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TWO FRAGMENTS OF EARLY
DYNASTIC FLINT BANGLES FROM
TELL EL-MURRA IN THE CONTEXT
OF FINDS FROM ANCIENT EGYPT

Abstract: The aim of this study is to present two fragments of flint bangles discovered in the remains of the settlement excavated at the site of Tell el-Murra (north-eastern Nile Delta). This group of artefacts, related to the Proto- and Early Dynastic periods, is known from several sites of Ancient Egypt, but their total number is still modest. The items from Tell el-Murra may contribute to the discussion on the method of production and distribution of this type of items.

Keywords: flint bangles; flint bracelets; flint jewelry; lithic industry; Early Dynastic

Introduction

Production of flint tools in Ancient Egypt reached a remarkable level of sophistication. The peak of its development is associated with the Proto- and Early Dynastic periods. The tools produced at that time were of high quality, fine form, and careful finish. The most common artefacts include standardized sickle inserts, so-called razor blades, and bifacial knives with elongated blades and hooked handles. Apart from tools, other objects were also made of flint during this period. Worth mentioning here are flint figurines of people and animals, dated to the Proto- and Early Dynastic periods, mainly known from Hierakonpolis (e.g., Friedman et al. 2017, 240, Fig. 6 a-d). Flint bangles comprise another interesting group of artefacts. Fragments of two

objects belonging to this category were discovered in the site of Tell el-Murra in the 2017 season during excavations conducted by the Institute of Archaeology of the Jagiellonian University in the settlement of this site.¹ The aim of this study is to present these artefacts, their archaeological context, and analogies known from other sites.

Early Dynastic Flint Inventory from Tell el-Murra

Flint bangles are part of the Early Dynastic flint inventory obtained during excavations at the site of Tell el-Murra, located in the north-eastern part of the Nile Delta, about 1km south of the modern village of Abu Umran (Pl. 1: 1). It was discovered by the Amsterdam University Survey Expedition to the North-Eastern Nile Delta (van den Brink 1987, 23, Table 2). Since 2008, Tell el-Murra has been investigated by a Jagiellonian University expedition (Jucha et al. 2013, 105-107). The oldest archaeological evidence from the site is related to Lower Egyptian Buto-Maadi culture. The results of the research have confirmed the presence of remains dated to the Proto- and Early Dynastic periods. By the end of the Old Kingdom, the site was abandoned and no finds from later periods have been made as yet (Jucha et al. 2016, 87-88).

The Early Dynastic flint assemblage is so far comprised of 620 artefacts, identified according to their context and, to a lesser extent, by their typological characteristics. The vast majority of this group was obtained from trenches S3 (the cemetery) and T5 (the settlement) (Pl. 1: 2). So far, the general character of the inventory fits well into the range of industries known from other sites from the same period and region, containing mostly tools with very little production debris. Regular blades of medium size, obtained from single-platform cores, were the dominant blanks used for the production of tools. With a few exceptions, the blanks and tools were not produced at the site but imported as finished items. The only tools made locally are a few temporary forms, most often retouched flakes, produced from small, low-quality flint nodules found on the surface.

Typologically, the tools are dominated by one main category, blade segments, making up 80% of the items. They were used as inserts, forming the blades of cutting tools, mainly sickles. The second most numerous group of tools (about 10%) are simple retouched blades and flakes. The most

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common tools also include so-called razor blades, bifacial flint knives (Lajcs 2019), scrapers, and perforators.

Flint Bangles from Tell el-Murra

The Early Dynastic assemblage from the site of Tell el-Murra described above consists not only of debitage and tools. It also includes the two pieces of flint bangles discussed in this paper. Both of them were obtained during season 2017 in trench T5, which holds the remains of the Early Dynastic and Old Kingdom settlement.

The first fragment (Pl. 2) was found in the Early Dynastic layer T5-236, interpreted as the filling of some kind of room related to economic activities. The bangle was made of light brown, nontransparent flint of good quality. Unfortunately, it was strongly damaged by heat. This damage was not caused by intentional heat-treatment but by some post-depositional processes, as the structure of the silica is significantly fractured. The original diameter of the bangle was approximately 7cm on the outer edge and 6cm on the inner edge. This item was rather small – it might have been made for a child or a short adult. The bangle's width reaches 0.9cm and its thickness is 0.6cm. The cross-section is in the shape of an elongated triangle. Irregular negatives of the surface retouch are visible on the upper and lower sides of the bangle. The inner part of the bangle was finished with some steep retouch.

