

“Stone vases are not satisfactory”

On the Importance of Stone Vessels in the Pre- and Early History of Egypt. Examples of Vessel Materials from the Royal Tomb of Den in Abydos

Robert Kuhn, Ägyptisches Museum und Papyrussammlung, Staatliche Museen zu Berlin

Abstract

Stone vessels have so far often been understood as a phenomenon of prestige within Egyptology. However, the study of this material provides a much more comprehensive and exciting insight into the functioning of the various economic networks. As an example of the 1st dynasty, the following section looks at the collection discovered in the royal tomb of Den in Abydos. The processing of the material was intended from the outset as a practical example, which will make it possible to document other stone vessel groups in a similar form in the future and thus make them comparable. In addition, the study of production, sources of raw materials and stone vessels as an important medium for writing in the Early Period plays an important role.

1 Introduction

Similar to pottery, stone tableware represents a special and important category of objects for the archaeology of pre- and protodynastic Egypt. Unlike clay vessels, however, stone vessels are classified in Egyptology and Near Eastern Archaeology as so-called “small finds”¹, not least because of the sometimes unusual and unique raw materials. Rarely, and mostly in elite-tombs, stone vessels with inscription were recorded, and therefore belong to yet another special category in the stone vessel material. On the other hand, stone vessels represent a category of finds, which is also not so often found in cemeteries and settlements, especially not in larger quantities. However, this fact is considerably changing when moving to high-elite contexts such as royal tombs. As will be exemplified in this overview, in the royal necropolis, stone vessels are quite numerous and are considered among the prestige goods of pre- and early dynastic

1 Martin 1993. Some archaeologists list these kinds of objects also in the category of “other objects”: cf. Köhler 2014: 71, even-though stating “artefacts which are not classified as pottery, so-called Small Finds, were ...”.

Egypt as an “obsession of the elites”². They combine several aspects: special raw materials, some of which have to be procured at considerable expense, special manufacturing know-how, their durability, which predestines them to be the first choice for permanent grave goods, and last but not least, a special symbolism of colour and material.³ They are often interpreted as indications of the emergence of the state structure, the formation of a status-orientated elite, and the emergence of specialised crafts.⁴ However, the basis and starting point for these hypotheses remains extremely poor to this day and it is therefore surprising that stone vessels have played a rather subordinate role in Egyptological research literature to date. The focus of research has primarily been typological starting with Jacques de Morgan. However, even these typochronological approaches have hardly been ascribed any great significance, as an important quote from the British archaeologist Guy Brunton illustrates very well: “Stone vases are not satisfactory : they are not sufficiently common ; they were used and re-used in daily life, and very often buried only when worn out.”⁵ In the course of the German Archaeological Institute’s excavations in the tomb of King Den (1st Dynasty) in the necropolis of Abydos, several thousand fragments of stone vessels were documented, which led to a detailed examination and study of the material. Therefore, the following article will highlight and outline some important results and aspects.

2 The stone vessels in the tomb of King Den in Abydos

The royal necropolis at Abydos is situated at a wadi edge and contains elite and royal tombs dating from the late 5th Millennium BCE until the end of the 2nd Dynasty. The tomb of king Den, fifth king of the 1st Dynasty, is situated in the very centre of this necropolis (Figs 1–2). The history of this particular tomb is very complex, resulting from various stages of ancient and modern robbery, secondary burning, and multiple excavations beginning in the late 19th century.⁶ Despite the destruction by Coptic agency and robbery, objects and tomb inventory have been relocated due to the depositions of the Osiris cult-rituals in Antiquity⁷ and different archaeological interventions starting with Émile Amélineau⁸ and William Flinders Petrie⁹.

2 Seidlmayer 2009: 318.

3 Kuhn 2018: 135–139.

4 Hendrickx 2011.

5 Brunton 1927: 6.

6 Müller 2021: 48–54; Müller 2006: 37–38; Müller 1998: 147–149.

7 Müller 2021: 48–54; Müller 2006; Efland/Efland 2013.

8 Amélineau 1899.

9 Petrie 1900; Petrie 1901; further excavations have been undertaken in the area by E. Naville – cf. Naville et al. 1914: 35 with pl. VIII. Another excavation appears to have been carried out by W. B. Emery, although no documentation of this is known to date: cf. Dreyer 1990: 72.

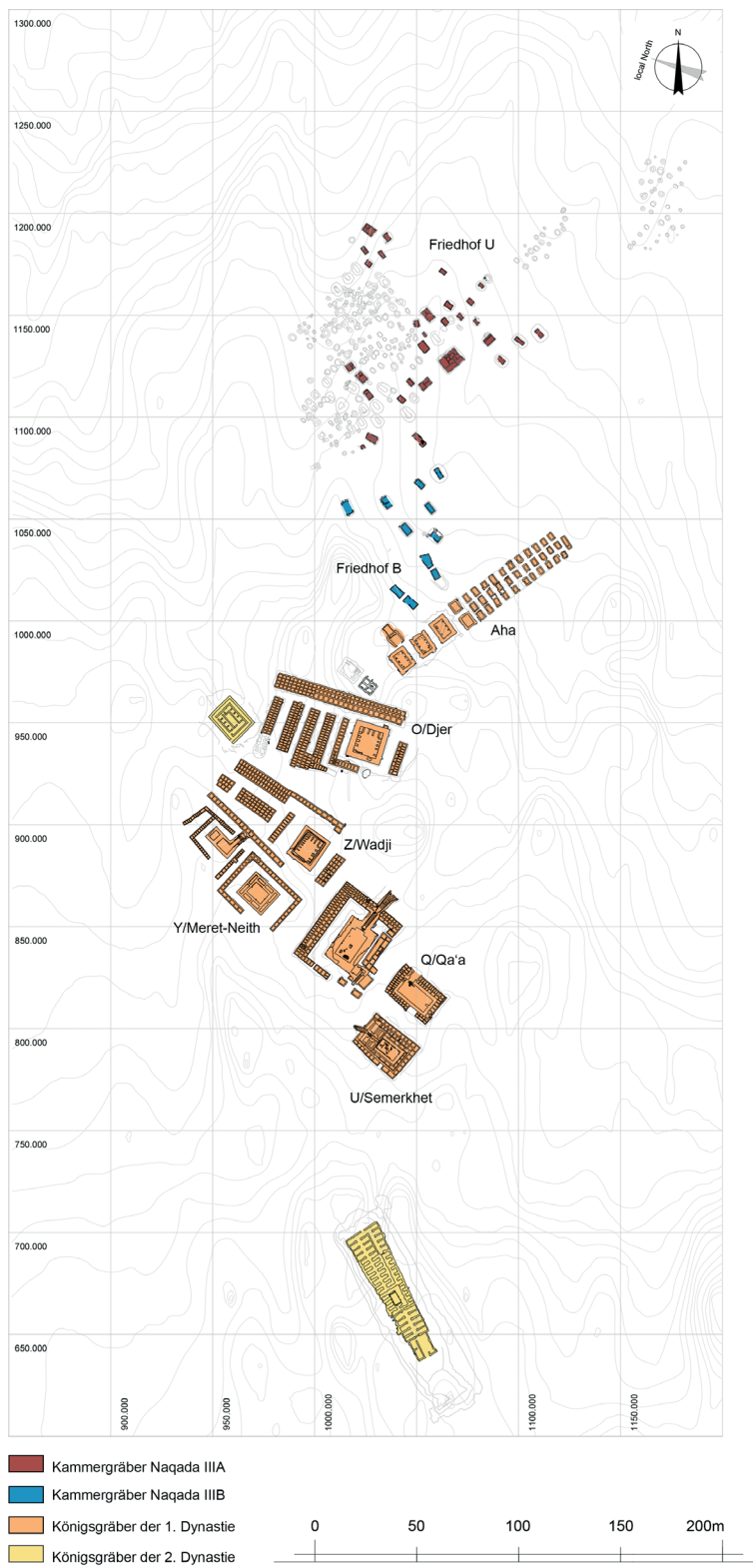


Fig. 1: Plan of the necropolis of Umm el-Qa'ab, Abydos; © DAIK, M. Sählhoff, with kind permission

