

CHAPTER 4:

THE MATERIAL REMAINS FROM THE NEW KINGDOM TOWN

by *Julia Budka*

As was mentioned above, the excavations at SAV1 East and SAV1 West also yielded a large amount of Post-New Kingdom finds (Chapter 3). Especially in the upper levels a lot of mixed material, mostly medieval and Ottoman in date, but also some Post-Meroitic, Meroitic and Napatan finds, were found associated with New Kingdom material. In general, ceramics and finds from SAV1 East and SAV1 West cover a time span from the 18th Dynasty to Meroitic, Post-Meroitic and Christian periods, all the way to Ottoman and sub-recent times.⁵⁵⁶ Many of the objects derive from stratigraphic units which represent disturbed contexts, debris layers and fillings.⁵⁵⁷ These disturbances and the multi-period use of the site were the main challenges while excavating in the New Kingdom town of Sai.

Since the focus of the present volume (and of the AcrossBorders project) is the Pharaonic period on Sai, the objects post-dating the New Kingdom will not be discussed here in detail. The most common categories of finds of Post-New Kingdom date are the following: figurines and moulds, ceramics, ceramic window grilles, re-used sherds including tokens and game pieces, leather, glass and basketry. Some of these will be mentioned in the following and all of them are referred to in the find lists (see Appendix). For many objects the dating remains unclear (e.g. ring beads, figurines, stone tools).

Before starting with remarks on the New Kingdom material culture of Sai, some exceptional pieces from later times shall be mentioned. One particular noteworthy Post-New Kingdom find from SAV1 East falls into the category of games. It is a well preserved clay cubic dice (SAV1E 2771) which is just missing the corner between the sides '3' and '4' (Pl. 73).⁵⁵⁸ In addition to the incised dots, each number has an additional decoration: a circle around the '1', lines connecting the dots of '2–5', and a fern pattern on '6'. Since cubic dices are well-attested in Roman times both in Egypt and in Sudan,⁵⁵⁹ a Meroitic date for this piece would be the earliest possible one. Its context from SAV1 East (Square 4C) and especially the associated finds which comprise four fragments of ceramic window grilles (SAV1E 2754, 2764, 2765, 2766) and one glass fragment (SAV1E 2769) suggest, however, a medieval/Christian date. This would also correspond to stylistic differences between SAV1E 2771 and Meroitic dices from Sedeigna.⁵⁶⁰ The mentioned window grilles are common finds at SAV1 East, presumably connected to medieval building activities (Pl. 74).⁵⁶¹ Glass vessels are less frequent and may already date to the Islamic period, as it is the case for the few pieces of glazed ware recorded from SAV1 East (see Appendix).⁵⁶² As another characteristic medieval object type horse and camel figurines may be mentioned (Pls. 75–76, see below).

The study of the New Kingdom finds from the Egyptian town of Sai has profited substantially from recent advances in the assessments of the material culture of New Kingdom sites in Nubia in the last

⁵⁵⁶ Corresponding to sector SAV1 North, see Budka 2016a, 49.

⁵⁵⁷ For the most common circumstances under which objects entered the archaeological record in settlements cf. Kemp and Stevens 2010b, 4–5.

⁵⁵⁸ Griffin and Gundlach 2016.

⁵⁵⁹ See Voogt, Francigny and Baas 2017, 29.

⁵⁶⁰ Voogt, Francigny and Baas 2017.

⁵⁶¹ Such window grilles with circular or octagonal openings were frequently found at Christian sites in Nubia with architectural remains of a church, e.g. Old Dongola, Hambukol and Ghazali, see Eigner 2005, 98.

⁵⁶² On glazed wares in medieval Nubia, cf. Adams 1986, vol. I, 59–60.

decade. Of particular relevance here are improvements based on both site-specific and comparative approaches which allowed tracing the complex entanglement of Nubian and Egyptian cultures visible in ceramics, tools and other objects.⁵⁶³ These material remains testify to the complex nature of archaeological cultures during the New Kingdom in Nubia, therefore illustrating the dynamic settings, shifting identities and permeable borderlines between Egyptian and Nubian lifestyle in the area (see also Chapter 8).⁵⁶⁴

There are several indications of the most common objects for reconstructing activities within the town area of New Kingdom Sai. Activities like fishing and grinding have been already discussed for Egyptian sites in Nubia, also for Sai.⁵⁶⁵ However, many aspects connected with production work in New Kingdom temple towns on the basis of the material culture still remain unclear. Information about the manufacture of faience, pottery and leather as well as activities like weaving and metal working is at present still quite limited.⁵⁶⁶ The subject of gold exploitation in Nubia has been addressed by several missions working at New Kingdom sites in the last years and therefore still awaits an updated synthesis considering all new data.⁵⁶⁷ Various scientific analyses contribute to the micro-archaeology of Egyptian sites in Nubia, including the study of pigments which also allow addressing questions on the macro level.⁵⁶⁸

4.1 OVERVIEW: CATEGORIES OF MATERIALS

by *Julia Budka*

As already observed at other Egyptian towns in Nubia, e.g. Buhen⁵⁶⁹ or Askut,⁵⁷⁰ objects of Egyptian type dominate the material assemblage at Sai.⁵⁷¹ However, some site-specific aspects of the material remains from the town are also evident.⁵⁷² It is the purpose of this chapter to illustrate the most important categories used during the New Kingdom occupation of Sai, taking the sites SAV1 East and SAV1 West as case studies.⁵⁷³ A detailed contextual analysis will be conducted for the material from the large cellars in SAV1 East (Features 15, 83 and 85).⁵⁷⁴ Associations and specific percentages of object types from specific rooms were unfortunately not feasible,⁵⁷⁵ but the Appendix offers the complete lists of finds to demonstrate the dominance of certain types of finds like pottery, bones, charcoal and stone tools within the excavations of AcrossBorders at Sai. Furthermore, small assemblages from well-stratified contexts at SAV1 West, like the silos Features 115, 151 and 152, will also be presented (Chapter 4.5).

4.1.1 Main categories of finds

A total of 4,812 objects were recorded in the database for SAV1 East and SAV1 West until 2017. Ten objects were registered for the test trench at SAV1 Northeast. In registration, the finds are labelled “SAV1E”, “SAV1W” and “SAV1NE” and assigned a continuous number (starting from SAV1E 0001).

⁵⁶³ See, e.g., Spencer et al. 2017; Budka 2017g.

⁵⁶⁴ See Smith 2003a, 97 for Askut. Cf. Budka 2016c; 2018d.

⁵⁶⁵ Budka and Doyen 2013, 198–201 with references. For grinding as one of the main household activities, see Lang 2016.

⁵⁶⁶ See Spencer et al. 2017.

⁵⁶⁷ Klemm and Klemm 2013; 2017; Smith and Buzon 2018; see also Spencer et al. 2017, 30–33.

⁵⁶⁸ See Fulcher 2017; cf. also Budka 2018f, 16–17.

⁵⁶⁹ Millard 1979.

⁵⁷⁰ Smith 2003a, 101.

⁵⁷¹ See the account based on the material from SAV1 North: Budka 2017j, 157–170.

⁵⁷² See Smith 2003a, 97 for Askut. Cf. Budka 2016c.

⁵⁷³ Cf. the already published material with SAV1 North as a case study, Budka 2017e.

⁵⁷⁴ Budka forthcoming b.

⁵⁷⁵ For general aspects of the analysis of artefact distributions and assemblages in Egyptian houses, see most recently Spence 2015, 89–93 with further references.

This sequence is dependent on the chronology of excavation (with some exceptions) and does not distinguish between Pharaonic and Post-Pharaonic finds by number (see Appendix, section 1).

The variability of objects derived from the sectors excavated by AcrossBorders is comparable to the one found at sector SAV1 North.⁵⁷⁶ Of particular interest is the reconstruction of the circumstances placing the objects into the archaeological record – whether they attest a primary function as in situ deposits, as primary refuse of activities or as evidence for other discard criteria.⁵⁷⁷ Deliberate refuse of objects is often the case, occurring in several variants.⁵⁷⁸

All in all, the material from both SAV1 East and SAV1 West that can be safely dated to the New Kingdom, more precisely mostly to the 18th Dynasty, represents a typical assemblage as attested from other Egyptian New Kingdom settlements, both in Egypt (e.g. Elephantine, Memphis, Amarna) and in Nubia (e.g. Askut, Buhen, Quban). For some aspects, parallels to sites in Nubia are closer than to the Egyptian ones and will be specifically highlighted in the following (see also Chapter 8).

The six main categories established for finds from SAV1 East and SAV1 West follow a modified system as developed by Lisa Giddy for Memphis⁵⁷⁹ which was already applied to the material remains from SAV1 North.⁵⁸⁰

A) *Figurines and statuettes*

Manufactured in clay and mud, figurines in both human and animal shapes are attested from SAV1 East and SAV1 West. Clearly Christian/medieval pieces are a number of horse figurines (moulded technique, Pl. 75)⁵⁸¹ as well as a small number of camel figurines⁵⁸² (Pl. 76). The 18th Dynasty material comprises both female figurines and various animal forms.⁵⁸³ Especially noteworthy is a group of more than 20 female figurines in low-fired clay or mud, finding close parallels in both Egypt and Nubia.⁵⁸⁴ Rudimentary figures in the shape of simple sticks with an incised or dotted area representing the pubic region, sometimes with dotted circles resembling breasts are of a common Egyptian-style, already well-attested at sector SAV1 North.⁵⁸⁵ It is especially remarkable and will be discussed below (Chapter 4.3.2 and Chapter 8) that more rudimentary female figures were found at SAV1 West than at SAV1 East. These figurines can clearly be dated to the early to mid-18th Dynasty, both by the archaeological context and through numerous parallels.⁵⁸⁶ No Ramesside mould-made bed figurines, which in general belong to the late 18th Dynasty or Ramesside era,⁵⁸⁷ were found at SAV1 East or SAV1 West.⁵⁸⁸ The so far only example from the New Kingdom town of Sai was discovered at SAV1 North.⁵⁸⁹

⁵⁷⁶ Budka 2017j.

⁵⁷⁷ Cf. Rosen 1989, 564.

⁵⁷⁸ Cf. Kemp and Stevens 2010b, 4–5.

⁵⁷⁹ Giddy 1999.

⁵⁸⁰ Budka and Doyen 2013, 184; Budka 2017j.

⁵⁸¹ On comparable terracotta horse figurines from Ptolemaic and Roman Egypt, see Boutantin 2014, 162–216.

⁵⁸² See Boutantin 2014, 292–321 for camel terracotta from Ptolemaic and Roman Egypt.

⁵⁸³ Cf. the corpus of figurines from Amarna, Kemp and Stevens 2010b, 217–230.

⁵⁸⁴ Doyen 2016, 133–157.

⁵⁸⁵ For a typology of the figurines from SAV1 North, see Doyen 2016, 133–157; cf. also Stevens 2017 (Amara West).

⁵⁸⁶ See Kopp 2005a, 89, note 291 with further parallels from domestic contexts. The examples from Amarna (Stevens 2006, 89–91, figs. II.3.10, II.3.11) date to the late 18th Dynasty. For a summary of the figurines from SAV1 North, see Doyen 2016, 134–144; cf. also Budka 2017j, 158–159, fig. 85.

⁵⁸⁷ Cf. Kopp 2005a, 89 for stratified examples from Elephantine (oldest examples from the late 18th–19th Dynasties; but more common in the 20th–21st Dynasties); for Memphis, see Giddy 1999, 31 (mid-18th–20th Dynasties); for Medinet Habu, see Teeter 2010, 41–48 (all from the Third Intermediate Period). Interestingly, no mould-made bed figurines are reported from the Ramesside site of Amara West, see Stevens 2017.

⁵⁸⁸ Cf. Elephantine (Kopp 2005a, 88–90); Amarna (Stevens 2006, 85–91, figs. II.3.7, II.3.10–11); Memphis (Giddy 1999, 28–31, pls. 8–12); Askut (Smith 2003a, 131–133). One piece was found at SAV1 North, see Doyen 2016, 144–145, fig. 15.

⁵⁸⁹ Budka and Doyen 2013, 183–188; Budka 2017j.

Among the hand-modelled animal figurines of poorly fired clay⁵⁹⁰ are several quadrupeds, of which it is unclear whether they represent rams, sheep, dogs or horses.⁵⁹¹ The clay figurines of bulls might fall into a well-attested Nubian tradition of cattle representations.⁵⁹² One remarkable dog representation (SAV1W 0764) was found at SAV1 West, but can most likely be interpreted as an applique to a pottery vessel, not as a figurine (see Chapter 4.3.2).⁵⁹³ Another exceptional find from the AcrossBorders excavation is SAV1W 1574, a model boat in clay (Chapter 4.3.2).

B) Personal adornment

Beads are attested in various shapes (disc/ring, conical, drum-, barrel- and tube-shaped) and in a range of materials (faience and other materials, including clay and bone, Fig. 54).⁵⁹⁴ An unusual piece is SAV1E 2957 which is a small barrel-shaped bead in bronze (Fig. 54). Some examples are quite large and of irregular shape (Fig. 55), possibly representing pendants which also occur in clearer shapes and also in diverse materials (Fig. 56). At present, all of the beads seem to be Egyptian in style.⁵⁹⁵ Also of Egyptian type are other elements of personal adornment, like bracelets and finger rings. Four fragments of stone bracelets were found at SAV1 West (SAV1W 0093, SAV1W 0729, SAV1W 1276 and SAV1W 1697), none at SAV1 East. However, an arched faience object from SAV1 East might represent a bracelet (SAV1E 2967, Fig. 57). One faience finger ring was found by AcrossBorders – SAV1E 2882, a light green faience ring bezel, with a wedjat-eye as the central element (Fig. 57, Pl. 77, see Chapter 4.3.1). SAV1E 2729 is the fragment of a blue faience ring, which is likely to represent an earring (Fig. 57, Pl. 78).⁵⁹⁶

Scarabs are in general scarce within the New Kingdom town of Sai.⁵⁹⁷ Only one scarab was found at SAV1 East (SAV1E 1595) and one frog-scaraboid at SAV1 West (SAV1W 0527, Chapter 4.3). A faience frog amulet was also found at SAV1 East (SAV1E 0294; Chapter 4.3.1). Two steatite cowroids were unearthed at SAV1 West (SAV1W 0723 and SAV1W 1736, Chapter 4.3.2).

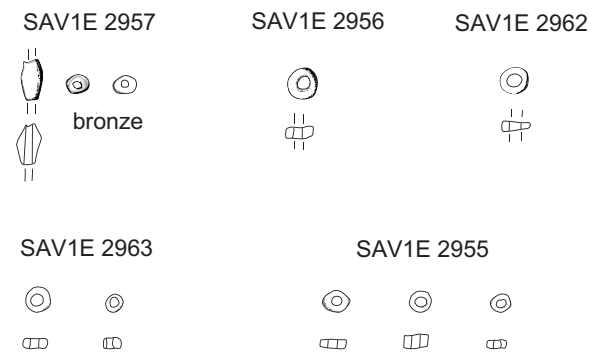


Fig. 54 Faience ring beads and one bronze bead from SAV1 East. Scale 1:1

C) Household items

Stands and supports appear within the New Kingdom town of Sai primarily as pottery vessels and are very common (see Chapter 4.2). Basin-like installations are present as well, both in clay and stone. Fragments of stone basins were only unearthed at SAV1 West and probably represent installations within

⁵⁹⁰ Cf. Giddy 1999, 307–315, pls. 68–70. See also some figurines from Buhen, Millard 1979, 146–148, pl. 52.

⁵⁹¹ Cf. Stevens 2006, 61, 110.

⁵⁹² Cf. cattle representations from Quban: Emery and Kirwan 1935, Fig. 33 and Askut: Smith 2003a, 132, fig. 5.32. At Amarna, over 70 figurines were unidentifiable, but might have included cows (Stevens 2006, 110). For animal figurines from Kerma, including cattle, see Bonnet 1990, 133–134.

⁵⁹³ For dog-like animal figurines from Amarna, see Stevens 2006, 103.

⁵⁹⁴ Cf. the types of beads recovered from New Kingdom tombs on Sai at cemetery SAC5, see Minault-Gout and Thill 2012, vol. 2, pls. 123–116. For cylindrical pottery beads, see Giddy 1999, pl. 25. See also the rich repertoire of beads from Amarna, including fancy shapes: Kemp and Stevens 2010b, 107–119.

⁵⁹⁵ Cf. Smith 2003a, 106–110 who differentiated a Nubian from the Egyptian-style for the personal adornments at Askut. For a selection of Egyptian beads from New Kingdom funerary contexts in Nubia with parallels for SAV1 North, see Williams 1992, 123–130, fig. 17.

⁵⁹⁶ Cf. similar shapes in different materials from SAC5, Minault-Gout and Thill 2012, vol. 2, pl. 121.

⁵⁹⁷ Four scarabs were found at SAV1 North, see Budka 2017j, 159–160.

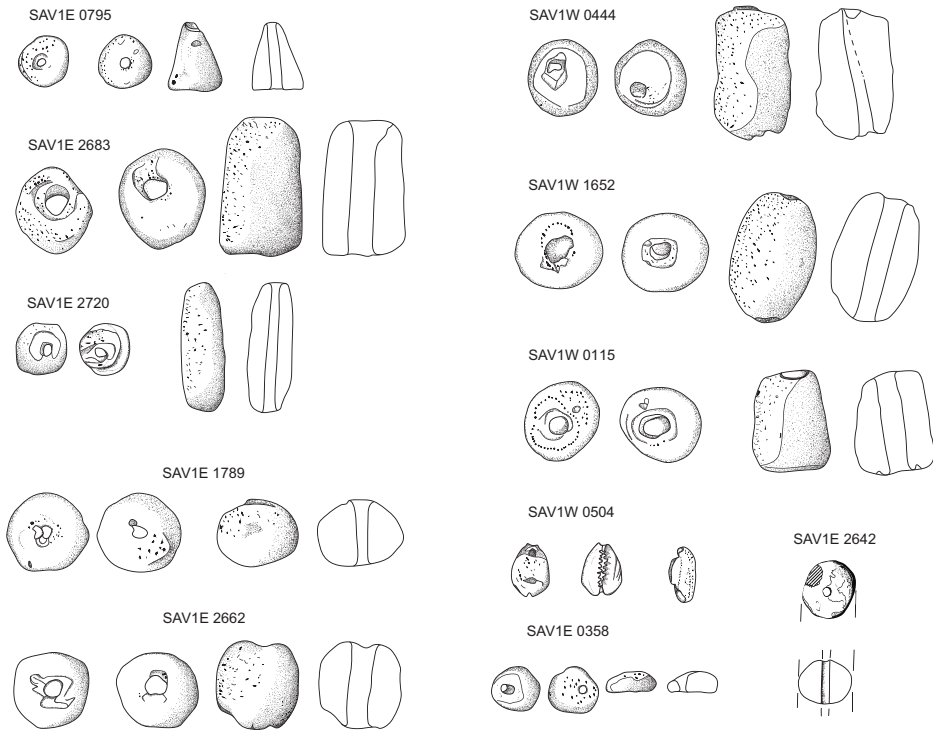


Fig. 55 Various types of beads from the New Kingdom town of Sai. Scale 1:2

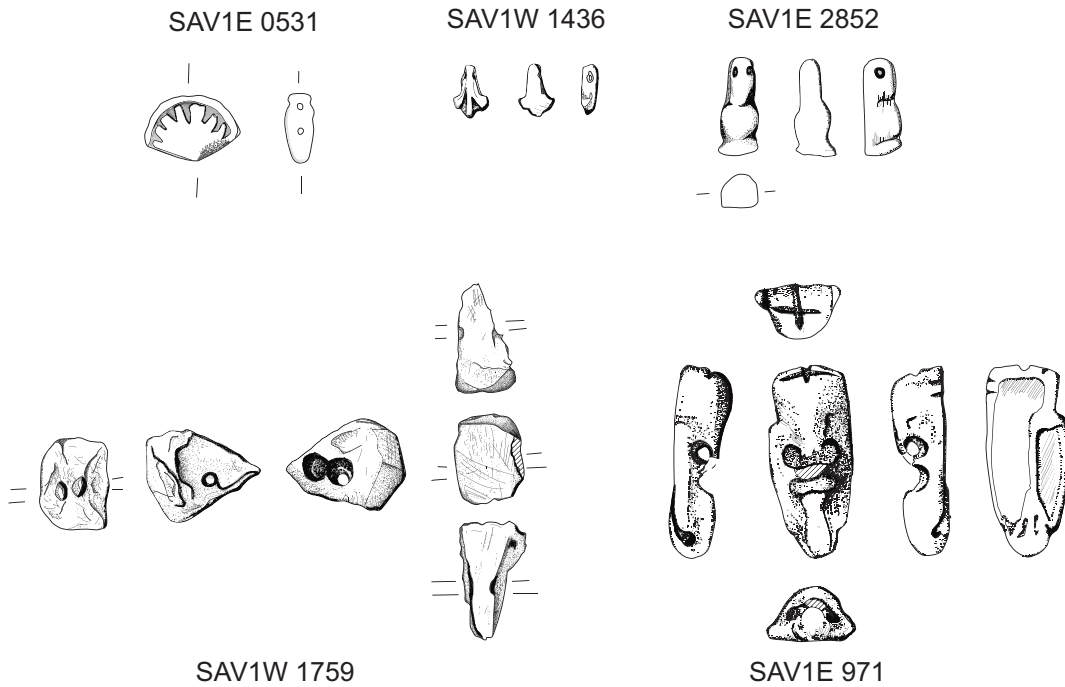


Fig. 56 Pendants from the New Kingdom town of Sai. Scale 1:1

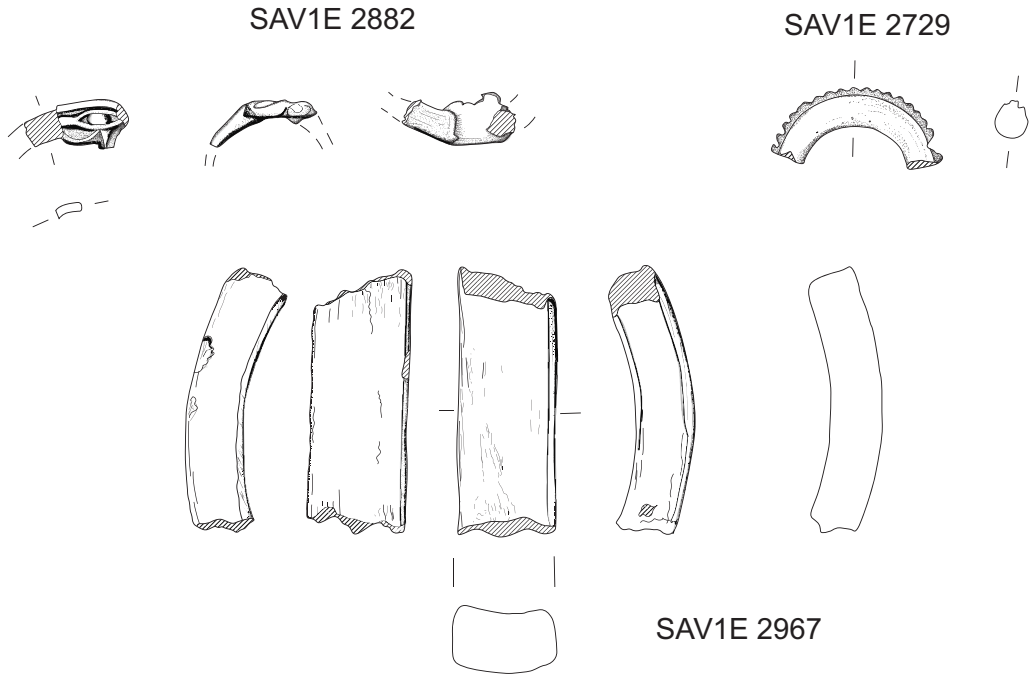


Fig. 57 Personal adornment from the New Kingdom town of Sai. Scale 1:1



Fig. 58 SAV1W 1555, stone basin

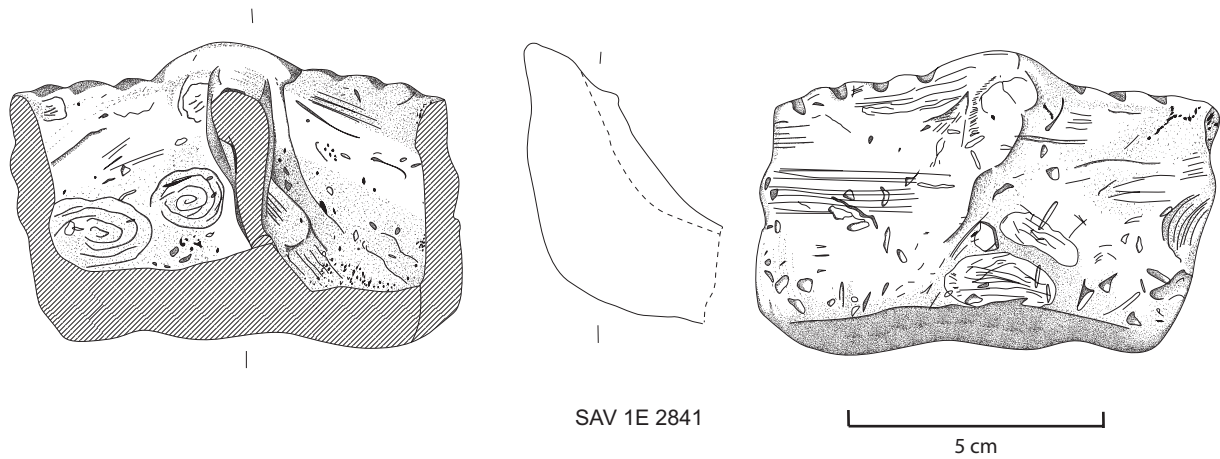


Fig. 59 SAV1E 2841, pottery basin with application

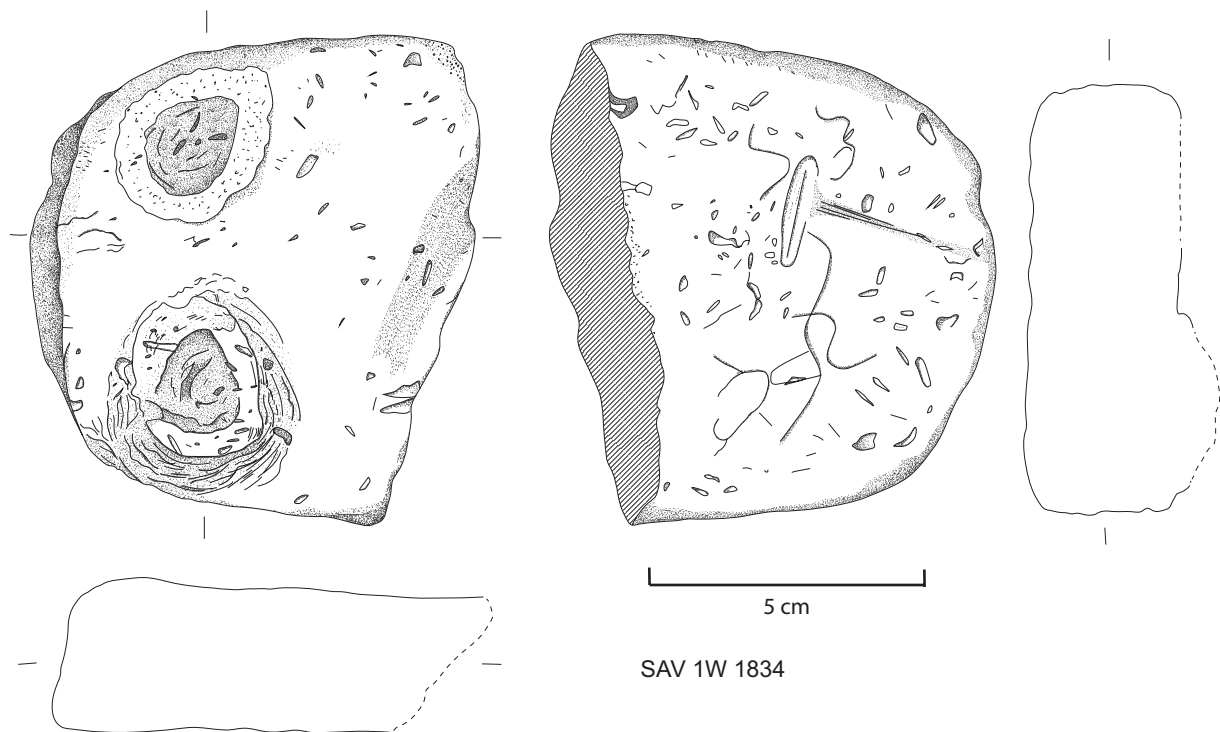


Fig. 60 SAV1W 1834, clay model table

the 18th Dynasty structures (SAV1W 1555, Fig. 58 and SAV1W 1798).⁵⁹⁸ Fragments of basins of unfired clay which were found at SAV1 West remain unclear in function and dating (e.g. SAV1W 1001, SAV1W 1002, SAV1W 1004 and SAV1W 1318). At SAV1 East one basin in fired clay was recorded (SAV1E 2347).⁵⁹⁹

SAV1E 2841 is an unusual piece (Fig. 59). It is the corner fragment of a pottery basin, with remains of an applique on the interior. The applique is placed at a 45 degree angle to the corner and would have run diagonally through the basin. A series of decorative notches was carved into the top edge. All of the corners are somewhat rounded and the base is not quite flat. Both the interior and the exterior are burnt.

⁵⁹⁸ For similar basins from the stone village at Amarna, thought to represent containers for liquids, see Stevens 2012, 225–229.

⁵⁹⁹ Cf. basins of burnt clay from SAV1 North, Budka 2017j, 160, fig. 86.

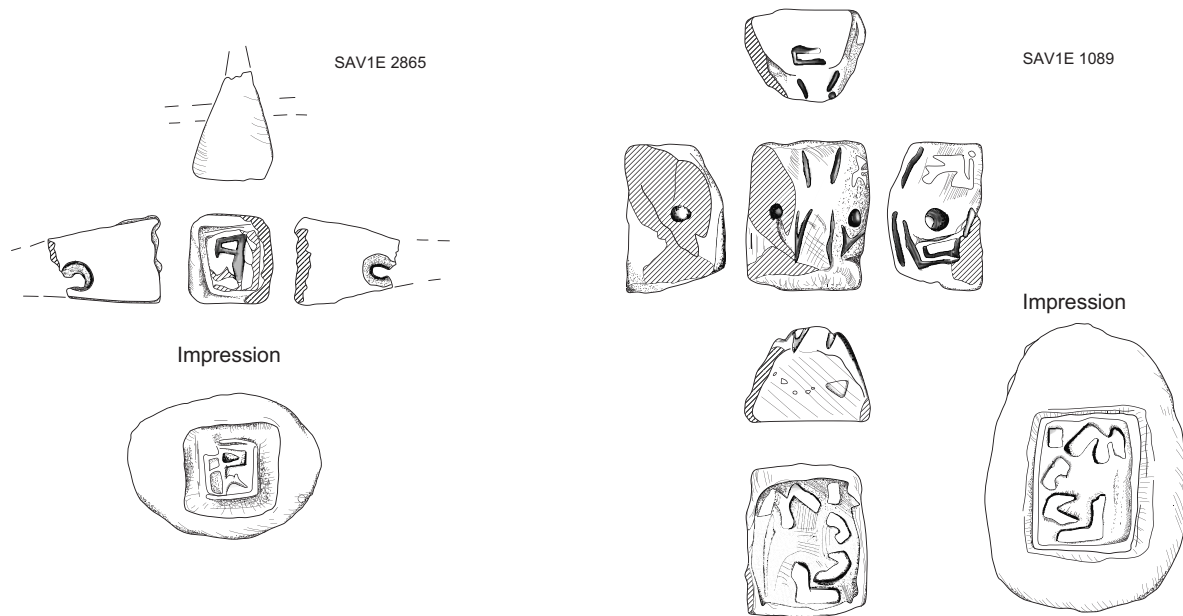


Fig. 61 SAVIE 1089 and SAVIE 2865, seals or seal-amulets. Scale 1:1

SAVIE 2841 might be related to the so-called cobra bowls, well-attested at Amarna, Memphis and Egyptian fortresses situated at the northeastern and northwestern borders of Egypt.⁶⁰⁰

SAV1W 1834 (Fig. 60) is the fragment of another unclear pottery object belonging to the category of household items. This object is possibly part of a small model table. On the presumed lower side only the connection point for two protruding legs remain. Spots of red paint are traceable on all surfaces.

Some pieces of large, tubular-shaped ovens were found at both sectors of Sai, but unfortunately come from fills rather than closed contexts and, therefore, remain open in their dating. The ovens are circular in diameter and are made of coarse, low fired Nile silt ware.⁶⁰¹ In general, kilns from New Kingdom sites in Nubia were only reported from Amara West, Askut and Buhen.⁶⁰² At Sai, no kilns have so far been documented. The oven fragments registered by AcrossBorders possibly derive from bread ovens, but remain unclear in their date.

Mud stoppers for various vessels were recorded and are mostly of the common conical type or hemispherical.⁶⁰³ The best preserved stoppers were found in Feature 15.⁶⁰⁴ The Egyptian practice of using stamped jar stoppers, mostly for wine jars, is confirmed for Sai by one piece from SAV1 North⁶⁰⁵ and one example from SAV1 West (SAV1W 1614). Unfortunately, the stamp of this piece from SAV1 West is broken and worn and not readable. No other examples were unearthed at SAV1 West and no stamped stoppers were found at SAV1 East. This scarcity of stamped stoppers at Sai raises some questions since other Egyptian sites in Nubia have yielded large numbers of such objects.⁶⁰⁶

Sealings and seal impressions were found predominantly at SAV1 East in Feature 15 which can be interpreted as seals for boxes, chests and very often bags.⁶⁰⁷ Sealings were rare at SAV1 West (see Chap-

⁶⁰⁰ See most recently Szpakowska 2015 with references.

⁶⁰¹ For examples of this type of ovens, see Elephantine (in situ evidence) and South Abydos (Budka 2006, 114 with references for Elephantine).

⁶⁰² See Spencer 2017, 345–346 with references.

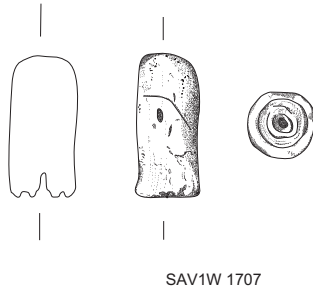
⁶⁰³ Cf., e.g., Seiler 2005, 118–119, fig. 58. See also the corpus from Amarna, Kemp and Stevens 2010b, 25–34.

⁶⁰⁴ Budka forthcoming b.

⁶⁰⁵ Budka 2017j, 160–161, fig. 87.

⁶⁰⁶ See in particular Buhen: Millard 1979, 137.

⁶⁰⁷ Budka forthcoming b.



SAV1W 1707

Fig. 62 SAV1W 1707, stamp. Scale 1:1

ter 4.3.2), but the seemingly sporadic occurrence at Sai might also be related to excavation techniques.⁶⁰⁸ Two stamp seals (or seal-amulets, see Chapter 4.3.1) were found at SAV1 East (SAV1E 1089 and SAV1E 2865, Fig. 61) and imply that sealing was probably a common practice at New Kingdom Sai. Another stamp of unclear function was found at SAV1 West (SAV1W 1707, Fig. 62).

D) Tools and instruments

The largest group of tools from all sectors in the New Kingdom town is those made of stone and comprises weights, querns, grinders, hammer stones, pounders and pestles, polishers and burnishers. A considerable number of possible whetstones and finally miscellaneous and/or multifunctional stone tools are also present (see

Number of Object	Area Location	SU	Type of Object	Material
SAV1W 0232	SQ1, adj. to Feature 100 f. E 3–5m E-W / 0–5m N-S	501	Net weight	Clay, fired
SAV1E 0002	SQ1	–	Net weight	Clay, fired
SAV1E 0119	SQ1A, ~ 8m to E above Feature 3		Net weight	Clay, fired
SAV1W 1267	SQ1S	704	Net weight	Clay, fired
SAV1W 1475	SQ1S	652	Net weight	Clay, fired
SAV1W 1476	SQ1S	638	Net weight	Clay, fired
SAV1W 1477	SQ1S	638	Net weight	Clay, fired
SAV1W 0054	SQ1SE	809	Net weight	Clay, fired
SAV1E 0608	SQ4B	319	Net weight	Clay, fired
SAV1W 1575	SQ1SE	834	Net weight	Clay, fired
SAV1W 1576	SQ1SE	834	Net weight	Clay, fired
SAV1W 1630	SQ1S	852	Net weight	Clay, fired
SAV1W 1665	SQ1S	861	Net weight	Clay, fired
SAV1W 1666	SQ1SE	863	Net weight	Clay, fired
SAV1E 2818	SQ4B1	414	Net weight	Clay, fired
SAV1E 2833	SQ4C	421	Net weight	Clay, fired
SAV1E 2899	SQ4, Feature 15, W of Feature 44	1331	Net weight	Clay, fired
SAV1E 2646	SQ4D	1434	Net weight	Clay, fired
SAV1W 1754	SQ1SE	916	Net weight	Clay, fired
SAV1W 1786	SQ1	931	Net weight	Clay, fired
SAV1W 1753	SQ1SE-E	916	Net weight	Clay, fired
SAV1W 0411	SQ1	549	Net weight	Re-used pottery
SAV1W 0496	SQ1	565	Net weight	Re-used pottery
SAV1W 0739	SQ1S	628	Net weight	Re-used pottery
SAV1W 1679	SQ1SE/SQ1S	862	Net weight	Re-used pottery
SAV1E 2068	SQ4+4A, 0,7–5m W-E/ 10,3–12m N-S	227	Net weight	Re-used pottery
SAV1E 2110	SQ4A, 9.6m WE/1.8m NS	234	Net weight, oblong in shape	Re-used pottery
SAV1W 1541	SQ1SE	803	Net weight	Stone (sandstone)

Tab. 14 Net weights from SAV1 East and SAV1 West

⁶⁰⁸ Within the muddy/silty material of the New Kingdom town, seal impressions were only found during AcrossBorders excavations by means of sieving. This technique was not used at SAV1 North where also no seal impressions were found, see Budka 2017j, 165.



Fig. 63 Model net weight from SAV1 West (SAV1W 1753).
Scale 1:1

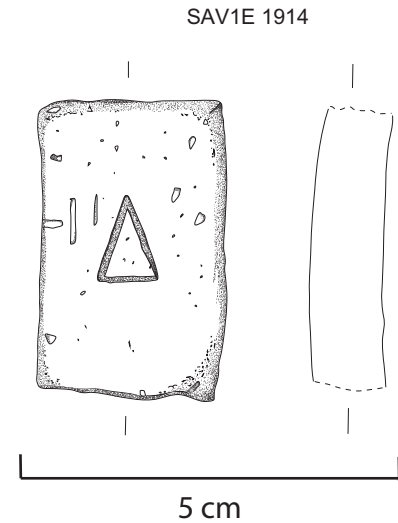


Fig. 64 SAV1E 1914, Christian token
(re-used sherd)

Chapter 4.4).⁶⁰⁹ Another category of tools is the cosmetic instruments of typical Egyptian types, especially small palettes, grinders/pestles and dishes.⁶¹⁰

A total of 80 objects were classified as weights, many of which are made of baked clay or re-used pottery sherds (27 objects, Tab. 14). Most common are clay axe head types, which were interpreted as net weights at Elephantine (21 pieces of Cornelius von Pilgrim's Type A, Pl. 79).⁶¹¹ This is also the most likely classification for the pieces from SAV1 East and SAV1 West, although at other sites such items have been labelled as loom weights or as multi-functional devices.⁶¹² At Sai, von Pilgrim's Type A is sometimes also attested in very small scale (Fig. 63). SAV1W 1753 represents a complete example of such a miniature weight (27 × 22 × 12mm), indicating that these objects maybe also had a symbolic meaning (Pl. 80).

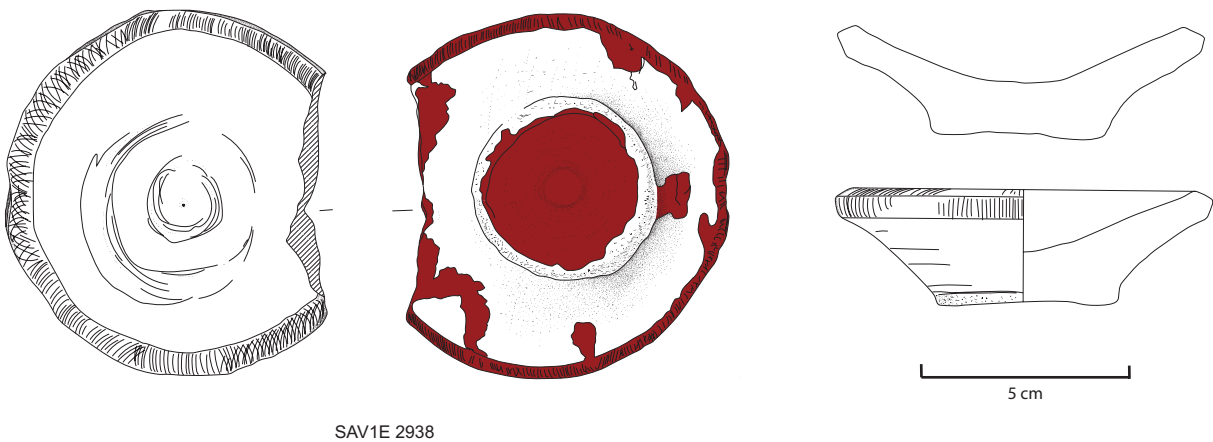


Fig. 65 Example of lower part of a pottery dish reshaped as a lid
(SAV1E 2938)

⁶⁰⁹ Cf. Giddy 1999, pls. 39–50; Prell 2011, *passim*.

⁶¹⁰ Cf. finds from SAV1 North, Budka 2017j, 162–163, fig. 89.

⁶¹¹ von Pilgrim 1996, 275–276, fig. 120.

⁶¹² E.g. Millard 1979, 127 and pl. 103; Giddy 1999, 193. For loom weights, which are different in shape, see e.g. Kemp and Vogelsang-Eastwood 2001, 392–403.

Possible net weights in stone are rare, though one example is SAV1W 1541 (Pl. 81).⁶¹³ Von Pilgrim's Type C net weight is represented at SAV1 East and SAV1 West by only five pieces of re-cut pottery sherds (four pieces from SAV1 West, one piece from SAV1 East, Tab. 14).⁶¹⁴ SAV1W 0411 and SAV1W 0496 (Pl. 82) are both made from body sherds from large Marl clay *zir* vessels, which have a good hardness and are also much heavier than Nile clay wares. As already noted for SAV1 North, where similar quantities were found, this small number of Type C net weights contrasts to sites in Egypt where such weights are very common.⁶¹⁵ The preference on Sai for the clay axe head type might indicate a centralised organisation for the distribution of these objects, rather than *ad hoc* production like Type C. A similar situation at Askut was interpreted by Stuart T. Smith as reflecting a "centralized system of food production."⁶¹⁶ On the other hand, those net weights probably made at Sai from suitable potsherds like SAV1W 0411 and SAV1W 0496 exhibit a clear knowledge of, and probably also experience in, producing these devices.

Among the weights, three possible loom weights were classified. One piece, SAV1E 0331, is made of pottery and as a surface find remains unclear regarding its dating. SAV1E 1285 is a circular sandstone weight of possible New Kingdom origin (Pl. 83). One sandstone weight from SAV1 West, SAV1W 0600, was maybe made for a loom. It is roughly tear-shaped and in the upper part a horizontal circumferential groove was incised.

Of the 615 artefacts classified as re-used pottery sherds, most were probably used as scrapers (see Figs. 101–102). The total number of re-used sherds from both SAV1 East and SAV1 West includes 248 pieces from the 18th Dynasty, one Ramesside sherd, three New Kingdom pieces and 181 Post-New Kingdom sherds as well as 150 Christian/medieval ones (e.g. SAV1E 1914, Fig. 64). 33 re-cut sherds remain unclear in dating, due to weathering or size. Thus, only 41% of the re-used sherds from AcrossBorders excavations are actually of New Kingdom date. This category of finds is, therefore, one of the object types which illustrates well the Post-New Kingdom use of the site. However, with almost 250 objects, re-used pottery can be regarded as a quite prominent factor of the object assemblage at Sai.

Re-cut pot sherds are in general common tools with multiple functions at New Kingdom domestic sites, attesting to material-saving recycling processes within Pharaonic culture (e.g. at Qantir,⁶¹⁷ El-ephantine⁶¹⁸ and Amarna⁶¹⁹). Such a re-use of ceramics is also attested in Nubian cultures, e.g. for cosmetic palettes.⁶²⁰ Six to ten examples of the 248 18th Dynasty re-cut sherds from SAV1 East and SAV1 West are made from Nubian wares (seven from SAV1 East,⁶²¹ three from SAV1 West). This amount of

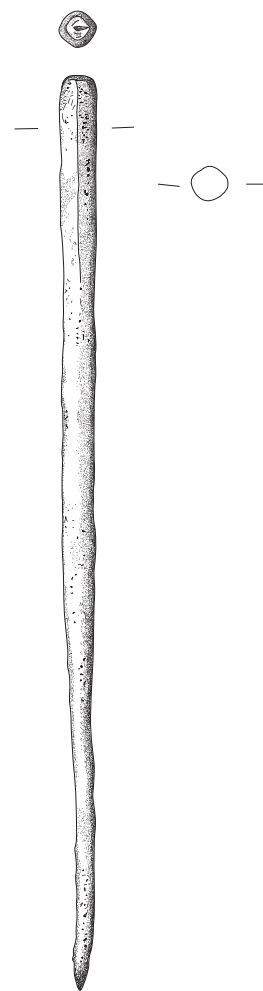


Fig. 66 SAV1W 0965, bronze needle. Scale 1:1

⁶¹³ Cf. one piece from SAV1 North, Budka and Doyen 2013, 186, fig. 15.5.

⁶¹⁴ von Pilgrim 1996, 278, fig. 121.

⁶¹⁵ von Pilgrim 1996, 279, fig. 123.

⁶¹⁶ Smith 2003a, 101. According to the Nauri decree, fishing rights in Nubia were owned by temples, see Morkot 1995, 177, and restricted access to fishing devices could correspond to this.

⁶¹⁷ Raedler 2007; Prell 2011, 92.

⁶¹⁸ Cf. Kopp 2005b; see also Budka 2010b.

⁶¹⁹ Stevens 2012, 295–338.

⁶²⁰ See Williams 1993, 45 with note 49.

⁶²¹ This number includes four pieces of unclear date (SAV1E 2259, 2619, 2620 and 2638). Only three pieces are clearly datable to the 18th Dynasty (SAV1E 0346, 1028 and 2653).

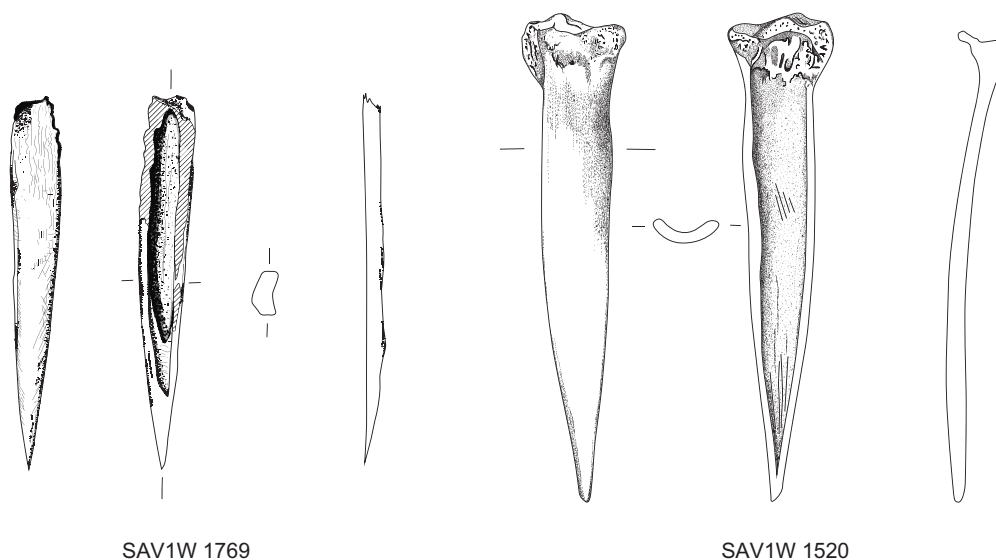


Fig. 67 SAV1W 1520 and SAV1W 1769, bone tools. Scale 1:1

c. 4% more or less equals the general quantities of Nubian sherds within the 18th Dynasty pottery (see Chapter 4.2).

