

THE PRODUCTION, USE
AND IMPORTANCE OF
FLINT TOOLS IN THE
ARCHAIC PERIOD AND THE
OLD KINGDOM OF EGYPT

Michał Kobusiewicz

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Chapter 1

Introduction

1.1. The scope of the study

This book seeks to explore the issues of production, use and importance of flint tools in the Archaic Period and the Old Kingdom of Egypt, the epoch immediately following the unification of pre-state organisms of Upper and Lower Egypt into one political body; the early days of the long reign of the pharaohs, the rulers of the Lower Nile valley, eventually also of oases scattered over extensive areas of deserts to the east and west of the valley and of Sinai.

The study encompasses the Archaic Period, known also as the Early Dynastic Period, and the Old Kingdom of Egypt. Their precise chronological frameworks, notably of the former one, have been widely discussed in the subject literature, albeit there is no space here to do this debate justice. When exactly the Archaic Period dawned remains a particularly contentious issue. The Egyptian state is most frequently defined as starting *c.* 3100 BC, when Aha, the first pharaoh of Dynasty I, acceded to the throne and established the capital at Memphis. This moment marks the commencement of the historical era of Egypt. The Archaic Period comprises the reign of dynasties I and II, the end of which falls at 2686 BC (Wenke 2009). Some Egyptologists include Dynasty III in the Archaic Period (Wilkinson 2000), a possibly misguided opinion considering that the dynasty displays features typical of the Old Kingdom (Wenke 2009). It is consequently assumed in this work that the Old Kingdom stretched from the establishment of Dynasty III to the end of Dynasty VI, that is to say from 2686 BC to 2181 BC. R. J. Wenke (2009) includes here the Old Kingdom dynasties VII and VIII as well. Having lasted for merely 21 years in total and least known in our present state of knowledge, they are generally taken to have been part of the First Intermediate Period. This book therefore presumes that the Archaic Period and the Old Kingdom spanned 414 and 505 years respectively, thus accordingly the chronological scope of this study covers 919 years.

The monograph explores and concentrates on rich flint inventories attributable to the late dynasties of the Old Kingdom especially thoroughly, and presents hitherto unpublished materials from rich archaeological sites such as Kom el-Hisn in the Western Delta, Ain el-Gazzareen in the Dakhla Oasis and watch-posts set up in the Oasis and in its vicinity. The analysis of the assemblages, which also refer to the well-studied materials yielded by contemporary archaeological sites such as Ain Asil from the Dakhla Oasis and Elephantine in northern Nubia, was

conducted in accordance with the exhaustive list of types compiled for the materials recovered from the settlement site of Ain el- Gazzareen.

At the beginning of this period, the vast majority of Egyptians dwelt in small settlements and lived by cultivating wheat and barley as well as by breeding cattle, sheep, goat and pig. Some hunting, fishing and gathering were done but played a minor role in this agriculture-based economy. Each village constituted a confined, self-contained world. Remarkably, by the end of the Old Kingdom, Egypt had burgeoned into a well organised, centralised state with an efficient administration, a powerful army, its own writing system and a developed economy; a state that was able to erect its own, splendid architecture and prominent towns (Wenke 2009). It is remarkable that in this advanced civilisation, flint nonetheless retained its essential function.

Owing to the natural conditions, the boundaries of the formation that came to be known as the Egyptian state from its early days remained virtually unchanged. Following the unification of Upper and Lower Egypt, Ancient Egypt spanned the Nile Delta and Valley upriver to the 1st Cataract – today's Aswan, then Abu, the Sinai Peninsula and the Faiyum Oasis. Starting from Dynasty IV, Egypt also ruled over two deserts, *i.e.* the Eastern and the Western Deserts, or, to be exact, over large oases, *e.g.* Faiyum, Bahariya, Farafra, Dakhla and Kharga, later also the Siwa Oasis in the Western Desert, and over large wadis such as Wadi Hammamat and Wadi el-Sheikh in the Eastern Desert. Egypt's intermittent sway in the area of Palestine or Nubia was too short-lived and weak for these states to be included into the territory of the Egyptian state.

This book is an in-depth study of tools made of flint, which unceasingly fulfilled a major role in the period under study. Flint, occurring in a number of varieties, substantially outnumbers other raw materials used for manufacturing tools: chalcedony, obsidian, quartzite, carnelian or rock crystal, all found in small or even minute amounts, which attests to their minor role in the first periods of Egyptian history. Notwithstanding a growing number of implements made of copper, then bronze, flint tools constituted an essential element of a broad-based culture, and not only material culture, in the Archaic Period, the Old Kingdom and beyond.