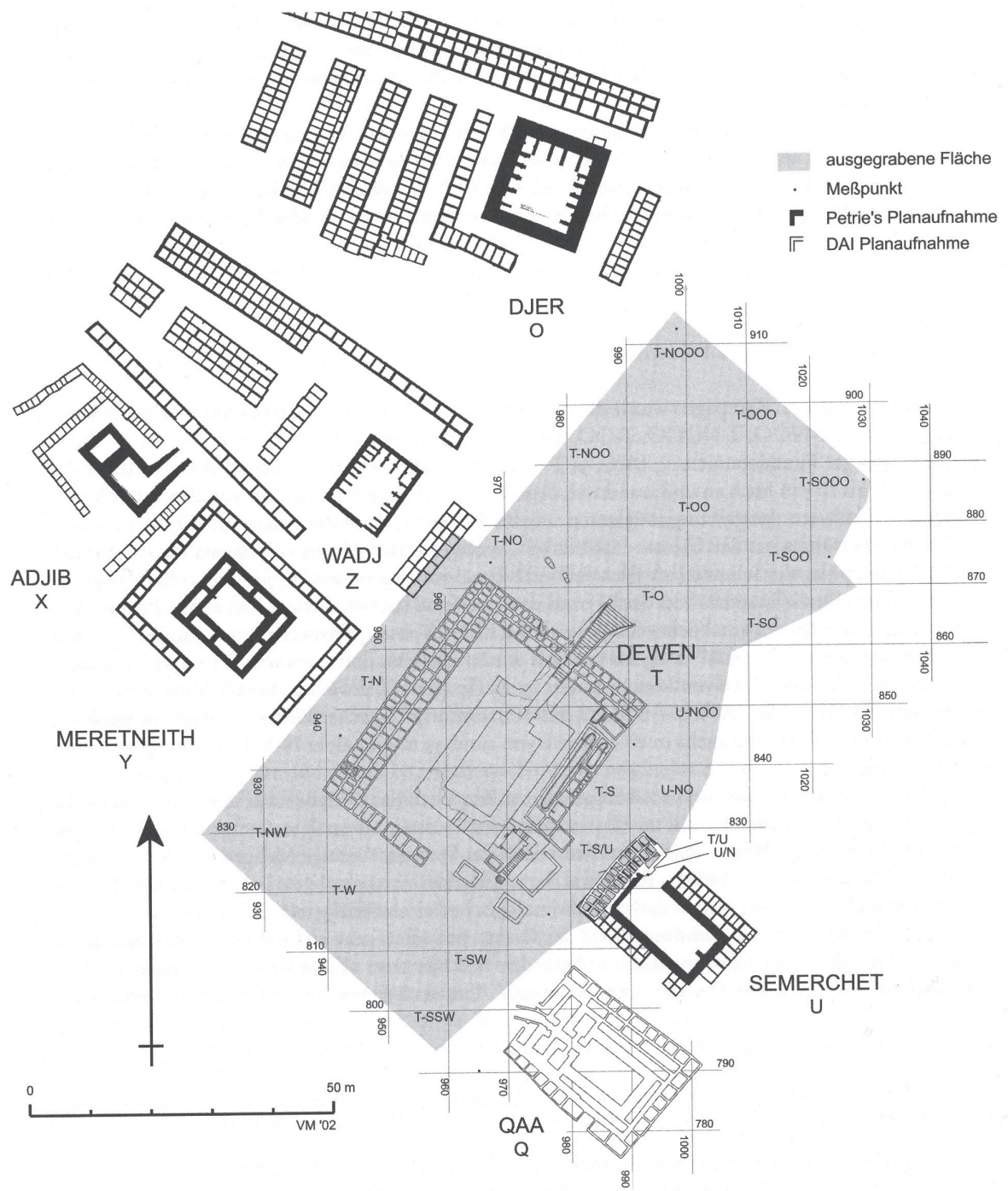


Fig. 2: Plan of the surrounding area of king Den and the spoil-heaps; inlay: V. Müller, 2002, after G. Dreyer et al. 2003: fig. 8; with kind permission

During the re-excavation of the German Archaeological Institute, the tomb of Den as well as most of the surrounding area including the spoil-heaps from previous excavations have been examined by the late Günter Dreyer and Vera Müller.¹⁰ This time-consuming investigation has provided us with a lot of new material and information.

About 20,700 fragments of stone vessels were discovered in the described excavation area.¹¹ In most cases, they were highly fragmented, and hardly any of the objects could be recovered intact or *in situ*. They were found in the king's chamber (Fig. 2, T-KK), in the magazines and in large amounts in the adjacent spoil-heaps. In addition, much of the material shows severe burning and prolonged exposure to heat has caused demineralization and even melting. This mass of finds naturally posed a particular challenge for documentation and processing. Above all, the difficulty that almost none of the pieces were found *in situ* made it important that the origin or context of the find was also recorded on the fragments themselves. This was done by using lightfast markers, and so each fragment was labeled in a lengthy, time-consuming process – a work which was undertaken by the excavator Vera Müller. To process the stone vessels, the next step was to separate the available material into raw materials and then roughly pre-sort them into vessel shapes (Fig. 3). Despite intensive attempts, it was difficult to join the pieces, as burnt and unburnt fragments are sometimes matching, making it a labour-intensive task. Nevertheless, it was possible to reconstruct a certain amount of vessel profiles at the site, as well as with the help of material scattered worldwide in different museums and private collections such as Brussels, London, Berlin, Cairo, and so forth.¹²

2.1 “Typology at all costs...”

In addition to the reconstruction of the vessel forms, it was also an intriguing task to deal with the documentation and typology. Starting with Jacques de Morgan¹³ and William Matthew Flinders Petrie, typological work on the stone vessels was provided in the early days of Egyptology (Fig. 4.) The categories and types published were usually a mix of the raw materials, vessel forms, and the attributed – but mostly speculative – function.¹⁴ The lack of clear and

10 For more details see the preliminary excavations reports: Dreyer 1990: 72–79; Dreyer 1993: 57–60; Dreyer 1998: 141–147; Dreyer et al. 2003: 88–89; Müller 2003: 89–102; Müller 2006: 73–92.

11 Kuhn 2017; Kuhn forthcoming.

12 This is likewise attested for the stone vessels from the tomb of Qa'a: cf. Engel 2017: 352. Already Engel and others have pointed out that many of the possibly joining fragments are housed today at different museums. Although Petrie reported leaving some of the fragments near his excavation house – which to a certain amount could be verified by the American team – it seems likely that a vast part of this material is now housed in the museum in Brussels, the Petrie Museum and to a smaller amount in other collections world-wide.

13 De Morgan 1896. Even if De Morgan never explicitly speaks of a typology, his classification of the stone vessels, which he presents in several illustrations, is at least a first step in dealing with the different forms and variations.

14 This is especially true for the typological work of De Morgan 1896; Petrie 1901; Petrie 1937; Bonnet 1928; Reisner 1931; Emery 1938 sq.; Klasens 1958 sq.; El-Khouli 1978. The approach via the raw material originated, for example, from Alfred Lucas (1930) and, more recently, Barbara G. Aston (1994). Recently, some more authors have followed the approach of presenting the available material via the raw material rather than the vessel form, e.g. Engel 2017.



Fig. 3: Sorting and processing stone vessels in Abydos, © DAI-K, R. Kuhn

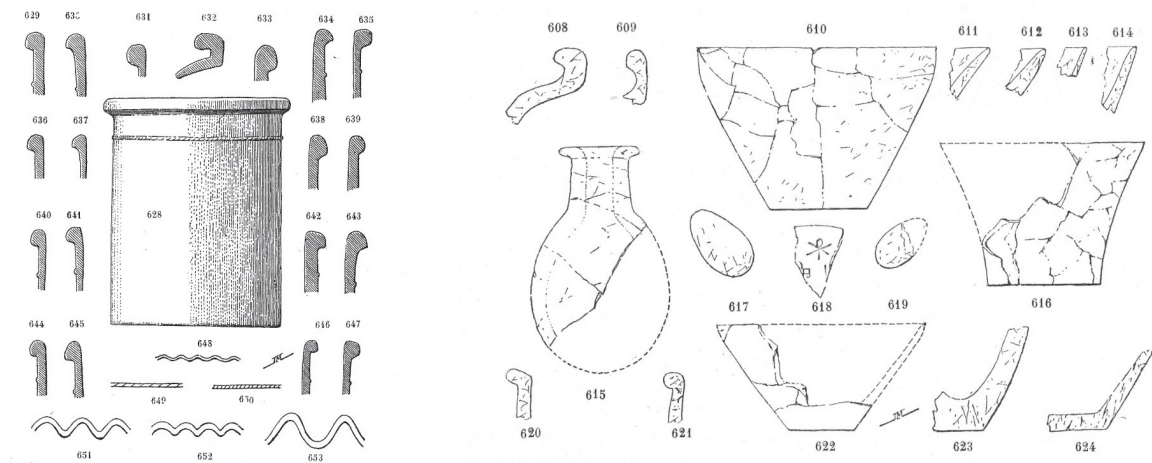


Fig. 4: First attempts towards a typology for stone vessels can be found in the publication by de Morgan 1896: fig. 629–653 (cylindrical beaker made of calcite alabaster); and fig. 608–628 (vessels made of quartz). These vessels were found in the so-called Royal Tomb at Naqada

objective categories, as well as a distinct definition, is problematic and, in the end, not useful for fieldwork. Therefore, most of the stone vessel aficionados are trying to establish their own typology, which of course does not help very much for an inter-side comparison, etc. This is particularly evident in the classification of vessel shapes such as plates, bowls, dishes, and bowls, which can ultimately differ greatly depending on the author. A handbook for this kind of material is still a desideratum in Egyptology.¹⁵

