

# OLD DONGOLA

## FIELDWORK IN 2002

Stefan Jakobielski

*In 2002 two campaigns of fieldwork were carried out at the site of the monastery on Kom H in Old Dongola. During the thirty-fifth season, which lasted from January 12 to February 26, 2002,<sup>1)</sup> activities were limited to the monastic compound area on Kom H.<sup>2)</sup> The successive season, from November 27, 2002, until January 22, 2003,<sup>3)</sup> concentrated on essential conservation work inside the uncovered parts of the monastic compound.<sup>4)</sup>*

1) The Mission in the 35th season comprised Dr. Stefan Jakobielski, Director; Dr. Małgorzata Martens-Czarnecka, archaeologist; Mr. Wojciech Chmiel, restorer; Dr. Teresa Kelm-Krauze, architect; Mr. Krzysztof Pluskota, archaeologist, pottery specialist; Mr. Jarosław Świącicki and Mr. Daniel Gazda, archaeologists; Syd. Haidar Hamid Mukhtar, restorer (Head of the Conservation Department at the Sudan National Museum, acting as Inspector of Antiquities); Ms Anna Pałczyńska and Ms Aleksandra Nowicka, students of archaeology, Poznań University. Mrs. Elżbieta Jakobielska assisted in the documentation while visiting the Mission in a private capacity.

2) Funds were provided by the Polish Center of Archaeology of Warsaw University with some financial assistance from the Research Center of Mediterranean Archaeology of the Polish Academy of Sciences. Kinomax Enterprises (Poland) Ltd. kindly provided some photographic equipment for the use of the expedition this season.

3) The Mission in the 36th season comprised Dr. Stefan Jakobielski, Director; Dr. Marcin Wiewióra, archaeologist-architect; Mrs. Gabriela Chmiel, restorer; Messrs. Jarosław Świącicki and Daniel Gazda, archaeologists; Ms Marta Gauza, archaeozoologist; Syd. Haidar Hamid Mukhtar, restorer (Head of the Conservation Department at the Sudan National Museum, acting as Inspector of Antiquities). Ms Monika Kamińska assisted in the documentation during a short-term visit to Dongola.

4) The fieldwork was covered with extra funds from the Polish Center of Archaeology of Warsaw University and some financial assistance from the Ureusz Foundation to promote archaeological investigations in the Nile Valley. A one-week extension was financed by the Ushuaia Program of French Television Canal Deux working on a film on the past of Sudan.



*Fig. 1. Aerial view of the excavations on Kom H: 1 - Building NW-E; 2 - Northwestern Annex, northern end (NW-N); 3 - Northwestern Annex, southern end (NW-S); 4 - Southwestern Annex (SW); 5 - Unit S; 6 - Church (HC); 7 - service area NE; 8 - Building N (Photo B. Żurawski)*

EXCAVATIONS IN THE MONASTERY IN THE 35<sup>th</sup> SEASON  
(2002)

There were three objects of exploration within the area of the monastic compound on Kom H (*Fig. 1* and *Plan I*):<sup>5)</sup> the North-western Cemetery (TNWH) by the western facade of the Northwest Annex to

the Monastery; the western part of the Main Monastery Building (NW-E) including the southwestern part of the adjoining Northwest Annex and, finally, the Monastery Church (HC).<sup>6)</sup>

## NORTHWESTERN CEMETERY (TNWH)

A further part of the Northwestern Cemetery west of the Annex was cleared<sup>7)</sup> uncovering eight tomb superstructures of the *mastaba* type founded on bedrock in two rows following a N-S axis. The box-like superstructures, unfortunately preserved to a height of no more than 30 cm, were built of bricks, both fired and unfired, and filled with rubble. They varied in size from 2.20 by 1.10 m to 2.50 by 1.20 m. Remnants of hard gravel-lime plaster occurred on some of them, no doubt originally covering the entire surface of the structures. The more interesting finds, however, came from the thick superimposed stratum formed of rubble quite obviously from the upper story of the Monastery. The debris yielded fragments of terracotta window grilles or screens, some of these finely carved and

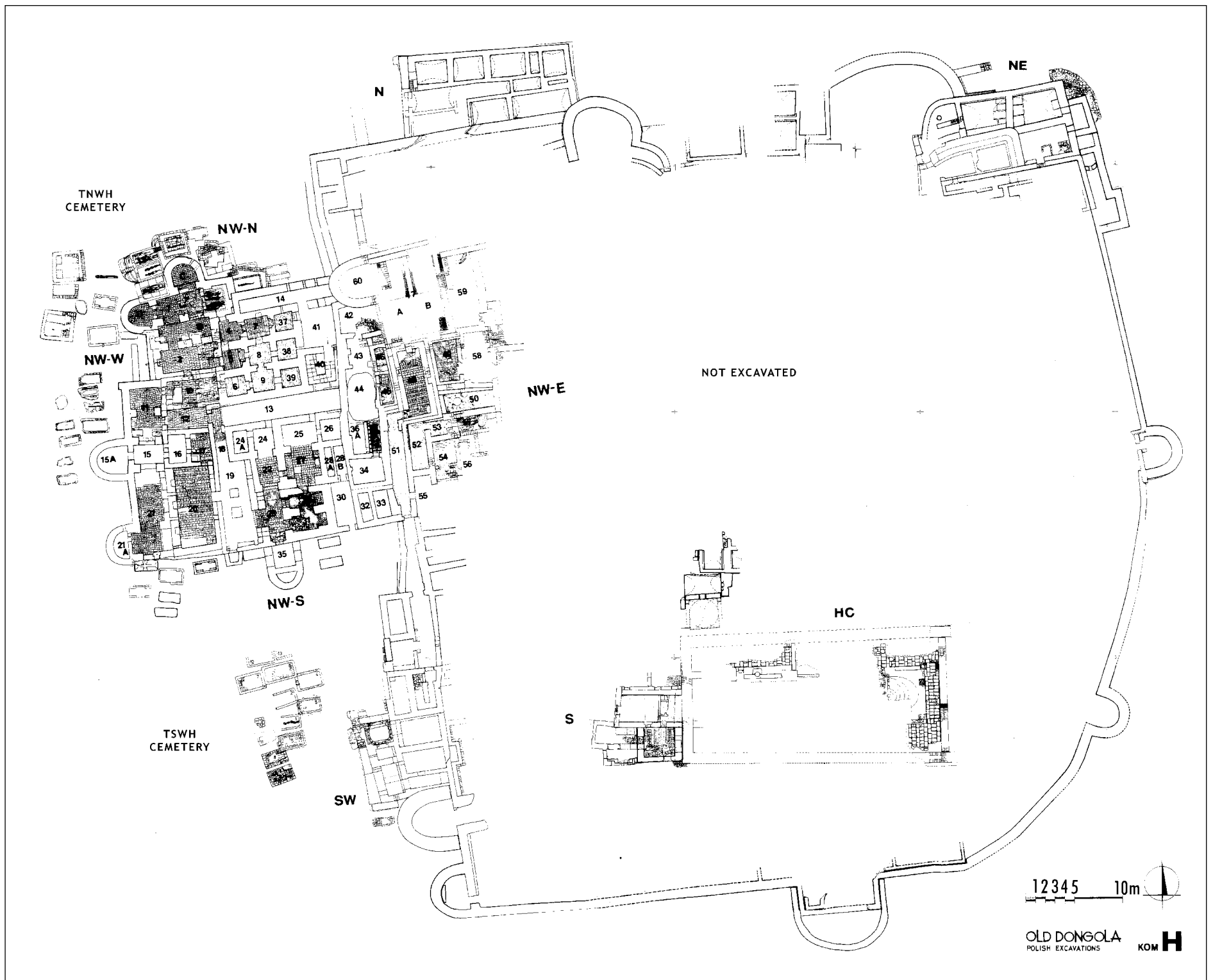
painted. Four such grilles or screens could be restored using also fragments found previously at the site. In one case (*Fig. 2*) two cocks are shown flanking a column and on the arched frame above them there is a painted dedicatory inscription of an archpresbyter and archistylites. The term ἀρχιεργαίτης<sup>8)</sup> is attested here for the first time in full, having occurred before in texts from Dongola solely in abbreviated form. The proper name is missing, yet there is a good deal of likelihood, judging by the association of titles, that the person referred to in this inscription was Georgios (γεωργ), later bishop and archbishop of Dongola, the man who according to other evidence was responsible for an extensive rebuilding of the Annex in the second half of the 11th century.

