

Fieldwork in 2015/2016 in the Southern Dongola Reach and the Third Cataract Region

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Abstract: The settlement remains surrounding the churches at the sites of Banganarti and Selib continued to be excavated in the 2015/2016 season by a team directed by Bogdan Żurawski. The research focused primarily on the living quarters around the churches and fortifications. An ethnographic survey carried out in Banganarti and Selib, and in the nearby villages documented traditional crafts, such as pottery making, basketry, baking and cooking using traditional techniques and recipes. Conservation and construction work were undertaken simultaneously with preparations for turning the Banganarti and Selib 1 sites into tourist attractions. Skeletal remains from earlier excavation were examined by a physical anthropologist.

A survey combined with aerial documentation was carried out on selected archaeological sites in the Southern Dongola Reach (Soniyat, Diffar, Hettani, Bani Israil) and in the Third Cataract Region (Kissenfarki, Fagirinfonti). Short excavations were also conducted in the temple at Soniyat.

Keywords: Middle Nile valley, Banganarti, Selib, fortification, settlement studies, medieval Nubia, 3D documentation, aerial archaeology, ethnological survey, conservation and preservation, heritage studies

The Polish archaeological mission based at Banganarti and directed by Bogdan Żurawski carried out fieldwork in the 2015/2016 season concurrently at the sites of Banganarti and Selib and at a number of lesser sites. Archaeological research at the main sites was paralleled by a significant effort toward preservation of historical remains and preparations for opening the sites

to tourism, including construction of museum buildings, a visitor's center and creating exhibition spaces.

The second part of the season witnessed more activities in the Southern Dongola Reach and in the Third Cataract region. Research in these areas was a continuation of a program aimed at studying early medieval Nubian strongholds (see Żurawski 2015: 382–387).

BANGANARTI

The archaeological work at Banganarti was carried out outside the Raphaelion. The progress of excavations and the pace of environmental degradation at Banganarti and in its vicinity were documented by means of a remote-controlled camera suspended from a kite. The pictures were processed with the use of the AgiSoft Photoscan program to produce three-dimensional models of the site [Fig. 1].

The team proceeded with the excavation of domestic and military architecture, mostly in the northeastern part of the site. One of the main goals of the archaeological work in this sector was to expose the inner face of the fortifications, explored sporadically until now with most of the investigations taking place on the outside of the enclosure wall. The rectangular trench dug in November and December 2015 reached the top of the culturally sterile sand layer at a depth of

6.08 m below the southern threshold of the Upper Church. The inner face of the foundations was exposed down to a level of 5.11 m below the local reference point (the upper surface of the stone threshold in the southern entrance to the Upper Church). The wall above, made of large mud bricks (42–45 x 23–25 x 8–10 cm), appeared to belong to the first phase of the fortifications (for a detailed report, see Drzewiecki 2017b, in this volume).

Earlier excavations carried out *extra muros* provided interesting data on the character of the buildings outside the enclosure. Trials pits were dug now under the supervision of Mariusz Drzewiecki to check the situation on the opposite side of the enclosure wall. The foundation foot of the enclosure wall was uncovered at a level of 4.84 m below the local reference point. Both trial pits cut through layers containing rich ceramic materials. Part of

Team

Dates of work: 9 November–20 February 2016

Director: Prof. Bogdan Żurawski (Institute of Mediterranean and Oriental Cultures, Polish Academy of Sciences; 2015, 2016)

NCAM representatives: Tamadur Ali Ebeid (2015), Abdel Raouf Jubara (2016)

Archaeologists: Dr. Mariusz Drzewiecki (Institute of Mediterranean and Oriental Cultures, Polish Academy of Sciences; 2015, 2016), Dr. Michał Dzik (Institute of Archaeology, University of Rzeszów; 2016), Robert Krzywdziński (Dantiscum; 2015), Agata Momot (Antiquity of Southeastern Europe Research Centre, University of Warsaw; 2015), Paweł Rurka (independent; 2016)

Archaeologist/iconologist: Dr. Magdalena Łaptaś (Cardinal Stefan Wyszyński University in Warsaw; 2016)

Archaeologist/photographer: Paulina Terendy (Dantiscum; 2015)

Ceramologist: Aneta Cedro (Institute of Mediterranean and Oriental Cultures, Polish Academy of Sciences; 2015, 2016)

Anthropologist: Magdalena Bury (independent; 2015)

Conservator: Tadeusz Badowski (freelance; 2015)

Conservation assistants: Emilia Kujawska, Aleksandra Polańska (both freelance; 2015)

Arabist: Andrzej Leligdowicz (independent; 2015)

Topographer: Roman Łopaciuk (Geomatic; 2016)