Thus, when reprocessing the Abydos material, a more objective methodology was selected, which is ultimately based on ceramic processing using the vessel index (v_i) and has been established in Egyptology by Rostislav Holthoer and Hans-Åke Nordström.¹⁶ They worked with the help of metrical characteristics that can be clearly assigned to the individual forms. In stone vessel processing, this method was first tested in 1988 in the context of publishing a private collection, but has hardly been used to date.¹⁷ In addition to Rudolf Wellauer, Peter Günther and Petra Vlcková¹⁸ there are above all Stan Hendrickx and Stijn Bielen who have also documented stone vessels, using and adapting the vessel index system,¹⁹ and have recorded as well as documented material from the old excavations at Abydos in this way.²⁰ The result is not only the implementation of an objective and good working system, but also the possibility of comparison with other, already recorded and numerically large convolutes.

Diagnostic material such as rims and bases could be differentiated into restricted (R) and unrestricted (U) vessels and their subclasses (Fig. 5).²¹ In a second step, the nondiagnostic material has been connected with these vessel classes as well.

A quantity of minimum individuals for the very vessel forms could be finally calculated by employing the Estimated Vessel Equivalent-system.²² As a result, at least more than 2,300 different stone vessels were identified in the area of King Den's tomb. A very high percentage of about 43 % can be attributed to cylindrical beakers without (938) and with plastic rope-band application (126 + 209), mainly produced of calcite-alabaster. A high quantity of unrestricted vessel forms, such as cups, bowls, and plates – likewise produced of calcite-alabaster and greywacke – are also present in the material.²³ Although the characteristic “Leitforms” of the 1st dynasty dominate, such as cylindrical beakers, a high variation of about 33 different vessel forms is found in the tomb of Den, some of which are only present in very small quantities: these include, for example, vessels decorated in high relief, imitations of wine jars, miniature and dummy vessels, and so forth (Fig. 6).

15 First attempts were made by Petrie 1937 and Aston in 1994, which should not be minimized at this point, but nevertheless both publications show many gaps and difficulties.

16 Holthoer/Nordström 1977.

17 Günther/Wellauer 1988.

18 Vlcková 2006.

19 Hendrickx 1990; Hendrickx 1994; Bielen 1997; Hendrickx/Bielen/De Paepe 2001.

20 Bielen 1997; Hendrickx/van Winkel 1993; Hendrickx/Bielen/De Paepe 2001; Bielen 2004.

21 Detailed and with a clear breakdown of the individual metric parameters: cf. Hendrickx 1994: 39–41, 52–54.

22 Orton/Tyers/Vince 1993: 168–181.

23 An in depth-presentation of the whole material by the author is in preparation: cf. Kuhn forthcoming.

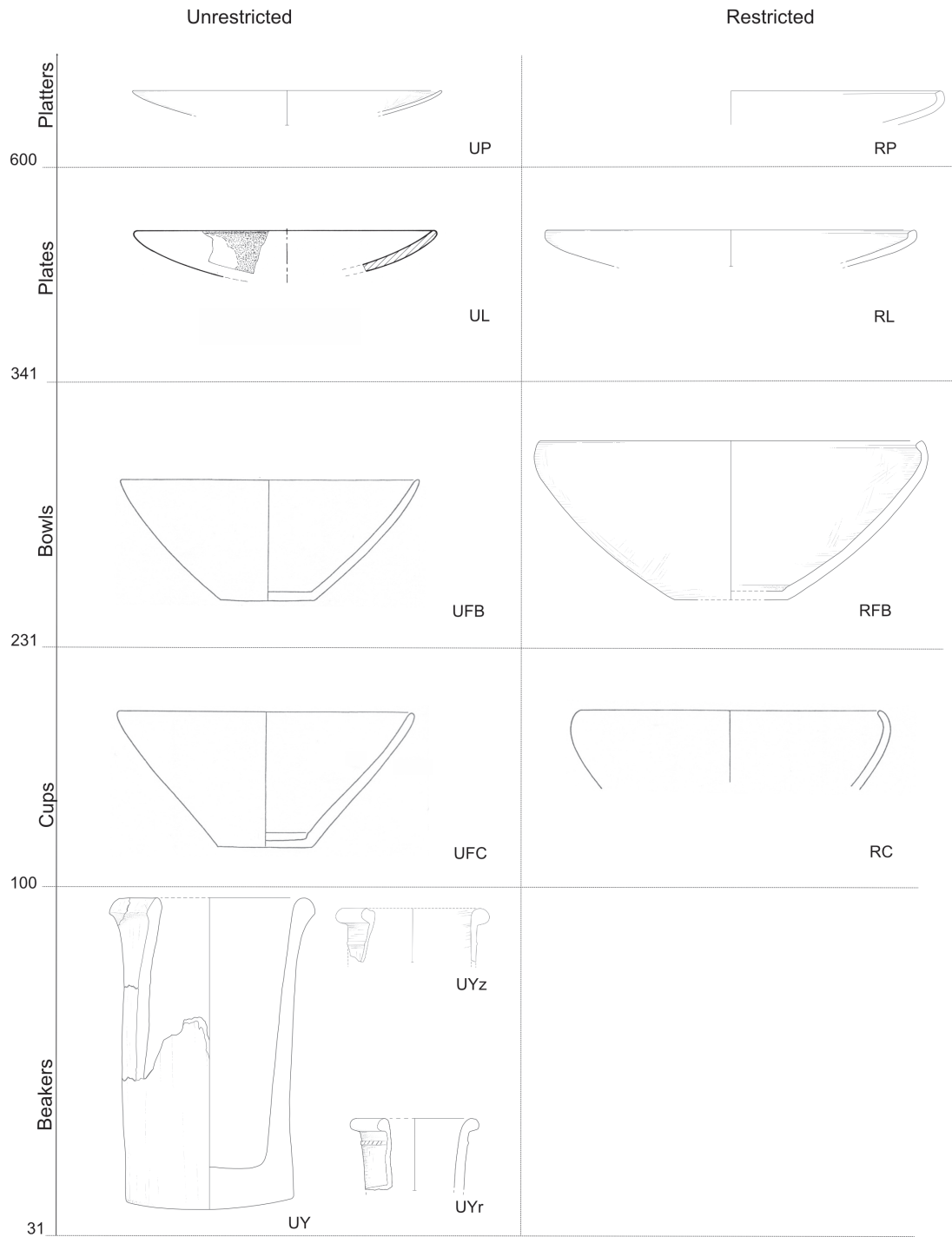


Fig. 5: Dividing the stone vessels by vessel index
 (UP = Unrestricted Platters; RP = Restricted Platters; UL = Unrestricted Plates; RL = Restricted Plates;
 UFB = Unrestricted Flat-based Bowls; RFB = Restricted Flat-Based Bowls; UFC = Unrestricted flat-based
 cups; RC = Restricted cups; UY = Unrestricted Cylindrical jar; UYz = Unrestricted Cylindrical jar with plastical
 band; UYr = Unrestricted Cylindrical jar with incised plastical band (incision pointing to the right)

