



HADIA MOHAMMED SHAWGI GAMAL¹

DISTRIBUTION OF WOODEN OBJECTS BASED ON THE FINDS IN THE ROYAL CEMETERIES OF KUSH

INTRODUCTION

Wood is a complex biological structure, itself a composite of many chemicals and cell types acting together to serve the needs of the plant. Trees are divided into two broad classes: softwood and hardwood. Softwoods are those woods that come from gymnosperms (mostly conifers), and hardwoods are woods that come from angiosperms (flowering plants). Not only do softwoods and hardwoods differ in terms of the types of trees from which they are derived, but they are also different in terms of their component cells. There are approximately 20,000 different extant species of woody plants, each with unique properties, uses, and capabilities, in both plant and human contexts (Wiedenhoef and Miller 2005: 9, 11).

Trees and wood have played a prominent role in human life throughout history. From the dawn of humanity wood has been one of the most useful materials for manufacturing a diversity of tools, furniture, buildings etc. (Robert 2009: 131).

Equally in ancient Sudan, wood played an important role in making many objects. From ancient time until today, Sudan is rich of forests which provide us by different species of trees; however, there exists no in-depth studies on wood, wood crafts and wooden objects yet. In more recent studies, charcoal and other archaeobotanical remains are discussed, such as the investigation of the Kerma-dated site H 29 in the Northern Dongola Reach (Cartwright 2018) of Amara West, dated to the New Kingdom (Cartwright and Ryan: 2017). Nevertheless, a study with the focus on wooden objects is still lacking. The following contribution aims to highlight some aspects of the use of wooden objects in Kushite (Napatan and Meroitic) funerary contexts.

WOODEN OBJECTS IN ANCIENT EGYPT

The ancient Egyptians used wood extensively to make a broad range of artifacts. Many examples have been excavated from archaeological sites, preserved by desiccation in the arid climate. Precious exotic woods were imported from around the Mediterranean, Africa, the Near East and possibly India. These included aromatic woods such as *Cedrus* and *Juniperus*, in addition to ebony and conifers (Gale and et. al 2000: 334, Cresman 2015: 48). However, in Egypt itself there grow only very few different types of trees. Among them are several species of *Tamarix*, *Acacia* and *Ficus sycamore*, *ziziphus apina-christa*, *salix subserrata*, *Hyphaene thebaca* (Liphshitz 1998: 255, Creaman 2015: 46).

WOODEN OBJECTS IN ANCIENT SUDAN

Production of wooden objects started in early times in ancient Sudan. Wood had been used during the Neolithic period in El Shaheinab to make handles of arrows and axes (Adams 1977: 125). During Nubian A- and C- groups wood was used for making handles belonging to copper awls and mace heads. Various wooden objects occur in the form of wooden bowls or dishes and wooden spoons (Rampersad 1999: 250-251). During the Kerma period wooden furniture and stools were used in additions to headrests. The burial on wooden beds was the usual type of burial (Fig. 1). Even in present day the wooden anagreeb is a characteristic product of Nubia (Reisner 1923: 17). A recent study investigated many species of wood found in Kerma-dated graves, used both as charcoal and objects. The identified species are *Acacia nilotica*, *ficus sycomorus*, *phoenix dactifera* etc. (Cartwright 2018: 207). Ebony was easily obtainable from southern Sudan (Reisner 1923: 17). It is mentioned as one of the goods usually brought from Punt (Dixon 2004: 33).

By the time of the Egyptian New Kingdom in Sudan wood manufactures were known widely, many different objects made by wood, such as furni-

¹ Assistant professor, Department of archaeology, Faculty of Humanities sciences, University of Bahri.



Fig. 1: Wooden bed and headrest, Kerma, Kerma period. Khartoum, SNM No. 942. (photo: Hadia M. Shawgi).

