

Wild cereals from Holocene central Sahara archaeological sites: aDNA and archaeobotany from the Takarkori rockshelter

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Both pollen and macroremains recovered from archaeological sites point to a long-time exploitation of wild cereals and to the prevalence of these plants among those selected and transported to shelters and caves of central Sahara (southwestern Libya)(1). Spikelets, florets and grains of Panicoideae (*Brachiaria*, *Cenchrus*, *Echinochloa*, *Panicum*, *Setaria*, *Urochloa*, *Sorghum*) are the most abundant plant remains in these sites. The archaeological excavation of the Takarkori rockshelter by the Italian-Libyan Archaeological Mission in the Acacus and Messak (Central Sahara), Sapienza University of Rome (directed by S. di Lernia), exposed a surface of c. 120 m² in extent. The 1.6 m thick deposit includes stone structures, fireplaces, plant accumulations, dung layers and a burial area. Layers were deposited during hunter-gatherer and later pastoralist occupational phases. Chronology ranged from c. 9000 to 4200 BP, and was based on stratigraphy, radiocarbon dates, and archaeological materials (2). Systematic morphological analysis was carried out on 200 spikelets/florets selected as representative of different chronological contexts. The records of *Panicum*, *Echinochloa* and *Sorghum* showed homogeneous typology and fairly uniform size in each genus. aDNA extraction confirming the morphological identifications of the three taxa was obtained by Olmi et al. (3). aDNA was successfully performed using several methods (4, 5) and then assayed using PCR with a primer set for the *rbcL* gene. New aDNA extraction was obtained from *Panicum* spikelets and the analysis of *matK*, *trnH-psbA* and *trnL* barcode regions may help to identify the records at species level.

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