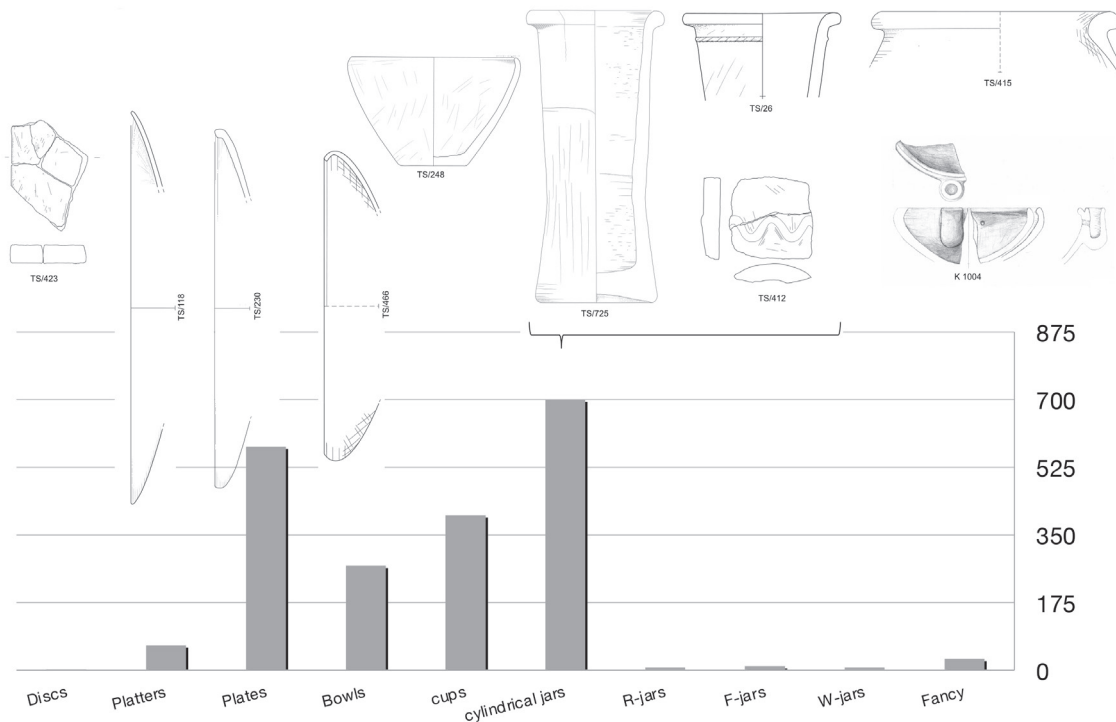


Fig. 6: Overview of the different stone vessel classes in the tomb of king Den at Abydos

2.2 On trading networks and the question of raw materials

Concerning raw materials, it is interesting to note that even though calcite-alabaster and greywacke dominate, a substantial variety of 17 different stones and minerals have been used to produce these vessels. In addition to others, dolomite, limestone, granite, obsidian and rock-crystal are attested. Due to the raw material, further questions arise regarding the type and method of processing (for example problems of hardness and structure), as well as possible transport routes and even networks (raw material sources). The so far known geological sources of these materials in the Nile Valley²⁴ and the surrounding areas (e.g. Ethiopia for obsidian²⁵) point already to the existence of extensive networks, probably centrally organised and led by the king and his elite. One problem remains, however, as for many rocks there are no longer any clear traces of extraction from pre-dynastic and early dynastic times, which is due not least to the

24 Klemm/Klemm 2008; Aston/Harrell/Shaw 2000: esp. 5–20; Aston 1994.

25 Bavay/De Putter/Adams et al. 2000: 5–20; Giménez/Sánchez/Solano 2015: 349–359.

long mining traditions of these deposits up to the present day. The individual origin of rocks can therefore not (yet) always be determined with certainty.

The networks would probably start with the survey for appropriate raw materials, continuing with the selection of suitable blocks to the rough portioning at the site²⁶, and finally further transport to the appropriate specialized workshops. Due to the mostly still poor written evidence from the time, many of these steps remain uncertain, but indeed, they imply a clear and detailed organisation. This applies not only to the production of vessels in the workshops. The sheer mass of the objects as well as the perfection of the processing, up to the shiny polished surfaces reflects how excellently the craftsmen could handle the raw material. Many of the individual steps of the *chaîne opératoire* may at least be inferred from experimental archaeological investigations.²⁷ The similarity of the finished products in the individual vessel classes as well as the existence of size-based sets within these, also show that these objects were probably produced in groups as a step towards mass production by central and specialised workshops as well as technical know-how.²⁸

Compared to other convolutes published so far from Pre- and Early Dynastic tombs, the quantity of vessels found in Den's tomb is enormous and just surpassed by Djoser in the early 3rd Dynasty – although the latter has never been studied or documented *in toto* yet.²⁹ So far, however, only a fraction of the comparable stone vessel material is available with good documentation and publication. The tomb of Qa'a, last king of the 1st Dynasty, published by Eva-Maria Engel, should therefore be mentioned as particularly important. Engel recorded about 3,726 fragments of stone vessels, which can be attributed after her calculation to about 386 different vessels made of 14 different stones/minerals.³⁰ It is worth comparing these numbers also with other contemporary cemeteries, e.g. the elite necropolis of Saqqara – here in particular the tombs of the viziers Hemaka (S 3035)³¹ and Ankh-Ka (S 3036)³² – as well as other Memphite cemeteries. In the tomb of Hemaka (S 3035), Walter B. Emery documented about 328 stone vessels made of 11 different raw materials (cf. Tab. 1 below), all of which have been discovered in the burial chamber.³³ In the Memphite region there are other cemeteries and elite-tombs contemporaneous with the regency of King Den: Macramallah,³⁴ Abusir,³⁵

26 This is indicated, for example, by the semi-finished products such as slate palettes made of graywacke as well as a small amount of semi-finished stone vessels found in the Wadi Hammamat: cf. Harrell/Bloxam/Kelany 2014: 11–30.

27 Hester/Heizer 1981 were working foremost on ethnographic observations, as well as El-Khouli 1978; experimental-archaeological approaches are presented by Stocks 2003; Kuhn/Lehmann in press; Kuhn forthcoming. A very detailed documentation on stone vessel material contemporary to that of the royal tomb of Dewen has been published by Takenouchi 2021, who is particularly taking into account the traces resulting from the production of the vessels.

28 Costin 1991; this problem is exemplified in more detail: Kuhn in press; Kuhn/Lehmann in press.

29 The excavators Pierre Lacau und Jean-Phillipe Lauer have, however, published the stone vessels with inscriptions: Lacau/Lauer 1959; Lacau/Lauer 1965. An overview of the remaining vessels and vessel types in king Djoser's tomb is only available in the form of preliminary reports such as Quibell 1936: 76–80.

30 Engel 2017: 352–409.

31 Emery 1938.

32 Emery 1949.

33 Emery 1938: 55–61; Kuhn forthcoming.

34 Macramallah 1940.

35 Bonnet 1928; Blaschta 2011.

Abu-Rawash,³⁶ and Helwan³⁷. A first rough comparison of the tomb inventories with the royal tombs in Abydos shows that a significantly lower quantity of stone vessels per grave is recorded. Although there is evidence of more than 100 stone vessels per grave in the elite burials of the Emery-cemetery, there are often only 2 to about 20 stone vessels³⁸ per grave in the so-called middle-class cemeteries of the Memphite region. Furthermore, it is obvious that, especially in less rich equipped and smaller tombs, there is a tendency of less variety concerning the raw material. While calcite-alabaster and limestone, and more rarely graywacke, predominate, other rocks and minerals are extremely rare. The tendency here may be that the variance in the raw material used, as well as the quantity of stone vessels, can be interpreted as an indicator of status of the deceased in the 1st Dynasty (Tab. 1).

Tab. 1: Overview of the quantity of fragments of the stone and mineral materials used for the production of stone vessels (data: Emery 1938 [Hemaka]; Engel 2017 [Qa'a]; Emery 1949 [Ankh-Ka]; Emery 1959: 119–120 [S 3121])

	Dewen	Hemaka	S 3121	Ankh-Ka	Qa'a
Calcite-Alabaster	12089	167	15	20	2129
Greywacke	5860	133	8	19	1068
Alabaster	35	0	0	0	76
Limestone	329	8	0	3	184
Dolomite	1401	2	1	2	165
Rock Crystal	199	4	0	4	48
Serpentine	58	0	0	0	23
Basalt	38	0	0	3	2
Granite	17	0	0	0	1
Andesit-Porphyr	173	5	0	3	2
Diorite	210	23	0	7	9
Anorthosit-Gneis	46	0	0	0	3
Obsidian	10	0	0	0	3
Breccia	101	2	0	0	0
Metabolit	1	0	0	0	0
Tuff	34	15	0	12	0
Conglomerate	169	0	0	0	0
unknown	298	1	0	0	0

36 Montet 1938; Montet 1946; Klasens 1958; Klasens 1960.

37 Köhler 2014; Köhler 2017.

38 Some of the tombs stand out with a remarkable quantity of stone vessels like the tomb 4/94 with 54 dummy vessels made of limestone and some other stone vessels as well (cf. Köhler 2017: 377–379). These tombs are, however, already mostly belonging to a younger phase of early Egyptian history – late 2nd Dynasty, or even the transitional phase to the 3rd Dynasty. Interesting are also graves like 4/114 and 4/91 in Helwan, which stand out by the variety of 8 respectively 9 different raw materials: cf. Köhler 2021: 73; 159–174 (tomb 4/114); Köhler 2017: 333–347 (tomb 4/91). These mentioned tombs do also belong to the older phase of the cemetery and are dated by the excavator into their phases IIID1 (4/91) and IIID2 (4/114), which corresponds roughly with the Hendrickx chronology Naqada IIID1 and IIID2, so the early 2nd Dynasty.

