The eighth season of the Italian-Russian archaeological joint mission at Abu Erteila (Sudan) lasted from 17th November to 24th December 2015. In addition to co-directors Eugenio Fantusati (ISMEO) and Eleonora Kormysheva (IOS RAS), the campaign was attended by Richard Lobban (SSA), Juan Vicente Estigarriba (CEEMO), Maria Rita Varriale and Sergey Vetokhov (architects), Marco Baldi, Silvia Dall’Armellina, Maxim Lebedev, Sergey Malych, Nedjud Hassan Bashier, Alla Troshina and Mikhail Yakomulskiy (archaeologists), Svetlana Malych (pottery expert).

NCAM was represented by inspector Tysser Mohamed.

A new temple

Fieldwork 2015 confirmed the presence of a temple in the site, as already suggested by the results of the previous seasons: a 33 m2 broad excavation survey on kom II, realized to the north of the inquired area, yielded in fact the sacral core of such original complex, including a naos surrounded by an ambulatory on three sides (fig. 1).

The E-W naos (K 1030) has a rectangular plan sized 5.4 x 4.6 meters, and is entered from east through a passage 160 cm wide. It is defined by adobe walls of width between 94 to 110 cm and preserved until six courses as a maximum (fig. 2).1 The occasional inclusion of red bricks in correspondence of the most stressed parts, especially corners and jambs,2 was noted, whereas foundations appear lacking. Remains of white plaster till 2 cm wide cover the walls and traces of yellow pigment are preserved. Square stone slabs of irregular dimensions make the pavement of the room, as well as the avenue, 160 cm wide, running from the naos till the eastern limit of the actual survey.

The ambulatory surrounding the naos has width between 101 to 113 cm along its three sides. It is delimited on north and south by E-W lateral walls flanking the stone avenue. The southern wall, 84 cm wide, is made from adobe masonry occasionally strengthened by red bricks,3 irregularly preserved up to six courses as maximum; it extends from west for 9.40 meters till an entrance, whose eastern jamb protrudes by 20 cm from the survey limit.

The northern wall, having the same width of 84 cm, intersects the delimitation of the survey. It shows a more regular combination of mud and red bricks, burnt material making upper courses and external facing of the adobe masonry. Fragmented red bricks – probably re-employed – define three foundation courses, protruding 16 cm from the external line of the wall.

Analogous foundations, protruding 28 cm from the internal face, supported the rear wall of the ambulatory, being 107 cm in width for 9 meters in length. It is made from adobe masonry, 70 cm wide, surmounting lower courses of red bricks.4 Burnt material was likewise used for making an exterior facing covered by white calcareous plaster, painted with red, yellow and blue pigments, preserved in an irregular stripe 3.20 meters long for 12 cm as maximum height.

The foundation structure of the wall intersects the actual northern limit of the survey, suggesting that the building extended northwards.

At the actual evidence, the rear wall of the ambulatory appears to be the northern extent of the western perimeter wall of the complex; its lesser width, equal to 80 cm, marks the discontinuity respect the original core including the naos. The perimeter wall is made from mud bricks courses surmounting a base in red bricks, which form the external protection facing and the foundations at the same time. Excavation work during the eighth season yielded its northernmost tract, 11 meters long, closing to west three lateral chapels, K 1027, K 1028 and K 1029, having rectangular plan but different N-S extension.5

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1 The mud bricks, laid according to alternating stretcher and header courses as usual, size 42 x 21 x 9 cm.
2 Southern wall and jamb were partially destroyed during the making of two burial pits.
3 The eastern part of the wall was partially damaged by the excavation of a Christian epoch burial.
4 The red bricks size 34 x 17 x 9 cm.
5 K 1027 is 4,5 meters extended, K 1028 2.08 meters, K 1029 2.74 meters.
The three chapels are divided by partition walls, 80 cm in width, deprived of foundations.

A square door housing in basalt was observed to the eastern angle of the southern entrance to K 1027.6

So far, only the area flanking K 1027 was excavated to the east of these three chapels and three further rooms, K 1024, K 1025 and K 1026 disposed from east to west, were brought to light.

K 1024 and K 1025 are divided by a solidly built mud bricks wall,7 being 64 cm in width that runs in N-S direction for three meters saving a southern passage linking them.

Room K 1026, 16.4 m² broad, is closed to north and east by irregular red bricks walls,8 completed by occasional inclusions of mud pieces and bound with highly earth-like mortar, unable to assure good tie; the distribution of the collapsed material to the west of the eastern wall suggests that its destruction happened in a single moment. In addition to a northern passage, an eastern doorway, 111 cm wide, led to the room.

