

# Gebelein Archaeological Project 2019: Pathyris and the cemeteries in East Gebelein and the Chert Survey in West Gebelein



**Abstract:** Fieldwork in early 2019 by the Gebelein Archaeological Project encompassed surveys of two cemeteries situated south of the ancient town of Per-Hathor/Pathyris in the area of the Eastern Mountain of Gebelein. One of these is dated to the Old Kingdom and the First Intermediate Period, the other tentatively to Fatimid times. The third survey searched for local chert sources on the Western Mountain, investigating a local tradition of lithic tool production.

**Keywords:** Gebelein, Pathyris, survey, GIS, Ptolemaic, Fatimid

The Gebelein Archaeological Project strives to augment the understanding of the archaeological topography of the area of the Eastern Mountain through archaeological field studies of the remains of the town of Pathyris, epigraphic work on a nearby rock-shelf and in the rock-cut chapel dedicated to Hathor, and a ground survey of the southern part of the mountain where the Southern and Islamic cemeteries are located. The Chert Survey on the Western Mountain of Gebelein initiated a study of local chert sources combined with an investigation of a local tradition of lithic tool production. Conservation work progressed on the rock-cut chapel dedicated to Hathor.

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## METHODS

The archaeological survey was conducted with the use of a mobile Global Navigation Satellite System (GNSS) tool, with Geographic Information System (GIS) applications in order to document the positions and to gather detailed information about archaeological features. The GIS application ArcPad was used in combination with the mobile measuring tool MobileMapper 20 (Ejsmond et al. 2015; 2017: 240–243). As a result, a map with locations of archaeological features and finds was produced. The archaeological features received numbers compliant with the system used in previous seasons (see Ejsmond et al. 2017: 241–243).

To increase the precision of recording selected archaeological features, geodetic reference points were established in 12 locations [Fig. 1, Table 1] with the use of a TotalStation Sokkia CX 105 and Sokkia GSR2700 IS. Further measurements of archaeological features were taken with the use of a Leica TS06 Plus.

Most of the graffiti were documented by photography and drawing, which however was fraught with difficulty, mainly due to the fragility of the rock, the rough and cracked surface, coupled with unfavorable lighting conditions. A Canon 750D (24 megapixels) was used to record the images, supplemented with different lenses (EF-S 18–55mm f/3,5–5,6 IS and EF-S 60 mm f/2,8 macro USM), a tripod, a Fomei Panther 600 mini flash, and a stick (see Ejsmond et al. 2017: 243–245).

## SURVEYS

The archaeological and epigraphic survey of the Eastern Mountain was focused on three general areas: 1) the town and

temple enclosure, which were the subject of a reconnaissance in 2018 (Ejsmond, Wieczorek, and Wieczorek 2018: 237–242), and the habitation district investigated this year; 2) a rock-shelf with Pharaonic inscriptions located east of the temple; and 3) Southern and Islamic cemeteries, both located in the southern part of the hill.

During initial fieldwork (Ejsmond et al. 2017: 240–243), the Eastern Mountain (like the Western one) was divided into Rocks, numbered from I to IV from north to south. In 2019, Rock II was further subdivided, changing the initial numbering, but to avoid confusion the following designations were introduced: Rock II a (northern) and Rock II b (southern) [Fig. 1].

## PER-HATHOR/PATHYRIS

The town of Per-Hathor, better known under its Greek name Pathyris, is attested since the Predynastic period (Ejsmond forthcoming; Ejsmond et al. forthcoming b) and throughout most of the pharaonic periods (Fraser 1893: 496–500). It was a nome capital from the 2nd century BC to 88 BC (Łajtar 2012: 171), when the town was taken by rebels (for the history and region, see e.g. Vandorpe and Waebens 2009: 11–51; Fiore Marochetti 2013: 2–6). Some of the latest surviving documents from the site relate to the Thebaid revolt of 88–85 BC (for this revolt, see e.g. Vélisse 2004: 64–73; Fischer-Bovet 2014: 108–109). The town remained loyal to the Ptolemaic rulers and was promised military aid, but because written records cease abruptly in the fall of 88 BC, it is assumed that Pathyris did not survive this riot.

