SODMEIN PLAYA

Fourth Field Report — Season 2014

CRC 806
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Report on the fourth field season in the Sodmein area, autumn 2014 (Eastern Desert, Egypt)

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1 Introduction

The fourth field season of the joint research project "Sodmein Cave", conducted by the German University of Cologne and the Belgian University of Leuven, took place in autumn 2014 between the 30th of November and the 12th of December. The field work was carried out under the aegis of the Collaborative Research Centre 806, which was established in 2009 by the Deutsche Forschungsgemeinschaft (Research Funding Organisation).

During the first field campaign in 2010 the archaeological excavations in Sodmein Cave could be resumed as a kind of continuation of the 1990's activities of the Belgian Middle Egypt Prehistoric Project (BMEPP). On the contrary, the focus during the second season was on the analysis of the archaeological material from the former Belgian excavations in the magazine of Quft. Whereas the third campaign during spring 2012 concentrated anew on the archaeological excavation of the Middle Palaeolithic cave layers and the documentation of Sodmein Cave with a 3D laser scanner.

The 2014 field campaign started with a short visit at Sodmein Cave to document the actual situation of the former archaeological trenches in the cave and to discuss possible further measures of the site preservation. During the 2010 and 2012 field seasons the modern limestone mining nearby the cave was documented by photographs and described in detail in the SCA field reports. Although the modern limestone quarrying is still going on, the actual situation seems to be quite stable and relatively satisfying. During the last two years no greater harm and threat was done on Sodmein Cave and its former archaeological excavations.

The main research focus of our current archaeological field work in autumn 2014 was concentrated on the nearer surrounding of Sodmein Cave, where during the 2012 field work archaeological material from the Middle Stone Age (MSA) had been observed on terraces south of Sodmein Cave. During this season a new open air site in the Wadi Sodmein basin, about 3 km upstream from the cave site, was discovered **(fig. 1)**. Hence, the objectives of our last research season have been mainly to the

- archaeological surveys on the terraces in the surrounding of Sodmein Cave,
- excavation as well as to the documentation of the newly discovered site 14/01 "Sodmein Playa".

2 Sodmein Playa

During the surveying activities on the terraces in the nearer surrounding of Sodmein Cave a new archaeological site – preliminarily named as 14/01 "Sodmein Playa" – was discovered south-west of Sodmein Cave **(fig. 1)**. On the surface a concentration of Middle Stone Age (MSA) artefacts, which seems to weather out of the sediments, was observed. It was immediately clear that it did not occur in association with the gravel terraces but with a very different geomorphological context. The artefacts did not exhibit the typical desert varnish of the terraces surfaces and they occurred at the surface of a sandy plain, seemingly a playa. Therefore, Sodmein Playa is the first open air MSA site in the entire Eastern Desert of Egypt that is associated with fine lacustrine sediments.

Figure 1. Location of Sodmein Cave and the Pleistocene open air site Sodmein Playa in the Egyptian Eastern Desert. The detail map illustrates the location of the research area (red dot) in Egypt.

2.1 Geo-archaeological terrace survey

By surveying and analysing the satellite images of the area around Sodmein Cave numerous other well-preserved Pleistocene terrace remnants were documented. In the southern surrounding of the cave many terraces are covered with concentrations of Late Pleistocene stone artefacts. Such artefact concentrations on the surface were preferentially registered on older surface remnants (*terraces*), which are covered mainly with dark desert pavement. Two of these terraces were topographically documented using a DGPS **(fig. 2)**. The northern terrace rises up to 7 m in south-east direction, whereas the southern one is more incised and reaches up to 13 m above the main wadi floor. During the course of this, it

became increasingly clear that these terraces probably represent parts of the former Pleistocene surface of the area.

