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Chufu 01/01 - a Pharaonic Outpost in the Western Desert of Egypt

Until not too long ago the Western Desert of Egypt, outside of the oases, presented itself as terra incognita to Egyptologists. This was about to change a couple of years ago when the so called Abu Ballas Trail with its around 30 way stations was discovered, indicating pharaonic advances into the desert west of the Dakhla oasis for more than 350 kilometres until the Gilf Kebir plateau. In December 2000 a new and important site outside the Abu Ballas Trail was discovered, yet again by Carlo Bergmann. This site featuring hieroglyphic inscriptions among these the name of Pharaoh Khufu, the builder of the Great Pyramid of Giza, and thus being named "Chufu 01/01" (Bergman and Kuhlmann 2001; Kuper 2003: 26-34; Kuper and Förster 2003; Kuhlmann 2005). The following paper will give a preliminary report on the ongoing research at this Fourth Dynasty desert camp site.

The site is situated about 60 km southwest of the Dakhla oasis in an extensive hilly region. Among these the pharaonic remains were discovered on a c. 20 m high hill of light brown sandstone (Fig. 1). On its eastern side about halfway up a natural step has artificially been enlarged to form a 42 m long and 3 to 4 m wide terrace bordered by an intricate dry stone wall. Behind the terrace a several meters high rock face arises, which lends the hill its unique appearance among the hundreds of small hills in the region. Worked into this rock face, which is decorated next to the afore mentioned hieroglyphics with seemingly prehistoric petroglyphs, there are seven 1 m by 1 m large recesses extending about 1 m deep into the rock at ground level. At higher levels, up to two metres above the modern ground,

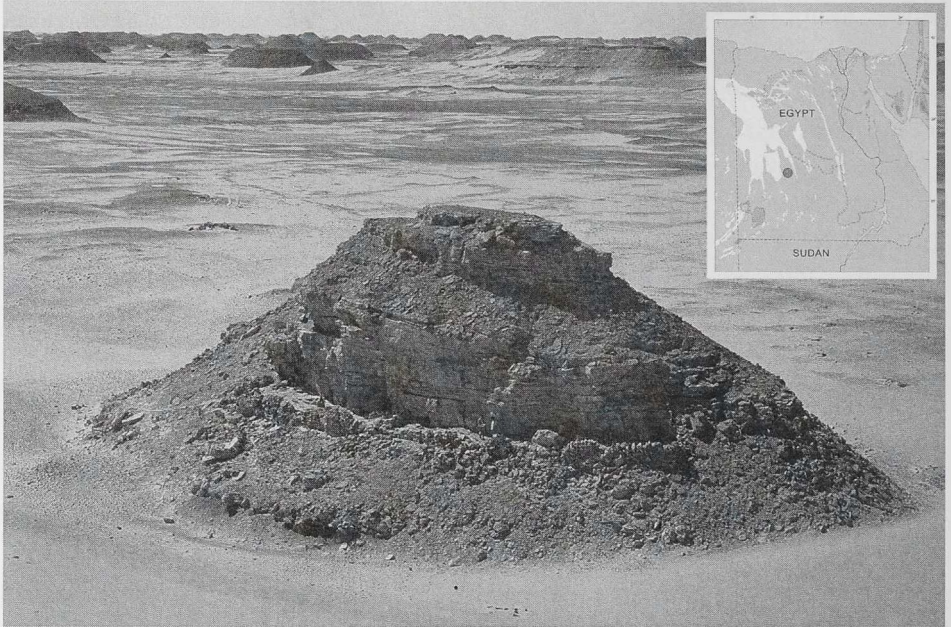


Fig. 1. The Site Chufu 01/01.

numerous eyelets were chiselled into the rock face. The hieroglyphic inscriptions engraved on the rock face account for at least three subsequent pharaonic expeditions during the reign of the Pharaohs Khufu and his son Djedefre (Kuhlmann 2005). The reference to the two Pharaohs through their cartouches demonstrates the official character of the expeditions. It can be gathered from the inscriptions that they were carried out by two so called “recruit supervisors”, military personnel by the names of Iymery and Beby.

Excavations

These observations made clear, that this was not only one of the remotest, but also the oldest verified proof of ancient Egyptian expansion into the Western Desert. In addition there seemed to be the possibility of finding evidence for potential contacts between the pharaonic people and the late prehistoric desert dwellers. Therefore the extensive research of the site seemed to be the appropriate measures.