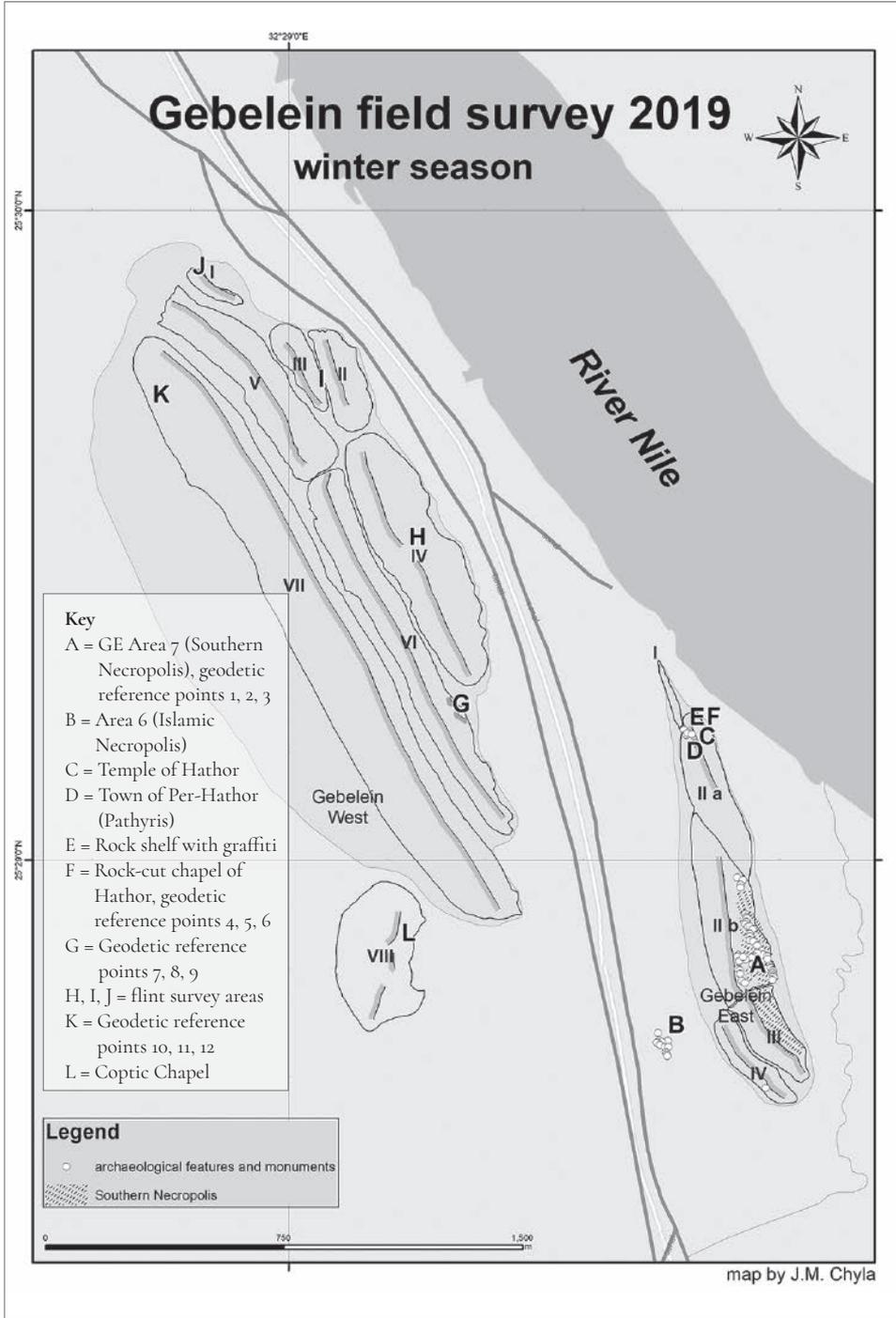


Fig. 1. Gebelein field survey in 2019; geodetic reference points in Table 1 (Gebelein Archaeological Project | map J.M. Chyla)

The site must still have held some religious importance in the Roman period. It is mentioned (as the ‘City of Aphrodite’) in Strabo’s list of cities located south of Thebes in the early 1st century AD (Strabo XVII.1.47), and a stela dedicated to Isis of Pathyris from the reign of Trajan (January 11, AD 109) was found in the ruins of the town (Milne 1905: 40–41, Pl. 5; Vandorpe and Waebens 2009: 50). Blemmyan kings took residence in the area during the 6th century AD (Eide et al. 1998: 1202). However, the later history of the place has not been studied yet. It is believed that the archaeological remains of the domestic district reflect the layout of the town from the late Ptolemaic period (Bergamini 2003).

After the Arab conquest of Egypt, during Fatimid times, Pathyris was in the Qus province (al-Qalqashandī: 497). It was mentioned as “Gebelein” in the account of

Ibn Mammātī from 1209 (Ibn Mammātī 1991: 109). Another source (al-Udfūwī, AD 1347) refers to it as “Pepweah” (Udfūwī: 9–10). While Ibn al-Ġay‘ān (AD 1412–1480) refers to it as “Gebelein” and claims it belonged to the Diwan of Sultan, in the Mamluk state it was actually under the control of al-Amīr Yashbak min Mahdī al-Dawādār (Ibn al-Ġay‘ān: 191).

