



Cooperative Research Centre 389  
University of Cologne

Preliminary Report on the Study  
Season 2003 of the ACACIA  
Project in the Western Desert



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# **Preliminary Report on the Study Season 2003 of the ACACIA Project in the Western Desert**

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A short study season of the ACACIA project (Arid Climate, Adaptation and Cultural Innovation in Africa) took place from March 29th to April 9th, 2003.<sup>1</sup> The work was carried out at the project's excavation house in Balat, Dakhla oasis, investigating archaeological material that had been collected in former field seasons and was stored in the adjacent magazine (fig. 1). The main objectives have been to document and study

- (1) the prehistoric stone assemblages of sites Khufu 02/15 and 02/17,
- (2) the pottery of the Abu Ballas Trail sites,
- (3) the pottery of site Khufu 01/01, and
- (4) the seal impressions of site Khufu 01/01.

As previously reported, both the Abu Ballas Trail sites and site Khufu 01/01 have been discovered by Carlo Bergmann and definitely attest pharaonic advances into the inner Western, or Libyan, Desert.<sup>2</sup> In doing so, they contribute to a field of research which, until recently, did not range among the main interests of Egyptologists. Ongoing investigations of the remains of these sites together with those of prehistoric sites such as 02/15 and 02/17 in the Khufu region are hoped to elucidate to what extent the ancient Egyptian culture from its formation process onwards received impulses from and, in turn, made use of the vast areas of what is now arid and inhospitable desert.

It should be pointed out here that many of the archaeological sites in the depths of the desert are increasingly endangered due to looting and illicit activities mainly of desert tourists. As an alarming example one may not only cite the case of Abu Ballas or "Pottery Hill" (site 85/55) where plundering and destruction left only traces of the original evidence as found in 1918, but also the important site Khufu 01/01 where the excavation area of ACACIA recently has been completely vandalised. The protection of the sites under study is one of the main future aims of the project.

R.K.

## **1. Sites Khufu 02/15 and 02/17**

Within the ten days when the magazine was open two prehistoric assemblages excavated or collected during the spring season in 2002<sup>3</sup> were briefly revised, namely site Khufu 02/15 and 02/17. Both collections mainly consist of chipped stone tools while pottery and other lithic material is very rare.

The study of the artefacts from 02/15 underlined the dominance of bifacially flaked tools on site, as suggested during the field stay. The elements of the tool kit are similar to those of the Late Bashendi A unit of Dakhla Oasis or the Djara B unit of the Egyptian Limestone Plateau<sup>4</sup> which forms a tentative absolute age between 6000 and 5000 BC. Among these characteristic retouched tools are a number of knives which are all made out of tabular flint (fig. 2.5). They show a flat retouchment of the edges while parts of the natural surface remain. The arrow heads mostly are bifacial tanged points with a complete working of the surfaces (fig. 2.1-3). Although flaked adzes form a major component of the sites in Djara, they are absent on sites of the Khufu area. In contrast, two ground adzes were found on the surface of 02/15 (fig. 2.6).

The reconstruction of production sequences, however, indicates that none of the tools were produced on site, but brought from Dakhla or the Egyptian Limestone Plateau to the site during the seasonal rounds of the prehistoric groups. A large number of very small cores (fig. 2.4) were obviously used to produce very small sharp flakes, which could not be used for further tool production. The tabular flint used for many of the retouched tools is not available in the surrounding area, but occurs on the Limestone Plateau some 100 km to the north.

Site Khufu 02/17 yielded a tool assemblage which is not yet securely dated. It could not be excluded that the collection is mixed up by artefacts from different periods. Bifacial tools as well as pointed arrow heads are very rare. Only a small number of transversal arrow heads are tools significant for the Mid-Holocene, but they point to a more southerly influence. The assemblage is characterized by a large number of end-scrapers and edge-retouched or denticulated flakes and blades. In any case, none of the pieces are diagnostic, and they may represent an earlier (or later?) settlement which was accidentally included in the collection.

Although grinding stones were not collected, many occurred on both sites. They were counted and measured during the field stay, however, two small grinders of sandstone were collected. They can be compared to sandstone tablets known from the Fayum A culture.<sup>5</sup> On site, they were related to a kind of very small upper grinding stones made of sandstone, quartzitic sandstone or quartz pebbles which often were found on the sites of the Khufu area. It is likely that these grinders were not used for preparing wild cereals, but for pounding coloured sediments which can be found at outcrops in the surrounding area.

H.R.

## 2. The pottery of the Abu Ballas Trail sites

The study of the Abu Ballas Trail pottery initiated in 2002<sup>6</sup> was continued during the spring of 2003. All in all, information on 249 vessels has been recorded in detail, out of which 164 were drawn and inked.<sup>7</sup>

Particular attention was given to the detailed description of the pottery fabrics of about 80 vessels. For each sample a number of properties were described and size, shape and amount of the inclusions were noted. This was done by means of a form with standard entries, allowing the descriptions afterwards to be compared and grouped.

The study of the material from the sites 99/31, 99/35, 99/37 as well as the isolated finds from sites 00/07, 00/17, 00/18 and 00/27 has been completed.

