partial three-quarter view in niche/in situ. Scale = 10 cm (photo by S.E. Sidebotham)



5: Trench BE18/19-116: Head of Amun. Scale = 5 cm (photo by K. Braulinska)



6: Trench BE23-154: Torso of Amun statue in black steatite. Scale = 5 cm (photo by K. Braulinska)



1: Trench BE23-154: Falcon statue in stone: left profile. Scale = 20 cm (photo by S.E. Sidebotham)



2: Trench BE23-154: Falcon statue in stone:right profile. Scale = 20 cm (photo by S.E. Sidebotham)



1: Trench BE23-155: Orthophoto – Naos outlined in box, false Pharaonic-style door circled (compiled by S. Popławski)



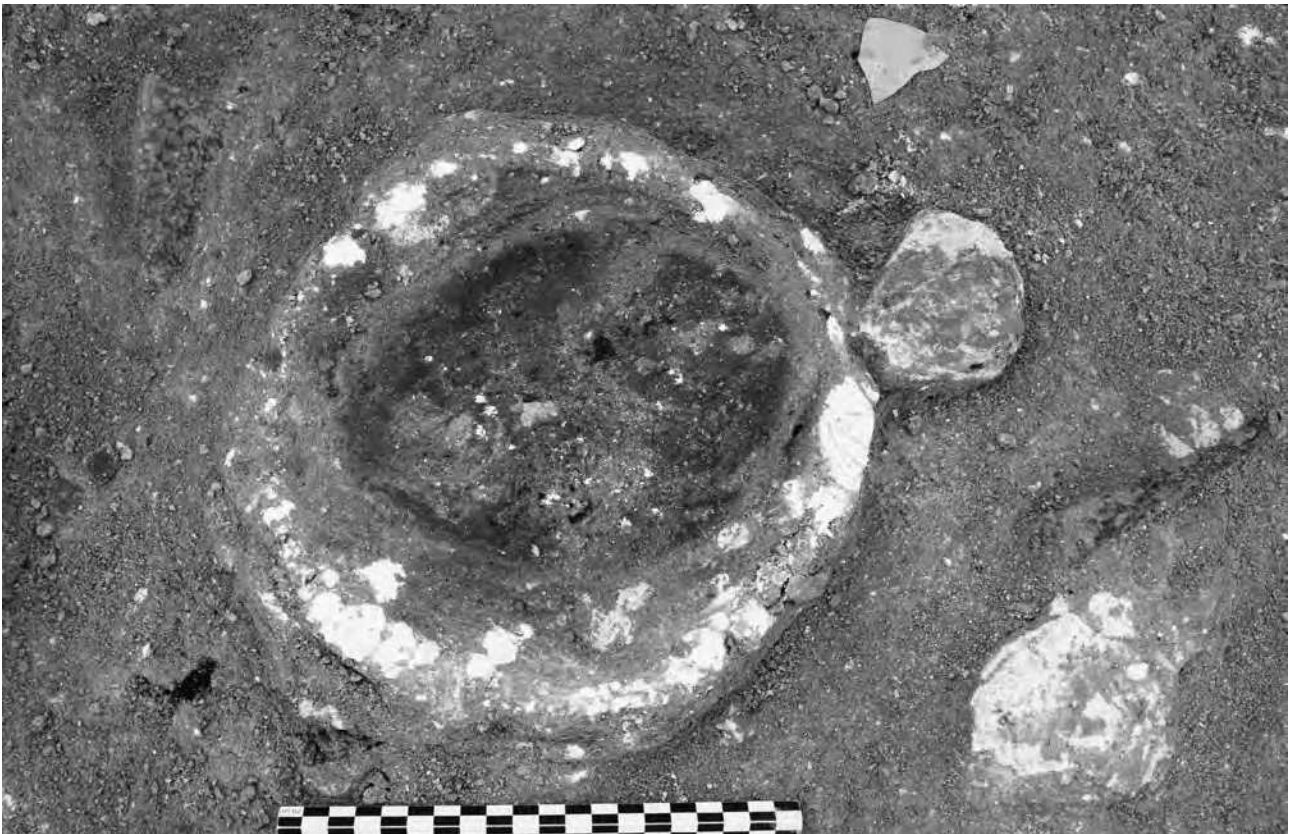
2: Trench BE23-155: Naos outlined in box; false Pharaonic-style door circled. View looking northwest. Scale = 50 cm (photo by S.E. Sidebotham)



1: Trench BE23-155: Votive stela of late Ptolemaic date leaning against eastern face of the naos and atop a libation table, in turn atop a stone bowl. Scale = 10 cm. View looking northwest (photo by S.E. Sidebotham)



