



LEATHERWORK FROM ELEPHANTINE (ASWAN, EGYPT)

ANALYSIS AND CATALOGUE OF THE
ANCIENT EGYPTIAN & PERSIAN LEATHER FINDS

ANDRÉ J. VELDMEIJER

WITH CONTRIBUTIONS BY
FELIX ARNOLD & CORNELIUS VON PILGRIM

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Introduction

The importance of leather fluctuated throughout Egypt's history. Finds suggest that during the prehistory and Old Kingdom, leather was worked with much confidence and finds are relatively abundant (Van Driel-Murray, 2000). In the later Old Kingdom, leather seems to have been used less, the reason of which might be the development of the textile industry (Van Driel-Murray, 2000: 308). During the late Middle Kingdom, but especially the New Kingdom, leather gained importance, evidenced by an increase in leather objects and a wider variety of the use of leather in and for other objects.¹

There are, however, several problems with this view. First, the archaeological record is biased. The New Kingdom era is overrepresented as, for example, New Kingdom sites were often built over earlier phases of occupation, destroying these earlier layers or making them impossible to excavate. The amount of material which survives from the New Kingdom is largely due to the fact that elite burials of this period were generally rich and elaborate with a whole range of material deposited with the body for use in the after life (Spencer, 1982: 50-51). Because much of the Pharaonic Egyptian archaeological record is constructed from tomb goods, burial practices are a major contributing factor in terms of what survives. Moreover, many Roman settlements have been excavated, largely accounting for the numerous leather finds from that era. Furthermore, organic material only survives under special conditions, which limit finds to the more arid areas of Egypt, such as Upper Egypt, which has more New Kingdom and later sites.² Finally, although there are numerous finds in collections and more are still being recovered at various excavations, systematic research, including technological analyses of the objects and their manufacturing and chemical analyses to better understand skin processing and staining/colouring, are largely lacking. Roughly, it is only during the last ten years that research into ancient Egyptian leather has developed, although much of the work is focussed on finds of Roman date (such as Berenike, Quseir el-Qadim and Didymoi).

The present work discusses the leather finds from the excavations at Elephantine that are conducted by the German Archaeological Institute Cairo (DAI), in collaboration with the Swiss Institute for Architectural and Archaeological Research on Ancient Egypt (SI). The majority of the objects are dated to periods well after the Pharaonic era, namely the 5th-6th century AD, save for a few finds which date to the New Kingdom and, ever rarer, to the Middle Kingdom. Unfortunately most of these Middle Kingdom examples are featureless fragments. Therefore, here the focus will be on the later periods of Egyptian history, particularly the Persian period (525-332 BC). These have been expertly published several years

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- 1 It is beyond the scope of this work to give a detailed overview; see Forbes (1957: 21-36), Van Driel-Murray (2000), but see also Veldmeijer (2008) and Veldmeijer & Laidler (2008).
 - 2 A telling example is the tomb of Tutankhamun, which contained a large quantities of leather but barely anything survived due to the high humidity, accelerating the deterioration process (see Veldmeijer *et al.*, 2013: 259-260) and the discussion therein. The problematic character of preservation of organic material is clearly indicated by the extremely fragmentary state of much of Elephantine's leatherwork.

ago by Kuckertz (2006). However, at that time Kuckertz did not have access to the material, therefore she had to base her study on photographs and drawings. The present author, however, had the opportunity to study the finds some years later hands-on and is, therefore, able to add to, and enhance the excellent descriptions of Kuckertz, the relevant parts of the original descriptions of which are quoted in the catalogue with her approval. This leads to a comparison of the material with other leatherwork, which was published subsequent to Kuckertz's publication. The group of Persian objects is separated from the rest of the leatherwork in the group 'Persian' (see "Quantity and Breakdown by Functional Groups").

Materials and Methods

The leatherwork was studied over a period of several years, starting in 2005. Work consisted of the macroscopic study (including the use of simple tools such as magnifying glasses), a resulting verbal description, measurements and, if necessary, drawings, as well as photography in overview (obverse/reverse, if the condition allowed turning of the fragment) and, again if necessary, in detail. A field-test for identifying vegetable tanning was applied to most of the material (see below for details). The camera used was a Canon Digital Rebel/EOS 300D Digital with a Tamron 90/2, 8 DI CAF SP Macro lens. Each photograph included the useful Kodak Colour Separation Guide and scale bar.

Terminology

The terminology that is used in the present work is based on Goubitz *et al.* (2001). As they based their work on European footwear, expansion and adjustment proved inevitable for Egyptian material, thus additional terms from Veldmeijer (2012; see also Veldmeijer, 2011a) are used. Terminology of knots is after Veldmeijer (2006).

Analytical Strategy

The footwear is analysed within the framework of the Ancient Egyptian Footwear Project (AEFP), which is a multidisciplinary research into ancient Egyptian footwear from Predynastic to Coptic times (for a more detailed account see Veldmeijer, 2011a: 11-15). The non-footwear leatherwork is analysed within the framework of the Ancient Egyptian Leatherwork Project (AELP). In both cases the focus is on manufacturing technology: skin processing techniques and related research (see below) needs specialised strategy, which is scheduled for the future. A detailed explanation of this project is presented for the sub-project on Amarna's leatherwork and is still valid (see Veldmeijer, 2011b).³

In contrast to published footwear typologies such as that of Montembault (2000),⁴ the typology developed by the AEFP, based on Montembault's and Goubitz *et al.* (2001), will eventually include, among others, date and distribution as diagnostic characters.⁵ Moreover, the AEFP is based on more specimens of footwear relative to the number on which Montembault's typology is based (the Louvre collection), resulting in expansion and refinement of the typology.⁶ Finally,

3 See www.leatherandshoes.nl for more information on both projects.

4 The following text about the AEFP's typology is adapted from Veldmeijer (2011c: 12).

5 The final archaeological analysis of the Project is in progress (Veldmeijer, Forthcoming).

6 See for some examples Veldmeijer (2011a: 226; 2013a) and Veldmeijer & Ikram (2014).

as explained elsewhere (Veldmeijer, 2011a: 15) recognisability is used, based on the work of Goubitz *et al.* (2001), in some cases. Leguilloux (2006) has established a typology of the footwear from Didymoi but because this is based on the finds from only one site and of limited time period (Roman) it is not used here.⁷ Neither typology uses the shape of the sole as a characteristic, although Leguilloux (2006: 98-101) recognises the distribution of shape through time. Since a typology that also incorporates dates and distribution can only be established on the basis of a large sample of varying date and from various sites, Montebault's typology will be used here for the time being for part of the Elephantine finds.⁸

A comparison of the objects from Elephantine is not only limited to published material, but also include unpublished material that is housed in museum collections, as well as finds from other excavations – all of which were studied by the author and which are in various states of getting published.⁹ In order to avoid repetition, in cases where the Elephantine material did not add to the general, still up to date discussions published elsewhere, references are made to these publications rather than to reiterate them here. The focus, thus, will be on new (additional) information and/or insights.

Illustrations

Photography is by André J. Veldmeijer/Erno Endenburg unless stated otherwise and courtesy of the DAI/SI. The scale bars in the illustrations are 50 mm unless stated otherwise. The photographs were prepared for publication by Adri 't Hooft Photographic Services and/or Erno Endenburg/André J. Veldmeijer. All drawings are by André J. Veldmeijer/Erno Endenburg unless stated otherwise. Construction drawings are not to scale.

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7 Note that Leguilloux's reconstructions are partially based on assumptions of the layout of the strap complex: no sandals with intact straps have been depicted in the volume, so we can assume they were not preserved (more on the lack of straps: Van Driel-Murray, 2002c: 3-4).

8 A reappraisal of the typologies will be included in the forthcoming final analysis (Veldmeijer, Forthcoming).

9 Collections: Ägyptisches Museum und Papyrussammlung, Berlin; Ashmolean Museum, Oxford; British Museum, London; Coptic Museum, Cairo; Egyptian Museum, Cairo; Luxor Museum, Luxor; Metropolitan Museum of Art, New York; Museo Egizio, Turin; Museum of Fine Arts, Boston; National Museum of Antiquities, Leiden; National Museums of Scotland, Edinburgh; Oriental Institute Museum, University of Chicago; Petrie Museum of Egyptian Archaeology UCL, London; Roemer- und Pelizaeus-Museum, Hildesheim; Royal Ontario Museum, Toronto; Sammlung des Ägyptologischen Instituts der Universität, Heidelberg; World Museum, Liverpool. Excavations: Amarna; Amenhotep II Temple Luxor; Berenike; Deir el-Bachit; Dra Abu el Naga; Elephantine; Fustat; Hierakonpolis; Mersa Gawasis; Qasr Ibrim.

however, are solely my own responsibility. I am indebted to Josephine Kuckertz for allowing me to cite large parts of her descriptions of the Persian finds, which were published in 2006, and comment on them. The English of the catalogue was checked by Ariel Singer, for which I am very grateful. Any mistakes, however, are solely my own responsibility. I am thankful for the continuous help and support from Erno Endenburg, who among many other things, prepared the publication drawings. Finally, I like to thank Sidestone Academic Press for their help, support and the professional way of publishing of my manuscripts.

Provenance

The Domestic Quarters from Middle Kingdom until the Late Period (Cornelius von Pilgrim)

Leather objects are comparatively rare among finds in the living quarters from the period of the Middle Kingdom until the New Kingdom. Almost all pieces presented here were found in waste layers in the abandoned houses of the living quarter south of the Khnum Temple. The houses are located just opposite the entrance to a central administration building (H2), the so-called ‘Governors Palace’ (Von Pilgrim, 1999: 85-90). It may be assumed that most of the refuse was derived from activities in that building, especially since many mud sealings have been found in the same contexts as the leather pieces.

The oldest object from this area is a ball-shaped leather object, filled with pieces of textile (el-054, Cat. No. 90). It was found in a stratum (Bauschicht XV)¹⁰ of the 12th Dynasty, in the filling of a storage facility (0280) in House 25a (Von Pilgrim, 1996: 32, Fig. 3).¹¹ In some cases debris and waste were also deposited and levelled in the streets. A discarded piece of skin (el-021, Cat. No. 87) was found in such a layer in the northern part of the street between the blocks of houses and the administration building H2 (Bauschicht XIII-XIV).

An extensive midden deposit of the late 12th/early 13th Dynasty was excavated in Room C of House 12 (Bauschicht XIII) opposite the entrance of building H2 (Von Pilgrim, 1996: 46, Fig. 9). It contained not only hundreds of sealings¹² but also a small collection of leather fragments (el-009, Cat. No. 95; el-018, Cat. No. 97; el-024, Cat. No. 99).

A similar deposit covered House 10 in the following building layer (XII), after it was abandoned in the 13th Dynasty (Von Pilgrim, 1996: 48-49, Fig. 10). Among the discarded objects in Room A were a number of sealings¹³ and one leather fragment (el-053, Cat. No. 113).

Aside from the finds of the living area south of the Khnum Temple, only one further leather object was recorded from the Middle Kingdom town itself (el-019, Cat. No. 19). It was a sandal sole discarded in a layer that had accumulated during the second phase of House 79, next to the town wall at the south-western limit of the settlement. The house was built shortly after the construction of the town wall in the mid-12th Dynasty and was abandoned before the end of the same Dynasty (Von Pilgrim, 2011: 200, Fig. 17). Again, the waste deposit contained numerous sealings and thus may have derived from an administrative building that was located in the nearby vicinity.¹⁴ Only two leather fragments came from stratified contexts in the building layers of the following dynasties. One leather piece (el-011, Cat. No. 96) was found in the construction of a cellar (0184/0185)

10 On the numbering system of finds and contexts see Von Pilgrim (1996: 23, note 48).

11 For the associated group of sealings (SVK 64c) see Von Pilgrim (1996: 311).

12 SVK 53a in Von Pilgrim (1996: 308). Pottery sherds from this layer were preliminarily grouped by T. Rzeuska into phase F3 (mid-late 12th Dynasty) and F4 (early 13th Dynasty).

13 Cf. Von Pilgrim (1996: 308 [SVK 47]).

14 Sealing group SVK 42, see Von Pilgrim (1996: 307).

of the 17th Dynasty (Bauschicht 11) in the area immediately north of the Heqaib Sanctuary. The architectural context remains uncertain since the area was largely cleared during the excavation of the Heqaib Sanctuary in the 1940's (cf. Habachi, 1985: plan 4). A sandal (el-005, Cat. No. 5) was found in a small House (34) of the early 18th Dynasty (Bauschicht X, before Thutmosis III) in the area south of the Khnum Temple. It comes from a layer that covered the original floor, next to an installation in the north-western corner of the eastern room of the house (Von Pilgrim, 1996: 66, Fig. 16).

A large number of sandals, shoes, and other leather objects from the Late Period have been found in houses of the residential quarters to the west of the central main street. This street goes back to the late Old Kingdom and separated the residential quarters in the western half of the town from the temple precincts and official institutions on the eastern mound of the town.¹⁵ In the Persian Period (525-332 BC) many houses in the centre of this area were inhabited by families of foreign mercenaries who served in the Persian army. The most remarkable deposit of leather objects has been found in House DA (Kuckertz, 2006; el-016, Cat. No. 61; el-056, Cat. No. 60; el-057, Cat. No. 65; el-059, Cat. No. 62; el-097, Cat. No. 64).¹⁶ To the north-west of this area, the town mound gradually slopes down towards the town wall next to the ancient riverbank. Buildings of the first millennium, however, were largely destroyed by extensive *sebbakh* digging during the last centuries, and only few walls and layers on a lower level escaped the destruction in the area to the west of the pyramid. These remains, however, prove the existence of houses integrated into the slope. In a limited sondage aiming to clarify the topography of the settlement in this area, another piece of footwear (el-057, Cat. No. 65) was found. Based on a first assessment of the associated pottery it may be dated to the 25th Dynasty¹⁷ (but see 'The Objects. The Persian Group').

In contrast to the towering ruins in the residential quarters on the western town mound, only small remnants of buildings from the Late Period are preserved in the temple precincts or next to them in the eastern part of the town. This can be explained by the fact that the stone built temples determined the surface level of the settlement for a long time. Structures built from mud-brick, however, developed more dynamically and buildings were more frequently replaced. Since the levels raised more rapidly in the latter areas than those with stone built structures, occasionally buildings and layers were completely cleared away, especially in the vicinity of the temples. Accordingly, only a few remnants of some subterranean parts (such as cellars or storage facilities) have survived from buildings of the Late Period in the domestic quarter to the south of the Khnum Temple. In one of the subterranean storage facilities, a small vaulted cellar (041) below the eastern wall of House 17,¹⁸ a leather object (el-022, Cat. No. 98) was found in a midden deposit between two mud floors. Among the numerous finds were many fragments of papyri documents of the 22nd Dynasty.¹⁹ Therefore it may be assumed that the cellar was once part of the house of a priest related to the Khnum Temple.

15 For a general overview on the town structure and its development see Von Pilgrim (2010).

16 See the introduction of the present work.

17 I am grateful to D. Aston for evaluating the pottery.

18 For the location of House 17 see Von Pilgrim (1988: 168, Fig. 10). The nomenclature of the stratigraphic sequence given in Fig. 10, however, is outdated.

19 Fragment 25102C/a-35, see Vittmann (2015: 398).

The Late Roman Settlement in the Khnum Temple Precinct (Cornelius von Pilgrim)

The vast majority of leather objects were found in the late-Roman settlement in the precinct of the Khnum Temple (see also the contribution by Felix Arnold in this volume). In the older stratum of the settlement (Bauschicht 01) most pieces, predominantly sandals, were encountered in levelled layers of fillings in streets and open areas. Sandal el-013 (Cat. No. 8) was found in the street immediately to the south-west of the entrance to House M21. This particular layer belongs to a very early phase of the house, before a bench was built on the eastern façade (Arnold, 2003: 68-69, Fig. 32). Fragments of sandal el-026 (Cat. No. 11) were found in the street along the northern wall of House K26 (Arnold, 2003: 69-72, Fig. 34). Sandal el-030 (Cat. No. 13) was encountered in a levelled layer of ashy refuse in the street to the east of the northern room of House M14. It is the oldest layer that accumulated by the house wall and can be related to the phase before the unit was remodelled into a living house (Arnold, 2003: 59-64, Fig. 17). Other leather pieces (el-052, Cat. No. 112) were found in the same street, further to the south in a windblown deposit next to House 12A. The layer covered a disused mud-brick container attached to the curved outer wall of the house (Arnold, 2003: 58, Fig. 19). Shoe el-119 (Cat. No. 58) was found in a layer of debris with chippings of granite in the north-eastern room of House M21 in the zone to the west of the pilaster, which was attached to the northern wall of the house. The layer had been levelled on a floor of the second phase of the house and was covered by a mud floor of a subsequent use.²⁰

Sandal fragment el-027 (Cat. No. 12) was found in the second stratum (Bauschicht 02) of the same street. It was found in a layer of animal dung directly north of the north-eastern front yard of House 13 (Arnold, 2003: 80, Fig. 39). Another collection of leather fragments (el-105, Cat. No. 56, 79, 126) belongs to the terminal stratum of the settlement. It was found in a secondary deposit of refuse above the floor with a millstone installation in House T53, located to the north of the (demolished) Khnum Temple (Haeny, 2003: 202). El-069 (Cat. No. 17) originates from a similar refuse layer in the same house (T53) but it was disturbed by small pits of modern burials.²¹

In the following cases it is only possible to determine an approximate stratigraphic position of the objects.²² Sandal el-076 (Cat. No. 21) was found in the area of the north-western corner of House K13 in an intermediate layer between House K16 (Bauschicht 01) and older buildings K13/K40 (Bauschicht I) below. A coin of Hadrian from the same context may provide a rough chronological indication, but according to the notes of the excavator a clear stratigraphic correlation with the building sequence in this area was not possible.²³

In addition to objects from midden deposits and street layers in the late-Roman settlement, another group of leather objects originated in tertiary deposits in the former temple precinct. The demolition of the Khnum Temple continued

20 The house was excavated by H. Jaritz in 1994, *cf.* Arnold (2003: 69 and Fig. 33).

21 Excavated by P. Grossmann in 1971. The deposit (3526) also contained numerous ostraca and fragments of papyri.

22 The datings indicated for pieces el-089 (Cat. No. 25), el-094 (Cat. No. 124), el-074 (Cat. No. 49) and el-064 (Cat. No. 117), excavated in the area to the south of the Khnum Temple by P. Grossmann in 1969, are exclusively based on an evaluation of the associated pottery by M. Rodziewicz.

23 For the location of the buildings see Grossmann (1973: 169-170, Fig. 4).

for a period of more than 300 years and happened from west to east. After the foundations of the temple had been fully robbed, the empty foundation pits and trenches were backfilled with debris, which previously had accumulated in other areas within the settlement district. The fillings contained not only chippings of stones from the demolition process but also refuse of the neighbouring settlement. Among the many finds from the fill were numerous leather objects. Some, such as el-092 (Cat. No. 71), were found in the fill of the south-western corner of the inner enclosure wall, which was demolished in the 6th/7th c. AD (Bauschicht 02).²⁴ Others (such as el-109, Cat. No. 34, 128 and el-128, Cat. No. 134) were found in the backfill of the temple foundation or in its latest phase in the south-western corner of the temple proper (el-111, Cat. No. 35, 73).²⁵ An extraordinary sole fragment (el-127, Cat. No. 39) was found in an ashy deposit of refuse in the area southeast of the former pronaos. However, the stratigraphic correlation to the building sequence of the settlement in the temple's courtyard remains unclear: the layer was possibly connected to the backfill of the foundation of the southern temple colonnade of the temple courtyard.²⁶ The demolition of this foundation did not start before the 7th c. AD and continued until the 9th c. AD. Several leather pieces and objects (el-015, Cat. No. 9, 52; el-028, Cat. No. 101; el-029, Cat. No. 51; el-046, Cat. No. 66, 84; el-047, Cat. No. 107) were excavated from the backfill of the foundation trench of the southern colonnade.

The Late Antique Period (Felix Arnold)

The vast majority of leather objects published in this volume derives from the settlement that flourished from the 5th to the 9th c. AD within the former Khnum temple complex. The settlement remains were excavated by Peter Grossmann, Gerhard Haeny, Horst Jaritz, and most intensively from 1998 until 2011 by Felix Arnold (Arnold, 2003; Grossmann, 1980). Several dozen houses have been investigated, deriving from three major settlement phases. In Phase 01 (c. 425-550 AD) houses were built inside the existing structures of the Khnum Temple, occupying both the temple courtyard and the area surrounding the temple house in the north, west and south. In Phase 02 (c. 550-750 AD) the temple was progressively dismantled, while settlement activity continued. By Phase 03 (c. 750-900 AD) little of the former temple was left. Much of the temple area was now occupied by a large domestic complex, possibly a monastery (complex "o").

Most of the leather pieces were recovered from layers of rubbish and wind-blown sand deposited in the streets, open spaces and other abandoned areas of the settlements. These include the area of the demolished Khnum Temple, its courtyard and enclosure wall. The majority of these layers can be attributed to Phases 01 (12 pieces) and 02 (15 pieces), while only two of the pieces were found in a layer of Phase 03. The leather pieces found in these layers most certainly had been used by the inhabitants of the settlement before being discarded together with other types of refuse, including pottery, glass, animal bones, textiles and other objects of daily use.

²⁴ The associated pottery was recorded and dated by M. Rodziewicz.

²⁵ Excavated by H. Jaritz in 1987.

²⁶ Jaritz (1988: 163, Fig. 8). According to the notes of Jaritz the pottery from the same context dates to the 6th-7th c. AD.

Only 16 leather objects were discovered within particular houses of the settlement. Of these, half originate from houses of stratum 01. Four pieces were found in the front yard of House M12A, a small cottage located southwest of the former Khnum Temple and dating to c. 450-550 AD (el-002, Cat. No. 002; 004, Cat. No. 4; 051, Cat. No. 111; and 052, Cat. No. 112; Arnold, 2003: 57-59, Fig. 19). One piece was found in house M21, a few blocks further north on the same street (el-119, Cat. No. 58; Arnold, 2003: 67-69, Fig. 32-33). Two other pieces were recovered in the courtyards of House K20, the home of a stone mason located south of the temple house, from layers dating to c. 475-550 AD (el-045, Cat. No. 14; and 120, Cat. No. 37; Arnold, 2003: 73-77, Fig. 35-36). Another piece was found in the fireplace of a neighboring building, numbered K31, dating to c. 425-450 AD (el-033, Cat. No. 28).

Seven pieces were recovered from houses of the subsequent stratum 02, all dating to c. 550-750 AD. One of them derives from House M13, a multi-story building erected next to the former House M12A southwest of the Khnum Temple (el-007, Cat. No. 6; Arnold, 2003: 79-84, Fig. 38-41). Five leather objects were discovered in different rooms of House K26, a large building located south of the temple, just west of House K20 (el-025, Cat. No. 100; 048, Cat. No. 108; 102, Cat. No. 125; 115, Cat. No. 132; and 121, Cat. No. 38; Arnold, 2003: 94-98, Fig. 53-56). Another piece was found nearby in K21, a single-room structure dating to c. 700-750 AD (el-037, Cat. No. 83; Arnold, 2003: 112-113, Fig. 73). Only one piece was found in a building of stratum 03 (el-071, Cat. No. 32). The object was discovered under the brick pavement of K22, an extension of K21 probably dating to c. 750-800 AD (Arnold, 2003: 119-121, Fig. 82). K21 and K22, together with K23, may have formed the nucleus of the later monastery, the so-called complex "o".

Most of the leather objects found inside houses were recovered in the courtyard areas of these houses. In these spaces rubbish from various household activities tended to accumulate during the time of occupation, together with ash from bread ovens and straw from animal keeping. The leather fragments were usually found in association with other objects that had been discarded by the inhabitants of the respective houses, including pottery, glass, wood, animal bones, coins, ostraca and game pieces. Noteworthy is the close association with other objects of apparel, like textiles, bracelets and beads. In one case the leather object was found with a sheep skin (el-004, Cat. No. 4), in another with two fragments of a wooden weaving comb (el-045, Cat. No. 14), attesting to crafts conducted within the houses.

Analysis

Quantity and Breakdown by Functional Groups

The finds are discussed by functional groups, the breakdown of which resulted in seven groups (Appendix 'Concordance'): 'Footwear' (subdivided into 'Sandals' and 'Shoes'), 'Bags and Other Containers', 'Belt, Straps, Cordage etc.', 'Waste and Offcuts', 'Miscellaneous', 'Unidentifiable' and 'Persian'.

Footwear is always an important and large group of finds within the category 'leather' on an archaeological excavation. Here, 119 specialist numbers (Cat. No. 1-44)²⁷ belong to sandals, which include a fair number of largely complete examples (19). Forty-three specialist numbers (Cat. No. 45-59) belong to shoes (these exclude the footwear in the group 'Persian'). Among these remnants of shoes are only two more or less complete examples. The group 'Persian' consists of 57 specialist numbers (Cat. No. 60-65), which is mainly due to the severe fragmentation since the objects were excavated. 'Bags and Other Containers' is a group with eight specialist numbers (Cat. No. 66-73). Complete bags are relatively rare in the archaeological record, probably because they were used beyond repair and discarded, leaving little to recognise as bag. Thus no complete objects have been found except for the, probably 19th c. AD wallet (el-096, Cat. No. 70), and a container from the Persian levels (which is, as with the Persian footwear, included in the group 'Persian'). The group 'Belt, Straps, Cordage etc.' is rather varied and consists of eleven specialist numbers (Cat. No. 74-81). The term 'belt' is defined as a strip of leather with a buckle or comparable fastening that is, for example, used in clothing; strips of leather that are used for tying are referred to as a 'strap'. This should not be confused with the straps in a sandal's strap complex, which are usually referred to in a more specific way, *i.e.* front, back- and heel strap; it is very well possible that small pieces of the strap complex ends up in this category as they might not be recognisable as a sandal element. Braided fragments and fragments that are made by the slit/pull technique are included here as well, unless their function is clear: some of these might originate from sandals, but such objects have also been used in other objects, such as book covers, although these have not been discovered at Elephantine. The distinction between belts and straps is not always easy to make or often even impossible, hence the classification in one group; the quantity should be viewed within this light. With 'cordage', objects are meant that are plied (and sometimes cabled), like rope and string that is made of vegetable materials. The terminology also applies to cordage that is made of leather, rawhide or sinew.²⁸ The group 'Waste and Offcuts' has 14 specialist numbers (Cat. No. 82-87). Skin processing yields waste (the parts of a skin that were useless, cut off and discarded such as pieces of fatty tissue). Offcuts, however, usually only refers to fragments of leather that are cut off from a processed sheet of leather in order to obtain a suitable piece for manufacturing an object and

27 As explained in 'Guide to the Catalogue' a specialist number does not indicate per se the exact number of fragments studied.

28 More on terminology of cordage see Veldmeijer (2005).

more often than not have a characteristic shape. The small group ‘Miscellaneous’ has 11 specialist numbers (Cat. No. 88-90) and includes items that could not be classed within the bigger groups, such as a small basketry lid (el-082, Cat. No. 88) and a ball-like object (el-054, Cat. No. 90). The largest group, with 117 specialist numbers (Cat. Nos. 91-140), is ‘Unidentified’. Typically, this is the largest group for which several explanations can be offered. In antiquity, objects, especially if these were ordinary ‘daily life’ utilities such as bags and some footwear, were often used beyond repair. Moreover, after discarding the object, decay sets in,²⁹ varying from the influences of moisture, wind and the like to insect and rodent activity. These processes change the object even more.

Preservation

In general, the leather finds from Elephantine suffered greatly and are in poor condition, and (severely) fragmented. The Persian material was seemingly in surprising good condition, but the internal chemical degradation of the collagen fibres made the leather frail, resulting in easily breaking and splitting, hence the fragmentation seen in the present work as compared with the situation just after discovery (*cf.* Kuckertz, 2006). The finds continued to suffer greatly ever since excavation, resulting in, among other issues, further fragmentation (see below). Much research has been carried out on the deterioration of leather, especially for the modern leather industry. However, such research has not been done in detail for ancient Egyptian material (although Trommer, 2005 did include some samples). This is necessary as Pharaonic leather differs in various points from European leather: it is not tanned and the arid conditions before the material is excavated differ from usually waterlogged conditions in Europe, resulting in different chemical processes.³⁰

Skin Type Identification and Skin Processing

As explained elsewhere (Veldmeijer, 2011b: 18 and references therein),³¹ the identification of type of skin of archaeological leather is troublesome. The worn character of much archaeological leather, in combination with post-depositional circumstances, even if the preservation can be qualified as excellent, prohibits in most cases identification by absence of the upper surface and/or hairs. Identification on the basis of fat content, DNA or protein sequencing of the collagen using soft-ionization mass spectrometry has not been done: one of the reasons is that these research methods are expensive and might only be partially

29 Without proper treatment, decay of the skin sets in as soon as the animal dies.

30 Lucy Skinner is working on such research, the results of which are expected in several years. See *e.g.* Kite & Thomson (2006) for the chemical process related to the process of procuding leather as well as of the deterioration of leather.

31 Handy is the identification through various steps at <http://www.furskin.cz>, but is relying heavily on hair. Moreover, powerful microscopes are needed, which are not always available in the field.

successful,³² another is that it requires specialised laboratories for which sampling is needed. In general one can say that ordinary leather footwear is made of cow's leather (own observation, but see also Van Driel-Murray, 2000: 302) and the thickness of the leather of most of Elephantine's footwear leaves little doubt that this is the case here as well. The preservation of leather goes hand-in-hand with the method that was used to make a skin durable (curing, tanning, tawing etc.,). The slaughtering of the animal, depilating the skin and preparing it for curing/tanning – the first phases of skin processing, together with the actual curing/tanning, before the manufacturing of the objects – will not be given attention here. Processing of skin into (pseudo-)leather is rather universal and described in various handbooks, giving a good idea of the process and the reader is therefore referred to these general overviews (focussing on ancient Egypt, see Van Driel-Murray, 2000: 299-306; Forbes, 1957: 1-21; Veldmeijer, 2008: 3; Veldmeijer & Laidler, 2008: 1216; a description of these parts of the process on the basis of two-dimensional art and anthropological data see Schwarz, 2000: 39-70). However, exactly how this was done in Pharaonic Egypt is, in its detail, not well understood but very little of these tasks can be deduced from the archaeological record as presented here. Equally, the way a skin is made durable by curing can only be confidently identified by chemical analyses and even with these modern methods many problems have been noted (Van Driel-Murray, 2000: 316-317). A field-test for identifying vegetable tanning (Van Driel-Murray, 2000: 316-317; 2002a; 2002b; Leach, 1995) is a fairly simple test but the results are not always as unambiguous as one would hope (Pers. Obs. Qasr Ibrim; see also Thomson, 2006: 59; Van Driel-Murray 2002a: 19-20; Veldmeijer & Van Roode, 2005). This test has been applied to most of the leather finds from Elephantine and included in the catalogue, but the results are troublesome and should be checked with the aforementioned proper analytical means. A comparison of these dates could elucidate the validity of field-tests.

Colour

No paint, dye or pigment seems to have been used to decorate the leather,³³ and it was left naturally coloured. There is significant variation in the natural colour of the leather, varying from a light brown to a greyish black. It is plausible to suggest that these extreme differences are due to the type of skin, or, in some cases in connection with the skin processing methods. Another cause of the difference in 'natural' colour is the use of the object: natural fats in the skin further alter the leather. Finally, the specific circumstances during burial, which might differ distinctly, even in close proximity, have a bearing on the colour.

32 For fat contents, see especially Trommer (2005). Regarding DNA, Thomson (2006: 58) wrote: "Work is being undertaken to analyse DNA extracted from skin-based objects. It might well be possible to develop such procedures for untanned materials and successful results have been reported with oil-tanned chamois leathers (Langridge, 2004). It is less likely, however, that successful methods will be found for use with vegetable- or mineral-tanned leathers as the cross linking mechanisms involved in the tanning processes will probably interfere with the extraction procedures." This means that the way a skin is prepared (so-called skin processing) needs to be known first in order to increase the possibility of positive skin type identification.

33 Technically there is a distinction between pigment, paint and dye (see for example Lee & Quirke, 2000).

Manufacturing Technology

Material

The use of leather thong in stitching is fairly limited before Roman times. Indeed, nearly all Pharaonic footwear (Veldmeijer, 2009a; 2009b; 2009c; 2009d), chariot leather, including bow cases and quivers (Veldmeijer *et al.*, 2013; In Prep.) and other objects such as the tent of Istemkheb (Pers. Obs. 2009; see also Schwarz, 2000: 253-258) studied thus far is predominantly stitched with sinew and, to lesser extent, flax (see also Van Driel-Murray, 2000: 207-208). This differs with leatherwork from Nubian origin, as finds from for example Hierakonpolis' C-group suggests (Veldmeijer, 2007), which are far more often made with fine and delicate leather thong. In post-Pharaonic times, the use of leather thong for stitching gained importance over flax and sinew. It became the main material to secure sole layers in sandals and for stitching seams in objects such as bags and tents, and although the sole seams in the much later turnshoes were usually closed with flax thread, there are examples that this was on occasion done with leather thong as well even though usually these are repairs (Veldmeijer, 2012).

But there are, however, exceptions: evidence suggests that so-called stubbed-toe ankle shoes can be dated to the New Kingdom (Veldmeijer, 2013a; In Press a). In the simple sole/upper construction, the seam is closed with leather thong on the outside. This is also seen in a shoe found in the temple of Amenhotep II in Luxor, which date to Ptolemaic times (Veldmeijer, 2011d), but this is a repair, and a comparable construction is seen in the Persian material from Elephantine, discussed in more detail below. Note, however, that at least some of the sewing in this footwear is done with rawhide thong, rather than leather. The use of leather thong in Pharaonic times in one type of shoe only is remarkable (other closed shoes from New Kingdom times were stitched with flax, so-called curled-toe ankle shoes, Montebault, 2000: 204-205; Veldmeijer, 2009a). The preference of the Egyptians for using sinew and flax, might indicate a foreign tradition of using leather thong in footwear, and the Persian finds from Elephantine might be seen as confirming such a suggestion.

Stitching

Running Stitch

For a detailed discussion see Veldmeijer (2011b: 19-22; 2012: 16-18). Running stitching is by far the most common stitch registered and all stitching is done exclusively with narrow leather thong (see above on the use of leather thong).

Interlocking Running Stitch – Looping

In interlocking running stitching “two threads are used simultaneously but in opposite direction, resulting in an uninterrupted line of stitching” (Grew & De Neergaard, 1988: 101). It is a common technique in closing the seam of the sole/upper constructions in shoes. But this technique is not limited to footwear as it has also been identified in Pharaonic chariot leather (Veldmeijer *et. al.*, In Prep.). A comparable technique is seen in the seams of sole/upper constructions that are situated at the outside of the shoe and which are made with leather thong, such

as the Persian footwear discussed below. However, for leather thong interlocking stitching is not possible as the thong cannot pass itself due to its width. With looping, in appearance not much different from interlocking stitching, the thong runs diagonal through the layers and twice through one stitch hole but done with only one thong. Thus, they do not have to pass in the stitch hole simultaneously. Often, and exclusively seen in the Persian material, at the visible surface the loops touch and make an uninterrupted row of stitching; at the ventral surface of the treadsole, there is often an interstitch space visible. Not seen in the Elephantine material, is a comparable technique but since the thong passes next to each other, the uninterrupted row of loops has a diagonal course (Veldmeijer, In Press a) and has a strong decorative effect.

Whip Stitch

For a detailed discussion see Veldmeijer (2009a: 14-16; 2011b: 19-22; 2012: 18-19). Whip stitching is registered fairly often and is also common in the Persian material.

Sailor Stitch

Usually, sailor stitches are used for repairing tears, as is the case in the only example registered in the material from Elephantine (el-100C, Cat. No. 92). The diagonal stitching that runs alternately over and under both edges of the tear and thus pull them together makes it very suitable for this purpose. Its predominant use as a repair-stitch is the reason that it is not often encountered (for example seen in a scabbard from the tomb of Tutmosé IV, Veldmeijer *et al.* In Prep., and several finds from Deir el-Bachit [DB 3708c, Cat. No. 100, DB 3733a, Cat. No. 400 and DB 3212, Cat. No. 316], Veldmeijer, 2011c). Finds from Hierakonpolis' C-group (c. 2494-1550 BC; find HK27C 03-181) suggest that the technique was used very early onwards.

Sole/Upper Constructions

Much is known about sole/upper constructions and sole seams, hence the reader is referred to existing discussions elsewhere (Veldmeijer, 2011c: 19-20; 2011d; 2012: esp. 78-83; 2013a; *cf.* Veldmeijer, 2009a; 2009b; 2009c). Additional information, especially on the sole/upper construction of the Persian footwear can be found in the section 'Shoes' below.

Slit/pull Technique

For a detailed discussion of the so-called slit/pull technique, in which two pieces of leather strips, or one that is folded over, are connected to each other by slits that are cut at regular intervals through which the leather is pulled repetitively and alternately, and more examples see Veldmeijer (2011b: 20-21). The technique is registered only ones (el-040, Cat. No. 80).

Decoration Techniques

Only few fragments show signs of decoration, such as the stamped motifs in el-127 (Cat. No. 39) and the appliqué work in the Persian material (Cat. No. 60-65); these will be discussed with the objects themselves. For a more general account on decoration in post-Pharaonic leather see Veldmeijer (2011c: 25-38; for decoration of Coptic footwear and its potential for helping in dating, see Smalley, 2012).

The Objects

Footwear

Sandals

For a discussion on leather eared sandals such as el-019 (Cat. No. 10) and el-077 (Cat. No. 22), see Veldmeijer (2011e; 2014: 50 [general introduction], 51-53; more on el-073, Cat. No. 19 below). Additional information on different but related eared sandals will be included in the discussion on the material from Gebel Adda (Veldmeijer, In Press d) but see also Veldmeijer (2012: 33-47). A detailed discussion on pre-straps integrally cut from the sole's leather (origin, development as well as the use in shoes, see Veldmeijer, 2009c: 240-242).

Most of Elephantine's sandals are of the large and varied group of sandals with independent pre-straps, *i.e.* a strip of leather is pulled transversely relative to the length through slits at either side in the insole (and sometimes through the midsole[s]) to which the back (and heel strap, if present) are secured (see Veldmeijer, 2014: 64 [general introduction]; *cf.* Veldmeijer & Ikram [and references therein], 2014: 36-52). For a discussion on the development of such pre-strap constructions (as opposed to pre-straps emerging from the side of the sandal) see Veldmeijer (2011c: 39-40). A start to classification was made (Veldmeijer, 2012: 47-49; Veldmeijer & Ikram, 2014: 53-54) but additional material already forces an update as well as reappraisal of the typology (Veldmeijer, In Press d). For a description and discussion of leather or string sewn sandals (el-030, Cat. No. 13) see Veldmeijer (2009f).

Several sandals deserve attention here. The shape of sandal El-004 (Cat. No. 4) is extraordinary: the front is diagonally square, with a clear indication of the big toe. The sides increase in width towards the front in different ways (smooth but distinct at the lateral side and more abrupt and less distinct at the, broken, medial side), resulting in a swayed sole. Sandal soles with straight edges are not common at all and currently no exact parallels to el-004 (Cat. No. 4) can be noted. Probably, given the repairs of the sole and the two different holes for the reception of the front strap, it is a result of some sort of adjustment (perhaps because the leather is re-used) or repair rather than an original design.

Notching of the front edge in sandals, as seen in el-045A-C (Cat. No. 14) and el-123 (Cat. No. 43), has been reported frequently and from various periods (Veldmeijer, 2012: 50-51 [Ottoman]; Veldmeijer & Ikram, 2014: 51-52 [Classic Christian 2 or later, *i.e.* > AD 1000]). Separating the big toe from the others in the sole is already seen in Pharaonic footwear³⁴: the so-called fibre composite

34 See the section 'The Persian Group' below about Kuckertz' observation regarding the separation of the big toe from the others.

sandals sometimes have a notched front as well (Veldmeijer, 2013c). This feature is largely limited to sandals, but one example of shoe has a comparable feature too (Veldmeijer, 2009a: 13-14). As explained elsewhere (Veldmeijer, 2009a: 17) “It is as yet unclear when the isolation of the big toe was seen first. This is partially due to the unclear dating of [fibre composite sandals]”. It is tempting to suggest that the isolation of the big toe led to the toe-shaped sandals (where all toes have been indicated in the sole by semi-circular cut-outs, see for a discussion Veldmeijer & Ikram, 2014: 28-30, including the examples published by Livingstone, 2011: 141; Montebault, 2000: 112-113; Winterbottom, 2001: 320³⁵) but thus far no evidence can be presented to either confirm or reject such a suggestion. The notched sandal from Elephantine is very well made and has a highly shaped sole, separating it from the comparative material. In all cases, the sandals have an independent pre-strap but the Elephantine sandal has not: here, the pre-strap was sandwiched between the sole layers and protruded from the sides, which is an earlier type of construction, probably introduced by the Romans (Veldmeijer, 2011c: 39).

Cladding of the integrally cut pre-strap, as is seen in el-073 (Cat. No. 19) is common in the so-called composite sandals (Veldmeijer, 2009d; 2014: 54-57) which are fairly fancy, well-made and expensive pieces. But it is also seen in an extraordinary sandal, probably from Middle Kingdom Meir (Veldmeijer, 2013b), suggesting that the technique is, if the date of the Meir sandals is correct, a fairly old one. Cladding of the pre-strap in the more simple eared sandals is very rare (Veldmeijer, 2011e: 2-3) and the Elephantine example is one of the few eared sandals thus far described with such a feature, the other examples being a sandal in the British Museum, London (EA 4377/8; Veldmeijer, 2011e: 5), a sandal from Amarna (ÄM AM 046c; Veldmeijer, 2011b: 62-64) and one from Dra Abu el-Naga (FN 1057; Veldmeijer, In Press a). However, also the pair of open shoes in the Egyptian Museum, Cairo (JE 48362/4; Veldmeijer, 2009c) has one integrally cut pre-strap (the one of the insole) that is clad but the pre-strap of the treadsole is left without. Another extraordinary feature of el-073 (Cat. No. 19) is the additional, unclad pre-strap, suggesting there were two attachment points at either side for the attachment of the back straps, probably in a comparable way as seen in an example of composite sandal in the British Museum, London (EA 4396, Veldmeijer, 2009d: 15-18). All examples of sandals with clad pre-straps date to the New Kingdom, which makes it highly probable that el-073 (Cat. No. 19) is New Kingdom as well. The general lack of dates for footwear, however, makes it for now impossible to narrow the date down more specifically.

Another important sandal from Elephantine is el-127 (Cat. No. 39). The sandal is important for its decoration rather than shape or technology: it is a sandal with an independent pre-strap (see the remarks about this category above). Although decorating footwear in post-Roman times became default, generally the impressed motifs are much more shallow (due to which it is often rubbed off by use) than seen in the Elephantine sandal and only or mainly on the sole rather than (also) on the straps. Moreover, the variety of motifs is fairly limited: zigzag, circles, lines and rosettes being the most often encountered ones. Some of the motifs seen here have not been registered before in sandals, but have parallels in some fragments of book covers from Deir el-Bachit. The double-X is seen in

35 More examples were found in Gebel Adda (Veldmeijer, In Press d).

book cover fragment DB 2196 (Veldmeijer, 2011c: 37, 153-156) although the motif is more elongated in the Elephantine sandal. The double diamond with a dot in the centre has also only a parallel in a Deir el-Bachit belt fragment (DB 2393, Veldmeijer, 2011c: 28, 166-167) but, as with the previous discussed motif, they differ in ratio length/height: the motif in the monastery book cover is more elongated. The extraordinary nature of these motifs makes one wonder if there is a relation. It is common knowledge that monks often produced leather products and this was also suggested for the monastery of Bachit (and which is only one of the places where leatherworking happened; see Veldmeijer, 2011c: 44-45). Could the Elephantine sandal have been made in the same workshop as the book cover and belt fragment from Deir el-Bachit?

Shoes

The stubbed-toe ankle shoes are discussed in detail by Veldmeijer (2013a). Additional discussion and comparison with the Elephantine shoe el-095D-F (Cat. No. 46) can be found in Veldmeijer (In Press a). The only complete turnshoe from Elephantine, el-074 (Cat. No. 49) can be classed as a Montebault's Classe IV, Type B, Variant 2 shoe (*cf.* Veldmeijer & Ikram, 2014: 81-84). On classification of turnshoes such as el-074 (Cat. No. 49) see Veldmeijer (2012: 74-75) whereas a discussion on various technological features, such as sole shape, sole seam and vamp/back part construction of such and comparable turnshoes can be found in subsequent pages (Veldmeijer, 2012: 75-87).

The Persian Group

Kuckertz (2006) divides the so-called Persian footwear in three types. Type I (Kuckertz No. 3; el-097B & C, Cat. No. 64; Kuckertz, 2006: 141) is the heel part of a so-called 'open shoe'. Kuckertz (2006: 143) mentions that *"Für alle drei Schuhtypen lassen sich im publizierten Material für Ägypten keine Parallelen finden. Geschlossene Lederschuhe sind für die pharaonische und spätantike Zeit relativ selten dokumentiert. Die gebräuchlichste Fußbekleidung waren Sandalen, entweder aus Leder oder aus Schilf und Bast."* Kuckertz has focused her identification, comparison, and discussion mainly on depictions of footwear. Here, the focus will be on the archaeological material: much research was published since the appearance of the study of the Elephantine Persian material by her,³⁶ revealing that open shoes were indeed a fairly common type in and outside Egypt, and a wide variety has been described, occurring in fibre (Veldmeijer, 2009e³⁷) as well as leather (Veldmeijer, 2009b, c), although the latter were far less common. The general layout of open shoes is clearly recognisable in all of these, but the exact shape of the upper, the extension of the upper towards the front, the height of the upper as well as details in the attachment of the upper to the sole, the finishing of the upper (presence/absence of an edge binding and if present, the shape and way it is secured) and whether or not it could be closed over the foot and if so, how,

36 Kuckertz (2006: 143-145) does mention several examples of closed shoes, but the referred publications are not much detailed, thus prohibiting detailed comparison, until the material was studied years later by the present author.

37 Another type of open shoe is post-Pharaonic (Veldmeijer, 2010). Although these have an upper that goes around the entire foot, the dorsal surface of the foot is still bare and the shoe is still held to the foot with a sandal-like strap complex.

may differ. In all cases described, however, there is a sandal-like strap complex which includes a front strap and back straps. The straps, however, are sometimes combined with a drawstring³⁸ that is pulled through slits in the upper, which might have led, eventually, to laces proper (Veldmeijer, Forthcoming). There is an important difference with the open shoes as for example seen in the imagery from Persepolis (522-486 BC; Kuckertz, 2006: 149, fig. 25) or from reliefs of the time of Ashurbanipal (British Museum, London, *e.g.* 124918, c. 645-640 BC). Here, bands over the foot and the toe was used, a system that was not known in Pharaonic Egypt but for one exception: the open shoes from the tomb of Tutankhamun (Veldmeijer, 2011a: 109-138).

An interesting observation on the open shoes we know from Pharaonic Egypt is that in most cases, the upper is added to a sole that would have been recognised as a sandal if it did not have the upper. The occurrence of open shoes outside Egypt, more specifically Asia Minor, have led to the suggestion that this type of footwear was introduced in Egypt by these foreign visitors, probably in the Middle Kingdom or even before, as were so many other technologies and innovations. The Egyptians took over the idea of an open shoe but refused to take over the foreign layout of the straps and combined it with their own straps which they predominantly used in sandals: a front strap, attached to a back strap and no foot strap or toe band (terminology after Veldmeijer, 2011a: 267, 269 respectively). The coil that worked as a spacer in the straps of el-097B (Cat. No. 64), which might have been adjustable (Kuckertz, 2006: 141), is often seen in Coptic leather footwear, though comparable coils were also used in fibre sandals (including those of possible earlier date) and shoes alike. For a detailed discussion see Veldmeijer (2011c: 22-25).

The slits in upper el-097B (Cat. No. 64) suggest it was secured to the sole with leather or rawhide thong, as is the case with the other Persian footwear. This differs from the leather open shoes we have from other places in that the open shoe in the Egyptian Museum, Cairo (JE 48362/3; Veldmeijer, 2009c) is stitched with sinew and the example in the British Museum, London (EA 4391; Veldmeijer, 2009b) is stitched with flax thread; in both, the seam was closed with whip stitching. The seam in these Egyptian examples of open shoes³⁹ are much more complex than the simple seam seen in el-097B (Cat. No. 64) and the other Persian material, where the layers are simply stitched at the outside without separate strips or protection. In this, the seam is much more comparable to the seam in a pair of shoes from the Ptolemaic layers in the temple of Amenhotep II (116/117; Veldmeijer, 2011d: 321-326, 330), except that the seams in the Persian material is closed by looping rather than with running stitching, as is seen in one of the Ptolemaic examples (No. 116/7). Interestingly, this seam in 116/7 is a repair as the shoe must have had an entirely different type of seam originally (*cf.* Veldmeijer, 2011d: 326-330). This repair seam is closed with rawhide thong rather than leather. Although rawhide thong is, in some cases, used in stubbed-toe ankle shoes (Veldmeijer, 2013a; see also above), which also have leather or rawhide sewn sole/upper constructions outside of the shoe proper, the use of rawhide for this purpose is rare. The sole/

38 With a 'drawstring' is meant a string that is woven through the upper (see Grew & De Neergaard, 1988) and not the 'laces', which were used to tie a shoe in order to close it and keep it to the foot.

39 This is also true for the partial leather open shoes from the tomb of Tutankhamun (Veldmeijer, 2011a: 109-138), which are in terms of sole/upper construction much more comparable to EA 4381 and JE 48362/3.

upper construction of stubbed-toe ankle shoes can be closed with running stitches, but in several, including the shoe from Elephantine (el-095D-F, Cat. No. 46), it is closed by looping, the same technique as seen in the Persian footwear. The use of loose pieces of leather between sole layers is sometimes seen in post-Pharaonic footwear (Pers. Obs. Fustat material) but it seems here an occasional feature rather than a default, in contrast to the Persian material.

Other closed shoes from Pharaonic times, curled-toe ankle shoes, are entirely different from the Persian closed shoes, as these are brightly coloured, different in shape (including a large leather curl at the front that curls back towards the instep) and in manufacturing technology. The complicated sole/upper constructions are usually sewn with flax thread (and in one case with sinew) and often include separate elements to reinforce the seam. Although the seam is situated at the outside as well, it is less bulky than the clear ridge seen in the construction of the Persian material and their comperanda.

The upper of the open shoe, el-097B (Cat. No. 64) has a thin lining, which is sewn inside the thicker outer layer. Lining has been identified in the open shoe in the Egyptian Museum, Cairo as well and other open shoes with an upper of more than one layer are the examples from the tomb of Tutankhamun, but these uppers are made of different materials (beadwork on leather). However, there is one exception: in Carter's number 270a (Veldmeijer, 2011a: 130-138) the inner and outer layer of the upper are both made from leather, but the outer layers consists of an elaborate open work design. Also curled-toe ankle shoes might have lining, but a lining is not identified in stubbed-toe ankle shoes. Kuckertz's Type III (2006: 142-143) includes the examples with the appliqué and drawstring.

Appliqué in Pharaonic shoes is seen in the curled-toe ankle shoes (Van Driel-Murray, 2000: 315; Montembault, 2000: 204-205; Veldmeijer, 2009a): large drop-shaped appliqué in various layers are added to the sides and back of the upper, but despite the fact that appliqué is a common decoration technique in leatherwork in these times, these are the only examples in shoes: the stubbed-toe ankle shoes are without appliqué work (Veldmeijer, 2013a). In Egypt, appliqué in footwear becomes far more common in post-Roman times (Smalley, 2012; Veldmeijer & Ikram, 2014) and the Persian group is in this respect rather special. Most of the appliqués, however, are functional but they certainly enhance the appearance of the shoe as well (as opposed to the appliqué in the curled-toe ankle shoes which are solely for decoration and/or to hide seams): the closing system is one example, the appliqué at the start of the instep to reinforce it and prevent it from tearing too easily, is another. Only the two appliqués at the back of shoe el-097R (Cat. No. 64) do not seem to have a technological function. At either side is an appliqué, inserted in the sole/upper construction, which makes the toggle closure over the instep. Assuming it is a left shoe (Kuckertz, 2006: 131), the medial appliqué ends in a toggle; the end of the lateral appliqué has a hole for the reception of the toggle (so-called 'toggle-hole straps'⁴⁰). Comparable toggle closures is seen in the Ptolemaic footwear found in the temple of Amenhotep II (Veldmeijer, 2011d), but these toggles are simply overhand knots tied in the ends rather than the toggles that were made for the Elephantine shoe. The discussion published

40 The definition by Goubitz *et al.* (2001: 323): "a short strap on the medial side of the fastening opening with a slit hole in it corresponding to a toggle on the lateral side." Note that the fastening in el-097R (Cat. No. 64) is the other way around: the toggle-hole strap is situated on the lateral side and the tailed toggle on the medial side, which is the same as in the Ptolemaic shoes.

elsewhere (Veldmeijer, 2011d: 333) should be consulted for more information on toggle closures in time.⁴¹ Note that the author mentions (Veldmeijer, 2011d: 333) that “the Persian shoes from Elephantine have toggle closures, but as part of a more elaborate closure system” but as is shown in the present work, this is not the case: the drawstrings have no function in the closing system.

The drawstrings in Type III shoes are decorative only and have no function in closing the shoe. For a description of the ‘drawstring variant’ of stubbed-toe ankle shoes, see Veldmeijer (2013a); for a comparison and discussion of the various types of shoes with drawstring, see Veldmeijer (2011d: 332) and especially Veldmeijer (2013a: 69-72).⁴²

The upper of the closed shoes from the Persian group consists, as far as we can tell from the often fragmentary remains, of one piece, which is closed with a back seam. Although only the stitch holes are left in el-097O (Cat. No. 64) the impressions and size of the stitch holes suggests a comparable back seam as seen in el-097R (Cat. No. 64). Only in the case of el-097R (Cat. No. 74), which is the complete back part of a shoe, there is definite evidence of this detail. Surprisingly, the back seam is closed with sailor stitches executed in coarse leather thong, which does not seem to fit with the overall high craftsmanship of the piece. However, the seam was not meant to be seen, perhaps explaining the coarse work, since a small piece of leather would have covered it. This piece of leather, in its turn, is nicely sewn to the upper’s leather. This feature is certainly unique but not the only example of such practice as in the curled-toe ankle shoes (Montembault, 2000: 204-205; Veldmeijer, 2009a), the large appliqué at the back had the same purpose: cover the back seam. But the back seam in these Pharaonic shoes were equally well made as the rest of the seams as opposed to the practice in the Persian shoes.