As the site was endangered because of its proximity to the oases first archaeological excavations were immediately carried out by the ACACIA project of the University of Cologne in autumn 2001 (Kuper and Förster 2003). A small test excavation on the terrace below the Djedefre inscription was instigated in order to



Fig. 2. Chufu 01/01. South-profile test excavation.

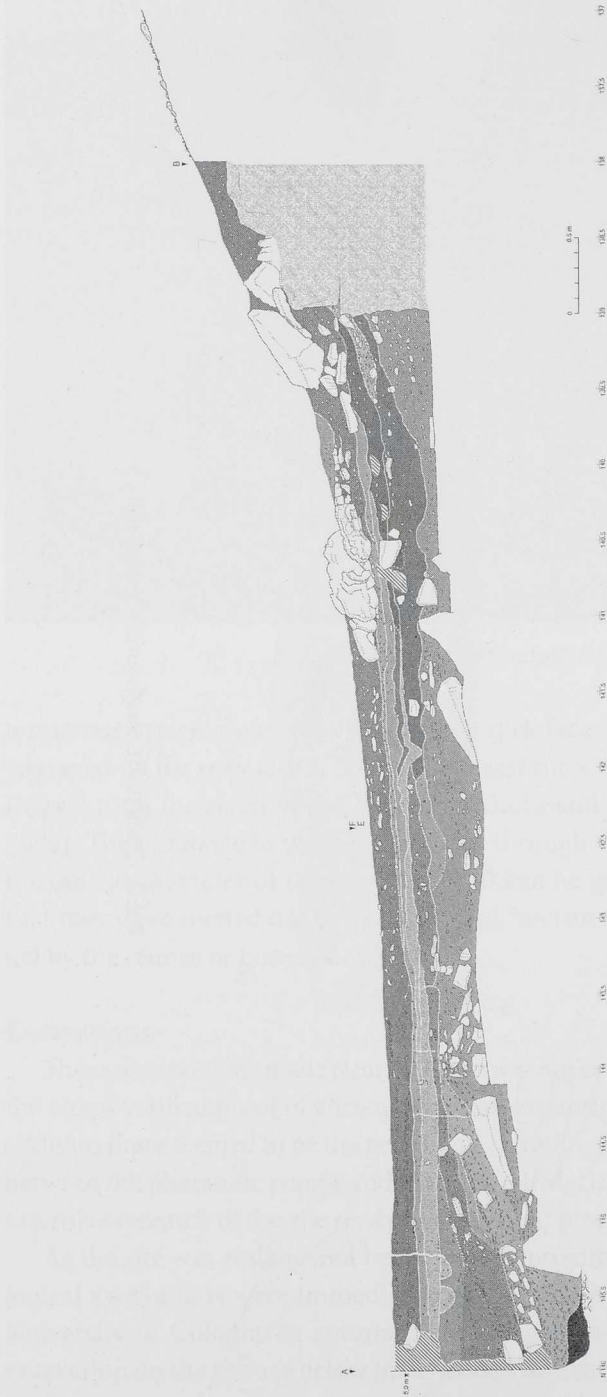


Fig. 3. Chufu 01/01. Longitudinal profile in the southern part of the terrace.

gain information on potential settlement structures. Soon it became clear that the settlement layers were unexpectedly well preserved, due to the sheltered situation on the terrace. The recorded stratigraphy with a thickness of more than one metre showed up a multiphase usage of the site (Fig. 2).

Underneath a c. 20 cm thick layer of shifting sand and recent rubble a continuous layer of yellow dune-sand was discovered. This had obviously been brought onto the terrace in order to level the rough surface. Pottery sherds and stone artefacts as well as at least three campfire sites embedded into the layer identify this as an intensively used surface. One of these hearths was radiocarbon dated to 2739 ± 93 BC (KIA-17740). Below the levelling layer an earlier occupation of the site is indicated by two charcoal concentrations, radiocarbon dated slightly older to 2764 ± 74 calBC (KIA 17739) and 2761 ± 78 calBC (KIA 20116).

From these layers derived not only Old Kingdom Egyptian style pottery – most likely produced in the oasis – but also sherds of pottery in the tradition of the local prehistoric Sheikh Muftah cultural unit. Therefore already at this point in time the archaeological potential of the site became strikingly clear, not least of all due to the extraordinarily good preservation of organic matter. As the necessary extensive excavation of the site as well as a systematic research of its surroundings could not be realized within the scope of the ACACIA project a new project was launched in 2006. Named “Chufu 01/01 – eine pharaonische Wüstenstation und ihr landschaftsarchäologischer Kontext” it is a corporate scheme between the German Archaeological Institute (K.P. Kuhlmann, H. Parzinger) and the University of Cologne (R. Kuper) and is funded by the German Research Council (DFG).