### *Old Kingdom – First Intermediate Period*

Nearly all of the pottery is made from oasis clay. The fabric is characterized by the presence of important amounts of limestone particles and sand, the ratio of which can differ. Characteristic also, though not always present, are fine clay pellets (“shale”) which are a natural part of the oasis clay. Most likely all of the inclusions are naturally present in the clay although coarse sand may have been added occasionally.

When described in detail, an important variation can be observed. This however is largely due to differences in firing temperature and the occasional presence of organic temper. The latter occurs in large quantities on settlement sites but for the pottery of the Abu Ballas Trail the organic tempered ware is only represented by large dough vats (fig. 3.1).

Furthermore there is a “shale” tempered fabric, which is very easy to recognize but occurs only occasionally. It is also made from oasis clay, to which a very large amount of clay pellets (“shale”) has been added. The vessel types, mainly

large deep bowls, and the pottery technology (open fire) of the “shale” tempered fabric also differ strongly from the regular fabric. This type of pottery is characteristic for the Sheikh Muftah cultural unit.<sup>8</sup> Finally there is an oasis clay fabric in which the amount of sand is so high that it is considered to be a temper, which is confirmed by the angular shape of the sand. As the “shale” tempered fabric, this sand tempered fabric also belongs to the Sheikh Muftah unit.

As mentioned in a previous report<sup>9</sup>, the Old Kingdom – First Intermediate Period pottery from the Abu Ballas Trail was most probably manufactured at Ayn Asil in the Dakhla oasis. There are important similarities to the pottery dated at Ayn Asil to the “première phase post-incendie”<sup>10</sup> corresponding with the very end of the Sixth Dynasty or the beginning of the First Intermediate Period.

#### *Second Intermediate Period*

Second Intermediate Period pottery has been found at a few sites only (99/31, 99/32, 99/35) and was always limited to one or two vessels only. There can however be no doubt about their chronological position because the vessels found, small jars with brushed base (fig. 3.2) and a spouted bowl (fig. 4.1), have close Second Intermediate Period parallels in Dakhla.<sup>11</sup> It is to be accepted that these vessels were produced in Dakhla itself.

#### *New Kingdom*

The fact that the New Kingdom pottery consists of two sharply contrasted units, dating probably to the middle of the Eighteenth Dynasty and the Ramesside period respectively, had already been noted during the study campaign of 2002<sup>12</sup>. The fabric of both units is however very similar to the Old Kingdom untempered oasis fabric mentioned above. Exceptionally, shining, soft, black-red particles occur, which can possibly be identified as small vitrified lumps of ochre. This fabric seems identical to fabric B23, identified by Ecclestone for the New Kingdom at Dakhla.<sup>13</sup>

The Eighteenth Dynasty storage jars occur at several sites (85/55, 99/31, 99/32, 99/35, 00/06) and show an important diversity but the majority of them can be attributed to “Category 1a amphorae” as defined by Colin Hope.<sup>14</sup> The shapes of the Ramesside jars are more uniform although they have also been found at several sites (99/30, 99/33, 00/19) and can be considered as a specific oasis production with only limited relations to the Nile valley pottery. The attribution to the Ramesside period is based on related but not identical oasis pottery found in the Nile valley,<sup>15</sup> available C14 dates and some morphological details such as the small circular handles which are characteristic for Ramesside vessels in the Nile valley.<sup>16</sup> But it is to be noted that they differ considerably from the high-necked oasis amphorae attributed by Marchand and Tallet to the Ramesside period.<sup>17</sup> On the other hand, the knobbed bases considered to be characteristic for the late Eighteenth Dynasty<sup>18</sup> or the Ramesside period,<sup>19</sup> are also lacking. The knobbed bases are probably a development of the ring bases known from our Eighteenth Dynasty group. Often potmarks, incised before firing, can be found on the base of the jars. This has also been noted for other oasis amphorae,<sup>20</sup> but is apparently not restricted to a particular phase of the New Kingdom. Due to all of this, some doubts remain about the chronological position of the “Ramesside” jars.

#### *Site 99/38*

Although a limited number of (late) Old Kingdom sherds has been found at site 99/38, which is situated relatively close to Dakhla oasis, the main occupation phase of the site is much more recent and dates most likely to the Persian period. The pottery consists exclusively of kegs (fig. 5) which are identical to type A1 (Tall-Necked Kegs, Barrel-Shaped Bodies) as defined by Hope,<sup>21</sup> which are dated by him as “primarily fifth to early third centuries”. It is generally accepted that these kegs were produced at Dakhla.

St.H.

### 3. The pottery of site Khufu 01/01

The pottery excavated during the spring 2002 season has been studied in a preliminary manner.<sup>22</sup> At first, a fabric typology was established. The large majority of the pottery was produced in an oasis fabric, probably at Dakhla itself. It is characterized by the presence of conspicuous amounts of sand and limestone particles. Generally a limited amount of small clay pellets (< 0,5 mm) can also be observed. Organic temper is completely absent. Two other fabrics were probably also produced in the Dakhla region. The first is characterized by the massive presence of clay pellets ("shale" temper) (0,3 - 8 mm), the second by the equally important occurrence of sand. The clay pellets and probably also the sand were added as temper. Among the pottery found there are also a few imports from the Nile valley, made from Nile silt as well as from marl fabrics.