The centre of the front instep edge in el-059B/el-097S (Cat. No. 62) is straight and the upper has not been enhanced. As explained in the catalogue, the ‘notch’ mentioned by Kuckertz (2006: 123, 142) is not a deliberate notch but rather a damaged area. This, however, has no consequences for the typology, but does have its consequences for her discussion. From the perspective of the cutting pattern of the shoes, Type II shoes compare well with Montembault’s Category IV (Montembault, 2000: 145-175, but esp. type A within this category; *cf.* Veldmeijer, 2012: 88-94): one piece closed with a back seam. But in appearance, the differences are large, especially by the lack of any decoration in the Elephantine examples and, with respect to the Ottoman shoes from Qasr Ibrim, their shape (the Ottoman shoes have large extensions). Note, of course, that there is a huge time gap between the Elephantine material and the Ottoman footwear but in the current typologies these can still be classed into same categories. The Elephantine Type II look much more like Category XII shoes (and more specifically type A, variant 1 & 2, Veldmeijer, 2012: 95-98), an added category to Montembault’s typology (Veldmeijer, 2012: 95), even though the upper consists of several elements and the shoes are turnshoes, with different ways of closing the seam between the upper and soles. Veldmeijer (2012: 159) mentions that shoes with an upper made

41 Although, as explained elsewhere (Veldmeijer, 2011d: 333), toggle closures in footwear is rare, toggles itself are not (in chariot leather for example Veldmeijer & Ikram, 2012: fig. 4).

42 The origin and development of drawstrings, and their relationship with laces will be discussed in the final archaeological analysis of the AEFPP (Veldmeijer, Forthcoming).

of a single piece and closed with a back seam⁴³ were rather popular in Christian times (Montembault, 2000: 144-147, 151, 158-162, 172, 176-183; Veldmeijer, In Press c; Dzierzbicka, 2008: 265-266) but the appearance can, despite the simple cutting pattern, vary quite distinctly (*e.g.* Veldmeijer, 2012: 158-159). Note that the stubbed-toe ankle shoes (Van Driel-Murray, 2000: 316; Veldmeijer, 2013a) have one-piece uppers with back seam as well. Kuckertz' Type III are perhaps the most interesting. Kuckertz (2006: 142) mentions that "*Auch bei diesem Typ eines geschlossenen Schuhs besteht das Oberleder aus einem einzigen Lederstück*" but this is not true: at the instep the medial and lateral sides are elongated with triangular-like inserts,⁴⁴ which can be seen as flaps.⁴⁵ These were pulled over the instep and each other and kept in place by the toggle-hole straps. Flaps to cover the instep (partially) are also seen in curled-toe ankle shoes (Van Driel-Murray, 2000: 314-316; Montembault, 2000: 204-205; Veldmeijer, 2009a) but not seen in any other footwear to the best of my knowledge,⁴⁶ and is thus a unique feature.

Thus, the Persian footwear, especially Type III, is distinct from ancient Egyptian footwear but finds parallels in some of the details. The group as a whole shows a remarkable similarity in technology. One extraordinary piece of footwear, however, differs from the rest in its appearance, though less in its technology. It is, therefore, tentatively classified as Persian, suggesting a relationship, despite the different provenance and the improbability that the layers from which it was excavated was somehow disturbed (Pers. Com. C. von Pilgrim). El-057 (Cat. No. 65) is probably a slipper (the only one within this group) and differs in shape of the sole to the other Persian footwear: it tapers and is elongated in contrast to the much more distinctly shaped soles of the other Persian finds. Moreover, there is evidence that it was coloured; although colours are prone to fading over the years, there is no indication that any of the leather in other Persian footwear was coloured. The most intriguing detail of el-057 (Cat. No. 65) is, however, the upper, of which only fragments have survived. The thin layer is decoratively sewn with extremely narrow leather thong. A pattern is suggested by the curvature of the rows, but too little is preserved to identify the original design. Such decoration has no parallel in footwear or other leatherwork known thus far. Slightly comparable might be the decorative sewing in a unique sandal type from Fustat but it is wider, even more delicate and made with a material that has yet to be identified (Veldmeijer, In Press b).

Besides this detail, within the three types of footwear,⁴⁷ and the features mentioned by Kuckertz (2006: 141-143), there is an interesting difference in detail, despite the fact that all footwear is fairly similar in technology. The hart-

43 Thus not to be confused with shoes in which the uppers and soles are all made from a single piece of leather or skin, without any seam, known from *e.g.* Qasr Ibrim (cam-3709) or the extraordinary one-piece-shoes from Fustat, which have an insole sewn in (the analysis of the footwear is in progress, but see for an example Veldmeijer, In Press b).

44 This can still be seen in el-059A (Cat. No. 62) although the lateral one seems to have broken off, and in el-097R (Cat. No. 64). In the other shoes from this Type the insert itself is not preserved but its presence is suggested by stitch holes and the overall similarity of the design of the shoes (such as the appliqué).

45 Not to be confused with the tongue in shoes.

46 The lateral instep strap in Carter's number 021k & l, an highly embellished open shoe from the tomb of Tutankhamun (Veldmeijer, 2011a: 121-130) goes over the instep as well and connects to another, medial element. But since these are open, they do not provide any protection of the dorsal of the foot.

47 Kuckertz did not include el-057 (Cat. No. 65).

shaped reinforcement appliqué at the front of the instep is secured with running stitches of leather thong in el-059A (Cat. No. 62) whereas the same appliqué is secured with running stitches of flax thread in el-097R (Cat. No. 64). In el-097D (Cat. No. 64), however, the same reinforcement appliqué is secured with whip stitches of flax.

Bags and Other Containers

The leather from bags is often not recognisable, especially when the leather fragments originate from the body of the bag and are without features such as edges and handles. A discussion of bags and containers, including the Elephantine material such as el-096 (Cat. No. 70) as *comperanda*, is presented elsewhere (Veldmeijer, *In Press a*; but see also Veldmeijer, 2011c: 44).

Belts, Straps, Cordage etc.

See the discussion in Veldmeijer (*In Press a*; 2011c: 43-44).

Waste and Offcuts

See (Rose, 2012: 18; Veldmeijer, 2011c: 44-45; *cf.* Veldmeijer, 2012: 166).

Discussion

The quantity of the Elephantine leather finds is surprisingly low, although the fragmented state and overall rather bad condition suggests that the specific post-depositional condition was not favourable for preservation and that more leather must have been deposited over the years, but has not survived. The corpus did not add much new information to our knowledge on the technology of leatherwork, which is even true for the most important group of leather finds from settlement excavations. The dating of stubbed-toe ankle shoes could use some confirmation: the example from Elephantine is dated to the late Antique period, and thus sheds no new light on the dating of this type of shoe. The only other complete shoe finds have many parallels as well. The eared sandals are comparable to those described previously and also the examples of sandals that can be classed to the large category of sandals with independent pre-straps have many parallels. The same can be said for the leather reinforced plaited sandal. However, the importance of the finds from Elephantine lies elsewhere: it shows that eared sandals of recognisable Egyptian design were also worn this far south and add, therefore, to our understanding of the distribution of footwear types over Egypt. Note that, perhaps surprisingly, no uniquely Nubian sandals were identified, surprising for such a southern site. Moreover, the eared sandals confirm the earlier dating: they were already worn in Middle Kingdom times.

Moreover, the Elephantine leather finds does include a group of finds that are of utmost importance since these are the only preserved archaeological examples to date from the Persian era and this southern site.⁴⁸ The present work adds to the elaborate descriptions that were published several years ago and which were made on the basis of photographs only. Moreover, due to the number of publications that have appeared since the first descriptions of the material, a comparison with Egyptian shoes and leather manufacturing technology has become possible. The Persian footwear differs distinctly from the Pharaonic closed shoes known as curled-toe ankle shoes in cutting pattern, shape and overall technology and appearance (colour, decoration), clearly suggesting different traditions. The Persian tradition also differs distinctly from technology seen in leather open shoes. The use of leather thong in securing the upper find only a parallel in the stubbed-toe ankle shoe (and one repaired shoe from Ptolemaic date) but again a connection between them and the Persian footwear seems too far-fetched: the thick leather with lining, the elaborate and different kind of decoration (including aesthetic pleasing toggle-hole closing and the double flap, covering the instep) and the high level of craftsmanship (such as the regular and fine stitching and the finishing touch, of which the covering of the back seam is a good example) with elaborate cutting pattern clearly separates it from the more simple stubbed-toe ankle shoes. A feature that suggests a thorough knowledge of materials and experience is the use of different materials in assembling the various parts into a shoe: leather/rawhide thong for the sole/upper construction but flax thread for adding decoration. The choice must have been based on the stress that the material

48 The find from Assur, mentioned by Kuckertz (2006: 151) is slightly older.

would face. Although this seems a logical way of working, in earlier leatherwork usually one material (sinew) was used for both securing decoration as well as for the object's construction.⁴⁹ These distinct differences without parallels warrant an origin or tradition other than for the Egyptian footwear. Open shoes were much more common in ancient Egypt than closed shoes, leather and fibre alike. Open shoes were most probably introduced as early as the Middle Kingdom, if not before. However, the few examples of leather open shoes from ancient Egypt are clearly different from the Persian one in design and technology, which, as with the other footwear, warrant the identification of a different (Persian) origin.

It is unlikely that Elephantine had leather workshops, despite the suggestion that the Persian footwear might have been found in a shoemaker's workshop, based on the low number of offcuts and waste, and the lack of tools. However, the room could have belonged to a cobbler, *i.e.* a "person who repairs shoes and makes shoes from recycled leather" (Goubitz *et al.*, 2001: 318) instead,⁵⁰ but there is no evidence of (extensive) repair of the footwear and one would expect far more pieces of leather and discarded leather objects from which leather could be harvested for repair work. The suggestion that some of Type II footwear was left unfinished as an indication for a workshop seems invalid, as the material is in too bad a condition to be able to tell why the different elements were not connected (anymore?). Even if there was a production centre somewhere else on the island, one would expect to find far larger quantities of offcuts and waste, as is seen from Deir el Bachit, for example. Note that in modern-day Fustat (Cairo) the streets in the tanning area are littered with offcuts and waste and though it might be conceivable to suggest that, in Elephantine, these products might have ended up in the Nile, still the few examples do not point to large-scale production. Instead, the unique decoration of a sandal strap (el-127, Cat. No. 39) finds only a parallel in leatherwork from the Coptic monastery Deir el-Bachit in Luxor, possibly suggesting that perhaps this sandal was made by these monks and found its way for whatever reason to Elephantine.

49 A clear example for the use of different materials for adding decoration and in constructional seams (flax versus sinew thread) is seen in the so-called 'Tano chariot'. Other chariot leather did not show such a choice in materials and this choice in different materials was therefore one of the reasons to date the Tano leather to later times than the others (see *e.g.* Veldmeijer *et. al.*, 2013).

50 If in these ancient times the work of a shoemaker and cobbler were already separated, as we know it was in Medieval (European) times.

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The Catalogue

GUIDE TO THE CATALOGUE

Catalogue Number (Cat. No.): All finds have been given a catalogue entry number to facilitate the reader with searching through the corpus of finds.

Specialist Number (Spec. No.): All finds from a context have been given a specialist number and, if there are more than one fragments, are subdivided by letters. A prefix, el-, is used to identify the fragment as having been excavated from Elephantine. Thus, Specialist Number el-095 consists of six fragments, numbered A-F. However, in some cases, mainly if there are (numerous, small) featureless scraps, these were not subdivided.

Provenance: The exact location of the finds. The catalogue description gives the locus, whereas the full provenance description can be found in the table in the Appendix. In this table, the number pre-fixed with 'K' is the internal find number of the excavation (not always given). See Chapter "Provenance" by F. Arnold and C. von Pilgrim.

Date: The date of the material as provided for by the excavation or determined by the analysis of the leatherwork in the present work (marked with *).

Group: All finds within the context. The entry is only used when some of the sub-numbered fragments are described in another functional group. If so, this will be mentioned with 'Remarks'.

Measurements: If two measurements are separated by a hyphen, it indicates the smallest and largest size. Measurements of fragments of which

sides cannot be determined and hence no 'length' or 'width' can be recognised, are noted with 'x'. Usually, but not exclusively, these are featureless scraps. All measurements are in millimetres, unless stated otherwise. Abbreviations: D = diameter; H = height; L = length; T = thickness; W = width. Measurements are always as preserved, which means that in the case of incomplete specimens, this is not stated explicitly. However, if the heel is missing, the end of this side of the sandals is referred to as waist or back, depending where the heel was torn off. If a measurement is marked with *, it is taken from the photograph.

Skin Processing: As explained in Chapter "Analysis".

Remarks: Information about where to find the sub-numbered objects that are not described with other catalogue numbers (see explanation of Specialist Number) can be found here. Furthermore, one can find statements if the object is not illustrated or sub-numbered or if the entry includes not-described, featureless scraps. Occasionally, information of a different nature can be found here as well.

Description: All objects are described in detail. Since it is a description, no references are included: these can be found in part I, the scientific analysis. However, occasionally one can find references to text figures in order to guide the reader through the specialist's terminology. Indications of types of footwear are given (inf not, it means that no indication of type is possible): Eared = Egyptian Eared Sandal; Ind. Pre. = Independent Pre-Strap Sandal; Rein. = String/Leather Reinforced Plaited Sandal,

FOOTWEAR: SANDALS

CATALOGUE NUMBER 1

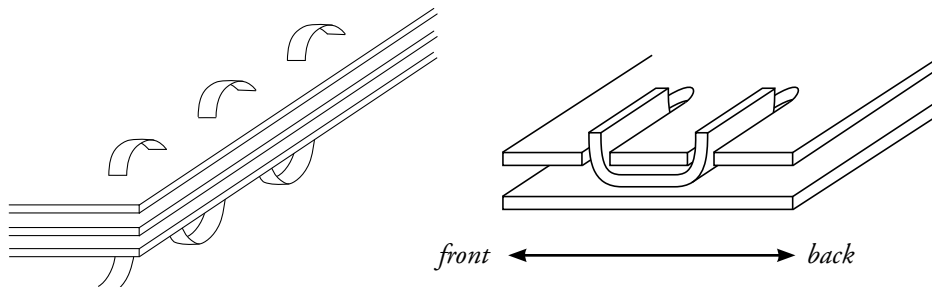
Spec. No. el-001;
Provenance Khnum Temple area, surface;
Date Post-Roman (after AD 395)*;
Object Partial sole;
Measurements W front: 81.6. W back: 47.5. L: 149.4. T total: 5.7. T insole: 1.8-2.3. T 'treadsole': 1.8-2.5. L anterior slit (taken at insole): 7.0. L posterior slit (taken at insole): 8.8. W stitches (average): 2.0. L stitches (average): 5.8. Distance between stitches (average): 6.5 (note there is a relatively large variation);

Skin Processing Vegetable tanned;

Description

The front part of a sandal, which is about three quarters of the original length. A straight sole, but the position of the front strap suggests that it was meant for the right foot. The front is rounded and distinctly wider than the waist. The lost heel must have also been wider than the waist, as the broken edges at the waist show the start of an increase in width. The sandal consist of two sole layers but this is probably not original: the 'treadsole' seems to have been the

original midsole, as remnants of leather (the true treadsole?) are still *in situ* in some of the stitches, especially in the middle rows (arrows). Part of the left front of the 'treadsole' is folded towards the ventral surface, showing the imprint of the front strap on the insole. The front strap does not go through the 'treadsole', but only penetrates the insole and is thus sandwiched between the sole layers. The front edge of the slit curls slightly upwards on the dorsal surface of the insole. Note the two lines at the sides of the strap (gray arrow). On the backside of the insole, a clear impression of the strap can be seen. The sole layers are secured with leather thong running stitches along the edge, as well as lengthwise down the centre with three rows, which follows the flaring of the front part. The stitches are small on the insole and slightly larger on the treadsole. On the insole, small impressed geometrical motifs follow the edge-stitching on the inside. On the waist are the remnants of impressed lines (double arrows). This suggests the insole was decorated but the complete design can no longer be established.



El-001. Left: Diagram of the running stitches (leather thong) and, right, of the construction of the front strap. The overviews of the sandal can be found on the following page.

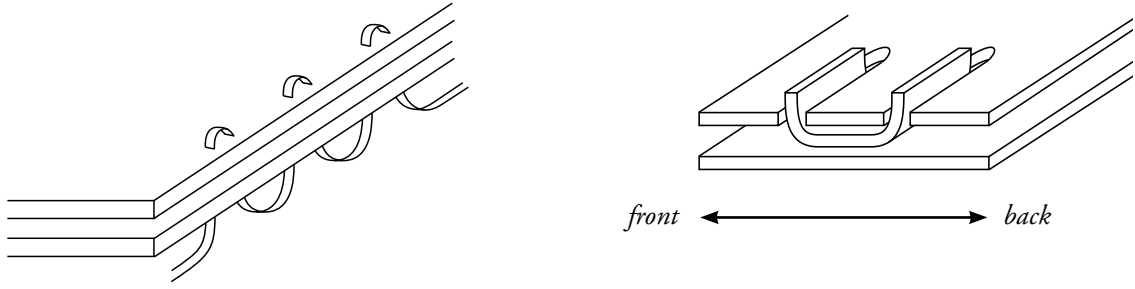


El-001. Ventral and dorsal view. The arrows are discussed in the text.

CATALOGUE NUMBER 2

Spec. No. el-002;
 Provenance West of Khnum Temple, House M12A, occupation layer in courtyard;
 Date 5th-6th c. AD;
 Object Partial sole;
 Measurements W front: 72.3. W back: 63.4. L: 132.2. T (average): 7.0. T insole: 1.9-2.5. T treadsole: 3.0-3.4. W anterior front strap slit (taken at treadsole): 7.3. Length posterior front strap slit (taken at treadsole): 8.0. W stitches (average): 2.5. L stitches (average): 5.5. Distance between stitches (average): 6.5;
 Skin Processing Vegetable tanned;
 Description Front part, slightly more than half, of a sandal, broken off at the waist. The square corner on one side (the other side is rounded) suggests a right sandal, supported by

the off-centre position of the front strap. Furthermore, a slight dent at the medial and front edge marks the big toe area. The sandal consists of an insole and treadsole; the treadsole is thicker than the insole. The sole layers are secured by means of five rows of widely-spaced running stitches of narrow leather thong extending lengthwise down the centre. These are placed in between two outer rows that follows the sandal's edge (and which are slightly wider and longer). Thus these also borders the centre rows at the front. Towards the heel, the width decreases, showing a (slightly?) constricted waist. The front strap, of which a small fragment is still *in situ*, is pulled through two slits, which are positioned transversely in the longitudinal plane. Parts of the (non-leather?) strap are still *in situ* in the slits. On the ventral surface of the treadsole, the front is repaired with a piece of leather, which is secured at the edges with coarse stitches. This piece of leather is also worn and, after it was cleaned of dirt, various small holes became visible. A crack is repaired with coarse stitches.



El-002. Left: Diagram of the stitching; Right: Diagram of the front strap construction.



El-002. Dorsal and ventral view. Note the two shallow indentations at the medial and front edge, indicating the big toe area.

CATALOGUE NUMBER 3

| | | |
|--------------|--|--|
| Spec. No. | el-003; | 3.3. L (average): 2.9 (taken at tread-sole). |
| Provenance | West of Khnum Temple, street layer; | Distance between stitches (average): 3.9; |
| Date | 5th-6th c. AD; | Skin Processing Vegetable tanned?; |
| Object | Partial sole; | Description |
| Measurements | W front: 49.7. W heel: 53.2. L: 73.6. T: 7.0. T insole: 3.1-3.5. T treadsole: 3.3. W stitches (average): | Heel, including largest part of the waist, of a small sandal, either for a woman or child. The rounded heel tapers towards the constricted waist. The sandal |

consists of an insole and treadsole, which are secured along the edge with leather thong running stitches. These appear small on the dorsal surface of the insole

and long on the ventral surface of the treadsole (all gone). The treadsole is worn and dirt adheres to it.

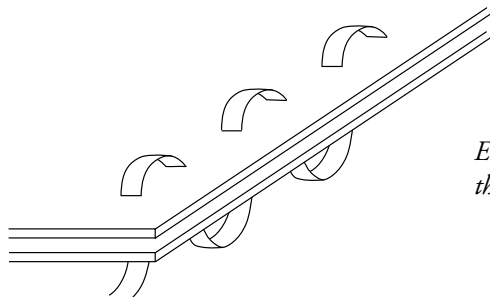


El-003. Left: Dorsal and ventral view. Right: Diagram of the stitching.

CATALOGUE NUMBER 4

Spec. No. el-004A, B;
 Provenance West of Khnum Temple, House M12A, occupation layer in courtyard;
 Date 5th-6th c. AD;
 Object Sole; Ind. Pre.;
 Measurements W front: 47.8-79.5. W waist: 47.7. W heel: 61.5. L front three quarters: 185.0. L heel: 71.5. L total: 243.0. T sole (average): 2.8. T repaired heel (average): 5.2. W anterior front strap slit (taken at treadsole): 6.3. W posterior front strap slit (taken at treadsole): 7.4. W stitches repair (average): 2.7. L stitches repair (average): 2.0-3.8. Distance between stitches: 3.0-6.5;
 Skin Processing A) Vegetable tanned?; B) Not vegetable tanned;
 Description Largely complete sandal consisting of a single sole layer. The sandal is broken in two at the beginning of the heel. The front is diagonally squared, with a

clear impression from the big toe. The width increases at the ball of the foot, after which it decreases in width towards the waist. The heel itself widens and is rounded. The medial front edge is incomplete. The front strap is inserted into two transversely positioned slits in the longitudinal plane. The anterior slit is smaller than the posterior one, but the latter is torn. Slightly behind the slits, an area of wear can be seen. A little more than halfway along the length of the sandal, well before the heel, a repair is sewn on with coarse stitches on the inside, surprisingly on the dorsal surface of the insole. On the detached heel this repair is only partially preserved, but the stitching along the edge suggests that the additional layer covered it entirely. The ventral surface shows the original strap construction before it was repaired. It shows a slit on either side for the reception of the pre-strap, the imprint of which can still be seen. The repair was done after the strap was taken out and the slits sewn tight. The thickness of the leather seems to have been seriously reduced at this part of the strap. It seems likely that it has been impressed by the force exerted on it and the strap running through it.



El-004. Top: Dorsal and ventral view; Left: Diagram of the stitching of the repair.

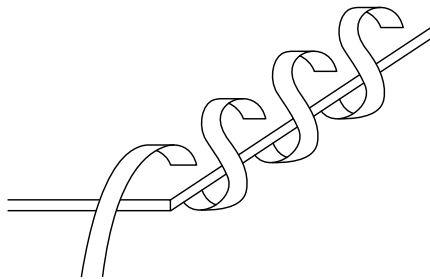
CATALOGUE NUMBER 5

| | |
|-----------------|--|
| Spec. No. | el-005; |
| Provenance | Domestic quarter south of Khnum Temple, House 34; |
| Date | 18th Dynasty; |
| Object | Near complete sandal; |
| Measurements | W front: 63.2. W (minimal, reconstructed): 62.0. W heel (reconstructed): 65.0. L: 146.2. L (reconstructed): 155. T: 5.1. T insole: 0.9. T midsole/treadsole: 0.9. Slit and remnants strap: 4.6 x 3.0. W stitches: 2.5-5.7. L: 11.0-20.3. Distance between stitches: 14.1-16.5; |
| Skin Processing | Not vegetable tanned; |
| Remarks | With the sandal are four small pieces, two possible pieces of stitches and two parts of the sole layers. One of the latter contains an inserted 'strip'; |

Description

Near-complete sandal, but missing part of the heel's edge. The sole layers have many cracks and show some repairs, mainly in the treadsole. The edge in the waist area of the treadsole is torn off. The layers are significantly cracked and repaired. The straight sole has rounded corners at the front, but the anterior edge is straight. The width is nearly consistent throughout, but it shows a slight curvature in medial direction. The sandal, small in size (child?), consists of three sole layers. The insole is a separate layer, whereas the

mid- and treadsole consist of one piece of leather that is folded at the toe: this is an extraordinary feature, not noted before in sandals except for one example (S.14043) housed in Museo Egizio Turin (Veldmeijer, 2011e: 4-5). The three layers are secured with very coarse, widely-spaced stitches along the edge of the sandal. On the medial side, the insole shows a seam, made with leather thong whip stitches. As this seam appears to have no purpose at all, and is not present at the other side, it is likely a re-used piece of leather, cut in shape and without any effort having been made to cut off the seam. If this is true, the current insole is a repair of the mid- and treadsole. The off centre position of the slit for the reception of the front strap, with part of the strap still *in situ*, indicates the orientation (left sandal). The front strap is secured at the ventral surface of the treadsole by means of a roughly square piece of leather (15.0 x 17.0, arrow in the figure), a so-called 'button'. At the beginning of the heel, a relatively thick strip of leather sticks out, which is the pre-strap. Its dorsal end is thickened and contains a slit for the reception of the back strap (and possibly a heel strap). The pre-strap runs under the ventral surface of the treadsole and would have been pulled through a hole at the lateral side of the sandal, now lost. Since comparable straps are unknown, and independent pre-straps pulled through slits in the sole are not known from Pharaonic times, this is without a doubt not an original pre-strap but rather a make-shift one, as is the case with the entire sandal.



El-005. Diagram of the whip stitches (leather thong) along one edge of the insole. The overviews of the sandal can be found on the following page.



El-005. Dorsal and ventral view. The arrow points to the button that prevents the front strap from slipping through the slit.

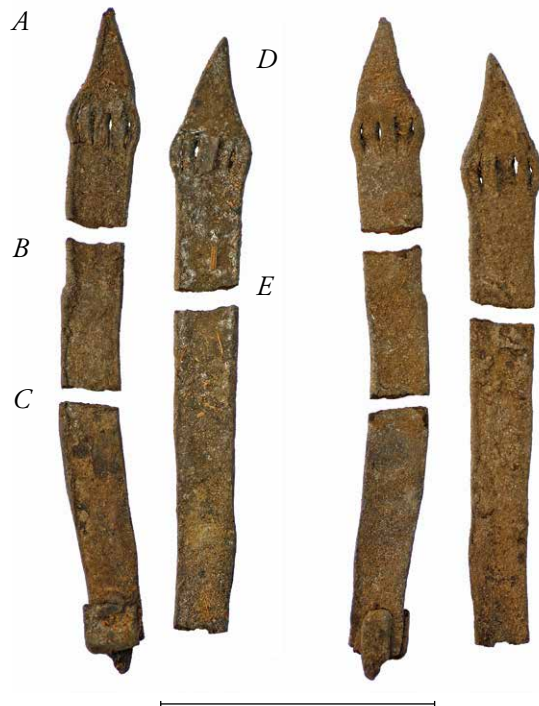
CATALOGUE NUMBER 6

Spec. No. el-007A-E;
 Provenance West of Khnum Temple, House M13, occupation layer;
 Date 6th-7th c. AD;
 Object Pre-strap(?);
 Measurements A) L: 45.5. W: 9.3-11.0. T: 2.0. B) L: 27.2. W: 10.8. T: 2.0. C) L: 39.4. W: 11.6 (13.6 maximal). T: 2.0. D) L: 58.8. W: 9.8-11.7. T: 2.0. E) L: 46.2. W: 11.9 (14.8 maximal);

Skin Processing A) Vegetable tanned?;

Description

In total, five pieces of strap, reconstructed into two almost complete straps. The small strips taper to a point after a short, but distinct increase in width, in which five slits are cut lengthwise. The increase in width here is probably due to the back (and heel?) strap being secured to it (both of which are now lost). The most complete strap, consisting of parts A-C, is composed of a double layer at the opposite end, through which a smaller strap has been pulled.



El-007. Straps A-C and D-E. Recto and verso.

CATALOGUE NUMBER 7

| | |
|-----------------|-------------------------------------|
| Spec. No. | el-010; |
| Provenance | West of Khnum Temple, street layer; |
| Date | 9th c. AD; |
| Object | Part of a strap (?); |
| Measurements | L: 64.3. W: 29.0; |
| Skin Processing | Vegetable tanned?; |
| Description | |

A fragment with one square transverse end (torn off); the other is intact and rounded, but not symmetrically. No identification is possible, since there are no slits to secure other straps to the piece or to secure it to something else.



El-007. Obverse and reverse

CATALOGUE NUMBER 8

| | |
|-----------------|---|
| Spec. No. | el-013A-E; |
| Provenance | West of Khnum Temple, street layer in front of House M21; |
| Date | 5th-6th c. AD; |
| Object | Sole fragments; |
| Measurements | A) 15.8 x 32.6. B) 37.4 x 53.4. C) 40.7 x 50.0. D) L: 145.0. W (maximal): 60.5. W (minimal): 30.4. T: 1.7-3.1. E) L: 138.0. W heel: 48.0. T: 1.8; |
| Skin Processing | C) Vegetable tanned; |
| Description | |

A) Small fragment, roughly rectangular, without any edges. There is one empty stitch hole (slit) and one stitch consisting of a small leather thong;

B) Fragment with rounded point (slightly curled), which is an edge. There are three empty stitch holes and several with small leather thong running stitches *in situ*;

C) Small fragment, roughly square and slightly curled; one side is an edge. Small stitch holes with remnants of leather thong stitches *in situ* are still visible;

D) Roughly rectangular piece of sole. About three quarters of the width is preserved. At the front, however, the remaining width is preserved for only about a third. Stitch holes (slits) with remnants of leather thong stitches are visible at the edge. Stitches are still intact on one surface. There are a few repair stitches across at the front;

E) An enigmatic piece, which is folded. Because the leather is very hard and brittle it could not be unfolded. One side seems original; the edge is nicely cut. The other edge has a simple edge binding (arrow), consisting of a strap of leather that is folded around. Because of the absence of stitching, it is possible that it was glued. On this side, at one end, a rounded extension with stitch holes arranged in a circle can be seen. On the other side, the extension is more triangular in shape. Here, small slits are cut, in which remnants of leather thong are still *in situ*. The shape and the random placements of the slits suggest they are secondary: possibly a rounded extension, comparable to the one on the other side, was torn off and repaired with the leather thong. How this fragment relates to the other remnants remains uncertain; perhaps this was a sole, but the absence of a hole for the front strap suggests a function in a shoe rather than a sandal. This is further suggested by the edge binding (arrow).



El-013A. Obverse and reverse. Scale bar is 10 mm.

EL-013B. Far left: Ventral and dorsal view.
Left: EL-13C. Obverse and reverse.

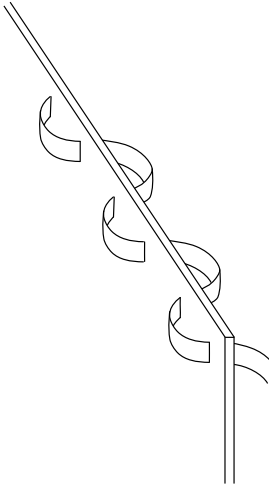


Diagram of the running stitching seen in some of the fragments.



EL-013E. Obverse and reverse.

EL-013D. Ventral and dorsal view.

CATALOGUE NUMBER 9

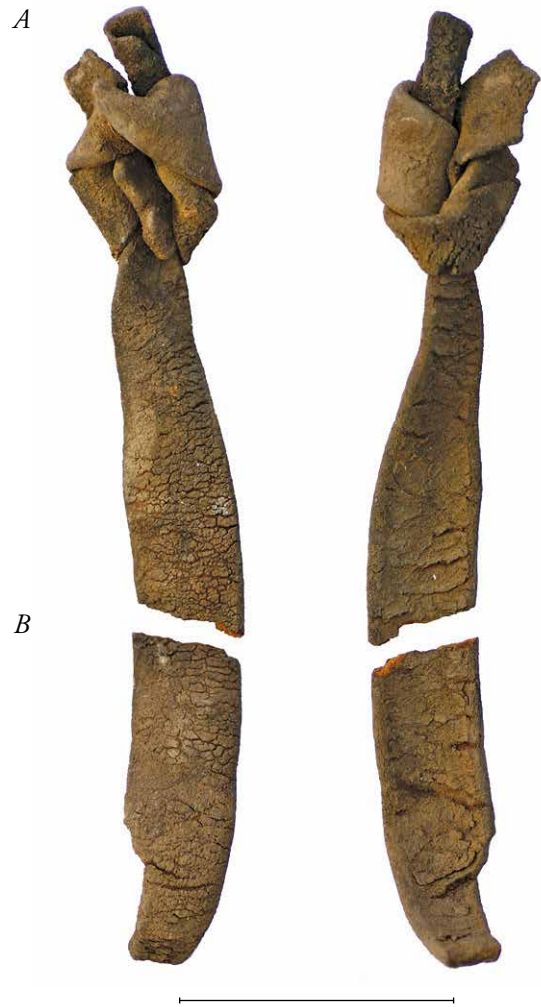
Spec. No. el-015A-C, F, G;
 Group el-015A-G;
 Provenance Khnum Temple, fill of robbed foundation of southern colonnade;
 Date 7th-9th c. AD;
 Object Sole and strap fragments;
 Measurements A) L: 115.0. W (maximal): 20.5. W (minimal): 14.7. T: 3.2. B) L: 70.0. W (maximal): 20.4. W (minimal): 11.9. T: 3.4. C) 35.6 x 37.6. T (total): 4.9. F) 19.6 x 36.8. T: 2.2. G) 40.4 x 24.6. T: 2.2;
 Skin Processing Vegetable tanned?;
 Remarks F) and G) not illustrated; D) and E) See 'Shoes' (Cat. No. 49);

Description

A, B) These two fragments form a strap of sturdy, rather thick leather. Fragment B decreases in width rapidly, but lacks the very tip. Fragment A terminates in a reef knot;

C) Small fragment of sole consisting of two layers of leather, which are secured at the edge with small leather thong running stitches. On one side, there are small vertical incised slits, which do not go through the entire thickness: these are decorative. The attached layer is thinner;

F, G) Featureless scraps.



El-015A, C. Obverse and reverse.



El-015C. Dorsal and ventral view. Note the impressed line decoration on the dorsal surface.

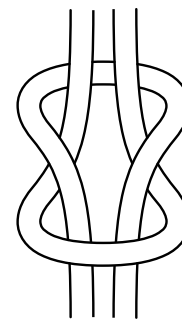


Diagram of the reef knot.

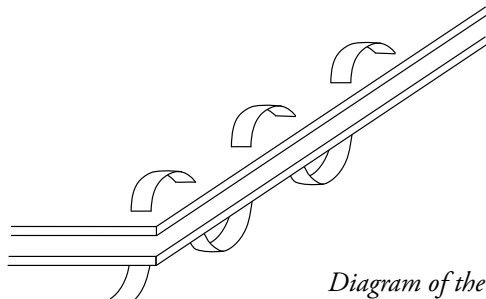


Diagram of the running stitches.

CATALOGUE NUMBER 10

Spec. No. el-019A-G;
 Provenance Domestic quarter beside townwall,
 House 79;
 Date 12th Dynasty;
 Object Near complete sole; Eared;
 Measurements A) 79.9 x 72.7. T: 1.5. B) 116.0
 x 78.1. C) 61.3 x 55.2. D) 35.1
 x 42.2. E) 41.6 x 46.4. F) 36.9 x
 38.3. G) 35.3 x 56.2. L total: 280.0.
 W front: app. 103.8. W waist: app.
 67.5. W heel: 71.3;

Skin Processing A) Vegetable tanned?;

Description

Seven fragments forming an almost complete, fairly large but thin sole. The sandal lacks the strap complex. It has a rounded heel, with a distinctly constricted waist. Towards the front it increases in width obtaining the largest measurements at the ball of the foot and ending in a rounded front edge. The front part is incomplete, thus no information could be obtained about the front strap. Except for G, all of the other fragments fit together.



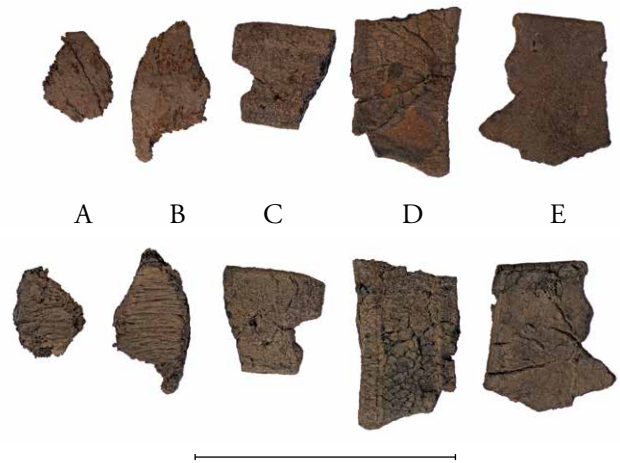
El-019A-G. Near complete sole in dorsal and ventral view.

CATALOGUE NUMBER 11

Spec. No. el-026A-E;
 Provenance South of Khnum Temple, street north of House K26;
 Date 5th-6th c. AD;
 Object Strap fragments;
 Measurements A) 17.3 x 13.6. B) 15.0 x 27.8. C) 20.3 x 19.5. D) 20.3 x 31.5. E) 29.3 x 25.2. T (average): 3.3;
 Skin Processing D) Not vegetable tanned; E) vegetable tanned?;

Description

Five small fragments. Fragments C & D have straight edges, suggesting these may be pieces of a strap; as they have the same width they might originate from the same strap (sandal?). Fragment E has one straight edge with a leather thong stitch close to it.



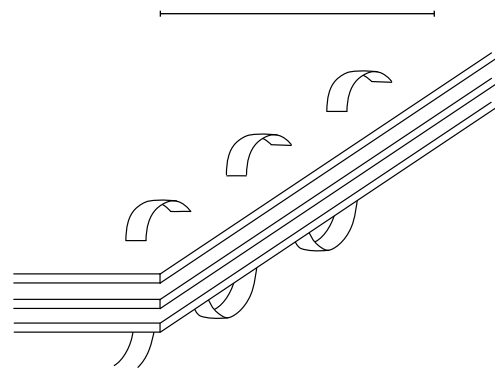
El-026A-E. Obverse and reverse.

CATALOGUE NUMBER 12

Spec. No. el-027;
 Provenance West of Khnum Temple, street beside House M13;
 Date 7th c. AD;
 Object Sole fragment?;
 Measurements L: 54.8. W maximal: 58.0. T: 9.9;
 Skin Processing Not vegetable tanned;

Description

Small fragment, possibly of the sole of a children's sandal. Three layers are secured with small running stitches made of leather thong at the edge, as well as two rows lengthwise down the centre. All stitches are broken. The edges of one of the outer layers are complete, allowing the measurement of the original width, which is rather small. All the other layers are broken except for a very small (about two mm) fragment of the other outer layer, suggesting it was of the same width. It is clear that the middle layer extended further beyond the width of the others: possibly this was the (pre-)strap, suggested by the limited width (about 17 mm).



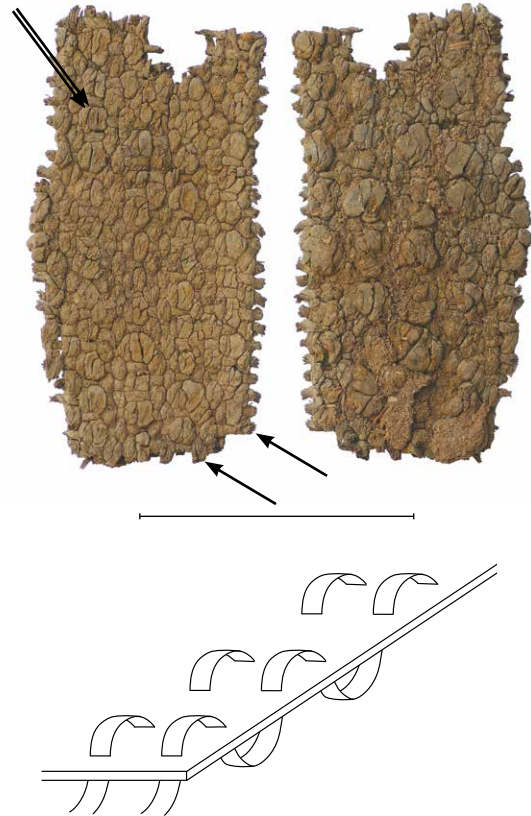
El-027. Top: Dorsal and ventral view; Bottom: Diagram of the stitching.

CATALOGUE NUMBER 13

Spec. No. el-030A, B;
 Provenance West of Khnum Temple, street layer in front of House M14;
 Date 5th-6th c. AD;
 Object Sole fragment; Reinf.
 Measurements A) 27.0 x 40.0. B) 43.0 x 84.0. Fabric: D warp and weft: 1.8. T total: 6.0. W thong: 3.2;
 Skin Processing Not tested

Description

One small (A) and one (B) big piece of vegetal material sandal sole, in which leather thongs have been sewn (double arrow) for reinforcement. The fragments are badly preserved and some of the leather thongs are worn through, so that only the two vertical elements survive. The fibre fabric is woven 'over 1, under 1' (warp and weft are indicated by arrows) and very fine. No edges are preserved. It is most probably made of palm leaf.



El-030B. Top right: Dorsal and ventral view; Right: Diagram of the reinforcement sewing with leather thong.

CATALOGUE NUMBER 14

Spec. No. el-045A-E;
 Provenance South of Khnum Temple, House K20, occupation layer in eastern court;
 Date 5th-6th c. AD;
 Object Sole fragments; A-C) Complete sole;
 Measurements A) 42.5 x 40.9. B) 77.5 x 65.5. C) 48.9 & 40.0 x 88.7. W front: 65.5. W waist: 36.1. W heel: 40.1; L: 175.0. T one sole: 3.8. T both soles: 6.9. D) L: 120.0. W (minimal): 55.6. W (maximal): 70.8. T: 6.3. W stitches: 3.0. E) 23.6 x 26.0;

Skin Processing D) Vegetable tanned; A-C, E) Possibly vegetable tanned;
 Remarks Fragile;

Description

Five pieces from two different sandals.
 A-C) A sole for the right foot. The heel is rounded and the waist modestly constricted. From here, however, the width increases distinctly but not symmetrically: the lateral side is more convex than the medial edge, resulting in a swayed sole. Fragment C represents about three quarters of the length of the sandal. It has several leather thong stitches along its edge and lengthwise down the centre, but not exactly in rows. The dorsal surface seems to be enhanced, but

Next page: El-045A-C. Top: Dorsal and ventral view. Note the indented front. The arrow points to a remnant of a reinforcement of the heel.

Next page: El-045D. Bottom. Dorsal and ventral view.

A

B

C

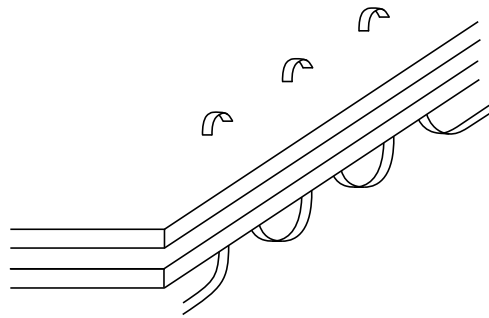


D



the technique(s) and design can no longer be established: it is now barely visible anymore. The ventral surface still shows a small piece of the treadsole in place (arrow). Since this layer was only secured at the back half of the sandal, it seems to be a reinforcement of the heel of the original single layer sole; there are no signs of extensive repair thus it is unlikely that the addition of the layer was meant as a repair. The pointed toe has an indentation, situated almost at the centre, which accentuates the big toe area. A small slit, just before the indent, indicates the attachment of the front strap. There is no indication of pre and/ or back straps;

D-E) Remnants of a sole that consists of an in- and treadsole. The two layers are secured with four rows of leather thong stitches: one row at either side along the edge and two lengthwise down the centre. The fragment is rectangular, but one side seems to taper (but the width might be incomplete).



El-045D-E. Diagram of the stitching.



El-045E. Dorsal and ventral view

CATALOGUE NUMBER 15

| | |
|-----------------|---|
| Spec. No. | el-060A-Q; |
| Provenance | Old Kingdom - Middle Kingdom cemetery, Tomb NE 35; |
| Date | Late Antique*; |
| Object | Sole fragments; |
| Measurements | A) 74.5 x 84.0. T: 5.7. B) 60.0 x 90.0. T: 3.3. C) 68.5 x 71.5. T: 3.6. D) 35.0 x 53.5. E) 34.0 x 51.0. F) 29.5 x 42.0. G) 21.5 x 28.0. H) 29.5 x 54.5. I) 36.0 x 46.0. J) 23.5 x 31.5. K) 17.5 x 23.0. L) 21.5 x 28.5. M) 17.0 x 25.0. N) 42.0 x 42.0. O) 26.0 x 26.5. P) 28.0 x 40.0. Q) 20.5 x 24.5; |
| Skin Processing | O) Not vegetable tanned; |
| Remarks | Only the fragments with features are numbered. There are several small scraps. Hard and very brittle leather; |

Description

The description is general and focuses on the three biggest fragments A-C. Due to the fragmentary state

as well as the fragility, it is not possible to determine the shape, but it is certain that the pieces belong to one (or more?) sandal(s).

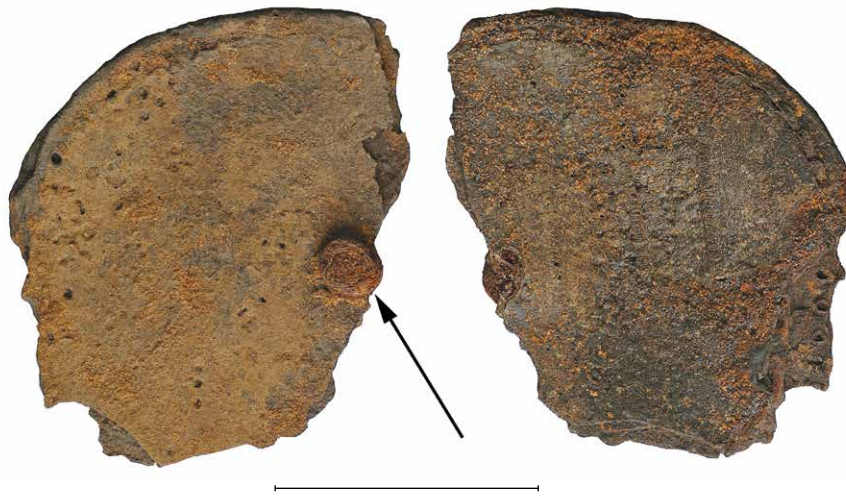
A) The front edge of a sole consisting of three layers. The ventral and dorsal surfaces (thus treadsole and insole) are determined on the basis of the front strap button (arrow), which is made from textile. The insole shows the remnants of three rows of small leather thong running stitches extending lengthwise down the centre; the running stitches at the edge are slightly bigger and are also done with leather thong. The edge row goes through all three sole layers in contrast to the centre ones, but it can no longer be established whether these centre rows are only stitched through the insole or through the midsole as well (which is most likely);

B) Almost rectangular fragment, consisting of three thin layers of leather that are secured at one end with leather thong running stitches;

C) As A. On the basis of the rows of small leather thong running stitches extending lengthwise down the centre and the stitches along the edge, this piece

originates from the same sandal, the sandal of the other foot or a sandal comparable to fragment A. Most likely, however, it is part of the sandal for the other foot, as

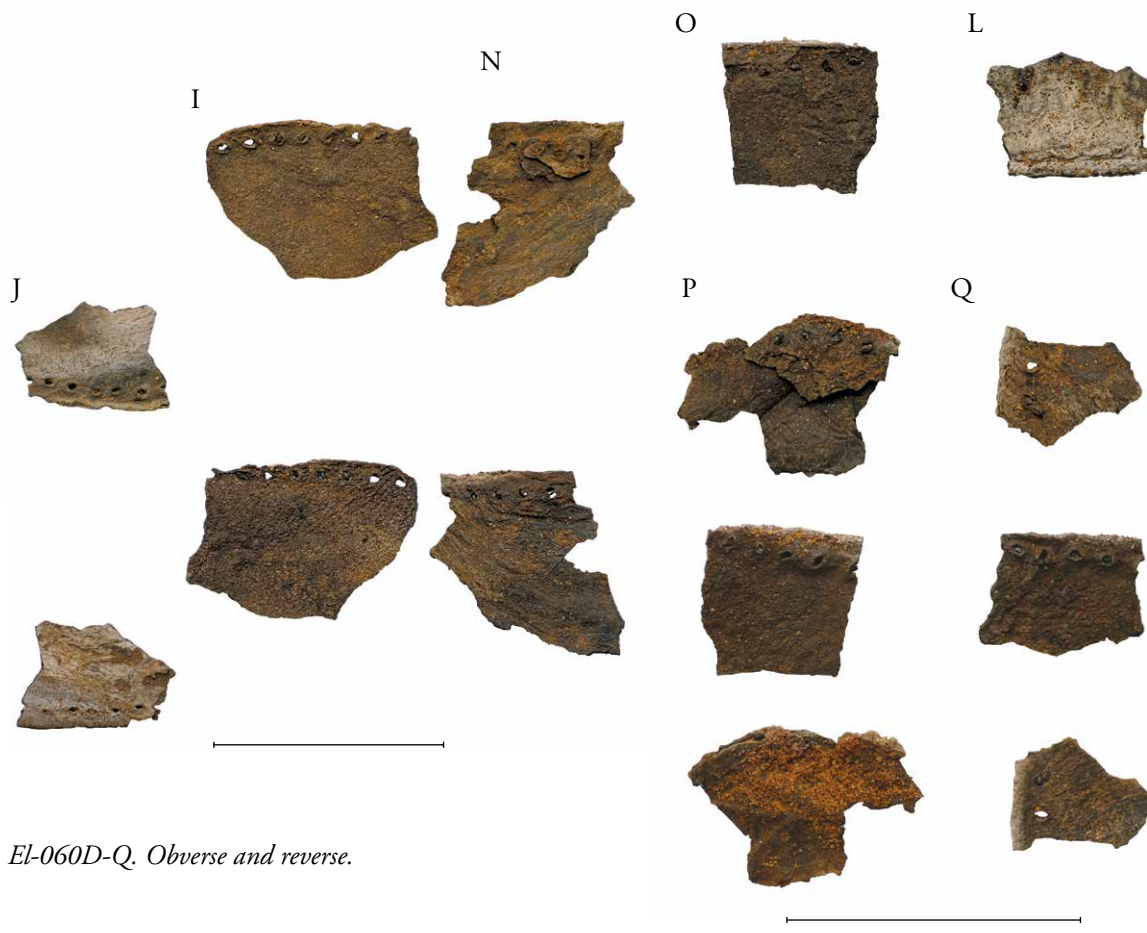
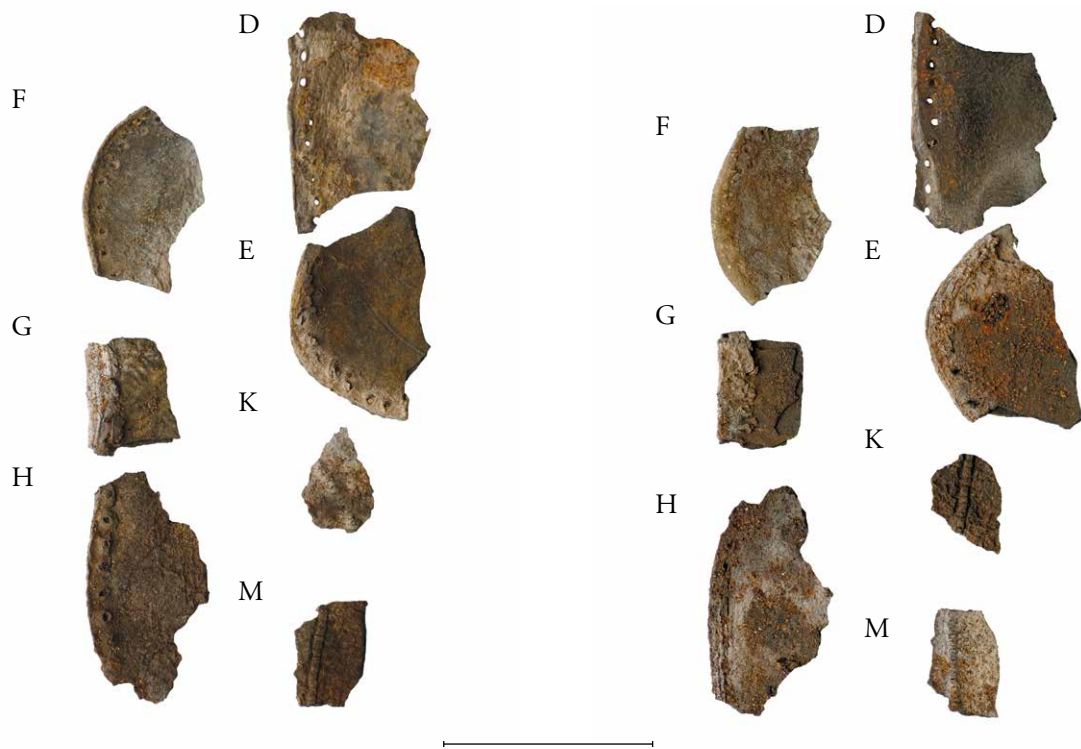
it also shows a front strap hole. The other pieces are much smaller, often consisting of only one layer, with stitch holes and occasional remnants of stitches.



El-060A. Ventral and dorsal view. The arrow indicates the coiled button that secures the front strap at the ventral surface.



El-060B, C. Left: Dorsal and ventral view; Top: Diagram of the stitching.



El-060D-Q. Obverse and reverse.

CATALOGUE NUMBER 16

Spec. No. el-066;
Provenance South of Khnum Temple, ash layer
from plundering of temple;
Date 4th c. AD;
Object Sole fragment;
Measurements 38.0 x 70.0. T: 3.8 & 1.3;
Skin Processing Possibly vegetable tanned;
Description
Rectangular fragment of relatively thick leather. Onto
this is sewn a thinner layer with coarse leather thong
running stitches.



El-066. Right: Dorsal and ventral view.

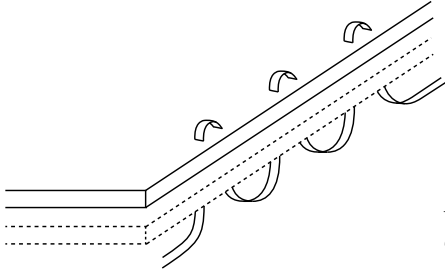
CATALOGUE NUMBER 17

Spec. No. el-069;
Provenance House T53 north of Khnum Tem-
ple. Midden deposit disturbed by
modern burials;
Date 7th-9th c. AD
Object Sole fragment;
Measurements L: 135.0. W front: 69.5. W heel:
85.0. T: 3.4;
Skin Processing Not vegetable tanned;

Description
Probably the heel part of a sandal's sole with leather
thong running stitches along the edge (remnants are
still visible in some of the stitch holes). The edge has
two isolated stitches at the back right (arrow). There
is some tapering, but seemingly without an indica-
tion of left or right. Note the two small slits in the
back. The original number of sole layers is unknown.



El-069. Ventral and dorsal view.



El-069. Diagram of the stitching. The dashed lines indicate the uncertainty of the number of sole layers.

