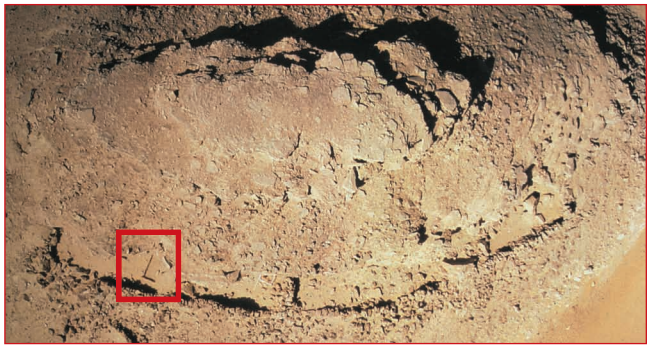

Arid
Climate,
Adaptation and
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Preliminary Report on the Field Season 2002 of the ACACIA Project in the Western Desert

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Preliminary Report on the Field Season 2002 of the ACACIA Project in the Western Desert

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The ACACIA (Arid Climate, Adaptation and Cultural Innovation in Africa) project is a multidisciplinary Collaborative Research Centre (SFB 389) established by the German Research Council (DFG) at the University of Cologne, Germany in 1995. The central topic of this long-term project is the historical development of the African continent and its people during the last 12,000 years in light of the complex interrelation between man and changing environmental conditions. ACACIA focuses its research activities on the arid zones of northeastern and southwestern Africa, in particular Egypt, Sudan and Namibia, aiming at a transcontinental comparison of human strategies of coping with arid habitats.

The 2002 fieldwork of the sub-projects working in Egypt (fig. 1) took place from February 18th to April 8th. The main objectives of the season have been: (1) to gather more information on the geological and climatological situation in the Djara and Abu Gerara area on the Abu Muharik Plateau, (2) to carry out an archaeological and geomorphological survey in the Farafra Sandsea, (3) to study the palaeoenvironmental situation at Abu Tartur and the Eastpans area, (4) to survey the Meri - Jaqub - Khufu area, (5) to review the sites of the Abu Ballas Trail, (6) to take preliminary measures to document and protect the site Khufu 01/01, including a first test excavation, and (7) to document and study the pottery of the Abu Ballas Trail and the Khufu 01/01 sites.

1. Geo-archaeological investigations in the areas of Djara, Abu Gerara, Farafra Sand Sea, Abu Tartur and Eastpans

Initial geoarchaeological surveys were conducted at a number of locations on the Egyptian Limestone Plateau and south of Dakhla oasis in the hope to find more reliable sedimentological archives for a high resolution of the climatic and environmental development over the Holocene wet-phase. Playa basins in Abu Gerara and Eastpans were surveyed, but did not hold enough potential for further analysis. Stratified playa deposits were discovered in the area of Djara and Abu Tartur. There, individual strata were connected to archaeological sites in the vicinity, and the sediments promise a higher potential for dating and environmental studies. A brief survey across the Farafra Sand Sea followed along the dune trains from south to north. As to the geomorphology, the sand dunes have been surveyed by systematic measurements and borings. At present, it is not possible to estimate the exact age of the dunes. As to the archaeological observations, the Farafra Sand Sea seems poor of prehistoric material.
H.R.

2. Archaeological survey of the Meri - Jaqub - Khufu area

An intensive archaeological survey was carried out during a 19 days field campaign covering the areas of Meri and Khufu east of the western margins of the southern Great Sand Sea. This survey was performed in order to study the prehistoric cultural relations between the Dakhla oasis and the inner desert areas of the Great Sand Sea. During the survey a number of larger archaeological sites at playa basins were discovered. At three sites (labelled Khufu 02/14, 02/15, 02/17) excavations and / or surface collections were started. In addition, small excavations took place at the sites of Meri 00/80 and Meri 00/82 which have been discovered in 2000.

The first results from the surveys and excavations of our 2002 campaign generally point to the fact that the prehistoric desert dwellers of this region frequently came from the oases in the north and north-east, most likely from the Dakhla, Abu Minqar, and Farafra depressions. The contacts are manifested in the tradition of lithic production clearly visible from the numerous chipped stone tools found on sites of the Khufu and Meri area. However, the site collections also yielded a few other artefacts which point to long distance contacts between the areas under study and the south.

Meri 00/80 and 00/82

Both sites were located within a shallow valley flanked to the east by 10-15 m high ridges. Site Meri 00/80 is situated on the sandy playa edge south of a deflated playa basin. Dry vegetation and a thin silt cover in the centre of the basin were formed during a more recent precipitation event. The surface yielded a small assemblage of lithics. A number of bifacial fragments and bifacial tanged points can be attributed to a Mid-Holocene age (ca. 6000-5000 BC). A small test excavation of four square metres revealed only a small number of debitage and debris in the first stratum 0-5 cm below the surface.

Site Meri 00/82 is situated some 100 m southeast of the aforementioned site. About a dozen of circles made of sandstone rubble (ca. two metres in diametre) were discovered on top of a narrow spur facing northwards. Only a small number of lithic artefacts were found within the circles, but at the eastern foot slope remains of hearth mounds, grinding stones, and a number of retouched tools have been observed. At the steep gravel slope some ashy sediment was uncovered by accident. A test excavation of 1 x 5 m produced stone artefacts which tentatively can be attributed to the Mid-Holocene; however, the formation processes on site are not yet clear.

