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PLEISTOCENE ART OF THE WORLD

Short articles



PLEISTOCENE ROCK ART IN NORTH AFRICA:

Securing the Age of the Qurta Petroglyphs (Egypt) through OSL Dating of their Sediment Cover

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The existence of pre-Holocene rock art in North Africa has been a subject of debate for several decades. Thus far, the oldest petroglyphs identified in North Africa with some degree of certainty, the so-called “fish trap” motifs and associated figurative and geometric scenery of el-Hosh in Upper Egypt, have been ascribed to the Early Holocene and are tentatively dated to ~9000 cal BP. It has now become clear that even older art, of fully Pleistocene age, exists in the same geographic area: the rock art of Qurta.

At Qurta, situated on the east bank of the Nile between Edfu and Aswan, three rock art sites have been identified: Qurta I, II and III (henceforth QI, QII and QIII). These sites are located in higher parts of the Nubian Sandstone scarp bordering the Nile floodplain. At each site, several rock art locations, panels and individual figures have been identified, with a total of at least 180 individual images. Naturalistically drawn bovids (*Bos primigenius*) are predominant (over 75% of the total number of drawings), followed by birds, hippopotami, gazelle, fish and hartebeest. In addition, several highly stylized representations of human figures appear at the sites. On the basis of the intrinsic characteristics of the rock art, its patination and degree of weathering, as well as the archaeological and geomorphological context, we have proposed an attribution of these petroglyphs to the Late Pleistocene, specifically to the Late Palaeolithic Period (~19000 to ~18000 cal BP). This interpretation has met with little criticism from the archaeological community, but proof in the form of science-based dating evidence has thus far been lacking.

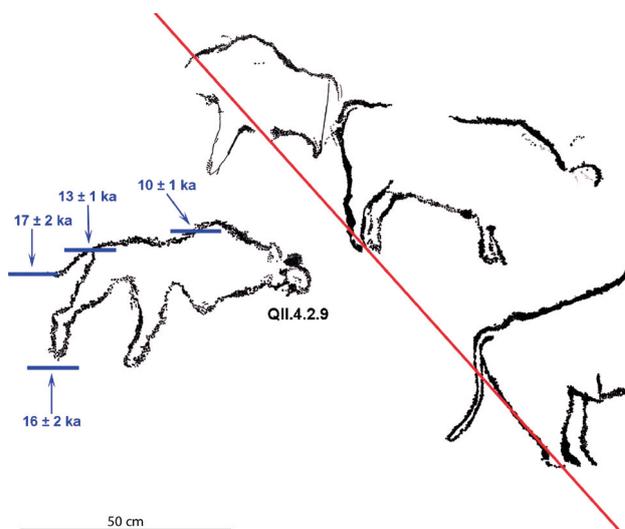
During the 2008 field campaign, it became clear that one of the rock art panels at QII, in particular panel QII.4.2, was partly covered by sediment accumulations that are trapped between the engraved rock face and coarse Nubian Sandstone rock debris that became separated from the scarp. Using petrographical thin sections, the covering sediment could be identified as being derived from the Late Pleistocene “Wild Nile” floodplain deposits of the region, through aeolian reworking. The wind-blown nature of the covering sediment makes it ideally suited for optically stimulated luminescence (OSL) dating.

OSL dating can determine the time that has elapsed since buried sediment grains were last exposed to sunlight. Using the constituent mineral grains of the sediment itself, it offers a direct means for establishing the time of sediment deposition and accumulation. OSL dating requires that the sedimentary grains were exposed to sufficient daylight in order to fully reset the luminescence clock prior to deposition and burial. The most robust OSL dating procedure currently available involves the use of OSL signals from quartz in combination with the single-aliquot regenerative-dose (SAR) procedure. We have applied this procedure to four samples to establish the time of sediment deposition on top of rock art panel QII.4.2 and, in this way, to obtain a minimum

age for the petroglyphs. OSL dating was performed in the luminescence dating laboratory at Ghent University (Belgium). The samples of the sediment that covers panel QII.4.2 yield optical ages that are fully consistent with the stratigraphic position of the samples (figure). The dates range from 10 ± 1 ka at the top to 16 ± 2 ka at the base of the sequence. They provide solid evidence for the pre-Holocene age of the Qurta rock art.

The rock art of Qurta is not an isolated occurrence. Four other sites are known in the region, all with a limited but highly homogeneous assemblage of drawings, which display a very similar art, both thematically and stylistically. One site, Abu Tanqura Bahari 11 at el-Hosh, is situated about 10 km north of Qurta; the other three, Wadi Abu Subeira 6, 13 and 14, lie about 45 km to the south. The repertoire of these sites again consists mainly of naturalistically drawn bovids, but fish, hippopotamus and Nubian ibex are also represented. None of them, however, offer the dating opportunities that Qurta does.

The Qurta OSL dates present the first solid evidence for the existence of sophisticated figurative Pleistocene rock art in North Africa. Whereas this makes the Qurta rock art definitely the oldest discovered in North Africa thus far, its true age remains unknown. It is clear that the buried drawings at QII were already considerably weathered before they became covered by sediment. It seems likely therefore that the rock art is significantly older than the minimum ages obtained by means of OSL. An age of $\sim 19\,000$ – $17\,000$ calendar years would make the Qurta rock art more or less contemporaneous with Solutrean / Early Magdalenian art as known from Upper Palaeolithic Western Europe. Significantly, the rock art of Qurta and the other Egyptian Pleistocene art sites have several thematic and stylistic features in common with European Late Magdalenian art. This is particularly evident from the human figures, most of which are very similar to the anthropomorphs of the Lalinde / Gönnersdorf type. The latter are dated to $\sim 15\,500$ – $14\,000$ cal BP. Whereas it would be premature to speculate on any implications of this in terms of long-distance influence and intercultural contacts, it is clear that the Pleistocene age of the Qurta petroglyphs along with their degree of sophistication, similar to that of European Ice Age art, introduce a new set of challenges to archaeological thought.



Detail of panel QII.4.2.
The red line indicates the top of the sediment accumulation. The OSL ages are presented for sediments completely covering drawing QII.4.2.9, representing an indeterminate two-legged creature.





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