

## ■ EGYPT

### **The mid-Holocene Sheikh Muftah Cultural Unit of Dakhleh Oasis, South Central Egypt: a preliminary report on recent fieldwork**

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liminary report on the results of work carried out in the 1998, 2000 and 2001 field seasons. The recent fieldwork attempted to date and better define the Sheikh Muftah within its environmental setting (McDonald 2001). The earlier site survey had suggested that the mid-Holocene Sheikh Muftah was the earliest Holocene cultural unit which, under pressure of desertification, was mainly restricted year-round to the oasis, with sites concentrated in the oasis Central Lowlands (Kleindienst et al. 1999). Issues still to be resolved included the precise dating of the Sheikh Muftah unit (a ca. 5200-4000 bp time span extending into Old Kingdom times is indicated) and details concerning mid-Holocene environmental conditions and the adaptations of those who produced the Sheikh Muftah cultural stratigraphic unit. While the distribution of localities within the modern oasis boundaries, extending into Camel Thorn Basin to the southeast, might suggest sedentism, no structures were found during the earlier survey. There were no botanical remains to indicate human diet or the ecological setting. The extant faunal evidence, which included domesticates (cattle and goats) and a diverse wild fauna, seemed at odds with that for a deteriorated environment. Nor did the apparent confinement within Dakhleh entail cultural isolation, to judge from the many exotic materials and artifacts from the Nile Valley and elsewhere, and from the way stations located beyond the oasis. Furthermore, variation in artifact categories distributed among the 70 recorded sites suggested evolution through time away from distinctive Bashendi B assemblages, perhaps reflecting changes in adaptation, such as increasing sedentism or dependency upon cultivars, during Sheikh Muftah times.

In addressing these issues, an attempt was made to select, from among the few Sheikh Muftah sites that are not completely deflated, localities representing the various site sizes, regions within the oasis, and different periods within the ca. twelve hundred year span of the Sheikh Muftah. Of these sites (Figure 1), five (Localities 136, 105, 404, 108A and 380) were subjected to programs of mapping, controlled surface collection, and areal excavation. At another three localities, 381, 382 and 135, hearth mounds were dug for botanical soil samples. In addition, further site survey was conducted in the vicinity of Localities 136, 105, 382, 002 and 402.

## **Introduction**

The Sheikh Muftah is the youngest of the prehistoric cultural units in Dakhleh Oasis in the Egyptian Western Desert. Some 70 localities, most of them purely surface scatters, had been recorded during the Dakhleh Oasis Project's survey phase, completed in 1983 (McDonald 1999). In 1998, we resumed field work on the Sheikh Muftah, with programs of mapping, controlled surface collections, and excavation at selected sites. This is a pre-



## Localities investigated

**Locality 136:** Lying within the northwestern margin of Camel Thorn Basin, in the southeastern palaeo-oasis (Kleindienst et al. 1999, Figure 1.50, bottom; Churcher 1999:137), it is the most extensive site tested (a ca. 3,200 m<sup>2</sup> spread of cultural materials). Pottery on the surface, both locally-made and imported from the Nile valley, indicates site use throughout the Sheikh Muftah from late Bashendi into Old Kingdom times (Hope in press; personal communication, January 2001). The site was gridded, mapped, 1300 m<sup>2</sup> of its surface collected, and 46 m<sup>2</sup> in 5 areas excavated to sterile soil. The longest sequence occurred in trench KL-13. Here <1 m-deep culture-bearing deposits contain 3 or more dark bands representing soil development, probably in a periodically marshy basin, subject to slow infilling from aeolian sediments and slope-wash. In the 30 cm of colluvium above the top dark band in square L13 lie two black lenses, one 25 cm down, the other on the surface and including fire-cracked rock. Both appear to be hearths. Of the four other trenches, two revealed cultural material to a depth of 30 to 40 cm within layered deposits, while the other two were sterile beneath the surface deposits.

Two forms of burnt features were found: hearths and fire pits. Hearths are slight mounds 2 - 3 m in diameter, armored with fire-cracked rock, some still containing ash and sherdage. Fire pits are oval basins 0.70 to 5.0 m long, and now 10-15 cm deep, containing dark grey ash, sherds, lithics and some animal bone, but lacking the fire-cracked rock. Aside from these two types of features, no others, including structures or post molds, were found, except for one possible hut circle.