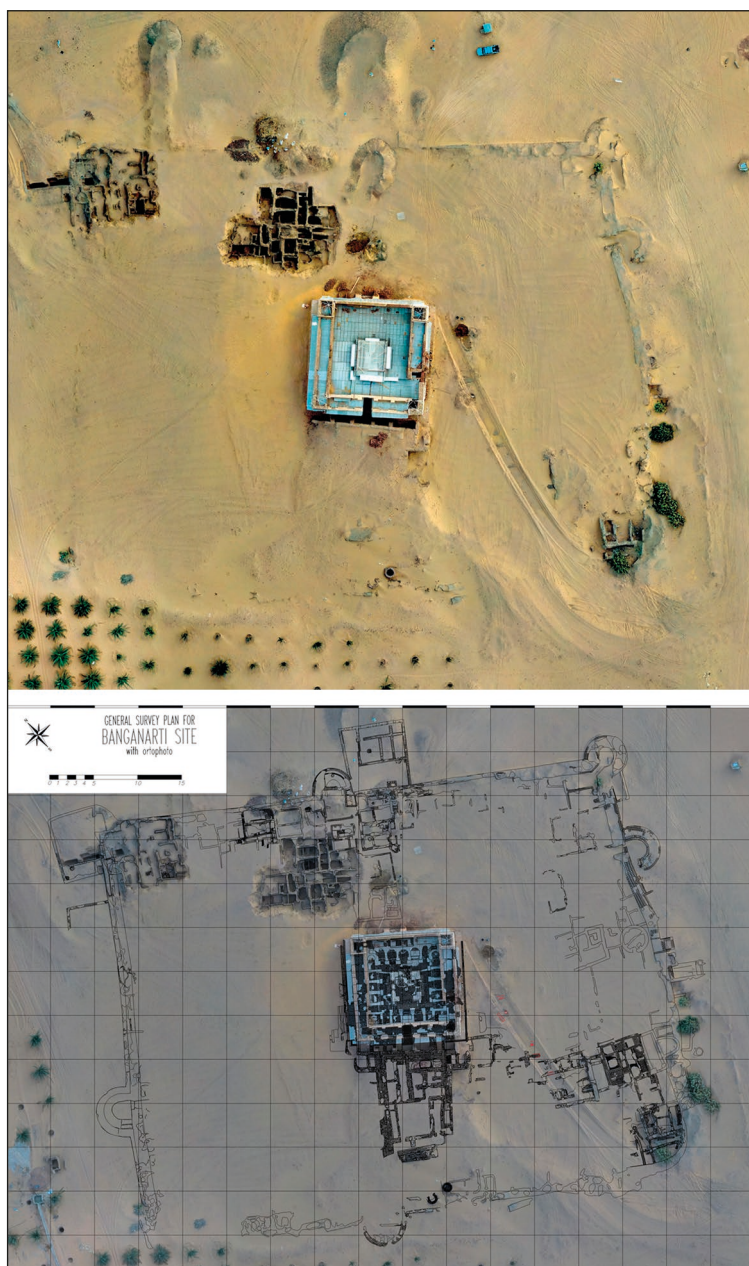


Fig. 1. Banganarti: top, airborne photography, season 2015/2016; bottom, orthophotographic image generated from the airborne photographs and geodetic measurements and overlapped with the plan of the Banganarti enclosure, February 2016 (Photo and rendering R. Łopaciuk and B. Żurawski)

this pottery deposit consisted of rubbish dumped outside the wall. One of the layers at the foundation level might be the outcome of water erosion, presumably caused by the Nile flood or heavy rainfall.

A southward extension of the trench in the southeastern corner, supervised by Robert Krzywdziński, who was assisted by Paulina Terendy, aimed at tracing the habitation pattern in the northeastern living quarter. Sixteen rooms were uncovered in an area of 16 m by 18 m. The wall tops were brushed and trowel-enhanced for a tachymetric survey, the results of which were compared with airborne photographs to improve the plan. By the end of the season, a large part of the living quarter extending from the Upper Church to the northeastern corner of the enclosure wall had been revealed [*Fig. 1* bottom].

Excavation of domestic architecture in the sector northeast of the Raphaelion,¹ supervised by Michał Dzik, was a continuation and extension of the fieldwork commenced in 2014 and continued in 2015 (trench E/I/2015). During the second part of the 2015/2016 season, the excavated area was enlarged from approximately 300 m² to 350 m². Four new units were explored in addition to the 29 excavated previously (for this research, see Dzik 2017, in this volume).

ETHNOGRAPHIC SURVEY

Oral testimonies on traditional Sudanese crafts and industries were collected in Banganarti and its neighborhood by Andrzej Leligdowicz, a specialist in the Arabic language and culture. The main goal of his research was to document in particular production techniques that

are in danger of disappearing in the near future. In November and December 2015, Leligdowicz interviewed a number of Banganarti residents on building techniques, the pottery production process in the Debba and Jabaruna potteries, brick-making, making traditional Sudanese beds (Arab. sing. *angareeb*), breadbaking, charcoal burning and fishing. Members of a Gypsy family who occasionally visited the village were also interviewed. The ethnographic survey has provided valuable reference data for interpreting archaeological finds and reconstructing medieval daily life in Banganarti and will be continued.

CONSERVATION AND RESTORATION

Much of the fieldwork at Banganarti focused on the conservation of the Upper Church murals and reconstruction, as well as restoration of the church itself. The building's most vulnerable east wall was abutted with five buttresses made of red brick and coated with waterproof lime mortar. The roof above the Upper Church was repaired and covered in part with a second layer of corrugated iron sheets. A skeletal 1:1 scale model of the central dome, welded from square pipes, was attached to a steel base. The attic wall above the corrugated iron roof was raised to its original, medieval height. New red brick walls were lime-plastered and whitewashed. The entrance to the Upper Church was bridged with an attic supported on a welded construction made of five steel beams.

During the first part of the season a team of four restorers, supervised by Tadeusz Badowski, accomplished an exten-

¹ Now coded as trench I in sector NECH, according to the revised site coding system (see Dzik 2017, in this volume); previously published as Trench I/2015 (see Żurawski 2016: 357).

sive restoration program focused on the eastern chapels of the Upper Church. The murals affected by insects (*arda*) were treated with insecticide. The holes made by termites were sealed with a putty paste mixed with insecticide to stop pene-

tration by termites and to consolidate the background of the murals. Conservation of the murals in the Upper Church proceeded simultaneously with iconographic studies conducted by Magdalena Łaptaś.

SELIB

At Selib, located about 7 km upriver from Baganarti and excavated concurrently with Baganarti since 2010, archaeological and construction works were conducted on the medieval sites of Selib 1 and

Selib 3 [Fig. 2]. The 2015/2016 season at Selib 1 was dedicated to the study of an area adjacent to the enclosure wall and to the wall itself. The research started with a narrow trench dug along the inner and

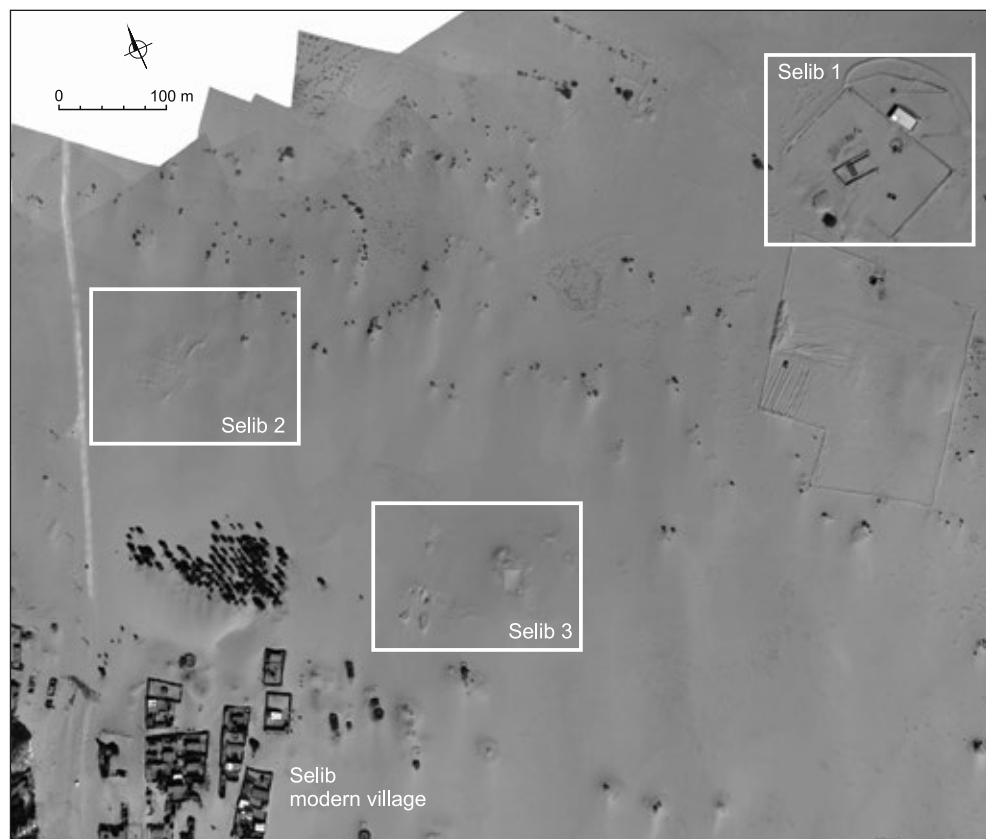


Fig. 2. Orthophoto of the Selib sites
(Photo and rendering B. Żurawski)