In addition to authentic tools like scrapers, further re-shaping of ceramics is notable at all sectors of the New Kingdom town of Sai for the production of lids.⁶²² As is commonly known from Egypt, especially the lower parts of dishes and plates were sometimes re-cut to be used as lids or covers (Fig. 65). This tradition is well traceable at SAV1 East and SAV1 West.

Metal tools are rare within the corpus of finds from the New Kingdom town. A singular piece is the well-preserved bronze needle/pin from SAV1 West (SAV1W 0965, Fig. 66). Further tools were manufactured from bone – two very nicely worked piercing tools were found at SAV1 West (SAV1W 1520 and SAV1W 1769, Fig. 67).

E) Non-ceramic vessels

A small number of stone (28) and faience (77) vessels were excavated in fragmented condition at SAV1 West and SAV1 East, comparing closely to the material found at SAV1 North.⁶²³ The stone vessels comprise only three fragments in calcite; the majority belongs to large bowls or mortars made of quartzite or granite (see Fig. 112). 12 fragments were found at SAV1 East, 16 at SAV1 West. Within the group of faience vessels, several fragments represent Nun (or marsh) bowls (30 from SAV1 West, 18 from SAV1 East, see Chapter 4.3.2, Fig. 113).⁶²⁴ Such Nun bowls attest to the Egyptian tradition of these vessels connected to regeneration in the domestic context of the New Kingdom town of Sai.⁶²⁵ Among 25 faience vessels from SAV1 East, 22 fragments are of 18th Dynasty date. A total of 52 pieces of faience vessels were found at SAV1 West and all seem to date to the 18th Dynasty. All in all, the number and state of preservation of the faience vessels is much better at SAV1 West than in the eastern sector.⁶²⁶

⁶²² See Budka 2017j, 164, pl. 45.

⁶²³ Budka 2017j.

⁶²⁴ One fragment of a Nun bowl was also found at SAV1 Northeast.

⁶²⁵ See Tschorn 2017. For the domestic context of marsh bowls, cf. also Giddy 1999, 267; Stevens 2006, 178–180. For Nun bowls in New Kingdom tombs in Nubia, see e.g. Williams 1992, 131.

⁶²⁶ See Tschorn 2017, 437.

F) Models, games and unidentified pieces

A total of 98 pieces were registered as token/gaming pieces (56 at SAV1 East, 40 at SAV1 West and two at SAV1 Northeast). This group comprises both New Kingdom and Post-New Kingdom pieces; 79 tokens are re-used sherds, 12 are made in stone and seven in mud/unfired clay. The cubic dice SAV1E 2771 mentioned above (see Pl. 73) is also included here.

The numerous small tokens or pottery discs are common at New Kingdom sites, but their precise function remains unclear.⁶²⁷ Of special interest within the group of tokens/gaming pieces are miniature balls (Pl. 84). These spherical objects occur in sandstone and limestone both at SAV1 East and SAV1 West and find close parallels at Elephantine and other New Kingdom settlements in Egypt.⁶²⁸ Similar balls were also found in unfired clay (SAV1E 1038, 2601, 2602 and SAV1W 1427, 1592, Pl. 84).⁶²⁹ Such miniature clay balls are well known from SAV1 North⁶³⁰ and find exact parallels at Egyptian sites like Amarna. Although these balls could represent actual gaming pieces, it is also possible that they are related to the ritual of the first haircut.⁶³¹

Contextualising the main categories of finds

The object assemblage from the New Kingdom town of Sai is closely comparable to those from other Egyptian New Kingdom settlements like Elephantine and Amarna, but also to Askut, Buhen and Amara West. The most common New Kingdom objects found at SAV1 East and SAV1 West allow reconstructing some activities, for example weaving, fishing and grinding corn.⁶³² Stone tools were found in very large quantities, especially pounders and grindstones (see Chapter 4.4). The numerous schist plates from SAV1 East noted in the find lists (Appendix) derive from the architecture at the site, i.e., from stone pavements (Chapter 3.2). An interesting aspect that should be emphasised related to the location of Sai in Upper Nubia, and which was already stressed on the basis of finds from SAV1 North, is the scarcity of textual evidence within the categories of small finds which is now confirmed based on the finds from SAV1 East and SAV1 West.⁶³³ Jar docketts are extremely rare,⁶³⁴ as are traces of sealing practices with the exception of Feature 15.⁶³⁵ Despite of these findings, the actual importance of written culture at Sai remains problematic to evaluate (see Chapter 8).⁶³⁶

Another aspect of the material culture from the New Kingdom town of Sai in contrast to contemporaneous sites in Egypt is that moulds for small faience objects are missing.⁶³⁷ One may conclude that, dissimilar to the main residential sites in Egypt like Memphis and Amarna, no faience production was carried out in the New Kingdom town of Sai. In general, the number of faience objects/vessels found in

⁶²⁷ Cf. Giddy 1999, pls. 72–73.

⁶²⁸ Large amounts of small limestone balls were recently unearthed at House 55, Elephantine (unpublished material, processed within the AcrossBorders project, publication in preparation). For balls from Amarna, see Stevens 2012, 232–233.

⁶²⁹ Cf. a large number of model balls from Amarna, Stevens 2006, 112–115.

⁶³⁰ Budka 2017j, 165, fig. 92.

⁶³¹ See Arnst 2006. Cf. also Budka 2017g, 439, fig. 9.

⁶³² Budka and Doyen 2013, 198–201.

⁶³³ See Budka 2017j, 165.

⁶³⁴ Budka and Doyen 2013, 198–199. Cf. also the small amount of docketts (two) from the complete material of The Scandinavian Joint Expedition to Sudanese Nubia (both from the cemetery of Fadrus, site 185), see Holthoer 1977, 58, 82.

⁶³⁵ Cf. Giddy 1999, 54–76, pls. 15–17, 64. Smith 2003a, 113 proposed a direct link between this phenomenon and changing organisational patterns of Egyptian control, in contrast to the Middle Kingdom and the Second Intermediate Period.

⁶³⁶ Cf. the assessment of written culture at Amara West, where several ostraca with literary texts of Middle Egyptian classics were found: Parkinson and Spencer 2017.

⁶³⁷ For faience moulds common at Egyptian sites, see Giddy 1999, 243–250, pls. 53–54 with diverse parallels.

the various sectors is rather restricted.⁶³⁸ However, the presence of faience beads, including ‘double ring beads’, may attest to a local bead production on a small scale.⁶³⁹

In terms of quantities, the categories of finds and materials resemble standard settlement types (see Appendix) and besides the proper objects include much botanical remains, animal bones and charcoal. The large quantities of pottery from both sectors, SAV1 East and SAV1 West, is remarkable and attests to the long occupation phase of the New Kingdom town of Sai (Chapter 4.2). After the ceramics, macrolithics and stone tools are the second largest category of finds (see Chapter 4.4).

4.2 POTTERY: CORPUS OF TYPES AND VESSELS

by *Julia Budka*

4.2.1 General remarks

Considerable amounts of ceramic material were unearthed during excavations at SAV1 East and SAV1 West. This rich ceramic material finds ready parallels not only in other Egyptian foundations of Lower and Upper Nubia,⁶⁴⁰ but also at various New Kingdom sites in Egypt,⁶⁴¹ especially Elephantine,⁶⁴² Abydos,⁶⁴³ Deir el-Ballas⁶⁴⁴ and Thebes/Karnak.⁶⁴⁵ However, similar to the small finds and tools, a local component of site-specific features is present on Sai.⁶⁴⁶ Hybrid types are of particular relevance to illustrate two-way-influences of the Nubian and Egyptian pottery traditions at the site (see below and Chapter 8).⁶⁴⁷

Excavation at SAV1 East and SAV1 West yielded substantial amounts of pottery on a daily basis, attesting not only to the use of the structures in the areas during the New Kingdom, but also to the abandonment phase and the later history of the site, especially in Meroitic, Post-Meroitic and Christian times (see Chapter 3).⁶⁴⁸ The sherds arrived from the field at the dig house in large baskets, arranged according to their archaeological context (site, square, stratigraphical unit). The contents of each basket were then separated into the categories of diagnostic and undiagnostic sherds; rim and base sherds, handles and decorated/painted sherds were regarded as diagnostics. The first step was to separate the Pharaonic and Post-Pharaonic material.⁶⁴⁹ On an average, 40–60 % of the diagnostic material was of New Kingdom date.

In general, several classes of Post-New Kingdom ceramics were documented. Post-Meroitic or X-Group wares are well-attested by cups and goblets of the red ware.⁶⁵⁰ Transitional types and early Christian ceramics are quite common (Adam’s Group N.III), including black rims or black painted lines on

⁶³⁸ See Tschorn 2017.

⁶³⁹ As suggested for SAV1 North, see Budka 2017j, 166. For the manufacture of faience beads, see Nicholson 2007, 141–144. Note, however, the statement of Kemp and Stevens 2010b, 108 about manufacturing errors of beads found at Grid 12 at Amarna: “some ‘rejects’ could slip into a patch of beads acquired from elsewhere”.

⁶⁴⁰ Cf. Holthoer 1977, *passim*. See also Miellé 2012, 173–187.

⁶⁴¹ Cf. Budka 2011, 23–33.

⁶⁴² Seiler 1999, 204–224; Budka 2005a, 90–116; Budka 2010a, 350–352.

⁶⁴³ Cf. Budka 2006, 83–120.

⁶⁴⁴ Bourriau 1990, 15–22 and 54–65 [figs.].

⁶⁴⁵ Jacquet-Gordon 2012, 2 vols.

⁶⁴⁶ See Budka 2011, 23–33; Budka 2016a; Budka 2017g; Budka 2018g.

⁶⁴⁷ Budka 2018g, 109 and 112.

⁶⁴⁸ Cf. Miellé 2012, 173.

⁶⁴⁹ Cf. Budka 2011, 24. This system of recording was slightly modified in 2016: From this season onwards, sherd yards were set up close to SAV1 East and SAV1 West where the sorting into New Kingdom and Post-New Kingdom material took place as well as the differentiating between diagnostic and non-diagnostic sherds (see Tab. 16). Only selected, relevant diagnostics to be recorded in more detail were still brought to the dig house.

⁶⁵⁰ See Group N.II, X-Group red ware by Adams 1986, vol. I, 51; vol. II, 458–473, cups and goblets, fig. 265, footed bowls, fig. 268. For Post-Meroitic ceramics from Sai, see Siguoirt 2012, 237–246.

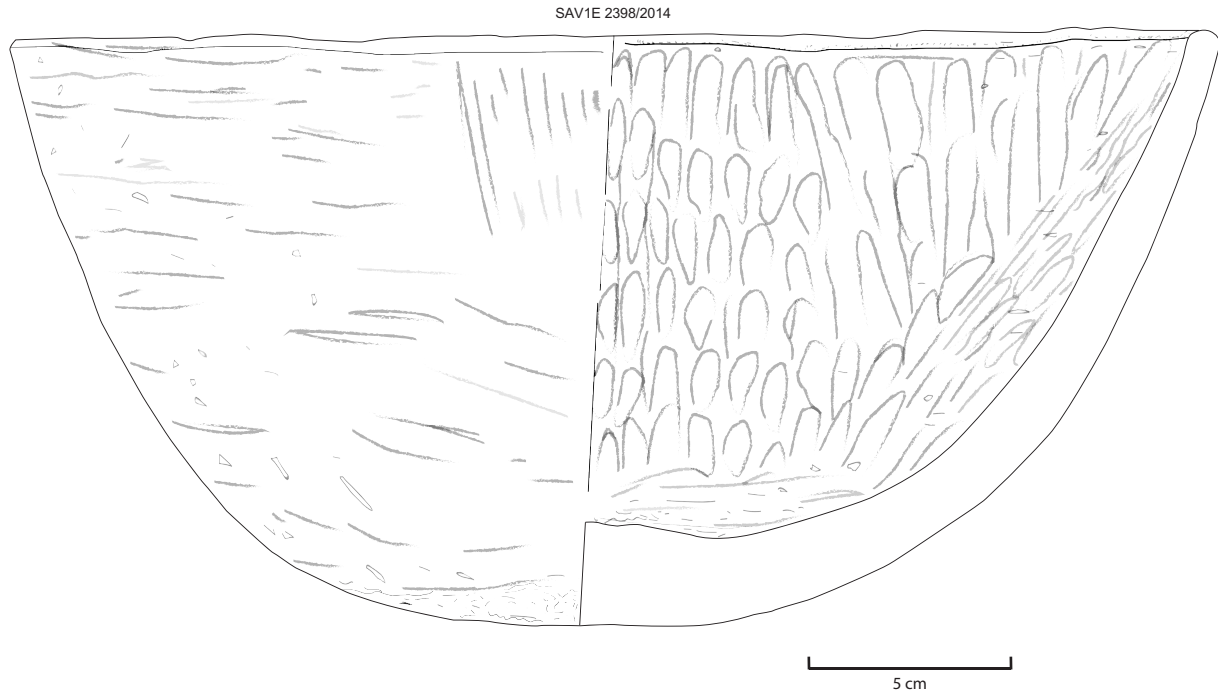


Fig. 68 SAV1E 2398/2014 Ottoman/Late bowl, handmade

red slip and stamped impressions on cups and bowls.⁶⁵¹ Similar vessels of the transitional phase had already been documented by André Vila in the near neighbourhood of Sai, at sites in the area of Amara East.⁶⁵² Painted Post-New Kingdom fine wares (Pl. 85) from the site of the New Kingdom town of Sai mostly belong to the Classical Christian period.⁶⁵³ Besides the wheel-made wares, also hand-made Nubian Christian pottery is present.⁶⁵⁴ *Qadus* water jars are well represented at both SAV1 East and SAV1 West and difficult to assign to a specific period within the medieval and/or post-medieval age. Coarse unslipped sherds and fragments of heavy, hand-made utility ware can be associated with a very late medieval or Ottoman date.⁶⁵⁵ An almost complete large red burnished bowl of this period was recovered in SU 105 at SAV1 East (SAV1E 2398/2014, Fig. 68). It is a very thick-walled bowl with a direct rim and rounded base with prominent traces of burnishing inside.⁶⁵⁶

The New Kingdom ceramics were subsequently documented according to wares and vessel type. The typology established for the ceramic material (Tab. 15) follows the one used for SAV1 North and is organised along the lines of the pottery corpus from Amarna as published by Pamela Rose.⁶⁵⁷ Broad shape groups like dishes, necked jars and pot stands constitute the main categories of vessels, designated by two letters, e.g. DP for dishes/plates. Within these shape groups, form classes are labelled by a numeral, e.g. DP 1 for a simple dish. The individual types are designated with a further number separated from the form class by a point, e.g. DP 1.1. If possible, the diagnostics of each basket are recorded according to

⁶⁵¹ Group N.III. Early Christian by Adams 1986, vol. I, 52; vol. II, 473–485, see especially bowls and footed bowls as well as jars.

⁶⁵² Vila 1977, figs. 45, 65 and passim.

⁶⁵³ Group N.IV Classical Christian by Adams 1986, vol. I, 52–53; vol. II, 485–495, cups, bowls and vases.

⁶⁵⁴ See especially Adams 1986, vol. I, 47–49; vol. II, 420–423: Early Christian Ware D.II, mostly *Qadus* jars, cups, bowls, *doka* bowls jars and storage jars.

⁶⁵⁵ Cf. Adams' Wares H4, H5 and also H6 and H7 of Class D. III, Adams 1986, vol. II, 426–432; see also Edwards and Soghayroun el-Zein 2012, 189, 202–206, figs. 7.29–31.

⁶⁵⁶ Cf. Edwards and Soghayroun el-Zein 2012, 206, fig. 7.31, no. 6.

⁶⁵⁷ Rose 2007. See already Budka 2017i for the material from SAV1 North.

OPEN FORMS	Funnel-necked jars = FU
Dishes/Plates = DP	FU 1: Biconical vessels, short-medium neck, direct rim FU 2: Complex contour, tall neck, modelled rim
DP 1: Simple, direct rim DP 2: Simple, modelled rim DP 3: Simple, upturned rim (direct) DP 4: Simple, direct rim internally thickened DP 5: Simple, modelled rim with flange (ledge) DP 6: Simple, everted rim (direct) DP 7: Complex, direct rim DP 8: Complex, modelled rim DP 9: Complex, outer lip DP 10: Complex, inwardly-sloped upper wall DP 11: Modelled contour (wavy rims)	Zir = ZI
Bowls = BO	ZI 1: Composite, long wide neck, modelled rim
BO 1: Simple, direct rim BO 2: Simple, modelled rim BO 3: Simple, outer lip/everted rim BO 4: Complex, direct rim BO 5: Complex, modelled rim BO 6: Complex, outer lip BO 7: Complex, inwardly-sloped upper wall	Storage jar = ST
Flowerpot = FP	Tall jars = TJ
FP 0: Modelled rim FP 1: Modelled rim, hole in base FP 2: Modelled rim, without hole FP 3: Direct rim, hole in base FP 4: Direct rim, without hole	TJ 1: Tall jars, hole-mouth TJ 2: Tall jar, simple, modelled rim TJ 3: Tall jar, simple, everted rim TJ 4: Tall necked jar, inflected contour, externally thickened rim TJ 5: Tall short-necked jar, bag-shaped, modelled rim
Beakers (deep open forms) = BK	Globular jar = GJ
BK 1: Tall beaker with direct rim BK 1.1: rounded base BK 1.2: cut/trimmed base BK 1.3: flat base BK 2: Beaker with inflected contour, direct/everted rim	GJ 1: Globular jar, short flaring neck with direct rim GJ 2: Globular jar, short flaring neck with modelled rim GJ 3: Globular jar, vertical neck with modelled rim GJ4: Globular jar, vertical neck, direct rim
CLOSED FORMS	Ovoid meat jars = MJ
Carinated Vessel = CV (squat)	Handeled vessels/amphorae = AO
CV 1: Vessel with carination, modelled rim CV1.1: short-necked CV1.2: broad-necked CV 1.3: narrow-necked CV 2: Vessel with carination, outer lip CV 3: Vessel with carination, outer lip and handles	Pilgrim flask = PF
Slender Jars = Jar ordinary = JO	Miniature vessels = MV
JO 1: Slender jars, simple contour, externally thickened rim JO 1.1 Ovoid jar with rounded base JO 1.2 Drop-shaped jar with rounded base JO 2: Slender jars, everted rim JO 3: Slender jar with internally rolled rims (crucibles) JO 4: Slender jar with externally rolled rims (crucibles) JO 5: Slender jar, composite contour, direct rim	OTHERS/FUNCTIONAL
Necked jars = NJ	Cooking pots = CP
NJ 1: Necked jars, externally thickened rim NJ 2: Necked slender jar, composite contour, modelled rim NJ 3: Necked slender jar, composite contour, direct rim NJ 4: Slender jar, out-flared neck, direct rim NJ 5: Ovoid necked-jar, rounded base	Pot-stands = S stands
Beer jar = BJ	SB = Biconical
BJ 0: base with hole BJ 00: base without hole BJ 1: Hole-mouthed BJ 2: Short-necked slender jar, composite contour, direct rim	SB 1: Low ring stands of biconical form SB 2: Medium ring stands of biconical form SB 3: Tall ring stands of biconical form
	ST = Transitional
	ST 1: Low ring stands ST 2: Medium ring stands ST 3: Tall stand
	SU = Tubular
	SU 1: Low ring stands SU 2: Medium ring stands SU 3: Tall stand of tubular form
	SO = Tall stand with bowl/offering bowl
	Lids = LL
	Stoppers = LS
	Fire dogs = FD
	Funnels = FN
	Spinning bowls = SB
	Fish bowls = FB
	HANDMADE
	Bread tray = BT
	Bread mould = BM
	Various

Tab. 15 Typology of main categories of pottery vessels from Sai, New Kingdom town

SAVIE					
	Total	NK total	Post-NK	NK-Post-NK ratio**	Comment
2013	32199	13872	18327	43–57%	
2014	77827	19098	58729	25–75%	
2015	29555	4401	25154	15–85%	only surface layers processed, incl. SU 205
2016*	14643	6528	8115	45–55%	630 baskets
2017*	1872	1210	662	65–35%	incomplete data from 87 baskets only
Total	156096	45109	110987		
SAVIW					
	Total	NK total	Post-NK	NK-Post-NK ratio**	Comment
2014	24456	13941	10515	57–43%	
2015	18935	9878	9057	52–48%	
2016*	11745	9818	1927	84–16%	430 baskets
2017*	9995	8804	1191	88–12%	218 baskets
Total	65131	42441	22690		

* Total numbers in years 2016 and 2017 are lower because only diagnostics were counted; see number of baskets processed.

** The New Kingdom to Post-New Kingdom ratio refers primarily to the counted diagnostics; the majority of body sherds are of New Kingdom date and would change these statistics.

Tab. 16 Statistics of pottery processed at SAVI East and SAVI West

their form class or at least within their shape groups. In contrast, all body sherds are counted according to their ware and broad shape group only.

While processing, selected sherds of the New Kingdom were sorted out for drawing, to enlarge the site-specific corpus. Pottery sherds and vessels that were designated for this detailed analysis are labelled as “P” = “Pottery” and numbered continuously, separated with SAVI West and SAVI East according to sector. Complete profiles, complete vessels, decorated or otherwise important pieces were recorded with an individual P-number. In the case of fragments and less important pieces, they were labelled as find assemblages (e.g. SAVIW P012.1–4 coming from SU 507 at SAVI West).

Coming from both SAVI East and SAVI West, a total of 221,227 sherds were looked at, sorted and recorded between 2013 and 2017.⁶⁵⁸ Amongst these sherds, 87,550 were diagnostics from the New Kingdom (40%). The remaining 133,677 sherds (60%) are comprised of Post-Pharaonic material, with Christian sherds in the clear majority, followed by X-Group/Post-Meroitic material and a few Meroitic and Napatan pieces. Tab. 16 gives an overview of the basic ceramic statistics from SAVI East and SAVI West. In general, the amount of New Kingdom diagnostic sherds was always higher at SAVI West because of the less mixed layers below the upper strata. Especially during the 2016 and 2017 seasons most of the pottery excavated at this sector was of 18th Dynasty date. The situation at SAVI East was slightly different and more complicated, even in the lowest strata (see Chapter 3.2).

In addition, 135 baskets of pottery were processed from the test trench at SAVI Northeast (Chapter 3.5). The upper levels at this trench were dominated by Post-New Kingdom material, accounting to up to 98% of the material. Only in the lower levels, the ones associated with the documented brickwork at the site, more 18th Dynasty pottery was found, c. 80% as an average.

⁶⁵⁸ These numbers are of a preliminary character. A more complete statistical analysis will be published elsewhere: Budka forthcoming a.

4.2.2 Corpus of fabrics

In the following, basic information in order to understand the common outlines of the pottery corpus will be given.⁶⁵⁹ A detailed study, including the petrographic information on the fabrics used for the New Kingdom pottery from sectors SAV1 East and SAV1 West will be published elsewhere.⁶⁶⁰ In general, a site-specific fabric corpus was established for the New Kingdom town of Sai, which closely resembles the Egyptian material from the New Kingdom town of Elephantine,⁶⁶¹ but also includes local fabrics for Egyptian vessels as well as for Nubian wares.⁶⁶² This site-specific fabric corpus was already presented for the pottery from SAV1 North and comprises six large groups of fabrics:⁶⁶³

- (1) Imported Nile clays from Egypt
- (2) Locally produced Nile clays from Sai/Upper Nubia
- (3) Nubian clays from Upper Nubia
- (4) Imported Marl clays from Egypt
- (5) Other imported wares (Oases, Levante, Cyprus)
- (6) Imported Mixed clays from Egypt

In accordance with the ‘Egyptological’ understanding of ‘pottery fabric’ as “the finished product”⁶⁶⁴ as defined in the classification of the Vienna System⁶⁶⁵ all relevant technological features of the production technique are included in this assessment.⁶⁶⁶ The locally produced Egyptian-style Nile clays are almost always wheel-thrown, whereas the indigenous Nubian tradition is hand-made (see below, Chapter 4.2.3).

The establishment of a site-specific classification of fabrics was essential for the analysis of the ceramics from SAV1 East and SAV1 West because of a development in the composition and nature of fabrics and wares within the pottery from New Kingdom Egypt, potentially providing dating criteria and other information.⁶⁶⁷ The main fabric groups were identified from fresh breaks with the aid of a 1x10-magnification hand-lens. The designations employed for the groupings – especially for groups 1, 2 and 4 – are those used within the Vienna System,⁶⁶⁸ with some minor alterations and additions.⁶⁶⁹ In the following, only descriptions based on the macroscopic analysis of the fabrics are presented. Petrographic details based on optical microscopy and chemical analyses will be published elsewhere.⁶⁷⁰ Provenance studies by Instrumental Neutron Activation Analysis (INAA) added important information on the exact nature of Nile clay wares.⁶⁷¹ This chemical characterisation method elucidated aspects of the regional pottery production,⁶⁷² revealing sub-groups for the Nile clay fabrics which correspond to (a) locally made Nubian-style vessels, (b) locally made Egyptian-style vessels and (c) imported Egyptian-style vessels.⁶⁷³ One has to stress again that this differentiation also needs to take the production technique into

⁶⁵⁹ Budka (with an appendix by D’Ercole) 2018g.

⁶⁶⁰ Budka forthcoming a.

⁶⁶¹ Budka 2005a, 91–95.

⁶⁶² Cf. Budka forthcoming a (including a chapter on the petrography by D’Ercole).

⁶⁶³ Budka 2017i.

⁶⁶⁴ Nordström and Bourriau 1993, 162.

⁶⁶⁵ See Nordström and Bourriau 1993, 168–186.

⁶⁶⁶ The same approach is followed for the study of material from Amara West, cf. Spataro et al. 2015. For the general importance of the production techniques for ceramic analysis, see Miller 1985, 34–50.

⁶⁶⁷ For example, the sandy variant of Nile B2 (typical for the Ramesside period), the use of mixed clays and the distribution of Marl clays, cf. Aston 1992, 73.

⁶⁶⁸ Nordström and Bourriau 1993, 168–186.

⁶⁶⁹ Following a system established by the author for the New Kingdom pottery at Elephantine, see Budka 2005a, 91–95.

⁶⁷⁰ Budka forthcoming a.

⁶⁷¹ See D’Ercole and Sterba 2018.

⁶⁷² Cf. Carrano et al. 2009; Spataro et al. 2015; D’Ercole and Sterba 2018.

⁶⁷³ Budka 2015a, 50; Budka 2015b, 69; Budka 2017i; D’Ercole and Sterba 2018.

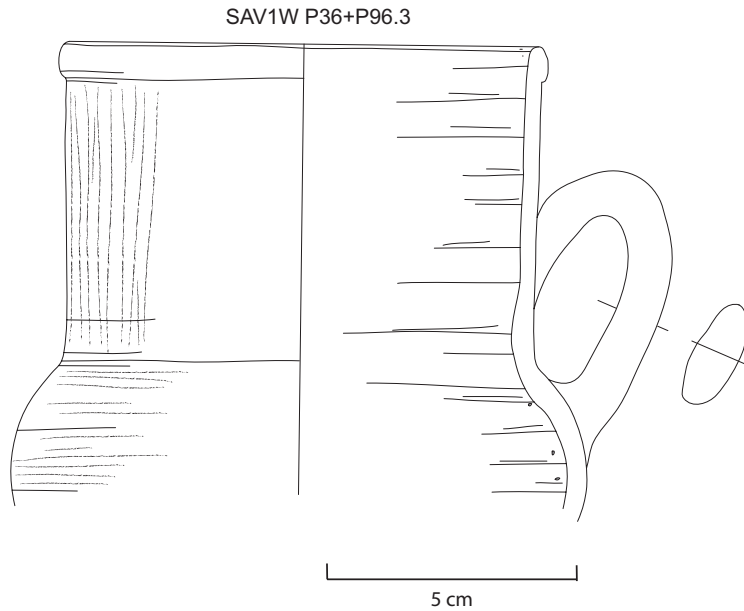


Fig. 69 SAV1W P36 and P96.3 – jug/mug in Marl D, SAV1 West.
Late 18th Dynasty

amount of Marl clays found at SAV1 East and SAV1 West compares well to the corpora from Elephantine⁶⁸⁰ and Sesebi.⁶⁸¹ Furthermore, SAV1 West shows close parallels to SAV1 North, especially regarding painted Marl clay wares.⁶⁸² Interestingly, Marl C vessels which get less common in New Kingdom Egypt, but are among the most favourite Egyptian imports during the Kerma period,⁶⁸³ are frequently found in early 18th Dynasty levels at both SAV1 East and SAV1 West.⁶⁸⁴ They are restricted to large *zir* vessels.⁶⁸⁵

The following Marl clays have been identified in the material deriving from Sai: Marl A2, A4 (variants 1 and 2) and A3, Marl B, Marl C (variants 1 and 2), Marl D (variants 1 and 2) and Marl E. Within the material of the early 18th Dynasty, Marl A2 and Marl B were used most often.⁶⁸⁶ From deposits datable to the late 18th Dynasty and the 19th Dynasty, Marl D appears in considerable quantities.⁶⁸⁷ Besides fragments from amphorae, several small jugs and mugs are attested from SAV1 West (Fig. 69). Marl E was especially used for large thick-walled bread trays (so-called *Schaelbecken*, see below).⁶⁸⁸

account. From a macroscopic point of view only it is not always possible to distinguish imported Nile clays from Egypt and locally produced Nile variants.⁶⁷⁴

The following groups of the Vienna System are well-attested at Sai: Nile B2 (with a chaffy, local variant), Nile C, Nile D and Nile E.⁶⁷⁵ The latter was used for cooking pots (e.g. SAV1E P 179) – its fabric can be classified as Upper Egyptian equivalent⁶⁷⁶ of the typical Nile E,⁶⁷⁷ originating from the Nile delta. The bread moulds from SAV1 East were made of a typical mixture of sandy mud, clay and organic temper, classified as ‘bread mould clay’ or Nile D4.⁶⁷⁸

Marl clays are less common than Nile clays in New Kingdom settlement pottery.⁶⁷⁹ The rather small

⁶⁷⁴ See Rose 2018 for difficulties with the differentiation of Nile clay wares as local or imported.

⁶⁷⁵ See the comments on these fabrics based on material from SAV1 North: Budka 2017i, 122–123.

⁶⁷⁶ See Budka 2006, 84 (for a local variation at Abydos); Budka 2016c.

⁶⁷⁷ See Nordström and Bourriau 1993, 175.

⁶⁷⁸ Cf. Budka 2006, 84; Budka 2017i, 123.

⁶⁷⁹ See Budka 2017i, 124–125.

⁶⁸⁰ Budka 2005a, 93–94.

⁶⁸¹ See Rose 2018, 137.

⁶⁸² See Budka 2017i, 124–125.

⁶⁸³ See Bader 2001, *passim*; cf. Bourriau 2004, 3; Smith 2012, 392 and also Gratien 1986, 398–402 for Marl C vessels from Kerma tombs on Sai.

⁶⁸⁴ For a mid-18th Dynasty context in Egypt (Sedment) where a Marl C *zir* was found, see Bourriau and Schenck 2015. In general, the Marl C production seems to have faded out by the reign of Thutmose III which corresponds to the evidence on Sai.

⁶⁸⁵ Cf. Bader 2001.

⁶⁸⁶ See Budka 2017i, 124.

⁶⁸⁷ For Marl D, see Budka 2006, 84 with references; Ruffieux 2016, 516, fig. 11.5 (for an early piece from Dokki Gel). Cf. also Miellé 2016, 430.

⁶⁸⁸ See Bader 2001, 81–83; Budka 2017i, 125, fig. 53 with references to parallels from Memphis, Koptos, Deir el-Ballas and Abydos.

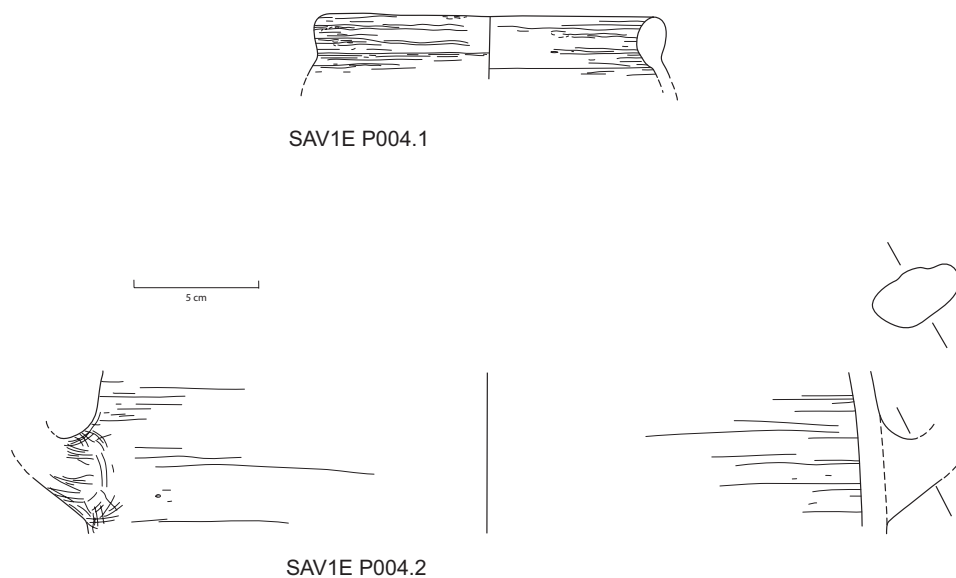


Fig. 70 Fragments of an amphora in Mix clay A (SAV1E P004.1+2)

Some imported pottery (Canaanite, Levantine and Cypriote) as well as a few sherds in Oases were confirmed from SAV1 East and SAV1 West.⁶⁸⁹ Most common are Non-Egyptian amphorae from Syria/Canaan and here a fabric which is similar to Marl D with a dark grey or brownish matrix and abundant particles of limestone.⁶⁹⁰ Another amphora fabric is homogenous with a reddish-yellow colour, numerous mineral inclusions and abundant limestone particles; this imported fabric corresponds to P11 at Saqqara and Memphis.⁶⁹¹

Egyptian mixed clays are commonly associated with the late New Kingdom. Both variants as defined by David Aston, Mix clay A and B, are attested on Sai, but only in small numbers.⁶⁹² Both wares are commonly associated with Ramesside and Third Intermediate Period amphorae of which only small fragments have survived. The sherds SAV1E P004.1+2 belong to the same vessel, a Mix A yellowish burnished amphora, which was found as a small rim fragment and body part on the surface of Square 1 at SAV1 East (Fig. 70).

4.2.3 Production techniques

Both Egyptian (wheel-made) and Nubian (hand-made) pottery traditions are attested from Nubian New Kingdom sites and this also holds true for Sai Island.⁶⁹³ At Sai, a Nubian component is traceable at all sectors recently excavated in the New Kingdom town (Fig. 71).⁶⁹⁴ Hand-made cooking pots and storage vessels as well as some fine wares (black-topped cups and beakers) are attested in considerable numbers. The Nubian assemblage at Sai is comparable to findings at other Upper Nubian sites established in the early 18th Dynasty, such as Sesebi.⁶⁹⁵ The Nubian pottery from SAV1 East and SAV1 West shows relations to the local Kerma corpus,⁶⁹⁶ is as a rule hand-made and very often decorated with impressed and/

⁶⁸⁹ Comparing well with SAV1 North, see Budka 2017i, 125–126.

⁶⁹⁰ Well-attested at SAV1 North and Elephantine, see Budka 2017i, 125.

⁶⁹¹ Nordström and Bourriau 1993, 185; Aston 2008, 40; Bourriau 2010, 31.

⁶⁹² For two variants of Mix clays, see Aston 1999, 6. For rare examples of Ramesside amphorae in Mix clays at SAV1 North, see Budka 2017i, 126.

⁶⁹³ Cf. Smith 2003a, 43–53; Smith 2003b; Spencer 2014, 55; Budka 2017i, 126.

⁶⁹⁴ See Budka 2016a; Budka 2017i, 126.

⁶⁹⁵ Rose 2012. See also Budka 2017i.

⁶⁹⁶ See Gratien 1986, *passim*.

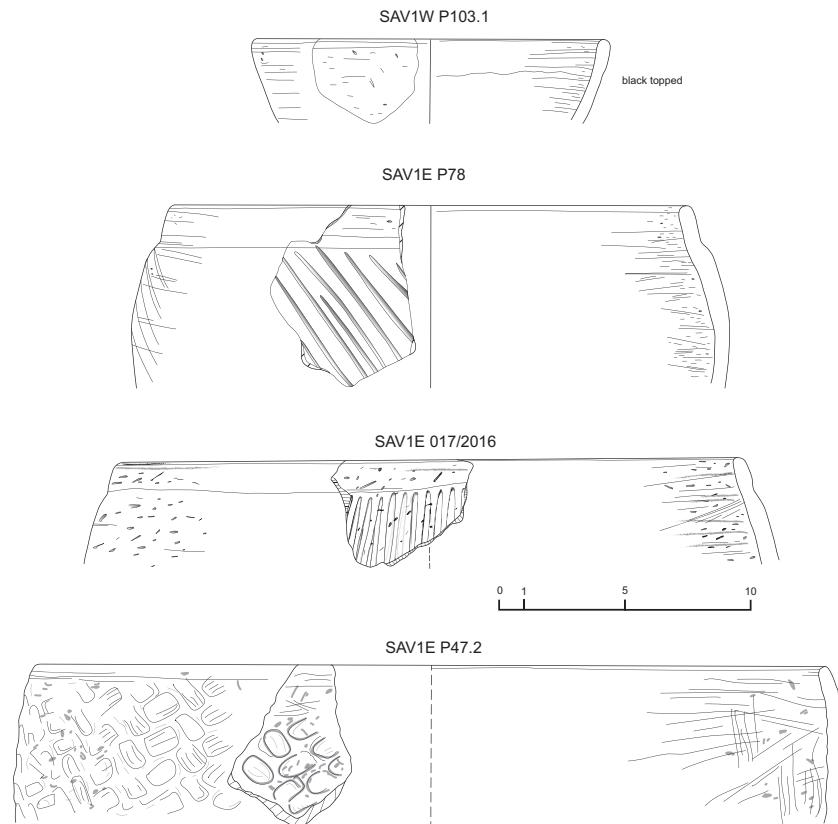


Fig. 71 Nubian hand-made vessels from SAV1 East and SAV1 West

or incised patterns. Nubian storage vessels are attested as rim fragments only, but find complete parallels in sector SAV1 North.⁶⁹⁷

The majority of the New Kingdom ceramics from both SAV1 East and SAV1 West is wheel-made pottery in Egyptian-style, produced in Egyptian Nile clays and imported to Upper Nubia⁶⁹⁸ or locally produced with Nile clay variants. Most of the vessels were either wholly or partially made on a simple wheel. Small open forms were usually thrown on the wheel in one piece, whereas large storage vessels frequently show traces of joints where they were produced in more than one piece.⁶⁹⁹ *Zir* vessels were usually made in sections with the coiling technique, while the rim was finished on the wheel (see Fig. 82).⁷⁰⁰ Egyptian hand-made pottery is rare and the examples are restricted to bread plates and so-called *Schaelbecken* or bread trays (see Fig. 91).⁷⁰¹

In some cases locally produced Nile clay pottery vessels were modelled on Egyptian types, but with a ‘Nubian’ influence in regards to the surface treatment, production technique or decoration (see below, Chapter 4.2.4 Hybrid vessels).⁷⁰² I have argued that this pottery can be regarded as evidence of “material entanglement,”⁷⁰³ which recent studies have stressed as one of the main characteristics of New Kingdom Nubia.⁷⁰⁴ Such hybrid pots may represent products of a temporary or local fashion, but they can also refer

⁶⁹⁷ Budka 2011, 27 (citing parallels from the local Kerma tombs, cf. Gratien 1986); Budka 2017i, 130–131, fig. 57.

⁶⁹⁸ For the import of Nile silt vessels, cf. Arnold 1993, 78, figs. 90B–C and Smith 2003a, 117. Cf. also Rose 2018.

⁶⁹⁹ For a concise summary of shaping techniques, see Holthoer 1977, 42–43.

⁷⁰⁰ Budka 2017i, 126.

⁷⁰¹ See Budka 2017i, 126.

⁷⁰² On hybridity cf. Stockhammer 2013; see also Budka 2018h.

⁷⁰³ Budka 2018d. See also Stockhammer 2012; Pappa 2013; Stockhammer 2013.

⁷⁰⁴ See van Pelt 2013; Smith 2014a; Spencer 2014; Binder 2017; Budka 2018d.

to the cultural identity of their users or materialise more complicated processes.⁷⁰⁵ In any case, one has to keep in mind one important paradigm phrased like the following by Marwan Kraidy: “It is therefore imperative to situate every analysis of hybridity in a specific context where the conditions that shape hybridities are addressed.”⁷⁰⁶ For Sai, these hybrid pots seem to attest to a complex mixture of lifestyles during the New Kingdom which is well traceable in the pottery production (see below, Chapter 8).⁷⁰⁷

During the New Kingdom there is generally less clear evidence at Egyptian sites for kilns and potter’s workshops than in Middle Kingdom Nubia.⁷⁰⁸ Important evidence for local pottery production comes from wasters and unfired sherds at various sites.⁷⁰⁹ Although the latter were also found in small numbers within the sectors of the New Kingdom town of Sai, no kilns or potter’s workshop have been identified with certainty within the settlement area.⁷¹⁰

4.2.4 Corpus of types and shapes

Since a detailed presentation of ceramics from SAV1 East and West (fabrics, wares, corpus and quantities) will be published elsewhere,⁷¹¹ the following chapter presents an overview of the most important types, with a focus on early and mid-18th Dynasty contexts, providing ready parallels for the material from SAV1 North.⁷¹² In general, small and medium-sized dishes, various plates, pot stands, storage vessels, cooking pots, beer jars, beakers and bread plates dominate the corpus of ceramic types from both sectors.⁷¹³ Bread moulds, bread trays and spinning bowls, as well as carinated Marl clay vessels, amphorae and decorated jars are also present (see Tab. 16). Within these types, certain differences between SAV1 East and SAV1 West can be observed.

Dishes and plates

This category of vessels comprises various types of dishes and larger plates.⁷¹⁴ Simple dishes with flat bases or ring bases are very common, often with a red rim (especially for the variants DP 3 and DP 6, Fig. 72). Black rim ware⁷¹⁵ and the Thutmoside red splash decoration⁷¹⁶ is also regularly found on dishes. In general, the most common ware within this shape group is red slipped and burnished inside (especially for DP 3 and DP 9). Carinated dishes with complex contours (especially DP 9) frequently show wavy incised or painted decoration, including triangles which are common for large carinated bowls (BO 6).⁷¹⁷

DP 3, a dish with a simple, upturned rim, is a very common type which appears both with flat bases and ring bases (Figs. 72 and 73). Although uncoated surface treatments and red rims are attested, DP 3 vessels are very often red slipped and burnished inside. Here, a phenomenon already observed by Anne Seiler is noteworthy: early variants like SAV1E P007.2 (Fig. 73) illustrate that the bottom part of the ring base was left uncoated.⁷¹⁸ In later variants, the complete base is red slipped because

⁷⁰⁵ Miller 1985; Woolf 1998; Smith 2003b; Budka 2017g, 440.

⁷⁰⁶ Kraidy 2005, vi.

⁷⁰⁷ Cf. Budka 2017g; see also Garnett 2014, 62; Ruffieux 2016, 518–519, fig. 13.

⁷⁰⁸ For the recent discovery of a pottery kiln at Amara West: Garnett 2014, 62; Spencer, Stevens and Binder 2014, 19–20, 26.

⁷⁰⁹ Williams 1992, 24 (Serra); Smith 2003a, 117 (Askut); Edwards 2012, 78, fig. 3.33 (Tombos).

⁷¹⁰ See, however, Hesse 1981; cf. Budka and Doyen 2013, 170 with discussion.

⁷¹¹ Budka forthcoming a.

⁷¹² Budka 2017i.

⁷¹³ Very similar to SAV1 North, see Miellé 2012, 177 and Budka 2017i.

⁷¹⁴ Cf. the corpus from the treasury of Thutmose I at Karnak: Jacquet-Gordon 2012, vol. 2, figs. 54–58.

⁷¹⁵ The dating of the black rim has been discussed controversially; see, e.g., Bourriau and Schenck 2015, 182 with references; Budka 2016a, 52.

⁷¹⁶ Cf. Aston 2006, 65–73.

⁷¹⁷ See parallels from Sesebi: Spence et al. 2011, 37, fig. 5.

⁷¹⁸ The archaeological context of this dish is not relevant for dating; it derives from Feature1, the surface layer, in the north-eastern part of Square 1.

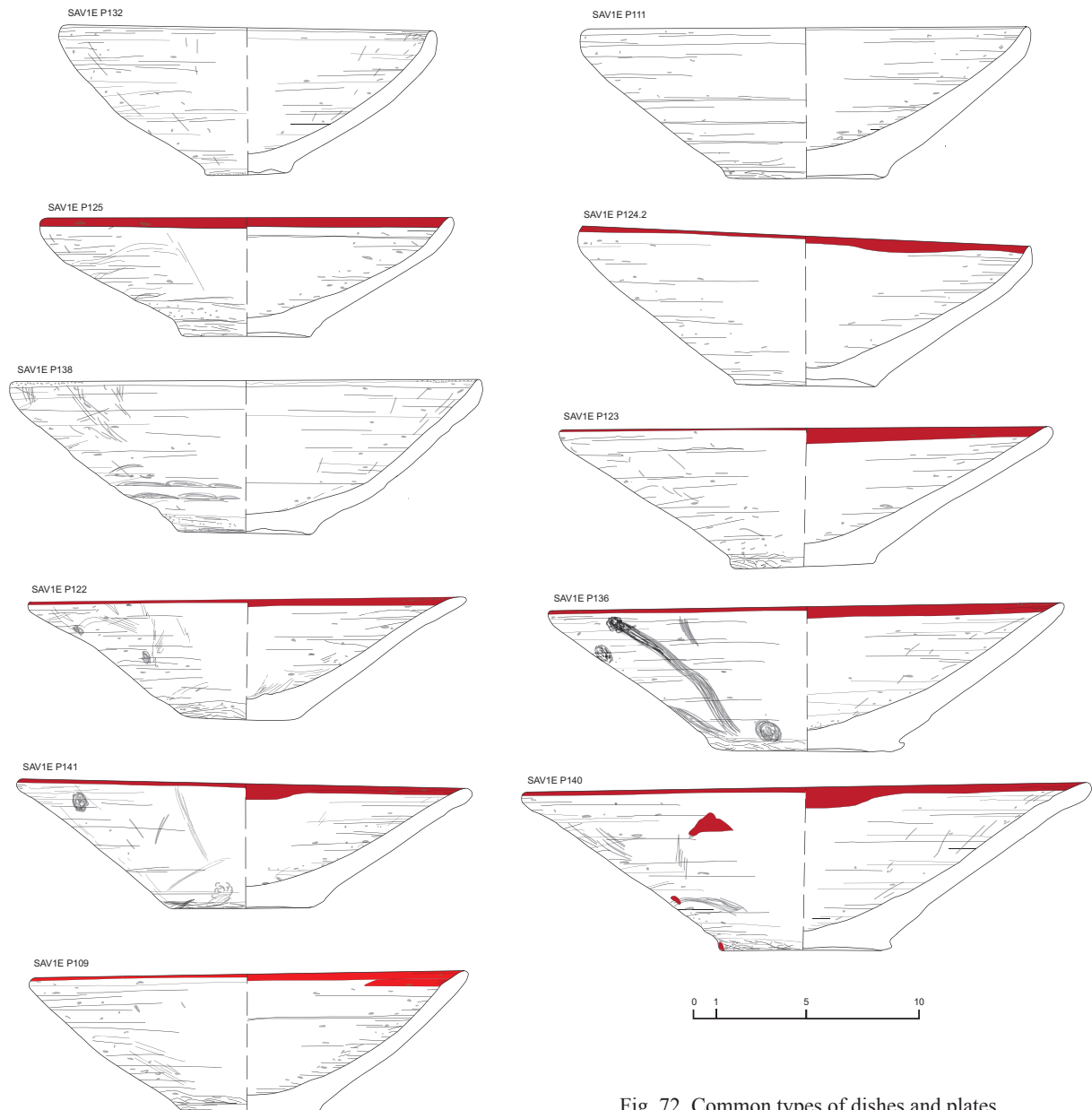


Fig. 72 Common types of dishes and plates

the complete dishes were dipped into the red wash.⁷¹⁹ In chronological terms, this difference in the surface treatment of the bases of dishes at Sai is significant: in Egypt, the transition is associated with the beginning of the New Kingdom.⁷²⁰ At Sai, an overlap of traditions seems to have happened, combining the ‘outdated’ method of the Second Intermediate Period with the innovative technique of the 18th Dynasty. This might have been stimulated by either imports from Egypt and/or a local pottery production which was less up-to-date than the ones in the pottery production centres within Egypt proper (see below, DP 11).