5) For previous reports, cf. S. Jakobielski, *PAM IV, Reports 1992* (1993), 102-106; *PAM V, Reports 1993* (1994), 115-126; *PAM VI, Reports 1994* (1995), 84-92; *PAM VII, Reports 1995* (1996), 105-113; *PAM VIII, Reports 1996* (1997), 161-168; *PAM IX, Reports 1997* (1998), 160-169; *PAM X, Reports 1998* (1999), 137-147; *PAM XII, Reports 2000* (2001), 265-279, therein (note 3 on page 267) further bibliography concerning the site. The most recent studies of the Monastery are to be found in: Dongola-Studien, 35 Jahre der polnischen Forschungen in Zentrum des makuritischen Reiches, eds. S. Jakobielski and P.O. Scholz, *Bibliotheca nubica et aethiopica* VII (Warsaw 2001); cf. also A. Łajtar, "Heb 5.4 in a graffito in the Western Annex of the Monastery on Kom H at Old Dongola", *EtTrav* 19 (2001), 209-215; M. Martens-Czarnecka, "Suggestions on dating of some murals from the Monastery in Old Dongola", *EtTrav* 19 (2001), 217-236; M. Martens-Czarnecka, "Old Dongola's share in Nubian painting", in: *Studia Archaeologica, Uniwersytet Jagielloński, Prace dedykowane Profesorowi Januszowi A. Ostrowskiemu*, eds. E. Papuci-Władyka, J. Śliwa (Kraków 2001), 287-302.

6) See contribution by D. Gazda in this volume. Mr. Gazda supervised the work there during this and the successive season.

7) For a previously explored part of the cemetery, see especially B. Żurawski, "The Monastery on Kom H in Old Dongola. The Monks' graves", *Nubica et Aethiopica* IV/V (Warsaw 1999), 238-244, and id., "Old Dongola. Cemeteries 1995", *PAM* VII, op. cit., 127-135.

8) ἀρχ. . . . . ἀρχ. κ. ἀρχ. ἐργαίτης: For a discussion of the term, cf. A. Łajtar & K. Pluskota, "Inscribed vessels from the Monastery of the Holy Trinity at Old Dongola", in: *Dongola-Studien*, op. cit., 348-349. A new suggestion, for which I am indebted to Prof. Georgios Moschonas, the current Greek Ambassador in Sudan, is to interpret this term as "chief librarian of the monastery".



Plan I. General plan of the Monastery on Kom H (2002/3) (Drawing M. Wiewióra, based on earlier documentation)





Fig. 2. Painted terracotta window grille from the Monastery, restored from fragments (Inv. No. D.36/02). Mid 11th century (Drawing W. Chmiel)



Fig. 3. Fragmentary double pot stand from the Monastery (Inv. No. D.24/02) (Photo K. Pluskota)

Amphora mudstoppers constitute another important category of finds coming from the rubble. One of the stoppers bears an inscription in ink:  $\phi\rho\omega$  or "wine", beside the stamped seal impression.<sup>9)</sup>

Needless to say, the rubble also yielded potsherds mostly attributed to the Late Christian Period. Local amphorae were

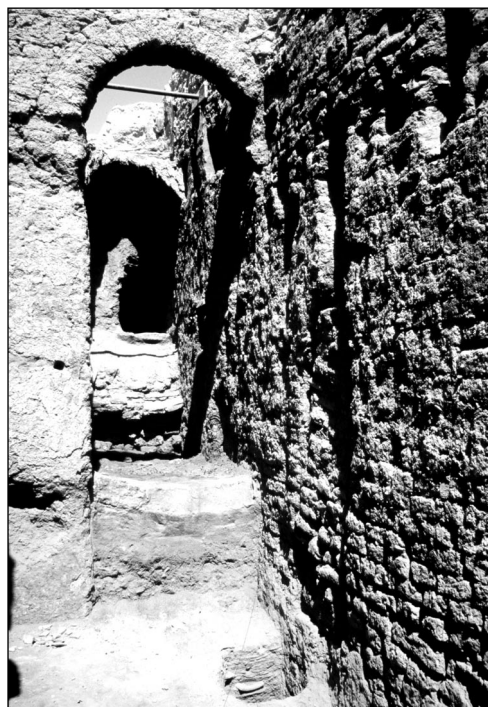
extremely numerous. One curious pottery object deserves special attention (*Fig. 3*). It may be a double-pot stand made up of two open-ended cylinders joined at the middle with a bird-shaped vessel. The object was slipped yellow and painted with red bands. It has no parallels in Nubian pottery.

## BUILDING NW-E

Building NW-E is actually part of the main monastery building bordering the Northwestern Annex on the east. It was connected with the Annex on the upper-floor level, but the architectural evidence so far had seemed to exclude any connection between them on the ground floor. The present excavations, continuing the previous campaign's effort to reduce pressure on the building's west wall which is adjoined by the Annex,<sup>10)</sup> were to resolve this issue once and for all. A row of rooms running from north to south (43, 44, 36, 34, and partly 33 & 32) was uncovered at ground-floor level, enclosed within common walls.