2.3 Reddite ergo quae sunt Den ...

In addition to this “quantity problem” it has of course to be asked, if these 20,700 fragments found in the area of king Den’s tomb truly belong to the original tomb inventory of that king. The tomb itself is located in the very centre of the 1st Dynasty royal necropolis and is therefore surrounded by the tombs of Queen Meret-Neith, king Adj-ib and Djet in the north-western section, and the tombs of Semer-khet and Qa’u in the eastern and south-eastern area (Figs 1–2).

As the material connected with the tomb of Den has been found scattered in a wide range in all directions, it was imperative to document all the finds and to map them by context and vessel class to obtain an overview of their distribution. About 5 % of the rim fragments of plates, for example, (almost 1,000 fragments) has been found in the filling of the king’s chamber (T-KK), while a lot of more material derives from the spoil-heaps surrounding the tomb. Although none of the vessels has been found *in situ*, vessel impressions in the magazines like in S16 could be recorded. It cannot, however, be assured if these impressions derive from the deposition of pottery or stone vessels as a very comparable variation of forms and dimensions is to be found for both materials. However, there is also evidence for the deposition of stone vessels such as cylindrical beakers in wooden boxes,³⁹ which has also been attested for miniature vessels at sites such as Minshat Abu Omar⁴⁰ for the 1st Dynasty and the Qubbet el-Hawa cemetery⁴¹ for the Middle Kingdom.

Re-excavating the southern and eastern spoil-heaps showed, that a lot of inscribed objects with the name of king Den have been found, so that it is quite clear that these spoil-heaps are connected to the former excavations of the tomb of this particular king. This holds also true for the area in the east of the king’s chamber, which can be easily explained with the staircase giving access to the burial chamber. More problematic is the interpretation of the convolute deriving from the northern and western spoil-heaps. Typologically, the vessel fragments date to the 1st Dynasty, but more than 1/3 of the material shows secondary burning. Additionally, some of the fragments join with others deriving from the king’s chamber or the eastern part, so that one can again argue for a connection with the original burial of Den. However, a mixture of vessels from other royal tombs nearby has to be taken into account as well.

An interesting area is also the so-called ‘Annex’ and the two southern chambers S 1 and S 2, where 156 fragments of cylindrical beakers and other open forms, mainly cups and bowls, have been recorded. Taking up Dreyer’s proposal, which considers that this feature was used as the main offering space,⁴² the vessels might very well have played a role during special offering rituals while closing the burial chamber.

39 Jones/Killen 2008: 290–292.

40 Kroeper 1985; Kroeper/Krzyzaniak 1992: 90.

41 García González 2022: 164–165.

42 Dreyer 2010.

2.4 Function beats form ...

A characteristic feature of older typologies was the mixture of references connecting form and function. For example, wine jugs and cosmetic vessels were openly denoted as such without any corresponding chemical investigations or evidence confirming that they truly contained such contents. The function was often borrowed, mostly from depictions of vessels in reliefs and sealings, some of which also name vessel contents.⁴³ However, it remains crucial to note that the vessels – including the stone vessels – first and foremost represent containers that could be used to store a wide variety of things. Although there is no doubt that there are similarities between the depictions and the vessels, the actual function of each vessel remains simply hypothetical without appropriate investigation. Therefore, it was also interesting to note that in 2 % (331 fragments) of the stone vessels in Den’s tomb, evidence of the former vessel contents could be visibly detected macroscopically. The vessel fragments could not be sampled on the excavation itself at the time of their documentation. However, chemical tests are currently being carried out on the vessel material in the Berlin collection. In purely macroscopic terms, the remains of the contents are reminiscent of burnt oils, ointments, and fats, which has already been demonstrated in the museum sampling as well.⁴⁴ Besides oily substances, which are also known from the written records, other contents should be considered. For example, we could find traces of a backlog of a copper chisel in a calcite-bowl. The latter reminds us of the general possibility of the multifunctional use of these vessels. Compared to other convolutes of this time, most of the vessels in Den’s tomb could also have been deposited empty or as kind of *pars pro toto*. Interestingly, for most of the cylindrical beakers with rope decoration (Fig. 7), almost no trace of any content at all could be ascertained. In connection with the imitation of the rope band deriving from the sealing, this might be explained by the fact that these vessels are already sealed and filled *qua* decoration.

The distribution of the stone vessel fragments from Den’s tomb shows a high probability of actual deposition in the main burial chamber of the king. Interestingly, this hypothesis fits quite well with Eva-Maria Engel’s observations for the royal tomb of Qa’a⁴⁵ as well as the observations made in tombs of the high-elite at Saqqara. The stone vessels – like other cosmetic equipment such as slate palettes – belong to a special class of objects, usually buried next to the body of the deceased. This might be due to the characteristics of the material, especially its durability connected with a certain colour symbolism.⁴⁶

43 The Egyptologist Heinrich Balcz presented some important ideas on this problem in a series of articles in the *Mitteilungen des Deutschen Archäologischen Institutes Abteilung Kairo*: cf. Balcz 1932–1934.

44 Kuhn forthcoming.

45 Engel 2017: 353.

46 Baines 2007; Kuhn 2018.

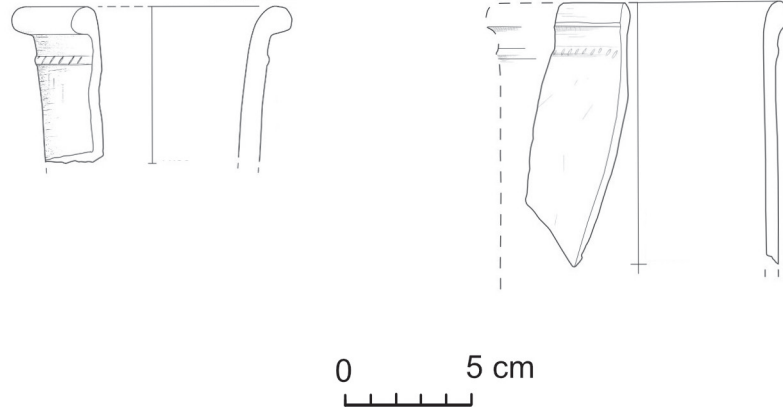


Fig. 7: Rim fragments of cylindrical beakers: a. TS/0735, made of calcite-alabaster, drawing: R. Kuhn; b. TS/0646, made of greywacke, drawing: R. Kuhn

2.5 Hence, inscriptions beat everything ...

From the very beginning, Egyptologists did not care too much about materials and forms but rather, of course, about the inscriptions on these vessels. During the re-excavations by the German Archaeological Institute, 43 new inscriptions could be found which now complete the so far known published material.⁴⁷ Taking into consideration the whole material known so far from the tomb of Den which is scattered today across different museums, private collections and known from the older excavation reports, it is nevertheless striking that just very few stone vessels were inscribed and deposited in the royal tomb. Incised inscriptions – the largest amount –, ink inscriptions as well as very few vessel fragments with inscriptions in high-relief could be recorded. More marks on vessels that cannot be definitively ascertained as script have been detected, and may have played a role similar to the so-called pot-marks on pottery.⁴⁸ The information provided by the convolute concerns mostly names of persons, gods, feasts, and institutions. The name of a product also appears twice, which could be interpreted as the name of the actual content: *št*⁴⁹.

Chronologically, and regarding the deposition, by far the most interesting convolute concerns the stone vessel fragments with royal names. In addition to the tomb owner Den himself, the name of almost every ruler of the 1st Dynasty – including the name of Queen Meret-Neith –

47 A first overview with some examples: Kuhn 2017: 75–79; Kuhn forthcoming.

48 As the literature has not yet recorded other examples for this phenomenon it remains to be seen what purpose and distribution can be connected with them. For the recent discussion of the interpretation of pot-marks on pottery cf. Bréand 2005: 17–30; Mawdsley 2009: 197–219; Engel 2015: 55–70.

