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# Medieval Nubia: a contribution to the study of textiles from Meinarti

## Abstract

An examination of textile finds from Meinarti led to a new identification of pieces of textile, including fragments of furnishing textiles, most likely carpets, previously unnoticed in the assemblage. This new evidence expands the available knowledge about textiles for furniture in medieval Nubia. The article describes the technical features of the fabrics and discusses their potential social and economic value in the archaeological context and during the specific historical period of the site.

**Keywords** Nubia, furnishing textiles, wool, kilim, twining, nomads

## Introduction

Nubian rulers were converted to the Christian faith after two Byzantine missions visited them in the first half of the sixth century (Vantini 1975, 7-28; Kirwan 1937, 289-295; 1980, 134-139; Monneret de Villard 1938, 66; Richter 2002; Welsby 2002, 31-34). At that time, the territory between the Second and Sixth Cataract of the Nile was divided into three kingdoms: Nobadia, Makuria and Alwa. The mission sent out by empress Theodora (527 to 548 CE) led by the monophysite priest Julian arrived first in Nobadia and few years later in Alwa, while a concurrent mission sent by emperor Justinian (527 to 565 CE), bringing the melkite faith, reached the kingdom of Makuria.

After a century, the Christian kingdoms of Nubia faced the Arab conquest: in 651 to 652 CE a great battle took place in the Makurite capital, Dongola. Later, medieval writers described the great ability of Nubian archers, who sent arrows directly into the eyes of the Muslim soldiers. At the end of the battle, a non-aggression treaty, called *baqt*, was concluded between the Egyptians and Nubians. This treaty stipulated the exchange of slaves for cereals, wine, horses and textiles and also regulated the circulation of people and trade goods between Nubia and Egypt (Plumley 1975, 241-245).

At some point between the end of the seventh century and the beginning of the eighth century, Nobadia and Makuria merged into one great kingdom. In that new configuration, the territory of Nobadia was supervised by a royal representative called an *eparch*, who was in charge of the annual delivery of slaves to Egypt and controlled the trade traffic. No merchant was allowed to go further than the Second Cataract (Vantini 1975, 603-604; Seignobos 2010).

Meinarti – “the island of [saint] Michael” in Old Nubian (Crowfoot 1927, 145) – is located immediately north of the Second Cataract, circa 350 km upriver from Philae (fig. 1). The site, a large *kom* 175 m long and 95 m wide, was variously occupied from the third century to 1500 CE. During the period under consideration, Meinarti played an important role in the Nubian trade control policy. In the medieval written sources, the island was described as a control point for traffic on the river and also as the occasional residence of the eparch of Nobadia (Vantini 1975, 540, 680). In fact, it was the southernmost place of the district under the eparch’s jurisdiction.

The excavations at Meinarti were conducted by anthropologist and archaeologist William Y. Adams (University of Kentucky) from 1963 to 1964 for the Sudan Government Antiquities Service and under the

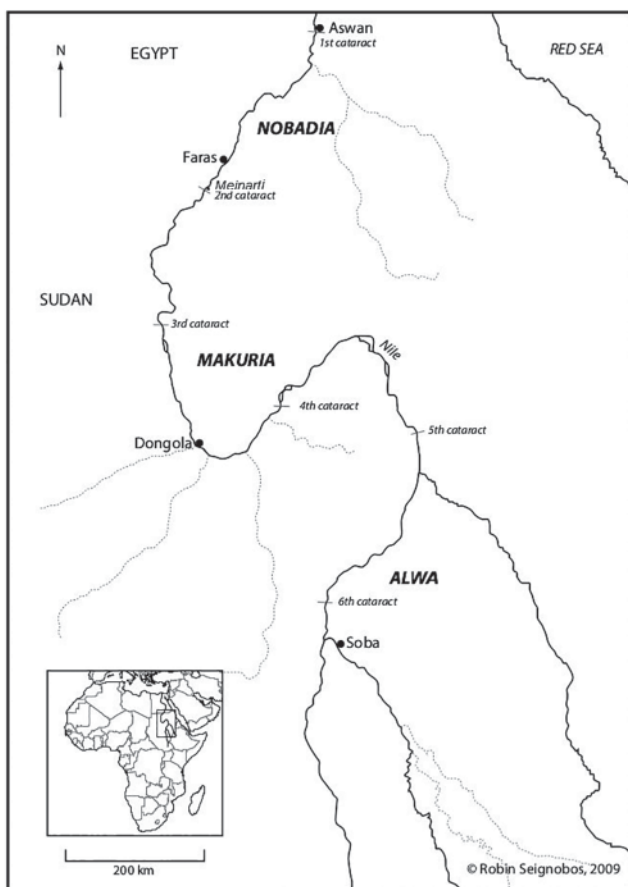


Fig. 1: Map of the medieval kingdoms of Nubia (Image: © and courtesy of Robin Seignobos)