Ceramics are relatively abundant, with 6000 sherds recovered so far. The corpus appears to span well over 1000 years, and includes imports from the Nile Valley and elsewhere. A large percentage of the locally-made pottery is reminiscent of the fine quartz and shale ware that dominates the Bashendi B collections, and as such, was probably discarded during the earlier period of occupation at Locality 136. Another common ware in this collection appears to be a cruder variation of the standard quartz and shale pottery. In this case, the distribution and size of the fabric inclusions varies significantly amongst individual sherds, as does the wall

thickness - one example measuring between 3.4 and 9.6 mm. Most vessels made of this fabric were probably quite large, deep open or slightly restricted bowls.

Decorated Sheikh Muftah pottery is very rare and that from Locality 136 is no exception. The vast majority of locally-made wares are compacted and several examples preserve coatings and blackened rims. There is also a tendency to apply striations or finger rillings to exterior surfaces of these vessels. The reason for this is unknown though it might be that the rillings provide ease in holding the vessel when wet, or, that such applications provide greater surface area for heating purposes. Regarding this latter point, many of the cruder sherds display abrasive marks and fire patches suggesting that the vessels were used for activities involving food preparation, dry cooking and indirect boiling. In contrast, the finer version of this fabric does not preserve use-wear evidence to such a degree, which may suggest a different (serving, storage, transporting) purpose.

The chipped stone collection (>4000 pieces) includes 201 shaped tools, c. 40% made on imported tabular cherts. In addition to the usual tool types, triangles and trapezes (transverse arrowheads?) were found for the first time on a Sheikh Muftah site (Table 1). Grinding equipment is rare: 3 small grinding slab fragments, 6 handstones and a few rubbing stones were noted. Six small copper fragments were found. Faunal remains are dominated by domesticates — cattle (*Bos taurus*) and goats (*Capra hircus*). As many as 8 or 9 individual cattle may be represented, all but one of those old animals, judging from tooth wear. Gazelle (*G. dorcas*) bones are fairly common, with some elements of hare (*Lepus capensis*) and perhaps hartebeest (*Alcephalus buselaphus*). All the bone is well fragmented, presumably to extract all possible nutrients. Ostrich (*Struthio camelus*) eggshell is present but rare. Twenty-four soil samples were collected for botanical analysis, but contained very little charcoal, even from the promising-looking dark bands and hearth material. Three small charcoal samples were obtained for radiocarbon dating.

In summary, Locality 136 seems to have been used by Sheikh Muftah people over a ca. 1200-year span that witnessed variable (wetter and drier?)

**Table 1.** Absolute and percentage frequencies of major tool classes at four Sheikh Muftah localities in Dakhleh Oasis.

Locality / Tool type	136		105		108A		404	
	N	%	N	%	N	%	N	%
Denticulates	51	25.4	12	11.4	3	25.0	24	18.6
Notches	9	4.5	19	18.1	0	0	9	7.0
Points	25	12.4	39	37.1	4	33.3	17	13.2
Point-denticulates	22	10.9	4	3.8	0	0	28	21.7
Scrapers	26	12.9	14	13.3	2	16.6%	27	20.9
Combinations	8	4.0	7	6.7	3	25.0	16	12.4
Retouched	11	5.5	7	6.7	0	0	1	0.8
Knives	0	0	0	0	0	0	2	1.6
Sickle elements	0	0	0	0	0	0	1	0.8
Geometrics	42	20.9	0	0	0	0	0	0
Arrowheads	4	2.0	1	1.0	0	0	4	3.1
Burins	3	1.5	2	1.9	0	0	0	0
TOTAL	201	100.0	105	100.0	12	99.9	129	100.1

climatic conditions. They herded animals and hunted mainly gazelles. While no plant macrofossils are available for analysis, the scarcity of grinding equipment and lack of sickles and knives suggests limited plant use. Further, the lack of shelters, storage facilities, etc., argues against full-time, permanent occupation. Evidence from other Sh. Muftah sites appears to reinforce this picture.

