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EVOLUTION OF ANCIENT EGYPTIAN
BIFACIAL FLINT KNIVES:
A VIEW FROM THE SETTLEMENT
IN TELL EL-MURRA

Abstract: Bifacial knives are a significant category of artefacts known from ancient Egypt, drawing the attention of researchers since the beginnings of Egyptology. A popular type of knife with a well-defined handle was produced from the Early Dynastic onwards. Bifacial knives were crucial in many aspects of life. The knives from the site of Tell el-Murra, located in the North-Eastern part of the Nile Delta, are no exception. The chronology of the site dates back to the Predynastic period and lasts to the end of the Old Kingdom. There are two main groups identified amongst the bifacial knives: the first one dated to the Early Dynastic period and the second to the Old Kingdom. Both of them have some specific features which allow them to be assigned to their proper chronological phases.

Keywords: flint knives; bifacial knives; lithic industry; Early Dynastic; Old Kingdom

Introduction

The aim of this study is to present and classify bifacial flint knives obtained during the excavations conducted by the Institute of Archaeology of the Jagiellonian University in the settlement in the site of Tell el-Murra¹.

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These finds, dated to the Early Dynastic and Old Kingdom periods, provide the opportunity to observe the evolution of form of this category of artefact during the process of forming the Ancient Egyptian state. This research could also make a contribution to the typological and chronological studies on this category of artefact.

Bifacial flint knives of Ancient Egypt – basic characteristics

One of the first important papers on the problems of typology and dating of the Ancient Egyptian flint knives was a study by A. Eggebrecht, who described this type of tool in the context of butchery (1973). Another study taking a similar approach is presented in a book by S. Ikram (1995) concerning the production of meat in Ancient Egypt. Amongst other crucial papers dealing with the issue of bifacial knives, one should mention A. Tillmann's unpublished PhD thesis of 1992, 'Die Steinartefakte des dynastischen Ägypten dargestellt am Beispiel der Inventäreaus Tell-el Dab'a und Qantir: zugleich ein Beitrag zur Bedeutung steinzeitlicher Gerätschaften in metallverarbeitenden Kulturen im Alten Orient'. The classification of bifacial knives proposed by Tillmann has been recently modified and expanded by M. Kobusiewicz (2015).

Bifacial flint knives, dated from the Predynastic times, were commonly produced from the Naqada IIc period onwards, and they played an important role in everyday use at least until the Middle Kingdom. These tools occur in various contexts: in graves, in the settlements, in shrines or temples and in residences of the elite (Kobusiewicz 2015, 13; Lund 2015, 113). Amongst the oldest and most distinctive types of bifacial knives, the so-called rhomboidal knives and fishtail knives with U-shaped blades are worthy of note. Both types have been discovered in graves dated to the Naqada I period (Ciałowicz 1999, 112). The emergence of a new kind of surface retouch – the ripple-flake technique – is linked with the Naqada II phase. This new technique was used for production of high-quality flint knives, usually found in graves (often intentionally broken). Fishtail knives also appear in the Naqada II period, but their blades are now V-shaped (Ciałowicz 1999, 132).

However, the most outstanding and finely made type of flint knives were bifacial forms with a short, well-defined handle, dated to the Proto- and Early Dynastic Period. Advanced use of the pressure technique allowed production of long, narrow, thin blades. Scars forming the bifacial retouch are exceptionally regular and shallow. Bifacial knives with handles also

had the longest time-span of occurrence. In the dynastic periods the form of their blades underwent transformation from narrow and curved with a concave back to wide with a straight or even convex back (Graves-Brown 2015, 21). It is widely believed that in the Old Kingdom period bifacial flint knives gradually became more primitive and simplified (Kobusiewicz 2013, 3). Bifacial knives dated to the Old and Middle Kingdom periods are characterized by relatively large and irregular scars of surface retouch, which indicate application of the percussion technique (Lund 2015, 119).

The majority of bifacial knives were produced in highly specialized workshops controlled by central administration. This can be testified to by aspects such as high standardization of their forms and lack of production debris (e.g. typical flakes) in flint inventories known from regular settlement sites (Kobusiewicz 2015, 13-15).

Bifacial knives played an important role in Ancient Egyptian society on many levels. Some types were used in everyday household activities (and therefore had an impact on the Ancient Egyptian economy), in a similar way to other kinds of flint tools (e.g. sickle blades or scrapers). Flint knives were used mostly in activities linked with butchery (Kobusiewicz 2015, 59), which is also confirmed by the iconography (Lund 2015, 113). These tools were also used to perform other tasks – some of them bear traces of sickle gloss, meaning they were used to cut cereals and grasses (Graves-Brown 2015, 23).

Another aspect of the importance of bifacial knives is associated with religious practices. This issue may be analysed in three categories. The first is usage of flint knives in funerary rituals, mainly mummification. The second refers to the appearance of these tools in the context of grave goods. Last but not least, bifacial knives are often discovered in the remains of temples or shrines and interpreted as tools used for ritual slaughter. It is also difficult to distinguish between the ritual and prestigious functions of some bifacial knives, especially with specimens found in graves. However, it is widely believed that some of them played an important role in the process of forming of the social structure in the beginnings of the Ancient Egyptian state. Production of the most outstanding knives required raw materials of high quality and intense labor. There is no doubt that these specimens were seen as luxury goods and might be considered as a symbol of prestige and social status for their owners (Kobusiewicz 2015, 60).