auspices of UNESCO as part of the emergency Nubian Campaign. In such circumstances, Adams chose to explore only half of the mound from top to bottom and succeeded in registering all the occupation levels of the town. He identified 18 levels which he related to six phases. Between each phase he noticed traces of flood damage or destruction, which implied partial or total rebuilding (Adams 2001, 2002, 2003).

The textiles are mostly wool tabbies and weft-faced tabbies decorated with colour bands (blue and/or red) and range from coarse to fine. Tabbies are here considered coarse quality when both warp and weft are fewer than 10 threads/cm, medium quality when warp and weft are from 10 to 20 threads/cm and fine quality when warp and weft number more than to 20 threads/cm. In weft-faced tabbies, it is the number of weft threads/cm which is the determinant: for fewer than 10 wefts/cm the quality is coarse, between 10 and 20 wefts/cm the quality is medium and more than 20 wefts/cm the quality is fine. All the textiles were retrieved from Level 5b with the exception of two

pieces. Textile inventory number 18123 was found in Level 6, subphase 5a and textile inventory 18135 was recovered from Level 5, subphase 5c.

This level was dated to the 13th century CE, more precisely to between 1285 and 1286 CE when an Egyptian raid was conducted in Nubia by the emir 'Alamaddin Sanjar al-Masruri, governor of Cairo and the emir 'Izzaddin al-Kurani. The Egyptian historian Maqrīzī compiled a description of this invasion of the country of the Nuba by the Egyptian armies of Sultan Qalāwūn: "When the army arrived at the frontier of Nubia, King Simamun ordered that the country should be evacuated. He was very brave. He sent a messenger to Jorais, his agent in the island of Mika'il and the district of Daw – the lord of that province was known among the Nubians under the name of Sahib al-Jabal – and ordered him to evacuate the country under his jurisdiction" (Vantini 1975, 683-685).

How did the eparch organise the evacuation of the country? Did the inhabitants of Meinarti have time to secure their goods before leaving the town? Or did they flee their houses hastily abandoning all their belongings? As far as the administrative building is concerned, at least two caches were found by Adams' team, which attest to an attempt to prevent some valuable items – mainly pottery – from being plundered by the Egyptian soldiers. Unfortunately, it seems that none of the people involved in hiding them had the opportunity to come back after the raid to retrieve the objects. As some pottery was secured in the eparch's complex, probably because it was difficult to transport, it is reasonable to assume that precious textiles may have been taken away by the eparch's people. Unlike ceramics, fabrics do not break easily, and are lighter and easier to load for transportation. It is also possible that such textiles were found and taken by the Egyptians. The textile fragments found in Meinarti were mostly torn rags, which were used for secondary purposes such as wrappings. This explains why there were not taken away by Meinarti inhabitants or by the Egyptian soldiers.

The textiles' exact provenance was not always recorded but almost all the fragments were unearthed within the area labelled "Building II-III" (Adams 2002, 88). This huge building, located in the southern part of the village, consisted of three large open courtyards which were progressively "subdivided into whole series of interior suites" (Adams 2002, 32). Additional suites were also built at the northern, western and southern parts of this unique building. Adams identified this place as the "eparchal complex". He considered suites C, E and F components of a "public sector", used by the eparch to host his visitors and



conduct negotiations while goods were probably stored in suites A, B and D. The outer suites may have served for the residence of the eparch's retinue. The fragmentary textile finds were scattered around the area of Building II-III (potentially the "public sector" or "private suites"). Two pieces were found in caches, where they were probably used as wrappers.