Khufu 02/14 and 02/15

A couple of deep playa basins are situated some kilometres east of the easternmost dune trains of the Great Sand Sea. Dense artefact scatters are distributed along the northern shore line of Khufu 02/14 and on the southern end of Khufu 02/15. In both cases the artefacts on the lower plain surfaces of playa silts clearly date to the Early Holocene (ca. 8500-6700 BC) while the upper horizons show mid-Holocene tools. The surface artefacts were collected for further analysis, and a test excavation on site Khufu 02/15 was carried out. Trench 02/15-1 was dug on the place of a well preserved bone scatter (fig. 2). The bone fragments were burned and can tentatively be determined as small gazelle.

On both sites the assemblages of the mid-Holocene collections show a large proportion of bifacial tools such as knives, arrow heads, and side-scrapers. They indicate a dating to the Mid-Holocene Late Bashendi A or Bashendi B units (ca. 6000-4500 BC) or the Djara B phase (ca. 6000-5000 BC) (cf. McDONALD 2001; KINDERMANN 2003).

Near the dense scatter of site Khufu 02/14, sherds of two bowls with well preserved surfaces were discovered at the foot gravel of a small rock (fig. 3). Both vessels show a packed dotted zig-zag pattern on the surface and an organic temper of the paste. While the lithics show parallels to the northeastern sites of Dakhla and the Limestone Plateau, Khartoum style pottery points to a southern influence. As to the pottery, a preliminary date ca. 6500 BC can be suggested because of parallels from Mudpans and Eastpans further to the south (GEHLEN / KINDERMANN / LINSTÄDTER / RIEMER 2002).

Khufu 02/17

Site Khufu 02/17 is situated on the southern shore zone of a large elongated playa basin. The surface is partially covered with dense artefact scatters. On the lower part of the playa, blade workshops were observed which seem to date to the Early Holocene or Epipalaeolithic (ca. 8500-6700 BC). Backed points and elongated backed triangles support this affiliation. In the western part a dense scatter of blades combined with bone fragments was selected for a small excavation trench labelled 02/17-4 (7.5 square metres). It produced a large number of flint blades, debitage and debris, but only few characteristic tools were found which point to an early Holocene age.

The upper playa sediments were mixed with dune sand washed down from the southern basin's slope. Here a large number of grinders, cores and debitage, and some retouched tools were observed. The area was selected for an intensive surface collection. Although a small number of characteristic bifacially retouched tools were observed, the main part of the assemblage was unspecific and does not show any striking parallels with the sites mentioned above. A mid-Holocene age can tentatively be suggested.
H.R.

3. Reviewing the Abu Ballas Trail sites

For a long time since its discovery by John Ball and Lieutenant Moore in 1918, the Abu Ballas or "Pottery Hill" site some 200 km west-southwest of Dakhla oasis with its large amount of pottery has ranged among the mysteries of the Libyan Desert (cf., e.g., SERS 1994: 199-207). This unique situation only changed in 1999 when Carlo Bergmann, a dedicated German desert traveller who uses camels to explore the unknown on his own, discovered several new sites with similar deposits of pottery. Including Abu Ballas, they make up a chain of staging-posts or depots and prove the existence of a Saharan route leading from Dakhla oasis to the Gilf Kebir, and probably further on, to Kufra oasis in Libya or even the Ennedi mountains in Chad. Since winter 1999 / 2000 the sites are under investigation by ACACIA, aiming to elucidate the purpose and destination of this ancient pharaonic route that has provisionally been labelled the "Abu Ballas Trail" (KUPER 2001; 2002; 2003; KUHLMANN 2002: 149-158; BERGMANN 2001: 367-460).

The remains of the trail's ca. 30 presently known stations mainly consist of concentrations of pharaonic pottery which differ in age and quantity, ranging from fragments of a single jar up to more than a hundred vessels in different states of preservation (see contribution by Stan Hendrickx below). The majority of these pottery concentrations is to be considered water depots that had been placed in certain regular distances in order to enable donkey caravans to travel about 350 km or more through the barren desert. Usually the depots are to be found at the foot or near one of the ubiquous sandstone cones dotting the vast regions of this part of the Libyan Desert (fig. 4). However, some minor depots had even been placed on top of a hill. A number of the vessels, mostly large storage jars of late Old Kingdom / First Intermediate Period date, bear potmarks (fig. 5). Some of these as well as the jars themselves strongly suggest a direct link with the Egyptian presence at Ayn Asil in Dakhla oasis, since 1977 under study by the IFAO (see, most recently, SOUKIASSIAN / WUTTMANN / PANTALACCI 2002).

Some road signs made of loose stones (alamat in Arabic) mark the route between the stations (fig. 6), as do straight running donkey tracks which are partly still visible. A number of sites show structures of stone slabs, probably the remains of huts, or shelters with hearths. Occasionally, small stone circles measuring up to two metres have been found that might well have served as basins for watering donkeys. Together with a number of rock engravings this evidence clearly attests a temporary occupation by some people.

Of special interest is a short semi-hieratic rock inscription relatively close to Dakhla (site Meri 95/05) which was already discovered in 1992 (BURKARD 1997). The text mentions a stewart Meri who, according to the translation by G. Burkard, set out in "year 23" of an unknown reign "to meet the oasis dwellers" (for a slightly different reading, see KUHLMANN 2002: 156). Since the date of the inscription is not yet clear (perhaps Sixth or Twelfth Dynasty as proposed by Burkard for several, mainly palaeographic, reasons), its exact relation to the Abu Ballas Trail still remains obscure. However, the homeland of the "oasis dwellers" might be located in the Gilf Kebir / Uweinat region or even further south-west.

Since winter 1999 / 2000, extensive excavation and documentation work has taken place at seven of the sites: Abu Ballas 85/55 (the original Abu Ballas site), Jaqub 99/30, Jaqub 99/31, Jaqub 99/32, Jaqub 99/33, Dakhla 99/38, and Meri 99/57.