Another significant dish type of the 18th Dynasty is DP 5 which is a large plate with a modelled rim with a flange or ledge. It is commonly made in chaffy Nile B2 or Nile C2 variants, always uncoated, and

⁷¹⁹ Seiler 2005, 154.

⁷²⁰ Seiler 2005, 154. The corpus of pottery from Elephantine also supports this assessment (personal observation).

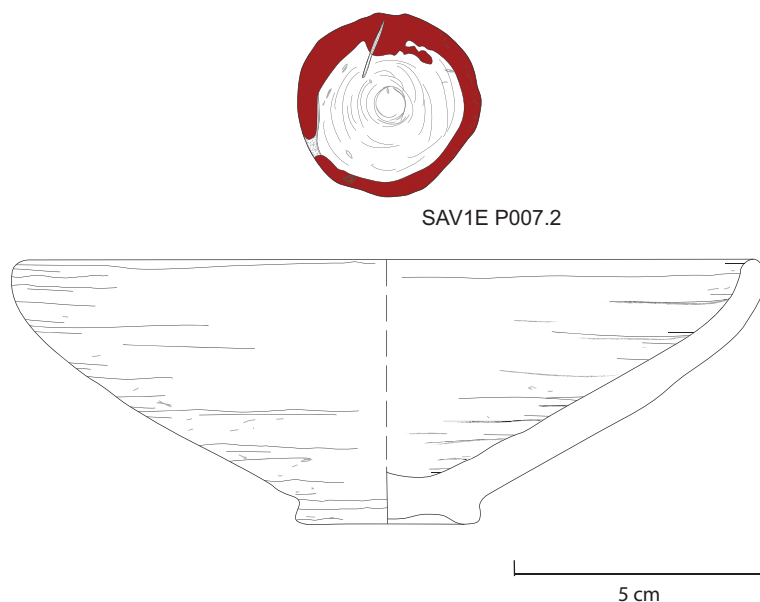


Fig. 73 Example of complete red washed DP 3 from SAV1 East with uncoated bottom of ringbase

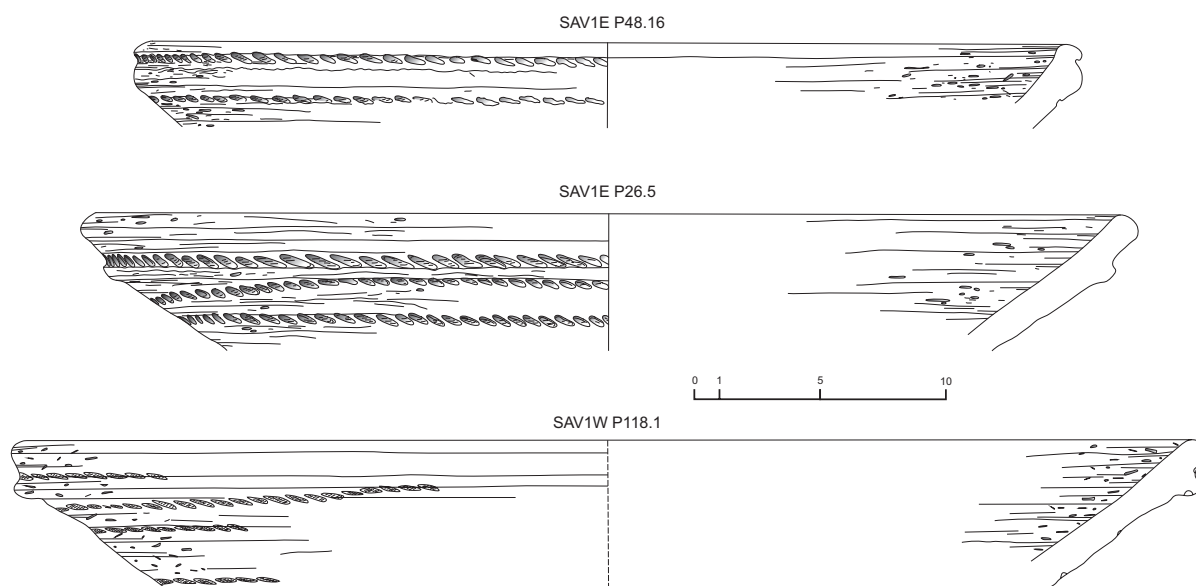


Fig. 74 Examples of type DP 5 plates

shows traces of sometimes very deep rope impressions (Fig. 74). DP 5 dishes have flat bases, cut from the slow wheel. In Egypt this type shows a significant morphological development from the 17th Dynasty to the 18th Dynasty,⁷²¹ and the variants in Nubia (like Askut, Sai and Dokki Gel)⁷²² all fall into the new type of the New Kingdom.⁷²³ At both sectors, SAV1 East and SAV1 West, this type is well-attested in various variants, especially in diverse sizes.

⁷²¹ Well-attested on Elephantine, especially for the material from House 55 (unpublished, courtesy of the author).

⁷²² For Askut, see Smith 1995, 143, fig. 6.4, O. At SAV1 North, this type is attested from the earliest 18th Dynasty levels onwards, see Budka 2017i, 128. For Dokki Gel, see Ruffieux 2005, 268, no. 18.

⁷²³ See Jacquet-Gordon 2012, vol. 2, fig. 57.

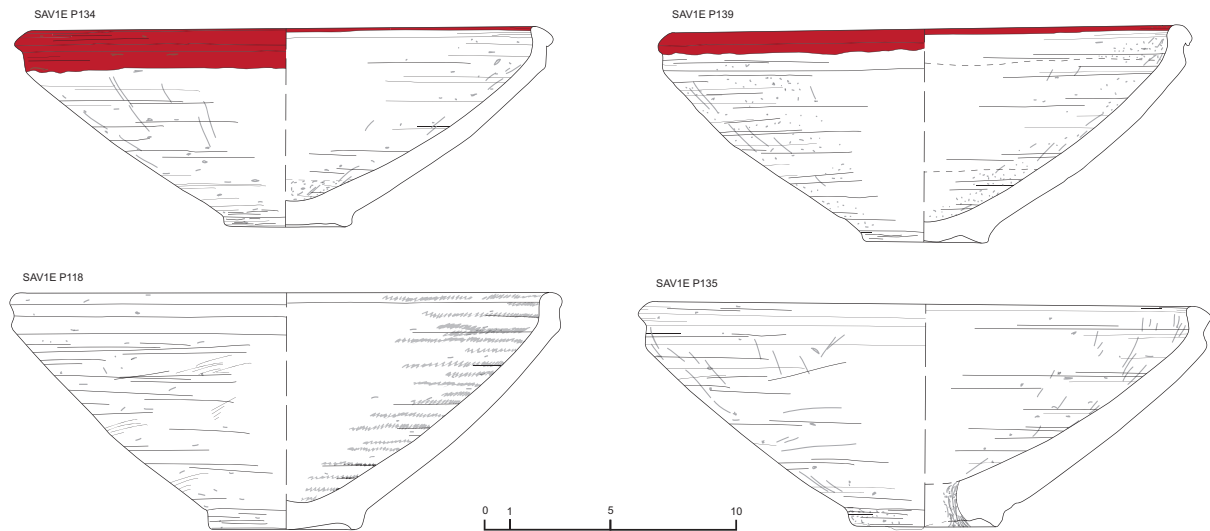


Fig. 75 Examples of type DP 9 dishes

DP 7 is a dish with a complex outline and a direct rim. This type is very common at Elephantine in ‘Bauschicht’ 10⁷²⁴ and was also found in Thutmoside contexts at Thebes.⁷²⁵ At Sai, the amount of DP 7 dishes is moderate. They are attested at both sectors with black rims and more often plain red slipped and burnished.⁷²⁶

More common than DP 7 at Sai is another variant of carinated dishes, DP 9 with an outer lip. The shape of the bases may vary, but most common are ring bases (Fig. 75). These vessels find close parallels at Elephantine, ‘Bauschicht’ 10 and are most often red slipped and burnished inside and outside until the carination.⁷²⁷ Red rims are also well-attested; some complete dishes were found in Feature 15.⁷²⁸ Painted examples, using geometric designs in black colour, are also confirmed from both sectors.⁷²⁹

A common and very specific type of carinated dish shows incised wavy lines and a finger-pinched or cut rim (DP 11, Fig. 76).⁷³⁰ An almost complete example with incised decoration on the interior and exterior has survived from Feature 15 (SAV1E P129, Fig. 76). This large dish originally had a conical foot which is now lost. Carinated dishes like this example frequently show painted decoration in addition to the incised lines, finding parallels at Sesebi⁷³¹ and Askut.⁷³² Dishes of type DP 11 are regularly red washed, sometimes with additional white as decoration, and they often show vertical applications on the upper part of the vessel. This type, also known from SAV2⁷³³ and SAV1 North⁷³⁴ is commonly associated with the Second Intermediate Period pottery tradition with numerous attestations from Lower Egypt,⁷³⁵

⁷²⁴ See Seiler 1999, 2010, fig. 47.

⁷²⁵ Lilyquist 2003, figs. 62a–b, d.

⁷²⁶ Cf. Budka 2016a, fig. 1.

⁷²⁷ Seiler 1999, 212, fig. 48, Lilyquist 2003, fig. 62f.

⁷²⁸ Budka 2018d, 156, fig. 7.

⁷²⁹ Cf. Budka 2018d, 153–154, fig. 5 with examples from SAV1 North.

⁷³⁰ Budka 2018d, 153–154, fig. 5.

⁷³¹ Spence et al. 2011, 37, fig. 5; Rose 2017, fig. 1.4; Rose 2018, fig. 1.

⁷³² Smith 1995, fig. 6.14.

⁷³³ Hesse 1981, 29, class 93, fig. 18.

⁷³⁴ Budka 2011, 29–30 (as type DP 8.1 at SAV1 North).

⁷³⁵ E.g. Avaris/Tell el-Daba, 15th Dynasty, Aston 2004, no. 18; Aston and Bader 2009, fig. 4.32; Qau, Bourriau 2010, fig. 9.

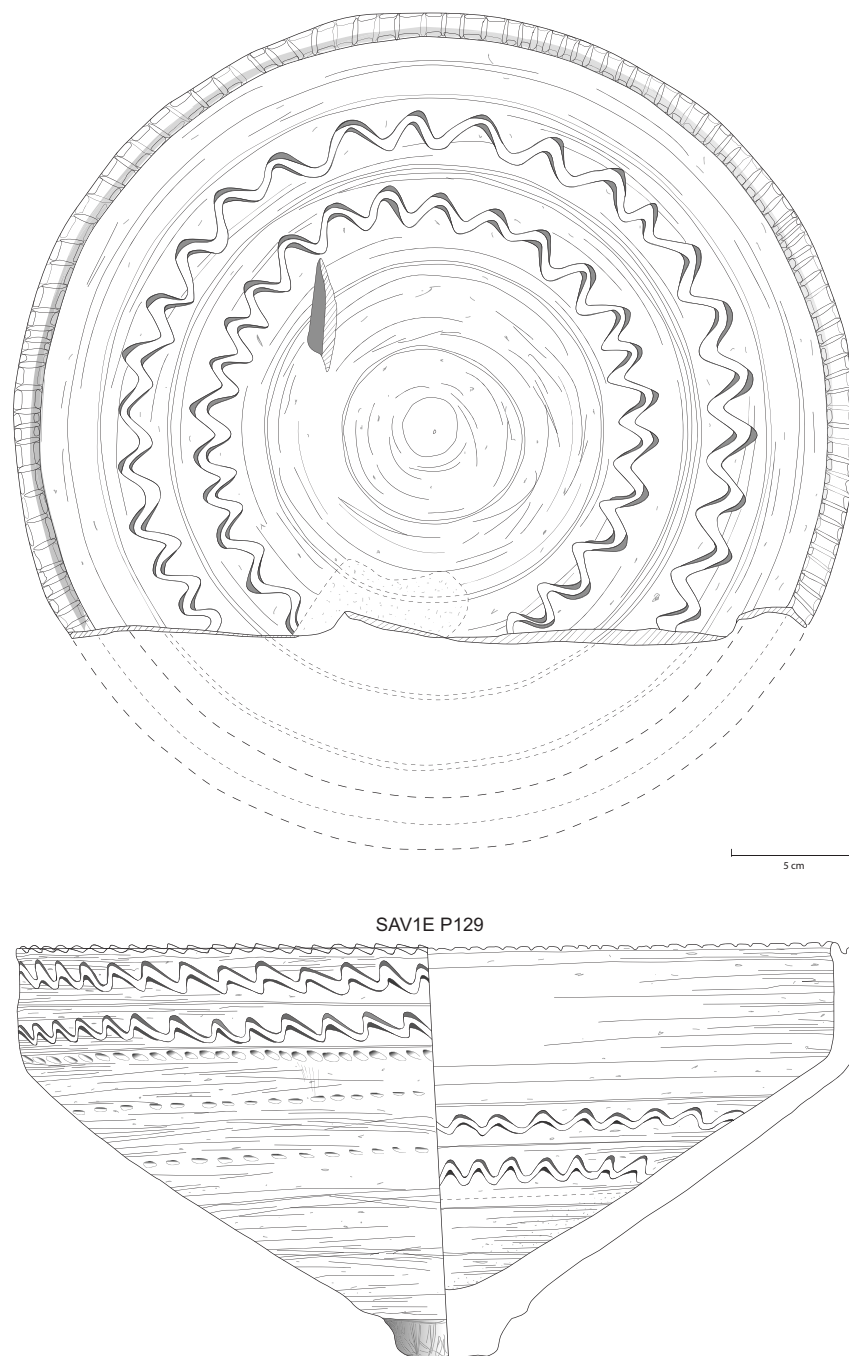


Fig. 76 Almost complete example of type DP 11 dish (from Feature 15)

Upper Egypt⁷³⁶ and also Lower Nubia.⁷³⁷ Finds at Elephantine⁷³⁸ and at Sedment⁷³⁹ illustrate, however, that this vessel type occurs in 18th Dynasty contexts as well, until the reign of Thutmose III. This cor-

⁷³⁶ E.g. Abydos, Wegner 2007, figs. 123.78 and 128.149; Thebes, Seiler 2010, figs. 8.2–3, 17th Dynasty and in Marl variants at Deir el-Ballas, Bourriau 1990, fig. 4.3[20].

⁷³⁷ Askut, dated as 13th Dynasty, Smith 1995, fig. 3.8; Smith 2003b, fig. 3.3, but probably later, see Knoblauch 2007.

⁷³⁸ Budka 2018d, 160, fig. 12.7.

⁷³⁹ Today at Brussels, Musées Royaux d'Art et d'Histoire, E. 5806.4, see Petrie and Brunton 1924, pl. 64; Franzmeier 2017, 1327–1328. Franzmeier gives as parallel a piece from Thebes: Seiler 2005, 144–145, fig. 64.4.

responds to the distribution of the type at Sai Island, where such dishes frequently appear together with material dating to Thutmose III/Amenhotep II.⁷⁴⁰ Although they evoke the style of the Second Intermediate Period, this particular type of dish might serve as a good illustration of the way in which pottery of the Second Intermediate Period and the early New Kingdom followed regionally divergent developments within the areas of both Egypt and Nubia.⁷⁴¹

Bowls (Fig. 77)

Several variants of bowls are attested from SAV1 East and SAV1 West, differing not only in sizes but also regarding the rim and contour. The majority is made in Nile clays and several surface treatments are attested, including red rims, red wash and common uncoated surfaces. Rounded bowls with an outer lip often show a red rim.⁷⁴² Especially the variants BO 6 and BO 7 are often red slipped and burnished and

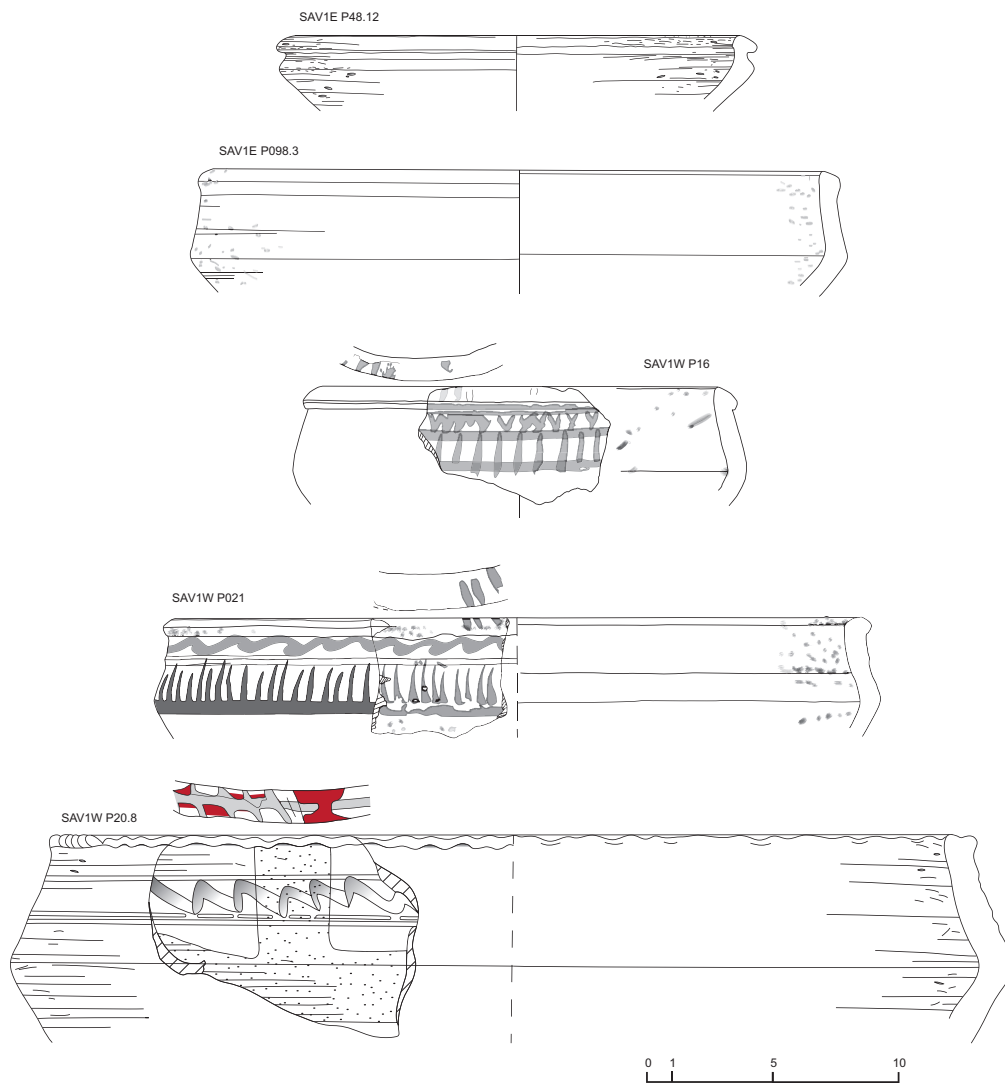


Fig. 77 Common types of bowls from SAV1 East and SAV1 West

⁷⁴⁰ Budka 2011, 30.

⁷⁴¹ Cf. Knoblauch 2007 and recently Seiler 2010; Bourriau 2010. See also Budka 2011, 30 for SAV1 North.

⁷⁴² Cf. Thutmose examples from Thebes: Lilyquist 2003, fig. 60c–d, fig. 61a.

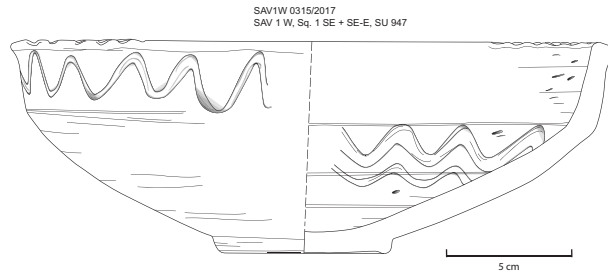


Fig. 78 Complete example of a small carinated bowl with wavy line incised decoration (SAV1W 0315/2017)

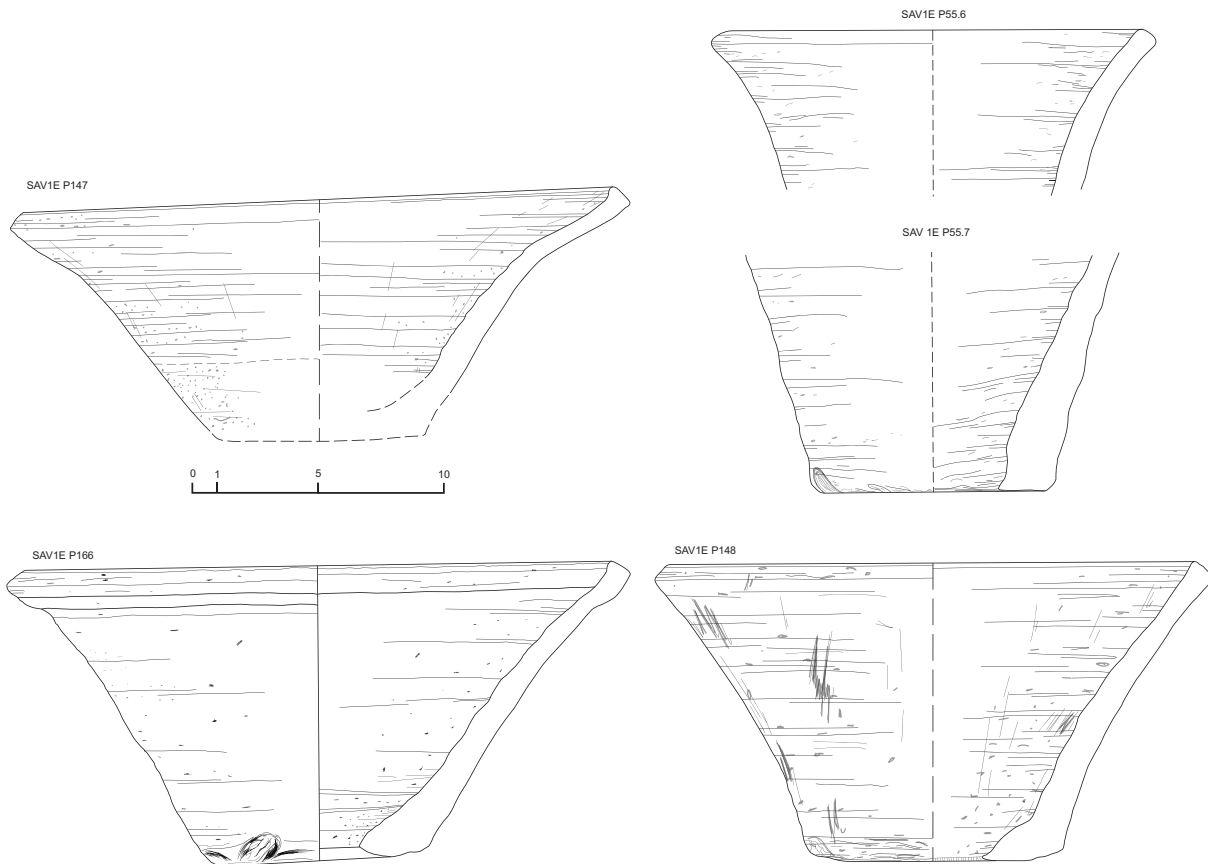


Fig. 79 Flower pots from SAV1 East

sometimes painted with black colour and geometric motifs.⁷⁴³ The preference of wavy lines (Fig. 78) and painted triangles on these bowls has been discussed by several scholars and Smith proposed to interpret these patterns as local Nubian-style.⁷⁴⁴

Flower pots (Fig. 79)

Chronological markers for the 18th Dynasty are the so-called flower pots, conical deep bowls with perforated bases which are present both at SAV1 East and SAV1 West.⁷⁴⁵ They are attested in several variants

⁷⁴³ Cf. Holthoer 1977, pl. 24; Smith and Buzon 2018, 219, fig. 17 with references.

⁷⁴⁴ Smith 2003a, fig. 6.14, Smith 2003b, fig. 3.7; Budka 2018d, 153. See also Miellé 2014, 389 and most recently Rose 2018, 136.

⁷⁴⁵ See Wolf 1937, pl. 77, 'Form 25'; Holthoer 1977, pl. 18; Williams 1992, 34–35; Minault-Gout and Thill 2012, pl. 132; Pierce 2013, 514–517. For the shape without a perforated base, see, e.g., Lilyquist 2003, fig. 63.

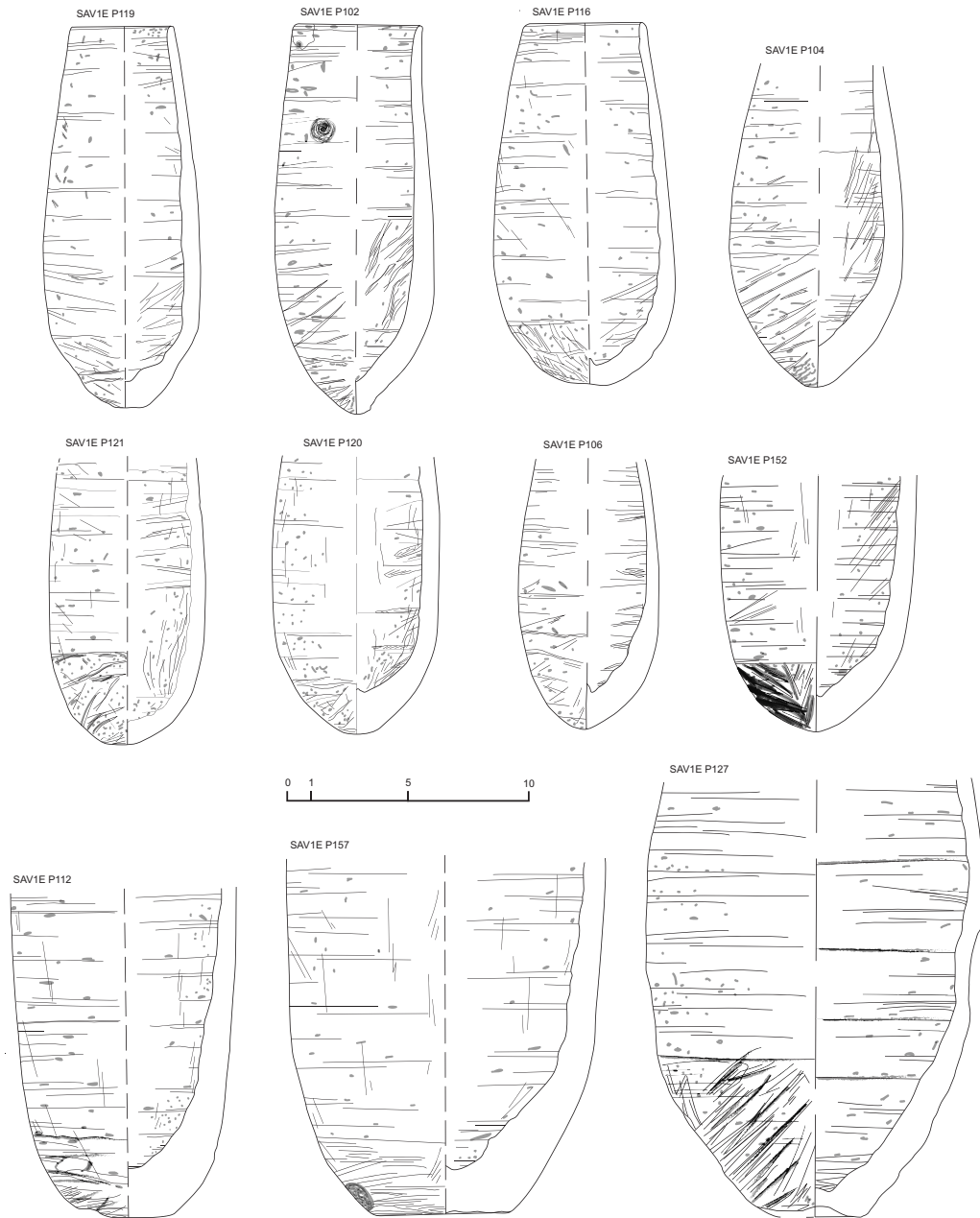


Fig. 80 Beakers from SAV1 East

depending on the rim and whether a hole in the base is attested or not. In general, flower pots seem to be more common at SAV1 East, being often associated with beer jars. Several complete examples were found in Feature 15.⁷⁴⁶

Beakers (Fig. 80)

A large number of complete or almost complete beakers were found at SAV1 East in Feature 15 (Fig. 80).⁷⁴⁷ This group of vessels can be regarded as typical drinking vessel of the 18th Dynasty with a clear

⁷⁴⁶ See Budka 2018d, 156, fig. 7 bottom.

⁷⁴⁷ See Budka 2018g, fig. 5.

morphological evolution going back to the 13th Dynasty.⁷⁴⁸ At Sai most common are tall beakers with direct rims (BK 1) which appear in various sizes and with rounded base (BK 1.1), with cut/trimmed base (BK 1.2) and also flat base (BK 1.3). This slender shape finds many parallels in Egypt, for example at Abydos, both from early 18th Dynasty contexts at South Abydos and from Umm el-Qaab.⁷⁴⁹ Less common at Sai are beakers with inflected contour and a direct/everted rim (BK 2). All of the beakers from SAV1 East and SAV1 West were made in Nile clay variants; most of them seem to have been manufactured locally.

Carinated vessels (Fig. 81)

Carinated vessels are also known as squat jars and seem to imitate Levantine vessels, both in terms of shape and decoration.⁷⁵⁰ This group of jars shows a large variety of shapes and is closely related to jugs with a globular body,⁷⁵¹ but the typical squat jar has a biconical or convex body.⁷⁵² The first appearance of these vessels, which are attested as either handleless, with a single vertical handle or with two transverse handles in Egypt and Nubia, has been dated to the early to mid-18th Dynasty (especially Hatshepsut/Thutmose III).⁷⁵³ The jugs with a vertical handle are regarded as typical Thutmoside vessels.⁷⁵⁴ The earliest squat jars of this type are made of Marl A2 clay and decorated with a vertical decoration and criss-cross patterns on the shoulders.⁷⁵⁵ They are common burial gifts in Thutmoside tombs, both in Egypt and Nubia.⁷⁵⁶

Both Marl clay vessels (Fig. 81) as well as Nile clay squat jars that imitate Marl clay vessels are well-attested on Sai.⁷⁵⁷ The Nile variants from Feature 15 are not decorated, but a large number of painted examples were documented from other sectors of the New Kingdom town of Sai, SAV1 East, SAV1 West and also SAV1 North.⁷⁵⁸ The classification of the vessels mainly considers the form of the rim and neck. CV 1 comprise vessels with carination and a modelled rim. They are attested as short-necked (CV 1.1), broad-necked (CV 1.2) and narrow-necked (CV 1.3). An outer lip characterises CV 2. CV 3 carinated vessels show both an outer lip and handles. One well preserved, large squat jar was found in cellar Feature 115 at SAV1 West (SAV1W P233, Fig. 81 bottom). It seems to belong to the broad-necked type, but its upper part is lost. It has a characteristic rim base with a bulged base and can be dated to the mid-18th Dynasty. SAV1W P233 shows a typical vertical decoration. Other vertical decoration patterns include criss-crosses and seem to predate another pattern which is composed of horizontal bands.⁷⁵⁹ Rim-tickings on top of the lips of squat jars, for which Rostislav Holthoer has collected the most common patterns, often complement the decoration on the body.⁷⁶⁰

⁷⁴⁸ Seiler 2005, 152.

⁷⁴⁹ Budka 2006, figs. 19.9 and 20.1 (South Abydos); Pumpenmeier 1998, fig. 23; Budka 2010c, 42, fig. 21 (both Umm el-Qaab).

⁷⁵⁰ See Amiran 1969, 187; Lakomy 2016, 167. Williams labelled them as “Pseudo-Import Jars”, see Williams 1992, 40–42, figs. 7–8.

⁷⁵¹ Labelled by Holthoer as “jugs and juglets”, see Holthoer 1977, pls. 20–21. For this group, which is also attested on Sai, see most recently Lakomy 2016, 166–180 with references and parallels.

⁷⁵² Williams 1992, 41. See also Holthoer 1977, pls. 30–32.

⁷⁵³ For a variety of vessels from Nubia and their diverse decoration patterns, see Holthoer 1977, 133–145. For early 18th Dynasty variants from Level 5 at SAV1 North, see Budka 2017i, 128, fig. 55.

⁷⁵⁴ See, e.g., Seiler 1992, 126, figs. 6–7.

⁷⁵⁵ See Rose 2018, 138. 40–42.

⁷⁵⁶ See Seiler 1992, 126 with references.

⁷⁵⁷ Two complete Marl clay squat jars were found at sector SAV1 North, see Miellé 2012, 180–181, figs. 5.1–2. For the rare appearance of decorated squat jars already in Levels 5 and 4 at SAV1 North, see Budka 2016a, 52; Budka 2017i, 128–129, fig. 55.

⁷⁵⁸ Budka 2018d, 152, fig. 3.

⁷⁵⁹ See Holthoer 1977, 133–134.

⁷⁶⁰ Holthoer 1977, pl. 14.

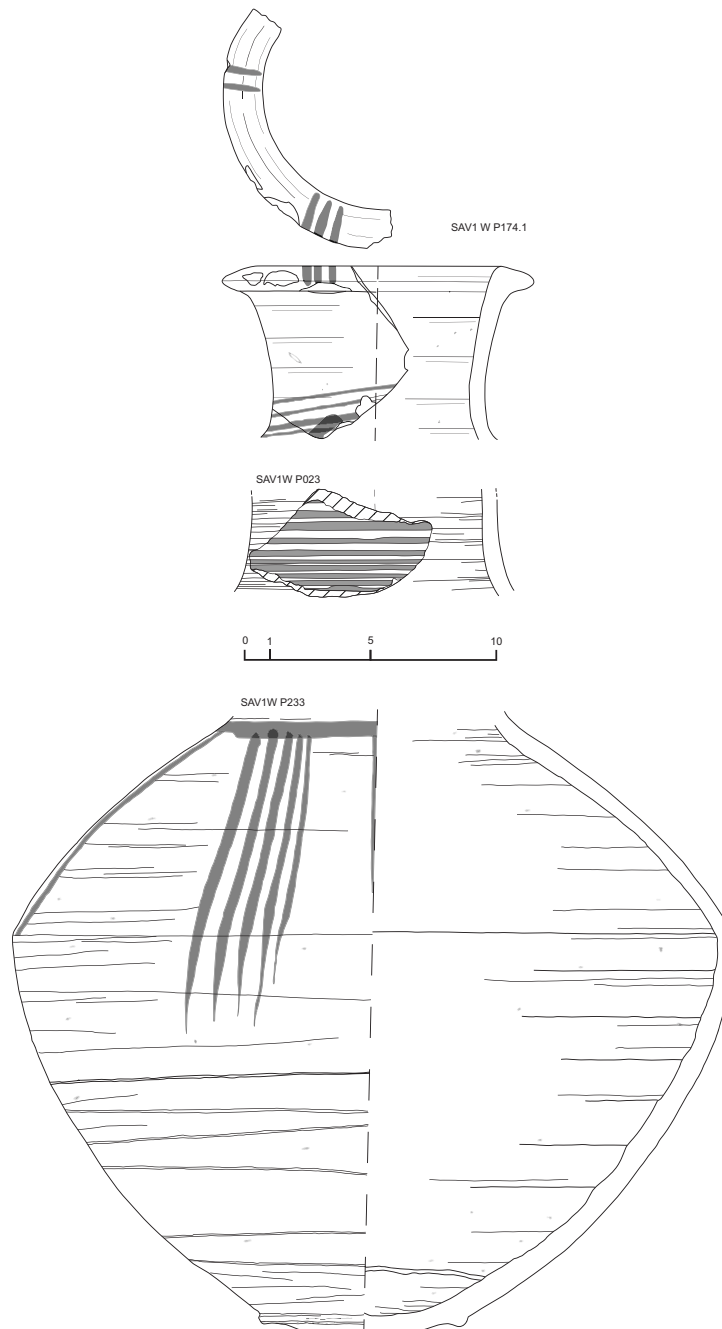


Fig. 81 Examples of carinated Marl clay vessels (squat jars) from SAV1 West

Jars (Fig. 82)

In general, the corpus of various jars is better illustrated by finds from tombs because of the complete state of preservation⁷⁶¹ – only rim fragments and base sherds were found at SAV1 East and SAV1 West. A large variety of different neck-shapes are attested within the category of jars (short-necked, tall-necked, neckless etc., see Fig. 82). Large *zir* vessels of a chaffy Nile C variant are characteristic of the early to

⁷⁶¹ Minault-Gout and Thill 2012; see also Williams 1992, 81–84.

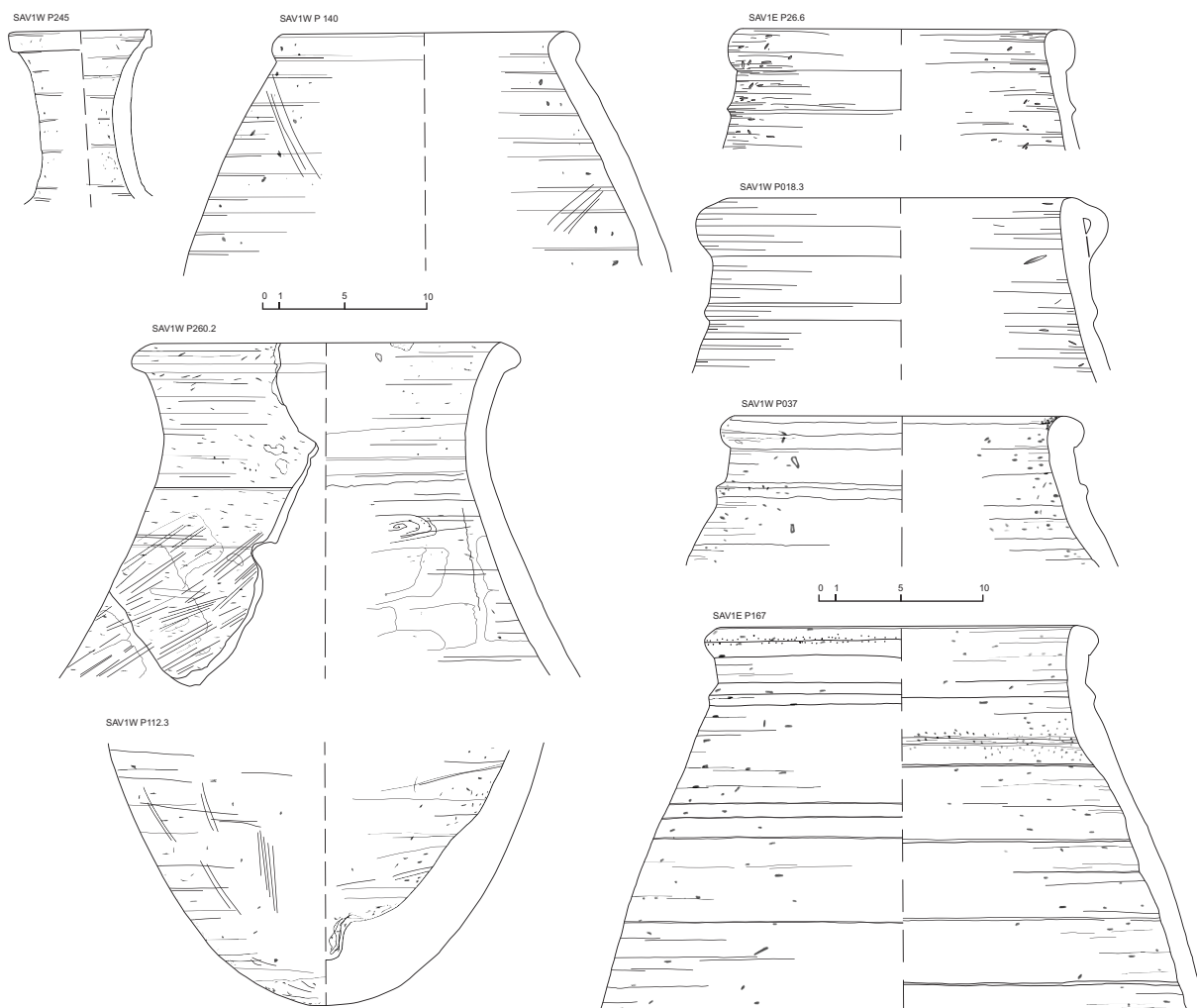


Fig. 82 Common types of jars from the New Kingdom town of Sai

mid-18th Dynasty and find close parallels at Elephantine (Fig. 82, e.g. SAV1E P167).⁷⁶² The same holds true for Marl clay variants of *zirs*, which are less common than the Nile clay ones.⁷⁶³ However, one almost complete in situ ceramic vessel (0838/2015) from Cellar Feature 115 at SAV1 West is noteworthy. Unfortunately, only the body without neck and rim has survived, but it is clear that the vessel represents a typical mid-18th Dynasty *zir* in the specific Marl clay variant (Marl A4 variant 2 of the 18th Dynasty). A large number of these vessels were found still intact and sealed in Theban tombs⁷⁶⁴ – one has to assume that the vessel reached Sai as a container full with provisions coming from Egypt. It might have been used for a certain time, possibly with diverse contents, before it ended up in Feature 115. The parallels from Thebes for vessel 0838/2015 support the general dating of Feature 115 to the mid-18th Dynasty (see Chapters 3.3.3 and 4.5). The upper part of a white-washed dense and hard-fired Nile variant of such a *zir* is represented by SAV1W P260.2 (Fig. 82).

Common jars from the early and mid-18th Dynasty are ovoid jars with tall or short necks and modelled rim.⁷⁶⁵ During the late 18th Dynasty and the Ramesside period funnel necked jars are attested by

⁷⁶² Budka 2011, 26 with references.

⁷⁶³ For the parallels from Elephantine and Abydos, see Seiler 1999, 217–219, fig. 51.3; Budka 2005a, 94–95; Budka 2006, 93–94.

⁷⁶⁴ See most recently Lakomy 2016, 195–198 with references and parallels.

⁷⁶⁵ For common 18th Dynasty jars, see Williams 1992, 37–40.

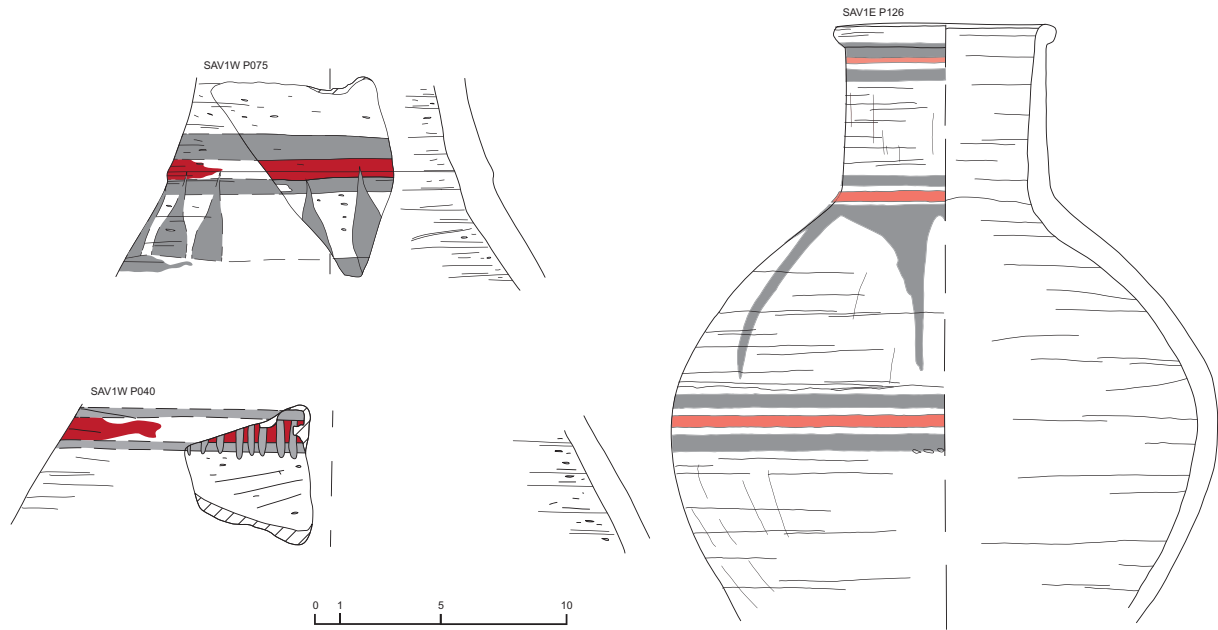


Fig. 83 Bichrome-painted vessels from SAV1 West and SAV1 East

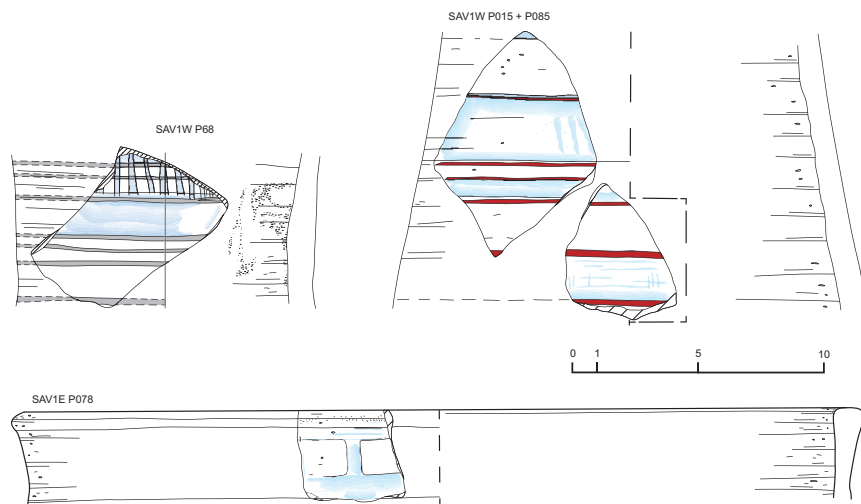


Fig. 84 Examples of blue-painted vessels from the New Kingdom town of Sai

rim fragments in small numbers.⁷⁶⁶ A large group of bichrome-decorated necked jars from Sai that show linear and floral as well as figurative designs is of special interest. Such bichrome-painted vessels are well-attested at SAV1 West and also occur at SAV1 East (Fig. 83). Good parallels of mid-18th Dynasty date are known from Nubia at Dokki Gel,⁷⁶⁷ but also from Askut, Buhen and Aniba.⁷⁶⁸ The origin of these specific vessels is still an open question – on the basis of parallels, the area of Elephantine seemed likely,⁷⁶⁹ but new finds from Dokki Gel suggest a local workshop in Upper Nubia as well.⁷⁷⁰ Another category of painted closed forms is blue-painted pottery (Fig. 84), which is only rarely attested in Nu-

⁷⁶⁶ Cf. Williams 1992, 84, figs. 6f–h.

⁷⁶⁷ Ruffieux 2009, 124–126, figs. 3–5; Ruffieux 2016, 512–513, figs. 7–8.

⁷⁶⁸ See Budka 2015c with references.

⁷⁶⁹ Budka 2015c.

