Report on the 34th Season of Excavation and Restoration on the Island of Elephantine

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I. Area XXIV-XXX-XXXI: The central part of the town of the Third Millennium BC (Pl. I-II). .......... 4
II. Area XII: The strata of the Old Kingdom next to the southern harbour (Pl. III-IV, fig. 3) .......... 5
III. Temple of Khnum and Area XXVI: Roman House K19 south of the temple (Pl. V) .......... 7
IV. Lithic Studies: At the end of the supply line – stone tools on Elephantine (table 1) .......... 7
V. Pottery of the Middle Kingdom (fig. 4-7) .......... 10
VI. Small Finds from the settlement of the 3rd and 2nd millennium BC (Pl. VI-VII, fig. 8) .......... 17
VII. Leather objects .......... 18
VIII. Greek Ostraca .......... 19
IX. Human skeleton .......... 20
X. Geomorphology and geo-archaeology .......... 20

The 34th season of the German Institute of Archaeology and the Swiss Institute for Architectural and Archaeological Research on Ancient Egypt at Elephantine was carried out from October 18th 2004 till March 30th 2005.

The work on the finds collected in past seasons was continued. The small finds, pottery from the Middle Kingdom and the Roman Period, lithic finds, Greek ostraka and textiles as well as human and animal bones were studied. The epigraphic documentation of the Graeco-Roman temples of Satet and Khnum was continued.

The conservation work of the wooden columns from the palace bakery of the First Intermediate Period was continued in autumn 2004, while excavation work focussed on the central part of the town of the Third Millennium BC, the strata of the Old Kingdom next to the southern harbour and the temple of Khnum (fig. 1-2).


The Inspectorate of Antiquities was represented by the chief-inspectors Ozama Abd el-Latif and Karima Fahmy Mohammed, and the inspectors Amira Mohammed Sadiq, Hussein Mahsub Megahed, Hala Adel Mohammed and Fahmy Mahmud Mohammed El-Amin. To them, as well as to the general director of Aswan, Mohammed el-Bialy, we would like to express our sincere thanks for their kind support and cooperation.

1 For the methods applied in the course of restoration, compare E. Peintner, in D. Raue et al., Report on the 32nd season of excavation and restoration on the island of Elephantine, ASAE, in press.

fig.1: Map of Aswan, scale 1:50000 (from E.G.S.A. sheet NG36B3b)

I. Area XXIV-XXX-XXXI: The central part of the town of the Third Millennium BC (Pl. I-II)

The excavations in the workshop area of the 3rd-5th Dynasty was finished. The remaining pit fillings of stratum XXI (late 5th Dynasty) were removed. In addition to the activities ascribed to these workshops in the past seasons (baking, pounding grain, simple pottery kilns, production of stone vessels, ivory working), the production of faience beads and wooden objects is attested. The discovery of an unfinished wooden headrest may point to the manufacture of tomb equipment, as other finds of the 5th and 6th dynasty in Area XXX and XXIV have suggested. If this is the case, it adds another piece of evidence for the presence of an elite cemetery of the late Old Kingdom, that predates the rock-cut tombs on Qubbet el-Hawa. This may have been situated west of the town in the area of the cemetery of the late 6th Dynasty.

The continuation of the stratum had been examined in the adjoining area XXIV up to the town enclosure wall of the Old Kingdom. Fragments of seal impressions were found on the floor levels of Stratum XXI, to which a major repair phase of the inner part of the town enclosure also belongs. Several of these fragments bear the horus-name of King Menkauhor, Mn-xaw. In the debris of the decay of these workshops, seal impressions with the horus-name Djedkare, +d-xaw, were discovered last season. The seal impressions testify to the activity of the expedition leaders (jm j-rA aA.w) in this district, as well as for their troops (mSa), who are also mentioned on the sealings.

The town enclosure wall in this part of the city has been enlarged several times, the last enlargement taking place in the 3rd Dynasty. In the adjoining stratum of the 3rd Dynasty, parts of an administrative building, including a mud-brick pavement (pl. I), were found. This structure was traced in the past seasons in other sections of area XXX. It probably occupied the entire southern part of the settlement, and mainly consists of open courtyards with traces of workshops and firing activity, partly covered by vast amounts of charcoal dust. The oldest layers in Area XXIV can be dated to the 2nd Dynasty. Conspicuous amounts of fine granite gravel may point to the first construction phases for the town enclosure wall, when a proper building ground was prepared.

In the northern part of the site (Area XXXI), the excavation of the palace bakery of the First Intermediate Period was continued by cleaning the southern half of the cellar that was discovered last season under the first floor level of the bakery (pl. II). It belongs to an earlier phase of the building and was constructed in the late 6th Dynasty. In the fill of its construction pit, a stone weight made of serpentine was found.