CATALOGUE NUMBER 18

Spec. No. el-072A-C;
 Provenance South of Khnum Temple, south wall, excavation debris;
 Date Post-Roman (after AD 395)*;
 Object Sole fragment; C: Ind. Pre.;
 Measurements A) L: 73.5. W (in the middle): 82.1. T: 4.8. B) 36.5 x 49.0. C) L: 148.0. W front: 31.8. T: 7.7. W waist: 43.6. W heel: 49.6;
 Skin Processing A-C) Possibly vegetable tanned;
 Remarks Note the wooden objects, associated with the leather. Among these is a cone, which might be comparable to the one covered with leather published by Van Driel-Murray (2000: 208, figure 12.5);

Description
 Two parts of sandals and one largely complete child's sandal.
 A) A fragment of intact width, showing four rows of leather thong running stitches extending lengthwise down the centre and one row along the edge. Rem-

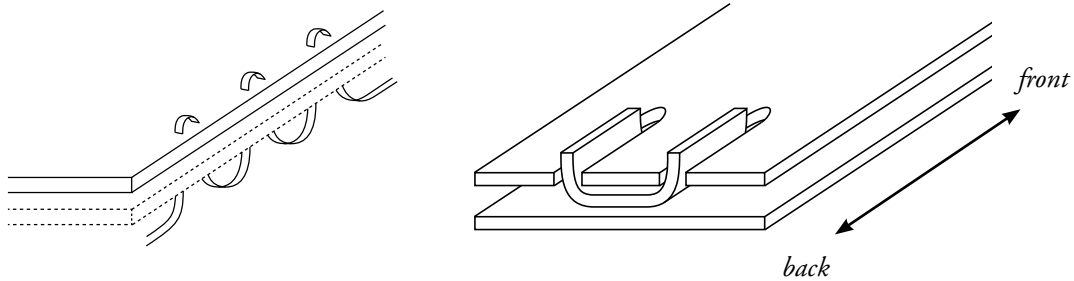
nants of the stitches are still *in situ*. They are short with large interstitch spaces. Note the large stitch holes at one end;
 B) A small fragment from the same or a comparable sandal. It is rectangular with a rounded edge, which most likely is not original. Remnants of leather thong running stitches are visible in some of the stitch holes;
 C) Largest part of a small, left sandal, which consists of an insole and treadsole. The sole layers are secured with leather thong running stitches along the edge as well as with three rows extending lengthwise down the centre. The heel is rounded and the waist is slightly but clearly constricted after which the sandal increases in width towards the front (only half of the width is preserved). The pre-strap inserts in slits in the insole at either side; it is sandwiched between the in- and treadsoles. The ends of the pre-strap, which is in one piece, are triangular with three slits orientated lengthwise. The narrow back (and heel?) strap is pulled through the slits. The insole is decorated with three parallel rows of circular, stamped motifs, which are orientated lengthwise (arrows).



El-072A. Dorsal and ventral view.



El-072B, C. Left: Dorsal and ventral view. The arrows point to the rows of impressed motifs; Bottom Left: Diagram of the stitching. The dashed lines indicate the uncertainty of the number of sole layers. Bottom right: Diagram of the pre-strap construction.



CATALOGUE NUMBER 19

Spec. No. el-073A-C;
 Provenance South of Khnum Temple courtyard, below floor of house K12;
 Date New Kingdom*; Eared(?);
 Object Sole and strap fragment;
 Measurements A) L: 195.0. W front: 68.0. W waist: 58.9. W heel: 65.4. T: 2.7. D pre-strap: 14.7 & 8.3. B) D: 12.3 & 7.6. L: 70.0. C) L: 55.0. W: 9.0;

Skin Processing A [sole] Possibly vegetable tanned;
 A [strap] Possibly vegetable tanned;
 B, C) Not vegetable tanned;

Description A) An incomplete sandal, due to which the orientation cannot be established. The sandal consists of one sole layer. A long pre-strap protrudes at the constriction of the heel. It is folded and wrapped transversely



El-073A-C. A. Ventral and dorsal view; B, C) Obverse and reverse. The arrow points to the second attachment to the sole, which was secured with leather thong stitches (encircled).

(and slightly diagonally) with a strip of leather that is secured at the junction of the sole by stitching it through the cladding and pre-strap (gray arrow). The back strap is pulled through the eye of the pre-strap, but there is another strap (arrow), which has a length-wise oriented slit. Usually these kind of pre-straps are integrally cut from the sole's leather, but here it has been attached secondarily. It is probably a second attachment to which the back strap was secured, as is sometimes seen in more elaborate sandals (Veldmeijer, 2009d: 15-18). This strap was secured to the sole

with a leather thong on the edge (encircled), as suggested by the remnants of the stitches and the straight cut end of the strap. Slightly more towards the back, there is a slit which suggests that the sandal was modified, probably after the straps were broken: slits like these are used for pulling through a pre-strap in some types of sandals;

B) The right pre-strap, which is broken off. It shows the attachment of the cladding of the strap;

C) A narrow strip, folded and stitched at one end, and likely part of the front strap.

CATALOGUE NUMBER 20

| | |
|-----------------|---|
| Spec. No. | el-075A, B; |
| Provenance | South of Khnum Temple courtyard; |
| Date | Late Antique; |
| Object | Sole fragments; Ind. Pre.; |
| Measurements | A) L: 168.0. W (maximal): 79.2. W (minimal): 48.1. Distance slits to edge: appr. 10. T: 3.7. B) L: 113.7. W 81.6. T: 7.6; |
| Skin Processing | A) Possibly vegetable tanned; |

Description

A) A piece of leather that tapers at both sides but more distinctly towards one side. The narrow end is torn off. Four oval slits cut lengthwise along the long edge, two on each side. This suggests it is a heel part, despite the pointed shape. One of these slits still contains the remnants of a leather thong, which is the only remnant of the straps;

B) A piece of textile fabric of approximate the same dimensions as the sandal fragment. It is tempting to conclude that this piece was an insole to enhance the comfort of the sandal. The fabric is knitted and possibly made of wool(?). Note that two edges are finished.



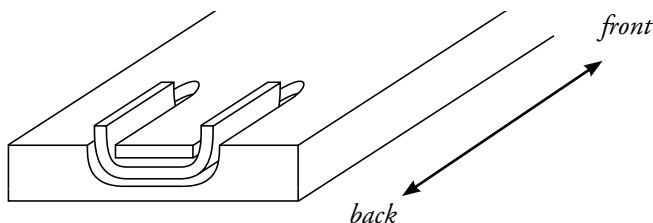
El-075A-B. Overviews.

CATALOGUE NUMBER 21

Spec. No. el-076;
 Provenance South of Khnum Temple, below House K16;
 Date 2nd-5th c. AD;
 Object Near-complete sandal; Ind. Pre.;
 Measurements L: 168.0. W front: 75.1. W waist: 58.2. W heel: 40.0. T: 7.8. W pre-strap: 25.2;
 Skin Processing Possibly vegetable tanned;
 Description

A small, right sandal consisting of one thick sole layer. The heel is rounded and the waist is slightly constricted. Towards the front, the sole increases in width and the lateral edge runs in a smooth curve towards

the pronounced big toe area. The pre-strap, which has rounded ends, is pulled through two slits, which are oriented lengthwise and placed slightly inwards from the edge. Note, however, the extraordinary construction: the straps do not go entirely through the sole, but are pulled through the thickness of the sole. Due to this, the strap is protected at the ventral side from wear by a fraction of the sole's thickness. One of the pre-straps is broken off. The back strap is attached by looping it through the three lengthwise slits. The slit for the reception of the front strap is placed transversely. Furthermore, there are three lengthwise folded strips of leather, which are remnants of the back and/or front strap.



El-076. Top: Ventral and dorsal view of the sole; obverse and reverse of the other fragments. Remarkably, the pre-strap is pulled through the thickness of the leather rather than sandwiched between the insole and treadsole (diagram left).

CATALOGUE NUMBER 22

Spec. No. el-077;
Provenance Old Kingdom - Middle Kingdom
cemetery, Tomb NE 15;
Date First Intermediate Period-Early
Middle Kingdom;
Object Pair of sandals; Eared;
Measurements L: 270.0. W front: 127.8. W waist:
70.0. W heel: 79.6. W strap 14.5;
Skin Processing Possibly vegetable tanned;
Remarks Discussed in detail by Veldmeijer
(2011e: 10-11);

Description

A pair of sandals, one partially on top of the other. Despite their fragile condition and the fact that they are stuck together, they are largely complete. The rounded heel is constricted, forming a waist that is less

distinct than usually seen in eared sandals. The width increases towards the front at both sides. The sandals have a rounded toe part, and due to its symmetry lengthwise, the sandal is straight. The pre-straps are cut from the sole's leather (encircled), but from the heel and pointing diagonally forwards and sideways, rather than the usual way: cutting it from the waist and pointing diagonally backwards and sideways. The straps, consisting of strips of leather, are oddly attached to the pre-strap, and are seemingly only looped around one of the edges rather than hitched. There is a layer of cloth visible at the stone, and at the front of the sandals it seems to sandwich the sandals. Parts of the straps might have been wrapped around as well. The edge of the sandal is elevated (arrow) and two impressed lines run along the entire edge.



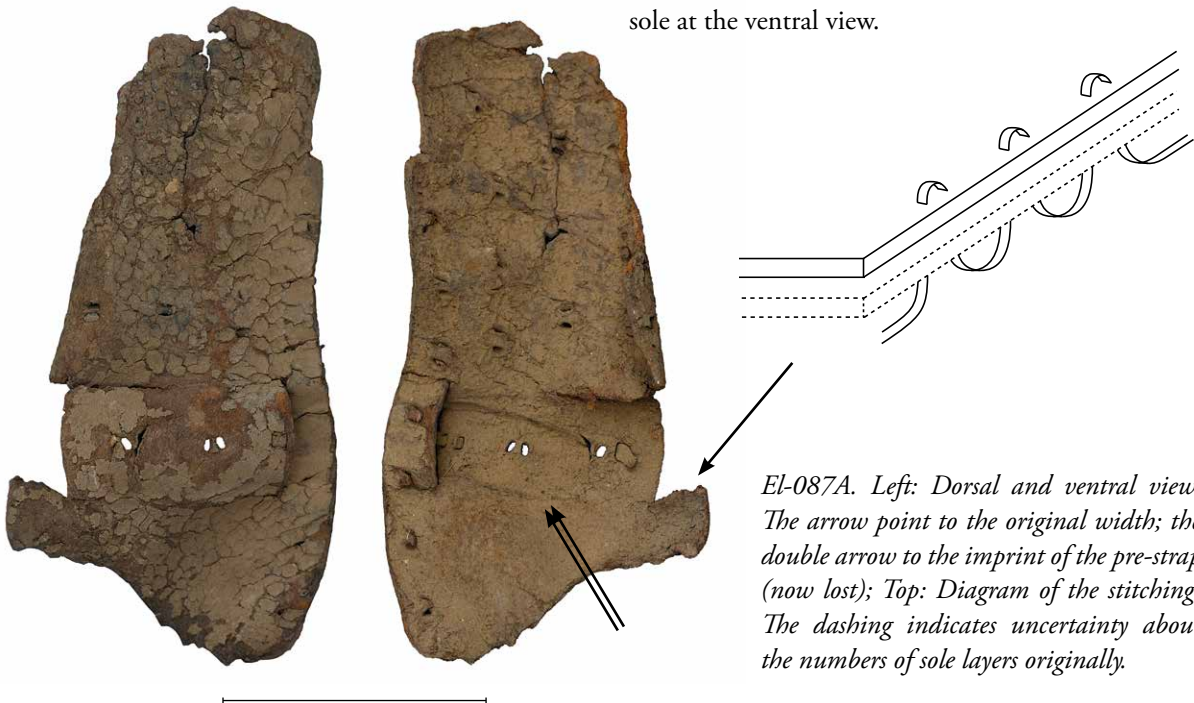
El-077. Overview. The arrow points to the elevated edge. Encircled is the pre-strap, integrally cut from the sole's leather.

CATALOGUE NUMBER 23

| | |
|-----------------|--|
| Spec. No. | el-087A; |
| Group | el-087A, B; |
| Provenance | Khnum Temple area, surface; |
| Date | Post-Roman (after AD 395)*; |
| Object | Sole fragment; |
| Measurements | L: 125.0. W waist: 61.7. L slit: 19.4; |
| Skin Processing | Not vegetable tanned; |
| Remarks | B) See 'Shoes' (Cat. No. 45); |

Description

A part of a right(?) sandal sole. The stitch holes along the edge as well as two rows lengthwise down the centre suggests that there was more than one sole layer. Remnants of the leather thong running stitches are still visible in several holes. The lateral and medial edges are largely incomplete but a small piece allows the determination of the original width (arrow). The length is incomplete as well. One slit for the reception of the pre-strap is still visible. It is oriented lengthwise and set slightly off the edge of the sole proper. Note the impression of the pre-strap (double arrow) in the sole at the ventral view.



El-087A. Left: Dorsal and ventral view. The arrow point to the original width; the double arrow to the imprint of the pre-strap (now lost); Top: Diagram of the stitching. The dashing indicates uncertainty about the numbers of sole layers originally.

CATALOGUE NUMBER 24

| | |
|--------------|---|
| Spec. No. | el-088; |
| Provenance | South of Khnum Temple courtyard; |
| Date | Late Antique; |
| Object | Sole fragment; Ind. Pre.; |
| Measurements | L: 150.0. W front: 80.8. W waist: 65*. W heel: 59.8. T: 7.7. W thong: app. 2.5; |

Skin Processing Possibly vegetable tanned;

Description

Large part of a left sandal, lacking the frontmost section and straps. The heel is rounded and the width

increases continuously towards the front. Note the overall lengthwise curvature (with matching stitching), which is original and not due to preservation. The two sole layers are secured along the edge as well as lengthwise down the centre with running stitches that are made of leather thong; these are short with longer interstitch spaces. The insole is thicker than the treadsole. One of the sole layers (or both?) is re-used pieces judging by the fact that the treadsole terminates at the front well before the insole (dashed arrow), as well as the curved front of the treadsole. The

pre-strap runs through two slits in the insole. They are oriented lengthwise and set slightly inwards from the edge. As a consequence, the pre-strap is sandwiched between the in- and treadsole. The leather in between

the slits is torn off. Note the big isolated stitch at the left front side of the slits, which is a repair (arrow). The insole shows remnants of line decoration (double arrow).



El-088. Top: Dorsal and ventral view. The arrow points to the isolated stitch (which is a repair); the double arrow indicates the remnants of the decoration; the dashed arrow indicate the shorter treadsole; Right, top: Diagram of the stitching. The dashed lines indicate the uncertainty of the number of sole layers. Right bottom: Diagram of the pre-strap construction.

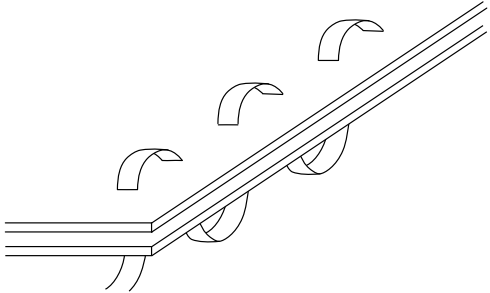
CATALOGUE NUMBER 25

Spec. No. el-089;
 Provenance South of Khnum Temple courtyard;
 Date 6th c. AD;
 Object Sole fragment; Ind. Pre.;
 Measurements L: 178.0. W front: 97.6. W back: 89.8. T (at repaired part): 11.5;
 Skin Processing Not vegetable tanned;
 Description

The front part of a swayed, right sandal that consists of an insole and treadsole. The heel is missing, but from the waist on, the width increases in size. The lateral edge has a more distinct convex curvature. Both

sole layers show large repair patches, coarsely stitched along their edges with leather thong running stitches. The two sole layers are secured along the edge with leather thong stitches as well, which are distinctly finer. The heel part is cut off, thus the pre- and back strap (and heel strap?) are lacking. Just anterior the 'new' edge, a line of stitches can be seen (dashed arrow), probably the remnant of an old repair before the heel was cut off. The transverse slits for the front strap are situated behind each other rather than next to each other. Note that there is a piece of leather sticking out and incorporated into the stitching at the edge of the sole layers (arrow).

El-089. Bottom: Dorsal and ventral view. The arrow points to the strip of leather incorporated in the edge stitching, the dashed arrow points to the stitching shortly before the cut off edge; Right: Diagram of the stitching.



CATALOGUE NUMBER 26

Spec. No. el-093A-C;
 Provenance South of Khnum Temple, modern excavation debris;
 Date ?;
 Object Footwear, sandal;
 Measurements C (sandal): W front: 62.2. W waist: 41.6. W heel: 45.0. L: 148.0. T: 3.3. Strap complex: A) L: 130.0. B) 115.0. W back strap: A) 22.5. B) 25.0;

Skin Processing A-C) Possibly vegetable tanned;

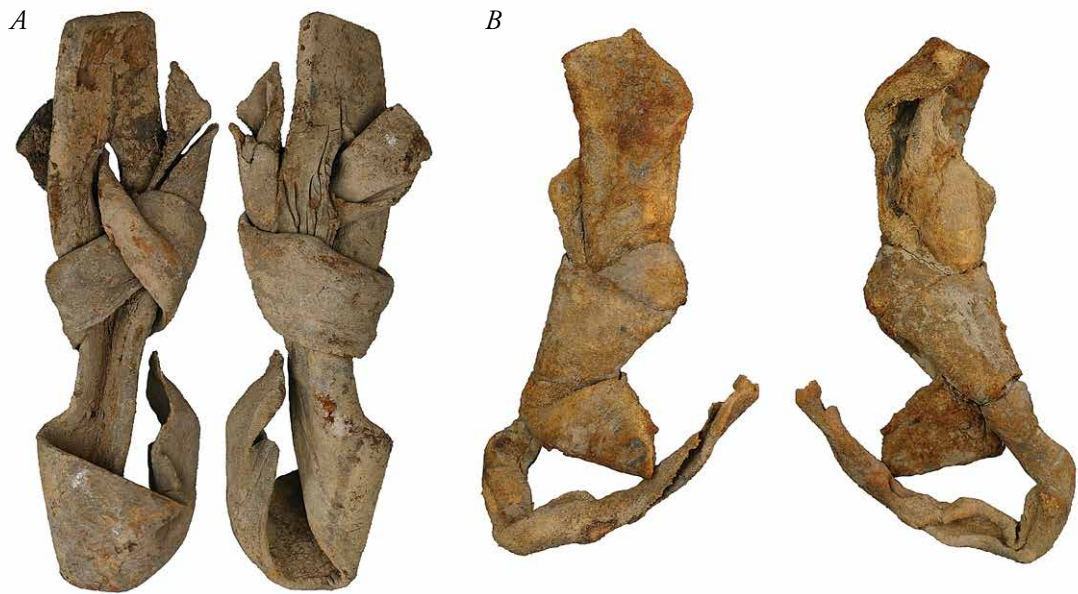
Description

The two straps associated with the sandal, C, are too big and heavy to belong to it;

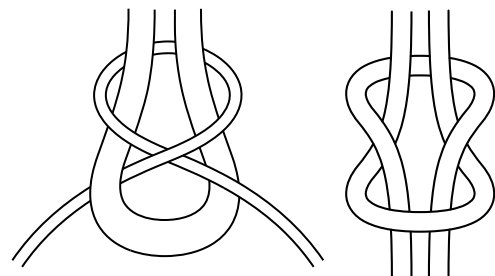
A) A piece of back strap that is attached to a fragment of front strap by means of a mesh knot;

B) A piece of back strap that is attached to a fragment of pre-strap by means of a reef knot;

C) A child's right sandal, the sole of which consists of one layer. The heel is rounded with a slightly constricted waist. The width expands distinctly towards the toe, especially on the medial edge. The big toe area is more pronounced here; at the other corner, the edge curves more gently. The function of the few stitch holes at the heel, towards the front, is unclear: they do not seem to have been used for securing another sole layer. A transverse slit at the front is meant for the reception of the front strap. On the dorsal surface, half of the leather's thickness is curled towards the front edge of the sandal (arrow).



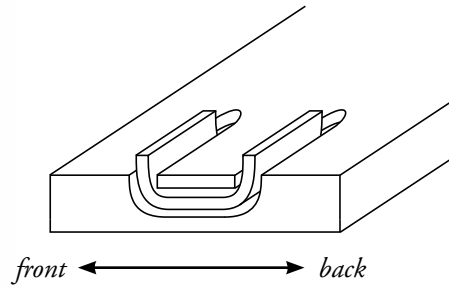
El-093A, B. Top: Obverse and reverse; Right: Diagram of the knot, seen in fragment A and B respectively.



C



El-093C. Left: Ventral and dorsal view; Bottom: Diagram of the front strap construction.

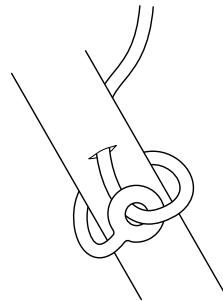


CATALOGUE NUMBER 27

Spec. No. el-031G;
 Group el-031A-G;
 Provenance Domestic quarter west of Khnum
 temenos wall, House f, room 9,
 east;
 Date 1st-2nd c. AD;
 Object Strap fragment;
 Measurements G) 47.1 x 74.1. T: 3.0;

Skin Processing Not tested;
 Remarks A-E) See 'Unidentified' (Cat. No.
 135); F) See 'Shoes' (Cat. No. 53);

Description
 Piece of strap: one small strip of leather is wrapped
 around a slightly wider strip and stitched through
 its own end as well as through the wider strip (*cf.* el-
 087B, Cat. No. 48).



El-031G. Left: Obverse and reverse. Scale bar is 10 mm; Right: Diagram of the construction.

CATALOGUE NUMBER 28

Spec. No. el-033;
 Provenance South of Khnum Temple, House
 K31, fireplace;
 Date 5th c. AD;
 Object Sole fragment;
 Measurements 28.1 x 41.8;

Skin Processing Vegetable tanned?;

Description

Small, almost rectangular fragment. One pair of slits is at right angle to the intact edge, suggesting short running stitching with larger interstich spaces. A bigger stitch(?) hole is situated towards one of the ends.



El-033. Left: Dorsal and ventral view; Right: Diagram of the stitching. The dashed lines indicate the uncertainty of the number of sole layers.

CATALOGUE NUMBER 29

Spec. No. el-036;
 Provenance South of Khnum Temple, street
 layer;
 Date 5th c. AD;
 Object Sole fragment;
 Measurements L: 24.3. W: 14.2;

Skin Processing Not tested;

Description

Small fragment with an intact edge. Three pairs of small slit stitch holes, with remnants of leather thong stitches still *in situ*, suggest short running stitching with larger interstich spaces.



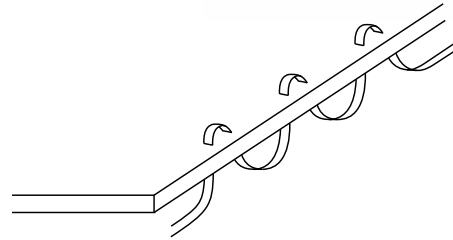
El-036. Left: Dorsal and ventral view. Scale bar is 10 mm; Right: Diagram of the stitching. The dashed lines indicate the uncertainty of the number of sole layers.

CATALOGUE NUMBER 30

| | |
|-----------------|--|
| Spec. No. | el-044A; |
| Group | el-044A, B; |
| Provenance | South of Khnum Temple, ash deposit in street; |
| Date | 5th c. AD; |
| Object | Fragment of sole(?); |
| Measurements | A) L: 52.5. W: 41.1 x 48.8. T: 5.0. W stitches: 2.9. L stitches: 6.5; |
| Skin Processing | Not vegetable tanned; |
| Remarks | B) See 'Unidentified' (Cat. No. 138); |

Description

Almost rectangular, slightly convex sole(?) fragment with the edges intact but broken off at the front and back. The width indicates it is a small sandal, probably for a child. Leather thong stitches along the intact edges and a row of comparable stitches running lengthwise down the centre suggests that there was at least one other layer, but this is not the case as the stitches are intact.



El-044A. Top: Obverse and reverse. Bottom: Diagram of the stitching.

CATALOGUE NUMBER 31

| | |
|-----------------|--|
| Spec. No. | el-046D; |
| Group | el-046A-D; |
| Provenance | Khnum Temple, fill of robbed foundation of southern colonnade; |
| Date | 7th-9th c. AD; |
| Object | Strap fragment; Ind. Pre.; |
| Measurements | L: 50.2. W: 31.1. T: 2.5. L slit: 11.5; |
| Skin Processing | Possibly vegetable tanned; |

Remarks A) See 'Bags and Other Containers' (Cat. No. 66); B-C) See 'Waste and Offcuts' (Cat. No. 84). Various small scraps and two pieces with hair, none of which are numbered;

Description

Pre-strap with a rounded top. It has three vertical slits, the middle of which is distorted due to the back strap having been pulled through (*cf.* el-076, Cat. No. 21; the strap is lost). The other end has broken off. In three rows (two along the edge and one lengthwise down the centre) small, horizontal incisions are made, which seem to be decorative (arrow in figure).



El-046D. Recto and verso.

CATALOGUE NUMBER 32

Spec. No. el-071;
 Provenance South of Khnum Temple, House K22, brick pavement;
 Date 9th c. AD;
 Object Pre-strap; Ind. Pre.;
 Measurements 26.1 x 55.0. T (average): 3.5;
 Skin Processing Not vegetable tanned;

Description

Piece of a sandal's pre-strap. One end is rounded with three slits at a right angle to the curved edge. The other end is torn off. The leather is rather thick.



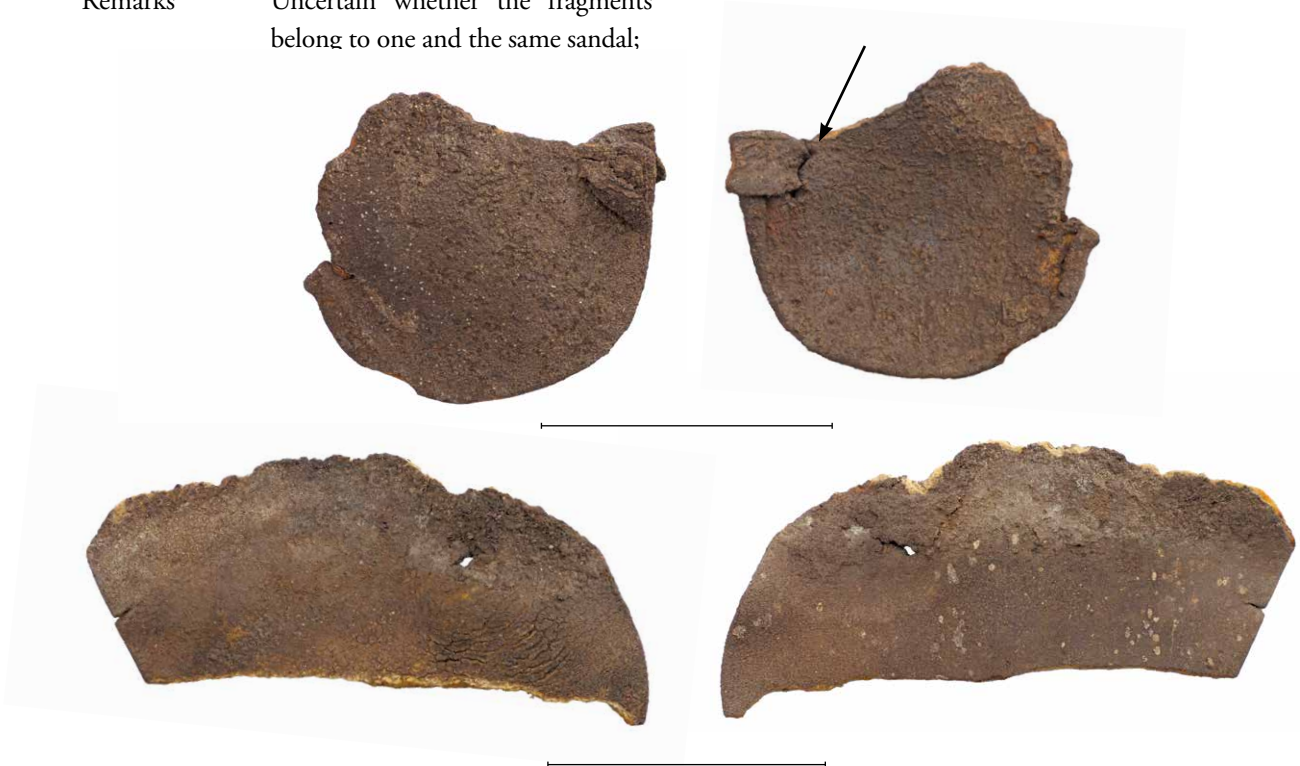
El-071. Recto and verso.

CATALOGUE NUMBER 33

Spec. No. el-099A, B;
 Provenance Old Kingdom - Middle Kingdom cemetery, Tomb NE 6;
 Date 6th-11th Dynasty;
 Object Footwear, sandal;
 Measurements A) L: 55.0. W: 61.7. T: 2.6. B) L: 42.4. W: 107.5. T: 2.1;
 Skin Processing Not vegetable tanned;
 Remarks Uncertain whether the fragments belong to one and the same sandal;

Description

A) The heel of a small sandal with a single-layer-sole. One side still holds the remnant of the back strap, which is pulled through a slit in the heel's leather (arrow). Note the slightly elevated edge;
 B) A tapering fragment of sole with one convex and one straight edge. Both sides show remnants of an intact edge. The width is intact at some spots.



El-099A, B. Top: El-099A. Dorsal and ventral view; Bottom: El-099B. Dorsal and ventral view.

CATALOGUE NUMBER 34

Spec. No. el-109D;
 Group el-109A-I;
 Provenance Khnum Temple, fill of robbed temple foundation;
 Date 7th-9th c. AD;
 Object Sole fragment;
 Measurements W: 52.1. L: 73.1. T: 3.0;
 Skin Processing Not tested;
 Remarks A-C, E-I) See 'Unidentifiable' (Cat. No. 128);

Description

Front part of a sandal, evidenced by the transverse slit for the reception of the front strap (arrow). Note the bulging edge.



El-109D. Dorsal and ventral.

CATALOGUE NUMBER 35

Spec. No. el-111A-C;
 Group el-111A-D;
 Provenance Khnum Temple, fill of robbed temple foundation;
 Date 7th-8th c. AD;
 Object Sole and strap fragments; Ind. Pre.;
 Measurements A) W: 76.8; L: 136.6. T: 3.0. Slit: 24.5. B) W: 19.4. L: 61.3. T: 2.1. W back/heel strap: 6.7. C) W: 7.4. L: 140. T: 1.7;
 Skin Processing Not tested;
 Remarks D) See 'Bags and Other Containers' (Cat. No. 73);

Description

A) A near-complete length of a sandal's sole. The heel part is folded diagonally. On either side are lengthwise oriented slits for the reception of the pre-strap (one of the slits is torn). The dorsal surface has very faintly impressed circular motifs, but the design can no longer be identified;

B) A rectangular fragment of pre-strap, which has a rounded top. Shortly before this end, two parallel slits are placed lengthwise and still hold a remnant of the back strap;

C) Several fragments of straps. One fragment is still attached to another, which seems to be part of a pre-strap (as described for fragment A).



El-111B. Left: Recto and verso. Scale bar is 10 mm. See next page for el-111A and C.



El-111A. Dorsal and ventral view.



Left: El-111C. Obverse and reverse. See previous page for el-111B.

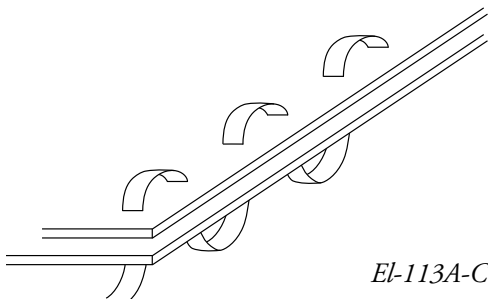
CATALOGUE NUMBER 36

Spec. No. el-113A-C;
 Provenance Khnum Temple, modern excavation dumps;
 Date ?;
 Object Footwear, sole;
 Measurements A) W heel: 43.9. W waist: 44.4. W front: 55.8. T: 2.7; B) 24.0 x 33.3. T: 1.9. C) W: 43.3. L: 52.7. T: 5.1;

Skin Processing Not tested;

Description

Near-complete length of a coarse sandal's sole. The heel is rounded and the waist is of approximately equal width. From here, the width increases, ending in a rounded front. Remnants of the lighter coloured insole (arrow) in several of the large leather thong running stitches at the edge are evidence of a multi-layer sole. These sole layers are further secured by a row of equally long and widely-spaced leather thong stitches extending lengthwise down the centre.



El-113A-C. Diagram of the stitching.



El-113A-C. Dorsal and ventral view.

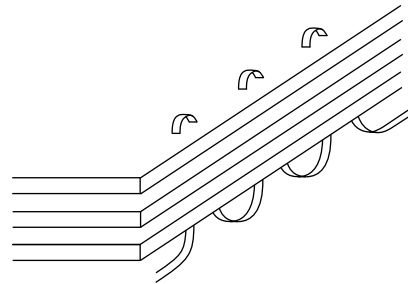
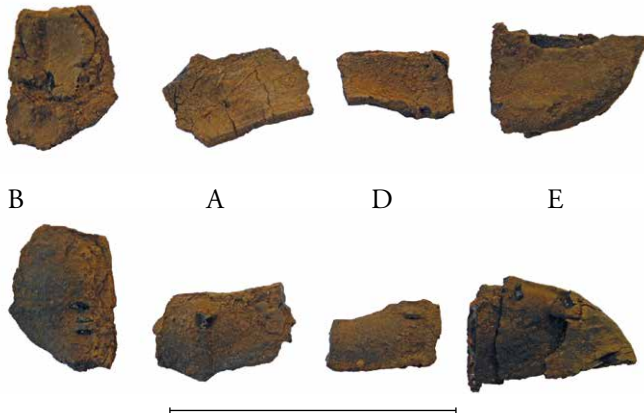
CATALOGUE NUMBER 37

Spec. No. el-120A-E;
 Provenance South of Khnum Temple, House K20, occupation layer in courtyard F;
 Date 5th-6th c. AD;
 Object Sole fragments;
 Measurements A) 15.0 x 25.0. T: 2.4. B) 17.7 x 25.4. T: 3.3. C) 24.3 x 42.4. T: 8. D) 11.5 x 20.3. T: 2. E) 18.4 x 26.4. T: 8.8;

Skin Processing Not tested;

Description

Five small fragments of a sandal's sole, consisting of three layers that are secured with short but widely-spaced leather thong running stitches. Some are edge fragments.

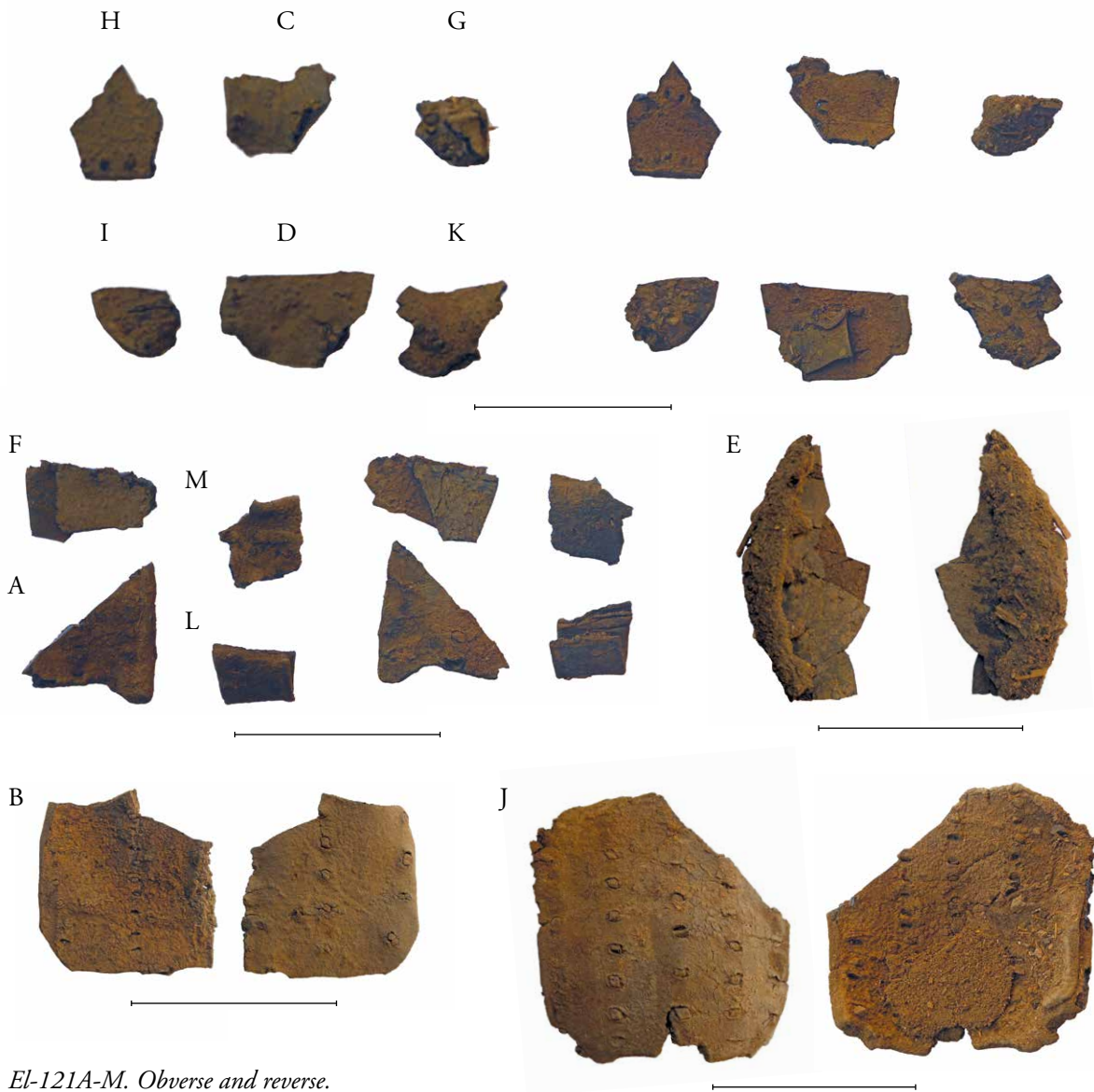


Left: El-120A, B, D, E. Obverse and reverse; Right top: El-120C. Dorsal and ventral view; Right bottom: Diagram of the stitching.

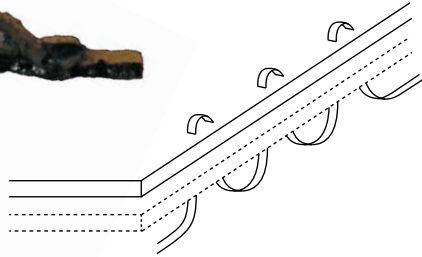
CATALOGUE NUMBER 38

| | | |
|--------------|--|--|
| Spec. No. | el-121A-M; | L: 23.8. T: 3.2. I) W: 17.5. L: 22.5. |
| Provenance | South of Khnum Temple, House K26, ash deposit in Room B; | T: 3.8. J) W: 65.1. L 64.4. T: 2.5. T total: 6.6. K) W: 32.1. L: 23.7. T: 1.7. L) W: 17.8. L: 40.0. T: 3.0. M) W: 21.6. L: 21.3. T: 1.5; |
| Date | 6th-7th c. AD; | |
| Object | Sole fragments; | |
| Measurements | A) W: 32.9. L: 34.5. T: 3.6. B) W: 38.6. L: 40.7. T: 2.9. C) W: 27.4. L: 21.1. T: 1.6. D) W: 36.6. L: 23.4. T: 2.3. E) W: 24.5. L: 49.0. T two sole layers: 3.4. T edge: 10.2. F) W: 19.5. L: 32.6. T: 3.4. G) W: 17.1. L: 17.8. T: 2.5. H) W: 28.3. | Skin Processing Not tested; |

Description
 Thirteen fragments of (a) sandal's sole(s). At least two sole layers are secured along the edge as well as with several parallel rows lengthwise down the centre. These consists of tiny, but widely-spaced leather thong running stitches. The edge bulges in some edge fragments.



El-121A-M. Obverse and reverse.



El-121A-M. Left: Cross section of fragment F showing the diagonally running stitching; Right: Diagram of the stitching. Uncertainty on the number of layers is expressed by dashed lines.

CATALOGUE NUMBER 39

| | |
|--------------|---|
| Spec. No. | el-127A-C; |
| Provenance | Khnum Temple; |
| Date | 6th-7th c. AD; |
| Object | Sole fragments; Ind. Pre.; |
| Measurements | A) W: 70.6. L: 47.3. T: 2.4. B & C) W heel: 70.6. W waist: 65.8. W front: 90.8. T: 2.3. L: 255.0. W pre-strap: 18.5. T: 2.2. L slits: 9.2. D circular impressions: 4.4; |

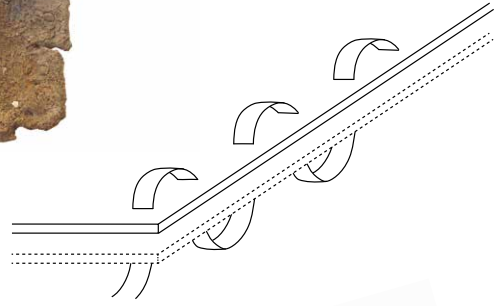
Skin Processing Not tested;

Description

A) A fragment of a sole layer with a row of stitch holes along the edge as well as three parallel rows lengthwise down the centre, suggesting the sandal consisted of at least two sole layers. The stitches are slightly shorter than the interstitch spaces. The layers were secured with leather thong running stitches, remnants of which are still *in situ* in some of them;

B & C) Two pieces that make up a complete, single-sole of a left sandal. Fragment B is the heel part; C is the front three quarters of the length. The sandal is warped. The rounded heel runs into a slightly constricted waist. From here towards the front, the width increases nearly equally on both sides. However, at the front, the lateral edge curves gently towards the big toe area, whereas the medial edge runs more or less straight towards the front, resulting in a swayed sole. The pre-straps are pulled through lengthwise-oriented slits, set inwards from the edge (and the edge decoration, see below) on either side. It consists of one strip of fairly thick leather, both ends of which are rounded. These ends have three lengthwise-oriented slits for the attachment of the back (and heel?) straps, of which nothing remains. Nothing remains

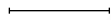
of the front strap either, but two transverse slits (the one closest to the front edge is torn) indicate that the strap was pulled through them. The dorsal surface of the sole is decorated with deeply and sharply impressed combined-triangle motifs that follows the edge. These are widely-spaced, which is unusual as generally they are set close together. At the waist, just anterior to the pre-straps, is a set of impressed circular motifs arranged in a triangle (starting with a row of four). On either side of the front strap is an isolated impressed circle; there were probably more, which have worn away. The dorsal (visible) surfaces of the pre-straps are decorated too. The lateral extension has two transverse lines ending in two circles, one within the other; one of these terminates in three diamonds, also one within the other, and with a circle in the middle. Two of these are impressed in the area where the slits are situated (thus they are cut through the motifs). At the other end, the described motif is followed by four parallel double crosses with a circle in the centre. This, again, is followed by the previously described motif of lines and diamonds. This motif is also visible on the area of the medial pre-strap closest to the sole, but the end has five circular motifs, consisting of three circles set within each other. The open space is filled with a stylised rosette. The decoration was added before the slits were cut into it. One edge of the pre-strap is adorned with an impressed line. This, together with the a-symmetry of the decoration, suggests that the strip was cut after the decoration. Thus, the decoration was cut off: most likely the diamond motif had, originally, diamonds at both ends of the lines.



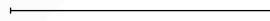
El-127A. Top: Dorsal and ventral view; Right: Diagram of the stitching. The dashed line indicates uncertainty on the number of sole layers; Bottom: El-127B. Dorsal and ventral view.



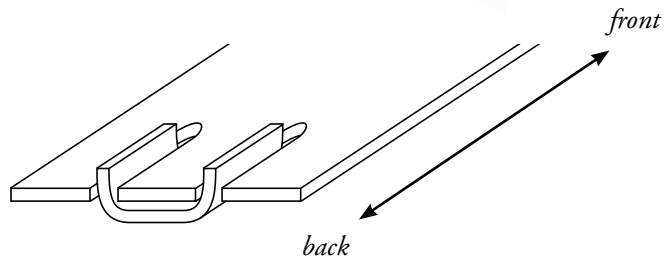
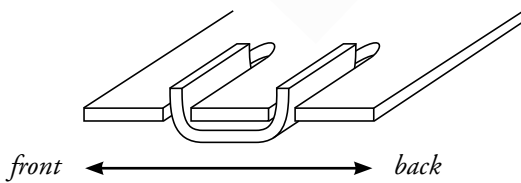
El-127B. Left: Detail of the deeply impressed widely-spaced edge decoration; Top: El-127B. Detail of the decoration of the sole at the waist. Scale bars are 10 mm.



El-127B. Left: Detail of the lateral pre-strap; Top: Detail of the medial pre-strap. Scale bars are 10 mm.



El-127C. Dorsal view of the front part; dorsal view of the back part of the fragment (the edge that connects to the waist, i.e. fragment B).



El-127B. Left: Diagram of front strap construction; Right: Diagram of the pre-strap construction. The possible additional sole layers are left out.

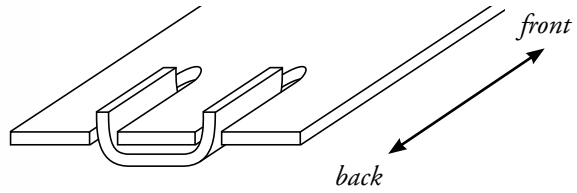
CATALOGUE NUMBER 40

| | |
|-----------------|---|
| Spec. No. | el-122; |
| Provenance | North of Khnum Temple, House T51, disturbed layer; |
| Date | Post-Roman (after AD 395)*; |
| Object | Near-complete sole; Ind. Pre.; |
| Measurements | L: 200.0. W front: 79.2. W waist: 51.7. W heel: 68.8. T: 3.8. L slits: appr. 30; |
| Skin Processing | Not tested; |
| Description | A near-complete, single-layer sandal's sole (suggested by the absence of stitching), lacking the front part. It is broken in two at the heel. The rounded heel is |

pronounced, and continues rather far forward. From here, at first there is a continuous, slight decrease and it is only towards the front that the width increases at both sides to form the front part (partially lost). Two relatively large slits, which are oriented lengthwise, are positioned at either side at the heel, just inside from the edge. Nothing remains of the pre-strap, which would have been pulled through. Note the leather thong that is inserted at the heel (arrow), for which no function can be suggested. The dorsal surface is enhanced with impressed, fairly closely-spaced zigzag motifs along the edge and, nearly-invisible, rosettes in the centre.



El-122. Top: Dorsal and ventral view. The arrow indicates the single leather thong stitch; Right: Detail of the decoration of the edge and the rosettes inside the edge decoration. Scale bar is 10 mm.



El-122. Left: Detail of the dorsal view showing the single leather thong stitch(?), the function of which remains obscure. Scale bar is 10 mm; Right: Diagram of the pre-strap construction.

CATALOGUE NUMBER 41

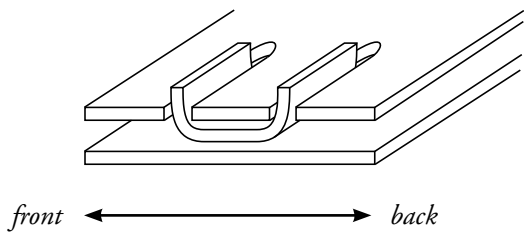
Spec. No. el-123;
 Provenance South of Khnum Temple, fill of robbed temple enclosure wall;
 Date 6th-7th c. AD;
 Object Sole fragments;
 Measurements L: 46.4. W: 50.7. T: 6.7;
 Skin Processing Not tested;
 Description

Front part of a sandal's sole (and four unnumbered scraps), which consists of three layers. The front edge is notched slightly off centre: one side of this notch is slightly more bulky than the other. These are secured along the edge with short but widely-spaced leather thong running stitches. The sole layers are further se-

cured with at least one row of leather thong running stitches extending lengthwise down the sole, slightly off centre. Visible at one side are coarse, leather thong repair stitches. A fairly large transverse slit in the front of the dorsal layer does not go through the treadsole. It is not clear whether or not the midsole had a slit, and thus it is not clear between which layers the end of the front strap was sandwiched. One diagonal stitch in the centre does not seem to be a repair stitch. The dorsal surface is decorated but most of it cannot be recognised anymore. Only a row of black, impressed circular motifs that follow the edge remain visible. They are placed inwards from the edge stitching.



El-123. Top: Dorsal and ventral view (the scraps are not illustrated); Right: Diagram of the stitching.



El-123. Diagram of the front strap construction.

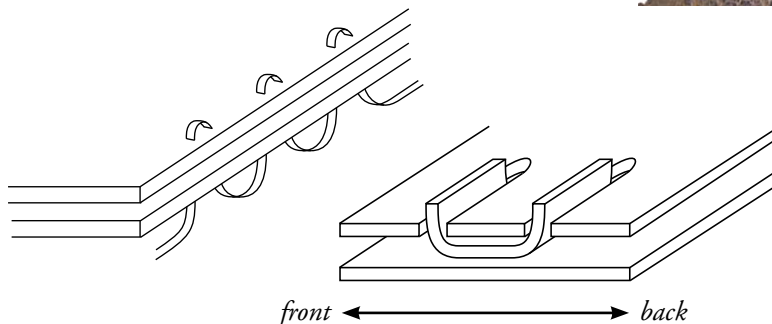
CATALOGUE NUMBER 42

Spec. No. el-124;
 Provenance North of Khnum Temple, House T51, disturbed context;
 Date Post-Roman (after AD 395)*;
 Object Sole fragment;
 Measurements L: 85.5. W front: 28.0. W back: 37.5. W max. 47.0. T: 5.3;
 Skin Processing Not tested;

Description

Front part of a sandal's sole that consists of two layers. From the torn off back part onwards, the width increases and only starts to decrease at the very tip. This results in a fairly pointed front. The sole layers are secured along the edge with short, but widely-spaced

leather thong running stitches. They are further secured with one row of comparable stitches extending lengthwise down the centre. The dorsal surface of the insole is enhanced with lines that flank the stitching. Pairs of lines run from this point diagonally to the edge and front. This decoration seems to be high relief, but it is unclear how this was done. Two transverse slits, one behind the other, still have a remnant of the front strap *in situ*. It goes through the most posterior one, runs between the two sole layers and emerges again in the most anterior one. Here, the end is seemingly tied into a hitch: remnants of the vegetal material around which the front strap is hitched, are still present.



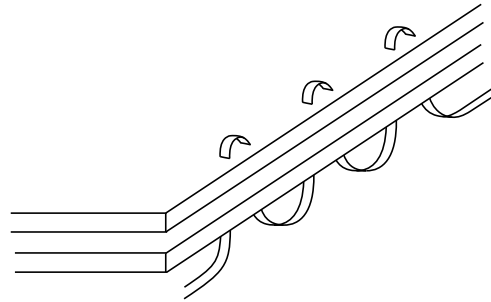
El-124. Left top: Ventral and dorsal view; Right top: Detail of the front strap, stitching and decoration, seen from dorsal. Scale bar is 10 mm; Far left: Diagram of the stitching; Left: Diagram of the front strap construction.

CATALOGUE NUMBER 43

Spec. No. el-125;
 Provenance South of Khnum Temple, street layer;
 Date 6th-7th c. AD;
 Object Footwear, sole; Ind. Pre.(?);
 Measurements L: 65.9. W front: 36.1. W back: 47.0. T: 7.4;
 Skin Processing Not tested;

Description

The heel part of a two-layer sole. The layers are secured with short but widely-spaced leather thong running stitches along the edge as well as lengthwise down the centre. At the torn edge remnants of the pre-strap(?) are still visible.



El-125. Right top: Ventral and dorsal view; Right: Diagram of the stitching.

CATALOGUE NUMBER 44

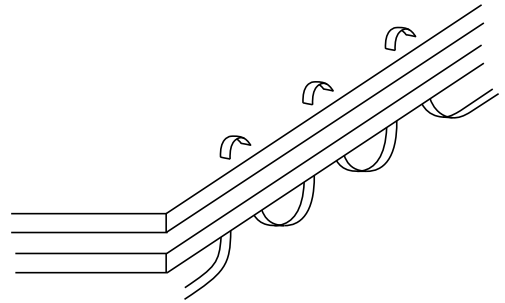
Spec. No. el-126A;
 Group el-126A-B;
 Provenance North of Khnum Temple, surface;
 Date Post-Roman (after AD 395)*;
 Object Sole fragment; Ind. Pre.;
 Measurements L: 108.7. W waist: 68.7. W heel: 76.8. T: 5.0;
 Skin Processing Not tested;
 Remarks B) See 'Shoes' (Cat. No. 56);

Description

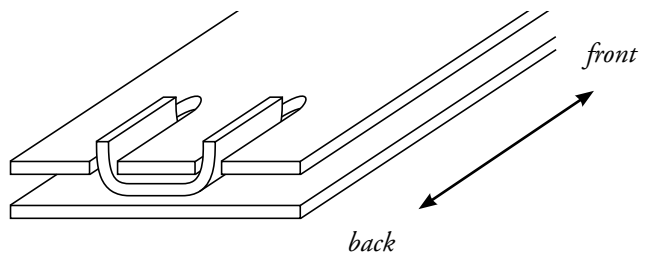
The heel part of a two-layer sole. The layers are secured with two rows (which is extraordinary) of short but widely-spaced leather thong running stitches along the edge as well as with one row lengthwise down the centre. The lengthwise-oriented slits for the reception of the pre-strap are set rather far forward. The remnant of the pre-strap that is still *in situ* shows that the part that ran between the sole layers to the slit at the opposite side was decimated. The dorsal surface of the insole has, following the edge, a line of impressed rosettes just inwards from the edge stitching.



El-126A. Dorsal and ventral view. Note the forward position of the slits for the reception of the pre-straps.



El-126A. Top left: Detail of the stitching and decoration along the edge. Sale bar is 10 mm; Top right: Diagram of the stitching; Bottom right: Diagram of the construction of the pre-strap (the cutting to decimate the thickness of the strap's leather is not shown).



