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Dongola 2008-2009

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Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.
Abstract: The two seasons, in 2008 and 2009, of the expedition of the Polish Centre of Mediterranean Archaeology, University of Warsaw, digging in Dongola, covered continued excavations of the area of the Citadel, the monastery on Kom H and the Mosque, which had once been the Throne Hall of the Makurian kings. Work continued on recording general site topography and a geophysical survey was conducted in an area of the town with masonry architecture (site P) in the northern part of the urban agglomeration. Documentation work was carried out also on the site of a 17th–19th century village called Old Dongola in the southern part of the town.

Keywords: Dongola, Citadel, Throne Hall, Makuria, Nubia, settlement (site P), South Dongola (SDONG) – Abandoned Village, geophysics

In the two seasons covered by the present report, the Mission of the Polish Centre of Mediterranean Archaeology of the University of Warsaw digging in Old Dongola continued the main thrust of excavations in recent years, namely the uncovering of the royal palatial and church complex on the citadel (SWN), as well as some late 16th and 17th century village architecture, which grew on ruins from the Makurian period in the northern part of the Citadel.

Exploration was also undertaken on the site of the monastery on Kom H, initiating a program of anthropological examination of the burials in the crypts of the Northwest Annex (for this work, see separate report, Godlewski et alii 2012, in this volume).

Work proceeded on documenting the 17th–19th century architecture of the so-called Abandoned Village in the southern part of the site.

The archaeological mission also undertook a comprehensive reevaluation of general site topography as well as initiating a geophysical survey of the lower town area.

Paralleling the excavation and documentation work in different parts of the site was a conservation program undertaken in the building of the Mosque with the purpose of revitalizing and preserving the evidence of wall paintings decorating the upper hall, which had once been the Throne Hall of Makurian kings (see below, appendix by C. Calaforra-Rzepka).
TOPOGRAPHY OF THE DONGOLAN AGGLOMERATION

A comprehensive reevaluation of the topography of Dongola was carried out in 2009, covering the southern parts of the town with the 17th–19th century Abandoned Village (SDONG), the central part of Dongola (CDONG), which comprises the Citadel with its extensive royal architecture [Fig. 1] and the territory to the east of the citadel where the Throne Hall was situated.

In the northern part of the ancient agglomeration (NDONG), topographic work was coupled with a program of magnetic prospection carried out in a district of regular mud-brick architecture on the extensive kom P. The survey, made by Tomasz Herbich and Dawid Święch, identified the character of this architecture and traced the topographical arrangement [Fig. 2].

I am indebted to Tomasz Herbich for the following remarks interpreting the findings of the magnetic survey.

Team

Season 2008

Dates of work: 28 January–6 March 2008

Director: Prof. Włodzimierz Godlewski (Institute of Archaeology, University of Warsaw)
NCAM representative: Nemat, Mohammed
Archaeologists: Dobrochna Zielinska (PhD candidate, Institute of Archaeology, University of Warsaw), Artur Obłuski (PhD candidate, independent), Szymon Maślak (PCMA scholarship holder), Bartosz Wojciechowski (Institute of Archaeology, University of Warsaw), Grzegorz Ochala (Research Center for Mediterranean Archaeology, Polish Academy of Sciences)

Season 2009

Dates of work: 24 January–6 March 2009

Co-directors: Prof. Włodzimierz Godlewski (Institute of Archaeology, University of Warsaw), Assoc. Prof. Adam Łajtar, epigrapher (Institute of Archaeology, University of Warsaw)
NCAM representative: Amal Mohamed Ahmed
Coptologist: Prof. Jacques van der Vliet (Institute for Eastern Christian Studies, Radboud University Nijmegen; Institute for Area Studies, Leiden University)
Registrar: Grzegorz Ochala (Research Center for Mediterranean Archaeology, Polish Academy of Science) Physical anthropologist: Robert Mahler (PCMA)
Archaeologist/documentalist: Szymon Maślak (PCMA scholarship holder)
Geophysicist: Tomasz Herbich (Institute of Archaeology and Ethnology, Polish Academy of Sciences), Dawid Święch (independent)
Topographer: Wiesław Małkowski (Institute of Archaeology, University of Warsaw)
Pottery expert: Katarzyna Danys-[Lasek] (independent)
Painting restorers: Cristobal Calaforra-Rzepka, Urszula Dąbrowska (independent)
Textiles restorer: Barbara Czaja-Szewczak (Wilanów Palace Museum)
excavated remains of houses in the northern part of the kom (Houses A, B and PCH.1) to the region situated in the immediate neighborhood of the Dongolan cathedral, covering an area of approximately 29,600 square meters.

