

POSTER PRESENTATION:

Multidisciplinary analysis of Early – Mid Holocene wild cereal remains from central Sahara (SW Libya)

Rita Fornaciari¹, Laura Arru¹, Anna Maria Mercuri¹, Savino di Lernia^{2,3}

¹ Dipartimento di Scienze della Vita, Università di Modena e Reggio Emilia, Italy

² Dipartimento di Scienze dell'Antichità, Sapienza Università di Roma, Italy

³ School of Geography, Archaeology and Environmental Studies, University of the Witwatersrand, South Africa

rita.fornaciari@unimore.it; laura.arru@unimore.it; annamaria.mercuri@unimore.it; savino.dilernia@uniroma1.it

Pollen and plant macroremains from rock shelters of central Sahara give information about environmental conditions during the Holocene, and adaptive strategies of human groups living in the area. Wild cereals were long-time exploited and are prevalent among plants selected and transported to these sites. Spikelets and grains of Panicoideae are the most abundant plant remains found at Takarkori, a rock shelter in the Tadrart Acacus Mts. (SW Libya). They have been studied by means of morphological and molecular (ancient DNA) analyses.

The excavation by the Italian-Libyan Archaeological Mission in the Acacus and Messak (Sapienza University of Rome and Libyan Department of Archaeology) exposed a surface of 140 m². The deposit includes stone structures, fireplaces, plant accumulations and a burial area. The site (dated 10,200-4,600 cal yr BP) was occupied throughout Early and Middle Holocene, a pivotal period for human development as include the transition from hunter-gatherer subsistence to food production. Peculiarity of the sequences is the surprising preservation of organic matter.

Systematic morphobiometrical analysis was carried out on 1,450 spikelets of *Panicum*, *Echinochloa* and *Sorghum* selected on the basis of their different cultural contexts. The records showed uniform size in each genus. aDNA was extracted testing different protocols and then was studied by the DNA barcoding technique using four chloroplast markers. Bioinformatic analysis of the results allowed to inspect the phylogenetic relationships between the archaeobotanical records and the modern species of African wild cereals.