#### **Re-examination of the textile material from Meinarti**

The textiles were studied by Nettie K. Adams and published in the third Meinarti volume, dedicated to the Late and Terminal Christian Phases of the site (Adams 2002). It is important to point out that the observations were made directly in the field, under very difficult conditions and without appropriate equipment (N.K. Adams, pers. comm.). Adams wrote several chapters in the volumes edited by her husband, W.Y. Adams, who did not have the opportunity to return to the material before publication. However, in a short but valuable chapter, she describes the textile material from the Phase 5 levels, giving, when possible, the provenance of various fragments and relevant technical data for 22 items including weave, fibre, spin direction of the warp and weft as well as descriptions of the patterns and colours (Adams 2002, table 9). The textiles are tabby or weft-faced tabby weave. Wool and linen fibres dominate but cotton and silk were also identified. The most popular pattern is band decoration.

During a recent study visit to the Sudan National Museum in Khartoum, in 2017, there was an opportunity to examine medieval textiles and tools relevant to textile production in the museum's storerooms. In contrast to Adams' facilities in 1964, the team included a textile conservator, quite good lighting, and a digital microscope which permitted a more careful and precise examination of the Meinarti textiles. A detailed observation of the finds identified, in some cases, several textile objects with the same inventory number. As a result, the Meinarti textile corpus numbers 29 woven textiles and one braid (table 1). Weft-faced tabbies and balanced tabbies are still the most common weaves (there are 25). However, examination of the fibres by microscopic magnification (x200) identified features which were less consistent with former conclusions. Almost all textiles appeared to be wool. Only one piece was positively identified as linen; three others as bast fibres; and one as silk. No cotton fibres have been identified so far.

In this assemblage, three textiles present interesting features, which were apparently unnoticed before. One is the textile originally registered as number 145 (which is now inventory number 18135). It was

published as a richly decorated "woollen [sic] robe" woven in a weft-faced tabby. However, it is made in slit-tapestry, also called kilim. The two other textiles – a fragment of pile-weave and a thick fabric fragment made in a weft-twining technique – were found in a box labelled inventory number 18130 (which primarily corresponds to textiles registered in the field under number 370).

#### **Textile inventory number 18135**

There are more than 50 preserved pieces of this fabric found in Meinarti. These include its two edges (the right and left sides of the textile) but the fringes usually left on the extremities of the transverse edges are not preserved. Warps and wefts of the fabric are made of wool. The density of the fabric is 7 warp threads/cm and 32 weft threads/cm. The fabric has a close "tight" weave. The cream-coloured warp is Z2s-plied; the weft is Z-spun. The decoration is woven in slit-tapestry. The decoration displays a rich palette: blue, dark blue, yellow, cream-coloured, orange and green. Textiles are very sensitive to light, which can quickly cause the dye to fade. Exposure to light also breaks down the chemical structure of textile fibres, making them weak and brittle. The fabric from Meinarti underwent physical damage (it is cracked, dried, and fragmented) but the dyes did not undergo significant degradation and decolourisation - the colours are still intense. The decoration is composed of colourful bands in blue, green, orange, yellow and dark blue on a dark red ground. Almost every band displays a different ornamental motif, mostly in geometrical designs but also with stylised floral elements. Both the technical and decorative features of this textile suggest it as a kilim.

Some definitions of kilim indicate a fabric woven by nomadic Islamic communities from Anatolia, Iran and the Caucasus: "Flat-woven covering or hanging, produced in Islamic lands of central Asia, the Middle East, the Balkans and north Africa. Most were produced in nomadic or village setting on horizontal or vertical looms" (Campbell 2006, 386). However, kilims were produced long before the Islamic period and in various areas. The oldest fragment of a fabric woven in kilim technique was found in Qatna, Tell Mishrife, Syria, and dates from the second half of the second millennium BCE (James et al. 2009, 1112-1113 & fig. 3a to fig. 3c). This technique also characterises one of the fabrics discovered in Gordion, a Phrygian city near modern day Ankara in Anatolia, dated between the tenth and ninth century BCE (Gaspa 2018, 75). Here the term kilim refers to a textile produced by tightly interweaving the warp and weft to produce a flat