For 19 characteristic fragments detailed descriptions and drawings were made. The pottery types are characteristic for the early Old Kingdom as can be seen from Meidum bowl fragments with deep shape and high rim (fig. 4.2).<sup>23</sup> The vessel diversity remains almost exclusively restricted to cups and bowls and relatively small storage jars.

Particular attention is to be given to the "shale" and sand tempered pottery mentioned above. Besides the fabrics the ceramic technology and the vessel types also differ from the rest of the pottery. The vessels were quite roughly made and fingerprints can often be observed. Smoke stains visible on the surface indicate that the vessels were fired in an open fire. The vessel types of the "shale" tempered fabric are limited to deep cups and bowls (fig. 4.3) while no restorable vessel shapes have been found for the sand tempered fabric. All of this are characteristics of the Sheikh Muftah cultural unit,<sup>24</sup> for which interaction with the "classic" Egyptian culture can therefore be confirmed during the Fourth Dynasty.

St.H.

### 4. The seal impressions of site Khufu 01/01

The first test excavation at site Khufu 01/01<sup>25</sup> unexpectedly revealed 57 mud seal impressions or fragments thereof.<sup>26</sup> The vast majority, i.e. more than two-thirds of the material, has been found within stratum 4, with a concentration near 'cache 2' below the rock inscription of Radjedef (or Djedefre).<sup>27</sup> Almost all sealings are unburnt and therefore in a quite fragile state of preservation. The employed clay, which contains a conspicuous amount of fine sand and limestone as well as coarse sand grains and, occasionally visible, fine "shale" and charcoal, is very homogeneous. Similar to the fabrics of most of the pottery found at the site (see above), the material points to an oasian provenance, most probably Dakhla itself. In general, the clay shows a very fine texture normally needed for sealings.<sup>28</sup>

All the sealings have been recorded as to finding position, dimensions, clay fabric, sealing type and hieroglyphic text, and 26 have been drawn on scale 1:1.<sup>29</sup> Though the majority of the material consists of fragments, it seems clear that only relatively small lumps of clay have been used for sealing. The smallest fragment<sup>30</sup> measures 1.1 x 0.7 x 0.5 cm, and the largest, almost completely preserved sealing<sup>31</sup> has 4.3 x 3.2 x 2.2 cm. No. 201 bears the most comprehensive of the cylinder seals' impressions which covers an area of ca. 3.0 x 2.4 cm; this is also the only sealing identified as such in situ.<sup>32</sup> In general, the material attests the use of several cylinders which differ in regard to size, motifs, arrangement and accuracy of their hieroglyphic designs. Some, rarely joining,<sup>33</sup> fragments show impressions of the same seal.

Though no completely preserved king's name could be detected,<sup>34</sup> the sealings most probably are to be linked with the Fourth Dynasty expeditions recorded by the rock inscriptions which date to the reigns of Khufu and Radjedef, respectively.<sup>35</sup> This is strongly supported by sealing no. 209<sup>36</sup> (fig. 6.1) which apparently bears the titles attributed to

the officers Jj-mrjj and Bbj in the longest text on the terrace's rear rock wall (sHD-nfrw stp-sA).<sup>37</sup> Likewise, the Xrt-nTr sign, a composite hieroglyph which often occurs as part of the "signatures" left by quarry workers or stone masons (Xrtjw-nTr) on the rock face,<sup>38</sup> is remarkably attested several times among the sealed material (fig. 6.2).<sup>39</sup> However, its occurrence here might be better explained as referring to a "necropole" (Xrt-nTr, lit. "the property of the god")<sup>40</sup> or an institution connected with it rather than to gangs of quarry workers or their leaders. This would go very well with the interpretation by K.P. Kuhlmann of the most important rock inscriptions: According to his preliminary analysis, the aim of both expeditions in the reign of Khufu was to collect "mefat" (mfAt), interpreted by him as most probably a mineral powder used for paint.<sup>41</sup> This was surely an important need for the decoration of the Fourth Dynasty pyramid complexes with their adjoining necropolises.

Apart from this, the presence of the sealings emphasises the official nature of the expeditions sent into this desert region. Besides, there is evidence to suggest that some sealings were actually made on the spot: A number of roundish, hand shaped lumps of the same clay fabric bearing fingerprints but no seal impressions were also found (fig. 6.3), as was at least one sealing with traces of a cylinder seal impression,<sup>42</sup> which for a very short time must have been attached to a container (as indicated by the impressions of textile and a cord) but obviously was removed before the clay dried, thereby being deformed (fig. 6.4). Most probably, a certain amount of suitable (wet) clay was brought here for that purpose, perhaps in a leather bag. This does, however, by no means exclude the possibility, or rather probability, that already sealed containers were carried along and opened here, either.

The impressions on the undersides of the sealings, which help determine the type of containers to which they were once attached, are therefore of special interest. At least three different types can be distinguished (fig. 7): storage jars, leather (?) bags, and indetermined containers which were enclosed by stalks of reed or a similar plant material leaving a corresponding impression of the latter fixed with a string. At present, it seems impossible to ascertain which containers were just being opened on the spot and which have been closed and sealed there. As to the contents, one may suggest that some of the leather (?) bags might have enclosed the mefat-powder collected in the surroundings which could have been stored in the 'caches'.<sup>43</sup> But first of all, the limited provisions in this desert environment such as water, food and salt have to be taken into consideration. These surely were rationed items of survival, perhaps delivered (from Dakhla?) while work was in progress, and some authorities might have been responsible for supervising the food-supply and consumption of up to 400 men.<sup>44</sup>

The seal impressions found at Khufu 01/01 are obviously the most westerly attestation of this administrative practice to date.<sup>45</sup> It is to be expected that future excavations, especially in front of the other seven 'caches', will reveal much more sealings which may considerably add to the Old Kingdom material known so far.<sup>46</sup>

F.F.