Though an enlargement of the excavated area appears necessary, the rough making of these masonries, as well as the building technique with no other evidences in the complex, suggest that the walls defining K 1026 were erected after the original core of the edifice as confirmed as well by the upper altitude of the red bricks threshold of the room.

The E-W wall closing these three rooms to south should be identified as the southern perimeter wall of the temple in its first building period:9 it is 65 cm in width, made from the combination of internal core in adobe and red bricks facing.

A basement protruding 21 cm, runs along the external face of such wall for its actually visible length, corresponding to 8.20 meters. This basement is 30 cm high above the grade plane, and covered by painted calcareous plaster being till to 1.5 cm in thickness.10

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6 This housing sizes 25 x 20 cm, and holds a square hole measuring 8 x 7 x 2.5 cm.
7 The mud bricks size 30 x 15 x 7 cm. In the report of the seventh season the two rooms, initially interpreted as belonging to a new building, had been called K 1201 and K 1202 (see Fantusati et ali 2016, 137, fig. 2); after the eighth season, that allowed to assign them to K 1000, their marks have been changed.
8 The red bricks size 34 x 17 x 7 cm.
9 The red bricks size 32 x 17 x 7 cm, whereas the damages of adobe did not allow to measure mud bricks. A tract of the internal face of the wall was made from red bricks, probably as result of a restoration.
10 The composition of the basement is partially hidden by the plaster; its height suggests the occurrence of three courses.
The temple was later enriched by a multi-roomed southern annex, oriented N-S according to the actual excavation state, that was brought to light between the fourth and seventh excavation seasons. The linking between the two building periods was assured by room K 1021, whose later erection respect the original core is clearly recognizable.

**Structure K 1100**

Structure K 1100, deprived of architectural connections with the complex, had been noted by the mission within the south-eastern area of room K 1022 in the previous years, and newly brought to light during the eighth season. It is oriented in E-W direction and comprises two rectangular plan rooms (K 1104 and K 1105), that are respectively 7.4 and 5.3 m² broad and linked through a passage 95 cm wide; their walls, whose width varies between 60 to 70 cm, present the usual combination of different clay materials with the exception of the jambs, made from red bricks, while the actual excavation level does not allow to recognize foundations. Both the rooms are floored with differently sized stone slabs. K 1105 shows an eastern passage, evidently leading to a room beyond the actual limit of the survey, and is entered from south through a small vestibule (K 1106).

The vestibule is closed to east by a wall whose southern corner brick is rounded and oriented towards south-west: it indicates that this wall originally delimited another room set beyond the eastern limit of the survey.

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11 See the reports on excavation works on kom II in Fantusati 2013, Fantusati and Kormysheva 2014, Fantusati et alii 2016.
12 The vestibule measures 1 m N-S x 1.5 m E-W.

The dating of K 1100 is unclear, nevertheless its attribution to the first building phase of the complex appears likely: the unusual extension and longitudinal N-S plan of K 1021, linking the original core and the southern annex of the temple, was in fact probably determined by the necessity to include in the structure K 1100. The stone floor may suggest as well the sacral nature of this structure, as noticed in the naos and pronaos of the temple. Moreover a possible destination of K 1100 to the popular devo-
tion is suggested by the finding of votive objects, as a bronze ring bearing a gryphon,\textsuperscript{13} two sandstone lion statuettes\textsuperscript{14} and faience beads.

Three circular holes, aligned in E-W direction, were noted in the eastern area of K 1104; the holes, being 6 cm in diameter, are roughly evenly spaced.

\textsuperscript{13} Fantusati et alii 2016, fig. 8.
\textsuperscript{14} Fantusati and Kormysheva 2014, fig. 20.

They could have allowed the anchorage of a statue or another furnishing.\textsuperscript{15}

**Temple furnishings**

Furnishings in the naos confirmed the sacral nature of the building. A ferricrete sandstone altar (fig. 3), set in axis with the entrance, was flanked on its northern side by a high stone stand destined to sustain a sacred boat (fig. 4), while a basement was in the southwestern corner of the room; a column drum, put on the stone floor behind the altar, was evidently not \textit{in situ}. Moreover, two sandstone lion-headed water spouts (90 x 37 x 50 cm), originally placed on the roof of the temple to assure the outflow of the rains, were found; one of them was re-used to close the door of the naos in a later epoch (fig. 5).

\textsuperscript{15} For similar floor holes, made according to a regular scheme in the naos of the temple M 720 at Meroe, see Shinnie and Anderson 2004: 31, fig. 23.
The stand is 140 cm high and presents an approximately square cross-section of 26 x 20 cm at the top and 35 x 31 cm at the bottom. It was found in an inclined position between 391.91 and 391.32 meters above the sea level, after tearing down by the looters of the temple; it was originally fixed into the ground as suggested from the lower unworked portion, that was hidden in the pavement for a height of 22 cm. The object was discovered in good conditions with the exception of its upper part, partially broken, bounded by a cornice enriched, in correspondence of the eastern face, by a solar disk.