During a first excavation campaign in spring 2006 the archaeological research at the site was resumed. Starting from the test trench the excavation was carried on in the southern part of the terrace. During the second campaign in autumn 2006 the excavation was expanded to the northern part of the terrace beyond the dry stone wall separating the terrace into two. The excavation was carried out following natural layers. By gradually uncovering the ancient surfaces, an examination of the distinct layers with regard to chronological and functional differences was made possible. The longitudinal profile (Fig. 3) orientated from North to South in the southern part of the terrace shows that the levelling layer of coarse dune sand stemming from the pharaonic occupation can be traced over large parts of the excavation area. To the South this layer thins out gradually.

In large parts of the southern excavation area an up to 10 cm thick layer containing large amounts of dung, animal hairs and plant fibres covering the pharaonic layers could be traced. It is in turn covered by natural rubble layers. The high con-

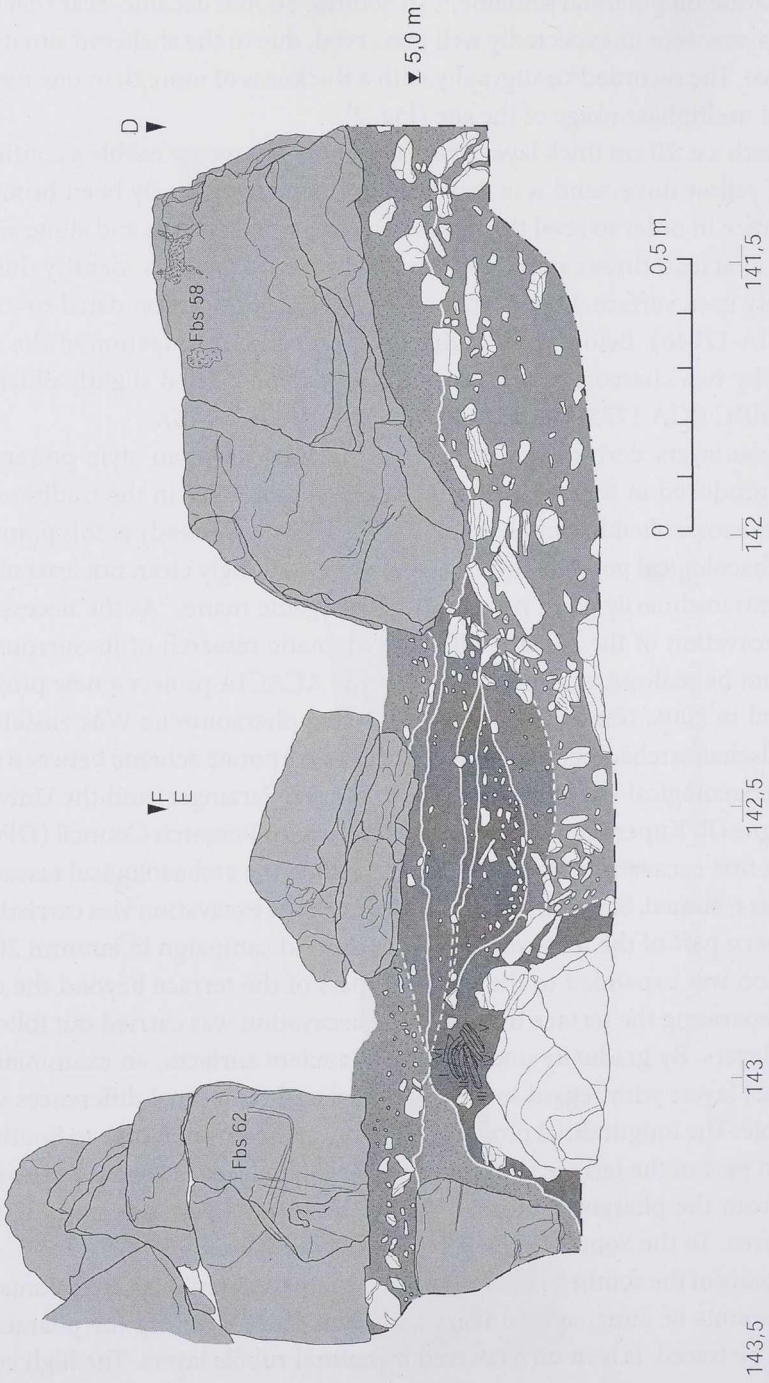


Fig. 4. Chufu 01/01. East-profile showing the entrance in the southern part of the terrace.