**Notes:**

1 For the spring 2002 season of ACACIA, a Collaborative Research Centre (389) funded by the German Research Council (DFG) since 1995 and housed at the University of Cologne, Germany, see R. Kuper / H. Riemer / St. Hendrickx / F. Förster, Preliminary Report on the Field Season 2002 of the ACACIA Project in the Western Desert, in: *ASAE* XXX, XXXX, p. XXX-XXX (hereafter referred to as ACACIA Report 2002). – Participants of the study campaign have been: Dr. Heiko Riemer (field director; Prehistorian at University of Cologne), Dr. Stan Hendrickx (ceramologist, Hasselt, Belgium), Frank Förster M.A. (Egyptologist at University of Cologne), Peter Schönfeld (student of Prehistory at University of Bonn), and Merel Eyckerman (draftswoman, Hasselt, Belgium). We wish to thank the Permanent Committee of the Supreme Council of Antiquities for the kind permission to carry out the work. Thanks also goes to Sayed Yamany, Chief Inspector, Dakhla, for his kind support.

2 For the Abu Ballas Trail sites see R. Kuper / F. Förster, in: ACACIA Report 2002; R. Kuper, The Abu Ballas Trail: Pharaonic Advances into the Libyan Desert, in: Z. Hawass / L. Pinch Brock (eds.), *Egyptology at the Dawn of the Twenty-first Century: Proceedings of the Eighth International Congress of Egyptologists, Cairo 2000, Vol. 2: History, Religion, Cairo / New York 2003*, p. 372-376; id., By donkey train to Kufra? – How Mr Meri went west, in: *Antiquity* 75, 2001, p. 801-802. For the site Khufu 01/01 see R. Kuper / F. Förster, in: ACACIA Report 2002; id., Khufu's 'mefat' expeditions into the Libyan Desert, in: *EA* 23, 2003 (in press); K.P. Kuhlmann, The "Oasis Bypass" or The Issue of Desert Trade in Pharaonic Times, in: "Jennerstrasse 8" (ed.), *Tides of the Desert – Gezeiten der Wüste. Contributions to the Archaeology and Environmental History of Africa in Honour of Rudolph Kuper – Beiträge zu Archäologie und Umweltgeschichte Afrikas zu Ehren von Rudolph Kuper (Africa Praehistorica 14)*, Köln 2002, p. 133-138.

3 Cf. H. Riemer, in: ACACIA Report 2002.

4 M.M.A. McDonald, Origins of the Neolithic in the Nile Valley as seen from Dakhleh Oasis in the Egyptian Western Desert, in: *Sahara* 4, 1991, p. 81-110; B. Gehlen / K. Kindermann / J. Linstädter / H. Riemer, The Holocene Occupation of the Eastern Sahara: Regional Chronologies and Supra-regional Developments in Four Areas of the Absolute Desert, in: "Jennerstrasse 8" (ed.), *Tides of the Desert – Gezeiten der Wüste. Contributions to the Archaeology and Environmental History of Africa in Honour of Rudolph Kuper – Beiträge zu Archäologie und Umweltgeschichte Afrikas zu Ehren von Rudolph Kuper (Africa Praehistorica 14)*, Köln 2002, p. 85-116.

5 Chr. Regner, *Schminkpaletten (Bonner Sammlung von Aegyptiaca 2)*, Wiesbaden 1996.

6 St. Hendrickx, in: ACACIA Report 2002.

7 The drawings were made in collaboration with Merel Eyckerman, a last year student in applied graphics. This made it possible to render the fabrication traces visible on the surface of the pottery, which resulted in drawings which are not only informative but also visually appealing.

8 C. Hope, Early and Mid-Holocene Ceramics from the Dakhleh Oasis: Traditions and Influences, in: R.F. Friedman (ed.), *Egypt and Nubia. Gifts of the Desert*, London 2002, p. 39-61.

9 St. Hendrickx, in: ACACIA Report 2002.

10 G. Soukiassian / M. Wuttmann / L. Pantalacci, Le palais des gouverneurs de l'époque de Pépy II: Les sanctuaires de ka et leurs dépendances. Balat VI (FIFAO 46), Le Caire 2002, p. 9-13.

11 Jars: C. Hope, Dakhleh Oasis Project - Report on the Study of the Pottery and Kilns, in: *JSSEA* 10, 1980, pl. XXb, XXIIj; id., Dakhleh Oasis Project. Preliminary Report on the Study of the Pottery. Fifth Season, 1982, in: *JSSEA* 13, 1983, fig. 2, a/d. Spouted bowl: Hope, op.cit. (1980), pl. XXj, XXI,d; Hope, op.cit. (1983), fig. 2,k-l.

