Research Article

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A Blocked-Out Capital from Berenike (Egyptian Red Sea Coast)

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Abstract: The article examines a blocked-out capital discovered in Berenike on the Egyptian coast of the Red Sea. The artefact was reused in a Late Antique installation just outside the courtyard wall of the main city sanctuary, the Isis Temple. Its distinctive, highly simplified form is typical of Ptolemaic influence in the area. This article places the fragment in its archaeological context, accompanied by a detailed architectural description and analysis of the phenomena of blocked-out capitals. The authors demonstrate that the capital under discussion does not represent an unfinished stonework, but rather an intentional stylization. Its simplification is most likely inspired by the form of Corinthian capital that was common in Egypt between the second and third century AD. The discovery of this capital implies that there were buildings with classical architectural traits in Berenike, a theory that has previously not been supported by the excavated remains.

Keywords: Egypt, Berenike, Isis temple, blocked-out capitals, "Nabatean" capitals architectural decoration

1 Introduction

Excavations conducted in 2019 in the Isis Temple in Berenike[1], Egypt, on the Red Sea coast, revealed an accumulation of Late Antique trash deposits just outside the northern entrance to the temple courtyard. Among the excavated items were reused architectural elements, including a fragment of a capital that was distinctive for its highly simplified form, which is indicative of Ptolemaic influence in the area. The resemblance of this form to unfinished stonework frequently leads to the conclusion that it was not intentionally made. To provide new insights into the phenomena of blocked-out capitals, this article sets the fragment in its archaeological context and includes a detailed architectural analysis.

Berenike (Figure 1) was established probably in the second quarter of the third century BC by Ptolemy II Philadelphus (285/282–246 BC). Its foundation was linked to the development of road and port infrastructure within the Eastern Desert and along the Red Sea coast. Recent studies have suggested the decline of Hellenistic Berenike in the mid-third to late second century BC. A piece of a Greek inscription uncovered in Trench 122 is dated to the Ptolemaic period to year 133 BC (Ast, 2020, pp. 108–110). The city

1 From Wilkinson's era, the temple was supposed to be dedicated to Serapis, but in the 2018, it was discovered that the facility had in particular been the center of the cult of Isis (see Meredith, 1957, pp. 56–70; Sidebotham et al., 2019, pp. 7–19; 2020, pp. 11–22; Ast, 2021; Hense & Kaper, 2020; Hense, 2017a,b; Hense, Kaper, & Geerts, 2015).

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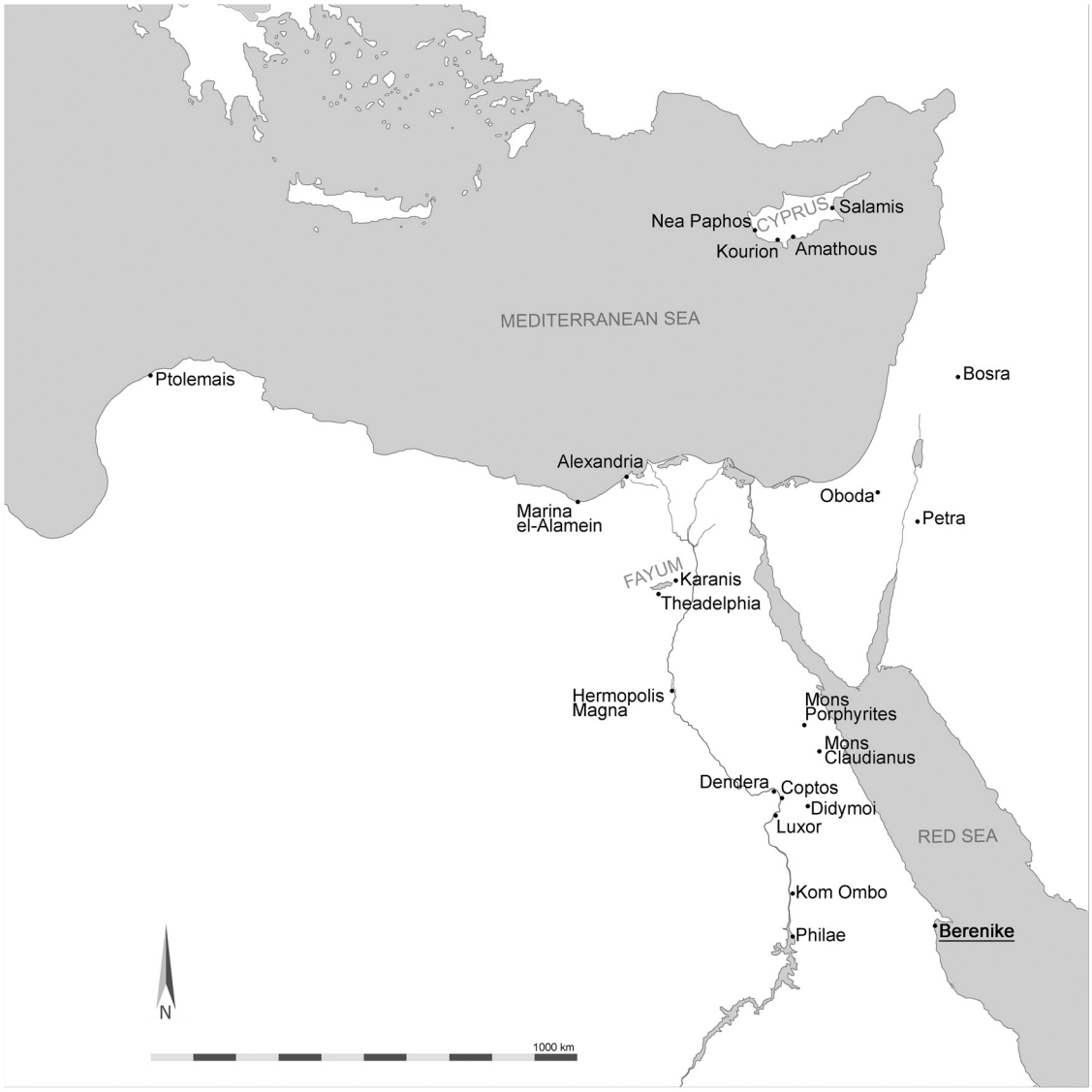

Figure 1: Map of Egypt and vicinity with locations of cities mentioned in the text (drawing: S. Popławski).

later flourished as a result of the Roman conquest of Egypt around 30 BC (see Sidebotham et al., 2020, pp. 11–22; 2019, pp. 7–19; Sidebotham, Zych, Rądkowska, & Woźniak, 2015, pp. 297–324; Woźniak & Harrell, 2021, pp. 349–366; Woźniak & Rądkowska, 2014, pp. 505–526; Zych, Sidebotham, Hense, Rądkowska, & Woźniak, 2016, pp. 315–348). The main city sanctuary, the Isis Temple, was erected in the Egyptian style, under Tiberius, in the early first century AD. Extensive excavations conducted within its premises since 2015 have shed light on the ancient temple and contributed to the discovery of several pieces of architectural artefacts.