outer faces of the wall. In three places, huge sections of the mud-brick wall were found overturned [Fig. 3]. It appeared that in its upper section the outer enclosure wall (the so-called bigger *peribolos* wall), at least 6 m high, was made of mud brick. In its lower part, which averaged 1.30 m

in width, unworked, closely-fitted stone blocks formed an even surface [Fig. 4]. A few stones in vertical position in one place suggest at least one episode of wall repair. A rectangular pit lined with red brick had been dug in the sand close to the northeastern corner of the wall [Fig. 5].

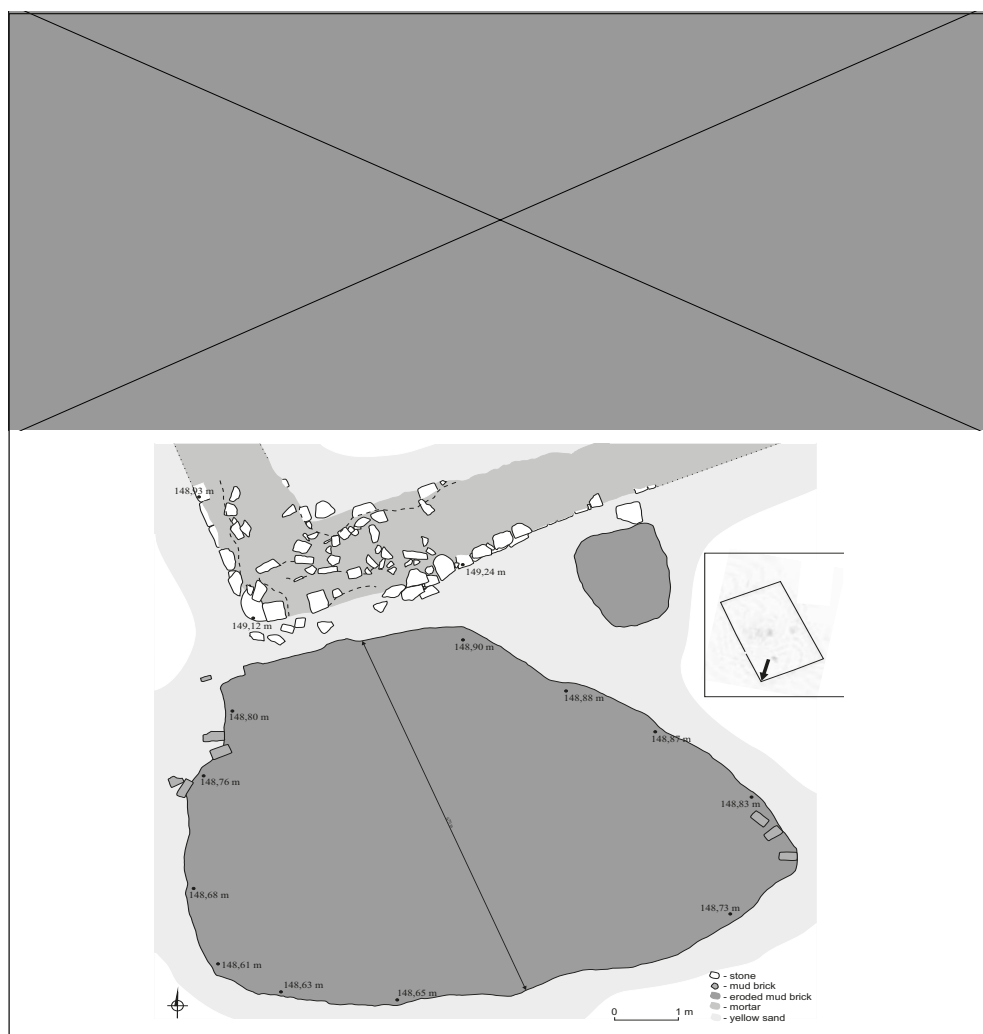


Fig. 3. Selib 1. Southern corner of the bigger peribolos with a section of the collapsed wall: plan and view from the west (Photo and drawing P. Terendy)

This resembled the so-called trebuchet sockets known from the fortifications in Banganarti, Suegi West, Shofein, Haraz and Usheir (Żurawski 2013: 133; 2015: 386–387). This was the first indication that the Selib enclosure could have had a defensive character. Next came the discovery of eight double stairways built into the inner face of the *peribolos* wall [Figs 6–7]. Originally, there were probably sixteen or more pairs of these, which entails that the communication with the parapet walk on the wall top was ensured by 32 or more flights of stairs of the type known, for example, from the fortresses of Dar el-Arab and Marakul (Łopaciuk et al. 2014: 239).

The 2015/2016 research in Selib 1 provided conclusive proof that the enclosure wall was in fact a skillfully designed defense built around the well and the church. The well provided water necessary during a prolonged siege, while the church offered sacred patronage and protection of the divine. Before the end of

the season, it became clear that the stairs had not been built into the riverine wall, which included a gate with a heavy stone threshold. This did not come as a surprise, because riverine walls in Nubian fortresses were occasionally of lighter construction. All in all, the outcome of the last season has completely changed the understanding of the Selib enclosure. There is now no doubt that the site used to be a refuge fort serving as a place of retreat in times of danger for the medieval villages scattered along the right bank of the river near Selib. Needless to say, it was not inhabited permanently. The indigenous population would have sought refuge there only when faced with an external threat. In times of peace people probably visited the *intramuros* St Menas church and the sanctuary of St Thecla. In the event of a raid by desert dwellers, they would have moved there together with their livestock.

