2nd international congress on

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PROGRAMS AND ABSTRACTS
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The exploitation of wild cereals during the Early and Middle Holocene in the Tadrart Acacus (Central Sahara, Libya): pollen evidence

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The Tadrart Acacus massif, in Central Sahara, south-western Fezzan - Libya, is extraordinarily rich in archaeological sites. They date from the Late Pleistocene Aterian occupation to the Holocene pre-Pastoral and Pastoral cultures. Multidisciplinary research, including archaeological, geological, micromorphological, zoological and botanical analyses, has been carried out on these sites with the aim of reconstructing the environment where humans lived. Pollen analyses carried out on thirteen sites so far, provided a reliable improvement in the knowledge of the flora, vegetation, climate and relationships between humans and plants in that area.

This paper concerns the last point, and more precisely the pollen evidence of the harvesting of wild grasses on a large scale before these plants were domesticated. They were large-sized pollen grains from the Grass family - Gramineae recorded in the above mentioned Early and Middle Holocene sites in the Tadrart Acacus. The emphasis is on "Cerealia-type" pollen, that is pollen grains with a maximum diameter > 40 microns. These records, based on morphobiometrical characteristics were divided into three groups: 1) Large-sized *Panicum* (s.l.); 2) Cerealia type I; 3) Cerealia type II; the latter were the largest sized grains.

During the Early Holocene (9500 - 8500 bp), Large-sized *Panicum* s.l. and Cerealia-type II pollen were frequently recorded, suggesting that the parent wild cereals were available in the area and people cared for them as an important food resource. A process of selection was already in progress at that time and it could have been transformed into real domestication. Later, during the Middle Holocene (7000 - 5000 bp), these pollen types disappeared in favour of different grasses with pollen belonging to Cerealia-type I. At the end of the Middle Holocene (5000 - 3900 bp) large-sized grass pollen became sporadic.

The trend observed in the occurrence of Ceralia type pollen in this area suggested that the process of "taking care" of some grasses species, advanced as it appeared to be in the Early Holocene, when the largest sized pollen grains were recorded, could not continue until the end of the Middle Holocene. The climatic history of the region, reconstructed on the basis of geological and palynological evidences, showed that aridification had advanced progressively. This may explain why wild cereals disappeared from the area.