2 Archaeological Context

Trench BE19–122, excavated during the 2019 campaign, was a 5.00 m east-west by 4.30 m south-north rectangular trench, located north of the Isis Temple, adjacent to the northern doorway of the temple courtyard (Popławski, Kraśniewska, Mi, & Oleksiak, 2021). The door corresponds to the centre of the southern side of the trench (Figure 2). A geophysical survey previously carried out on the site showed

Figure 2: Structures at Berenike with areas mentioned in the text: (a) the Isis Temple; (b) Tetrastylon; grey – Hellenistic period structures; black – Roman and Late Antique period structures (drawing: S. Popławski).

anomalies in the shape of dark patches all along the northern temple wall (Zych & Herbich, 2015, pp. 95–118; Zych et al., 2016, pp. 319–322).

The trench reached the level of the original doorway to the temple courtyard at about 4.45 m a.s.l. The strata reflect multiple rubbish depositions accumulated to the height of more or less 2.00 m and was divided into nine stratigraphical phases of different duration (Figure 3). The phases spanned from the first to the nineteenth century AD. Phases I–IV involved minor architectural modifications to the immediate exterior of the temple, which resulted from the rising floor level. Noteworthy is the construction of a small pavement in front of the doorway and the erection of stone steps, facilitating access to the forecourt of the temple. At least two different floor levels were recognised, before under phase V trash accumulation blocked access to the courtyard through the northern doorway.

By the end of the second century AD, the accumulation of trash deposits must have been so overwhelming that the temple inhabitants built a retaining wall to prevent the garbage from entering the forecourt. The low wall was set up in front of the doorway, and its width (1.47 m) was just sufficient to enclose the jambs of the door. The blockage was built with reused ashlars, coral heads, and natural rocks. The blocks of this crude, single-wythe wall were joined with the use of only small quantities of gypsum mortar (Figure 4). The wall rested on a layer of compacted windblown sand mixed with pebbles, accumulated probably within a period of relative abandonment of activities outside the temple and testifies to the increasing level of the surface in that location. Although the use of mortar shows the intentionality of the construction of the wall, its height (maximum 30.0 cm and minimum 10.0 cm) and somewhat crude disposition of blocks highlight the provisional nature of the installation. The fragment of a blocked-out capital, which is the subject of this paper, was found here reused in the western portion of the wall. Its preserved side was positioned looking north-west, while the broken side was oriented to the south-east, toward the door and the courtyard. This orientation was probably chosen for stability reasons since the preserved part of the capital was leaned against the sandy layer. While it is certain that the blockage helped in the

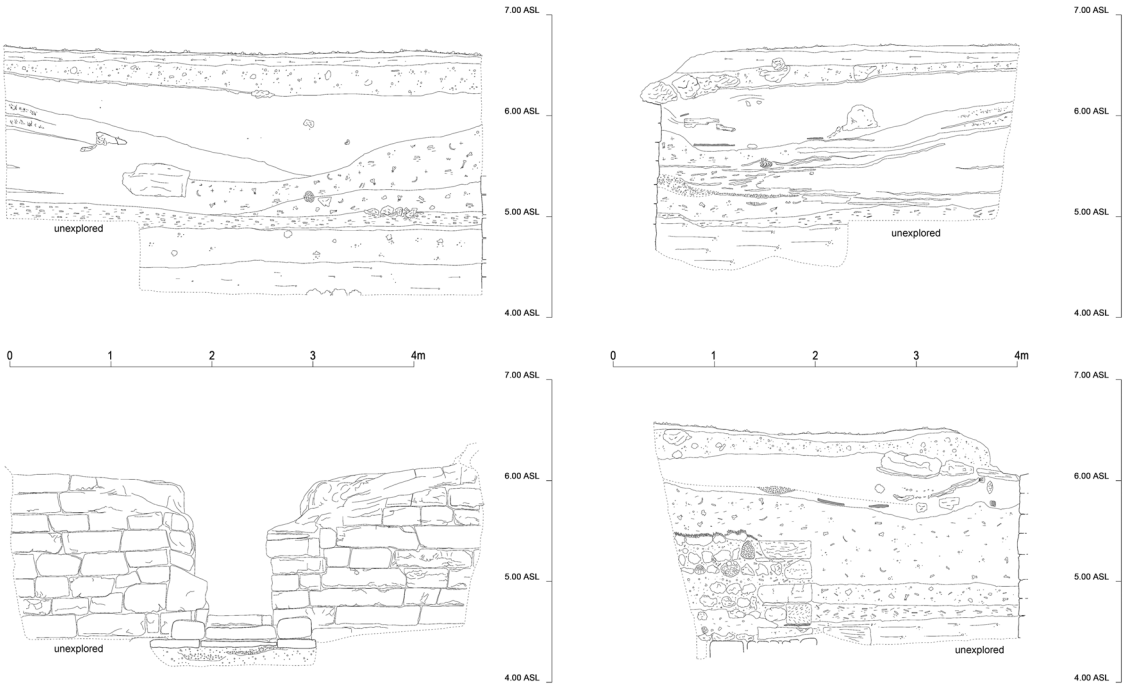

Figure 3: The complex stratigraphy of trench BE19-122. Top left – profile N, top right – profile W, bottom left – profile S, bottom right – profile E (drawing: F. Mi, S Popławski).

Figure 4: The low wall in front of the northern doorway. The blocked-out capital fragment is marked by an arrow, scalebar measures 50.0 cm (photography: S. E. Sidebotham).

Figure 5: Blocked-out capital from Berenike trench BE19-122 photograph (not orthophoto view), scalebar measures 50.0 cm (photography: M. Bergmann).

containment of the trash that was gradually accumulating outside the courtyard on the left and right sides of the door, it is also possible that the doorway and the wall itself were the place where the trash was thrown from. Supporting this interpretation is the fact that the sloping of the two layers of trash deposited after the construction of the wall is directed towards the wall itself.

The first massive accumulation of trash appears to be of considerable thickness (maximum 90.0 cm) and an evident slope toward the northern wall of the temple from the north-east. Ceramic material points to Late Antiquity, in particular to a period covering about two centuries from the fourth to the sixth century AD. The discovery of a coin dated to the fourth century AD, as well as the Ostraka (Ast & Bagnall, 2022), sustain this dating. Slightly later, but physically and chronologically very close to the previous, is another trash deposit. The composition of this layer is slightly different from the preceding one, since it is richer in decayed organic material, while inorganic material appears in smaller quantities. The slope is sharp and quite evident, going from north-west to south-west and rising in level when reaching the temple wall. Near the wall, the layer is richer in the inorganic material. Towards its upper surface in the north-west corner of the trench appeared organic remains of wood and plants. From an interpretative point of view, it seems like the two depositions of trash were created almost at the same time. They were evidently thrown in two opposite directions, the first on the right of the door and the second on the left of it. They then sloped down towards the temple wall, initially blocked by the late wall where the capital fragment was found, later obliterated by the increasing accumulation of trash.