The second fragment (Pl. 3) comes from another flint bangle. It is bigger and made with more precision, and is generally of a better quality. It was found in the Early Dynastic layer T5-356, interpreted as the filling inside a room located to the west of some kind of a large oval structure. This bangle was made of brown, transparent flint of a very homogenous structure and excellent quality. A piece of rather smooth, light-beige cortex is also visible on one side of the bangle. This fragment is bigger than the one presented above: the original diameter of the bangle was approximately 9cm on the outer edge and 7cm on the inner edge. The bangle's width is 1.1cm; its thickness reaches 0.8cm. The bifacial retouch on the surfaces of the bangle is more regular and precise than on the former piece. On the outer edge, some additional fine retouch can also be seen. In cross-section, the bangle again is in the shape of an elongated triangle. The inner part of the bangle was finished with a steep retouch.

Similar Finds from Ancient Egypt

Flint bangles, also referred to as bracelets or arm-rings, are quite a unique type of jewelry, most often associated with the Early Dynastic period; they were used as arm decoration, as evidenced by findings *in situ* from burials (Petrie *et al.* 1913, 11; von der Way and Schmidt 1987, 253). Their form resembles Proto- and Early Dynastic bracelets made of many other materials, such as shells, ivory, bone, alabaster, or tortoise shell (Petrie 1920, 31).

Flint bangles are known from all regions of ancient Egypt; they appear in contexts and forms analogous to bracelets made of other materials. A large number of the finds come from burials, but they have also been found in settlements, at production sites, and as finds from unknown contexts – in total, they were have been discovered at several sites in Egypt (Pl. 4).

Some of the first flint bangles ever discovered come from an Early Dynastic cemetery at Ballas. In the burials, apart from bangles made of shell, ivory, horn and slate, flint bangles were discovered: one completely preserved and three fragments of others (Petrie and Quibell 1895, 14). All the bangles were polished. The fully preserved specimen has a diameter of about 6.5cm and a thickness of about 0.4cm. This bangle, and one of the fragments, is made of a dark flint that has weathered to grey. The other bangles are made of a harder, translucent flint of the same color (Petrie and Quibell 1895, 59).

Fragments of flint bangles unearthed at the royal necropolis Umm El Qa'ab in Abydos allowed for a precise dating of this type of artefact. They were unearthed in the First Dynasty tomb of Djer, Djet, Semerkhet, and in the Second Dynasty tomb of Peribsen (Petrie 1901, Pl. XXXV: 60-65, Pl. XXXVIII: 45, Pl. XLIII: 19, Pl. XLV: 14). Beside royal tombs, flint bangles were also found in grave M14 in Abydos, dated to the First Dynasty: a deceased (probably male) had seven bangles on his left arm and one bangle on his right arm (Petrie 1902, 16, Pl. XLVIII). However, there is no mention if these were polished or not. Flint bangles discovered in the Tarkhan cemetery are dated to the beginnings of the First Dynasty (Petrie 1920, 31). In grave No. 60, the remains of the deceased have not survived. However, the equipment has been preserved: a cylindrical ivory jar and hairpins, as well as two slate and three flint bangles (Petrie *et al.* 1913, 11). Grave no. 149 contained eight flint (or rather chert) polished bangles, preserved *in situ*, four on each arm of the deceased (Petrie *et al.* 1913, 11, Pl. III: 3). A completely preserved, unpolished flint bangle comes from the cemetery in Diospolis (Petrie 1920, 31). Flint bangles are known from

the Memphite Necropolis as well. Two polished flint bangles were found on the right forearm of the body in grave 23 in Giza, dated to the First Dynasty (Petrie 1907, 6, Pl. III). Three complete bangles and six fragments were also discovered in a First Dynasty tomb 3507 in Saqqara, presumably belonging to the Djer's queen Her-nit (Emery 1958, 73, 82-83).