49 The reading of the word is not assured yet. It may be hypothesized that it is a short version for *jšd* (*balanites aegyptiaca*) and therefore a well-known product for the time period of the 1st Dynasty. One of the examples was already found by W. M. F. Petrie 1901: pl. XXV.16 in the tomb of king Den. For the plant and its use in medical recipes cf. Germer 2008: 35–37; 207–208.

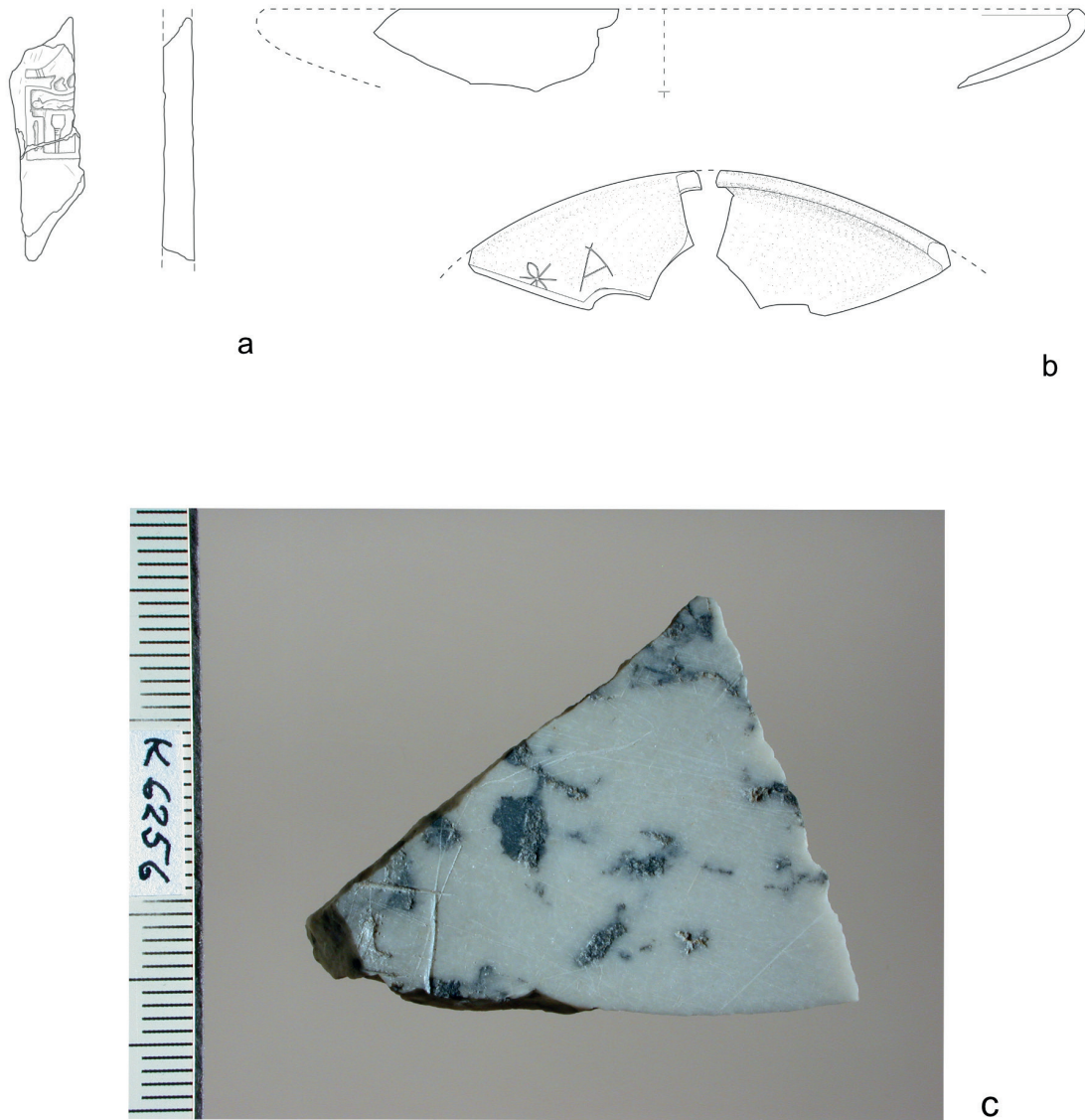


Fig. 8: Stone vessel fragments naming royal kings of the 1st Dynasty: a. Nar(-mer), Ab K 5093, Calcite-Alabaster; drawing: R. Kuhn; © DAIK; b. Queen (?) Merit-Neith, Ab K 5090a, graywacke, drawing: R. Kuhn, © DAIK; c. Qa'a (?), Ab K 6256, dolomite, photograph: F. Barthel, © DAIK

has been found within Den's material. These fragments could very well be inherited heirlooms (like the one of Nar(-mer)⁵⁰; Fig. 8) or derived from the surrounding tombs as well, as it is for sure the case for the fragment naming Qa'a, which on top of that has been found in the western spoil-heaps.

50 Kuhn 2017: 78–79.

Besides the naming of a second Sed-festival for the reign of Den⁵¹, which is now likewise attested by a seal impression found by Müller, institutions such as *pr-ḥd* – the treasury –, and one example with the evidence for a royal domain have been documented. The latter provides further information on the question of storage and distribution of these prestigious goods.⁵²

3 Conclusion

Whether the stone vessels were also used as a luxury tableware in everyday life, especially by the elite – some show traces of repair –, cannot be conclusively affirmed yet, due to the lack of evidence from the settlements. However, the known material from the tombs indicates that these were very likely luxury items, which served as durable tableware for the afterlife, as storage containers for other luxury goods such as oils and, in addition, they may also have been related to the funeral and burial rituals that were performed when the tombs were closed and visited.

Therefore, examining stone vessels is interesting in different aspects such as the raw material, the technical problems of the manufacturing processes as well as the distribution and final deposition and use of these items. All of these aspects help us to understand the economical networks and crafts in Pre- and Early Dynastic Egypt much better. Stone vessels are by no means boring as lamented by Guy Brunton – it remains an exciting topic, which is far from being conclusively clarified.

Acknowledgements

This work could not have been completed without the support and help of Vera Müller and the late Günter Dreyer; for both, I am particularly grateful. Further research on the material of other collections such as the one in Brussels and Berlin was made possible by the kind support of the late Stan Hendrickx, the late Dirk Huyge, Luc Delvaux and Friederike Seyfried. The main part of this research was compiled as part of my PhD Dissertation, presented at the University of Bonn in 2017. Therefore, I would also like to thank my supervisors for their kind support and guidance: Ludwig Morenz and Friederike Seyfried. Pia Lehmann, the conservator for stone of the Berlin Museum, has brought many details concerning the question of the vessel production to my attention – I have to thank her for her support and for her insight concerning new ideas and hypotheses. I am deeply indebted to Ana Díaz Blanco for improving the English – all remaining errors are of course the ones of the author.