During phase VII, windblown sand started covering the two earlier layers of trash, initially following their slope, and then covering the entire surface of the trench. During this phase, the northern temple wall collapsed, thereby creating a tumble, which comprised numerous anhydritic gypsum ashlars and coral heads. Also reused and appearing in the tumble were two fragments of classical-style cornices with a flat geison and one cornice block with Ionic dentils (Popławski et al., 2021). Finally, several fragments of wood, some of the large dimensions and in a very good state of preservation, lay near the collapse and were probably part of the same event. The timber found was of two different kinds of pinewood and teakwood (C. Newton, personal communication).[2]

2 Oriental woods from dismantled cargo crates or ships itself arriving by sea from India are believed to have been reused in Berenike (Sidebotham, 2002, p. 223; Sidebotham et al., 2019, p. 19). Following the 1998 season, various uses of wood within the site were studied (Vermeeren, 2000, pp. 328–342).

Figure 6: Blocked-out capital from Berenike trench BE19-122, artistic reconstruction (render: S. Popławski).

3 Architectural Study

3.1 The Discovered Fragment of the Capital

The fragment that was discovered is a product of a vertical split of a complete capital and accounts for less than a half of the whole. Although the top and the bottom sides of the capital are too weathered to reveal any tool traces, the break clearly maintains the stone layering direction, proving the unintended character of the split. The fragment is well preserved, with clearly eroded top layers and chipped corners. The stone has been finely prepared, with gentle chisel marks visible on the curving surfaces. There are no traces of whitening or polychrome on the original stone surface.

The fragment of the capital has pseudo-Corinthian features and is highly geometrized (Figure 5). Based on measurements of the preserved substance, the dimensions of the whole capital are estimated to have been 31.0 cm in height, 42.5 cm in lower diameter, and 94.0 cm in maximum upper diagonal. The object was sculpted from anhydritic gypsum[3] as a single-element capital. In its upper part, it has volutes reduced to non-sculptured, elongated corners with slanted side-faces tapering towards the top, with their bottom face sloping towards the shaft's centre. Fleurons are reduced to cylindrical protrusions. The lower section of the capital's kalathos has a diameter of 48.0 cm (Figures 6 and 7) and underneath it are two ring-like cut outs or steps, each of sequentially decreased diameter and height (respectively, 1.5 and 3.7 cm for the top one and 1.5 and 4.5 cm for the bottom one).

3 In 2019, the material from which the capital was created was identified as anhydritic gypsum (J. Harrell, personal communication). An extensive discussion of the physical properties of this stone may be found in a chapter devoted to the geology of Berenike (Harrell, 1996, pp. 125–130, 136–137) or in the latest studies results (Sidebotham et al., 2021, pp. 21–22).

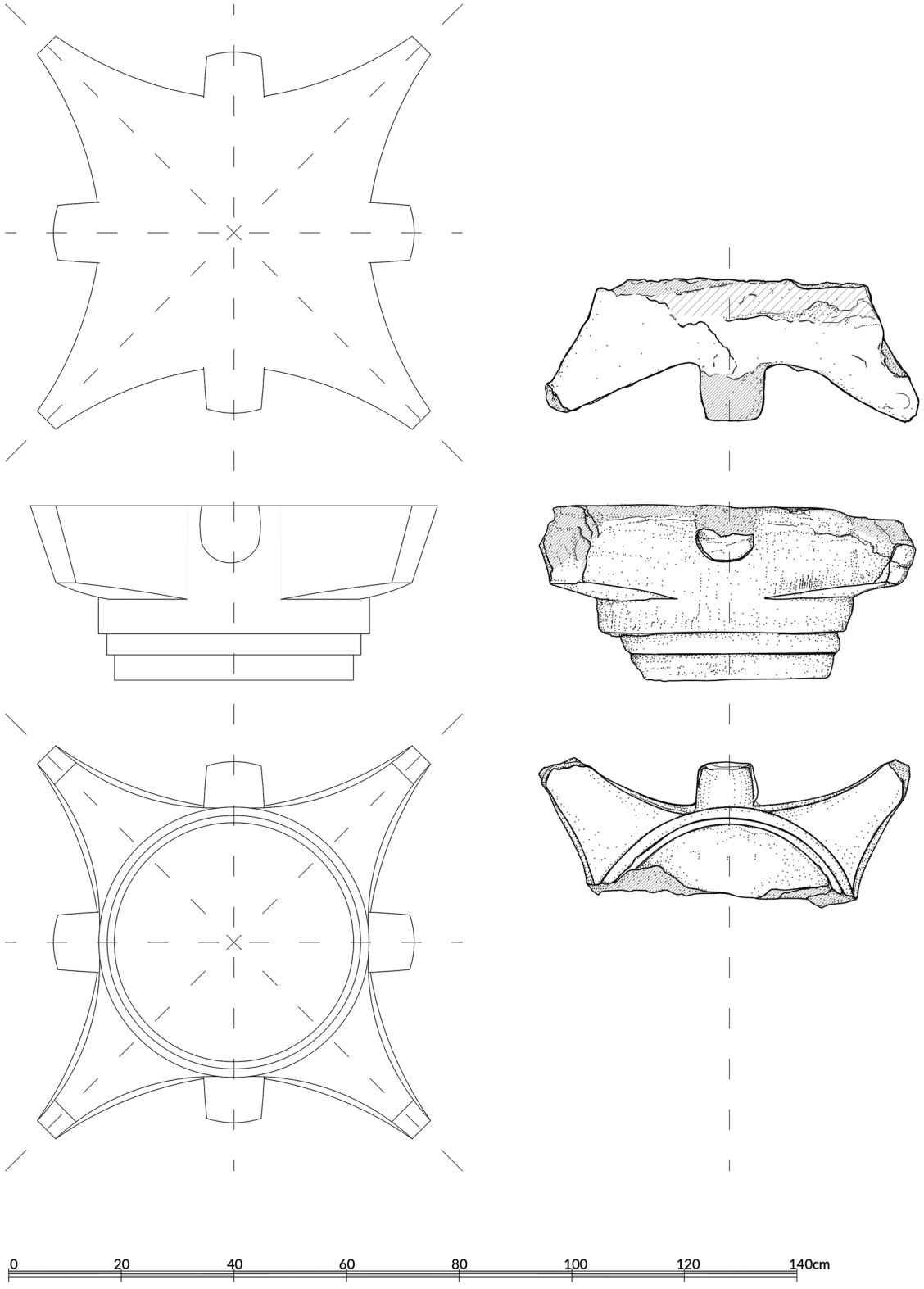

Figure 7: Blocked-out capital from Berenike trench BE19-122: left, reconstruction; right, existing state of preservation (F. Mi, S. Popławski).