The presented characteristics of bifacial knives indicate some issues which may complicate producing reliable typological and chronological

classifications of this kind of tool. First of all, flint implements are not as a precise chronological indicator as, for example, pottery – dating of some forms may be extended for entire phases. As well, bifacial knives should be considered as long-functioning objects. This is caused by two reasons – flint implements are relatively easy to repair when a cutting edge is blunted, or even to rework when broken, and both of these treatments can significantly extend the duration of their usage (Kobusiewicz 2013, 15). Furthermore, production of bifacial knives required copious amounts of time, work, and raw materials, as mentioned above. These tools were produced almost exclusively by highly specialized craftsmen; the users of knives probably had only the skills required to perform necessary repairs and alterations. The attractiveness of large Early Dynastic flint knives should be also considered as an additional factor affecting their reception in ancient society. All of these aspects allow us to assume that bifacial flint knives were objects of great value and they were treated with proper care, an approach which could have significantly extended their time of functioning, even for several decades (Hikade 2014, 40; Kobusiewicz 2015, 60). This assumption may be even more valid regarding ritual knives.

The possibility of easy repairs has also adversely affected the creation of typological and chronological classifications of bifacial knives. The initial form of a tool was constantly modified by use and the performance of necessary renovations. After a certain amount of time, the form of a knife could be significantly modified.

During preparation of the following classification of the bifacial flint knives from the site of Tell el-Murra, all of these factors were taken into consideration. General division is based on the context of discovery of each particular knife, which indicates the time of its use – Early Dynastic or Old Kingdom period. Further divisions are based on morphological parameters least modified during the use: general shapes of blades and handles, and manner of surface treatment.

Bifacial flint knives from the settlement at Tell el-Murra

Tell el-Murra

The site of Tell el-Murra is located in the north-eastern part of the Nile Delta, about 1km south of the modern village of Abu Umran and about 10km east of the site of Tell el-Farkha (Pl. 1). It was first mentioned amongst the sites visited by the Amsterdam University Survey Expedition to the North-Eastern Nile Delta (van den Brink 1987, 23, Tab. 2). Since 2008,

Tell el-Murra has been investigated by the Polish Archaeological Expedition from the Institute of Archaeology of the Jagiellonian University in Kraków (Jucha *et al.* 2013, 105-107). Regular excavations have been conducted since 2012 (Jucha *et al.* 2015, 199). The oldest archaeological evidence from the site is related to Lower Egyptian culture. The results of research confirmed the presence of remains dated to Proto- and Early Dynastic periods. By the end of the Old Kingdom the site was abandoned for unknown reasons and no finds from later periods have been made as of yet (Jucha *et al.* 2016, 87-88).

Trench T5, situated in the north-eastern part of the tell (Pl. 2) and excavated since 2012, holds remains of the settlement. The upper levels contain pottery dated mainly to the late Old Kingdom (Sixth and Fifth Dynasties). The remains of the architecture are dominated by relatively thin walls and rounded structures interpreted as storage pits and silos (Jucha *et al.* 2015, 209). Following layers are dated to the early Old Kingdom (mostly the Fourth, but also the Third Dynasty). The revealed constructions are dominated by rectangular structures with walls more massive than in later periods. These structures are interpreted as houses with rectangular rooms, corridors and probably courtyards (Jucha *et al.* 2016, 101-113). Discoveries made in the two latest seasons are dated to the Early Dynastic period.

More than 3100 flint artefacts were obtained during surveys and excavations in the 2008 and 2010-2017 seasons. The vast majority of finds (about 79.4%) were found in trench T5 – the settlement. 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. Flint finds are dominated by typological tools (about 51.7% of the whole inventory). So far, the presence of specialized workshops connected with production of flint implements has not been confirmed. The structure of raw material in Tell el-Murra is dominated by two variants of high-quality flint. One is light beige to brown and non-transparent, sometimes with some stripes. It can be identified with Type I described in J. Kabaciński's (2012) classification of raw materials for the site of Tell el-Farkha. The other variant is brown or grey, transparent or semi-transparent, sometimes with some intrusions. It resembles flint of Type II from Tell el-Farkha (Kabaciński 2012, 323). Both variants were commonly used for production of bifacial knives occurring in Tell el-Murra.

The most numerous category of tools obtained from the settlement (about 80.1%) is that of blade segments interpreted as inserts. These implements were made on fragments of regular blades from single-platform cores. The inserts occurred in two variants: rectangular and triangular.

Another interesting category of flint tools is that of so-called ‘razor blades’ (4.1% of the tools). Besides these two typical groups of implements, some less standardized forms, such as perforators and scrapers, deserve mention. The collection of bifacial knives (3.7% of the tools) is also a significant group of finds. Over 50 knives were identified during excavations in trench T5. Only 16 of them are preserved in condition allowing typological identification. These knives are characterized below, divided into two main chronological groups, and in the next step they are assigned to the proper typological category.

Early Dynastic knives

Three bifacial knives discovered in the settlement in Tell el-Murra are dated to the Early Dynastic Period. These specimens were found in the interior parts of rooms associated with household activities. The first specimen (Pl. 3: 2) is damaged – the handle broke off just under the blade, but part of the steep retouch niche is still visible. The quality of this knife is slightly lower than that of the two following specimens – scars of surface retouch are deeper and less regular. A similar knife was discovered on the site of Tell el-Iswid in the layer dated to the Early Dynastic Period (Midant-Reynes, Buchez 2014, 200, 210). Another comparable specimen was found in Tell el-Farkha, but it is linked with the Protodynastic Period (Kabaciński 2012, 331-333).