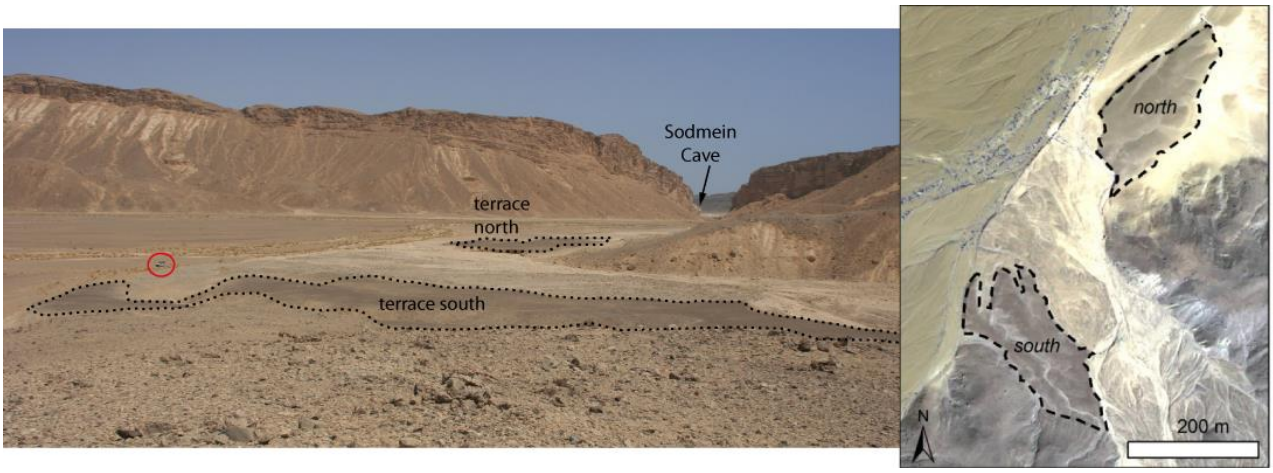

Figure 2. Images show the position of the older terrace remnants (bordered by dashed lines) in Wadi Sodmein around 2.5 km south-west of the cave entrance. The photograph on the left shows the terraces in the foreground and Sodmein Cave in the background (a car for scale in the red circle), whereas the satellite image on the right displays the detail with the terraces.

The recovered artefacts exhibited both classical Levallois **(fig. 3)** as well as Nubian and Taramsan technologies and therefore seem to indicate direct technological affinities with both the Egyptian Nile Valley and the Eastern Desert. It seems probable that some of these former Pleistocene surfaces were also exploited during the Middle Stone Age for raw material resources as flint and chert gravels.

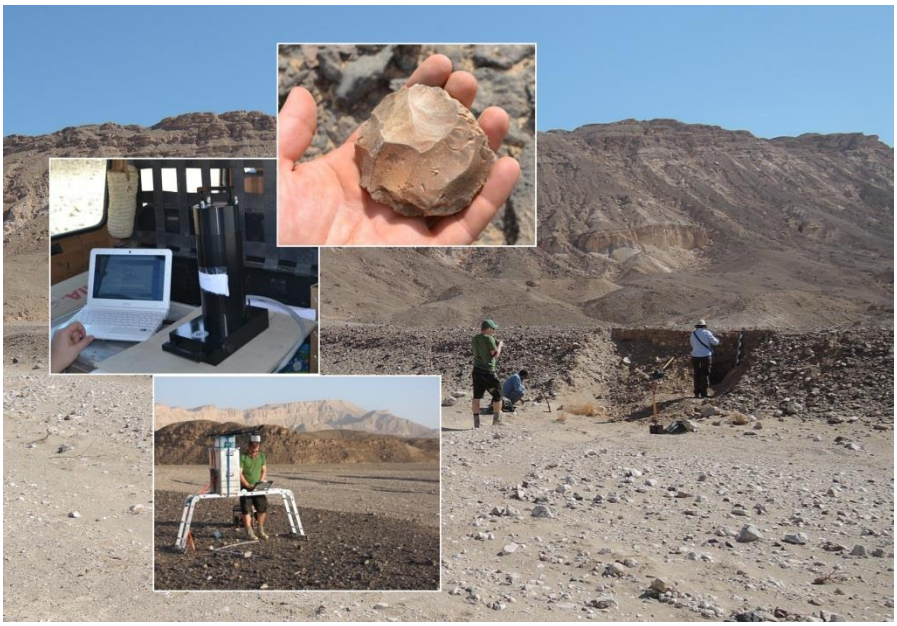

Figure 3. Identifying and reconstructing probable Late Pleistocene surfaces in the area of Sodmein Cave. The photo in the background shows a typical terrace remnant in Wadi Sodmein. The small pictures (from upper right to lower right) showing a Levallois core, the SUERC Pulsed OSL device and the ROKOLA hyperspectral camera for proper image acquisition.