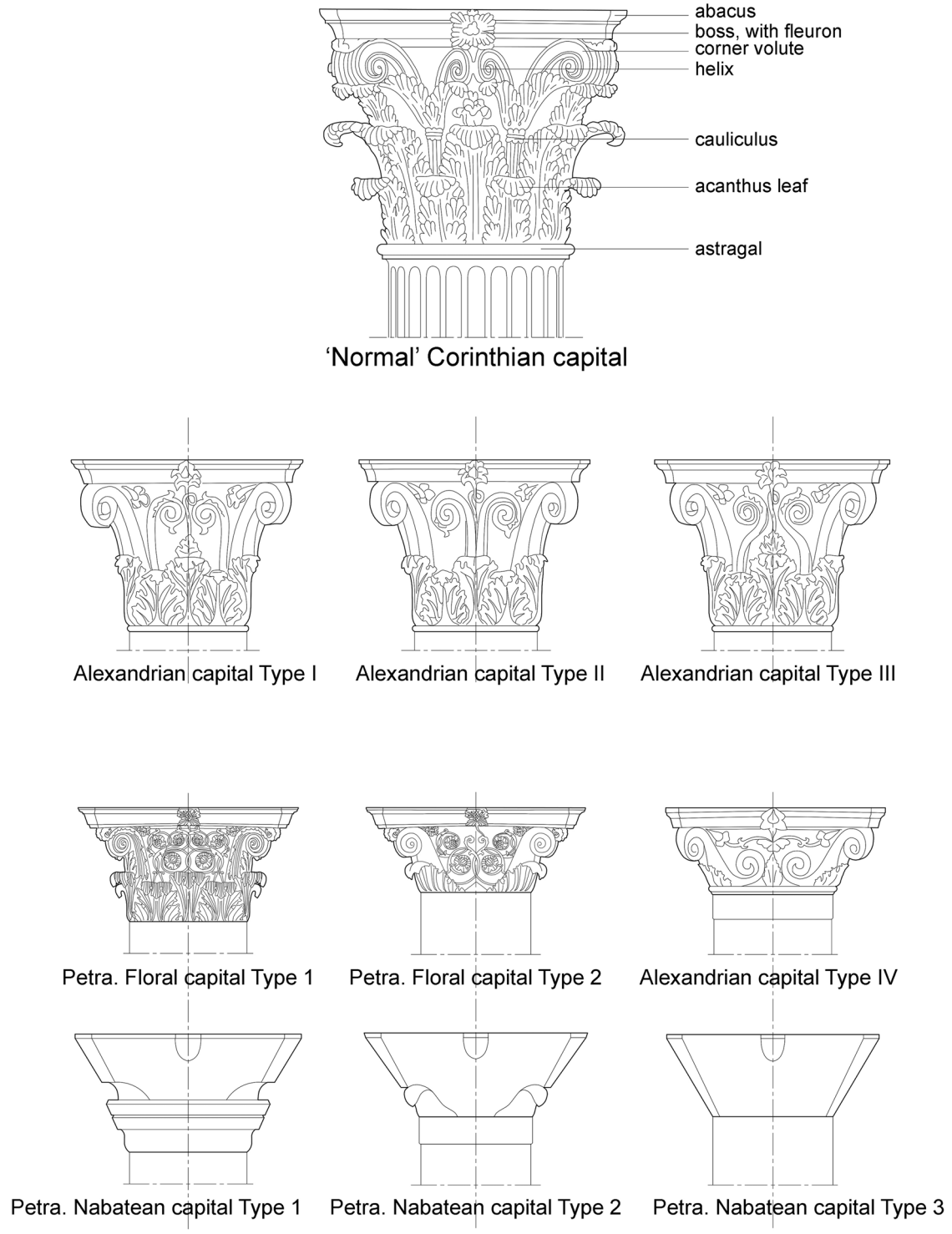

Figure 8: Evolution of capitals forms. "Normal" Corinthian, Alexandrian, Floral, and Nabatean Types (drawing: U. Kraśniewska, based on McKenzie, 1990, p. 190; 2007, p. 85).

3.2 Blocked-Out Capitals in the Ancient World

Blocked-out capitals are a particular type of architectural decoration characterized by a simplified form. Their shape is based on Corinthian or Ionian capitals and achieved by replacing floral ornamentation with

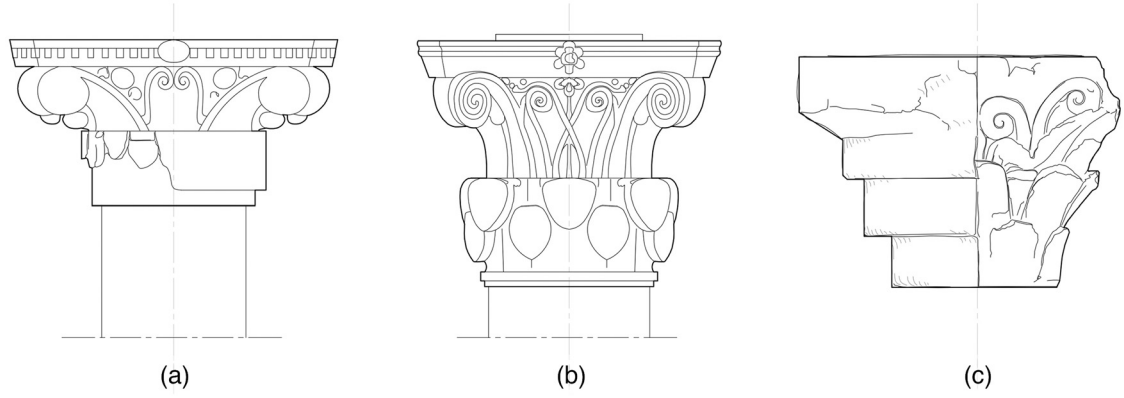

Figure 9: Selected unfinished capitals: (a) Kom Ombo, (b) Dendera, and (c) Cherchell (drawing: S. Popławski, based on the studies by Laroche-Traunecker, 2000, p. 210; Pensabene, 1982, p. 59, Tav.56, 168b).

geometrical forms. The concepts of simplification might have been inspired by capitals in their roughed-out state (see Brzozowska-Jawornicka, 2019; Czerner, 2009; Grawehr, 2017; Grawehr & Brzozowska-Jawornicka, 2020; Laroche-Traunecker, 2000; McKenzie, 1990, 1996; Patrich, 1996; Pensabene, 1993, 2018). They were first discovered in the areas inhabited by the Nabataeans, where they may be found in the stone monuments of Petra (Jordan) and Bosra (south Syria). This was reflected in their original designation as "Nabataean capitals," but subsequent findings in Egypt, Israel, and Cyprus have led researchers to associate their forms with the area of influence of Ptolemaic Egypt, particularly with Alexandria (Pensabene, 1993, pp. 114, Tav. 44–45; Sabottka, 1983, pp. 195–203).