The cellar measures 4.66 m in length (north-south), 1.82 m in width (east-west) and 2.70 m in height. After a long period of neglect, that is indicated by layers of fine dust, it was reused in the early First Intermediate Period. An interior wall was built, separating the cellar into two almost equal cells. This wall, which may point to the temporary erection of a column on top of the cellar, was later removed.

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2 See below the contribution of P. Kopp in this report.
3 See for example the wooden statuette found in 2002 in area XXX, register-no. 4062, see D. Raue et al., Report on the 32nd season of excavation and restoration on the island of Elephantine, ASAE, in press.
5 See below the contribution of P. Kopp in this report.
In the First Intermediate Period, the cellar was used as a depository for jar stoppers made of very fine loam, perhaps with a view to recycling this material. In its debris, large amounts of hemispherical cups were also found, that may point not only to the function of the bakery as centre of food production and but also as place of distribution.

The levels began to rise quickly in the 11th Dynasty because of intense use and large amounts of ash dust. By this time, the cellar’s accessibility had lessened considerably. Soon it was given up and intentionally filled with the debris that had accumulated in the workshop.

II. Area XII: The strata of the Old Kingdom next to the southern harbour (Pl. III-IV, fig. 3)

After the final investigations inside the houses of the later 6th Dynasty, four house units can now be discerned: House 160 and 161 on the east side of a road, and House 162 and 163 on the west side of the road. Another house unit is probably represented by four rooms at the northern border of the excavated area (Pl. III, fig. 3).

All these houses have three main phases, that seem to have been built at the same time; the earliest phase has the same orientation of walls as the river embankment of the 3rd Dynasty (see below) and was in parts built against this structure. It remains unclear, to what extent the area was used in the 4th and 5th Dynasties. Not even pits or pottery in the bricks of later structures point to activity in this period.

In the last phase, the houses on the western side of the street acquire thresholds made of sandstone. This may point to an intensified use of the houses during the development of the quarter; the houses can be dated by large amounts of pottery (mainly open forms, suggesting some kind of organized food distribution) and by the circumstance that the houses are built against a rock-inscription. This mentions an official of the pyramid-town of Teti called Khui and an official named Nj-Ppj6; Houses 160-163 may therefore be dated to the later reign of Pepi I, Merenre and Pepi II.

Due to the low level of this area close to the water table of both the pharaonic and the modern inundation seasons, only finds made of stone and bone are preserved. Among them, additional evidence for the function of the area as a harbour quarter was gathered. An uninscribed stone weight (about 680 g) and a fragmentary stamp seal of a common type of depiction (with an ankh-sign in the upper half flanked by two falcons) may point again to administrative activities in the perimeter of the town.

Below the southern part of the area (Pl. IV, fig. 3), additional granite walls of the 3rd Dynasty were found7. This artificial river embankment consists of one granite course running east-west, and six courses leading from this course southwards. The wall was erected on a layer of hard mud of minimum 1,7 m thickness and the granite walls are preserved to a height of 2 metres (dated by the pottery to the first half of the 3rd Dynasty). They are identical with the walls used to build the stone pyramid of the 3rd Dynasty in the royal estate of the western

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part of the island. The space in between the granite walls was filled with fine sand. In the higher levels of this fill, ash layers with seal impressions of the 3rd Dynasty were found.

This structure was probably built to allow for an easy landing of ships from the south and to create a dry plain for storing goods close to the town.

D. Raue

fig. 3: Area XII, southern harbour, strata of the Old Kingdom.


III. Temple of Khnum and Area XXVI: Roman House K19 south of the temple (Pl. V)

During this season (December 2004 - January 2005), the stratigraphic connection between the Temple of Khnum and house K19 was established. The house was probably built before the inner temple enclosure of Ptolemaios VIII was finished, and thus can be dated to earlier in the Ptolemaic Period.

An extension of the house can be dated to the reign of emperor Augustus. About 120 mainly Demotic ostraca, considerable amounts of papyrus fragments and seal impressions of the 1st and 2nd Cent AD indicate that the house served as the seat of the temple administration.

In the immediate area between house K19 and the temple, a destruction level of the late 4th cent. A.D. can be seen. Tiny traces of burnt temple inventory and fragments of formerly gilded relief decoration, as well as melted glass and burnt lapis lazuli inlays may point to the destruction of the sanctuary in the early-Christian period, probably in the time of the bishop of Syene, Anba Hadra (385-412 A.D.).