Initially in the form of beads, copper has a history of use in Egypt at least since the Neolithic Badari culture (Krzyżaniak 1977). It is also found in the Naquada culture

(Ciałowicz 1999; Needler 1984). Copper ore was mined from the pre-Cambrian formations on the coast of the Red Sea, west of Gebel Zeit, from the early dynasties through to the beginning of the Old Kingdom (Wilkinson 2000). Requiring considerable expertise and marked by high fuel consumption, copper metallurgy was very expensive, as opposed to cheap and effective flintworking. Therefore, it was not before the twilight of the Old Kingdom that flint was gradually superseded by copper and bronze. Sickles with flint inserts came to be replaced by metal equivalents only by the end of the Late Iron Age, when iron became inexpensive (Müller 1983). Flint nonetheless persisted and there is an abundant archaeological record and a variety of extant iconographic and written sources to evidence its exploitation in the Middle and New Kingdom, and even later, at least until the 1st millennium BC (Hikade 2000). B. Midant-Reynes (1981) noted that flint, along with gold, turquoise and lapis lazuli held a prominent position in mythology as well as in beliefs and customs of Ancient Egypt. The paramount importance of flint in the life of the ancient Egyptians is brilliantly attested to by the grandeur of flint mines at Wadi el-Sheikh, exploited at least down to the end of the Middle Kingdom (Negro, Cammelli 2010).

B. Adams and K. Ciałowicz (1997) claim that the quantity of flint artefacts in the Archaic Period decreases roughly to ten per cent compared to the Predynastic period. I am of the opinion that while the discrepancy between the representation of this category of finds in the archaeological record from both periods is undeniable, it was decidedly far less extensive than the one suggested by Adams and Ciałowicz. The authors' statement supposedly refers to the inventories from royal tombs or tombs of high officials employed in the then capital towns. However, the analysis of tool assemblages yielded by important, yet provincial settlement sites dated to dynasties V and VI, such as Ain Asil, Ain el-Gazzareen, both in the Western Dakhla Oasis, Kom el-Hisn from the western Delta or Elephantine, showed that copper objects were scarce, whilst flints accounted for virtually 100 per cent of the raw materials used for making tools.

In the past, archaeologists investigating the Archaic Period and particularly the Old Kingdom had largely neglected the problem of the production and use of flint implements. It is only in the recent years that, together with the growing realisation of flint's significance in Egyptians' life, economy, religion and even armed conflicts, an increasing interest in the issue has been apparent in the subject literature. The topic has nevertheless remained largely unexplored and definitely needs to be further elaborated upon. This book is therefore intended to be the first comprehensive account of toolmaking and use in the Archaic Period and the Old Kingdom of Egypt. It was based on published materials from a variety of sites, both from investigations carried out at the turn of the 20th century and subsequent excavations, specifically those conducted in the last two decades of the 20th century and the early 21st century. Flint inventories were recovered from settlement sites and burial sites alike.

Recent advanced excavations at a few Old Kingdom settlement sites have produced assorted, rich flint inventories. As well as permitting more comprehensive analyses of the typology of flint artefacts and the manufacturing technologies than those from burial assemblages, finds from settlement contexts shed some light on the organisation of toolmaking. Furthermore, lithic analyses evidence even such issues as centralisation of administration and external relations throughout the period of the first dynasties, and can be used to draw an understanding of the processes of acculturation of communities occupying the areas beyond the Nile valley, ensuing from the colonisation by the State of the Pharaohs. The analysed sites include Ain Asil and Ain el-Gazzareen from the Dakhla Oasis, watch-posts located in the oasis and in its vicinity, a nearby pastoral nomadic settlement site of El Kharafish, a large settlement of Kom el-Hisn from the western Delta, and Elephantine in Egyptian Nubia. The foregoing sites largely provide a basis for exploring the Old Kingdom flint industry.

Below I outline the history of field research at major Archaic Period and Old Kingdom sites which yielded lithic materials under study. It is worth noting that flint artefacts held various research value for archaeologists, hence the scarcity of such sites to be analysed. In earlier studies flint materials were either completely disregarded or merely hinted upon, site reports mentioning only specimens of great aesthetic appeal, e.g., beautiful Predynastic bifacial knives of the ripple-flaked type. Sadly, debitage went entirely unnoticed in the course of investigations. While artefacts from burial contexts were generally acknowledged, flint finds from settlement sites were habitually overlooked (Ciałowicz 1999; Conard 2000; Holmes 1989; Tillmann, 1999). This applies also to some extent to the area of Palestine (Rosen 2014). Predynastic flint inventories were typically so rich and constituted such a considerable share of the archaeological record that they could not be simply ignored (Buche, Midant-Reynes 2007; Hendricks, Midant-Reynes 1988; Holmes 1989, 1992;) as such they stand in marked contrast to flint materials dated to the Archaic Period and the Old Kingdom, overshadowed by finds of other elaborate objects of high aesthetic value.