On the four faces, female figures in profile sustaining with their hands a starry sky can be seen. Each of them is standing on the representation of a palace and flanked by two vertical lines of Egyptian hieroglyphic texts. The scene represents a reproduction of the ritual twA-p.t, ‘the supporting of the sky’, a ceremony very well attested both in Egypt and Nubia to represent the cosmic order and the union among the king and the divinities.16

Four cartouches, that allowed to date the building to the reign of Natakamani and Amanitore, appear on every side of the stand. The king’s name is engraved twice: on the eastern and on the western face, where Kheperkare, his throne name, appears. The name of the queen can be read on the southern side while on the northern face, despite its bad conditions, Sorkror’s cartouche has been recognized. The presence of Sorkror’s name written in Egyptian hieroglyph, the first evidence till now found in Sudan, is one of the main attractions of the stand found at Abu Erteila.

The text, associated to the royal family, is repeated with few variants:

Well established on the Great Throne, O Isis, followed by the dedication honour of each personage.17

In order to preserve such finding, the stand was transferred to the National Museum in Khartoum in the course of the same day in which it was discovered, once completed its excavation and survey:18 it was 26th November 2015.19

16 See Type B of Kurth 1975, 120-123. See also Aldenhoven 2014, 605-606.
17 For the role of Isis in the Nubian world see Kormysheva 2010: 134-154; Baldi 2016a.
18 The mission is deeply grateful to NCAM for the precious assistance offered in the course of the stand’s transfer from Abu Erteila to Khartoum.
19 A more detailed analysis of the stand will be offered in a paper actually in press.

The altar, found at a level of 391.22 meters, was cracked to a height of 97 cm; its square form is 52 x 52 cm width, and is crossed on each side by series of vertical incised lines and decorations in wavy form recalling a snake body. On the eastern surface of the altar the following dedication in Egyptian hieroglyph was engraved:

King of Upper and Lower Egypt Natakamani, mistress Amanitore on the throne of father Ré.

In front of the altar’s eastern face, an offering table, sized 32 x 24 x 7 cm, was collocated on the pavement of the room confirming, together with several fragments referable to an offering tray, the relevant role of this worship space.
Columns

In addition to the several column drums and the open papyrus capital found in 2014, a new fragment sized 40x28 cm came to the light in the temple. Its decoration shows the king and a god represented shoulder to shoulder. The unknown divine personage is here reproduced holding in his right hand an ankh sign (fig. 6).

![Fig. 8: Abu Erteila, Temple K 1000, Outer facing of the southern perimeter wall, Detail of the painting on plaster depicting sunbeams (photo Baldi).](image)

**Little statuary**

A small sandstone statuette representing a crouched lion was discovered during the excavation of the naos. Deprived of the head, such object, whose dimensions correspond to 16,5 x 9,6 x 10,8 cm, has to be obviously reported to well diffused practices of popular devotion (fig. 7).

![Fig. 9: Abu Erteila, Temple K 1000, Outer facing of the southern perimeter wall, Detail of the painting on plaster depicting a solar disk flanked by an ibis and a sphinx (photo Fantusati).](image)

Wall-paintings

Despite the poor conservation of the building, significant traces of wall-paintings have been noticed in correspondence of the exterior southern and western walls, while a unique internal sample has been observed. Their presence confirms how the complex may have been originally completely plastered and painted.

**External murals**

Moving from the east to the west, a sequence of large diagonal stripes flanks a central subject along the basement of the southern perimeter wall of the temple. The stripes, representing sunbeams, are realized through the chromatic variation of blue, white, black, yellow and red colours (fig. 8, colour fig. 2). The stripes are followed by the reproduction of false marble, whereas only two elements of the central subject are now clearly recognizable: an ibis and a winged sphinx preceding a circular form, perhaps a solar disk, both painted with a brown contour (fig. 9). The ibis is shown in profile according to the Egyptian tradition. The sphinx, reproduced in standing position, shows a lion body and a feminine head surrounded by long hair and surmounted by a crown; from the back depart an impressive wing and a long tail. The south-western part of the wall is occupied by yellow and blue circular forms resembling a snake body. This motif runs along the wall, turns the angle of the building and then continues on the western perimeter of the temple.