This season, a short survey covering eight days (12th to 19th of March) has been devoted to review the majority of the sites in order to (1) check possible changes in the appearance of the sites which might have been caused by sand moves as well as tourists' activities, (2) select highly potential or even endangered sites for future excavations and, last but not least, (3) familiarize new team members with the material evidence. It indeed turned out that at the areas of some sites, where the wind blown sand had meanwhile been removed, additional pottery became apparent that previously had not been detected (e.g., site Jaqub 99/31).

At Abu Ballas itself (site Abu Ballas 85/55)[1], the name giving find spot has suffered immensly by vandalism and looting almost since its discovery in 1918 (BALL 1927: 122) (fig. 7), the area between the two rock engravings on the eastern slope of the hill (showing a hunter with dogs chasing a gazelle and a cow suckling its calf, see RHOTERT 1952: pl. 36.3-6) has been found heavily disturbed. Visitors, probably some off-road tourists, had dug a pit there and in doing so unearthed potsherds. In order to secure the remaining evidence it was decided to carry out a small excavation that covered almost two working days, examining an area of about eight square metres.

Unexpectedly, a little cave was revealed that finally reached a size of ca. 2.5 square metres (fig. 8). Its walls are smooth and without any hint of an artificial origin. There were no artefacts inside the cave, but in front of it a small hearth, potsherds and a few stone artefacts were excavated. According to Stan Hendrickx the pottery dates to the end of the Old Kingdom or the beginning of the First Intermediate Period, as does the majority of the storage jars found at the foot of the slope. Moreover, two abraders and a small fragment of a gameboard were found, all made of local sandstone. Already in October 2000, a stone slab incised with a grid of thirty squares and thus resembling an ancient Egyptian senet-gameboard has been found near-by (FÖRSTER / KUPER 2003: 168, fig. 3). Several samples of organic material were taken for radiocarbon dating as well as for botanical identification, but have not yet been processed and analysed.

This new evidence clearly attests - similar to other sites of the trail like Jaqub 99/31 - a temporary occupation of "Pottery Hill" by some people in late Old Kingdom or early First Intermediate Period times. The area in front of the cave probably had served as a look-out post to keep watch over the water depot, and a row of notches on the rock face near-by may be interpreted as a counting of the lonely days spent there.

It should be added that the protection of the most endangered sites of the Abu Ballas Trail as part of Egypt's cultural heritage in this remote desert region is one of the main objectives of the project.

In regard to the special importance of the pottery found at the trail's stations it seems highly appropriate to devote a broader section to this subject in the following.
R.K. / F.F.

4. The pottery of the Abu Ballas Trail

General remarks on the study of the Abu Ballas Trail pottery

The state of preservation of the pottery shows important differences from site to site. Some of the jars which had been well protected against the wind were still very well preserved. The large majority however had been eroded at different degrees. This made observations on the original surface treatment often very difficult or even impossible.

For several sites an important part of the vessels had been broken anciently. Although the erosion of the fractures often caused practical problems, it nevertheless proved most rewarding to search for matching sherds. The material from the sites Jaqub 99/31 and Jaqub 99/32 was worked over with the reconstruction of a number of vessel shapes

as result. In the future this will certainly also be possible for at least the sites Jaqub 99/33 and Dakhla 99/38.
Information for 137 vessels has been recorded in detail, out of which 77 were drawn. This included at first the identification of the fabric, for which a preliminary fabric typology has been set up. Furthermore the metrical data and the technical characteristics (shaping method, finishing technique, firing) were recorded, as well as information concerning the (possible) utilisation of the vessels. All information was consequently entered into a database.
It is to be stressed that the study of the Abu Ballas Trail pottery is far from finished and will be continued in 2003.

Preliminary conclusions

Old Kingdom - First Intermediate Period

The majority of the pottery studied dates to the very end of the Old Kingdom or the beginning of the First Intermediate Period. The sites Abu Ballas 85/55 (the original Abu Ballas site) and Jaqub 99/31 can be used as type sites. Large storage jars (h. 45-60 cm) are by far the most numerous vessel types at both sites and as a matter of fact at all Abu Ballas Trail sites. Identical potmarks incised before firing are present on jars from both sites, indicating that they had a common origin. These potmarks occur also at the late Old Kingdom site of Ayn Asil in Dakhla oasis (SOUKIASSIAN / WUTTMANN / PANTALACCI 2002: 459, fig. 270). Furthermore, the pottery from sites Abu Ballas 85/55 and Jaqub 99/31 resembles that from Ayn Asil so closely (cf. infra) that it can be considered to have been produced at Ayn Asil. Besides the storage jars, both sites also share strongly resembling cups and bowls, as well as large, organic tempered vats. These two sites are not only contemporaneous but also to be considered elements of the same operation.

For both sites Abu Ballas 85/55 and Jaqub 99/31, only three different types of pottery are represented. These are large storage jars for water, drinking cups / bowls and straw tempered vats for the preparation of bread dough. These obviously illustrate the “economic” activity, limited to the basics: water and bread. The large storage jars are considered to be water jars because water is of course the most basic need in this desert environment, but also the jars never contained any remains of whatever substance and they furthermore sometimes show salt stains, characteristic for the evaporation of water.

On many storage jars, wind erosion lines can be seen, indicating that the jars were lying with their axis in an angle between about 20° and 45°, aperture upwards. This clearly shows that all of the jars were empty when left behind. Accepting 25 litre as (low) estimated content of the jars, site Abu Ballas 85/55 (originally perhaps about 200 jars) may have represented a water supply of 5000 litres and site Jaqub 99/31 (min. 52 jars) of at least 1300 litres. This should allow some idea of the number of animals that may have been involved in a donkey caravan.