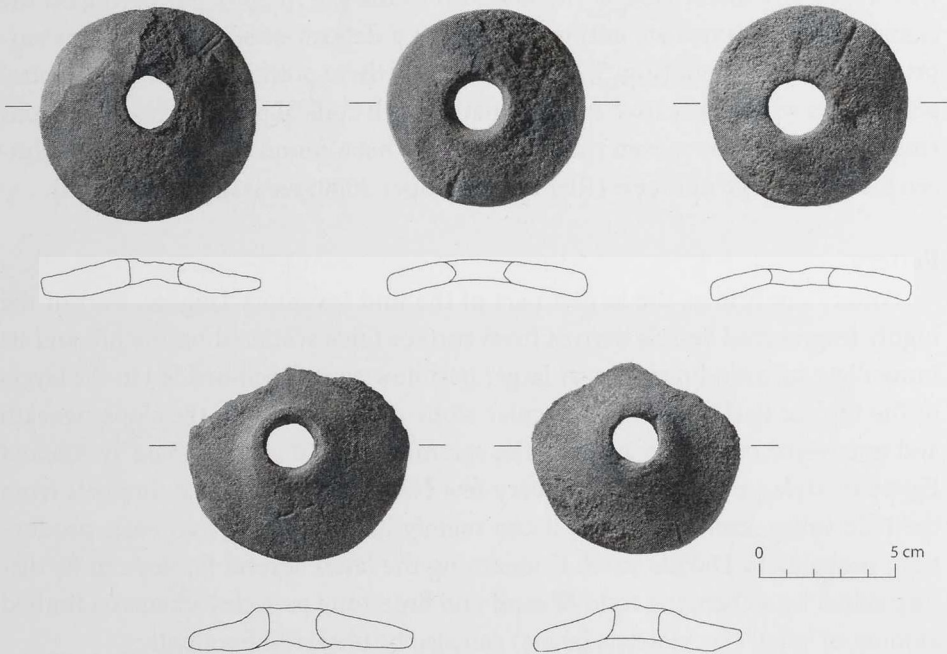


Fig. 5. Chufu 01/01. Deposit of Clayton-discs in the entrance to the terrace.

centration of dung which could originate from sheep or goat may indicate a post-pharaonic usage of the terrace as a pen, however a detailed analysis of the dung has not been carried out until now. More or less regular pit-like features immediately in or under the coarse sand layer were clearly discernable in the profiles of the southern part of the terrace. In the planum they become apparent as round to oval, thereby permitting an interpretation as postholes. These could be proven on the entire excavation area. A reference of these features to the chiselled eye-lets in the rock-face as it might be expected in a context of a tent like roof construction is not clearly visible. However a concentration of the postholes along the longitudinal axis of the southern part of the terrace, as would be expected, already becomes apparent.

At one part of the exterior wall of the southern terrace, the wall turns outward thereby creating an opening which is framed by a large boulder. Here evidence of the entrance to the southern terrace area could be uncovered. The profile set up immediately in front of the wall (Fig. 4) shows a hollow deposit of the settlement layers documenting a worn out channel resulting from the entrance usage. This could also be proven in the planum of the area inside the wall as well as on the outside slope of the hill, where a worn out path probably deriving from former times

was still clearly discernable at the first visit to the site in 2001. Bordering on the channel in the immediate entrance situation a deposit of six Clayton-discs surprisingly came to light (Fig. 5). The function of these pottery-discs with a central perforation which were used in combination with conical pottery-rings (Clayton-rings) is still unknown even though they have been found throughout the Western Desert in large numbers (Riemer and Kuper 2000; see last: Riemer 2004).

Pottery

Pottery constitutes the largest part of the find inventory (Fig. 6). Part of the highly fragmented vessels derives from surface finds scattered on the hill and its immediate surroundings. The far larger part however was embedded in the layers of the terrace itself and of the circular stone construction on the slope beneath and uncovered during excavation. The ceramic material is dominated by Ancient Egyptian style pottery. Besides a very few Nile silt and marl clay imports from the Nile valley, exclusively jars, it can mainly be attributed to an oasis production, probably in Dakhla itself. Concerning the latter several fabrics can be distinguished by a changing ratio of sand and limestone particles whereas a limited amount of small clay platelets (shale) can also be observed frequently.

