MAN – MILLENNIA – ENVIRONMENT

STUDIES IN HONOUR
OF ROMUALD SCHILD

EDITED BY
Zofia Sulgostowska and Andrzej Jacek Tomaszewski

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THE RENS SHELTER, SODMEIN WADI, RED SEA, EGYPT
A BEDOUIN SETTLEMENT?

SITE SITUATION

During the Sodmein cave excavation campaign in March 1999 (Vermeersch et al. 1996, Van Peer et al. 1996 Moeyersons et al. 1999), the Belgian Middle Egypt Prehistoric Project of Leuven University1 explored a small shelter on the southern side of wadi Sodmein. Sodmein cave, mentioned by Prickett (1979) as site QSR-44, is located in the Red Sea mountains of the Egyptian Eastern Desert, at 26° 14' 27" N and 33° 58' 12" E, about 35 km to the NNW of Quseir (Fig. 1, 2). A cliff recess in Eocene Thebes limestone dominates the west bank of wadi Sodmein, where it cuts a 3 km long gap through the Gebel Umm Hammad, a local hogback. The Thebes limestone contains several bands of ovaloid-shaped chert nodules, greyish, whitish or bluish in color. They are well cemented into the limestone and therefore difficult to extract. Numerous chert nodules, however, have eroded out of the limestone and now form parts of the scree deposits and wadi gravels. Many nodules are of good knapping quality. Vegetation in the valley is now very limited: some halophytes are found in the wadi bed and very rarely some dispersed acacia occurs. Dorcas gazelle has often been seen in the wadi. At Quseir an annual average rainfall of 4 mm and a mean temperature of 28°C are recorded. However, on cold winter mornings, temperatures can fall close to freezing. The precipitation is very irregular with long nearly completely dry periods interrupted by rare high magnitude events (Moeyersons et al. 1999). Stream floods and mass wasting, occurring during such extreme and rare events, are the dominant landscape modeling processes. Karstic features, such as depressions and hollows along joints, affect the Thebes limestone and predate the actual hyper-arid climatic period (Vermeersch et al. 2002).

Rens Shelter is situated approximately 500 m south of Sodmein cave. An important rock fall accumulation originating from the southern cliff face created a chaotic distribution of large blocks. As a result some large limestone blocks rest on top of a low wadi terrace. Weathering of the lower part of the blocks has resulted in overhanging limestone, thereby creating several rock shelters. Most rock shelters face north providing shadowed areas. In the Rens Shelter, as the largest of them has been named, an accumulation of flaked chert was discovered. It has a surface of about 100 m². Its ceiling is 5 m high in the north and slopes down to reach the surface in the south. On the present surface an unstructured hearth with pieces of unburnt wood was still present. The surface was scattered with donkey and ovicaprine excrements, suggesting that the shelter was used quite recently.

A topographic plan was created by measuring the elevation of the area every few meters (Fig. 3). A short excavation program of a few days (seen being carried out in Fig. 4) was organized in April 1999 and resulted in the uncovering of an artifact concentration. A surface of 9 m² (42-44N21-23N) was excavated. Excavated sediments were sieved with a 4 mm mesh, yielding 32% of the collected remains. Most of the artifacts (67%) were measured in situ and their location recorded tridimensionally. A number of units (41N14E, 44N25E, 44N33E and 46N43E) in the vicinity were also tested, but no other artifact concentrations were located. On the surface around the shelter numerous artifacts were found. There are several other shelters in the area that are likely archaeological sites but these have not been tested by excavation.

STRATIGRAPHY

The surface stratum is a fine limestone scree deposit. This upper limestone scree, originating from the weathering of the shelter roof, has a thickness of 20 to 25 cm. On its surface, remains from recent occupation...
Fig. 1. Map (a) and general picture of the Gebel Umm Hammad (b) showing the canyon of the Sodmein wadi and the location of Rens Shelter (arrow).
were found. Besides these recent remains, the upper scree is sterile. Below this stratum, is an archaeologically rich layer of fine limestone scree, measuring about 5 cm thick (Fig. 5). A second layer of artifacts, about 5 cm thick, was found below, at the interface with a layer of fine aeolian sand. The top of the 25 cm thick aeolian sand stratum contained a few scattered artifacts, but this is probably the result of postdepositional processes. The two artifact-rich layers often coalesce. Only in the eastern part of the site were we able to differentiate between the two layers. Splitting up the assemblage did not seem feasible (Fig. 6) due to the stratigraphic locations of the artifacts. For this reason we did not differentiate between the two assemblages, considering all of them as belonging to a single assemblage, although one should note that the occupation remains are probably the result of several short stays at the site.

The northern part of the aeolian sand layer in our excavation trenches was slightly reworked by water action. The aeolian sand rests on a layer of relatively large limestone blocks (30 to 40 cm thick) that are partially reworked by water (wadi) activity and which contain no archaeological remains. Below these blocks is a sterile rocky limestone scree deposit. In the tested squares outside our excavated artifact concentration there is no aeolian sand between the scree layers.