Rooms 28B and 30 in the Annex area were also excavated to the original level, revealing in the process the original southwestern corner of the NW-E Building on the axis of the southern outer wall of the Annex complex. The earliest yard of the Annex had once been entered through an arched entrance comprising the full breadth of the later southern wall of room 30. Another arched doorway (*Fig. 4*) closed off the yard on the north, having been built between the outer southeastern corner of room 28A (which appears to be at the same time the outer southeastern corner of the NW-S Building in its earliest

phase) and the outer western wall of NW-E. It led to room 28B, which in this period formed an open corridor leading in



*Fig. 4. Arched doorway between outer southeastern corner of annexed Building NW-S and the Main Monastery Building, leading to passageway 28B. View from the south (Photo S. Jakobielski)*

9) To be studied and published by J. Świącicki.

10) Cf. S. Jakobielski, *PAM* XII, op. cit., 267 and Fig. 2.

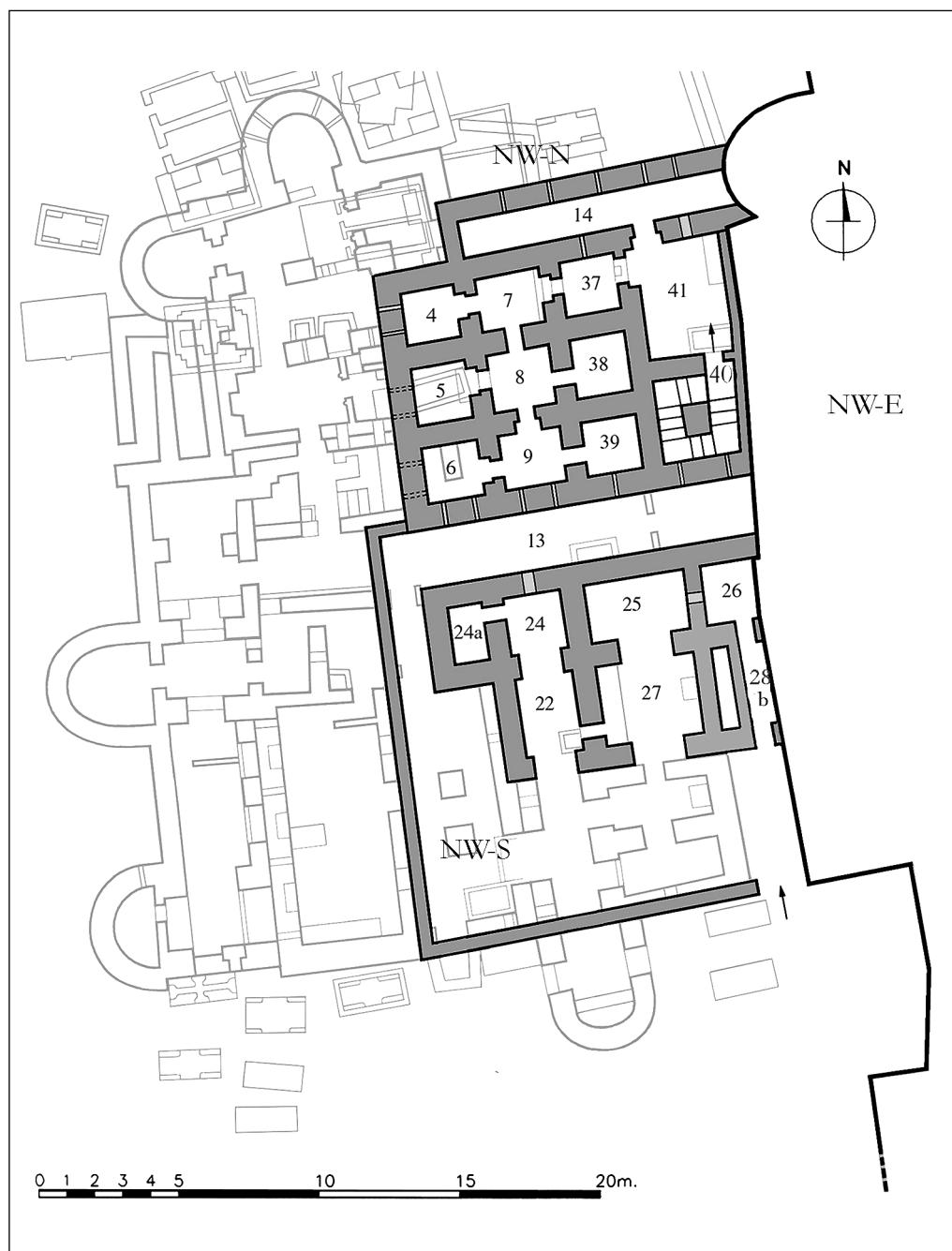
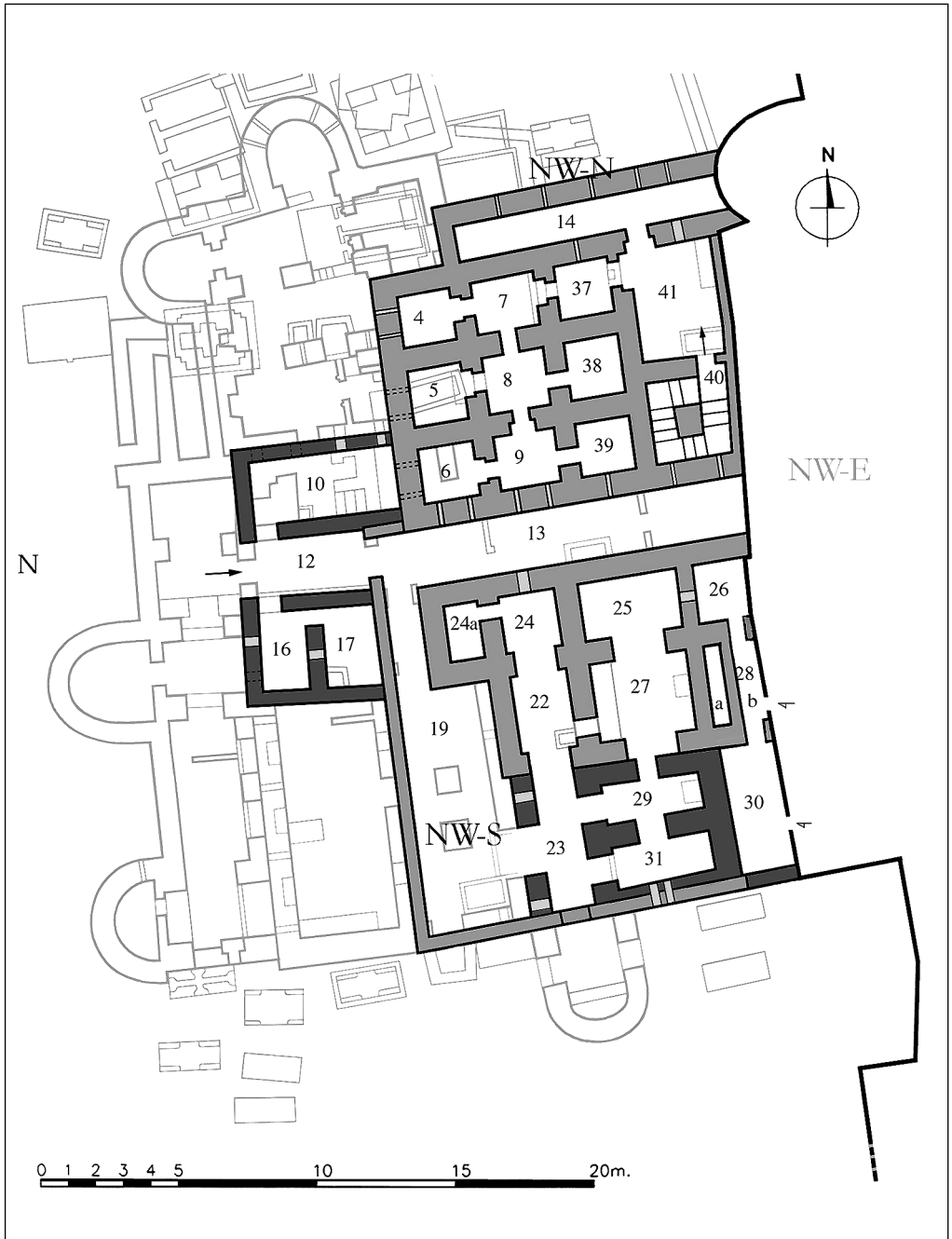