2: Trench BE23-155: False Pharaonic-type door removed from its final resting place. Scale = 30 cm (photo by S. Popławski)



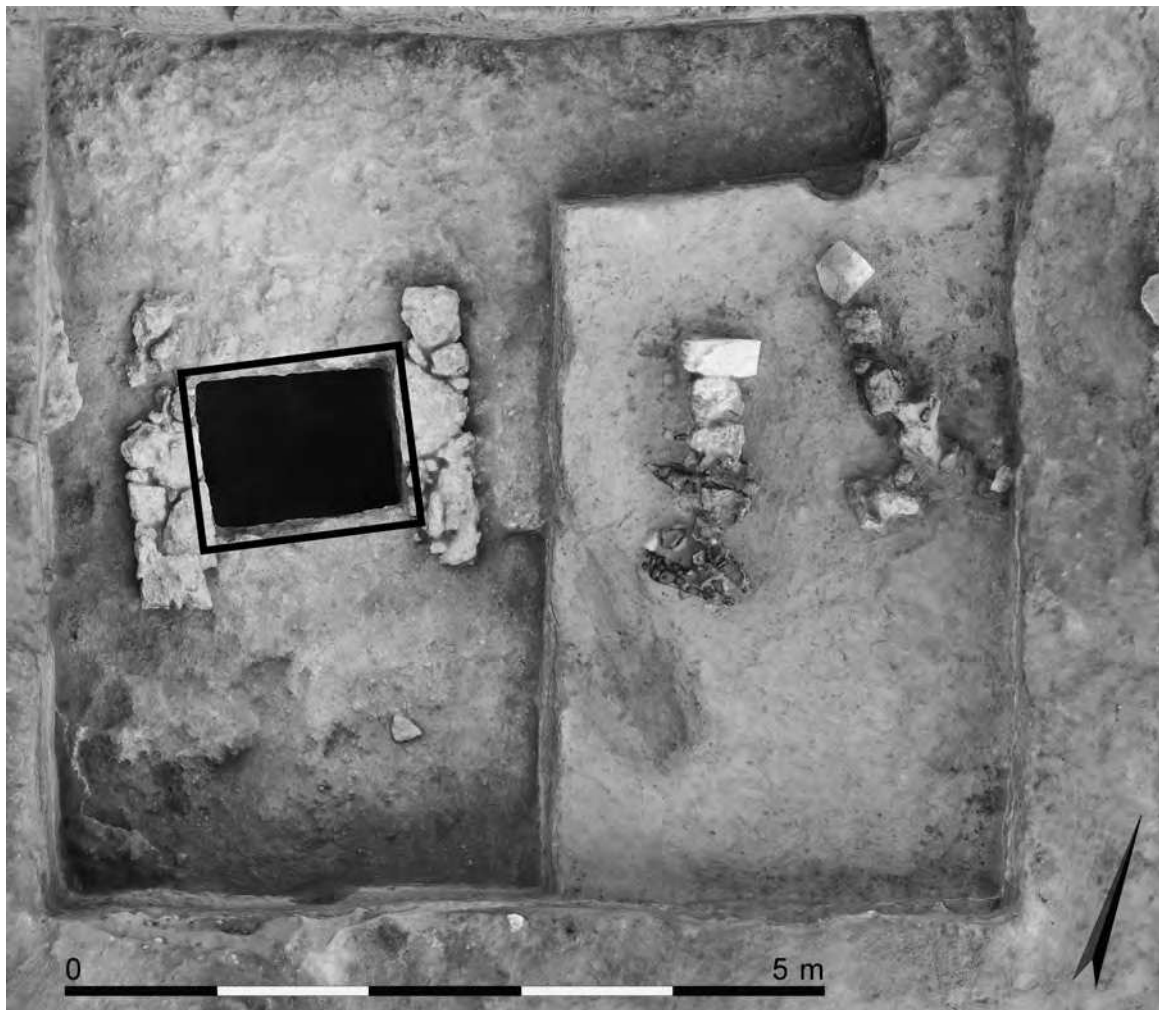
3: Trench BE23-155: Wooden bowl west of the naos. Scale = 20 cm (photo by S.E. Sidebotham)