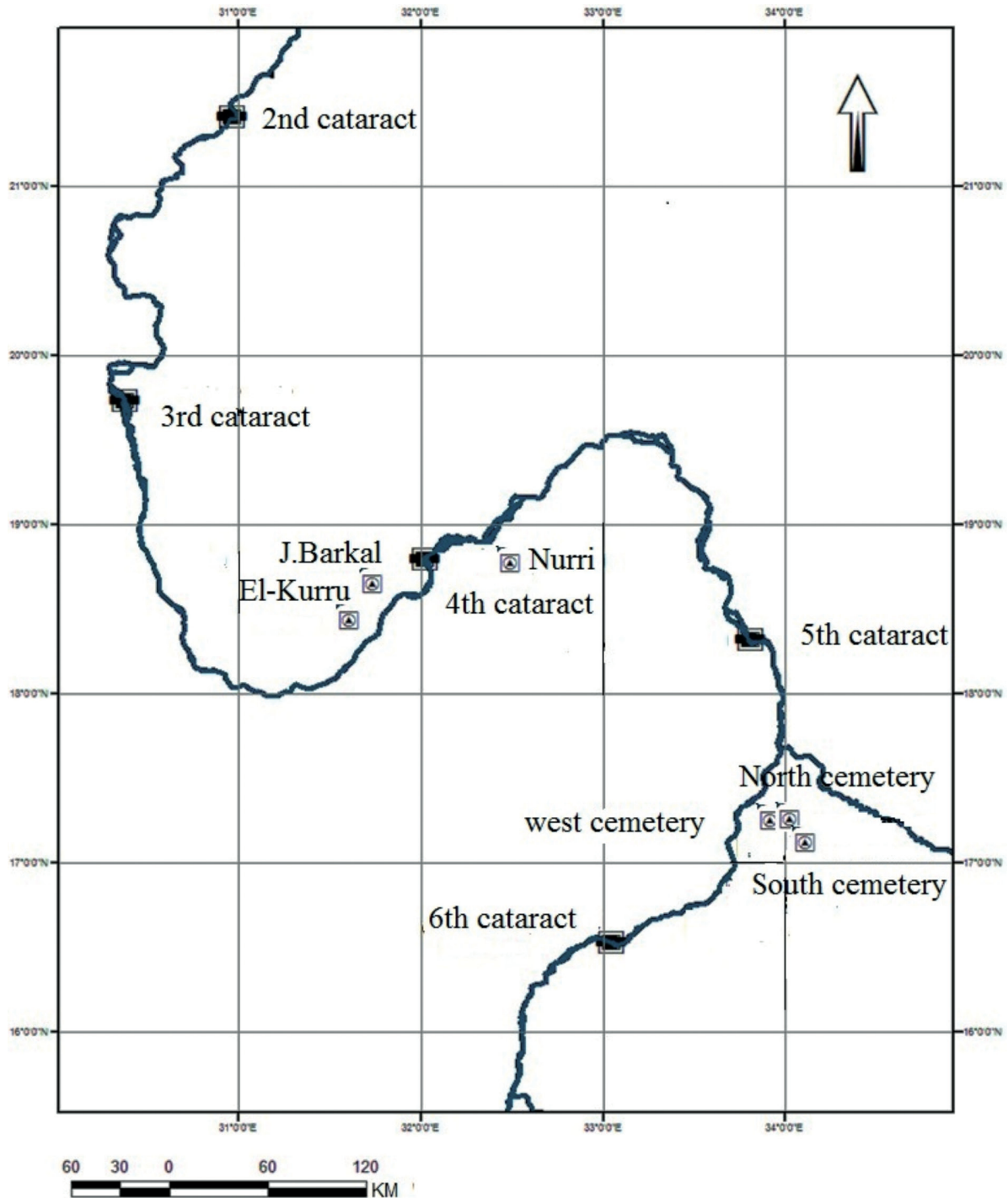
ture, or coffins are documented. To give an example: In Amara West coffins made of *Sycamore fig* were the most popular funerary container. It is easy to work but is not very durable and is prone to insect attack (Binder 2015: 77, Cartwright and Ryan 2017:280). *Sycamore fig* wood was of relatively low quality, but was widely available, so these coffins were probably made locally (Binder 2015: 77). Another type of funerary container also became popular during the later phases of use of Amara West. The bodies were wrapped in a cover of doum-palm, a soft wood of very poor quality. These were left entirely undecorated. The doum-palm containers might reflect social differences or a declining availability of good wood due to increasing aridity (Binder 2015: 77-78).

Wooden objects were found also on many Napatan and Meroitic sites, for example the Royal Ceme-

teries (Dunham 1950, 1955, 1957 and 1963), Karanog, Aniba (Francigny 2008), Meroe royal city (Garstang 1911), Wad Ban Naga (Welsby 1996) etc. In Wad Ban Naqa ebony was one of the trade items. It was found stock-piled in a storeroom of the palace (Welsby 1996: 175). Using wood was continued in post- Meroitic and in the medieval periods in Sudan and was one of the Sudanese trade goods with Egypt and other countries (Abdel Wareth 2004: 187).