House complexes erected of mud brick are especially well traceable in the central and northern part of the prospected area. A close analysis of the magnetic map reveals not only the outlines of individual houses, but also their inner layout.

The clarity of the image is due to the properties of Nile silt in Sudan. Measurements with a kappameter have shown that the magnetic susceptibility of mud brick falls within the range $3 \times 10^{-3} \text{SI}$ to $5 \times 10^{-3} \text{SI}$, which is virtually twice as much as average values of mud-brick magnetic susceptibility in the Egyptian part of the Nile Valley.

The disturbances observed in the southern part of the surveyed area correspond to concentrations of baked brick. The map has also traced a number of areas characterized by homogeneous values of magnetic field intensity. In these areas any architecture, if it exists, is concealed under a layer of sand at least one to one-and-a-half meters thick.

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Fig. 1. Topographic plan of the citadel (CDONG) (Mapping W. Małkowski, PCMA archives)
Fig. 2. Magnetic map of architecture on site P in the northern part of the ancient town agglomeration in Dongola (NDONG); fluxgate gradiometer Geoscan Research FM256. Sampling grid 0.25 x 0.50 m. Dynamics -15/+25 nT; right, general plan showing the location of the survey (Processing T. Herbich, contour map PCMA archives, general plan D. Zielińska)
EXCAVATIONS IN THE CITADEL

Research continued on two structures in the SWN part of the citadel, that is, Buildings B. I. and B.V. A new trench was opened in the northwestern part of the citadel, on the rocky rise above the river (site C.1).

BUILDING B.I (SWN)

In the reported two seasons the exploration of Building B.I, first identified in 2001, concentrated on the northern part of this extensive (more than 1200 m²) storied complex built of both dried and baked brick combined with blocks of sandstone (see Godlewski 2010: 75–79). The corner parts of the building and its western side (rooms B.I.37, B.I.42) were cleared [Fig. 3]

NORTHWESTERN PART OF B.I

Removal of the remains of 17th–18th century post-Makurian architecture

*Fig. 3. Site SWN on the citadel. Plan of uncovered structures, state as of 2010  
(Plan W. Godlewski, M. Puszkarski, D. Zelińska, S. Maślak, PCMA archives)*
Fig. 4. Building B.I. North doorway
(Drawing S. Maślak, PCMA archives)

Fig. 5. Building B.I. Keystone of the north doorway with monogram (center) and voussoir stones with relief palmettes on either side (Photo W. Godlewski, PCMA archives)
Dongola 2008-2009

SUDAN

from the area (see below) uncovered the northwestern corner of Building B.I. The walls in the western part were severely damaged, just like the citadel wall, both of which apparently were dismantled along with the foundations. It is likely that this part of the building suffered at the hands of the raiding Mamluk forces of Sultan al-Zahir Baybars I in 1276. Evidence of repairs to the damaged sections of walls is abundant, as well as proof of measures taken to preserve the ground floor when it was decided, presumably at the end of the 13th century, to use only the upper floor. The northern facade of the building has been preserved with the entrance from the town. Its upper part was cleared, revealing an arch with sandstone voussoirs [Fig. 4]. It was a monumental doorway, 2.53 m wide and approximately 2.80 m high in the arch. The keystone of the arch, which was supported on lateral impost, bore a cruciform monogram, IWANNOU. This can be interpreted as the name of the founder of the edifice, most probably king Ioannes [Fig. 5, center]. An eight-leaf palmette in high relief decorated the fifth voussoir above the impost on either side of the entrance [Fig. 5, left and right]. The doorway was blocked with bricks before the ground floor of the building was filled in with rubble.

Walls of Building BVIII were well preserved to the north of B.I, from which it was separated by an alley 2 m wide. At the western end this structure appeared to be built onto the facade of the palatial structure.

