

# Taller de Arqueobotánica

## Madera/Carbón Arqueológico

Martes, 11 de diciembre 2012

Programa:

- 10.00 - 10.15 h. Raquel Piqué (UAB): Bienvenida
- 10.15 - 10.45 h. Oriol López (Laboratori d'Arqueobotànica UAB): *New approaches to the functional study of the wooden tools from the Neolithic site of La Draga (Bayoles, Girona).*
- 10.45 - 11.15 h. Carla Lancelotti (IH, CCHS-CSIC): *Fuelling Harappan hearths: archaeobotanical analysis of fuel and environment exploitation at Harappa and beyond.*
- 11.15 -11.30 h. Pausa Café
- 11.30 - 12.00 h. Welmoed Out (IMF-CSIC): *Branch age and diameter: useful criteria to recognise woodland management?*
- 12.00 - 13.30 h. Sesión práctica de microscopía

Durante la sesión de práctica, que se celebrará en los laboratorios de la IMF, será posible hablar de métodos, identificaciones y otras cuestiones prácticas relacionadas con la madera y el carbón vegetal arqueológico. La sesión se basará en el material traído por los participantes.

El Taller está dirigido a estudiantes interesados. No es necesaria preinscripción, pero si queréis traer material enviad un correo electrónico:

[w.a.out@imf.csic.es](mailto:w.a.out@imf.csic.es).

¡Esperamos veros a todos en el taller!

**Organizado por:** Depto. De Arqueología y Antropología de la Institución Milà y Fontanals (CSIC)

**Lugar:** Sala de Actos de la IMF, C/Egipcíaques, 15, Barcelona



## **New approaches to the functional study of the wooden tools from the Neolithic site of La Draga (Banyoles, Girona).**

Oriol López (Laboratori d'Arqueobotànica, UAB)

Traceology is an extremely well-known discipline in archeology. Everyone knows about use-wear analysis developed on bone, lithic tools or even shells. But what happens with organic materials?

The site of La Draga located on the Eastern shore of the “Estany de Banyoles” (Banyoles Lake) has documented the only preserved waterlogged site in the Iberian Peninsula, with hundreds of wooden tools. The good preservation of those wooden tools allows us to document how the wood resources were used. The main objective of the work has been to characterize the woodworking technology to produce instruments and dwellings. Our work focuses on the identification of the type of wood and how it was transformed and used. In order to achieve those objectives we have to develop a careful and wide range of different studies: anatomical and morphological analysis, tool marks and use-wear analysis... Our work is based on an experimental approach as well as the development of new technologies such as 3D scanning.

## **Fuelling Harappan hearths: archaeobotanical analysis of fuel and environment exploitation at Harappa and beyond.**

Carla Lancelotti

Wood and other plant materials (chaff, straw, etc) played a pivotal role in all Early Civilizations as fuel for domestic and industrial uses. The continuous and extensive exploitation of fuel resources can negatively impinge on the natural environment especially in arid conditions where wood is scarce. This is particularly true during periods of rapid urban expansion and population growth when the demand for wood resources is high. In these cases alternative sources of fuel, such as dung or crop-processing leftovers, become vital and their widespread use, associated to anomalous evidences in the wood assemblage, provide precious hints to the archaeobotanist to assess the human impact on the environment.

This paper presents the results of archaeobotanical analyses aimed at the understanding of fuel collection and use, which have been conducted on Mature Harappan samples from four sites: Harappa (Pakistan), Alamgirpur (Uttar Pradesh, India), Kanmer and Shikarpur (Gujarat, India). Although these sites are all located in semi-arid environments they are situated in slightly different ecological zones (hyper-dry, hot semi-arid and hot moist semi-arid), thus allowing the assessment of local adaptations as well as potential cross-regional similarities.

A specific methodology involving the study of charred wood, phytoliths, spherulites and geochemistry has been applied to the samples. The combined application of these different but related disciplines offers the means of clearly discriminate between the different fuel resources, thus evaluating their relative importance. At the same time this study provides



new knowledge on the ecological settings in which the Mature Harappan period evolved and how the people interacted with their natural surroundings.

### **Branch age and diameter: useful criteria to recognise woodland management?**

Welmoed Out, Caroline Vermeeren, Kirsti Hänninen

Management such as pollarding and coppicing is regularly discussed in archaeobotany. When excavations yield finds like wattle work or fish traps, age and diameter data combined with physical evidence are frequently used to argue in favour of management. However, conclusions are often based on assumptions. To test whether former woodland management can be recognised in wood assemblages from archaeological excavations, models were developed that predict the expected age and diameter distribution of branches from unmanaged and managed trees. The models were tested by the analysis of branches from modern-day trees. The first results support that the models can be used to discern management in the past. It is however necessary to critically take into account issues like sample size, natural disturbance/opportunistic wood collection and diameter selection.

