Living at the lakeshore: Early Nubian Complex site associated with a lacustrine environment

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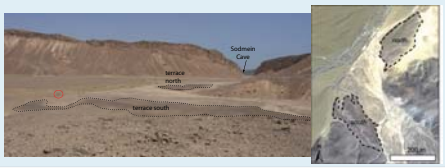
Sodmein Playa

By analysing satellite images of the area around Sodmein Cave numerous well-preserved surface remnants (terraces) could be documented. Surveys on these old terraces, showing mainly a dark desert pavement, yielded preferentially Pleistocene artefact concentrations. Hence, it became clear that these terraces represent parts of the former Pleistocene surface of the area.

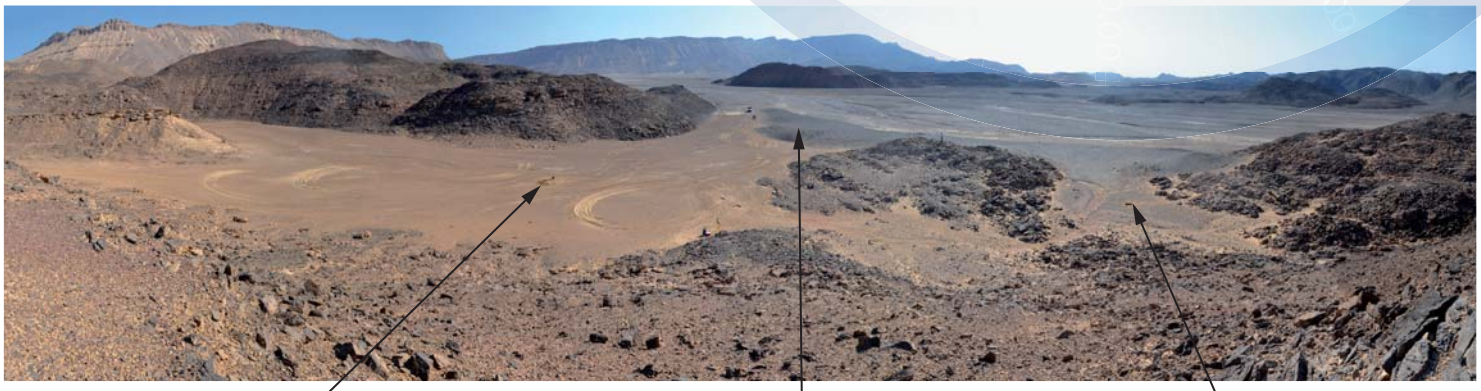
During surveying activities on such terraces a new archaeological site – preliminary named as "Sodmein Playa" 14/01 – was discovered around 3 km south-west of Sodmein Cave. On the surface a concentration of Middle Stone Age (MSA) artefacts, which seem to weather out of the sediments, was observed. It was immediately clear that it did not occur in association with the gravel terraces but indicate a different geomorphological context. The artefacts did not exhibit the typical desert varnish of the terrace surfaces and they occurred at the surface of a sandy plain, seemingly lacustrine sediments (playa).

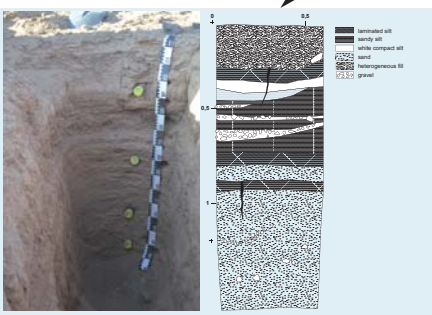


Terrace remnants in Wadi Sodmein measured by DGPS.

Location of Sodmein Cave and open-air site Sodmein Playa.

Panoramic View Sodmein Playa

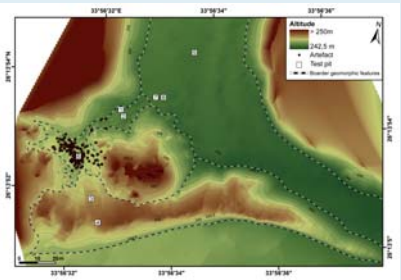




Photograph and sketch of a test trench (northern profile) in the centre of the playa depression.

Lacustrine sediments

Sodmein Playa is located behind a linear terrace remnant, which is elevated up to 2 m above the present wadi floor. In this rather protected geomorphological situation – between numerous hills of Nubian Sandstone – a small former lake basin was found. The surface is flat and consisted of sand and fine gravels. In order to estimate the sediment fill of this basin a test trench was excavated in its centre. The sequence consists predominantly of thick sandy units covered by laminated lacustrine silts, evidencing more humid conditions and the presence of ephemeral lake stands. With this 1.5 m deep trench the bedrock could not be reached.



Topographic map of Sodmein Playa (based on DGPS measurements) with the test trenches and the concentration of the MSA artefacts.

Hyper-spectral camera for detailed surface recording.

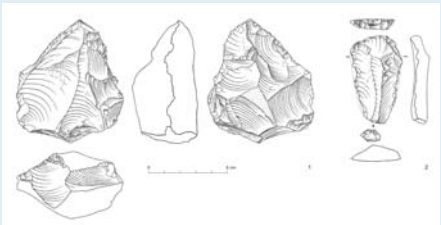
Levallois core found on the terraces.

Terrace analysis

On the terraces archaeological surveys were conducted to document different artefact concentrations and archaeological features. A portable device (SUERC Pulsed OSL) was used to measure luminescence signals in the field. The OSL-/IRSL-signal ration was recorded to correlate sections of different profiles with each other.

To get a precise description of the terrace surface composition, selected square metres were documented with hyperspectral photos. Such pictures reproduce the structure and colour of the characteristic desert pavement, which can serve in the future as a ground check for extrapolating and mapping Late Pleistocene surfaces.

The documented artefacts exhibited both classical Levallois as well as Nubian and Taramsan technologies and therefore indicate direct technological affinities with the Egyptian Nile Valley and the Eastern Desert. It seems probable that some of these former Pleistocene surfaces were also exploited during the MSA for raw material resources as flint and chert gravels.



Sodmein Playa 14/01: (above) 1 Nubian type 2 core; 2 endscraper; (below) 1 Nubian type 2 point; 2 handaxe.

MSA artefact concentration

On the south-western extension of Sodmein Playa 14/01 a concentration of MSA artefacts was observed and spatially recorded. In contrast, no further surface artefacts could be found in the central depression. Most of the artefacts displayed a shiny whitish patina very different from the black desert varnish of the terrace material and indicate a different taphonomic history. It was assumed that probably a small lake had existed behind the terrace remnant, which acted as a barrier. The lithic technology of Sodmein Playa shows the characteristic features of the Early Nubian Complex (Nubian 2 technology).

Hence, Sodmein Playa is the first open air-site in the Eastern Desert of Egypt that demonstrates Pleistocene human occupation in association with a lacustrine environment.

References

The CRC 806 "Our Way to Europe" is funded by the Deutsche Forschungsgemeinschaft (DFG). Research is conducted by Karin Kindermann, Institute of Prehistoric Archaeology, University of Cologne and Philip van Peer, Department of Archaeology, University of Leuven.

We thank the Permanent Committee of the Ministry of State for Antiquities, the Security and the Military forces for the permission to carry out archaeological work in the area of Wadi Sodmein.