FOOTWEAR: SHOES

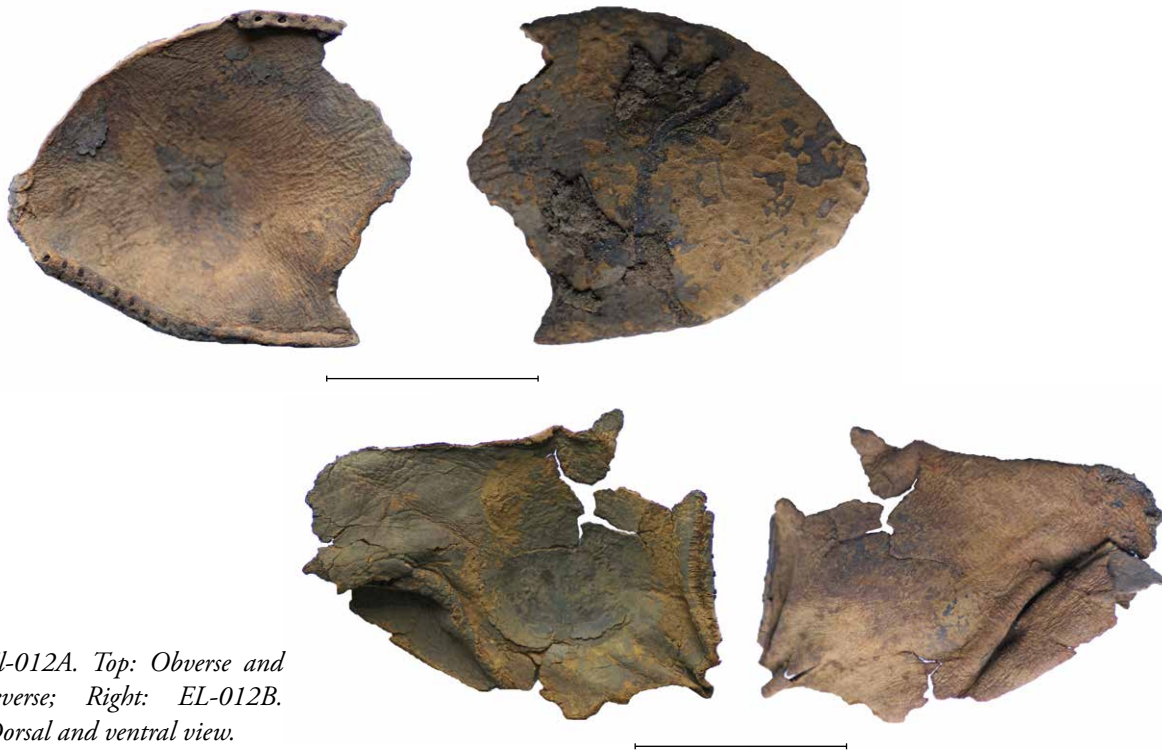
CATALOGUE NUMBER 45

Spec. No. el-012A, B;
Provenance Domestic quarter west of Khnum
temenos wall, House P, Room 2;
Date 27th-30th Dynasty;
Object Shoe upper(?) and sole;
Measurements A) 94.0 x 67.0. T: 1.6. W seam:
app. 4. B) 96.7 x 81.7 (maximal).
T: 3.0. W seam: app. 5;
Skin processing Not tested;

Description

A) A thin piece of crumpled leather. On one side, a small piece of seam is still visible, showing the folded edge. There are seven small circular stitch holes, in which remnants of the sewing thread are still *in situ*. Macroscopic examination suggests the material to be coarse flax. The fragment has been used as

door pivot; the circular impressed rings are clearly visible. Although fragment A and B have the same provenance and the stitch holes are comparable, it is not absolutely certain that they originally belonged to one and the same shoe: possibly, they were only found together because they were used together (one on top of the other) as a door pivot. Fragment A was topmost because it has the circular impressions which are lacking on fragment B. Fragment A might be a piece of upper, whereas B certainly is part of the sole; B) A thicker, harder and far less flexible fragment of leather. It is pointed in shape. On one side, a large part of the seam remains; a smaller piece survives on the opposite side. The seam is folded and has circular stitch holes, again with fragments of threads still *in situ*.

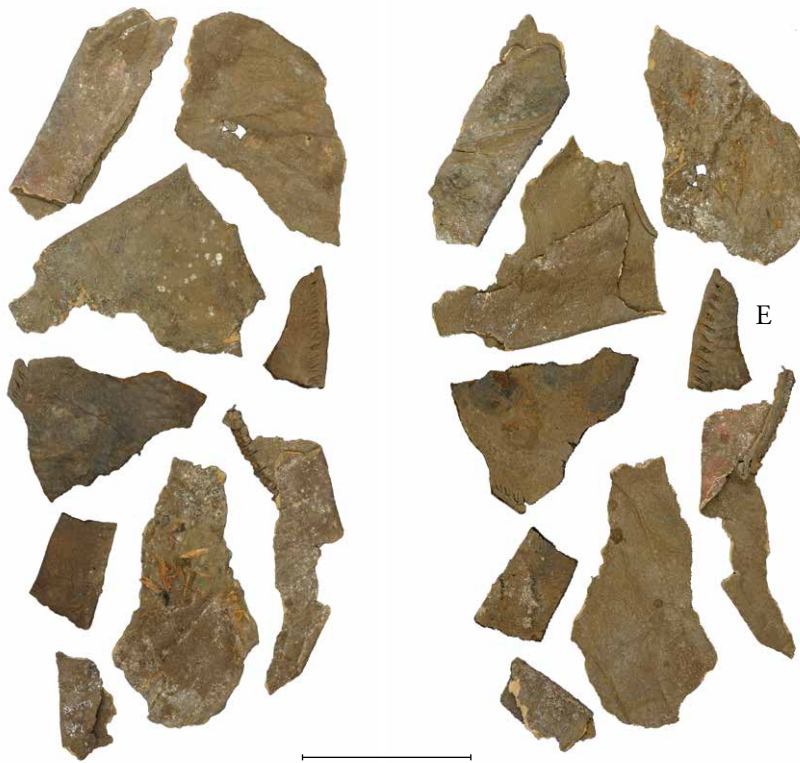


EL-012A. Top: Obverse and reverse; Right: EL-012B. Dorsal and ventral view.

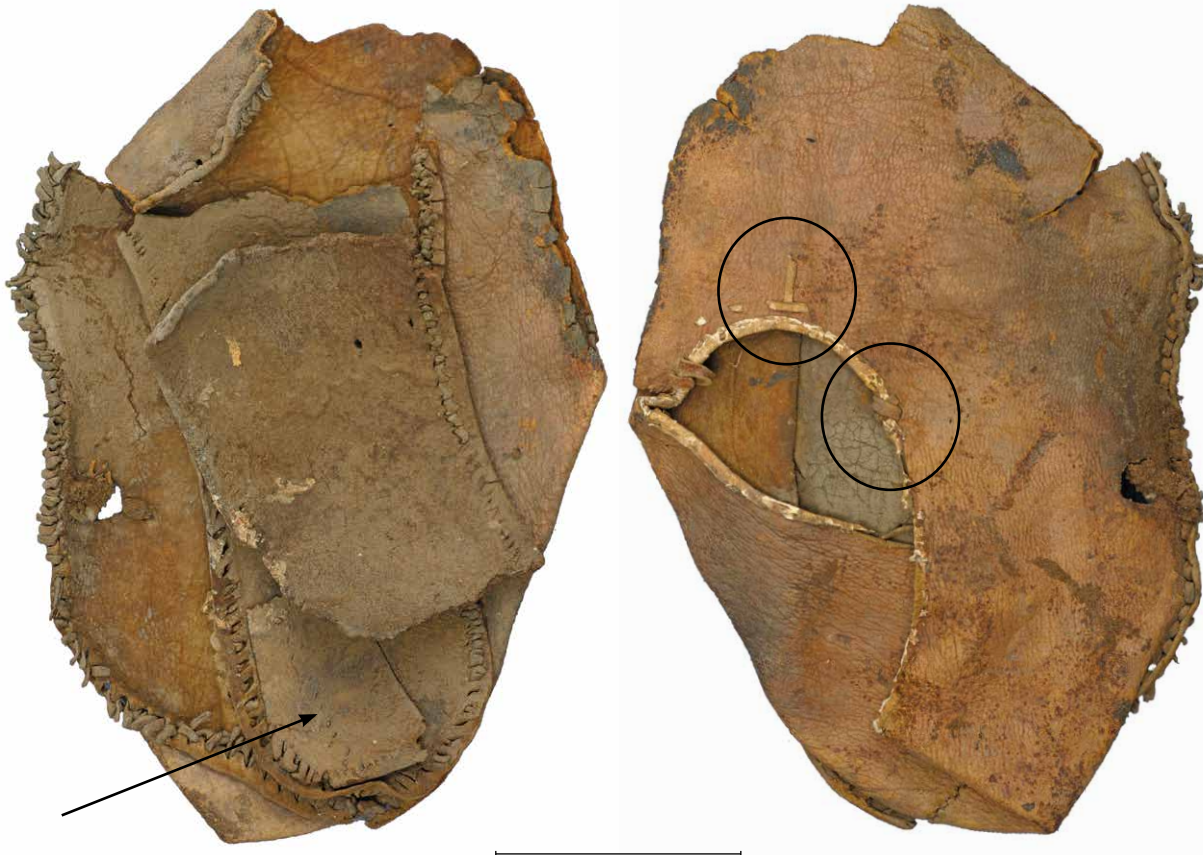
CATALOGUE NUMBER 46

| | |
|-----------------|---|
| Spec. No. | el-095D-F; |
| Group | el-095A-F; |
| Provenance | South of Khnum Temple courtyard; |
| Date | Late Antique; |
| Object | Footwear, shoes; |
| Measurements | D) 16.5 x 32.5-57.8 x 70.5. E) 20.6 x 32.3 x 1.3 & 29.4 x 36.6 x 1.5. F) L: 130.0. W front: 66.3. W waist: 52.0. W heel; 52.5. T sole (including leather of the upper): 5.5. H heel: 55.0; |
| Skin Processing | D, E) Vegetable tanned; |
| Remarks | A-C) See 'Persian' (Cat. No. 63); |
| Description | D) Several small, mostly featureless fragments; some are remnants of a sole's seam. E) Two small pieces with remnants of diagonal leather thong stitches in one of them. The other has paired slits, sometimes cut in such a random way that two touch each other and form a 'V'-shaped slit. F) An almost complete Stubbed-Toe Ankle Shoe (Veldmeijer, 2013a) with the upper still partially |

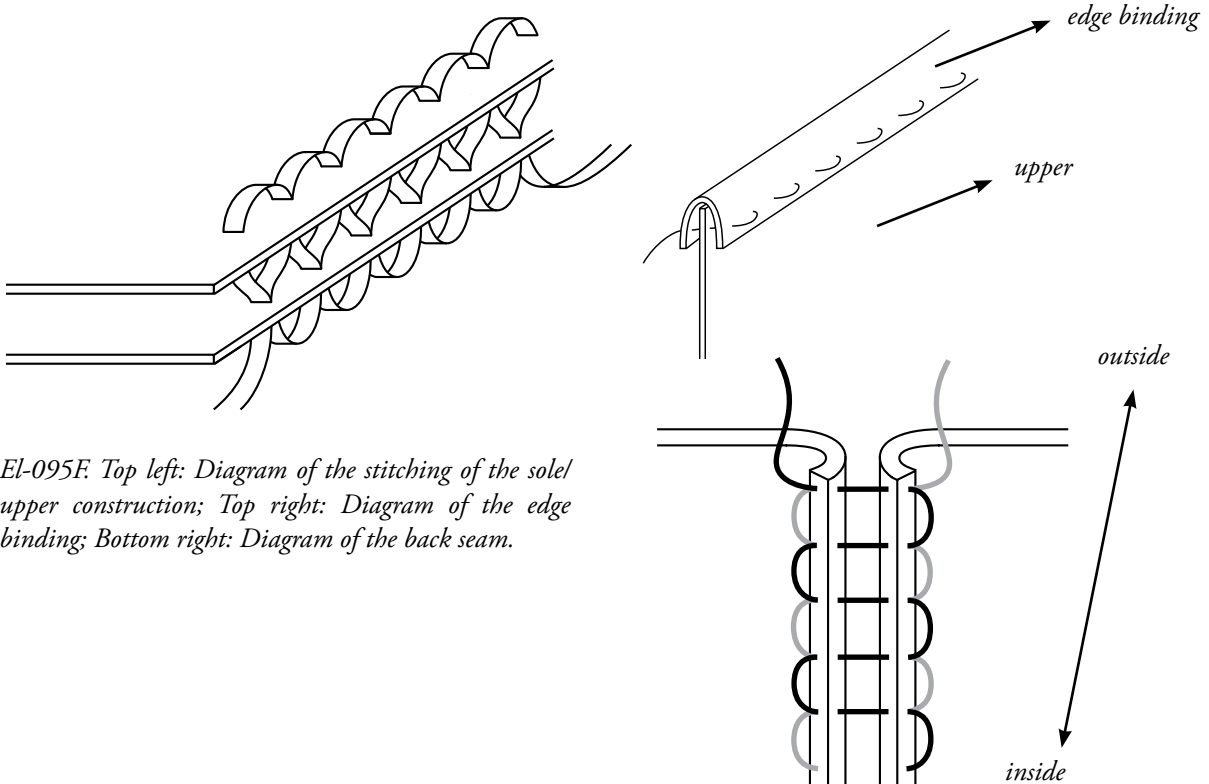
attached. The insole is missing the front part. The treadsole is missing the front part, as well as the heel's edge. The heel is rounded and the waist is gently constricted. Towards the front, the sole increases in width on both sides, but due to the missing part, it is impossible to know the orientation. At the heel a small piece of leather is sandwiched between the in- and treadsole (arrow) and part of it is included in the sole/upper construction. There are two isolated stitches next to this inserted part. The upper is joined to the sole by folding the edge outwards and securing it with interlocking running stitches of narrow leather thong, which is unique in this type of shoe (this technique is also seen in fragments A-C). The upper consists of one piece that is closed using a back seam with interlocking running stitches made of flax. Around the instep there is a white edge binding, which is folded over the edge of the upper and secured with running stitches made of sinew. At the lateral and medial side are X-motifs (encircled) running over the edge binding. These are made of leather thong and flank a 'T'-shape appliqué at the front of the instep (encircled).



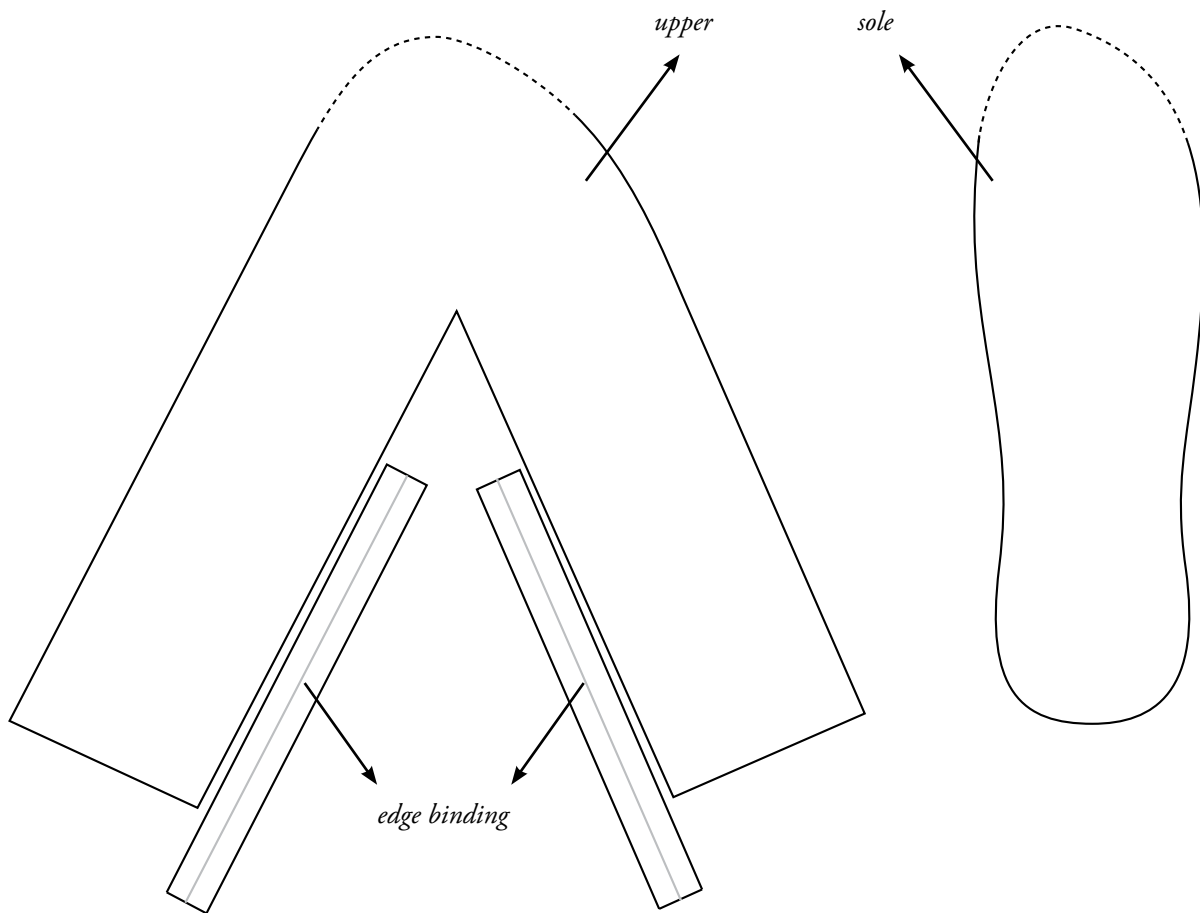
El-095D, E. Obverse and reverse. Fragment E is indicated; the remaining is described as D.



El-095F. Ventral and dorsal view. The arrow indicate the small piece of leather between the in- and treadsole. Note the decorative stitching below the lighter coloured edge binding (encircled).



El-095F. Top left: Diagram of the stitching of the sole/upper construction; Top right: Diagram of the edge binding; Bottom right: Diagram of the back seam.



El-095F. Cutting pattern. The missing parts are indicated, approximately, with dashed lines; the gray line indicate the fold of the edge binding. Only one sole layer is shown.

CATALOGUE NUMBER 47

| | | | |
|-----------------|--|-------------|--|
| Spec. No. | el-017A-K; | Remarks | K) Not illustrated. It has not been attempted to fit this with the other fragments because the remains are very hard and brittle and much too fragile; |
| Provenance | Domestic quarter west of Khnum temenos wall, House f, room 10; | | |
| Date | 1st-2nd c. AD; | | |
| Object | Sole; | | |
| Measurements | A) L: 170.0. W front: 74.5. W heel: 65.0. T total: app. 6.3. W reinforcement stitches: 3.0. B) L: 66.6. W front: 42.0. W back: 82.0. T total: app. 6.3. W repair stitches: 2.2. C) 46.9 x 63.3. T: 2.0. D) 68.3 x 46.8. T: 4.5. E) 41.7 x 46.1. T: 4.7. F) 42.7 x 58.8. T: 2.3. W stitches: 2.9. G) 44.9 (incl. curvature) x 7.1 x 13.3. H) 39.1 x 25.3. I) 35.3 x 27.3. J) 28.2 x 28.5; | Description | Ten fragments (and some scraps under number el-017K, which are not photographed) of a shoe of which only the swayed sole, with small remnants of the upper, is preserved. Fragments A and B fit together and form the complete length of the sole, albeit folded. A) Back three quarters of the sole of a turnshoe, which consist of an insole and treadsole. The treadsole has been reinforced with a roughly half circle of leather fitting the heel (arrow). There are no traces of wear on the insole, but it is possible that only the treadsole was worn. It cannot be ruled out that this was a re- |
| Skin Processing | K) Vegetable tanned: | | |

inforcement rather than repair, as it is inserted in the sole/upper construction. On the other edge the patch is secured with small leather thong running stitches through both sole layers. Moving towards the front, the width of the sole is continuous and only decreases at the tip, which tapers asymmetrically, thus indicating the orientation (left shoe). The seam between the upper and sole includes a lengthwise folded rand and is secured with a leather thong, but the type of stitching could not be determined with certainty; most likely it is just a running stitch (in flax thread);

B) Front part. On the treadsole, a patch is secured with small leather thong stitches, which is certainly a repair. In front of the repair is a small hole, however, it is not clear whether this was the result of wear or post-depositional circumstances;

C) The fragment has almond-shaped stitch holes at the edge and several other stitch holes forming a circle;

D) Roughly rectangular part of two layers of leather.

Probably part of the sole. Note, that there are no traces of a rand. The original leather thong stitches are accompanied by a second phase (repair?) of soft fibre (flax?) stitches (s?Z₃);

E) Part of the sole, including a small remnant of the seam and rand;

F) This fragment (arrow) fits with fragment C but actually is the outer side, which is suggested by the leather thongs;

G) Part of the sole seam. Curved fragment;

H) An unidentifiable fragment (part of sole seam?). It includes an edge and stitching (probably flax);

I) Unidentifiable, but with a few empty stitch holes: H) and I) might fit;

J) Roughly triangular, small fragment with slits at right angles to the edge(?);

K) Small parts of the sole seam, often including a rand. The bigger fragment, however, is a piece without features.



El-017A, B. Dorsal and ventral view. The arrow in fragment A points to the extra, partial layer at the heel.

C & F



El-017C, F. Left: Dorsal and ventral views respectively. The arrow in C & F points to fragment F; Right: Diagram of the stitching of the sole seam.

D



E



G



H



I



J



El-017D, E, G-J. Obverse and reverse.

CATALOGUE NUMBER 48

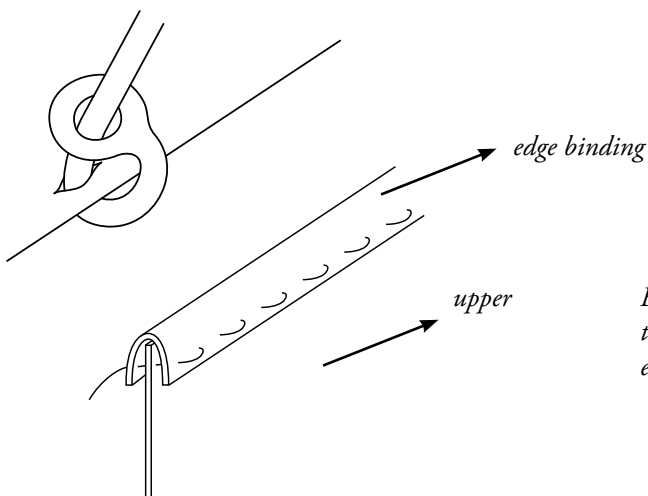
| | |
|-----------------|---------------------------------|
| Spec. No. | el-087B; |
| Group | el-087A, B; |
| Provenance | Khnum Temple area, surface; |
| Date | Post-Roman (after AD 395)*; |
| Object | Upper fragment; |
| Measurements | L: 155.0. W: 43.6; |
| Skin Processing | Not vegetable tanned; |
| Remarks | A) See 'Sandals' (Cat. No. 21); |

Description

A rectangular, folded piece of leather, which is part of the upper of a shoe. One edge shows stitch holes and a small strip that has been folded around the edge (edge binding), thus sandwiching it. The running stitches are made of flax. Note the extraordinary fastening, which is made of a narrow strip of leather, pulled through a hole in the edge and leather sheet, and subsequently pulled through an eye at the other end of the strip (*cf.* el-031G, Cat. No. 27).



El-087B. Verso and recto.



El-087B. Left: Diagram of the remnant of the system to close the upper over the instep; Right: Diagram of the edge binding.

CATALOGUE NUMBER 49

| | |
|-----------------|---|
| Spec. No. | el-074; |
| Provenance | South of Khnum Temple courtyard; |
| Date | 6th c. AD; |
| Object | Complete shoe; |
| Measurements | L: 233.0. W front: 74.7. W waist: 49.8. W heel: 64.6. H heel's upper: 55.0; |
| Skin Processing | Sole: Possibly vegetable tanned. Upper: Vegetable tanned; |
| Remarks | Extremely fragile; |

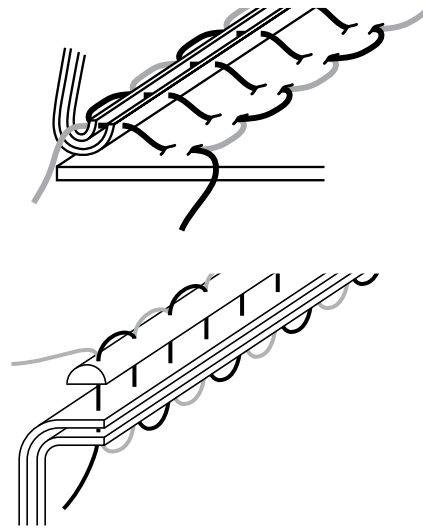
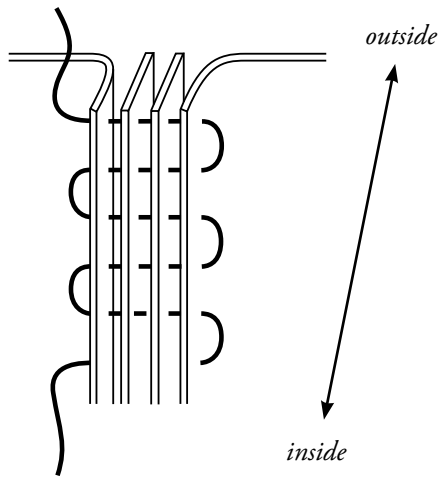
Description

A shoe with a straight, relatively thick sole that is highly shaped with a rounded heel and constricted waist. Towards the front it increases in width and ends in

a rounded toe. The sole is not perfectly symmetrical lengthwise: the constriction of the waist at one side is more pronounced than the other and the heel's edge on this side is more convex (arrow) but this seems to be from sloppy cutting rather than to be intentional. The turnshoe is meant for the left foot. The upper consists of a piece of thinner outer leather, which is closed with a back seam, and has a lining. Towards the back, the height increases slightly. The centre part of the 'vamp's' edge of the instep protrudes into the instep as the sides run concave towards the sides of the shoe. The edge binding of the instep, a single strip of leather, ends as passepoil in the back seam. The upper and sole are secured with interlocking stitching of flax. Note the repair patch at one side (double arrow).

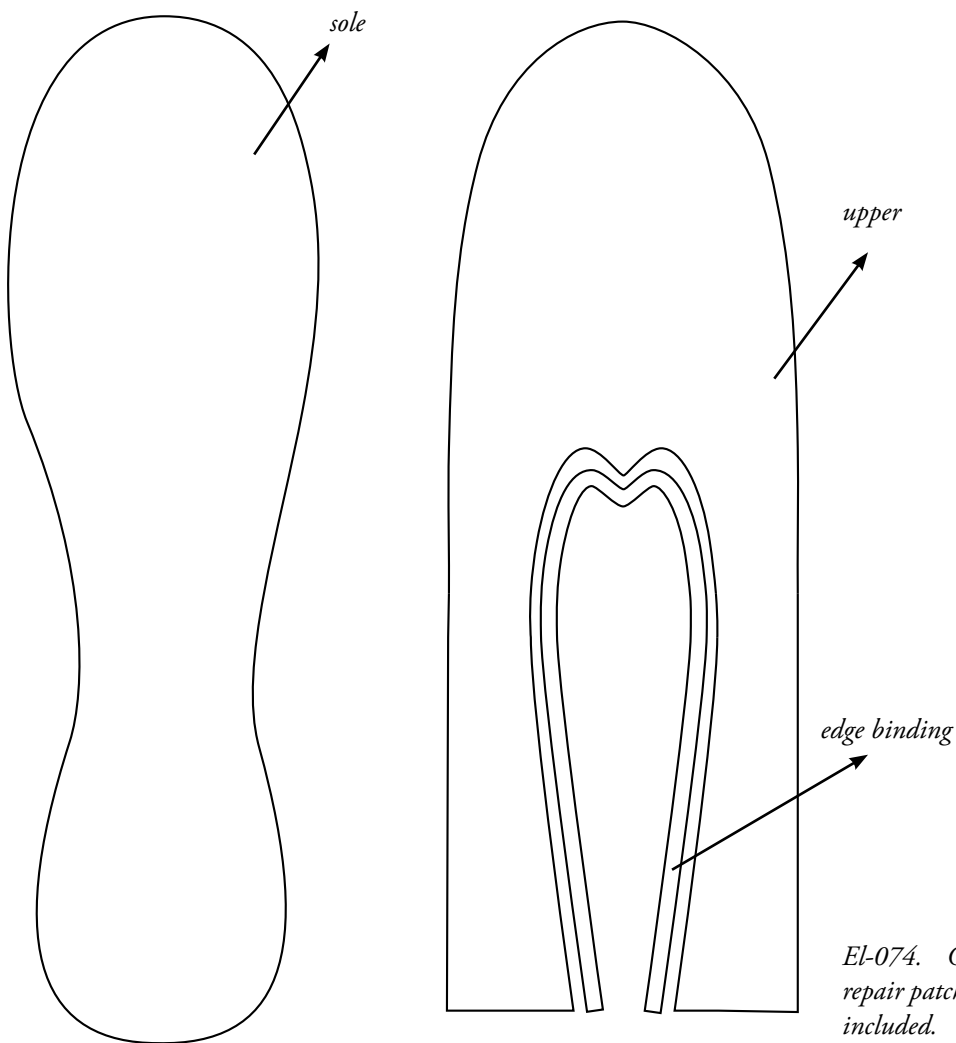


El-074. Dorsal and ventral view;



El-074. Diagram of the back seam.

El-074. Top: Diagram of the sole seam; Bottom: Diagram of the edge binding.



El-074. Cutting pattern. The repair patch and the lining are not included.

CATALOGUE NUMBER 50

| | |
|-----------------|--|
| Spec. No. | el-020; |
| Provenance | Area of town wall southwest; |
| Date | Post-Pharanoic*; |
| Object | Heel fragment; |
| Measurements | L (along curvature): 170.0. H: 26.6-38. W secondary stitches: 2.5. W stitches seam: 3.7; |
| Skin Processing | Vegetable tanned?; |
| Remarks | The outer surface of the original leather is red; |

Description

A fragment of the heel part of a shoe. The owner walked on the heel, as is suggested by the characteristic folds. The lining seems original but perhaps the fragment is too small to be absolutely sure. The outer layer is secured with leather thong stitches, which are not original. The outer layer was joined to it later, as the first layer has a clear folded edge through which the thong is stitched. On the left side, a small repair(?) is stitched partially over the thongs of the first 'repair' by means of zS_n thread (probably flax). The bottom shows the coarse leather stitches of the sole seam. Both layers of the upper are inserted here.



El-020. Top: Dorsal and ventral view; Left: View seen from the back.

CATALOGUE NUMBER 51

Spec. No. el-029A, B;
 Provenance Khnum Temple, fill of robbed foundation of southern colonnade;
 Date 7th-9th c. AD;
 Object Sole fragments;
 Measurements A) 32.5 x 36.5. T: 3.5. B) 30.0 x 62.0. T: 4.0;
 Skin Processing B) Vegetable tanned?;
 Description
 A) Small, almost square fragment with intact edge and flax stitching (zS₂);

B) A roughly rectangular fragment with three small holes, two of which are next to each other and situated close to the intact edge. Two more holes are closer to the edge and have remnants of interlocking running stitches of flax still *in situ*. At the other side, below the holes, a distinct horizontal incision is visible. The fragment is torn off, which is suggested by the frayed edges. The fragments do not originate from the same object.



El-029A & B. Recto and verso.

CATALOGUE NUMBER 52

Spec. No. el-015D-E;
 Group el-015A-E;
 Provenance Khnum Temple, fill of robbed foundation of southern colonnade;
 Date 7th-9th c. AD;
 Object Sole fragments;
 Measurements D) 13.0 x 17.5. T: 1.8. E) 18.4 x 32.6. T: 1.8;
 Skin processing Vegetable tanned?;
 Remarks A) - C), F) - G) See 'Sandals' (Cat. No. 9);

Description
 Fragment D and E are small pieces, which fit together. Two layers are sewn with a double row of stitches (flax?) that are comparable to the stitching in shoe soles. Relatively thin leather.



El-015D-E. Recto and verso.

CATALOGUE NUMBER 53

| | | | |
|-----------------|---|-------------|---|
| Spec. No. | el-031F; | Remarks | A-E) See 'Unidentified' (Cat. No. 135); G) See 'Sandals' (Cat. No. 27); |
| Group | el-031A-G; | Description | |
| Provenance | Domestic quarter west of Khnum temenos wall, House f, room 9, east; | | |
| Date | 1st-2nd c. AD; | | |
| Object | Footwear; upper(?); | | |
| Measurements | 59.8 x 56.8. T: 2.2; | | |
| Skin Processing | ?; | | |



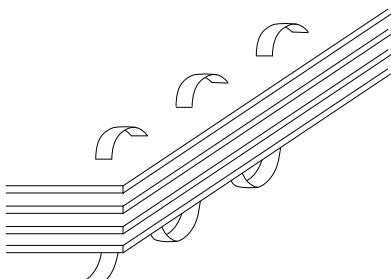
El-031F. Recto and verso.

CATALOGUE NUMBER 54

| | |
|-----------------|---|
| Spec. No. | el-014A-C; |
| Provenance | Domestic quarter west of Khnum temenos wall, House H, Room 3; |
| Date | 26th Dynasty; |
| Object | Sole fragments; |
| Measurements | A) L: 61.0. W: 50.3. T (total): 8.2. W seam: 6.0. B) 17.7 x 23.2. C) 14.3 x 23.5; |
| Skin processing | Vegetable tanned?; |

Description
Five fragments of which three are numbered and described. These belong together.
A) The biggest fragment, consisting of four layers of leather (two thinner middle ones and one inner and

one outer layer, both thicker), which are secured by means of running stitches of leather thong. The front end (the identification is based on the fact that the area just posterior of the toe is often worn) bends. The stitches run across the fragment rather than on the edge, which suggests that they are repairs. One edge still adheres on the inner layer. This kind of heavy seam, together with the sturdy leather, suggest remnants of a shoe. Some of the stitch holes contain remnants of flax(?) thread that may have connected the sole to the upper. Fragments B and C show small parts of seams; small leather thong stitches are still visible in fragment C.



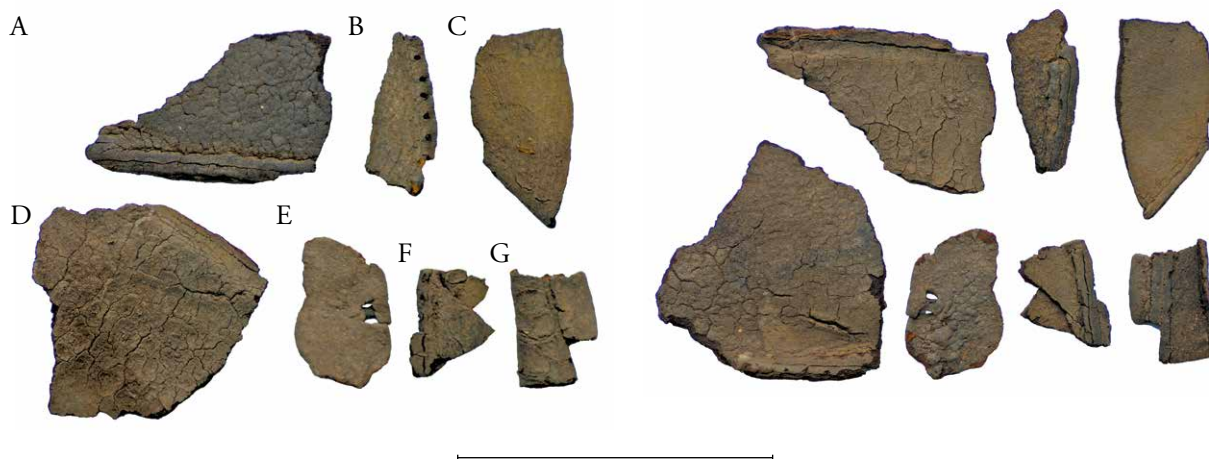
El-014A-C. Diagram of the stitching.



El-014A-C. Dorsal and ventral view.

CATALOGUE NUMBER 55

| | | |
|-----------------|---|---|
| Spec. No. | el-023A-K; | Description |
| Provenance | Domestic quarter west of Khnum temenos wall, House f, room 9, modern debris; | Ten numbered and photographed fragments. Hard and very brittle. The description is general, without details for each fragment. Small seams are visible in most of them. Two edge pieces are secured together along their edges (flesh-grain interlocking stitching). Fragment E has a pair of relatively large stitch holes. Fragment I shows small leather thong stitches and fragment H shows a comparable seam but here it functions to secure a piece of leather to the folded edge of a larger fragment. Fragment K has a seam, but also a large narrow leather thong stitch on one surface. Due to the fragmentary state as well as the fragility, it proved impossible to identify the fragments but probably they were part of a shoe, since butt seams were often used to secure the upper and its lining or to close the back seam (<i>cf.</i> Veldmeijer, 2013b). |
| Date | ?; | |
| Object | Footwear?; | |
| Measurements | T leather: 1.1-1.8. A) 38.8 x 24.4. B) 10.6 x 25.2. C) 28.6 x 24.1. D) 36.4 x 37.3. E) 15.5 x 24.4. F) 14.0 x 17.6. G) 13.4 x 19.1. H) 40.4 x 64.7. I) 15.9 x 54.1. W stitches: 1.2. L stitches: app. 4.3. J) 28.3 x 39.2. K) 48.3 x 52.6. W stitches: 2.0. L stitches: 11.7; | |
| Skin Processing | B) & G) Not vegetable tanned; | |
| Remarks | 24 featureless scraps not numbered/illustrated; | |



El-023A-G. Obverse and reverse.



El-023H-K. Top: Obverse and reverse; Right: Diagram of the butt seams.

CATALOGUE NUMBER 56

| Spec. No. | el-105F-H; | Description |
|-----------------|---|---|
| Group | el-105A-H; | F) An irregularly-shaped fragment of upper. One edge shows remnants of torn stitch holes. The opposite edge is bulging which might be due to the stitching; |
| Provenance | North of Khnum Temple, House T53; | G) A small, roughly triangular fragment that might have been a piece of upper's leather. A scrap of edge binding or passepoil still adheres to it; |
| Date | 7th-9th c. AD; | H) The greater piece of a sole. The only features that are visible are torn stitch holes on one edge. |
| Object | Fragments of upper and larger part of the sole; | |
| Measurements | F) W: 115.1. L: 81.4. T: 1.3. G) W: 38.2. L: 51.2. T: 1.0. H) 44.1-61.7 x 114.5. T: 1.6; | |
| Skin Processing | Not tested; | |
| Remarks | A-C) 'Unidentified' (Cat. No. 126); D) 'Belts, Straps, Cordage etc' (Cat. No. 79); E) Number not used; | |



Top: El-105F. Verso and recto; Right top: El-105G; Recto and verso; Right bottom: El-105H. Ventral and dorsal.

CATALOGUE NUMBER 57

Spec. No. el-118;
 Provenance South of Khnum Temple, ash deposit in street;
 Date 6th-7th c. AD;
 Object Larger part of a sole;
 Measurements W waist: 57.0. W front: 72.3. T: 2.7;
 Skin Processing Not tested;
 Description
 The greater part of a single-layer sole (suggested by several intact stitches). The heel as well as the front part is incomplete. Towards the front, the sole in-

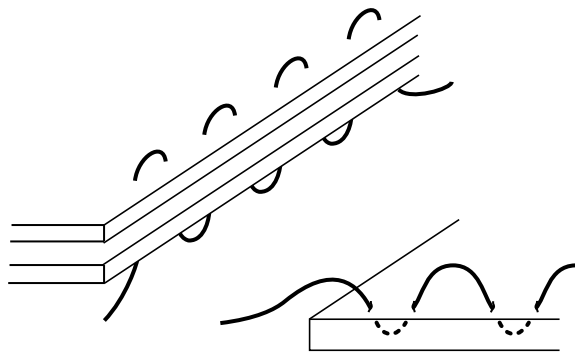
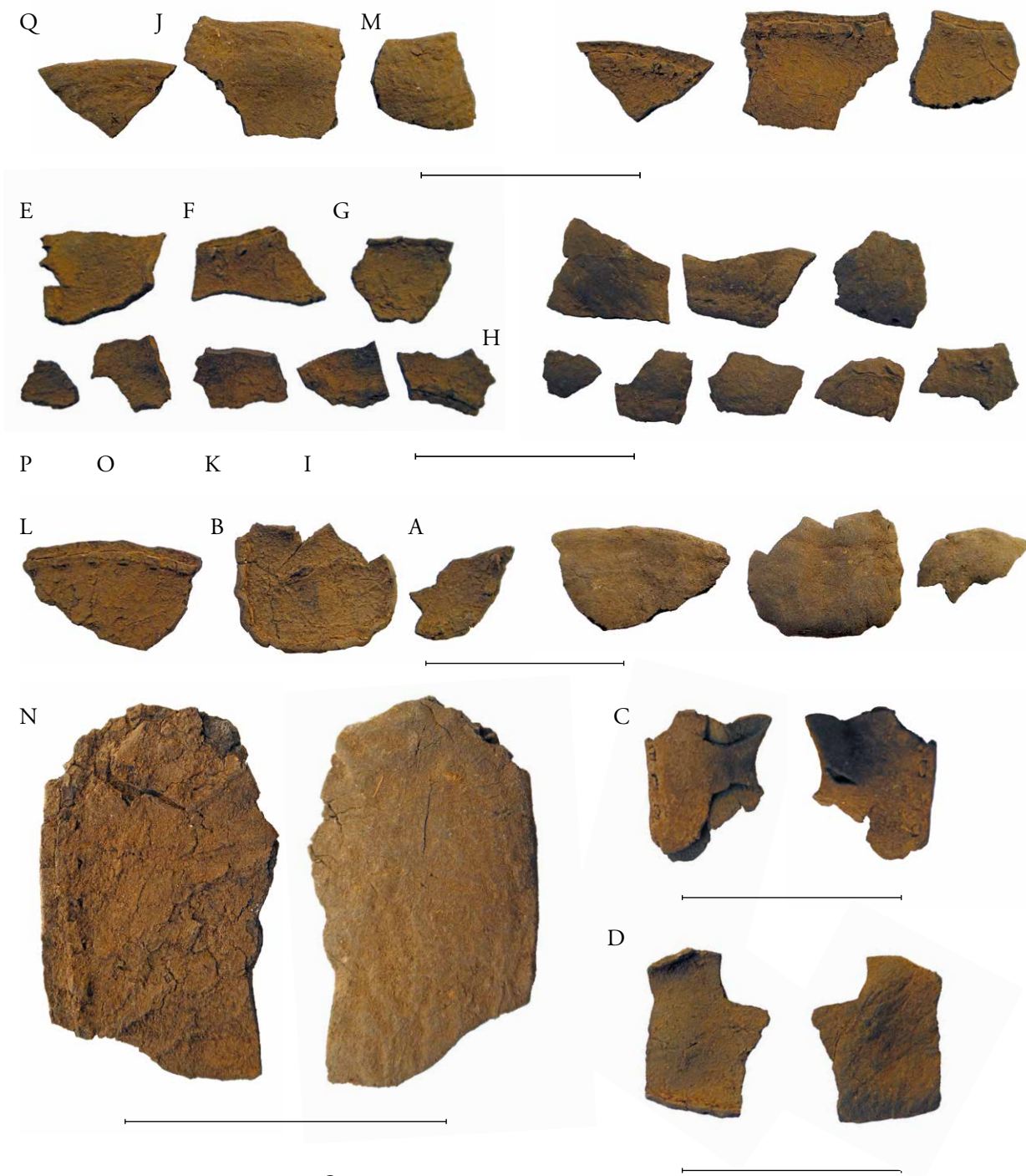
creases in width almost equally on both sides. Along the edges are long and widely-spaced leather thong running stitches. The identification as a shoe's sole is uncertain, although such stitches could have been used to secure the upper. If correct, it would have been a coarsely-made shoe. The absence of evidence for straps is another argument for the identification. Note the remnants of transverse stitches, also made of leather thong, which once secured repair patches. On one front corner, an overhand(?) knot is tied in a leather thong sewing thread (arrow).



El-118. Top: Dorsal and ventral view; Right: Diagram of the stitching.

CATALOGUE NUMBER 58

| | | | |
|--------------|--|--|---|
| Spec. No. | el-119; | Skin Processing | Not tested; |
| Provenance | West of Khnum Temple, House M21; | Remarks | All fragments are from one sole, thus not described separately; |
| Date | 5th-6th c. AD; | Description | |
| Object | Fragments; | Small fragments of thin leather of various shapes. Group A-H has fine running stitching that are made of flax thread. These are fairly regular in size as well as in the length of the interstitch space. Although group I-P consists of slightly thicker leather, the difference is minimal and the physical appearance suggests that they originated from the same object. The tiny stitch holes are reminiscent of tunnel stitches that can be found in shoes in order to connect the upper with the sole. Fragment C is an exception: it is folded and the edge is secured with very fine leather thong running stitching. | |
| Measurements | A) 19.7 x 31.4. B) 41.0 x 32.1. C) W: 27.0. L: 34.3. T: 2.7. D) 38.1 x 28.1. E) 22.2 x 29.9. F) 21.0 x 31.7. G) 20.8 x 23.2. H) 15.7 x 23.8. I) 14.7 x 19.8. Average D: 1.4. J) 27.4 x 37.5. K) 14.7 x 21.6. L) 26.6 x 44.9. M) 23.1 x 25.1. N) 36.5 x 59.1. O) 17.5 x 19.2. P) 11.3 x 13.6. Q) 17.8 x 31.5. Average T: 3.1; | | |

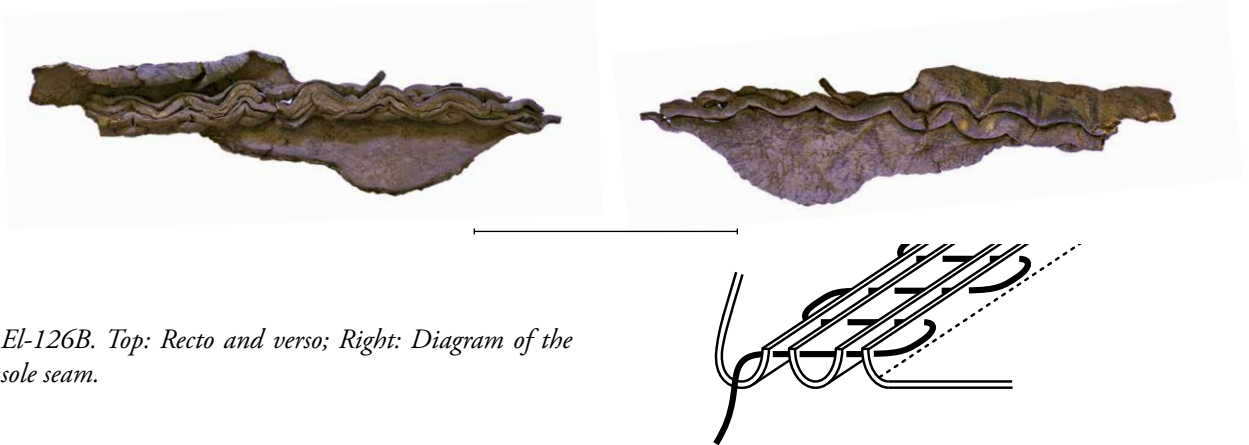


El-119A-P. Top: Obverse and reverse. Left: Diagram of the running (top) and tunnel (bottom) stitches registered in the fragments.

CATALOGUE NUMBER 59

Spec. No. el-126B;
 Group el-126A-B;
 Provenance North of Khnum Temple, surface;
 Date ?;
 Object Sole fragments;
 Measurements L: 108.7. W waist: 68.7. W heel:
 76.8. T: 5.0;
 Skin Processing Not tested;

Remarks A) See 'Sandals' (Cat. No. 44);
 Description
 A fragment of sole seam, showing both a remnant of the upper as well as the sole. The seam is closed with a lengthwise folded rand and is secured with leather thong running stitches, the stitches as well as the interstitch space are almost equal in length.



El-126B. Top: Recto and verso; Right: Diagram of the sole seam.

PERSIAN FINDS

CATALOGUE NUMBER 60

| | |
|-----------------|--|
| Spec. No. | el-056; |
| Provenance | Domestic quarter west of Khnum temenos wall, House DA, wall niche (see Kuckertz, 2006: 109-122); |
| Date | 27th Dynasty; |
| Object | Container; |
| Measurements | L: 160.0; L body: 140.0. W at opening: 95.0. Circumference: app. 230. H opening fold: app. 28. H slits at rim (average): 8.0. D bottom: app. 60; |
| Skin Processing | Not tested; |
| Remarks | Kuckertz' (2006: 135-136) Nr. 18. The object is in the museum; no labels with specialist numbers with it; |

Description

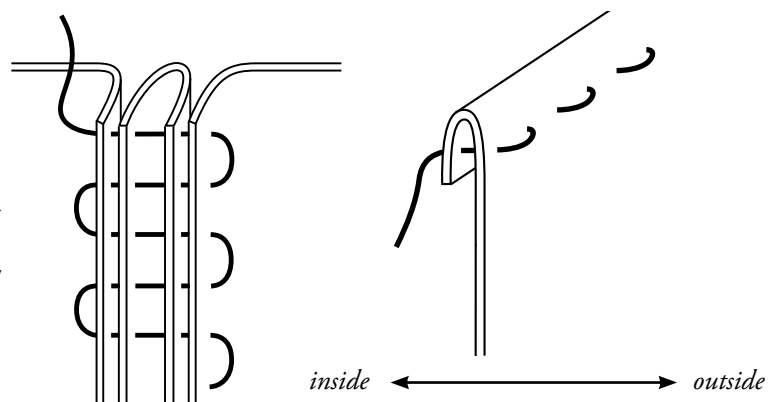
Kuckertz (2006:135-136):

Es handelt sich um einen schmalen zylindrischen Beutel (H ca. 15,5 cm, B max. 7,8 cm) mit einer Längsnaht, bei der die übereinander gelegten Lederkanten in schräg verlaufenden Saumstichen [but see below] mit einer dünnen Lederschnur zusammengenäht wurden. [...] Der obere Rand des Beutels ist nach innen umgeschlagen und etwa 3,0 cm vom Rand entfernt mit einem Lederriemen festgenäht. Zusätzlich ist der Beutel etwa

1,5 cm unterhalb des Randes in größeren Abständen mit Längsschnitten versehen, durch die ein Zugband gezogen wurde, das ihn verschließen sollte. Reste dieser dünnen Lederschnur sind in zwei Löchern noch vorhanden. Ein schmaler V-förmiger Einschnitt im Randbereich in der Nähe der Längsnaht ist vermutlich eine antike Beschädigung, die wieder zugenäht worden ist.

Due to the completeness, it is not possible to be definite about the exact construction of the body itself. However, it is likely that the sides of the sheet and the passepoil (the above-mentioned 'Lederschnur') are secured with flax (this is used in the bottom too, see below) running stitches, rather than whip stitching ('Saumstichen'). The type of stitching is suggested by the wavy line of the seam (Veldmeijer, 2012: 79). The passepoil is a lengthwise folded strip of leather, which is inserted with its fold facing outwards. The bottom is made with a separately inserted piece of leather that is secured to the body of the bag by means of a passepoil too (fold facing outwards) and folded edges. Throughout the bag, the sewing thread is on the inside, suggesting that the bag was made thus and turned inside out afterwards. The larger slits just below the opening must have been used for a drawstring to close the pouch.

El-056. Right: Diagram of the edge of the opening of the pouch, which is folded inwards and secured with running stitches; Far right: Diagram of the seams in the bottom and body, using a passepoil and running stitches.





El-056. Obverse and reverse.

CATALOGUE NUMBER 61

Spec. No. el-016;
 Provenance Domestic quarter west of Khnum temenos wall, House DA, wall niche (see Kuckertz, 2006: 109-122);
 Date 27th Dynasty;
 Object Complete shoe sole;
 Measurements L: 255.0. W front: 85.0. W waist: 60.0. W heel: 66.2. T total: app. 4.7;
 Skin Processing Vegetable tanned;
 Remarks Kuckertz' (2006: 134-135) Schuh Nr. 17. The object is in the museum; no labels with specialist numbers with it;

Description
 Kuckertz (2006: 134-135):
Das auf 106.61 ü. NN. knapp über dem Boden der Kammer gefundene Schuhteil ist lediglich eine aus meh-

rerer (etwa fünf bis sechs) Schichten bestehende Sohle eines rechten Schuhs mit wenigen Resten des Oberleders (L ca. 25,5 cm, B ca. 8,5 cm). Der hintere Bereich des Oberleders fehlt gänzlich. Bei der zweiten, vom Rand etwas entfernt laufenden Nahtlinie handelt es sich entweder um die des Oberleders auf die Sohle, oder eine kleine zusätzliche Obersohle wurde auf mehrere Lagen einer Untersohle aufgenäht. Reste des ledernen Nähriemens sind in den eingeschnittenen Löchern erhalten. Auch die Untersohlen sind am Rand zusammengenäht; besonders am Innenrand und an der Schuhspitze finden sich Reste des Nähriemens. Da vom Oberleder nur Fragmente erhalten sind [arrows], lässt sich über Gestalt und dekorative Ausformung des Schuhs keine Aussage machen.

Eight fragments forming a complete, multilayer sole of a shoe. The sole, consisting of four layers, is well made. The heel is rounded, running into a slightly constricted, elongated waist, after which it widens



until the ball of the foot, which is the widest part. The front is pointed at the big toe, indicating the shoe was for a right foot (swayed sole). The thick treadsole is slightly larger than the two midsoles and single insole, which are distinctly thinner as well. The sole layers are secured by running stitches which touch each other on the dorsal surface, but show interstitch spaces on the ventral surface of the treadsole. Sewing is done with a leather thong through slits at the edge of the sole and through the outward-folded edge of the upper. About halfway down its length, on the medial edge, is a z-spun thread (flax?) tied at the edge, the function of which is unclear.

El-016. Top: Dorsal and ventral view. The arrows point to some of the small remnants of the upper; Left: Detail of the stitching of the sole/upper construction, seen from dorsal. Note the z-spun thread sticking out of the sole; Right: Diagram of the stitching of the sole/upper construction.