Refuge forts are well known in the Byzantine world, for instance, from Byzantine Greece in the 6th–10th centuries



Fig. 4. Selib 1. Stones of the inner face of the bigger *peribolos* wall
(Photo M. Drzewiecki)

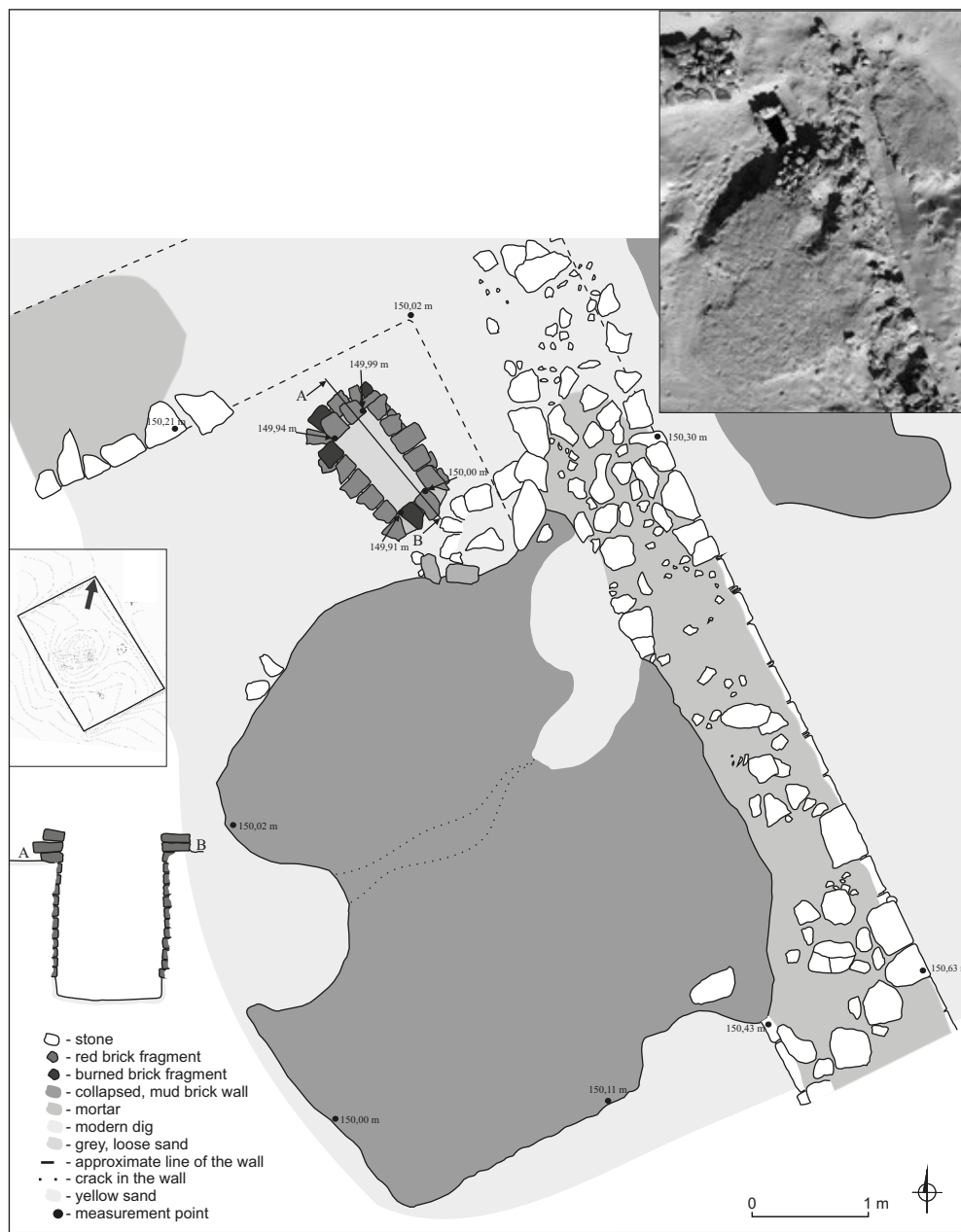
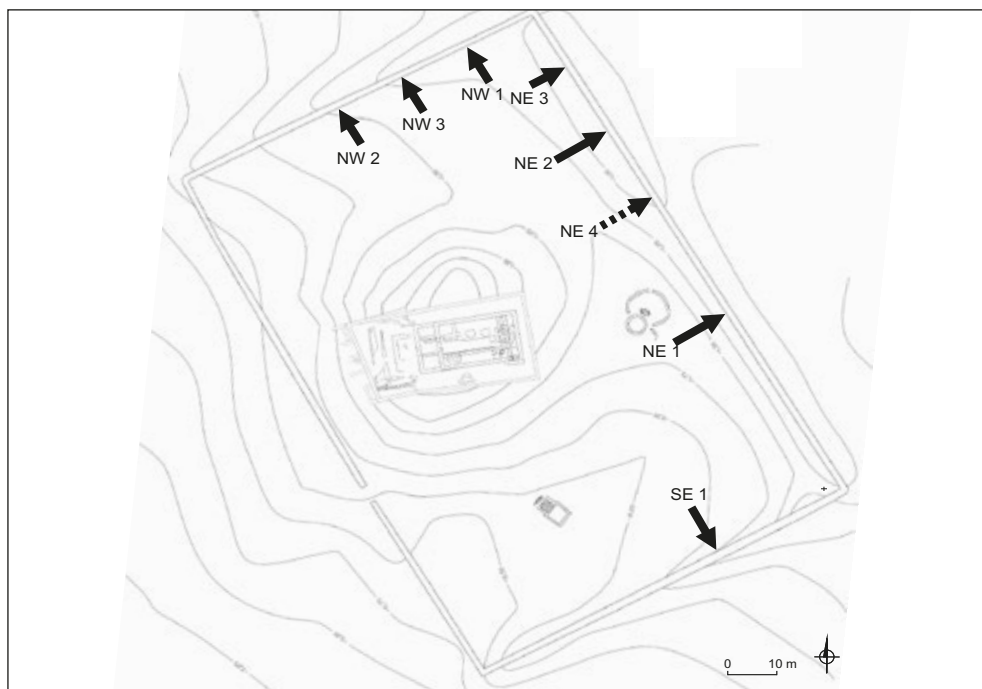


Fig. 5. Selib 1. Northern corner of the bigger peribolos with a section of the collapsed wall and a rectangular red brick structure; plan and cross-section of the red-brick structure (Drawing M. Drzewiecki, P. Terendy; photo B. Żurawski)



*Fig. 6. Selib 1. Plan of the site with location of the staircases (staircase NE 4 is only approximate)
(Drawing R. Łopaciuk and M. Drzewiecki)*



*Fig. 7. Staircase NE 3 at Selib 1
(Photo M. Drzewiecki)*

(Koder 2005: 170). Selib was probably part of a well-developed early warning system. The enemy could be spotted from the nearby Gebel el-Alim, where a structure which may have been a *skopelos* (watchtower) was found (Żurawski 2003: 156–157). Warned of an approaching enemy, the population would seek refuge either in Selib or in the fortress on the island of Tanqasi seen by Evliya Çelebi (Prokosch 1994: 154–155), referred to by Waddington and Hanbury (1822: 66) and drawn by John Gardiner Wilkinson (Żurawski 2003: 50, Fig. 12). Provided with a church, a well and perhaps a basin for watering flocks, Selib can be seen as a model medieval Nubian refuge fort. The specifics of the terrain in the Middle Nile region make it perfectly understandable why people preferred to live in open settlements close to their fields, seeking refuge in specialised defensive structures only in times of danger.