	SNM inventory number (+ excavation number)	Provenance	Weave type	Fibre, Colour	Thread count/cm (wp x wf)	Spinning direction	Dimension (cm)	Description	References
1	18096 (6-K-3/238)	Level 5, fill of Building II-III	tabby	wool, brown	9 x 9	S (wp, wf)	12.0 x 18.0	Fragment of wool cloth	unpublished
2	18113 (6-K-3/270)	Level 5, fill of Building II-III, room 78	weft-faced tabby	wool, cream (wp), purple, dark blue (wf)	6 x 25-30	S (wp, wf)	21.5 x 14.0 15.0 x 11.0 15.0 x 10.0 9.0 x 9.0 9.0 x 10.0 4.0 x 4.0 7.5 x 5.0 3.0 x 4.0 3.0 x 2.5	9 fragments. Band decoration. Purple band 9 cm wide, blue band's width impossible to estimate. Edge reinforced with a double warp (2 separate threads, each S-spun)	Adams 2002, 89-90
3	18114 (6-K-3/272)	Level 5, fill of Building II-III	tabby	wool, blue	16 x 20	S (wp, wf)	14.0 x 9.0	Lack of decor	Adams 2002, 89, 91
4	18115 (6-K-3/231)	Level 5, fill of Building II-III	weft-faced tabby	wool, cream (wp), purple, dark blue (wf)	9-10 x 25	S (wp, wf)	11.0 x 5.0 3.0 x 2.5 5.0 x 4.0 4.0 x 1.5 7.0 x 1.0 9.0 x 3.0 4.0 x 3.0 3.5 x 2.0 4.0 x 1.5 3.5 x 2.5 3.0 x 1.5 5.0 x 1.5 2.5 x 0.5	Similar to 18113, they probably formed one piece	unpublished
5	18117 (6-K-3/177)	Level 5, fill of Building II-III	tabby	linen, cream (undyed)	8 x 9	S (wp, wf)	11.0 x 7.0 12.0 x 7.0	Undecorated tabby. Small brittle fragments	Adams 2002, 89, 91
6	18119 (6-K-3/233)	Level 5, fill of Building II-III, room 23	weft-faced tabby	wool, cream (wp), blue, brown (wf)	4 x 20	S (wp, wf)	4.0 x 8.0 1.0 x 3.0 2.5 x 2.0 4.0 x 1.0	Wool textile with blue and brown bands	Adams 2002, 89-90
7	18120 (6-K-3/118)	Level 5, fill of Building II-III, room 25, cache	weft-faced tabby	wool, purple, dark blue	6 x 28	S (wp, wf)	28.0 x 16.0	Band decoration. Purple band 1.4–1.8 cm high, blue band 1.5 cm	Adams 2002, 89
8	18123 (6-K-3/320)	Level 6, subphase 5a, area of Building II-III	weft-faced tabby	wool, dark blue, light blue	4 x 20	S (wp, wf)	20.0 x 28.0 (general measurement of the surface of the textile. very fragmentary. kept under glass)	Band decoration	Adams 2002, 89-90
9	18124 (6-K-3/109)	Level 5, Building II-III, room 25, cache	weft-faced tabby	wool, dark blue (wp), dark red (wf)	6-8 x 25-30	S (wp, wf)	7.8 x 1.0 7.7x2.4 10.5 x 0.5 10.3 x 1.8 10.0 x 4.0 2.0 x 1.0 3.8 x 1.3 6.4 x 1.0 2.0 x 1.4	11 fragments, band decoration, about 0.5 cm high	Adams 2002, 89-90
10	18125 (6-K-3/234)	Level 5, fill of Building II-III, room 13	weft-faced tabby	wool, beige (wp, wf)	6 x 32	S (wp, wf)	8.0 x 12.0 1.5 x 3.5 1.0 x 5.5 1.0 x 5.0	Weft-faced tabby, without decor	Adams 2002, 89-90
11	18126 (6-K-3/112)	Level 5, fill of Building II-III, room 25, cache, inside a pot	weft-faced tabby	wool, brown (wp), dark blue, brown (wf)	6x 28	S (wp, wf)	9.0 x 13.0 5.0 x 8.0 5.0 x 6.0 4.0 x 5.0 3.0 x 7.0	Wool textile decorated with brown and blue bands, brown warp	unpublished

Table 1a: Inventory of the textiles from Meinarti with updated data, Sudan National Museum, Khartoum, February 2017



