

Basketry, matting, cordage, and other organic objects from Deir el-Bahari



Abstract: Organic artifacts made of plant fibres are frequently found on Egyptian sites. Numerous baskets, mats, cordage, brushes and small items of daily use were collected, classified and documented during the Polish excavations in the Temple of Hatshepsut (Deir el-Bahari, Upper Egypt). These artifacts reflect the long history of the temple site in Deir el-Bahari, from the Pharaonic period through the times of the Christian monastery of St Phoibammon established in the ruins. Pending detailed archaeobotanical analyses in the future, the raw material has been recognized as locally sourced.

Keywords: basketry, matting, cordage, Deir el-Bahari

Excavations in the Temple of Hatshepsut, carried out by the Polish–Egyptian Archaeological Expedition from the Polish Centre of Mediterranean Archaeology University of Warsaw, produced a significant number of organic artifacts that could be assigned both to the Pharaonic period and the so-called “monastic” phase. The latter began at the end of the 6th century AD with the foundation of the monastery of St Phoibammon by the bishop of Hermonthis Abraham (Godlewski 1986: 60). The assemblage in question came for the most part from trenches and secondary tomb shafts located in

Aleksandra Pawlikowska-Gwiazda

University of Warsaw

Acknowledgments

This project was financially supported by National Science Centre grant No. 2015/18/A/HS3/00485 “Monks and monastic communities in the Eastern Mediterranean (4th–8th centuries)” led by Prof. Ewa Wipszycka-Bravo.

the Complex of the Royal Mortuary Cult in the southern part of the Upper Terrace. The finds are now stored in wooden boxes in one of the cleared tomb shafts inside the Chapel of Hatshepsut.

The assemblage consists of baskets, mats, cordage and other objects of daily

use, such as brushes. The purpose of the study was to establish a plausible dating and to discuss individual categories in light of published parallels from Egypt. Pending archaeobotanical analysis, a preliminary identification of the raw material was attempted.

METHODS

The methodological approach to the study followed guidelines proposed for similar research by Willemina Z. Wendrich (1991). Organic artifacts were divided into the following categories: mats and baskets, cordage, brushes, pads, personal items, raw material and miscellanea. The archaeological context was disregarded in view of the difficulties in assigning finds to specific parts of either the temple or the later monastery. The difficulties were caused by a significant disturbance of the record introduced by 19th and 20th cen-

tury excavators. Instead, emphasis was placed on regrouping the objects taking into consideration their similarities (e.g., technique, material etc.). The benefit of this procedure was twofold: first, some objects were rejoined; and second, they could be properly counted and measured. Due to the poor state of preservation, the identification of organic objects is often inconclusive; for example, a small fragment of matting may well be mistaken for a basket.

CORDAGE

The bulk of the organic objects was classified as cordage (75 types). The group was further divided into three subgroups: string (44%), rope (16%) and cable (40%) [Fig. 1; Table 1]. Strings are always less than 1 cm in diameter, and they are plied of two or more yarns, either spun or unspun. The definition of rope is almost identical, except for the diameter, which is more than 1 cm. Cables are much thicker, because they are turned from two or more strings or ropes. Yarns were usually of vegetal fibres, such as flax fibres or palm leaf sheath fibres, which were spun or twisted accordingly in an S-

or Z-direction [Fig. 2]. The letter “i” is used in cases when yarns were not twisted, or the direction of the turn is unclear. For instance, the code iS₂[Z]₃ stands for three S-plied strings (made of two untwisted yarns) cabled into a Z-direction. Another important factor is the Cord Index (CI), giving the tightness with which a cord is turned, which determines quality: the higher the CI index, the higher the quality. All the examined strings were plied in an S-direction, with the iS₂ and zS₂ techniques being encountered most often. Seven times strings were plied of more than two yarns. Ropes tended to be

Table 1. Types of cordage
(continued on the next page)

Cord	Technique	Type	Material	Dia. (mm)	Cord Index
STRING	is2	1	grass	5 to 8	60–66
		2	grass	5.5	63
		3	grass	5.6	64–90
		4	palm leaf sheath fibres	3.5	60
		5	grass	4	64
		6	palm leaf sheath fibres	3.5	60
		7	palm leaf sheath fibres	7	60
		8	grass	7.5	30
		9	palm leaf sheath fibres	9.5	48
		10	grass	5	81
		11	palm leaf	3	56
		12	palm leaf	4	24
		13	grass	2	52
STRING	zs2	1	grass	5.5	24
		2	palm leaf	9	27
		3	palm leaf sheath fibres	5	28
		4	palm leaf sheath fibres	7	36–54
		5	grass	9	18
		6	palm leaf	5	30
		7	grass	4	20
		8	palm leaf	4	25
		9	palm leaf sheath fibres	2	30
		10	palm leaf sheath fibres	8	24
		11	grass	5	72
		12	palm leaf sheath fibres	4	40
		13	palm leaf sheath fibres	4	18
STRING	zs3	1	palm leaf sheath fibres	9.5	32
		2	palm leaf sheath fibres	4.5	55
		3	palm leaf sheath fibres	3	34
		4	grass	4.5	45
		5	grass	6.5	52
STRING	zs4	1	palm leaf	7	42
		2	palm leaf sheath fibres	7	29
ROPE	zs3	1	grass	10	
ROPE	sZ2	1	grass	22	33
		2	grass	23	42
		3	palm leaf sheath fibres	25	33
		4	grass	11	60
		5	grass	6	36
ROPE	sZ3	6	palm leaf	4	27
		1	palm leaf	23	48
		2	grass	12	40
		3	palm leaf	18	70
ROPE	sZ4	4	grass	13	48
		1	palm leaf sheath fibres	11	24
CABLE	is2[Z]3	1	grass	10	40
		2	grass	17	56
		3	grass	15.5	54
	zs2[Z]3	4	palm leaf sheath fibres	14.5	35
	iz2[S]3	5	palm leaf sheath fibres	9.5	50
	zs2[Z]3	6	palm leaf sheath fibres	9.5	48
		7	palm leaf sheath fibres	8	45
	is2[Z]3	8	palm leaf sheath fibres	13.5	56
	is2[Z]3	9	grass	8	36
	is2[Z]2	10	grass	13.5	26
		11	grass	9.5	20
	zs2[Z]3	12	grass	9	30
	zs2[Z]2	13	grass	11	24
		14	grass	9	42
	is2[Z]2	15	palm leaf sheath fibres	10	36
	zs2[Z]2	16	grass	10	20
		17	palm leaf sheath fibres	8	20



