
Regional climatic and social transformations during the 4.2 ka BP event at the Southern Iberian Peninsula. First results of a paleoclimatic-archaeological project

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Résumé

Within the F1 project of the CRC 1266 'Scales of Transformation' we are investigating the 4.2 ka BP event in the western Mediterranean and its influence on the transformation of societies at the major cultural transition from a Neolithic/Chalcolithic configuration towards the Bronze Age.

We aim at investigating the local timing and magnitude of the climatic oscillation during the event and the intensity and character of the societal change by quantification of the archaeological record. The intent is to correlate both proxies and to test if and to what extent the climate may have triggered and influenced developments in the human sphere.

One possible, and maybe most prominent, aspect of the societal change could be represented by shifts in population. Demographic studies are currently again an emerging field in archaeology. Among the reasons for this development are the resurrected debate about ethnicity and migration resulting from the advances in aDNA methodology, and the broad application of summed 14C dates as an activity and demographic proxy.

Geochemical analyses of long chained n-alkanes and alkenones from a marine sedimentary archive (ODP-161-976A) from the Alboran Sea are taken out in order to investigate changes in precipitation, vegetation dynamics and sea surface temperatures.

In this presentation we would like to explore the trajectories of societies in the Southern Iberian Peninsula under the influence of the 4.2 ka BP event. Our recent results indicate two prominent arid periods centred around 4.0 ka BP and 4.25 ka BP interrupted by more humid conditions. Furthermore, we found a correlation between the development of precipitation and demographic proxies. It is also evident that the settlement structures changed in the course of the climatic shift.

Still a finer chronological resolution is desirable for both climatological and archaeological proxies. Nevertheless, it is already possible to examine the hypothesis of early statehood

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on the Iberian Peninsula in a more differentiated way than before by taking into account the changed environmental conditions and a detailed and quantitative description of large transformations in the social sphere.

Mots-Clés: Iberian Peninsula, Chalcolithic, Bronze Age, 4.2 ka event, paleoclimatology, social transformation