⁷⁷⁰ Personal communication Phillipe Ruffieux, May 2016.

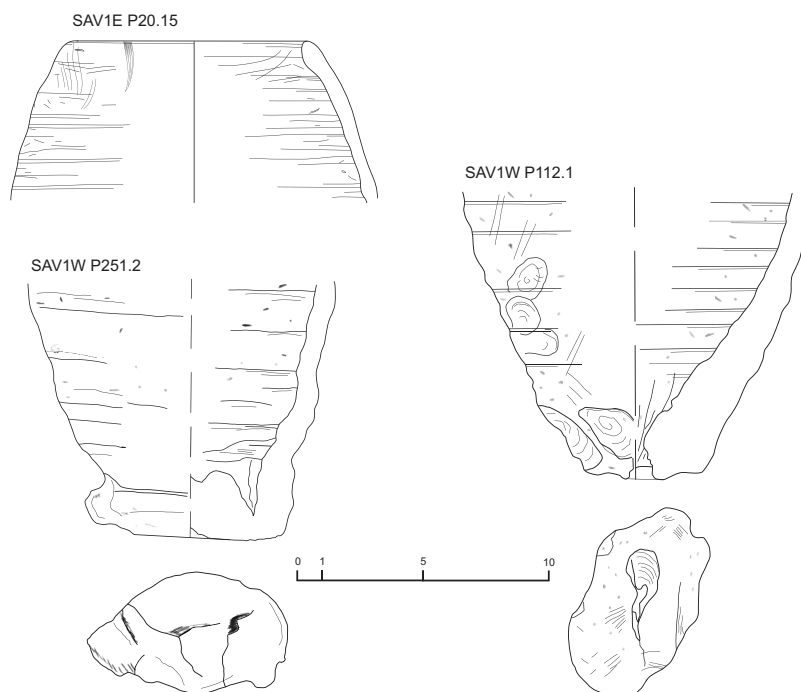


Fig. 85 Examples of beer jars from SAV1 West and SAV1 East

bia.⁷⁷¹ Some pieces from SAV1 West are made in Marl clay and date to the mid-18th Dynasty (Pl. 86); other blue-painted sherds in Nile clay already belong to the Ramesside period (see Fig. 84). Very few blue-painted sherds were documented from SAV1 East, including the interesting open form of SAV1E P078, a carinated bowl (Fig. 84 bottom).

Beer jars (Fig. 85)

Beer jars with an inverted or direct rim are, together with slender beakers of various sizes and types, typical settlement forms of the New Kingdom and well-attested on Sai and from Feature 15 at SAV1 East.⁷⁷² Several lower parts of beer jars with flat bases showing deep fingerprints and rim fragments were also found at SAV1 West. Most common are at both sectors Holthoer's BB2, the "Transitional Beer-Bottles".⁷⁷³ These beer jars from Sai, labelled as BJ 01,⁷⁷⁴ compare well to this type of vessel attested in 'Bauschicht' 10 and 9 at Elephantine and from early to mid-18th Dynasty levels at South Abydos.⁷⁷⁵

Stands (Fig. 86)

Pot stands are very numerous at both sectors within the New Kingdom town and vary from low to tall and occur in diverse sizes. They are attested as biconical, transitional and tubular stands with varying rim formats.⁷⁷⁶ The stands at Sai are made primarily in Nile clays (Nile B2 and Nile C), but are also at-

⁷⁷¹ E.g. at Aniba, Sai, Tombos, Dokki Gel and Amara West, cf. Spencer 2002, pl. 4; Budka 2011, 30. See also Holthoer 1977, pl. 33, FU1.

⁷⁷² See Budka 2018g, 127, fig. 4.

⁷⁷³ Holthoer 1977, 86, pl. 18.

⁷⁷⁴ Also attested in cemetery SAC5, see Minault-Gout and Thill 2012, vol. 2, pl. 133.

⁷⁷⁵ See Budka 2005a, 95; Budka 2006, 88. The type is also attested at Thebes, see Lakomy 2016, 190.

⁷⁷⁶ Holthoer 1977, pl. 15. For Sai, see Budka 2018g, 124, fig. 1.

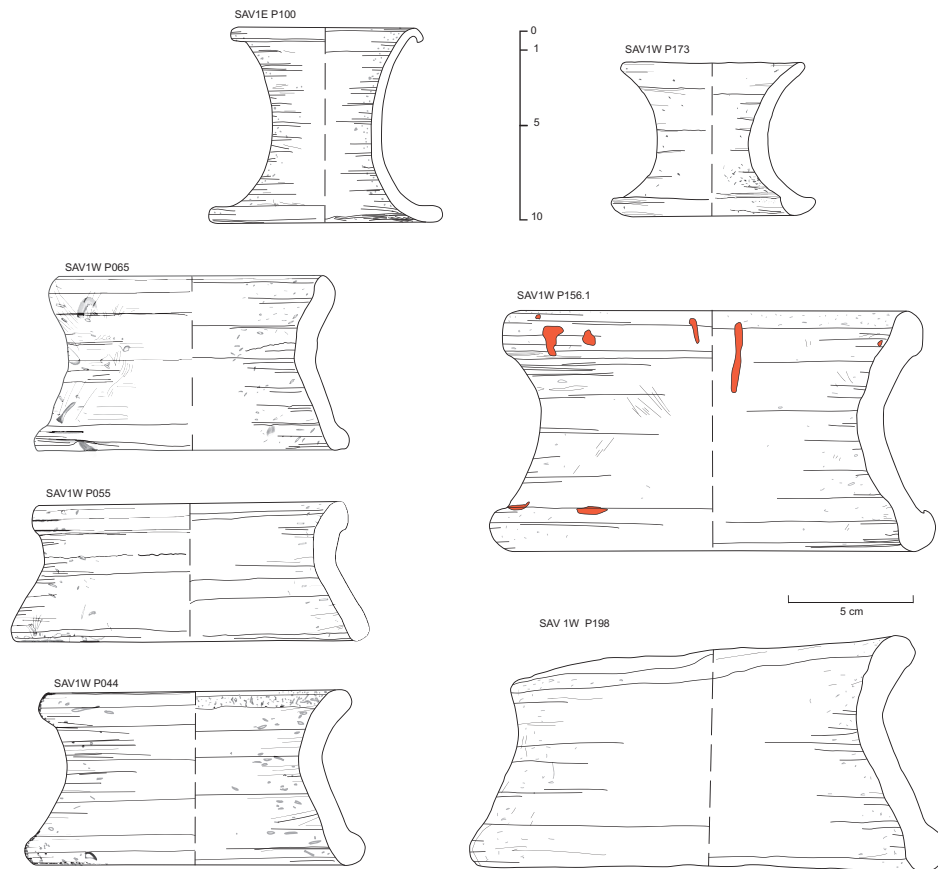


Fig. 86 Common types of stands from the New Kingdom town of Sai

tested in Marl clay (here especially in Marl B and Marl E).⁷⁷⁷ Pot stands are very abundant at both SAV1 East and SAV1 West; they represent the New Kingdom pottery type which is most often preserved with its complete profile or even as complete vessel. Examples like SAV1W P198 with very irregular rims (Fig. 86 bottom right) nicely illustrate that pot stands were obviously used for a long time, until they were not functional anymore. At SAV1 West a considerable number of decorated pot stands was noted – very common is a black linear design on a red polished or red washed surface.⁷⁷⁸ Also present are red splashes of paint on the exterior of pot stands (see, e.g., SAV1W P156.1, Fig. 86).

Tall stand with bowl/offering bowl (Fig. 87)

A common variant of a stand is a tall stand with an attached bowl – in other contexts, such pedestal bowls are well-known cultic vessels for burning incense.⁷⁷⁹ At Sai, it is remarkable that these vessels were primarily found at SAV1 West. Very often they contained organic residues, likely to represent incense, e.g. SAV1W P063 (Fig. 87). They are often smoked inside the bowl and showed a white wash or slip. Such surface treatments are well known from non-funerary contexts like Amarna and Abydos.⁷⁸⁰

⁷⁷⁷ For Buhen, see Emery, Smith and Millard 1979, pls. 70–71. For the small amount of stands from funerary contexts see Williams 1992, 88, figs. 10m–p; cf. also Wolf 1937, pl. 68 (cemetery S, Aniba).

⁷⁷⁸ Cf. Holthoer 1977, pl. 15.

⁷⁷⁹ See Budka 2006, 90–91, fig. 3 with references. Cf. also Smith 2003a, 130–131.

⁷⁸⁰ Hulin 1984; Budka 2006, 91. See also Seiler 2005, 102–103, 120 for the ritual function of such burners.

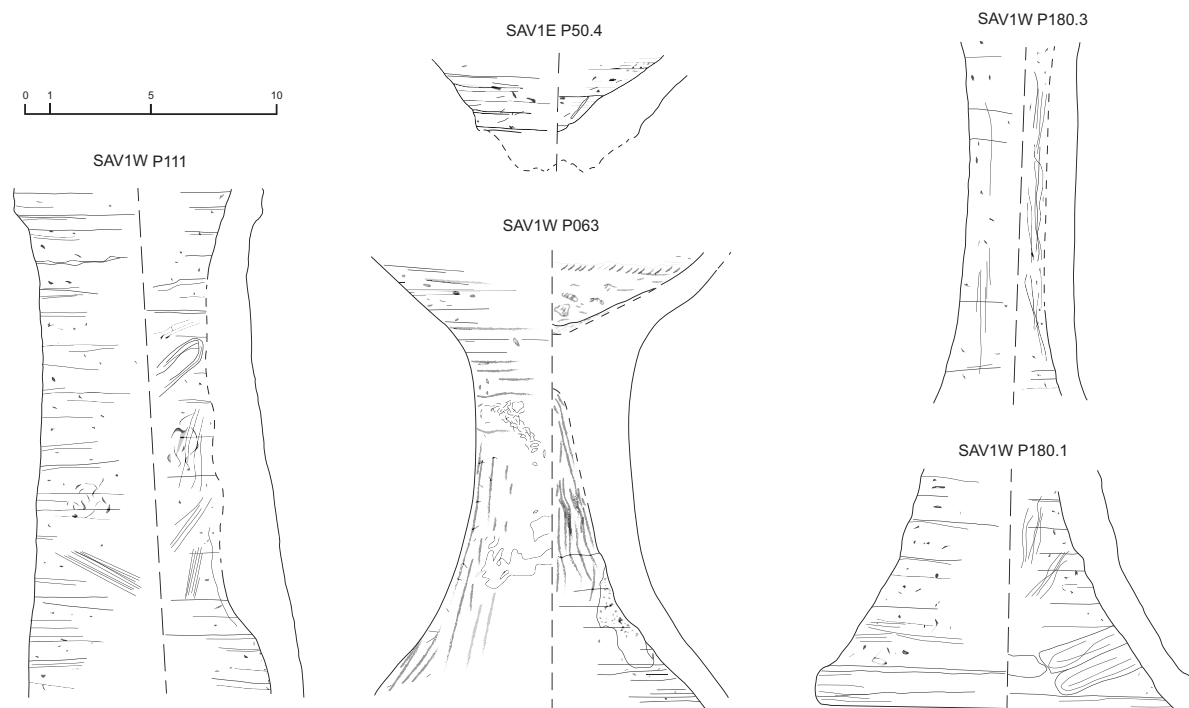


Fig. 87 Tall stands and pedestal bowls from the New Kingdom town of Sai

Within the bowls, incised wavy lines are found quite often (cf. Fig. 76 with a short foot).⁷⁸¹ In Nubia, comparable pedestal bowls/burners were found at Askut⁷⁸² and Dokki Gel.⁷⁸³

Lids

Various types of lids were recorded from SAV1 East and SAV1 West. A sub-group which will be addressed in the category of small finds are re-cut sherds (see Chapter 4.3). Other typical lids are small dishes of mostly simple shape and a flat base. Sometimes round-based lids also occur. Most of the lids were made in various variants of Nile B and C. In some cases it is not possible to identify whether very simple dishes of small scale were used as miniature vessel or as lid. This holds true for SAV1E P002, which is a surface find from Square 1 (Fig. 88).

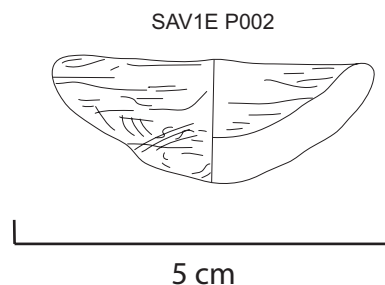


Fig. 88 Miniature vessel or lid SAV1E P002

Fire dogs (Fig. 89, Pl. 87)

Within the pottery corpus from SAV1 North, specific Egyptian ceramic devices, the so-called fire dogs, were found in considerable quantities.⁷⁸⁴ Interestingly, these functional vessels, thought to be connected with the preparation of food,⁷⁸⁵ were only present in small numbers at SAV1 East, here mostly in surface layers (four pieces in 2013). However, one fragment of a fire dog was discovered

⁷⁸¹ Cf. Brunton 1930, pls. XXVI.39–40; see also Budka 2011, 29.

⁷⁸² Smith 2003a, 130–131, fig. 5.28.

⁷⁸³ Ruffieux 2005, 266, nos. 13, 14 and 16–17.

⁷⁸⁴ See Budka 2017i, 138–139.

⁷⁸⁵ See Aston 1989; Giddy 1999, 250–253; Budka 2012, 60–61, figs. 9–10; Budka 2017i, 138–139.

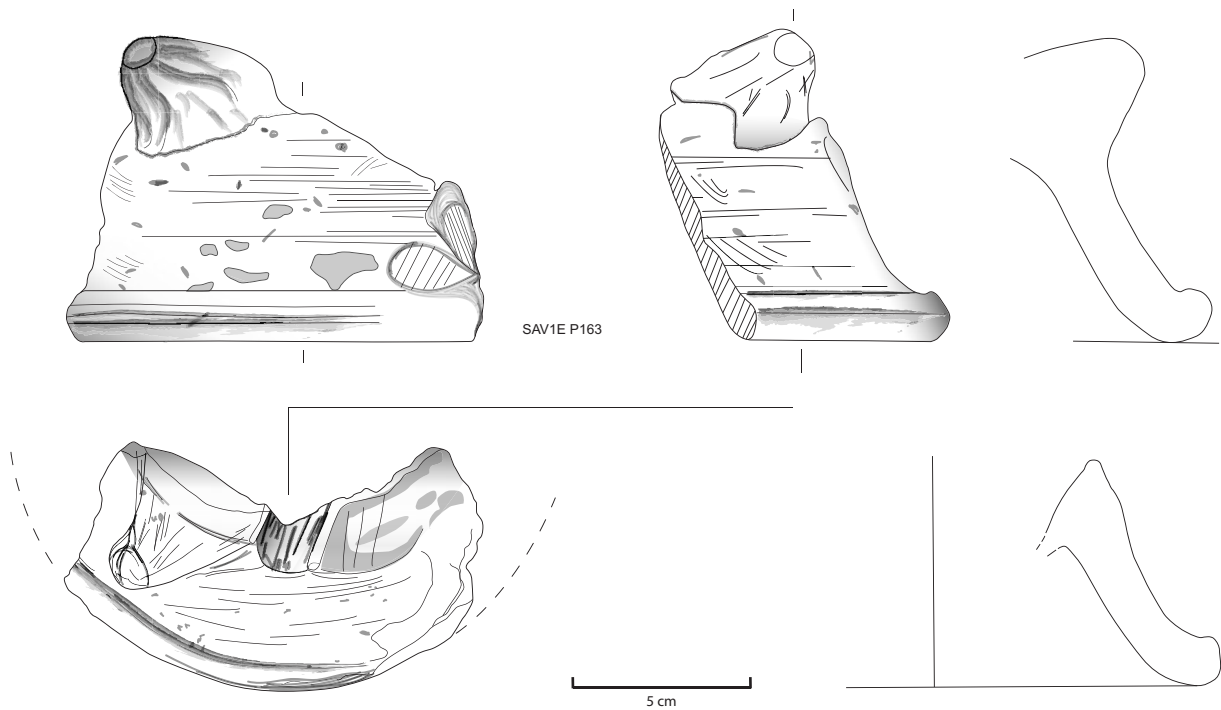


Fig. 89 Fire dog SAV1E P163 from Feature 15

SAV1W P	Find no.	SQ	SU	Label	State of preservation	Ware
14.1	743/2014	1	507	fire dog	ear	B2UC
14.2	743/2014	1	507	fire dog	ear	B2UC
14.3	743/2014	1	507	fire dog	base fragment	B2UC
14.4	743/2014	1	507	fire dog	base fragment	B2UC
15.1	500/2014	1	500	fire dog	ear	B2UC
15.2	500/2014	1	500	fire dog	ear	B2UC
15.3	500/2014	1	500	fire dog	snout	B2UC
15.4	500/2014	1	500	fire dog	base fragment	B2UC
29	1320/2014	1	572	fire dog	ear	C2UC
30	1178/2014	1	551	fire dog	base fragment	C2UC
32.1	1333/2014	1	584	fire dog	base fragment	C2UC
32.2	1333/2014	1	584	fire dog	base fragment	C2UC
64.2	1258/2014	1	565	fire dog	ear	Nile B2localUC
80.1	1358/2014	1	587	fire dog	base fragment	C2chaffy local UC
80.2	1358/2014	1	587	fire dog	ear	C2UC
89	1122/2014	1	548	fire dog	base fragment	B2UC
95	1334/2014	1	585	fire dog	base fragment	C2UC
102.1	593/2014	1	507	fire dog	base fragment	C2UC
102.2	593/2014	1	507	fire dog	base fragment	C2UC
102.3	593/2014	1	507	fire dog	base fragment	C2UC
102.4	593/2014	1	507	fire dog	ear	C2UC

Tab. 17 Fire dogs from Square 1, SAV1 West (2014 season)

in the filling of Feature 15 (Fig. 89). At SAV1 West, by contrast, a quite considerable number was found – not as many as at SAV1 North, but clearly more than in comparable layers at Elephantine. Especially interesting were 21 fragments of fire dogs which were all found in Square 1 at SAV1 West in 2014 (Tab. 17).

All fire dogs are made in a chaffy Nile clay; at least two pieces were clearly made locally (SAV1W P64.2 and 80.1). Four pieces derive from the surface layer (SU 500), eight fragments were found in the debris layer SU 507. In general, the distribution of fire dogs at SAV1 West can be well compared to SAV1 North.

Until now, Sai is the only New Kingdom site in Upper Nubia where fire dogs were found. However, large quantities of these objects were discovered at Buhen; there, the fire dogs were thought not to be associated with cooking but rather with copper production processes.⁷⁸⁶ At present, the precise function of the fire dogs at Sai must remain open – a multi-functional use might explain the large numbers from sectors SAV1 North and SAV1 West at Sai. The finding of a SAV1E P163 (Fig. 89) in Feature 15, however, would rather conform to a connection with cooking since much burnt material, charcoal and ashes were found in this cellar (see Chapter 3.2.2).

Spinning bowls (Fig. 90)

Spinning bowls (dishes with two handles attached to the interior of the base)⁷⁸⁷ are only known from SAV1 West and are absent at SAV1 East.⁷⁸⁸ These functional bowls were primarily produced on site in local Nile clay fabrics as is illustrated by SAV1W P201 (Fig. 90); this is comparable to evidence at Sesebi and Buhen.⁷⁸⁹ A pottery manufacture meeting the local demand at Sai is therefore likely, similar to, e.g., the workmen's village at Amarna.⁷⁹⁰

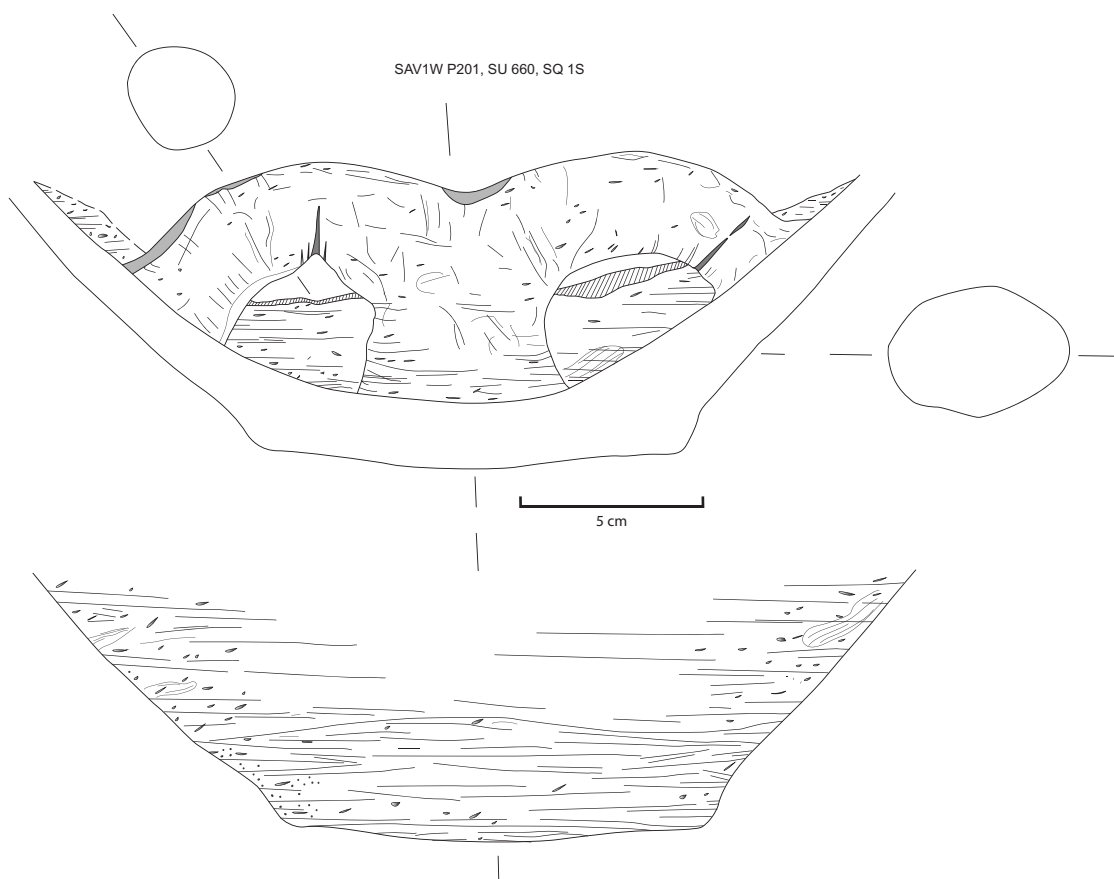


Fig. 90 Base of a Nile clay spinning bowl from SAV1 West (SAV1W P201)

⁷⁸⁶ Millard 1979, 123–126, pls. 43, 103.

⁷⁸⁷ See Rose 2007, 60–61, SD 6, 202–203.

⁷⁸⁸ Spinning bowls comparable to SAV1 West were found at SAV1 North, see Budka 2017i, 137.

⁷⁸⁹ Sesebi: Rose 2018, 142; Buhen: Emery, Smith and Millard 1979, pl. 68, nos. 143–144 and 148.

⁷⁹⁰ Cf. Rose 2007, 60; Budka 2018d, 162.

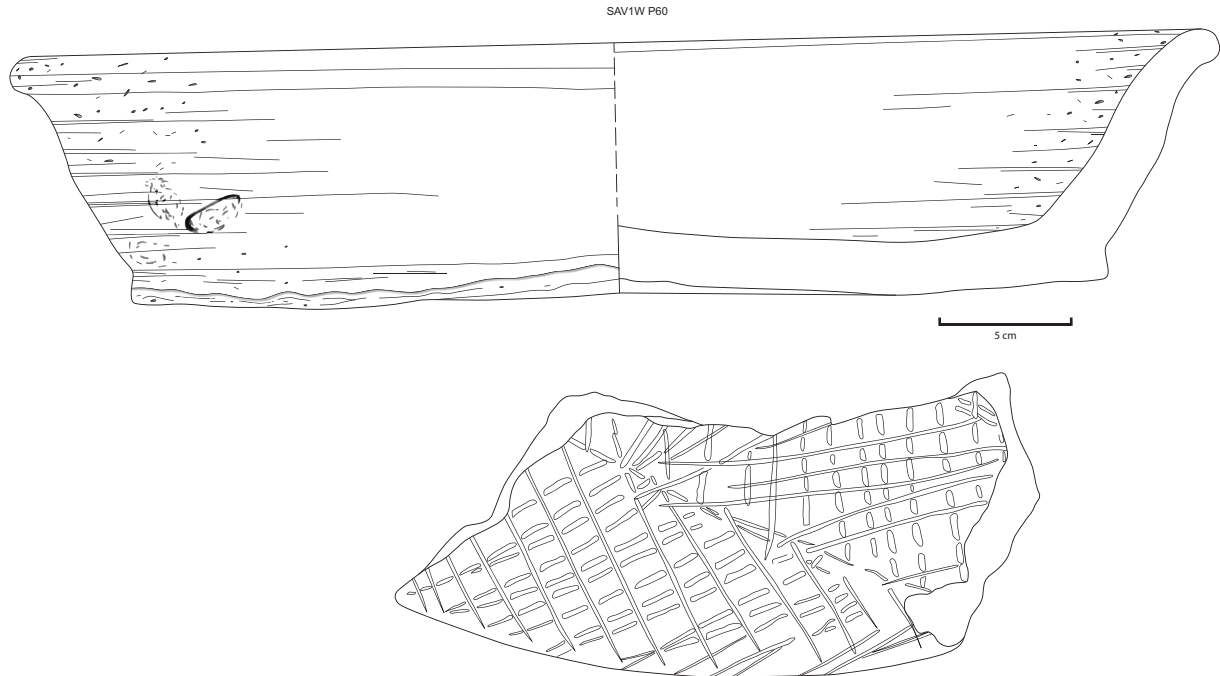


Fig. 91 Marl clay fish bowl from SAV1 West (SAV1W P60)

Fish bowls (Fig. 91)

The so-called *Schaelbecken* or fish bowls⁷⁹¹ illustrate that utilitarian shapes were both directly imported from Egypt and also locally produced. At Sai, these large, thick-walled trays with an oval-shape and incised geometric pattern on the interior occur both in Egyptian Marl E (e.g. SAV1W P60, Fig. 91) and in local Nile clay variants – the shapes and decoration patterns are in both cases the same.⁷⁹²

Cooking pots (Figs. 92–93)

At SAV1 East and SAV1 West, imported, authentic Egyptian wheel-made cooking pots⁷⁹³ are attested as contemporaneous with Nubian-style cooking pots (hand-made with basketry impression or incised decoration).⁷⁹⁴ The analysis of the fabrics revealed that these cooking pots are mostly imports from Egypt, but that there are also local variants.⁷⁹⁵ Within the form class of Egyptian cooking pots attested from SAV1 East and SAV1 West, four individual types can be differentiated according to morphological details,⁷⁹⁶ all of which find close parallels at Elephantine.⁷⁹⁷ Further variants regarding the size, carination and details of the rim shape are attested throughout the class; the rim gradually becomes more pronounced and the folded rim or lip is a late morphological feature within this series of cooking pots.

SAV1E P179 illustrates an imported Egyptian cooking pot which was found in the context of a small installation with lots of ash and traces of burning (SU 452). It can be safely dated to the early to mid-18th Dynasty (Fig. 92).

⁷⁹¹ This type of vessel is especially well-known in Marl C variants from the Middle Kingdom and Second Intermediate Period; see, most recently, Bietak and Bader 2015; Allen 2017.

⁷⁹² See Budka and Doyen 2013, 191; cf. also Bader 2016 and Budka 2017i, 137, fig. 62. For SAV1 North, see also Miellé 2012, 178–179, fig. 4.2.

⁷⁹³ Budka 2011, 26; Budka 2012, 60; Budka and Doyen 2013, 196, fig. 26.

⁷⁹⁴ Budka and Doyen 2013, 197, fig. 27.

⁷⁹⁵ Cf. D'Ercole and Sterba 2018.

⁷⁹⁶ Budka 2016c.

⁷⁹⁷ See Seiler 1999, 223, fig. 53; Budka 2016c; Budka 2018d, 162.

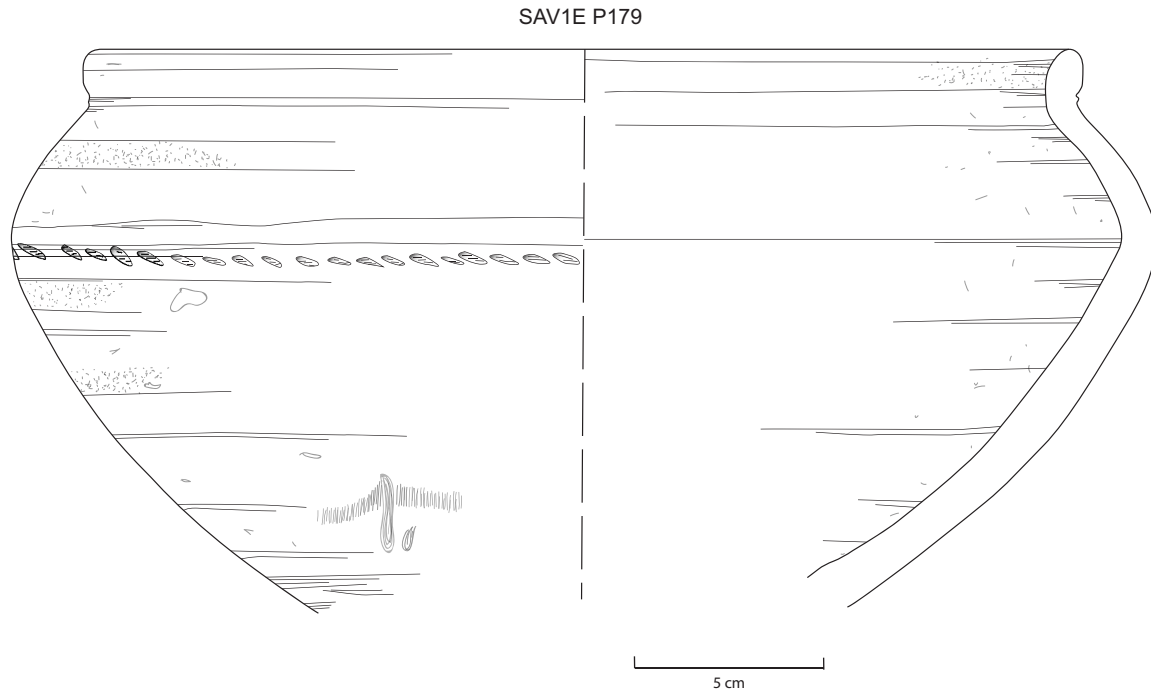


Fig. 92 Example of Egyptian cooking pot (SAV1E P179)

From SU 507 at SAV1 West, a thick, sandy debris layer which was very rich in pottery, a group of cooking pots was documented (Fig. 93). These vessels cover the time from the early to late 18th Dynasty. SAV1W P012.2 and P012.3 belong to the early type and are manufactured in local, chaffy Nile clay variants. SAV1W P 012.1 is made in a sandy Nile clay B2 variant and was imported from Egypt. SAV1W P012.4 illustrates the significant morphological change of cooking pots at the end of the 18th Dynasty – it represents a carinated cooking vessel which dominated the corpus in the late New Kingdom.⁷⁹⁸ This vessel was probably produced locally in a Nile B2 variant.

Bread plates and bread moulds (Figs. 94–95)

Bread plates of different sizes are frequent at both sectors and usually made in Nile C (Fig. 94). One in situ evidence at SAV1 East is noteworthy. In Square 4C, associated with Feature 63, a large baking plate was found still in place (SAV1E 889/2016, Fig. 95). It was situated close to a mud brick wall, sitting on a very ashy deposit (see above, Fig. 31). This baking area was most probably located in an open-air zone of one of the domestic buildings associated with the early building phase at SAV1 East (see Chapter 3.2.2).

Conical bread moulds, belonging to Helen Jacquet's Type D (Fig. 94 top left),⁷⁹⁹ appear only in very small numbers within the domestic contexts of Sai.⁸⁰⁰ The only exception is sector SAV1 East, where they were found in considerable quantities and are probably connected with the temple cult of nearby Temple A.⁸⁰¹

⁷⁹⁸ See Budka 2005a, 105 with references.

⁷⁹⁹ Jacquet-Gordon 1981, 18, fig. 5; see also Rose 2007, HC 2, 288.

⁸⁰⁰ Budka 2017i.

⁸⁰¹ Budka 2015c; Budka 2017g.

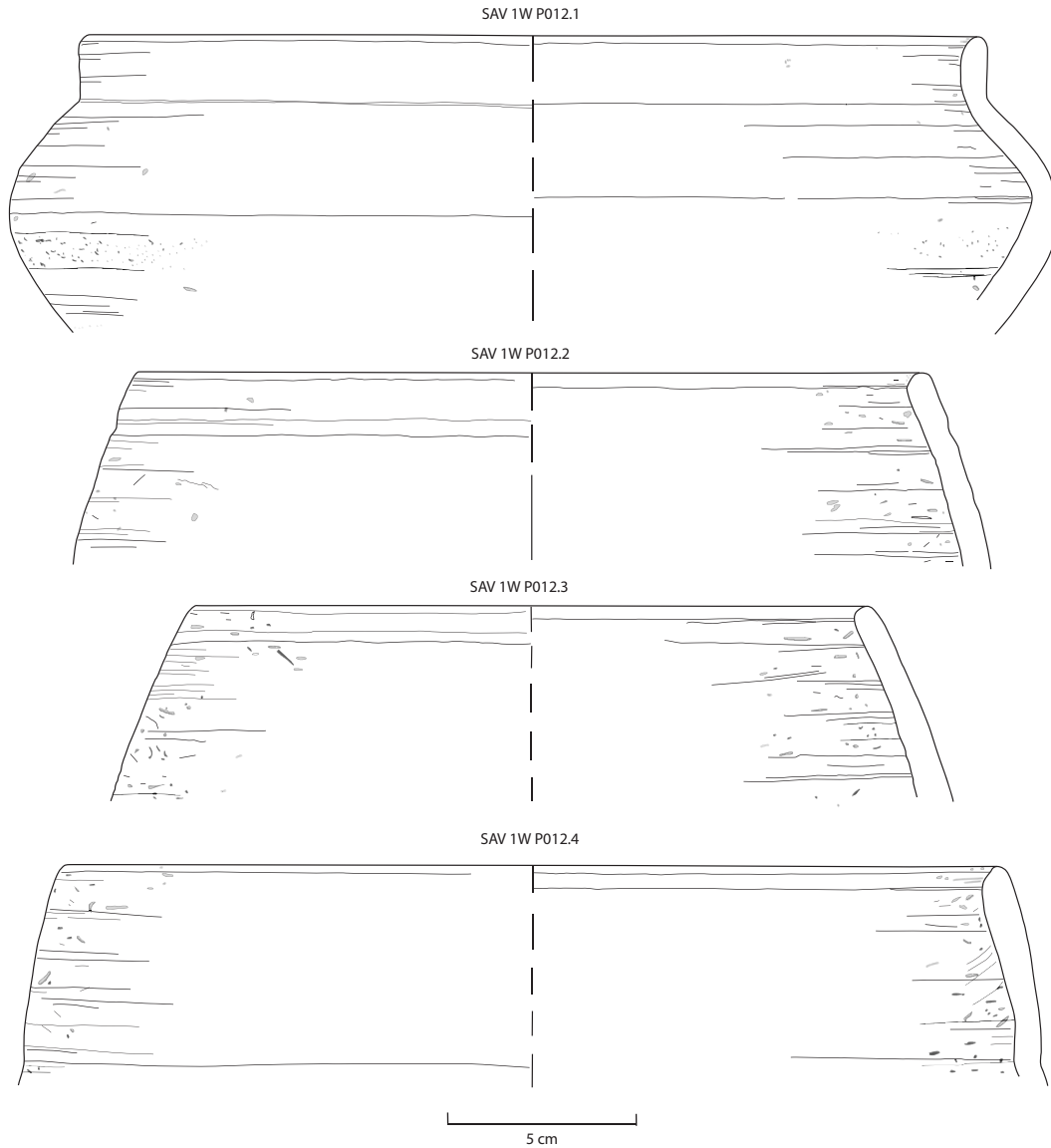


Fig. 93 Selection of Egyptian cooking pots (SAV1W P012.1–4)

Nubian vessels

Native Nubian hand-made pottery vessels are present in all levels and all sectors within the New Kingdom town.⁸⁰² These ceramics comprise primarily cooking pots with basketry impression and sometimes incised decoration (Fig. 71), but also fine wares of Kerma style (black-topped cups, dishes and beakers) (see Fig. 71 top). All in all, the hand-made Nubian ceramics from SAV1 East and SAV1 West cover a large spectrum of types and wares, not only cooking pots, but also storage vessels and fine wares.

Interestingly, within the fine ware none of the burnished Kerma vessels shows the silvery band characteristic of Kerma Classique productions,⁸⁰³ corresponding to the evidence from early 18th Dynasty levels at the town of Sesebi.⁸⁰⁴ Nubian storage vessels from the New Kingdom town of Sai generally

⁸⁰² See Budka 2018d.

⁸⁰³ Gratien 1978, 210.

⁸⁰⁴ Rose 2017, 466. See also Budka 2018d, 151.

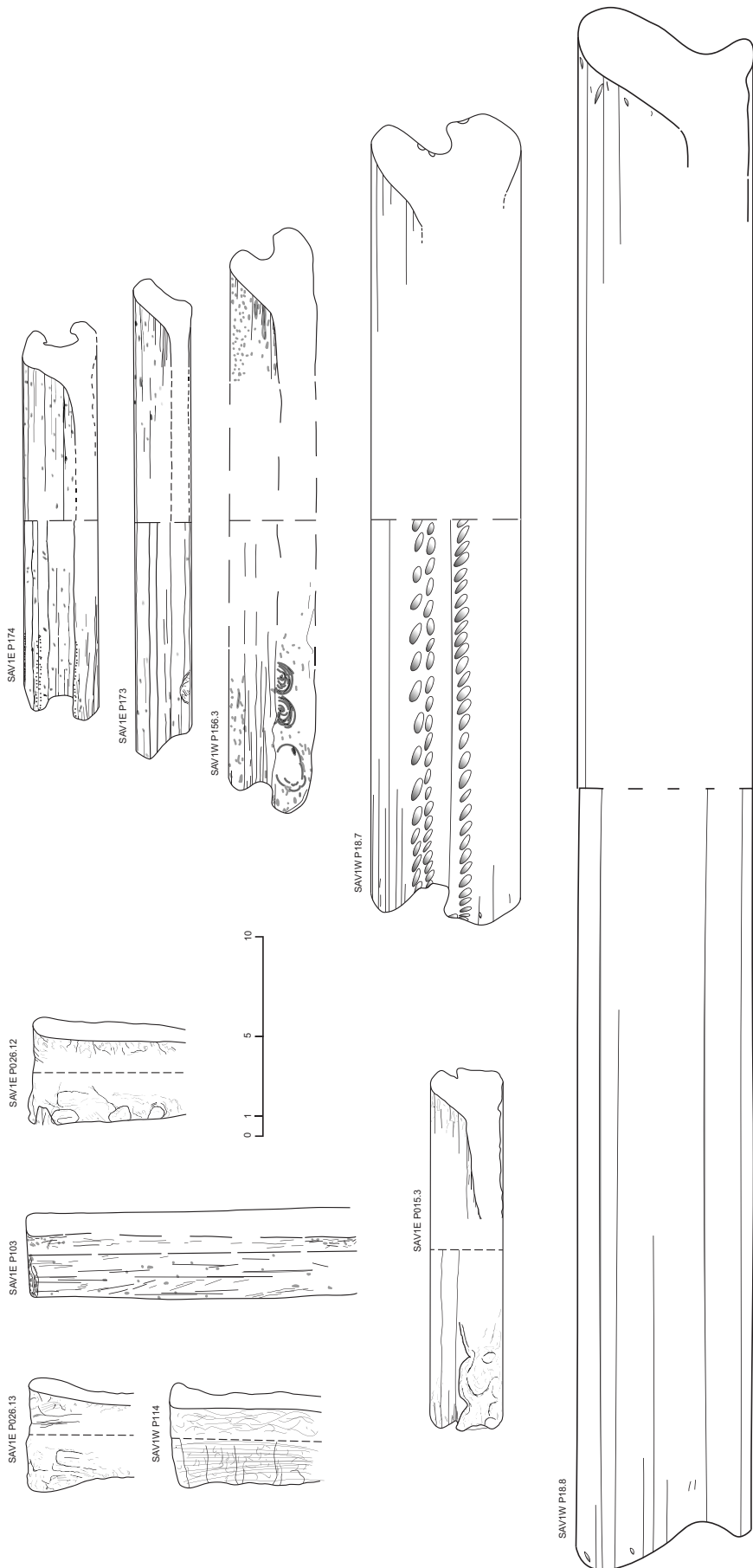


Fig. 94 Bread plates and bread moulds from the New Kingdom town of Sai

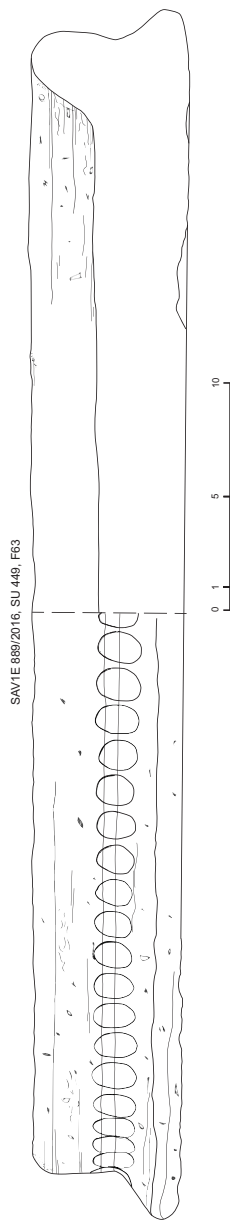


Fig. 95 Baking plate from Feature 63 at SAV1 East (SAVIE 889/2016)

have a larger capacity than Egyptian vessels and often show traces of repair. This is nicely illustrated by the almost complete vessel N/C 650 with four repair holes found at SAV1 North.⁸⁰⁵

Hybrid vessels (Fig. 96)

Some Nile clay pottery vessels from Sai were modelled on Egyptian types but were locally produced and this sometimes with a ‘Nubian’ influence as far as the surface treatment, production technique or decoration are concerned.⁸⁰⁶ For example, SAV1E P20.16 is a typical Egyptian neckless jar fragment with a folded rim (Fig. 96). It was wheel-thrown, but is rather thick-walled. Its surface treatment is not of Egyptian-style – the outer surface has red horizontal burnishing lines, somehow reminiscent of Nubian burnishing of handmade jars/vessels. A similar example is SAV1E P046a, which was found close to Feature 27 (Fig. 96). It is the rim fragment of a large globular jar, again wheel-made and produced from a local, chaffy Nile clay. Its surface treatment, showing a vertical ripple-burnishing on the outside, is similar to Nubian finishing techniques.⁸⁰⁷

In general, the appearance of such hybrid types – Egyptian types made of Nubian fabrics, shaped by hand or with a Nubian surface treatment like ripple-burnishing and incised decoration – is very significant for the ‘cultural entanglement’ on Sai, but not forthright to explain (see Chapter 8). Influences of the Nubian tradition can also be traced for the decoration of Egyptian types. This does not only apply to the situation on Sai – Teodozija Rzeuska has proposed convincingly that Marl jars with incised decoration attested in Egyptian contexts since the Middle Kingdom reflect Nubian decoration patterns.⁸⁰⁸ Such

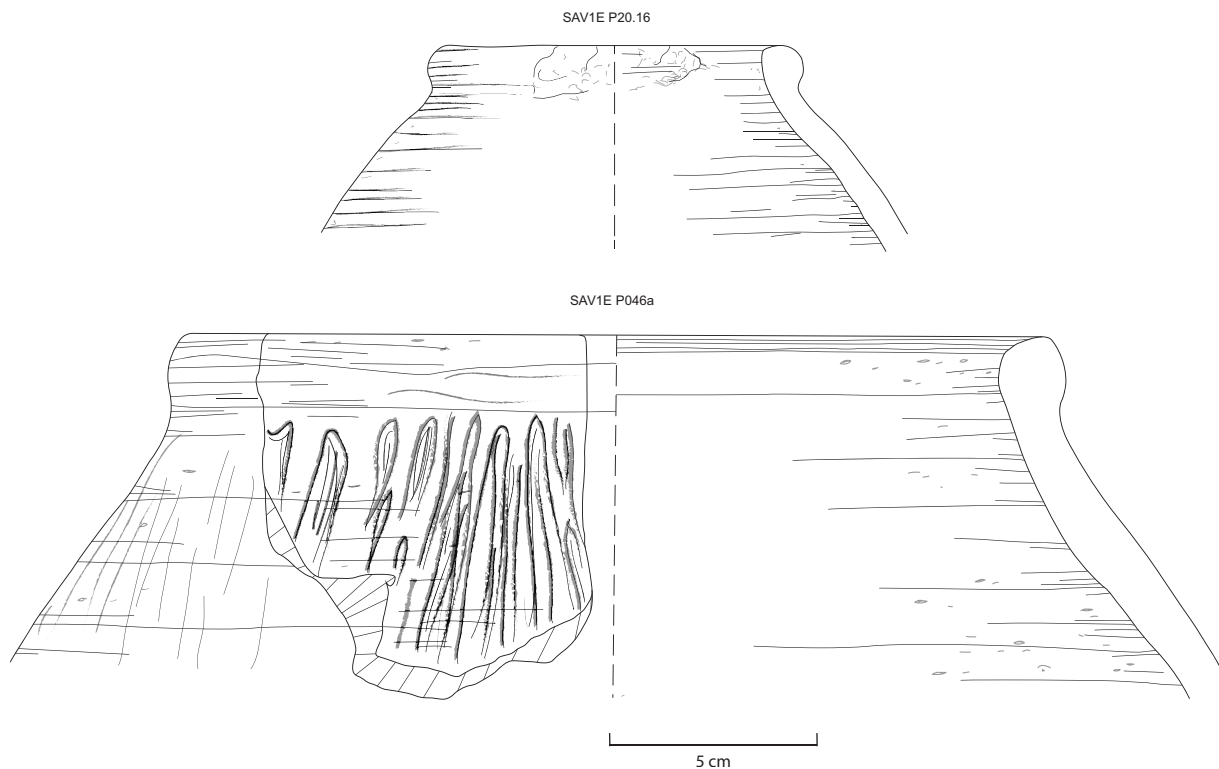


Fig. 96 Hybrid vessels from SAV1 East (SAV1E P20.16 and P46a)

⁸⁰⁵ Budka 2011, 27; Budka 2018d, 151, fig. 2.

⁸⁰⁶ Budka 2018d, 163–164.

⁸⁰⁷ A local production of SAV1E P046a is undisputed but the vessel remains somehow unclear in its date – Feature 27 is associated with Ottoman or even recent activities; the contexts in this area of SAV1 East were very mixed and disturbed. The angular rim and size of the jar are unusual for Egyptian New Kingdom vessels.

⁸⁰⁸ Rzeuska 2010. For Sai, see also Miellé 2014.