The second Early Dynastic bifacial knife (Pl. 3: 1) presents an original form of the specimen because it bears no traces of modifications or repairs. The pointed ending of the lower part of the blade as well as the slightly hooked handle, both typical for Early Dynastic knives, are well-preserved and clearly visible. This specimen is also definitely well-made, which can be attested by shallow and regular scars of surface retouch. Analogous knives were discovered in the precisely dated (end of the phase Naqada IIID) context of the tomb of King Khasekhemwy in the Umm el-Qaab necropolis in Abydos (Angevin 2015, 820). Further similar knives were also found in Early Dynastic graves from Helwan (Saad 1947, 27, Pl. XVI).

The third Early Dynastic knife (Pl. 3: 3) is characterized by the most classic form. It has an elongated, relatively narrow blade with a rounded tip and a short hooked handle. The back of the blade is visibly concave. The surface retouch and the finishing of the edges present precision of production. This specimen can be also identified with numerous analogous finds – e.g. from the tomb of King Khasekhemwy (Hikade 1997); from the tomb of Hemaka in Saqqara, dated to the First Dynasty (Emery 1938,

18-19, Pl. 11); from the storage room of the First Dynasty tomb in Helwan (Saad 1951, 9-11, Pl. VII-VIII); and also from Tell el-Isiwd, where similar specimens are dated to phases Naqada IIIC-D (Buclez, Midant-Reynes 2014, 200, Figs 6-7).

Old Kingdom knives

Knives of older traditions

Amongst the bifacial knives found in Old Kingdom contexts, three show characteristics similar to older forms dated to the earlier periods. Two of them (Pl. 4: 1-2) may be identified with nearly the same form. Unfortunately, only one specimen is almost completely preserved – only the lower part of the handle is missing; in the second case only the upper part of the blade was found. The first specimen was found inside a two-part room (T5-97/98) with traces of household activities; the second was discovered in a burnt layer in another room, T5-130 (Jucha *et al.* 2016, 106, Fig. 29). The form of both specimens resembles Early Dynastic knives – the slightly concave back and pointed ending of the lower part of the blade should be noted. Scars of the surface retouch in both cases are rather shallow and large, although regularity is absent. However, these knives still should be described as well-made. A similar knife was discovered in Minshat Abu Omar (Kroeper 1988, 17, Pl. 14b). Some analogous forms were also found in the tomb of Hemaka in Sakkara (Emery 1938, 18-19, Pl. 11).

A third specimen with some older characteristics (Pl. 4: 3) was discovered in a layer interpreted as a courtyard surrounded by plastered walls (Jucha *et al.* 2016, 104, Fig. 26; 106, Fig. 29). A small posthole indicates that this space was roofed with some organic material. It was probably linked with some household activities. However, the knife cannot be clearly identified with everyday use. First of all, it has a significantly large and wide blade. Moreover, besides shallow, regular, lamellar scars of retouch on the both surfaces, one can also observe some polishing, clearly visible especially on one of the sides. This specimen is unique within the range of the whole site. Dating and finding analogous specimens is also difficult. The form of the knife certainly resembles so-called ripple-flaked knives; however this class of tools is much older than the specimen from Tell el-Murra. The disappearance of ripple-flaked knives is dated to the beginning of the Naqada III phase (Ciałowicz 1999, 219); these tools were no longer produced in the Early Dynastic period. The knife from Tell el-Murra is noticeably similar to one of the great knives from a famous deposit found in Tell el-Farkha, dated to the Proto-dynastic period. However, it is not

clear how these similarities should be interpreted. The knife found in Tell el-Murra might be seen as an import, considered ‘antique’ already in the Old Kingdom. Local imitation also should not be excluded. Another possibility is reminiscence of a much older technology.

Knives with wide blades

The next group of knives is characterized by features typical for the specimens from the Old Kingdom Period: a straight or slightly convex back with a straight handle and rounded tip of the lower part of the blade. All of the knives belonging to this category were discovered in rooms associated with household activities. The most typical specimen (Pl. 5: 2) is almost completely preserved. It shows traces of heavy use and re-sharpening, which caused modification of the shape and proportions of the blade (initially it was probably longer and more slender). This knife is relatively well-made, but the scars of surface retouch are large and highly irregular. A second specimen identified with this category is only partially preserved – the upper part of the blade is missing (Pl. 5: 1). Compared to the previous knife, the quality of surface treatment is much lower, which may be caused by the features of the raw material – in this case it cannot be described as homogenous high-quality flint, known from all of the described specimens. This raw material is rather grained and non-transparent. This knife was also more intensively used – re-sharpening retouch modified the outline of not only the cutting edge, but also the back of the blade.

In the case of the third knife identified with this group, only the central part of the blade is preserved (Pl. 5: 3). However, features typical for this category are still observable: the blade is flat and wide, and the back is straight. The cutting edge is modified as the result of re-sharpening, which caused an irregular, denticulated outline. The scars of surface retouch are somehow regular and shallow – the knife might be described as relatively well-made.