As previously mentioned, flint bangles have also been found on settlements. Two fragments of flint bangles with visible negatives were discovered in Buto. One of them was unearthed from layer IV, dated to the times of the First Dynasty (von der Way and Schmidt 1987, 253; Schmidt 1992b, 37). One fragment of a polished bangle has also been discovered (von der Way and Schmidt 1987, 253). In Tell el-Farkha, a single retouched bangle fragment made of chert was found in the context of phase 5, i.e., the early First Dynasty (Chłodnicki *et al.* 2002, 105; Kobusiewicz 2015, 25). One small fragment of a bangle made with a bifacial retouch was also found at Tell Ibrahim Awad. It occurred in the context of the Old Kingdom, but according to the authors, it is most likely a secondary context (Schmidt 1992b, 88, Fig. 8: 51). However, one half of a retouched flint bangle associated with the Old Kingdom was also unearthed on Elephantine (Katthagen 1985, 62, Pl. 24: 2; Kobusiewicz 2015, 25). A complete, unpolished example together with several fragments was found at the settlement of Kom al-Ahmar (Pawlik 2005, 204-205).

Some of the flint bangles mentioned in the literature come from collections of surface finds or objects from uncertain contexts. Among the earliest described artefacts, two flint bangles found in one of the tombs near Qurna should be mentioned. These bangles, published with no further context details by A. Pitt-Rivers (1882), are entirely formed by chipping, with no grinding or polishing evident on any part of their surfaces (Pitt-Rivers 1882, 385). The flint bangles collected by H.W. Seton-Karr and stored now in the Liverpool Museum, the British Museum, and the Cairo Museum are very significant. Most of them were found in Wadi el-Sheikh, and this collection covers some unfinished specimens as well as finished bangles, polished slightly or completely (Currelly 1913, 273). Pieces of flint bangle were also collected by H.W. Seton Karr in the Fayum – these forms are similar to the ones discovered in Wadi el-Sheikh (Seton-Karr 1906, 751, Pl. 12: 253).

The Production Process of the Flint Bangles

From the beginning, the technique of making flint bangles has aroused the interest of archaeologists. Some researchers from the turn of the 20th century suggested that flint bangles had to be made of ring concretions – they doubted that prehistoric flint knappers had the skills necessary to produce such unusual forms. The existence of such concretions on the surface on Gebel Assart was described by A. Pitt-Rivers (1882). They were all to consist of a central body surrounded by a ring of the same material, resembling the configuration of a planet with rings. By chipping out the central body, or by using a flint from which the central body had eroded through natural causes, the remaining ring was easy to transform into a bangle (Pitt-Rivers 1882, 385; Petrie and Quibell 1895, 59).

Soon, however, the discoveries of H.W. Seton-Karr in Wadi el-Sheikh made it possible to modify this theory. A considerable number of artefacts in his collection are roughly outlined preforms of bangles laid down in an unfinished state, while the majority are specimens which, by an unfortunate stroke when they were partially made, broke in two, and were abandoned (Forbes 1900, 78). All these items were found in Wadi el-Sheikh – a large, meandering valley located in the Eastern Desert approximately 150km south of Cairo, where the remains of flint mining and processing from the times of deep prehistory, at least until the end of the second millennium BC, are present. The site was discovered at the end of the 19th century by H.W. Seton-Karr and is currently being investigated by a mission of the University of Vienna (Köhler *et al.* 2017, 1-2, 10-11). In this area, there are outcrops of the flints the bangles were made of – mainly a yellowish brown or pale grey, opaque, earthy chert, and sometimes of the translucent chalcedonic variety; some of them may be described as siliceous limestone (Forbes 1900, 78). Flint occurs in the form of flat concretions *in situ* in the limestone or in the form of eroded lumps (Köhler *et al.* 2017, 2-3).

Findings from Wadi el-Sheikh, especially materials discovered recently at area L20, indicate that the production of this jewelry followed specified steps (Köhler *et al.* 2017, 23). At the beginning of the process, the manufacturer selected or made a flattish flint or siliceous limestone disk and then shaped it round; in the next step, it was thinned by flaking on both sides (Forbes 1900, 78-80). A circular disk-like preform was then pierced by means that may have included drilling and pressure flaking to hollow out the central part of the disk (Köhler *et al.* 2017, 23). Punches made of flint flakes that might have been used during that process occur in H.W. Seton-

Karr's collection. This stage of production was hazardous, as evidenced by the finds of numerous damaged preforms (Forbes 1900, 78-80; British Museum 1911, 107). The central opening was then widened to the point where the trifacially retouched preform had been achieved (Köhler *et al.* 2017, 13-14). It is possible that this stage involved mainly careful grinding and to a less extent chipping. (Forbes 1900, 80). For some flint bangles, the final step was polishing.

However interesting, flint bangles only last a short time since they wear away quite quickly. Their production was probably complicated and risky, and the bangles themselves were quite impractical. They went out of fashion, pushed out by bracelets made of other materials.