CATALOGUE NUMBER 62

| | |
|-----------------|---|
| Spec. No. | el-059A-D; el-097S; |
| Provenance | Domestic quarter west of Khnum temenos wall, House DA, wall niche (see Kuckertz, 2006: 109-122); |
| Date | 27th Dynasty; |
| Object | Footwear, shoe; |
| Measurements | A) L: 130.0. W front: 57.0. W heel: 48.8. T sole (incl. attachment upper): 6.3. W decorative strip instep: 20.4 (W attachment strips): 2.3. B) L: 120.0. W: 60.0. W seam: 5.4. D) 26 x 51. L: 155-160; el-097S: L: 140.0. W: 107.0 (115.0 including the folded edge). T: 1.7. |
| Skin Processing | Not tested; |
| Remarks | A, C & D: Kuckertz' (2006: 129-130) Schuh Nr. 9. Object in museum; no labels with specialist numbers with it. Fragment B and el-097S are the upper of Kuckertz' Schuh Nr. 1 (2006: 123-124); |

Description el-059A [the numbers between square brackets can be found in the sketch]

Kuckertz (2006: 129-130):

Von dem geschlossenen Schuh Nr. 9, einem linken Schuh, sind der vordere Teil bis zum Spann fast vollständig (L ca. 13,0 cm, B ca. 8,5 cm) und zwei jetzt lose Fragmente (a: L ca. 8,5 cm, B ca. 6,5 cm; b: L ca. 8,0 cm, B ca. 3,5 cm) von den Seiten erhalten. Erkennbar ist zu beiden Seiten des Schuhs je eine mit kleinen Heftstichen aufgenähte trapezförmige Applikation [1], die – zum Riemen verlängert – rechts in einem Knoten endet, wohl aber nicht mehr vollständig ist. Von der linken Applikation ist der zum Binden verlängerte Teil im Fundphoto noch zu sehen, jetzt aber abgefallen. Vermutlich war an jeder Seite ein weiteres trapezförmiges Lederstück aufgenäht (ähnlich wie z.B. bei den Schuhen Nr. 8 und 10), wie das in situ im Verband liegende Fragment b (Abb. 14 unten Mitte) verdeutlicht.

[This fragment does not seem to belong to this shoe. Another reason to think there was no second element attached is the absence of stitch holes in the upper. Moreover, the bottom edge of this appliqué is complete and does not show a V-shape]. [...] *Zur Verstärkung des vorderen Einschnitts der Fußöffnung ist ein blattförmiger Zwickel angebracht [2] [which slightly overlap the insert*

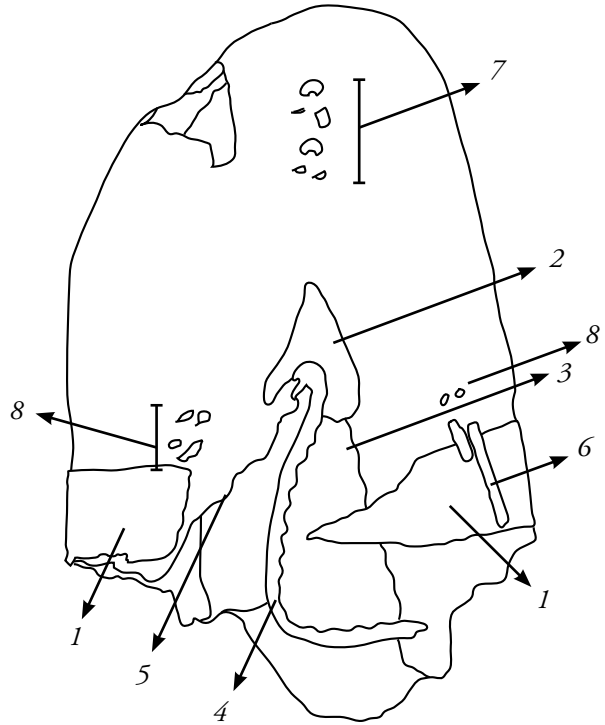
that is described next]. *An der Öffnung ist auf der rechten Seite ein separater zungenförmiger Lederlappen an das Oberleder angenäht [3], wobei der Rand fein säuberlich mit einem Lederstreifen in der Art einer Paspelkante [...] umfasst ist [4], die noch bis auf das eigentliche Oberleder übergreift. Vermutlich war die linke Seite entsprechend gearbeitet [suggested by the torn edge of the leather] [5]. Auf allen drei Bruchstücken sind die Reste von zwei dünnen Lederriemen zu erkennen [6], die als Dekoration um den Schuh herumlaufen und in Höhe der Zehengelenke umbiegen [7]. Diese Schnüre werden an mindestens sechs (ursprünglich wohl insgesamt neun) Stellen durch kleine tunnelartige Laschen gezogen [8], die mittels Schnitten im Oberleder hergestellt wurden. Die Dekorriemen werden an diesen Stellen nach innen und wieder nach außen geführt.*

The front part of the shoe. From the preserved back of the sole moving towards the front, the width of the sole expands mainly on the lateral side, resulting in a swayed sole. There are three sole layers, but at the front there seems to also be a fourth one. This was probably inserted to reinforce this part of the shoe, which is prone to wear. The edge of the vamp is folded outwards and secured to the sole layers along the edge by means of fairly regular running stitches made of leather thong. The stitches are longer than the interstitch spaces. The upper consists of a single, fairly thick layer of sturdy leather. The medial side of the instep has a more or less triangular insert [3]. It was not possible to look at the inner surface of this element, due to the fragile state of the shoe. However, the insert is probably secured to the vamp's leather by a butt seam, sewn with whip stitches; the material of the thread is unclear. The edge binding [4], a lengthwise folded strip of leather that also includes this insert, is secured with whip stitches of flax thread. The trapezoidal appliqué [1] is included in the sole/upper construction and secured to the vamp's leather with flax running stitches along their edges. Two narrow leather drawstrings [6], decorative in nature, run over them.

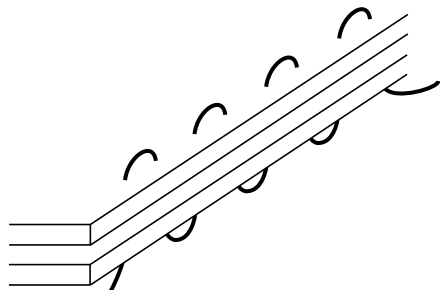
Description el-059B and el-097S

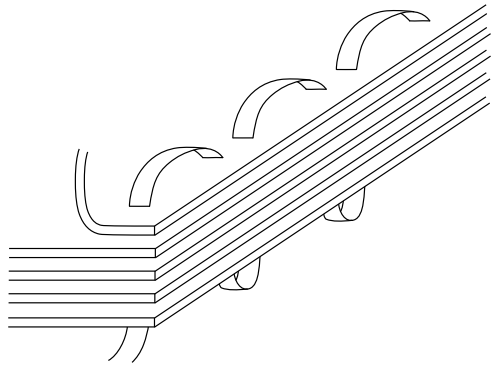
Kuckertz No. 1 (2006: 123-124):

Es handelt sich dabei um das Oberleder eines geschlossenen Schuhs, jetzt in zwei Fragmente auseinandergelassen (L ca. 28,5 cm, B max. 10,5 cm) [here el-059B and el-



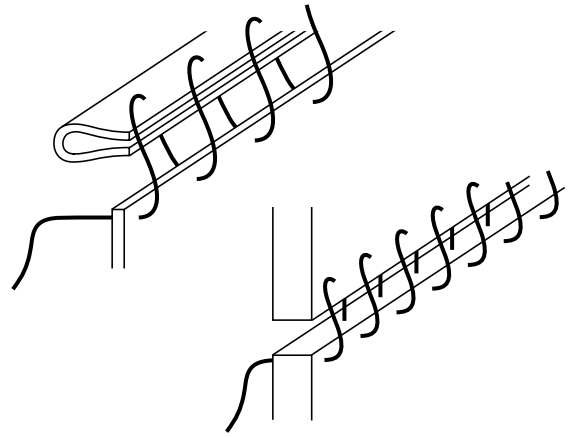
El-059A. Top: Dorsal (left) and sketch of the dorsal view to guide the description (right; stitching is not drawn); Left: ventral view; Below: Detail of the front of the upper (seen from dorsal), showing the two laces pulled through four slits in the leather [7]. Scale bar is 10 mm; Below left: Diagram of the stitching used to secure the appliqué (done with αS_2 flax thread).





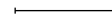
El-059A. Right: Detail of the stitching of the sole/upper construction, seen from ventral. Scale bar is 10 mm; Top: Diagram of the stitching of the sole/upper construction.

097S]. Von der Sohle war nichts erhalten, möglicherweise war sie gar nicht vorhanden (unfertig?). Der zum größten Teil umgeklappte untere Rand zeigt, wo er erhalten ist, regelmäßig schräg eingeschnittene Löcher für die Befestigung an der Sohle. An der Schuhspitze ist das Leder V-förmig eingeschnitten, dort sollte durch Zusammennähen der Zehenbereich geformt werden [this is not deliberately cut, but rather is torn off, just as much of the edge is torn off as well]. Eine längs verlaufende Verdickung markiert wahrscheinlich den Rist. Im mittleren Teil des Oberleders sind die Reste von drei Löchern zu erkennen [arrow in the figure], die dreieckförmig angeordnet sind. An dieser Stelle ist bei anderen Schuhen [e.g. el-059A, see above and el-097D, el-097R, see below] eine dreieckige oder blattförmige Verstärkung aus Leder aufgenäht, die das Ausreißen des Oberleders an der Fußöffnung verhindern soll. Diese Verstärkungen sind in der Regel mit kleinen



outside ← → inside

El-059A. Left: Detail of the leaf-shaped appliqué [2], insert [3] and edge binding [4]. Scale bar is 10 mm; Top left: Diagram of the stitching of the edge binding; Top right: Diagram of the seam between the insert [3] and the vamp.



Hefstichen (Nr. 9, 10) bzw. Saumstichen (Nr. 14) auf das Oberleder aufgenäht, was regelmäßige Löcherreihen zur Folge hat. Welche genaue Funktion diese drei relativ großen Löcher allerdings haben, bleibt unklar (vielleicht für Bänderriemen?). Der hintere Teil des Oberleders von Schuh 1 zeigt feine Nahtlöcher [dashed arrow in the figure], vermutlich von der Fersennaht, und das am oberen Schuhrand nach innen umgeschlagene Leder. Ein winziges Loch [encircled in the figure] ist unterhalb des umgeschlagenen Randes zu erkennen (Funktion?).

Da die Photos der Fundsituation und des Objektes selber größtenteils nur die Unterseite zeigen, kann über die Oberseite und eine eventuelle Dekoration keine Aussage getroffen werden. Der Schuh war jedoch wahrscheinlich undekoriert [...]. Schuh Nr. 5 oder Nr. 6 könnten das Pendant zu Nr. 1 sein, sind aber beide etwas kleiner.

El-059B is the back part of the upper, including the folded edge with empty stitch holes, which is part of the sole/upper construction. El-059S is the front part

of the upper. The stitch holes still hold remnants of leather thong stitches. The fragments are in an extremely fragile state.



El-097S (top) and el-059B (bottom). Recto and verso. The two pieces fit and together form the larger part of the upper of a closed shoe. Note that the medial edge of el-059B is torn off post-excavation due to which much of the back seam, still visible in the images published by Kuckertz (2006: 124), is now lost.

Description el-059C and el-059D

C) A folded part of the upper with remnants of the sole/upper construction. A row of small stitches (flax) along one side of the upper appears to have been situated at the inside corner of the heel. Slightly more towards the front, there are two slits (once with a drawstring running through them?). There is a row of leather thong stitches at the other edge. This part fits the right side of fragment el-059A, resulting in a reliable estimation of the length of the sole, as fragment C curves towards the heel.

D) Small fragment of the side of the upper with two narrow leather thongs (laces) running through slits.

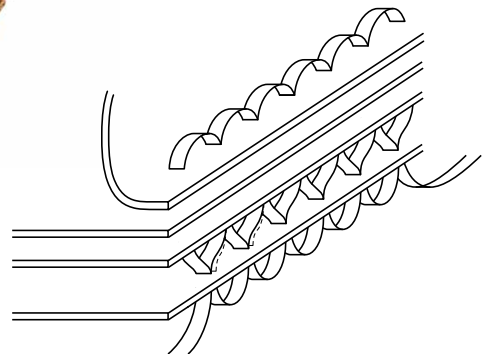


El-059C (left) and el-059D (right). Overview.

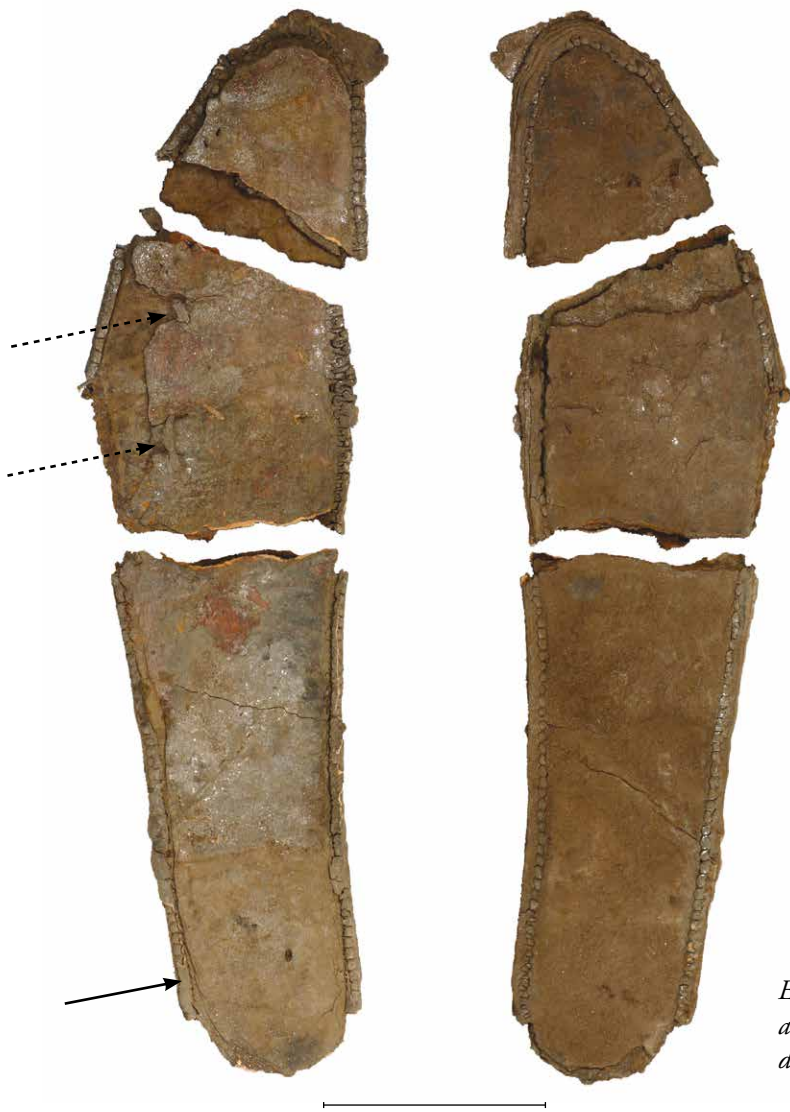
CATALOGUE NUMBER 63

| | |
|-----------------|--|
| Spec. No. | El-095A-C; |
| Group | El-095A-F; |
| Provenance | South of Khnum Temple courtyard; |
| Date | Late Antique; |
| Object | Shoe sole; |
| Measurements | A-C) L: 227.0. W front: 60.4. W waist: 45*. W heel: 42.4. T: 3.5. W thong: 2.0; |
| Skin Processing | A [insole]: Vegetable tanned; A [treadsole] Possibly Vegetable tanned; A [upper]: Not vegetable tanned; B, C) Possibly vegetable tanned. |
| Remarks | For D-F see 'Shoes' (Cat. No. 46). See the discussion in the analysis for inclusion with the Persian material. |

Description
 Fragments A-C form a complete left sole. The heel is rounded and from here the width continuously increases in size. Halfway down its length, the width increases more distinctly, especially on the lateral edge, which is convex as opposed to the near-straight medial edge. The sole consists of three layers, which are much worn, reducing the layer to only a few millimetres thickness at some points. Small remnants of the upper are still *in situ* (one scrap is indicated by an arrow in the figure). The upper is joined to the sole by folding the edge outwards and securing it to the sole by looping it with a narrow leather thong. Note the repair stitches at the insole, which do not penetrate all layers (dashed arrow in the figure; see also the detail photograph).



El-095A. Top: Detail of the sole/upper construction, seen from dorsal. Note the small remnants of the upper (arrow); Left: Diagram of the sole/upper construction. The overview of the sandal can be found on the following page.



El-095A. Dorsal and ventral view. The arrow indicates remnants of the upper; the dashed arrows indicate repair stitching.

CATALOGUE NUMBER 64

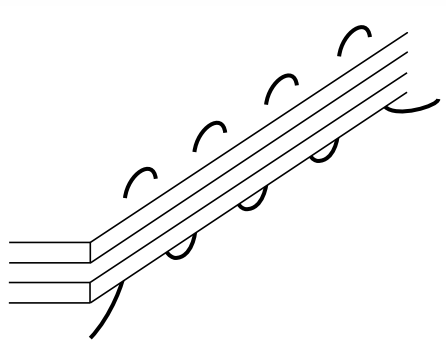
| | | |
|--------------|--|--|
| Spec. No. | el-097A-AP; | 70.0. W over heel's upper: app. 90.0. |
| Provenance | Domestic quarter west of Khnum temenos wall, House DA (see Kuckertz, 2006: 109-122); | W sole: 48.4. G1) L: 105.6. W: 92.0. T front: 12.9. G2) L: 78.3. W: 59.4. G3) L: 63.2. W: 37.6. G4) L: 73.5. W: 57.6. G5) L: 64.9. W: 36.6. W decoration: 21.0-25.7. G6) L: 61.0. W: 18.1-25.6. H) L: 67.8. W: 23.6. I) L: 48.0. W: 33.8. W: 24.9. H: 26.2. J) L: 27.0. W: 25.0. K) L: 56.9. W: 44.4. L) L: 53.9. W: 44.6. M) L: 43.4. W: 24.3. N) L: 38.2. W: 26.2. O) L: sole (O3 & 4): 220.0. W heel (O3): 49.6. W front (O4): 59.8. T (O3): 4.1. L upper (O1): 170.0. W (O1): 100. L O2: 93.6. W O2: 58.7. |
| Date | 27th Dynasty; | |
| Object | Footwear, sandals & shoes; | |
| Measurements | A) L: 82.8. W: 40.5. T: 2.2. B) L: 68.9 & 46.0. D: 4.7. W coil: 22.6. C) L: 128. W (at beginning): 75.5. W heel: 74.1. H heel: app. 70. H front: app. 50.0; D) L: 121.5. W over upper: 98.6. W over sole: app. 80.0. E) L: 107.2. W front: 66.5. W end: 68.2. T (including upper's leather): 7.3. F) H heel (intact): app. | |

P) L: 245.0. W heel (reconstructed): 76.5. W front: 83.5. H upper halfway instep: 70. Q) L: 240.0. W front: 90.5. W waist: 68.5. W heel: 72.5. T: 7.2. H upper at application: 87.0. R) L: 190.0 (over upper). H upper: 65.0. W front: 90.6. W waist: 67.4. W heel: 74.2. T sole: 7.5. S) T) L: 74.4. W total: 55.0. W sole: 39.8. W sole (reconstructed): 52.5. T sole: app. 4.0. U) L: 190.0. W front (reconstructed): 78.4. W waist: 53.0. W heel: 60.0. V) L: 130.0. W: 64.6-68.8. T: 10.5. W1) L: 72.0. W: 46.3-48.5. T: 4.2. W2) 68.5 x 48.5. W3) 44.0 x 55.5. X) L: 71.8. W: 77.7. T: 2.5. Y) L: 73.5. W: 90.0. T: 3.0. Z) L: 89.5. W: 37.0. AA) L: 55.8. W: 31.2. AB) 62.5 x 42.7. AC) 36.5 x 22.3. AD) L: 103.7. W: 23.8-10.7. AE) 54.6 x 43.7. AF) 37.2 x 36.7. AG) 57.8 x 53.8. AH) 66.9 x 62.4. AI) 17.8 x 41.9. AJ) 13.0 x 44.6. AK) 54.8 x 51.0. AL) 29.5 x 32.0. AM) 17.4 x 65.7. AN) 28.2 x 49.3. AO) 26.9 x 56.1. AP) 31.7 x 32.0.

Skin Processing Possibly vegetable tanned: AL, AN, AB-AD, AK, AO, AP, Y, U, T, Q (sole), R (inside upper), R (insole), D (upper and application). Vegetable tanned: C, AP, AI, AH, AG, R (outside upper), AM, AE, AA, Z, X, A, P (upper), S, Q (upper), O4 (upper and sole), O1-3. Not vegetable tanned: L, G6, E, W3. Fragment U: The cross section shows the outer surfaces as gray/brown, but the core is cream coloured, suggesting the leather was treated only at the surface.

Description el-097A

This is Kuckertz' No. 7 (2006: 128-129). It is a roughly rectangular piece that is folded lengthwise. The fragment is a piece of upper, judging by the seam of the sole/upper construction with leather thong stitching on one of the long sides (arrow in the figure). The opposite long side has tiny running stitches that are made of flax. One side shows two decorative tapered leather strips, stitched on with flax running stitches. Note that although the two seem to be independent strips, they were actually connected at one end (dashed arrow).



El-097A. Top: Obverse and reverse. The arrow points to the sole/upper construction. The dashed arrow indicate the missing part of the appliqué; Left: Diagram of the stitching which secures the appliqué.

Description el-097B

Two parts of a strap. One is a twisted end only, the other is a coiled strip of leather through which two twisted leather strings are pulled (spacer). These fragments belong to the next described piece (Kuckertz, 2006: 125).

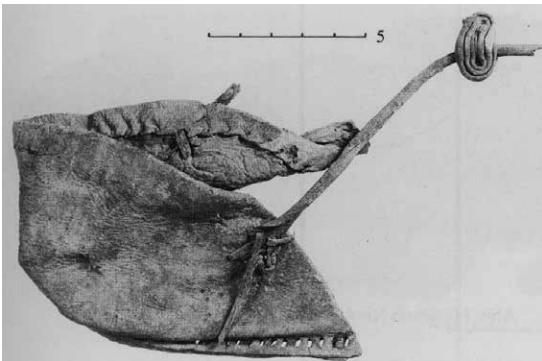
Description el-097C

Kuckertz No. 3 (2006: 124-125):

Es handelt sich dabei um das geschlossene Fersenteil/Hackenleder einer Sandale (vermutlich) bzw. eines im Vorfußbereich geschlossenen Schuhs [rather a shoe which is open at the front, hence the straps; this is referred to by the AEFP as 'open shoe']. [...] Das aus einem einzigen Lederstück bestehende Hackenleder (Seitenlänge ca. 12,0 cm, Gesamtlänge ca. 23,5 cm) ist im Fersenbereich etwa 7,0 cm hoch, wird nach vorne hin schmaler (auf ca. 5,0 cm) und endet in einer akzentuierten Abschrägung, die bis etwa zum mittleren Bereich der zu rekonstruierenden Sohle gereicht hat. Das Fersenteil zeigt am unteren Rand die Nahtlöcher für die Befestigung auf der Sohle [suggesting that the sole/upper construction was positioned at the outside]. Der obere Rand ist umgeschlagen und innen in kleinen Stichen mit einer

dünnen Lederschnur festgenäht, eine Saumnaht, die auf der Außenseite nicht sichtbar wird. Im Eckbereich der Abschrägung ist auf beiden Seiten je eine Lederschnur eingeknotet. Von einer Schnur ist nur noch ein kleiner Rest erhalten, von der anderen, anscheinend aus einem schräg gerollten schmalen Lederband bestehend, ein ca. 12,0 cm langes Stück, an dessen Ende eine Art Knopf angebracht ist. Die Knotung selber scheint aus kleineren Riemen zu bestehen (vielleicht dem in kleine Streifen aufgeschnittenen Ende der Schnur), dort hängt ebenfalls ein ca. 4,0 cm langes Ende herunter. Der Knopf besteht aus einer schneckenförmig aufgerollten Lederschnur. Die elliptische Verformung spricht dafür, dass die Binde-schnur durch einen in den Knopf eingeschnittenen, quer durch das aufgerollte Lederband verlaufenden Kanal gezogen wurde.

The upper consists of two layers, which are secured with the aforementioned whip stitches on the instep and the sole/upper seam on the bottom. The folded edge on the instep (arrow in the figure) is 8.3 mm wide. On the bottom the edge is 9.6-10.7 mm wide. The two pieces of thong protruding from the coil suggests it functioned as spacer intended to gather them so as to continue as a front strap, thus the front part remained open.

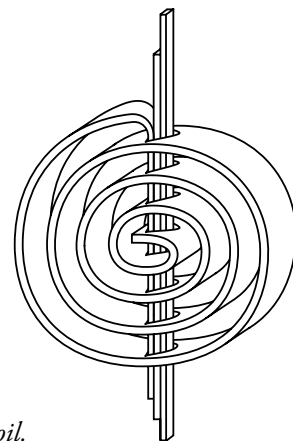
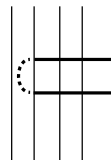
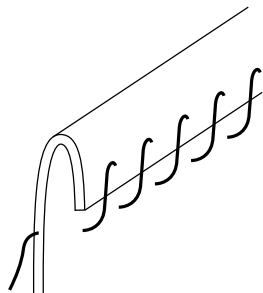


Left: El-097B & C still connected. From: Kuckertz (2006: 125, Abb. 10); Below: El-097B (strap) and C (upper). El-097C is seen in ventral and side view. The arrow point to the edge binding (folded edge).





El-097C. Top left and left: Detail of the folded edge of the instep, which is secured with whip stitches. Note the attachment of the strap in the figure in the centre; Top right: Detail of the empty stitch holes of the sole/upper construction; Below right: Detail of one of the attachments of the straps. Scale bars are 10 mm.



Left: Diagram of the stitching of the edge binding; Right: Diagram of the coil.

Description el-097D

Kuckertz No. 14 (2006: 132-133):

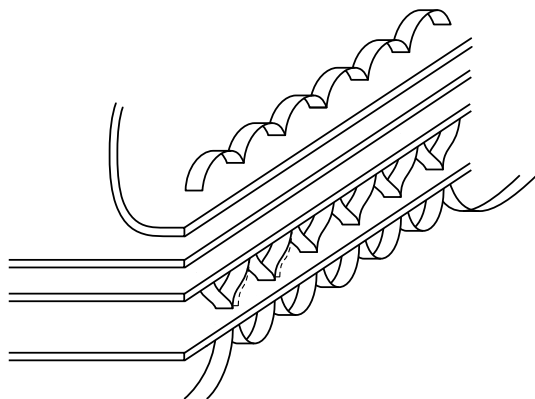
Das Schuhfragment Nr. 14 besteht aus dem Vorderteil eines geschlossenen Schuhs mit dem Rest der Sohle [...] (L ca. 15,0 cm, B ca. 10,0 cm). Zwei dünne, zur Fußspitze laufende Dekor-Lederriemen und die blattförmige Applikation zur Verstärkung am vorderen Einschnitt der Fußöffnung erinnern an die Schuhe Nr. 9, 10 und 12 [el-059A, Cat. No. 62; el-097R and el-097P respectively], die ähnliche

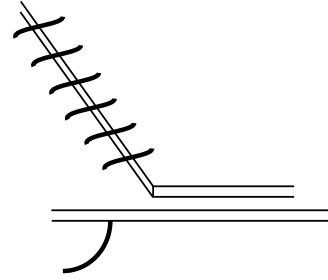
Merkmale aufweisen. Möglicherweise ist Nr. 14 das Pendant zu Nr. 12 [el-097P]. Dafür spräche auch die doppelte Lochreihe bei Nr. 12 von der dort fehlenden blattförmigen Applikation. Diese Applikation ist bei Nr. 14 mit einer über die Lederkante ziehenden schräg verlaufenden Vernäbung (Saumstich) aufgebracht, d.h. ebenfalls zwei Reihen leicht versetzter Einstichlöcher verursachend, wie sie bei Nr. 12 zu sehen sind.

The sole consists of three layers. The upper is secured to the sole by a leather thong.



El-097D. Top: Dorsal and ventral view; Below: Diagram of the sole/upper construction; Right: Detail of the attachment of the decorative laces pulled through slits in the front upper. Scale bar is 10 mm.





Left: El-097D. Detail of the leaf-shaped appliqué; Right: Diagram of the whip stitching that secures the appliqué.

Description el-097E

Kuckertz No. 11 (2006: 131):

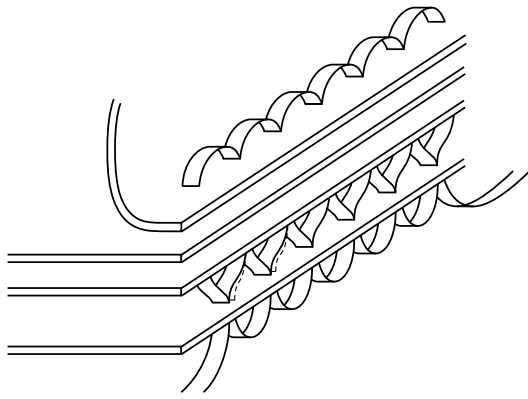
Von der stark zerstörten Sohle Nr. 11 ist nur der hintere Teil erhalten geblieben, der aus mehreren Lagen Leder besteht. Am Rand sind noch die Reste der Naht mit dem Lederfäden zu erkennen.

Part of a shoe's sole with remnants of the upper's leather (arrow). One edge curves slightly, indicat-

ing that it is the heel of the shoe. The sole consist of three layers, which are stitched using the looping technique; the thong seem to be rawhide rather than leather. The insole has an insert (dashed arrow), which indicates an economical use of leather rather than a repair. The stitches that secures it do not go through all the sole layers, but it could not be established through precisely which of the layers they do go.



El-097E. Dorsal and ventral view. The arrow indicates a remnant of the upper. The dashed arrow points to the insole's insert.



El-097E. Diagram of the sole/upper construction.

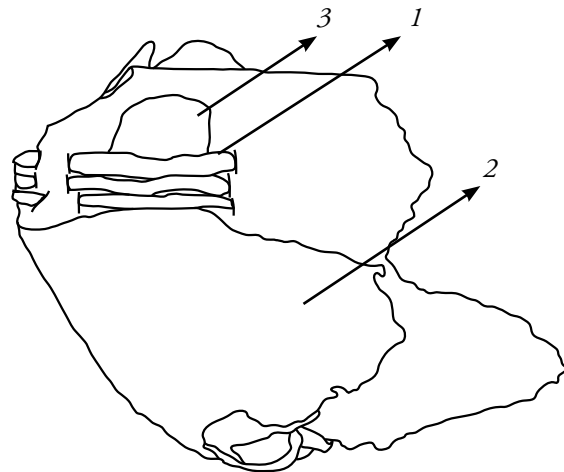
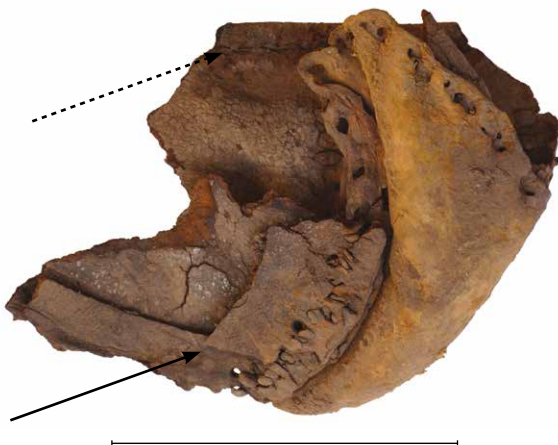
Description el-097F [the numbers between square brackets can be found in the sketch].

Kuckertz No. 15[a] (2006: 133):

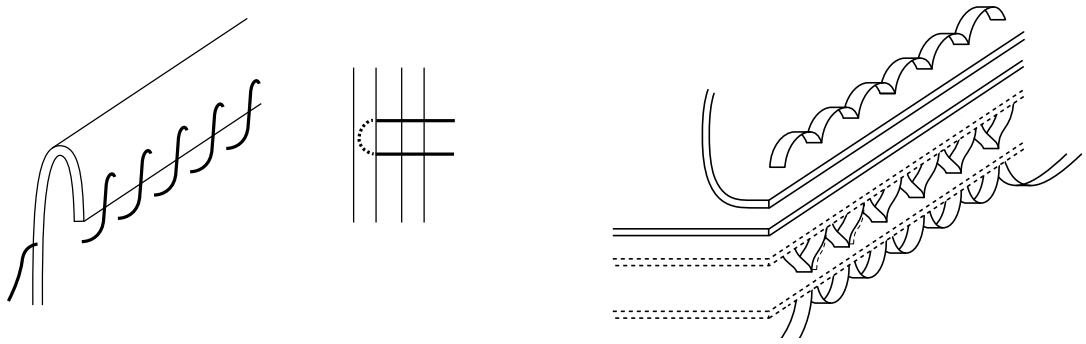
Die beiden Fragmente [Kuckertz' fragment b has not been found/recognised among the material] (*a*: *L* ca. 7,5 cm, *B* ca. 6,0 cm; *b*: *L* ca. 8,5 cm, *B* ca. 6,0 cm), die vermutlich vom hinteren Teil eines Oberleders stammen, sind dadurch gekennzeichnet, dass als Dekor

drei schmale Lederriemen durch senkrechte Schnitte im Leder gezogen sind [1]. *An anderen Schuhen* (z.B. Nr. 9, 10, 12, 14) *sind nur zwei Riemen vorhanden, die um den gesamten Schuh herumgeführt sind.*

An almost complete heel's upper (single layer) with part of the sole still attached (arrow in the figure). The height of the upper is complete. The edge of the in-step is folded and secured with whip stitches (dashed arrow in the figure), forming a simple edge binding. The heel has a semi-circular patch [2], which is an external heel stiffener. It is secured along the edge with running stitches (which are lost). The stiffener has a rectangular protrusion [3] that is inserted between the upper and the three drawstrings. These, in turn, insert at either sides of the protrusion into slits in the heel's leather. Moreover, the lower edge of the insert is included in the sole/upper construction. The upper and sole are secured by looping a leather thong through slits.



El-097E. Left top and bottom: Side and ventral view. The arrow indicates the remnant of the sole; the dashed arrow indicates the folded edge of the instep; Top right: Sketch of the dorsal view to guide the description (stitching is not drawn);



El-097F. Left: Diagram of the edge binding; Right: Diagram of the sole/upper construction. The dashed lines indicate uncertainty on the exact number of sole layers.

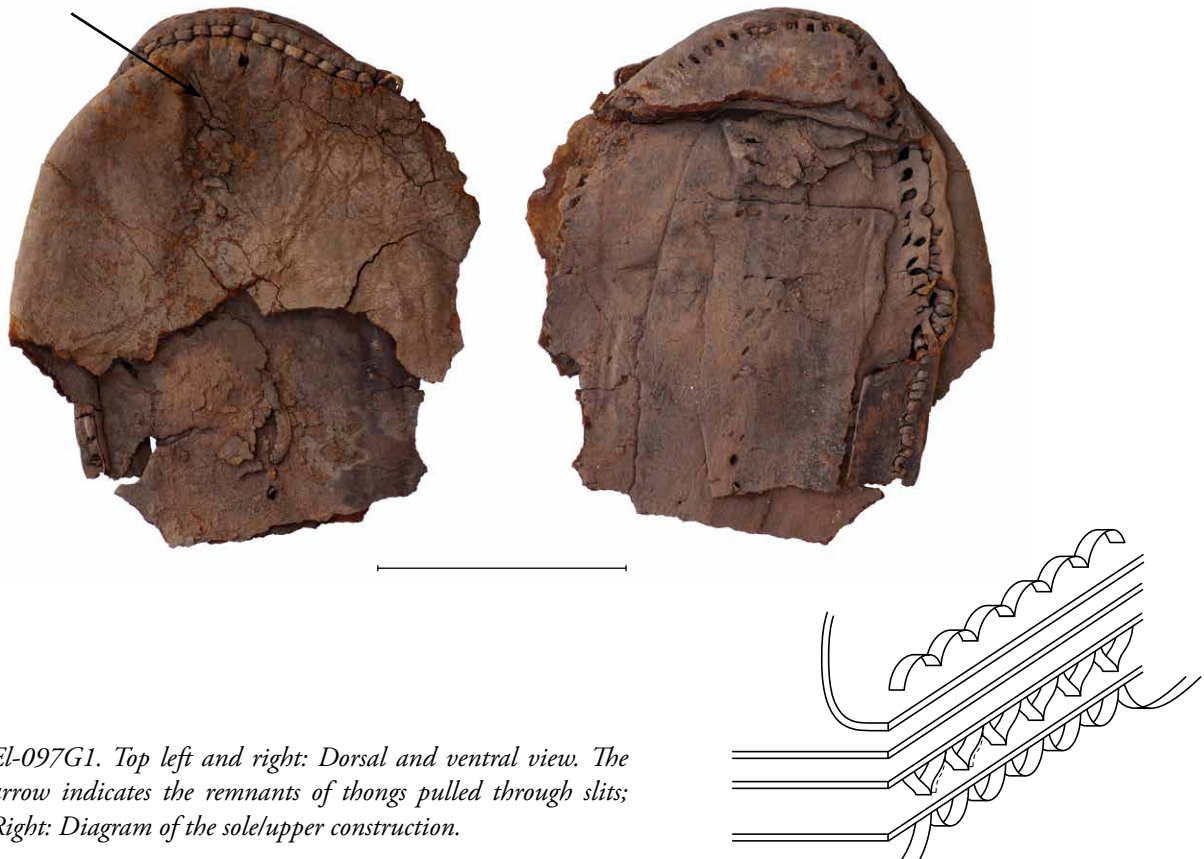
Description el-097G1-6

Kuckertz No. 16[a] (2006: 133-134):

Ein relativ großes Fragment ([...]; L ca. 10,5 cm, B ca. 9,5 cm) einer aus mehreren Schichten bestehenden Sohle zeigt vermutlich Flickstellen im Schubinneren, wo mit einem unregelmäßig aufgenähten Trapez wohl eine abgenutzte Stelle ausgebessert wurde. Am Rand sind die Nahtlöcher und teilweise der Lederfaden erkennbar.

El-097G1

The front part of a shoe with upper and sole. The sole consists of three layers; another layer seem to be only loosely inserted pieces of leather. The upper and sole are secured by looping a rawhide thong, of a distinctly lighter colour, through slits in the outward-folded edge of the upper. Two leather drawstrings are pulled through transverse slits (arrow), making a distinct bend as seen in other shoes (e.g. El-059A, Cat. No. 62).



El-097G1. Top left and right: Dorsal and ventral view. The arrow indicates the remnants of thongs pulled through slits; Right: Diagram of the sole/upper construction.

Kuckertz No. 16[e] (2006: 134):

Hierbei handelt es sich wohl um zugeschnittene, aber meist unverarbeitete Lederstücke (Riemen?, Sohlenende?), die aneinander haften ([...]; L ca. 8,0 cm, B ca. 6,0 cm). Nur an einem Fragment scheinen Nahtlöcher vorhanden zu sein [arrow in the figure].

El-097G2

A fragment of sole with various small pieces of leather attached, one of which has a crescent shape;



El-097G2. Dorsal and ventral view. The arrow indicates the row of stitch holes.

Kuckertz No. 16[d] (2006: 134):

Ob das Fragment d zu einem Schuh gehörte, bleibt unklar (Abb. unten, 2. von links; L ca. 6,5 cm, B ca. 4,5 cm, Dm Plättchen ca. 2,5 cm). Ein leicht elliptisches Lederplättchen ist mit einfachen Hefstichen auf ein größeres Lederstück aufgenäht. In der Mitte des Plättchens ist ein Loch durchgestochen. Wenn es im Zusammenhang mit einem Schuh gesehen werden soll, könnte es vielleicht eine Verstärkungsapplikation für einen durch das Leder gezogenen Riemen wie bei Schuh Nr. 3 sein.

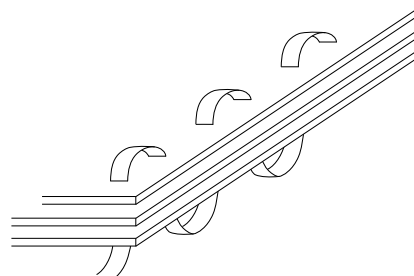
El-097G3

A patch consisting of two layers. The sewing is done with leather thong. The stitches are not visible on the other side because material adhering to this side obscures the view.



Kuckertz No. 16[f] (2006: 134):

Bei dem/den Lederrest(en) von fist nicht erkennbar, wozu er/sie gedient hat/haben. Eine mit einfachen Stichen aufgenähte Applikation und etliche Nahtlöcher sind erkennbar ([...]; L 8,5 cm, B ca. 5,0 cm).



El-097G3. Top: Overview of the recto and verso; Bottom: Diagram of the stitching that secures the patch.

El-097G4

Various pieces of soft, red-brown leather that, at some points, are secured with goat hair(?) sailor stitches. This suggests that the leather cracked and was repaired. A diamond-shaped appliqué, possibly a repair, is added and secured with running stitches made of leather thong. The stitching compares well with the stitching that secures the circular patch in el-097G3.

Kuckertz No. 16[b] (2006: 133-134):

Von einem Schuh stammt auch das Fragment b mit einem Bruchstück aus der Sohle und dem anhängenden Teil des Oberleders ([...]; L ca. 7,0 cm, B gefaltet ca. 3,0 cm). Die aufgenähte trapezförmige Seitenapplikation gehört zu einem Schuhtyp, wie er z.B. durch Nr. 7, 8, 9, 10 und 12 verkörpert wird [...].



El-097G4. Left and centre: Obverse and reverse; Right top: Diagram of the goat hair sailor stitch that repairs a crack; Right bottom: Diagram of the stitching that secures the patch.

El-097G5

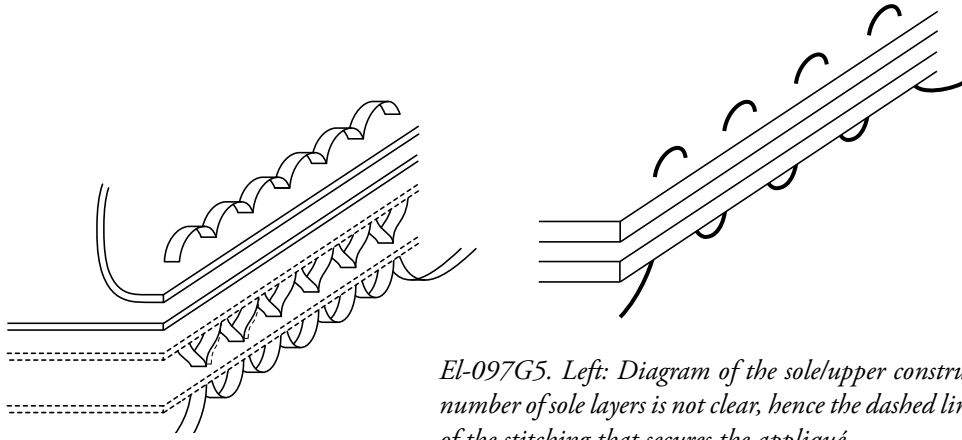
A rectangular piece of folded upper's leather. One edge still includes a remnant of the sole (arrow in the figure), showing that the upper and sole were secured by looping through the outward-folded edge with leather thong. The decorative strip across the upper's leather is secured with running stitches of flax (zS₂).

Kuckertz No. 16[c] (2006: 134):

Auch Fragment c gehört zu einem Schuh. Es handelt sich um eine wie bei Fragment b beschriebene trapezförmige Lasche, die auf die Seite eines Schuhs (Typ III) aufgenäht wurde ([...]; B ca. 1,8 – 2,8 cm). An den Längsseiten sind die Nahtlöcher der Applikation erkennbar.



El-097G5. Overview of the folded upper part of the fragment and the bottom part with a piece of sole/upper construction. Both recto. The arrow indicates the remnant of the sole/upper construction.



El-097G5. Left: Diagram of the sole/upper construction. The original number of sole layers is not clear, hence the dashed lines; Right: Diagram of the stitching that secures the appliqué.

El-097G6

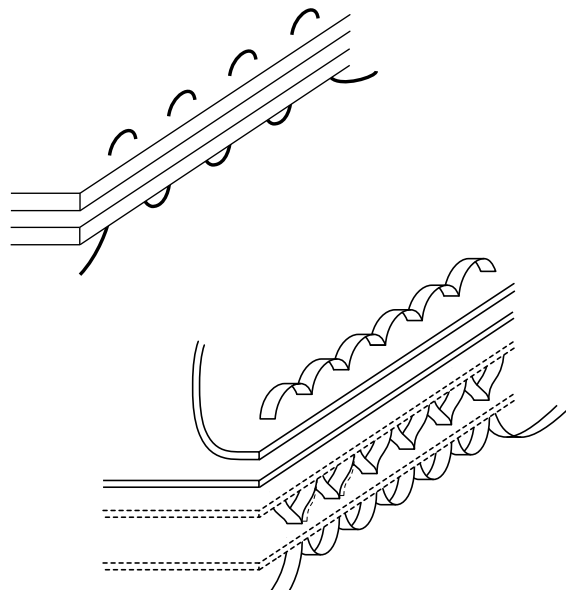
Some of the stitch holes still contain remnants of the sewing thread (zS₂ flax).

Right: El-097G6. Recto and verso (top); Diagram of the stitching that secures the appliqué (bottom).



Description el-097H

See the description of the comparable fragment el-097G previously.



El-097H. Left and centre: Overview of the folded upper part of the fragment and the bottom part with piece of sole/upper construction. Both recto; Right top: Diagram of the stitching that secures the appliqué; Right bottom: Diagram of the sole/upper construction. The original number of sole layers is not clear, hence the dashed lines.

Description el-097I

Folded upper's leather with a curved edge and a small remnant of the sole. The upper and sole were secured by leather thong looped through the outward-folded edge.

Right: El-097I. Ventral and dorsal view.



Description el-097J

A triangular piece of upper with a small strip of sole still attached by leather thong looped through the outward-folded edge. One of the edges at right angle to this sole/upper construction has remnants of running stitching made of flax.

Right: El-097J. Verso and recto. The scale bar is 10 mm.



Description el-097K

A roughly rectangular, thin fragment with a big leather thong running stitch at one side.

Right: El-097K. Verso and recto.



Description el-097L

A roughly diamond-shaped fragment of thin leather, the edges of which suggest it is a part of a sole. At one edge, two leather thong stitches include the remnants of a second (or perhaps more?) layer(s).

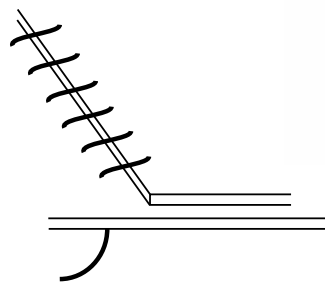
Right: El-097L. Verso and recto.



Description el-097M

A roughly rectangular fragment with remnants of a triangular appliqué that is secured with flax whip stitches (zS₂). On one side the stitches run more diagonally than on the other, where they are nearly at right angle to the edge of the appliqué.

El-097M. Right: Recto and verso; Below: Diagram of the stitching that secures the appliqué.



Description el-097N

A roughly rectangular fragment with two big leather thong running stitches. The other side shows two small fragments of leather, which are secured by the stitches.



El-097N. Obverse and reverse.

Description el-097O

Kuckertz No. 5 (2006: 126):

Von dem Schuh Nr. 5 (B ca. 10,5 cm, rekonstruierte Gesamtlänge ca. 21,0 – 22,0 cm) ist das Oberleder recht gut erhalten. Der Zehenbereich ist zerstört und löchrig, die Hälfte des hinteren Schuhteils hat sich eingefaltet, und an der linken Seite sind die feinen Nahtlöcher der Fersennaht zu erkennen. Auch einige lose Fragmente mit den Löchern der Sohlennaht sind erhalten. Am Spann ist um die Fußöffnung herum das Leder umgeschlagen und auf der Rückseite mit Hefstichen festgenäht. Unterhalb des Oberleders kam die schmale Sohle zutage, die zeigt, dass es sich um einen linken Schuh (L ca. 22,0 cm, B ca. 6,3 cm) handelt. [...] Die Schuhsoble besteht aus mehreren Lagen; am Rand ist fast durchgehend die Lochreihe der Naht mit einigen Resten des Lederfadens zu erkennen. Die Oberfläche ist ziemlich bröckelig.

A nearly complete but distorted shoe, in several parts. The narrow sole (el-09703 & 4) has a rounded heel, which increases in width towards the front. The lateral edge curves gently towards the toe area but still more distinctly than the medial edge. The sole consists of three layers: the thin insole is folded over the edges of the other two layers and seems to comprise of different pieces, judging by the overlapping edges of two (arrow). At least one (but possibly more) individual pieces of leather have been put between the insole and midsole (dashed arrow). The upper consists of one layer. The aforementioned edge binding is sewn with flax thread. The upper is closed by means of a back seam with whip stitching, as suggested by the shape of the stitch holes and the diagonal impressions of the thread next to them.



El-097O1. Top: Ventral and dorsal view; Right: Diagram of the back seam. Note that, although whip stitching is certain, there is no real indication that the edges were folded.

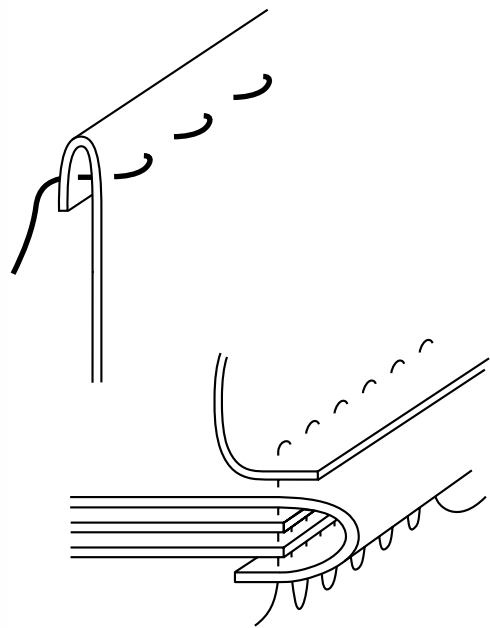


El-097O3 & 4. Dorsal and ventral view. The arrow points to the start of a new piece of leather, suggesting that the insole consisted of several parts. The dashed arrow indicates separate pieces of leather between the in- and midsole.

Description el-097P

Kuckertz No. 12 (2006: 131-132)

[...] *Schuh Nr. 12, der möglicherweise als rechter [the shoe is meant for the left foot] Schuh anzusehen ist (L ca. 24,5 cm, B ca. 10,5 cm, B Sohle ca. 7,0 cm). Die fast vollständige, aber sehr bröckelige Sohle besteht aus mindestens zwei Lederschichten, die übereinander gelegt und mit Hilfe [...] von groben Hefstichen mit einem schmalen Lederstreifen zusammengenäht sind. Vom Oberleder sind nur der vordere Bereich und ein Teil der linken Seite erhalten. Dort ist eine schmale trapezförmige Lasche auf-*



El-097O1. Top: Diagram of the simple edge binding; Bottom: El-097O3 & 4. Diagram of the soleupper construction.



El-097O2. Recto and verso.

genäht [arrow in the figure], die an ihrem oberen Ende über dem viereckigen Rest des separaten Schnürbandes, welches abgerissen ist, vernäht wurde. Die Nahtlöcher entlang der Schuböffnung deuten wie bei Schuh Nr. 7 [el-097Q1-4. see below] darauf hin, dass auch hier ein separater, vermutlich zungenförmiger Lederlappen angenäht war, wie er bei den besser erhaltenen Schuhen Nr. 9 und 10 vorhanden ist [el-059A-D, Cat. No. 62 and el-097R, see below, respectively]. Am vorderen Einschnitt der Schuhöffnung sieht man noch doppelreihig Löcher der ehemals aufgenähten Verstärkungsapplikation. Reste von

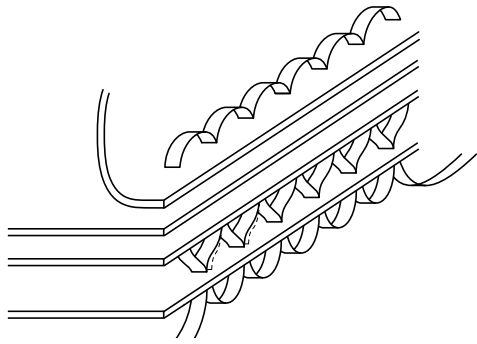
den zwei dünnen Dekorriemen, die rund um den Schuh liefen, sind noch erhalten; im Zehenbereich sind die Einschnitte für die Riemen gut erkennbar [encircled in the figure].

A largely complete sole with the almost complete left side of the upper still attached. Note the impression of the narrow thongs, which are themselves partially lost. The sole possibly consists of three layers but several smaller pieces were seemingly sandwiched between them, as also seen in e.g. el-097O3 & 4 (see above) and el-097U (see below). These, however, do

not correspond with the stitches that secures the sole layers. A coarse repair of the seam can be noticed on the lateral front part (dashed arrow). Kuckertz (2006: 132) suggests that this shoe could be the other in a pair with el-059A (Cat. No. 62) but both shoes are meant for the left foot. There is a remnant of a third narrow thong being pulled through the upper (double arrow in the figure), which compares with el-097F (see above) but is lower (*i.e.* closer to the sole/upper construction). It does not, however, seem to run all the way to the front, as there are no slits in the front of the shoe.



El-097P. Dorsal and ventral view. The arrow points to the appliqué, whereas the dashed arrow indicates the repair of the lateral front part of the sole/upper construction. The double arrow indicates the third layer. Encircled are the thongs going through the leather at the front.



El-097P. Top: Diagram of the sole/upper construction; Right: Detail of the attachment of the drawstring pulled through slits in the front upper. Scale bar is 10 mm.



El-097P. Left: Detail of the drawstrings, pulled through slits in the upper, as well as the appliqué; Centre: Detail of the impression of the drawstrings; Right: Detail of the stitching in the sole/upper construction, with clearly visible the appliqué, which is included in the seam.

Description el-097Q1-4

Kuckertz No. 7 (2006: 128-129)

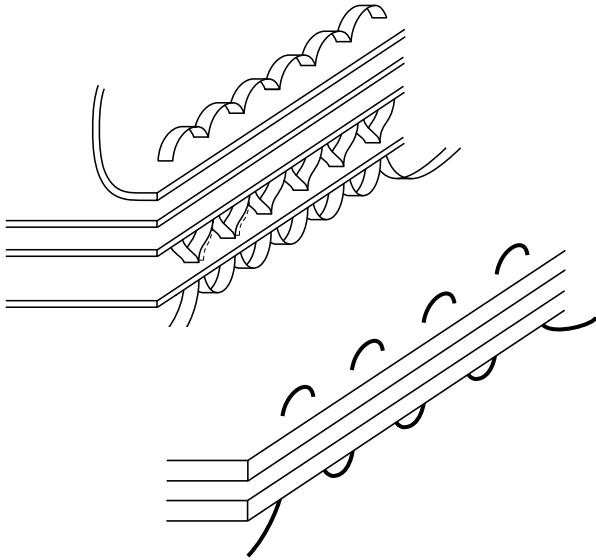
Der rechte Schuh Nr. 7 (L ca. 24,0 cm, B ca. 9,5 cm), der vermutlich das Pendant zu Nr. 8 darstellt, lag unmittelbar unter diesem. Erhalten ist der größte Teil der aus mehreren Lagen bestehenden Sohle, ebenso wie die rechte Seite und ein Fragment von der linken Seite des Oberleders vom Vorfuß; der hintere Teil des Schuhs fehlt. Auf das Oberleder ist an der Seite eine trapezförmige, wie ein umgedrehtes V gestaltete Applikation mit kleinen Hefstichen aufgenäht. Die Sohle zeigt am Rand regelmäßig Nahtlöcher und Reste der ledernen Nahtschnur. Eine entlang der Oberkante des Schuhs im Bereich der Fußöffnung verlaufende feine Lochreihe [arrow in the figure] ist vermutlich die Ansatznaht zu einem separat angesetzten Lederlappen, wie er bei den Schuhen Nr. 9 [el-059A, Cat. No. 62] und 10 [el-097R, see below] noch erhalten ist. Ein ver-

mutlich zu Schuh Nr. 7 gehörendes Fragment (L ca. 8,0 cm, B gefaltet ca. 4,0 cm) mit dem Gegenstück der Lasche [el-097A, see above] und der ebenso möglicherweise zugehörige Lederrest mit der pfeilspitzenartigen Lederapplikation und einem umzuklappenden Lederläppchen (L ca. 7,0 cm, B ca. 4,5 cm) [el-097Q3 & 4, see below], welche vermutlich zur Verstärkung des Einschnitts am Spann diente, lagen etwas abseits nahe bei Schuh Nr. 13. Ein weiteres kleines Fragment mit dem Rest einer Lasche scheint ebenfalls zu Schuh Nr. 7 zu gehören.