Similar knives were discovered in a temple connected with the Pyramid of Mycerinus (Reisner 1931, 230, Pl. 18). Other analogous forms were found in the settlement of Ain el-Gazzareen in Dakhla Oasis – a specimen dated to the Fifth or Sixth Dynasty (Kobusiewicz 2015, 26-27, 30-31, 92), in Tell Ibrahim Awad – a specimen dated to Old Kingdom (van Harlem and Hikade 2006, 391, Pl. V) and in Tell el-Farkha – and a specimen dated to Early Dynastic period, although the shape of the blade and the massive handle may indicate a younger chronology (Kabaciński 2012, 335-336).

Knives with triangular blades

The third group of Old Kingdom knives, probably of the youngest chronology, comprises specimens with an irregular triangular blade (Pl. 6: 1-3). Two of them (Pl. 6: 1-2) are very similar. These knives were found inside the rooms, almost completely preserved. These specimens are extremely different from the tools discussed above – notable amongst their features are the small size and low quality of production; the blades resemble irregular, elongated triangles and the straight backs continue into short straight handles defined with semi-steep retouch. Both of the specimens bear traces of heavy use. It should be mentioned that the second knife (Pl. 6: 2) was made in an even more primitive manner. It may have been caused by the characteristic of the raw material, which is very similar to the stone used for production of one of the knives with wide blades (Pl. 5: 1). The surface retouch is exceptionally untidy – scars are hardly visible and irregular, and are often ended with hinges.

The next knife (Pl. 6: 3) can be also characterized by its triangular blade, but its form slightly differs from the forms of the two previous specimens. Unfortunately it was discovered on the surface of the tell, although some technological features allow us to identify this tool with the Old Kingdom. The handle of the knife is broken, but a small part of the niche defined probably with semi-steep retouch is still visible. The initial form of the tool was slightly modified during the repair of the upper part of the blade, which is proven by fine retouch near the tip. The scars of surface retouch are rather irregular and deep, but this specimen is characterized by much higher quality of production than the two previous examples.

An analogous find is known from Elephantine. This knife was discovered on the presumed kitchen floor of a building located north of the walls surrounding the temple complex of Satet. This specimen is dated widely to the Old Kingdom period and the context of its discovery may indicate its use in household activities (Hikade 2014, 62, Pl. 36). Another knife with a triangular blade was found in Ayn-Asil (Dakhla Oasis). It is dated to the end of the Old Kingdom. Use-wear analysis suggests that it was used for working with some hard material (Midant-Reynes 1998, 35). A similar specimen is also known from the funerary complex of the family of Vizier Qar located in Abusir (Barta 2009, 139). A slightly older knife, dated to the transitional period between the Early Dynastic and Old Kingdom times, was also discovered in Tell Ibrahim Awad (van Harlem and Hikade 2006, 391, Pl. IV).

Various knives

Besides regular, easily classified forms, the settlement in Tell el-Murra provides some unusual types of knives. The first is a specimen with a narrow blade (Pl. 7: 1). It is only partially preserved – the handle is missing, but part of the niche is still visible. The blade is narrow and slightly curved, but its initial form was modified, as the cutting edge and the back bear traces of renewing. A similar knife found on Kom el-Hisn is also dated to the Old Kingdom period (Wenke *et al.* 1988, 27-30). An analogous form was discovered on Elephantine; it is however slightly older, as it was discovered inside of a construction dated to the Second Dynasty. It has a narrow, elongated blade with a straight back and rounded tip (Hikade 2014, 62, Pl. 37). A relatively similar knife was found also in Tell el-Farkha, but again it is dated to the Early Dynastic period. The handle of the knife was probably quite massive, and it may indicate late chronology of the specimen (Kabaciński 2012, 335-336).

Another unusual form is represented by a miniature knife (Pl. 7: 2). This artefact is completely preserved. It was discovered in a layer linked with household activities. The shape of the knife is quite typical – it has a wide, flat blade, the cutting edge is finished with semi-steep retouch and the handle is defined with steep retouch. However, it is exceptionally small and bears no traces of use – most likely the miniaturized form excluded functionality. The arrangement of scars of the surface retouch indicates that this knife cannot be interpreted as a secondary reduced form. The function of this specimen is unknown – it may be interpreted as a kind of model, an amulet, or even a toy.

Amongst Old Kingdom knives from the settlement in Tell el-Murra two reduced forms may be distinguished. One of them (Pl. 7: 3) is a middle part of a knife with a defined handle. Only the lower part of the blade and upper part of the handle are preserved. However, some features of the original form are visible: a small fragment of the straight back and the mentioned part of the niche defined with semi-steep retouch. The initial specimen was probably damaged in the upper part of the blade and the handle. Later the broken edges were reworked with fine flat retouch. The new cutting edge has an irregular outline. Its initial form was heavily modified by repeated renewing. The second example of a reduced specimen (Pl. 7: 4) was discovered in a layer surrounding a silo (Jucha *et al.* 2016, 111, Fig. 37). Identification of its initial form or even the part which was reused is impossible. The new knife is characterized by an unusual straight cutting edge and strongly convex back. The latter was reworked with semi-steep

retouch on the one side in the upper part of the blade and on the traversal side in the lower part of the tool. However, this edge still cannot be described as 'backed'.

Re-utilization of pieces of bifacial knives is relatively well-testified on Early Dynastic and Old Kingdom sites. Three examples of such tools are known from Tell Ibrahim Awad (Schmidt 1992, 87). These specimens were certainly made on broken fragments of bifacial knives. One of them may be classified as a modified knife – a new cutting edge and back are located on the opposite sides of the initial features. Another example of a reworked piece of a knife is a scraper with a faceted working edge, dated to transitional Early Dynastic/Old Kingdom phase. The last specimen from Tell Ibrahim Awad should be described as a scraper made on a piece of knife handle. It is dated to the period between Old and Middle Kingdom. Other examples of reworked pieces of bifacial knives are known from Elephantine and Abusir (Schmidt 1992, 87).