51 Dreyer 1990.

52 For the concept cf. Breuer 1990; Costin 1991; these ideas will be explained in more detail in Kuhn in press.

References

- Amélineau 1899: Amélineau, E., *Les nouvelles fouilles d’Abydos 1895–1896: Compte rendu in extenso des fouilles, description des monuments et objets découverts*, Paris 1899.
- Aston 1994: Aston, B. G., *Ancient Egyptian Stone Vessels. Materials and Forms*, Studien zur Archäologie und Geschichte Altägyptens 5, Heidelberg 1994.
- Aston/Harrell/Shaw 2000: Aston, B. G./Harrell, J. A./Shaw, I., Stone, in: Nicholson, P. T./Shaw, I. (eds), *Ancient Egyptian Materials and Technology*, Cambridge 2000, 5–77.
- Balcz 1932: Balcz, H., Die Gefäßdarstellungen des Alten Reiches, in: *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 3, 1932, 50–114.
- Balcz 1933: Balcz, H., Die Gefäßdarstellungen des Alten Reiches, in: *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 4, 1933, 18–36; 207–227.
- Balcz 1934: Balcz, H., Die Gefäßdarstellungen des Alten Reiches, in: *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 5, 1934, 45–94.
- Baines 2007: Baines, J., *Visual & Written Culture in Ancient Egypt*, New York 2007.
- Bavay/De Putter/Adams et al. 2000: Bavay, L./De Putter, T./Adams, B./Navez, J./André, L., The Origin of Obsidian in Predynastic Upper Egypt, in: *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 56, 2000, 5–20.
- Bielen 1997: Bielen, S., *Het stenen vaatwerk in tuff, mudstone, basalt en grauwaske uit de graven van de koningen van de nulde, eerste en tweede dynastie te Abydos / Oemm el-Qa’ab*, unpubl. Licentiaat an der Katholieke Universiteit Leuven 1997.
- Bielen 2004: Bielen, S., The Funerary Objects from the Early Dynastic Royal Tombs at Abydos in the Royal Museums of Art and History Brussels, in: Hendrickx, S./Friedman, R. F./Cialowicz, K. M./Chlodnicki, M. (eds), *Egypt at its Origins. Studies in Memory of Barbara Adams*, *Orientalia Lovaniensia Analecta* 204, Leuven 2004, 621–635.
- Blaschta 2011: Blaschta, D., Aufgestöbert – Eine Leipziger Ausgrabung auf dem frühdynastischen Gräberfeld von Abusir aus dem Jahre 1910, in: Kuhn, R./Morenz, L. D. (eds), *Vorspann oder formative Phase? Ägypten und der Vordere Orient 3500–2700 v. Chr.*, *Philippika Marburger altertumskundliche Abhandlungen* 48, Wiesbaden 2011, 83–108.
- Bonnet 1928: Bonnet, H., Ein frühgeschichtliches Gräberfeld bei Abusir, *Veröffentlichungen der Ernst von Sieglin Expedition in Ägypten*, Leipzig 1928.
- Bréand 2005: Bréand, G., Les Marques et graffiti sur poteries de l’Égypte pré- et protodynastique. Perspectives de recherches à partir de l’exemple d’Adaima, in: *Archéo-Nil* 15, 2005, 17–30.
- Breuer 1990: Breuer, S., *Der archaische Staat. Zur Soziologie charismatischer Herrschaft*, Berlin 1990.
- Brunton 1927: Brunton, G., *Qau and Badari I*. *British School of Archaeology in Egypt* 44, London 1927.
- Costin 1991: Costin, C. L., Craft Specialization: Issues in Defining, Documenting, and Explaining the Organization of Production, in: *Journal of Archaeological Method and Theory* 3, 1991, 1–56.

- De Morgan 1896: De Morgan, J., *Recherches sur les origines de l'Égypte II. Ethnographie préhistorique et le tombeau royal de Négadah*, Paris 1896.
- Dreyer 1990: Dreyer, G., IV. Grabkomplex des Dewen, in: Dreyer, G./Engel, E./Hartung, U./Hikade, T./Köhler, E. C./Pumpenmeier, F./Driesch, A. von den/Peters, J., Umm el-Qaab. *Nachuntersuchungen im frühzeitlichen Königsfriedhof, 3./4. Vorbericht*, in: *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 46, 1990, 72–81.
- Dreyer 1993: Dreyer, G., Umm el-Qaab – *Nachuntersuchungen im frühzeitlichen Königsfriedhof, 5./6. Vorbericht*, in: *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 49, 1993, 23–62.
- Dreyer 1998: Dreyer, G., IV. Grab des Dewen, in: Dreyer, G./Hartung, U./Hikade, T./Köhler, E. C./Müller, V./Pumpenmeier, F., Umm el-Qaab – *Nachuntersuchungen im frühzeitlichen Königsfriedhof, 9./10. Vorbericht*, in: *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 54, 1998, 141–147.
- Dreyer et al. 2003: Dreyer, G./Hartmann, R./Hartung, U., Umm el-Qaab – *Nachuntersuchungen im frühzeitlichen Königsfriedhof, 13./14./15. Vorbericht*, in: *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 59, 2003, 67–138.
- Effland/Effland 2013: Effland, A./Effland, U., *Abydos. Tor zur ägyptischen Unterwelt*, Darmstadt 2013.
- El-Khouli 1978: El-Khouli, A., *Egyptian Stone Vessels. Predynastic Period to Dynasty III. Typology and Analysis*, *Sonderschriften des Deutschen Archäologischen Instituts Abteilung Kairo* 5, Wiesbaden 1978.
- Emery 1938: Emery, W. B., *The Tomb of Hemaka, Excavations in Saqqara* 18, Cairo 1938.
- Emery 1949: Emery, W. B., *Great Tombs of the First Dynasty I, Excavations at Saqqara* 20, Cairo.
- Engel 2015: Engel, E.-M., *Schrift oder Marke? Ein neuer Ansatz zur Lesung der Ritzmarken der Frühzeit*, in: Amstutz, H. et al. (eds), *Fuzzy Boundaries. Festschrift für Antonio Loprieno I*, Hamburg 2015, 55–70.
- Engel 2017: Engel, E.-M., *Umm el-Qaab VI. Das Grab des Qa'a. Architektur und Inventar*, *Archäologische Veröffentlichungen* 100, Wiesbaden 2017.
- Petrie 1900: Petrie, W. M. F., *The Royal Tombs of the First Dynasty I, Memoir of the Egypt Exploration Fund* 18, London 1900.
- Petrie 1901: Petrie, W. M. F., *The Royal Tombs of the First Dynasty II, Memoir of the Egypt Exploration Fund* 21, London 1901.
- Petrie 1937: Petrie, W. M. F., *Funeral Furniture of Egypt with Stone and Metal Vases*, *British School of Archaeology in Egypt* 59, London 1937.
- García González 2022: García González, L., *Cosmetic Box*, in: de la Torre Robles, Y./Jiménez Serrano, A. (eds), *A Decade of Excavations in Qubbet el-Hawa. The Results of the University of Jaén. Catalogue of the Exhibition*, Jaén 2022, 164–165.
- Germer 2008: Germer, R., *Handbuch der altägyptischen Heilpflanzen*, *Philippika Marburger altertumskundliche Abhandlungen* 21, Wiesbaden 2008.

- Giménez/Sánchez/Solano 2015: Giménez, J./Sánchez, J. A./Solano, L., Identifying the Ethiopian Origin of the Obsidian Found in Upper Egypt (Naqada Period) and the Most Likely Exchange Routes, in: *Journal of Egyptian Archaeology* 101, 2015, 349–359.
- Günther/Wellauer 1988: Günther, P./Wellauer, R., *Ägyptische Steingefäße der Sammlung Rudolph Schmidt Solothurn, Ägyptologische Hefte des Orientalischen Seminars der Universität Zürich* 2, Zürich 1988.
- Harrell/Bloxam/Kelany 2014: Harrell, J./Bloxam, E./Kelany, A., Investigating the Predynastic Origin of Greywacke Working in the Wadi Hammamat, in: *Archéo-Nil* 24, 2014, 11–30.
- Hendrickx 1990: Hendrickx, S., Une importante collection de vases égyptiens en pierre, in: *Bulletin des Musées Royaux d'Art et d'Histoire* 61, 1990, 5–46.
- Hendrickx/van Winkel 1993: Hendrickx, S./van Winkel, C., Fragments de recipients décorés en pierre provenant de la nécropole royale des premières dynasties à Abydos (Haute-Égypte), in: *Bulletin des Musées Royaux d'Art et d'Histoire* 64, 1993, 5–38.
- Hendrickx 1994: Hendrickx, S., *Elkab V. The Naqada III Cemetery*, Bruxelles 1994.
- Hendrickx 2011: Hendrickx, S., Crafts and craft specialization, in: Teeter, E. (ed.), *Before the Pyramids. The Origins of Egyptian Civilization*, Oriental Institute Museum Publications 33, Chicago 2011, 93–98.
- Hendrickx/Bielen/de Paepe 2001: Hendrickx, S./Bielen, S./de Paepe, P., Excavating in the Museum: The Stone Vessel Fragments from the Royal Tombs at Umm el-Qaab in the Egyptian Collection of the Royal Museums for Art and History at Brussels, in: *Mitteilungen des Deutschen Archäologischen Instituts*, Kairo 57, 2001, 73–108.
- Hester/Heizer 1981: Hester, T. R./Heizer, R. F., Making Stone Vases: Ethnoarchaeological Studies at an Alabaster Workshop in Upper Egypt, in: *Monographic Journals of the Near East*, Occas. Papers 1/2, 1981, 21–66.
- Holthoer/Nordström 1977: Holthoer, R./Nordström, H.-A., *New Kingdom Pharaonic Sites. The Pottery*, Scandinavian Joint Expedition to Sudanese Nubia 5:1, Lund 1977.
- Jones/Killen 2008: Jones, J./Killen, J., New Evidence of Jar Storage and Stabilisation Techniques Found in the Spoil Heaps Associated with the Tomb of Den, in: Müller, V./Engel, E./Hartung, U. (eds), *Zeichen aus dem Sand. Streiflichter aus Ägyptens Geschichte zu Ehren von Günter Dreyer*, Menes 5, Wiesbaden 2008, 283–293.
- Köhler 2014: Köhler, E.-C., Helwan III. Excavations in Operation 4, Tombs 1–50, *Studien zur Archäologie und Geschichte Altägyptens* 26, Rahden/Westfalen 2014.
- Köhler 2017: Köhler, E.-C., Helwan IV. Excavations in Operation 4, Tomb 51–100, *Studien zur Archäologie und Geschichte Altägyptens* 28, Rahden/Westf. 2017.
- Köhler 2021: Köhler, E.-C., Helwan V. Excavations in Operation 4, Tombs 101–150, *Excavations at Helwan* 1, Rahden/Westfalen 2021.
- Klasens 1958: The Excavation of the Leiden Museum of Antiquities at Abu-Roash. Report of the First Season: 1957, Part II, in: *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden te Leiden* 39, 1958, 20–31.