12 St. Hendrickx, in: ACACIA Report 2002.

13 M.J. Ecclestone, Macroscopic and Microscopic Analysis of New Kingdom Dakhleh Oasis Amphorae Fabrics, in: R.F. Friedman (ed.), *Egypt and Nubia. Gifts of the Desert*, London 2002, p. 106-109.

14 C. Hope, Amphorae of the New Kingdom, in: id., *Pottery of the Egyptian New Kingdom. Three Studies*, Burwood 1989, p. 93-94. See especially fig. 1,7 (Amenhotep II) and fig. 2.1 (Amenhotep III – Horemheb).

15 C. Hope, Oases Amphorae of the New Kingdom, in: R.F. Friedman (ed.), *Egypt and Nubia. Gifts of the Desert*, London 2002, p. 95-131.

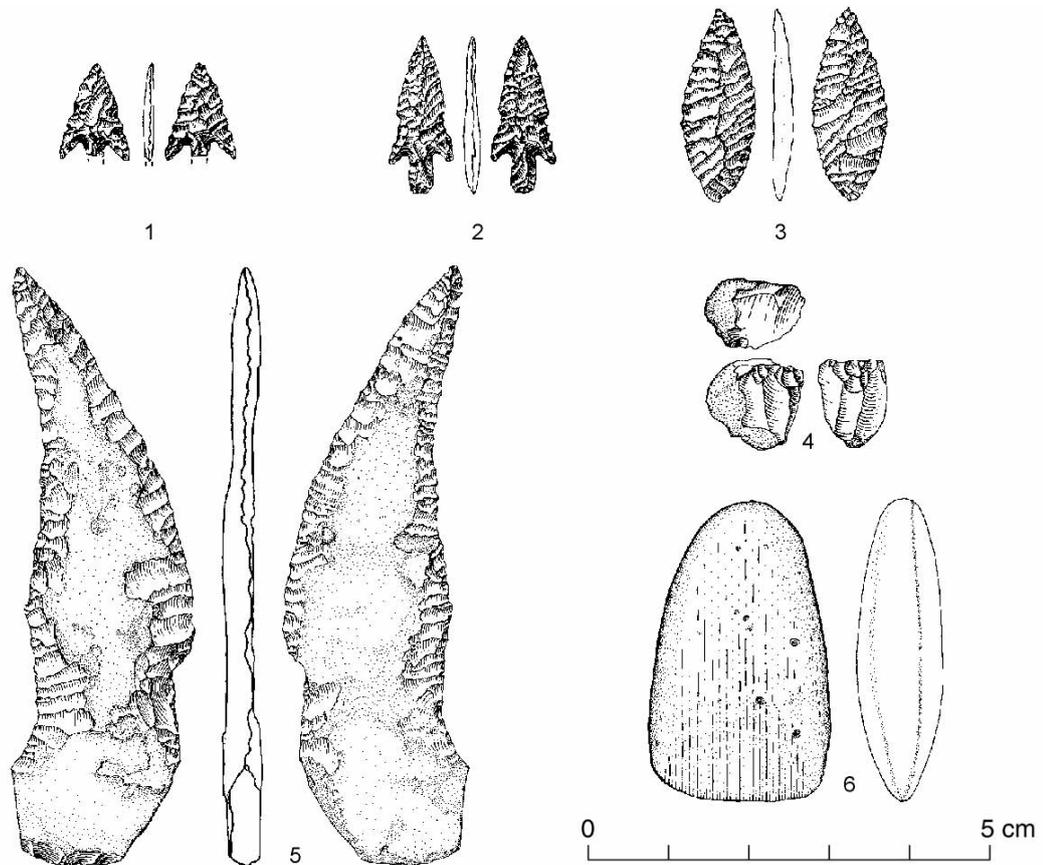
16 L. Bavay / S. Marchand / P. Tallet, Les jarres inscrites du Nouvel Empire provenant de Deir al-Médina, in: *CCE* 6, 2000, p. 83.