Summary

The bifacial knives discovered in the settlement in Tell el-Murra form a certainly interesting group of tool. Taking into consideration the mentioned restrictions applying to classifications of this kind of artefact, some regularities are still visible and traceable. It is also possible to identify and indicate aspects of evolution of bifacial knives in the beginnings of the Ancient Egyptian state.

Despite the modest number of Early Dynastic bifacial knives found in the settlement, these finds still represent features typical of knives dated to this period: hooked handle, elongated and curved blade, concave back, convex cutting edge and general high quality of production showing in fine finishing of the surfaces and the edges.

Old Kingdom bifacial knives seem to be more diversified in terms of form. However these specimens still show some features typical of this period, e.g. straight or convex backs, wide or triangular blades and relatively short and straight handles without a hooked tip. Technological regression is also observable – Old Kingdom knives are usually more roughly made. Small knives with irregular triangular blades may be determined as the youngest forms.

The occurrence of knives with Early Dynastic features in Old Kingdom contexts is probably linked with their value and special meaning for ancient people. These tools were usually made of high-quality raw material by highly

specialized craftsmen. Taking this into consideration, it is understandable that most of the bifacial knives bear traces of long-lasting use and multiple repairs. As precious objects, these tools were treated with care and attention, and this is probably why some pieces of broken bifacial knives were reused to produce new tools. The high quality of flint used to produce the knives provided an opportunity – and also a reason – to do so. Tools made on reused pieces are usually unique and are made and used *ad hoc*, which makes them difficult to classify.

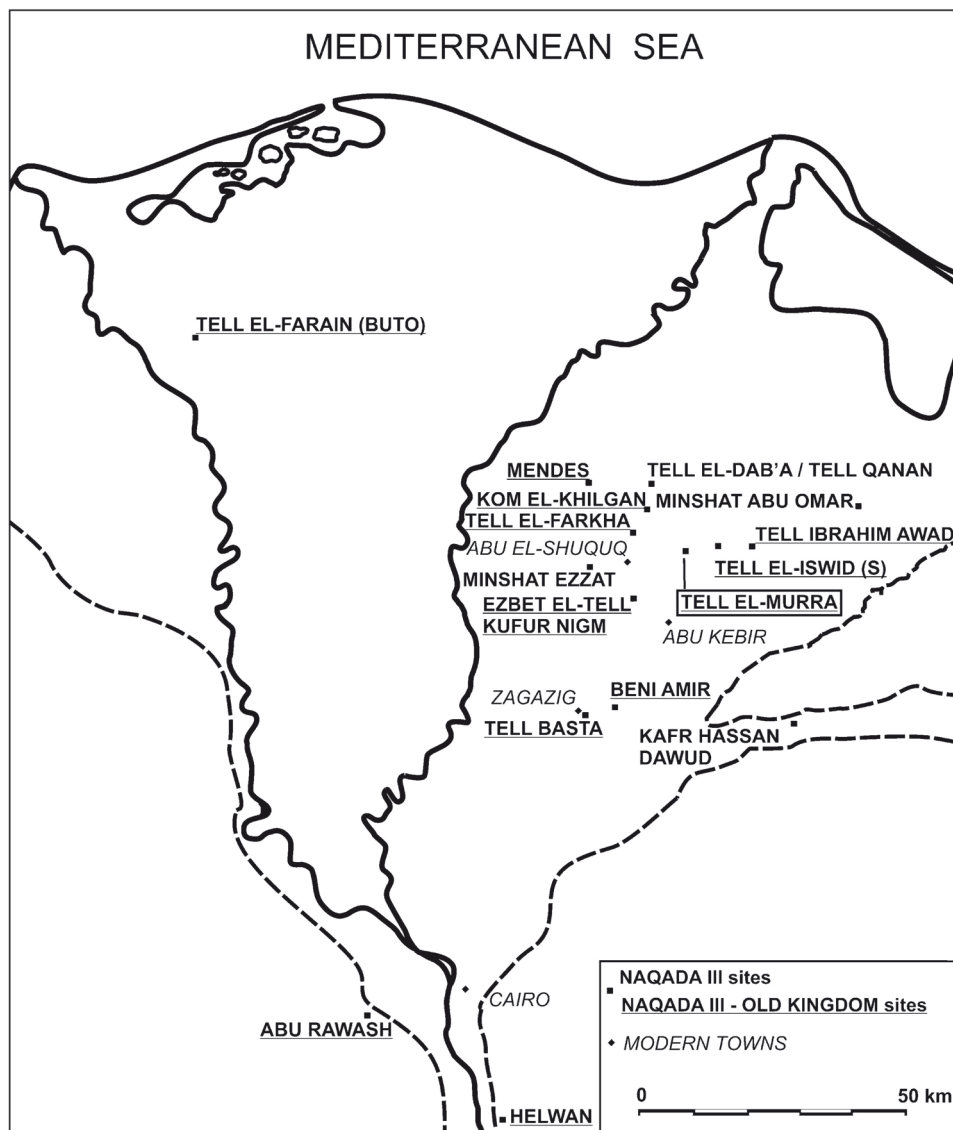
Identification of functions of the bifacial knives from Tell el-Murra is ambiguous. As mentioned above, knives discovered in the settlement are usually interpreted as tools used in everyday household activities linked with the production of meat, such as slaughter and butchery. However, it is highly probable that bifacial knives were seen as multifunctional tools. Use of this type of tool for other activities, for example processing of crops, should not be excluded.