THE ROYAL CEMETERIES OF KUSH

Sudan has a remarkable history and a rich archaeological heritage. Several classical writers mention it. Information provided by these writers encouraged travelers and adventures in the 18th and 19th centu-



Map 1: Royal cemeteries sites (Hadia M. Shawgi).

ries to visit Sudan and to document its monuments.² Especially the pyramids awoke their interest. Excavation of the six pyramidal cemeteries was done in the early 20th century by George Andrew Reisner and published by Dows Dunham (Map 1).³

² For an overview see Ali and Anderson 2013: 12

³ El Kurru, Nuri, Gebel Barkal near Napata and the three cemeteries near Meroe: Begrawiya South, West and North (Dunham 1950, 1955, 1957, 1963).

These volumes are considered as the main references for the archaeological remains of Kushites kings and queens. The finds were made of various materials such as gold, iron, glass, stone as well as wood. The present study is based on the publication of the Royal cemeteries of Kush (RCK).⁴

⁴ To achieve this work, the author used the SPSS (Statistical Package for Social Sciences) to analyze the samples of wood remains, collected from RCK editions, the sample number was 212.

TYPES OF WOODEN OBJECTS DOCUMENTED IN RCK

Twenty-six types of wooden objects can be differentiated. Most of them were parts of coffins (49.80%). This high percentage of wood deriving from coffins might refer to the common use of this material for body containers plus the fact that one coffin needs a number of wooden boards, thus potentially can be preserved in several pieces. Furthermore, sufficient wood must have been available since several boards are needed for one coffin. Most of them were found in the Meroe Region, especially at West cemetery, followed by North and South cemeteries. Because of the nature of wood as an organic material many of wooden objects have decayed into fragments (12.20%),



Fig. 2: Wooden box and lid in form of buckle amulet, West Cemetery, W 109, Meroitic period. Khartoum, SNM. No 1945. (photo: Hadia M. Shawgi).



Fig. 3: Wooden bowl, North Cemetery, Meroitic period. Khartoum, SNM. No. 2373. (photo: Hadia M. Shawgi).



Fig. 4: Wooden toy in the shape of a mouse, West Cemetery, tomb of a child, W 308, Meroitic period. Khartoum, SNM. No. 2301. (photo: Hadia M. Shawgi).

and it was impossible to reconstruct their shape. Toilet boxes were not common (6.80%) (Fig. 2), most of them were found in West cemetery, few at Barkal, Nuri, no more existed in the other sites. This may indicate that wooden boxes were used during the Napatan period for royal burials, but during the Meroitic period also in non-royal contexts. Maybe such boxes were replaced by another material such as ivory in the royal tombs: an ivory box was found at tomb Beg. S 10 at South cemetery and an ivory lid of a box was found at Beg. N 32 at North cemetery (Dunham 1957: 47, 179). Not exactly as in the case of coffins, boxes also require a number of wooden boards to be fabricated, so their existence may refer to wood availability too.

Some bed legs were found (3.40%) especially in the West cemetery, in addition to few funerary beds (0.50%). A number of wooden cylindrical objects⁵ were found (2.90%), the kohl tubes were (2.40%). most of them found in the west cemetery followed by the North one. Also some wooden bowls were found (2.40%) (Fig. 3).

There were many parts of not identified objects (2.40%), and shaft of arrows (2%). Many other objects were found but they were in few number: pins, knob, disc, ornament, toy in the shape of mouse (Fig. 4) etc. (Diagram 1).

WOODEN OBJECTS AND DATES

In comparing the percentages of wooden objects in the two periods we found that it was 45% during the Napatan period (total number of the wooden objects are 94) and 55% during the Meroitic one (total number of the wooden objects are 118). This explains that wood manufactures were known during Napatan period, continued and enlarged during the Meroitic era for the availability of this material in Meroe region, since many trees grow in that region.⁶

5 Dunham mentioned them as “Miscellaneous, wood”, including 5 small cylindrical objects without explains their functions (for more information see Dunham 1957: 76-77).