An archaeological survey was conducted on these terraces during the field campaign of autumn 2014, to document the different artefact concentrations and the archaeological features. A portable device (SUERC Pulsed OSL) was used to measure luminescence signals in the field **(fig. 3)**. 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, single square meters were documented with hyperspectral pictures using a RIKOLA hyperspectral camera. Such pictures reproduce the structure and colour of the characteristic desert pavement, which can later serve as a ground check for extrapolating and mapping further Late Pleistocene surfaces. For the reconstruction of the Pleistocene environment in the area of Sodmein Cave the recently collected geographical and archaeological data seems to be very promising **(fig. 3)**.

2.2 Archaeological excavation

Around 3 km south-west of Sodmein Cave the archaeological site 14/01 "Sodmein Playa" was discovered behind a linear terrace remnant, which is elevated up to 2 m above the present wadi floor. Here, in a geomorphological rather protected situation, located between numerous little hills of Nubian Sandstone, a small former lake basin could be documented **(fig. 4)**. The surface of the flat area consisted of sand and fine gravels.

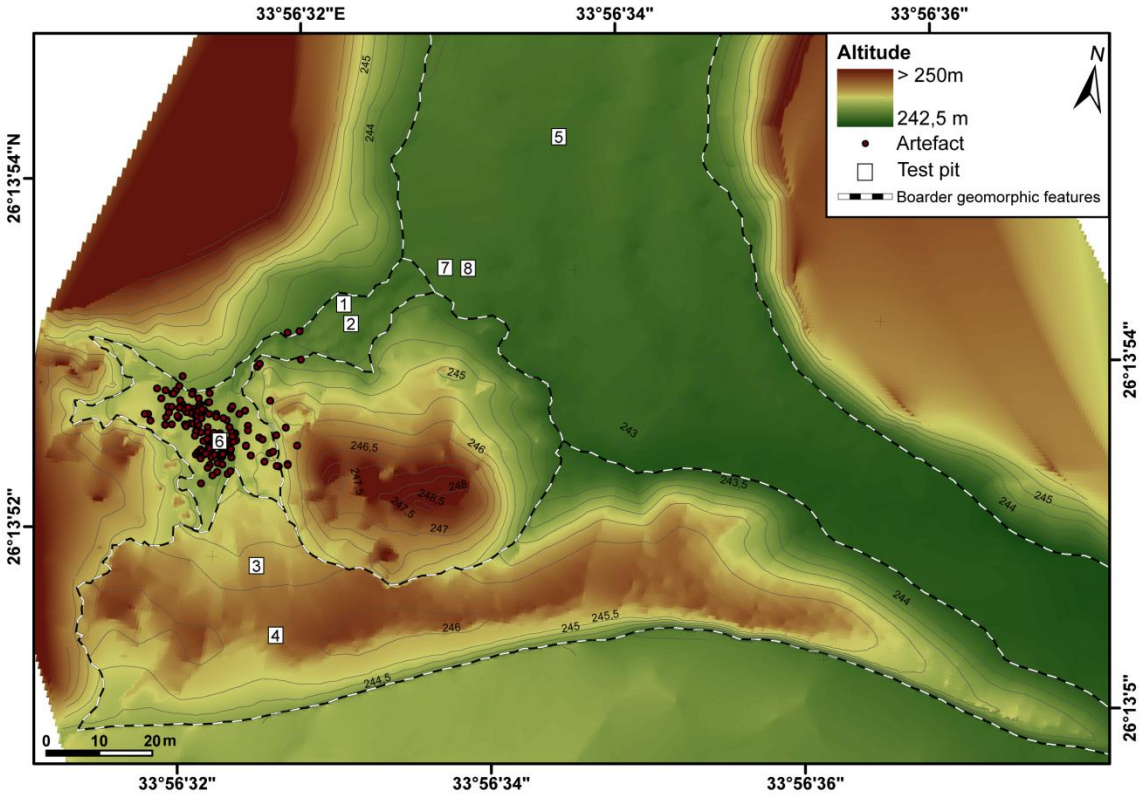

Figure 4. Topographic map of 14/01 "Sodmein Playa" with the position of the test trenches and the surface artefacts in the south-western extension.