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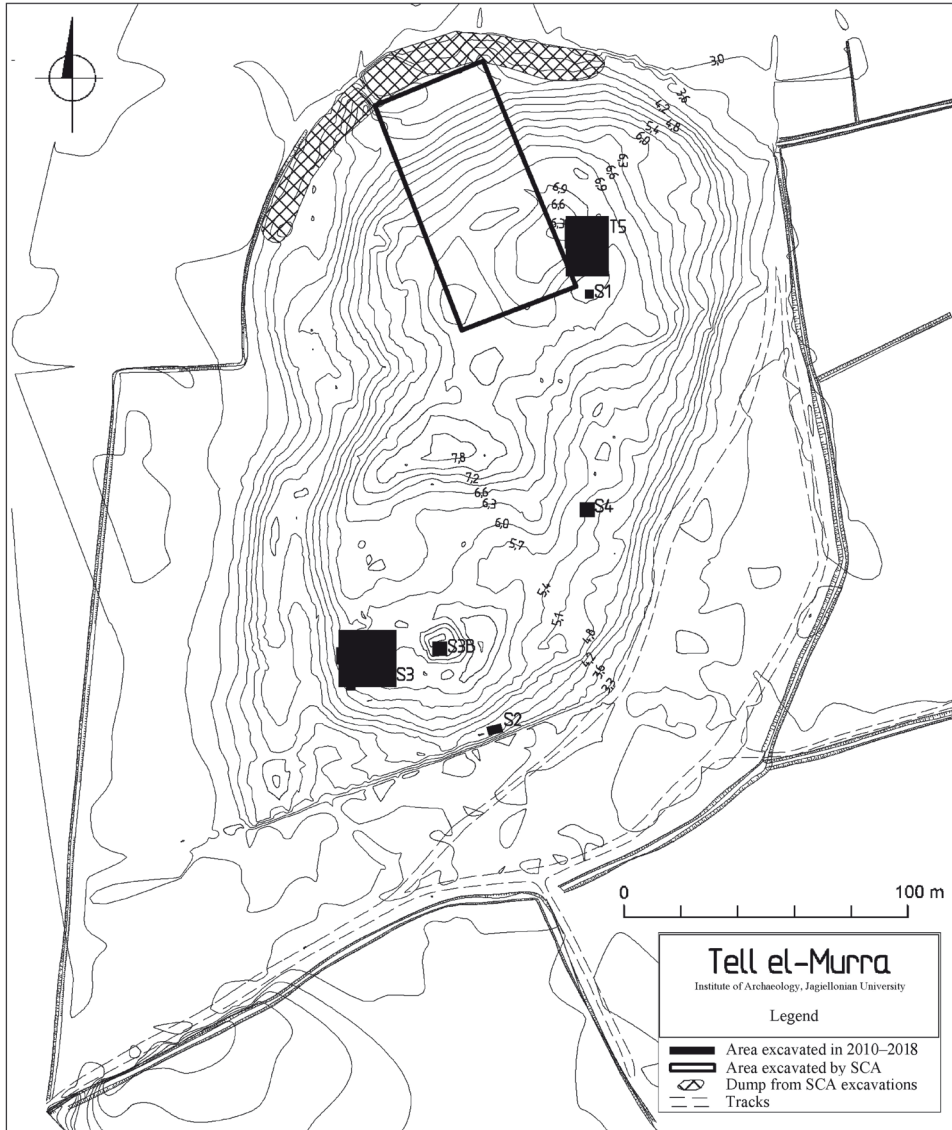
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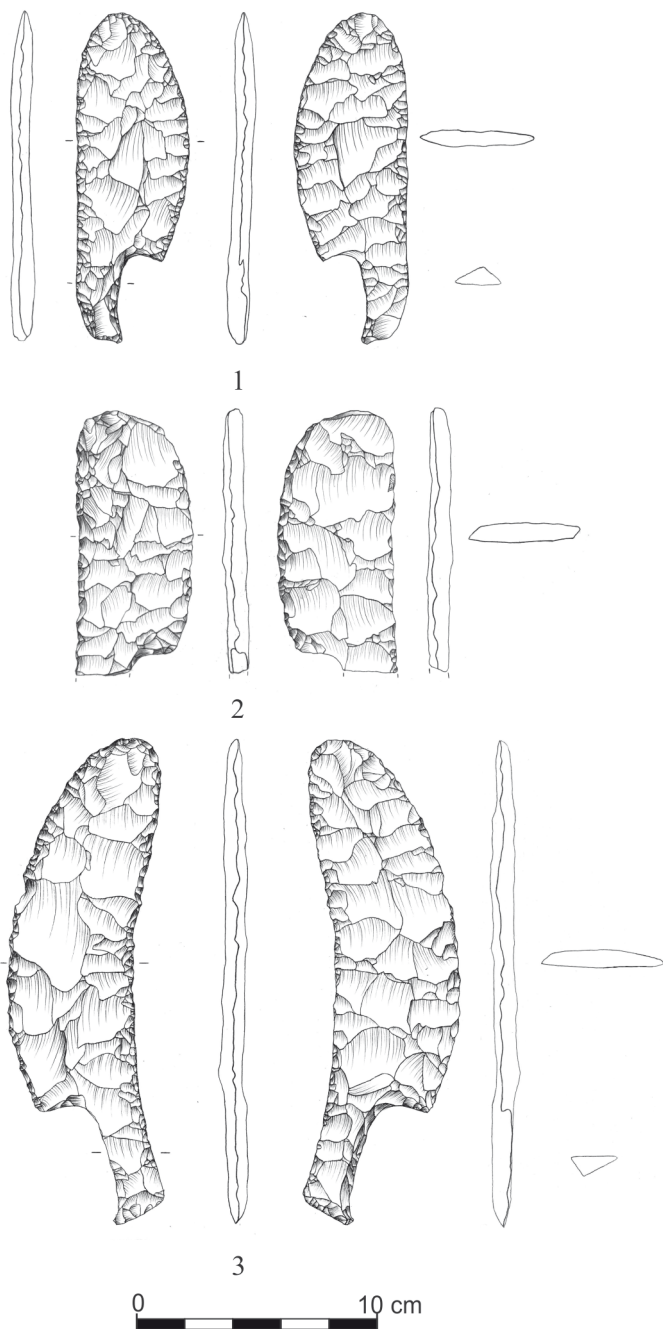
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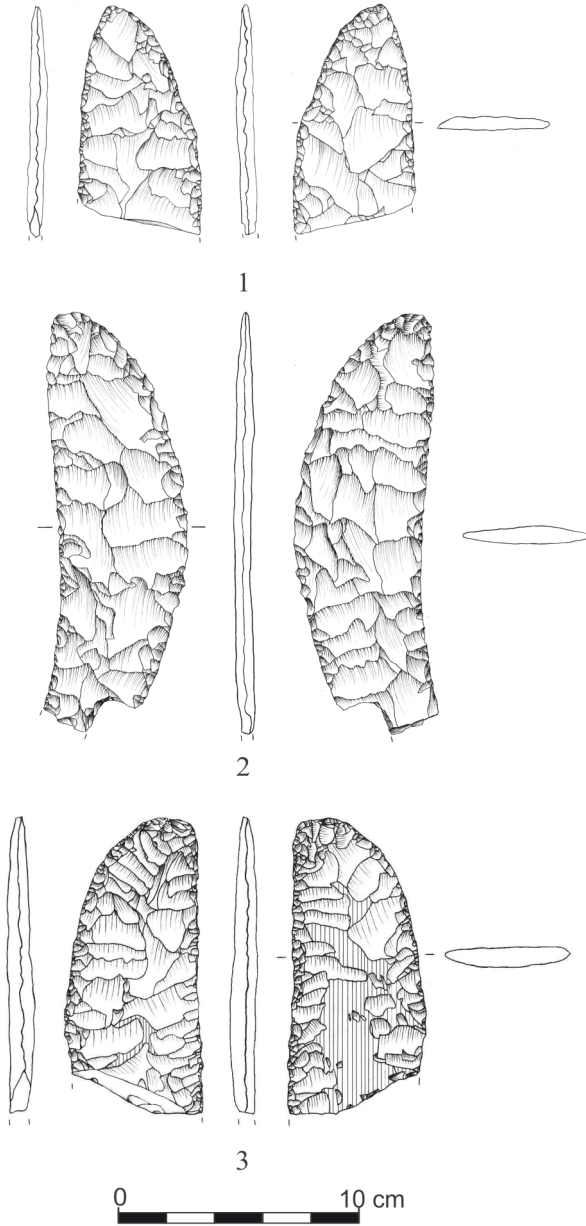
Pl. 1 – Map of the Nile Delta with most important Naqada III – Old Kingdom sites (according to Jucha M.A. with contributions by Bąk-Pryc G., Małecka-Drozd N., Kazimierczak M., Ownby M.F., Mądrzyk K., Pankowska A, Woźniak B. Abłamowicz R. 2016. Polish excavations at Tell el-Murra in the Nile Delta. Preliminary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