Fig. 1. Examples of cords from Deir el-Bahari:

A – string iS2, type 5

B – string zS2, type 7

C – string zS3, type 3

D – rope sZ3, type 1

E – rope sZ2, type 1

F – cable iS2[Z]3, type 1

G – cable iZ2[S]3, type 1

H – cable iS2[Z]3, type 25

I – cable zS3[Z]3, type 30

(PCMA UW | photos A. Pawlikowska-Gwiazda)

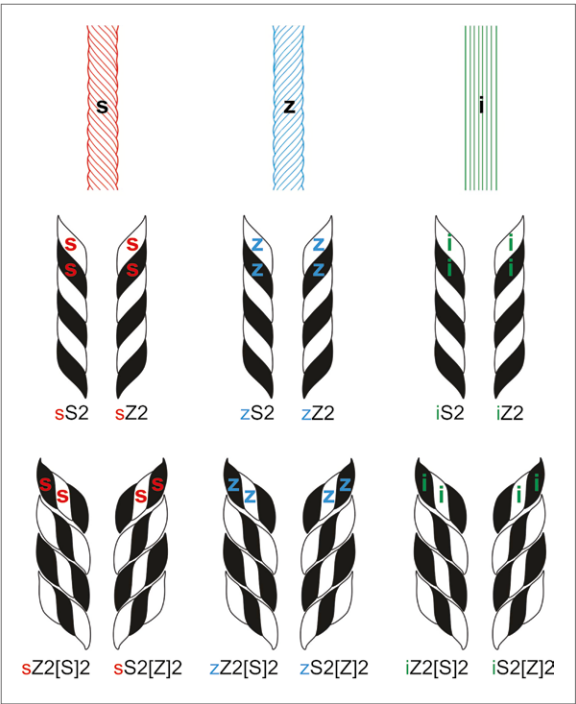


Fig. 2. Cordage twist directions (Drawing A. Pawlikowska-Gwiazda)

Table 1 (continued)

Cord	Technique	Type	Material	Dia. (mm)	Cord Index
CABLE	sZ2[Z]2	18	palm leaf sheath fibres	8	40
	zS2[Z]2	19	palm leaf sheath fibres	7	40
	iS2[Z]3	20	palm leaf sheath fibres	9.5	54
	zS2[Z]4	21	grass	12	40
	iS2[Z]5	22	palm leaf sheath fibres	12	54
	zS2[Z]3	23	palm leaf sheath fibres	5.5	45
	iS2[Z]2	24	grass	9	56

Cord	Technique	Type	Material	Dia. (mm)	Cord Index
CABLE	iS2[Z]3	25	palm leaf	6	42
	sS2[Z]2	26	grass	18	20
	iS2[Z]2	27	palm leaf sheath fibres	5.5	40
		28	grass	9	40
	A: iS2[Z]3 B: iS2[Z]2	29	palm leaf sheath fibres, grass	A: 6.5 B: 9	A: 45 B: 48
	zS3[Z]3	30	palm leaf sheath fibres, linen	8.5	27

plied in a Z-direction: sZ₂, sZ₃, sZ₄. Cables represent an even broader spectrum of possibilities regarding technique, although one repetitive pattern emerges from the gathered data: the alternating direction of turns (S/Z/S or Z/S/Z). According to Wendrich, this is a “standard” technique, also observed in the workers’ village in Amarna (Wendrich 1989: 176).

Knots are a common denominator of all three types of cords [Fig. 3]. They were used to repair, extend or tie.

Three kinds of raw material were recognized broadly as grass (45.5%), palm leaves (40.2%) and palm-leaf sheath fibres (almost 13%). Flax, widely used in textile production, was identified only once (cable, type 30) [see Fig. 1:1].