SNM inventory number (+ excavation number)	Provenance	Weave type	Fibre, Colour	Thread count/cm (wp x wf)	Spinning direction	Dimension (cm)	Description	References
12 18127 (6-K-3/329)	Level 5, fill of Building II-III	weft-faced tabby	wool, a) brown (wp, wf), purple (wf), dark blue (wf), cream (tassel); b) brown (wp, wf), dark blue (wf)	a) 6 x 28 wątków (dark blue-red); b) 6 x 36 (brown-purple)	S (wp, wf for both textiles); S3z2s (tassel)	15.0 x 7.0 (purple, dark blue) 7.0 x 5.0 8.0 x 5.0 10.0 x 7.0 4.0 x 1.0 6.0 x 3.0 5.0 x 4.0 25.0 x 8.0 14.0 x 6.0 5.0 x 2.0 9.0 x 3.0 (tassels)	Fragments of band decorated textile. Possibly two different fabrics: a purple-dark blue one, decorated with tassels and a dark blue and brown one	Adams 2002, 89-90
13 18129 (6-K-3/176)	Level 5, fill of Building II-III	tabby	wool, red, dark blue	13 x 8	S (wp, wf)	13.0 x 10.0 28.0 x 23.0	Textile decorated in plaited effect	Adams 2002, 89-90
14 18130 a (6-K-3/370)	Level 5, fill of Building II-III	weft-twining	wool, cream (wp), dark red, red, dark blue (wf)	2 (each warp composed by 10 unspun threads) x 4	10 x Z2s (wp), S4z (wf) – loosely spun	6.0 x 2.5	Twined décor	Adams 2002, 89-90 but material preserved in the box not consistent with description
15 18130 b (6-K-3/370)	Level 5, fill of Building II-III	Pile textile, impossible to determine the type of knot because of its bad condition	wool, cream (wp, wf), dark red, dark blue, orange, beige (pile)	3 x 10	S2z (wp) Z (wf)	3.0 x 3.0 3.0 x 4.0 2.5 x 2.0 3.0 x 2.5	carpet	Adams 2002, 89-90 but material preserved in the box not consistent with description
16 18130 c (6-K-3/370)	Level 5, fill of Building II-III	tabby	wool, brown	10 x 10	S (wp, wf)	3.0 x 1.5	Undecorated brown wool tabby	Adams 2002, 89-90 but material preserved in the box not consistent with description
17 18130 d (6-K-3/370)	Level 5, fill of Building II-III	weft-faced tabby	wool, cream (undyed)	4 x 16	Z2s (wp, wf)	4.0 x 3.0 3.0 x 3.5	Lack of decor	Adams 2002, 89-90 but material preserved in the box not consistent with description
18 18132 a (6-K-3/271)	Level 5, fill of Building II-III, room 58	weft-faced tabby	wool, cream (wp, wf), brown (wf)	2 x 8	Z2s (wp), Z2s (wf)	14.0 x 18.0 13.0 x 7.0 8.0 x 7.0	Thick fabric, probably furnishing textile – plaid, carpet, blanket ? Band decor.	Adams 2002, 89-90 (271d)
19 18132 b (6-K-3/271)	Level 5, fill of Building II-III	tabby	wool, dark brown (wp), light brown, blue (wf)	6 x 6	S (wp, wf)	4.0 x 4.0 4.0 x 3.0 7.0 x 6.0	Textile decorated with blue bands on a brown ground	Adams 2002, 89-90 (271d)
20 18134 (6-K-3/232)	Level 5, fill of Building II-III, room 7, fold together with a leather garment	weft-faced tabby, weft-patterned	wool, cream (wp), cream, dark blue, light green, red (wf)	4 x 18	S (wp, wf)	2.5 x 4.5 2.5 x 3.0 3.0 x 3.0 2.0 x 2.0 7.0 x 4.5 9.0 x 5.0 4.5 x 2.5 6.0 x 7.0 4.5 x 3.5 4.0 x 4.5 3.0 3.5 3.0 x 1.0 2.5 x 2.0 2.5 x 2.5 4.5 x 2.0	Weft-faced tabby, band decor, plain bands and chequered pattern	Adams 2002, 89-90, colour figure 57, pl. 4d

Table 1b: Inventory of the textiles from Meinarti with updated data, Sudan National Museum, Khartoum, February 2017