The vessel inventory is composed of cups, bowls and storage jars of different size. These shapes offer many parallels to the Nile Valley. In accordance to St. Hendrickx the pottery types are characteristic for the early Old Kingdom as can be seen from Meidum bowl fragments with deep shape and high rim. It fits very well with the early Fourth Dynasty date known from the rock-inscriptions. In Dakhla however, where most of the vessels seem to have been produced, only few remains of the Fourth Dynasty have been located so far (Kaper and Willems 2002; Hope 2007).

In addition the pottery from the site also comprises a local component. This is characterized by a small amount of late prehistoric pottery tempered with sand, sand and limestone or a high amount of coarse shale. Among these fabrics Clayton-rings and the associated Clayton-discs, as to date of unknown function, prevail.

The local pottery spectrum is completed essentially by coarsely made undecorated deep bowls. Concerning temper, shape and ceramic technology the local pottery can be attributed to the late prehistoric Sheikh Muftah cultural unit in the Dakhla region (Hope 2002; Riemer and Schönfeld 2006).

The distribution of the dominating Egyptian style pottery in the excavated area shows clear concentrations in some areas, especially in the middle of the southern part of the terrace. Pottery in the tradition of the local prehistoric Sheikh Muftah cultural unit shows a sparser but nevertheless regular distribution. Whether these

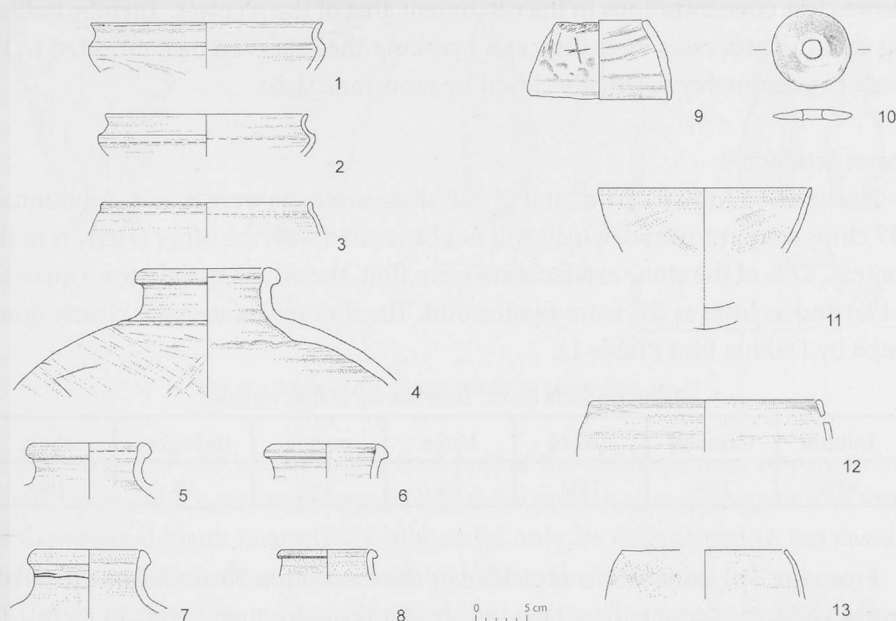


Fig. 6. Chufu 01/01. Pottery: Egyptian fabrics (1-8) and local late prehistoric fabrics (9-13).

distribution patterns can be attributed to functional differences of the distinct terrace areas according to various activity zones, also with regard to chronological aspects will be one objective of the ongoing research.

Mud seals

A find category that underlines the official character of the pharaonic expeditions are mud seals partially with hieroglyph impressions, embedded in the settlements layers in vast numbers (Fig. 7; Förster 2008). The fragmented seals and seal blanks recovered during the excavation prove that both sealed goods were broken and - to date unknown goods - were sealed on site. The distribution of the seals



Fig. 7. Chufu 01/01. Seal impressions.

shows clear concentrations in the catchment area of the recesses. Thereby indicating that the processes of sealing and breaking the seals can be connected to the recesses presumably originally closed by sandstone slabs.

Stone artefacts

At the site Chufu 01/01 a total of 340 stone artefacts were found. Additionally 447 chips were recovered, which will not be treated with the other artefacts in this context. 87% of the stone artefacts are from flint, the others mainly from quartzite (11%) and as little as 2% from fossil wood. The flint raw material is clearly dominated by Dakhla flint (Table 1).