A largely complete sole with three quarters of the right upper still preserved. The upper and sole are secured by looping with rawhide thong through the outward-folded edge of the upper. The sole consists of three layers; the treadsole is by far the thickest. On the side, close to the instep, are slits that still contain remnants of a narrow drawstrings (dashed arrow).



El-097Q. Ventral and dorsal view. The arrow points to the seam that would have hold an insert; the dashed arrow indicate the slits for the narrow decorative single thong, which is mostly lost.



El-097Q. Top: Detail of the stitching of the sole/upper seam, seen from dorsal; Bottom: Detail of the sole/upper construction, showing that the appliqué was included. Seen from ventral.

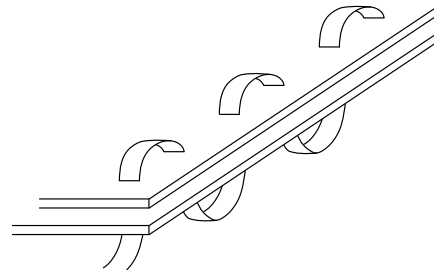
El-097Q. Top: Diagram of the sole/upper construction and of the stitching that secures the appliqué respectively; Bottom: Detail of the appliqué.



El-097Q4. Obverse and reverse.



El-097Q2. Recto and verso.



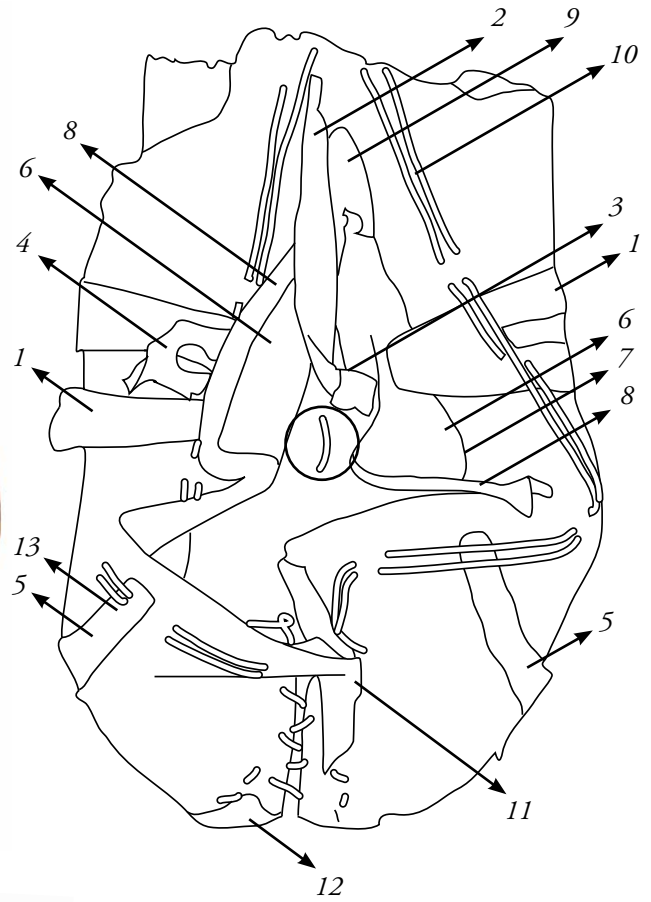
El-097Q3. Left: Recto and verso; Top: Diagram of the running stitches with thong to secure the appliqué.

Description el-097R [the numbers between square brackets can be found in the sketch]

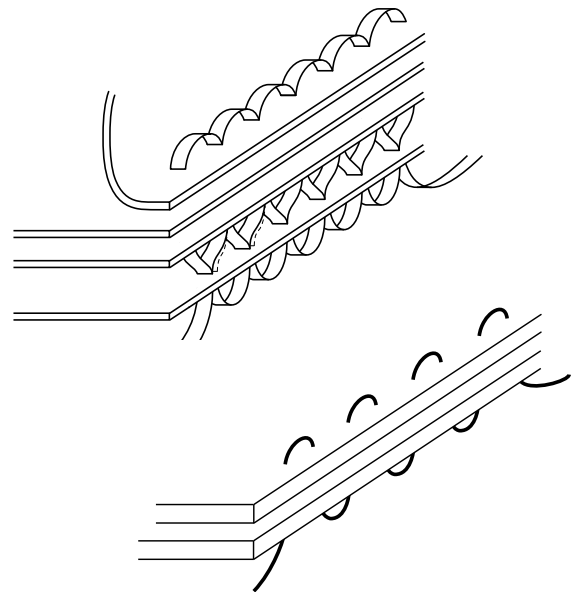
Kuckertz No. 10 (2006: 130-131):

Bei Schuh Nr. 10 handelt es sich vermutlich um einen linken Schuh, von dem ca. zwei Drittel des hinteren Teils mit Sohle und Oberleder erhalten sind (erh. L ca. 18,5 cm, B ca. 12,5 cm, B Sohle ca. 10,0 cm). Deutlich erkennbar ist die Fersennaht mit Resten der Nahtschnur. Seitlich des Fußes sind zwei trapezförmige Applikationen in Gestalt eines umgedrehten V aufgenäht [1], die in Lederbändern zum Zubinden enden [2]. Rechts, an der Innenseite des Fußes, ist entweder das Band verknotet [...] [3], während links, an der Fußaußenseite, an entsprechender Stelle eine Öffnung erkennbar ist, [...] [4] zur Aufnahme des Knotens der Gegenseite. Zu beiden Seiten des Fersenbereichs ist beidseitig ein weiteres trapezförmiges, aber schmaleres Lederstück appliziert [5]. Die Schuhöffnung wird an beiden Seiten durch einen separaten zungenförmigen und an das Oberleder angearbeiteten Lederlappen [here referred to as 'insert'] begrenzt ([6] siehe oben Schuh Nr. 9 [el-059A-D, Cat. No. 62]). Die beiden Bindebänder der Seitenapplikationen reichen über dessen Nähte [7]. Der Rand der Lederlappen ist fein umsäumt und mit einer Art Paspelkante verziert [here referred to as 'edge binding' 8], die innen festgenäht ist und auch noch ca. 2,0 cm vom Rand des Oberleders einfasst. Der vordere Einschnitt im Bereich des Fußrückens ist durch eine mit Hefstichen aufgenähte blattförmige Lederapplikation verstärkt [9]. Rund um den Schuh verlaufen, wie bei Nr. 9, zwei schmale Lederbänder [10] bis zur jetzt nicht mehr erhaltenen Spitze des Schuhs.

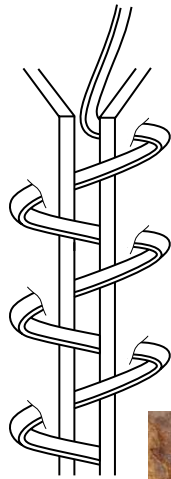
The heel of a shoe, including the sole and upper. There are three sole layers, with the treadsole being the thickest one. The looping with a leather thong through slits, through the outward-folded edge of the upper, is accompanied by flax(?) thread. The edge of the instep (note the thickness of the leather) is folded and secured with whip stitches of flax. The upper is closed with a back seam, which is secured with sailor stitches made of leather thong (note the overhand stopper knot, visible inside the shoe). Additional running stitches of leather thong suggests a repair. The stitching is remarkable coarse, but it was originally covered with a rectangular piece of leather [11], which is secured with fine stitches, probably of flax thread. There might have been a semi-circular heel stiffener as well, but if so, only very little remains of it [12]. The knot of the toggle closure was made by wrapping the end of the appliqué with a strip of leather and stitching it through the layers. The medial side would have gone over the lateral side in order to close it properly. The running stitches inside the shoe (encircled in the figure) seem to secure only the in- and midsole: they do not go through the treadsole. The narrow thong at the left side of the heel shows a connection between two pieces or, perhaps more likely, the connection between the two ends of the drawstring that goes around the entire shoe. The thongs were cut from one piece of leather and the other ends/other thongs are inserted through the wider, uncut part [13; see also the detail photographs below].



El-097R. Top left: Dorsal view; Top right: Sketch of the dorsal view to guide the description (stitching is not illustrated); Left: Ventral view.



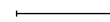
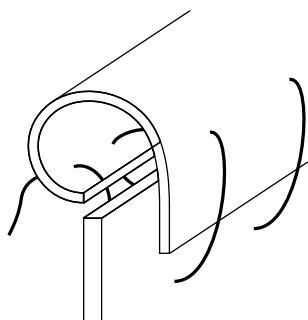
El-097R. Top: Diagram of the sole/upper construction; Bottom: Diagram of the stitching of the appliqué.



El-097R. Far left: Detail of the back seam. Note the small patch to the right to cover the seam; Left: Diagram of the back seam.



El-097R. Top: Detail of the appliqué at the left side of the heel. The decorative narrow tongue shows the start (arrow) and attachment; Left: Detail of the front of the instep, with leaf-shaped reinforcement patch, drawstrings and edge binding; Left bottom: Diagram of the edge binding.



El-097R. Detail of the appliqué at the lateral side with the hole to receive the toggle from the medial to close the instep (see below).



Description el-097S

See el-059B (Cat. No. 62) above.

Description el-097T

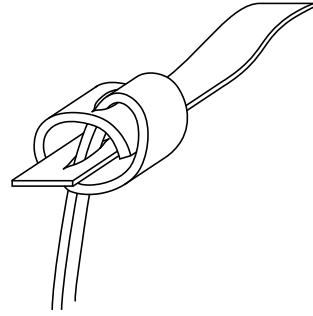
A small fragment of sole consisting of three layers. The thin insole is folded over the other two and secured at the ventral surface of the treadsole and the upper. The measurements suggest that the shoe was for a child. Only one other shoe has a comparable sole/upper construction within the Persian finds (el-097O3 & 4, see above).

Description el-097U

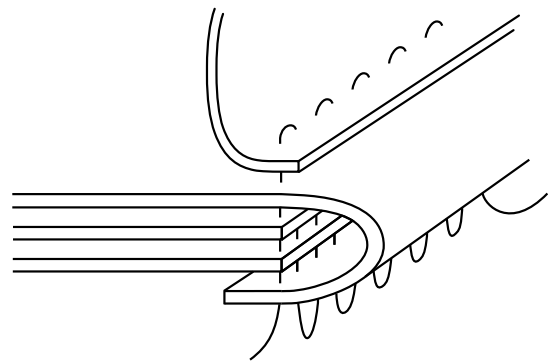
Kuckertz No. 4 (2006: 125):

Unterhalb des Fundortes von Nr. 3 [el-097B & C, see above] fand sich die sehr brüchige Ledersohle Nr. 4, von der nur zwei größere Fragmente geborgen werden konnten.

A largely complete sole, but broken in two pieces. Note the rectangular piece of leather attached to the dorsal surface of the sole: no clear method of attachment could be seen. It is now adhered to the sole but might be one of the small fragments that were often inserted between various sole layers without being secured (*cf.* e.g. el-097O3 & 4 and el-097P, see above).



El-097R. Left: Detail of the appliqué at the medial side with the toggle to pull through the hole at the lateral side to close the instep (see above); Top: Diagram of the construction.



El-097T. Top: Dorsal and ventral view. The arrow points to the back seam; Bottom: Diagram of the sole/upper construction.



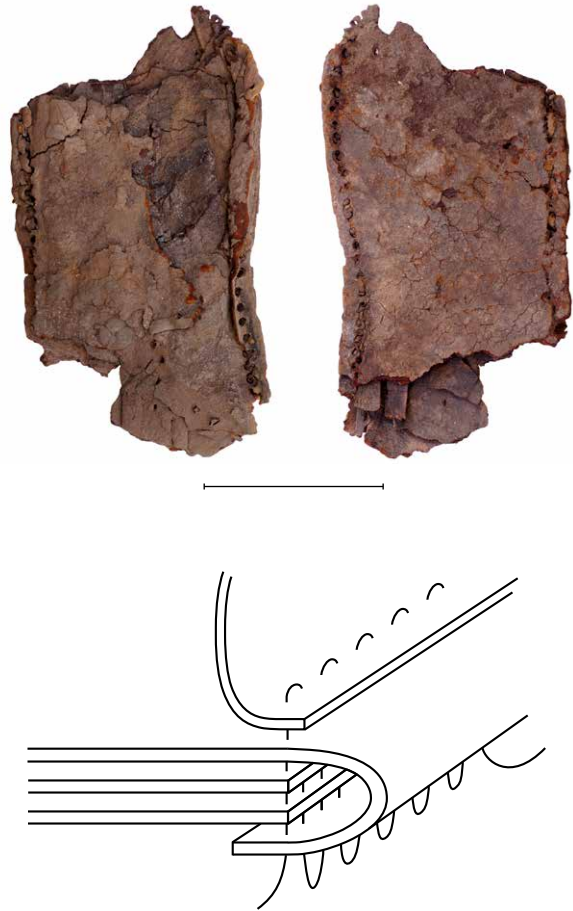
El-097U1 & 2. Dorsal and ventral view.

Description el-097V

The centre piece of a sole, with remnants of the upper. The sole probably consisted of three layers originally, including small pieces of leather that were sandwiched between the various layers, as seen in other soles (such as el-097O3 & 4 and el-097P, see above).

Description el-097W1-3

Three pieces, for which it is not clear if they belonged to the same object. The width of W1 is almost intact. It consists of two layers that sandwich various scraps of leather, which can be identified as offcuts. The construction of this child's sole might be different from the other in this group: a strip of leather wraps around the two or three layers on their edges. From the dorsal view, it is uncertain whether this is the remnant of the upper, a sole or just a strip that is folded around the edge.



El-097V. Top: Ventral and dorsal view; Bottom: Diagram of the sole/upper construction.

Description el-097X

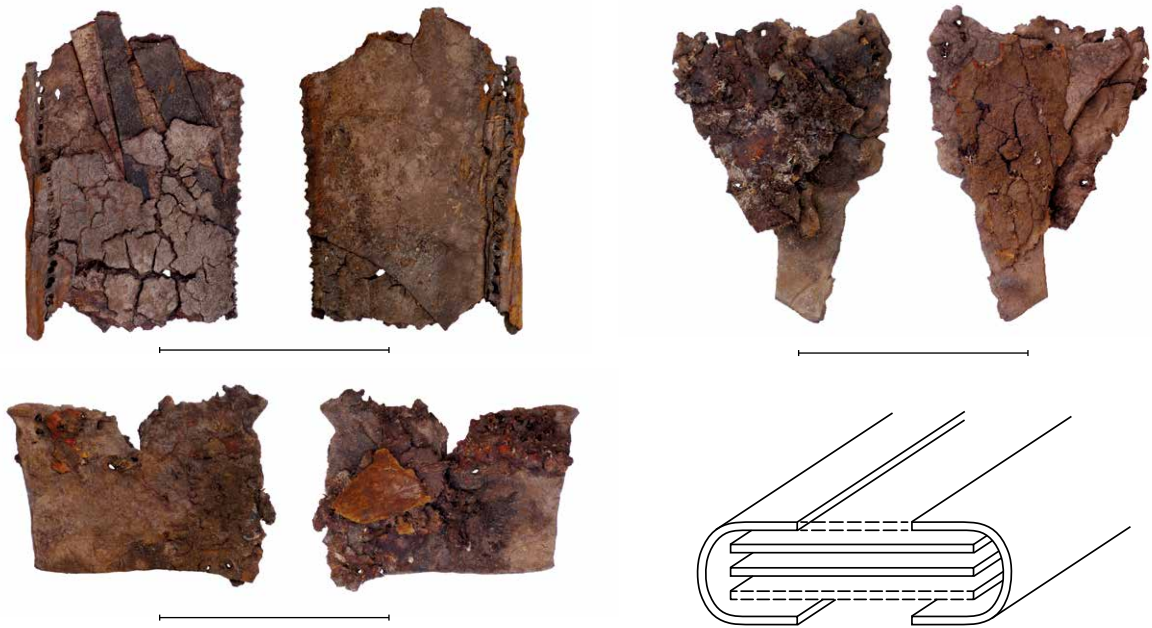
The centre piece of a relatively thin sole. The intact stitch holes, some of which still have remnants of stitches, suggest that it was part of a series of sole layers. Theoretically, it could have been one layer, secured to the upper, but this is unlikely.

Description el-097Y

The front part of a relatively thick sole, with intact edge. Despite some remnants of leather thong stitches, it cannot be determined whether the sole was part of a multilayer sole or not.

Description el-097Z

A small, roughly rectangular piece of upper with a small fragment of the folded seam with stitch holes.



El-097W1. Top: Dorsal and ventral view; Bottom: El-097W3. Obverse and reverse; Right top: El-097W2. Obverse and reverse; Right bottom: Diagram of the sole/upper construction, which is rather enigmatic, hence the dashed lines.



El-097X. Dorsal(?) and ventral(?) view.

El-097Z. Verso and recto.



El-097Y. Dorsal and ventral view.

Description el-097AA

A small piece, possibly of the heel's leather judging by the curved folded end with stitch holes for attachment to the sole. The stitch holes at one edge were used to secure it to the sole.



El-097AA. Obverse and reverse.

Description el-097AB

A roughly rectangular thin piece of leather with a curved edge that has stitch holes.



El-097AC. Verso and recto.

Description el-097AC

A roughly rectangular fragment with a few stitch holes at one edge.

Description el-097AD

A slightly tapering piece with two pairs of stitch holes at the smallest end.



El-097AD. Obverse and reverse.

Description el-097AE

A curved piece of treadsole with an intact edge that has remnants of the insole.



El-097AE. Ventral and dorsal view.

Description el-097AF

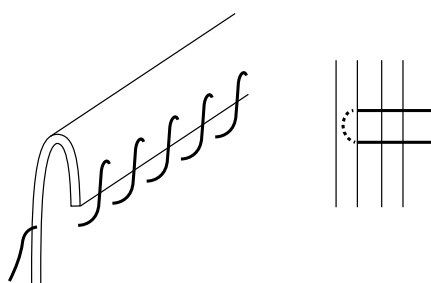
A tapering piece of upper, including the edge binding, which is secured with tiny whip stitches, and a fragment of decorative lace pulled through slits.



El-097AB. Obverse and reverse.



El-097AF. Ventral and dorsal view; Left: Diagram of the stitching of the edge binding.



Description el-097AG

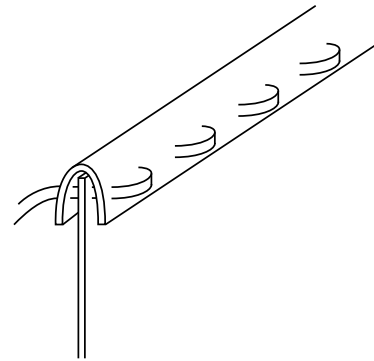
A piece of the front of the shoe's upper, including the folded edge with stitch holes and stitches *in situ* to secure it to the sole. Note two pairs of slits with the remnants of drawstrings.



El-097AG. Ventral and dorsal view.

Description el-097AH

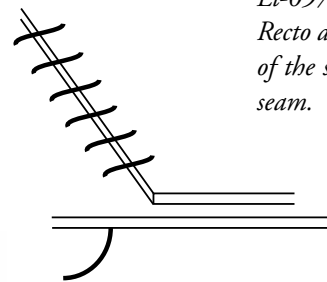
A fragment of a thin upper's leather with a slightly curved end. Here, a small strip sandwiches the edge and is secured with leather thong running stitches, forming a simple edge binding.



Left and centre: El-097AH. Obverse and reverse; Right: Diagram of the edge binding.

Description el-097AI

A triangular fragment of upper's leather with flax whip stitching *in situ* on the long edge. A triangular piece of leather, which is secured with flax whip stitches, is added diagonally across.



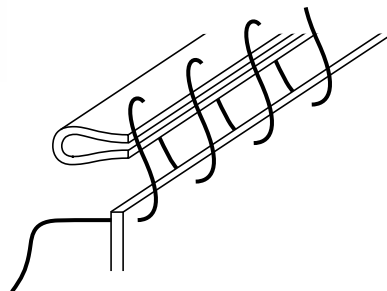
El-097AI. Top left and right: Recto and verso; Left: Diagram of the stitching of the diagonal seam.

Description el-097AJ

A fragment of the edge of the instep, with edge binding and the attachment area of a narrow leather thong.



El-097AJ. Left and centre: Recto and verso; Right: Diagram of the edge binding.



Description el-097AK

A fragment of upper's leather with two narrow leather drawstrings that run through slits across the fragment.



El-097AK. Recto and verso.

Description el-097AL

A rectangular fragment with a rounded edge on one side. Both long sides have a row of stitch holes, slightly diagonal to the edge. Note the big single leather thong stitch lengthwise down the centre.



El-097AL. Obverse and reverse.

Description el-097AM

A piece of upper with the edge folded over and secured with whip stitched made of flax, resulting in a simple edge binding.



Description el-097AN

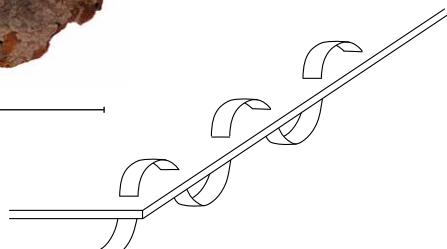
A fragment of upper with a folded and whip stitched edge and two narrow drawstrings. Not illustrated.



El-097AM. Top: Outside and inside; Bottom: It could not be determined whether the stitching was done through the thickness or only partially.

Description el-097AO

A rectangular fragment with a leather strip stitched onto it that is secured at the edges with running stitches (slightly paired) of leather thong. The fragment still has remnants of the narrow leather drawstrings.



El-097AO. Left: Recto and verso; Right: Diagram of the stitching.

Description el-097AP

A curved piece of sole.



El-097AP. Dorsal and ventral view.

CATALOGUE NUMBER 65

| | |
|-----------------|---|
| Spec. No. | el-057; |
| Provenance | North-Western habitation area (Area XIII); |
| Date | 25th Dynasty; |
| Object | Slipper? sole; |
| Measurements | L: 230.0. W front: 70.0. W halfway: 54.2. W at heel: 42.1. W stitches: 2.2. W stitches: 2.5. T: 13.9; |
| Skin Processing | Not tested; |
| Remarks | Object in museum; no labels with specialist numbers with it. Described here with the Persian group (see 'The Objects'); |

Description

Sole and part of the upper of a shoe or slipper, consisting of no less than five sole layers. The treadsole is broken in several places and folded at the back, as is the midsole dorsal to the treadsole. The sole has a narrow, rounded heel from which the width increases continuously and distinctly towards the front. The sole is straight. The sole layers and upper fragments are secured together along the edges with running

stitches of leather thong. The edge of the upper is folded outwards. An additional row of coarse leather thong running stitches extending lengthwise down the centre further secures the sole layers. The insole has remnants of at least two, and at some places even three, layers of the upper along its edge, running on the left side towards the heel (it may have run along the entire edge but is now lost). The middle layer has a reddish colour (arrow). Note that, strangely, if this really is a lining, it would be the inside of the vamp – hence, the colour would not be visible. A small piece of this side upper is bent outwards (it cannot be touched due to the fragile condition), and it seems to be attached to the reddish layer. It is possible that these small scraps are reinforcements or repairs, since the upper is still largely intact at the front (vamp). This part clearly consists of one layer of rather thin leather. Possibly, there is a seam between the vamp and the sides, but too little is preserved to be certain. The surface of the scraps on the side, as well as a small part of the vamp, shows a texture made with extremely narrow leather thongs woven through it.



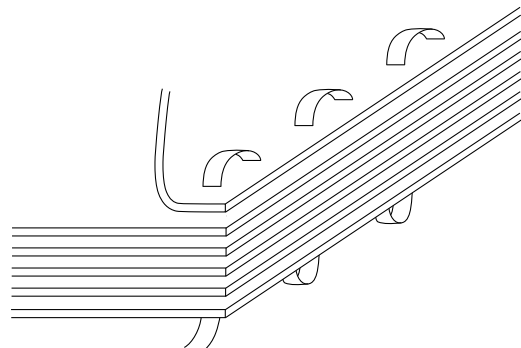
El-057. Ventral, side and dorsal view.



El-057. Left: Overview of the decorated part of the vamp leather. Note the reddish colour; Right: Detail of the vamp leather, which is enhanced by sewing a narrow strip of leather through it in rows. Scale bar is 20 mm.



El-057. Top: Detail of the sole/upper construction. Note the remnants of highly decorated upper still in situ in the seam; Right: Detail of the stitching at the front, seen from dorsal (the topmost layer is the vamp); Left: Side view of the sole, showing the six layers; Right bottom: Diagram of the sole/upper construction.



BAGS AND OTHER CONTAINERS

CATALOGUE NUMBER 66

| | | | |
|-----------------|--|-------------|---|
| Spec. No. | el-046A; | Remarks | B-C) See 'Waste and Offcuts' (Cat. No. 84); D) See 'Sandals' (Cat. No. 31). Various small scraps and two pieces with hair, none of which are numbered or illustrated; |
| Group | el-046A-D; | | |
| Provenance | Khnum Temple, fill of robbed foundation of southern colonnade; | | |
| Date | 7th-9th c. AD; | | |
| Object | Strap; | Description | |
| Measurements | A) L: 125.0. W (minimal): 29.3. W (maximal): 39.9; | | A thin piece of leather with hair still <i>in situ</i> at the rounded, tapering end. It might be part of a bag. |
| Skin Processing | Not vegetable tanned; | | |



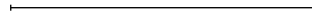
El-046A. Obverse and reverse.

CATALOGUE NUMBER 67

| | | | |
|-----------------|---|--|---|
| Spec. No. | el-032; | | |
| Provenance | Surface; | | |
| Date | Post-pharaonic*; | | |
| Object | Bag handle; | | |
| Measurements | W one strand of braid: 4.2-8.2. D braid: 8.8 x 11.2. W leather sheet: 29.5. W stitches: app. 3. L stitches: app. 10. Total length: 195; | | |
| Skin Processing | Not vegetable tanned; | | |
| Description | A bag handle consisting of five strips of leather which are braided three-dimensionally around a core made | | of a folded strip of leather. One end is broken. The rectangular opposite end was made by folding a sheet of leather around the braid, which is secured with leather thong running stitches (which appear to be longer on one side and short on the other) along the long sides. A coarse leather thong stitch secures one of the short ends to the braid. The short edges are folded. At the terminal end leather protrudes from the rectangular part, which is the remnant of the body of the bag proper. Although only one braid is visible, remnants next to it suggest a second one, now lost, which was made with narrower strips of leather. |

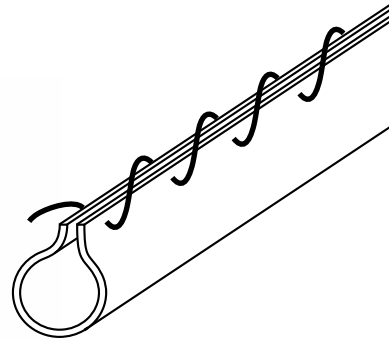


El-032. Top left: Overview; Top right: Diagram of the construction; Right: Detail of the attachment area.



CATALOGUE NUMBER 68

| | | |
|-----------------|---|---|
| Spec. No. | el-081; | Description |
| Provenance | South of Khnum Temple, street layer; | The edge of a bag(?) consisting of a strip of folded leather, which is sandwiched by two other layers. It is secured with whip stitches that are made of leather thong. |
| Date | 6th-7th c. AD; | |
| Object | Bag(?); | |
| Measurements | L: 180.0. W folded outer layer: 30.0. T: 9.7; | |
| Skin Processing | Possibly vegetable tanned; | |



El-081. Top: Obverse; Bottom: Reverse; Centre: Side view; Right: Diagram of the construction.

CATALOGUE NUMBER 69

Spec. No. el-086;
 Provenance Khnum Temple area, surface;
 Date ?;
 Object Bag(?);
 Measurements L: 230.0. W: 4.8. T: 5.3;
 Skin Processing Not vegetable tanned;

Description
 A folded strip of leather that might have been part of a bag, judging by the leather's thickness. No features are of note except that the long edges are clearly cut.



El-086. Overview.

CATALOGUE NUMBER 70

Spec. No. el-096;
 Provenance Satet Temple Area, debris left by *sebakhin*;
 Date 19th c. AD;
 Object Wallet;
 Measurements W: 103.7. H (closed): 70.2. H (open): 120.2. W thongs: app. 3.5;
 Skin Processing Vegetable tanned;
 Remarks See Veldmeijer (In Press a⁵¹) for a full discussion of this and comparable containers. Dating on the coins;

Description

A small, rectangular purse. Two sheets of leather are folded: one end is rounded which forms the flap whereas the other end is square. One of these ends forms the outer layer of the body of the wallet where-

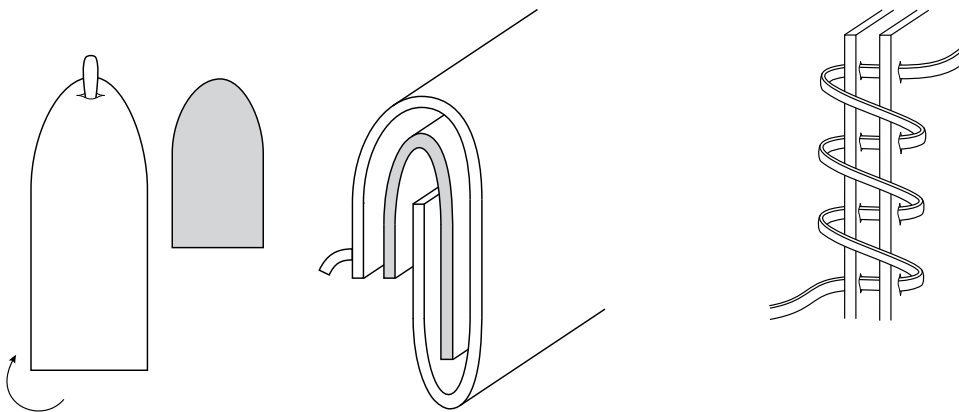
as the inner one separates the two compartments inside. Closing it was not really possible: there is a small leather extension pulled through a slit in the outer layer of the flap which might have served as a 'buckle' but there is no slit in the body of the wallet to pull it through. The sides are closed by a combination of whip stitching and plaiting with a leather thong. The contents consisted of a large and heavy iron buckle(?), which is responsible for much of the damage, two small stones and two coins: a 5 para from the reign of Mahmud II (1789-1839 AD, reigned from 1808-1839) and another 5 para from the reign of his successor, Abdul Mejid (1823-1861 AD, reigned from 1839-1861).⁵²

51 The page numbers are not yet known.

52 I am grateful to Lukas Veldmeijer for helping me with the identification of the coins.



El-096. Left top: Bottom view; Left centre: Recto; Left bottom: Verso; Right centre: Side view; Right top and bottom: Two coins and two stones, the content of the purse. The scale bar for the coins is 10 mm.



El-096. Diagram of the construction, including the whip stitching that closes the purse at the side.

CATALOGUE NUMBER 71

Spec. No. el-092;
 Provenance West of Khnum Temple, fill of robbed temple enclosure wall;
 Date 6th-7th c. AD;
 Object Handle?;
 Measurements L: 30.1. W: 15.7. T: 14.7. W strip: app. 10.5;
 Skin Processing Possibly vegetable tanned;
 Description
 A Z-overhand knot tied in a folded strip of leather.



El-092. Top left and right: Obverse and reverse; Right: Diagram of the knot.

CATALOGUE NUMBER 72

Spec. No. el-108;
 Provenance South of Khnum Temple, fill of robbed temple enclosure wall;
 Date 6th-7th c. AD;
 Object Handle;
 Measurements 28.0 x 56.6 x 14.9;
 Skin Processing Not tested;
 Description
 An S-overhand knot tied in what seems to be the extremity of the leather of an animal's leg.



El-108. Top left and right: Obverse and reverse; Right: Diagram of the knot. Scale bar is 10 mm.

CATALOGUE NUMBER 73

Spec. No. el-111D;
 Group el-111A-D;
 Context Khnum Temple, fill of robbed temple foundation;
 Date 7th-8th c. AD;
 Object Handle;
 Measurements 10.8 x 6.6. L: 48.4;
 Skin Processing Not tested;
 Remarks A-C) See 'Sandals' (Cat. No. 35);
 Description
 A strip of leather folded around a core, which is also made from leather. The edges are sewn with fine, short but widely-spaced running stitches made of flax.



El-111D. Left and centre: Obverse and reverse; Right: Diagram of the construction. Scale bar is 10 mm.

BELTS, STRAPS, CORDAGE ETC.

CATALOGUE NUMBER 74

| | |
|--------------|---|
| Spec. No. | el-051G; |
| Group | el-051A-G; |
| Context | West of Khnum Temple, House M12A, occupation layer in courtyard; |
| Date | 5th-6th c. AD; |
| Measurements | L: 140.0. W: 7.2. T: 2.6; |
| Remarks | A-G) See 'Miscellaneous' (Cat. No. 111). This entry includes various small, unnumbered, featureless scraps, which are not described or illustrated; |



El-051G. Obverse and reverse.

Description

A narrow, long strap of intact width. Both ends are broken but one end shows a triangular notch (the original shape of which is unknown). It is clearly a strap or belt.

CATALOGUE NUMBER 75

| | |
|-----------------|--|
| Spec. No. | el-055A-D; |
| Context | South of Satet Temple; |
| Date | Middle Kingdom; |
| Object | Straps; |
| Measurements | A) 51.0 x 42.5 x 34.0. W strap: 5.3-10.5. T: 3.5-4.1. B) L: 135.0. W: 6.3-8.2. T: 3.9. C) L: 95.0. W: 11.8 x 8.1. T: 3.4. D) L: 64.3. W: 10.0. T: 1.6. D (pen): 3.4; |
| Skin Processing | Not tested; |
| Remarks | Not illustrated. The object is stored in the museum; there are no labels with specialist numbers with it; |

Description

Five fragments of rawhide straps.

A) This is the biggest fragment. It is curled and consists of two parts. No attempts have been taken to untangle them;

B) A folded fragment;

C) A relatively long fragment with a weak spot at approximately one third of its length;

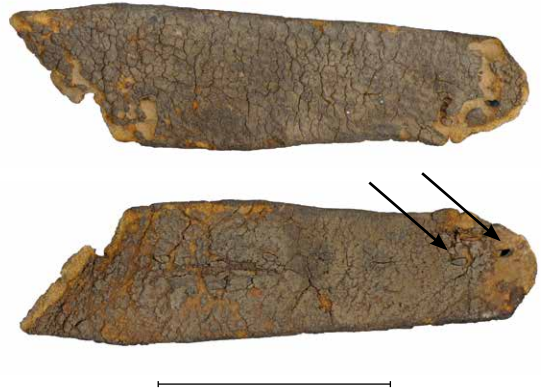
D) The smallest fragment, which is much thinner than the others. Just over the middle, a small tube of wood has been inserted, like a joint with a peg.

CATALOGUE NUMBER 76

Spec. No. el-079;
 Context Surface;
 Date ?;
 Object Belt(?);
 Measurements L: 110.4. W: 30.3-23.7. T: 4.2;
 Skin Processing Not vegetable tanned;

Description

A rectangular, sturdy piece of leather that tapers towards one side, terminating in a rounded end. This end has one small (stitch?) hole; note also the small stitches just in front of this hole (arrows). One side shows scratches that are oriented lengthwise. The leather is gray.



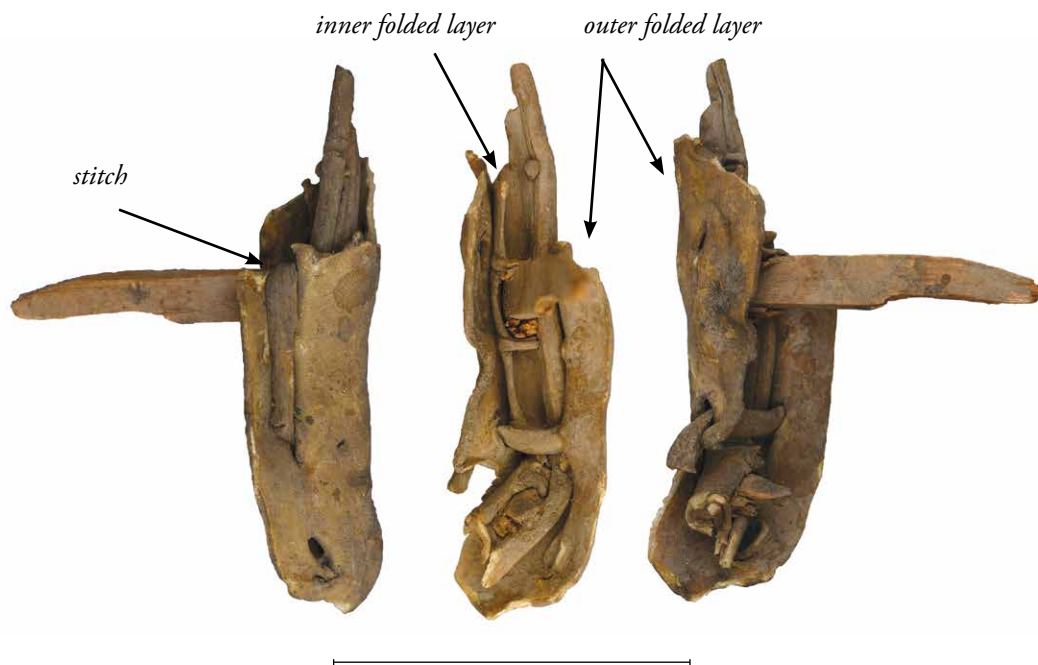
El-079. Obverse and reverse. The arrows point to the stitch and stitch hole.

CATALOGUE NUMBER 77

Spec. No. el-080;
 Provenance Khnum Temple area, surface;
 Date ?;
 Object Fastening;
 Measurements L: 95.0. W folded outer layer: 50.0.
 T: 24.0;
 Skin Processing Possibly vegetable tanned;

Description

A fastening of some sort, which is made by folding one sheet of leather around another folded, but smaller, sheet of leather. The big stitch holds not only the layers, but also a piece of wood.



El-080. Obverse, side view and reverse.

CATALOGUE NUMBER 78

| | |
|-----------------|-----------------------------|
| Spec. No. | el-091; |
| Provenance | Khnum Temple area, surface; |
| Date | Late Antique*; |
| Object | Belt buckle; |
| Measurements | L: 82.7. W: 64.0. T: 21.6; |
| Skin Processing | Not vegetable tanned; |

Description

A horseshoe-shaped buckle. Analogies suggest that a wooden rod originally ran through it (dashed arrow). The top is closed by weaving a strip of leather though slits; the seam is closed by pulling the sides together. Note the large stitches of the square ends that go through both sides. At one side, an additional piece seems to be a repair (arrow).

Bottom: El-091. Obverse, reverse and side view respectively. The arrow point to the added strip, possibly a repair; Right: Diagram of the seam to close the buckle at the top.

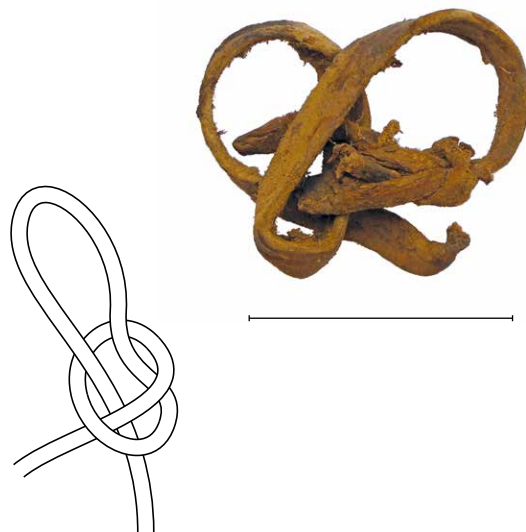


CATALOGUE NUMBER 79

| | |
|-----------------|---|
| Spec. No. | el-105D; |
| Group | el-105A-H; |
| Provenance | North of Khnum Temple, House T53; |
| Date | 7th-9th c. AD; |
| Object | Strap; |
| Measurements | W: 7.8. T: 1.9. L: app. 290; |
| Skin Processing | Not tested; |
| Remarks | A-C) See 'Unidentified' (Cat. No. 126); E) Number not used; F-H) See 'Shoes' (Cat. No. 56); |

Description

A narrow strap that ends in a loop through which the other end (now torn off) is pulled. The loop was made by tying the intact, pointed end around itself with a half knot.



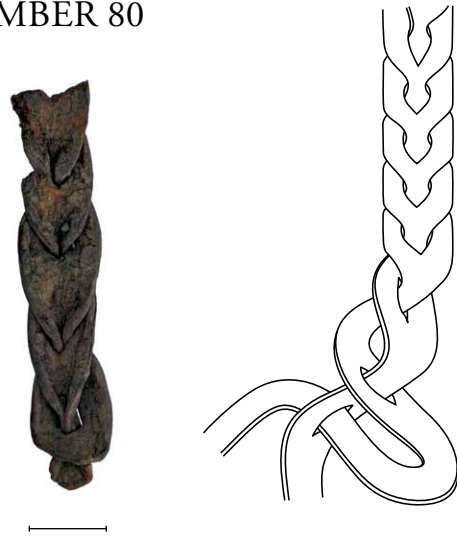
El-105D. Right: Overview; Left: Diagram of the loop construction.

CATALOGUE NUMBER 80

Spec. No. el-040;
Context North of Khnum Temple, House
T51, disturbed context;
Date ?;
Object Strap;
Measurements L: 51.7. W: 10.7. T: 4.8;
Skin Processing Not tested;

Description

A strap made with two lengths of leather, incised at regular intervals, through which the other strip has been pulled (slit/pull technique).



El-040. Left: Overview; Right: Diagram of the construction. Scale bar is 10 mm.

CATALOGUE NUMBER 81

Spec. No. el-098;
Context Old Kingdom - Middle Kingdom
cemetery;
Date Old Kingdom - First Intermediate
Period;
Object Strips of rawhide;
Measurements Bigger fragments): W: 16.1. T: 4.7.
Smaller fragments) W: 3.5. T: 3.9;
Skin Processing Not vegetable tanned;
Remarks Not certain if they are parts of a
sandal's strap complex. Not num-
bered separately;

Description

Five thick, featureless pieces of rawhide straps and various other small pieces.



El-098. Overview

WASTE AND OFFCUTS

CATALOGUE NUMBER 82

Spec. No. el-035A, B;
Provenance South of Khnum Temple, street layer;
Date 6th c. AD;
Skin Processing A, B) Vegetable tanned?;
Measurements A) L: 24.3. W (maximal): 24.1. W (minimal): 12.0. B) L: 26.1. W (maximal): 8.6. W (minimal): 2.6. T: 2.2;

Description

Two small fragments without features. Fragment A is trapezoid-shaped and fragment B is a small tapering fragment.



El-035A, B. Obverse and reverse.

CATALOGUE NUMBER 83

Spec. No. el-037;
Provenance South of Khnum Temple, House K21, occupation layer;
Date 7th c. AD;
Measurements 42.4 x 50. T: 3.8;
Skin Processing Not vegetable tanned;
Description A triangular offcut. One point has broken off.



El-037. Obverse and reverse.

CATALOGUE NUMBER 84

| | |
|-----------------|---|
| Spec. No. | el-046B, C; |
| Group | el-046A-D; |
| Provenance | Khnum Temple, fill of robbed foundation of southern colonnade; |
| Date | 7th-9th c. AD; |
| Object | Strap. |
| Measurements | B) L: 67.8. W (maximal): 11.4. W (minimal): 4.2. T: 3.5. C) L: 68.4. W (maximal): 5.2. W (minimal): 2.2. T: 1.2; |
| Skin Processing | Not vegetable tanned; |
| Remarks | A) See 'Bags and Other Containers' (Cat. No. 66); D) See 'Sandals' (Cat. No. 31). Various small featureless scraps and two pieces with hair, none of which are numbered or illustrated; |



El-046B, C. Overview.

Description
Small tapering fragments, which probably are offcuts.

CATALOGUE NUMBER 85

| | |
|-----------------|--|
| Spec. No. | el-104; |
| Provenance | South of Khnum Temple, fill of robbed temple enclosure wall; |
| Date | 6th-7th c. AD; |
| Measurements | 32.0 x 20.9. L: 69.6; |
| Skin Processing | Not tested; |
| Description | Featureless piece. |



El-104. Obverse and reverse.

CATALOGUE NUMBER 86

| | |
|--------------|--|
| Spec. No. | el-116A-G; |
| Provenance | Khnum Temple, modern excavation dumps; |
| Date | ? |
| Measurements | A) 27.1 x 175.0. B) 28.8 x 60.3. D) 41.5 x 54.2, T: 2.6. D: 30.0 x 80.5 x 22.7, T leather: 1.0. E) 35.8 x 96.7. T: 1.0. F) 15.5 x 93.9. T: 2.6. G) 1.6 x 37.9. T: 0.8; |

Skin Processing Not tested;

Description

Scraps and larger fragments of waste and offcuts. Fragment A might also be a heavily worn piece of leather. Note the intact, convex edge in fragment B. Fragment D has two short parallel cuts. Fragment G is possibly torn off from fragment D.



El-116. Overview.

CATALOGUE NUMBER 87

Spec. No. el-021;
 Provenance Domestic quarter south of Khnum
 Temple, East street;
 Date 12th Dynasty;
 Measurements L: 210. D: 25.3 x 50.4 & 23.6 x
 9.2;
 Skin Processing Not tested;
 Description
 A piece of skin (waste), which is wide at one side and
 decreases rapidly in size towards the other side. It is
 white in colour with short brown-beige hair. Hard.



El-021. Overview.

MISCELLANEOUS

CATALOGUE NUMBER 88

Spec. No. el-082;
 Provenance Surface;
 Date ?;
 Object Basketry lid;
 Measurements D: 36.0-38.8. H: 16.8;
 Skin Processing Not vegetable tanned;
 Remarks The lid is made of palm leaf, but the species has not been identified;



El-082. Inner, side and top view.

Description

A small basketry lid, which, on one side, is covered with leather. The leather layer is secured at the edge with leather thong stitches. One end of this leather thong is also inserted in the centre and knotted on the inside of the lid. Likely, this functioned as a handle; the top part, used to pull the lid from the basket, is lost.

CATALOGUE NUMBER 89

Spec. No. el-083;
 Provenance City wall north-west, surface;
 Date ?;
 Object Beads on leather strip;
 Measurements L: 42.6. W leather: 2.6;
 Skin Processing Not tested;
 Remarks Not illustrated;

Description

Two large mother-of-pearl coloured discs, two small light blue discs and a red bead, strung on a narrow leather thong. The thong goes through the series of beads and returns to the beginning where it is knotted, first by a half knot and finally by an S-overhand knot.

CATALOGUE NUMBER 90

Spec. No. el-054A-I;
 Provenance Domestic quarter south of Khnum Temple, House 25a;
 Date 12th Dynasty;
 Object Ball;
 Measurements A) 20.2 x 46.4. B) 47.2 x 51.9. C)

52.6 x 65.2. D) 72.0 x 64.2. E) 59.5 x 103.0. F) D: 89.8 & 41.5. G) 84.7 x 49.7. H) 23.4 x 22.6 x 8.8. I) 41.0 x 53.0 x 10.8;
 Skin Processing D) Vegetable tanned;
 Remarks Fragment H and I not illustrated;

Description

Nine numbered fragments (including the isolated contents) and few small scraps of a ball, made by sewing two sheets of leather together with leather thong stitches

through a folded edge. The leather is thick and hard but fragile. It was filled with mud, which is tempered with organic material, but must be recent as it was filled with cloth when discovered (Pers. Com. Von Pilgrim, 2016).



El-054A-G. Recto and verso.



El-054. Photograph taken shortly after recovery. Photograph by D. Johannes (DAIK).

UNIDENTIFIED

CATALOGUE NUMBER 91

Spec. No. el-090;
Provenance Khnum Temple area, surface;
Date ?;
Object Footwear, shoe(?);
Measurements L: 170.0. H: 95.0. T: app. 6.5;
Skin Processing Not vegetable tanned;
Description
Possibly a fragment of shoe. The object is triangular with one straight edge, which has remnants of a rand.

This suggests the fragment is a piece of upper. The short square edge has a rand too, and might be the seam of the heel. Note the notch (arrow). The fragment consists of three layers of different thicknesses and a layer of cloth that is sandwiched between two of the layers of leather. It is sewn with flax interlocking stitching. Note the pairs of slits as well as the leather thong stitches at the possible back seam.



El-090. Left and right: Obverse and reverse; Top right: Diagram of the stitching. The dashed lines indicate the uncertainty on the exact number of layers.

CATALOGUE NUMBER 92

Spec. No. el-100A-F;
 Provenance Old Kingdom - Middle Kingdom cemetery;
 Date Old Kingdom-First Intermediate Period;
 Object Garment?;
 Measurements A) 69.5 x 117.3. B) 28.4 x 27.1 & 30.3 x 82.7. C) 26.1 x 55.2. T) 1.0. D) 18.0 x 27.9, 17.7 x 35.7 & 17.8 x 35.7. T fold: 2.5. E) 16.9 x 17.7 & 15.4 x 19.1. F) 19.8 x 18.4-28.5 x 41.5;
 Skin Processing A-D & F) Vegetable tanned; E) Not vegetable tanned;
 Remarks D-F) Not sub-numbered;

Description
 Various fragments of dark, red-brown leather. Although from the same context, the appearance of fragments C, D and E differs so much that it is doubtful if it belonged to the same object originally.

A) A bundle of folded leather with, seemingly, a strip of a sheet of leather wrapped around it. There are whip stitches of relatively wide leather thong (not visible in the photograph);
 B) A roughly rectangular piece of leather comparable to fragment A. The seam is made with whip stitches of leather thong;
 C) A roughly rectangular fragment, with a crack that is secured by leather thong sailor stitches (dashed arrow). This stitch is often used to repair cracks and this is clearly the case here, judging by the small remnant of the whip stitched seam at the side of the fragment (arrow), which is comparable to fragment B;
 D) Three edge fragments, consisting of folded leather which are secured with coarse leather thong running stitches. The appearance and coarseness of the stitching suggests it did not belong to the same object as A-C;
 E) Two corner fragments of edges that are comparable to fragment D, including the stitching;
 F) Four featureless fragments.



El-100A. Obverse and reverse.

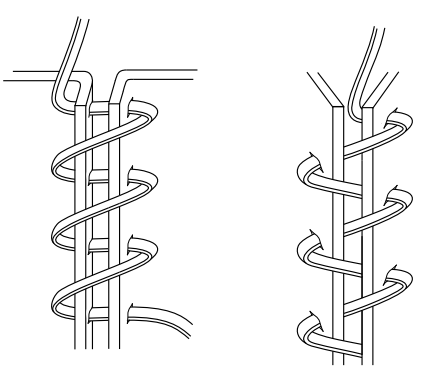


El-100B. Obverse and reverse.



El-100C. Left and right: Obverse and reverse; Below left and right: Diagram of the whip stitching (arrow) and sailor stitching (dashed arrow).

El-100D. Obverse and reverse.



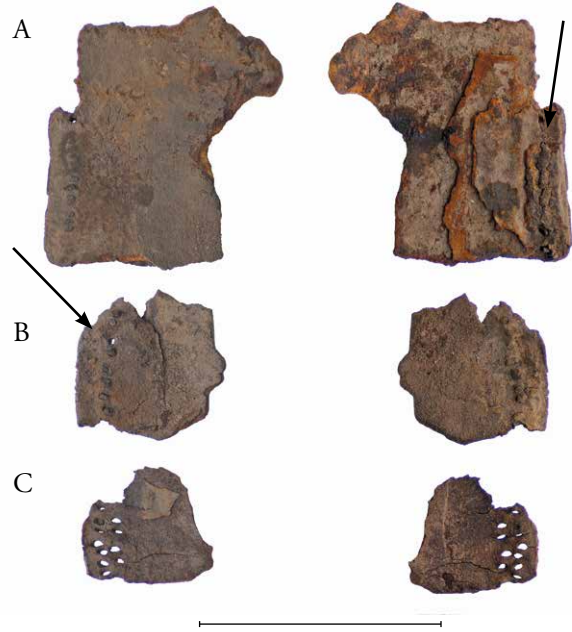
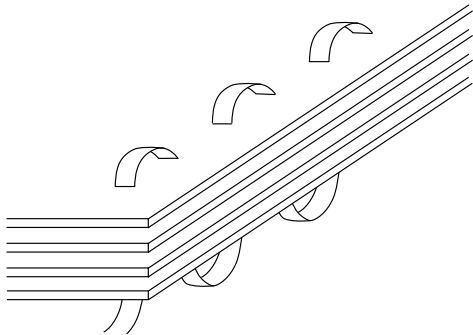
El-100E. Obverse and reverse.

El-100F. Obverse and reverse.

CATALOGUE NUMBER 93

Spec. No. el-006A-C;
 Provenance Domestic quarter west of Khnum temenos wall, North of wall M 361;
 Date Late Antique;
 Measurements A) 49.5 x 54.5. T: 6.2. W stitches: 1.8. L stitches: 3.6. B) 31.3 x 30.8. T: 2.6. C) 24.4 x 27.4. T: 1.0;
 Skin Processing Not vegetable tanned;

Description
 Three fragments, the biggest of which (fragment A) consists of four layers that are secured with short leather thong running stitches (arrow in figure). The second largest, B, consists of two thin layers; remnants of a row of leather thong running stitches survive (arrow). The smallest fragment, C, has a double row of stitch holes, which makes it questionable if it belonged to any of the bigger pieces.



El-100A-C. Top: Obverse and reverse; Left: Diagram of the stitching.