Fig. 5a. Sketch plan demonstrating the development of the Northwestern Annex: earliest phase from the 10th century (Drawing W. Chmiel and S. Jakobielski, based on documentation plans)



*Fig. 5b. Sketch plan demonstrating the development of the Northwestern Annex: phase II, rebuilding carried out by Georgios in the mid 11th century (Drawing W. Chmiel and S. Jakobielski, based on documentation plans)*



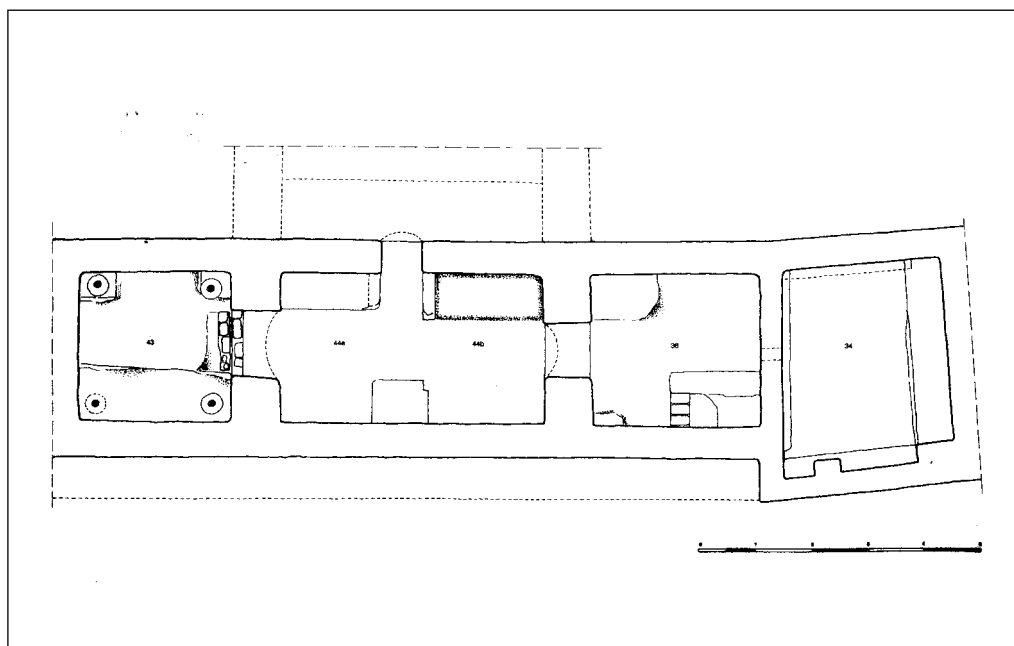
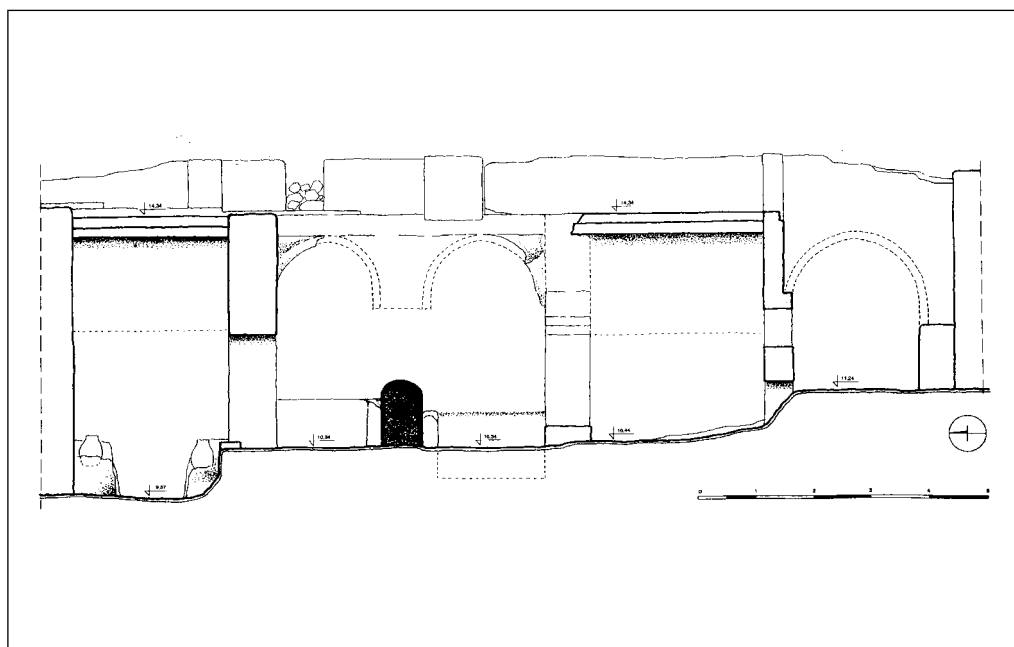


Fig. 6. Great hall in Building NW-E after 10th-century rebuilding into individual rooms 43, 44A, 44B, 36, and 34: a) N-S section looking east (top); b) plan of ground floor (Drawing T. Kelm-Krauze)

turn to the original (and only) door to room 26 (*Fig. 5a*).