This stylization was initially believed to be the result of unfinished stonework, as was the case with the capitals from the facade of the Temple of Augustus at Philae. Borchardt (1903, pp. 73, 83–84) explained their form by the difficulty of processing a very hard stone, diorite. Similar examples occurred in Mons Porphyrites and Mons Claudianus (both in Egypt), where granite details were produced (Kraus, Röder, & Müller-Wiener, 1967, pp. 108–205; Maxfield & Peacock, 2001, pp. 36–39). At the moment, the simplification tendency is widely noticed in soft and easily weathering material as well. Researchers justify it, among other things, by a small and fragile detail's limited resistance to external conditions (Brzozowska, 2016, p. 63; Grawehr, 2017, pp. 107–108).

The intentionality of stylizing an architectural decoration in this way is not questioned anymore. Based on similar proportions of subsequent capitals and their elements, three basic types of blocked-out capitals were differentiated in Petra, along with their biomorphic equivalents (Figure 8). These are Nabatean Types 1, 2, and 3, which correspond to high floral capital, low floral capital, and Alexandrian Corinthian type IV capital, respectively (McKenzie, 1990, pp. 116–117; Patrich, 1996, pp. 199–201). The purpose for styling the capitals discovered in Marina el-Alamein, on the other hand, is proven by the form given to them. They were fashioned by flattening the disks and removing a part of the stone required for carving a fully decorative volute, rendering them unfit for the production of a "Normal" Corinthian capital (Czerner, 2012, pp. 46–47).

It may be tempting to look for signs of simplification in undoubtedly unfinished capitals, such as those discovered in Dendera, Kom Ombo, or Cherchell (Figure 9; Castel, Daumas, & Golvin, 1984, pp. 21–36; Laroche-Traunecker, 2000, p. 209; Pensabene, 1982, p. 59, Figure 168). Instead of the intended geometrical shape of blocked-out capitals, they are characterized by sections of completed ornamentation along with some portions left unfinished, most likely as a consequence of the unintentional interruption of work. Because of this apparent similarity, it is reasonable to assume that the source of inspiration resides in the particular stages of the capital formation process.

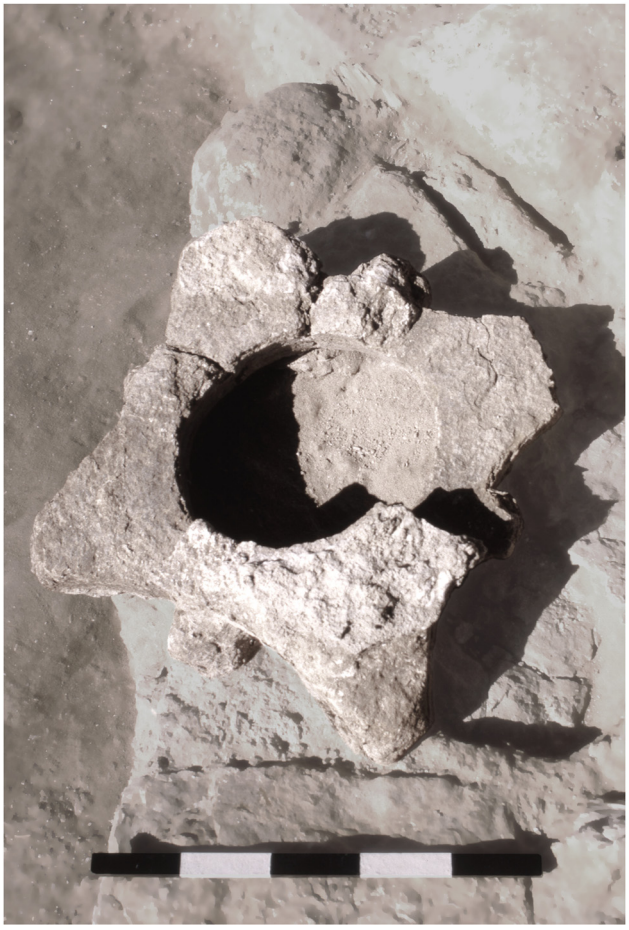

Figure 10: Blocked-out capital from Berenike trench BE95-4, scalebar measures 50.0 cm (photography: S. E. Sidebotham).

3.3 Architectural Analysis of the Capital from Berenike

The capital fragment discovered in the 2019 season demonstrates clear characteristics of simplification. It is not the only architectural artefact of this kind found at the site; in 1995, another capital with similar features was unearthed in the site's northeastern part. The capital was excavated in a Late Antique structure (BE95-4) around 150 m from the Isis Temple (Figure 2) and had been probably repurposed as a statue base. It was photographed and described in a report from the excavation works (Sidebotham, 1996, pp. 61, 71) as measuring *c.* 54.0 cm by *c.* 54.0 cm with a large circular depression of *c.* 32 cm in diameter curved in its top section. It is possible to deduce from the published image (Figure 10) that the forms of both capitals are similar. Their common features may be seen in the simplified volutes and fleurons. Although the length of the upper diagonal, calculated at *c.* 80.0 cm, indicates that the 1995 capital is smaller, it might be due to erosion and weathering of the original stone surface. Despite the simple and geometrized form of both capitals, much can be inferred about the architectural decoration that influenced the shape.

The two bottom rings are the typical elements of the capital discovered in Berenike in 2019. They would have been used to create two rows of acanthus leaves in the process of making a Normal Corinthian capital. Identical rings can be seen on the incomplete capital from Cherchell (Figure 9c; Pensabene, 1982, p. 59, Figure 168), which was most likely in a half-finished state due to a change in its intended function already during carving. According to Pensabene, it was initially intended to be a full capital, but shortly before its completion, it was changed to a semi-column crowning. As a result, a comprehensive study of the technique for carving acanthus leaves is now available. It is reasonable to assume that the ring's lower surface,

prior to further processing, corresponded to the bottom ends of downward-facing leaves. If the same approach had been applied to the capital from Berenike, it would have been impossible to achieve fully plastic, sculptured leaves of a Normal Corinthian capital due to the low and shallow placement of those rings.