Nearby, in the 5th century foundations, a head of a statue of Serapis made of red granite was found. Remains of metal kilns of the 5th and 6th century were also investigated.

During the past six seasons, a number of fragments belonging to the Ptolemaic and Roman decoration of the main temples of Elephantine were found while removing surface debris. These were studied in March 2005 and incorporated into the temple’s publication.

The main architectural objective of the season was the reconstruction of the twelve column capitals of the pronaos, each of which once stood 1.5 m high and had a diameter of 1.5 m at the bottom and 3 m at the top.

Eight different types of composite capitals were identified and reconstructed in drawing: lotus capitals, palm capitals, four different versions of quatrefoil papyrus and palmette capitals, and two versions of bell-shaped palmette capitals.

The capitals were probably arranged in a similar manner as in the temple of Edfu. Of special significance are the remains of colors on the fragments from Elephantine, as in the majority of other temples no colors have been preserved. The usual canon of colors (papyrus green, palmette blue, lily green and red, palm green) was varied to emphasize the composite structure of the capitals. For example, in the composite palmette capitals, palmettes with blue stems and yellow leaves alternate with palmettes with green stems and white leaves.

In addition, fragments from the screen walls of the pronaos were studied. Portions from the cavetto, the uraeus frieze, and the door frames had been identified.

Again, special attention was paid to the reconstruction of the original color scheme of the screen walls (white and yellow with special elements highlighted in green and red).

F. Arnold

IV. Lithic Studies: At the end of the supply line – stone tools on Elephantine (table 1)

In December 2004 the study on the lithic assemblages from the 29th to 33rd campaigns was continued. The total number of objects had risen by another 17% from around 4600 and is now at approximately 5400. This material ranges in date from the Early Dynastic to the early Middle Kingdom with the overwhelming amount of
material coming from 5th to early 12th Dynasty contexts. This is in contrast to the material that has been studied from the 14th – 27th campaigns which dates primarily to the Early Dynastic Period and the early Old Kingdom. As mentioned before, we can observe a clear distinction between two different raw materials and stone tool industries on the island of Elephantine. On the one hand, there is the industry based on local Nile and wadi pebble and on the other, artefacts made of a non-local flint. This imported material is a homogenous, mid- to dark brown flint that sometimes still has remnants of a chalky-white cortex. The Nile and wadi pebbles are coarse and quite often bear the remains of a shiny brown skin and are of a lesser quality for knapping. A study showed that around 15% of all the finds were of local raw material while ca. 22% were made using imported material.

The region around Aswan lacks limestone formations which generally contain flint nodules embedded in the formations. Apart from surface nodules, flint was transported within Egypt by the Nile. When mined, flint coming from limestone beds is superior in knapping characteristics and, as such, it was the preferred raw material of the Ancient Egyptians. However, when flint was not available from a natural outcrop, people had to make do with Nile and wadi pebbles, or even had to rely completely on the supply of stone tools from an external production centre, as is the case with sites in the Nile Delta.

In the previous study it also became clear that the local raw material was preferred for heavy tools such as borers, scrapers, axes and various chopping tools, and that more than 50% of the debitage came from this material. In contrast to this, less than 10% of the imported material was left as waste. This strongly indicates that imported flint reached the island in the form of finished products. This is also supported by the lack of any finds of bigger core fragments of this material on the island to date.

But what kind of tools were imported to Elephantine? In the majority is the bi-truncated blade tool (sometimes nicknamed the ‘razor blade’), which in some parts of the island comprise up to 50% of all blade tools. This type of tool is a highly standardised implement made from large regular blades. Its dorsal grades are almost perfectly parallel, the cross section is always trapezoid, and the length-width ratio is nearly exclusively ca. 2.8:1. With a final length of up to 7 to 8cm the blanks for this tool must have been struck from large cores obtaining blanks with a length of 10cm or more. Given that today thousands of these tools are known, it is very intriguing to find out that not a single core for the production of ‘razor blades’ has been discovered, any workshop for them.

On Elephantine these tools were so widespread that obviously all households in the settlement used such an implement. So far its function has not been determined but it is very probable that it had a multifaceted use, not unlike a modern day Swiss Army Knife.

<table>
<thead>
<tr>
<th>Lithic assemblages on Elephantine Island</th>
<th>1\textsuperscript{st} half 3\textsuperscript{rd} millennium BC</th>
<th>%</th>
<th>2\textsuperscript{nd} half of 3\textsuperscript{rd} millennium BC</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total assemblages</td>
<td>6100\textsuperscript{9}</td>
<td></td>
<td>5400</td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{9} T Hikade, Die lithischen Industrien auf Elephantine, MDAIK 58, 2002, 305-322.