The doorway led to a spacious vestibule (B.I.44 and B.I.24). There was extensive evidence of interior rebuilding intended as reinforcement of the walls, which was followed by the filling of the ground floor with rubble. An arched stone doorway in the southwestern corner of the vestibule (B.I.44), only partly preserved, opened into a corridor (B.I.11) which traversed the entire building from north to south, separating the eastern part of the palace from the rooms on the western side (B.I.15, 36–37, 41–42) which evidently served economic functions. The entrance to B.I.11 from vestibule B.I.44 was 2.20 m wide and was topped by an arch of sandstone voussoirs resting on impost. Only the lower stones have survived in place. This doorway was also blocked when the ground floor was filled up with rubble [Fig. 6]

NORTHEASTERN CORNER OF B.I
Post-Makurian architecture obscuring the east facade of Building B.I in the northeastern sector of the complex was
cleared (see below), revealing the tops of walls in rooms B.I.46 and B.I.47, but without tracing the actual northeastern corner of the building. The walls in this part of the palatial structure had been severely damaged and heavily reconstructed at the time of their incorporation into the post-Makurian structures.

Excavations in unit B.I.46, which measured 4.96 x 2.70 m, uncovered a low square structure in the southwestern corner, erected on a floor resting on the vaulting of the unit. The structure had a conduit pierced through the center, going also through the said vaulting [Fig. 7]. A trace impression in mortar on the top surface of this structure suggested the presence of a ceramic toilet seat. A fragmentary seat of this kind was identified in the assemblage filling unit B.I.46. This evidence suggests a toilet function for this unit. The floor of B.I.46 at 26.61 m. a.s.l., compared with the walking level in B.I.20 at 26.51 m a.s.l., indicates beyond doubt that this part of the building is preserved to the height of the first floor.

Unit B.I.47, situated on the south side of B.I.46, appears to have had a wooden ceiling, similar to a number of other rooms in the central and western parts of the

Fig. 7. Building B.I. Northeastern corner, B.I.46 and B.I.47, view from the east (Photo W. Godlewski, PCMA archives)

Ceramic toilet seats have been found in houses on the Citadel (A.106) and in the lower town (Site P – House PCH.1), as well as in the monastic compound on kom H.
Fig. 8. Pottery of 13th century date: left, local vase (ADd.09.082; H. 18.8 cm Dia. 18.4 cm) and top, glazed bowl produced in Egypt (ADd.09.080; H. 12.0 cm Dia. 23.0 cm Dia. base 8.5 cm) (Photo W. Godlewski, PCMA archives)

Fig. 9. Ostrakon in Greek (ADd.09.030), 13th–14th century; H. 8.7 cm, W. 10.8 cm (Photo W. Godlewski, PCMA archives)
building where there was no doubt as to the absence of a masonry vault. To date vaults have been noted only in unit B.I.1 with a staircase in the southern part of the palace.

The upper parts of the fill in units B.I.46–B.I.47 yielded pottery from the 13th century, identified as being either of local production or imported from Egypt [Fig. 8]. An ostrakon from the same layer, written in Greek on an amphora sherd, is a kind of patera on behalf of a woman named Ariñji (Łajtar, Van der Vliet 2011), possibly one of the residents of the building [Fig. 9].

WESTERN PART OF B.I.

The stores and service area of the building were located in the western part, between the corridor B.I.11 and the west citadel wall. It comprised a number of rooms: B.15, B.36–37; B.I.40–42, of which B.37 and B.I.42 were explored in the current season. The fill of unit B.37, running to 2 m in height, was removed and a test trench (1.70 m by 0.90 m) dug in the northwestern corner of the room, reaching below the occupational level and under the foundation of the north wall as well as the citadel wall [Fig. 10]. The trench turned out...
to be located inside an ancient pit dug before the north wall of the room was erected. A deposit of shattered pottery, mainly amphorae imported from Aswan [Fig. 11], was found in the original trench, which was 0.95 m deep and had partly destroyed the foundation of the citadel wall. Among the other finds, which would have originated from the palace interiors, were fragments of a broken stone tub of considerable size (Godlewski 2010: 76–78, Pls 7–8) [Fig. 12]. The front and the left side of the basin with part of the bottom have been preserved, enabling a reconstruction of both form and size. Apparently, the basin must have been broken elsewhere and only these fragments entered the rubbish pit. The rest must have been discarded elsewhere, perhaps somewhere nearby.