Nothing has been found that could have been used for sealing the jars. Clay stoppers, as used in the Nile valley, are of course out of question because they would imply spilling water. The cups and bowls are far to few in number to have been used for closing the jars. Their deep shapes would anyhow be inappropriate, and cups or bowls for closing jars are normally used in combination with clay caps. Apparently perishable material was used for closing the jars and a piece of leather seems indicated.

The chronological position of the pottery is best to be considered through comparison with the extensive information available for the late Old Kingdom at Ayn Asil (VALLOGGIA 1986; MINAULT-GOUT 1992; SOUKIASSIAN et al. 1990; VALLOGGIA 1998; CASTEL / PANTALACCI / CHERPION 2001; SOUKIASSIAN / WUTTMANN / PANTALACCI 2002). Although it is obvious that the storage jars belong to the Old Kingdom or the First Intermediate Period, they do not allow a more precise chronological setting because of their limited typological evolution over time. Despite their restricted number, the cups and bowls offer better possibilities. Especially the cups “à carène basse” (fig. 9.1-2) are most informative. They are a very characteristic production of the Ayn Asil ateliers and although probably originating at the end of the Old Kingdom, they are mainly to be dated in the First Intermediate Period (SOUKIASSIAN et al. 1990: 145). The

broad convex cups (fig. 9.3) also rather point towards the First Intermediate Period (SOUKIASSIAN et al. 1990: 144). Finally, the fragments of large straw tempered vats confirm the late Old Kingdom - First Intermediate Period date (SOUKIASSIAN et al. 1990: 112-113).

New Kingdom
Two different phases of the New Kingdom are represented, the Eighteenth Dynasty (site Base Camp 00/06) and probably the Ramesside period (sites Jaqub 99/30, Jaqub 99/33). As for the late Old Kingdom - First Intermediate Period sites, the pottery consists almost exclusively of storage jars. Contrarily to the Old Kingdom sites Abu Ballas 85/55 and Jaqub 99/31, there are no cups and bowls or vessels referring to bread production at the New Kingdom sites such as Jaqub 99/33.

The Eighteenth Dynasty jars ("amphorae") are characterized by pushed out bases on top of which the vessels have been turned. Most of them have large vertical (exceptionally horizontal) handles and tall necks. Ring bases occur frequently. The type variation is important and reflects shapes which are also known from the Nile valley although the fabrics seem to indicate that all of the pottery has been made in the Dakhla oasis.

The bases of the "Ramesside" jars are turned as a part of the lower section of the vessel. They have small rounded handles and low necks. As for the Eighteenth Dynasty pottery, all of the jars seem to have been produced at Dakhla. Their shapes do not reflect Nile valley types but they are to be considered typical oasis type jars, primarily serving as containers for wine which however can not have been their function at the desert sites where they were found.

On two jars from respectively sites Jaqub 99/30 and Jaqub 99/33 potmarks representing donkeys can be seen (fig. 10). Together with the almost identical vessel types, these indicate that the two sites are to be considered elements of the same desert operation.
S.H.

5. Work at site Khufu 01/01

Site Khufu 01/01, a Fourth Dynasty desert camp in the Dakhla region,[2] has been discovered by Carlo Bergmann in 2000 (BERGMANN / KUHLMANN 2001; KUHLMANN 2002: 133-138; KUPER / FÖRSTER in press). Being a small, flat-topped sandstone cone some 20 m high, the hill is singled out from hundreds of similar ones in the region due to the steep rock face on its eastern side (fig. 11). A natural step at the foot of the rock face had artificially been enlarged to form a terrace 3-4 m wide and 42 m long. The terrace is fenced in by a dry-stone wall which is preserved up to 2 m high in some parts, and a central transverse wall divides it into two compartments (fig. 16-17).

On the rear rock face, where the cliff edges were pierced at 19 points between 1.5 m and 2 m above the present terrace surface level to form 'eyelets' of yet unknown purpose, numerous engravings, cut recesses and hieroglyphic inscriptions bear witness to pharaonic expeditions (fig. 12). Apart from the inscriptions that include several "signatures" of quarry workers or stone-masons, there is, for example, a depinto in red of a Pharaoh smiting the enemies, a griffin with outspread wings, and a boat towed by men. Moreover, several graffiti representing, inter alia, giraffes, ostriches, antelopes as well as linear figures identifiable as humans provide evidence for an occupation of the site as early as prehistoric times. This is also indicated by a number of grinding stones, flint artefacts and ostrich eggshell beads found around the foot of the hill.

According to a preliminary study of the epigraphic material by K.P. Kuhlmann (KUHLMANN 2002: 133-138) - first scholar on the spot and cooperation partner of the ACACIA project - the site had seen activities of at least three subsequent pharaonic expeditions, two in the reign of Khufu (fig. 13) and one in the reign of Radjedef (or Djedefre), his son and successor. The longest inscription on the rear rock face of the terrace (fig. 14) records an expedition led by the officers Jj-mrjj and Bbj in "the year after the thirteenth time of counting the cattle", i.e. regnal year 27, of Khufu, which extends the generally accepted length of his reign by four years. As stated by the text, Jj-mrjj and Bbj had come there with two regiments of recruits (up to 400 men) in order to "make mefat", following Kuhlmann's interpretation most probably a mineral powder used for paint - surely an important need in regard to the huge building projects of the Fourth Dynasty. As another inscription records, Bbj had been to the site on his own already two years earlier, at that time leading only one regiment but for the same reason, to "produce all kinds (?) of mefat".