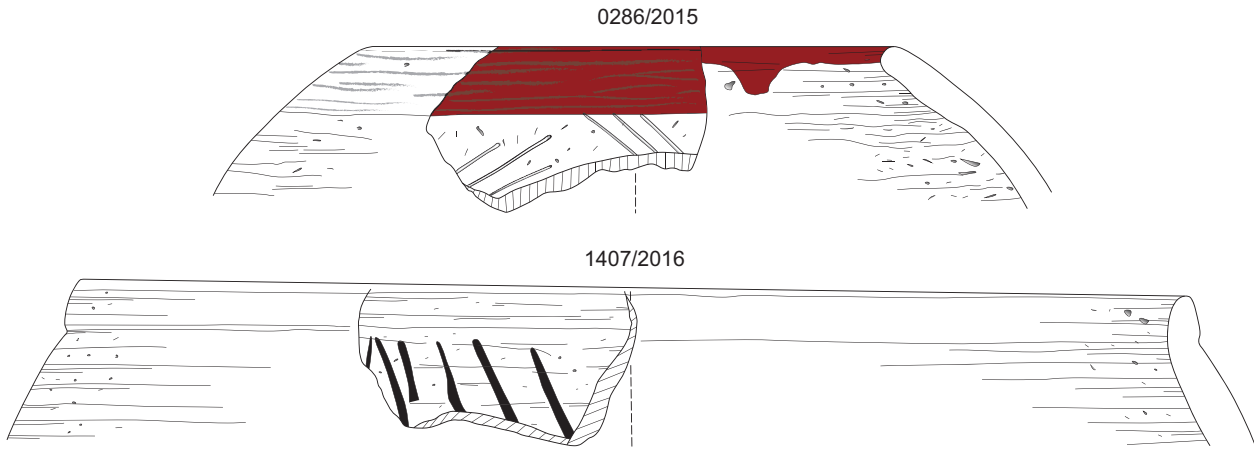


Fig. 97 Example of distinctive Nubian and Egyptian cooking pots from SAV1 West (SAV1W 0286/2015 and 1407/2016)

Marl B and especially Marl A3 storage vessels continue well into the Second Intermediate Period and also the early 18th Dynasty. They are common on Sai, especially at sectors SAV1 North and SAV1 East, preferably showing incised wavy lines.⁸⁰⁹ Such a preference for wavy lines can also be found on open decorated shapes like carinated bowls (see Figs. 76–78) and is traceable until the late 18th Dynasty, also as painted decoration.⁸¹⁰ Similar to the triangular decoration of deep bowls mentioned above, it would require further research whether such decorative patterns are really of a local, Nubian character.

Good examples of so-called hybrid vessels with adaptations of Nubian decoration are wheel-made imitations of Nubian cooking pots with red rims and incised decoration found in considerable numbers at Elephantine. These have been labelled as Medjay-imitations by Dietrich Raue.⁸¹¹ Although of different shape, these vessels combine a Nubian surface treatment with the Egyptian production technique as well as the use of Egyptian Nile clay. Within the large corpus of ceramics from Sai only two sherds were recovered from SAV1 West which are in some aspects related to this large group of ‘hybrid cooking pots’ from Elephantine (Fig. 97). The Nubian cooking pot SAV1W 0286/2015 has an Egyptian-like red rim, but a Nubian incised decoration, comparable to pieces from Elephantine. The rim fragment SAV1W 1407/2016 derives from an Egyptian cooking pot which was imported to Sai (see above). What makes this piece unique and maybe relevant within the sphere of hybridity is a charcoal drawing of diagonal lines on the sherds. These lines seem to imitate incised decoration on this Egyptian type of vessel.

4.3 SMALL FINDS⁸¹²

by *Julia Budka*

As supplement to the overview of find categories (Chapter 4.1), examples of small finds clearly datable to the New Kingdom will be presented here. All in all, the database of finds from the New Kingdom town comprises 4,812 objects from both SAV1 East and SAV1 West.⁸¹³ 536 objects are clearly of a Post-New Kingdom date; the majority of the remaining *c.* 4,000 finds are likely to be of New Kingdom date. 242 pieces remain of unclear date. Four palaeolithic stone artefacts were found at SAV1 West (see

⁸⁰⁹ Budka 2017i, 148, fig. 77, N/C 1182.

⁸¹⁰ Smith 1995, fig. 6.14; Rose 2017, fig. 1.4; Budka 2018g, 112. For painted wares from SAV1 North, see also Miellé 2012, 183–187.

⁸¹¹ Raue 2017. See also Budka 2018d, 158.

⁸¹² The following is based on the database entries; these were composed (in chronological order) by Nathalie Bozet, Julia D. Preisigke, Nicole Mosiniak, Kenneth Griffith, Meg Gundlach and Veronica Hinterhuber.

⁸¹³ In addition, the database comprises ten objects from SAV1 Northeast; see above.

Chapter 4.4.1). The selected pieces will be presented in the following according to excavation area, illustrating both similarities and differences between SAV1 East and SAV1 West.

4.3.1 SAV1 East

All together 2,977 objects were found and registered between 2013 and 2017 from sector SAV1 East. A considerable amount (441 pieces) originates from Feature 15, which will be published elsewhere and is not discussed in the following.⁸¹⁴

Scarab

Only one scarab was found at SAV1 East, thankfully within a well stratified context. SAV1E 1595 (Fig. 98) comes from SU 377 in Square 4B, datable to the early to mid-18th Dynasty (see Chapter 3.2.2). It is a small ovoid steatite scarab (16 × 12 × 5mm) with one horizontal perforation through the body (diam. 2mm). The scarab beetle itself was hacked off, leaving just the decoration on the back. The decoration on the back is surrounded by an incised band. Within this, a crudely carved winged cobra, perhaps wearing the Red Crown, holds a *shen*-ring with her talons. In front of this is an empty cartouche topped by several indistinct hieroglyphs, perhaps to be interpreted as including *ntr-nfr nb-t3.wj* (the Good God, Lord of the Two Lands).

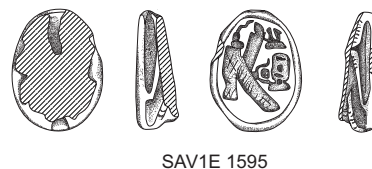


Fig. 98 SAV1E 1595, scarab.
Scale 1:1

Jewellery

Five amulets of presumed New Kingdom date were found in sector SAV1 East (cf. Fig. 56). These are three in faience, one in steatite and one in ivory/tooth.

SAV1E 0294 is a frog amulet in light blue faience (Fig. 99). It was found intact, is very small in size (8 × 4 × 3.8mm) and finely worked as frog-scaraboid.⁸¹⁵ The lower base is oval-shaped; there is one horizontal perforation through the body (diam. 1mm). This small faience amulet came up while cleaning around Feature 28, the stone foundation in Square 2B which might be the extension of Feature 57 (see Chapter 3.2.4, Plan 1). Unfortunately, the archaeological context – found in dense mud debris with mixed ceramic material, filling material of the depression south of Feature 28 – does not provide any clue for dating. In Ancient Egypt, frogs were primarily associated with fertility and birth – they are common amulets used during a long time span, both for the living and in funerary contexts.⁸¹⁶

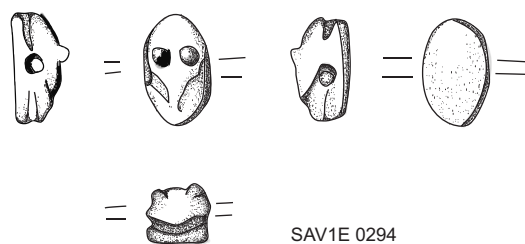


Fig. 99 SAV1E 0294, frog amulet.
Scale 2:1

SAV1E 0531 is another small faience amulet (12 × 4 × 9mm), light blue in colour (Fig. 56). Two suspension holes pierce the amulet horizontally. The design of the amulet is unclear, although it may be a floral motif or a shell. The next amulet in blue faience, SAV1E 2852, is shaped like a pomegranate seed (5 × 5 × 13mm). Its colour is 5.0BG8/2 (Ice Blue). On the back side the surface is flat. Pendants like this are well known from examples in carnelian⁸¹⁷ and occur in faience at Amarna.⁸¹⁸

⁸¹⁴ Budka forthcoming b.

⁸¹⁵ See Budka 2013b.

⁸¹⁶ For a recent re-assessment of the symbolism of frogs in Ancient Egypt, see Kremler 2012.

⁸¹⁷ For example in New Kingdom tombs on Sai at SAC5, see Minault-Gout and Thill 2012, vol. 2, pl. 120, T1P5, T20Ca103.

⁸¹⁸ Kemp and Stevens 2010b, 80, fig. 10.5.

SAV1E 2730 is a small piece of worked steatite ($7 \times 12 \times 25\text{mm}$), perhaps an amulet (Fig. 100). It is broken at one end and this broken end has traces of what might be a suspension hole, indicating that the piece was worn. Traces of an unclear incised decoration were documented.

SAV1E 0971 is a nearly intact, small ($25 \times 5\text{--}11 \times 3\text{--}7\text{mm}$), finely worked amulet of ivory or tooth (hippopotamus tooth?) of unclear shape and date (Fig. 56). One very small part is broken away where there was once a horizontal perforation (diam. $0.2\text{--}0.3\text{mm}$) through the middle of the body. The shape is uncertain, possibly this amulet represents a figurine, maybe there is the indication of an arm at the right side; at the opposite edge there are three short incised lines. The base of the object is half-disc shaped and at the base there are fine incised lines of which two are building a cross (not directly central) and one is a short line at one side. The top part is not exactly worked; at each side of the 'head' there is a small hollow/beginning of a perforation. This could indicate that the object was not finished.

100 beads were found at sector SAV1 East (see Figs. 54–55). These are of diverse materials: bone (9); bronze (1); fired clay (9); unfired clay (2); glass (6); shell (3); stone (4) and faience (65). The material of one bead remained uncertain. The beads are mostly ring beads (faience, shell, stone, glass), also circular/ball-shaped (glass, faience, stone, clay), tubular (clay, faience), cylindrical bead (clay) and spherical (clay). SAV1E 2783 represents a small blue faience ring bead, with fluted outer edge. SAV1E 2768 is a small faience tube bead, with one original and one broken end. The remainder is divided by two narrow areas, causing it to resemble three adjoining spherical beads.

A single faience finger ring was found at SAV1 East. SAV1E 2882 is a bezel with a wedjat-eye as the central element (Fig. 57, Pl. 77).⁸¹⁹ Though the wedjat-eye is quite well preserved, the body of the ring is represented by only a short piece on the left side. The wedjat appears to have been moulded as a separate piece from the rest of the ring, though the front is nicely smoothed; the connection points can be clearly seen on the interior. Wedjat-eye ring bezels are “the most popular ring design at Amarna”⁸²⁰ where faience rings like SAV1E 2882 were very common. Based on these parallels, SAV1E 2882 can clearly be dated to the 18th Dynasty.

SAV1E 2729 (Fig. 57, Pl. 78) also belongs to the category jewellery. This small fragment is probably part of a finely produced faience earring.⁸²¹ While only half of the ring has survived, it is clear that it is only broken at one end. The other end is finished, with a small notch nearby for attaching the ring in place. The exterior circumference of the ring is decorated with small serrated nodules.

Another piece of personal adornment is SAV1E 2967 (Fig. 57). This fragment of an arched faience object is most probably a badly deteriorated bracelet. Areas of pale blue glaze remain at the edges, but most has faded to white.

Seal impressions

221 clay seal impressions were discovered at SAV1 East and all derive from Feature 15, which will be presented in detail elsewhere.⁸²² These sealings comprise a large number of royal names (Amenhotep I, Hatshepsut and Thutmose III), a seal of the viceroy Nehy (see Chapter 6.4.1.2) and various floral deco-

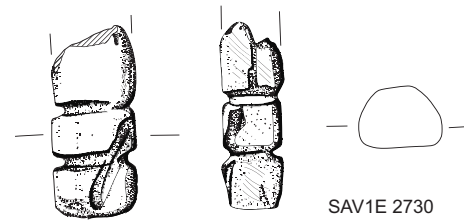


Fig. 100 Worked steatite, possibly an amulet (SAV1E 2730). Scale 1:1

⁸¹⁹ Gundlach 2017b.

⁸²⁰ Kemp and Stevens 2010b, 119.

⁸²¹ For similar examples in stone from SAC5 on Sai, see Minault-Gout and Thill 2012, vol. 2, pl. 121C. For faience ear or hair rings from Amarna, see Kemp and Stevens 2010b, 130–132.

⁸²² Budka forthcoming b.

rations in a style typical for the Second Intermediate Period.⁸²³ Some of these sealings might have been used on papyri,⁸²⁴ while the majority probably sealed bags and boxes.

Stamps/seal-amulets

Two pieces of stamps/seals or seal-amulets were found at SAV1 East (Fig. 61). SAV1E 1089 derived from Square 3, SU 095 and represents an intact but very badly preserved stamp of fired clay. The surface of the stamp with a rather cuboid body measures 19 × 16mm and the rectangular side has the inscription/signs (the section is rather trapezoid-shaped). The visible signs on the top side are very unclear, most probably they represent a floral or abstract motif. This stamp field is perforated through the width (diam. 0.3–0.4mm); nearly all five sides are decorated with incised lines in different patterns which form unclear motifs (if any).

The second stamp was found at Square 4B in SU 451. SAV1E 2865 is a small pyramidal clay stamp of fired clay (12 × 11 × 15mm). It is pierced through the point (now broken, diam. 2.5mm). The flat base is carved with an incised design, likely for stamping seals. The design is, however, unclear.

Both stamp seals from SAV1 East seem to be associated with the early building phase of the sector (see Chapter 3.2.3). They are remarkable because they do not find comparisons in New Kingdom towns. These seals rather compare well with finds from Kerma and Askut⁸²⁵ and raise several questions for their use at Sai. Since no seal-impressions with these stamps were found at SAV1 East, they might have served as seal-amulets, like Smith has proposed for those discovered at Askut.⁸²⁶

Figurines

47 pieces of figurines were found at SAV1 East (Tab. 18). 14 are of 18th Dynasty date (or more general of the New Kingdom); two are possibly from the New Kingdom and 16 are Christian/medieval (mostly horses). Of the remaining 15 pieces, generally simple animal figurines/quadrupeds, the date remains unclear.

Within the 18th Dynasty examples there are four rudimentary female figurines (Pls. 88–90) attesting two different types of figurines. SAV1E 0896 from Square 3, SU 052, is made of unfired clay with brownish (7.5YR5/3) colour. The piece (34 × 24 × 19mm) represents the lower part of a female figurine of the type of figurines modelled in the round.⁸²⁷ At the front side legs are formed out of clay, maybe even with the knees inclined. At the back side one incised line indicates the space between the legs. Three lines at the base possibly designate the feet.

The other three examples from SAV1 East all fall into the category of plaque-type rudimentary female figurines.⁸²⁸ SAV1E 0939 from SU 322 in Square 4C is made of brownish-grey unfired clay (18 × 18 × 32mm, Pl. 88). This figurine was originally rectangular in shape, but is now largely broken. Remains of black pigment are traceable on at least two faces. The pubic triangle was incised at the front.

SAV1E 2801 derives from SU 405 in Square 4B1 (Pl. 89). It is a small female figurine in unfired clay, roughly triangular in shape (20 × 43 × 7mm). The top of the figurine comes to a point and appears to be complete. The breasts were not applied but moulded out of the same piece of clay. The back surface is slightly convex.

SAV1E 1065 from SU 1401 in Square 4D seems to have been slightly fired (31 × 29 × 47mm, Pl. 90). It is the fragment of a rectangular rudimentary female figurine, decorated with incisions on the two wider faces and flaring slightly towards the bottom. The front is determined by a prominent pubic triangle, with a dot in the centre. On the reverse, a single line is incised vertically down the centre, and a small dot is incised to each side near the bottom. Both sides of the figure are undecorated, but a dot is incised in the centre of the base. The top is broken and there is a large chip out of the right side.

⁸²³ Budka 2015a, 45.

⁸²⁴ As suggested for fragments of sealing from Amarna, Kemp and Stevens 2010b, 39–44.

⁸²⁵ Smith 2003a, 113–114, fig. 5.17, E–J with references for Kerma seals.

⁸²⁶ Smith 2003a, 113.

⁸²⁷ See Stevens 2017, fig. 4.

⁸²⁸ See Stevens 2017, figs. 1–3.

Number of Object	Area Location	SU	Type of Object	Material	Date of Object	Form
SAV1E 2343	SQ2, W-part of SU, above floor	1321	Figurine	Clay, fired	18 th Dynasty	Prisoner or execration figurine?
SAV1E 2840	SQ4B1	420	Figurine	Pottery	unclear	Animal; dog?
SAV1E 0160	SQ2A, E side of SQ2a, in filling of sandy pit/ridge	NA	Figurine	Clay, fired	Unclear	Animal; quadruped
SAV1E 2016	SQ4, 0–1m W-E/8.8–9.7m N-S	215	Figurine	Pottery	Unclear	Animal; quadruped
SAV1E 2218	SQ4+4A, 8.8–10.5m W-E/9.3–12m N-S	236	Figurine	Pottery	Unclear	Animal; quadruped
SAV1E 2224	SQ4+4A, 8–9m W-E/9.4–11.4m N-S	239	Figurine	Pottery	New Kingdom?	Animal; quadruped
SAV1E 2276	SQ2	1321	Figurine	Pottery	mid-18 th Dynasty	Animal; quadruped
SAV1E 2362	SQ4-3, baulk between squares	1307	Figurine	Pottery	Christian/medieval	Animal; quadruped
SAV1E 2703	SQ4B	337	Figurine	Pottery	Unclear	Animal; quadruped
SAV1E 1120	SQ4, 3.5–6 m W-E; 0–3.5 m N-S	105	Figurine	Clay, fired	Unclear	Animal; bull?
SAV1E 1142	SQ4, 0–7.5m W-E/7.1–10m N-S	202	Figurine	Pottery	Unclear	Animal?
SAV1E 2891	SQ4C	449	Figurine?	Clay, alluvial silt	unclear	Animal?
SAV1E 1386	SQ4, 0–4m W-E/6–10m N-S	205	Application	Pottery	Christian/medieval	Application to pottery vessel
SAV1E 2002	SQ4, 1–2.7m W-E/3.7–5m N-S	223	Figurine	Pottery	Unclear	Bull
SAV1E 2917	SQ4D	1423	Figurine	Clay, unfired	Post-New Kingdom	Camel
SAV1E 2355	SQ4, 0–4m W-E/ 7–9 m N-S/9–10 m N-S	205	Figurine	Clay, unfired	medieval?	Camel?
SAV1E 0657	SQ1B, 0.5–2.5m W-E /4–5m N-S	19	Figurine	Pottery	Christian/medieval	Female
SAV1E 0851	SQ1B, 1.5–4m W-E / 0–2.3m N-S	51	Figurine	Clay, unfired	18 th Dynasty	Hippo
SAV1E 0087	SQ2, 6.50 m (North) East	NA	Mould/ Figurine	Clay, fired	Christian/medieval	Horse
SAV1E 0342	SQ4B	373	Figurine	Pottery	Christian/medieval	Horse
SAV1E 0406	SQ4B	311	Figurine	Pottery	Christian/medieval	Horse
SAV1E 0733	SQ3, 0–2m W-E / 4.4–10m N-S	25	Figurine	Clay, fired	Christian/medieval	Horse
SAV1E 1453	SQ4D, from ash-spot, base of SU	1403	Figurine	Clay, fired	Christian/medieval	Horse
SAV1E 1939	SQ4+4A, 3.5–5.5 W-E/8.3–11.3m N-S	214	Figurine	Pottery	Christian/medieval	Horse
SAV1E 2361	SQ4A, 0.7–5m W-E/10.3–12m N-S	227	Figurine	Pottery	Christian/medieval	Horse
SAV1E 2648	SQ4D, from pit	1420	Figurine	Pottery	Christian/medieval	Horse
SAV1E 2667	SQ4A/4, south profile/ south west profile cleaning	302	Figurine	Pottery	Christian/medieval	Horse
SAV1E 2675	SQ4C	328	Figurine	Pottery	Christian/medieval	Horse
SAV1E 2759	SQ4C	383	Figurine	Pottery	Christian/medieval	Horse
SAV1E 2787	SQ4B1	395	Figurine	Pottery	Christian/medieval	Horse
SAV1E 2779	SQ4B1	301	Figurine	Pottery	New Kingdom	Human, male
SAV1E 2677	SQ4B	316	Figurine	Pottery	Unclear	Human; doll?

Number of Object	Area Location	SU	Type of Object	Material	Date of Object	Form
SAV1E 2358	SQ2, Feature 15	1316	Figurine	Clay, fired	mid-18 th Dynasty	Human?
SAV1E 2226	SQ2, Feature 15	1321	Figurine	Clay, unfired	mid-18 th Dynasty	Obelisk, painted
SAV1E 0181	SQ4, Feature 15	1337	Figurine/Lid	Clay, unfired	mid-18 th Dynasty	Ram
SAV1E 0896	SQ3, 2.3–4.8m W-E/3–5.2m N-S	52	Figurine	Clay, unfired	18 th Dynasty	Rudimentary female figurine
SAV1E 0939	SQ4C	322	Figurine	Clay, unfired	18 th Dynasty	Rudimentary female figurine
SAV1E 1065	SQ4D	1401	Figurine	Clay, fired	18 th Dynasty	Rudimentary female figurine
SAV1E 2801	SQ4B1, S part of SU, directly W of wall	405	Figurine	Clay, unfired	New Kingdom	Rudimentary female figurine
SAV1E 0858	SQ4C	322	Figurine	Pottery	Unclear	Unclear
SAV1E 1266	Sq 4, 0–4m W-E/7.1–9.7m N-S	205	Unidentified object	Clay, fired	Unclear	Unclear
SAV1E 2421	SQ2, Feature 15	1321	Figurine	Pottery	18 th Dynasty	Unclear
SAV1E 2605	SQ2, Feature 15	1321	Figurine	Pottery	mid-18 th Dynasty	Unclear
SAV1E 2618	SQ2, Feature 15	1320	Figurine	Clay, fired	mid-18 th Dynasty	Unclear
SAV1E 2778	SQ4C	393	Figurine	Clay, unfired	New Kingdom?	Unclear
SAV1E 2819	SQ4B1, N part of SU	405	Figurine	Clay, fired	Unclear	Unclear
SAV1E 2821	SQ1B, 1.5–4m W-E/0–2.3m N-S	51	Figurine	Pottery	Christian/me-dieval	Unclear

Tab. 18 Figurines from SAV1 East

A single male clay figurine was found at SAV1 East. Only the head is preserved (SAV1E 2779, Pl. 91). Though the surface is badly worn, the eye sockets, nose and chin are all visible and testify that this figurine was carefully crafted.⁸²⁹ The break comes at the top of the neck, but the hair is well defined around the face and is probably a lappet wig. Possible traces of an orange-red wash or paint are visible on the right side of the face and wig. This figurine contrasts considerably from the rudimentary female figurines.

Among the zoomorphic figurines, one object is especially remarkable. SAV1E 0851 is a rather crudely shaped clay figurine found in Square 1B (Pl. 92). Its shape is elongated with one rounded and one broken end. The object represents the rear part of an animal which was identified as a hippopotamus by Meg Gundlach.⁸³⁰ Two lines of incised dots run across the back (one forming the edge of a break). In addition to the dotted lines, the left flank bears a lotus petal and the right a butterfly, motifs typically found on the well-known faience figurines of hippopotami of the Middle Kingdom.⁸³¹ Clay figurines of hippopotami are also attested in other New Kingdom settlements, e.g. at Amarna.⁸³²

Some exceptional pieces of figurines without close parallels were found in Feature 15: SAV1E 2226 is a small clay figurine in the shape of an obelisk with a square base (19 × 19mm) with certain similarities to the rudimentary female figurines, but with painted design. SAV1E 0181 is probably a small lid equipped with the nicely modelled figurine of a seated ram.⁸³³ Remarkable is also SAV1E 2343, the fragment of a small human figurine of almost unfired clay. The feet/legs are missing; the right arm is indicated through the negative. According to the rectangular position, the figurine can possibly be identified as an Asiatic prisoner or execration figurine. These three pieces from Feature 15 illustrate that the corpus of figurines from SAV1 East shows also some peculiarities, despite its close parallels from Amarna, Amara West and other New Kingdom sites.

⁸²⁹ Cf. a figurine from Askut, Smith 2003a, 131, fig. 5.31A.

⁸³⁰ Gundlach 2017a.

⁸³¹ See, e.g., ÄS 6040 and ÄS 1571, Wildung 1987. See also Pinch 1993, 79 and 162 for such faience figurines found outside of Egypt, at Byblos.

⁸³² See Stevens 2006, 104–105. Clay figurines of hippopotami are also known from Kerma, see Bonnet 1990, 133–134.

⁸³³ Detailed publication in preparation (Budka forthcoming b).

Number of Object	Area Location	SU	Type of Object	Date of Object	Colour
SAV1E 0085	SQ1, SP 1–3 E 8.85m, N 1.55m	–	Nun bowl	18 th Dynasty	Blue
SAV1E 0317	SQ2B, 6m to E, 1.3m to S	–	Nun bowl	New Kingdom?	Light greenish-blue
SAV1E 0350	SQ3, 10 × 10m	001	Nun bowl	Post-New Kingdom?	Outside: blue inside: light blue top of rim: black-brownish
SAV1E 0351	SQ3, 4.5m W-E/2m N-S	005	Nun bowl	18 th Dynasty	Outside: blue inside: light blue & dark painting
SAV1E 0394	SQ4, 8m W-E/1m N-S	002	Nun bowl	18 th Dynasty	Light blue - turquoise dark blue paint
SAV1E 0513	SQ4B	320	Nun bowl	18 th Dynasty	Blue
SAV1E 0796	SQ3, 1.3m W-E/9.8m N-S	041	Nun bowl	18 th Dynasty	Light blue, dark (black) painting
SAV1E 0978	SQ1B, 0–1.1m W-E/4–5m N-S	065	Nun bowl	18 th Dynasty	Outside light blue, grey lines, inside dark and light grey - black break brownish grey
SAV1E 1252	SQ4, 4m W-E/8m N-S	205	Nun bowl	18 th Dynasty	Blue - turquoise, light blue, dark blue lines
SAV1E 2075	SQ4A, 3.5–5.1m W-E/0-2m N-S	229	Nun bowl	18 th Dynasty	Light blue & greenish brown, black paint
SAV1E 2076	SQ4A, 3.5–5.1m W-E/0-2m N-S	229	Nun bowl	18 th Dynasty	Greenish blue & pale yellow
SAV1E 2229	SQ2	1321	Nun bowl	18 th Dynasty	White, green, and blue
SAV1E 2449	SQ2, sieving	1321	Nun bowl	18 th Dynasty	Greenish-blue
SAV1E 2767	SQ4B	391	Nun bowl	18 th Dynasty	Blue
SAV1E 2785	SQ4B1	394	Nun bowl	18 th Dynasty	Blue
SAV1E 2804	SQ4B1, S part of SU	405	Nun bowl	18 th Dynasty	Blue
SAV1E 2846	SQ4B, bottom of SU	437	Nun bowl, re- used as scraper	18 th Dynasty?	Blue
SAV1E 2884	SQ4C	475	Nun bowl	18 th Dynasty	Blue
SAV1E 0635	SQ1B, 2m W-E / 5m N-S	019	Vessel	unclear	Turquoise
SAV1E 0667	SQ1B, 7.5m W-E/2m N-S	021	Vessel	unclear	Greenish turquoise
SAV1E 0673	SQ3, 9.25m W-E/6.5m N-S	002	Vessel	Post-New Kingdom?	Blue-greenish
SAV1E 0923	SQ1B, 2m W-E/3m N-S, SQ1B, 6.5–10m W-E/0–1.7m N-S	056, 048	Vessel, two pieces	Post-New Kingdom?	Greenish turquoise, dark blue
SAV1E 1411	SQ4D, S part SU	1404	Vessel?	unclear	Greenish-blue
SAV1E 1910	SQ4+4A, 5–6.5m W-E/8.2– 12m N-S	213	Vessel, thick- walled; re-used	New King- dom ?	Bluish-green
SAV1E 2416	SQ2, Feature 15, above floor	1321	Vessel, small	mid-18 th Dy- nasty	Bright blue

Tab. 19 Faience vessels from SAV1 East

Fragments of stelae

Two small pieces of inscribed stelae were found in sector SAV1 East, both in Square 4 and thus close to Temple A. SAV1E 1938 from Square 4, SU 220, is the small fragment of a stela (60 × 42 × 31mm) in limestone. The piece contains part of one register line in addition to a side (end) line. The traces of hieroglyphs seem to be part of the *hṭp-di-nsw* formula, with the *di*-sign being the clearest. The stela was carved in sunk relief (Pl. 93).

SAV1E 1124 derives from Square 4, SU 107, and was made in a very pale orange-coloured sandstone (10YR8/2), possibly of local origin (cf. Chapter 2.3). The material is very fragile and the stone porous; the back side was nicely smoothed. It is the small fragment of an inscribed sandstone stela (49 × 27 × 57mm) with only one part of a column preserved. An incised *w3s*-scepter is preserved looking towards the right, possibly with a column line to the right of it. The preserved size of the sign is 3cm + x; it remains, therefore, unclear if the sceptre was once held by a god now lost or really should be read as a hieroglyph.

Faience vessels

A total of 25 fragments of faience vessels were found at SAV1 East; 18 pieces clearly derive from Nun bowls (Tab. 19). All in all, these fragments from the eastern sector are rather insignificant and small pieces; well-dated mid-18th Dynasty examples are only present because of three sherds from Feature 15. Another interesting piece is SAV1E 2846 from Square 4B because it was re-used as a scraper which is rather rare for faience vessels (Pl. 94). It is a small rectangular rim fragment of faience, probably from a bowl (31 × 9 × 18mm). The re-use as a scraper is well visible along both long sides. The original blue surface is preserved on one broad surface, decorated with a series of black chevrons (four of which remained).

Re-used pottery

374 re-used pottery sherds were documented from sector SAV1 East. 122 are of clear Post-New Kingdom date and 95 of 18th Dynasty date.⁸³⁴ The remaining pieces are probably also of New Kingdom origin (Figs. 101–102). Among the datable sherds (Tab. 20), scrapers, lids and tokens/gaming pieces are most common. The majority of the pieces were made from Nile clay sherds.

SAV1E 2966 was originally an 18th Dynasty dish and was re-shaped as a scraper (Fig. 101). SAV1E 2647 is another scraper, but re-used from a large body sherd of a Nile clay jar (Fig. 102). The base jar of a round-based Nile clay beaker was also reworked into a tool, possibly a scraper (SAV1E 2964, Fig. 102). One example for re-used sherds as token/gaming pieces is SAV1E 0989 (Fig. 101). SAV1E 2271 (Fig. 101) is the ring base of an early 18th Dynasty dish which was later re-cut and pierced with a hole in the centre. Possibly, it was used as a weight.

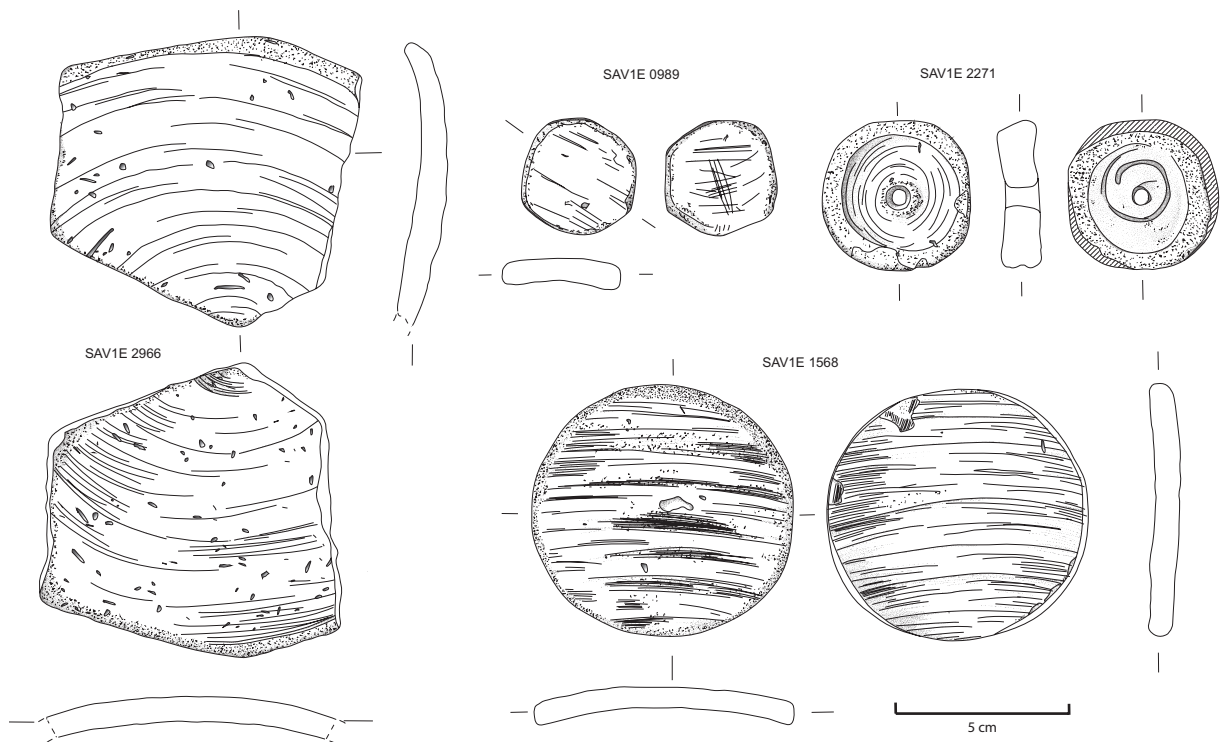


Fig. 101 Re-used pottery objects from SAV1 East (scraper, token, weight and lid)

⁸³⁴ Re-used sherds formed to net weights were already mentioned above, Chapter 4.1.1. Only one piece from SAV1 East falls into this category (SAV1E 2068).

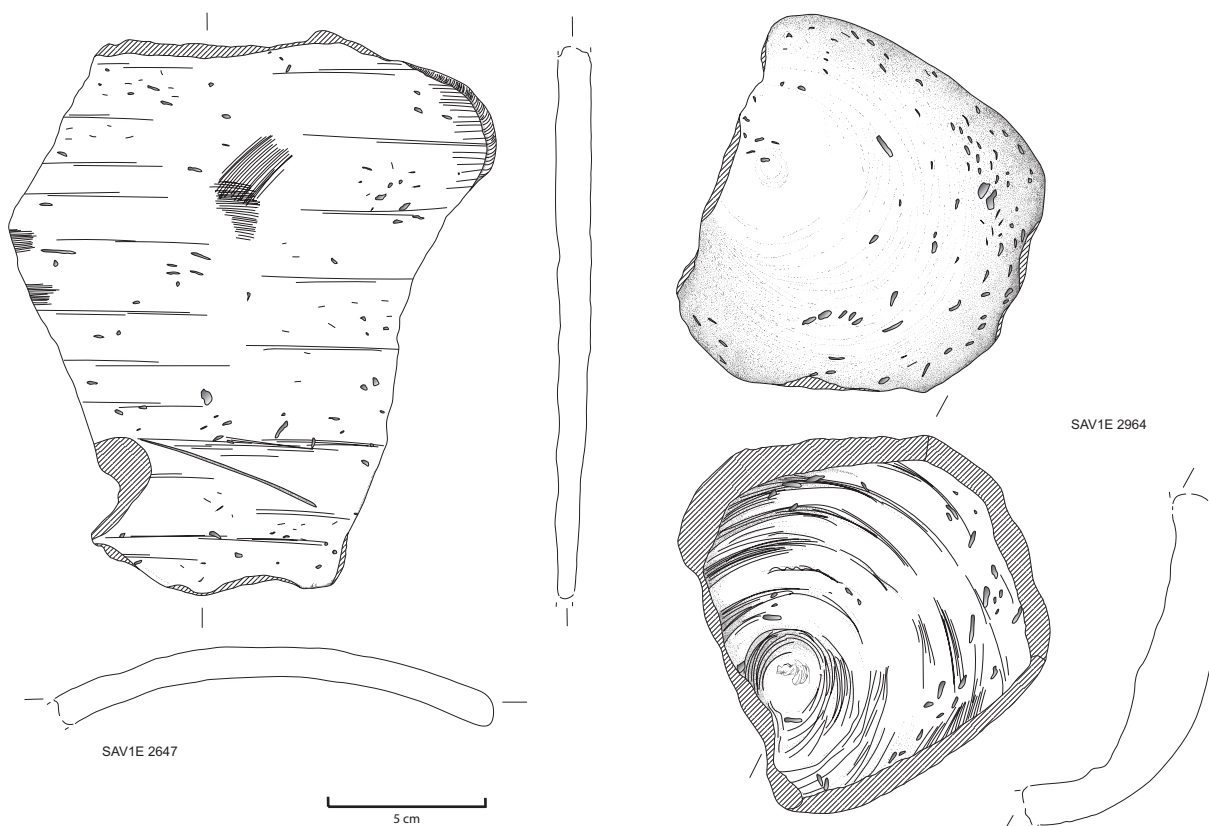


Fig. 102 Re-used pottery from SAV1 East – two scrapers (SAV1E 2964 and 2647)

Number of Object	Area Location	SU	Type of Object	Material	Date of Object
SAV1E 0314	SQ4C	456	Lid	Nile clay	18 th Dynasty
SAV1E 2619	SQ4A, 0.7–5m W-E/10.3–12m N-S	227	Lid	Nile clay	18 th Dynasty
SAV1E 2672	SQ4C	327	Lid	Nile clay	18 th Dynasty
SAV1E 2733	SQ4C	375	Lid	Nile clay	18 th Dynasty
SAV1E 2781	SQ4C	384	Lid	Nile clay	18 th Dynasty
SAV1E 2909	SQ4D	1423	Lid	Nile clay	18 th Dynasty
SAV1E 2954	SQ4C	1485	Lid	Nile clay	18 th Dynasty
SAV1E 0256	SQ 2B, 5–6.5m to E	NA	Lid	Nile clay	18 th Dynasty
SAV1E 2762	SQ4C	384	Lid (from ring base of dish)	Nile clay	18 th Dynasty
SAV1E 2788	SQ4B	396	Lid (from ring base of dish)	Nile clay	18 th Dynasty
SAV1E 2716	SQ4C	335	Lid (from <i>zir</i> vessel)	Marl clay	18 th Dynasty
SAV1E 2834	SQ2B, 2.5–4.5m to E		Palette	Nile clay	18 th Dynasty
SAV1E 0006	SQ1, NW	NA	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0009	SQ1	NA	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0045	SQ2	NA	Re-used sherd	Nile clay	18 th Dynasty?
SAV1E 0082	SQ2, 3.5m to E	NA	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0083	SQ2, 3.5m to E	NA	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0084	SQ2, 0–6.5m to E	NA	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0089	SQ2, cleaning S of Feature 14	NA	Re-used sherd	Nile clay	18 th Dynasty

Tab. 20 Re-used 18th Dynasty sherds from SAV1 East

Number of Object	Area Location	SU	Type of Object	Material	Date of Object
SAV1E 0140	SQ1A, 4.5–5m to E	NA	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0143	SQ1A, 4.5–5m to E	NA	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0172	SQ1+2, up to 1m W, surface cleaning	NA	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0190	SQ2B, 1–3m to E debris	NA	Re-used sherd	Nile clay	18 th Dynasty?
SAV1E 0207	SQ2A, 0–3m to S along E border	NA	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0218	SQ2B, c. 5–7m to E	NA	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0257	SQ2B, 0–2.5 m to E	NA	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0271	SQ2B, S-baulk 1–6 m to E	NA	Re-used sherd	Marl clay	18 th Dynasty
SAV1E 0290	SQ2B, cleaning 7.5–10 m to E	NA	Re-used sherd	Marl clay (A4)	18 th Dynasty
SAV1E 0293	SQ2B, cleaning 7.5–10 m to E	NA	Re-used sherd	Nile clay	early 18 th Dynasty
SAV1E 0316	SQ2B, cleaning Feature 27 and S of Feature 27		Re-used sherd	Nile clay local	18 th Dynasty
SAV1E 0346	SQ3	005	Re-used sherd	Nubian ware	18 th Dynasty
SAV1E 0777	SQ3, 9–10.5m W-E/2.6–5.5m N-S	34	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 0989	SQ4D	1403	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 1028	SQ3, 4.8–7m W-E/4–8.3m N-S	066	Re-used sherd	Nubian clay	18 th Dynasty
SAV1E 1074	SQ3, 6–7.5m W-E/3.5–5m N-S	080	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 1112	SQ4, 7, 3-8m W-E/0-2.5m N-S	111	Re-used sherd	Nile clay local	18 th Dynasty
SAV1E 1385	SQ4, 0–4m W-E/6–10m N-S	205	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 1420	SQ4D	1407	Re-used sherd	Marl clay	18 th Dynasty
SAV1E 1465	SQ4A, 1.7–3.2m W-E/0–1.5m N-S	205	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 1466	SQ4A, 1.7–3.2m W-E/0–1.5m N-S	205	Re-used sherd; scraper	Nile clay	18 th Dynasty
SAV1E 1813	SQ4, 3.5–5m W-E/9–10m N-S	105	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 1819	SQ4A, 4–5m W-E/1.4–2m N-S	205	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 1820	SQ4A, 4–5m W-E/1.4–2m N-S	205	Re-used sherd, scraper	Canaanite ware	18 th Dynasty
SAV1E 1874	SQ4, 5–5.9m W-E/4.2–5.8m N-S	207	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 1931	SQ4+4A, 6–10m W-E/8.2–12m N-S	213	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 1940	SQ4+4A, 3.5–5.5 W-E/8.3–11.3m N-S	214	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 2257	SQ4A, 5.1–5.9m W-E/0–2m N-S	230	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 2573	SQ4, 2.5–5.5m W-E, 9–10m N-S/SQ4A, 2.6–6.5m W-E, 0–2m N-S	009	Re-used sherd	Marl clay	18 th Dynasty
SAV1E 2608	SQ2, Feature 15	1321	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 2626	SQ4, 7–9.2m W-E/6.8–8m N-S	212	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 2629	SQ4A, 0–3m W-E/0–2m N-S	205	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 2632	SQ4A, 0–1m W-E/0–2m N-S	217	Re-used sherd	Nile clay	mid-18 th Dynasty
SAV1E 2652	SQ4, N baulk, Feature 15	1309	Re-used sherd	Nile clay	mid-18 th Dynasty
SAV1E 2659	SQ2, Feature 15	1321	Re-used sherd	Nile clay	mid-18 th Dynasty
SAV1E 2938	SQ4C	1481	Re-used sherd	Nile clay	18 th Dynasty
SAV1E 2970	SQ4D	1444	Re-used sherd	Nile clay	mid-18 th Dynasty
SAV1E 1104	SQ3, 7.7–8.8m W-E/3.5–8m N-S	097	Re-used sherd from imported amphora	Imported ware	mid-18 th Dynasty

Tab. 20 *continued* Re-used 18th Dynasty sherds from SAV1 East

Number of Object	Area Location	SU	Type of Object	Material	Date of Object
SAV1E 1304	SQ4, 0–4m W-E, 5–10m N-S	205	Scraper	Nile clay	New Kingdom
SAV1E 2267	SQ4A, 3.5–5.1 W-E/0–2 N-S	229	Scraper	Nile clay	18 th Dynasty
SAV1E 2278	SQ4A, 0.7–5m W-E/10.3–12m N-S	227	Scraper	Nile clay	18 th Dynasty
SAV1E 2279	SQ4D	1407	Scraper	Nile clay	18 th Dynasty
SAV1E 2609	SQ2, Feature 15	1321	Scraper	Nile clay	mid-18 th Dynasty
SAV1E 2634	SQ4+4A, 0.5–3.5m W-E/7.5–10.3m N-S	227	Scraper	Nile clay	18 th Dynasty
SAV1E 2911	SQ4D	1421	Scraper	Nile clay	18 th Dynasty
SAV1E 2915	SQ4D	1421	Scraper	Nile clay	18 th Dynasty
SAV1E 2925	SQ4D	1419	Scraper	Nile clay	18 th Dynasty
SAV1E 2933	SQ4D	1428	Scraper	Nile clay	18 th Dynasty
SAV1E 2964	SQ4D	1424	Scraper	Nile clay	mid-18 th Dynasty
SAV1E 2966	SQ4B	1444	Scraper	Nile clay	mid-18 th Dynasty
SAV1E 0302	SQ2B, 0–6.5 m to E	NA	Scraper	Nile clay	18 th Dynasty
SAV1E 0303	SQ2B, 0–6.5 m to E	NA	Scraper	Nile clay local	18 th Dynasty
SAV1E 0672	SQ1B, 6–7.5m W-E/0–2.5m N-S	021	Scraper	Nile clay	mid-18 th Dynasty
SAV1E 1091	SQ4, 9.2–9.6m W-E/0–1.1m N-S	087	Scraper	Nile clay	18 th Dynasty
SAV1E 2653	SQ4, from filling of Feature 44 in Feature 15	1324	Scraper	Nubian ware	18 th Dynasty
SAV1E 0442	SQ4C	348	Scraper	Nile clay	18 th Dynasty?
SAV1E 0814	SQ4C	322	Scraper	Nile clay	18 th Dynasty
SAV1E 1309	SQ2	1321	Scraper	Nile clay	mid-18 th Dynasty
SAV1E 2623	SQ4+4A, 0.4–5m W-E/7.5–12m N-S	228	Scraper	Nile clay	18 th Dynasty
SAV1E 2624	SQ4+4A, 0.4–5m W-E/7.5–12m N-S	228	Scraper	Nile clay	18 th Dynasty
SAV1E 2656	SQ2	1321	Scraper	Nile clay	18 th Dynasty
SAV1E 2657	SQ2	1323	Scraper	Nile clay	18 th Dynasty
SAV1E 2695	SQ4C	330	Scraper	Nile clay	18 th Dynasty
SAV1E 2696	SQ4C	330	Scraper	Nile clay	18 th Dynasty
SAV1E 2816	SQ4C	408	Scraper	Nile clay	18 th Dynasty?
SAV1E 2836	SQ4B1	418	Scraper	Nile clay	18 th Dynasty
SAV1E 2843	SQ4B1	423	Scraper	Nile clay	18 th Dynasty
SAV1E 2946	SQ4C	1482	Scraper (from beer jar)	Nile clay	18 th Dynasty
SAV1E 2734	SQ4C	375	Scraper (from flat-based dish)	Nile clay	18 th Dynasty
SAV1E 2422	SQ2, Feature 15	1321	Token/gaming piece	Nile clay	mid-18 th Dynasty
SAV1E 2655	SQ2, Feature 15	1321	Token/gaming piece	Nile clay	mid-18 th Dynasty
SAV1E 2658	SQ2, Feature 15	1321	Token/gaming piece	Nile clay	mid-18 th Dynasty
SAV1E 2686	SQ4C	319	Token/gaming piece	Nile clay	18 th Dynasty
SAV1E 2687	SQ4C	319	Weight	Nile clay	18 th Dynasty
SAV1E 1138	SQ4+4A, 0–7.5m W-E/7.1–12m N-S	200	Weight (from an imported amphora)	Canaanite ware	18 th Dynasty
SAV1E 2271	SQ4A, 3.5–5.1 W-E/0-2 N-S	229	Weight (from ring base of a dish)	Nile clay	early 18 th Dynasty

Tab. 20 *continued* Re-used 18th Dynasty sherds from SAV1 East

4.3.2 SAV1 West

All together 1,835 objects were found and registered between 2014 and 2017 from sector SAV1 West.

Scaraboids/cowroids

One frog-scaraboid was found in Square 1 at SAV1 West. SAV1W 0527 is made in blue faience and represents a small, finely worked scarab in the shape of a frog with the head broken off (13 × 11 × 6mm,



Fig. 103 Frog-scaraboid (SAV1W 0527) and cowroids (SAV1W 0723 and 1736)

Fig. 103). The lower base is oval-shaped with an incised cross. The remains of the forelegs are visible and the hind-legs are nicely worked. One horizontal perforation through the body (from head to back, diam. 1mm) demonstrates that it was probably used as amulet. It is from a completely different type than SAV1E 0294 (see above) and seems to be an 18th Dynasty piece. Amuletic beads in the shape of frogs which compare well to SAV1W 0527 were found at Amarna.⁸³⁵

Two 18th Dynasty cowroids were unearthed at SAV1 West (SAV1W 0723 and SAV1W 1736, Fig. 103). SAV1W 0723 is a small, very nicely worked cowroid bead in glazed steatite with a hole running through the centre for suspension (diam. 2mm).⁸³⁶ One side is formed in the shape of the cowrie shell while the other, which is flat, depicts the goddess Taweret wielding a knife. This iconography is commonly attested on Middle Kingdom apotropaic wands.⁸³⁷ In front of the goddess appears the *s3*-symbol, which she is frequently associated with. SAV1W 0723 finds several parallels from Egyptian New Kingdom sites.⁸³⁸

SAV1W 1736 is also made in glazed steatite and was found in the filling of Feature 152, providing a clear mid-18th Dynasty for this piece (see above). The flat side of this small cowroid bead depicts a lotus form barque with a small central hut (Fig. 103).⁸³⁹ Above the barque is a small sun disk, with interior cross hatching.