For this analysis, it is necessary to think about how an Alexandrian capital was constructed (Czerner, 2012, p. 43). According to its reconstruction, acanthus leaves on Corinthian capitals typical of Alexandria and the surrounding region (Figure 8) were carved from a single ring that was shared by both rows. This was achievable due to the spatial separation of the leaves and the lack of overlap between neighbouring wreaths. As seen at the site of Marina el-Alamein, this method of forming details became the starting point for styling separate discs, with their amount matching the intended number of acanthus leaf wreaths. Each disc might then be carved to have properly separated leaves. Unfinished capitals carved in this way were discovered among the architectural artefacts of the Roman nymphaeum in Dendera (Castel et al., 1984, pp. 21–36; Pensabene, 1993, pp. 220–226, Tav. 31) as well as in Kom Ombo (Figure 9a and b) (Laroche-Traunecker, 2000, pp. 209–211; Pensabene, 1993, p. 293, Tav. 38; 2018, p. 420).[4]

The analysed capital has no astragal, which in a classical form serves to visually separate the capital and the shaft of the column. The lowermost ring, which was the foundation for carving leaves, and a scarcity of material surplus in the bottom section hindered future stages of shaping the column and rendered obtaining a Normal Corinthian capital impossible. At this point, it is worth mentioning capitals constructed from two distinct pieces, the top of which generally corresponds to the volutes and the bottom to the acanthus leaf wreaths. A less-common separation occurs between successive rows of acanthus leaves, as seen, for example, in the capital of the Alexandrian Pompey's Pillar from the Diocletian's era (Pensabene, 1993, p. 39, Tav. 7; Sabottka, 2008, pp. 288–298). The application of this technique to the Berenike capital would have resulted in its fragmentation into disproportionate components and would have made carving and assembly more difficult. Although it was also feasible to carve the astragal directly in the column's shaft, the transition from the shaft to the capital was most likely denoted by a slight overhang of the latter (McKenzie, 2007, p. 86, Figure 128, pp. 166–167, Figure 286).

Elongated corners are another characteristic feature of the Berenike capital. This kind of shape is typical of one of the steps in the creation of a Corinthian capital's volute and abacus. However, this similarity does not entirely explain the form used in this particular case. Because the corners are so elongated and tapered towards the end that forming a volute would have required removing a significant amount of excess material. Such elongation might indicate that the sculptor intended to make an abacus that would extend outside the volutes, with its projection in the shape of a square with concave sides. Corners fashioned in this manner are even referred to as "horns" (Grawehr, 2017, p. 105; Patrich, 1996, pp. 199–201); however, this does not seem to properly reflect their character.

Halfway between the corners, as far as they have been preserved, are fleurons reduced to the form of cylinders. They might be used in preparing the remaining material for carving floral ornamentation known from the classical Corinthian order. Their shape was commonly used in the ornament carving process.

Knowing the diameter of the capital allows for estimating the probable size of the column on which it was originally installed. According to Vitruvius (Vitr. 3.3.10), the height of the column shaft in the Corinthian order is eight to ten times its diameter depending on the size of the intercolumniation. The application of these proportions to the pseudo-Corinthian order with simplified capitals was confirmed in Marina el-Alamein, where the column shaft height amounted to 17 modules or 8.5 times the diameter (Czerner, 2009, p. 25). In the case of Berenike, the column shaft might therefore have a height of between 3.20 and 4.00 m, which together with the capital would result in an estimated size of 3.50–4.30 m.

4 The capitals from the back corner pilasters of the temple of Augustus at Philae might be considered as an exception to this rule. Their geometrized form had two steps (equivalent to two rings in the column capital), while more developed capitals from the portico, described by McKenzie as modified Corinthian, are visually closer to the Alexandrian capitals and so should have been carved with only one ring.

3.4 The Capital from Berenike in the Context of Blocked-Out Capitals

The discovery of blocked-out capitals in this area is hardly a surprise, given the presence of Ptolemaic – and subsequently Roman – influences are over both southern Egypt and Berenike itself. In the context of the object in question, the analysis of the capitals with distinctive two lower rings and elongated corners is crucial.

A resemblance to the Berenike capital may be observed in the details from Karnak, Medinet Habu, and Kom Ombo, among others, due to the appearance of the simplified volutes. For instance, two capitals with prominent corners and rectangular protrusions, as well as column drums measuring 55.0 cm in diameter each, were discovered in the peristyle of the Roman baths in Karnak (Figure 11a). They most likely formed only the upper part of the capitals. Plaster remnants with traces of red and yellow pigment were found on their surface (El-Masekh, Fournet, Piraud-Fournet, & Boraik, 2017, p. 224). According to the discoverers, elements of the capitals had been reused, and thus did not allow for accurate dating.

Two other capitals of similar forms were reported nearby, in the area of the Medinet Habu complex, in a small church located outside the Eastern Gate (Figure 11b and c; Hölscher, 1954, pp. 55–56, Pl. 46 a,b). Based on the released photograph, each of them has a diameter of *c*. 40.0 cm. The first is characterized by a significant simplification and the absence of the sculptural ornament. The other is slenderer and decorated with a delicate floral detail. Both consist of only a few basic elements: bulky corners, protrusions between them, and plain cylindrical shafts.

Many capitals with significantly simplified volutes were found in Kom Ombo (Figure 11d and e) (Laroche-Traunecker, 2000, pp. 209, 213; Pensabene, 1993, pp. 601–607, Tav. 73; 2018, pp. 407–422). Despite the fact that they were discovered at the same site, their styling differs. Their corners vary in shape, some being simple and others being more complex. This might be attributed to the varied levels of development of what are ultimately the same capitals (Laroche-Traunecker, 2000, p. 209). It seems considerably more plausible; however, these are the complete blocked-out forms.

Finally, a capital of comparable characteristic was unearthed in the north-eastern corner of the Roman Fort at Didymoi (Brun et al., 2011, pp. 33–47). It had been re-used in the first quarter of the third century AD. The capital is smaller (diameter *c*. 23.0 cm) and simplified to a roughed-out form consisting of only fundamental elements (Figure 11f).

It is important to note that all of the described capitals from southern Egypt are characterized by a simple form and extensive reduction of classical elements. In several cases, the capitals are decorated with colour or florals, but without additional sculpting of the simplified form. Unlike the Nabatean and Marina el-Alamein capitals, their stylization is not based on further interpretation of the classical elements. It is worth mentioning that the capitals from Douch are an exception – despite their South Egyptian provenience, their decoration is more elaborated and closer to those found in Nabatea and el-Alamein (Laroche-Traunecker, 2020, pp. 95–112; Pensabene, 2018, pp. 407–420).

Capitals with acanthus leaf wreaths characteristically reduced to two ring-like steps were discovered in Karanis. They were found as crownings of pilasters surrounding niches in Late Roman houses (Figure 11g and h; Boak & Peterson, 1931, pp. 57, 60, Figure 77; El-Nassery, Wagner, & Castel, 1976, p. Pl. XLVIII). Considering their relatively small size, they seem to be more sculptural and decorative than architectural elements. Although they are made of mud brick, smaller details are shaped in plaster. This demonstrates intentional simplification as their form was achieved in part with materials other than stone. These capitals are significantly less prominent, with their top part dominating the bottom. It might have been caused by the dimensions of brick used for their construction, as it was most likely the case in house C119 (Gazda, 2004, p. 30, Figure 54).