STRUCTURES

The only structural elements found at the site are an artifact concentration and a hearth (Fig. 7). The artifact concentration has a vaguely oval layout with a maximum diameter of about 3 m. Visually, it seems possible to distinguish between two elongated artifact concentrations, one with a northwest-southeast orientation and another with a southwest-northeast orientation (Fig. 7). The artifacts belonging to the lower concentration are predominantly in the eastern part of the site. This is interpreted as the result of two diachronic occupations, of which the eastern is the oldest because most of the lower artifact concentration is limited to that eastern part. A large unstructured hearth with a diameter of nearly 1 m is located in the same stratigraphical position and to the south of the artifact concentration(s). Directly below the hearth feature the dune sand is slightly rubified there and contains a significant number of charcoal fragments of which a sample was submitted for radiocarbon dating (cf. infra). It is unclear to...
which of the concentrations the hearth belongs. Directly below the heat feature the dune sand is slightly rubefied there and contains a significant number of charcoal fragments of which a sample was submitted for radiocarbon dating (cf. infra). It is unclear to which of the concentrations the hearth belongs. A sample of 30 pieces of the hearth charcoal was submitted to an anthracologic analysis by E. Marinova. The charcoal pieces have been identified as Tamarix.

THE ARCHAEOLOGICAL MATERIAL

Chert of varying quality has been used. Most artifacts (79%) were produced in a reddish brown chert (flint) of good quality with a fresh white cortex. This chert quality has been found near the Tree Shelter (Vermeersch et al. 2002), some 4 km to the north. A somewhat darker chert variety, but probably also from the same origin, was used for 7% of the artifacts. An orange brown chert with a reddish cortex amounts to 8%, whereas the remaining 5% was produced in a brownish-pink grey banded chert with coarse inclusions. The exact origin of those last flint types is unknown, but it is likely local. Quartz, was used for two flakes. It is available in the basement complex, to the north and south of Wadi Sodmein. The local Eocene sandy limestone was also used for a few flakes. All artifacts are slightly patinated and weathered.

Apart from a single platform core for bladelets (Fig. 8:1), cores are rare and mostly irregular in shape. Together with the scarcity of core rejuvenation flakes and full cortical flakes, this implies that nodule reduction was not practiced onsite. Possibly cores were reduced near the extraction locations, for instance near the Tree Shelter (cf. supra) where similar chert outcrops exist. This being said, tertiary flakes without traces of cortex are few, suggesting that the nodules were not very large and not entirely decorticated at the acquisition stage. Local sandy limestone has been used as raw material, some of the fragments showing flaking traces.

The numerous chips confirm that flaking was practiced at the site. The flaking process is expedient and was performed using a hard hammer. The linear (41%) or plain (38%) butts suggest that core processing was not complex. Cortical butts represent 9% and dihedral 8% of the butts. Blades and even elongated flakes are rare. Some of the artifacts, such as a high-quality bladelet fragment (Fig. 8:2), were imported.

Most tools are expedient. The tools consist mainly of retouched flakes, some of which can be typological-
Table 1. Flint artifact inventory.

<table>
<thead>
<tr>
<th>Artifacts</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single platform core</td>
<td>2</td>
<td>0.25</td>
</tr>
<tr>
<td>Opposed platform core</td>
<td>1</td>
<td>0.125</td>
</tr>
<tr>
<td>Discoid core</td>
<td>1</td>
<td>0.125</td>
</tr>
<tr>
<td>Pre-core</td>
<td>1</td>
<td>0.125</td>
</tr>
<tr>
<td>Core rejuvenation flake</td>
<td>5</td>
<td>0.625</td>
</tr>
<tr>
<td>Blade(let)</td>
<td>7</td>
<td>0.875</td>
</tr>
<tr>
<td>Elongated flake</td>
<td>2</td>
<td>0.25</td>
</tr>
<tr>
<td>Flake without cortex</td>
<td>125</td>
<td>14.44</td>
</tr>
<tr>
<td>Flake &lt;1/3 of cortex</td>
<td>67</td>
<td>7.75</td>
</tr>
<tr>
<td>Flake &gt;1/3 cortex &lt;2/3</td>
<td>35</td>
<td>4.0625</td>
</tr>
<tr>
<td>Flake &gt;2/3 cortex &lt;1</td>
<td>20</td>
<td>2.3875</td>
</tr>
<tr>
<td>Full cortical flake</td>
<td>5</td>
<td>0.625</td>
</tr>
<tr>
<td>Flake fragment</td>
<td>173</td>
<td>20.00</td>
</tr>
<tr>
<td>Chip</td>
<td>347</td>
<td>40.00</td>
</tr>
<tr>
<td>Chunk</td>
<td>35</td>
<td>4.0625</td>
</tr>
<tr>
<td>Tool</td>
<td>42</td>
<td>4.80</td>
</tr>
<tr>
<td>Total</td>
<td>868</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 2. Tool list.