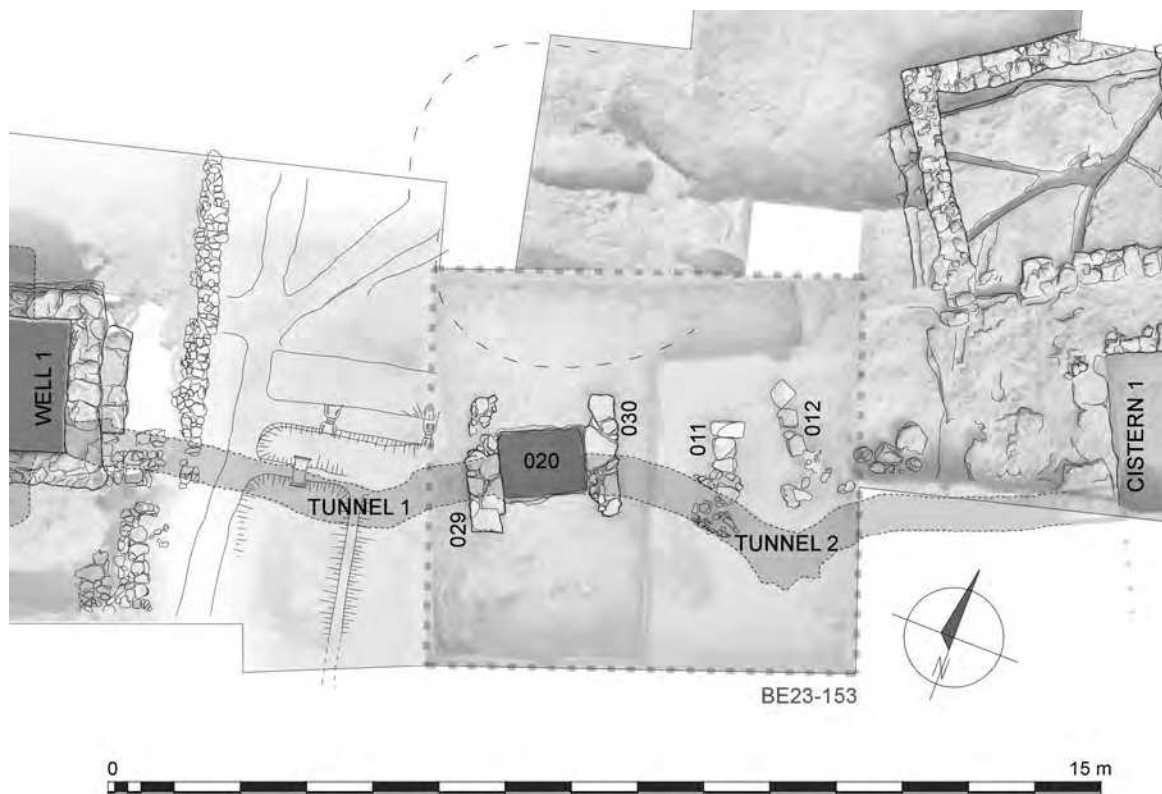
1: Trench BE23-155: Broken ceramic container filled with fragments of monkey bones of an unidentified species located west of the naos. Scale = 10 cm (photo by S.E. Sidebotham)



2: Trench BE23-153: Shaft. Note tunnels to the east and west and hand/fothold (outlined in white). View looking south (photo by S.E. Sidebotham)



1: Trench BE23-153: Orthophoto – vertical shaft outlined in black box (compiled by S. Popławski)



2: Trench BE23-153 and environs. Plan of area of the Hellenistic/Ptolemaic well, bath and other hydraulic features at the western side of Berenike (plan by S. Popławski)



1: Trench BE23-153: Samples of some third-second century BC amphoras. Scale = 50 cm (photo by S.E. Sidebotham)



2: Trench BE23-153: Rhodian amphora stamp. Scale = 5 cm (photo by S.E. Sidebotham)



3: Trench BE23-153. Rhodian amphora stamp. No scale (photo by S.E. Sidebotham)



4: Trench BE23-151: Block with cartouche recording a remarkable spelling of Osiris. Scale = 10 cm (photo by S.E. Sidebotham)



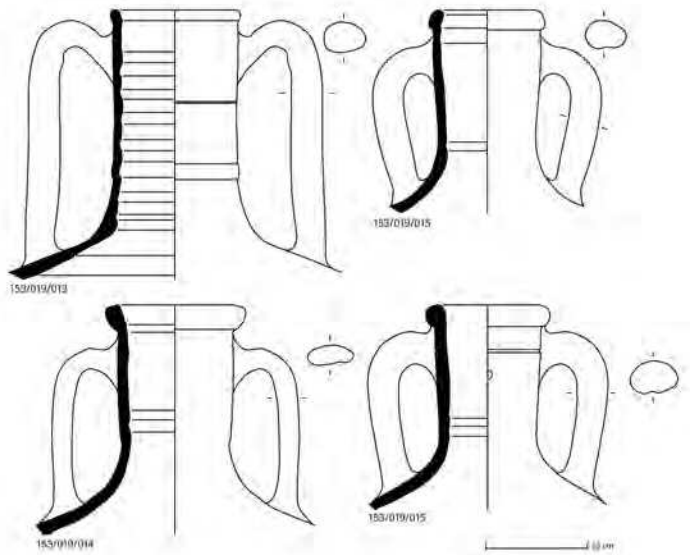
5: Trench BE23-153: Tunnel going west towards the Hellenistic/Ptolemaic-era well. Scale = 50 cm (photo by S.E. Sidebotham)