- Klasens 1960: The Excavation of the Leiden Museum of Antiquities at Abu-Roash. Report of the Third Season: 1959, Part I, in: *Oudheidkundige Mededelingen uit het Rijksmuseum van Oudheden te Leiden* 41, 1960, 66–94.
- Klemm/Klemm 2008: Klemm, D./Klemm, R., *Stones and Quarries in Ancient Egypt*, London 2008.
- Kroeper 1985: Kroeper, K., Some Stone Vessels From Minshat Abu Omar – Eastern Delta, in: *Varia Aegyptiaca* 1, 51–57.
- Kroeper/Krzyzaniak 1992: Kroeper, K./Krzyzaniak, L., Two Ivory Boxes from Early Dynastic Graves in Minshat Abu Omar, in: Friedman, R. F./Adams, B. (eds), *The Followers of Horus. Studies Dedicated to Michael Allen Hoffman*, Egyptian Studies Association 2, Oxford 1992, 207–214.
- Kuhn 2017: Kuhn, R., Steingefäße, in: Dreyer, G. et al., *Umm el-Qaab – Nachuntersuchungen im frühzeitlichen Königsfriedhof, 25./26./27. Vorbericht*, in: *Mitteilungen des Deutschen Archäologischen Institutes Kairo* 73, 2017, 74–78.
- Kuhn 2018: Kuhn, R., Imitation – Produktschwindel oder Innovation? Nachahmungen von Gefäßen in Stein während der formativen Phase ausgehend vom Königsgrab des Dewen in Abydos, in: *Mitteilungen des Deutschen Archäologischen Institutes Kairo* 74, 2018, 123–146.
- Kuhn forthcoming: Kuhn, R., *Das Steingefäßinventar aus dem Königsgrab des Dewen in Abydos. Studie zur Typologie, Herstellung und wirtschaftlichen Bedeutung von Steingefäßen während der formativen Phase Altägyptens*, Dissertation, Universität Bonn, Bonn 2019.
- Kuhn in press: Kuhn, R., Auf der Suche nach den Spezialisten: Die Herstellung von Prestige-gütern in der frühägyptischen Wirtschaft am Beispiel der Steingefäße aus dem Königsgrab des Den in Abydos, in: Tristant, Y. (ed.), *Egypt at its Origins 7: Proceedings of the Seventh International Conference “Origin of the State, Predynastic and Early Dynastic Egypt”*, Paris, 19th–23rd September 2022, Leuven 2024, 395–419.
- Kuhn/Lehmann in press: Kuhn, R./Lehmann, P., Found in Wooden Boxes – A First Attempt in the Review and Documentation of the Stone Vessels from the Mortuary Cult Complex of King Sahura in Abusir, in: Jiménez Serrano, A. (ed.), *Proceedings of the Old Kingdom Art and Archaeology Conference*, Jaén, 21st–25th June 2022, Jaén, in press.
- Lauer/Lacau 1959: Lauer, J. P./Lacau, P., *La Pyramide à Degrés IV. Inscriptions gravées sur les vases*, Le Caire 1959.
- Lauer/Lacau 1965: Lauer, J. P./Lacau, P., *La Pyramide à Degrés V. Inscriptions à l’encre sur les vases*, Le Caire 1965.
- Lucas 1930: Lucas, A., Egyptian Predynastic Stone Vessels, in: *Journal of Egyptian Archaeology* 16, 1930, 200–212.
- Macramallah 1940: Macramallah, R., *Un cimetière archaïque de la classe moyenne du peuple à Saqqarah, Fouilles à Saqqarah*, Le Caire 1940.
- Martin 1993: Martin, L./Lindemeyer, E., Uruk. Kleinfunde III. Kleinfunde im Vorderasiatischen Museum zu Berlin: Steingefäße und Asphalt, Farbreste, Fritte, Glas, Holz, Knochen/Elfenbein, Muschel/Perlmutter/Schnecke, *Ausgrabungen in Uruk-Warka Endberichte* 9, Mainz 1993.

- Mawdsley 2009: Mawdsley, L., The Corpus of Potmarks from Tarkhan, in: *British Museum Studies in Ancient Egypt and Sudan* 13, 2009, 197–219.
- Montet 1938: Montet, P., Tombeaux de la Ière et de la IVe dynasties à Abou-Roach, in: *Kêmi* 7, 11–69.
- Montet 1946: Montet, P., Tombeaux de la Ière et de la IVe dynasties à Abou-Roach. Deuxième partie: inventaire des objets, in: *Kêmi* 8, 1946, 157–227.
- Müller 1998: Müller, V., Grab des Dewen: Fundinventar, in: Dreyer, G. et al., Umm el-Qaab – Nachuntersuchungen im frühzeitlichen Königsfriedhof, 13./14./15. Vorbericht, in: *Mitteilungen des Deutschen Archäologischen Institutes Abteilung Kairo* 54, 1998, 147–162.
- Müller 2003: Müller, V., Grab des Dewen: Haldenabbau und Fundinventar, in: Dreyer, G. et al., Umm el-Qaab – Nachuntersuchungen im frühzeitlichen Königsfriedhof, 13./14./15. Vorbericht, in: *Mitteilungen des Deutschen Archäologischen Institutes Abteilung Kairo* 59, 2003, 89–93.
- Müller 2006: Müller, V., III. Deponierungen südöstlich des Grabes des Dewen, in: Dreyer, G. et al., Umm el-Qaab – Nachuntersuchungen im frühzeitlichen Königsfriedhof, 16/17./18. Vorbericht, in: *Mitteilungen des Deutschen Archäologischen Institutes Kairo* 62, 2006, 73–92.
- Müller 2021: Müller, V., Re-excavating Re-excavated Materials – A Case Study from the Royal Necropolis of the Early Dynastic Period at Umm el-Qaab/Abydos, in: Kilian, A./Zöller-Engelhardt, M. (eds), *Excavating the Extra-Ordinary. Challenges & Merits of Working with Small Finds. Proceedings of the International Egyptological Workshop at Johannes Gutenberg-University Mainz, 8–9 April 2019, Heidelberg 2021*, 47–69.
- Naville et al. 1914: Naville, E./Peet, T. E./Hall, H. R./Haddon, K., *The Cemeteries of Abydos I. 1909–1910. The Mixed Cemetery and Umm el-Ga’ab. Memoir of the Egypt Exploration Fund* 33, London 1914.
- Quibell 1936: Quibell, J. E., Stone Vessels from the Step Pyramid, in: *Annales du Service des Antiquités de l’Égypte* 36, 1936, 76–80.
- Reisner 1931: Reisner, G. A., *Mycerinus. The Temples of the Third Pyramid at Giza*, Cambridge 1931.
- Seidlmayer 2009: Seidlmayer, S. J., Prestigegüter im Kontext der Breitenkultur im Ägypten des 3. und 2. Jahrtausends v. Chr., in: Hildebrandt, B./Veit, C. (eds), *Der Wert der Dinge – Güter im Prestigediskurs. „Formen von Prestige in Kulturen des Altertums“*. Graduiertenkolleg der DFG an der Ludwig-Maximilians-Universität München, München 2009, 309–333.
- Stocks 2003: Stocks, D. A., *Experiments in Egyptian Archaeology. Stoneworking Technology in Ancient Egypt*, London 2003.
- Takenouchi 2021: Takenouchi, K., Technical Choices and Processes of Stone Vessel Manufacture Under the Reign of King Den: Evidence from the Cemetery M at Abu Rawash, in: *Archéo-Nil* 31, 2021, 135–157.
- Vlcková 2006: Vlcková, P., *Stone Vessels from the Mortuary Complex of Raneferef at Abusir, Abusir XV*, Prague 2006.