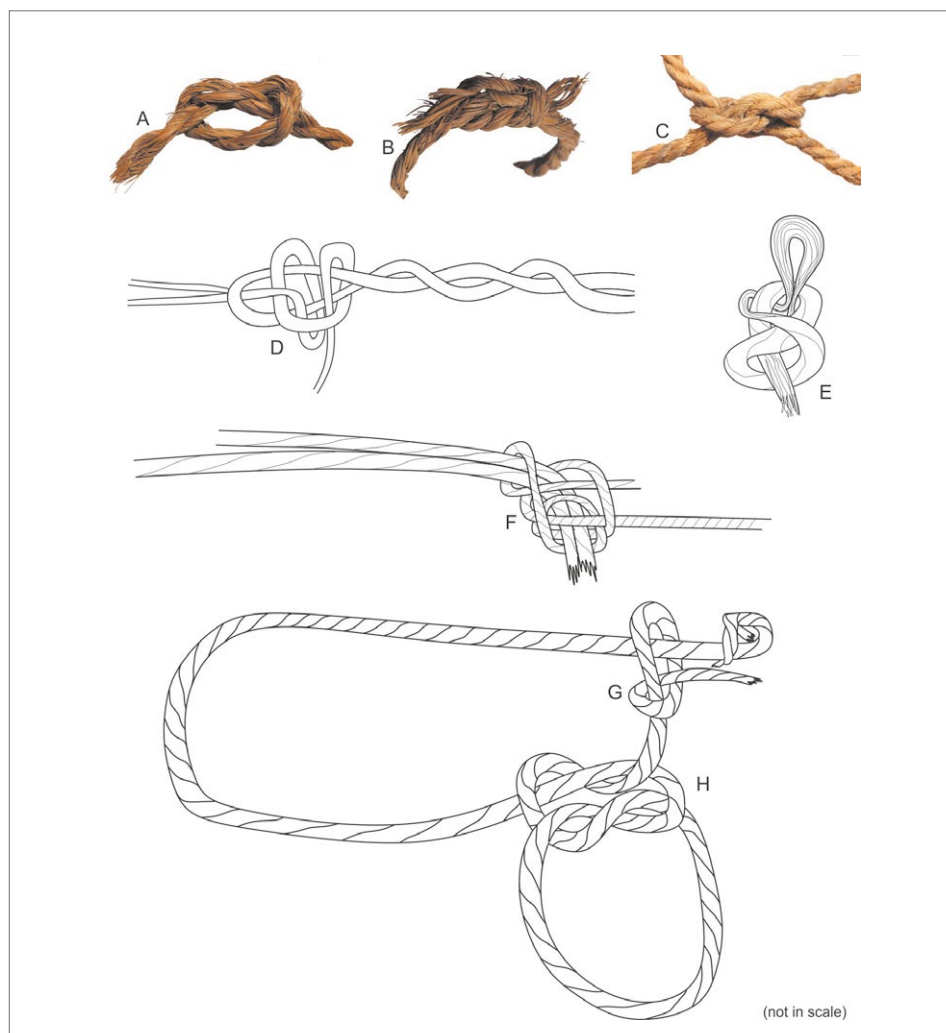


Fig. 3. Knots: overhand (A), reef (B), carrick bend (C), sheet bend double (D), noose (E), icicle hitch (F), half hitch (G), and granny (H) (PCMA UW | photos and drawing A. Pawlikowska-Gwiazda)

It is debatable whether various combinations of twists represent different workshops, considering the limited nature of our knowledge on the subject. A more credible hypothesis is that a given cord-maker was responsible for one technique. Finds of raw material from the temple are no doubt an indication of cord-making taking place in the temple grounds [Fig. 4:B, C].

When it comes to the dating, the situation is more complex. The physical features of organic cordage have not changed since the Dynastic period, and handmade organic cords are still in use, especially in the Egyptian countryside. Cord-making is indeed a very simple task: vegetal fibres (like grass or palm-leaf sheath fibre) were first hand-rolled to make yarns, then the



Fig. 4. Unfinished four-strand plait (A) and bundles of palm leaf strips (B, C) (PCMA UW | photos A. Pawlikowska-Gwiazda)

yarn was bent in half and plied in the chosen direction. Consequently, string or rope always had a loop at the start, and was usually finished with a knot (Wendrich 1989: 177). Spinning of flax, which was more delicate and thinner, required special tools such as spindle whorls.

Multiple functions characterized these objects regardless of their age [Fig. 5]. These included: pulling (see wooden pulleys with ropes; Winlock and Crum 1926: 66–67, Fig. 24,

Pl. XVI.C), binding (Coptic ostraca intentionally tied together; Górecki 2011: 228, Fig. 2), attaching (for instance, water pots attached to a *saqiyah*; Winlock and Crum 1926: Pl. XVIII), carrying and lifting. Palm strings or ropes might have also been used in ceramic production for making decorative imprints [see Fig. 5:A]. Cables, being the most durable, served as handles in carrier baskets, while fine linen strings as lamp wicks [see Fig. 5:B].



Fig. 5. Multipurpose use of cords encountered in Deir el-Bahari: Middle Kingdom bowl with string imprints (A), Byzantine linen wick inside a bronze wick-holder (B), basket handle (C), and an Islamic pilgrim flask with a flax string around the neck (D) (PCMA UW | photos M. Jawornicki, A. Pawlikowska-Gwiazda)

BASKETS AND MATS

The term “basketry” can be applied not only to baskets, but to all objects that are made of worked vegetal fibres, since it indicates a type of technique, not a specific function (Wendrich 1989: 169; 2000: 254). The main types of techniques include plaiting, twining, coiling, weaving, which are the most common, and looping, piercing and binding, which occur rather less often. Wendrich adds an eighth to this list, called the “sewn-plaits technique” (Wendrich 2000: 256), but since it derives from plaiting it will not be treated separately. Most of these techniques use two elements (thus known as a two-system technique): passive, giving a basic shape

and structure, and active, binding it all together. In the case of plaiting, both elements are active. Some exceptions should be noted: looping may be done with only one element (one-system technique) and binding or twining can use as many as three elements (three-system technique) (Wendrich 2000: 264).