SNM inventory number (+ excavation number)	Provenance	Weave type	Fibre, Colour	Thread count/cm (wp x wf)	Spinning direction	Dimension (cm)	Description	References
21 18135 (6-K-3/145)	Level 5 (sic), subphase 5c, scattered through the fill of Building VII	kilim	wool, pink (wp, wf), dark red, green, dark blue, light blue (wf)	7 x 20	Z2s (wp), Z (wf)	Many fragments; the bigger ones are 6.0 x 30.0 11.5 x 22.0 9.0 x 27.0 11.0 x 21.0 9.0 x 22.0 14.0 x 28.0 28.0 x 19.0 15.0 x 34.0 23.0 x 23.0 23.0 x 22.0 17.0 x 25.0	Wool textile, geometric patterns in bands. Selvedge preserved. Numerous big fragments in good condition. Dyes lightly decoloured.	Adams 2002, 89-90, colour figures 54-56
22 18131 a (6-K-3/179)	Level 5, fill of Building II-III	weft-faced tabby	wool, brown (wp), dark blue (wf)	5 x 12	S (wp, wf)	3.5 x 3.5 2.0 x 2.5 1.5 x 2.0 3.0 x 1.5	Lack of decor	Adams 2002, 89-90, content of box not consistent with description
23 18131 b (6-K-3/179)	Level 5, fill of Building II-III	weft-faced tabby	wool, beige (wp, wf)	7 x 18	S (wp, wf)	7.0 x 1.0	Lack of decor. Selvedge	Adams 2002, 89-90, content of box not consistent with description
24 18131 c (6-K-3/179)	Level 5, fill of Building II-III	weft-faced tabby	wool, cream (undyed) (wp), red (wf)	5 x 20	S (wp, wf)	2.0 x 2.5	Lack of decor. Selvedge. Wedges	Adams 2002, 89-90, content of box not consistent with description
25 18131 d (6-K-3/179)	Level 5, fill of Building II-III	tabby	wool, brown (wp, wf)	18 x 14	S (wp, wf)	Numerous fragments in bad condition. very brittle	Lack of decor	Adams 2002, 89-90
26 18250 (6-K-3/386)	Level 5, inner shrouding of the body buried under the floor of Building VIII	warp-faced tabby	silk, red, cream, blue, green, yellow, dark blue	68 x 15	S (wp, wf)	Number of very small fragments impossible to estimate. very dry and brittle	Textile decorated with vertical bands, selvedge 1 cm wide	Adams 2002, 89, 91, colour figure 62
27 18251 (6-K-3/387)	Level 5, outer wrapping of the body buried under the floor of Building VIII	weft-faced tabby + embroidery (backstitch)	wool, cream (wp), dark red, dark blue, brown, yellow, cream (wf)	3 x 14	S (wp), Z (wf) S2z (embroidery thread)	Many fragments. estimated total surface 2 sq. m. The bad condition of the fabric prevents from measuring each fragment.	Textile with geometric decor, deeply impregnated with products of body's decomposition. Selvedge preserved.	Adams 2002, 89-90, colour figure 60
28 18116 (6-K-3/102)	Level 5, fill of Building II-III (in the bottom of a small glazed bowl)	braid textile	wool, beige	n.c.	S	9.0 x 9.0 3.0 x 5.0 3.5 x 1.5 1.5 x 1.5	Textile from showcase, width 1.0 cm	Adams 2002, 89, 91
29 15601 (6-K-3/506)	Level 7, scattered through the fill	weft-faced tabby with supplementary continuous pattern wefts, floating on the reverse. The warp setting creates a ribbed surface.	wool, cream, brown (wp), dark red, cream, green, blue, dark brown (wf)	4 x 18	S2z (wp), Z (wf)	8.0 x 5.0 7.0 x 4.0 8.0 x 5.0 2.0 x 1.5 8.5 x 10.0 4.0 x 4.0 10.5 x 8.0	The textile is decorated with red and green rectangles, oriented vertically. The red rectangles are separated by blue and yellow ribbed frames, the green ones by brown and yellow	Adams 2001, 105 and pl. 40f
30 18121 (6-K-3/371)	Level 7, cemetery fill	warp-faced tabby	wool, brown	10 x 5	S (wp, wf)	11.0 x 10.0 14.0 x 9.0	2 fragments	Adams 2001, 105

Table 1c: Inventory of the textiles from Meinarti with updated data, Sudan National Museum, Khartoum, February 2017



Fig. 2: General view of the kilim, inventory number 18135, after conservation (Image: Barbara Czaja)

surface. From a technical point of view, kilim is a tapestry weave, more precisely a weft-faced tabby: that is, the horizontal wefts are pulled tightly downwards so that they hide the vertical warps (Hull & Luczyc-Wyhowska 2000, 43-44). A kilim is smooth on both sides. The decorative repertoire is also a characteristic: it consists of bands, geometrical patterns, and stylised floral motifs. Kilims are decorative fabrics used as interior textiles such as rugs or wall hangings.

