Early Homo adaptive and behavioral patterns in North Africa: Perspectives from Ain Hanech and Tighennif (formerly Ternifine) sites in northern Algeria

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Abstract

The archaeological information on Early Homo adaptive and behavioral patterns in Africa is derived chiefly from a number of sites south of the Sahara, e.g. Gona and Konso Gardula (Ethiopia); Olduvai (Tanzania); Koobi Fora (Kenya); and Sterkfontein and Swartkrans (South Africa). Current investigations at Ain Hanech and Tighennif in Algeria are broadening the range of Early Homo behavioral activities to the Mediterranean fringe. Ain Hanech is central for documenting the oldest currently known archaeological occurrences in North Africa. Recent fieldwork at Ain Hanech resulted in the discovery of stone tools associated with cutmarked bones from several Early Pleistocene deposits, including Ain Boucherit Members P and R dated to 2.3and 1.9 Ma, respectively, Ain Hanech classic and El Kherba (Member T) dated to 1.8-1.7 Ma, and calcrete deposits (Member U) encasing Acheulean artifacts estimated to 1.6 Ma. The stone tools from these sites are Oldowan, similar to those known at eastern African sites. Evidence of cutmarks and usewear traces indicate early Homo exploitation of animal tissues and marrow. The Acheulean site of Tighennif is significant for investigating Homo erectus adaptive patterns to arid environment and ecology at a crucial time in human evolution, namely the Early-Middle Pleistocene Transition (MPT). Paleoecological data suggest that during the MPT (1.2-0.8 Ma) Africa experienced a major global climate change characterized by increased aridity and open vegetation. Chronologically, Tighennif correlates with the occurrence of this open/dry environment in Africa and has also yielded H. erectus fossils and an Acheulean industry associated with a savanna-like fauna. Current field investigations at Tighennif reveal that the archaeological remains were accumulated in primary

context. The preliminary study of the association of the Acheulean artifacts and animal bones suggests a significant adaptive behavior to open/dry environment by H. erectus. Our investigations have shown that by 2.2 Ma early Homo has already occupied North Africa and was well adapted to expand into Eurasia.

Key words: Ain Hanech; Tighennif; Oldowan; Acheulean; Behavior;