Conclusions: Flint Bangles Found at Tell el-Murra and Their Position in the System of the Production and Distribution of Bangles

The above-mentioned examples of flint bangles known from ancient Egypt indicate their occurrence in two variants: bifacially retouched with visible negatives and polished with smooth surfaces. Most of the bangles found in the Nile Valley were carefully polished; coarser, unpolished varieties are known only in rare instances (Köhler *et al.* 2017, 13-14). Bangles without polishing, remarkably similar to the examples from Tell el-Murra, seem to be more popular in the Nile Delta, however, a piece of a polished specimen was found in Buto (von der Way and Schmidt 1987, 253). Some researchers have suggested that retouched flint bangles may be semi-finished versions of fully polished bangles (von der Way and Schmidt 1987, 253). Tracing the remains left from the production process may contribute to a reconsideration of this view.

High standardization and the small number of discovered flint bangles may indicate that they were produced for a relatively short time, possibly in only one location (probably in Wadi el-Sheikh). Production waste and damaged semi-finished products have been discovered there, which means that finished bangles were removed from the site (Köhler *et al.* 2017, 11, 13). Of course, the existence of another hitherto undiscovered center of production cannot be ruled out. The presence of both types of bangles throughout Egypt, even at a considerable distance from the place of production, may indicate that they were worn in two variants, both polished and with visible negatives of retouch. It seems unlikely that a retouched bangle would be transported to the Nile Delta in order to be polished there by the recipients. This process probably required proper skills and would have been risky, as the bangle

could have easily been damaged. The occurrence of two variants of bangles may also result from chronological diversity or from preferences of different groups of recipients. The bangles from the site of Tell el-Murra, which were found at a great distance from the production site, should be considered finished products, worn in the unpolished form.

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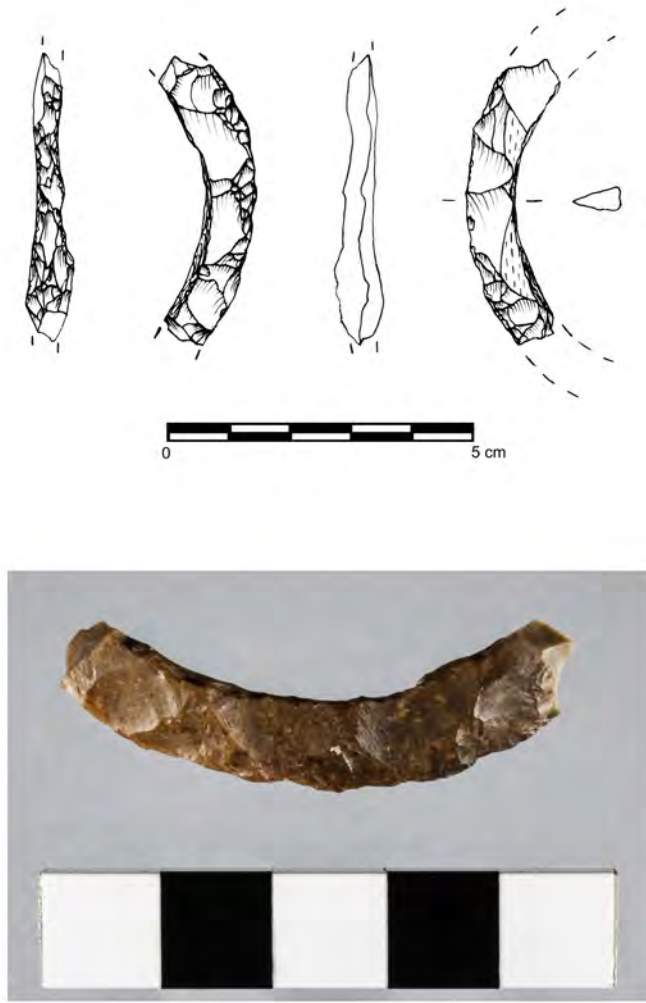


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Pl. 1: 1 – Map of the Nile Delta with most important Naqada III – Old Kingdom sites (according to Jucha M.A. with contributions by Bąk-Pryc G., Małecka-Drozd N., Kazimierczak M. and Ownby M.F. *et al.* 2016. Polish excavations at Tell el-Murra in the Nile Delta. Preliminary report 2013-2015. *Archeologia* 65 (2014), 85–146; Fig. 1).