6 Here we must put in consideration that the Meroitic graves were more in Numbers.

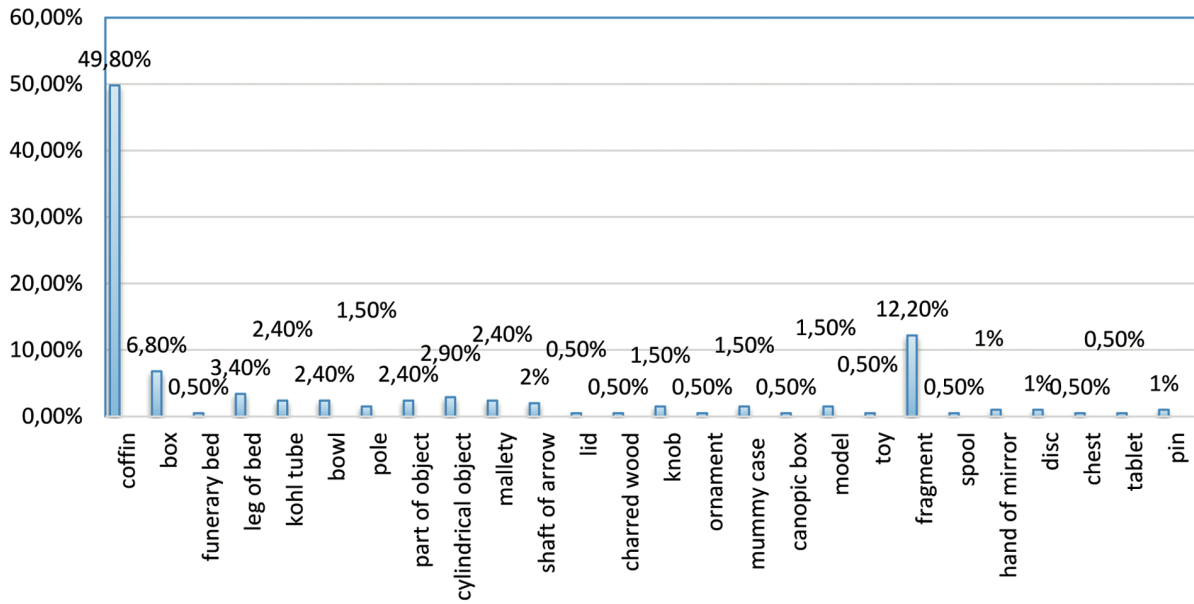


Diagram 1: Quantities of types of wooden objects in all cemeteries.

LOCATIONS AND TYPES

El Kurru Cemetery

It lies about one mile west of the Nile and about ten miles downstream from Gebel Barkal (Dunham 1950: 5). Just three wooden objects were documented inside this cemetery, and these are of different types (model tools, leg of bed and coffins) (Dunham 1950: 25, 51, 81, 129, 130). Here we have to keep in mind two facts about this cemetery: the cemetery has only few graves in comparison with the other cemeteries, and it was flooded several times in the past, so many archaeological finds were affected.

Nuri Cemetery

About six miles above Karima, and approximately a mile south of the river, the cemetery of Nuri is situated (Dunham 1955: 1). 18 wooden objects of eight different were found in this cemetery: coffin, mummy case, fragments (not identified,) which were in equal percentages (20%), and models (13.30%), which were more in number than the others objects (box, pole, canopic box and tablet) (Diagram 2).

Nuri cemetery

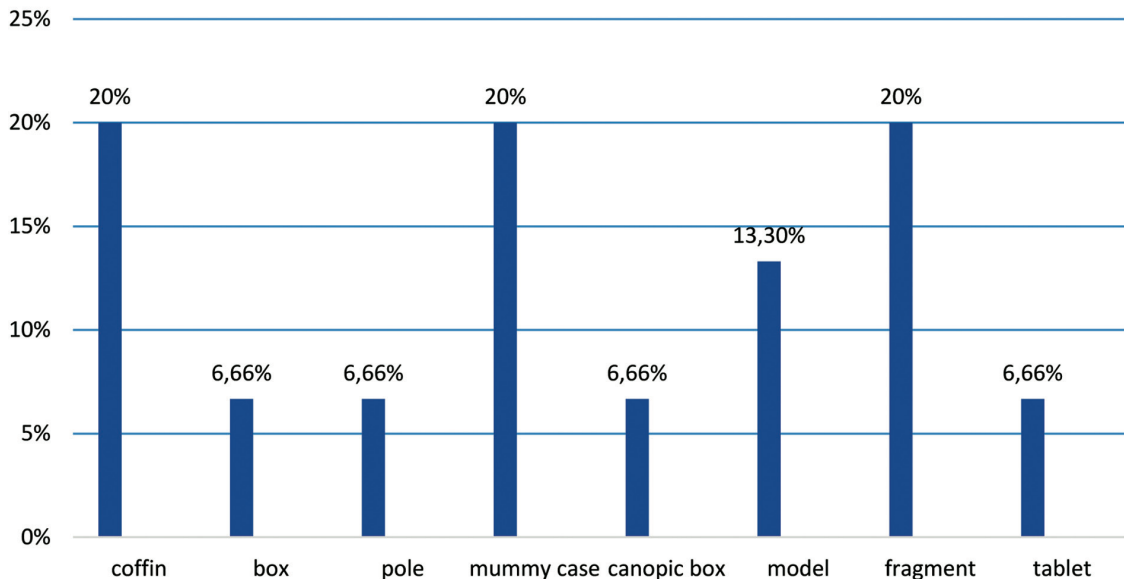


Diagram 2: Types of wooden objects in Nuri.