**Locality 105:** This site lies southwest of the Balat cultivation, on the edge of an extensive area encrusted with salt and gypsum. The cultural material occurs in or near a dark band sandwiched between two silty clay units containing various plant casts, and stratified over the basal Mut Fm. clay and beneath a salt crust (Churcher 1983:181 and Figure 1; 1999:137). The sediments may represent a wet, perhaps marshy, environment that could have been supplied by nearby fossil spring mounds. At Locality 105 we gridded, mapped and surface collected 1100 m<sup>2</sup> and excavated 65 m<sup>2</sup>. The pottery from the site suggests an occupation late in the Sheikh Muftah sequence, but before Old Kingdom times (Hope, pers. comm., February

1999, February 2000). As at Locality 136, we found no evidence of shelters, but did record 3 hearths. The chipped stone tool collection resembles that of 136, without the geometrics, and with a greater emphasis on points than on denticulates (Table 1). About 10% of tools were made on tabular chert, and many others on recycled MSA lithics. Grindstones are rare. Excavated faunal remains include cattle (1 or 2 old animals), goat, gazelle and hartebeest. Limb bone fragments from 2 hartebeests were recovered near one of the hearths. Nine soil samples were taken for botanical analysis, but as at Locality 136, little charcoal was present. Two samples were concentrated for radiocarbon dating.

**Locality 108A** lies 3 km from Locality 105, in a reentrant in the sandstone ridge bordering the crusted land. Contemporaneous with Locality 105 but much smaller, it consists of animal bone eroding from within a scatter of pottery and chipped stone. 380 m<sup>2</sup> was surface collected and 8 m<sup>2</sup> excavated. Gazelle (much of a single animal) and hartebeest were recovered.

**Locality 404:** In the Central Lowlands of Western Dakhleh, Locality 404 is adjacent to and contemporaneous with the Old Kingdom town site of Ein el-Gezareen (Mills 2000). Work included gridding of 1440 square meters, surface collection of 233 square meters, and the excavation of 23 square meters. A magnetometer survey conducted by T. N. Smekalova (Physics Institute, St. Petersburg State University) showed no likely man-made structures sub-surface; the only features found in the excavated area were pits. The largest was a fire pit 3.5 x 2.5 m in size, filled with black-stained sherds together with some bone and lithics. About half the sherds were of Sheikh Muftah manufacture, the rest being Old Kingdom products. Two other pits were smaller and lacked evidence of burning. One, ca. 1.5 m in diameter, was packed with about 300 sherds. In the chipped stone collection from 404, ca. 62% of tools are made on imported tabular material (Table 1). The faunal collection includes cattle, goat and gazelle. Five soil samples were taken, all from the large fire pit. One has been analyzed so far and yielded 17 poorly-preserved plant macrofossils including clover-type seeds and grass stalks, but no trace of cultivated plants. The Sheikh Muftah cultural unit was defined in part on the basis of the rich scatters of lithics and pottery south of Ezbet Sheikh Muftah (McDonald 1982), and in 1998 some controlled sampling and excavation was carried out at 3 locations:

**Locality 380:** A grid was established in a 432 m<sup>2</sup> area where ceramics (including whole pots) and animal bones were eroding out of the re-deposited Mut muds. The gridded area was surface collected and *in situ* material excavated, but cultural material was confined to the top few cms. The pottery is listed as late Sheikh Muftah (Hope in press), while faunal remains include cattle and hartebeest.

**Locality 381:** Here we excavated two fire pits (c.a. 0.80 x 0.55 x 0.10 m) filled with charcoal and animal bone (wild pig or warthog, and goat). Associated lithics and pottery suggest this site to be early Sheikh Muftah or transitional between Bashendi B and Sheikh Muftah cultures. Plant macrofossils include an edible fruit, jujube (*Zizyphus spina-christi*), and a woody climber, but no grasses (which are abundant in earlier Bashendi samples).

**Locality 382:** Two fire pits were excavated and a ca. 80m<sup>2</sup> area around them surface collected. Cultural material appears slightly later than that at Locality 381.