The remains of the Ptolemaic town of Pathyris are located in the northwestern part of Rock IIa on the Eastern Mountain and consist of concentrations of mud bricks and potsherds. The site was excavated, mainly by the Italian Archaeological Mission of the Museum of Egyptian Antiquities in Turin, but no satisfying documentation has been published. Giovanni Bergamini made a generic plan of the town on the basis of unpublished sketches and photographs from the Italian excavations (Bergamini 2003: Figs 5

Table 1. Coordinates of geodetic points established in the winter of 2019

according to WGS 84 UTM zone 36N				according to World Geodetic System 1984							
Point No.	Easting	Northing	Elevation	Point No.	Latitude			Longitude			Elevation
					Dg.	Min.	Sec.	Dg.	Min.	Sec.	
1	449372.448	2818286.952	91.771	1	25	28	51	32	29	46.74	91.771
2	449397.936	2818236.563	91.260	2	25	28	49.36	32	29	47.66	91.260
3	449422.813	2818329.733	70.033	3	25	28	52.39	32	29	48.54	70.033
4	449269.711	2818923.738	69.075	4	25	29	11.69	32	29	42.97	69.075
5	449255.517	2818955.095	67.440	5	25	29	12.7	32	29	42.46	67.440
6	449245.068	2818956.554	68.920	6	25	29	12.75	32	29	42.09	68.920
7	448584.578	2819069.659	78.966	7	25	29	16.34	32	29	18.41	78.966
8	448505.514	2819004.298	88.039	8	25	29	14.21	32	29	15.59	88.039
9	448539.857	2818981.204	88.871	9	25	29	13.46	32	29	16.82	88.871
10	447700.791	2819819.480	84.494	10	25	29	40.61	32	28	46.65	84.494
11	447759.356	2819916.893	103.425	11	25	29	43.78	32	28	48.74	103.425
12	447714.644	2819969.094	107.356	12	25	29	45.47	32	28	47.13	107.356



Fig. 2. Plan of Pathyris, georeferenced on a 2013 satellite image of the northern part of the Eastern Mountain; letters are correlated with Bergamini's detailed plan (plan after Bergamini 2003: Figs 5, 9; Gebelein Archaeological Project | processing J.M. Chyla)

and 9), to which the current fieldwork has made some amendments.

The town can be divided into two main parts: 1) the temple area, which may have been part of a fortress at some stage (or maybe the fortress was located nearby; for a discussion of this issue, see Ejsmond, Wieczorek, and Wieczorek 2018: 237–241), located in the northern part of the summit of Rock IIa, and 2) inhabited area on the western slope of the northern part of Rock IIa (see plan in Ejsmond et al. 2017: Fig. 20). Although the temple dedicated to Hathor has received some scholarly attention (e.g., Fiore Marochetti 2010), still very little is known about the habitation area from an archaeological point of view.

The reconnaissance in the habitation area was intended as a means of examining the state of preservation of the remains and testing the accuracy of Bergamini's archaeological plan, which was based on 14 drawings by the Italian expedition (Bergamini 2003) [Fig. 2]. In the 1990s, a comparison of old and new photographs, and the drawing documentation (although not dated precisely) allowed the habitation area on the Eastern Mountain to be traced in the field.

Ernesto Schiaparelli (1921: 127) claimed that the town had been explored by the Italian mission in 1910 and 1911. Bergamini (2003: 215) reiterated this information and added new facts, namely, that a campaign directed by Gulio Farina was conducted in the town in the 1930s. In his report on the 1930 season, Farina (1929: 292) said only that he had made

a brief visit to the area. He wrote that the place had already been explored and did not refer to any archaeological work conducted in the town and temple area during the 1930 season.

According to Bergamini (2003: 215), the drawings must have been made in 1911 because there is a note to this effect on the margin of a town plan. The 1911 season was directed by Virginio Rosa, who started his research at Gebelein by exploring the eastern part of the Northern Necropolis (Rosa 1911; Ugliano 2016: 176–178; Ejsmond et al. forthcoming a). After finishing the exploration of the Northern Necropolis, he went on to explore the Central Necropolis, and then focused on the town. Rosa wrote a letter to Schiaparelli complaining about having found nothing in the fortress (Ugliano 2016: 184). More recent archival research by Federica Ugliano demonstrated that excavations were conducted in the town, temple and fortress in 1910 and that only some minor work was undertaken in these areas in 1911 due to time constraints (Ugliano 2016: 176, 219). Thus, the town was excavated in 1910, with only minor work, which may have included drawing of the plans, being done in 1911.

The map published by Bergamini was first registered in GIS. Control points were set up at characteristic locations observed both on Bergamini's plan and on the ground (for example, the corner of Sheikh Musa's mausoleum,<sup>1</sup> S in Fig. 2). These points were recorded and verified

1 The man buried in the mausoleum is referred to by local residents as Sheikh Abu Moses el-Ansary, yet since the name "Musa" is mentioned frequently in publications, it has been used also in this study.

in the field in earlier seasons. The final georeferencing is quite high for such a small area, that is, 1.50 m. The final map is distorted compared to the original plan published by Bergamini. It is longer on the north–south axis and narrowed down on the east–west one to fit the topography of Rock IIa and to better represent the actual features.