1.2. History of research

There is a widely held consensus that the research of the antiquities of Egypt was inaugurated with the activity of a group of scholars who travelled alongside Napoleon's army in the early 19th century. The first to take notice of flint artefacts was A. Arcelin, in 1869. Once intensive investigations of Egyptian antiquities began in the late 19th/early 20th centuries, the first to study flint finds fairly thoroughly was J. J. M. de Morgan (1896). Interestingly, in the last one hundred and twenty years there have been two clearly marked peaks of research, which resulted in recovering a considerable amount of ancient Egyptian flint materials. The first one covers the period from c. 1890 to the mid-second decade of the 20th century, while the second has lasted roughly from the early 1970s until now.

The publication of flint artefacts attributable to various periods was pioneered by such scholars of the closing two decades of the 19th century as J. J. M. de Morgan, G. Ebers or F. Delanoue. An Egyptian scholar, S. A. Huzayn (1939), was the first on the territory of Egypt to seriously, albeit timidly, investigate flint assemblages. In the 1960s, some advancement in flint studies occurred with the publication of the first synthesis of Predynastic flint materials by E. Baumgartel (1960).

According T. A. H. Wilkinson (1999), serious exploration of flintwork and flint implements' usage can be said to commence in Egyptology along with publications of Polish researchers, mostly prehistoric archaeologists, such as B. Ginter, A. Dagnan-Ginter, J. K. Kozłowski and J. Śliwa (Dagnan-Ginter *et al.* 1984; Ginter *et al.* 1980; Ginter, Kozłowski 1994).

There is no doubt whatsoever that the enhancement of the quality of studies on flint inventories has largely ensued from establishing professional relations between some Egyptologists and prehistorians, whose expertise, methods of investigation and analysis of flint inventories had already been marked by excellence, and from the warmly welcomed participation of the latter in Egyptological research.

Recent years have witnessed an upsurge in the number of published studies in the field, both comprehensive analysis of particular flint assemblages (Briois, Midant-Reynes 2008; Hikade 1990b, 2000b, 2003a, 2003b, 2005, 2013; Kobusiewicz 2007; Midant-Reynes 1998; Schmidt 1985, 1987, 1992a, 1992b, 1996); works that seek to examine lithic technology (Hikade 1997, 2008; Midant-Reynes 1983, 1984, 1985, 1987; Midant-Reynes, Tixier 1981); and monographs of particular types of tools (Clark *et al.* 1974; Hikade 2001, 2004). Last, but not least, a monograph on the Predynastic lithic industry in the Upper Egypt has been published by D. L. Holmes (1989).

A brief history of research at the most important sites to yield flint materials attributable to the Archaic Period and the Old Kingdom is outlined below. Principal investigators of particular sites are mentioned, along with archaeologists concerned with lithic production. Sites are given in alphabetical order and their location is shown on the map (Figure 35).

Abusir

Discovered in 1842 by K. R. Lepsius, the site is located on the west bank of the Nile, ca. 2.5km north of Saqqara, 17km south of Giza. From 1898 to 1901, it was excavated by a German Egyptologist L. Borchardt and in the years 1902–6 by other German researchers, i.e., G. Möller, H. Ricke and F. von Bissing. Between 1976 and 1986, Czech archaeologists supervised by M. Verner investigated the Pyramid Complex of Raneferef in Abusir, dating to Dynasty V, and then explored the Old Kingdom burial sites of dynasties III-IV under M. Barta.

Abu Rawash

The site is located north of Saqqara, at the north end of Memphis and its Necropolis. In the years 1880–2, an English Egyptologist, W. M. F. Petrie, conducted the first investigation of the site, followed by L. Borchardt; in the years 1898–1901 the site was excavated by É. G. Chassinat, in 1912–13 by P. Lacau and, in 1922, by J. P. Montet. From 1957 to 1959, the latter's research was continued by A. Klassens, who discovered even more *mastabas* and excavated a burial site dating back to dynasties 0 and I. Between 1995 and 2007, a French-Swiss expedition conducted excavations under the direction of M. Valloggio, and in 2007, Y. Tristant unearthed a Protodynastic necropolis; both worked on behalf of the Institut Français d'Archéologie Orientale.