\textsuperscript{10} All figures are rounded for easier use.
As briefly described in an earlier report, one of the common tools of the later phase of the 3rd millennium BC was the borer\textsuperscript{11}. However, this tool was not as commonly used as the rectangular blade tools of previous periods. With a burgeoning use of stamp seals on the island and the local production of those, the borers were introduced to carve the signs and symbols on the seals.

The end of the Old Kingdom was a time of administrative, economic and social change affecting the capital and the provinces. Located far away from the capital, the question for Elephantine is: was the island affected by this and, if so, how? Stone tools cannot fully explain history but as the material remains of the production, trade and domestic activity of the inhabitants on the island their analysis can contribute to answering this question. Hence, for the lithic assemblage we shall go back to the selection of raw material and see if a possible development might reflect wider changes in the country. To this end, the following chart compares the material of the 14th to 27th campaigns, mainly material of the first half of the 3rd millennium BC, with the inventory from the 29th to 33rd campaigns, overwhelmingly dated to the second half the 3rd millennium BC.

It has to be stressed first that most of the material for both periods has not been clearly assigned to either local or imported material. But where this has been possible, the results are striking. There is a remarkable drop from 20% to 3% in imported material in the later stage accompanied by a rise of local raw material from 21% to 31%. This development is echoed when tools are taken into consideration. Almost half of the tools for the earlier phase were made on imported flint. This declines to 11%, while at the same time local Nile and wadi pebble doubles as the selected material for tools.

If we now focus on the kind of tool that was so typical of the early period we return to our bi-truncated rectangular blade implement. This tool has a life span from the 1st to the 4th Dynasty. So with the end of the early phase the major tool category disappears which explains in parts the dramatic drop with regard to tools. However, what remains is the fact that almost no piece of the total lithic assemblage can be attributed to imported material. This can only mean that imports of standardized stone tools made on high-quality flint come almost to a complete stop.

\begin{table}
\centering
\begin{tabular}{|l|c|c|c|c|}
\hline
Local raw material & 1300 & 21 & 1700 & 31 \\
\hline
Imported raw material & 1200 & 20 & 170 & 3 \\
\hline
Tools & 1500 & 25 & 630 & 12 \\
\hline
Complete tools & 480 & 32 of all tools & 170 & 27 of all tools \\
\hline
Tools of local raw material & 150 & 10 of all tools & 120 & 19 of all tools \\
\hline
Tools on imported raw material & 670 & 45 of all tools & 70 & 11 of all tools \\
\hline
\end{tabular}
\caption{Comparative chart of raw material selection for the time from the Early Dynastic Period to the First Intermediate Period/early Middle Kingdom}
\end{table}

\textsuperscript{11} T. Hikade, Small yet effective – flint borers at the end of the Old Kingdom, in D. Raue et al., Report on the 33rd season of excavation and restoration on the island of Elephantine, in: ASAE (in press).
This outlined development hints, in the author’s opinion, at a decrease in stone tool imports in general that led the population on Elephantine to substitute the tools once delivered to them with locally manufactured ones.

Thus, sitting at what was clearly the end of the supply line, Elephantine’s stone tool users did indeed feel a material change that seems to have been widespread in Egypt towards the end of the Old Kingdom.

Th. Hikade

V. Pottery of the Middle Kingdom (fig. 4-7)

In the course of the project on Middle Kingdom pottery, the material from the levels 14, 13, and 12 of area VII have been studied\textsuperscript{12}. The material consisted mostly of vessel forms well known and attested on the island, but it also contained potsherds that are under-represented in the assemblages studied so far, as well as some new types that have contributed to broadening the existing typology.

Pottery from level 14 (Bauschicht 14): The pottery from this layer is characteristic of the early 12th Dynasty. The assemblage yielded eggshell thin, hemispherical drinking cups (made of fine Nilt silt B1, uncoated), medium-size carinated bowls (Nile silt B1, red slipped with cut base or so-called ring base), medium-size bowls with slightly everted rim (fig. 4.4, Nile silt B2, uncoated) used as cooking pots to judge by soot and traces of burning on the surface; so-called beer jars (Nile silt B2 or C, red slipped, with rounded body), and bread moulds (fig. 4.3)\textsuperscript{13}.

Numerous variants of the latter differ in the form of the bottom portion, which may be flat, narrowing toward the bottom or flattened out at the very base to make it self-standing or semicircular and narrowing toward the bottom. Each of the variants might have a hole pierced in the bottom. Typically for this forma very sandy Nile silt, covered inside with a thick layer of fine sand, was used, presumably to facilitate taking out the bread once it had been baked.