The rebuilding program executed by Georgios in the mid 11th century changed the spatial and functional layout of this part of the Annex (*Fig. 5b*). With the erecting of the eastern wall of rooms 31 and 29, the area east of it became room 30; the arched southern doorway was replaced with a wall, thus removing the room, together with neighboring rooms 28A and 26, from the Annex. Low doors, 1.50 m high, were cut in the western wall of Building NW-E in order to enter this space. In the next stage, a small vaulted corridor was built across room 28B along its northern wall, open into room 36 so as to provide a direct covered passageway between rooms 26 and 36. After the doors leading to it from rooms 32 and 34 were blocked, the rest of the space was most probably turned into a rubbish dump. At the time of the next rebuilding, when the upper story of the Annex and Building NW-E was re-arranged, vaults were introduced in rooms 28B and 28A (the latter likely being a chimney duct located in the outer southeastern corner of the oldest phase of Building NW-S). Both were made accessible but through trapdoors in the floor of the upper story (i.e., from room <sup>1</sup>28).<sup>11)</sup> Room 30, accessible through an opening in the south wall, was now used for household purpose.

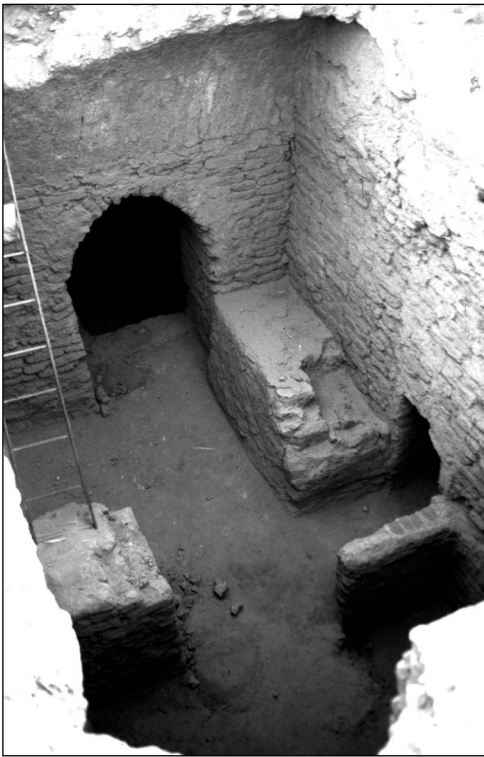
Three main phases of use were distinguished in Building NW-E. The first one should be associated with the beginning of the Classic Christian period, as suggested by the pottery evidence. At that time rooms 42, 43, 44, 36 and most of 34 formed one whole, measuring 17.80 m in

length and 3 m in width. This monumental hall was covered with a huge barrel-vault rising to a height of 4.20 m. The mud-brick walls were founded directly on the rock covered with a mud floor. There must have been a doorway to the southern part of the building, but no evidence of it survived the rebuilding. A passage to the northwestern tower (room 60) in the northern end, if it existed, will be uncovered once the ground-floor level is excavated here. The sole access attested to date was from the eastern part of the building. It was a low entrance leading to unit 45, which had apparently been rebuilt into a kind of vaulted narrow passage of obscure use. The passage, before being incorporated into the western extension of the building, ran alongside the earlier western girdle wall of the Monastery.

In the second phase, associated with Classic Christian pottery, the building underwent considerable alterations following a period of disuse that ended in many of the vaults collapsing. This phase may be contemporary with the erection of Building NW-N in the 10th century for the building program included changes at the upper-floor level. But first the ground floor underwent essential modifications. In an effort to save as much of the vault as possible, massive walls were built across the corridor, dividing it into smaller units (*Fig. 6a,b*). These walls supported new vaults constructed at right angles to the old vaults wherever these had collapsed. Room 43 thus came into being, still covered with an old vault, while the area to the south of it was divided into rooms 44A and 44B, each covered with new roof. The rhythm of the new vaults positioned the

11) Cf. Jakobielski, *PAM IX*, op. cit., 160-162; id., "Das Kloster der heiligen Dreifaltigkeit..." in: *Dongola-Studien*, op. cit., 161f. Please note that the upper-floor rooms are marked with a preceding <sup>1</sup> in order to differentiate them from same-plan rooms on the ground floor.

eastern entrance on the spot of an engaged pillar of a transversal arcade. It was retained inside the thickness of this pillar, which supported the springing of the vault. This unusual construction that went against all building principles apparently caused the collapse of the vault in the end (*Fig. 7*). Further to the south, the old vault was retained in room 36 and a new one at right angles to the previous one was built in room 34. Room 42 adjoining tower 60 was treated in similar fashion. The only entrance from the new parts was through a narrow passage designated as 45 (and its extension 46) joining the northern and southern parts of the building. In all of the



*Fig. 7. Building NW-E. Interior of rooms 44A & 44B with entrance to passage 45. In the background, an archway leading to room 43 (Photo W. Chmiel)*

rooms the rubble from the collapsed vaults was leveled, reducing the height by almost one meter. All the rooms, except for those at both ends (42 and 34), were connected by arcade doorways nearly 2 m high; the wall between rooms 36 and 34 was pierced by a small doorway barely 1.20 m high and over it a slot window.

On the upper floor (*Fig. 8*) a single room (later divided by a large arcade) existed at first over rooms 43 and 44; it was bordered on the south by two other rooms (36, 34) in a row, connected by narrow doors in the east wall. All the walls were plastered (2 layers of plaster and evidence of successive coats of whitewash were recorded), the floor was paved with irregular stone slabs. Room 144 was connected with 145 (and may have been one with it initially). Room 43 was obviously connected with staircase 40 in the Annex, but no traces of jambs or threshold were found because the wall in this place was preserved too low. Considering that the rubble fill underlying the final collapse of the vaults regularly contains Late Christian pottery, the rooms, on both the ground floor and the upper level appear to have been used for quite a long period of time.