Jebel Barkal cemetery

The cemetery lies directly at the Jebel Barkal (Dunham 1950: 5) which was the site of the ancient city of Napata. Many important temples and palaces had been found in that site. During the third and first centuries B.C, selected rulers chose the site for their tombs and constructed small, steep-sided pyramids, identical to those at Meroe (Kendall 2004: 158). There were 14 wooden objects of seven different types found inside this cemetery. Most of them were unfortunately fragments (42.85%), followed by toilet boxes (21.45%), and only few other objects (coffins, part of objects, spools, hand of mirrors, discs), each one was 7.14% (Diagram 3).

West Cemetery

The West cemetery, which is the nearest to the royal city of Meroe, had the longest duration of use (mid-eighth century BC to mid-fourth century A. D) (Yellin 2012: 267). The burials date from the early Napatan Period to the end of the Meroitic period. It was also the largest of the three cemeteries at the Meroe region (Yellin 2012: 267). There were 120 wooden objects of twelve different types found in the West cemetery: most of them were coffins (73.50%), and additionally many different types, more than

at the previous sites were found, but in little numbers (boxes, leg of beds, kohl tubes, shaft of arrow, charred wood, knob, ornament, toy, fragment, disc, pin) (Diagram 4).

South Cemetery

The South cemetery is located four kilometers from the town of Meroe on a chain of sandstone hills. It was in use approximately from the mid-eighth century to the mid-third century B.C and contains more than two hundred burials (Yellin 2012: 270). Just twelve coffins were found inside this cemetery and no other wooden objects.

North Cemetery

The North cemetery (mid-third century B.C-mid-fourth century A.D), unlike the West and South cemeteries, contains only the burials of rulers and three crown princes (Yellin 2012: 270).

The North cemetery shows the largest variety of wooden objects: 40 objects representing 15 types: fragments (20%), coffins and cylindrical objects (both 12%), bowls and mallets, (both 10%), boxes and parts of objects (both 8%), and many other objects (Diagram 5).

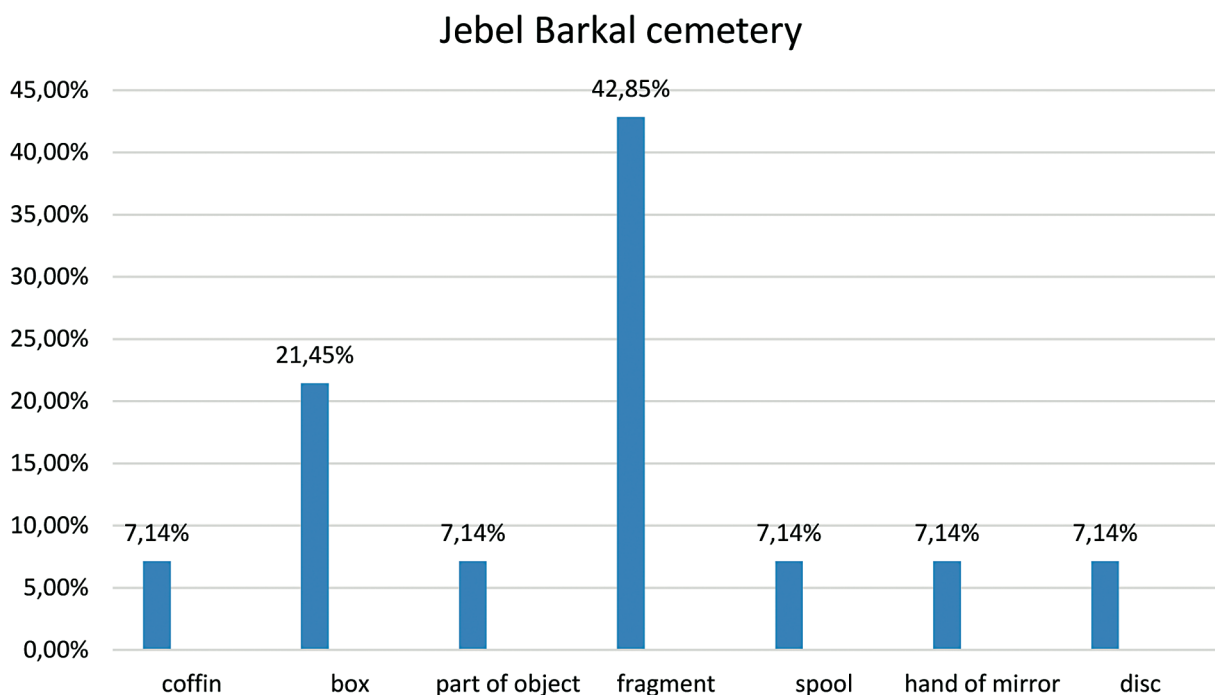


Diagram 3: Types of wooden objects in Gebel Barkal cemetery.