![Fig. 10: Abu Erteila, Temple K 1000, Two-steps structure to south of K 1027. Behind it, on the right, is visible on the planking level the square door housing put in correspondence of the entrance to K 1027 (photo Fantusati).](image)

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20 On this topic see Baldi 2016b.
Painted plaster also covered a red bricks two-steps structure set to south of the room K 1027, brought to light during the seventh season; a middle body is flanked by two slightly projected same-sized wings (fig. 10). It was decorated with the representation of two groups including human and divine personages collocated on both its lateral sides; of such figures only the legs and part of the feet are now visible. Furthermore the reproduction of bows can be noticed on the steps: they symbolized enemies of the kingdom that were crushed underfoot confirming the royal supremacy and the full control on all the dominions of the reign.

**Interior murals**

The only known proof of paintings in the interior spaces of the temple is actually a human head, sized 9 x 13 cm, realized with ochre colour and placed in correspondence of the south-eastern corner of K 1025 (fig. 11). Most likely this figure was inserted in a line, actually disappeared, together with other components of a procession, as in the case of what is represented on the red bricks structure described above.

**Archaeometry**

Thirteen small fragments of collapsed murals from the temple have been analyzed in the laboratory “Spettroscopia Raman” of the Department of Sciences, “Roma Tre” University, in order to identify their molecular composition, combining investigations under SEM/EDS, X-ray powder diffraction and Raman spectroscopy.22

The results of the laboratory show the use of natural ochers for yellow and red pigments; copper and calcium silicates, typical of the “Egyptian blue”, for blue with robin egg blue tone;23 the white pigment is a white clay (kaolinite) with anatase traces.

Moreover, all pigments contain variable quantities of quartz, calcium silicates depending from raw materials availability and technical production (tab. 1).

Most of all the presence of calcium in all analyzed pigment could suggest that all the colours were completely englobed into the plaster carbonation process. This finding could indicate that all Abu Erteila’s temple murals were frescoes and not simply temperas on wall.

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<tr>
<th>Specimens</th>
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<th>XRD Results</th>
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<tr>
<td>C1</td>
<td>GREEN</td>
<td>Quartz, Feldspar, Calcite, Cuprorivaite</td>
</tr>
<tr>
<td></td>
<td>YELLOW</td>
<td>Kaolinite, Quartz, Calcite.</td>
</tr>
<tr>
<td>C3</td>
<td>YELLOW</td>
<td>Quartz, Feldspar, Calcite, Phyllosilicate</td>
</tr>
<tr>
<td>C4</td>
<td>YELLOW</td>
<td>Quartz, Phyllosilicate, Calcite.</td>
</tr>
<tr>
<td>C8</td>
<td>WHITE</td>
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</tr>
<tr>
<td>C9</td>
<td>YELLOW</td>
<td>Quartz, Feldspar, Calcite, Phyllosilicate</td>
</tr>
<tr>
<td>C10</td>
<td>RED</td>
<td>Quartz, Feldspar, Calcite, Phyllosilicate</td>
</tr>
<tr>
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</tr>
<tr>
<td>C13</td>
<td>YELLOW</td>
<td>Kaolinite, Quartz, Goethite, Calcite, Feldspar</td>
</tr>
</tbody>
</table>

Tab. 1: XRPD analyses of pigments on plaster (by Sodo, Casanova Municchia and Di Cosola).

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21 Fantusati et alii 2016, 135.
22 The mission would like to thank Armida Sodo, Annalaura Casanova Municchia and Iolanda Di Cosola for the really precious collaboration; more detailed reports on these analyses will be presented on forthcoming papers and on the proceedings volume of the 12th International Conference for Meroitic Studies (Prague, 5-9 September 2016).
23 Samples of Egyptian blue have been already observed in Dangeil: see Sweek et alii 2012, 11.
Burmals

Work on kom II yielded five intrusive pit burials; three of them were realized damaging building walls. The corpses, differently oriented, were not accompanied by grave goods.

In addition to the burials brought to light on both koms during the previous seasons, they confirm that the territory of Abu Erteila was re-used as funerary area in a late phase of its life-cycle. According to archaeometrical analyses performed on bones of a skeleton from kom I their dating between twelfth and thirteen centuries can be suggested.24

Conclusions

To the light of what has been till now passed in review, we must underline most of all the unusual plan of the temple whose architectonic development, on the basis of our actual knowledges, can be compared only with Hamadab H 1000.

Future improvements of the archaeological researches will be so essential to clarify on one side the role of Abu Erteila temple in the religious context, on the other to define both the real extension and the planimetric trend of the structure.

Finally it appears too early, on the basis of the elements actually at our disposal, to indicate the divinity worshipped in the temple and to remount to the circumstances that conducted to the bad destruction of this new Meroitic building.

Zusammenfassung


Im Gebiet von Abu Erteila wurden bereits mehrere christliche Bestattungen gefunden, die die Nachnutzung dieses Ortes als Begräbnisstätte in dieser späten Phase belegen.

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