The third phase falls generally in the Terminal Christian period. Some rooms (36, 43) continued to be used in unchanged form, but on a higher level. The deposits seem to be in part the leveled rubble from ruined parts of the building and in part the outcome of rainfall. In the ground-floor rooms, which were undoubtedly used in some way, not even a mud floor had been installed. In the well-preserved room 43, four storage jars were set into the floor in the four corners (*cf. Fig. 6*). A graffito, apparently in Old Nubian, mentioning bishop(?) Marianos (ⲁⲃ ⲙⲁⲣⲓⲁⲛ ⲡⲁⲛ) was lightly scratched on the body of one of these jars. On another

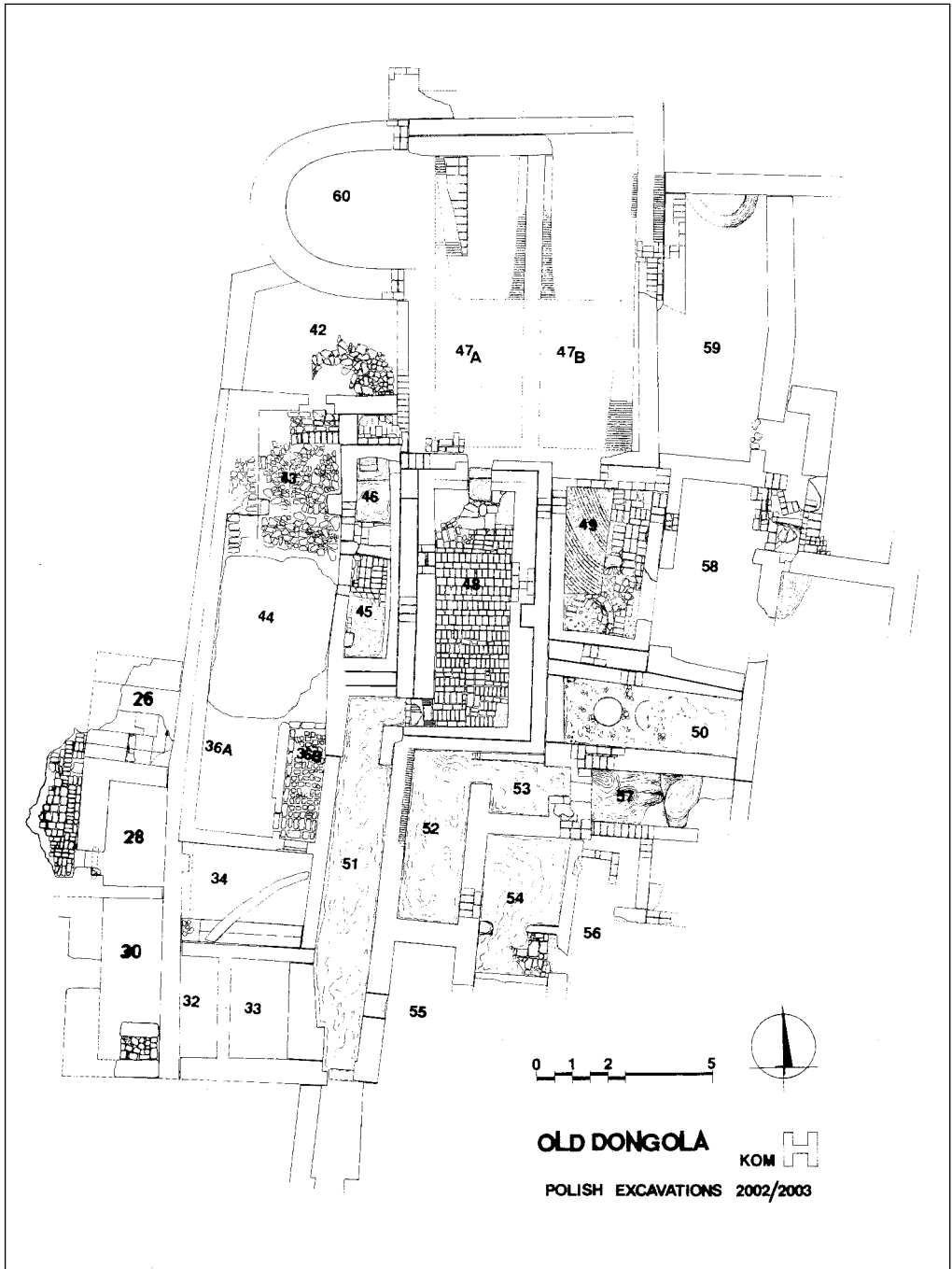


Fig. 8. Plan of the extant part of the upper floor of Building NW-E and Annex (Drawing M. Wiewióra after plans by T. Kelm-Krauze and A. Wójcik)





*Fig. 9. Terracotta toilet seat with cylinder and basin on the front part of a flat rectangular base (Inv. No. D. 18/02 ) (Photo K. Pluskota)*



*Fig. 10. Terracotta sinks (Inv. Nos. D.16/02 & D. 17/02) (Photo W. Chmiel)*

the archistylites and archimandrite of the Holy Trinity, Lazaros,<sup>12)</sup> was mentioned in two incised graffiti (ⲁⲃ ⲗⲁⲗⲁⲣⲟⲥ ⲁⲣⲥ ⲥⲧⲩⲗ).

The most extensive alterations were introduced in the southern end of the building, where a two-room structure was erected on the remnants of crosswise (hence originating from the second phase) vaults. These must be the foundations, since despite being preserved to a height of 1.5 m the walls reveal no entrance anywhere. The ruined room 34 on both levels was used as a rubbish dump. In the last period of use, when the Annex was already in ruins, the last version of this room (I34) was created with an entrance in the south-western corner. The space was delimited by

two walls running at an angle to the room's axis.

Many fragments of hydraulic installations were discovered in the layers of the rubbish dump. Included here was a ceramic toilet seat with evidence of use (*Fig. 9*), two complete sinks of a form never encountered before (*Fig. 10*) and several different ceramic pipes, both square-sectioned and semicircular on a flat base.

An unusual wooden amulet was found in the ruins of a ground-floor room. Carved in relief was a depiction of Christ on one side and what is presumed to be an angel on the other. It was intended to be suspended on a leather string and shows traces of heavy wear (*Fig. 11*).



*Fig. 11. Personal wooden amulet with carved representation of Christ (left) and an Angel ? (right) (Inv. No. D.5/02) (Photo K. Pluskota)*

12) On Lazaros, cf. A. Łajtar and K. Pluskota, in: *Dongola-Studien*, op. cit., 340ff.

Another amulet in the form of a pottery ostrakon with a text in Old Nubian was presumably meant to protect the owner against scorpion bites. The word *aggin* is mentioned repeatedly in various magic variants.

At the end of the season the excavated area was covered with an easily removable roof. In some of the rooms the surviving vaults needed to be supported with additional walls, e.g. room 36.

## EXCAVATIONS IN THE MONASTERY IN THE 36th SEASON (2002/2003)

The primary objective of the campaign was to protect the forty uncovered rooms of the Northwestern Annex with toxic substances designed to eliminate the subterranean termite, called *arda* locally, the larvae of which eat corridors in walls of Nile mud and mud-brick, thus constituting a threat to the preserved wall paintings.

The upper-floor rooms of the Main Monastery Building (NW-E) were evaluated in terms of essential safety measures required for the further methodic exploration of the structure. In effect, an area 15 by 20 m of the upper floor was cleared, comprising 15 rooms, which all appear to have been an adapted ruin, intended for temporary use (cf. *Fig. 8*).