On the south-western edge of this little basin a concentration of Middle Stone Age artefacts, which seem to weather out of the sediments, was observed. It was clear that it did not occur in association with the gravel terraces but with a very different geomorphological context. The stone artefacts did not exhibit the typical desert varnish of the terraces surfaces and they occurred at the surface of a sandy plain, seemingly a playa. In fact, these artefacts show a shiny whitish patina very different from the normal black desert varnish and indicate a different taphonomic history. The lithic technology of Sodmein Playa shows all the characteristic features of the Early Nubian Complex (Nubian 2 technology) **(fig. 5)**.

For getting further information about the genesis of the site and the development of the archaeological distribution patterns, different test trenches were excavated on site 14/01 "Sodmein Playa" **(fig. 4)**. The stone artefacts on the surface were individually documented and measured by a total station, to document its exact location and relation to the contextual landscape situation. For analysing the geomorphological situation of the lake basin and its archaeological context, several test pits were excavated and documented. A digital ground model was compiled by a DGPS to get a better understanding of the landscape situation and the stone artefacts in its context.

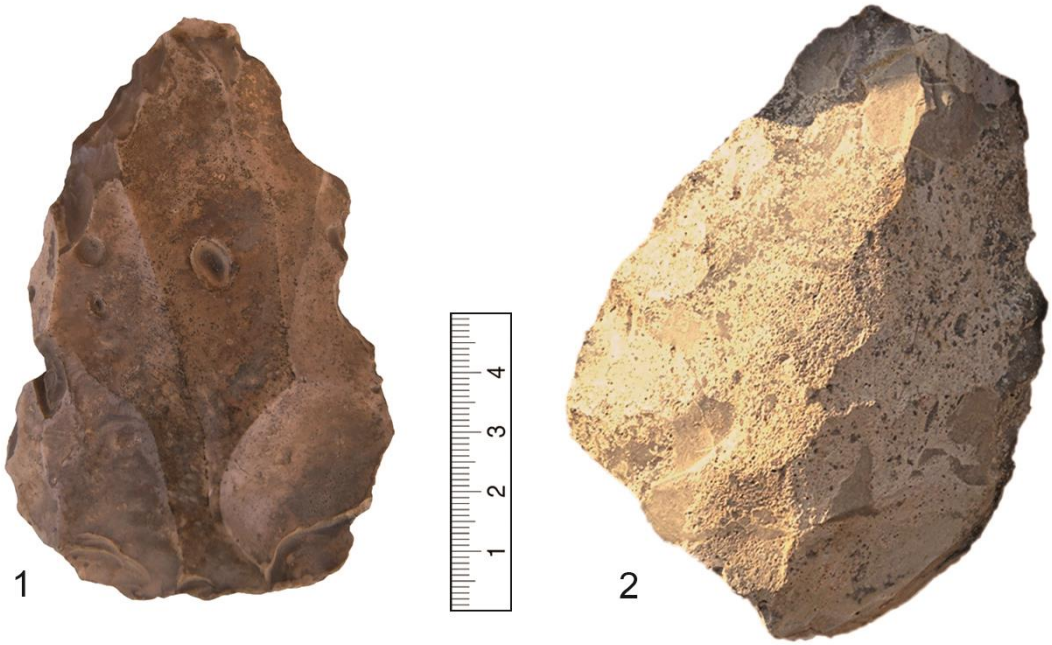

Figure 5. Stone artefacts from 14/01 "Sodmein Playa: 1. Nubian type 2 point; 2. Handaxe.

Acknowledgements

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We wish to thank the Permanent Committee of the MSA, the security and the military forces for the permission to carry out the archaeological work in Wadi Sodmein. The next field season of the “Wadi Sodmein” project is scheduled for the period from October until December 2015.