Table 1. Chufu 01/01. Distribution of flint varieties

Dakhla	Caramel	Brown	beige	purple	light grey	others
42%	27%	16%	7%	4%	3%	1%

From the 340 stone artefacts yielded by the excavation 78 are definite tools (exemplary Fig. 8). Among these the side scraper is predominant with 33 pieces. Together with 18 retouched blades and flakes as well as 10 borers they make up the major part of the tools found. The remaining tools which appear only sporadically are end scrapers (4), denticulates (4) and burins (2). 55 tools were executed on flakes, 15 on blades, four on thermo debris (for a detailed definition of this term see KINDERMANN 2006: 40) and three on debris. Flakes were preferably used for the production of side scrapers and retouched pieces. Blades were worked into retouched pieces and side scrapers as well. The production of the end scrapers did not show any preference towards the one blank form or the other, they appear on flakes, thermo debris and blades alike. The burins were all made from flakes.

When considering the different blank forms for the individual raw materials it becomes apparent that flakes dominate in all varieties. Only with the purple coloured flint flakes and debris occur in the same numbers. Overall flakes constitute far more than 50% of the blank forms. Second most important among the blank forms is the debris which accounts for a third or less of the blanks present on the site. Blades pose only a small percentage of the blanks with 1-8 pieces depending on the variety.

Almost half of all tools found at the site Chufu 01/01 were worked on older ("Neolithic") tools. These were presumably collected from the Holocene surface sites surrounding the hill and its vicinity. These old tools and blanks were only slightly modified or reworked. Tools which were reworked include side scrapers,

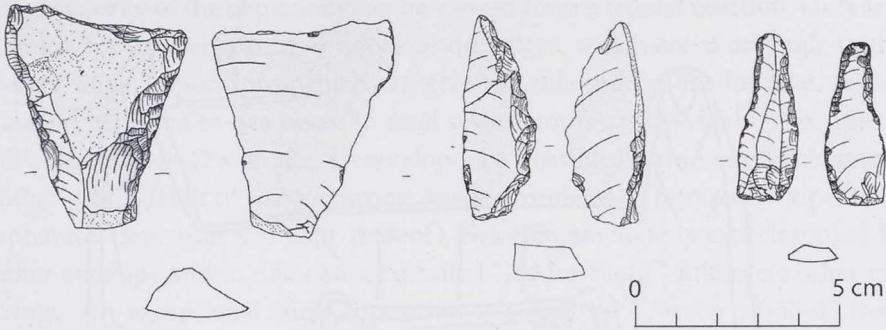


Fig. 8. Chufu 01/01. Stone artefacts: exemplary tools.

retouched pieces and burins. More than half of the old tools were reworked into side scrapers, which was to be expected as these pose the most frequent tool form. As the original blank respectively tool could only be determined in ten cases, a preference of certain forms for reworking can not be discerned.

Unfortunately it is not possible at this stage to allocate the reused tools to certain layers and thereby to a settlement period, as half of these originate from mixed layers, which cannot be ascribed to a specific phase of occupation. In most of these cases it must be assumed that the artefacts were subject to bio-turbation.

Nevertheless an in depth analysis of these artefacts seems promising as they can give information on the raw material procurement as well as the organization of the expedition into the Khufu region. Preparation flakes only appear infrequently thereby indicating that the majority of the tools were not made on site. However the rather large percentage of chips in the stone material shows that the main activities were reworking and resharping of already existing tools. The large percentage of tools on artefacts which were already patinated shows that not only were tools brought along and reworked but also old tools, the only available "raw material" on site, were resharpend or used to make new tools.

Rock art

At the site Chufu 01/01 95 panels of correlated rock engravings could be documented on the rock face at the backplane of the terrace. Among these graphic units, most of which belong into a prehistoric context, animals are clearly predominant. These are followed by half as many depictions of humans. Unspecific lines and graphic/geometric symbols make up the third group. A special position among these is taken by the so called "water symbols" even though they are the