The most popular marl fabric of the period was Marl A3 of the Vienna System, otherwise known as clay of the Qena type. It was used for the production of big storage jars, occasionally decorated with prefiring incised decoration in the form of multiple wavy lines or small applied dots; medium-size jars, hemispherical drinking cups and medium-size plates. Worthy of separate mention is a jar fragment made of this clay (fig. 4.1). The sherd represents the rim of a jar with an applied ornament that resembles a closed flower calyx. This is the first time that a closed form with this kind of decoration was found at Elephantine and only two other examples of this type are known from elsewhere in Egypt\textsuperscript{14}. The closest parallel in terms of style is a bowl with several miniature ornaments applied to the rim, found in Thebes\textsuperscript{15}.

\textsuperscript{12} Furthermore, pottery finds from the early Middle Kingdom have been investigated in spring 2005, mainly by samples from the excavation the the museums garden, where a sequence of 11th-12th Dynasty houses was excavated, see M. Bommas, in: Kaiser et al., Stadt und Tempel von Elephantine, in: MDAIK 51, 1995, 141-147 with fig. 16-18.


The Marl clay A4 fabric appeared somewhat less popular in this period. It was employed for small bowls (fig. 4.2), as well as for large carinated bowls (fig. 4.5). Both types were decorated with incised wavy lines, the latter having also additional plastic ornaments in the forms of tiny tubes attached at the point of carination. Vessels of the 12th dynasty, i.e. of the levels 14 and 13, were frequently decorated in this way, although it should be remarked that this decoration always consists of wavy lines made with a tool resembling a comb. To date, no decoration consisting of a single, or a few parallel wavy lines made with a tool equipped with just one cutting edge, has come to light. In Elephantine, such pottery decoration is not apparent until the 13th Dynasty.

Pottery from level 13 (Bauschicht 13): The pottery from this layer refers to a period following the reign of Sesostris I and closing with the end of the 12th Dynasty. The well-attested vessel forms of the period include carinated bowls (fig. 5.7), which are no longer as high as they were in the early Middle Kingdom, but become more open in the process; drinking cups usually with red-painted rim, red-lipped medium-size plates with slightly everted rim, medium-size carinated bowls used as cooking pots, red-slipped stands and numerous imports from the Fayum, such as zirs (fig. 5.10), egg-shaped jars with grooved rim, medium-size globular jars. The pots made of Marl C1, 2 or compact are almost exclusively closed forms. Three of the vessels merit particular attention in terms of pottery types. One is a medium-size carinated bowl (fig. 5.8). Vessels of this kind were made of Nile silt B2, the finer variant, red-slipped inside and outside down to the carination, the base tool-finished.

For the first time in the Elephantine assemblage vessels have been recorded with two dots applied to the outer surface just above the carination. These elements were attached to the vessel to make it more handy: placing the thumbs in between the dots made it much easier to hold the pot.


The vessel was made of Upper Egyptian Marl clay, probably Marl A3, and it has incised decoration in the form of horizontal wavy lines. It was found in the debris covering the unfinished royal monument in Thebes (the valley between Sheikh Abd el-Qurna and Qurnet Murai); cf.: Do. Arnold, Amenemhat I and the Early Twelfth Dynasty at Thebes, MMJ 26 (1991), pp. 9-10, fig. 9.

In this respect the assemblage from Elephantine is substantially different from that from Dendera; cf. S. Marchand, Fouilles récentes dans la zone urbaine de Dendera: La céramique de la fin de l’Ancien Empire au début de la XIIe dynastie, CCE 7 (2004), pp. 220-221, fig. 44-49, i.e., the pottery of phase 3 - end of the First Intermediate Period – 11th Dynasty.

Fig. 4: Pottery of the Middle Kingdom: level 14 (Bauschicht 14)
Fig. 5: Pottery of the Middle Kingdom: level 13 (Bauschicht 13)
Another interesting form is the so-called feeding cup (fig. 5.6). While vessels of this shape were usually low, the variant typical of Elephantine was high. The vessels were made of fine Nile silt B1, and were usually red-slipped on the outside and inside. In case of uncoated examples, the spout was decorated with red-painted lines or/and dots. Finally, the third vessel of interest is a carinated bowl (fig. 5.9), made of Nile silt B1, very sandy, red-slipped and burnished on the inner and outer surface. The proportions of the vessel and the surface treatment in particular are indicative of the Second Intermediate Period rather than Middle Kingdom times.

Pottery from level 12 (Bauschicht 12): The pottery from this level represents the broadest chronological period observed in the assemblage studied this year - from the 13th to the 17th Dynasty.

