Chert Quarrying, Lithic Technology and a Modern Human Burial at the Palaeolithic Site of Taramsa I, Upper Egypt

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This monograph publishes the data from the very important site of Taramsa I, near Qena, in Upper Egypt. The site is an outcrop of chert gravel which was exploited as a raw material source from at least MIS 6–7 times. The site was discovered in 1985, and was excavated in 1989, 1991 and 1994. Sampling for OSL dating was done in 2001 and a survey of the area carried out in 2003. Palaeolithic humans have extensively modified the site by their mining of chert nodules. Features such as mining pits and exploitation faces have been identified. The importance of the site is that clusters of artifacts left behind during the mining could be collected as units. These have been refitted to quite a large extent so that the analysis of the assemblages is not centered on artifacts as the main unit but as refitted sequences. The archaeological assemblages have been divided into "activity phases" which are separated in time. OSL dating of aeolian sand filling in the chert exploitation features gives the Taramsa sequence an absolute chronology. Stratigraphic relationships have been used to assign assemblages to one or another activity phase and the order of the activity phases. The technology of each activity phase differs from each other and has been reconstructed primarily from the refitted sequences. The book has three introductory chapters giving the history and background of the research, the methodology employed in studying the artifacts and a discussion of lithic production systems in NE Africa. Chapters 4-8 discuss "activity phases" I-VI, while Chapter 9 discusses other assemblages. Chapter 10 is devoted to the Taramsa burial and Chapter 11 is the conclusions and discussions.

Activity phase I is considered to pre-date the earliest OSL date of ~165 ka. One assemblage shows the dominance of the discoidal production system. The absence of Levallois cores is significant. Lupemban types of foliates occur. The authors suggest that the Nubian Levallois technique could develop from the Lupemban foliates. Activity phase II artifacts are bracketed between OSL dates of ~117 and 88 ka. This phase attests to the Nubian I method of core exploitation. The assemblage has a distinct laminar character. Activity phase III is sealed by aeolian sand with an OSL date of 78 ka. The assemblages show Nubian 1 cores. The modern human burial is assigned to this phase. Activity phase IV shows enhanced exploitation of the chert gravels with almost industrial level activities. It is suggested that social organization changed at this time. The lithic industry shows "transitional" features with volumetric blade production developing out of the earlier Levallois related methods. This phase is bracketed between ~56-66 ka. The authors consider that the term "Upper Palaeolithic" would be appropriate to apply to activity phase IV as Nubian methods of core exploitation have been transformed into volumetric blade production. The following activity phase V, however, dating to 10 ka later, shows continuation of the transitional features and even a reappearance of Levallois related core exploitation.

The book reports impressive work. It is a wonderful site and the authors have persisted with the study over more than two decades. There are 99 plates of good quality, including color plates of some of the refitted sequences. This is in addition to numerous figures and tables. I congratulate the authors and appreciate the efforts it must have needed to get this "final" report done as Taramsa I has emerged as a key site in the story of modern human origins.

I hesitate to criticize the authors but have to confess to my own shortcomings—I found this book very difficult to read. The authors have used an approach which would not be possible for most sites, which is refitting and reconstruction of *chaîne opératoires*. The language is very technical. It is explained, but I found it difficult to remember what was said from section to section. The detailed information is all there, but a medium level of abstraction which would let the reader understand the conclusions of the authors is missing. It took me ages to figure out what the age estimates for each of the activity phases was and what technology was associated with it. Even now, I fear that the summary I gave above might not be exactly correct.

The implications of the work for modern human origins is not clear. This is not a criticism, but the contrary. Although it was difficult for me to follow all the arguments, I think the complexity of the data is probably an indication of the reality. Simple narratives which dominate the discussion now are just an indication of our ignorance and more data is sure to necessitate a more complex story. The dates are not precise enough to correlate the phases of human activity and aeolian activity to particular climatic phases or events. Activity phase IV, which shows an Upper Palaeolithic technology developing, is bracketed between 66–56 ka and so could be coeval with some of the Neanderthals in the Levant. It also overlaps with the Howieson's Poort in South Africa and the Lemuta industry of East Africa.

One of the most significant findings from the site was a burial associated with activity phase III and thought to date to ~88 ka. Poor preservation of the skeleton and withholding of permission to export the skeleton for further study have reduced the importance of the find. Sediments inside the skull gave much younger dates than the surrounding sediments which remains difficult to explain. The attribution of the assemblages to modern humans, however, has been mostly accepted without the skeletal evidence.

The material studied in this monograph is curated by the museum of Egyptian Antiquities. Unstudied material, however, was re-buried at the Taramsa I site. The reason for this is not explained but puzzled me.

To properly understand the book it is probably necessary to read the previous and related publications. The appearance of an Upper Palaeolithic technology at a date earlier than Europe or the Middle East is of great significance, but this site is only one piece of the puzzle and it will require a similar level of data from elsewhere to properly interpret the evidence. This book is one I am sure I will need to come back to in order to get a better understanding of the work done.