**Locality 135:** The Locality 381 fire pits mentioned above were the only Sheikh Muftah Unit locality so far to yield quantities of analyzable charcoal. Hoping for additional rich samples, we returned to a similar early site, Locality 135. It consists of clusters of Sheikh Muftah material, representing small campsites, scattered along the edge of gypsum-encrusted land in Camel Thorn Basin south of Locality 136 (McDonald 1985). Extant lithics and pottery collections, plus a single radiocarbon date of 5070 ± 80 bp (McDonald in press) from Cluster 5, suggest an occupation very early in the Sheikh Muftah period. From Locality 135, we collected 6 soil samples from hearths and fire pits at 4 separate clusters, including Cl. 5, and Cl. 6, where bones of hartebeest, gazelle and a large bovid were recovered. We also collected 2 ostrich eggshell samples for dating. None of this material has been processed yet.

**Locality 402:** We conducted a further survey atop the plateau bordering Dakhleh Oasis, on the NW corner of Gebel Abu Tartur near Wadi el-Tawil. There we found small clusters, apparent way stations, from several periods, including one of Sheikh Muftah age that yielded a distinctive ceramic vessel, a truncated cone, which has been reported also elsewhere in the eastern Sahara (e.g. Caton-Thompson 1952, pl. 123).

## Discussion

In recent years we have studied a variety of Sheikh Muftah sites scattered across the oasis and spanning the ca. 1200-year history of the cultural unit. While much analysis remains still to be carried out, and the radiocarbon samples run, the picture emerging of the Sheikh Muftah adaptation seems consistent, if not entirely expected. Sheikh Muftah people still appear to be full-time residents of the oasis, but there is as yet no evidence for large groups or for permanent, long-term settlements. Further, while they were in contact with the Nile Valley and elsewhere, there is little indication that they participated in the growing prosperity and social complexity of Predynastic and later Egypt.

All recorded Sheikh Muftah localities appear to be temporary campsites. Even the large Locality 136, with its long history of use, has no evidence of shelters or storage facilities that would suggest permanent full-time occupation. All known sites are found close to water sources, whether artesian spring vents or apparent wetlands. The only noticeable change through time is a trend to somewhat larger site areas, such as that of Localities 105 and 136, in the later part of the Sheikh Muftah occupation. It is possible that only a part of the settlement pattern is preserved. The known localities could, for example, be special-purpose camps of herders who belonged to permanent villages located closer to central watered areas in the oasis proper which are now buried below modern cultivation. However, the known sites in the heart of the Central Lowlands, such as Localities 404 and 002 (McDonald 1980), also appear to be only temporary campsites.

As for the economy, the faunal evidence suggests herding and limited hunting. Cattle, to judge by the maturity of most specimens, were kept not primarily for meat, but perhaps for milk, blood and/or as a means of transportation. Sheikh Muftah hunters seem to have focused upon a limited range of game, principally gazelle and hartebeest, although other animals such as Cape zebra, hippo and ostrich should also have been available. The maximal fragmentation of bones suggests that animal parts were exploited for all possible nutrients. As for plant food, there is no solid evidence for cultivation. Plant processing tools — grinding equipment, hoes, knives and sickles, are rare to absent, and the sparse palaeobotanical evidence recovered includes no cultigens.

The impression from settlement and subsistence evidence of a somewhat “hardscrabble” existence is reinforced by the sparse skeletal evidence discovered. Portions of 6 individuals were recovered from 2 oasis locations (Thompson and Madden 2000). The remains show evidence of malnutrition in enamel hypoplasia and porotic hyperostosis (a sign of anemia), heavy work loads, and

early death. Further, the lack of noticeable burial monuments or of elaborate grave goods (a single copper pin was found with one of the burials), reinforces the picture of small, egalitarian groups. Clearly, Dakhleh continued to sustain a human population long after much of the rest of the Western Desert was abandoned due to increasing aridity in the mid-Holocene (McDonald in press, Hassan et al. 2001). Sheikh Muftah sites are numerous, and there is no evidence for breaks in the 1200-year span of the cultural unit. Still, it appears that it was only when Old Kingdom immigrants/colonists introduced irrigation and the cultivation practices developed in the Nile Valley, that the oasis was finally able to support a large, settled population.

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