Five techniques were distinguished in the material from Deir el-Bahari: plaiting (six types), twining (four types), coiling (two types), looping (two types) and weaving (one type) [Fig. 6]. Plaitings P.1a–e have two features in common: pattern (twilled twos) and material (palm leaves). Plaiting P.2 has slightly wider

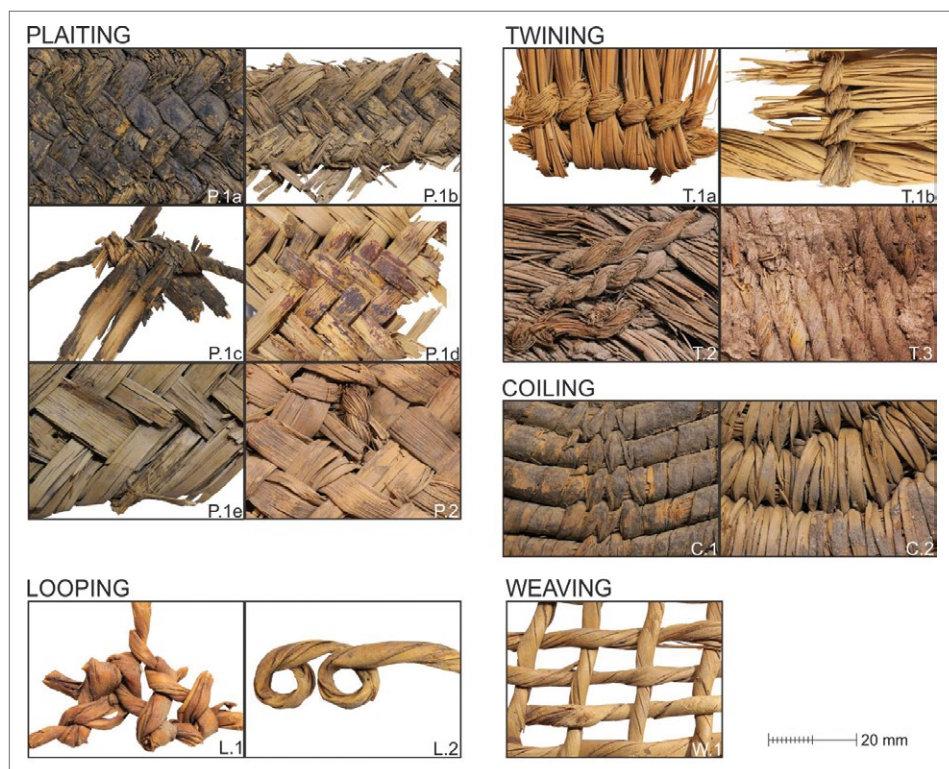


Fig. 6. Basketry techniques documented in Deir el-Bahari (PCMA UW | photos A. Pawlikowska-Gwiazda)

strands plaited into a check-pattern. A similar technique was identified in Islamic layers in Myos Hormos (Handley 2011: 311–312, Fig. 21.27).

All examples of plaitings were joined using the sewn-plaits technique. A single plait always has perpendicular edges (SZ) with an average width of approximately 4 cm (seven-strand plait); exceptions include thinner five-strand plaits [see Fig. 6:P.1b] or much wider, measuring approximately 10 cm [see Fig. 6:P.1e].

Narrower plaits were recognized in objects that can be identified as carrier baskets. Baskets of this sort, sewn from five-, seven- or nine-strand plaits, were characteristic of Roman, late antique and Islamic Egypt (Wendrich 1999: 213–214). It was previously thought that in order to sew plaits into an ongoing fabric two rules need to be applied: perpendicular edges (SZ) and an odd number of strands (Wendrich 1999: 211). Recent discoveries from Myos Hormos contradict this theo-