West cemetery

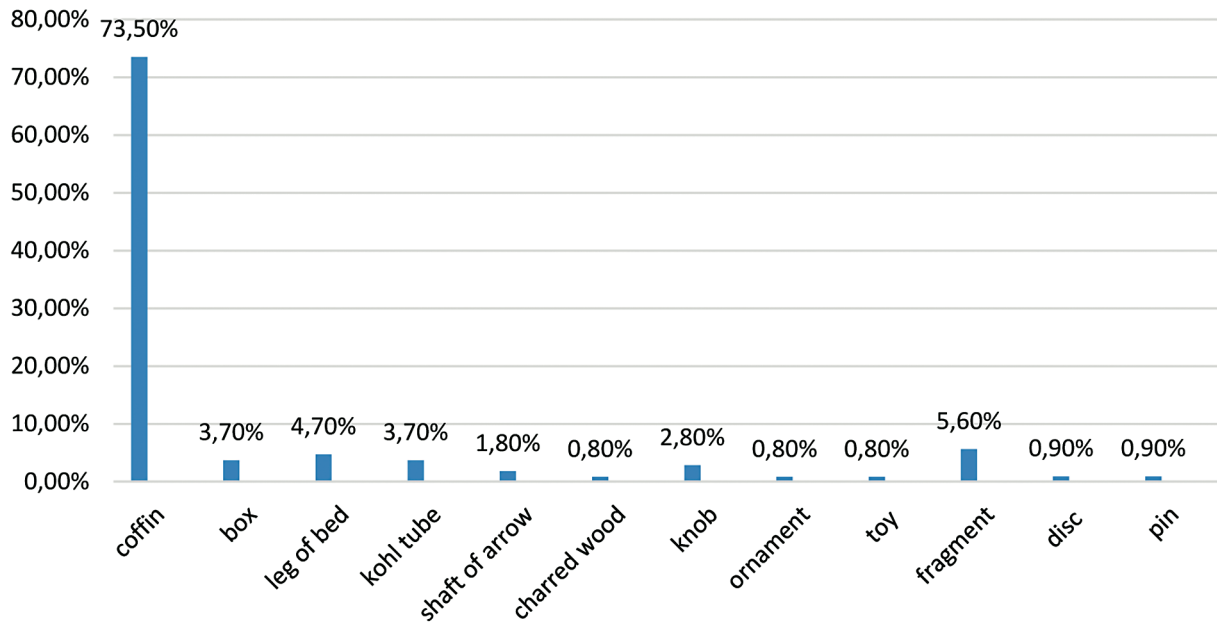


Diagram 4: Types of wooden objects in Beg. W.