A capital with corners and ring-like steps most similar to the fragment found in Berenike was discovered in Coptos (Figure 11i). It was most likely built during the extensive construction phase during the first century AD and then reused in the construction of a later building located in the northern part of the site (L. Pantalacci, personal communication). Despite being rather bulky and of higher proportions, it contains only basic elements. The presence of masonry tool marks on its surface and an elongated groove at the bottom of the base diameter might indicate that it was not completed. These defects might have later been concealed with a layer of plaster, but this cannot be confirmed due to a lack of evidence. The stepped arrangement of the rings in its bottom section bears a striking resemblance to the capital from Berenike. In

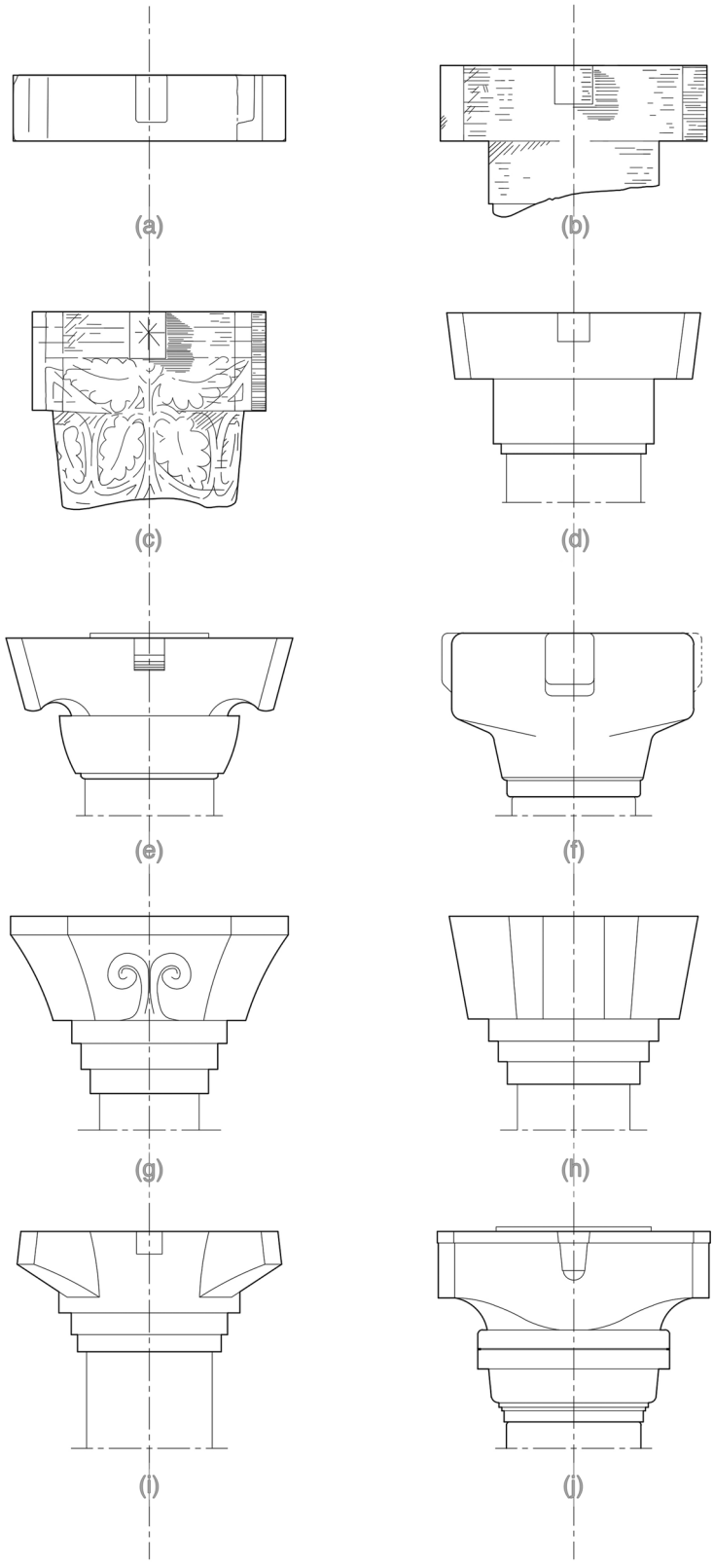

Figure 11: Selected blocked-out capitals: (a) Karnak; (b and c) Medinet Habu; (d and e) Kom Ombo; (f) Didymoi; (g and h) Karanis; (i) Coptos; (j) Kourion (drawing: U. Kraśniewska, S. Popławski, based on the studies by Boak & Peterson, 1931, Figure 77; Brun et al., 2011, pp. 33–47; El-Masekh et al. 2017, p. 224; El-Nassery et al., 1976, pp. 239–271, Pl. LXVIII: 47; Grawehr & Brzozowska-Jawornicka, 2020, pp. 181–200, Figure 2; Hölscher, 1954, p. 190. 46 a,b; Laroche-Traunecker, 2000, p. 210).

this case, however, the rings appear slightly further up, potentially allowing more of their surface to be used for carving the acanthus leaves. There are simplified fleurons in the middle of the distance between the corners. The corners themselves are elevated and narrow upwards in a similar fashion to those of the Berenike capital. Unfortunately, due to the breaking of the corner ends in the latter, it is not possible to accurately compare the ends between the two capitals.

Outside Egypt, blocked-out capitals were widespread in Cyprus, for example, in Salamina, Amathus, and Nea Paphos (Brzozowska-Jawornicka, 2019, pp. 177–178; Wright, 1992, p. 460), where simplified detail is quite common. Their stylization is based on both Ionic and Corinthian capitals. Pseudo-Corinthian capitals of Cyprus differ significantly from the Berenike capital. The cross section of the double rings, positioned at a considerable height from the capital's bottom, resembles the shape of an acanthus leaf. The top part consists of four corners, with a near-classically shaped volute ending with a plain scroll. What stands out among the instances of this common form is the detail used in the capital located at the front portico of the Temple of Apollo Hylates in Kourion (Figure 11j). Its corners, like those of the Berenike capital, have been cut down to the ruled surface, although in this case they have been ended with a straight cut. Despite the evident differences in other elements, it may be considered comparable to the capital from Berenike due to the shape of its corners alone.

3.5 The Development of the Corinthian Capitals in Egypt

In the context of the elements discussed earlier, the simplified model for the design of the Berenike capital can be traced back to the Corinthian order rather than the Ionic or Composite order. The Normal Corinthian capital (Figure 8) is defined by a shaft called a kalathos. It extends upwards from the ring separating the column shaft and the capital, called an astragal, and is covered with an abacus. Two rows of acanthus leaves decorate its bottom part. Cup-shaped stalks (cauliculi) rise from the upper row, curled at the ends, creating volutes in the corners and helices in the centre. Fleurons are positioned above the helices and partially blend with the abacus. The Normal Corinthian capital may be observed as early as the third century BC (McKenzie, 2007, p. 85). It was later standardized and widespread by the Romans.