Radjedef's name appears - in contrast to Khufu's - only once but in a remarkable manner: A short inscription including his cartouche is enclosed by a frame surmounted by two humps (fig. 15). Since this frame resembles the hieroglyphic sign for "mountain", and since the same shape appears several times filled with a number of zig-zag lines similar to the hieroglyphic word for "water", Kuhlmann suggested that "Radjedef's Mountain (of Water)" might be the Egyptian name for this location. Meanwhile, several more attestations of the framed "water motif" have been found in the surroundings of site Khufu 01/01. In no case they are associated with any hieroglyphs, thus challenging Kuhlmann's interpretation.

In order to take preliminary measures for the documentation and protection of the site, a first field campaign, covering 19 days, has been carried out by ACACIA in spring 2002 (KUPER / FÖRSTER in press). Ground plans of the whole hill and the terrace with its surrounding wall were drawn to scale, and all surface finds and loose decorated blocks mapped and collected. In addition, the numerous rock engravings were recorded in a preliminary way, including some decorated stones that were found within the dry-stone wall. Obviously they once were part of the rear rock wall before being reused.

In order to examine the archaeological potential of the terrace, a trial trench of 1 x 4 m, running from a 'cache' (one of eight niches cut up to one metre deep into the rock and extending below the present terrace surface) below the Radjedef inscription in the east to the dry-stone wall in the west, was excavated (fig. 16-17). Surprisingly, a stratigraphy of more than one metre in depth was revealed (fig. 18-20). Following ca. 20 cm of windblown sand and a layer of coarse rock debris, a near-continuous layer of fine yellow sand was exposed. Apparently this sand layer was artificially deposited in order to level the surface. As shown by several potsherds, other artefacts including a number of seal impressions (fig. 21), and the remains of three hearths in its upper reaches, this layer clearly represents a living floor extending into the 'cache'. Its eastern limits run under blocks of the dry-stone wall, perhaps indicating two phases in the wall's construction. Below other hearths were exposed, the lowest of them at the bottom of a pit surprisingly containing numerous parts of locusts and even complete specimens (along with well preserved charred plant remains). Obviously they had been roasted on the spot as part of an ancient diet.

One locust has been radiocarbon dated to about 2610 BC, while a charcoal date of 2780 BC was obtained from the same hearth. This does not exactly fit with the historical chronology, which places the reigns of Khufu and Radjedef to between ca. 2604 and 2572 BC (VON BECKERATH 1997: 159). However, the discrepancy of radiocarbon dates and historical chronology in Egypt, especially in regard to the Early Dynastic and Old Kingdom periods, and the problem of calibration has long been recognized (HAAS et al. 1987; 1992-93; cf. also VON BECKERATH 1997: 55-56).

The pottery found during the excavation could not be studied during this campaign because it was only brought to the excavation house in Dakhla at the very end of the season, after the ceramologist had left. A brief investigation of the surface material previously collected indicated that it fits very well with the early Fourth Dynasty date known

from the rock-inscriptions. The large majority of the pottery was produced in an oasis fabric. There are however also a few Nile silt and marl clay imports from the Nile valley. The vessel types consist mainly of cups, bowls and storage jars. Unfortunately it was not possible to reconstruct complete vessel shapes.

Additionally, three individual depots of pottery at the foot of the hill were excavated, all containing so-called 'Clayton rings' (fig. 22; for this puzzling type of pottery, see RIEMER / KUPER 2000). One depot consisted of a small pit dug into the ground of a stone circle. The pit was littered with ten rings and disks many of which show potmarks on their exterior (fig. 23). A fourth depot was found some 50 m away from the sandstone hill. Three rings and two disks covered by a pointed vessel of the Sheikh Muftah unit were set in front of a small sandstone rock. One of the disks was made out of a red polished sherd which points to an Old Kingdom age of the 'Clayton rings' found on the site. With regard to some disks from Fourth Dynasty layers of the excavation on the terrace which were also made from red polished sherds, they all may be considered contemporaneous.

When site Khufu 01/01 was revisited in November 2002, the excavation area on the terrace has been found completely vandalized - another example that shows the urgent need for some means to protect archaeological sites in the deep desert.
R.K. / F.F.

For a general overview on the archaeological sub-projects of ACACIA working in Egypt (labelled A1 "Climatic Change and Human Settlement between the Nile Valley and the Central Sahara" and E3 "Routes and Trade in Arid Zones"), see KUPER 2002, cf. also GRIMAL / ADLY 2003: 112-114. - The team of the field season 2002 comprised: Dr. Rudolph Kuper (head of the mission, Prehistorian at University of Cologne), 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), Karin Kindermann M.A. (Prehistorian at University of Cologne), Bettina Petrick M.A. (Prehistorian at University of Cologne), Oliver Rück M.A. (Prehistorian at University of Cologne), Peter Schönfeld (student of Prehistory at University of Bonn), Katja Oehmen (student of Prehistory at University of Cologne), Hardy Prison (student of Prehistory at University of Bonn), and Wolfgang Frank (technician). We wish to thank the Permanent Committee of the Supreme Council of Antiquities for the permission to carry out the work as well as Sayed Yamany, Chief Inspector, Dakhla oasis, for his kind support.