Drawing by M.A. Jucha

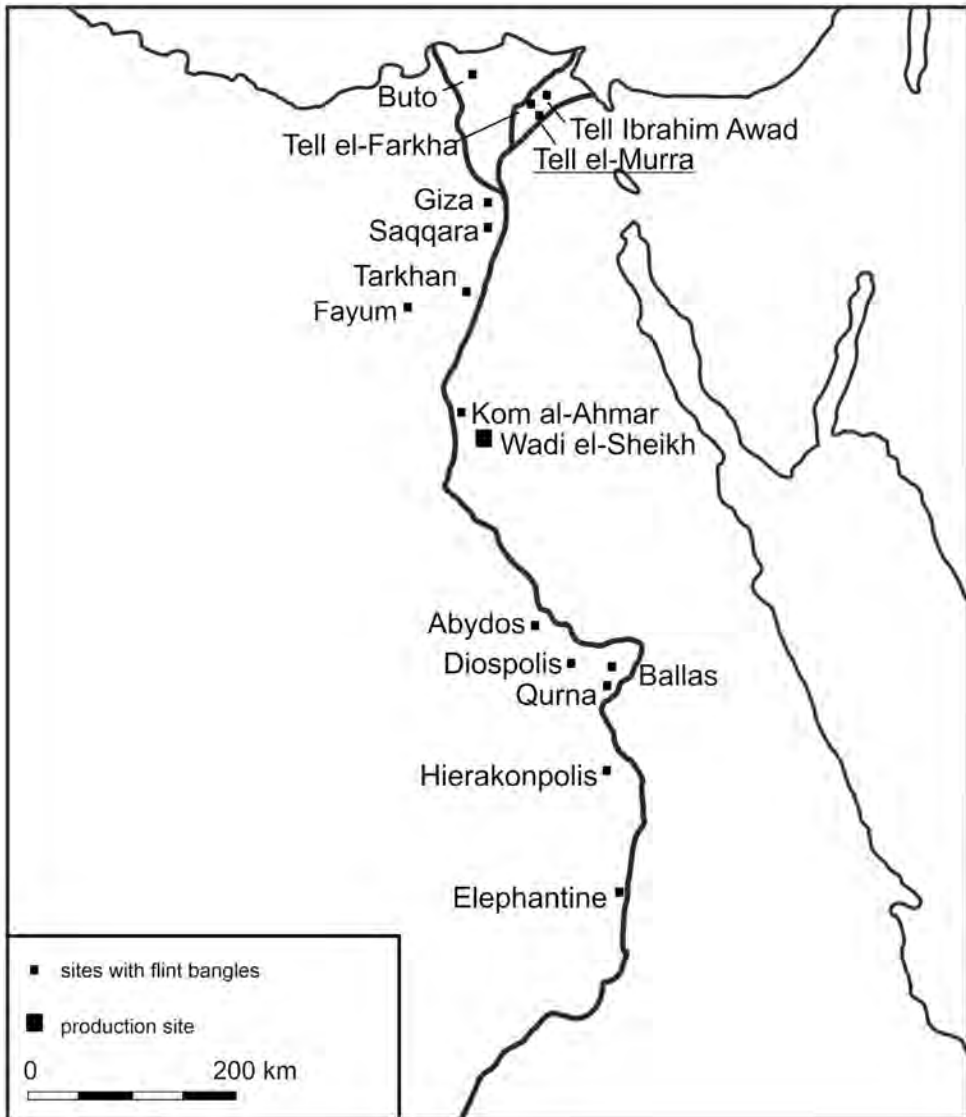
Pl. 1: 2 – Tell el-Murra. Plan of the site (according to Jucha M.A. with contributions by Bąk-Pryc G., Małecka-Drozd N., Kazimierczak M. and Ownby M.F. *et al.* 2016. Polish excavations at Tell el-Murra in the Nile Delta. Preliminary report 2013-2015. *Archeologia* 65 (2014), 85–146; Fig. 2). Drawing by A. Buszek



Pl. 2 – Fragment of the first Early Dynastic flint bangle from the settlement in Tell el-Murra. Drawing by the author. Photo by E. Kuciewicz



Pl. 3 – Fragment of the second Early Dynastic flint bangle from the settlement in Tell el-Murra. Drawing by the author. Photo by E. Kuciewicz



Pl. 4 – Map of Ancient Egyptian sites with flint bangles. Compiled by the author