Abydos

One of the longest-known and well-researched sites in Egypt, notably its necropolises of the earliest dynasties, the site is situated on the west bank of the Nile, on the edge of the desert, 40km southeast of Sohag. In the 1860s, the site was excavated by A. Mariette. The Abydos sites enjoyed particular research interest in the late 19th and early 20th centuries. The site was investigated successively by É. Amélineau, W. M. F. Petrie, E. R. Ayrton, J. Garstang, T. E. Peet, W. Kaiser and G. Dreyer, the last two from the Deutsches Archäologisches Institut in Cairo. Engaged in research at the site are also S. Harvey and J. Wagner. Abydos has been recently investigated by American researchers, namely D. O'Connor and M. Adams.

Ain Asil

The seat of the governor of the Dakhla Oasis at the times of Dynasty VI, the site, discovered by A. Fakhry, lies in the centre of the Dakhla Oasis in the Western Desert. The site has been under excavation since 1977, research on behalf of the Institut Français d'Archéologie Orientale directed by J. Vercoutter, then L. Giddy and presently by G. Soukiassian and M. Wuttmann.

Ain el-Gazzareen

Located in the central-western part of the Dakhla Oasis, the site was discovered by R. Fray in 1975. Since 1995, the site has been investigated by the Director of the Dakhla Oasis Project, A. Mills.

Dahshur

The site lies about 40km south of Giza. In 1843, K. R. Lepsius drew a map of the area. In the years 1894–5, research at the site was conducted by J. J. M. de Morgan. In 1925, G. Jequier explored the Bent Pyramid. Between 1951 and 1955, A. Fakhry continued the investigations. In 1975, the Deutsches Archäologisches Institut launched its research activity in the area, directed first by D. Arnold,

then, since 1980, by R. Stadelmann and now by S. Seidelmeyer and N. Alexanian.

Elephantine

Elephantine is an island in the Nile, on the First Cataract, located between Egypt and Nubia. The first investigations were commenced in 1917 by P. Bovier Lapierre. Further research on the island was carried out on behalf of the Egyptian Antiquity Service in the 1930s and 1940s. In 1968, W. Kaiser and G. Dreyer started years-long excavations of structures of varying chronology on behalf of the Deutsches Archäologisches Institut, in collaboration with the Swiss Institute of Architectural and Archaeological Research in Egypt. M. Ziermann and D. Raue participated in the research.

Faiyum

Faiyum is an oasis located to the west of the Nile, 70km south of Cairo. The area was first investigated in the early 20th century by H. W. Seton-Karr. In the years 1924–6, the area was under extensive prospecting by English researchers G. Caton-Thompson and E. Gardner, who worked on behalf of the Royal Anthropological Institute; they identified a number of sites with flint inventories attributable to the Early Pharaonic periods. In 1978–86, B. Ginter, A. Dagnan-Ginter, J. K. Kozłowski and J. Śliwa from Jagiellonian University, Kraków, investigated Protodynastic and Middle Kingdom sites in cooperation with the Deutsches Archäologisches Institut. In 1999, T. Herbich from the Institute of Archaeology and Ethnology, Polish Academy of Sciences, conducted archaeomagnetic surveys near the temple of Qasr el Sagha. Numerous prehistoric sites in the depression were explored by Italians, Americans and Poles.

Gilf el Kebir

It is a plateau in south-western Egypt. In 1980, E. Cziesla at the University of Cologne investigated a camp of desert pastoral nomads dated to the end of Dynasty VI.

Giza

Giza is another of most intensively researched locations in Egypt. Most prominent researchers from across the globe include G. B. Belzoni, who worked there in 1819; H. Vyse and J. Perring (1837); K. R. Lepsius (1842–3); F. A. Mariette (1859); W. M. F. Petrie (1880–81, 1907); G. Ch. Maspero (1880–86); E. (1903–20); H. Junker (1912–14, 1926–8); K. Kromer (1971–5); N. Conard (1988–9); Egyptian archaeologists include Selim Hassan, Abu Bakr, Ahmed Fakhry and W. S. Smith, who worked at the site in the years 1946–7. Since the early 1990s, M. Lehner and Z. Hawass directed the American and Egyptian missions, respectively. Furthermore, G. A. Gaballa, E. Brovarski, P. Der Manuelian, A. M. Roth and P. Janosi have recently explored the area.