17 S. Marchand / P. Tallet, Ayn Asil et l'oasis de Dakhla au Nouvel Empire, in: *BIFAO* 99, 1999, p. 319-320.

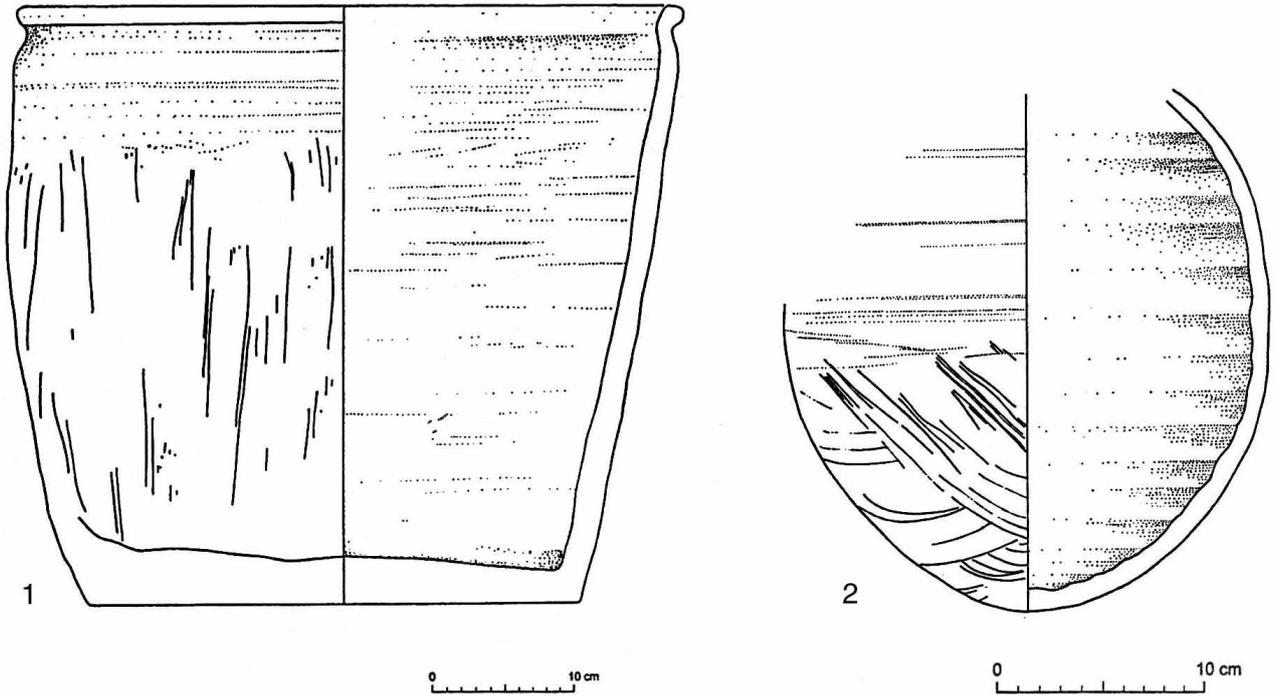
- 18 S. Marchand / P. Tallet, *op.cit.*, p. 319.
- 19 C. Hope, Oases Amphorae of the New Kingdom, in: R.F. Friedman (ed.), *Egypt and Nubia. Gifts of the Desert*, London 2002, p. 98.
- 20 S. Marchand / P. Tallet, Ayn Asil et l'oasis de Dakhla au Nouvel Empire, in: BIFAO 99, 1999, p. 320.
- 21 C.A. Hope, Kegs and Flasks from the Dakhleh Oasis, in: CCE 6, 2000, p. 200-201, fig. 5a-c.
- 22 Cf. St. Hendrickx, in: ACACIA Report 2002.
- 23 L. Op de Beeck, Restrictions for the Use of Maidum-bowls as Chronological Indicators, in: CdE 75, 2000, 5-14; id., Possibilities and Restrictions for the Use of Maidum-bowls as Chronological Indicators, in: CCE 7 (in press).
- 24 C. Hope, Early and Mid-Holocene Ceramics from the Dakhleh Oasis: Traditions and Influences, in: R.F. Friedman (ed.), *Egypt and Nubia. Gifts of the Desert*, London 2002, p. 39-61.
- 25 For the trench (1 x 4 m) on the terrace halfway up the eastern slope of the hill, see R. Kuper / F. Förster, in: ACACIA Report 2002 and id., Khufu's 'mefat' expeditions into the Libyan Desert, in: EA 23, 2003 (in press).
- 26 In addition, several fragments of sealings without any traces of hieroglyphic impressions have been found.
- 27 This 'cache' is one of eight niches of yet unknown purpose, which are cut up to one metre deep into the rock and extend below the present terrace surface, see R. Kuper / F. Förster, in: ACACIA Report 2002 and id., Khufu's 'mefat' expeditions into the Libyan Desert, in: EA 23, 2003 (in press). – For the inscription of Radjedef, see K.P. Kuhlmann, The "Oasis Bypass" or The Issue of Desert Trade in Pharaonic Times, in: "Jennerstrasse 8" (ed.), *Tides of the Desert – Gezeiten der Wüste. Contributions to the Archaeology and Environmental History of Africa in Honour of Rudolph Kuper – Beiträge zu Archäologie und Umweltgeschichte Afrikas zu Ehren von Rudolph Kuper (Africa Praehistorica 14)*, Köln 2002, p. 135, fig. 6.
- 28 I gratefully acknowledge the clay analysis by Stan Hendrickx.
- 29 With the assistance of Merel Eyckerman. – Most of the remaining fragments bear only minor or almost invisible traces of the original seal impression.
- 30 01/01-1, 77/146c (232).
- 31 01/01-1, 78/146d (223).
- 32 01/01-1, 77/145a (201), dimensions: 4.3 x 2.4 x 1.9 cm.
- 33 01/01-1, 79/146b (233) + 79/146d (234).
- 34 Sealing 01/01-1, 77/145a (204) shows traces of the upper part of a cartouche, and on 01/01-1, 79/146d (202) the lower part of a serekh is preserved.
- 35 K.P. Kuhlmann, *op.cit.*, p. 133-138.
- 36 01/01-1, 79/146c (209), dimensions: 1.8 x 1.5 x 0.9 cm.
- 37 K.P. Kuhlmann, *op.cit.*, p. 138, fig. 10. – For the titles, see D. Jones, *An Index of Ancient Egyptian Titles, Epithets and Phrases of the Old Kingdom (BAR International Series 866)*, vol. 2, Oxford 2000, p. 928 (no. 3418, "inspector of recruits") and p. 983 (no. 3629, "protector, court councillor").
- 38 K.P. Kuhlmann, *op.cit.*, p. 136 and fig. 3 (p. 133).
- 39 For example, 01/01-1, 79/146b (200); 77/145a (201); 77/146c (205); 79/146a (210).
- 40 It has also been stated that "the word 'god' in this term probably referred originally to the king who bestowed the right of burial on members of the elite" (St.J. Seidlmayer, in: D.B. Redford [ed.], *The Oxford Encyclopedia of Ancient Egypt*, vol. 2, Oxford 2001, p. 511 s.v. Necropolis).
- 41 K.P. Kuhlmann, *op.cit.*, p. 136-137.
- 42 01/01-1, 77/146c (214).
- 43 For a possible reference to the use of bags (mjnw) in the longest rock inscription, see K.P. Kuhlmann, *op.cit.*, p. 136 and fig. 10 (p. 138).
- 44 For the number of soldiers involved, cf. K.P. Kuhlmann, *op.cit.*, p. 137.
- 45 For the late Old Kingdom / First Intermediate Period seals and sealings found by the IFAO mission at Ayn Asil in Dakhla oasis see, most recently, L. Pantalacci, in: G. Soukiassian / M. Wuttmann / L. Pantalacci, *Le palais des gouverneurs de l'époque de Pépy II: Les sanctuaires de ka et leurs dépendances. Balat VI (FIFAO 46)*, Le Caire 2002, p. 385-445.
- 46 Cf. P. Kaplony, *Die Rollsiegel des Alten Reiches (Monumenta Aegyptiaca 2-3)*, 3 vol., Bruxelles 1977-1981.