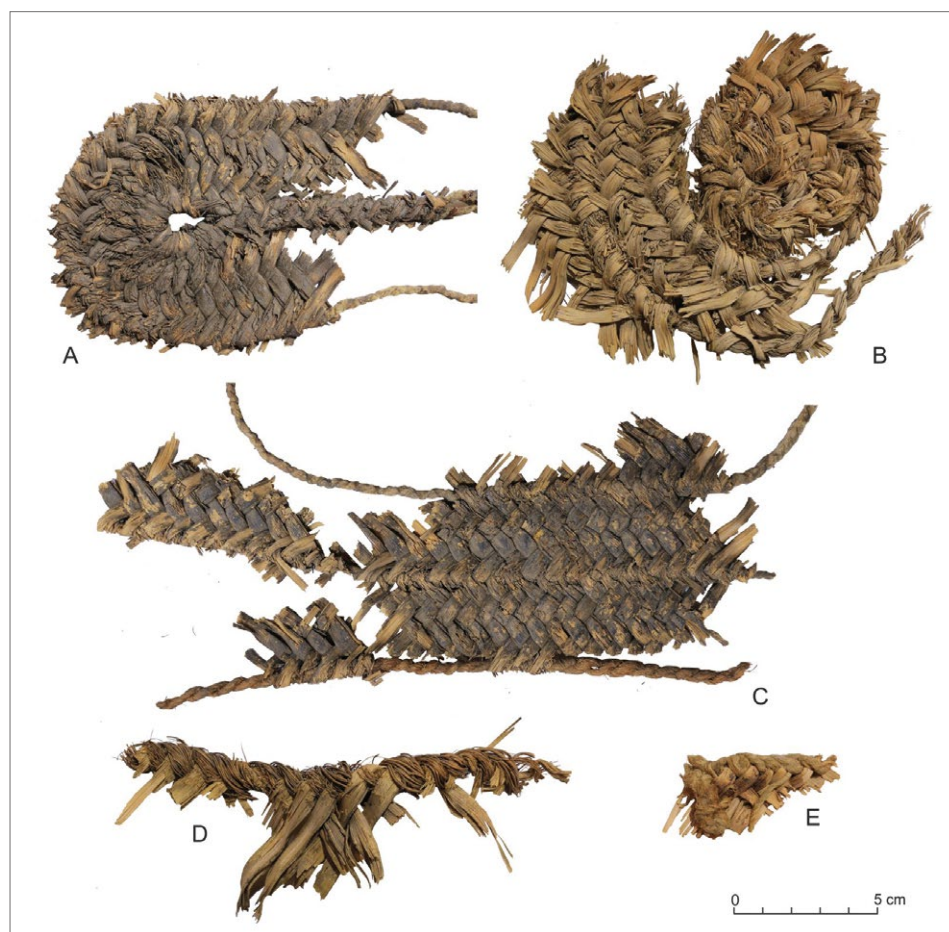


Fig. 7. Fragments of twilled-tuos baskets made in the sewn-plait technique: snail-centre bases (A, B), middle part (C), and edges (D, E) (PCMA UW | photos A. Pawlikowska-Gwiazda)

ry: Roman “bags” were made from sewn, four- and eight-strand plaits (Handley 2011: 297–298). Nevertheless, carrier baskets from Deir el-Bahari follow the former classic trend.

Sewn-plaited carrier baskets with a twilled-tuos pattern were represented by only shattered fragments. Parallel plaits belonged to the sides of baskets, whereas bases were usually patterned as a spiral (so-called “snail centre”, see Wendrich 1995: 75, Fig. 39), created from one long plait starting from the centre and then running counter- or clockwise (e-oriented and reversed-e, accordingly) [Fig. 7:A, B]. Plaits were sewn with flax or another vegetal fibre string, the latter being made usually from palm-leaf

sheath fibres or, less often, from palm leaves. Sometimes more than one type of string was used in one basket, as noted in type P.1a [see Fig. 7:C]. Flax strings (zS2 or Z-ply double spun yarns) were rather thinner than strings made of other vegetal fibres and well-plyed, which is reflected in a high Cord Index (CI 72). In contrast, vegetal fibre strings (zS2 or zZ2) were thicker and had a lower Cord Index (CI 25–42). Basket edges were finished with S-paired unspun palm-leaf sheath fibres or Z-tripled zS2 flax strings [see Fig. 7:D, E]. One basket fragment has irregular zigzag stitches made with vegetal fibre string (zS2); this appears to be some kind of reinforcement [Fig. 8]. It might have also been the place where

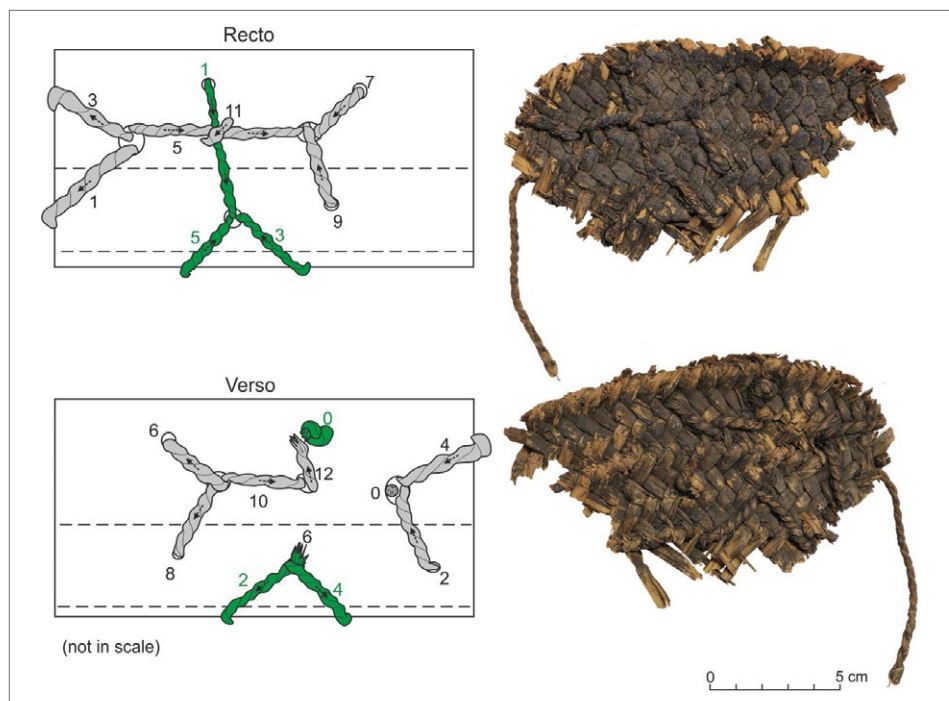


Fig. 8. Reinforcing stitches made with two different strings: “0” is the beginning of the stitch, while the dotted lines mark the places where plaits were sewn (PCMA UW | drawing and photos A. Pawlikowska-Gwiazda)