A rich body of Greek and Demotic records from Ptolemaic Pathyris has allowed schematic plans of the town and its surroundings to be sketched (Pestman 1965: 54–56, 73–88; Vandorpe and Waebens 2009: 16–36), but the layout and physical landscape of the town itself is poorly described in the literature. The published data from the excavations is limited (see, e.g., Fraser 1893: 496–500; Schiaparelli 1921: 126–127; Donadoni Roveri 1995) and only a few features of the town, temple and fortress have survived until the present day (Donadoni Roveri, D’Amicone, and Leospo 1994: 1–2; Bergamini 2003: 214 and Note 7; Ejsmond et al. 2017: 258, Fig. 20). A comparison of photographic images from the first half of the 20th century with those from the 1990s demonstrates extreme deterioration of the site during the 80 years between the two Italian missions (Donadoni Roveri 1995; see Bergamini 2003: Figs 3 and 4). However, some areas are still covered with ceramics and/or mud-brick debris, and parts of mud-brick walls can still be found in certain spots (see Ejsmond et al. 2017: 258, Fig. 20; Ejsmond, Wiczorek, and Wiczorek 2018: especially 238–239, Fig. 3) [Fig. 3].

This is especially true of the northern part of the western hillside of Rock IIa [Fig. 4], and the area south of the southernmost E–W wall on the mountain top [P in Fig. 2]. The western hillside is a rocky slope. The areas on the mountain top, between the mountain ridge and the steeper cliff-side to the east, are more levelled. In the late Ptolemaic period, this area [O and R in Fig. 2; Fig. 5] housed the southern part of the temenos of the temple of Hathor, the presumed fortress (with which the temple was closely connected), and some houses (Fraser 1893: 497; Winnicki 1978: 69–70; Vandorpe, Waebens 2009: 20–21).

The northern part of the western slope, which is covered in noticeably darker debris [see Fig. 4], correlates roughly with building blocks A, B and C in Bergamini’s plan<sup>2</sup> (2003: Fig. 9). Due to the significant amount of rubble, it was not possible to identify any of the scattered architectural remains with specific rooms or walls in his map with any certainty. Further south—where the debris is lighter in color [see Fig. 4]—the surface is again rich in ceramic finds (especially in the lower part of the hill) but contains fewer mud-brick remains.

Although no architectural remains could be securely identified, Bergamini’s placement of the plan in the topography was tested by means of comparing relatively stable features (like rocks), visible in the archival photographs, with the current landscape. Particularly useful for this purpose were two archival photographs (Bergamini 2003: Figs 6–7) showing the south and north view of the

2 Letters in Fig. 3 correspond with those in Bergamini’s plan (2003: Fig. 9).



Fig. 3. Areas of the town particularly rich in ceramics (top) and mud brick (bottom); photos taken north of the southernmost E-W wall on the mountain top and in the eastern half of building block B on the western slope (R and B, respectively, in *Fig. 2*), the latter looking southeast. The pottery might have come from a (modern) dump (Gebelein Archaeological Project | photos L. Tams)

main street excavated in 1910. The photographs are said to have been taken outside of units I.7 and H.19 (see Bergamini 2003: Fig. 9), the approximate location of which could be pinpointed due to the inclusion of some topographical features in the published plan [see Fig. 2]. However, the various rock formations and the tomb of Sheikh Musa visible from this location did not align well with the published plan. It turned out that Bergamini's general plan of Pathyris should not be read at face value. The plan seems to be flattened and does not consider the topographical reality, especially the heights and the slope of the hill. This partly explains the deviation of the location of some of the features.

A study of the town remains and of the archival photographs also showed that some houses were built on mud-brick terraces, built to level the steep slope of Rock IIa. Structures of this kind, which had gone unobserved before, shed a new light on a very important aspect of the town structure.

Moreover, the fieldwork and the study of archival photographs have suggested that the town layout should be amended so that the southwestern part of the plan (blocks G, I and M in Fig. 2) would touch (or nearly touch) the smaller western ridge (marked with arrows in Fig. 4). Its southern extension [Q in Fig. 2] is not justified, but the N–S wall running alongside the mountain ridge [O in Fig. 2], the large complex on the mountain top [N, O, P in Fig. 2] and the mausoleum of Sheikh Musa [S in Fig. 2] appear to be located accurately. Therefore, the archaeological plan of the town should be adjusted and moved some dis-

tance north and west on the topographical map.

Doing so would accomplish a number of things: 1) place a larger part of the town in more even terrain; 2) align it better with the N–S wall that ran along the mountain ridge [O in Fig. 2]; 3) free up some space between the town and this wall; and 4) provide an explanation as to why the westernmost part of the buildings in blocks E, G, I and M are not recorded (Bergamini 2003: Fig. 9) [see Fig. 2]. That this reconstruction is good is also suggested by an unpublished notebook in the State Archive in Turin with sketches and measurements of the same buildings (*Notebook with sketches* n.d.). In it, streets are indicated east of some of the published buildings and the sketches of blocks M.1–M.7 are cut off by rough wavy lines, similar to those indicating cliffs in other pages (for a more lengthy discussion, see Tambs forthcoming).

