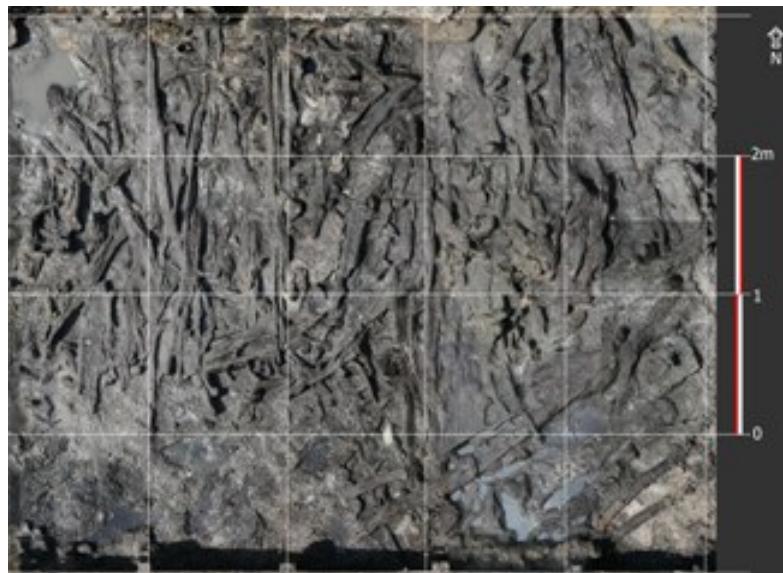


03/2015

## Landscape Transformation During Neolithic in Lake Banyoles Surroundings



Pollen analysis of a new pollen record from Lake Banyoles and its contextualisation with other archaeobotanical records from La Draga, has allowed characterising the environmental conditions in which Neolithic communities developed, and, at the same time, reconstruct the impact the economic practices of these social groups had on the landscape. The data show a rapid fall of the pollen values of oak coinciding with the first settlement phase of La Draga, which could be due to gathering raw material for the construction.

The onset of farming is often associated with a significant change in the relationship between humans and environment in comparison to hunter-gatherer societies. Lake Banyoles is remarkable for containing evidences of early farming communities of Iberian Peninsula, and also for providing the possibility to relate archaeological sites with palaeoecological records obtained in lacustrine and peat deposits in the lake surroundings. Located half-way along the eastern shore of Lake Banyoles, La Draga is the most important archaeological site in the region, with one Early Neolithic occupation, between 7250-6950 before present.

This paper focuses on the high-resolution pollen analysis of one new pollen record from Lake Banyoles and its contextualization with other archaeobotanical records (charcoal, seed and wood remains) from La Draga, in order to achieve a better understanding of landscape changes around the lake. The main goal of this paper is to characterise the environmental conditions in which Neolithic communities developed, and, at the same time, reconstruct the impact of the economic practices of these social groups on the landscape.

Around 7250 years ago, coinciding with the first settlement phase of La Draga, a rapid fall of the pollen values of oak is observed, and a stabilisation of these low values is found during the following 1000 years. The causes for such changes in vegetation cover are discussed, taking into consideration environmental data to calibrate the role of climate in vegetation dynamics, as well as archaeobotanical data to evaluate the impact of the management of vegetal resources on the landscape. The discussion of the data shows that climate could not have been the main cause for the decrease of broadleaf deciduous forests, and that the need of gathering raw material for the construction of dwellings played a major role in this change. The fact that these plant community does not recover during the occupation or after the abandonment of La Draga would confirm that human impact continued over time and that forest clearances were maintained for various purposes.

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*Top left figure: Collapse of oak wooden structures at La Draga site (Banyoles, Girona).*

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