Further work on the Monastery Church was focused on uncovering the eastern end of the building (the pastophoria and the

passage behind the apse were cleared, the total width of the church being established as 13.9 m including outer walls) and on investigating the central part of the northern aisle, close to the outer wall.<sup>13)</sup> Some preservation steps were also undertaken here, chiefly to protect the uncovered structures and the wall paintings, including that of the Nativity and of the Holy Trinity, both dating from the 11th/ 12th century.

In the first part of the campaign the area of Kom J was surveyed.<sup>14)</sup> Two tomb superstructures in fragmentary condition were recorded among the scattered brick rubble. A pharaonic block was found reused in the construction of the easternmost tomb; it preserved two hieroglyphic signs in relief: *šps* (or similar)<sup>15)</sup> and *R'* in low relief, both painted yellow.

## UPPER FLOOR OF BUILDING NW-E

The upper floor in the Main Monastery Building (coded NW-E) is actually confined to the westernmost section, bordering on the Northwestern Annex on the east. Exploration had started in the previous season when a row of rooms 43, 44, 36, 34 was excavated on the level of both floors.

This season another eleven rooms of the upper floor were cleared (cf. *Fig. 8*). The walls were all built of different-size mud brick (occasionally repaired with red brick) and were preserved to a height ranging from 1.70 m to as low as 0.25 m. Several periods of use are attested, with the currently uncovered one representing mostly the

13) See above, note 6.

14) Mr. Daniel Gazda was responsible for the work.

15) The signs A 40, A42, A46, C8, or C10 (A. Gardiner, *Egyptian Grammar*, List of Signs) are a theoretical possibility here.



Terminal Christian Period, when the upper story was partly reconstructed from heavy damages incurred possibly as a consequence of the Mamluk raids on Dongola in the end of the 13th century.

Some rooms with walls still standing high (mainly the southern part: rooms <sup>152</sup>, <sup>153</sup> and partly rooms <sup>157</sup>, <sup>156</sup>, <sup>154</sup> and <sup>155</sup>) were used as is, either on the original level where sometimes the original terracotta paving (as in <sup>154</sup>) or mud floor (in <sup>151</sup>, <sup>152</sup> and <sup>155</sup>) was still in place, or on a new mud floor laid on a layer of rubble in places where the condition of the ground-floor vaults was deemed unsafe (rooms <sup>156</sup>, <sup>150</sup> and <sup>153</sup>). How effective this was is an entirely different issue; many parts were obviously excluded from circulation

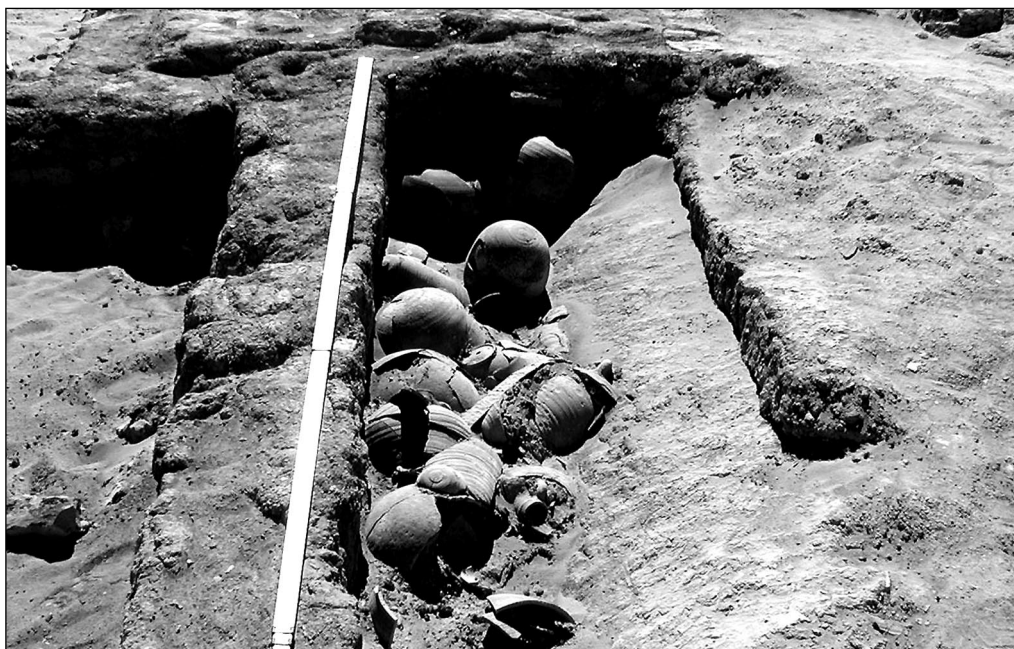
because of crumbling vaults. Another question that remains is whether the upper-floor rooms were used with the surviving older vaults (it could be true of rooms <sup>152</sup> and <sup>153</sup>) or were provided with a provisional flat roof.

One method that was applied in the reconstruction of the building was to double the walls, by inserting them into existing spaces (cf. *Fig. 8*); new barrel vaults could easily be introduced then (rooms <sup>148</sup>, <sup>149</sup>, <sup>150</sup>). In rooms <sup>145</sup>, <sup>150</sup>, <sup>158</sup> and <sup>151</sup>, it was sufficient to double one or two walls in order to cover them anew with a vault. Rooms <sup>148</sup> and <sup>149</sup> and probably <sup>147</sup> and <sup>146</sup> (as also a passage in room <sup>136</sup>, excavated in the previous season), received a new brick paving (*Fig. 12*).



*Fig. 12. Interior of room <sup>148</sup> of Building NW-E, looking south, in the last phase of use (Photo M. Wiewióra)*





*Fig. 13. Thirteen large Early Christian pottery vessels found as fill in the eastern haunch of a vault in room 47B of Building NW-E: a) in situ during exploration (top); b) displayed in the Expedition House (Photo M. Wiewióra)*

Most of the renovated rooms were plastered anew (as <sup>148</sup>) or at least whitewashed (<sup>152</sup>, <sup>153</sup>).