The basin was cut from a single block of sandstone. It stood on an oval base, 70 cm long and 35 cm wide, finished with a torus molding. The S-shaped wall of the basin, which was 4 cm thick, widened gently toward the top and terminated in an outcurved rim. The basin stood 58 cm high, maximum dimensions at the top being 105 cm long and 76 cm wide. Carved decoration in high relief turning into full sculpture on the outside wall make it unique. The composition on the front was antithetic: two rams standing on decorative bases opposite one another, flanking a lion’s head presented frontally in the center.

The deposit was buried before the western part of the building abutting the citadel wall appeared, but after the building of the palace of Ioannes. The basin must have come from the palace interior (Godlewski 2012). It is an excellent example of a late Meroitic sculptural tradition upheld in a 6th century artistic workshop.

Considered in general, the amphorae from Aswan and other production centers in Egypt and Gaza, dated to the end of the 6th century (see Danys-Lasek 2012, in this volume), confirm a lively trade with Byzantine Egypt at the turn of the 6th century, already suggested by numerous imported amphorae found in the fill of unit B.I.15 (Godlewski 2010: 76–78). The presence of wine amphorae also demonstrated a growing culture of wine-drinking in Dongola, while numerous animal bones from trenches in units B.I.15 and B.I.37 supplied data on the menu preferences of the palace inhabitants, as well as current trends in cattle, sheep and goat breeding.3

A few fragments of metal objects [Fig. 13] of unidentified function and place of production indicate the high class of the objects (codex covers? furniture?) decorated with these metal appliqués that were part of the furnishings of Building B.I in the 6th century.4

Meriting special attention is a locally made vase found in the fill of unit B.I.42 [Fig. 14], decorated with crosses adored by birds (doves) carrying branches in their beaks. This fine product of the Early Christian White Ware 9 polished ware can be dated to the 7th/8th century (Adams 1986: 484–485).

BUILDING SWN.B.V
The building was identified in 2005 to the south of the small commemorative cruciform structure B.III (Godlewski 2007: 294, Figs 1 and 8). Its northwestern corner

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3 The faunal assemblage was examined in 2010 by Dr. Marta Osypińska from IAE PAN Poznań.
4 Conservation of metal objects was carried out by Władysław Weker from the State Archaeological Museum in Warsaw.
Fig. 11. Aswan-made amphora (ADd.09.355), end of the 6th century; H. +67 cm; Dia. rim 8 cm (Photo W. Godlewski, PCMA archives)

Fig. 12. Fragments of a stone washtub (Photo W. Godlewski, PCMA archives)

Fig. 13. Fragment of impressed sheet metal decoration, 6th century (ADd.09.320), H. 17 mm L. +52 mm, front and back view (Photo W. Godlewski, PCMA archives)

Fig. 14. Locally made White Ware vase, 7th/8th century (ADd.08.159); H. +12 cm, Dia. 17 cm (Photo W. Godlewski, PCMA archives)
was uncovered at the time, leading to the present attempt at determining the size of the structure, its state of preservation and the layout and function. The tops of walls were traced along the northern and western sides [Fig. 15], revealing that almost the entire length of the west wall appears to have been dismantled most probably in the last century to salvage building material. The west wall was relatively easily accessible on the eroded citadel slope. The east and northeast walls were much more difficult to access and have therefore remained untouched to a height of 3.80 m above the interior stone pavement in the northwestern corner B.V appears to have been built on a high stone foundation presumably meant to level the sloping rock in the western end. The outer red-brick walls were 1.20 m thick. The building measured 15.0 m by 20.8 m and was aligned east–west. Four round pillars made of a special format of brick stood in the center of the complex, corresponding to engaged round piers in the side walls, built of similar wedge- and quarter-shaped bricks bonded with lime mortar [Fig. 16]. Consequently, the building can be reconstructed as a rectangular complex on a central plan. The outer and inner faces of the walls and piers of the building were thickly coated with lime plaster (1.5–2.0 cm thick) featuring a polished surface. Wall paintings and inscriptions were noted in the interior, on a thin coat of flaking plaster, which detaches easily from the underlying, very smooth original plaster. The state of preservation of the wall paintings and underlying plaster put a stop to further excavations in the northeastern corner of the structure. They will be resumed once proper field preservation procedures can be ensured and implemented. Two windows, each 0.67 m wide, were cleared down to the sills,
positioned 3.65 m above the stone paving in the northwestern corner of the building.