The period of the conquest of Egypt by Alexander the Great and the ensuing reign of the Ptolemaic dynasty coincide with the development of the Corinthian order. Due to the lack of the standardized form, Alexandria developed its own order. The form of helices distinguishes it from its classical archetype. Ronczewski (1927), followed by McKenzie (2007, pp. 85–86), identified four types of the Alexandrian capitals (Figure 8). They are all characterized by the acanthus stalks rising directly out of the leafage and by the absence of cauliculi. Helices of type I curl towards each other. They curl outwards and away from each other in types II and III, but in type III, there is more space between them. Acanthus leaf wreaths are removed entirely in type IV, and the volutes spiral into the helices, which curl towards each other in the centre of the capital.

McKenzie distinguishes two major directions in the development of the capitals in Egypt during the Roman period. One relates to the Normal Corinthian capitals, while the other develops the designs originated in the Ptolemaic Alexandria (McKenzie, 1996, p. 135; 2007, pp. 223–227). One subtype of these new Corinthian capitals[5] is characterized by plain acanthus leaves curved sharply downwards, as well as simple and narrow volutes. Most capitals of this subtype are notably shorter than the Normal Corinthian capital, which may result from the late origin of their design. As an example of this kind of decoration, McKenzie identifies the capital from the "Imperial Cult Chamber" in Luxor[6] (AD 300) (Figure 12b) and the earliest

5 Identified by McKenzie as the third type of the new Corinthian capital, which evolved in continuity from Ptolemaic classical architecture (McKenzie, 1996, p. 135; 2007, p. 225).

6 It is possible that the capital from the Imperial Cult Chamber in Luxor had been reused; therefore, it should be dated to the period before AD 300 (Karelin, 2015, p. 136).

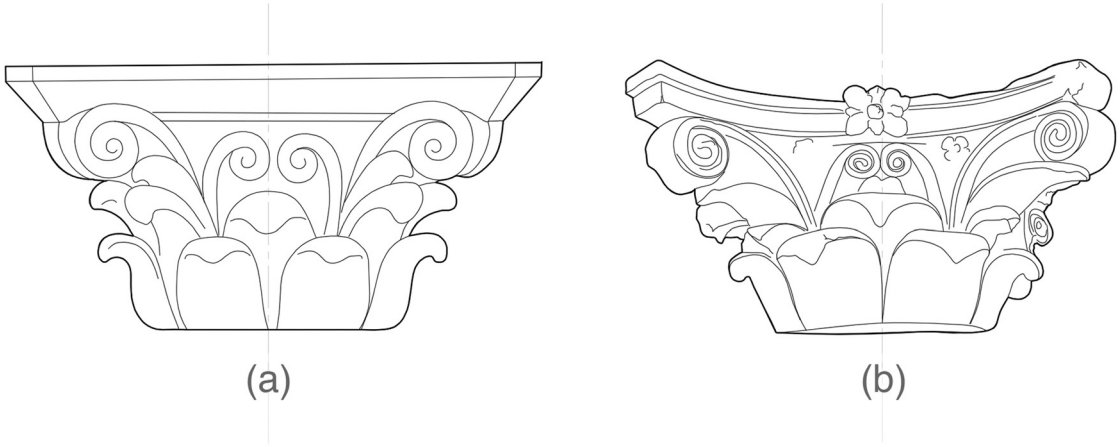

Figure 12: Corinthian capitals distinctive to Egypt in Roman period – McKenzie type 3: (a) Mons Claudianus and (b) Luxor "Imperial Cult Chamber" (drawing: S. Popławski, based on McKenzie, 2007, pp. 223–224).

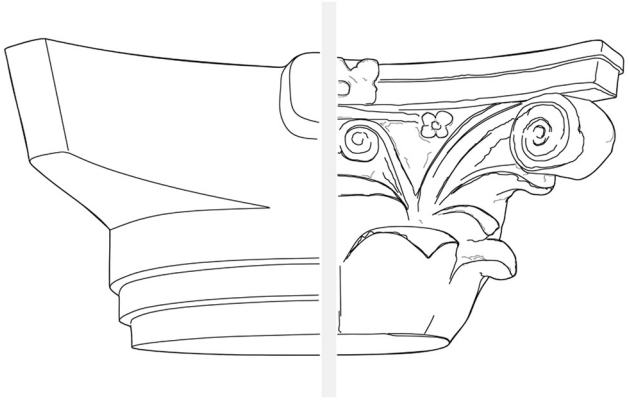

Figure 13: Comparison of the form of the blocked-out capital from Berenike and the Corinthian capital from the "Imperial Chamber" at Luxor (drawing: S. Popławski).

known capitals of this type from the Serapis Temple in Mons Claudianus (AD 118) (Figure 12a). This development group is most closely related to the capital from Berenike (Figure 13), primarily because of identical components and similar proportions that are so different from those of the Normal Corinthian capital, in which the height of a capital should be equal to the lower diameter of the column shaft.

This form might have inspired the capital from Berenike in the same manner as the capitals from Petra have their equivalents in the types of floral capitals. Also, similar to the capitals from Petra, it is possible to demonstrate the intentionality of the stylization of the capital from Berenike rather than the incompletion of its design.

4 Conclusion

The capital in question is the first-confirmed pseudo-Corinthian capital discovered as part of the Polish-American project in Berenike. Its simplified form is closely related to that of a Corinthian capital, which was common in Egypt in the second and third century AD. Its ornamentation does not represent an unfinished stonework, but rather an intentional stylization, as seen by the low position of the stepped rings and the aesthetic finishing of the surface. The use of very low-quality local material reveals that its carving was

performed by a local stonecutter. Stone softness is probably one of the reasons for the simplification of the capital, given the hypothesis that blocked-out forms are more resistant to weather conditions than their biomorphic equivalents. Moreover, the mere presence of the capital suggests that there were structures in Berenike that bore classical architectural traits, which still have not been confirmed by discoveries.[7] The height of the column on which the capital was mounted was most probably 3.50–4.30 m based on the capital's own measurements. It is hard to draw general conclusions regarding architectural ornamentation in Berenike based on the discussed details.

The only artefacts of this kind discovered within the site are the two blocked-out capitals from 2019 and 1995 and a small capital ornamented with acanthus leaves (Sidebotham & Wendrich, 2000, p. 96). The discovery of only three single capitals among the ruins of the city might be the consequence of excavations being so far conducted mainly within the layers of Late Antique developments and Ptolemaic fortifications, with the exception of the early roman Isis Temple built in the prevailing Egyptian style.

The capital from Berenike follows the stylization tendencies visible in southern Egypt. Its form is characterized by distinct simplification and clearly refers to the stages of the Normal Corinthian capital carving procedure. Its detail is rectilinear and highly geometrized to the extent that only the fundamental elements of the capital can be recognized. It thus differs from the capitals usually referred to as blocked-out from Nabataea, Israel, Marina el-Alamein, or Cyprus, which exhibit significantly more advanced stylization, characterized by extensive transformation and developed detail consisting of rounded, smooth, and delicate shapes.

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7 So far, the only structure confirmed in Berenike bearing the characteristics of classical architecture is the tetrastylon (Sidebotham et al., 2020, pp. 15–16; 2019, pp. 11–12).

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