A preliminary reconstruction of the decoration was first proposed by Adams (2002, fig. 54 to fig. 56). During conservation, the textile conservator made an attempt to arrange the decoration in accordance with the original appearance of the fabric (fig. 2 and fig. 3). As a result, it appears that the fabric was a minimum of 150 cm in length and 95 cm in width. The size and the shape of the fabric from Meinarti shows that it served as a furnishing textile, probably decorating the house. The quality of the fabric shows that the kilim was woven in a professional workshop by an experienced weaver. The only other example of such a textile known so far in the Nubian corpus is one

found in Gebel Adda dating to the Ottoman period (16th to 18th centuries CE). It is presently kept at the Royal Ontario Museum, Toronto, Canada (inventory number ROM 973.24.3491).

It is difficult to find comparative material dated to the same period for the decoration in the Meinarti kilim. The closest parallels to this specific ornamented decorative band were found in fabrics dating to the 19th and 20th centuries produced in the Maghreb: Mزاب Valley (Algeria), El Jem and Matmata (Tunisia), Oulad Bou Sbaa (Marocco) (Spring & Hudson 1995, 87). Today, similar kilims are still woven in this area (Hull and Luczyc-Wyhowska 2000, 91-92). Both the patterns and colours are similar to the fabric from Meinarti (see, for example, Zena Kruzick Tribal Art - Textile Gallery, 2018). Such a traditional ornamentation could have survived to this day, passed on from generation to generation in isolated circles of nomads. It is not reasonable to establish a provenance for the Meinarti kilim based on comparison with these recent textiles. However, the fabric preserved today in the Sudan National Museum undeniably attests to the antiquity



Fig. 3: Detail of a fragment of the kilim before conservation (Image: Magdalena Wozniak, courtesy of the Sudan National Museum)

and longevity of the decorative repertoire of north African nomadic communities and as such represents an exceptional piece of their heritage.

#### *Textile inventory number 18130b*

Among the fabrics from Meinarti stored in the Sudan National Museum there is a textile preserved in four small parts with pile (fig. 4). The fragments measure 3 cm x 3 cm; 3 cm x 4 cm; 2.5 cm x 2 cm; and 3 cm x 2.5 cm. The warps, wefts and piles of the fabric are made of wool. The density of the textile is 3 warp threads/cm and 10 weft threads/cm. The warp-threads are S2z plied, the weft is Z-spun. The warp and weft have the natural cream colour of undyed wool yarn. The yarn of the pile is in five colours: cream-coloured (undyed), dark red, dark blue, orange and beige.

A knotted-pile carpet contains raised surfaces, or piles, from the cut off ends of knots woven between the warp and weft. Most carpets are made of sheep's wool, which is durable, is readily dyed, and easily handled. Camel hair and goat hair are rarely used. There are various ways of knotting the pile yarn around the warp yarn. The Turkish, or symmetrical, knot is used mainly in Asia Minor, the Caucasus, Iran

(formerly Persia), and Europe. This knot was also formerly known as the Ghiordes knot. The Persian, or asymmetrical, knot is used principally in Iran, India, China, and Egypt. This knot was formerly known as the Senneh (Sehna) knot (Ford 1997, 10-40).



Fig. 4: Fragments of pile-weave, inventory number 18130b (Image: Magdalena Wozniak, courtesy of the Sudan National Museum)



Fig. 5: Fragment worked in twining technique, inventory number 18130a; a) face side, b) reverse of the same fragment (Image: Magdalena Wozniak, courtesy of the Sudan National Museum)

Unfortunately, the piles of the Meinarti pieces are very worn, and it is not possible to describe more precisely the specific technique used. In addition, it is possible that the pile was produced in a loop-pile technique and the seemingly cut off ends are in fact loops broken as a result of wear and tear.

#### Textile inventory number 18130a

The last piece identified is a small fragment worked in twining technique. This fragment was initially interpreted as woven in the soumak technique. However, it is identical on both sides (fig. 5), which confirms it is twining. It measures 6 cm in length and 2.5 cm in width. Both warp and weft are wool. The density of the fabric is 2 warp threads/cm (each warp is composed of 10 loose yarns) and 4 weft threads/cm. The undyed warp is Z2s-plied; the weft, in three colours (red, dark red, and dark blue) is S4z-plied.