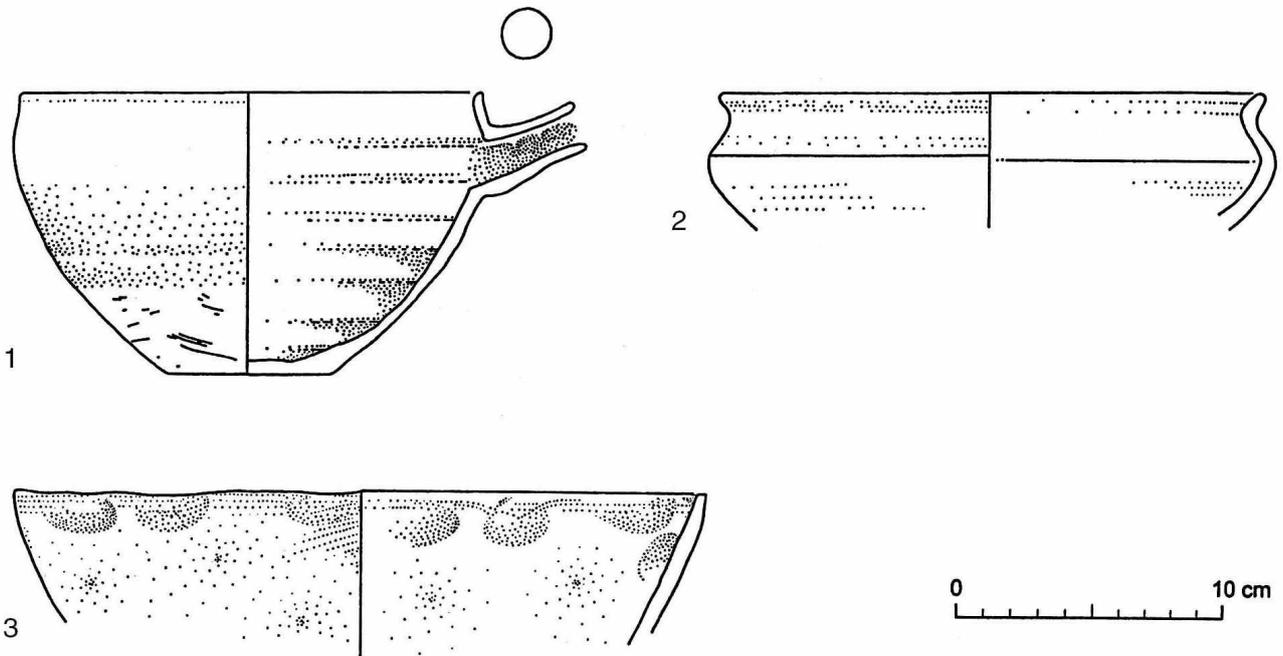
**Fig. 1** Pottery from the Abu Ballas Trail during the study season in the excavation house in Balat, Dakhla Oasis



**Fig. 2** Characteristic Mid-Holocene stone tools from Khufu O2/15: 1-3 Arrow heads; 4 Small core; 5 Knife; 6 Ground axe or plane.



**Fig. 3** Abu Ballas Trail: 1 OK large dough vat; 2 SIP small jar.



**Fig. 4** 1 Abu Ballas Trail, SIP spouted bowl; 2 Khufu 01/01, OK Meidum bowl; 3 Khufu 01/01, Sheikh Muftah shale tempered cup.