A well preserved mud-brick wall was located in the northwestern corner of the building, along with other vestiges of a structure designated as Building B.VII. This complex appears to have been built on the citadel slope to the south of B.V, partly attached to its southern façade.

Building B.V (SWN quarter) must have been an important structure functionally associated with Buildings B.I and B.III. Its original function, however, possibly sacral, could not be confirmed in any way during the present exploration.

16TH–17TH CENTURY DOMESTIC ARCHITECTURE

The ruined palace of Ioannes (SWN.B.I) was abandoned most probably at the turn of the 14th century and the area partly occupied, especially in the eastern and northern part, by domestic architecture [Fig. 18]. Explorations in the reported two seasons concerned post-Makurian architecture in the northwestern and northeastern parts of the palace.

House 1H.06 was attached to the west wall of the street from the post-Makurian period which ran along the outer perimeter of Building B.I on the northeastern side. It was built of mud-brick, taking advantage of the standing ruins. The house consisted of two rooms and a southern courtyard with a matmura [Fig. 19]. Room H.06.01, measuring 3.90 m by 4.80 m, had plastered and limewashed walls. It was entered from the south and had three benches at floor level (28.01 m a.s.l.). The largest southern bench (1.54 m by 2.50 m) occupied the space between the frame of the doorway (tuddik) and the east wall. It was bordered on the north by a partition wall just one brick thick and filled with sand, rising to a height of approximately 0.30 m. The brick-made northern bench was 0.72 cm wide and approximately 0.20 cm high. It supported a row of gesselas, that is, containers made of gir (local lime). The eastern bench, 1.07 m wide, was lined with bricks and filled with sand, rising to approximately 0.20 cm above the floor level. The two sandstone blocks found in the fill just above the floor must have been part of the structure supporting the roof. One of these blocks was an almost square slab (0.50 m by 0.55 m, 0.12 m high) with a round depression 0.20 m in diameter in the center of one of the sides. The other block, measuring 0.21 m by 0.25 m, and 0.53 m high, may have been salvaged from the nearby ruins.

Room H.06.03 was also accessible from the south from courtyard H.06.02; it was almost triangular (3.08 m by 4.00 m) and served domestic purposes. The furnishings comprised a low bench by the east wall with a deep round container (0.35 m in diameter, approximately 0.50 m deep) in the southern part. The inside walls of this container were plastered with mud and the surface was...
slightly burnt in places. In the center of the room there was a round handmade vessel 0.40 m in diameter, sunk into the floor below walking level.

A large *matmura* or silo was found in the southern courtyard by the north wall, nearer to the entrance of room H.06.01. It measured 1.46 m by 1.63 m at floor level and 1.50 m deep, the rim raised above walking level. The walls inside were lined with bricks and plastered. The installation was found filled with sand.

House 2H.06 was approximately 0.80 m below the walking level of 1H.06,
Fig. 18. Plan of House H.6 on site SWN and view of the house from the north (Plan S. Maślak, photo W. Godlewski, PCMA archives)
but consisted most probably of a single room measuring 3.90 m by 4.80 m. The east wall was of red brick. It was also entered from the south and had a bench, 1.65 m by 2.90 m, by the south wall and a hearth by the east wall with an irregular platform. Three fire dogs, each with a round top, were preserved in the hearth [Fig. 17].

The remains of post-Makurian architecture in the northwestern part of Building B.I were much more heavily damaged owing to erosion processes in this part of the citadel. The eastern part of house H.09 built of red brick suggests that the structure consisted of two rooms: a large one on the south, measuring 4.60 m by at least 2.00 m, with a low bench 0.54 m wide by the east wall, and a second room in the northern part, narrow at just 1.40 m, accessed from the southern room through a doorway in the east wall [Fig. 20]. A round corral for animals H.15 (probably for sheep or goats) was found to the north of it. The remains of other structures are suggestive of dense habitational architecture in this part of the citadel.