Amulets and beads

Besides the two cowroids from SAV1 West, only one other amulet was found in the sector. SAV1W 1436 derives from the filling of Feature 115 and represents a small faience amulet in the shape of a lotus blossom (5 × 2 × 7mm). It was pierced through the stem so that it would hang upside down and can be interpreted as necklace pendant (Fig. 56). Such amulets are well-attested in faience at Amarna.⁸⁴⁰

A small stone pendant or bead is SAV1W 1759 (Fig. 56). It is a small teardrop-shaped object, pierced through the narrow point. It is quite similar in shape to the pendant stamp SAV1E 2865 (see above), though no design was ever present. This piece is one of the objects within the category of personal adornment from SAV1 West which seems rather Nubian in character and not Egyptian (see Chapter 8).

⁸³⁵ Kemp and Stevens 2010b, 108–109, fig. 10.10.

⁸³⁶ Griffin and Gundlach 2015c.

⁸³⁷ On those so-called birth tusks, see Quirke 2016; cf. also Morris 2017.

⁸³⁸ See, e.g., BM EA 3737, http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=143200&partId=1&people=98412&peoA=98412-1-7&page=1 (last access 23 August 2018).

⁸³⁹ Cowroids with barque motifs including floral elements are well known from Egypt, e.g., BM EA 28686, http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=142278&partId=1&page=2. For a more sophisticated representation of a solar barque, see BM EA23298, http://www.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=142606&partId=1&page=2 (last access 23 August 2018).

⁸⁴⁰ See Kemp and Stevens 2010b, 76, fig. 10.1, 80, fig. 10.5.

92 beads from SAV1 West were registered; similar to SAV1 East, they represent various shapes and types. Faience is the most common material, but also stone, pottery, shell and bone are attested. A small ring bead, SAV1W 1405, was identified as ivory. Ring beads are in general the most numerous, followed by tubular beads. Disc-shaped beads are well-attested from Feature 115 and thus datable to the mid-18th Dynasty (SAV1W 1440, three pieces, Pl. 95). From the same cellar more than 100 faience ring beads of various colours, ranging between $4 \times 5 \times 3$ – $3 \times 3 \times 1$ mm and $3 \times 3 \times 2$ – $2 \times 2 \times 1$ mm respectively in size were recovered (SAV1W 1443, 44 pieces and SAV1W 1444, 76 pieces; see below Chapter 4.5). A single shell bead was found with SAV1W 0504 (Fig. 55).

Figurines

50 clay and pottery figurines were found at SAV1 West (Tab. 21). The largest group represents female figurines, followed by various animals. The New Kingdom animal figurines include a dog and three ibexes besides other quadrupeds.

The simple hand-modelled clay sticks with indications of the female genitalia, the so-called plaque-type female figurines (or rudimentary female figurines), are with 19 pieces well-attested from SAV1 West (Figs. 104–106). SAV1W 1647 (Pl. 96) is an almost completely preserved example of a female figurine of fine unfired grey clay, roughly rectangular in shape. The figure comes to a point at the top, in place of the head, and the bottom is slightly broken with traces of white slip. All decoration is confined to the front surface. Near the top, an excess piece of material is stuck to the figure and the texture of the



Fig. 104 Rudimentary female figurines from SAV1 West

surface indicates there is one missing next to it, indicating the probable addition of breasts.⁸⁴¹ Below this are five horizontal incised lines, of differing lengths and straightness. A short vertical dash likely represents the navel, while the waist is formed in two more horizontal lines. The pubic triangle is the most prominently carved feature and is perhaps more anatomically correct than most.

The rectangular rudimentary female figurine SAV1W 1734 (Fig. 104) is decorated with incisions on the two wider faces. The front is determined by a prominent pubic triangle, topped by three horizontal lines. In this case, these incised lines seem to replace the otherwise attested dotted lines on the figurines. It still remains unclear whether such lines represent body adornments like tattoos and scarification, or maybe girdles.⁸⁴² A deep hole was incised between the upper two lines, while a more shallow imitation appears between the lower lines; one of these holes likely indicated the navel. On the reverse, a single line is incised vertically down the centre, ending just short of the bottom. A small hole is incised in each of the bottom corners. A further two holes appear along the left edge and one even higher on the right edge. Both sides of the figure are undecorated. The top is broken and there is a large chip out of the bottom surface. There is no indication that the figure was ever painted.⁸⁴³

SAV1W 0555 (Fig. 104) is the lower part of a rudimentary female figurine (base = 3.1 × 2.9cm), more or less rectangular/cuboid-shaped. All sides are incised and might relate to the 'Nubian' design of the figurines on Sai (see above, Chapter 4.1.1). At the front, the pubic area is designed like a rounded triangle pointing upwards. Within the triangle, there is a small hollow indicating the navel. Above this there are two almost horizontal lines incised and some traces of red paint.⁸⁴⁴ The right side shows on the left a vertical line (in the eroded part); from this line three strongly curved lines go to the right, slightly sloping upwards. The lowest curved line is small and pointed; on the right there is another rather straight vertical line, nearly at the edge. Some remains of red paint are visible on this side.

The back side of the figurine clearly refers to the anatomy and shows a more or less straight vertical line, almost in the centre. It indicates the back bone or the space between the legs; a second vertical line to the left crosses the first in the lower part and nearly at the bottom there is another strongly curved line oriented to the right (similar to the lines on the right side of the figurine). Some traces of red paint are preserved on this side as well. The left side shows on the right a vertical line ending in a triangle pointing downwards; from this vertical line two curved lines go to the left, above the larger curve there is the end of another vertical line.

Another fragment of a rudimentary female figurine, which is decorated on all four faces and similar to SAV1W 0555, is SAV1W 1320 (Fig. 104). The front has four horizontal rows of dots; the rear has a vertical line along the entire length of the piece, while the sides have a similar pattern, consisting of a vertical line with a long squiggle running through it.

Only the lower half is preserved of figurine SAV1W 1534 (Fig. 104), again decorated on all four sides. The front face has a horizontal line at the top, usually representing the waist. Beneath this are two small perforations, followed by the pubic triangle, which is incised, and a small circular dimple (applied) in the centre. The remaining three faces have vertical incised lines in the centre with the back having two small perforations towards the bottom.

SAV1W 1624 (Fig. 104) is another fragment of a female figurine. The front face appears to have the pubic triangle outlined, though the area is damaged. There are four incised hollows above this zone, possibly representing the navel and some form of tattoo or scarification.⁸⁴⁵ The remaining sides all have a single vertical line incised through the length.

A slightly different pattern of decoration is illustrated with SAV1W 0029 (Fig. 105), which was found in the filling of one of the Post-New Kingdom pits above the enclosure wall. The shape and general type corresponds to the other stick figurines. It is decorated on all four sides; here, either horizontal

⁸⁴¹ Attached breasts by means of small pegs are also attested for female figurines at Amara West; Stevens 2017, fig. 2, F12688.

⁸⁴² For possible tattoos and/or scarification of the figurines and references, see most recently Stevens 2017, 411–412.

⁸⁴³ For painted figurines from Amara West, see Stevens 2017, 412–413, fig. 5.

⁸⁴⁴ See Stevens 2017, 412.

⁸⁴⁵ For circles of dots around the navel of such figurines, see Stevens 2017, esp. 423.

Number of Object	Area Location	SU	Type of Object	Material	Date of Object	Form
SAV1W 0164	SQ1W, E-W 0–5m/S-N 0–5m	500	Figurine	Clay, fired	18 th Dynasty?	Animal
SAV1W 1465	SQ1	732	Figurine	Pottery	New Kingdom?	Animal
SAV1W 1636	SQ1SE	854	Figurine	Clay, unfired	18 th Dynasty	Animal; bull?
SAV1W 1396	SQ1 & E	729	Figurine	Pottery	18 th Dynasty	Animal; ibex?
SAV1W 1491	SQ1, sieved material	731	Figurine	Pottery	18 th Dynasty	Animal; ibex?
SAV1W 1680	SQ1SE/SQ1 S	862	Figurine	Pottery	18 th Dynasty	Animal; ibex?
SAV1W 0016	SQ1SE	809	Figurine	Pottery	18 th Dynasty?	Animal; quadruped
SAV1W 0165	SQ1, E of Feature 100, 2m S/4m E	500	Figurine	Clay, fired	Post-New Kingdom?	Animal; quadruped
SAV1W 0215	SQ1W, E-half	501	Figurine	Clay, fired	Unclear	Animal; quadruped
SAV1W 0500	SQ1	559	Figurine	Clay, fired	New Kingdom?	Animal; quadruped
SAV1W 1303	SQ1, N-part, 3–4m to S	664	Figurine	Pottery	18 th Dynasty	Animal; quadruped
SAV1W 0772	SQ1S	634	Figurine	Pottery	18 th Dynasty	Animal; quadruped
SAV1W 1523	SQ1S, sieved material	710	Figurine	Pottery	New Kingdom?	Animal; quadruped
SAV1W 1546	SQ1SE	815	Figurine	Pottery	18 th Dynasty?	Animal; quadruped
SAV1W 1586	SQ1SE	837	Figurine	Pottery	Christian/medieval	Animal; quadruped
SAV1W 1657	SQ1SE	860	Figurine	Pottery	18 th Dynasty?	Animal; quadruped
SAV1W 1683	SQ1 S	863	Figurine	Pottery	18 th Dynasty?	Animal; quadruped
SAV1W 0910	SQ1S	612	Figurine	Clay, fired	18 th Dynasty?	Animal; quadruped, horse?
SAV1W 1206	SQ1	686	Figurine	Pottery	Christian/medieval	Animal; quadruped, horse?
SAV1W 0800	SQ1S, 10 x 10m	600	Figurine	Pottery	Christian/medieval	camel
SAV1W 0764	SQ1S	647	Figurine/ applique	Clay, fired	18 th Dynasty	Dog; applique of vessel
SAV1W 1301	SQ1S	678	Figurine	Clay, fired	Christian/medieval?	Female figurine
SAV1W 1708	SQ1S/SQ1SE	884	Figurine	Clay	18 th Dynasty	Female figurine; 'Nubian doll type'
SAV1W 1735	SQ1S, S of Feature 143	903	Figurine	Clay, unfired	18 th Dynasty	Female figurine; 'Nubian doll type'
SAV1W 1612	SQ1SE	843	Figurine	Pottery	Christian/medieval	Horse
SAV1W 0409	SQ1	547	Statuette/ figurine	Clay, unfired	Unclear	Human?
SAV1W 1574	SQ1SE	834	Figurine	Clay, unfired	18 th Dynasty	Model boat
SAV1W 0412	SQ1	512	Figurine/ gaming piece	Pottery	Post-New Kingdom	Gaming piece?
SAV1W 0029	SQ1, pit filling above enclosure wall	503	Figurine	Mud, unfired	18 th Dynasty	Rudimentary female figurine
SAV1W 0257	SQ1, 0–2m S-N, 0–1m E-W	507	Figurine	Mud, fired	18 th Dynasty	Rudimentary female figurine
SAV1W 0408	SQ1	512	Figurine	Mud, fired	18 th Dynasty	Rudimentary female figurine
SAV1W 0499	SQ1	563	Figurine	Clay, fired	New Kingdom	Rudimentary female figurine
SAV1W 0555	SQ1, 3.5m NS/1.8m EW	585	Figurine	Clay, slightly fired	18 th Dynasty	Rudimentary female figurine
SAV1W 0906	Cleaning SQ1 (2014)	600	Figurine	Clay, fired	18 th Dynasty	Rudimentary female figurine
SAV1W 0908	SQ1/1S, cleaning connection between SQ1/SQ1S	609	Figurine?	Clay, fired	18 th Dynasty	Rudimentary female figurine
SAV1W 1030	SQ1S	652	Figurine	Clay, unfired	18 th Dynasty	Rudimentary female figurine
SAV1W 1299	SQ1S	705	Figurine	Clay, fired	18 th Dynasty	Rudimentary female figurine
SAV1W 1320	SQ1E	714	Figurine	Clay, unfired	18 th Dynasty	Rudimentary female figurine

SAV1W 1498	SQ1SE	817	Figurine	Mud, unfired	18 th Dynasty	Rudimentary female figurine
SAV1W 1534	SQ1SE	802	Figurine	Pottery	18 th Dynasty	Rudimentary female figurine
SAV1W 1624	SQ1SE	854	Figurine	Clay, unfired	18 th Dynasty	Rudimentary female figurine
SAV1W 1647	SQ1 S	857	Figurine	Clay, unfired	18 th Dynasty	Rudimentary female figurine
SAV1W 1733	SQ1SE	900	Figurine	Clay, fired	18 th Dynasty	Rudimentary female figurine
SAV1W 1734	SQ1S, S of Feature 143	903	Figurine	Clay, unfired	18 th Dynasty	Rudimentary female figurine
SAV1W 1792	SQ1SE	921	Figurine	Clay, unfired	18 th Dynasty	Rudimentary female figurine
SAV1W 0591	SQ1W	544	Figurine	Clay, unfired	18 th Dynasty?	Rudimentary female figurine?
SAV1W 1648	SQ1S	857	Figurine	Clay, unfired	18 th Dynasty	Rudimentary female figurine?
SAV1W 0573	SQ1	584	Figurine?	Clay, fired	Post-New Kingdom	Unclear
SAV1W 1677	SQ1SE/SQ1S	865	Figurine	Pottery	Christian/Medieval	Unclear
SAV1W 1641	SQ1S	852	Figurine	Pottery	New Kingdom?	Unclear

Tab. 21 Figurines from SAV1 West

or vertical lines are used for each side. The frontal face shows five slightly diagonal incised lines above the pubic triangle zone. It is quite similar to SAV1W 1534, but the small circular feature was incised here and not applied.

SAV1W 0906 is the lower part of a rudimentary female figurine of the second type, modelled in the round (Fig. 106). The pubic triangle is clearly visible while the derriere is well defined. Traces of the left hand are still visible at the waist. The figure is broken at the waist, the right knee and the left thigh.⁸⁴⁶

To conclude, some of the plaque-type female figurines from SAV1 West, which dominate the corpus of female representations, combine a typical Nubian pattern of incised lines⁸⁴⁷ with Egyptian stylistic features (Fig. 104).⁸⁴⁸ However, like at SAV1 North, female figurines in distinctive ‘Nubian-style’ as identified at Askut,⁸⁴⁹ were not found at SAV1 West. However, another group – the so-called pottery fertility figurines, Type 3 after Geraldine Pinch,⁸⁵⁰ well-attested in Egypt and Nubia – is attested at SAV1 West. Of two pieces, SAV1W 1708 and SAV1W 1735, the characteristic head has survived (Fig. 107, Pl. 97).⁸⁵¹ The heads of these figurines are always flattened, with rudimentary facial features: a beak-like nose and slits for the eyes and eyebrows. The disc surmounting the face is always pierced with a series of holes, through which better preserved examples indicate that artificial hair was threaded.⁸⁵² According to Pinch, this hairstyle might suggest a Nubian origin of these figurines.⁸⁵³ Although more common from tomb contexts, parallels for the domestic context from Sai are also found at Abydos, Deir el-Medine, Karnak and Memphis.⁸⁵⁴

⁸⁴⁶ For parallels, see Stevens 2017, fig. 4.

⁸⁴⁷ See, e.g., a net weight found at Elephantine in Nubian fabric and with un-Egyptian incised decoration; see von Pilgrim 1996, 276, fig. 120b.

⁸⁴⁸ As already observed for SAV1 North, see Budka and Doyen 2013, 183.

⁸⁴⁹ Smith 2003a, 131–134, fig. 5.31. For female figurines from Kerma, cf. Bonnet 1990, 133–134.

⁸⁵⁰ Pinch 1993, 201–203.

⁸⁵¹ Pinch 1993, 201–202.

⁸⁵² Pinch 1993, 202.

⁸⁵³ Pinch 1993, 202.

⁸⁵⁴ Pinch 1993, 229, List 3.

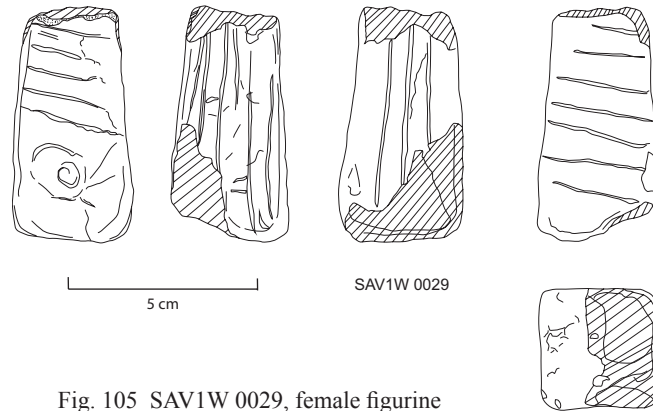


Fig. 105 SAV1W 0029, female figurine

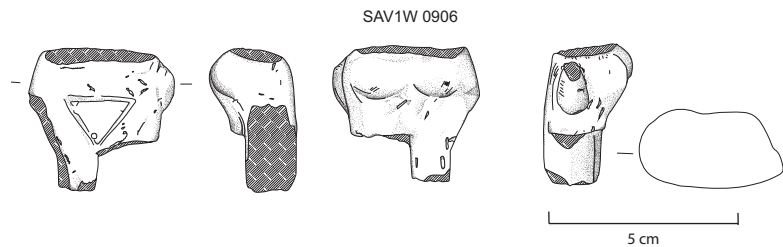


Fig. 106 SAV1W 0906, rudimentary female figurine

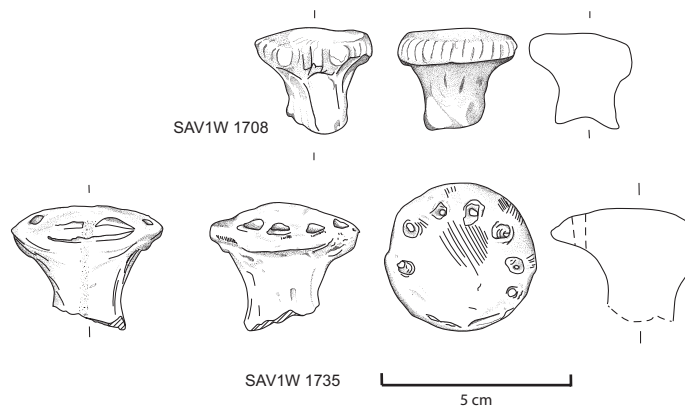


Fig. 107 Two 'Nubian' doll heads from SAV1 West (SAV1W 1708 and SAV1W 1735)

The head of SAV1W 1735 (Fig. 107) is round and flat on the top, with a thin stem for the face and neck. The area of the face is represented only by two rows of horizontal dashes, the upper ones are slightly hooked to indicate the nose. Seven holes have been pierced through the top of the head in order to attach strands of hair. The bottom of the neck is broken. Remains of orange wash/paint are visible on all surfaces.

Figurine SAV1W 1708 is comparable, but much smaller in size and also without the perforations (Fig. 107). Possibly the small dashes incised along the entire outer edge should represent the hair – in this case it is likely to be short hair in contrast to the long-haired figurines with strands of hair attached through the holes. The bottom of the neck tapers unevenly to a point, but the lower surface appears to be original, so this is the intended shape and not broken like at SAV1W 1735. Traces of red paint are visible on the top of the head, as well as around the neck.

One of the most remarkable zoomorphic figurines from all sectors within the New Kingdom town is SAV1W 0764. This object was found in Square 1S in SU 647 (Fig. 108). It is the small, intact clay

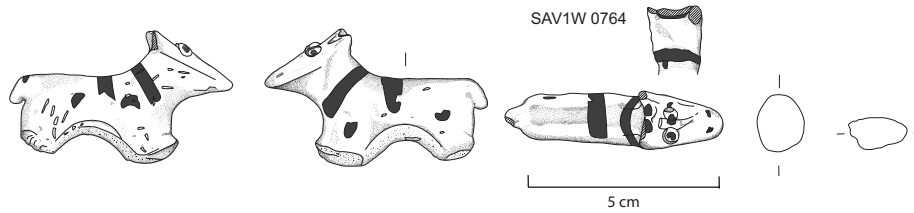


Fig. 108 SAV1W 0764, dog applique/figurine

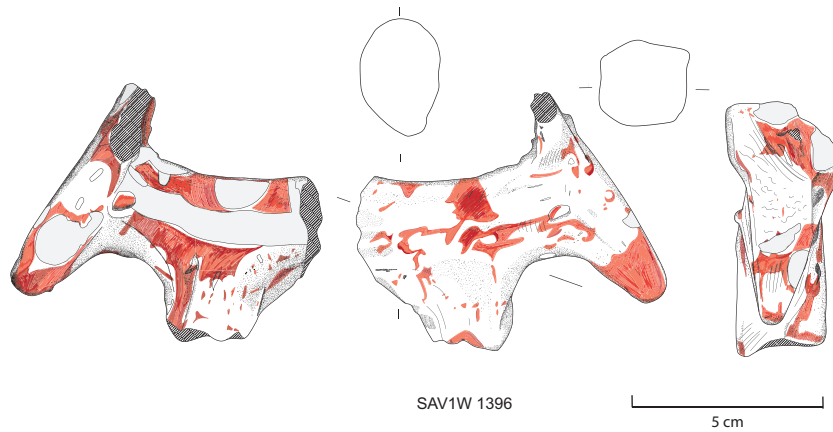


Fig. 109 SAV1W 1396, figurine of an ibex/gazelle

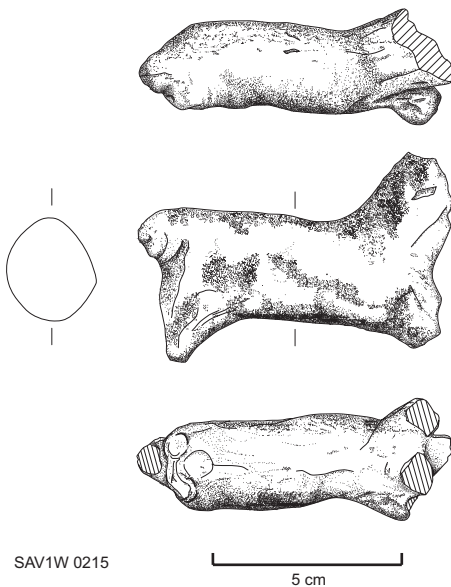


Fig. 110 SAV1W 0215, animal figurine

figurine of a dog (58 × 15 × 35mm). It is broken at the feet and was most probably once applied to a pedestal or rather the rim of a vessel. It has a long snout, pointy ears and a short tail. The eyes were applied separately with small circles of clay. The dog figurine has a painted collar, which is black, and several black dots over the body; the eyes are also painted black.

Among the animal figurines from SAV1 West, three examples represent ibexes or gazelles. SAV1W 1396 (Fig. 109) is quite fragmented; only the front of the animal is preserved, with a long face and long horns, which are partially broken. Only the upper parts of the front two feet are preserved. The figurine is painted red and white. It shows several similarities to the dog figurine SAV1W 0764; its eyes were applied separately as well with small circles of clay. In general, the amount and variety of painted animal figurines from SAV1 West is quite unusual and differs from SAV1 East and SAV1 North. Of a common type, but of unclear date, is SAV1W 0215 (Fig. 110).

The fragmented figurine of an animal figurine has an elongated body. With the beginning of the neck, the forelegs and the hind legs as well as a short tail it might represent a horse. It comes from the surface layers from SAV1 West and is possibly Post-Pharaonic.

Another notable figurine from SAV1 West is a clay model boat, SAV1W 1574 from Square 1SE, SU 834 (Pl. 98). It is a crudely carved handmade clay model boat representing a papyrus skiff. The ends of the boat are missing. The boat is painted white throughout, while the deck also has traces of black. Boat

models are common finds in Egyptian settlements since the Early Dynastic period.⁸⁵⁵ New Kingdom examples in Nubia were found at Buhen.⁸⁵⁶

Seal impressions

Only two fragments of mud sealings with remains of a stamp/impression were excavated in sector SAV1 West. This seems to contrast considerably from SAV1 East. However, at SAV1 East all seal impressions derive from Feature 15 – otherwise seal impressions are as rare as at SAV1 West or SAV1 North.⁸⁵⁷

One particularly well preserved seal impression derives from a closed context, the oldest filling of Feature 115 (see Chapter 4.5). The sealing SAV1W 1451 (Pl. 99) measures 15 × 6 × 18mm and shows an oval seal impression with the name of Thutmose, perhaps Thutmose III. The name is written with an ibis bird on a standard, the *ms*-sign in front and the *s*-sign behind. The writing is surrounded by an oval-shaped border. The impression of a cord on the back side indicates that this sealing was used to seal a box/chest or maybe a bag.

The other seal impression from SAV1 West shows only traces of lines of the stamp, but no clear impression. SAV1W 1455 was found in SQ1S in SU 710 and is a small fragment which measures 18 × 18 × 11mm. It is stratigraphically younger than Features 119 and 121 and is maybe associated with the debris/abandonment phase of Structure A.

Seals/plaques

Two possible seals were found at SAV1 West, which might have been used for mud bricks or just as plaques. The largest and best preserved cartouche-shaped plaque in mud is SAV1W 0532 (11.4 × 6.1 × 3.4cm, Fig. 111).⁸⁵⁸ It bears incised hieroglyphs on the front, giving, as it seems, the name and epithet of a god. The deity is a falcon-god, possibly Horus, Horakhty or even Hauron – the group of signs in front of the god could not be read until now. The other signs probably represent a playful writing of “Lord of the Thrones of the Two Lands, numerous in beauty” (*nb ns.wt t3.wj ʕs3 nfr:w*). “Lord of the Thrones of the Two Lands” is a well-known epithet for Amun, Amun-Ra and Ra-Horakhty-Amun.⁸⁵⁹ *ʕs3-nfr:w* was used during the Late Period for Amun and in Ptolemaic times for a specific Horus form.⁸⁶⁰ For the New Kingdom it cannot be excluded that the falcon of SAV1W 0532 is actually associated with the king and refers to a royal epithet.

SAV1W 0532 with its incised hieroglyphic cartouche reminds of the stamped bricks attested from the early 18th Dynasty onwards. However, it most probably held a symbolic character. It was found in the sandy pit cutting the enclosure wall in Square 2 at SAV1 West. SAV1W 0532 might have once belonged to a foundation deposit for the town enclosure. Comparable cartouche-shaped plaques are regularly found in foundation deposits in Egypt, but most often in other materials (faience or stone) and smaller in size. According to John Weinstein, cartouche-shaped plaques are new additions to foundation deposits in the mid-18th Dynasty (Thutmose IV/Amenhotep III).⁸⁶¹ This could correspond to a possible connection of SAV1W 0532 with the town enclosure, which can be dated to Thutmose III (the later part of his reign). However, one has to remark that the only foundation deposits attested in Upper Nubia for town walls were found at Sesebi⁸⁶² – at Sai itself several deposits came to light in the foundations of Temple A.⁸⁶³ Close to SAV1W 0532 in Square 2 of SAV1 West another fragment of a similar cartouche-shaped

⁸⁵⁵ For early finds from Elephantine, see Ziermann 2002; for New Kingdom examples, see Stevens 2006, 116.

⁸⁵⁶ Millard 1979, 146.

⁸⁵⁷ For SAV1 North, see Budka 2017j, 165.

⁸⁵⁸ Budka 2015d, 66, fig. 10.

⁸⁵⁹ Leitz 2002b, 672, a and d.

⁸⁶⁰ See Leitz 2002a, 216a and c.

⁸⁶¹ Weinstein 1973, 94.

⁸⁶² Thill 1997, 115 with references.

⁸⁶³ Thill 1997, 105–117.

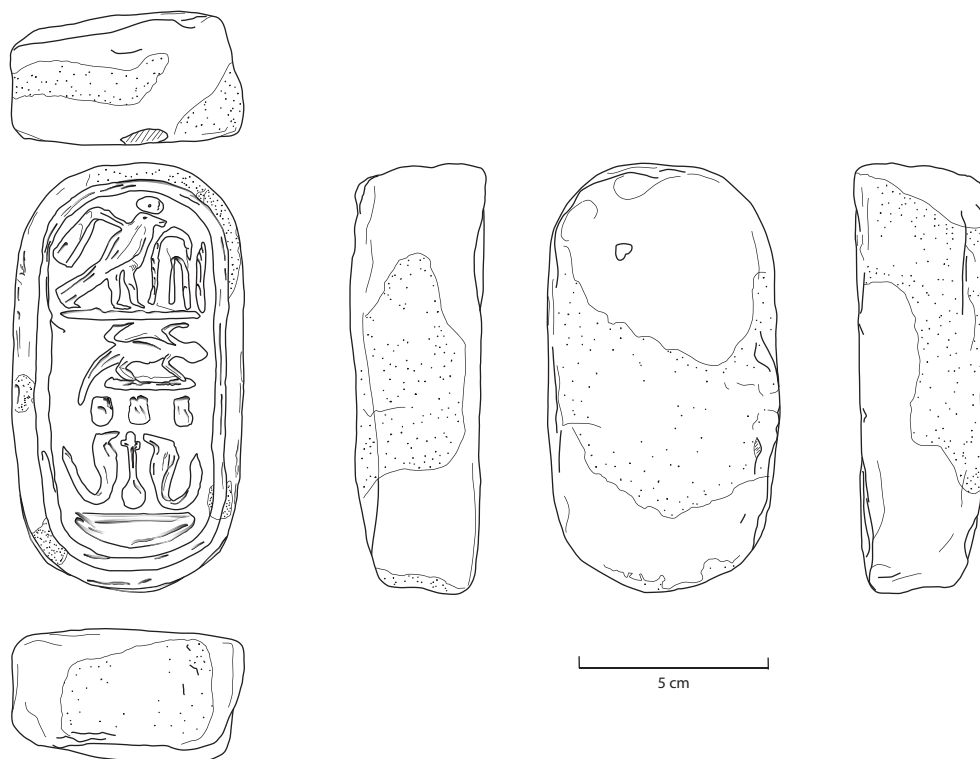


Fig. 111 SAV1W 0532, cartouche plaque

plaque was found, supporting the interpretation of a disturbed deposit for these objects. SAV1W 0031 (Pl. 100) is very fragmented and part of a plaquette with three hieroglyphs (an eye, *n*-sign and *nb*-sign?) and rests of the cartouche. Like SAV1W 0532 it is made in fired clay and might have been a dummy brick or a seal/stamp.

Another small stamp of completely different character was found in Square 1NW and is of unclear date. It might have been used to decorate figurines or pottery with circular designs. SAV1W 1707 is a small cylindrical clay object, very likely a stamp (9 × 9 × 19mm, Fig. 62). The flat end is decorated with an incised dot and a surrounding circle (diam. 9mm). The opposite end is not quite flat and makes the piece rather unstable (diam. 85mm). The whole object was handmade and possibly secondarily burnt.

Fragment of stelae

Unfortunately, only a surface find from south of Square 1 at SAV1 West is SAV1W 0590 (Pl. 101), the fragment from the upper part a sandstone stela (10.6 × 11.2cm with a width of 3.4cm).⁸⁶⁴ The sandstone seems to be local and is very pale brown to pale yellow (10YR8/2–2.5Y8/2). The stela was decorated in raised relief. The preserved part of the lunette shows the common motif of a so-called *shen*-ring flanked by two *wedjat*-eyes. Below the right *wedjat*-eye, facing left, the presumed donor of the stela is represented: he is wearing a shoulder long wig and is offering a libation to persons facing him. Only the lotus flower of the first seated person on the left is preserved – it was probably a female family member, maybe the mother of the donor. However, in the 18th Dynasty the lotus as an attribute is also well-attested for men. A fragmented sandstone stela discovered in the New Kingdom cemetery at Sai shows a seated couple, with the man holding a lotus flower next to a woman embracing him (T16S21).⁸⁶⁵ According to

⁸⁶⁴ Budka 2015d, 66–67, fig. 11.

⁸⁶⁵ Minault-Gout and Thill 2012, vol. 2, pl. 84 and 162.

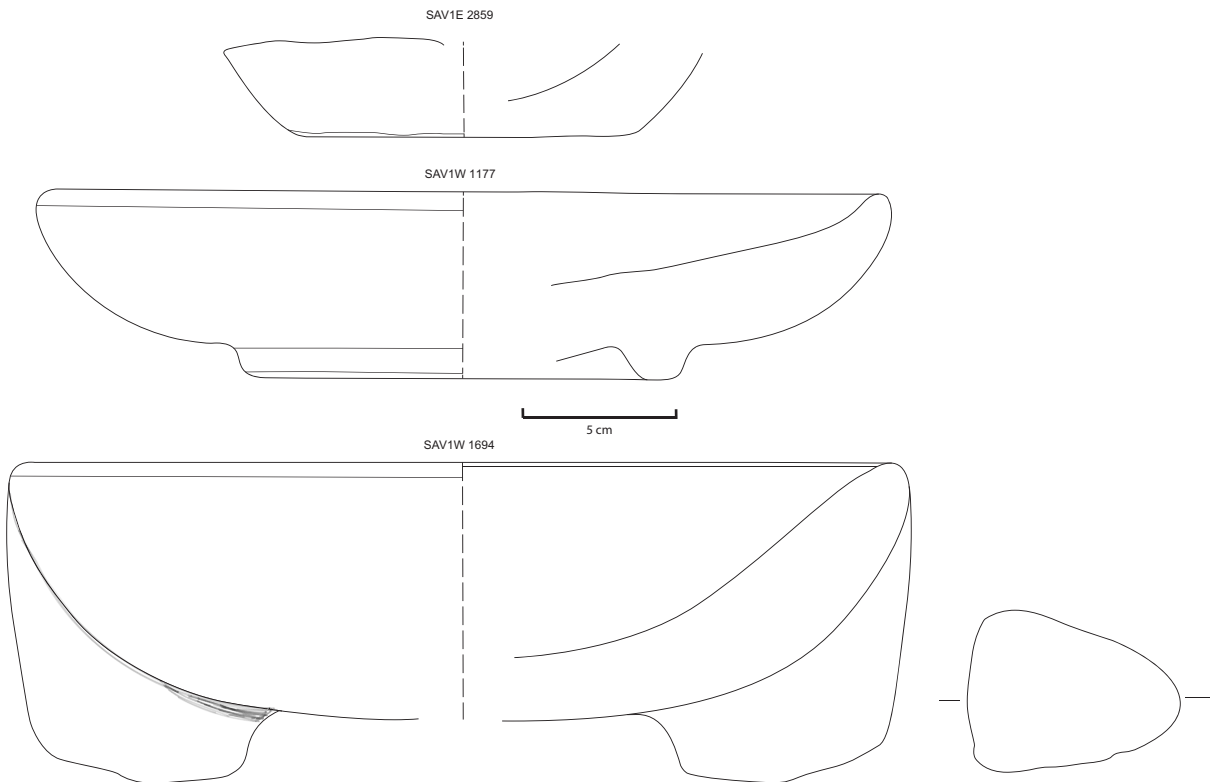


Fig. 112 Examples of stone vessels from SAV1 West and SAV1 East

the stylistic features of hair and costume of the donor, the stela from SAV1 West can be dated to the mid-18th Dynasty. Close parallels are stelae datable to the reign of Thutmose III and especially Amenhotep II – for example British Museum EA 623 by the viceroy Usersatet (see also Chapter 6.4.1.3).⁸⁶⁶ Regrettably, no text has survived on the stela fragment from SAV1 West identifying the donor by name – we can safely assume that it was one of the Egyptian officials working and living on Sai, and maybe even buried on the island (see Chapter 6).

Stone vessels

16 fragments of stone vessels were documented from SAV1 West (Tab. 22). All seem to be New Kingdom in date and the fragments are more significant than from sector SAV1 East. Except for two small pieces in calcite, mostly hard stone such as granite and sandstone was used. Apart from the calcite vessels which presumably belonged to cosmetic vessels, all stone vessels from SAV1 West represent open forms (Fig. 112).

Most are quite large pieces with a practical function: large basins, some of them with legs/supports (SAV1W 1531, 1585, 1694, Fig. 112) and large bowls with ring bases (SAV1W 0367, 0455, 1177, Fig. 112). Especially interesting regarding the function of the basins with legs is SAV1W 1694 (Fig. 112, Pl. 102). This fragment of a sandstone basin has its pronounced rim preserved, with the top surface being concave. The underside contains the remains of a leg. Large amounts of red pigment were documented on the inner surface. Found in proximity to this basin was SAV1W 1693 (Pl. 103), a small natural pebble of agate which was used as a pounder or pestle. Along the circumference of this stone tool are some percussion marks as well as red pigment. Thus, SAV1W 1694 was possibly a kind of mortar where red pigment was crushed with the pestle SAV1W 1693 (for mortars, see also Chapter 4.4, stone tools).

⁸⁶⁶ Purchased at Wadi Halfa, see Randall-Maciver and Woolley 1911, 96.

Number of Object	Area Location	SU	Type of Object	Material
SAV1W 0837	SQ1S, 10 × 10m	600	Basin	Stone (quartzite)
SAV1W 1531	SQ1SE	800	Basin with leg	Stone (sandstone)
SAV1W 1585	SQ1SE	837	Basin with leg	Stone (sandstone)
SAV1W 1694	SQ1S	866	Basin with leg	Stone (sandstone)
SAV1W 0367	SQ1, 0–3m E-W/0–5m N-S	537	Bowl with ring base	Stone (granite)
SAV1W 0455	SQ1	548	Bowl with ring base	Stone (granite)
SAV1W 1177	SQ1S	674	Bowl with ring base	Stone (quartzite)
SAV1W 0994	SQ1S	626	Bowl/basin	Stone (quartzite)
SAV1W 1053	SQ1S	649	Bowl/plate	Stone
SAV1W 1313	SQ1S	689	Bowl/plate	Stone
SAV1W 0834	SQ1S, 10 × 10m	600	Dish/bowl	Stone
SAV1W 1361	SQ1E	713	Vessel	Stone (sandstone)
SAV1W 1663	SQ1SE	856	Vessel	Stone (calcite)
SAV1W 1045	SQ1S	658	Vessel/plate	Stone
SAV1W 0936	SQ1/S	614	Vessel/pot stand?	Stone (sandstone)
SAV1W 1196	SQ1SE	837	Vessel; with flat base	Stone (calcite)

Tab. 22 Stone vessels from SAV1 West

Faience vessels

The faience vessel fragments from SAV1 West include 30 sherds from Nun bowls (Tab. 23). These comprise rim sherds, body sherds and base sherds. The iconography of the bowl decoration is quite elaborate and diverse; almost all vessels are painted both outside and inside (Fig. 113).⁸⁶⁷

SAV1W 0530 shows lotus petals on the outside and the well-known geometric motif of a lotus pond on its inside (Fig. 113).⁸⁶⁸ On the interior of SAV1W 1418 one of the other most common motifs of the

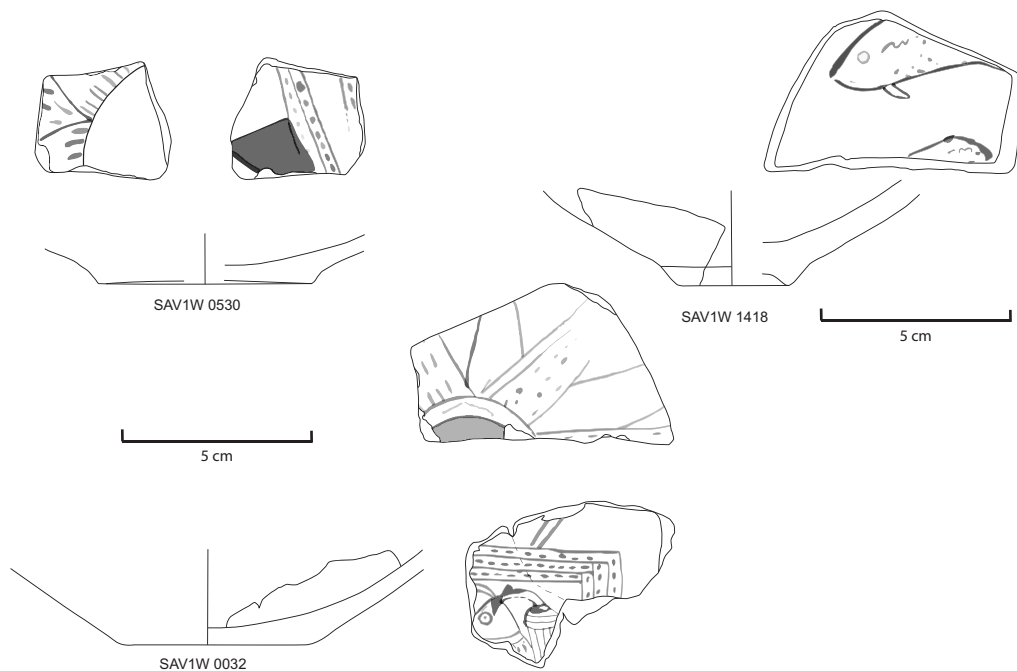


Fig. 113 Examples of faience vessels from SAV1 West – SAV1W 0530, 1418, 0032

⁸⁶⁷ See Tschorn 2017.

⁸⁶⁸ See Strauss 1974; Schoske 1992, 174–177; Friedman 1998, 211; Tschorn 2017, 438–439, figs. 7–8.

Number of Object	Area Location	SU	Type of Object	Colour
SAV1W 0032	SQ1, E of Feature 100/SQ1, 1m from E, 1m from S	501/507	Nun bowl	Outside blue, inside blue-turquoise
SAV1W 0428	SQ1	512	Nun bowl	Light turquoise - light blue, greyish lines
SAV1W 0442	SQ1NW	552	Nun bowl	Blue - turquoise
SAV1W 0506	SQ1	563	Nun bowl	Blue - turquoise, light blue, dark blue lines
SAV1W 0528	SQ1	556	Nun bowl	Outside light turquoise; inside blue - turquoise, black painting
SAV1W 0529	SQ1	556	Nun bowl	Turquoise, black painting
SAV1W 0530	SQ1, 4.9m S-N/5.5m E-W	568	Nun bowl	Outside turquoise, black painting; inside blue, black painting
SAV1W 0724	SQ1S	633	Nun bowl	Blue, with a darker blue for the decoration
SAV1W 0725	SQ1S	631	Nun bowl	Light blue
SAV1W 0738	SQ1S	627	Nun bowl	Various shades of blue
SAV1W 0771	Surface, 3m E of SQ1S	NA	Nun bowl	Various shades of blue
SAV1W 0964	SQ1S, S part of trench, cleaning and sand removal	612	Nun bowl	Blue - turquoise, light blue, dark blue lines
SAV1W 0987	SAV1W, 20m E of SQ1	NA	Nun bowl	Blue (three shades)
SAV1W 1007	SQ1S	642	Nun bowl	Blue and black (soot)
SAV1W 1193	SQ1S	669	Nun bowl	Bright blue
SAV1W 1194	SQ1S	668	Nun bowl	Bright blue
SAV1W 1418	SQ1 & E	731	Nun bowl	Blue with black decoration
SAV1W 1424	SQ1E	713	Nun bowl	Blue, with black decoration
SAV1W 1425	SQ1 & E	717	Nun bowl	Blue, with black decoration
SAV1W 1528	SQ1SE, 1m strip around trench	800	Nun bowl	Blue, with black decoration
SAV1W 1535	SQ1SE	801	Nun bowl	Blue, with black decoration
SAV1W 1544	SQ1SE	815	Nun bowl	bright blue, black decoration
SAV1W 1591	SQ1SE	843	Nun bowl	Blue, with black decoration
SAV1W 1621	SQ1SE	850	Nun bowl	Blue, with black decoration
SAV1W 1626	SQ1SE	855	Nun bowl	Blue, with black decoration
SAV1W 1631	SQ1SE	855	Nun bowl	Blue, with black decoration
SAV1W 1655	SQ1S	861	Nun bowl	Blue, with black decoration
SAV1W 1681	SQ1S	865	Nun bowl	Blue, with black decoration
SAV1W 1682	SQ1S	864	Nun bowl	Blue, with black decoration
SAV1W 1732	SQ1SE	900	Nun bowl	Blue, with black decoration

Tab. 23 Nun bowls from SAV1 West

Nun bowls is attested, the *tilapia* fish (Fig. 113).⁸⁶⁹ A somewhat unusual piece is SAV1W 0544, the fragment of a faience chalice (Pl. 104). Its shape is rather rare and it shows signs of secondary use. Both the inside and the outside are very unclean and the motifs of several flowers and buds on the outside are difficult to recognise. The severely abraded edge at the broken bottom of the cup suggests a secondary use of unknown purpose.⁸⁷⁰

Among the faience vessels other than Nun bowls from SAV1 West, SAV1W 1749 (Pl. 105) is especially remarkable. It is the fragment from the body of a small vessel, broken on all sides. Parts of the neck and rounded body are preserved; it seems to be a goblet or beaker with a complex shape. Decoration was added on the outside in black paint and appears rather elaborate, despite the small percentage preserved. Two horizontal lines run around the shoulder. Between the upper line and the break a small grid of six squares remains (probably originally nine), alternating in black and blue. To either side there

⁸⁶⁹ Krönig 1934, 157–161; Strauss 1974, 79–82; Tschorn 2017, 439–440, figs. 9–10.

⁸⁷⁰ Tschorn 2017, 441, fig. 13.

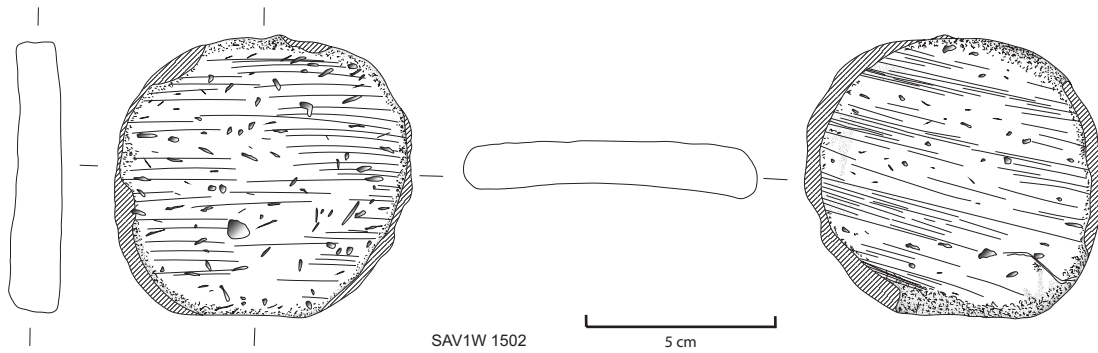


Fig. 114 Re-used pottery from SAV1 West – lid SAV1W 1502

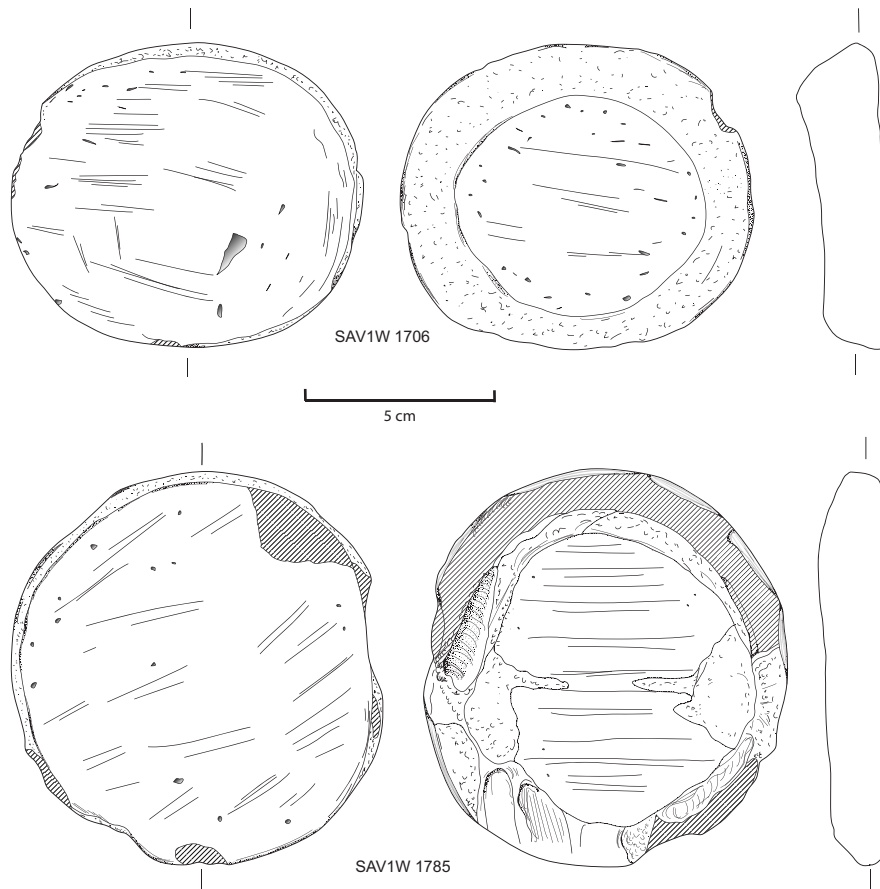


Fig. 115 Re-used pottery from SAV1 West – lids SAV1W 1706, 1785

is an empty panel – based on the small bits of paint remaining at the breaks, this may have held glyphs or small images. Faint remains of another horizontal band are visible at the bottom, connected to the top by vertical lines near the break on each side.