Notes

1 Already in 1985 the site has been investigated by the B.O.S. (Besiedlungsgeschichte der Ost-Sahara) project, Cologne.

2 In order to deter desert tourists and possible looters, it was decided to keep the exact location of the site secret.

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Figures

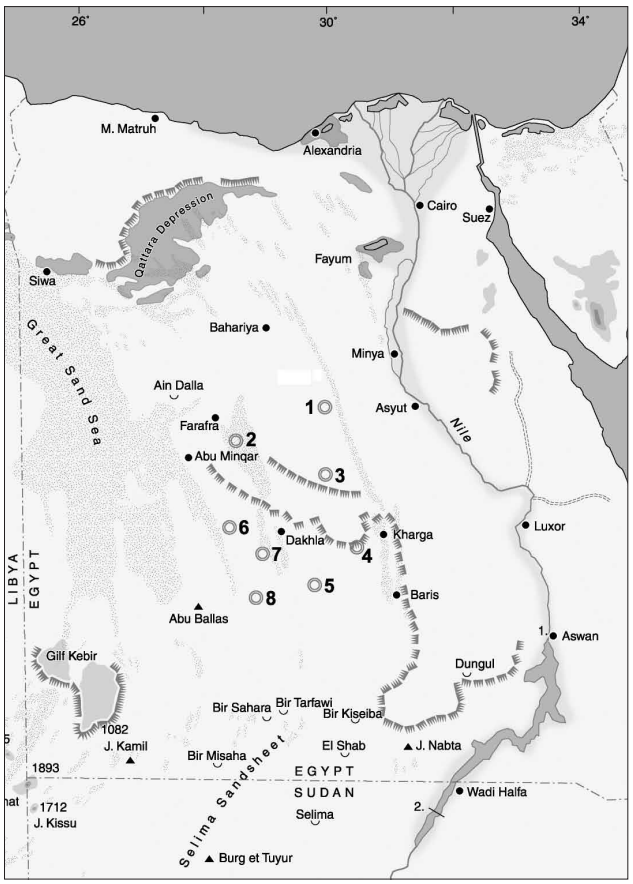

Fig. 1 *Working areas of the ACACIA’s sub-projects working in Egypt in 2002.*

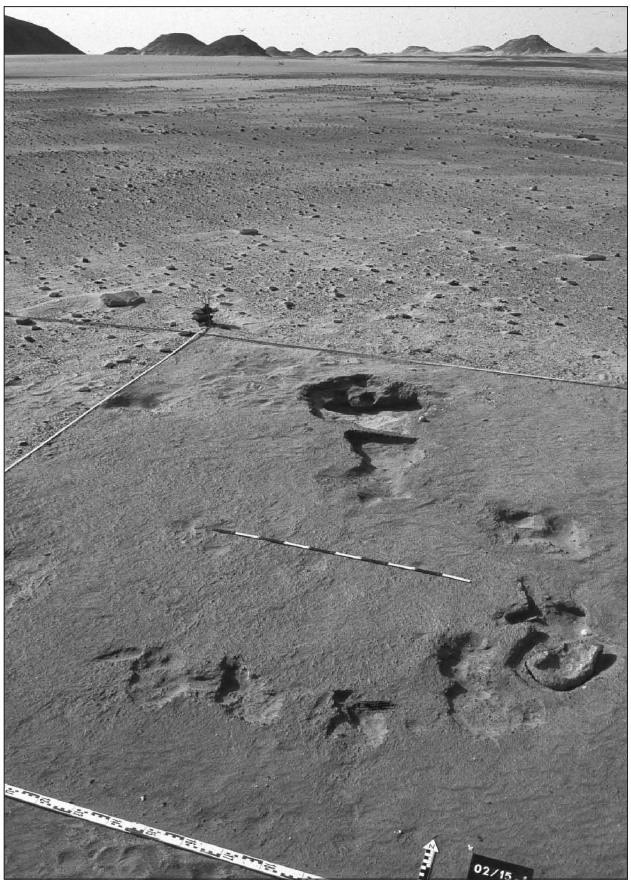

Fig. 2 *Excavation of an Early Holocene camp site (c. 7000 BC) on site Khufu 02/15 showing pits littered with bones of hunted gazelles.*

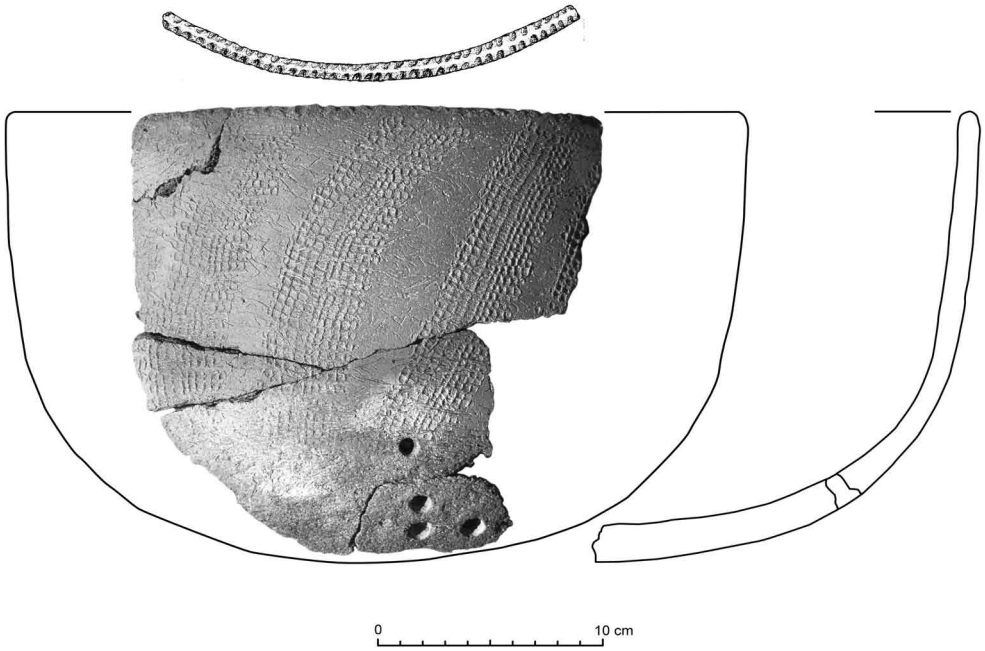

Fig. 3 *Bowl from site Khufu 02/14 showing a packed dotted zig-zag decoration on the exterior surface.*