the handle was attached. The original handle was still preserved in another type of carrier basket plaited in a check pattern [Fig. 9]. The base of the basket in question was made from one plait sewn spirally with a string, creating a counter-clockwise snail centre. Places where the plait was sewn were additionally reinforced with whip stitches using a zS2 vegetal fibre string. The side wall, of which roughly 30% was still connected to the base, was formed of five-strand plaits, sewn with zS2 vegetal fibre strings (0.4 cm, CI 48). Other zS2 vegetal fibre strings were stitched perpendicularly through the side wall in order to attach a handle made from three strings cabled into a thicker cable zS2[Z]3. Palm-leaf

sheath fibres were again used for that purpose. In contrast to other plaitings, the specimen P.1e was sewn from much wider 13-strand plaits, which is quite typical of matting. Two edges of this mat are still intact. The transverse edge is finished with Z-paired unspun vegetal fibre bundles. The side edge is reinforced with an additional plait bent in half, thus forming three layers, which are sewn together with a zS2 vegetal fibre string (running stitch, regularly spaced stitches) [Fig. 10].

The second most frequently encountered technique in Deir el-Bahari was twining. The first two subtypes, T.1a and T.1b, are quite similar in terms of execution: both are openly twined mattings of

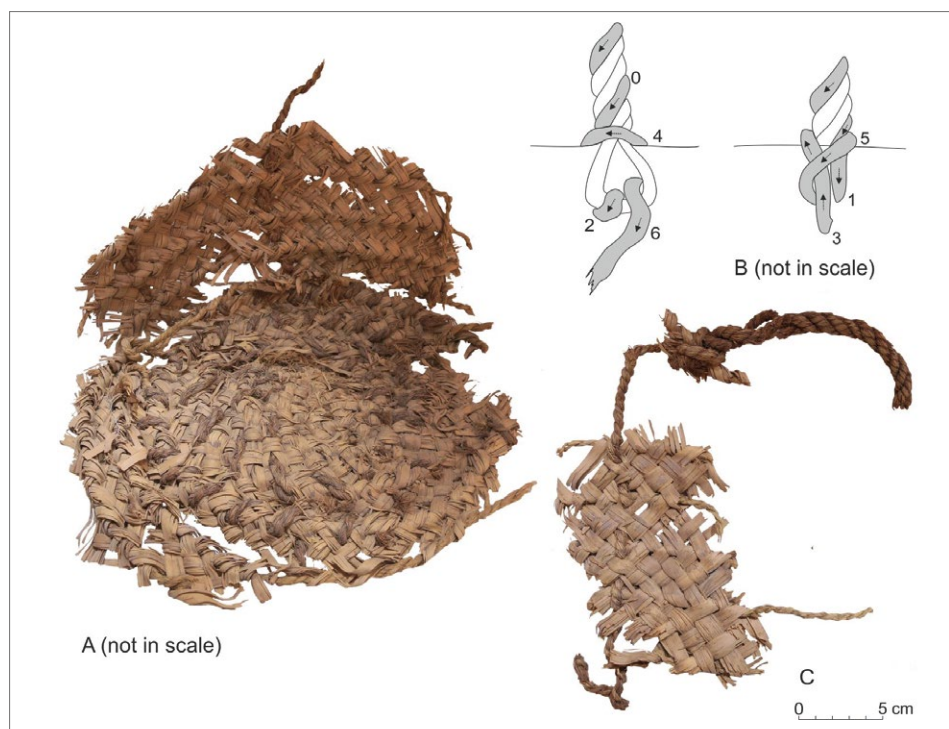


Fig. 9. Check-pattern basket: snail-centre base with a partly preserved side wall (A), and details of the handle attachment (B, C) (PCMA UW | drawing and photos A. Pawlikowska-Gwiazda)

string around unspun bundles of grass (see Type 2 in Wendrich 1989: 187, Fig. 9.18). In both cases, bundles should be considered as passive elements, whereas zS2 vegetal fibre strings as active. A major difference is to be noted in the way in which the passive elements were oriented towards the selvage edges. In subtype T.1a, they are perpendicular, in subtype T.1b parallel. Moreover, in the first example, the edge is finished with a reinforcing string, hidden under the passive elements. In subtype T.1b, the edge is simply marked with the thicker S-spun grass bundle. Regardless of the distinctions listed, both were identified as mats of possibly Dynastic origin (Winlock and Crum 1926: 73, Fig. 28). Twined mats, known since the Predynastic period, were most often found in funerary contexts, while in New Kingdom Amarna they were used as flooring, roofing, awnings and also as bedding (Wendrich 2000: 257–259).

Unlike the latter two, the third object T.2 is made with unspun bundles (passive elements) fixed in a coil and twined in pairs with zS2 vegetal fibre strings (0.5 cm, CI 30–60). Active elements radiating from the centre create a decorative pattern on both surfaces. This artifact may be interpreted either as the bottom part of a basket or as a cover [Fig. 11]. Considering the absence of any traces of side walls, the latter proposition seems to be more likely. The last subtype, T.3, is a closely twined matting. The fabric has a very smooth appearance, because weavers (active elements) were interlaced very tightly in order to hide all wefts (passive elements), known as a weft-faced surface (Wendrich 1989: 185–187, Fig. 9.18). Wefts, also called stakes, are made of three grass bundles spun in Z-direction and then plied together in S-direction (zS3 string). Since active elements were so tightly twined, it was hard to distinguish a single weft,



Fig. 10. Part of P.1e matting with a drawing of the sewn side edge (PCMA UW | drawing and photo A. Pawlikowska-Gwiazda)

which is in fact a zS2 string and not a spun bundle of grass. One transverse edge and two side edges were still intact (type “a” and “b” respectively, see Wendrich 1989: 198, Fig. 9.20a), thus the original width is retained (8.8 cm). It is additionally covered with mud, hence the stiffness. Given the insufficient size of the preserved object, it is impossible to determine its precise function. Nonetheless, traces of mud were often discovered on mats of this kind, which were used as roofing for example.