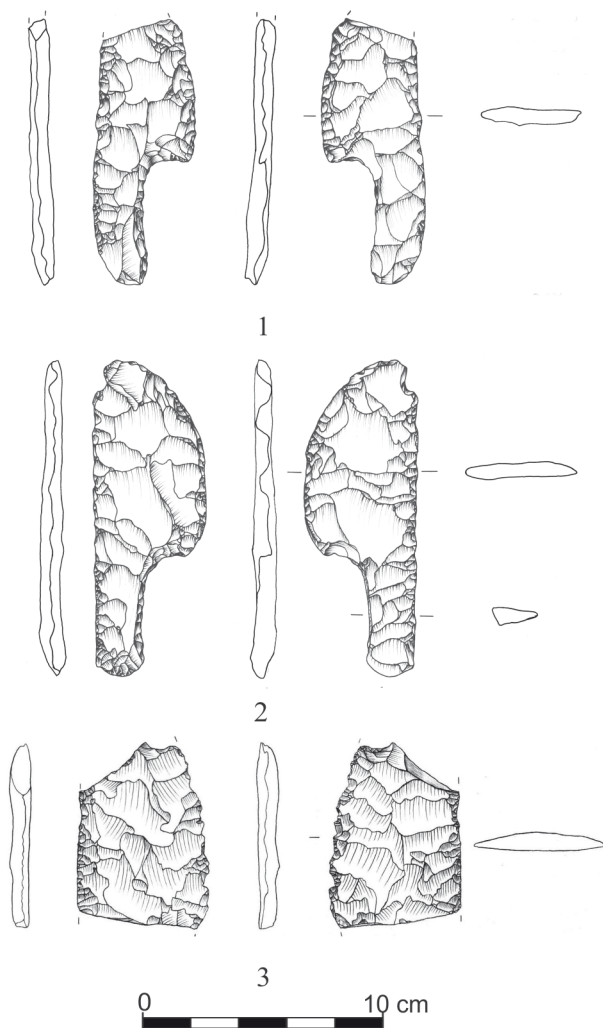
Pl. 2 – Tell el-Murra. Plan of the site (according to Jucha M.A. with contributions by Bąk-Pryc G., Małecka-Drozd N., Kazimierczak M., Ownby M.F., Mądryk K., Pankowska A, Woźniak B. Abłamowicz R. 2016. Polish excavations at Tell el-Murra in the Nile Delta. Preliminary report 2013-2015. *Archeologia*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