The town area may yield new data on the ancient settlement. In order to determine the extent of the plan adjustment, the northern section of the town should be cleaned and/or excavated. If larger sections of walls are exposed, this—in combination with a comprehensive study of the mentioned field journal, drawings and relevant archival photographs—might allow specific walls to be identified in the field, thereby verifying or refuting the placement of the recorded buildings in the physical landscape.

#### EPIGRAPHIC SURVEY

Further work was conducted on the eastern side of Rock IIa, where the rock shelf with inscriptions is located. They are dated to the late Middle Kingdom and the early New Kingdom and were

studied during the 2016 and 2018 seasons (Ejsmond, Wiczorek, and Wiczorek 2018: 2341-2342). In the 2019 season, new

elements of the graffiti were recognized and documented (Wiczorek forthcoming).



Fig. 4. Overview photos of the western slope of the northern part of the Eastern Mountain, looking south (top) and north (bottom) (Gebelein Archaeological Project | photos L. Tamsb)

## ROCK-CUT CHAPEL

The copying and photographic documentation of the epigraphic material in the *speos* took place during fieldwork in 2015 and 2016 (Ejsmond et al. 2017: 262–264). In 2016 and 2019, the walls were cleaned and restored, and the floor was cleared (2016), uncovering two large

manmade cavities in the ancient floor level [Fig. 5].

The team had initially wanted to clear these cavities in order to accurately map the current state of the *speos* and to explore their contents. After due archaeological consideration on site, it was decided to leave the cavities untouched. Cleaning work inside the *speos* has already demonstrated that the 30-cm-thick rubble layer accumulated on the ancient rock floor is of modern date, a claim supported by the local authorities and a photograph of the chapel taken in 1993, showing no signs of intrusion. Therefore, any material from these artificial cavities would be devoid of ar-



Fig. 5. Rear wall of the chapel: top, in 2019; bottom, in 1993; note signs of modern destruction on the rock-cut offering table and the floor (Gebelein Archaeological Project | photos D. Takács and F. Maresquier).



Fig. 6. Wall surface of the south wall of the chapel showing signs of deliberate destruction in antiquity in front of the now visible figure of Hathor (Gebelein Archaeological Project | photo D. Takács)

chaeological context and hence hold no primary significance for the dating of the monument. Moreover, the removal of debris would create an impractical situation, making movement inside the monument possibly dangerous.

Some new details of the hitherto documented parts of the wall decoration of the speos emerged thanks to the cleaning and conservation works. The area in front of the figure of Hathor, on the south wall, seems to show extensive traces of surface erasure which was

possibly done by Thutmose III in order to delete the royal figure of Hatshepsut which had previously been present in front of her [Fig. 6].

Conservation work was continued. The primary aim was to remove the dirt and salt efflorescence from the surface of the rock inside the chapel. The cleaning was done with cotton compresses, soaked in hot water, which absorbed the salt and dirt. Further work in the chapel is necessary to complete the cleaning and conservation process.

## THE CEMETERIES

### SOUTHERN NECROPOLIS

In the Southern Necropolis there is a group of rock-cut tombs which, based on their architectural features, are tentatively dated to the late Old Kingdom and the First Intermediate Period. They are located at the southeastern foot of Rock IIb and continue to Rock III. Most of them consist of a courtyard, an antechamber (sometimes with pillars), and a burial chamber(s) (in at least two cases a descending corridor connecting the antechamber and burial chamber were seen) [Fig. 7A–B]. Some rock-cut features were

noted west of the tombs. These may be remains of robber's pits in search of tombs or the remains of some mining activities.

This site includes about 40 recognizable archaeological features. Since individual features were, in some cases, hard to distinguish, the place was described in the GIS documentation as Area 7 of the Eastern Mountain [Fig. 9]. Further to the south, some other tombs were observed but due to time constraints it was impossible to document them. They are located higher on the mountain than the aforementioned sepulchers.



Fig. 7A. Selected archaeological features of the Southern Necropolis: GERII 36 (Gebelein Archaeological Project | photo J.M. Chyla)



Fig. 7B. Selected archaeological features of the Southern Necropolis: top, GERII 38, and bottom, GERII 40 (Gebelein Archaeological Project | photos J.M. Chyla)



Fig. 9. Detailed view of Area 6 in Gebelein East (Google Earth 2019 | processing J.M. Chyla)