CATALOGUE NUMBER 94

Spec. No. el-008;
 Provenance Domestic quarter at southeast corner of Early Dynastic fortress, Pit of a building above Room CIV;
 Date 6th Dynasty;
 Measurements 76.2 x 40.0;
 Skin Processing Vegetable tanned?;
 Description

A thin piece of leather, in the middle of which is a small incision. On one side the fragment tapers (accidentally?). On the other end, the fragment is straight.



El-008. Obverse and reverse.

CATALOGUE NUMBER 95

Spec. No. el-009A-D;
 Provenance Domestic quarter south of Khnum
 Temple, House 12;
 Date 12th Dynasty;
 Measurements A) 10.0 x 28.0. B) 30.0 x 32.0. C)
 28.0 x 37.0. D) 36.0 x 43.0;

Skin Processing D) Vegetable tanned?
 Remarks Not illustrated;
 Description
 Four featureless scraps, all of which have intact edges.



El-009A-D. Obverse and reverse.

CATALOGUE NUMBER 96

Spec. No. el-011;
 Provenance North of Heqaib Sanctuary, foun-
 dation trench of cellar;
 Date Second Intermediate Period;

Measurements 100.0 x 143.0. T: 1.7;
 Skin Processing Not vegetable tanned;
 Description
 A piece of rawhide without features.



El-011. Obverse and reverse.

CATALOGUE NUMBER 97

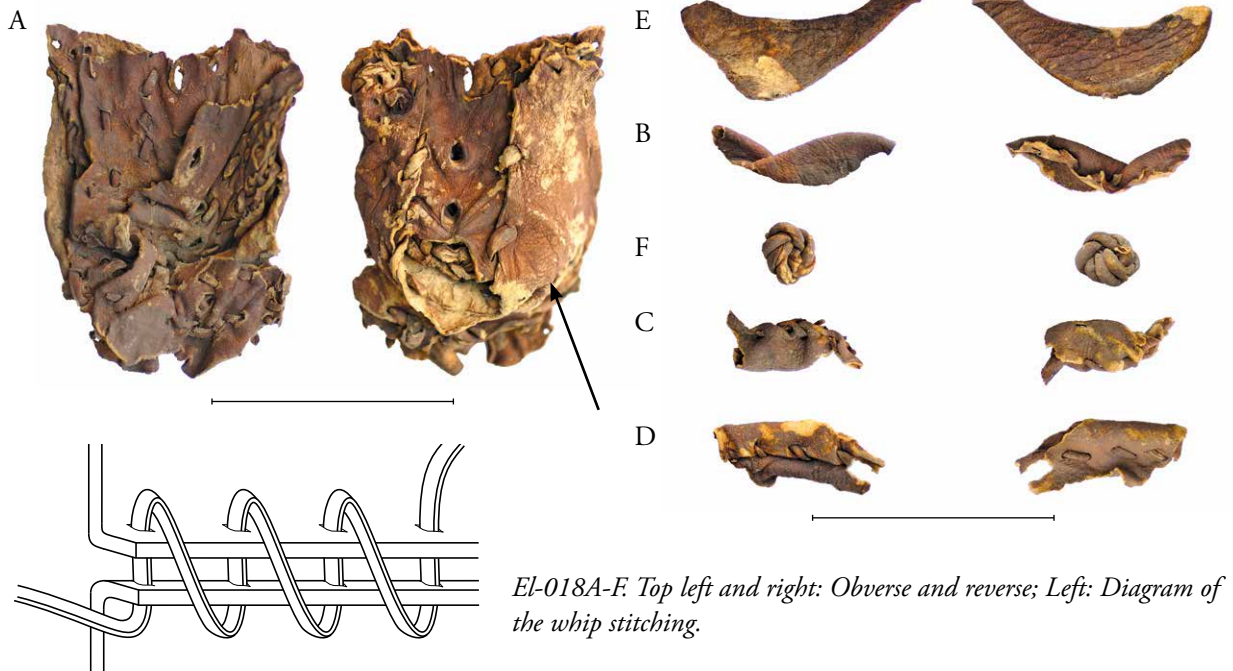
Spec. No. el-018A-F;
 Provenance Domestic quarter south of Khnum
 Temple, House 12;
 Date 12th Dynasty;
 Measurements A) 73.3 x 49.2 x 26.0. W stitches at-
 tachment: 3.7. W original stitches:
 1.6. T leather: 1.0. B) 37.5 x 10.0. C)

26.6 x 11.1. D) 35.8 x 6.2 (= diam-
 eter of the seam and core) x 15.5. E)
 49.5 x 20.6. T leather: 2.6. F) 12.6 x
 10.7 x 7.6. Diameter string: 4.2/2.2.
 CIP not possible due to knotting;
 Skin Processing A, E) Possibly vegetable tanned;

Description

At least four out of the six fragments belong together.
 A) This is the biggest fragment. It has a complicated appearance due to which it cannot be described satisfactorily. It is much sewn over with narrow leather thong running stitches. The convex side has a strip of leather (26 mm but tapering at one end) that is secured to it with whip stitches in a horseshoe shape (arrow), with larger leather thongs than the original(?) ones. This additional layer has many stitches as well and might be a re-used fragment. In the centre

there are relatively big stitch(?) holes visible, possibly to attach the complete fragment to a surface;
 B, C) Small pieces of the same or comparable object (same material and stitches) as fragment A;
 D) A fragment with a seam. Here, the leather is folded around a core (grass?) after which the seam is closed with leather thong whip stitches. The leather is very thin and brittle;
 F) An isolated Z-overhand knot in leather sZ₂ cordage;
 E) Possibly an offcut and certainly not the same as the other fragments.



CATALOGUE NUMBER 98

Spec. No. el-022A, B;
 Provenance Domestic quarter south of Khnum Temple, Cellar 041;
 Date 22nd-25th Dynasty;
 Object Belt?;
 Measurements A) L: 88.3. W (maximal, before cut out part): 39.1. W (minimal): 12.0. T thickest layer: 3.6. T thinnest layer: 1.6. W central thongs: 3.0. W 'sewing' strip edge: 3.5. B) L: 74.9. W (maximal, before cut

out part): 34.1. W (minimal): 11.0. T (thickest layer): 3.0. T (thinnest layer): 1.5. W central thongs: 2.8. W 'sewing' strips edge: 3.3. Length nails: 6.0-14.0;
 Skin Processing B) Vegetable tanned;
 Description Two tapering pieces, of which the tapered ends have rounded corners. Both fragments have a hole cut out, which seems intentional. The pieces consist of a thicker and a thinner layer. Various iron nails, all of

which are hooked and placed well within the edge, stick out from one side. The thinner layer covers the nail heads. Fragment A has ten nails and fragment B has eight. The two layers of leather are sewn to-

gether lengthwise down the centre with irregular running stitches that are made of rawhide. The edges are finished with red stained vegetable strips, which are most likely palm leaf.



El-022A. Left: Obverse and reverse; Right: El-022B. Obverse and reverse.

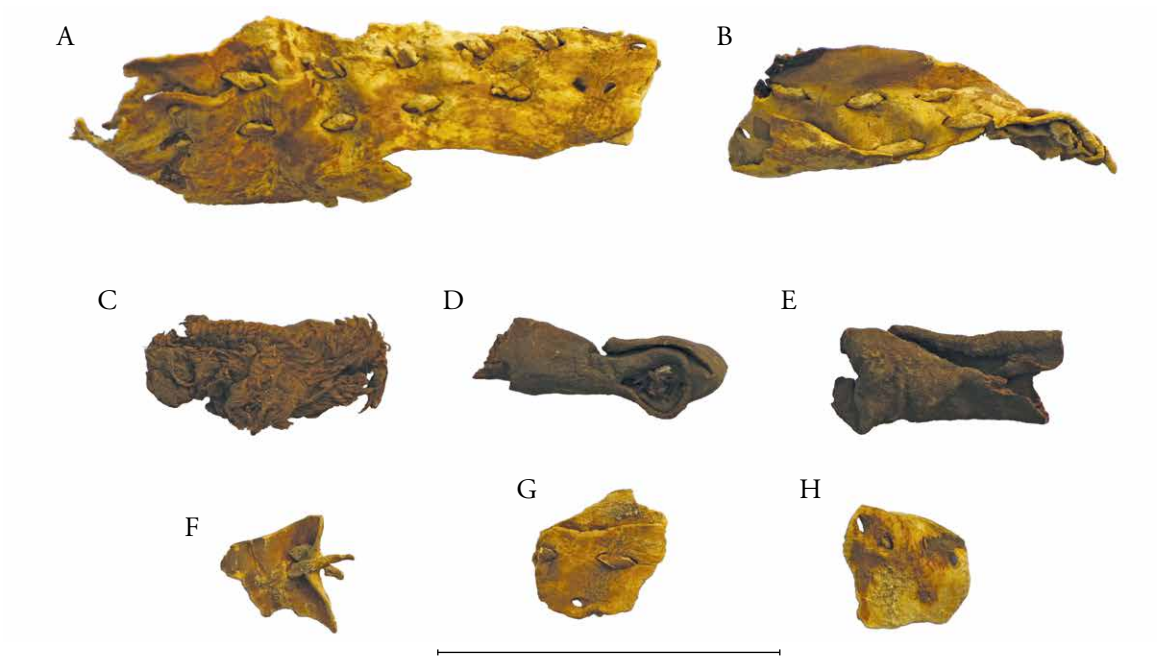
CATALOGUE NUMBER 99

Spec. No. el-024A-H;
 Provenance Domestic quarter south of Khnum Temple, House 12;
 Date 12th Dynasty;
 Measurements A) L: 100.0. W: 27.3. W stitches: 2.4. T: 3.2. B) L: 65.0. W: 19.3. W stitches: 2.4. C) Not measured. D) L: 36.2. W: 14.1. H: 9.0. Slit: 9.7 x 6.3. E) 33.4 x 6.7 x 12.5. F) 17.6 x 17.5. G) 18.5 x 19.1 H: 17.3 x 20.9;
 Skin Processing A) Not vegetable tanned;
 Remarks Fifteen fragments of which one numbered fragment, C, is not leather but cloth. One unnumbered fragment is bone and another one is made of unknown material. Of the remaining fragments two (D and E) likely do not belong to the others: the leather is as light in weight but

much darker in colour. The material of fragments A, B, F, G and H is comparable to el-018;

Description

A) One strip is sewn to another, but the entire fragment is possibly torn off from a larger piece. In the middle, the strips are secured with running stitches that are made of leather. In addition, they are sewn at one of the edges with whip stitches;
 B) A comparable piece to fragment A but smaller;
 C) Cloth;
 D, E) These two fragments likely fit together. Fragment D is folded numerous times and an incision was made in the fold. After this incision, which stands open due to its use, the remaining bit of leather is folded towards the side of the slit (now broken off). Fragment E is the other end; the end itself is folded into the tube;
 F-H) Small pieces that are comparable to A and B. Stitch holes and remnants of thong survive.



El-024A-H. Overview.

CATALOGUE NUMBER 100

| | | | |
|--------------|---|-----------------|---|
| Spec. No. | el-025; | Skin Processing | Not vegetable tanned; |
| Provenance | South of Khnum Temple, House K26, destruction layer; | Description | A fragment of skin with hair. It is not clear whether it has been processed into an object or whether it is just waste from slaughtering. |
| Date | 7th c. AD; | | |
| Object | Skin; | | |
| Measurements | 100.0 x 120.0; | | |

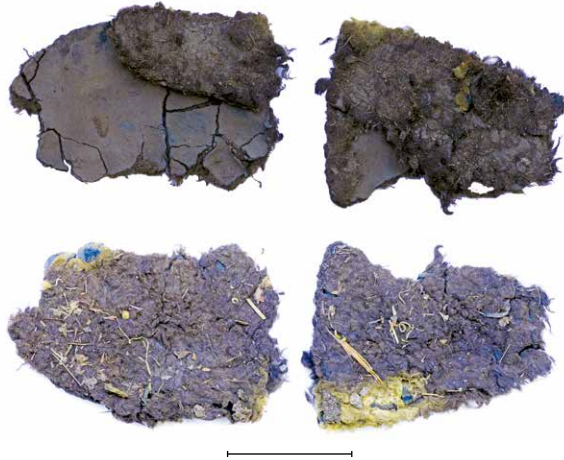


El-025. Flesh and grain side.

CATALOGUE NUMBER 101

Spec. No. el-028;
 Provenance Khnum Temple, fill of robbed foundation of southern colonnade;
 Date 7th-9th c. AD;
 Object Skin;
 Measurements 75.0 x 190.0;
 Skin Processing Not tested;

Description
 A fragment of skin with hair. It is not clear whether this has been processed into an object or whether it is just waste from slaughtering.



El-028. Flesh and grain side.

CATALOGUE NUMBER 102

Spec. No. el-038;
 Provenance South of Khnum Temple, street layer;
 Date 5th c. AD;
 Measurements 25.5 x 27.4;
 Skin Processing Not vegetable tanned;

Description
 A trapezoid-shaped fragment. One side has one intact edge and one other might also be intact. One edge is certainly torn. The fragment is convex.



El-038. Obverse and reverse.

CATALOGUE NUMBER 103

Spec. No. el-039;
 Provenance South of Khnum Temple, street layer;
 Date 5th c. AD;
 Measurements 10.4 x 17.6, 13.7 x 33.8 & 29.2 x 35.2;

Skin Processing Vegetable tanned?;
 Remarks Not sub-numbered or illustrated;
 Description
 Three small scraps without features.

CATALOGUE NUMBER 104

Spec. No. el-041;
Provenance South of Khnum Temple, street layer;
Date 7th c. AD;
Skin Processing Not vegetable tanned
Remarks Not sub-numbered;
Measurements 17.7 x 21.5, 32.8 x 32.6, 29.9 x 62.4 & 30.3 x 83.9;
Description
Four thin scraps without features.



El-041. Overview.

CATALOGUE NUMBER 105

Spec. No. el-042A, B;
Provenance South of Khnum Temple, ash pit in street;
Date 6th c. AD;
Measurements A) 33.4 x 80.3. B) 25.6 x 22.5;
Skin Processing Not vegetable tanned;
Description
A) A rectangular fragment with three stitch holes on one short side. The grain side has turned into a broken surface, often seen in leather that has been folded and wrinkled over and over;
B) A small, featureless fragment.



El-042A, B. Flesh and grain side.

CATALOGUE NUMBER 106

Spec. No. el-043;
Provenance South of Khnum Temple, midden deposit in street;
Date 1st-2nd c. AD;
Measurements 28.1 x 19.5, 25.4 x 33.5 & 40.1 x 29.6;
Skin Processing Not tested;
Remarks Not numbered separately;
Description
Three scraps, with isolated leather thong stitches.

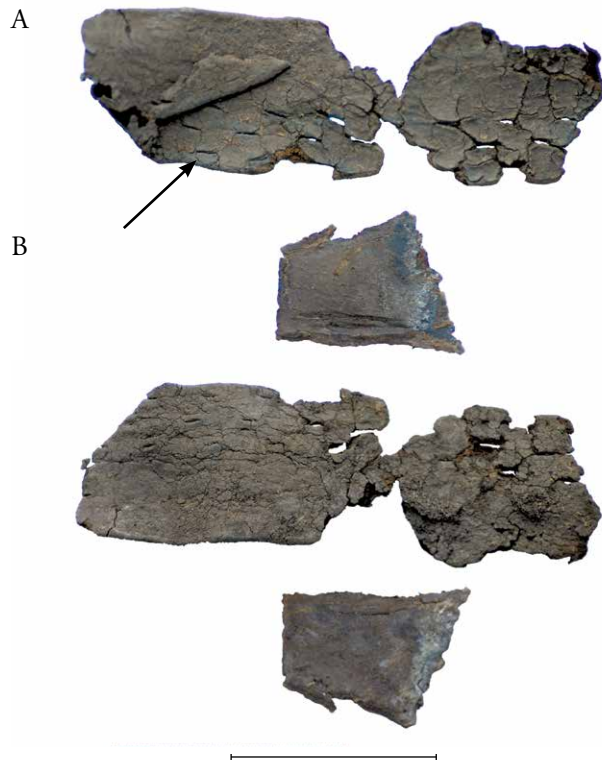


El-043. Overview.

CATALOGUE NUMBER 107

Spec. No. el-047A, B;
 Provenance Khnum Temple, fill of robbed foundation of southern colonnade;
 Date 7th-9th c. AD;
 Measurements A) L: 130.0. W: 39.3. T: 2.5. L slits: 5.3. B) 32.5 x 46.5. T: 2.3;
 Skin Processing B) Vegetable tanned;
 Description
 Fragments of varying size.

A) A fragment with its original, complete width, which might be some sort of strap. Several relatively long slits are oriented parallel with one edge (arrow). There are three rows;
 B) Featureless scrap.



El-047A, B. Right: Recto and verso.

CATALOGUE NUMBER 108

Spec. No. el-048;
 Provenance South of Khnum Temple, House K26, midden deposit;
 Date 7th c. AD;
 Measurements 19.9 x 8.3 x 5.5; 19.6 x 8.4 x 5.4; 30.4 x 8.0 x 5.4;
 Skin Processing Vegetable tanned;
 Remarks Not sub-numbered;
 Description

Three fragments of edges made by folding the leather and securing it with leather thong running stitches. It seems to have sandwiched cloth rather than leather, as there are remnants of flax(?) sticking out, but too little is preserved to be sure.



El-048A-C. Overview.

CATALOGUE NUMBER 109

Spec. No. el-049A, B;
 Provenance South of Khnum Temple, midden deposit in street;
 Date 7th c. AD;

Measurements A) 77.0 x 52.8. B) 18.0 x 20.4;
 Skin Processing B) Possibly vegetable tanned;
 Description
 Two featureless fragments.



El-049A, B. Overview grain side.

CATALOGUE NUMBER 110

Spec. No. el-050;
 Provenance Domestic quarter west of Khnum temenos wall, building southwest of house CA;
 Date 25th-26th Dynasty;
 Measurements 14.5 x 28.5; 19.0 x 26.8; 24.0 x 24.8; 28.7 x 28.8; 28.0 x 29.8;
 Skin Processing One might show evidence of vegetable tanning;
 Description
 Five scraps without features.



El-050. Overview.

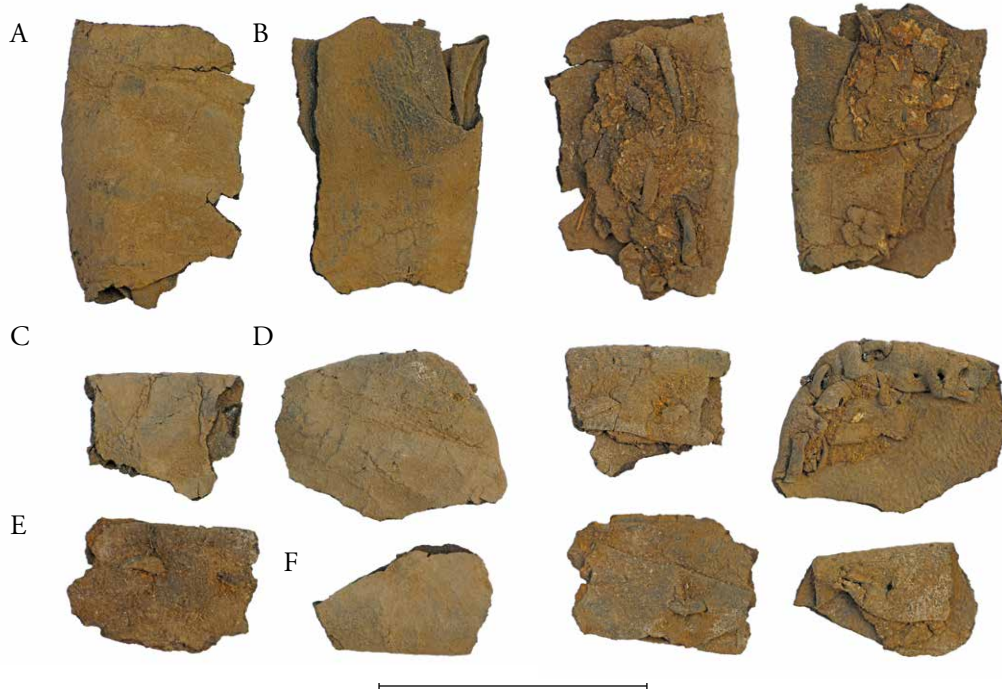
CATALOGUE NUMBER 111

Spec. No. el-051A-F;
 Group el-051A-G;
 Provenance West of Khnum Temple, House M12A, occupation layer in courtyard;
 Date 5th-6th c. AD;
 Measurements A) L: 51.5. W: 34.2. T at fold: 7.2. W stitches: 2.1. B) L: 50.4. W: 35.0. T at fold: 5.2. C) L: 30.3. W: 24.4. T at fold: 4.6. D) L: 42.6. W: 33.4. T at fold: 8.0. E) L: 35.9. W: 24.8. F) L: 34.1. W: 21.4. T at fold: 6.2. G) L: 140.0. W: 7.2. T: 2.6;
 Skin Processing E) Possibly vegetable tanned;
 Remarks G) See 'Belts, Straps, Cordage etc.' (Cat. No. 74). This entry includes various small, unnumbered scraps, which are not described or illustrated;

Description
 Fragments A-F clearly originated from the same piece;
 A) A rectangular, folded sheet of leather. It is stitched with long, narrow leather thong running stitches, which do not go through both layers. Leather might be sandwiched in the fold;
 B) A folded sheet of leather, which sandwiches another layer. At one corner it is reinforced with a coarsely-shaped fragment of leather and stitched on. These running stitches, however, do not go through all layers;
 C) A small rectangular folded piece of leather that sandwiches another layer. It is secured with small leather thong whip stitches;
 D) A corner piece with a folded edge that is stitched with leather thong whip stitches. It sandwiches another thickness of leather;

E) A small rectangular fragment that consists of two layers. These are stitched with leather thong running through both layers;

F) A small rectangular, but folded, piece that sandwiches another thickness of leather, but without any other features.



El-051A-F. Overview.

CATALOGUE NUMBER 112

Spec. No. el-052A-D;
 Provenance West of Khnum Temple, House M12A;
 Date 5th-6th c. AD;
 Measurements A) 33.8 x 41.3. W thong: 3.5 & 1.0. T both layers: 4.6. B) 22.7 x 34.8. T: 4.8. C) 19.0 x 19.3. W thong: 5.1. T: 3.0. D) 12.0 x 13.8. T: 2.8;

Skin Processing A) Not vegetable tanned;

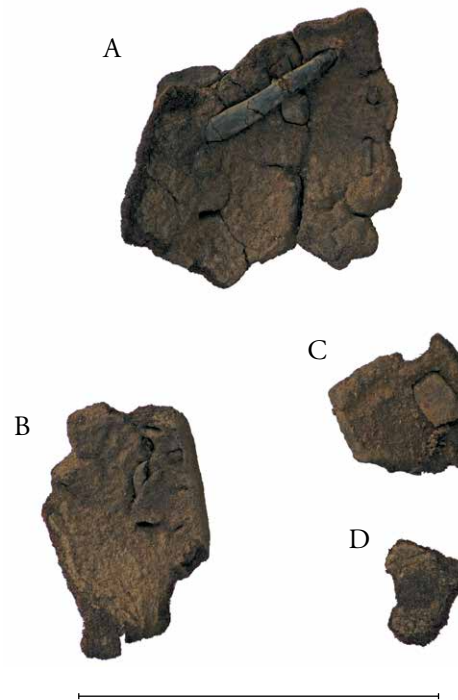
Description

A) The biggest fragment and roughly rectangular. One big leather thong stitch runs over a smaller one. It holds on one side a remnant of another layer of leather. The other edge has tiny leather thong stitches and one empty stitch hole;

B) A roughly rectangular fragment with one intact edge. The fragment contains three slits with remnants of leather thong stitches;

C) A roughly square fragment with a relatively big leather thong stitch;

D) A small featureless scrap.



El-052A-D. Overview.

CATALOGUE NUMBER 113

| | |
|-----------------|---|
| Spec. No. | el-053A-I; |
| Provenance | Domestic quarter south of Khnum Temple, House 10; |
| Date | 13th Dynasty; |
| Object | Various, among which fragments of a bag?; |
| Measurements | A) 54.9 x 81.4. W straps: 11.7. W stitches: 2.4. B) 80.0 x 117.0. W strap sewn with three rows of stitches: 21.8. W stitches: 2.2. W strips hairy side: 11.2. W stitches: 4.1. W strips other side: 16.2. W stitches: 6.2. C) 21.8 x 43.2. W stitches: 2.3. D) 35.0 x 65.0. W stitches: 2.6. E) L: 90.0. W: 15.3. T: 2.1. F) L: 72.2. W: 14.6 & 11.3. T: 2.6. G) L: 180.0. W: 11.8-16.7. T: 2.3. H) L: 60.0. W: 5.6 x 4.0. I) L: 27.4. W: 8.7-12.2. |
| Skin Processing | A, D-I) Possibly vegetable tanned; C) Not vegetable tanned; |
| Remarks | Extremely fragile; |

Description

Nine fragments, most likely from one object.

A) A fragment consisting of various layers that are stitched randomly with a leather thong; some of these are repair stitches. One side shows leather with hair (beige/yellow) still attached. On the other side two straps are secured to the layers with only one stitch. The strap is comparable to fragment I, see below;

B) The largest fragment and roughly rectangular in shape. One side of the leather still has the beige/yellow hair *in situ*. A strip is sewn onto it with three rows of leather thong stitches (one row of running and two of whip stitches). On the other side of the fragment, a smaller strip of leather is stitched on both sides, thus sandwiching the hairy sheet of leather, which is secured with a type of back stitch. The strip on the grain side is smaller than the strip on the other side and is sewn with rather wide leather thong whip stitches. It is finished at one end by pulling the thong through the stitch hole twice and tying it on the other side (possibly a half knot, arrow). All edges are broken;

C) A small rectangular fragment with several running and whip stitches;

D) A crescent-shaped fragment with one row of running and one row of whip stitches, securing the two layers. The rows of stitches curve in line with the curve of the fragment itself. All edges are broken. It is comparable to fragments A-C;

E, F) The two fragments fit together and form a tapering strap(?) without features;

G) A large, featureless strap that is folded in half. The ends are broken off. It is comparable to fragments E and F;

H) A small piece of strap(?), which is almost as thick as it is wide. It has no features and is broken at both ends;

I) A small piece of strap, which compares with the fragments sewn to fragment A. Both ends are broken, but two relatively large stitch holes, now broken, are still visible.



El-053C-I. Overview.

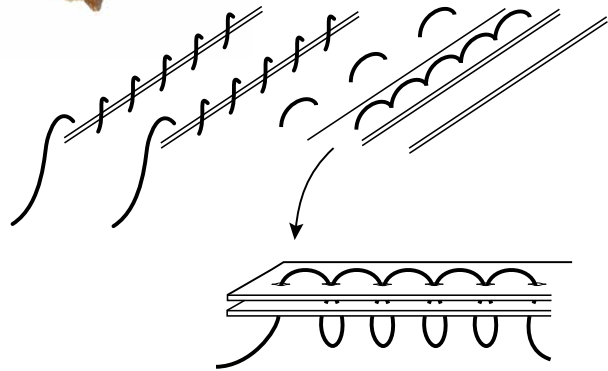
A



B



El-053A, B. Top: Obverse and reverse; Right: Diagram of the three types of stitching, seen in fragment B (from left to right): Two rows of whip stitching, one row of running stitching and the back stitching, securing the strips of leather that sandwich the main piece.



CATALOGUE NUMBER 114

Spec. No. el-061A-D;
 Provenance Surface;
 Date ?;
 Measurements 53.0 x 77.5; 57.0 x 56.0; 35.5 x 40.0; 57.5 x 62.0;
 Skin Processing One does not show signs of vegetable tanning;
 Remarks Not sub-numbered;
 Description

Four fragments, three of which clearly originate from the same object or a comparable object which was made of thin, beige leather. The fourth fragment is more brown in colour and less crumpled. It has two small stitch holes at one edge.



El-061A-D. Overview.

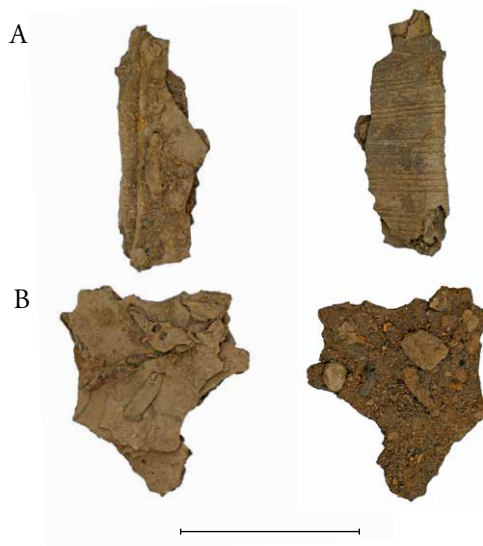
CATALOGUE NUMBER 115

Spec. No. el-062A, B;
 Provenance Area north of Satet Temple (Area II), Room VI, layer B1-B2;
 Date Late 2nd Dynasty;
 Measurements A) 25.0 x 68.5. T: 8.5. B) 56.0 x 59.5. T: 12.5;
 Skin Processing B) Possibly vegetable tanned;
 Remarks Included are seven featureless fragments (not numbered/illustrated);

Description

A) A rectangular fragment that consists of a folded layer to which another layer is attached with large leather thong running stitches. The relatively thick folded layer sandwiches a thinner layer and seems therefore to be an edge. The folded layer is decorated with impressed lines;

B) An irregularly-shaped fragment with one big leather thong stitch.



El-062A, B. Obverse and reverse.

CATALOGUE NUMBER 116

Spec. No. el-063A-C;
 Provenance South of Khnum Temple, ash deposit in street;
 Date 5th-6th c. AD;
 Measurements A) 21.0 x 52.0. B) 10.0 x 46.0. C) 8.0 x 11.5;
 Skin Processing Not vegetable tanned;
 Description Three featureless fragments. One fragment is folded.



El-063. Overview.

CATALOGUE NUMBER 117

Spec. No. el-064;
 Provenance South of Khnum Temple courtyard;
 Date 8th-9th c. AD;
 Measurements 57.5 x 105.0;
 Skin Processing Possibly vegetable tanned;
 Description One fragment of folded leather. One side is a gray grain and the other is a red-brown flesh side. Two small stitch holes are visible.



El-064. Overview grain side.

CATALOGUE NUMBER 118

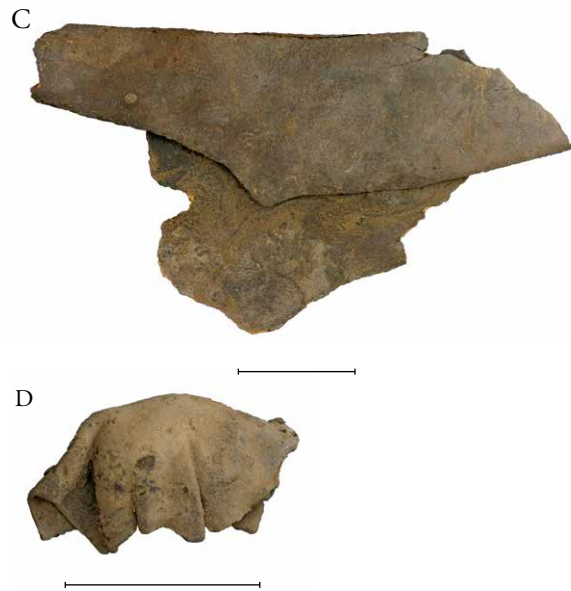
Spec. No. el-065A-D;
 Provenance Khnum Temple area, surface;
 Date ?;
 Measurements A) 42.0 x 105.0. B) 61.0 x 149.0. T both: 3.4. C) 130.0 x 233.0 (folded). T: 1.2. D) 35.0 x 71.0;
 Skin Processing A, B) Possibly vegetable tanned; C, D) Not vegetable tanned;

Description

A) A hard yellow-beige, piece of leather, of which one edge is original and curved;



B) A comparable fragment to A, but one side still has hair attached;
 C) A big piece of folded gray leather without features;
 D) A small square piece which was folded, judging by the shape, around a stick or comparable object. The shape of the leather is not as it was originally, since there is only stitching at one edge; the other edge thus must have been torn off.



El-065A-D. Overview.

CATALOGUE NUMBER 119

Spec. No. el-068A, B;
 Provenance South of Khnum Temple, street layer;
 Date 6th-7th c. AD;
 Measurements A) 8.7 x 34.0. B) 27.5 x 35.7. T: 1.3;
 Skin Processing Possibly vegetable tanned;
 Remarks B) Not illustrated;

Description

Two fragments, rectangular and both with a curled edge. Rather thin leather. No features.



El-068A. Overview.

CATALOGUE NUMBER 120

Spec. No. el-070;
Provenance Domestic quarter west of Khnum
temenos wall, House DA, wall
niche (see Kuckertz, 2006: 122);
Date 27th Dynasty;
Measurements 86.5 x 89.0 x 17.7;
Skin Processing Not vegetable tanned;
Description
A red-brown, featureless piece of rawhide.



El-064. Overview.

CATALOGUE NUMBER 121

Spec. No. el-078;
Provenance Surface;
Date ?;
Measurements 40.6 x 86.2;
Skin Processing Not vegetable tanned;
Description
A roughly rectangular, brown fragment which tapers
at one end. It has four small stitch holes and one rem-
nant of leather thong stitch.



El-078. Overview.

CATALOGUE NUMBER 122

Spec. No. el-084;
Provenance Satet Temple Area, near staircase;
Date Old Kingdom;
Measurements L: 95.0.W: 8.7;
Skin Processing Not vegetable tanned;
Description
A narrow strip of rather thick grayish brown leather.



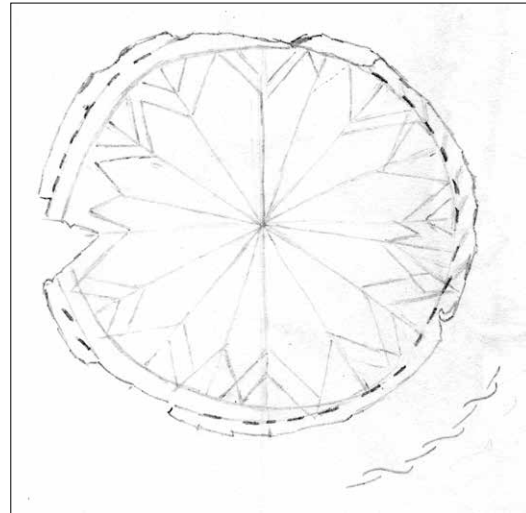
El-084. Overview.

CATALOGUE NUMBER 123

Spec. No. el-085;
Provenance West of Khnum Temple, modern
excavation debris
Date After 130 AD;
Measurements D: 51.8-56.7. T: 1.2;
Skin Processing Not vegetable tanned;

Description
A thin, circular fragment with small stitch holes on
the edge. The impressions between the edge and the
stitch holes suggest it was attached onto an under-
ground with whip stitches. One side is decorated
with an incised geometrical design. From Antinoë a

patch was found that equals the Elephantine example closely (Montebault, 2000: 216) and which is dated to 'Postérieure a 130 ap. J.-C.'.



El-085. Top: Sketch of the recto with a diagram of the stitching at the edge with which the roundel was attached to an underground; Bottom: Verso and recto.

CATALOGUE NUMBER 124

Spec. No. el-094;
 Provenance South of Khnum Temple courtyard;
 Date 1st-7th c. AD;
 Measurements 32.1 x 39.1-108 x 160;
 Skin Processing Not tested;
 Remarks Hair not yet identified;
 Description
 Various larger pieces of skin with yellow-beige hair still *in situ*. One fragment has a large patch that is

made of re-used leather and stitched with widely-spaced leather thong running stitches. Note the fine running stitches that are made of leather thong at the edge of this patch, which seems to be the original seam of the leather before having been used as a patch. The fragments were found together in a bag with wood, the relationship of which is uncertain.



El-094. Top: Overview; Right: Diagram of the stitching.

CATALOGUE NUMBER 125

Spec. No. el-102;
 Provenance South of Khnum Temple, House K26, ash deposit in room C;
 Date 550-650 AD;
 Measurements 27.6 x 40.2. T: 1.2; 12.7 x 26.8. T: 1.3. T edge: 3.7; 10.8 x 14.9. T: 1.2. T edge: 3.2;
 Skin Processing Not tested; not sub-numbered;
 Description Three featureless scraps.



El-102. Overview.

CATALOGUE NUMBER 126

| | | | |
|-----------------|---|-------------|--|
| Spec. No. | el-105A-C; | Remarks | D) See 'Belts, Straps, Cordage etc' (Cat. No. 79); E) Number not used; F-H) See 'Shoes' (Cat. No. 56); |
| Group | el-105A-H; | Description | A-C) Featureless scraps. |
| Provenance | North of Khnum Temple, House T53; | | |
| Date | 7th-9th c. AD; | | |
| Measurements | A) 43.7 x 95.5. T: 0.9. B) 40.4 x 74.6. T: 0.7. C) 32.4 x 46.4. T: 0.6; | | |
| Skin Processing | Not tested; | | |



El-105A-C. Overview.

CATALOGUE NUMBER 127

| | | |
|-----------------|--|---|
| Spec. No. | el-107; | Description |
| Provenance | South of Khnum Temple, ash fill of robbed temple enclosure wall; | Two small scraps, featureless except that one has a short, manmade cut in one edge. |
| Date | 6th-7th c. AD; | |
| Measurements | 45.6 x 48.0. T: 1.2; | |
| Skin Processing | Not tested; | |
| Remarks | Not numbered separately. Not illustrated; | |

CATALOGUE NUMBER 128

| | |
|-----------------|--|
| Spec. No. | el-109A-C, E-I; |
| Group | el-109A-I; |
| Context | Khnum Temple, fill of robbed temple foundation; |
| Date | 7th-9th c. AD; |
| Measurements | A) 31.5 x 82.2. T: 1. B) 32.5 x 39.0. T: 1. C) 51.3 x 107.1 x 8.1. E) 80.4 x 65.1. T: 2.6. F) 23.4 x 43.4. T: 2.3. G) 33.7 x 37.8. T: 1. H) 21.5 x 22.9. T: 1.7. I) 40.3-57.6 x 95.1 x 15.8; |
| Skin Processing | Not tested; |
| Remarks | D) See 'Sandals' (Cat. No. 34). Only fragment I is illustrated; |
| Description | Featureless scraps of varying size. |



El-109I. Overview.

CATALOGUE NUMBER 129

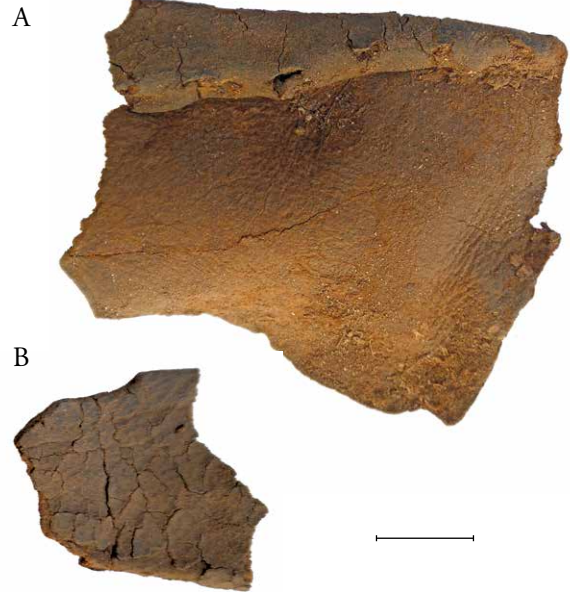
| | | | |
|--------------|--|-----------------|---|
| Spec. No. | el-110; | Skin Processing | Not tested; |
| Provenance | South of Khnum Temple, street layer; | Remarks | Not numbered separately; |
| Date | 6th-7th c. AD; | Description | Two small featureless scraps that fit together. |
| Measurements | 7.7 x 5.7. T: 1.2. 10.2 x 37.4. T:1.4; | | |



El-110. Overview.

CATALOGUE NUMBER 130

Spec. No. el-112A-B;
 Provenance South of Khnum Temple, street layer;
 Date 6th-7th c. AD;
 Measurements A) 41.8 x 50.8. T: 1.2. B) 22.7 x 22.0. T: 1.0;
 Skin Processing Not tested;
 Description
 One larger fragment, A, and one smaller one, B, that look like leather from the upper of a shoe. However, fragment A has large, horizontal stitch holes that do not seem to fit any of the known shoe constructions.



Right: El-112A, B. Overview.

CATALOGUE NUMBER 131

| | | | |
|--------------|--------------------------------------|-----------------|---|
| Spec. No. | el-114; | Skin Processing | Not tested; |
| Provenance | South of Khnum Temple, street layer; | Remarks | Not numbered separately. Not illustrated. |
| Date | 6th-7th c. AD; | Description | |
| Measurements | W: 8.3. L: 23.3, 6.7. T: 1.4; | Description | Small, featureless scraps. |

CATALOGUE NUMBER 132

| | | | |
|-----------------|--|-------------|---|
| Spec. No. | el-115; | Remarks | Not numbered separately; |
| Provenance | South of Khnum Temple, House K26, layer of organic material; | Description | |
| Date | 6th-7th c. AD; | Description | Small fragments of which one has one pair of slits and one single slit at right angle to the pair. Too little, however, is preserved to identify the origin of the fragments. |
| Measurements | 12.4 x 16.1, 22.0 x 28.7. T: 3.0-6.1; | | |
| Skin Processing | Not tested; | | |



El-112A, B. Overview.

CATALOGUE NUMBER 133

Spec. No. el-117;
 Provenance South of Khnum Temple, fill of robbed temple enclosure wall;
 Date 6th-7th c. AD;
 Measurements 35.8 x 53.1. T: 12.0;
 Skin Processing Not tested;
 Description Irregularly, thick piece of leather.

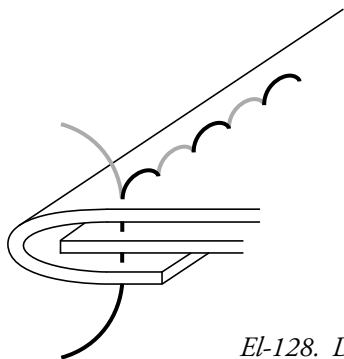


El-117. Overviews.

CATALOGUE NUMBER 134

Spec. No. el-128;
 Provenance Khnum Temple, fill of robbed temple foundation;
 Date 7th-9th c. AD;
 Measurements D: 50.0. L: 51.7. T (at edge): 3.4.
 W edge binding: 3.1. L slits: 11.0.
 W strips: 5.3;
 Skin Processing Not tested;

Description
 A circular object, tapering at one side, where it has been torn off. The edge binding is a strap of leather that is simply folded around the edge of the single layer object. It is secured with interlocking stitching of sZ₂ flax (diameter about 0.5 mm). On one side, the edge of the binding is neatly trimmed, suggesting this was the visible side. The other side shows a relatively large surplus of leather; here the edge has not been trimmed as precisely. Two parallel slits in the centre have two narrow leather strips pulled through them, emerging from the slits at either side.

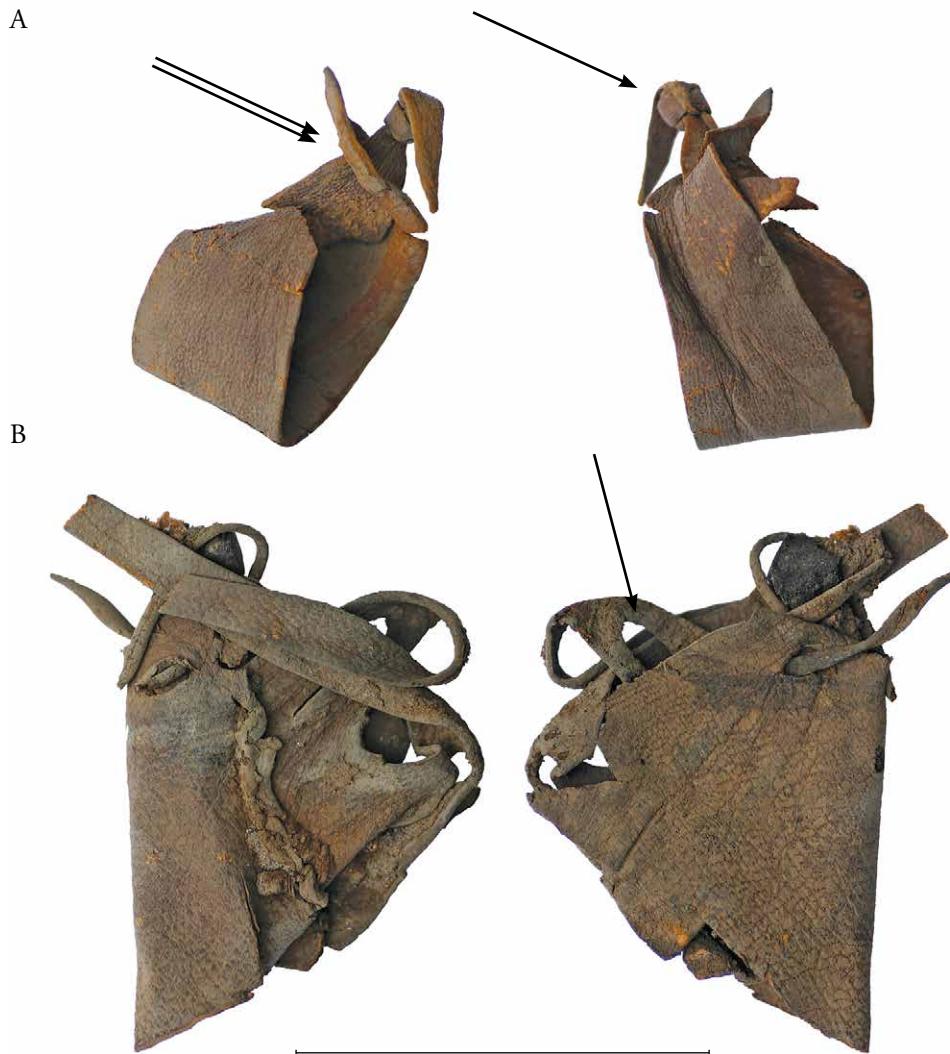


El-128. Diagram of the edge construction; Following page: Obverse and reverse.



CATALOGUE NUMBER 135

| | | |
|-----------------|---|--|
| Spec. No. | el-031 A-E; | trated; F) See 'Shoes' (Cat. No. 53); |
| Provenance | el-031A-G; | G) See 'Sandals' (Cat. No. 27); |
| Context | Domestic quarter west of Khnum temenos wall, House f, room 9, east; | Description |
| Date | 1st-2nd c. AD; | A) One end of this piece is tied into a half knot in which one of the two extremities is bent back and inserted into the knot (arrow). The end with the knot is pulled through a slit in the original strip (double arrow), thus forming a closed circle with a diameter of about 30 mm; |
| Object | Handle(?); strap; | B) The shape of this fragment resembles the triangular termination of braided handles, but the function is uncertain. The two sides have narrow strips, one of which has a big slit (arrow); |
| Measurements | A) 7.8 x 28.2. B) 4.5 x 37.6. C) 6.7 x 37.2. D) 63.0 x 53.0. E) 21.3 x 21.2. G) 47.1 x 74.1. T: 3.0. H) L: app. 120. W: 20.0; | E) A small corner fragment with remnants of stitch holes and stitches. |
| Skin Processing | A) and E) Not vegetable tanned; | |
| Remarks | C) and D) Featureless scraps, not illustrated/described; E) Not illus- | |



El-031A, B. Obverse and reverse. The arrows are explained in the text.

CATALOGUE NUMBER 136

Spec. No. el-034A, B;
 Provenance South of Khnum Temple, street layer;
 Date 6th c. AD;
 Object Strap?;
 Measurements A) L: 50.4. W (maximal): 15.7. W (minimal): 9.3. B) L: 70.2. W (maximal): 10.6. W (minimal): 2.7;
 Skin Processing Vegetable tanned?;
 Description Two featureless fragments that fit together.



El-034A, B. Overview.

CATALOGUE NUMBER 137

| | | | |
|------------|--|-----------------|----------------------------------|
| Spec. No. | el-101; | Measurements | 23.6 x 40.2 & 51.8 x 66.4; |
| Provenance | Settlement in southeastern area of town, street layer; | Skin Processing | Not tested on vegetable tanning; |
| Date | Late 6th Dynasty; | Remarks | Not illustrated; |
| Object | Pieces of sandal sole?; | Description | Pieces of a sandal? No features. |

CATALOGUE NUMBER 138

| | |
|-----------------|---|
| Spec. No. | el-044B; |
| Group | el-044A, B; |
| Provenance | South of Khnum Temple, ash deposit in street; |
| Date | 5th c. AD; |
| Measurements | B) 30.1 x 47.7. T: 1.5; |
| Skin Processing | Not vegetable tanned; |
| Remarks | A) See 'Sandals' (Cat. No. 30); |
| Description | |

Much thinner fragment than A; the origin is uncertain, but possibly a sole fragment. There is a set of small stitch holes on one edge.



El-044A. Overview.

CATALOGUE NUMBER 139

| | |
|-----------------|--|
| Spec. No. | el-067; |
| Provenance | South of Khnum Temple, midden deposit in street; |
| Date | 4th c. AD; |
| Measurements | 30.0 x 33.7. T: 2.9; |
| Skin Processing | Not vegetable tanned |
| Description | |

Small, almost rectangular fragment with leather thong running stitches extending lengthwise down the centre. One of the edges is original.



El-067. Obverse and reverse.