The most characteristic forms include bread moulds, which were more slender than the same type from an earlier age and had narrower bottoms, occasionally with prefiring dashes or crosses incised in the bottom (fig. 6.11); small and medium-size bowls and plates made of Nile silt B1, sandy with red-slipped and burnished surface (fig. 6.12); small bowls, reminiscent of miniature flower pots, made of Nile silt B1, uncoated, with cut base and white-washed rim (Fig. 6.13); drinking cups, made of Nile silt B1, with red-painted rim and trimmed base (fig. 6.14); egg-shaped jars, made of Nile silt B1, with red-painted rim, bowls with inward-folded rim, made of Marl A4.

The beer jars occurring in this level represented two types. The first, dated to the 13th Dynasty, featured a somewhat elongated body, straight neck that flared slightly and a rim with rounded or triangular lip (fig. 7.18). The other type, which was slightly later, was characterized by an egg-shaped body, very thick bottom, medium-high neck ending in a “kettle mouth” rim. Medium-size jars were popular (fig. 7.19), as were also carinated bowls with incised decoration in the form of wavy lines, outside and inside, plastic tubes attached at the rim and a plastic rim, made of Marl clay A4. During the 13th Dynasty Marl A2 become particularly popular, being used for a variety of cups, bowls, carinated bowls, jars, covers, plates and stand.

A new type of cooking pot also appeared in this level; it was hand-made of Nile silt E, medium and coarser variants, and rose-slipped (fig. 7.21). Bowls and plates with incised decoration in the form of a spiral or wavy lines at the inner surface, red-lipped (fig. 6.16) are also worthy of mention.

To conclude, the assemblage studied during the season has added to the current knowledge of Middle Kingdom Pottery on Elephantine, indicating simultaneously the need for more focused analyses, especially regarding pottery from level 12.

T. Rzeuska

Fig. 6: Pottery of the Middle Kingdom: level 12 (Bauschicht 12)
Fig. 7: Pottery of the Middle Kingdom: level 12 (Bauschicht 12)
VI. Small Finds from the settlement of the 3rd and 2nd millennium BC (Pl. VI-VII, fig. 8)

During the campaign in spring 2005 the work focussed on the small finds made of reused pottery sherds. So far about 3,800 of these objects were examined. The disks are the largest group comprising 1087 artifacts. They are knapped into a more or less regular rounded shape and partially abraded around the rim (fig. 8.1). Their diameters have a range from 0.8 to 13.6 cm. Probably they were used for different purposes, so the smaller ones might have been gaming pieces, the bigger ones lids\(^{17}\). About 15% of all disks have a central, double conical hole, drilled from both sides of the sherd\(^{18}\), only four have two holes (fig. 8.2). The gaming pieces sometimes also take a conical shape\(^{19}\) and 33 such examples are known from Elephantine. They are made out of rough Nile Silt pottery with straw temper and occur from the 2nd Dynasty to the New Kingdom.

The second big group is represented by 1,036 pieces of variously shaped sherds with smoothed edges. The nature and purpose of the smoothing process are unknown. Natural (river) or artificial (human activity) causes can both be suggested.

Reused pottery artefacts include nearly 360 net sinkers of different shapes\(^{20}\) and other weights (fig. 8.3). More than 240 scrapers were mainly made out of body sherds, while fragments of rims were used very rarely. The scrapers are ground to an edge at one end, and they have always a specific shape such as triangles or trapezoids (fig. 8.4). The usage of these objects is still unknown, but it has been stated that they might have been used in leather production\(^{21}\). 397 tools of another group have one or more sides flattened by abrading. In contrast to the scrapers, they have no specific shape. Marl clay is clearly preferred for these objects.

\(^{19}\) See W.M.F. Petrie: Objects of Daily Use, BSAE 42, London 1927, pl. XLVIII.
Apart from these tools there are new finds to mention, which were found during this campaign. They verify the results already presented in the last preliminary report. The balance weights of the Old Kingdom are complemented by a weight made out of green, translucent serpentine (fig. 8.5). The upper side bears the inscription “½ gold”. With a weight of 8.4 g it’s basic unit is 16.8 g; higher than the approximate gold weight known from other balance weights with this inscription “gold”.

The weights from Uronarti, Mirgissa, Quft, and Hu and four pieces without known provenance have an average weight 13.03 g and the basic unit doesn’t cross 14.42 g. But it has to be taken in consideration that these objects are probably less ancient than the piece from Elephantine.