Helwan

The site, located ca. 25km southeast of Cairo, was excavated from 1942 to 1954 by Z. Y. Saad. Since 1997, investigations have been conducted by Ch. Köhler from Macquarie University, Australia, at present in Vienna.

El Kharafish

The camp occupied by the community of the Sheikh Muftah culture, located ca. 25km north of the Dakhla Oasis, was excavated in 2002 by H. Riemer at the University of Cologne.

Kom el-Hisn

It is a settlement site of a considerable size functioning in Dynasty VI, located in the western Delta and investigated in the seasons 1984, 1986 and 1988 under R. Wenke, the then director of the American Research Center in Egypt.

Mut el Khorab

Research at the temple of Mut el Khorab, in the city of Mut, the capital of the Dakhla Oasis, has been carried out by C. Hope from the Monash University, Australia.

Saqqara

Saqqara is another of the richest and most widely excavated sites. It is located ca. 30km south of Cairo. F. A. Mariette is known to have been the first to work there, exploring Serapeum in 1850. Saqqara was further excavated by G. C. Ch. Maspero in 1886 and J. J. M. de Morgan in 1899. W. B. Emery excavated Early Dynastic tombs during three periods: 1935–8 (alongside Z. Y. Saad and A. Klassens), 1952–6 and in 1964; M. Z. Goneim worked there in 1952 and J. P. Lauer and J. Leclant since 1960. Currently Saqqara has been investigated by a number of archaeologists, to wit: K. Myśliwiec, at the Centre of Mediterranean Archaeology, Warsaw University, who has been exploring the area in the vicinity of the Pyramid of Djoser, including the Old Kingdom tomb of the Merefnebef since 1997; M. J. Raven from the Netherlands and Ch. Ziegler from France. Among the Egyptian researchers, I should mention S. Hassan, Abu Bakr, M. Z. Goneim and A. Fakhry.

Watch-posts at Dakhla

Remains of several watch-posts were found in the Dakhla Oasis. ‘Seth Hill’ was excavated by O. Kaper in 2000 and 2004, and ‘Bee’s Lookout’ in 1999. O. Kaper worked also at watch-posts named ‘Meidum Hill’, ‘Venus Hill’ and ‘Trigpoint Hill’. ‘Nephthys Hill’ was discovered by M. Kleindienst in 1997. Watch-posts codenamed 99/38 and 99/39, located in the present-day desert about 25km south of the village of Ain el-Gazzareen in the central-western part of the Dakhla Oasis, were identified in 1999 by C. Bergman and unearthed in 2000 by R. Kuper and H. Riemer at the University of Cologne.

Tell el Fara'in (Buto)

The site is located in the north-western Delta, about 40km south of today's sea coast. In the 1960s, English archaeologists V. Seton-Williams and D. Charlesworth registered the archaeological record attributable to later periods. In 1983-2007, the Predynastic to early Dynasty III levels were examined by the Deutsches Archäologisches Institut expedition, supervised by T. von der Way and then D. Faltings. From 2001 to 2006, the area was explored by French researchers.

Tell Ibrahim Awad

The site is located in the middle of the eastern Delta, ca. 130km to the north east of Cairo. Since 1986, research at the site has been conducted by the Dutch expedition led by E. K. M. Van den Brink and W. van Haarlem. Excavations produced remains from the Predynastic period to the Middle Kingdom inclusive, together with a burial site from the time of the Dynasty I-II.

Tell el Iswid

Located in the western Delta, 40km to the north west of the town Zagazig, the site was excavated between 1984 and 1987 by a Dutch researcher E. K. M. Van den Brink.

Since 2006, the Institut Français d'Archéologie Orientale has continued research at the site. In 2009, T. Herbich conducted an archaeomagnetic survey in the area.

Tell el Farkha

Tell el Farkha is located in the central western Delta. In the years 1987-9, research at the site was carried out by Italians, under R. Fattovich and S. Salvatori. Since 1998, this rich site dating to the Predynastic and Early Archaic Period has been excavated by Poles from Jagiellonian University, Kraków, and Archaeological Museum in Poznań, under the supervision of K. Ciałowicz and M. Chłodnicki.

Wadi el-Sheikh

The site is located east of the Nile, 160km south of Cairo. A huge quarry, it was exploited virtually at least down to the end of the Middle Kingdom. M. Blankenhorn prospected Wadi el-Sheikh in 1898. H. W. Seton-Karr was the first to explore the quarry in 1905. E. Baumgartel is known to have been at the site in 1930. In 1981, G. Weisberger and J. Kunkel investigated the area, and in 2009, G. Negro and M. Cammelli conducted more extensive excavations at the site.