Once the investigation of the sequence of the five St Menas churches at Selib 1 was completed in January 2016, the interior of the latest church was backfilled with sand in preparation for the reinstallment of the pavement made of blocks taken from a nearby Meroitic temple. The numbered blocks are stored on the northern side of the smaller *peribolos*. A reconstruction of the historic *saqia* complex and building of the storeroom were also continued during this season.

In the 2015/2016 season, the exploration of the midden flanking the early medieval settlement at Selib 3 from the south was continued. The elevated kom at Selib 3 turned out to be a natural elevation made of clear aeolian sand. However, a multicultural settlement, spanning the late Meroitic and early Christian periods, was investigated at the foot of the kom.

The mapping of magnetic anomalies does not give an impressive image, but the discoveries were interesting nonetheless. First, they yielded data on the everyday life of the pre-Christian population living there in two-roomed houses and using vessels almost identical to those used in the Meroitic settlement nearby. This phase of the Selib 3 site was almost totally destroyed either by the Nile or by rainwater floods. The subsequent settlement, built in the Transitional/Early Christian period, shared the fate of its predecessor — it was also swept away. The only structure that survived the flood or floods was located in a commanding position on a prominent elevation at the top of the kom (Żurawski et al. 2013: 285–287). Of the short-lived early Christian occupation of Selib 3 there remained a huge midden in the riverine part of the site, which accumulated throughout the 6th and 7th centuries. The magnetic anomalies map marks it as a long linear feature at the foot of the mound. It is composed of ash, animal bones and a multitude of potsherds. The collection of pottery from the midden was studied by Aneta Cedro (see Cedro 2017, in this volume).

The skeletons found buried within the bigger *peribolos* and in the vicinity of St Menas Church were studied concurrently by anthropologist Magdalena Bury. The skeletal material, analysed in the 2015/2016 season, represented two heterogeneous archaeological contexts. The post-Meroitic skeletal assemblage came from the Selib Bahri site, while a set of human bones dated to late medieval times was excavated at Selib 1. The biological identity of 21 individuals was assessed based on three principal parameters: sex, age-at-death, and stature.

SURVEYS IN THE SOUTHERN DONGOLA REACH

Other sites than Banganarti and Selib were also investigated in the Southern Dongola Reach. At Soniyat, a site located about 40 km upriver from Banganarti, trial pits were excavated in the southern part of the Kushite temple. The research continued Bogdan Żurawski's investigations in 1998–2000 during the Southern Dongola Reach Survey (Żurawski 2003: 89, 243–250) and

the geophysical survey in 2013 (Żurawski 2015: 378–379). The aim of the current archaeological work was to trace the pylon entrance to the temple, the only part of the complex which had not been explored at the time due to ongoing agricultural activity and was also not accessible when the temple was first explored (see Drzewiecki 2017a, in this volume).

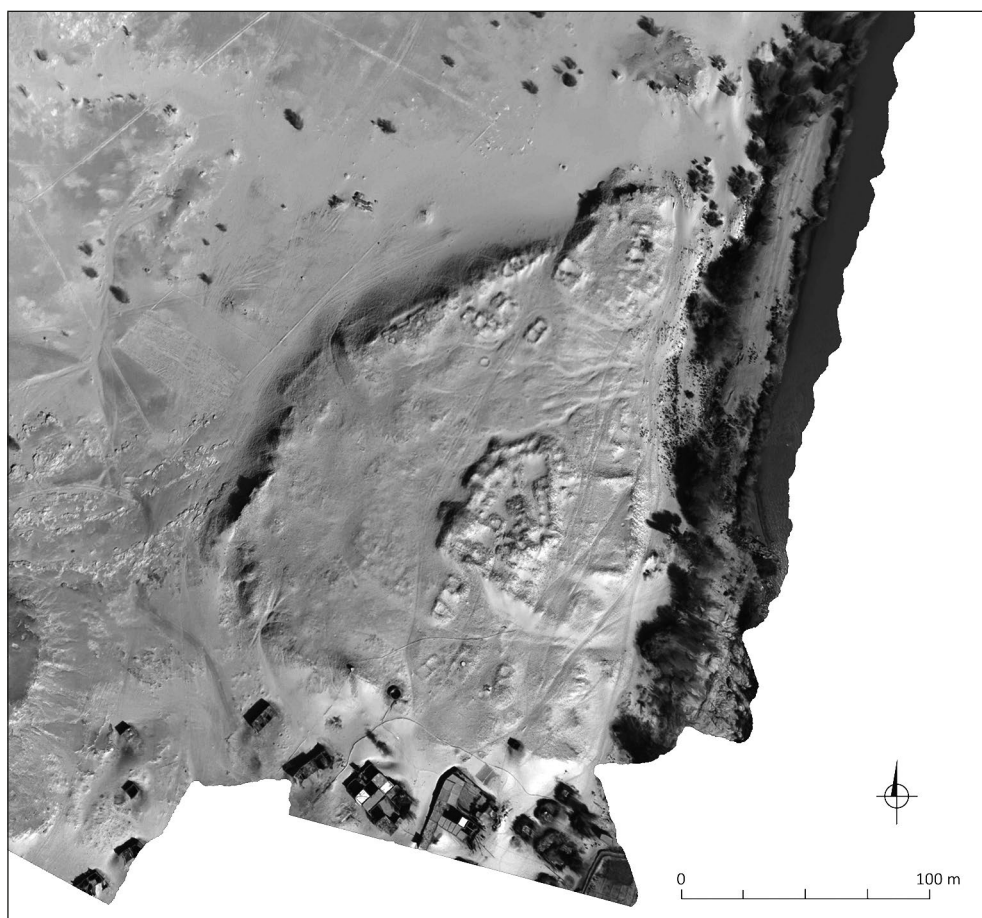
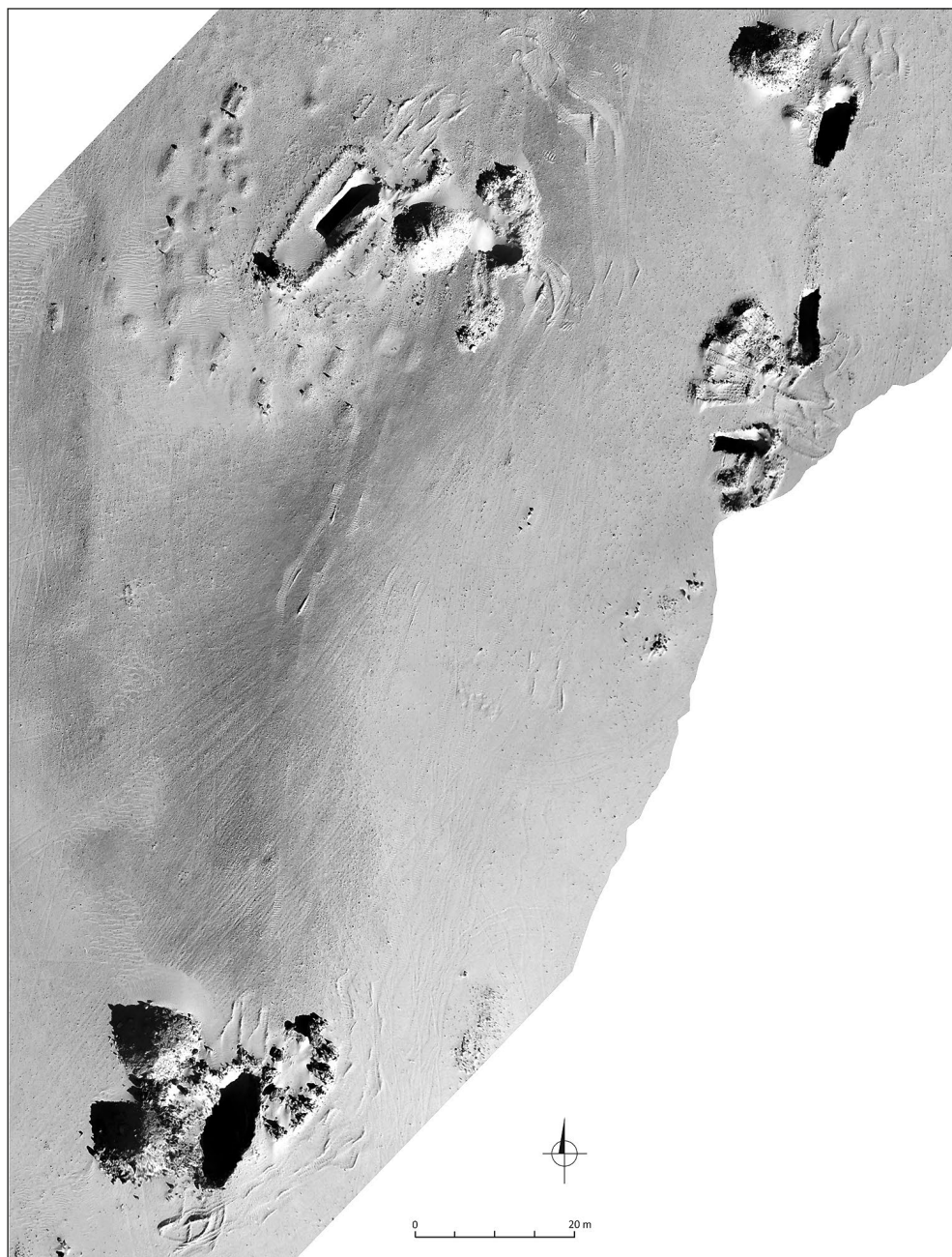