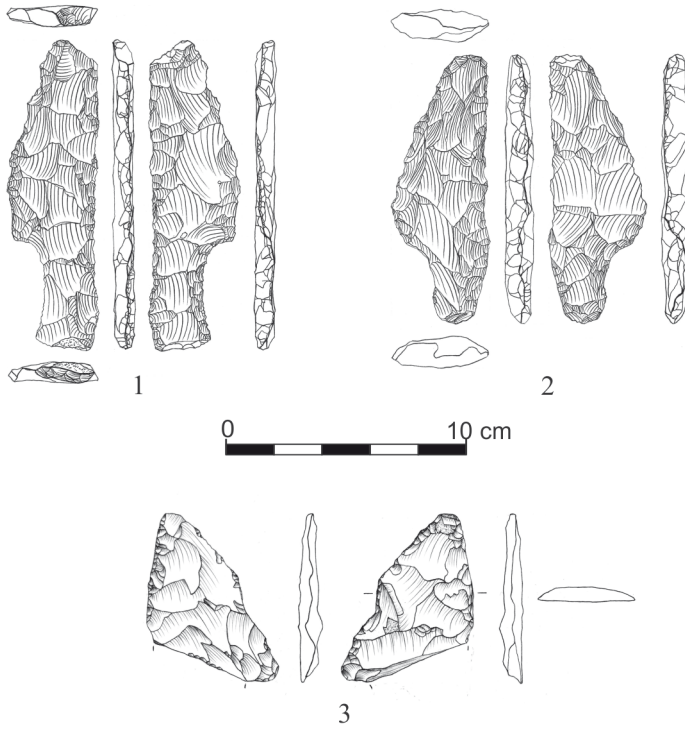
Pl. 3 – Early Dynastic bifacial knives from the settlement in Tell el-Murra.
Drawings by the author



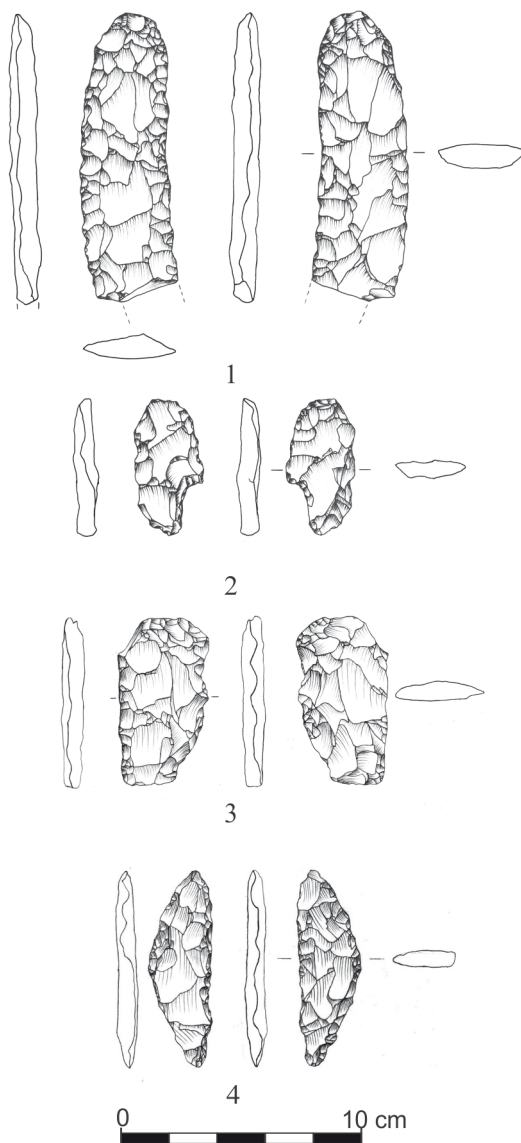
Pl. 4 – Old Kingdom bifacial knives with older tradition from the settlement in Tell el-Murra. Drawings by the author



Pl. 5 – Old Kingdom bifacial knives with wide blades from the settlement in Tell el-Murra. Drawings by the author



Pl. 6 – Old Kingdom bifacial knives with triangular blades from the settlement in Tell el-Murra. Drawings 1-2 by Kamila Peschel. Drawing 3 by the author



Pl. 7 – Various Old Kingdom bifacial knives from the settlement in Tell el-Murra.
Drawings by the author