Some rooms were used for a fairly long period; several Terminal Christian layers were observed there (e.g. <sup>156</sup>, <sup>157</sup> and <sup>153</sup>). Many other structures were erected on top of the destroyed eastern part of the building, where some existing rooms were re-shaped (<sup>158</sup>, <sup>154</sup>, <sup>155</sup>) and new rooms were constructed on the sand dunes filling the destroyed vaults of the ground floor. It looks as if some rooms were then used as goat yards (e.g. room <sup>157</sup>). Most of the rooms were found without any furnishings or installations. The one exception was room <sup>150</sup>, used obviously as a storage-room for provisions, where traces of two round containers (*qesseba*) for grain or dates were found. In room <sup>154</sup>, two globular pots were found inserted into the mud floor; both seem to be of Early Christian date.<sup>16)</sup>

Architectural analyses indicate that Building NW-E was made up of individual sections built in different periods. The oldest apparently is the southern part of the building, erected<sup>17)</sup> along the inner side of the western section of the enclosure wall, more or less in its center, extending for about 19 m and not reaching either the southwestern or the northwestern corner towers. It is fairly difficult at this stage of the excavations (limited mostly to the area of the preserved part of the upper floor) to demarcate, even hypothetically, the eastern outer wall of this building; the original course of the northern and southern walls also needs to be further examined. This part of the building undoubtedly included rooms 52-57, the north walls of rooms 52, 53 and 57 likely being the building's

north facade. At this stage of the investigations, it would be risky to propose a more precise date for the erection of this part of the building, but a general date in the Early Christian period (based on potsherds extracted from the mortar) is to be considered.

The next to be constructed was likely the northern part adjacent to the northern section of the enclosure and the north-western tower (room 60), but not actually adjoining the southern part of the building. Included here were rooms 47a, 47b, and 59, as well as several rooms further to the north (not plotted on the plan in *Fig. 8*), most probably filling completely the area up to the northern section of the enclosure wall. The mud brick used in the construction of this part of the building is much smaller (28 x 16 x 6.5 cm). As to the date, an important indication was given by a set of large Early Christian vessels, thirteen in number, which were found extraordinarily placed in the fill of the eastern haunch of the vault in room 47b (*Fig. 13a,b*). Three of these were so-called 'beer-jars' with elongated necks, another four were early amphorae of local production and a fifth most notably an import. The latter vessel had been provided with an apparently Coptic inscription in yellow paint on the upper part of the body: ΝΤΝ ΙΑΚΩΒ Ϡ ΑΡΧ, "from Iakob, archpresbyter". The ceramic evidence is thus in favor of a relatively early period of construction for the northern part of building as none of the vessels in this deposit was manufactured later than in the 8th century.

The part of the NW-E building to be erected next, and not much later, was a section outside the outer western wall of

16) A circular brick feature in the southwestern corner of room <sup>149</sup> (cf. *Fig. 8*), strongly suggestive of the kind of round seat that was typical of refectories, turned out to be an attempt to repair a damaged vault.

17) The entire building is of mud brick, the average brick size in this part being 35 x 17.5 x 7-8 cm.

the Monastery and attached to it. The wall of the former enclosure running from the northwestern corner tower to the southwestern corner tower was then totally incorporated into the building, the free space between the already existing northern and southern parts inside the enclosure having been overbuilt as well (including rooms 48, 49, 50, 58 and possibly some other ones further to the east). It is now clear that the western part of this structure (west of the enclosure) comprised originally an elongated hall, divided later into rooms 42, 43, 44, 36 and 34, and a room (or rooms) underneath structure 32 & 33 located at the southern end of this building (cf. *Plan I, Figs. 7,8* and pages 219-223 above). On the ground floor, a long narrow passage (i.e., rooms 46, 45 and 51),

running along the earlier enclosure, connected room 42 through a doorway in its north wall directly with the rooms in the southern part of the building, both in the old and the newly added sections of Building NW-E.

The original layout of the building can still be deciphered in the ruins of the upper floor despite building activity in the Terminal Christian period which largely obscured the evidence. A superficial examination of the area east of the described complex also suggested heavy overbuilding of a large part of the alleged monastery yard. These structures were likely additions or perhaps even integral parts of the building in question. Only methodical excavations of the ground floor of the building can provide answers in this regard.

## PROTECTION AND PRESERVATION

### BUILDING NW-E

All holes in ground-floor vaults, visible in the paving, mud floors and exposed fill below floor level, were repaired. Bricks and mud (in some cases mixed with gum Arabic) were used. Over rooms <sup>145</sup> and <sup>146</sup> a roof was built in conformity with the standard applied previously in the western part of Building NW-E. The rest of the excavated rooms were left unroofed, but pavements and mud floors were covered with sloped layers of sand or rubble to prevent accumulation of water, in case rainfalls occurred.

### MONASTERY CHURCH

The tribune in the apse was covered with a protective layer of new mud brick, especially in places where the inner part of the wall or an original rubble fill had been exposed. No attempt was made, however, to reconstruct the tiers as their exact number is not known. Two sections of the

east wall were reconstructed to a height of some 35 cm where the original plaster was still standing high but the wall had been dismantled. All surviving pavement edges were reinforced with mud and all the holes in the pavement were filled in.

The walls with paintings, once the latter had been preserved, were protected with walls of reused bricks built against them with an intervening layer of sand. Appropriate profiling of the ground surface will remove an excess of rainfall water, should it occur.

The conservation of murals in the Monastery Church concerned a gross area of 3 sq. m. The paintings had been executed on a layer of whitewashed mortar plastering the eastern and southern mud brick walls of the structure. Their condition is typical: cracking of the wall, surface holes and the degradation of the binding agent. After mechanical and chemical cleaning of the surface, all decrements were filled in using

sand, powdered mud brick and chalk consolidated with 2% hydropropylcellulose. This agent served also to fasten flaking paint. The mural surface was then treated with a 3% solution of PARALOID B-72 in toluene.

The painting of the Trinity on the west wall posed more problems and was in relatively worse condition, having been painted on a third successive thin layer of plaster, composed mainly of mud, which covered two layers of lime-plaster coating the red-brick wall. Insufficiently slaked lime resulted in the loosening of the layer of whitewash together with the paint, bringing to the surface eruptions of  $\text{CaCO}_3$  from earlier layers. After preliminary cleaning of the painting, the loosened flakes were glued with polyvinyl acetate diluted in water. Holes in the surface were filled with a similar mixture but glued with gum Arabic. The surface was then treated again with polyvinyl acetate diluted in water. This operation was not fully suc-

cessful, although the effect is not entirely displeasing; it is advisable, however, to exercise caution in using chemicals diluted in water in such cases.<sup>18)</sup>

Recent activity of the subterranean termites noted in the previous season in a part of the Northwestern Annex necessitated action to protect the preserved murals. All the endangered areas were treated with poison (PROTECTOR N including xirene and other components) by means of injections to every corridor in the wall left by the insects, no matter whether recent or old. This large-scale operation was supplemented with the application of other poisons (CHLORAMINE B and pure formaldehyde, separately), left in all the rooms of the Annex in small containers to evaporate slowly in order to create an unpleasant environment for both insects and bats. As these poisons may be harmful to humans as well, the Annex was closed and all the windows were walled up, so that it could not be entered for a time.

18) The section concerning mural preservation based on the report of restorer Gabriela Chmiel.