Fig. 8. *El-Diffar: orthophoto of the site made in 2016*
(Photo and rendering B. Żurawski, R. Łopaciuk, and P. Rurka)



*Fig. 9. Bani Israil: orthophoto of the site
(Photo and rendering B. Żurawski, R. Łopaciuk, and P. Rurka)*

Thorough documentation of selected fortified sites in the Southern Dongola Reach was carried out in the second half of the season. Two visits to the el-Diffar fortress permitted the geodesic and 3D photogrammetric documentation of the site to be completed (the initial research was conducted in 1998–2000 and in 2002). The first attempt at composing an airborne image of el-Diffar, unfortunately incomplete, was made in 1998 during the Southern Dongola Reach Survey using a camera suspended from a box kite (Żurawski 2003: 295, Fig. 5). In 2016, this task was accomplished. The ensuing 3D orthophotographic model of the site shows the modern village encroaching gradually into the archaeological zone [Fig. 8]. This poses a serious hazard as the site has never

been explored systematically except for a brief survey in 2002 (Wiewióra 2003: 500). Local residents dispose of their waste on the site. Moreover, the area just outside the enclosure wall is being prepared under cultivation.

The team undertook salvage work outside the concession area at the endangered site called Bani Israil [Fig. 9]. Located in the desert about 1.50 km northeast of the modern village of Banganarti, this place is well known among local residents as the site of the ‘tombs of giants’. A few grand elongated superstructures, overlaid with stones, were constructed there, amidst graves of a standard size and uncertain date. The archaeological inspection was induced by recent acts of robbery that had led to a partial destruction of the site.

RECONNAISSANCE IN THE THIRD CATARACT REGION

The study of fortifications in the Southern Dongola Reach, including Banganarti and Selib, falls within the broader framework of research on the emergence of statehood in early medieval Nubia. In February 2016, the project was taken up in the Third Cataract region, specifically in the area scheduled to be flooded by the proposed Kajbar dam. A number of early medieval sites, fortified settlements included, were recorded from air and reconnoitered on the ground. An extensive program of documentation was carried out in the area within the Polish concession granted in response to a NCAM appeal issued in 2012 for salvage work in areas endangered by dam construction.

KISSENFARKI

The first site to be explored in the Third Cataract region was Kissenfarki. The site was divided into two sections by a modern road [Fig. 10]. There were remains of medieval fortifications in the western area, called Kissenfarki West. The enclosing wall was built of irregular stones bonded with mud mortar in the lower part and of mud brick or mud brick and stone in the upper one [Fig. 11 above and top right]. The two parts were separated by a layer of gravel bonded with mud mortar. Sherds were occasionally used in the mortar. Samples from several parts were collected. A gate was located in the south wall. A large block of stone, which most

probably constituted a threshold in the gate passage, was found a few meters to the south, outside the enclosure. The tentative location of another gate was spotted in the northern curtain, but no architectural remains of the passage were identified. The enclosure wall continued on the other side of the road, where Kissenfarki East is situated. The wall, in the form of a faintly

visible line of stones, disappeared under the rubble from a post-medieval fort built there.

There were at least three towers in Kissenfarki West. Strangely, there were no towers at the opposite ends of the western section, which could mean that the entire western part was added later to an existing smaller fort. It could explain the difference