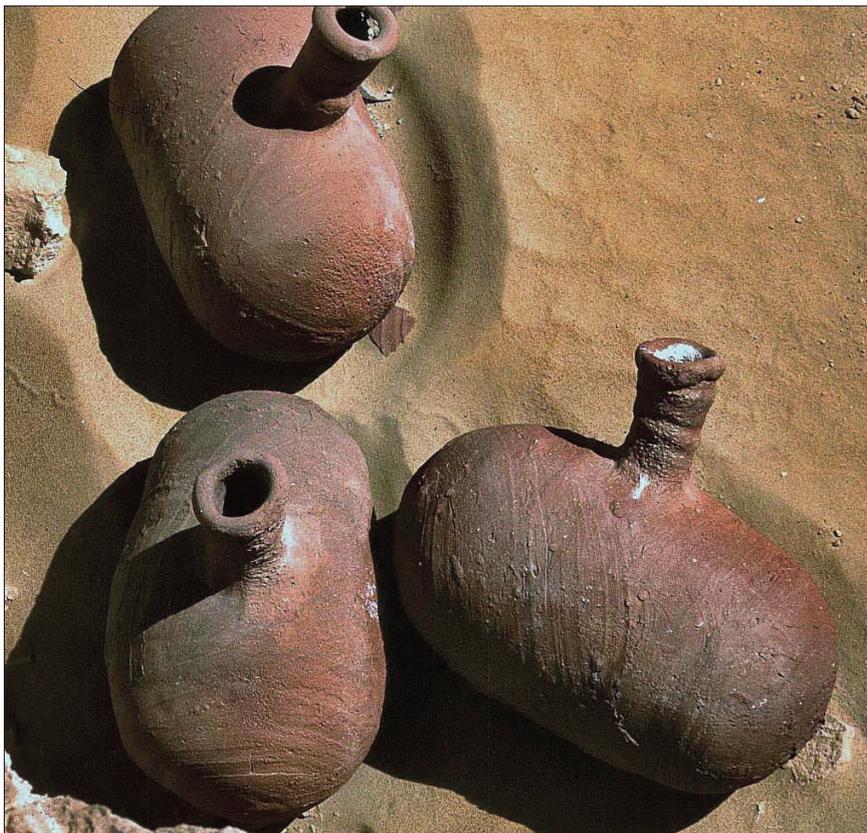


Fig. 5 Site 99/38: Persian kegs.

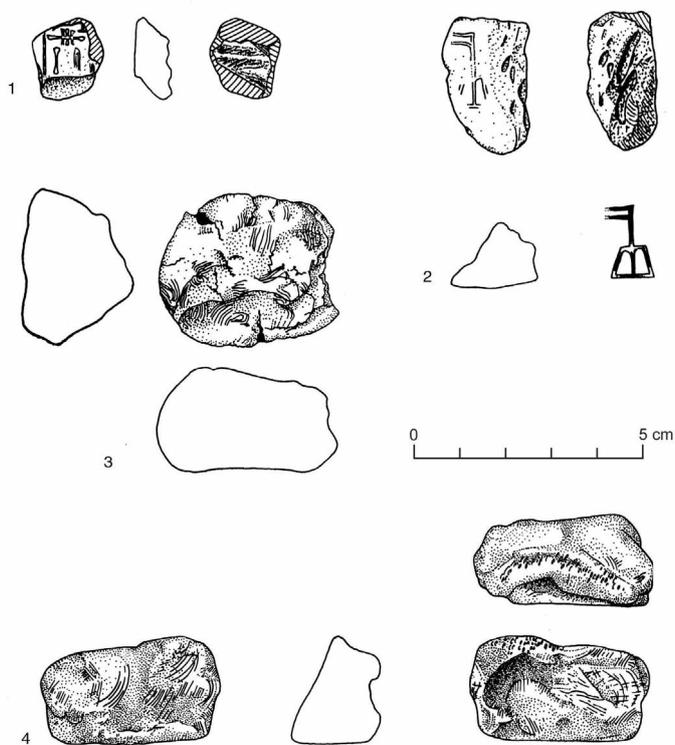


Abb. 6 Khufu 01/01 (4th Dyn.), seal impressions.

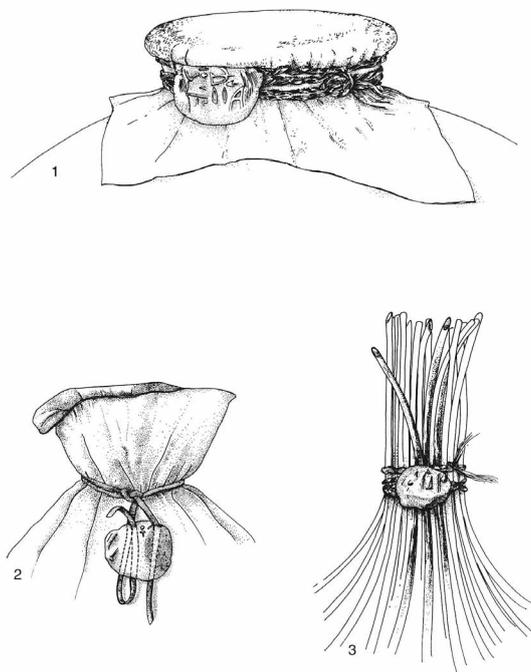


Abb. 7 Reconstructed types of sealed containers from Khufu 01/01: 1 storage jars; 2 leather (?) bags; 3 indetermined containers enclosed by stalks of reed or a similar plantmaterial.