Fig. 20. House H.9, view from the north
(Photo W. Godlewska, PCMA archives)
SOUTH DONGOLA (SDONG) — ABANDONED VILLAGE

Verification of general site topography initiated in 2008 prompted comprehensive documentation of the remains of the latest occupation of Dongola, that is, the 18th–20th century architecture in the southern part of the lower town (SDONG), referred to in earlier publications as Old Dongola or the Abandoned Village (Jakobielski 2001b: 15; Żurawski 2001: 62–77; 2003: 107–117). Measurements were taken of the entire southern part of the agglomeration closed from the east by a wall and from the west by the rocky riverbank [see Fig. 1]. Two features were selected for documentation: SDONG.20 — well preserved building of a mosque with adjoining rooms, and SDONG.40 — extensive domestic and habitational architecture preserved at ground level, between high-standing buildings SDONG 30 and SDONG 50.6

The mosque appears to have been erected at the turn of the 19th century [Fig. 21]. A large rectangular hall measuring 7.25 m by 4.60 m featured six pillars in two rows supporting a flat roof and a shallow mihrab in the east wall [Fig. 23]. It was connected to a few rooms adjoining it on the east and south sides.

Fig. 21. Northern facade of a 19th century mosque in the ‘Abandoned Village’ (SDONG.20) 
(Photo W. Godlewski, PCMA archives)

5 Documentation completed by Szymon Maślak.
6 The two buildings had been documented by Jarosław Dobrowolski in 1989.
The complex designated SDONG 40 consisted of mud-brick architecture of undoubtedly earlier date than the structures surrounding it [Fig. 22]. The wall tops can be traced at ground level. Cleaning for documentation purposes uncovered a few artifacts which date the functioning of these buildings to the first half of the 19th century and possibly earlier. One of these finds is an ostrakon written in Arabic on both sides (ADd.08.080) [Fig. 24]. It is a record of a transaction dividing a donation of a cow, yard and a thing called ‘fanga’ between a dozen or so inhabitants of Dongola mentioned.

Fig. 22. Plan of architectural complex SDONG.40 (Mapping S. Maślak, PCMA archives)

Fig. 23. Interior of a 19th century mosque in the ‘Abandoned Village’ (SDONG.20) (Photo W. Godlewski, PCMA archives)
Fig. 24. Ostrakon written in Arabic (ADd.08.080), H.5.2 cm W.14.4 cm (Photo W. Godlewski, PCMA archives)

Fig. 25. Bronze coin (ADd.08.001), Dia. 22 mm (Photo W. Godlewski, PCMA archives)
Fig. 26. Porcelain sherds
(Photo W. Godlewska, PCMA archives)
Fig. 27. Fragment of a representation of a Makurite Holy Trinity protecting a king from the Throne Hall (Mosque) (Photo W. Godlewski, PCMA archives)

Fig. 28. Fragment depicting a Byzantine-style crown in the hands of the king from the Throne Hall (Mosque) (Photo W. Godlewski, PCMA archives)
Research was resumed on this extraordinary building after a long time (previously see Godlewski 1982; Godlewski, Medeksza 1987). A framework program for continued investigations, preservation and revitalization was prepared in 2008 by a team of specialists: C. Calaforra-Rzepka, W. Godlewski, W. Kołtaj, S. Medeksza, A. Obruski (Calaforra-Rzepka et alii 2008) and in 2009 preservation and conservation work was initiated in cooperation with the NCAM Conservation Department represented by Director of Conservation Iglal el Malik. The wall paintings preserved under plaster in the central hall on the upper floor started to be uncovered and preserved, beginning with the northwestern part of the room. Here the original ceiling beams supported on a granite column have been preserved, as well as the wall to its full height with fragmentary remains of wall paintings (see below, appendix by C. Calaforra-Rzepka). The wall decoration was repainted at least twice on successive coats of plaster. Compositions recognized on the first, original layer included an angel represented on the southern pilaster, a fragmentary frieze below the ceiling on the south wall and below the frieze, a standing Virgin Mary with Child in front of a palm tree in one composition and Christ with raised hands in another. The second plaster coat bore an image of the Makurite Holy Trinity (triple representation of Christ) protecting the king shown wearing a horned crown [Fig. 27]. One of the preserved representations on the west wall is a fragmentary image of a king holding a Byzantine-style crown in his hand [Fig. 28]. Further conservation treatment of the wall paintings is planned.