<table>
<thead>
<tr>
<th>Tool</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>End-scraper</td>
<td>10</td>
</tr>
<tr>
<td>Side scraper</td>
<td>12</td>
</tr>
<tr>
<td>Transverse arrowhead</td>
<td>2</td>
</tr>
<tr>
<td>Burin on snap</td>
<td>3</td>
</tr>
<tr>
<td>Retouched blade</td>
<td>2</td>
</tr>
<tr>
<td>Retouched flake</td>
<td>11</td>
</tr>
<tr>
<td>Denticulate</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
</tr>
</tbody>
</table>

The finds also include a small fragment of ostrich eggshell. Except this item and charcoal, no other organic material was preserved.

An unexpected find was that of a small sculpture (Fig. 10). It seems to represent a foot in white translucent calcite alabaster. It is 2.5 cm long, 1.3 cm wide and 1.5 cm high. The foot sole is flat but has a drawing etched in it (Fig. 9). There was an attempt to drill holes from the ventral and the dorsal side, on the ankle, perhaps to create a pendant, but the drilling was aborted probably because the foot broke off from the rest of the alabaster figurine. The ankle is grooved. According to Veerle Rots,3 the groove is anterior to

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2 The contribution of E. Marinova (anthracologist at the Katholieke Universiteit Leuven) is kindly acknowledged.
3 Dr. Veerle Rots, who is a microwear analyst at the Katholieke Universiteit Leuven, examined the figurine under the microscope. We are grateful for her comment.
the perforation and is of a similar nature as the grooves on the foot sole. The dorsal perforation was made mechanically as witnessed by regular concentric striations; the ventral one is not, at least not during its last phase. The break was initiated at the lateral side of the dorsal face, possibly (but not necessarily) during the ventral perforation attempt. This means that the piece was positioned on a kind of anvil during perforation.”
Fig. 9. Drawing on the foot sole of the figurine.

14C DATING

Charcoal from the hearth (sample ME99/44/580) has been submitted for 14C dating. Mark Van Strydonck from the IRPA laboratory at Brussels obtained the following result: 750 ± 35 BP (IRPA-1374). After calibration this gives a 68.2% probability: 2.6% between 1225 AD and 1235 AD and 65.6% between 1240 AD and 1285 AD; for a 95.4% probability: between 1215 AD and 1295 AD.

INTERPRETATION AND CONCLUSIONS

The data collected at the Rens Shelter notes at least two occupations of the site by a small group of people in the past. We have no evidence for the economy of these groups but taking into account the isolated geographical location of the shelter, we are entitled to think that herders or merchants stayed for a short time in the shadow of the shelter. They still used flint as an important raw material for their tool needs.

It is difficult to attribute the flint assemblage to a specific human group of the Eastern Desert based on technological or typological criteria. The archaeology of the Eastern Desert is indeed still poorly understood. Moreover the flint assemblage of the Rens Shelter contains few typical tool types. The transverse arrowheads are the most diagnostic tools. According to Hikade (2001), the transverse arrowhead became a common part of the hunting equipment in the Western

Fig. 10. Calcite alabaster pendant.
Desert during the Neolithic and was in use in Egypt at least until the Middle Kingdom. There is however no reason to reject the idea that some Bedouin groups from a much later time, before the introduction of the firearms, still practiced hunting by using transverse arrowheads. In the post-15th century, the Bedouins from Jordan made use of flint for striker stones and gun flints (Kuijt and Russell 1993). Some Bedouin groups, such as the Ma’aza tribe people in the Eastern Desert, are still practicing very ancient methods of hunting. They also carry with them flint to make fire (Hobbs 1990). Flint will protect Bedouins in the Negev from the evil eye of women (Abu-Rabia 2005).

Although the alabaster foot may be a fragment of an ushabti figurine, perhaps dating from the New Kingdom, good quality reference data is lacking. The meaning and age of this fragment therefore remain unknown. We know of no alabaster quarry in the vicinity of the site. Several alabaster quarries were active, however, during the Pharaonic Period in the Eastern Desert, mainly between the Helwan and Assiut latitudes (Klemm and Klemm 1992:199–223). The raw material for our figurine may have come from one of those quarries, but because it is very small it may also have come from an outcrop of calcite alabaster in the larger limestone area of the Eastern Desert. We have no idea what the figurine could have represented. It was probably used as a pendant. An attempt to perforate it, probably for better suspension, failed but the groove gave another possibility for suspension.

The presence of an ostrich eggshell fragment is not exceptional. Even in more recent time, ostrich has been spotted in the Egyptian desert (Goodman et al. 1984).

The 14C-age, dating the site to the thirteenth century AD, is somewhat puzzling but we have no reasons to reject it. We should be aware that the widespread evolutionary assumption that by AD 1000, stone technologies are no longer in use in the Levant cannot be accepted (Kuijt and Russell 1993).

We hope that other surveys in the Eastern Desert will document more of the archaeological data of that area, which will help to shed light on a very unknown region.

REFERENCES


Pierre M. Vermeersch, Bart Vamontfort
Shawn Bubel, Philip Van Peer
Katholieke Universiteit Leuven
Colestijnenlaan 200E
3001 Leuven, BELGIUM
pierre.vermeersch@geo.kuleuven.be