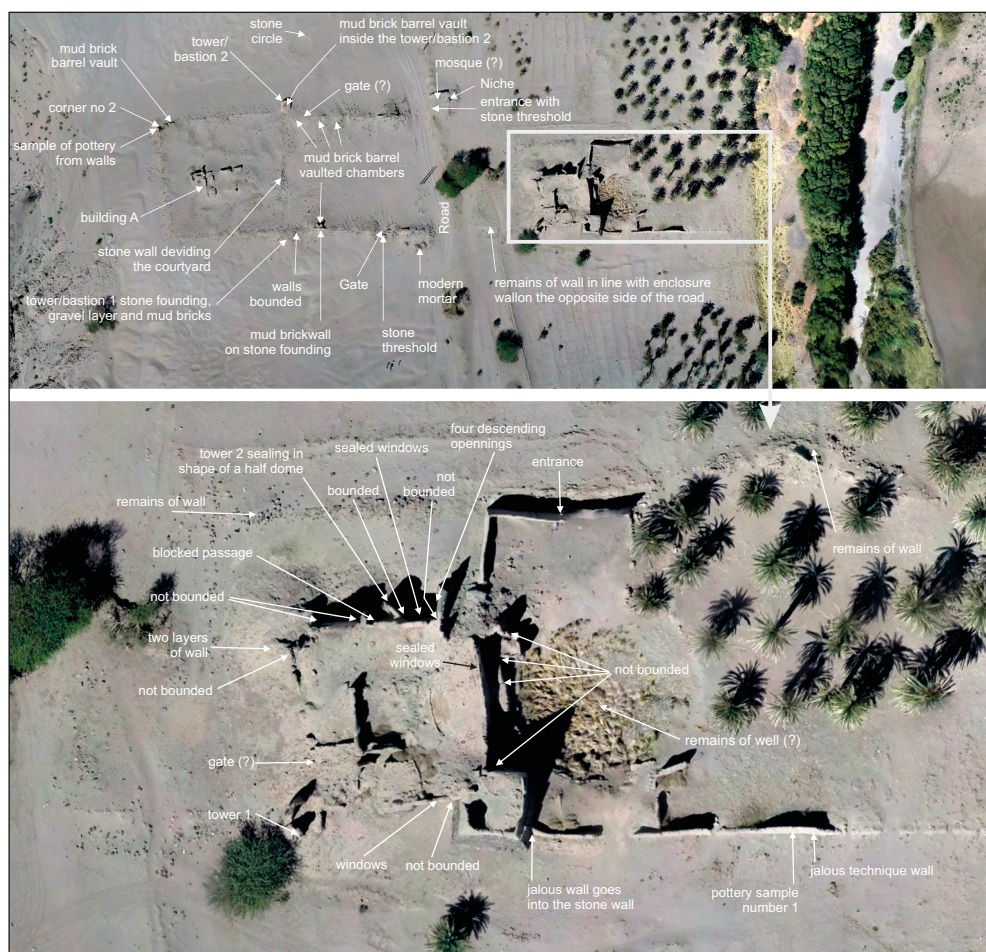


Fig. 10. Kissenfarki: top, view of the entire site with the identification of various features; bottom, close-up of the remains of the fort at Kissenfarki East (Photo B. Żurawski and R. Łopaciuk; description M. Drzewiecki)

in the orientation of the northern curtain wall [see *Fig. 10*: from Corner No. 2 to Tower No. 2 and from Tower No. 2 to the road]. However, this suggestion is still in need of verification.

The courtyard created by the fortification was divided by a stone wall, which was poorly preserved on the surface. The western part of the courtyard housed a large mud-brick building (Building A), most probably a church, in its center. Only a few mud-brick structures were identified in the eastern part of the courtyard; they stood against the northern and southern curtain walls.

A circular stone structure was traced at the southeastern end of the fortification, next to the road. At first it was interpreted as a tower, but upon closer examination modern mortar with the addition of cement was found to be used to bind some of the stones [*Fig. 11*]. It needs to

be clarified beyond doubt whether this feature is a modern addition or part of the original fortification.

There was also a small rectangular building northwest of the fort. It was erected of stone in the lower section and layered mud (Arab. *jalous*) in the upper section. It had an entrance from the south, close to the southwestern corner, and a stone threshold. A niche in the middle of the east wall indicated that it was a mosque [*Fig. 12*].

Kissenfarki East is a small but very well preserved site, interpreted as a post-medieval fort [*Fig. 10* bottom]. The fortifications (there) bear traces of many reconstructions. Mud-brick, stone and *jalous* were used to erect and renovate the walls. Surprisingly, the walls in the corner sections were not bonded. Even more surprisingly, walls raised in the *jalous* technique were not the youngest

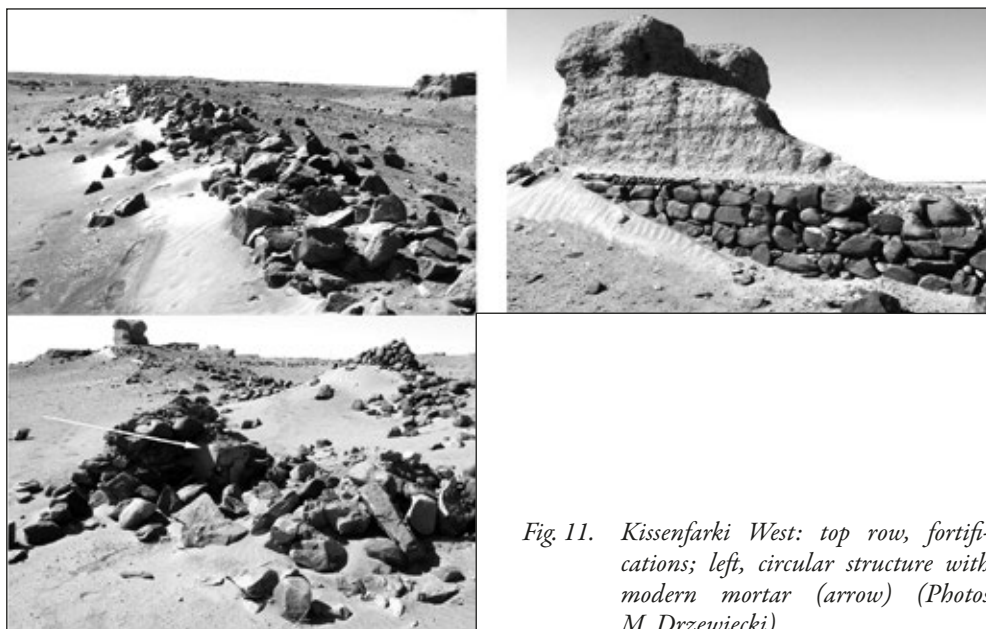


Fig. 11. Kissenfarki West: top row, fortifications; left, circular structure with modern mortar (arrow) (Photos M. Drzewiecki)

addition to the fort. Based on this preliminary study one may conclude that the youngest elements of this complex are the rectangular towers built in the northeastern and southeastern corners [Fig. 13]. It seems that they were built over the older ones. Concluding, the oldest fort was most probably of mud brick with later *jalous* additions, in the last phase reinforced with stone towers.

FAGIRINFENTI

Another place briefly investigated in the Third Cataract region during the 2016 season was Fagirinfenti. Three archae-

ological sites were visited there. Site 1 was an extensive field of ruins with a *saqia* well. Site 2, located about 550 m east of Site 1, was a hilltop fort with stone enclosure walls. Only a few artifacts were found there. Site 3 was an area at the foot of the hill with faint traces of mud-brick architecture visible on the surface and large quantities of pottery sherds (mainly Early and Classic Christian forms).