Re-used pottery

240 re-used pottery sherds were documented from SAV1 West and 144 of these could be dated to the 18th Dynasty (Tab. 24, Figs. 114–117). The most common group are scrapers (40 pieces), followed by lids (26 pieces). Ten tokens and six weights as well as four net weights are attested (see above, Chapter 4.1).

Examples for almost circular lids from body sherds of Nile clay vessels are SAV1W 1502 (Fig. 114), 1568, 1706 and 1785 (Fig. 115). SAV1W 1599 is the re-cut body sherd of a Nubian cooking pot.

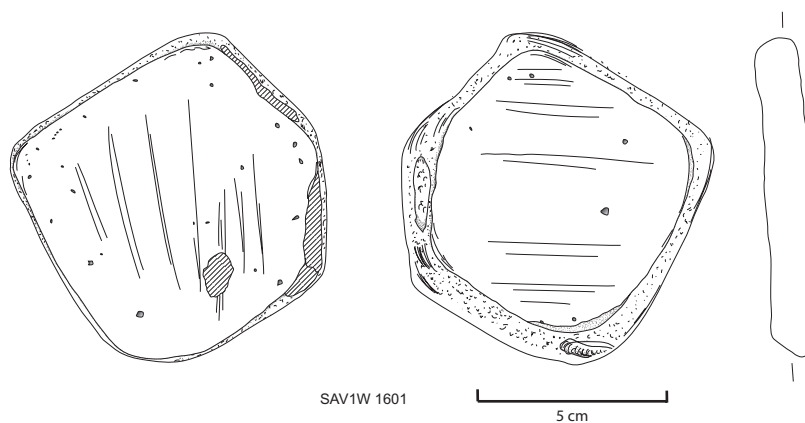


Fig. 116 Re-used pottery from SAV1 West – Marl clay piece SAV1W 1601

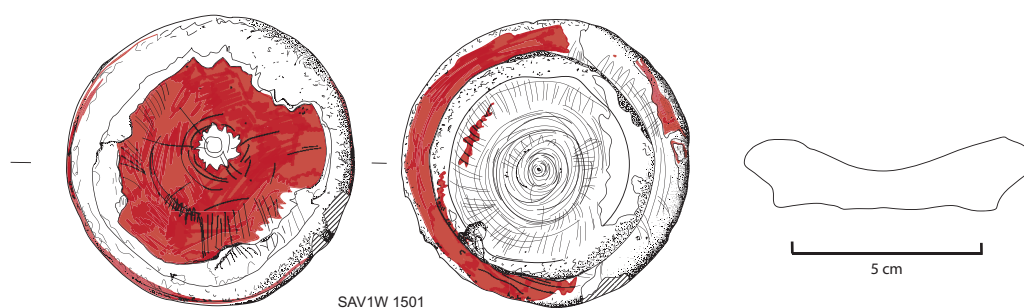


Fig. 117 Re-used pottery from SAV1 West – lid SAV1W 1501

Number of Object	Area Location	SU	Type of Object	Material	Date of Object
SAV1W 0012	SQ2, 15 x 5m, surface	500	Lid	Pottery	18 th Dynasty
SAV1W 0019	SQ1SE	809	Lid	Pottery	18 th Dynasty
SAV1W 0112	SQ1, NW-corner, 1–5m W-E/3–5m N-S	502	Lid	Pottery	18 th Dynasty
SAV1W 0142	SQ1SE	811	Lid	Pottery	early 18 th Dynasty
SAV1W 0261	SQ1, 0–2m S-N/0–4m E-W	507	Lid	Pottery	18 th Dynasty
SAV1W 0320	SQ1SE	809	Lid	Pottery	18 th Dynasty
SAV1W 0350	SQ1, 3–5m E-W/0–5m N-S	538	Lid	Pottery	18 th Dynasty
SAV1W 0359	SQ1, 0–5m N-S/0–1m E-W	507	Lid	Pottery	18 th Dynasty
SAV1W 0495	SQ1W	561	Lid	Pottery	18 th Dynasty?
SAV1W 0523	SQ1	556	Lid	Pottery	18 th Dynasty
SAV1W 0561	SQ1	584	Lid	Pottery	18 th Dynasty
SAV1W 0628	SQ1	537	Lid	Pottery	18 th Dynasty
SAV1W 1130	SQ1S	646	Lid	Pottery	18 th Dynasty
SAV1W 1239	SQ1S	669	Lid	Pottery	18 th Dynasty
SAV1W 1501	SQ1	708	Lid	Pottery	18 th Dynasty
SAV1W 1502	SQ1S	705	Lid	Pottery	18 th Dynasty
SAV1W 1547	SQ1SE	815	Lid	Pottery	18 th Dynasty
SAV1W 1566	SQ1SE	828	Lid	Pottery	118 th Dynasty
SAV1W 1567	SQ1SE	818	Lid	Pottery	18 th Dynasty
SAV1W 1568	SQ1SE	832	Lid	Pottery	mid-18 th Dynasty
SAV1W 1587	SQ1SE	837	Lid	Pottery	18 th Dynasty
SAV1W 1588	SQ1SE	837	Lid	Pottery	18 th Dynasty

Tab. 24 Re-used sherds from SAV1 West from the 18th Dynasty

Number of Object	Area Location	SU	Type of Object	Material	Date of Object
SAV1W 1596	SQ1SE	844	Lid	Pottery	18 th Dynasty
SAV1W 1599	SQ1SE	839	Lid	Pottery	18 th Dynasty?
SAV1W 1601	SQ1SE	848	Lid	Pottery	18 th Dynasty
SAV1W 1602	SQ1SE	848	Lid	Pottery	18 th Dynasty
SAV1W 1611	SQ1SE	843	Lid	Pottery	18 th Dynasty
SAV1W 1629	SQ1S	852	Lid	Pottery	18 th Dynasty
SAV1W 1635	SQ1SE	854	Lid	Pottery	18 th Dynasty
SAV1W 1654	SQ1S	857	Lid	Pottery	18 th Dynasty
SAV1W 1705	SQ1S	880	Lid	Pottery	early 18 th Dynasty
SAV1W 1706	SQ1S	880	Lid	Pottery	18 th Dynasty
SAV1W 1710	SQ1S/SQ1SE	884	Lid	Pottery	18 th Dynasty
SAV1W 1711	SQ1S/SQ1SE	884	Lid	Pottery	18 th Dynasty
SAV1W 1718	SQ1	530	Lid	Pottery	18 th Dynasty
SAV1W 1949	SQ1SE	812	Lid	Pottery	18 th Dynasty
SAV1W 0411	SQ1	549	Net Weight	Pottery	18 th Dynasty
SAV1W 0496	SQ1	565	Net Weight	Pottery	18 th Dynasty
SAV1W 0739	SQ1S	628	Net Weight	Pottery	18 th Dynasty
SAV1W 1679	SQ1SE/SQ1S	862	Net weight	Pottery	mid-18 th Dynasty
SAV1W 0494	SQ1	563	Polishing instrument	Pottery	18 th Dynasty?
SAV1W 0023	SQ1, SW-corner	501	Re-used sherd	Pottery	18 th Dynasty
SAV1W 0563	SQ1	585	Re-used sherd	Pottery	18 th Dynasty
SAV1W 0586	SQ1	530	Re-used sherd	Pottery	18 th Dynasty
SAV1W 0736	SQ1S	622	Re-used sherd	Pottery	18 th Dynasty
SAV1W 0759	SQ1S	622	Re-used sherd	Pottery	18 th Dynasty
SAV1W 0765	SQ1S	636	Re-used sherd	Pottery	18 th Dynasty
SAV1W 0774	SQ1S	633	Re-used sherd	Pottery	18 th Dynasty
SAV1W 0775	SQ1S	633	Re-used sherd	Pottery	18 th Dynasty
SAV1W 0887	SQ1S	609	Re-used sherd	Pottery	18 th Dynasty
SAV1W 0966	SQ1S	618	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1008	SQ1S	638	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1032	SQ1S	643	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1035	SQ1S	646	Re-used sherd	Pottery	18 th Dynasty?
SAV1W 1128	SQ1S	646	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1129	SQ1S	646	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1131	SQ1S	647	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1132	SQ1S	647	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1134	SQ1S	642	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1198	SQ1S	658	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1199	SQ1S	662	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1302	SQ1S	678	Re-used sherd	Pottery	18 th Dynasty?
SAV1W 1304	SQ1, N-part, 3–4m to S	664	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1305	SQ1, N-part, 3–4m to S	664	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1306	SQ1, N-part, 3–4m to S	664	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1307	SQ1S	674	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1312	SQ1S	701	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1394	SQ1S	698	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1432	SQ1E	601	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1434	SQ1 & E	717	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1462	SQ1, sieved material	726	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1478	SQ1 & E	731	Re-used sherd	Pottery	18 th Dynasty

Tab. 24 *continued* Re-used sherds from SAV1 West from the 18th Dynasty

Number of Object	Area Location	SU	Type of Object	Material	Date of Object
SAV1W 1740	SQ1S, S of Feature 143	903	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1750	SQ1SE-E & 1SE	912	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1784	SQ1SE	921	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1785	SQ1SE	921	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1788	SQ1SE	924	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1805	SQ1SE	937	Re-used sherd	Pottery	early 18 th Dynasty
SAV1W 1810	SQ1SE	943	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1811	SQ1SE & SQ1SE-E	947	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1820	SQ1S	963	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1829	SQ1S	964	Re-used sherd	Pottery	early 18 th Dynasty
SAV1W 1830	SQ1S	962	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1832	SQ1SE	920	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1835	SQ1SE_E	916	Re-used sherd	Pottery	18 th Dynasty
SAV1W 1836	SQ1SE, N of SU 941	916	Re-used sherd	Pottery	early 18 th Dynasty
SAV1W 1837	SQ1S	970	Re-used sherd	Pottery	18 th Dynasty
SAV1W 0017	SQ2, 15 x 5m, surface	500	Scraper	Pottery	18 th Dynasty
SAV1W 0021	SQ1, from debris of SU 502	502	Scraper	Pottery	18 th Dynasty
SAV1W 0037	SQ1, SW-corner	501	Scraper	Pottery	18 th Dynasty
SAV1W 0205	SQ1, SE-corner, 3–5m E-W/0–5m S-N	501	Scraper	Pottery	18 th Dynasty
SAV1W 0233	SQ1, adj. to Feature 100, 3–5m E-W/0–5m N-S	501	Scraper	Pottery	18 th Dynasty
SAV1W 0234	SQ1, adj. to Feature 100, 3–5m E-W/0–5m N-S	501	Scraper	Pottery	18 th Dynasty
SAV1W 0270	SQ1, 0–1m E-W/0–2m S-W	507	Scraper	Pottery	18 th Dynasty
SAV1W 0271	SQ1, 0–1m E-W/0–2m S-W	507	Scraper	Pottery	18 th Dynasty
SAV1W 0291	SQ1, 0–3m E-W/0–5m N-S	537	Scraper	Pottery	18 th Dynasty?
SAV1W 0349	SQ1, 3–5m E-W/0–5m N-S	538	Scraper	Pottery	18 th Dynasty
SAV1W 0354	SQ1, 3–5m E-W/0–5m N-S	538	Scraper	Pottery	18 th Dynasty
SAV1W 0384	SQ1, E-W 4–5m/S-N 0–5m	507	Scraper	Pottery	18 th Dynasty
SAV1W 0410	SQ1	512	Scraper	Pottery	18 th Dynasty
SAV1W 0497	SQ1	559	Scraper	Pottery	18 th Dynasty
SAV1W 0546	SQ1, 4–5m E-W/0–5m S-N	507	Scraper	Pottery	18 th Dynasty
SAV1W 0552	SQ1, 4–5m E-W/0–5m S-N	507	Scraper	Pottery	18 th Dynasty
SAV1W 0580	SQ1	585	Scraper	Pottery	18 th Dynasty
SAV1W 0581	SQ1, E-half	507	Scraper	Pottery	18 th Dynasty
SAV1W 0584	SQ1	587	Scraper	Pottery	18 th Dynasty
SAV1W 0593	SQ2, sandy area, 0–5m from W	504	Scraper	Pottery	18 th Dynasty?
SAV1W 1507	SQ1S	639	Scraper	Pottery	18 th Dynasty
SAV1W 1508	SQ1S	641	Scraper	Pottery	18 th Dynasty
SAV1W 1510	SQ1S	657	Scraper	Pottery	18 th Dynasty
SAV1W 1512	SQ1S	668	Scraper	Pottery	18 th Dynasty
SAV1W 1514	SQ1S	668	Scraper	Pottery	18 th Dynasty
SAV1W 1515	SQ1S	674	Scraper	Pottery	18 th Dynasty
SAV1W 1516	SQ1	680	Scraper	Pottery	18 th Dynasty
SAV1W 1518	SQ1E	601	Scraper	Pottery	18 th Dynasty
SAV1W 1519	SQ1 & E	732	Scraper	Pottery	18 th Dynasty
SAV1W 1521	SQ1S	711	Scraper	Pottery	18 th Dynasty
SAV1W 1522	SQ1 & E	719	Scraper	Pottery	18 th Dynasty
SAV1W 1533	SQ1	512	Scraper	Pottery	18 th Dynasty
SAV1W 1550	SQ1SE	818	Scraper	Pottery	18 th Dynasty

Tab. 24 *continued* Re-used sherds from SAV1 West from the 18th Dynasty

Number of Object	Area Location	SU	Type of Object	Material	Date of Object
SAV1W 1551	SQ1SE	818	Scraper	Pottery	18 th Dynasty
SAV1W 1600	SQ1SE	846	Scraper	Pottery	18 th Dynasty
SAV1W 1606	SQ1SE	847	Scraper	Pottery	18 th Dynasty
SAV1W 1638	SQ1 S	852	Scraper	Pottery	18 th Dynasty
SAV1W 1639	SQ1 S	852	Scraper	Pottery	18 th Dynasty
SAV1W 1669	SQ1SE	858	Scraper	Pottery	18 th Dynasty
SAV1W 1672	SQ1SE/SQ1S	865	Scraper	Pottery	18 th Dynasty
SAV1W 0020	SQ1, from debris of SU 502	502	Token/gaming piece	Pottery	18 th Dynasty
SAV1W 0296	SQ1, 0–5m W-E/0–5 m N-S	533	Token/gaming piece	Pottery	18 th Dynasty
SAV1W 0323	SQ1	536	Token/gaming piece	Pottery	18 th Dynasty
SAV1W 0381	SQ1NW	501	Token/gaming piece	Pottery	18 th Dynasty
SAV1W 0439	SQ1, 1.8m W-E/3.9m N-S	551	Token/gaming piece	Pottery	18 th Dynasty
SAV1W 1525	SQ1, sieved material	731	Token/gaming piece	Pottery	18 th Dynasty
SAV1W 1608	SQ1SE	850	Token/gaming piece	Pottery	18 th Dynasty
SAV1W 1609	SQ1SE	850	Token/gaming piece	Pottery	18 th Dynasty
SAV1W 1637	SQ1 S	852	Token/gaming piece	Pottery	18 th Dynasty?
SAV1W 1671	SQ1SE/SQ1S	865	Token/gaming piece	Pottery	18 th Dynasty?
SAV1W 0437	SQ1	512	Weight (central perforation)	Pottery	18 th Dynasty
SAV1W 1532	SQ1SE (surface cleaning)	800	Weight (central perforation)	Pottery	18 th Dynasty
SAV1W 1642	SQ1S	852	Weight (central perforation)	Pottery	mid-18 th Dynasty
SAV1W 1675	SQ1SE/SQ1S	865	Weight (intended perforation)	Pottery	18 th Dynasty
SAV1W 1678	SQ1SE/SQ1S	862	Weight (intended perforation)	Pottery	mid-18 th Dynasty
SAV1W 1833	SQ1S	953	Weight (central perforation)	Pottery	18 th Dynasty

Tab. 24 *continued* Re-used sherds from SAV1 West from the 18th Dynasty

SAV1W 1601 is a rare re-used body sherd of a Marl clay vessel (Marl B, Fig. 116). SAV1W 1501 represents one of the many re-used ring bases of dishes as lids (Fig. 117). It is another example for a red-washed/slipped dish with an uncoated bottom of the ring base (see above. 4.2). Another re-used sherd is SAV1W 0494. It seems to be a polishing instrument (Pl. 106), possibly for the pottery production. It has a diameter of 35–40mm and was made from a Nile clay body sherd of a jar.

Tools

Metallic remains are rare at SAV1 West. A bronze or copper needle was found in Square 1S, SU 618 (SAV1W 0965, Fig. 66). It is a long thin needle with a greenish surface and a rounded section; it tapers into a point (length 119mm; diam. 4.5mm). The top of the object is lightly perforated (diam. 1.5mm). Such needles are well known from New Kingdom settlements in Egypt, e.g. Amarna.⁸⁷¹

Further tools were manufactured from bone and find parallels at New Kingdom towns in Egypt such as Amarna, Gurob and Memphis.⁸⁷² Two very nicely worked piercing tools were found at SAV1 West (SAV1W 1520 and SAV1W 1769, Fig. 67). SAV1W 1520 is shaped to be used as a piercing tool (64 × 6 × 14mm). SAV1W 1769 was found in SU 909 within Feature 151 (see below, Chapter 4.5). It is a small bone sherd which was worked to a polished point at one end (49 × 3 × 7mm). All in all, the scarcity of

⁸⁷¹ Kemp and Stevens 2010b, 346–348, fig. 20.3.

⁸⁷² Kemp and Stevens 2010b, 449 with references.

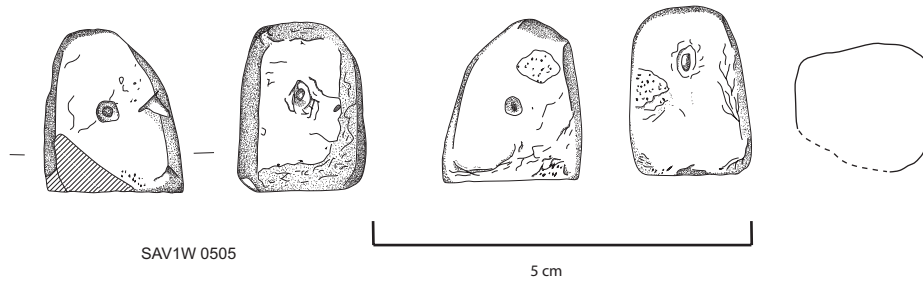


Fig. 118 SAV1W 0505, gaming piece

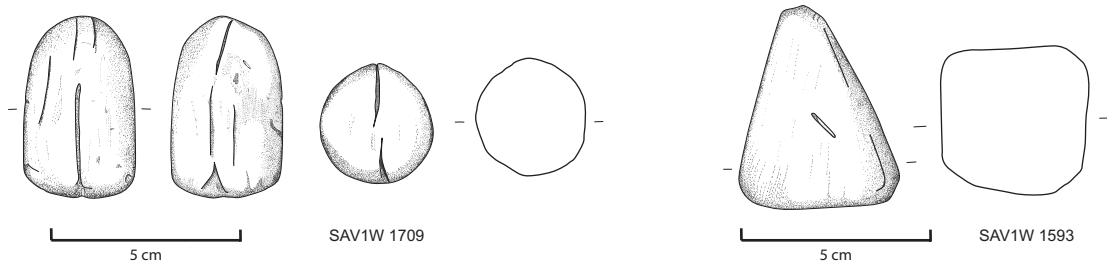


Fig. 119 SAV1W 1709, gaming piece/stone object

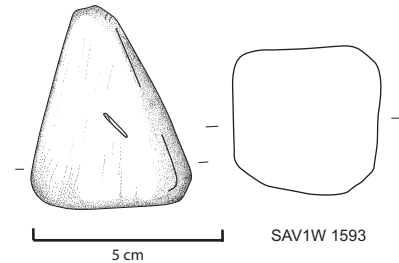


Fig. 120 SAV1W 1593, stone object

bone tools from the New Kingdom town of Sai is remarkable and contrasts, for example, with Amarna, where more than 160 pieces were recovered, possibly related to the textile production.⁸⁷³ The function of the two bone tools from SAV1 West must remain open.⁸⁷⁴

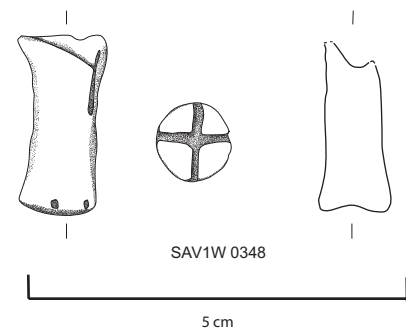
Tokens/gaming pieces

Altogether, 41 gaming pieces were registered from SAV1 West which are mostly re-used pottery sherds (see above, Tab. 24). Some objects in other materials and of various shapes were tentatively interpreted as tokens/gaming pieces, but the function remains unclear in most cases.

SAV1W 0505 (Fig. 118) is a small clay object with a flat, nearly quadractic surface and a half-oval-shaped/arched body. Each of its four sides was equipped with a small hole. One pair of opposite lying holes are connected with each other and represent a perforation; the other pair is not connected. This object might have been used as a gaming piece or as a bead/pendant.

SAV1W 1709 (Fig. 119) is a conical fragment in sandstone with a roughly flat base and rounded tip. Two lines were incised through the length of it, but do not quite match up at either end. A further shorter dash appears next to each line. The object is quite large for a gaming piece and maybe SAV1W 1709 was used as a small stopper.

Another unclear sandstone piece is SAV1W 1593 (Fig. 120). It is shaped as a pyramid and all sides are flat and smooth. The function of the object could be that of a gaming piece, but perhaps a polishing stone or even a figurine are more likely.

Fig. 121 SAV1W 0348, clay object/
gaming piece (medieval)

⁸⁷³ Kemp and Vogelsang-Eastwood 2001, 358–373; Kemp and Stevens 2010b, 449.

⁸⁷⁴ For bone tools from Egypt a use within the textile production, net-making and leatherworking was suggested, see Kemp and Stevens 2010b, 449.

Some of the gaming pieces from SAV1 West are also of Post-New Kingdom date as can be illustrated with SAV1W 0348 (Fig. 121). This medieval piece is a cylindrical object at which incised lines at the upper part depict a cross. The lower part seems to be broken off; maybe this object was attached to something or it was used as gaming piece.

4.4 STONE TOOLS

by *Julia Budka*

Unsurprisingly, the group of tools from the New Kingdom town of Sai is mostly represented by stone tools. As mentioned above, tools made of other materials like metal, wood and bone are rare.⁸⁷⁵ The large group of stone tools from SAV1 East and SAV1 West comprises weights, querns, grinders, hammer stones, pounders and pestles, polishers and burnishers, a small number of possible whetstones and finally miscellaneous and/or multifunctional stone tools.⁸⁷⁶ The following is an overview of the most common types.

4.4.1 Lithics

A total of 42 lithics were recorded during AcrossBorders excavations in the New Kingdom town (15 from SAV1 East, 27 from SAV1 West, Tab. 25). Predictably, the most common tool types are those useable in domestic contexts like scrapers and blades.⁸⁷⁷ Some unidentified tools and sickles are notable as well. The raw material used is mainly flint, but also chert/radiolarith.⁸⁷⁸ Small flakes attest both at SAV1 East and SAV1 West that also other material like agate was used. Three small flakes of agate were found associated with Feature 151 at SAV1 West and can safely be dated to the mid-18th Dynasty (SAV1W 1839, Fig. 122). SAV1W 1493 illustrates that besides agate also quartz and silicified wood were used.⁸⁷⁹

The material from SAV1 East (Figs. 123–125) comprises five pieces from 18th Dynasty contexts which are closely datable (see Chapter 3.2.4) – SAV1E 1527 and SAV1E 2348 from Feature 15 and SAV1E 2875, SAV1E 2876 and SAV1E 2877 from the small silo, Feature 75. The three blades from Feature 75 are in particular interesting because they can be dated to the early 18th Dynasty.

SAV1E 2875 is a small flint flake (43 × 4 × 21mm), lightly worked into a blade along one long edge. The material is 10YR8/2, very pale brown (Pl. 107). Slightly darker flint was used for SAV1E 2876, which is 5YR5/2, pale brown. This piece is also a small flint flake, lightly worked into a blade along both long edges. One short edge is preserved and flat, so it is likely that the point is missing (Pl. 108). The third lithic artefact found in Feature 75 is SAV1E 2877 with a middle brown to pale brown colour (5YR5/2). This small flint flake has also been lightly worked into a blade along both long edges. One long side is curved and the end surface is notched (Fig. 123).

A sickle blade (SAV1E 1527) from Feature 15 falls into Tillmann's Type A,⁸⁸⁰ and can be dated to the mid-18th Dynasty because of its find context. Implements made of flint stayed into use at least until the New Kingdom in Egypt and this also holds true for Egyptian sites in Nubia.

Significant within the material from SAV1 East is also the blade SAV1E 0357 (Fig. 124). It is a flat rectangular-shaped stone flake (51 × 17 × 6mm) of high-quality work, probably completely preserved. Three edges are chipped, one edge is very sharp. The characteristic 'caramel' colour of the flint makes

⁸⁷⁵ For the general reasons why Egypt produced stone tools well into the Late Bronze Age (scarcity of copper and iron in Egypt), see Tillmann 2006; Tillmann 2007.

⁸⁷⁶ Cf. Giddy 1999, pls. 39–50; Prell 2011, *passim*.

⁸⁷⁷ Tillmann 2007, 313.

⁸⁷⁸ Cajetan Geiger kindly provided the identification of the material.

⁸⁷⁹ This compares well with Amarna, where flint, chert, agate and silicified wood were worked into blades as well, see Kemp and Stevens 2010b, 445–447.

⁸⁸⁰ Tillmann 2007, 69–72.

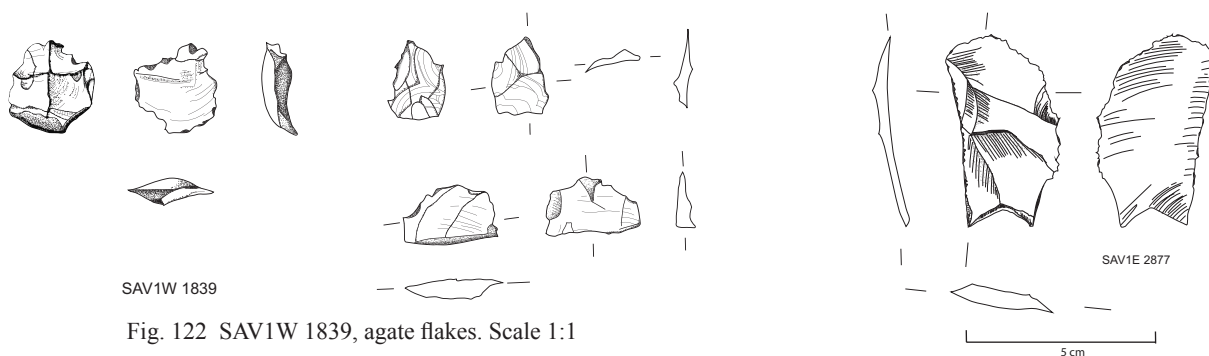


Fig. 122 SAV1W 1839, agate flakes. Scale 1:1

Fig. 123 SAV1E 2877, flint from Feature 75 at SAV1 East

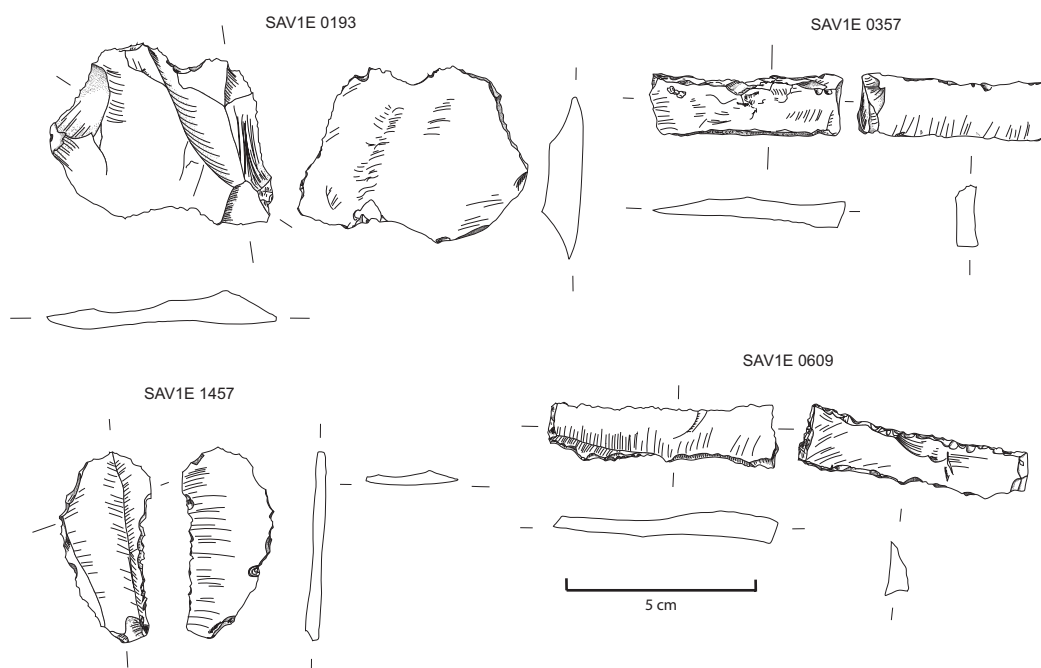


Fig. 124 Lithics from SAV1E

it likely that SAV1E 0357 was imported to Upper Nubia (Pl. 109). Such caramel-coloured flints are well-known from Amarna,⁸⁸¹ although it is unknown whether these represent local material.⁸⁸² Imported high-quality flints, presumably from Thebes, had already reached Nubia during the Kerma period.⁸⁸³

One possible scraper is attested from SAV1 East. SAV1E 2119 is semicircular in shape ($49 \times 48 \times 7$ mm). Its cortex is medium brown, the inner colour is 5YR5/2 (pale brown). This tool has an errated edge along the circular end of the stone and was used as a blade or perhaps rather as a scraper.

Except for three pieces from SAV1 West which come from stratigraphical units close to the surface including much mixed material (SAV1W 0067, SAV1W 0080, SAV1W 0154), the dating to the 18th Dynasty seems straightforward for the other pieces listed in Table 25 (see Figs. 126–128). However, four pieces most probably represent Palaeolithic artefacts: SAV1W 0911, SAV1W 1154, SAV1W 1407 and SAV1W 1449.

⁸⁸¹ See Stevens 2012, 235–243.

⁸⁸² For Amarna as one of the significant New Kingdom flint production sites, see Tillmann 2007, 155 with references.

⁸⁸³ Bonnet 1990, 138, fig. 119; see Tillmann 2007, 154–155, fig. 136.

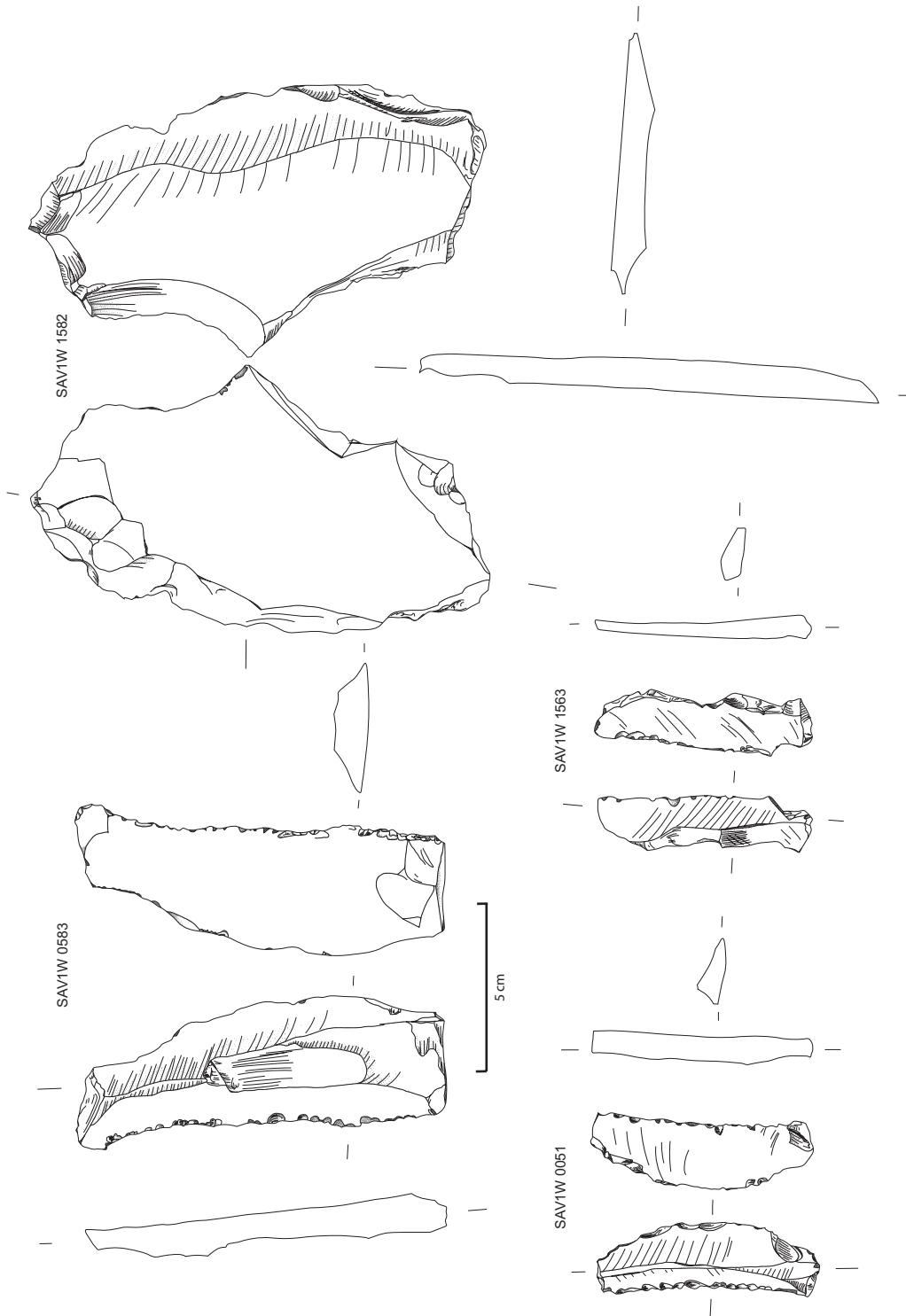


Fig. 125 Lithics from SAV1W

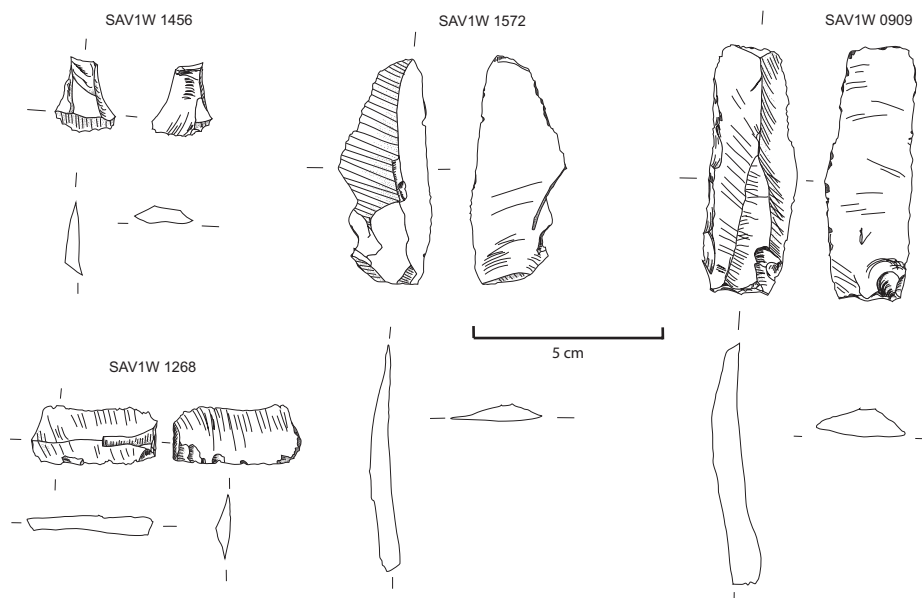


Fig. 126 Lithics from SAV1W

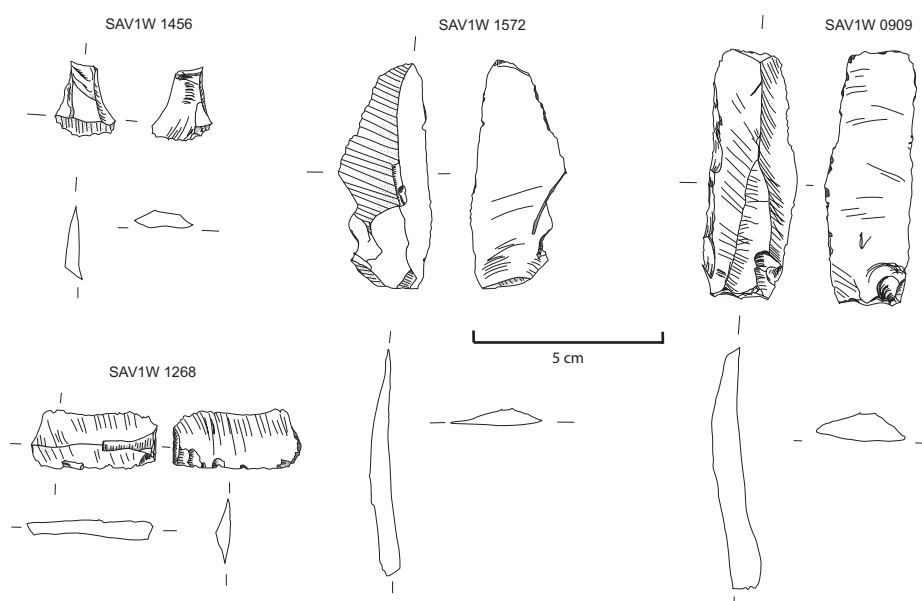


Fig. 127 Lithics from SAV1W

SAV1W 1449 is especially interesting since it was found in the upper filling of Feature 115, SU 731 (Fig. 128). This piece is a fragment of a flint blade, well weathered, thus suggesting that it might be Palaeolithic. Although Palaeolithic artefacts appear occasionally within the New Kingdom town, probably being part of the pebbles of the natural ground, SAV1W 1449 also raises the question whether some of these objects were also intentionally re-used/collected.⁸⁸⁴

Among the 18th Dynasty pieces of lithics from SAV1 West, SAV1W 0051 represents a sickle (Fig. 125). This flake of a flint pebble (10YR4/2 dark greyish brown) was worked into a sickle along

⁸⁸⁴ A prehistoric flint was also found within an 18th Dynasty context at Amarna, see Stevens 2012, 240–243, no. 39877.

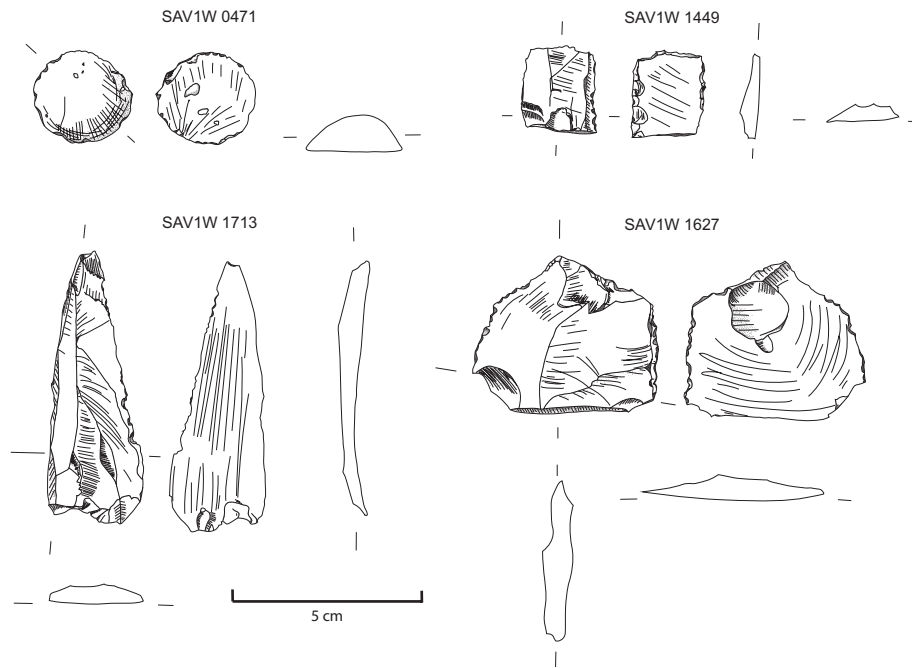


Fig. 128 Lithics from SAV1W

both long edges ($66 \times 7 \times 20\text{mm}$). Three pieces are illustrative for the use of the raw material chert/radiolarith⁸⁸⁵ (SAV1W 0471, 0583 and 1582). SAV1W 0471 is 5YR4/4 moderate brown in colour (Fig. 128). This small semispherical-shaped stone object with a diameter of 24–26mm (and a height of 10mm) has an edge with several sharp spallings and was probably used as a scraper. Its complete surface is very smooth.

The majority of blades from SAV1 West was made of flint and comprise scrapers and blades (Figs. 126–128). SAV1W 1563 is a small flint blade ($65 \times 6 \times 15\text{mm}$), with shallow serration marks on one side (Fig. 125). Its raw material is quite common for the silices used at SAV1 West, being 10YR6/2 pale yellowish brown. SAV1W 1627 (Fig. 128) was probably used as a scraper. It is a small irregularly shaped flake of flint ($48 \times 8 \times 42\text{mm}$). There are signs of working on two edges. The piece ranges in colour from 10YR8/2 very pale orange to 10YR6/2 pale yellowish brown. Another blade from SAV1 West is SAV1W 1268. It is a small fragment of a flint blade with one serrated edge of 5YR5/2 pale brown colour (Fig. 126). SAV1W 1456 is made of a very distinctive orange flint (Fig. 126). The piece is a small fragment of a flint flake ($20 \times 16 \times 5\text{mm}$) which may have been used as a tool and has a serrated edge. Its raw material suggests that it was possibly imported (cf. SAV1E 0357).

A very small number of possible sickles or sickle blades were found at SAV1 West like SAV1W 0051 (Tab. 25). Another example is SAV1W 1713 (Fig. 128) of light brown to pale yellowish brown colour (10YR 6/2). It is a triangular flake of a flint pebble, worked into a blade or sickle along one long side. All in all, the considerably small number of sickles from the town area of Sai may be interpreted as a possible indication that grain harvest was not within the main activities of the occupants of New Kingdom Sai, but that grains were also imported to the site (cf. Chapter 5.1).⁸⁸⁶

To conclude, the small assemblage of lithics from SAV1 East and SAV1 West seem to illustrate that flint tools were primarily produced according to the local demand from locally/regionally available chert and flint pebbles/gravels.⁸⁸⁷ Based on the finds from Feature 75, this seems to hold true already from the

⁸⁸⁵ Stone identification by Cajetan Geiger.

⁸⁸⁶ Cf. Tillmann 2007, 181. See also the more recent discussion by Jeuthe 2018, especially 290.

⁸⁸⁷ For local productions from “Schotterflint”, see Tillmann 2007, 159.

early 18th Dynasty onwards. Only a very small quantity of the flint objects was imported from Egypt, most likely from Thebes and/or Amarna.⁸⁸⁸

Number of Object	Area, Location	SU	Feature	Type of Object	Material
SAV1E 0357	SQ3, 4.50 m W-E/0.5 m N-S	005		Lithic, tool	Stone (flint)
SAV1E 0609	SQ4C	1315		Lithic, blade	Stone (flint)
SAV1E 0654	SQ1B, 1.5m W-E/5m N-S	19	29	Lithic, tool	Stone (gneiss?)
SAV1E 0793	SQ4C	381		Lithic, blade	Stone (flint)
SAV1E 1475	SQ4, 4.0–5.7m W-E/4.5–6.5m N-S	105		Lithic, blade?	Stone (flint)
SAV1E 1527	SQ2; 0.5–1.8 N-S; W section	–	15	Lithic, sickle blade	stone (flint)
SAV1E 1962	SQ4, 1–2.7 W-E/3.7–5m N-S	223		Lithic, blade	Stone (flint)
SAV1E 2119	SQ4+4A, 0.5–3.5m W-E/7.5–10.3m N-S	227		Lithic, scraper	Stone (flint)
SAV1E 2348	SQ2	1318	15	Lithic, tool	Stone (flint)
SAV1E 2875	SQ4	462	75	Lithic, blade	Stone (flint)
SAV1E 2876	SQ4	461	75	Lithic, blade	Stone (flint)
SAV1E 2877	SQ4	461	75	Lithic, blade	Stone (flint)
SAV1E 2890	SQ4C	449		Lithic, blade	Stone (schist)
SAV1E 2895	SQ4C	473		Lithic, blade	Stone (quartz)
SAV1E 2896	SQ4C	473		Lithic, blade	Stone (flint)
SAV1W 0051	SQ1SE	840		Lithic, sickle	Stone (flint)
SAV1W 0067	SQ1	501		Lithic, blade	Stone (flint)
SAV1W 0080	SQ1	500		Lithic, blade	Stone (chert)
SAV1W 0154	SQ2, N-edge, 6m W	501		Lithic, blade	Stone (flint)
SAV1W 0471	SQ1 NW, 1m N-S/1.2m E-W	552		Lithic, scraper	Stone (chert)
SAV1W 0583	SQ1, 7.1m S-N/2.6m E-W	567		Lithic, blade	Stone (chert)
SAV1W 0909	SQ1S	612		Lithic, blade	Stone (flint)
SAV1W 0911	SQ1S	612		Lithic, scraper	Stone (chert)
SAV1W 1154	SQ1	664		Lithic, blade	Stone (quartz)
SAV1W 1268	SQ1S	706		Lithic, blade	Stone (flint)
SAV1W 1298	SQ1S	718		Lithic, blade	Stone (flint)
SAV1W 1407	SQ1 & E	722		Lithic, blade	Stone (chert/pebble)
SAV1W 1428	SQ1S	723		Lithic, blade	Stone (flint)
SAV1W 1449	SQ1, sieved material	731	115	Lithic, blade	Stone (flint)
SAV1W 1493	SQ1, sieved material	731	115	Lithic, flakes	Flint, Agate, Quartz, Silicified Wood
SAV1W 1453	SQ1S, sieved material	710		Lithic, unclear	Stone (flint)
SAV1W 1456	SQ1S, sieved material	710		Lithic, tool?	Stone (flint)
SAV1W 1545	SQ1SE	812		Lithic, blade?	Stone (flint)
SAV1W 1563	SQ1SE	831		Lithic, blade	Stone (flint)
SAV1W 1572	SQ1SE	834		Lithic, blade	Stone (flint)
SAV1W 1582	SQ1SE	834		Lithic, scraper?	Stone (chert)
SAV1W 1627	SQ1SE	855		Lithic, scraper?	Stone (flint)
SAV1W 1713	SQ1S/1SE	880		Lithic, blade/sickle?	Stone (flint)
SAV1W 1755	SQ1SE_E	916		Lithic, scraper	Stone (flint)
SAV1W 1806	SQ1	931		Lithic, blade?	Stone (flint)
SAV1W 1814	SQ1SE & SQ1SE_E	945		Lithic, blade	Stone (flint)
SAV1W 1819	SQ1S	977		Lithic, blade	Stone (flint)

Tab. 25 Lithics from SAV1 East and SAV1 West

⁸⁸⁸ Cf. Tillmann 2007, 151–163 for the flint sources in ancient Egypt.