Fig. 4 *One of the sites of the Abu Ballas Trail (Jaqub 99/31) with its Old Kingdom pottery depot near a sandstone cone.*

Fig. 5 *Large storage jars found in Abu Ballas 85/55, the one in the fore-ground bearing a potmark.*

Fig. 6 *Big cairn (Alam) at site Jaqub 99/30.*

Fig. 7 *Abu Ballas 85/55: the remains of the Old Kingdom – First Intermediate Period pottery depot as found in March 2002, obviously arranged by desert tourists.*

Fig. 8 *Small cave at the eastern slope of Abu Ballas, and the excavated area in front of it.*

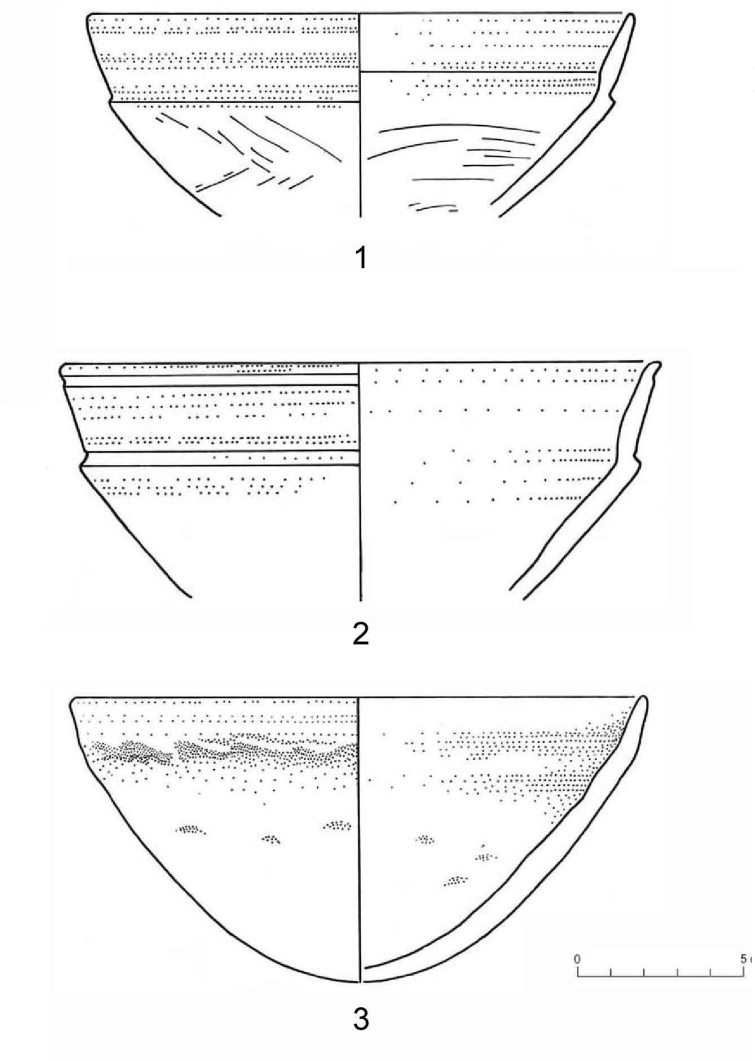

Fig. 9 *1-2 Cups "à carène basse" from sites Abu Ballas 85/55 and Jaqub 99/31. 3 Broad convex cup from site Abu Ballas 85/55.*

Fig. 10 *Potmark on a New Kingdom jar representing a resting donkey.*

Fig. 11 *Site Khufu 01/01 as seen from north-east.*

Fig. 12 *A number of engravings, cut recesses and hieroglyphic inscriptions (including stone-masons' "signatures") on the rear rock face of the terrace. Note also the 'eyelet' on the upper right.*

Fig. 13 One of a number of attestations of Khufu's name engraved on the rock.

Fig. 14 The main inscription recording an expedition of two officers in Khufu's 27th regnal year. On the right a representation of the oasis god Igai.

Fig. 15 *Radjedef's name enclosed by a frame that is surmounted by two humps: the Egyptian name for the location?*

Fig. 16 *First test excavation on the terrace fenced in by the dry-stone wall (view from south).*