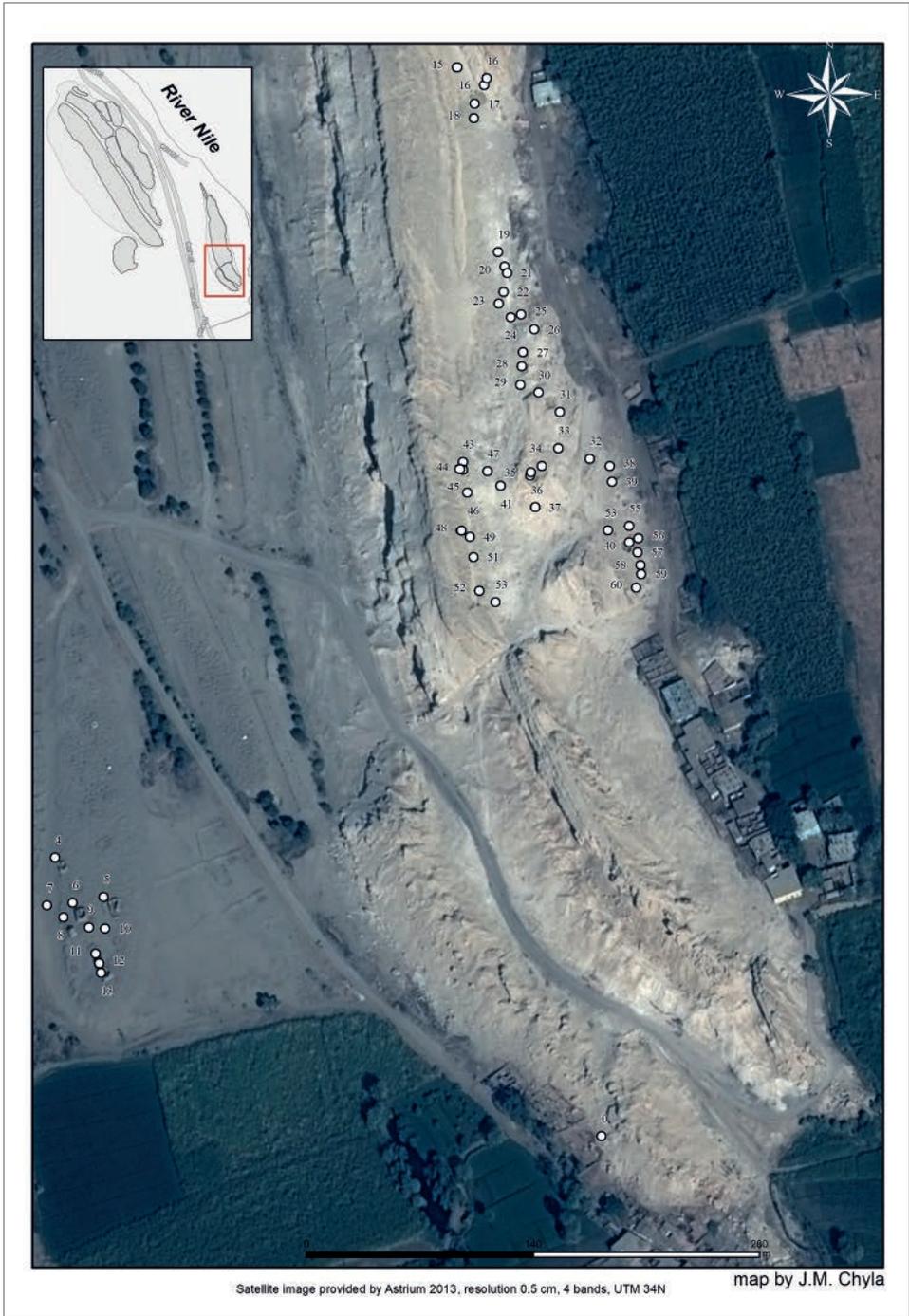


Fig. 8. Areas 6 (features in the west) and 7 (features in the east) (Gebelein Archaeological Project | map J.M. Chyla)

**ISLAMIC NECROPOLIS**

An Islamic cemetery (archaeological Area 6 on the Eastern Mountain) is located in the southwestern part of Gebelein East [Figs 1, 8, 9]. There are eight mud-brick mausolea tentatively dated to the time of the Fatimid dynasty.<sup>3</sup> Their struc-

tures are all alike and consist of a single room topped with a dome, some of these collapsed. Remains of additional rooms outside of some of the mausolea are still visible. Photographic documentation as well as architectural drawings of selected monuments were made, providing the