In the area next to the palace of the governor traces of handicraft production were found as in previous years. Again different beads without holes or glazed together by accident were found. Thus, the production of faience beads in this area becomes more and more probable, even if a kiln for this purpose has still not been found. Another find that indicates the existence of a production area is an headdress. It is made out of one piece of wood with an 8-sided single stem. It is roughly hewn into the shape, and particularly at the base traces of working remain. The piece was left unfinished, perhaps because one of the upper wings broke.

P. Kopp

VII. Leather objects

The research of the leather finds from Elephantine during February and March 2005 focussed on describing and photographing all known leather finds from the site and the establishment of a leather database. In total 58 specialist numbers have been given to the material, often sub-divided into a, b, c, etc.

All remains are fragments of objects, although there are few instances of nearly complete footwear items but these were always broken into pieces. Most of the material is fragile and needs careful handling. Although the detailed analysis has just started, a few finds are worth mentioning here.

El-004 is a largely complete sandal, that was found in house M12, dating to the middle of the 6th century. The front is diagonally square, with a clear indication of the big toe. This sandal-shape has not been encountered before, either at Elephantine or anywhere else in Egypt, and may therefore be regarded as a new type. Note also the repair, well before the heel seat, which has been sewn with crude stitches on the inside.
Another example is El-005. This is an almost complete, multi-layered (three) sandal of 18th Dynasty (Bauschicht X, House 34) date. The front part has rounded corners but the front edge itself is straight. Only the heel slightly widens. The sandal is small in size and is likely to have been a child’s sandal.

El-035, from late-Roman context, may be a very early example of a fibre, most likely palm, sole into which leather thongs are sewn. The example is particularly fine. Comparable sandals, but much coarser, are well known from the Ottoman layers from Qasr Ibrim.

The most remarkable non-footwear find is undoubtedly the ball-shaped container, cold sewn with folded edge and leather thong stitches, containing some sort of plant material.

The leather finds from Elephantine, albeit a small and fragmented assemblage, proved to be important as the new types of footwear that have been discovered attest. This is especially so because our knowledge of leather in ancient Egypt is extremely limited and there is an urgent need for research on this category of object.

During the next season, the remaining finds will be described and studied. A further focus will be on the identification of the leather as well as the process of making leather from hide (tanning, curing and the like).

Veldmeijer/ E. Endenburg

VIII. Greek Ostraca

After a first season in 2002/2003 the study of the Greek ostraca from the German-Swiss excavations on Elephantine was continued in October 2004\textsuperscript{27}. This stay was dedicated to reviewing the originals of the texts published and described by G. Wagner in the first volume of Greek Elephantine ostraca\textsuperscript{28}.

1,500 pieces were reviewed and by this inspection a fair number of pieces formerly described as Coptic, demotic or of uncertain language could be identified as Greek, whereas many pieces described as Greek are now identified as Coptic or of other languages. The results of this review have gone into the database catalogue of ostraca, and some of them will be included in the second volume of the Greek Elephantine ostraca: inv. nos. 353-354 (Roman receipts), 590 (receipt of grain, Roman), 1689 (Ptol. receipt for date palms from 103-102 B.C.), 1690 (Ptol. receipt for the trade of linen, Demotic and Greek), 1883+1909 (join).

Since Greek Ptolemaic ostraca from Elephantine are rare in comparison with the Demotic texts, it is all the more important to collect all pieces from that time. Inv. no. 1689, however fragmentary, shows an unambiguous date from the year 103-102 B.C. In comparing its style of writing with other pieces of that type, we hope to be able to determine the date of other receipts of that same, and similar, hands on a more secure basis. The other Ptolemaic piece, inv. no. 1690, is a receipt for the trade of linen, a tax we only know from one other Elephantine ostracon, namely BGU IV 1375. Among the new finds of the last season, there are two more new receipts of Ptolemaic date\textsuperscript{29}.

\textsuperscript{27} For this report, see D. Raue et al., Report on the 32nd season of excavation and restoration on the island of Elephantine, ASAE, in press.


\textsuperscript{29} Ostr.-No. 3871 and 3878.
In conclusion, one Byzantine ostracon may be singled out, which preserves the beginning of a loan of money from an hitherto unknown bishop of Syene, called Appa Josephios to an Aurelios Eucharios Silvanos of Elephantine. Unfortunately there is no date preserved, but the paleography suggests a dating in the 5th cent. A.D.

R. Duttenhöfer

IX. Human skeleton

The work on the skeletons found in the island necropolis of Elephantine during the 7th-11th and 21st season was resumed in February and March 2005. Most burials can be dated to the late Old Kingdom. In total, the remains of 121 individuals have been studied. Among them are 25 children, 4 juveniles and 92 adults (41 females, 26 males, 25 undeterminable).