Coiling was recorded twice, and in both cases the coiled objects were classed as round flat baskets [Fig. 12]. The technique of coiling C.1 was developed using two ways of stitching: stitching through the previous winder and so-called “lazy basket maker’s stitch” (Wendrich 2000: 260). The width of palm-leaf winders ranged from 0.5 cm to 1 cm. Apart from the first, every other coil is of approximately the same width (1 cm) and they are all oriented clockwise. The



Fig. 11. Twined basket base or a lid (PCMA UW | photos A. Pawlikowska-Gwiazda)

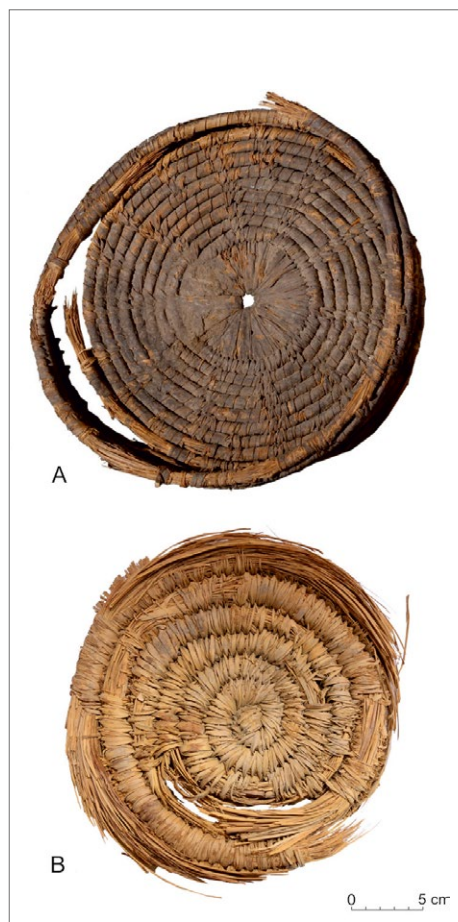


Fig. 12. Coiled baskets (PCMA UW | photos M. Jawornicki, A. Pawlikowska-Gwiazda)

first and the widest coil was joined with the second by stitching through every winder (active element) that was tightly wrapped around the bundles of grass (passive element). Other coils were sewn together by stitching winders at regular intervals, which increased towards the outer edge. Contrary to the name of the stitching (“lazy”), the basketmaker must have put some effort into lining up all the stitches in order to create a simple ornamental pattern: longer and shorter lines radiating from the centre. Consequently, the appearance of the base resembles a radiate disk [see *Fig. 12:A*]. The side walls were a direct continuation of the base, both in the way of execution and style. The second coiling C.2 was done only by stitching every winder through the previous one. The passive elements were again made of grass, and the active of palm leaves. The condition of this basket is not ideal: the side walls are missing and bundles are partly unwrapped. It seems that it was handcrafted with little attention to detail. While these two baskets cannot be dated precisely, they can be attributed roughly to the Dynastic period. Taking into account the surroundings—that is, the Temple of Hatshepsut—a dating in the New Kingdom seems plausible. Same-dated parallels were found in reliable archaeological contexts, such as the Eighteenth and Nineteenth Dynasty tombs in the el-Khokha necropolis located between Sheikh abd el-Gurna and Asasif (Feucht 1985: Pl. XLIV; Seyfried 1990: Pl. LVI; Strudwick and Strudwick 1996: 121, 155, Pl. 22).

Looping was observed sporadically. Unlike the other five, this technique has only active elements, meaning that loops are linked together by pulling them through each other. There is no passive element involved. Looping L.1 and L.2 represent two subtypes that have slightly different features. The pattern of looping L.1 is a multiplied figure of eight, while L.2 is a simpler version of knotless netting. Nevertheless, it may be argued that both subtypes belonged in fact to the same piece of fabric. The material was identified as doum palm leaf (*Hyphaene thebaica* L.), twisted in an S-direction. By doing so, it becomes stiff and resistant, but the fabric as a whole is still quite fragile. Almost nothing was left in the archaeological context, apart from single S-twisted palm leaves. A similar observation was made regarding the looped mats discovered in Amarna, which probably served as roofing reinforced with mud (Wendrich 1989: 193–194).

The last technique—weaving—was represented by one object (W.1). It is a typical example of tabby open weaving, with wefts and warps made of S-twisted doum palm leaf. The latticework-like appearance suggests that it could have been part of a piece of furniture, like the low stools of an Eighteenth Dynasty date (Killen 2017: 64, Pls 65, 66). Furthermore, the material was of the same quality as that used in the looping. The resemblance suggests that both techniques were used together in order to manufacture a single fabric.