North cemetery

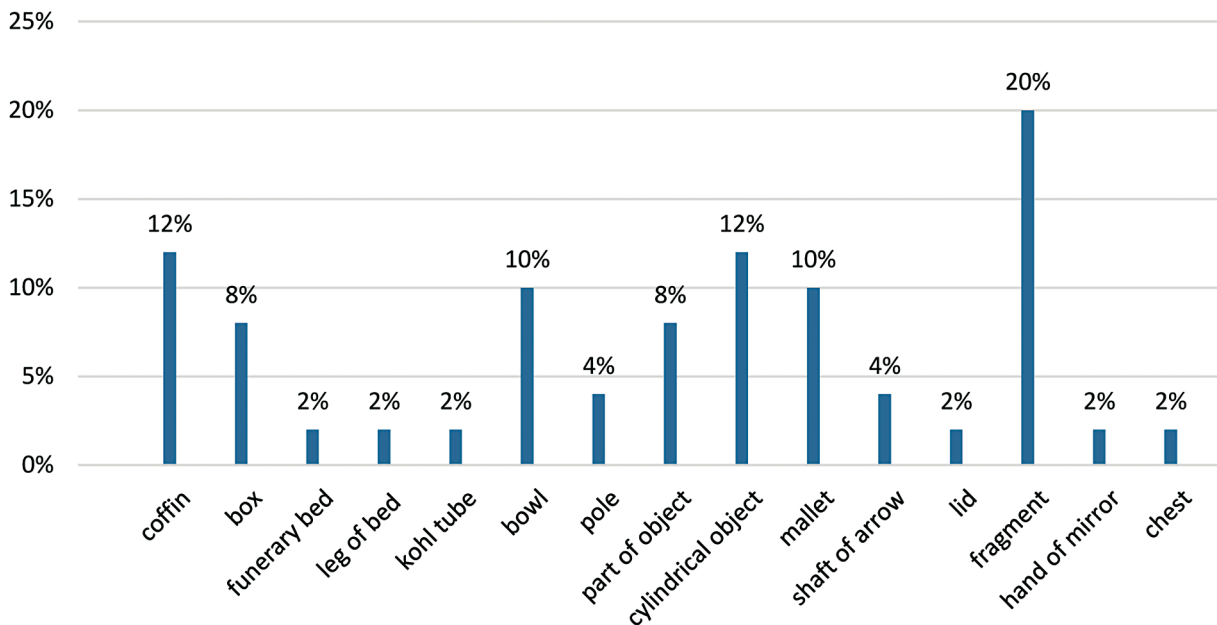


Diagram 5: Type of wooden object in Beg. N.

TYPES AND DATES

The total number of types found in all the cemeteries were twenty-six. There were twelve types in Napatan (total number of the wooden objects are 94) and twenty types in Meroe period (total number

of the wooden objects are 118), and this information emphasizes the variety of wood manufactures during Meroitic Period. It was observable that coffins made in the Napatan period were greater in numbers than in the Meroitic one (70 Napatan - 31 Meroitic), most of them in the West cemetery.



WOOD SPECIES IN THE RCK VOLUMES

It is difficult to identify the species of wood used for the objects discovered inside the royal cemeteries. Dunham did not document the species of wood, but he sometimes described their nature:

of hardwood and two fragments of softwood used to make a coffin. Dunham mentioned dark wood which is considered to be hardwood. Sometimes he describes its color as brown and black. Brown wood is most probably referring to Mahogany, and blackish wood for Ebony.

No	Site	Type	Description	Notes
1	West cemetery	Bed-legs	Soft brown	W609 (Dunham1963: 28)
2	West cemetery	Coffin	4 fragments of hardwood, l. 26.0 to 73.0 cm 2 fragments of soft wood	W415 (Dunham 1963: 114)
3	West cemetery	Sticks	4 hardwood	W308 (Dunham 1963: 151)
4	West cemetery	Ornaments, in relief with flat back.	20 hardwood, the largest l. 18.2 cm	W453 (Dunham 1963: 153)
5	West cemetery	Stick	Dark heavy wood, l. 51.8, d. 1.0 cm.	W106 (Dunham 1963: 194)
6	West cemetery	Arrows	hardwood	W122 (Dunham 1963: 206)
7	West cemetery	fragments of spear shafts	2 hardwood	W326 (Dunham 1963: 258)
8	West cemetery	Few fragments	brown wood	W341 (Dunham 1963: 262)
9	West cemetery	ornaments	4 hardwood	W438 (Dunham 1963: 276)
10	Barkal cemetery	Piece	blackish wood, with design in relief on two long sides and on one end	Bar 3 (Dunham 1957: 93)
11	Barkal cemetery	Rods	Fragments of wooden (ebony?) the longest 71 cm	Bar 6 (Dunham 1957: 99)
12	Barkal cemetery	Frag. of a spool-like object	Sandalwood?	Bar 24 (Dunham 1957: 44)

According to the previous table, Dunham recognized many of the objects as made of hard wood. Hard wood is frequent in Sudan today and known by its solidity and thickness which is good for fabrication. But we do not know if it was frequent in the times of the burials.

Softwood is rare in Sudan, so it may be imported from another country, perhaps Egypt. It is common to use hardwood to make coffins, but sometimes softwood was chosen. Perhaps to facilitate the fabrication, in burial Beg. W415 there were four fragments

Lastly, he mentioned the probability of existence of sandalwood which is one of the hardwood species existing in Sudan, but not in a large number.

CONCLUSION

To conclude, we can state that the region of Meroe can be considered as a center for wooden manufacturing during the Napatan and Meroitic kingdoms. Types of wooden objects increased during the



Meroitic period. In spite of this, most of the wooden coffins date to the Napatan period (especially at the West cemetery) and were replaced by rock-cut coffin benches during the Meroitic period.⁷

In spite of the fact that the West cemetery contains the largest number of burials, dated to both Napatan and Meroitic era, we find the largest diversity of wooden objects types in the North cemetery. This emphasizes the fact that wooden manufactures reached its peak during the Meroitic period. Some wooden objects were introduced only in the Meroitic period and did not exist before (for example wooden bowls, mallet, lid and chest).