*Sinusitis maxillaris* (inflammatory processes) are frequently found with adults and may occur among children. In most cases the inflammatory process of the sinus was provoked by respiratory disease and in some cases by dental abscesses.

*Otitis media* (inflammatory process of the tympanic cavity) could be fatal because of the septicaemia: It was a fairly common pathological feature in the population. Also inflammatory and haemorrhagic irritations of the meninges (e.g.: bacterical meningites, epidural haematoma), some provoked by trauma to the skull, were observed.

Medical treatment was identified in form of cauterisation of the skull-vault. Fractures of long bones (e.g. fibula radius and ulna) and of the hands and feet as well as fractures of ribs are common pathological features. Skull-traumata were found among men and women as well.

Severe degenerative disease of the spinal column and of the joints of long bones as well as of the hands and feet, probably due to physical strain were observed. Dental caries was not common, however periodontal diseases are frequently observed (many apical abscesses).

M. Schultz / J. Gresky / O. Kozak / N. Roumelis

X. Geomorphology and geo-archaeology

From 28th November to 1st December 2004 a first mission was conducted to examine several features in the settlement of the Old Kingdom.

In Area XII, the strata of the Old Kingdom next to the southern harbour and the embankment of sand, which may have been designed in the 3rd Dynasty to facilitate the landing of ships along the otherwise heavily fissured riverbank with its natural granite formations, was studied30. The layer is composed of fine, medium and coarse sand and contains sherds up to 12 cm long and a few angular flakes of fresh granite; those fragments have a diameter of 5 to 10 cm and are clearly the scraps of a hewn granite block. The layer completely lacks sedimentary structures: it is reworked or has even be supplied by man.

30 See the contribution of D. Raue in this report.

The deep section in Area XXX, that delivered a sequence of layers from 1st to 4th Dynasty, yielded deposits of coarse sand on top of the natural bed-rock.\footnote{For the excavation of this trench, see D. Rause, in: G. Dreyer et al., Stadt und Tempel von Elephantine – 28./29./30. Grabungsbericht, MDAIK 58, 2002, p. 162 ff. with area „aa“ in fig. 1 and Taf. 17a. \url{http://www.dainst.org/en/daik_ele34_rep_en.pdf}} The area consists of jointed fresh granite at the basal front of weathering; no saprolite (deeply weathered granite) or separate corestones (granite boulders) are present. The surface of the granite is polished. In a deep joint two layers of sediment, separated by a clear boundary, are observed.

The deepest layer is composed of medium to coarse sand and contains a lot of gravel. In the gravel three types can be distinguished:

1. Subrounded to rounded gravel; quartz and diorite; 1 to 4 cm diameter; fluvial gravel of long transport
2. Subangular gravel; 90% granite, 10% quartz and diorite; 5 to 10 cm diameter; fluvial gravel of local origin
3. Angular flakes of fresh granite; 5 to 10 cm diameter; some flakes are polished on one side showing that they are derived from the granite bedrock \textit{in situ}; the flakes may be the result of the natural impact of the river gravel on the granite bedrock, but most probably they are the result of hewing the bedrock by man.

In the gravel one single artefact of fine green diorite was found. It had rounded angles which indicates fluvial transport. The deepest layer is a natural fluvial deposit which was conserved in a deep joint of the granite bedrock. However the presence of angular granite flakes points to a partial reworking by man.

M. De Dapper
Abstract

During the 2004/2005 excavation season at Elephantine work focussed on the area of the palace of the Old and Middle Kingdom, the temple of Khnum and the southern harbour.

In the mid-third millennium BC town, the strata of the Third and Fifth Dynasty were investigated. In the north, the excavation of the palace bakery of the First Intermediate Period and adjoining contemporary strata was finished.

The architectural history of the Khnum Temple continued to be examined, with special attention being paid to the houses south of the temple.

Besides this, the study of finds (small finds, pottery of the Middle Kingdom and the Roman Period, lithic, Greek ostraka, leather objects, human skeletons, animal bones) was continued and a geomorphological survey was begun. Restoration work concentrated on wooden architectural elements of the bakery of the First Intermediate Period.
pl. I: Area XXIV, building of the 3rd Dynasty, mud-brick pavement

pl. II: Area XXXI, cellar in the palace-bakery of the First Intermediate Period

pl. III: Area XII: strata of the Old Kingdom

Pl. IV: Area XII: artificial river embankment of the 3rd Dynasty.
Pl. V: Area XXVI, settlement south of the temple of Khnum: House K19

Pl. VI: balance weight, serpentine, late Old Kingdom

Pl. VII: headrest, wood, late 5th Dynasty