BRUSHES AND PADS

Only two brushes were recorded, different in size but made from the same kind of material [Fig. 13:A, B]. Brush B.1



Fig. 13. Floor brush (A), paint brush (B), and pad (C) (PCMA UW | photos A. Pawlikowska-Gwiazda)

presents a standard method of production: bundles of palm leaves tied together with a grass zS2 string, then the bundle bent in half and again tied with the same type of string. Although the structure of the brush is slightly disturbed, it seems that the working end was divided into three separate fingers, which also should have been tied with string. The size of the brush and aforementioned features suggest that it was a typical floor brush, also known as a fan-shaped brush (Wendrich 1999: 187–188; Handley 2011: 301). Another much smaller brush, B.2, was simpler: a bundle of palm leaves tied with an iS2 grass string. Considering its small size, it may have served as a paint brush.

A circular object was also documented [see Fig. 13:C]. It was produced by winding around an iS2 rope, plied of grass. This inconspicuous looking artifact, called a pad, could have been used in various ways, for example as a head pad or separator.

MISCELLANEA

Several artifacts of disputable purpose could not be properly categorized [Fig. 14]. They all have one common feature, that is, the material, identified as dry palm leaves. The group includes ornamental braids, plaits and ring-shaped objects. The latter may be interpreted as elements of personal adornment (bracelets or rings), like those found in Roman layers in Myos Hormos (Handley 2011: 303–304). Wrapped bundles bent like hook, or sticks tied with a palm-leaf strap were also encountered. Their purpose is unknown.

CONCLUDING REMARKS

The discussed assemblage, as much as the various parallels known from other Egyptian sites, demonstrates beyond question that ancient basket- and cord-making techniques experienced little or no change over time and, therefore, continue to be a rewarding object of ethnoarchaeological studies, which were and will be a reliable source of information. Nonetheless, there is a downside to this invariability. Without the data from undisturbed archaeological strata it is often impossible to establish a precise dating. Similar observations have been voiced with regard to the organic material from Myos Hormos, ranging from Roman to Islamic times (Handley 2011: 320).

In the case of Deir el-Bahari, individual objects can be matched to specific phases in the long history of the mortuary

temple of Hatshepsut. The sanctuary was built in the Eighteenth Dynasty, but was significantly disturbed during the Third Intermediate Period when secondary tombs were cut into the rocky floor of the Upper Terrace (Szafrński 2008: 274–276; 2013: 136–142). From the 3rd century BCE to the 4th century CE, Amenhotep, son of Hapu was worshipped in this area (Łajtar 2006). The last major phase of human activity in the grounds of the old Pharaonic temple was the monastery of St Phoibammon established at the end of the 6th century CE (Godlewski 1986). Some of the mats discussed in this article were undoubtedly of Dynastic origin, thus may be dated to the New Kingdom. The remaining mats, baskets, cords and others could be convincingly connected



Fig. 14. Miscellanea (PCMA UW | photos A. Pawlikowska-Gwiazda)

with the Third Intermediate Period as elements of funerary equipment. It is just as likely that these objects might have been brought in the Ptolemaic or Roman period by people leaving *proskynemata* (Gr. προσκύνημα) in exchange for intercession or miraculous healing.

Yet, considering the fair amount of raw material and pre-products [see Fig. 4] prepared for further processing that were found at the temple site, these objects should rather be linked with the monastery of St Phoibammon. Crafting baskets, mats and cordage was a task performed by members of the Theban monastic communities on a large scale (Wipszycka 2009: 477–479, 532–545; 2018: 479, 496–498). Archaeological data are corroborated by reliable information from private letters exchanged between monks (Boud'hors and Heurtel 2010: 19). Mentions of ropes or mats can be found, for instance, in the texts written on ostraka by the well-known Theban monk Frange (O. Frange 105 and 208; Boud'hors and Heurtel 2010: 104, 167–168). Moreover, basket-making or rope-plying is a frequently occurring topic in other monastic sources like the apophthegms:

Some brothers once visited a great elder. He said to the first one: “What work do you do, brother?” “I braid rope, *abba*”, he replied. “God will braid a crown for you, my son”,

the elder told him. Then he said to the second one: “And what work do you do?” “Rush mats”, he said. “God will empower you, my son”, the elder said to him... (Wortley 2013: N. 375)

Occupied with worldly matters of this kind, monks were better able to avoid temptation. Handcrafting was also a good opportunity for meditation and a way to achieve inner tranquillity.

Research in the future should focus on identifying the species of the raw material used in the making of these objects. A preliminary look at the material suggests a local source. Date palm (*Phoenix dactylifera* L.) and doum palm (*Hyphaene thebaica* L.) occurred naturally in the region of Western Thebes (Gale et al. 2000: 347–348). Both of these palm species are still a component of the Theban natural environment. With regard to grass, two main species can be considered: *Desmostachya bipinnata* L. and *Imperata cylindrica* L., both known under the Arabic term *halfa* (Wendrich 1999: 169–170).

Even before this aspect is studied, the assemblage of organic artifacts from the site of the Temple of Hatshepsut in its different phases over two millennia has already contributed significantly to the knowledge of ancient craftsmanship in Pharaonic as well as Roman and Byzantine times.

Aleksandra Pawlikowska-Gwiazda

<https://orcid.org/0000-0003-3882-8797>

University of Warsaw, PhD Candidate

az.pawlikowska@uw.edu.pl

How to cite this article: Pawlikowska-Gwiazda, A. (2021). Basketry, matting, cordage, and other organic objects from Deir el-Bahari. In P. Chudzik and Z.E. Szafrński (eds), *Deir el-Bahari Studies 3* (=Polish Archaeology in the Mediterranean 30/1) (pp. 255–274). Warsaw: WUW <https://doi.org/10.31338/uw.2083-537X.pam30.1.11>

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