Fig. 29. Western entrance to the building of the Mosque with new mesh-net door (Photo W. Godlewski, PCMA archives)

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7 I am indebted to Amal Mohamed Ahmed of the NCAM for information on the content of this ostrakon.
At the same time protection measures were taken throughout the building by staff from the National Corporation for Antiquities and Museums (NCAM). All the openings were closed with small-mesh nets to keep out the bats [Fig. 29], fresh plaster was laid to fill gaps in the outer plaster coat and a provisional protection of the roof was carried out.

APPENDIX

CONSERVATION OF WALL PAINTINGS INSIDE THE FORMER THRONE HALL OF THE MAKURIAN KINGS IN DONGOLA (2009 SEASON)

Cristobal Calaforra-Rzepka
PCMA Associate, Warsaw

The aim of the conservation work in the 2009 season was to investigate the interior of the main room of the mosque in Dongola, formerly the Throne Hall of the Makurian Kings, and protect the wall paintings during construction works carried out on the roof of the building. The first stage of the program, which lasted from 25 January to 2 March 2009, was concentrated on murals in the western part of the Throne Hall. The restoration team was composed of Cristobal Calaforra-Rzepka, Urszula Dabrowska, Amal Mohamed Ahmed and Mohammed Sadik.

Probes made in the wall plaster revealed the complicated phasing of the interior decoration of the Throne Hall. Walls had been coated with one or more layers of paintings and later renewed several times with kaolin washes or mud plaster. The stratigraphy was different for each of the walls checked and consisted of 1–5 paint layers covered by 6–14 coats of plaster and whitewash. Uncovering of murals in the western part of the hall indicated that compositions in the northwestern corner had either never been overpainted or else later coats have not been preserved. By contrast, the paintings in the southwestern corner were overpainted at least three to five times.

The paintings are in deplorable condition. The original compositions were painted over and plastered several times. Rainwater seeping through holes in the roof of the building has damaged wall surfaces severely. Outer layers of plaster were scratched by vandals and visitors. Vegetal elements in the mud plaster have been consumed by termites making holes in the surface. Several wasp nests were attached to the painting surfaces and bat excrements accumulating on the surface were responsible for changing colors.

The first step of the program was to clean the paintings in the western part of the Hall of plaster overcoats, wasp nests and the bulk of the bat excrement. The excrement in particular had created a hard, almost insoluble shell on the surfaces. It had to be removed mechanically, scratching the surface of the dry plaster with spatulas or by
wetting with an Ethanol solution (40% in water) or ammonium carbonate (1:4 in water), depending on the character of the surface. The next layers were removed with scalpels and brushes. Part of the surface was pre-consolidated or directly cleaned with a 5% solution of PRIMAL AC 33 mixed with 40% solution of ethanol, when the resulting surface was too weak for standard cleaning. Recognizing the order of layers was a significant problem during the cleaning and consolidation work.

The most fragile edges were consolidated with a 5% solution of PRIMAL AC 33 in water, then reinforced with a kaolin–sand mortar (1:2 plus 2% of PRIMAL AC 33 to improve the elasticity and the adhesion of the mortar). Some fragments were impregnated with a 2% solution of PARALOID B-72 in toluene to improve the contrast and legibility of the paint layer.

A fragment of the painting in the southwestern corner was transferred from the wall in order to expose the earlier painting underneath. For this purpose, the paint layer was consolidated with a 5% solution of PRIMAL AC 33 in water, then a protective facing was glued to the surface using two layers of Japanese tissue and two layers of cotton gauze and KLUCEL G (1:10 in ethanol) as binder. The paint layer was then detached and stored to be treated in the future.

Continued cleaning of the paintings should make the composition more legible, as well as permit a final consolidation of the layers and reinforcement of the edges. Bats should be excluded from the building. Any building works performed near the walls of the hall require that the paintings be protected with thin sponges and a wooden panel to avoid mechanical damage to the painted surface.

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