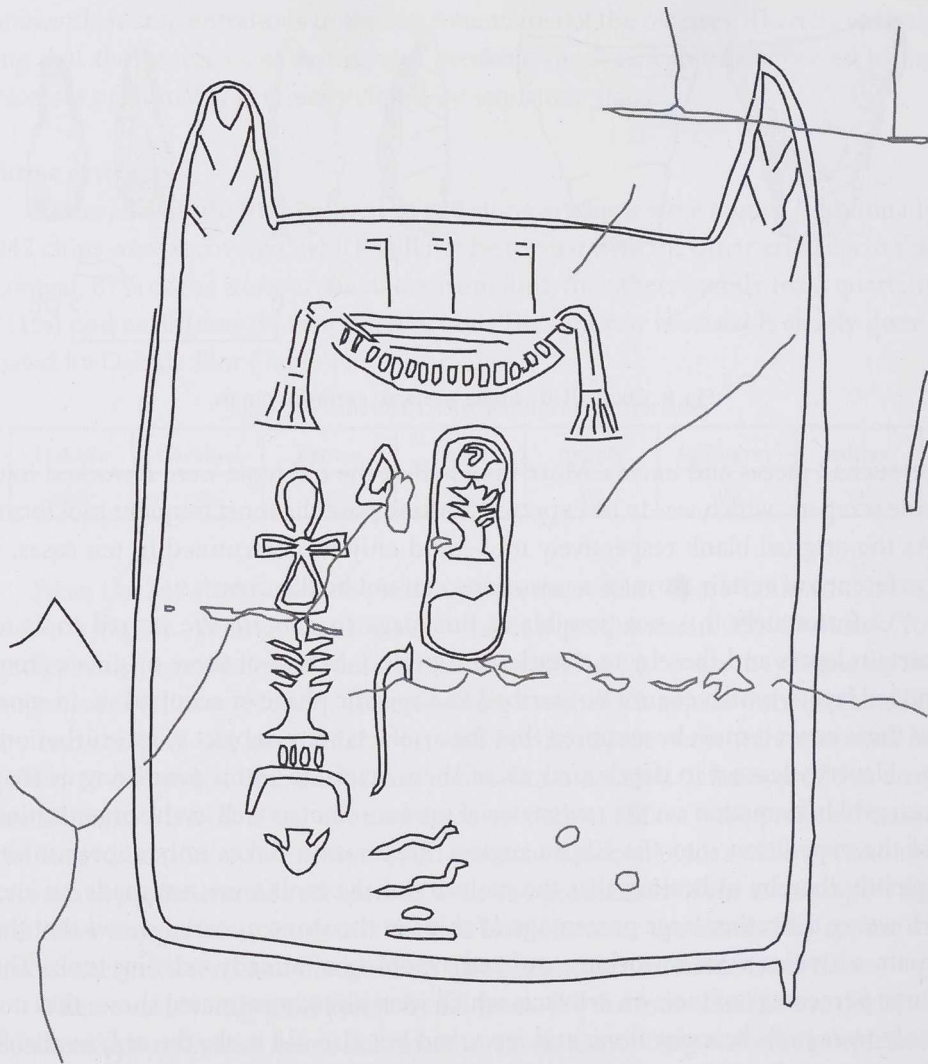


Fig. 9. Chufu 01/01. "Water symbol" superimposed by cartouche of Djedefre.

scarcest depictions. They are made up of parallel horizontal zigzag lines framed by a rectangular outline with triangular hornlike shapes connected by a horizontal line on the top. As the zigzag lines resemble the hieroglyph for water and the surrounding motif that for mountain these ideograms were formerly referred to as "water mountain" (Kuhlmann 2005: 270-278). Symbols like these were discovered at several sites in the broader vicinity of the Chufu site, but to date there are no indications as to their meaning.

The majority of the depictions can be viewed from a frontal position. Only few of the figures were engraved in nooks or on ledges, which are at an angle to the observer. Superimpositions, which can give valuable indications for relative dating, could be noted in five cases. In total seven motifs are overlaid by six others. In all cases animals (2 x giraffe, 4 x antelope, 1 x possible lion) were superimposed by other motifs. Half of the overlaying images are those of humans (2 x persons, 1 x pharaoh depiction and copy thereof), twice an antelope is superimposed by another antelope and in one case a so called “ladder-motif” intersects other engravings. An exceptional superimposition is posed by a “water symbol” from which the lines supposedly representing water were erased in order to apply the cartouche of Djedefre (Fig. 9). 23 % of the figures were pecked, 41 % and thereby the majority are made up of engraved lines. Less frequently the combination of pecking and engraving was employed (17% of the images). This combination can usually be found in images of animals where the body is pecked and the horns and/or legs are engraved. Other possible combinations of technique are engraving and polishing (14%) as well as pecking and polishing (2%). In 3 % of all depictions polishing was the only technique used. It was not possible to discern a focus of the different techniques on the individual panels. The outlines of the depictions are always very carefully executed, even of those images which were pecked. According to Claßen et al. this implies the utilization of a punch (Claßen, Kindermann, Pastoors, Riemer 2001: 358-359).

The execution of the images varies greatly. Highly schematic figures as well as precisely detailed images can be found. Among the animal depictions of the site Chufu 01/01 antelopes prevail (Table 2). Almost 30% of all animal images cannot be identified other than being quadrupeds or unspecific mammals. Ostriches and giraffes make up 17 % of all animals each. As singular depictions gryphon and donkey are prominent, which also appear on their own and cannot be assigned to a panel of other images.