Many wooden species found were local according to the information provided by Dunham. But laboratory analysis is needed to acquire more accurate information and should be carried out in the future.

LITERATURE

- Abdel Wareth, O. 2000. "The New Nubia Museum". In: Kendall, T. (ed.), *Nubian Studies 1998. Proceedings of the Ninth Conference of the International Society of Nubian Studies*, Boston, pp.186-190.
- Adams, W. 1977. *Nubia corridor to Africa*. London.
- Ali, A. and Anderson, J. 2013. *Highlights from the Sudan National Museum*. Khartoum.
- Binder, M. 2015. "Nubian burial customs". In: Spencer, N., Stevens, A. and Binder, M., (eds.), *Amara West*. London, pp.74-78.
- Cartwright, C. 2018. "Charcoal and wood". In: Welsby, D. A. (ed.), *Kerma Ancient cemetery In the Northern Dongola Reach: excavations at site H29*, Sudan Archaeological Research Society Publication 22. London 207-209.
- Cartwright, C.R. and Ryan, P. 2017. "Archaeobotanical research at Amara West in New Kingdom Nubia". In: Spencer, N., Stevens, A. and Binder, M (eds.), *Nubia in the New Kingdom. Lived experience, pharaonic control and indigenous traditions*. British Museum Publications on Egypt and Sudan 3. Leuven, pp.271-286.
- Creasman, P. P. 2015. "Timbers of time: revealing international economics and environment in antiquity". In: Mynářová, J., Onderka, P. and Pavúk, P. (eds.), *There and back again - the crossroads II: proceedings of an international conference held in Prague, September 15-18, 2014*, Prague. Pp 45-58.
- Dixon, D.M. 2004. "Pharaonic Egypt and the Red Sea Arms Trade". In: Lunde, P. and Porter, A. (eds.), *Trade and travel in the Red Sea region. Proceedings of Red Sea project I, held in the British Museum, October 2002*, BAR International Series 1269, pp. 33-41.
- Dunham, D. 1950. *El Kurru, RCK I*. Cambridge/Mass.
- Dunham, D. 1955. *Nuri. RCK II*. Boston.
- Dunham, D. 1957. *Royal Tombs at Meroe and Barkal. RCK IV*. Boston.
- Dunham, D. 1963. *The west and south cemeteries at Meroe, RCK V*. Boston.
- Francigny, V. 2008. "Incrustations en ivoire époque méroïtique. Les figurations hathoriques", *Kush*, vol. XIX, pp.117-126.
- Gale, R., Gasson, P., Hepper, N. and Killen, G. 2000. "Wood", in: Nicholson, P. and Shaw, I. (eds.), *Ancient Egyptians materials and technology*. Cambridge, pp. 334-371.
- Garstang, J. 1911. *Meroe. The city of the Ethiopians*. London.
- Liphshitz, N. 1998. "Timber identification of wooden Egyptian objects: the Israeli collection". *Tel Aviv University*, vol. 25, pp. 255-276.
- Netzley, P. D. 2003. *Ancient Egypt*. New York.
- Rampersad, S.R. 1999, *The origin and relationships of the Nubian A-Group*. Toronto.
- Reisner, G.A. 1923. *Excavation at Kerma*. Part iv-v. Cambridge Mass.
- Robert, L. Y. 2009. *History, Nature, and Products of wood*, in: Owens, J.N., Lund, H. G., (eds.), *Forests and Forest Plants*, vol. 2, pp.131-157.
- Welsby, D. 1996. *The kingdom of Kush*. London..
- Wiedenhoef, A. C. and Miller, R. B. 2005. "Structure and Function of Wood". In: Rowell, R. M. (ed.), *Handbook of Wood Chemistry and Wood Composites*, London, pp.10-32.
- Yellin, J. W. 2012. "Meroe". In: Fischer, M. M. et. al. (eds.), *Ancient Nubia*. Cairo/New York, pp. 258-273.

ZUSAMMENFASSUNG

Dieser Artikel untersucht die hölzernen Artefakte, die in den napatanschen und meroitischen Königsfriedhöfen dokumentiert wurden, um die verschiedenen Arten von Holzobjekten zu identifizieren. In der meroitischen Zeit kam es zu einer Zunahme von Holzobjekten in den Gräbern, die an dem größeren Holzaufkommen in der Region von Meroe basieren könnte. Aufgrund der Publikationen von Dows Dunham ist es schwierig, die Holzarten zu bestimmen, so dass in Zukunft eine Laboranalyse durchgeführt werden sollte. Jedoch wird vermutet, dass es sich bei den meisten um lokale Holzsorten handelt.

⁷ For more information see Dunham 1957.