	01	02	03	04	05	06	Σ
SAV1 W, SQ1	69	10	34	80	56	4	253
SAV1 W, SQ1/1S	4	0	4	0	2	0	10
SAV1 W, SQ1E	13	1	3	9	6	0	32
SAV1 W, SQ1&E	11	0	2	1	1	1	16
SAV1 W, SQ1NW	3	0	0	2	6	0	11
SAV1 W, SQ1W	15	2	7	9	5	0	38
SAV1 W, SQ1W&NW	1	0	0	1	4	0	6
SAV1 W, SQ1S	117	9	76	102	55	14	373
SAV1 W, SQ1S/1SE	0	2	0	0	0	2	4
SAV1 W, SQ1SE	22	2	3	15	1	20	63
SAV1 W, SQ1SE_E	2	0	0	2	0	1	5
SAV1 W, SQ1SE_E/1SE	0	0	0	2	0	1	3
SAV1 W, SQ2	5	5	9	8	8	2	37
	262	31	138	231	144	45	851

Horizontally main types – 01 = pounders, 02 = hammers, 03 = whetstones, 04 = grindstones, 05 = hand mills, 06 = other

Tab. 26 Distribution of macrolithics in sector SAV1 West

4.4.2 Macrolithics⁸⁸⁹

Introduction

In general, a considerable amount of macrolithics was unearthed in all sectors of the New Kingdom town (SAV1 North, SAV1 East and SAV1 West).⁸⁹⁰ The following is a summary of the stone tools discovered between 2013 and 2017 in SAV1 West and SAV1 East. All in all, the variety of tools and material they consist of is limited. Mainly pounders and hammers, grindstones and hand mills as well as whet- and abrasive stones were found. As most common materials natural quartz boulders, sandstone and quartzite (silicified sandstone) can be noted. Many pieces show traces of burning on the surface. The range of forms and materials from both sectors excavated by the AcrossBorders project, SAV1 East and SAV1 West, is comparable, although more macrolithics were unearthed in the eastern sector (a total of 1,421 objects). The classification of the macrolithics from the New Kingdom town of Sai was established by Silvia Prell in 2015. All in all, the total number of macrolithics registered and recorded in the database is 2,272.⁸⁹¹ Thus, this category of objects represents 47% of all registered finds.

Macrolithics from SAV1 West

The distribution of the 851 registered macrolithics from SAV1 West shows a clear concentration in Square 1 and Square 1S (Tab. 26). Since these squares are the areas where the domestic architecture was unearthed, this comes as no surprise. Square 1S yielded with 373 stone objects the majority and 43% of all macrolithics from SAV1 West.

⁸⁸⁹ This chapter is based on a written report by Silvia Prell, who studied the macrolithics from SAV1 East and SAV1 West during the 2015 field season (January 1–18, 2015), Prell 2015; the data were updated by means of the object database for the material excavated in 2016 and 2017.

⁸⁹⁰ For SAV1 North, see Budka 2017j, 166–167. One pounder, SAV1NE 0010, was found in sector SAV1 Northeast.

⁸⁹¹ Because of the large amount of stone tools, the recording system was slightly adapted in 2016; only selected macrolithics were registered, others were just counted and noted in the field notebooks. These undiagnostic pieces comprise several dozen per sector and per season; they are not considered within this overview.

Pounders and hammers

Altogether 262 pounders derive from sector SAV1 West. These tools often consist of simple natural boulders, used as found (Pl. 110).⁸⁹² The outline and sections are often naturally oval, round, planoconvex or bar-shaped. The surface of the objects is mainly naturally even and smooth, a factor which is important for the good handling. Concentrations of percussion marks show the use as a tool. According to the shape of the boulder, they can be arranged circumferentially, especially if the pounder was used over a longer period. Very well worn pieces have only small remains of the original surface of the boulder left. But also examples exist which were barely used and show only few and small concentrations of percussion marks.

A few examples with a naturally very regular and smooth surface show faint scratches possibly pointing to a combined use of the object as pounder and polisher.⁸⁹³ About a quarter of them consist from quartz boulders (white, yellow, red or brown outside, whitish inside), but also siliceous shale (greenish), sandstone (white, yellow, red), quartzite, flint and silicified wood are known materials. SAV1W 0254 shows clear traces of red pigment, most likely red ochre, showing its function as a crushing tool connected to paint production (Pl. 111).

31 intentionally shaped hammers are known from SAV1 West; most of them consist of quartzite (white, yellow, red). The forms are either spherical, cuboid, planoconvex or wheel-shaped (Pl. 112). The relatively small amount of intentionally shaped hammers is not astonishing considering the wide range of natural boulders present everywhere on site and most suitable for the task.

Whetstones/abrasive stones

138 whetstones, mainly made from sandstone (white, yellow, red), were registered from SAV1 West (Pl. 113). Most of them show grooves.⁸⁹⁴ The groove of one object (SAV1W 0637) shows a v-shaped section and most likely was used for sharpening metal tools, although no traces of abraded metal could be found on the surface.⁸⁹⁵ The other specimen show grooves with u-shaped section and are most likely connected either to bone⁸⁹⁶ or wood working. Some whetstones are quite big and might have had an (additional) function as abrasive stone. However, especially concave surfaces point to a use as whetstone. Due to the relative softness of the used sandstone, well-used pieces might be very much reduced in their size. To be noted is an object used as whet-/abrasive stone which primarily had another function (SAV1W 0256). It was originally shaped to be a pivot stone, but obviously broke during the process and was never used as such. The completely abraded break shows the secondary use as a tool (Pl. 114).⁸⁹⁷ One object worth mentioning consists of a piece of phyllite.⁸⁹⁸ SAV1W 0467 (Pl. 115) is a whetstone from a long, flat slab and is broken on one side. Its edges show clear traces of abrasion.

Grindstones and hand mills

The 231 grindstones excavated from sector SAV1 West are mainly made from quartzite (red, yellow, white, pinkish), showing a medium to coarse graininess (Pl. 116); only a few pieces consist of sandstone. No complete object has been recovered. But because of the distinct planoconvex section most of the grindstones are showing, even small pieces of an edge can be assigned to the particular function. The outline is often oval, the grinding surface can be flat or concave.⁸⁹⁹ The concave grinding surfaces show the long use of the object, where the grinding surface is already very much worn off. Several objects show clear traces of pecking on the grinding surface and are covered with percussion marks from wrinkling the surface after it

⁸⁹² Cf. Prell 2011, 32–33.

⁸⁹³ Cf. Prell 2011, 34.

⁸⁹⁴ Cf. Kemp and Stevens 2010b, 436–441 and Prell 2011, 50–53.

⁸⁹⁵ For possible metal traces on the surface, cf. grindstone SAV1W 0289.

⁸⁹⁶ Prell 2011, 53, fig. 15.

⁸⁹⁷ Also broken grindstones were re-used as abrasive stone or combined tool, cf. e.g. SAV1W 0062, SAV1W 0418 or SAV1W 0490. Pieces of stone vessels with abraded breaks were also secondarily used as abrasive stone, e.g. SAV1W 0099.

⁸⁹⁸ For other tools made from phyllite, cf. Prell 2011, 65–66.

⁸⁹⁹ Similar forms are known from Amarna, Kemp and Stevens 2010b, 412–420, and Qantir, Prell 2011, 72–77.

got too smooth and even. The pounders might have been used amongst other things for this purpose. Some grindstones show a mortar-like layout (Pl. 117). Differing from the concave type, this form is desired and the objects are shaped in this specific way from the very beginning. Considering the possible function of the grindstones, other than for grinding wheat, a flat grindstone (SAV1W 0594) and a mortar-like grindstone show clear traces of red pigment on the grinding surface (SAV1W 0606, Pl. 117). The mortar-like forms are small in number;⁹⁰⁰ a clear connection to gold production from quartz could not be established.⁹⁰¹ Several objects show, however, small golden particles on the surface,⁹⁰² but these particles turned out to be attached to all kinds of objects and were found as well in botanical samples or blown inside a corner of a room at SAV1 West. Therefore, the presence of those particles does not implicate the function and is still to be determined, if the particles are actually gold or maybe pyrite or mica. Nevertheless, similar forms are known to be used for grinding the quartz to powder,⁹⁰³ and the lack of actual evidence does not mean that the objects were not used for this purpose. An archaeological experiment connected to glass production in Qantir-Piramesse showed very well that the grindstones can be used to grind quartz to a fine powder.⁹⁰⁴ Anvil slabs,⁹⁰⁵ used for crushing the quartz, could not be established in the macrolithics from the area, even though the mortar-like forms might have been used for this purpose. Maybe a few slab-shaped objects, e.g. SAV1W 0281, SAV1W 0660 and SAV1W 0667 were used for this procedure. The latter grindstone has an oval shape (Pl. 118); its grinding surface on the front is smooth up to the surviving part of the edge. A couple of percussion marks, maybe from wrinkling the surface, are notable. SAV1W 0667 can be reconstructed to the common form of grindstones with a planoconvex cross-section.

To be noted is also a broken grindstone, which was secondarily shaped like a weight/anchor, showing an incomplete drilling on one side (Pl. 119). Obviously, the re-use of SAV1W 0289 was never finished. Such a secondary use of several objects from the New Kingdom town reveals that the stone material was relatively precious and broken pieces were re-used for different purposes.⁹⁰⁶ Whether this re-use happened immediately or at a later stage/in a Post-New Kingdom period, must remain open for a multi-period site like SAV1 West. Some slab-like specimen, made from good quality quartzite with fine graininess, might originally be pieces of architecture, re-used as grindstone or hand mill. This is exemplified by SAV1W 0104 (Pl. 120), a double-sided grindstone which is broken on three sides. Judging from the remaining edge, the outline and sections can be reconstructed as rectangular; on the front and back a flat surface, which is smooth and velvety up to the edge, is notable. These surfaces and the good stone quality suggest that it once was a piece of architecture. Again, one has to speculate whether this re-use happened during the New Kingdom or in later times.

The 144 hand mills from SAV1 West are also mainly manufactured from quartzite, even if some pieces consisting of sandstone are known (Pl. 121). The outline is often oval as well, the grinding surface can be flat, convex or concave, according to the wear.⁹⁰⁷ Sections are also mainly planoconvex. They come in different sizes and might be quite big. The differentiation to grindstones can be made by the nature of the surface treatment of the back: the convex back of hand mills is always smoothed, at least at the raised parts, to facilitate the grip. Several pieces are very worn down and only a few centimetres thick.

Other

The group 'other' comprises worked stones of unclear character, possibly multi-functional tools, polishing stones and pestles. SAV1W 0553 is a circular-shaped stone with a central perforation, probably

⁹⁰⁰ For the form, cf. Kemp and Stevens 2010b, 420–421.

⁹⁰¹ Neither were bigger pestles found, known to have been used for the gold production, see Klemm and Klemm 2013, 422, fig. 6.79.

⁹⁰² Cf. Klemm and Klemm 2013, 1–2 with fig. 1.1.

⁹⁰³ Cf. Klemm and Klemm 2013, 9 with fig. 1.7.

⁹⁰⁴ Prell 2011, 26, 78–79.

⁹⁰⁵ Cf. Klemm and Klemm 2013, 11 with fig. 1.9.

⁹⁰⁶ For the re-use of objects originally being no tool, cf. Prell 2011, 48.

⁹⁰⁷ For forms, cf. Kemp and Stevens 2010b, 423–432.

used as a small-sized weight (Fig. 129). Some large stone weights also derive from sector SAV1 West. According to the shape, some of them might as well be small anchors (e.g. SAV1W 0071) or tethering stones (SAV1W 1581). SAV1W 1581 (Pl. 122) is a large fragment of quartzite, broken at one end and rounded on the other. Perhaps it was used as a tethering stone for an animal. Since it derives from the filling of a Post-New Kingdom pit, its dating remains unclear. Some naturally very regular boulders, showing a smooth surface, were used as polishing stones, according to faint scratches on the surface.⁹⁰⁸ In addition, some schist stones were also used as polishing stones (e.g. SAV1W 0492). In total, 28 pieces of polishing stones were registered from SAV1 West. A few pieces of small mortars were found as well. Related to the hammers discussed above are some pestles of small size which might have been used to crush pigments on palettes.⁹⁰⁹

One very peculiar stone object is SAV1W 1184 (Fig. 130).⁹¹⁰ This small worked stone of unknown function is naturally shaped like an hour glass. Numerous small linear incisions are present on the surface, attesting that it was really worked. Maybe this object is one of the evidence for ‘material entanglement’ on Sai – in Nubian cultures, natural stones were often collected and used in various contexts, especially within temples.⁹¹¹ Although the date of SAV1W 1184 is unclear, it might, therefore, represent Nubian influence within the Egyptian New Kingdom town. However, the use of natural stones, primarily as votives, is also attested in Egypt from Early Dynastic times onwards⁹¹² and in Egyptian contexts in Nubia. At Mirgissa several natural stones, maybe associated with the female body, were found in the sanctuary of Hathor and provide New Kingdom parallels from Nubia for our Sai example.⁹¹³ Similar objects are also reported from Ramesside Deir el-Medine, where natural pebbles and stones were partly painted to represent female figurines and some animals.⁹¹⁴

Macrolithics from SAV1 East

The distribution of the 1421 registered macrolithics from SAV1 East shows a clear concentration in the southern part of the sector, Squares 3, 4 and 4A (Tab. 27). These squares are the areas where most of the mud brick architecture and domestic remains other than Building A were unearthed. It seems, therefore, safe to assume that the stone objects are at least partly connected with household activities of the earliest building phase at SAV1 East. Square 4 yielded with 582 stone objects a total of 41% of all macrolithics from SAV1 East.

Forms and materials of the stone tools from SAV1 East are similar to objects deriving from SAV1 West and only a few special pieces will be mentioned here. An object made from quartzite (fine graininess) bearing three grooves on the front (SAV1E 1840, Pl. 123) is noteworthy. The general layout of this

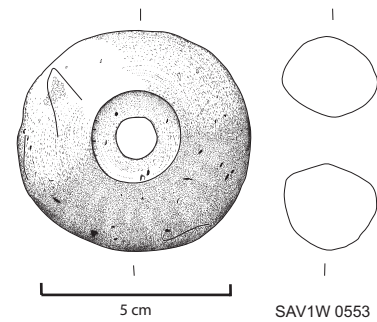


Fig. 129 SAV1W 0553, stone weight

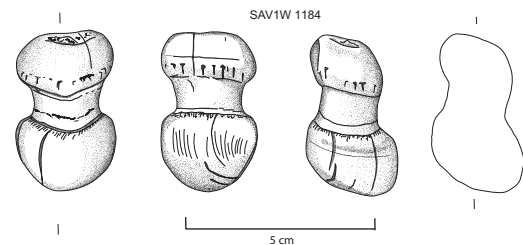


Fig. 130 SAV1W 1184, stone artefact

⁹⁰⁸ Prell 2011, 56–61.

⁹⁰⁹ Cf. a nice assemblage from SAV1 North: Budka 2017j, 162, fig. 89.

⁹¹⁰ See Griffin and Gundlach 2015b.

⁹¹¹ See Wildung 2016 with references.

⁹¹² Wildung 2016, 468 with references.

⁹¹³ Karlin 1970, 328–330, especially the top most examples on fig. 28.

⁹¹⁴ See Keimer 1940. The object most closely comparable to the Sai find (although much more elaborate and painted) is Keimer's no. 3, a female figure, see Keimer 1940, 7–9, fig. 3 and pl. VII.

	01	02	03	04	05	06	Σ
SAV1 E, SQ1	13	8	1	22	1	0	45
SAV1 E, SQ2	9	0	4	14	6	3	36
SAV1 E, SQ3	71	3	14	105	13	3	209
SAV1 E, SQ4	180	6	113	200	64	19	582
SAV1 E, SQ1/2	0	1	0	1	0	0	2
SAV1 E, SQ1A	1	3	0	5	0	0	9
SAV1 E, SQ1B	29	3	2	79	6	1	120
SAV1 E, SQ1A/2B	4	3	0	2	0	0	9
SAV1 E, SQ2A	2	0	0	2	0	0	4
SAV1 E, SQ 2B	13	13	0	18	0	1	45
SAV1 E, SQ3-4	2	0	1	2	1	0	6
SAV1 E, SQ4+2	2	0	0	0	0	0	2
SAV1 E, SQ4/4B	2	0	0	0	0	0	2
SAV1 E, SQ4+4A	67	1	21	39	29	4	161
SAV1 E, SQ4A	39	3	13	27	26	5	113
SAV1 E, SQ4B	9	1	2	5	3	1	21
SAV1 E, SQ4C	4	0	2	10	1	5	22
SAV1 E, SQ4C/4D	1	0	0	0	0	0	1
SAV1 E, SQ4D	6	2	2	4	1	7	22
SAV1 E, SQ4A+2A	4	1	2	3	0	0	10
	458	48	177	538	151	49	1421

Horizontally main types – 01 = pounders, 02 = hammers, 03 = whetstones, 04 = grindstones, 05 = hand mills, 06 = other

Tab. 27 Distribution of macrolithics in sector SAV1 East

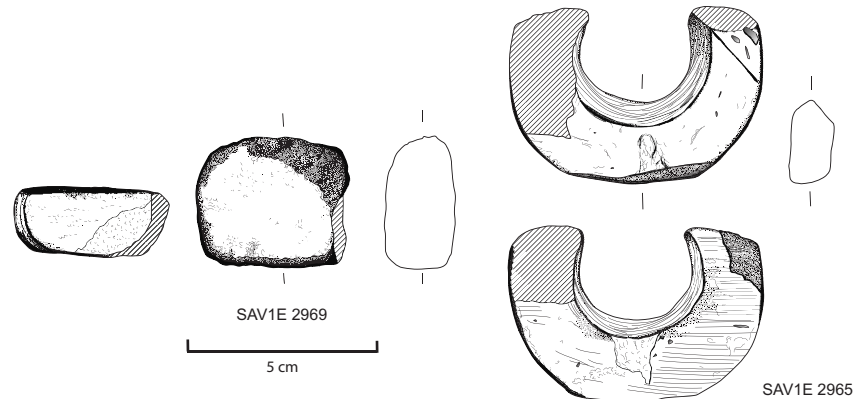


Fig. 131 SAV1E 2969 and SAV1E 2965, stone tools

implement can be compared to the tools used for polishing bone pins in Qantir-Piramesse.⁹¹⁵ No bone tools were found at SAV1 East, but at least two examples at SAV1 West (see above, Chapter 4.3.2).

To be noted is also a small mortar made of sandstone (SAV1E 1644),⁹¹⁶ nearly complete, with traces of the crushed material still attached to the inside, which looks like quartz powder (Pl. 124).

Although the majority of the stone tools at SAV1 East were made of quartz and quartzite, some pieces of schist are also known. Remarkable is SAV1E 1499 (Pl. 125), a large flat piece of schist (172 × 54 × 16mm) which was perhaps used as a polishing stone or a pestle. Traces of red pigment are visible

⁹¹⁵ Prell 2011, 65–66.

⁹¹⁶ Cf. Prell 2011, 89–90.

on both sides of the stone. Another polishing stone is SAV1E 2969 (Fig. 131). This small fragment of sandstone is broken at one end. All preserved sides and edges are worked smoothly and flat through use in polishing. Significant within the category ‘other’ of macrolithics is also SAV1E 2965, a presumable weight from Feature 85, thus of clear mid-18th Dynasty date (Fig. 131).

4.5 SELECTED FIND ASSEMBLAGES FROM SILOS AT SAV1 WEST

by *Julia Budka*

As was described above (Chapter 3.3.3), the early building phases at SAV1 West are comparable to sector SAV1 North, in some respects also to sector SAV1 East, and comprise domestic buildings with storage installations. Three of these installations yielded important objects to characterise the object assemblage of SAV1 West during the early and mid-18th Dynasty and will be presented in the following.

4.5.1 Feature 115

The rectangular cellar within Structure C yielded several objects. While excavating Feature 115, SUs 731 and 732 were identified as its (almost completely) undisturbed fillings datable to the mid-18th Dynasty. Both SUs are very loose, fine silty filling material with a lot of ash. SU 731 was 50cm thick, SU 732 20cm thick, covering the base of the cellar. Both layers were sieved and yielded many finds, including a large number of beads. Further fillings of the cellar are in stratigraphical order from the top: SUs 726, 727, 728 and 729 (see Appendix). In the following, only the inventory from SUs 731 and 732 and selected pieces from upper levels will be discussed.

Unregistered finds from SU 731 include bones (0822/2015), molluscs fragments (0830/2015), charcoal (0823/2015), doum nuts (0830/2015), organic material (0820/2015, 0830/2015), wood (0830/2015), one schist fragment (0846/2015), chalk/plaster (2 pieces, 0830/2015) and pottery (0819/2015 and 0849/2015).

Find number 830/2015 represents the sieved material from SU 731 and included the following registered pieces: SAV1W 1436 (amulet, lotus blossom shaped, faience, Fig. 56), SAV1W 1437, SAV1W 1438, SAV1W 1439, SAV1W 1440, SAV1W 1441, SAV1W 1442, SAV1W 1443, SAV1W 1444 (various beads), SAV1W 1482, SAV1W 1483, SAV1W 1484, SAV1W 1485, SAV1W 1486, SAV1W 1487, SAV1W 1488 (7 clay stoppers), SAV1W 1491 (animal figurine, possibly a gazelle/ibex), SAV1W 1447, SAV1W 1448, SAV1W 1450, SAV1W 1489, SAV1W 1490, SAV1W 1493 (unidentified objects), SAV1W 1446, SAV1W 1494 (vessels, two pieces, one faience, one glazed ware), SAV1W 1492 (worked wood), SAV1W 1495 (seal), SAV1W 1496 (worked stone), SAV1W 1499 (lid), SAV1W 1525 (token/gaming piece), SAV1W 1445 (disc shaped object; token/gaming piece?), SAV1W 1449 (lithic blade) and SAV1W 1493 (flakes). Further registered finds are SAV1W 1418, the fragment of a faience Nun bowl, SAV1W 1478, a ceramic lid from a re-used 18th Dynasty pottery sherd, SAV1W 1427, a token/gaming piece of clay/mud as well as macrolithics: three pounders (SAV1W 1401, SAV1W 1402, SAV1W 1403) and one polishing stone (SAV1W 1404).

The small fragment of green glazed ware, SAV1W 1494, seems to be an intrusive object of Post-New Kingdom date; all other finds from SU 731 are clearly 18th Dynasty in date.

From the oldest filling of the cellar, SU 732, the following unregistered finds were documented: bones (one bag, 0841/2015, one bag, 0831/2015 and one piece, 0827/2015), one mollusc fragment (0840/2015), charcoal (0826/2015, 0831/2015, 0840/2015), organic material (0831/2015, 0840/2015), plaster (0840/2015), pottery (0825/2015 and 0839/2015) and four fragments of undecorated seals (0840/2015).

Find numbers 0831/2015 and 0840/2015 comprise finds from the sieving of the cellar filling SU 732: beads (numerous pieces, various forms, faience and stone, SAV1W 1411, SAV1W 1412, SAV1W 1413, SAV1W 1414, SAV1W 1415, SAV1W 1416, SAV1W 1417), one faience object (one fragment, original function unclear, SAV1W 1524), a snail shell used as a piece of jewellery/bead (SAV1W 1466), a seal impression (one piece, probably with the name of Thutmose III, SAV1W 1451, see above, Chapter 4.3.2) and one pounder (SAV1W 1467). Other finds from SU 732 are one small fragment of an unspecific animal

figurine (SAV1W 1465), one scraper from a re-used 18th Dynasty pot sherd (SAV1W 1519) as well as worked stones (SAV1W 1419, SAV1W 1421), the fragment of a grindstone (SAV1W 1420), one pounder (SAV1W 1399) and a whetstone (SAV1W 1400).

Find number 0848/2015 is the sieved content of the large in situ ceramic vessel 0838/2015 (see Chapter 4.2). One faience ring bead was registered (SAV1W 1406); bones (1 bag), organic material (one bag) and charcoal (one bag) remained unregistered.

All finds from SU 732 can be safely associated with the mid-18th Dynasty and are representative of a typical assemblage within one of the building units at SAV1 West like Structure C. A special find which also seems relevant for dating is seal impression SAV1W 1451 – as was mentioned above, seal impressions were only rarely found at SAV1 West, despite of sieving, and this stamped mud sealing is, therefore, exceptional for the sector. It supports a dating of the inventory of Feature 115 to the reign of Thutmose III.

Some objects are probably associated with Feature 115 and were found in the upper layers above SU 731 and 732. Remarkable among these finds is the wooden object SAV1W 1464 (Fig. 132). This nicely worked fragment of wood was perhaps used as a makeup applicator. It is long and slender with a bulbous end (5 × 6 × 74mm). Similar wooden applicators were found, for example, at Amarna.⁹¹⁷

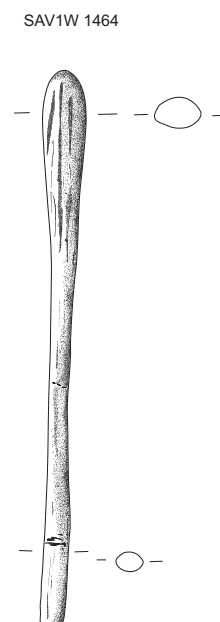


Fig. 132 SAV1W 1464, wooden makeup applicator (scale 1:1)

4.5.2 Feature 151

The oval silo within Structure E yielded several objects which are all from a closed context. Its silty filling was excavated as SU 908 (upper filling) and SU 909 (lower filling above the base). On top of SU 908 was the debris layer SU 907, which held one very interesting re-used architectural piece. SAV1W 1752 (Pl. 55) is a large fragment of a sandstone lintel, reworked at a later date for use as the base of a column. Though clearly once inscribed, only *ntr-nfr nb-(t3.wj)* now survives, in an area of 23 × 17.5cm. Remains of plaster are visible in the hieroglyphs. Based on the central location of the text, it appears that the inscription was hacked away after the column was already in place. The stone was seemingly used once more to close off the storage pit on which it was found, but this must have happened at a later stage.

The upper filling of Feature 151, SU 908, comprised the following unregistered finds: bones (071/2017), shell (one fragment, 089/2017), charcoal (068/2017), a doum nut (069/2017) and wood (067/2017). three and a half baskets of pottery (074/2017) were found, processed and dated to the Thutmose era (most likely Thutmose III). The registered finds from SU 908 are two beads (one faience disc bead, SAV1W 1773; one faience ring bead, SAV1W 1774) and macrolithics (two pounders, SAV1W 1744, SAV1W 1745; one polishing stone, SAV1W 1746; one fragmented grindstone, SAV1W 1747).

The lower filling above the base of Feature 151, SU 909, yielded the following unregistered finds: bones (080/2017), shell (082/2017), botanical material (seeds, 084/2017), doum nuts (086/2017), wood (079/2017), charcoal (076/2017), some fragments of bronze (083/2017) and pottery (one basket and three bags, 075/2017). The pottery is again, like the material from SU 908, an unmixed assemblage datable to the mid-18th Dynasty.

Registered finds from SU 909 include several pieces of jewellery, among them a small cowroid bead/amulet of faience (SAV1W 1736, Fig. 103), various beads in diverse materials, including 30 faience ring beads (Fig. 133, SAV1W 1759, SAV1W 1760, SAV1W 1761, SAV1W 1763, SAV1W 1764, SAV1W 1765, SAV1W 1766, SAV1W 1767, SAV1W 1768, SAV1W 1770) and some bead fragments

⁹¹⁷ Kemp and Stevens 2010b, 193. This shape is also well-attested on Sai, at SAC5 from contemporaneous tombs, see Minault-Gout and Thill 2012, vol. 2, pl. 12, T14Ca60.

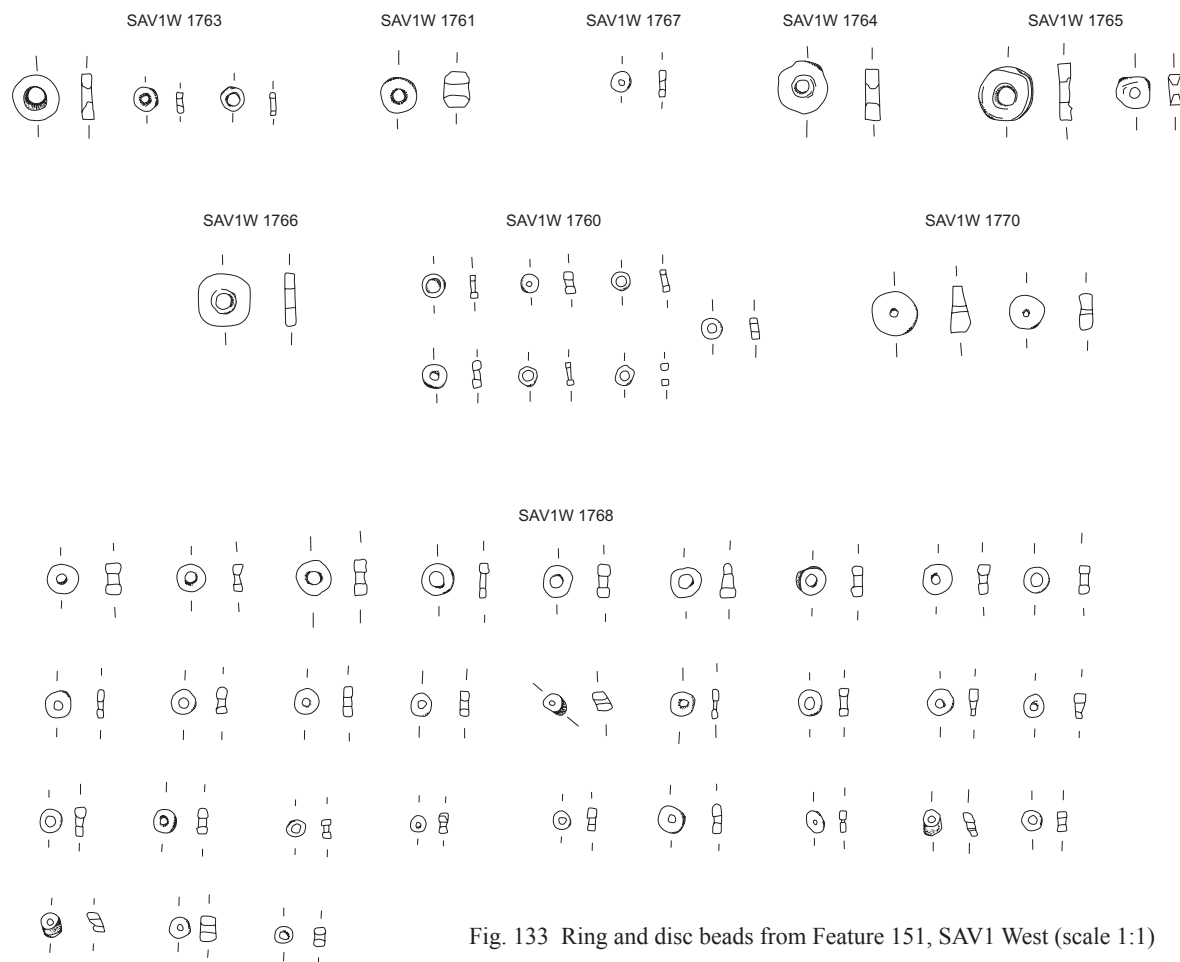


Fig. 133 Ring and disc beads from Feature 151, SAV1 West (scale 1:1)

(SAV1W 1762). Remarkable is a small bone tool, which was polished and is pointed at one end (SAV1W 1769, see above, Chapter 4.3.2, Fig. 67). Two mud seals were found (SAV1W 1777, SAV1W 1778, without impressions) and eight tiny fragments of metal with unclear form and function (SAV1W 1779). Finally, three small flakes of agate as proof of stone tool/lithic production were collected (SAV1W 1839, Fig. 122). The metal finds from Feature 151 are in particular remarkable, because metal was otherwise very rare in all sectors of the New Kingdom town of Sai.⁹¹⁸

4.5.3 Feature 152

The rectangular cellar Feature 152 within Structure D yielded several objects. Its filling was excavated from top to bottom as SUs 917, 945, 947 and 952 (see Appendix). SU 917 is a debris layer of mixed character and will not be discussed here. SUs 945 and 947 are also debris layers, characterised by many brick fragments from Feature 152 and possibly surrounding walls. The only closed stratified context within Feature 152 was the brownish, silty layer above the pavement of the cellar, SU 952. However, this layer was not very rich of finds. It only yielded unregistered finds: bone (338/2017), charcoal (337/2017), wood (339/2017) and doum nuts (340/2017) as well as pottery (one bag, 336/2017; one small bag, 355/2017) and one unimpressed seal (clay/mud, 383/2017).

⁹¹⁸ At Amara West, a sector with metalworking waste and a kiln were found; see Spencer 2017, 330, fig. 7, 344–349, figs. 18–22.

Other finds derive from the debris layer above, SU 947. Within SU 947, a piece of textile (319/2017) illustrates the mixed character of this debris mentioned above. Aside from bone (317/2017), shell (325/2017), botanical material (341/2017), doum nut (318/2017), charcoal (316/2017) and wood (320/2017), two baskets of pottery were found (315/2017). One unimpressed mud seal was noted (342/2017) and a token/gaming piece from a re-used pottery sherd (SAV1W 1811). Several faience beads (one tubular bead, composed with adjoining ring beads, SAV1W 1812) were found and a small bronze ring of unclear function (SAV1W 1815).

All in all, due to the debris above and in Feature 152, this cellar was less interesting regarding its inventory. However, it may serve as a good example that organic materials dominate the material culture at SAV1 West.

4.6 MICROSCOPIC ANALYSIS OF PLASTER AND MORTAR⁹¹⁹

by *Julia Budka*

4.6.1 Plaster

“It is important to distinguish mortar from plaster. They do different things and this is reflected in composition.”⁹²⁰

Plasters are used as a coating for architectural surfaces such as walls and floors, improving the appearance of these structures and also its strength.⁹²¹ Plasters may also be used for furnishings and architectural fittings as well as to produce objects such as beads, figurines, or vessels.⁹²² Thin-section petrography is one of the standard procedures used to identify the various components of a plaster and their respective proportions. It is well-known that historic plasters may contain burnt lime, gypsum, clay, sand, water and organic materials. For Egypt, mostly the compositions of painted surfaces of Theban New Kingdom tombs have been studied. The mortar and plaster covering the rock surfaces were composed of gypsum and also contained limestone flakes.⁹²³ Gypsum plaster was also identified for furnishings at Amarna.⁹²⁴

Microscopic analyses of historical plaster fragments can be useful to derive information on several aspects of their composition, such as the grain size, mineral impurities present in the sand or lime, textural characteristics of minerals, degree to which components such as shell were crushed during processing and others.⁹²⁵ William Barnett has pointed out that optical mineralogy is generally the easiest and least-expensive method of distinguishing among gypsum, lime and clay in plasters.⁹²⁶ These three components vary greatly in birefringence, indices of refraction and morphology. Yuval Goren and Paul Goldberg found that since thin sections provide information on grain textures and interrelationships, they were more useful than other techniques for reconstructing Neolithic lime plaster production technology in northern Israel.⁹²⁷ With this information, they could deduce the environment in which the limestone must have formed and thus narrowed the possible locales where it could have been collected. For Egypt, studies by Dietrich and Rosemarie Klemm are relevant as comparison, although they were mostly conducted on mortars. Klemm and Klemm used thin sections to characterise mortar samples

⁹¹⁹ Based on reports by Sayantani Neogi and Sean Taylor; Neogi and Taylor 2017a and 2017b.

⁹²⁰ Kemp 2000, 92.

⁹²¹ Kemp 2000, 92. For plasters used in architectural contexts at SAV1 North, see Doyen 2017.

⁹²² Cf. Kemp and Stevens 2010b, 249.

⁹²³ Lee and Quirke 2000, 117–118.

⁹²⁴ Kemp and Stevens 2010b, 249–250.

⁹²⁵ For the organic components of plaster and mortar, see Chapter 5.1. For the possible use of shells for plaster, see Chapter 5.3.

⁹²⁶ Barnett 1991.

⁹²⁷ Goren and Goldberg 1991.

from the pyramid districts of the Old Kingdom in Egypt.⁹²⁸ A number of mortar samples from Sudan, covering the time span from the New Kingdom to Meroitic times, was recently analysed by standard techniques in material science.⁹²⁹ In Amara West both modern and ancient mortars and plasters were studied with thin sections by Mathew Dalton.⁹³⁰ His meticulous analysis and micromorphological characterisation of the plasters are especially useful for comparisons with Sai.⁹³¹

A plaster fragment found during the 2016 season of excavation (SU 349 in Square 4C at SAV1 East) of the New Kingdom town at Sai Island was analysed for petrographic thin section analysis (Pl. 126).⁹³² This fragment of floor plaster is associated with the schist pavement found in scattered remains at SAV1 East (see Chapter 3.2.2). A date to the mid-18th Dynasty is firmly established based on the archaeological context. The study revealed that the plaster sample is quite homogenous with most of the mass made up of quartz, calcite, gypsum and very little plagioclase and feldspar. The quartz content is rather large. The aggregate content is over 60% and they were very close to each other. Quartz and calcite grain sizes ranged from 0.1mm to several mm and their shapes are sub-angular with low spherical property.

This sample seems to illustrate that both gypsum and lime were used in the making of plaster at New Kingdom Sai. However, this one sample is of course not statistically significant. Nevertheless and despite of certain *caveats*, this is in particular interesting as the use of gypsum implies the import of raw material: in Sudan, gypsum is found only along the Red Sea coast,⁹³³ whereas in Egypt at several places, especially the Fayum,⁹³⁴ but also the region of Amarna in Middle Egypt.⁹³⁵ The use of lime for plaster on New Kingdom Sai could indicate an additional use of locally available sources for building materials, but would have to be confirmed by using further procedures.⁹³⁶

4.6.2 Mortar

Mortars as essential parts of the building architecture in ancient Egypt, especially the stone architecture as setting mortars, have received quite some attention and several studies of their mineralogical characteristics have been published in recent years.⁹³⁷ In Sudan, research on mortars has focused on aspects of technological exchanges and developments, taking the history of building techniques in Egypt and New Kingdom Nubia into account.⁹³⁸ One of the big questions discussed in this respect is the identification of binders of ancient mortars in Egypt and Sudan. Gypsum as binder is well attested in Pharaonic Egypt, but the occurrence of lime mortar was not known prior to Ptolemaic times.⁹³⁹ Very similar are the findings in Sudan – the use of lime mortar is characteristic for the 1st century AD. The use of lime in setting mortar used in buildings in ancient Sudan still needs to be established, but seems to post-date the New Kingdom according to the present data.⁹⁴⁰

⁹²⁸ Klemm and Klemm 1991.

⁹²⁹ Feneuille et al. 2014.

⁹³⁰ Dalton 2017.

⁹³¹ See especially the assessment of distinctive plastering practices in the ancient town of Amara West, Dalton 2017, 374–383.

⁹³² Neogi and Taylor 2017b.

⁹³³ See Feneuille et al. 2014, 831.

⁹³⁴ See Heldal et al. 2009.

⁹³⁵ Harrell 2017. For painted gypsum plaster fragments from the town of Amarna, see Kemp and Stevens 2010b, 249–250.

⁹³⁶ Concerning mortars, there are no lime mortars before Ptolemaic/Meroitic times in Egypt/Sudan, see below, Chapter 4.6.2.

⁹³⁷ For an overview of basic publications on mortars in Egypt, see Dziedzic et al. 2015, 95–97. See also Kemp 2000, 92 with some references for mud brick architecture.

⁹³⁸ Feneuille et al. 2014.

⁹³⁹ Dziedzic et al. 2015, 94 with references. See also Aston et al. 2000, 22.

⁹⁴⁰ Feneuille et al. 2014, 831.

Materials and methods

Five samples of New Kingdom mortars from Sai were analysed as thin section by optical microscopy.⁹⁴¹ Two of these samples are on-site debris within the town area, one (SM05, 20°44.191'N, 30°19.912'E) from the southern town enclosure wall (south of M1 of SAF5, west of the southern gate, see Fig. 51, Chapter 3.7), and two more (SM13 and SM14) from Tomb SAC 5 area 2, Feature 2 (SU 104 and SU 105 respectively).⁹⁴² The petrographic microscope is an important tool in geology and archaeometry which can be used to identify sources of raw materials and to attribute stone artefacts to their geological source.⁹⁴³ It is also an essential tool in building material science in order to study the composition, size and shape of mineral grains and matrices, their relationships and arrangement, their decay and the presence of pores, cracks, cements and directional textures.⁹⁴⁴ Further applications for studying mortars are, among others, SEM (Scanning electron microscopy) and XRD (X-ray powder diffraction, see below).⁹⁴⁵

Since the mortars sampled from Sai fulfilled different functions within the built fabric, it was hoped that the analyses of these samples would broaden the knowledge on the nature and the availability of the raw materials, the craftsmanship and the working procedures as well as to determine the properties and durability of mortars if possible. For example, the presence of magnesian lime and/or reactive aggregate can impart a hydraulic set and, therefore, determine the quality of a mortar.⁹⁴⁶

Special care was taken during thin section preparation of the samples in order to preserve the material. The mortars were pre-consolidated by impregnation in a resin under vacuum. Thin sections were then cut with oils to avoid damaging water-soluble minerals in the mortars. They were polished to the standard thickness of 20µ, covered with a glass slip and examined with a petrographic microscope incorporating eye pieces of 2, 10, 20 and 40 magnifications using both natural and polarised light. They were analysed by Sean Taylor and Sayantani Neogi following the standard descriptive methods for ceramic petrography, particularly by Ian Whitbread⁹⁴⁷ and Ian Freestone.⁹⁴⁸

Results and discussion

Mortar as used for laying bricks at a mud brick wall was investigated with the sample from the southern enclosure wall of the New Kingdom town (sample SM 05, Pl. 127). A fragment of a reddish mortar was collected just south of SAF5, south of M1, to the west of the southern gate. A similar red mortar was observed in the field within the governor's residence, SAF2, as part of its brick pavement, confirming the 18th Dynasty date of this bedding for mud bricks. The thin section analysis of this very red sample from the enclosure wall revealed that it has got inclusions of quartzite rock, is highly calcareous and has a lot of iron oxide. The numerous quartz particles are of different sizes and have been used as temper. Organic temper of this mortar was traceable by abundant pseudomorphs of plant tissues.

Composition of the matrix

The matrix of the mortar samples from Tomb 26 are mostly composed of both micritic and sparitic limestones (Pl. 128). The fine-grained micritic limestones appear dark in plane-polarised light, but brighter than the lime binder matrix and less bright than the sparitic limestone when seen under crossed-polarised light. In the fine-grained matrix the brightness under crossed polarisers is lower than for coarse calcite grains because of the interference by dispersion of the light by the grain boundaries. As the limestone

⁹⁴¹ Neogi and Taylor 2017a.

⁹⁴² For Tomb 26 and its ground plan, see Budka 2018e, 188, fig. 3.

⁹⁴³ Clough and Wooley 1985.

⁹⁴⁴ Pavia and Bolton 2000.

⁹⁴⁵ For methods examining mortars, see Dziedzic et al. 2015, 95–97.

⁹⁴⁶ Pavia et al. 2005.

⁹⁴⁷ Whitbread 1986; Whitbread 1989.

⁹⁴⁸ Freestone 1995.

aggregate particles are mainly well rounded, the sand can be considered to be mature with respect to sphericity but not to sorting. In the binder matrix of all of these mortars a lot of rather large, spherically-shaped air bubble pores can be seen, which are mostly interconnected by shrinking cracks. In these thin sections, the binder matrix of lime mortars shows a light brown colour when seen in plane-polarised light. Seen under crossed-polarised light, the lime binder matrix shows much brighter birefringence colours than those observed in thin sections. Some gypsum components can also be seen.

Some individual small particles are also clearly visible; these are probably calcite or maybe dolomite grains, as can be seen from their high interference colours. It seems that in no case all added hydraulic material has reacted and, hence, disappeared during the setting of the mortar. Thus, at least a few grains of the unreacted clinker material were always found. Hydraulic clinker particles are, however, usually much easier to detect in thin sections than in dispersions.

Typical additions

Some of the occasionally identified additions in the mortar samples from Sai are animal hairs, wood particles, fragments of fuel and plant fibres (see Chapter 5.1).⁹⁴⁹ Though all of these materials can easily be recognised in thin sections, their sporadic presence, however, suggests that they are accidental, probably due to contamination from the kiln fuel.⁹⁵⁰

Petrofabric of lime binders vs. lime making technology

The petrographic analysis evidenced that the mortars studied possessed homogeneous, cohesive binders displaying a strong binder-aggregate bond and an absence of over-burned and under-burned lime particles. The lime binders are fine-grained, rarely displaying fractures. Evidence of aggregate-binder reaction was found in several mortars and the presence of ceramic fragments acting as pozzolans was also recorded. Petrographic analysis revealed that 85% of the mortars (4 out of 5 samples) studied display unweathered binders which continue fulfilling their role. In the mortars analysed, the fine-grained lime binders possess a highly specific surface. In addition, the absence of binder cracks indicates a low shrinkage. The lime's high specific surface and low shrinkage suggest that the raw limestone was soft-burned. According to Robert Boynton, lower burning temperatures and/or shorter burning duration (soft burning) yield the desirable soft-burned, highly reactive limes of low shrinkage and density and high porosity, whereas a high burning temperature and long calcining periods result in a hard-burned quicklime that has high shrinkage, high density, low porosity and low chemical reactivity.⁹⁵¹ Reactivity of lime refers to its quick ability to respond to chemical stimuli, e.g. reactive limes readily combine with water during slaking.

Conclusion

The fine-grained, cohesive petrofabrics of the lime binders studied in the mortars from Sai, displaying a perfect aggregate bond, an absence of over/under-burned lime particles and scarce fractures, suggest a high reactivity and water retention capacity as well as a low shrinkage for the lime. The strong binder cohesion and perfect aggregate-binder bond of most of the mortars analysed together with the presence of aggregate-binder reaction also indicate a high reactivity for the lime which also agrees with soft burning.

⁹⁴⁹ Cf. Cartwright 2008.

⁹⁵⁰ This is also the main difference of mortars from plasters which are rich in plant remains; see Cartwright 2008, 29 for a collection of material. See also Kemp 2000, 92.

⁹⁵¹ Boynton 1980. In addition, high temperature burning of lime for binders is not attested before the Ptolemaic/Meroitic period in Egypt/Sudan, see Aston et al. 2000, 22. The use of lime in setting mortar still needs to be established for Northeast Africa, but probably happened in the Post-New Kingdom era, see Feneuille et al. 2014, 831.

Evidence of gypsum within the Sai mortars is especially interesting, since it points to the import of raw materials (see above, plaster). A good parallel comes from Dokki Gel: The gypsum used in the setting mortar at this site was proposed to come from Egypt.⁹⁵²

Petrographic analysis evidenced that the quality of the mortars analysed are comparable, both from the New Kingdom town site and Tomb 26 in the contemporaneous elite necropolis. Most of these mortars are good quality materials and were fabricated with non-hydraulic lime; their hydraulicity is due to the addition of ceramics. Petrographic evidence suggests that hydraulicity induced by the addition of ceramics is partially responsible for the good quality and performance of the mortar. The conclusions above are based on a single analytical technique (petrographic analysis), so they may not be taken as final statements. X-ray diffraction, X-ray fluorescence and porosity measurement as further standard techniques could provide additional information.⁹⁵³

APPENDIX: LISTS OF FINDS

by Veronica Hinterhuber

The List of finds is based on the original find lists created in the field from 2013 to 2017.

online – https://doi.org/10.1553/AcrossBorders2_Appendix_List-of-Finds

⁹⁵² Feneuille et al. 2014, 829.

⁹⁵³ Cf. Feneuille et al. 2014.