Table 2. Chufu 01/01. Distribution of animal depictions (n=139)

Antelope	ostrich	Giraffe	Gryphon	donkey	unspecific
49	24	24	1	1	40

With two exceptions all animals are orientated in the anatomically correct position, e.g. back up and legs down. The exceptions are two antelopes which face slightly to the upper right, the back thereby showing to the left instead of up. All animals were depicted from a side view, so that in all cases a viewing direction

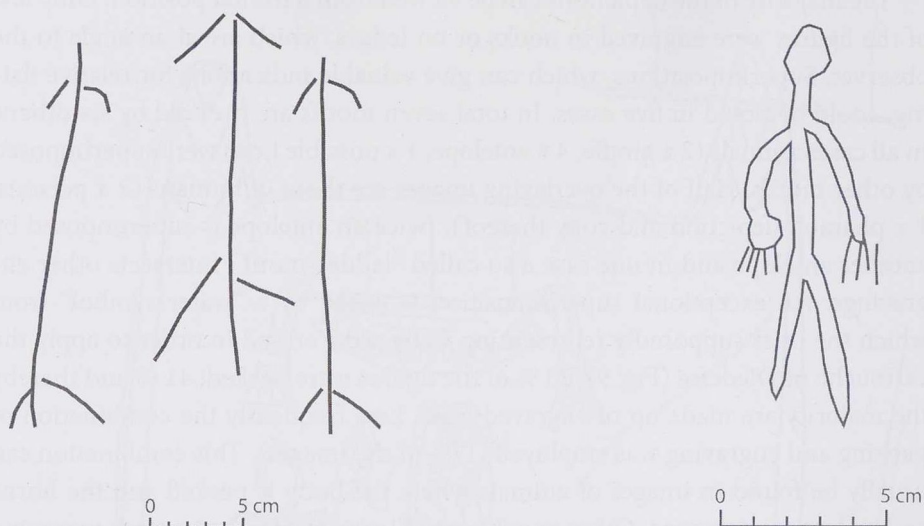


Fig. 10. Chufu 01/01. Two different types of male depictions.

could be discerned. With 44 animals facing to the right and 36 to the left the distribution is almost even. Into these numbers the two antelopes facing slightly to the upper right were also included, as the diversion from the normal orientation was not severe enough to justify “up” as viewing direction.

The animals at the site Chufu 01/01 are usually executed with the anatomically correct number of legs. All ostriches have two legs and all quadrupeds are shown with two front as well as two hind legs. In two cases so far animals were depicted with an incorrect number of legs. One quadruped has an unclear number of legs, but at least five are recognizable. Also there is a pair of ostriches with apparently only one leg each, this could however be due to the highly schematic manner of representation. Moreover there is a giraffe with only one fore and one hind leg, but this could also be down to the fact, that it is not shown in gait as the other giraffes at the site. Therefore it shall be mentioned here but will not be counted among the animals with incorrect anatomical depiction.

A total of 68 human images could be recorded and 52 of these can be identified as male. 13 figures can be certainly recognized as female and 3 depictions cannot be definitely ascribed to one or the other. As there are however clearly more men than women shown at the site, and there are also several different ways of depicting men and only one fairly regulated motif for women it seems safe to

assume, that the gender unspecific images are also meant to be male. Humans are always shown frontally, therefore no viewing direction can be discerned. At the site this display is reserved for humans exclusively. For the women only one mode of depiction is present, within this scope however a large variety of execution is possibly from highly schematic to very detailed. The images of men can clearly be divided into two categories (Fig. 10). On the one hand those with a long engraved line for the body and two shorter lines for the arms and legs respectively, very rarely also some dots indicating the head were added (type “arrow man”). On the other there are depictions of men which are more “three-dimensional”, not represented as stick-figures as the “arrow men” but with a wider line for the body, a round head and sometimes even with smaller details, such as fingers.

Conclusion

The excavations at the site Chufu 01/01 yielded some new insights concerning Egyptian expansion to the land west of the Nile Valley as early as the Fourth Dynasty.

The comprehensive study of this precisely dated site, the so far oldest proof of old Egyptian presence in the Western Desert of Egypt far off the oases offers the opportunity not only to gain insights into the organisation and the execution of the Egyptian expeditions, but also to illuminate aspects of the ancient interactions between the Egyptian military and the local population. The forthcoming monographic publication of the site in the series *Africa Praehistorica* will in depth present the site’s archaeological remains and also discuss the issues addressed above in detail.

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