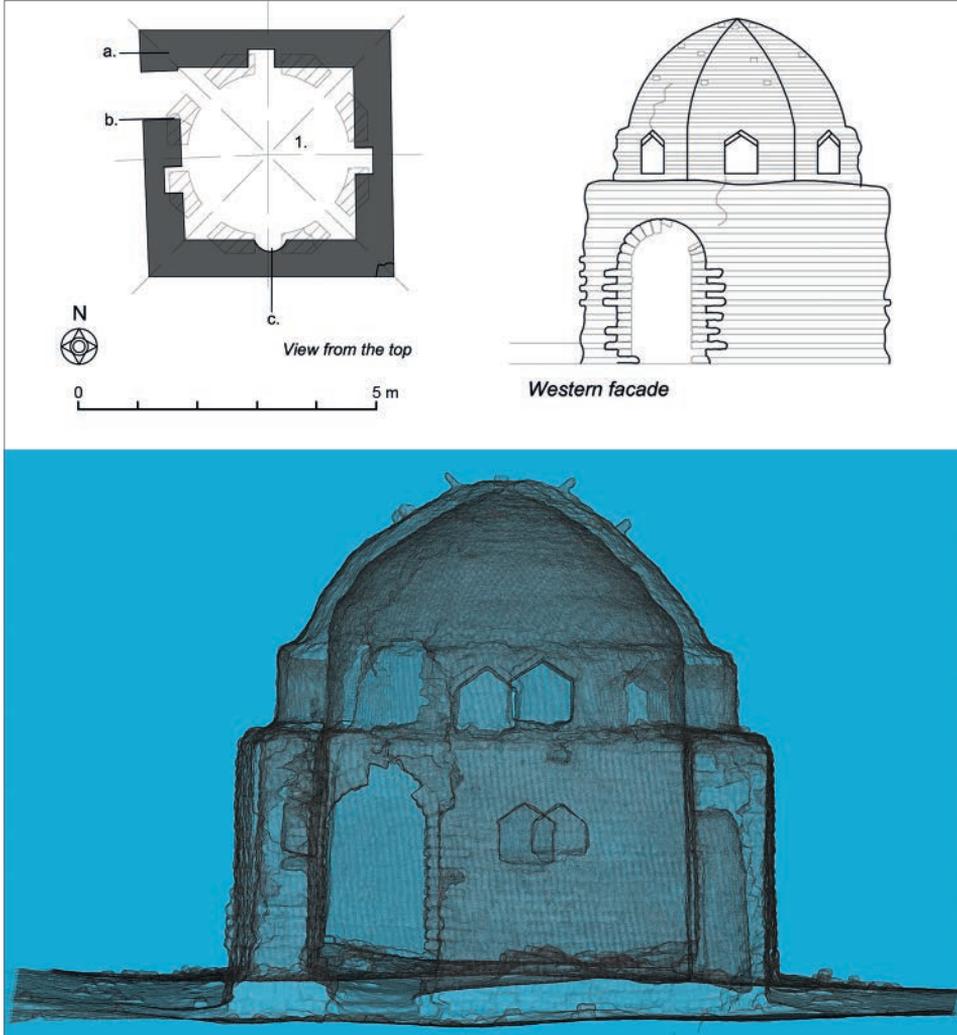


Fig. 10. Mausoleum No. 8: example of architectural documentation (Gebelein Archaeological Project | drawing E. Ostasz; 3D model P. Witkowski)

