

THE GESHER BENOT YA'AQOV ACHEULIAN SITE - ADDITIONAL EVIDENCE FOR THE "OUT OF AFRICA" BEHAVIORAL MODEL

Naama Goren-Inbar(Israel,Jerusalem)

The renewed multidisciplinary research on the waterlogged Gesher Benot Ya'aqov Acheulian site has yielded a wealth of data contributing much to the understanding of hominid complex behavior and subsistence strategies in southwestern Asia.

Starting in 1989, a series of previously unknown exposures of the Benot Ya'aqov Formation has been investigated in seven field seasons which took place south of locations of previous archaeological activities. Field work in the study area revealed a 34 m long sequence of lake margin and fluvial deposits of the paleo-Lake Hula. The strata at the GBY site include a diversity of lithofacies, and are strongly cyclical; most of the rich archaeological and paleontological rich finds have been found within the beach facies. A paleomagnetic study of the sediments has shown that it consists of a reversed polarity zone at the base of the sequence overlain by a normal polarity zone. The boundary between the zones is assigned to the Matuyama/Brunhes boundary, dated at 780 ka, and the duration of the sequence is estimated to be in the order of 100-150 kyr.

The archaeological data comprise lithic, paleontological and palaeobotanical assemblages. All of the seven archaeological sites excavated are assigned to the Acheulian Industrial Complex. The lithic assemblages are characterized by a single mode of raw material exploitation which makes use of three types of raw material: basalt, flint and limestone. Repetitively the basalt is mainly used for the modification of bifaces, limestone for that of chopping-tools and flint for flakes and flake tools. The blanks for bifacial tool modification (handaxes and cleavers) are mostly shaped on large flakes which have been obtained by different methods, including among others the Kombewa and prepared core techniques. The end-products (the bifacial morphotypes) are extremely similar to one another regardless of the production techniques, demonstrating both the depth of planning and the foresight abilities of the Early/Middle Pleistocene hominids. The earliest Levantine appearance of the Levallois and the soft

hammer techniques are also documented at the Gesher Benot Ya'aqov site.

The typological composition, the raw material preferences and the techniques employed for the production of the bifacial tools and the stylistic characteristics of their shaping are of distinct African affinities. Despite the variability (functional?) encountered in the different archaeological horizons, the same African features continue throughout the sequence and all differ drastically from those encountered at the earlier Acheulian site of Ubeidiya. Due to this cultural difference, the Gesher Benot Ya'aqov cultural sequence is viewed as evidence of a distinct and separate episode of the "Out of Africa" phenomenon. It is considered a distinct wave in a probable sequence of which only the sites of Ubeidiya and Gesher Benot Ya'aqov are presently known. A variety of large and small mammal remains and abundant paleobotanical finds in the form of wood, bark seeds and fruits (over 100 taxa presently defined), as well as a wealth of other data originating from the multidisciplinary studies, indicate that the paleoenvironment of the paleo-Lake Hula provided optimal conditions for the Early/Middle Pleistocene hominids. These enabled a repetitive pattern of hominid occupations along the shores of the lakes situated in the Dead Sea Rift, the northern sector of the African Rift Valley, and a corridor leading to Eurasia.