CATALOGUE NUMBER 140

| | | | |
|--------------|--|-----------------|------------------------------------|
| Spec. No. | el-106; | Skin Processing | Not tested; |
| Provenance | South of Khnum Temple, street layer; | Remarks | Not illustrated; |
| Date | 5th c. AD ; | Description | Several small, featureless scraps. |
| Measurements | 42.6 x 38.0. T: 3.3; 18.0 x 19.9. T: 3.8; 13.3 x 13.5; 12.6 x 13.0; 15.0 x 16.1. T: 3.8; | | |

APPENDICES

PROVENANCE DETAILS

| Spec. No. | Locus | Object | Context | Stratum | Date |
|-----------|------------|--------|---|---------|----------------------------------|
| el-001 | 29100 | K 8327 | Khnum Temple area, surface | n/a | ? |
| el-002 | 28703E/n-1 | | West of Khnum Temple, House M12A, occupation layer in courtyard | 01 | 5th-6th c. AD |
| el-003 | 28703H/h-1 | | West of Khnum Temple, street layer | 01 | 5th-6th c. AD |
| el-004 | 28703N/d-8 | | West of Khnum Temple, House M12A, occupation layer in courtyard | 01 | 5th-6th c. AD |
| el-005 | 15104F | | Domestic quarter south of Khnum Temple, House 34 | X | 18th Dynasty |
| el-006 | 18226B | | Domestic quarter west of Khnum temenos wall, North of wall M 361 | N/a | Late Antique |
| el-007 | 27708R/b | | West of Khnum Temple, House M13, occupation layer | 02 | 6th-7th c. AD |
| el-008 | 20305B | | Domestic quarter at southeast corner of Early Dynastic fortress, Pit of a building above Room CIV | n/a | 6th Dynasty |
| el-009 | 15107T | | Domestic quarter south of Khnum Temple, House 12 | XIII | 12th Dynasty |
| el-010 | 28703F/g | | West of Khnum Temple, street layer | 03 | 9th c. AD |
| el-011 | 23602P | | North of Heqaib Sanctuary, foundation trench of cellar | 11 | Second Intermediate Period |
| el-012 | 17232F | | Domestic quarter west of Khnum temenos wall, House P, Room 2 | 3-4 | 27th-30th Dynasty |

| Spec. No. | Locus | Object | Context | Stratum | Date |
|-----------|-------------|--------|---|----------|-------------------|
| el-013 | 26702X/b | | West of Khnum Temple, street layer in front of House M21 | 01 | 5th-6th c. AD |
| el-014 | 17255b | | Domestic quarter west of Khnum temenos wall, House H, Room 3 | 5 | 26th Dynasty |
| el-015 | 30102C/b-2 | | Khnum Temple, fill of robbed foundation of southern colonnade | 02-03 | 7th-9th c. AD |
| el-016 | 20860A | | Domestic quarter west of Khnum temenos wall, House DA, wall niche (see Kuckertz, 2006: 109-122) | 4 | 27th Dynasty |
| el-017 | 17242e | | Domestic quarter west of Khnum temenos wall, House f, Room 10 | 1 | 1st-2nd c. AD |
| el-018 | 15107T | | Domestic quarter south of Khnum Temple, House 12 | XIII | 12th Dynasty |
| el-019 | 19151B/l-6 | | Domestic quarter beside townwall, House 79 | | 12th Dynasty |
| el-020 | 15802 IIB | | Area of town wall southwest | n/a | Post-Pharaonic* |
| el-021 | 25102N/a-1 | 10573 | Domestic quarter south of Khnum Temple, East street | XIII-XIV | 12th Dynasty |
| el-022 | 25102C/a-12 | | Domestic quarter south of Khnum Temple, Cellar 041 | V/VI | 22nd-25th Dynasty |
| el-023 | 17241a | K2144? | Domestic quarter west of Khnum temenos wall, House f, Room 9, modern debris | n/a | ? |
| el-024 | 15107U | | Domestic quarter south of Khnum Temple, House 12 | XIII | 12th Dynasty |
| el-025 | 28707Q/f-1 | | South of Khnum Temple, House K26, destruction layer | 02 | 7th c. AD |
| el-026 | 29701N/d-3 | | South of Khnum Temple, street north of House K26 | 01 | 5th-6th c. AD |
| el-027 | 30702 A/a-1 | | West of Khnum Temple, street beside House M13 | 02 | 7th c. AD |

| Spec. No. | Locus | Object | Context | Stratum | Date |
|-----------|----------------|--------|---|---------|---------------|
| el-028 | 30104C/a-3 | | Khnum Temple, fill of robbed foundation of southern colonnade | 02-03 | 7th-9th c. AD |
| el-029 | 30102N/a-1 | | Khnum Temple, fill of robbed foundation of southern colonnade | 02-03 | 7th-9th c. AD |
| el-030 | 27704L/a-4 | | West of Khnum Temple, street layer in front of House M14 | 01 | 5th-6th c. AD |
| el-031 | 17241A/f-g Ost | | Domestic quarter west of Khnum temenos wall, House f, Room 9, east | 1 | 1st-2nd c. AD |
| el-032 | 29100 | K8928 | Surface | n/a | ? |
| el-033 | 34702E/d-5 | | South of Khnum Temple, House K31, fireplace | 01A | 5th c. AD |
| el-034 | 34702I/d-4 | | South of Khnum Temple, street layer | 01B | 6th c. AD |
| el-035 | 34704A/i-3 | | South of Khnum Temple, street layer | 01B | 6th c. AD |
| el-036 | 34704A/r-3 | | South of Khnum Temple, street layer | 01A | 5th c. AD |
| el-037 | 34704A/c-3 | | South of Khnum Temple, House K21, occupation layer | 02 | 7th c. AD |
| el-038 | 34704A/x-2 | | South of Khnum Temple, street layer | 01A | 5th c. AD |
| el-039 | 34702I/m-3 | | South of Khnum Temple, street layer | 01A | 5th c. AD |
| el-040 | 31106W/l-4 | | North of Khnum Temple, House T51, disturbed context | N/a | ? |
| el-041 | 34704A/g-1 | | South of Khnum Temple, street layer | 02 | 7th c. AD |
| el-042 | 34704A/l-1 | | South of Khnum Temple, ash pit in street | 01B | 6th c. AD |
| el-043 | 34702P/n-4 | | South of Khnum Temple, midden deposit in street | 1 | 1st-2nd c. AD |
| el-044 | 34704A/t-3 | | South of Khnum Temple, ash deposit in street | 01A | 5th c. AD |
| el-045 | 34702M/a-7, 8 | | South of Khnum Temple, House K20, occupation layer in eastern court | 01 | 5th-6th c. AD |

| Spec. No. | Locus | Object | Context | Stratum | Date |
|-----------|-------------|--------|---|-----------|-------------------|
| el-046 | 30102C/a-11 | | Khnum Temple, fill of robbed foundation of southern colonnade | 02-03 | 7th-9th c. AD |
| el-047 | 30104C/b-2 | | Khnum Temple, fill of robbed foundation of southern colonnade | 02-03 | 7th-9th c. AD |
| el-048 | 29704P/e | | South of Khnum Temple, House K26, midden deposit | end of 02 | 7th c. AD |
| el-049 | 29704C/e-2 | | South of Khnum Temple, midden deposit in street | end of 02 | 7th c. AD |
| el-050 | 20857B | | Domestic quarter west of Khnum temenos wall, building southwest of House CA | 5 | 25th-26th Dynasty |
| el-051 | 28703N/d-9 | | West of Khnum Temple, House M12A, occupation layer in courtyard | 01 | 5th-6th c. AD |
| el-052 | 26703N/b | | West of Khnum Temple, House M12A | 01 | 5th-6th c. AD |
| el-053 | 15110U | | Domestic quarter south of Khnum Temple, House 10 | XII | 13th Dynasty |
| el-054 | 19101L/e-5 | | Domestic quarter south of Khnum Temple, House 25a | XV | 12th Dynasty |
| el-055 | 22957b | R3006 | South of Satet Temple | n/a | Middle Kingdom |
| el-056 | 19842B | R3004 | Domestic quarter west of Khnum temenos wall, House DA, wall niche (see Kuckertz, 2006: 109-122) | 4 | 27th Dynasty |
| el-057 | 19551P/e-5 | R3008 | North-Western habitation area (Area XIII) (see Kuckertz, 2006: 109-122) | 5 | 25th Dynasty |
| el-058 | 19842B | R3004 | Domestic quarter west of Khnum temenos wall, House DA, wall niche | 4 | 27th Dynasty |
| el-059 | 19842B | R3004 | Domestic quarter west of Khnum temenos wall, House DA, wall niche (see Kuckertz, 2006: 109-122) | 4 | 27th Dynasty |

| Spec. No. | Locus | Object | Context | Stratum | Date |
|-----------|-------------|--------|---|---------|------------------|
| el-060 | 8450 | K1790 | Old Kingdom - Middle Kingdom cemetery, Tomb NE 35 | n/a | Late Antique |
| el-061 | 30000 | K9117 | Surface | n/a | ? |
| el-062 | 13902b | K3665 | Area north of Sater Temple (Area II), Room VI, layer B1-B2 | VIII | Late 2nd Dynasty |
| el-063 | 35701A/n-6 | | South of Khnum Temple, ash deposit in street | 01 | 5th-6th c. AD |
| el-064 | 634 | K108 | South of Khnum Temple courtyard | 03 | 8th-9th c. AD |
| el-065 | 1038 | K75 | Khnum Temple area, surface | n/a | ? |
| el-066 | 35701B/d-32 | | South of Khnum Temple, ash layer from plundering of temple | 1/01 | 4th c. AD |
| el-067 | 35701B/e-3 | | South of Khnum Temple, midden deposit in street | 1/01 | 4th c. AD |
| el-068 | 35701A/j-4 | | South of Khnum Temple, street layer | 02 | 6th-7th c. AD |
| el-069 | 3526 | K355 | House T53 north of Khnum Temple. Midden deposit disturbed by modern burials. | n/a | Late Antique |
| el-070 | 20860A | | Domestic quarter west of Khnum temenos wall, House DA, wall niche (see Kuckertz, p.122) | 4 | 27th Dynasty |
| el-071 | 35701A/b-1 | | South of Khnum Temple, House K22, brick pavement | 03 | 9th c. AD |
| el-072 | 290 | K129 | South of Khnum Temple, south wall, excavation debris | n/a | ? |
| el-073 | 640 | K112 | South of Khnum Temple courtyard, below floor of house K12 | n/a | New Kingdom* |
| el-074 | 633 | K107 | South of Khnum Temple courtyard | n/a | 6th c. AD |
| el-075 | 651 | K125 | South of Khnum Temple courtyard | n/a | Late Antique |
| el-076 | 3113 | | South of Khnum Temple, below House K16 | I/01 | 2nd-5th c. AD |

| Spec. No. | Locus | Object | Context | Stratum | Date |
|-----------|------------|--------|---|---------|--|
| el-077 | 11401b | | Old Kingdom - Middle Kingdom cemetery, Tomb NE 15 | n/a | First Intermediate Period-early Middle Kingdom |
| el-078 | 30000 | K9156 | Surface | n/a | ? |
| el-079 | 30000 | K9168 | Surface | n/a | ? |
| el-080 | 30100 | K8961 | Khnum Temple area, surface | n/a | ? |
| el-081 | 30100 | K8959 | Khnum Temple area, surface | n/a | ? |
| el-082 | 27006 | K8239 | Surface | n/a | ? |
| el-083 | 8800 | K1928 | City wall north-west, surface | n/a | ? |
| el-084 | 3905 | K350 | Satet Temple Area, near staircase | n/a | Old Kingdom |
| el-085 | 2600 | K158 | West of Khnum Temple, modern excavation debris | n/a | After 130 AD* |
| el-086 | 30100 | K8958 | Khnum Temple area, surface | n/a | ? |
| el-087 | 30100 | K8957 | Khnum Temple area, surface | n/a | Post-Roman (after AD 395)*; |
| el-088 | 626 | K105 | South of Khnum Temple courtyard | n/a | Late Antique |
| el-089 | 623 | K104 | South of Khnum Temple courtyard | n/a | 6th c. AD |
| el-090 | 30100 | K8960 | Khnum Temple area, surface | n/a | ? |
| el-091 | 30100 | K8962 | Khnum Temple area, surface | n/a | ? |
| el-092 | 30701E/a-2 | | West of Khnum Temple, fill of robbed temple enclosure wall | 02 | 6th-7th c. AD |
| el-093 | 1015 | K68 | South of Khnum Temple, modern excavation debris | n/a | n/a |
| el-094 | 632 | K106 | South of Khnum Temple courtyard | n/a | 1st-7th c. AD |
| el-095 | 635 | K109 | South of Khnum Temple courtyard | n/a | Late Antique |
| el-096 | 5906 | K581 | Satet Temple area, debris left by seabakhin | n/a | ? |
| el-097 | 19842B | | Domestic quarter west of Khnum temenos wall, House DA (see Kuckertz, 2006: 109-122) | 4 | 27th Dynasty |

| Spec. No. | Locus | Object | Context | Stratum | Date |
|-----------|-------------|--------|---|---------|---------------------------------------|
| el-098 | 10405x | K4940 | Old Kingdom - Middle Kingdom cemetery | n/a | Old Kingdom-First Intermediate Period |
| el-099 | 8420H | K4936 | Old Kingdom - Middle Kingdom cemetery, Tomb NE 6 | n/a | 6th-11th Dynasty |
| el-100 | 9475K | K4937 | Old Kingdom - Middle Kingdom cemetery | n/a | Old Kingdom-First Intermediate Period |
| el-101 | 33109W/y-2 | | Settlement in southeastern area of town, street layer | XVIII | late 6th Dynasty |
| el-102 | 42705I/d | | South of Khnum Temple, House K26, ash deposit in Room C | 02 | 550-650 AD |
| el-103 | not used | | | | |
| el-104 | 37702K/n-7 | | South of Khnum Temple, fill of robbed temple enclosure wall | 02 | 6th-7th c. AD |
| el-105 | 17719-17721 | K12195 | North of Khnum Temple, House T53 | n/a | 7th-9th c. AD |
| el-106 | 38703E/m-5 | | South of Khnum Temple, street layer | 1/01 | 5th c. AD |
| el-107 | 38703B/u-4 | | South of Khnum Temple, ash fill of robbed temple enclosure wall | 02 | 6th-7th c. AD |
| el-108 | 38703B/q-8 | | South of Khnum Temple, fill of robbed temple enclosure wall | 02 | 6th-7th c. AD |
| el-109 | 17702e | | Khnum Temple, fill of robbed temple foundation | n/a | 7th-9th c. AD |
| el-110 | 38703B/g-8 | | South of Khnum Temple, street layer | 02 | 6th-7th c. AD |
| el-111 | 17704D/a | | Khnum Temple, fill of robbed temple foundation | n/a | 7th-8th c. AD |
| el-112 | 41704B/b-1 | | South of Khnum Temple, street layer | 02 | 6th-7th c. AD |
| el-113 | 17701d | | Khnum Temple, modern excavation dumps | n/a | ? |
| el-114 | 41704B/c-1 | | South of Khnum Temple, street layer | 02 | 6th-7th c. AD |

| Spec. No. | Locus | Object | Context | Stratum | Date |
|-----------|------------|--------|---|---------|---------------|
| el-115 | 42703F/c-4 | | South of Khnum Temple, House K26, layer of organic material | 02 | 6th-7th c. AD |
| el-116 | 17701a | | Khnum Temple, modern excavation dumps | n/a | ? |
| el-117 | 38703B/v-2 | | South of Khnum Temple, fill of robbed temple enclosure wall | 02 | 6th-7th c. AD |
| el-118 | 38704E/d-2 | | South of Khnum Temple, ash deposit in street | 02 | 6th-7th c. AD |
| el-119 | 24738b | K12203 | West of Khnum Temple, House M21 | 01 | 5th-6th c. AD |
| el-120 | 41704D/d-4 | | South of Khnum Temple, House K20, occupation layer in courtyard F | 01 | 5th-6th c. AD |
| el-121 | 41708K/d-2 | | South of Khnum Temple, House K26, ash deposit in Room B | 02 | 6th-7th c. AD |
| el-122 | 36104-3 | | North of Khnum Temple, House T51, disturbed layer | n/a | ? |
| el-123 | 36701H/e-4 | | South of Khnum Temple, fill of robbed temple enclosure wall | 02 | 6th-7th c. AD |
| el-124 | 36104B-2 | | North of Khnum Temple, House T51, disturbed context | n/a | ? |
| el-125 | 36702D/i-5 | | South of Khnum Temple, street layer | 02 | 6th-7th c. AD |
| el-126 | 36100 | K9515 | North of Khnum Temple, surface | n/a | ? |
| el-127 | 15305a | K12291 | Khnum Temple | n/a | 6th-7th c. AD |
| el-128 | 17702e | | Khnum Temple, fill of robbed temple foundation | n/a | 7th-9th c. AD |

CONCORDANCE: CATALOGUE NUMBER

| Cat. No. | Spec. No. | Category | Cat. No. | Spec. No. | Category | Cat. No. | Spec. No. | Category |
|----------|-----------|----------|----------|-----------|----------|----------|-----------|----------|
| 1 | el-001 | sandal | 9 | el-015C | sandal | 14 | el-045B | sandal |
| 2 | el-002 | sandal | 9 | el-015F | sandal | 14 | el-045C | sandal |
| 3 | el-003 | sandal | 9 | el-015G | sandal | 14 | el-045D | sandal |
| 4 | el-004A | sandal | 10 | el-019A | sandal | 14 | el-045E | sandal |
| 4 | el-004B | sandal | 10 | el-019B | sandal | 15 | A | sandal |
| 5 | el-005 | sandal | 10 | el-019C | sandal | 15 | el-060B | sandal |
| 6 | el-007A | sandal | 10 | el-019D | sandal | 15 | el-060C | sandal |
| 6 | el-007B | sandal | 10 | el-019E | sandal | 15 | el-060D | sandal |
| 6 | el-007C | sandal | 10 | el-019F | sandal | 15 | el-060E | sandal |
| 6 | el-007D | sandal | 10 | el-019G | sandal | 15 | el-060F | sandal |
| 6 | el-007E | sandal | 11 | el-026A | sandal | 15 | el-060G | sandal |
| 7 | el-010 | sandal | 11 | el-026B | sandal | 15 | el-060H | sandal |
| 8 | el-013A | sandal | 11 | el-026C | sandal | 15 | el-060I | sandal |
| 8 | el-013B | sandal | 11 | el-026D | sandal | 15 | el-060J | sandal |
| 8 | el-013C | sandal | 11 | el-026E | sandal | 15 | el-060K | sandal |
| 8 | el-013D | sandal | 12 | el-027 | sandal | 15 | el-060L | sandal |
| 8 | el-013E | sandal | 13 | el-030A | sandal | 15 | el-060M | sandal |
| 9 | el-015A | sandal | 13 | el-030B | sandal | 15 | el-060N | sandal |
| 9 | el-015B | sandal | 14 | el-045A | sandal | 15 | el-060O | sandal |

| Cat. No. | Spec. No. | Category | Cat. No. | Spec. No. | Category | Cat. No. | Spec. No. | Category |
|----------|-----------|----------|----------|-----------|----------|----------|-----------|----------|
| 15 | el-060P | sandal | 30 | el-044A | sandal | 38 | el-121G | sandal |
| 15 | el-060Q | sandal | 31 | el-046D | sandal | 38 | el-121H | sandal |
| 16 | el-066 | sandal | 32 | el-071 | sandal | 38 | el-121I | sandal |
| 17 | el-069 | sandal | 33 | el-099A | sandal | 38 | el-121J | sandal |
| 18 | el-072A | sandal | 33 | el-099B | sandal | 38 | el-121K | sandal |
| 18 | el-072B | sandal | 34 | el-109D | sandal | 38 | el-121L | sandal |
| 18 | el-072C | sandal | 35 | el-111A | sandal | 38 | el-121M | sandal |
| 19 | el-073A | sandal | 35 | el-111B | sandal | 39 | el-127A | sandal |
| 19 | el-073B | sandal | 35 | el-111C | sandal | 39 | el-127B | sandal |
| 19 | el-073C | sandal | 36 | el-113A | sandal | 39 | el-127C | sandal |
| 20 | el-075A | sandal | 36 | el-113B | sandal | 40 | el-122 | sandal |
| 20 | el-075B | sandal | 36 | el-113C | sandal | 41 | el-123 | sandal |
| 21 | el-076 | sandal | 37 | el-120A | sandal | 42 | el-124 | sandal |
| 22 | el-077 | sandal | 37 | el-120B | sandal | 43 | el-125 | sandal |
| 23 | el-087A | sandal | 37 | el-120C | sandal | 44 | el-126A | sandal |
| 24 | el-088 | sandal | 37 | el-120D | sandal | 45 | el-012A | shoe |
| 25 | el-089 | sandal | 37 | el-120E | sandal | 45 | el-012B | shoe |
| 26 | el-093A | sandal | 38 | el-121A | sandal | 46 | el-095D | shoe |
| 26 | el-093B | sandal | 38 | el-121B | sandal | 46 | el-095E | shoe |
| 26 | el-093C | sandal | 38 | el-121C | sandal | 46 | el-095F | shoe |
| 27 | el-031G | sandal | 38 | el-121D | sandal | 47 | el-017A | shoe |
| 28 | el-033 | sandal | 38 | el-121E | sandal | 47 | el-017B | shoe |
| 29 | el-036 | sandal | 38 | el-121F | sandal | 47 | el-017C | shoe |

| Cat. No. | Spec. No. | Category | Cat. No. | Spec. No. | Category | Cat. No. | Spec. No. | Category |
|----------|-----------|----------|----------|-----------|----------|----------|-----------|----------|
| 47 | el-017D | shoe | 55 | el-023E | shoe | 64 | el-097A | Persian |
| 47 | el-017E | shoe | 55 | el-023F | shoe | 64 | el-097AA | Persian |
| 47 | el-017F | shoe | 55 | el-023G | shoe | 64 | el-097AB | Persian |
| 47 | el-017G | shoe | 55 | el-023H | shoe | 64 | el-097AC | Persian |
| 47 | el-017H | shoe | 55 | el-023I | shoe | 64 | el-097AD | Persian |
| 47 | el-017I | shoe | 55 | el-023J | shoe | 64 | el-097AE | Persian |
| 47 | el-017J | shoe | 55 | el-023K | shoe | 64 | el-097AF | Persian |
| 47 | el-017K | shoe | 56 | el-105F | shoe | 64 | el-097AG | Persian |
| 48 | el-087B | shoe | 56 | el-105G | shoe | 64 | el-097AH | Persian |
| 49 | el-074 | shoe | 56 | el-105H | shoe | 64 | el-097AI | Persian |
| 50 | el-020 | shoe | 57 | el-118 | shoe | 64 | el-097AJ | Persian |
| 51 | el-029A | shoe | 58 | el-119 | shoe | 64 | el-097AK | Persian |
| 51 | el-029B | shoe | 59 | el-126B | shoe | 64 | el-097AL | Persian |
| 52 | el-015D | shoe | 60 | el-056 | Persian | 64 | el-097AM | Persian |
| 52 | el-015E | shoe | 61 | el-016 | Persian | 64 | el-097AN | Persian |
| 53 | el-031F | shoe | 62 | el-059A | Persian | 64 | el-097AO | Persian |
| 54 | el-014A | shoe | 62 | el-059B | Persian | 64 | el-097AP | Persian |
| 54 | el-014B | shoe | 62 | el-059C | Persian | 64 | el-097B | Persian |
| 54 | el-014C | shoe | 62 | el-059D | Persian | 64 | el-097C | Persian |
| 55 | el-023A | shoe | 62 | el-097S | Persian | 64 | el-097D | Persian |
| 55 | el-023B | shoe | 63 | el-095A | Persian | 64 | el-097E | Persian |
| 55 | el-023C | shoe | 63 | el-095B | Persian | 64 | el-097F | Persian |
| 55 | el-023D | shoe | 63 | el-095C | Persian | 64 | el-097G | Persian |

| Cat. No. | Spec. No. | Category | Cat. No. | Spec. No. | Category | Cat. No. | Spec. No. | Category |
|----------|-----------|-----------|----------|-----------|-----------------|----------|-----------|-----------------|
| 64 | el-097H | Persian | 70 | el-096 | bags etc. | 86 | el-116C | waste & offcuts |
| 64 | el-097I | Persian | 71 | el-092 | bags etc. | 86 | el-116D | waste & offcuts |
| 64 | el-097J | Persian | 72 | el-108 | bags etc. | 86 | el-116E | waste & offcuts |
| 64 | el-097K | Persian | 73 | el-111D | bags etc. | 86 | el-116F | waste & offcuts |
| 64 | el-097L | Persian | 74 | el-051G | belts etc. | 86 | el-116G | waste & offcuts |
| 64 | el-097M | Persian | 75 | el-055A | belts etc. | 87 | el-021 | waste & offcuts |
| 64 | el-097N | Persian | 75 | el-055B | belts etc. | 88 | el-082 | miscellaneous |
| 64 | el-097O | Persian | 75 | el-055C | belts etc. | 89 | el-083 | miscellaneous |
| 64 | el-097P | Persian | 75 | el-055D | belts etc. | 90 | el-054A | miscellaneous |
| 64 | el-097Q | Persian | 76 | el-079 | belts etc. | 90 | el-054B | miscellaneous |
| 64 | el-097R | Persian | 77 | el-080 | belts etc. | 90 | el-054C | miscellaneous |
| 64 | el-097T | Persian | 78 | el-091 | belts etc. | 90 | el-054D | miscellaneous |
| 64 | el-097U | Persian | 79 | el-105D | belts etc. | 90 | el-054E | miscellaneous |
| 64 | el-097V | Persian | 80 | el-040 | belts etc. | 90 | el-054F | miscellaneous |
| 64 | el-097W | Persian | 81 | el-098 | belts etc. | 90 | el-054G | miscellaneous |
| 64 | el-097X | Persian | 82 | el-035A | waste & offcuts | 90 | el-054H | miscellaneous |
| 64 | el-097Y | Persian | 82 | el-035B | waste & offcuts | 90 | el-054I | miscellaneous |
| 64 | el-097Z | Persian | 83 | el-037 | waste & offcuts | 91 | el-090 | unidentified |
| 65 | el-057 | Persian | 84 | el-046B | waste & offcuts | 92 | el-100A | unidentified |
| 66 | el-046A | bags etc. | 84 | el-046C | waste & offcuts | 92 | el-100B | unidentified |
| 67 | el-032 | bags etc. | 85 | el-104 | waste & offcuts | 92 | el-100C | unidentified |
| 68 | el-081 | bags etc. | 86 | el-116A | waste & offcuts | 92 | el-100D | unidentified |
| 69 | el-086 | bags etc. | 86 | el-116B | waste & offcuts | 92 | el-100E | unidentified |

| Cat. No. | Spec. No. | Category | Cat. No. | Spec. No. | Category | Cat. No. | Spec. No. | Category |
|----------|-----------|--------------|----------|-----------|--------------|----------|-----------|--------------|
| 92 | el-100F | unidentified | 99 | el-024F | unidentified | 112 | el-052A | unidentified |
| 93 | el-006A | unidentified | 99 | el-024G | unidentified | 112 | el-052B | unidentified |
| 93 | el-006B | unidentified | 99 | el-024H | unidentified | 112 | el-052C | unidentified |
| 93 | el-006C | unidentified | 100 | el-025 | unidentified | 112 | el-052D | unidentified |
| 94 | el-008 | unidentified | 101 | el-028 | unidentified | 113 | el-053A | unidentified |
| 95 | el-009A | unidentified | 102 | el-038 | unidentified | 113 | el-053B | unidentified |
| 95 | el-009B | unidentified | 103 | el-039 | unidentified | 113 | el-053C | unidentified |
| 95 | el-009C | unidentified | 104 | el-041 | unidentified | 113 | el-053D | unidentified |
| 95 | el-009D | unidentified | 105 | el-042A | unidentified | 113 | el-053E | unidentified |
| 96 | el-011 | unidentified | 105 | el-042B | unidentified | 113 | el-053F | unidentified |
| 97 | el-018A | unidentified | 106 | el-043 | unidentified | 113 | el-053G | unidentified |
| 97 | el-018B | unidentified | 107 | el-047A | unidentified | 113 | el-053H | unidentified |
| 97 | el-018C | unidentified | 107 | el-047B | unidentified | 113 | el-053I | unidentified |
| 97 | el-018D | unidentified | 108 | el-048 | unidentified | 114 | el-061A | unidentified |
| 97 | el-018E | unidentified | 109 | el-049A | unidentified | 114 | el-061B | unidentified |
| 97 | el-018F | unidentified | 109 | el-049B | unidentified | 114 | el-061C | unidentified |
| 98 | el-022A | unidentified | 110 | el-050 | unidentified | 114 | el-061D | unidentified |
| 98 | el-022B | unidentified | 111 | el-051A | unidentified | 115 | el-062A | unidentified |
| 99 | el-024A | unidentified | 111 | el-051B | unidentified | 115 | el-062B | unidentified |
| 99 | el-024B | unidentified | 111 | el-051C | unidentified | 116 | el-063A | unidentified |
| 99 | el-024C | unidentified | 111 | el-051D | unidentified | 116 | el-063B | unidentified |
| 99 | el-024D | unidentified | 111 | el-051E | unidentified | 116 | el-063C | unidentified |
| 99 | el-024E | unidentified | 111 | el-051F | unidentified | 117 | el-064 | unidentified |

| Cat. No. | Spec. No. | Category | Cat. No. | Spec. No. | Category |
|----------|-----------|--------------|----------|-----------|-----------------|
| 118 | el-065A | unidentified | 128 | el-109I | unidentified |
| 118 | el-065B | unidentified | 129 | el-110 | unidentified |
| 118 | el-065C | unidentified | 130 | el-112A | unidentified |
| 118 | el-065D | unidentified | 130 | el-112B | unidentified |
| 119 | el-068A | unidentified | 131 | el-114 | unidentified |
| 119 | el-068B | unidentified | 132 | el-115 | unidentified |
| 120 | el-070 | unidentified | 133 | el-117 | unidentified |
| 121 | el-078 | unidentified | 134 | el-128 | unidentified |
| 122 | el-084 | unidentified | 135 | el-031A | unidentified |
| 123 | el-085 | unidentified | 135 | el-031B | unidentified |
| 124 | el-094 | unidentified | 135 | el-031C | unidentified |
| 125 | el-102 | unidentified | 135 | el-031D | unidentified |
| 126 | el-105A | unidentified | 135 | el-031E | unidentified |
| 126 | el-105B | unidentified | 136 | el-034A | unidentified |
| 126 | el-105C | unidentified | 136 | el-034B | unidentified |
| 127 | el-107 | unidentified | 137 | el-101 | unidentified |
| 128 | el-109A | unidentified | 138 | el-044B | unidentified |
| 128 | el-109B | unidentified | 139 | el-067 | unidentified |
| 128 | el-109C | unidentified | 140 | el-106 | unidentified |
| 128 | el-109E | unidentified | | el-103 | number not used |
| 128 | el-109F | unidentified | | el-105E | number not used |
| 128 | el-109G | unidentified | | | |
| 128 | el-109H | unidentified | | | |

CONCORDANCE: SPECIALIST NUMBER

| Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category |
|-----------|----------|--------------|-----------|----------|--------------|-----------|----------|--------------|
| el-001 | 1 | sandal | el-010 | 7 | sandal | el-016 | 61 | Persian |
| el-002 | 2 | sandal | el-011 | 96 | unidentified | el-017A | 47 | shoe |
| el-003 | 3 | sandal | el-012A | 45 | shoe | el-017B | 47 | shoe |
| el-004A | 4 | sandal | el-012B | 45 | shoe | el-017C | 47 | shoe |
| el-004B | 4 | sandal | el-013A | 8 | sandal | el-017D | 47 | shoe |
| el-005 | 5 | sandal | el-013B | 8 | sandal | el-017E | 47 | shoe |
| el-006A | 93 | unidentified | el-013C | 8 | sandal | el-017F | 47 | shoe |
| el-006B | 93 | unidentified | el-013D | 8 | sandal | el-017G | 47 | shoe |
| el-006C | 93 | unidentified | el-013E | 8 | sandal | el-017H | 47 | shoe |
| el-007A | 6 | sandal | el-014A | 54 | shoe | el-017I | 47 | shoe |
| el-007B | 6 | sandal | el-014B | 54 | shoe | el-017J | 47 | shoe |
| el-007C | 6 | sandal | el-014C | 54 | shoe | el-017K | 47 | shoe |
| el-007D | 6 | sandal | el-015A | 9 | sandal | el-018A | 97 | unidentified |
| el-007E | 6 | sandal | el-015B | 9 | sandal | el-018B | 97 | unidentified |
| el-008 | 94 | unidentified | el-015C | 9 | sandal | el-018C | 97 | unidentified |
| el-009A | 95 | unidentified | el-015D | 52 | shoe | el-018D | 97 | unidentified |
| el-009B | 95 | unidentified | el-015E | 52 | shoe | el-018E | 97 | unidentified |
| el-009C | 95 | unidentified | el-015F | 9 | sandal | el-018F | 97 | unidentified |
| el-009D | 95 | unidentified | el-015G | 9 | sandal | el-019A | 10 | sandal |

| Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category |
|-----------|----------|-----------------|-----------|----------|--------------|-----------|----------|-----------------|
| el-019B | 10 | sandal | el-024C | 99 | unidentified | el-031F | 53 | shoe |
| el-019C | 10 | sandal | el-024D | 99 | unidentified | el-031G | 27 | sandal |
| el-019D | 10 | sandal | el-024E | 99 | unidentified | el-032 | 67 | bags etc. |
| el-019E | 10 | sandal | el-024F | 99 | unidentified | el-033 | 28 | sandal |
| el-019F | 10 | sandal | el-024G | 99 | unidentified | el-034A | 136 | unidentified |
| el-019G | 10 | sandal | el-024H | 99 | unidentified | el-034B | 136 | unidentified |
| el-020 | 50 | shoe | el-025 | 100 | unidentified | el-035A | 82 | waste & offcuts |
| el-021 | 87 | waste & offcuts | el-026A | 11 | sandal | el-035B | 82 | waste & offcuts |
| el-022A | 98 | unidentified | el-026B | 11 | sandal | el-036 | 29 | sandal |
| el-022B | 98 | unidentified | el-026C | 11 | sandal | el-037 | 83 | waste & offcuts |
| el-023A | 55 | shoe | el-026D | 11 | sandal | el-038 | 102 | unidentified |
| el-023B | 55 | shoe | el-026E | 11 | sandal | el-039 | 103 | unidentified |
| el-023C | 55 | shoe | el-027 | 12 | sandal | el-040 | 80 | belts etc. |
| el-023D | 55 | shoe | el-028 | 101 | unidentified | el-041 | 104 | unidentified |
| el-023E | 55 | shoe | el-029A | 51 | shoe | el-042A | 105 | unidentified |
| el-023F | 55 | shoe | el-029B | 51 | shoe | el-042B | 105 | unidentified |
| el-023G | 55 | shoe | el-030A | 13 | sandal | el-043 | 106 | unidentified |
| el-023H | 55 | shoe | el-030B | 13 | sandal | el-044A | 30 | sandal |
| el-023I | 55 | shoe | el-031A | 135 | unidentified | el-044B | 138 | unidentified |
| el-023J | 55 | shoe | el-031B | 135 | unidentified | el-045A | 14 | sandal |
| el-023K | 55 | shoe | el-031C | 135 | unidentified | el-045B | 14 | sandal |
| el-024A | 99 | unidentified | el-031D | 135 | unidentified | el-045C | 14 | sandal |
| el-024B | 99 | unidentified | el-031E | 135 | unidentified | el-045D | 14 | sandal |

| Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category |
|-----------|----------|-----------------|-----------|----------|---------------|-----------|----------|--------------|
| el-045E | 14 | sandal | el-053B | 113 | unidentified | el-059A | 62 | Persian |
| el-046A | 66 | bags etc. | el-053C | 113 | unidentified | el-059B | 62 | Persian |
| el-046B | 84 | waste & offcuts | el-053D | 113 | unidentified | el-059C | 62 | Persian |
| el-046C | 84 | waste & offcuts | el-053E | 113 | unidentified | el-059D | 62 | Persian |
| el-046D | 31 | sandal | el-053F | 113 | unidentified | el-060A | 15 | sandal |
| el-047A | 107 | unidentified | el-053G | 113 | unidentified | el-060B | 15 | sandal |
| el-047B | 107 | unidentified | el-053H | 113 | unidentified | el-060C | 15 | sandal |
| el-048 | 108 | unidentified | el-053I | 113 | unidentified | el-060D | 15 | sandal |
| el-049A | 109 | unidentified | el-054A | 90 | miscellaneous | el-060E | 15 | sandal |
| el-049B | 109 | unidentified | el-054B | 90 | miscellaneous | el-060F | 15 | sandal |
| el-050 | 110 | unidentified | el-054C | 90 | miscellaneous | el-060G | 15 | sandal |
| el-051A | 111 | unidentified | el-054D | 90 | miscellaneous | el-060H | 15 | sandal |
| el-051B | 111 | unidentified | el-054E | 90 | miscellaneous | el-060I | 15 | sandal |
| el-051C | 111 | unidentified | el-054F | 90 | miscellaneous | el-060J | 15 | sandal |
| el-051D | 111 | unidentified | el-054G | 90 | miscellaneous | el-060K | 15 | sandal |
| el-051E | 111 | unidentified | el-054H | 90 | miscellaneous | el-060L | 15 | sandal |
| el-051F | 111 | unidentified | el-054I | 90 | miscellaneous | el-060M | 15 | sandal |
| el-051G | 74 | belts etc. | el-055A | 75 | belts etc. | el-060N | 15 | sandal |
| el-052A | 112 | unidentified | el-055B | 75 | belts etc. | el-060O | 15 | sandal |
| el-052B | 112 | unidentified | el-055C | 75 | belts etc. | el-060P | 15 | sandal |
| el-052C | 112 | unidentified | el-055D | 75 | belts etc. | el-060Q | 15 | sandal |
| el-052D | 112 | unidentified | el-056 | 60 | Persian | el-061A | 114 | unidentified |
| el-053A | 113 | unidentified | el-057 | 65 | Persian | el-061B | 114 | unidentified |

| Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category |
|-----------|----------|--------------|-----------|----------|---------------|-----------|----------|--------------|
| el-061C | 114 | unidentified | el-073B | 19 | sandal | el-093A | 26 | sandal |
| el-061D | 114 | unidentified | el-073C | 19 | sandal | el-093B | 26 | sandal |
| el-062A | 115 | unidentified | el-074 | 49 | shoe | el-093C | 26 | sandal |
| el-062B | 115 | unidentified | el-075A | 20 | sandal | el-094 | 124 | unidentified |
| el-063A | 116 | unidentified | el-075B | 20 | sandal | el-095A | 63 | Persian |
| el-063B | 116 | unidentified | el-076 | 21 | sandal | el-095B | 63 | Persian |
| el-063C | 116 | unidentified | el-077 | 22 | sandal | el-095C | 63 | Persian |
| el-064 | 117 | unidentified | el-078 | 121 | unidentified | el-095D | 46 | shoe |
| el-065A | 118 | unidentified | el-079 | 76 | belts etc. | el-095E | 46 | shoe |
| el-065B | 118 | unidentified | el-080 | 77 | belts etc. | el-095F | 46 | shoe |
| el-065C | 118 | unidentified | el-081 | 68 | bags etc. | el-096 | 70 | bags etc. |
| el-065D | 118 | unidentified | el-082 | 88 | miscellaneous | el-097A | 64 | Persian |
| el-066 | 16 | sandal | el-083 | 89 | miscellaneous | el-097AA | 64 | Persian |
| el-067 | 139 | unidentified | el-084 | 122 | unidentified | el-097AB | 64 | Persian |
| el-068A | 119 | unidentified | el-085 | 123 | unidentified | el-097AC | 64 | Persian |
| el-068B | 119 | unidentified | el-086 | 69 | bags etc. | el-097AD | 64 | Persian |
| el-069 | 17 | sandal | el-087A | 23 | sandal | el-097AE | 64 | Persian |
| el-070 | 120 | unidentified | el-087B | 48 | shoe | el-097AF | 64 | Persian |
| el-071 | 32 | sandal | el-088 | 24 | sandal | el-097AG | 64 | Persian |
| el-072A | 18 | sandal | el-089 | 25 | sandal | el-097AH | 64 | Persian |
| el-072B | 18 | sandal | el-090 | 91 | unidentified | el-097AI | 64 | Persian |
| el-072C | 18 | sandal | el-091 | 78 | belts etc. | el-097AJ | 64 | Persian |
| el-073A | 19 | sandal | el-092 | 71 | bags etc. | el-097AK | 64 | Persian |

| Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category |
|-----------|----------|----------|-----------|----------|--------------|-----------|----------|-----------------|
| el-097AL | 64 | Persian | el-097O | 64 | Persian | el-103 | | number not used |
| el-097AM | 64 | Persian | el-097P | 64 | Persian | el-104 | 85 | waste & offcuts |
| el-097AN | 64 | Persian | el-097Q | 64 | Persian | el-105A | 126 | unidentified |
| el-097AO | 64 | Persian | el-097R | 64 | Persian | el-105B | 126 | unidentified |
| el-097AP | 64 | Persian | el-097S | 62 | Persian | el-105C | 126 | unidentified |
| el-097B | 64 | Persian | el-097T | 64 | Persian | el-105D | 79 | belts etc. |
| el-097C | 64 | Persian | el-097U | 64 | Persian | el-105E | | number not used |
| el-097D | 64 | Persian | el-097V | 64 | Persian | el-105F | 56 | shoe |
| el-097E | 64 | Persian | el-097W | 64 | Persian | el-105G | 56 | shoe |
| el-097F | 64 | Persian | el-097X | 64 | Persian | el-105H | 56 | shoe |
| el-097G1 | 64 | Persian | el-097Y | 64 | Persian | el-106 | 140 | unidentified |
| el-097G2 | 64 | Persian | el-097Z | 64 | Persian | el-107 | 127 | unidentified |
| el-097G3 | 64 | Persian | el-098 | 81 | belts etc. | el-108 | 72 | bags etc. |
| el-097G4 | 64 | Persian | el-099A | 33 | sandal | el-109A | 128 | unidentified |
| el-097G5 | 64 | Persian | el-099B | 33 | sandal | el-109B | 128 | unidentified |
| el-097G6 | 64 | Persian | el-100A | 92 | unidentified | el-109C | 128 | unidentified |
| el-097H | 64 | Persian | el-100B | 92 | unidentified | el-109D | 34 | sandal |
| el-097I | 64 | Persian | el-100C | 92 | unidentified | el-109E | 128 | unidentified |
| el-097J | 64 | Persian | el-100D | 92 | unidentified | el-109F | 128 | unidentified |
| el-097K | 64 | Persian | el-100E | 92 | unidentified | el-109G | 128 | unidentified |
| el-097L | 64 | Persian | el-100F | 92 | unidentified | el-109H | 128 | unidentified |
| el-097M | 64 | Persian | el-101 | 137 | unidentified | el-109I | 128 | unidentified |
| el-097N | 64 | Persian | el-102 | 125 | unidentified | el-110 | 129 | unidentified |

| Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category |
|-----------|----------|-----------------|-----------|----------|----------|-----------|----------|--------------|
| el-111A | 35 | sandal | el-120C | 37 | sandal | el-127B | 39 | sandal |
| el-111B | 35 | sandal | el-120D | 37 | sandal | el-127C | 39 | sandal |
| el-111C | 35 | sandal | el-120E | 37 | sandal | el-128 | 134 | unidentified |
| el-111D | 73 | bags etc. | el-121A | 38 | sandal | | | |
| el-112A | 130 | unidentified | el-121B | 38 | sandal | | | |
| el-112B | 130 | unidentified | el-121C | 38 | sandal | | | |
| el-113A | 36 | sandal | el-121D | 38 | sandal | | | |
| el-113B | 36 | sandal | el-121E | 38 | sandal | | | |
| el-113C | 36 | sandal | el-121F | 38 | sandal | | | |
| el-114 | 131 | unidentified | el-121G | 38 | sandal | | | |
| el-115 | 132 | unidentified | el-121H | 38 | sandal | | | |
| el-116A | 86 | waste & offcuts | el-121I | 38 | sandal | | | |
| el-116B | 86 | waste & offcuts | el-121J | 38 | sandal | | | |
| el-116C | 86 | waste & offcuts | el-121K | 38 | sandal | | | |
| el-116D | 86 | waste & offcuts | el-121L | 38 | sandal | | | |
| el-116E | 86 | waste & offcuts | el-121M | 38 | sandal | | | |
| el-116F | 86 | waste & offcuts | el-122 | 40 | sandal | | | |
| el-116G | 86 | waste & offcuts | el-123 | 41 | sandal | | | |
| el-117 | 133 | unidentified | el-124 | 42 | sandal | | | |
| el-118 | 57 | shoe | el-125 | 43 | sandal | | | |
| el-119 | 58 | shoe | el-126A | 44 | sandal | | | |
| el-120A | 37 | sandal | el-126B | 59 | shoe | | | |
| el-120B | 37 | sandal | el-127A | 39 | sandal | | | |

CONCORDANCE: CATEGORY

| Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. |
|------------|-----------|----------|-----------------|-----------|----------|----------|-----------|----------|
| bags etc. | el-032 | 67 | miscellaneous | el-054A | 90 | Persian | el-095A | 63 |
| bags etc. | el-046A | 66 | miscellaneous | el-054B | 90 | Persian | el-095B | 63 |
| bags etc. | el-081 | 68 | miscellaneous | el-054C | 90 | Persian | el-095C | 63 |
| bags etc. | el-086 | 69 | miscellaneous | el-054D | 90 | Persian | el-097A | 64 |
| bags etc. | el-092 | 71 | miscellaneous | el-054E | 90 | Persian | el-097AA | 64 |
| bags etc. | el-096 | 70 | miscellaneous | el-054F | 90 | Persian | el-097AB | 64 |
| bags etc. | el-108 | 72 | miscellaneous | el-054G | 90 | Persian | el-097AC | 64 |
| bags etc. | el-111D | 73 | miscellaneous | el-054H | 90 | Persian | el-097AD | 64 |
| belts etc. | el-040 | 80 | miscellaneous | el-054I | 90 | Persian | el-097AE | 64 |
| belts etc. | el-051G | 74 | miscellaneous | el-082 | 88 | Persian | el-097AF | 64 |
| belts etc. | el-055A | 75 | miscellaneous | el-083 | 89 | Persian | el-097AG | 64 |
| belts etc. | el-055B | 75 | number not used | el-103 | | Persian | el-097AH | 64 |
| belts etc. | el-055C | 75 | Persian | el-016 | 61 | Persian | el-097AI | 64 |
| belts etc. | el-055D | 75 | Persian | el-056 | 60 | Persian | el-097AJ | 64 |
| belts etc. | el-079 | 76 | Persian | el-057 | 65 | Persian | el-097AK | 64 |
| belts etc. | el-080 | 77 | Persian | el-059A | 62 | Persian | el-097AL | 64 |
| belts etc. | el-091 | 78 | Persian | el-059B | 62 | Persian | el-097AM | 64 |
| belts etc. | el-098 | 81 | Persian | el-059C | 62 | Persian | el-097AN | 64 |
| belts etc. | el-105D | 79 | Persian | el-059D | 62 | Persian | el-097AO | 64 |

| Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. |
|----------|-----------|----------|----------|-----------|----------|----------|-----------|----------|
| Persian | el-097AP | 64 | Persian | el-097S | 62 | sandal | el-013D | 8 |
| Persian | el-097B | 64 | Persian | el-097T | 64 | sandal | el-013E | 8 |
| Persian | el-097C | 64 | Persian | el-097U | 64 | sandal | el-015A | 9 |
| Persian | el-097D | 64 | Persian | el-097V | 64 | sandal | el-015B | 9 |
| Persian | el-097E | 64 | Persian | el-097W | 64 | sandal | el-015C | 9 |
| Persian | el-097F | 64 | Persian | el-097X | 64 | sandal | el-015F | 9 |
| Persian | el-097G1 | 64 | Persian | el-097Y | 64 | sandal | el-015G | 9 |
| Persian | el-097G2 | 64 | Persian | el-097Z | 64 | sandal | el-019A | 10 |
| Persian | el-097G3 | 64 | sandal | el-001 | 1 | sandal | el-019B | 10 |
| Persian | el-097G4 | 64 | sandal | el-002 | 2 | sandal | el-019C | 10 |
| Persian | el-097G5 | 64 | sandal | el-003 | 3 | sandal | el-019D | 10 |
| Persian | el-097G6 | 64 | sandal | el-004A | 4 | sandal | el-019E | 10 |
| Persian | el-097H | 64 | sandal | el-004B | 4 | sandal | el-019F | 10 |
| Persian | el-097I | 64 | sandal | el-005 | 5 | sandal | el-019G | 10 |
| Persian | el-097J | 64 | sandal | el-007A | 6 | sandal | el-026A | 11 |
| Persian | el-097K | 64 | sandal | el-007B | 6 | sandal | el-026B | 11 |
| Persian | el-097L | 64 | sandal | el-007C | 6 | sandal | el-026C | 11 |
| Persian | el-097M | 64 | sandal | el-007D | 6 | sandal | el-026D | 11 |
| Persian | el-097N | 64 | sandal | el-007E | 6 | sandal | el-026E | 11 |
| Persian | el-097O | 64 | sandal | el-010 | 7 | sandal | el-027 | 12 |
| Persian | el-097P | 64 | sandal | el-013A | 8 | sandal | el-030A | 13 |
| Persian | el-097Q | 64 | sandal | el-013B | 8 | sandal | el-030B | 13 |
| Persian | el-097R | 64 | sandal | el-013C | 8 | sandal | el-031G | 27 |

| Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. |
|----------|-----------|----------|----------|-----------|----------|----------|-----------|----------|
| sandal | el-033 | 28 | sandal | el-060O | 15 | sandal | el-099B | 33 |
| sandal | el-036 | 29 | sandal | el-060P | 15 | sandal | el-109D | 34 |
| sandal | el-044A | 30 | sandal | el-060Q | 15 | sandal | el-111A | 35 |
| sandal | el-045A | 14 | sandal | el-066 | 16 | sandal | el-111B | 35 |
| sandal | el-045B | 14 | sandal | el-069 | 17 | sandal | el-111C | 35 |
| sandal | el-045C | 14 | sandal | el-071 | 32 | sandal | el-113A | 36 |
| sandal | el-045D | 14 | sandal | el-072A | 18 | sandal | el-113B | 36 |
| sandal | el-045E | 14 | sandal | el-072B | 18 | sandal | el-113C | 36 |
| sandal | el-046D | 31 | sandal | el-072C | 18 | sandal | el-120A | 37 |
| sandal | el-060A | 15 | sandal | el-073A | 19 | sandal | el-120B | 37 |
| sandal | el-060B | 15 | sandal | el-073B | 19 | sandal | el-120C | 37 |
| sandal | el-060C | 15 | sandal | el-073C | 19 | sandal | el-120D | 37 |
| sandal | el-060D | 15 | sandal | el-075A | 20 | sandal | el-120E | 37 |
| sandal | el-060E | 15 | sandal | el-075B | 20 | sandal | el-121A | 38 |
| sandal | el-060F | 15 | sandal | el-076 | 21 | sandal | el-121B | 38 |
| sandal | el-060G | 15 | sandal | el-077 | 22 | sandal | el-121C | 38 |
| sandal | el-060H | 15 | sandal | el-087A | 23 | sandal | el-121D | 38 |
| sandal | el-060I | 15 | sandal | el-088 | 24 | sandal | el-121E | 38 |
| sandal | el-060J | 15 | sandal | el-089 | 25 | sandal | el-121F | 38 |
| sandal | el-060K | 15 | sandal | el-093A | 26 | sandal | el-121G | 38 |
| sandal | el-060L | 15 | sandal | el-093B | 26 | sandal | el-121H | 38 |
| sandal | el-060M | 15 | sandal | el-093C | 26 | sandal | el-121I | 38 |
| sandal | el-060N | 15 | sandal | el-099A | 33 | sandal | el-121J | 38 |

| Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. |
|----------|-----------|----------|----------|-----------|----------|--------------|-----------|----------|
| sandal | el-121K | 38 | shoe | el-017F | 47 | shoe | el-095D | 46 |
| sandal | el-121L | 38 | shoe | el-017G | 47 | shoe | el-095E | 46 |
| sandal | el-121M | 38 | shoe | el-017H | 47 | shoe | el-095F | 46 |
| sandal | el-122 | 40 | shoe | el-017I | 47 | shoe | el-105F | 56 |
| sandal | el-123 | 41 | shoe | el-017J | 47 | shoe | el-105G | 56 |
| sandal | el-124 | 42 | shoe | el-017K | 47 | shoe | el-105H | 56 |
| sandal | el-125 | 43 | shoe | el-020 | 50 | shoe | el-118 | 57 |
| sandal | el-126A | 44 | shoe | el-023A | 55 | shoe | el-119 | 58 |
| sandal | el-127A | 39 | shoe | el-023B | 55 | shoe | el-126B | 59 |
| sandal | el-127B | 39 | shoe | el-023C | 55 | unidentified | el-006A | 93 |
| sandal | el-127C | 39 | shoe | el-023D | 55 | unidentified | el-006B | 93 |
| shoe | el-012A | 45 | shoe | el-023E | 55 | unidentified | el-006C | 93 |
| shoe | el-012B | 45 | shoe | el-023F | 55 | unidentified | el-008 | 94 |
| shoe | el-014A | 54 | shoe | el-023G | 55 | unidentified | el-009A | 95 |
| shoe | el-014B | 54 | shoe | el-023H | 55 | unidentified | el-009B | 95 |
| shoe | el-014C | 54 | shoe | el-023I | 55 | unidentified | el-009C | 95 |
| shoe | el-015D | 52 | shoe | el-023J | 55 | unidentified | el-009D | 95 |
| shoe | el-015E | 52 | shoe | el-023K | 55 | unidentified | el-011 | 96 |
| shoe | el-017A | 47 | shoe | el-029A | 51 | unidentified | el-018A | 97 |
| shoe | el-017B | 47 | shoe | el-029B | 51 | unidentified | el-018B | 97 |
| shoe | el-017C | 47 | shoe | el-031F | 53 | unidentified | el-018C | 97 |
| shoe | el-017D | 47 | shoe | el-074 | 49 | unidentified | el-018D | 97 |
| shoe | el-017E | 47 | shoe | el-087B | 48 | unidentified | el-018E | 97 |

| Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. |
|--------------|-----------|----------|--------------|-----------|----------|--------------|-----------|----------|
| unidentified | el-018F | 97 | unidentified | el-042A | 105 | unidentified | el-053D | 113 |
| unidentified | el-022A | 98 | unidentified | el-042B | 105 | unidentified | el-053E | 113 |
| unidentified | el-022B | 98 | unidentified | el-043 | 106 | unidentified | el-053F | 113 |
| unidentified | el-024A | 99 | unidentified | el-044B | 138 | unidentified | el-053G | 113 |
| unidentified | el-024B | 99 | unidentified | el-047A | 107 | unidentified | el-053H | 113 |
| unidentified | el-024C | 99 | unidentified | el-047B | 107 | unidentified | el-053I | 113 |
| unidentified | el-024D | 99 | unidentified | el-048 | 108 | unidentified | el-061A | 114 |
| unidentified | el-024E | 99 | unidentified | el-049A | 109 | unidentified | el-061B | 114 |
| unidentified | el-024F | 99 | unidentified | el-049B | 109 | unidentified | el-061C | 114 |
| unidentified | el-024G | 99 | unidentified | el-050 | 110 | unidentified | el-061D | 114 |
| unidentified | el-024H | 99 | unidentified | el-051A | 111 | unidentified | el-062A | 115 |
| unidentified | el-025 | 100 | unidentified | el-051B | 111 | unidentified | el-062B | 115 |
| unidentified | el-028 | 101 | unidentified | el-051C | 111 | unidentified | el-063A | 116 |
| unidentified | el-031A | 135 | unidentified | el-051D | 111 | unidentified | el-063B | 116 |
| unidentified | el-031B | 135 | unidentified | el-051E | 111 | unidentified | el-063C | 116 |
| unidentified | el-031C | 135 | unidentified | el-051F | 111 | unidentified | el-064 | 117 |
| unidentified | el-031D | 135 | unidentified | el-052A | 112 | unidentified | el-065A | 118 |
| unidentified | el-031E | 135 | unidentified | el-052B | 112 | unidentified | el-065B | 118 |
| unidentified | el-034A | 136 | unidentified | el-052C | 112 | unidentified | el-065C | 118 |
| unidentified | el-034B | 136 | unidentified | el-052D | 112 | unidentified | el-065D | 118 |
| unidentified | el-038 | 102 | unidentified | el-053A | 113 | unidentified | el-067 | 139 |
| unidentified | el-039 | 103 | unidentified | el-053B | 113 | unidentified | el-068A | 119 |
| unidentified | el-041 | 104 | unidentified | el-053C | 113 | unidentified | el-068B | 119 |

| Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. | Category | Spec. No. | Cat. No. |
|--------------|-----------|----------|-----------------|-----------|----------|-----------------|-----------|--------------------|
| unidentified | el-070 | 120 | unidentified | el-109F | 128 | waste & offcuts | el-116F | 86 |
| unidentified | el-078 | 121 | unidentified | el-109G | 128 | waste & offcuts | el-116G | 86 |
| unidentified | el-084 | 122 | unidentified | el-109H | 128 | | el-105E | number not used |
| unidentified | el-085 | 123 | unidentified | el-109I | 128 | | | |
| unidentified | el-090 | 91 | unidentified | el-110 | 129 | | | |
| unidentified | el-094 | 124 | unidentified | el-112A | 130 | | | |
| unidentified | el-100A | 92 | unidentified | el-112B | 130 | | | |
| unidentified | el-100B | 92 | unidentified | el-114 | 131 | | | |
| unidentified | el-100C | 92 | unidentified | el-115 | 132 | | | |
| unidentified | el-100D | 92 | unidentified | el-117 | 133 | | | |
| unidentified | el-100E | 92 | unidentified | el-128 | 134 | | | |
| unidentified | el-100F | 92 | waste & offcuts | el-021 | 87 | | | |
| unidentified | el-101 | 137 | waste & offcuts | el-035A | 82 | | | |
| unidentified | el-102 | 125 | waste & offcuts | el-035B | 82 | | | |
| unidentified | el-105A | 126 | waste & offcuts | el-037 | 83 | | | |
| unidentified | el-105B | 126 | waste & offcuts | el-046B | 84 | | | |
| unidentified | el-105C | 126 | waste & offcuts | el-046C | 84 | | | |
| unidentified | el-106 | 140 | waste & offcuts | el-104 | 85 | | | |
| unidentified | el-107 | 127 | waste & offcuts | el-116A | 86 | | | |
| unidentified | el-109A | 128 | waste & offcuts | el-116B | 86 | | | |
| unidentified | el-109B | 128 | waste & offcuts | el-116C | 86 | | | |
| unidentified | el-109C | 128 | waste & offcuts | el-116D | 86 | | | |
| unidentified | el-109E | 128 | waste & offcuts | el-116E | 86 | | | |

LEATHERWORK FROM ELEPHANTINE (ASWAN, EGYPT)

'Leatherwork from Elephantine' describes, illustrates and analyses the finds from the excavations at Elephantine island (Aswan, Egypt) that are conducted by the German Archaeological Institute (DAI), in collaboration with the Swiss Institute for Architectural and Archaeological Research on Ancient Egypt (SI). The majority of the finds are dated to periods well after the pharaonic era (4th century AD onwards), save for a few finds from the New Kingdom and the Middle Kingdom. The majority of finds are sandals and shoes. Most important for leatherwork/footwear studies, however, is the footwear from the Persian layers (6th-5th c. BC), which is distinctly different from ancient Egyptian leatherwork. Ample attention will be given to this important group.

Dr. André J. Veldmeijer, Visiting Research Scholar of the American University in Cairo, has worked as archaeologist in Egypt since 1995 as specialist in, among others, leatherwork and footwear. He (co-)directs several projects, such as the Ancient Egyptian Leatherwork Project, which includes the Egyptian Museum Chariot Project, and the Tutankhamun Sticks & Staves Project. He has published extensively, both scientifically as popular.

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