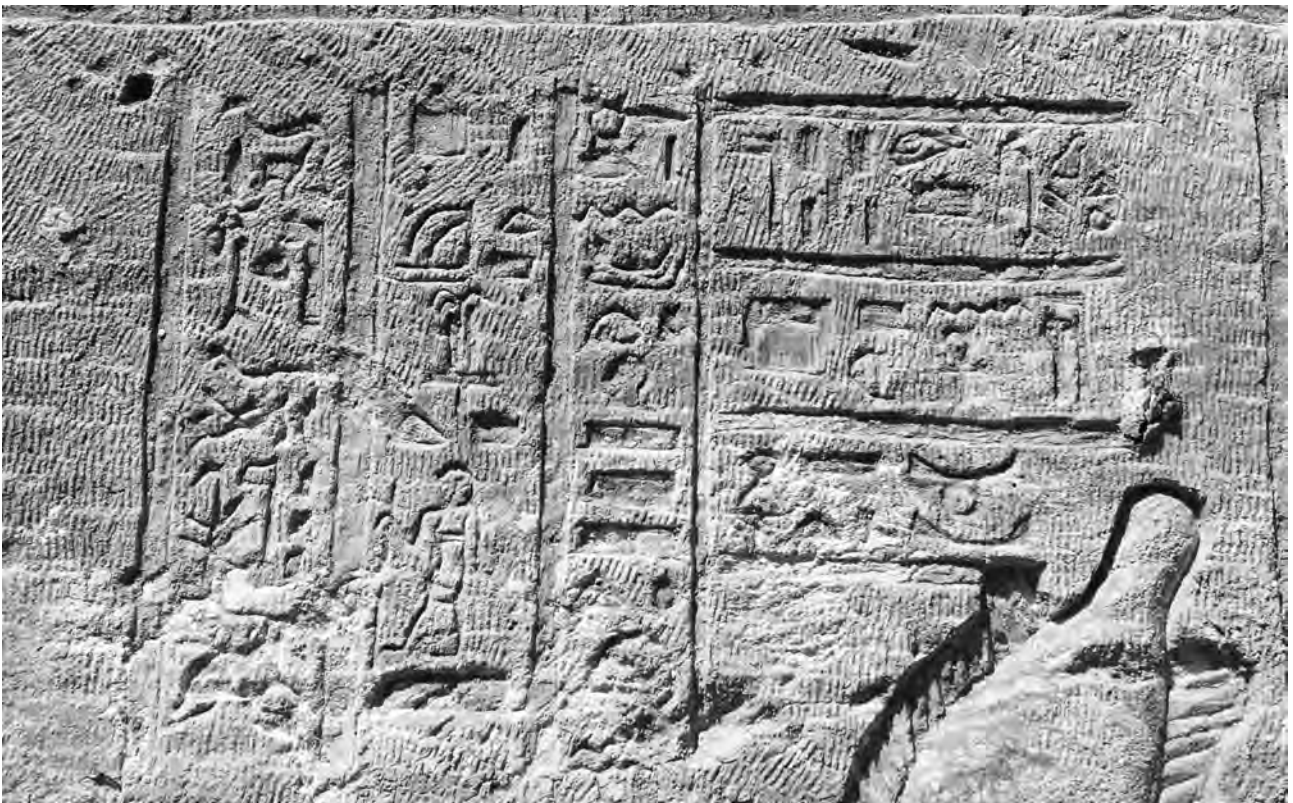
6: Trench BE23-153: Tunnel going east from the vertical shaft. Scale = 50 cm (photo by S.E. Sidebotham)



1: Trench BE23-153: Human burial. Scale = 50 cm. View looking north (photo by S.E. Sidebotham)



2: Trench BE23-153: A selection of the amphorae, top left a Rhodian amphora, the other three are Egyptian Amphorae type 1-2.5 (drawing by R.C.A. Geerts)



3: Trench BE20/22/23-135: Block that includes long text associated with an image of Osiris from the reign of Trajan (98-117 AD) (photo by O.E. Kaper)