Architectural remains on Site 1, where most of the work was focused this season, were well visible [Fig. 14]. At least four building techniques were used in their construction. The first, and most popular,



Fig. 12. *Kissenfarki West: left, stone building identified as a mosque; right, niche in the east wall of the building (Photos M. Drzewiecki)*



Fig. 13. *Kissenfarki East: fortifications of a post-medieval fort; arrows indicate construction phases (Photos M. Drzewiecki)*

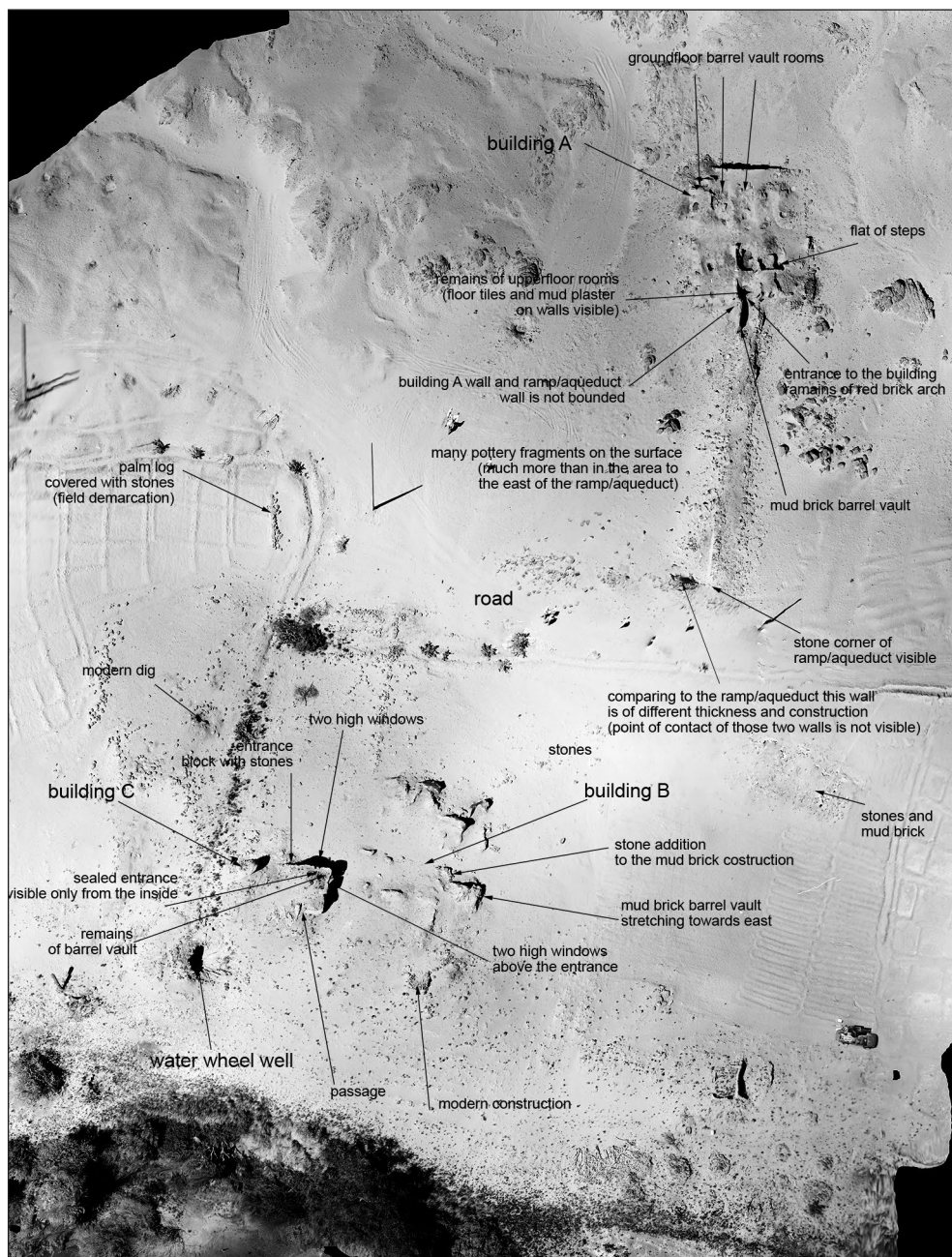


Fig. 14. Plan of Site 1 at Fagirinfenti
(Photo B. Żurawski and R. Łopaciuk; description M. Drzewiecki)

consisted of raising mud-brick walls on a stone substructure. This technique was used for Building A and the ramp/aqueduct [Fig. 15 bottom left]. The stone substructure, finished with flat slabs, was a maximum 1.50 m high. It made for a very stable base for the mud-brick walls.

Building A was two-storeyed, possibly higher. Most of the ground-floor chambers were preserved up to the vaults. The entrance to the building was on ground level in the middle of the south wall and was framed with a red-brick arch. Remains of the upper floor were preserved in the central part of the building and in an area not far from the entrance. A few floor tiles

were visible in place and mud plaster was recorded on some of the first floor walls. It seems that the first floor rooms were also barrel-vaulted. Communication between the ground floor and the first-floor was through a staircase provided with a central pillar located in one of the chambers northeast of the entrance [Fig. 15 top right]. Mud mortar binding the bricks was reinforced with fragments of pottery, especially in the arches. A sample of those sherds was taken.

No architectural phasing of Building A was recognized during this brief inspection. However, a ramp/aqueduct was clearly an addition to the building,



Fig. 15. *Fagirinfenti, Site 1: top row, Building A, details of construction; bottom left, Building A and ramp/aqueduct; bottom right, Building C (Photos M. Drzewiecki)*

despite being built in the same technique [Fig. 15 bottom left]. The ramp/aqueduct reached the building directly at the entrance. There were remains of a mud-brick arch at this end of the aqueduct. This unique structure extended towards the river, taking a 90° turn to the west just before a modern road. It seems that the other end of the ramp/aqueduct was at a well located not far, to the south of Building C.

Buildings in the southern part of the site were made of mud brick only. Buildings B and C were in a better state of preservation. Samples of pottery used in the mortar were taken from both. Building C had at least four high and narrow windows and three entrances, of which two were sealed [Fig. 15 bottom right], one not visible from outside. It seems that the building underwent at least two refurbishments, receiving a new coat of plaster during the second one.

A *saqia* well, in good condition, was found. Its oval shaft was lined with stones. A sample of the pottery was taken from the mortar binding the stones.

There are also some modern features on the site, including places delimited by loose stones, most probably prepared by local farmers. Remains of a rectangular stone building in the southeastern part of the site, raised in the *jalous* technique and furnished with a niche topped with a large stone in the east wall could have once been a mosque.

The survey in the Third Cataract added significantly to the already huge volume of data collected and published by the Mahas Survey team (Osman and Edwards 2012). Closer examination of the pottery samples collected during the reconnaissance, especially those taken from the mortars, will permit a more precise dating of individual buildings on the sites.

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