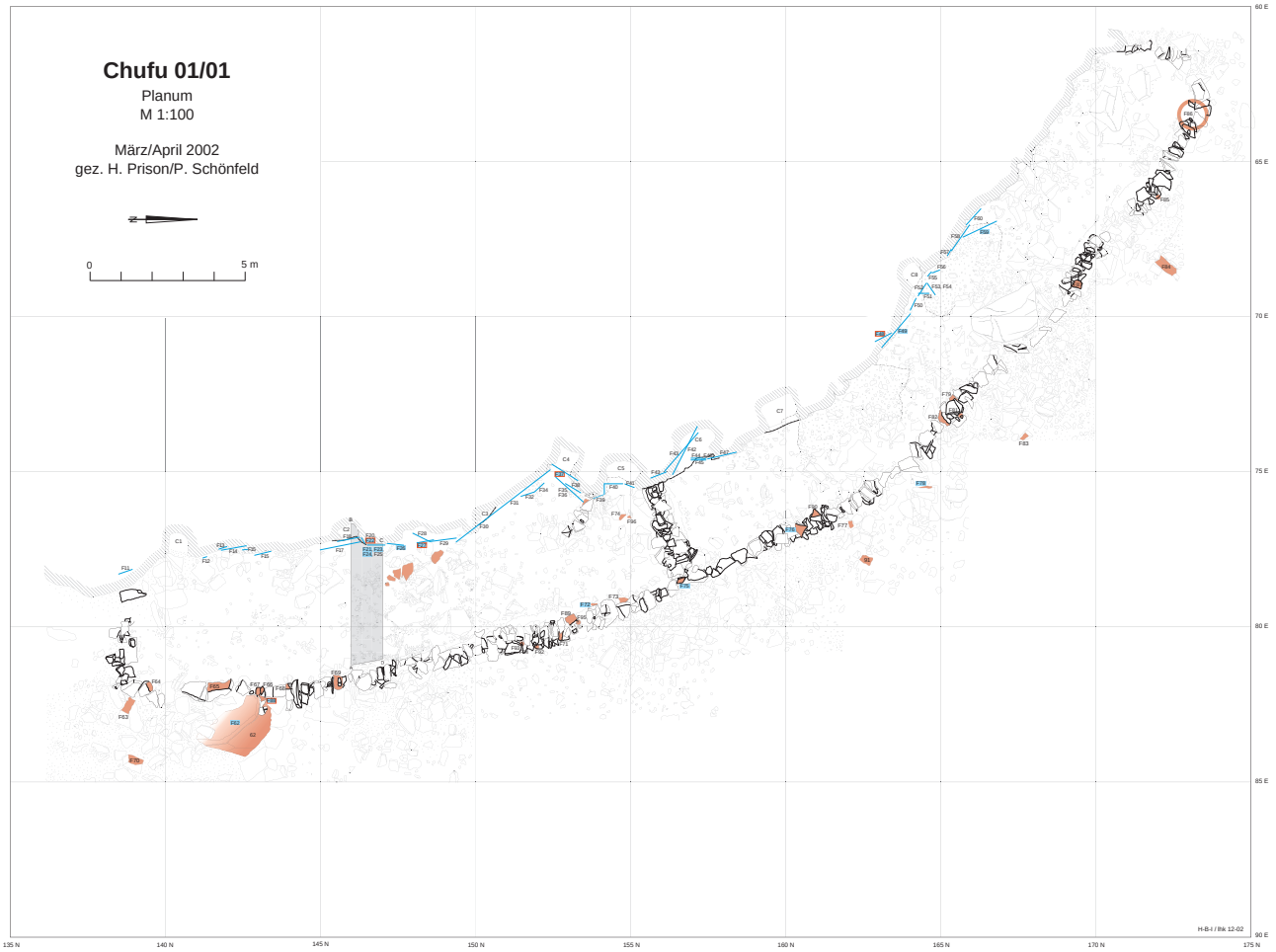

Fig. 17 Ground plan of the terrace of Khufu 01/01 showing its compartments as defined by the dry-stone walls and the location of the trench.

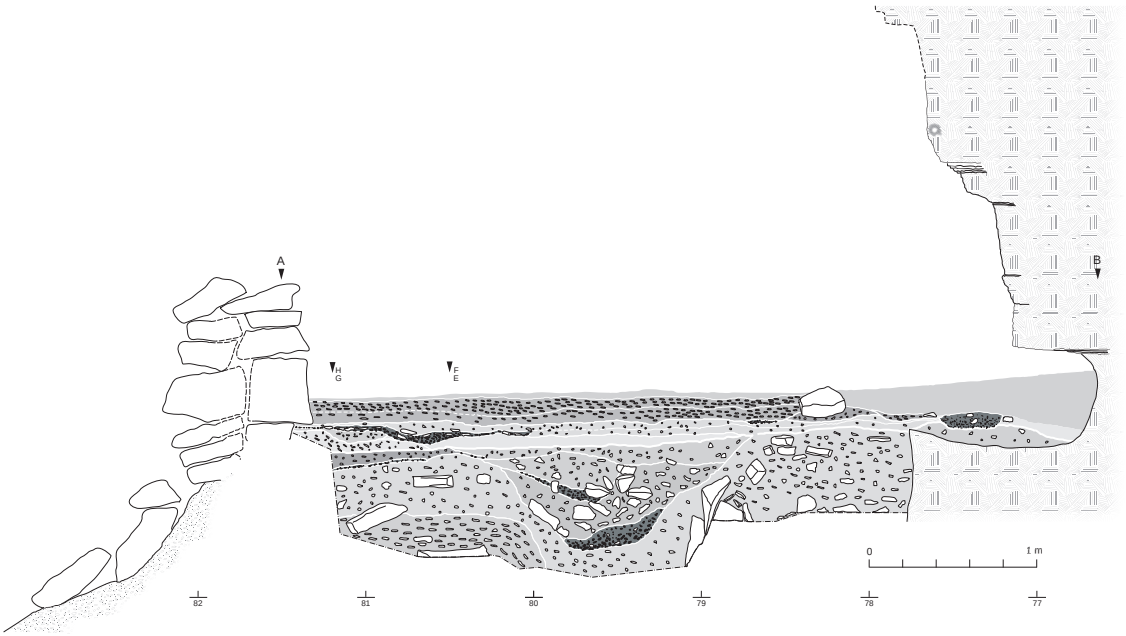

Fig. 18 Section A – B of the trench exposing several hearths and the pharaonic floor between the dry-stone wall and 'cache 2'.

Fig. 19 The trench having reached more than one metre in depth as seen from east.

Fig. 20 The stratigraphy as exposed in the western reaches of the trench. On top blocks of the dry-stone wall.

Fig. 21 One of some 60 seal impressions or fragments thereof, i.a. showing a composite hieroglyph probably referring to a necropole (Xrt-nTr).

Fig. 22 Collection of 'Clayton-rings' excavated at the foot of the hill.

Fig. 23 Two 'Clayton-rings' with potmarks on their exterior.