The twining technique is known in textile assemblages from Nubian sites. It appears mainly in a group of undyed wool fabrics from Lower Nubia in the finishing borders and associated with tassels (Bergman 1975, plates 38 and 39; Gebel Adda textiles ROM 973.242841.1, ROM 93.24.3400). These textiles are dated to the Post-Meroitic period (350 to 543 CE). The twining decoration is usually in two colours, yellow and red/purple (with variations in the number of twined wefts) and with red/purple tassels. Twining appears also in cotton fabrics, where the twining wefts are undyed. The threads used for twining are Z2s-plied.

The Meinarti fragment, securely dated to the medieval period, displays different features in construction from the Lower Nubian Post-Meroitic examples: the warps are very thick, composed of ten Z2s-plied threads, while the wefts are composed of Z-spun threads,

which is not the traditional spinning direction in Nubian production. Due to the fragmentary state of the textile, it is impossible to state if the twining technique was applied to the whole fabric or if it was used only for a limited area. However, considering its thickness, the fabric was most probably a furnishing textile. The technical features identified in this fragment point to an imported item rather than a local product. This hypothesis is also confirmed by dye analysis where lac dye was identified as the main dyeing agent. In the fabrics identified as local products, the common dyestuff is madder (Wozniak et al., in preparation).

#### Discussion

This minute examination of “old” material has brought some new data to the Nubian textile corpus and shed new light on the group of textiles found in Meinarti.

The identification of the fibre as almost exclusively wool with the absence of cotton may be related to environmental conditions: cotton consists about 94% of cellulose, and its hygroscopic nature facilitates the colonisation of fungi and bacteria. The biological deterioration of cotton fibres can cause absence of cotton on archaeological excavation sites. But it may also be linked to historical events, such as the sack of the town by the Egyptian army during the invasion of Nubia from 1285 to 1286 CE. While wool was probably the most common fibre used for clothing, cotton was a more valuable commodity. If it was present in the Meinarti palace, it was very probably taken by the Egyptians as a part of the booty (Vantini 1975, 328) during the sack of Ibrim, at which cotton is mentioned among the goods seized by Egyptian troops. The fragments of wool textiles found in the palace – all torn rags – present similar technical features: S-spun threads for both warp and weft, tabby and weft-faced



tabby weaves, and presence of coloured bands of decoration. All these point to local production.

When compared to this homogeneous group, the fragments of the pile weave, the slit-tapestry weave and the twined pieces appear as objects of non-Nubian production. Pile weaves were identified in limited quantities in Early Medieval Qasr Ibrim, mostly in funerary contexts, where they were (re)used as burial equipment (Adams 2010, 143-144; King 2011, 37-38). Interestingly, the Meinarti fragments are related to a settlement area, more precisely to an important administrative building: the eparch's palace. As previously discussed, the eparch's palace was closely related to trade and its control by the official representative of the king. It cannot be presumed that the tiny pieces found during the excavations came from carpets which decorated the palace complex itself or from one of the numerous storage rooms where goods imported from Egyptian market were kept. However, the state of preservation of the pile weave (18130b) was very worn which suggests it may have been used for a long time within the administrative building.

The kilim was recovered from the fill of Building VII, from the slightly later subphase 5c, dated to the 14th century CE. This building adjoined Building II-III and was located not far from Meinarti church VI and the cemetery. The function of this building is unknown. However, its spatial organisation in two parts (a large public suite and private smaller rooms), the wall plastering, as well as its close relation to Building VIII, tentatively identified as a chapel (both buildings were connected by a doorway), and suggests its importance in the organisation of the social and religious life of the town. During the subphase 5c, Meinarti island was briefly occupied by a nomadic Arab tribe, the Beni Ikrima (Adams 2002, 94-95; MacMichael 1922). The presence of the kilim and its relatively good state of preservation may be evidence of the temporary use of Building VII as a dwelling place by the Beni Ikrima people.

### Conclusion

These fragmentary textiles from Meinarti offer an unexpected insight into the trade in furnishing commodities in Nubia. In a situation where written sources are rare and mainly mention textiles for clothing, the identification of such weaves is certainly valuable for the understanding of the goods available in the market and imported by traders for the needs of the Nubian court and its elite during the Late Christian Period (12th to 14th centuries CE). The kilim piece, with its decorative patterns and their spatial display on the fabric, appears firmly related to nomadic

culture, illustrating the mobility and ethnic diversity of the inhabitants of medieval Nubia.

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