3 The authors would like to thank Dr Walid Akef for dating the features.

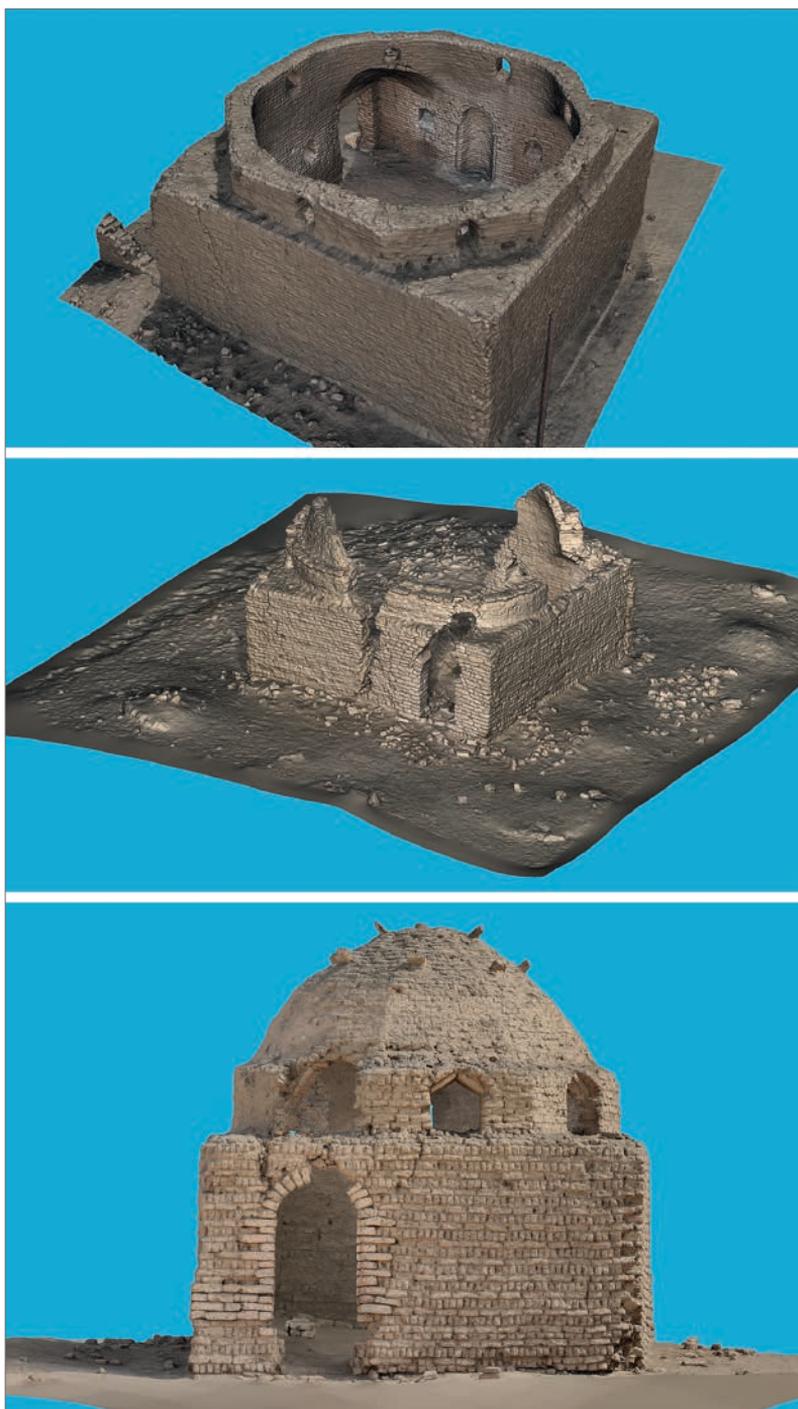


Fig. 11. Mausolea (from top down) Nos 4, 6 and 8: examples of 3D modeling (Gebelein Archaeological Project | processing P. Witkowski)



Fig. 12. Archaeological features found on the top of Rock IV: top, view from the mountain ridge, looking east; bottom, one of the features surrounded by flint debris (Gebelein Archaeological Project | photos S. Bulawka)

essential data for making 3D models and standard architectural documentation [Figs 10, 11].

These mausolea may attest to the existence of an elite living in the nearby

town during Fatimid times, of which, however, little is known. To understand the importance of the mausolea, it is vital to study the history of Pathyris after the Arab conquest.

## FLINT SURVEY

Selected locations on the Western Mountain (parts of Rocks I, IV, V, and all of Rock VI, see Fig. 1) were searched for flint in order to understand local traditions in manufacturing flint tools.

The survey yielded 103 flint artifacts which, based on preliminary assessment and archaeological data, were made of local raw material. The Gebelein flint occurs in grey or brown colors, in tabular or nodular form.

One of the most important results was the identification of the archaeological features found on the top of Rock IV (see also Ejsmond et al. 2017: Figs 11–13) [Fig. 12]. The archaeological material collected there indicates that this area could be related to mining activities with some flint workshops and places where the raw material

was tested. The flint material could be dated to the Palaeolithic, but more precise dating suggestions can be made only after further studies. The archaeological features take on the form of irregular rounded shallow pits, 2–3 m in diameter, surrounded by flint debris. The material consists of flint flakes, blades, cores and tools. Palaeolithic material was found during previous seasons as well (see Ejsmond et al. 2017: 245). However, in the southern part of Rock IV the presumed workshops were destroyed by later graves cut in this area and limestone quarrying of later date.

The survey carried out between Rocks I, III, and V revealed some archaeological features which could be related to places of flint raw material extraction. Their dating is later than the previously

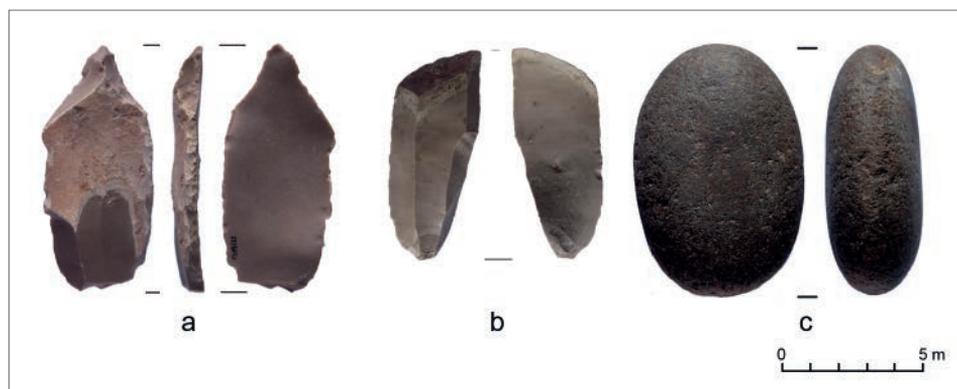


Fig. 13. Artifacts from a predynastic context found during the flint survey (Separated Area, northeastern part of GER I): A – blade with use-fractures; B – combined tool; C – grinder (Gebelein Archaeological Project | photos S. Buławka)

described location. This is indicated, among others, by the presence of flint artifacts and raw material, and also pottery. However, there is only a small amount of objects on the surface, and their context could be secondary, which makes a detailed chronology of the features unattainable prior to more comprehensive research of this part of the site.

Flint artifacts related to the settlement activities, tentatively dated to the Predynastic period, were found in the area north of Rock V and I [Fig. 13]. The material consists of flakes, blades and flakes, as well as blade implements. A Predynastic and early Dynastic settlement was located in this area (Ejsmond forthcoming).

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## Abbreviations

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