



Wood and architecture in Protohistory and Antiquity (3)

Which species for which uses? Choices, operational chain and conservation

Discoveries at Saint-Martin-au-Val (Chartres)

International Symposium,
June 12th-13th 2025, Chartres, France
Call for papers



Organizing Committee :

Bruno BAZIN (C'Chartres Archéologie, UMR 8546, CNRS-ENS, Paris)
Frédéric GUIBAL (IMBE, UMR 7263)
Stéphane LAMOUILLE (IRAA UAR 3155, CNRS, AMU, UPPA, MOM Lyon 2)
Sylvie ROUGIER-BLANC (CRHEC, UPEC)
Magali TORITI (Université de Rennes, CReAAH, UMR 6566)

Scientific Committee :

Girolamo FIORENTINO, anthracologist (Università del Salento, Lecce, Italia)
Olivier GIRARD CLOS, dendrochronologist (Chrono-environnement UMR 6249, Université de Besançon-Franche-Comté)
Bruno CLAIR, engineer (LMGC UMR 5508, Université de Montpellier)
Jean-Yves HUNOT, archaeologist (Pôle départemental d'archéologie du Maine et Loire, CReAAH UMR 6566)
Mario NOTOMISTA, archaeologist (Packard Institute for Cultural Heritage - Herculaneum)
Domenico CAMARDO, archaeologist (Packard Institute for Cultural Heritage - Herculaneum)

SUBJECT

Bio-indicators used in paleoecology are particularly valuable for reconstructing the history of palaeoenvironments. Among these, pollen analysis and pedoanthracology serve as key witnesses to changes and variations in vegetation cover, helping to recreate ancient landscapes. In archaeology, the conditions under which their macroremains are preserved, along with the specific nature of the analytical contexts, critically affect the methodology. For instance, wooden remains uncovered on archaeological sites can testify to past human activity. Through anthracology, xylology, and dendrochronology, the taxonomic identification, dating, and observation of wood characteristics provide insights—not only into the technology employed—but also into selection criteria, shedding light on the local availability or scarcity of the relevant taxon.

When a species identified on-site was not locally available but originated from a distant biogeographical region, its importation suggests a local shortage or a deliberate choice based on the wood's properties meeting the requirements of the object to be produced. One pertinent example is provided by the medieval painted ceilings that were prevalent in the grand homes of the Languedoc bourgeoisie: these were all crafted from fir wood, a species absent from the Mediterranean lowlands during the Middle Ages, and thus deliberately imported to meet the needs of carpenters and decorators. Fir logs, which are notably straight even in long lengths, with small knots and no resin, were most likely chosen for their desirable characteristics. However, we might wonder why fir was preferred over a species like poplar, which was abundant in the Mediterranean plains and riverbanks. Poplar could have supplied wood for the workshops that produced painted ridge closures, used as supports for Italian primitive painters. Clearly, the choice of fir wood for painted ceilings required a secure supply chain and sustained trade over nearly three centuries. Other, more surprising, examples of fir wood use in the past include fir logs used in a caisson system designed to drain wetlands in Fos-sur-Mer (Bouches-du-Rhône) in the 1st century AD, or to make locking pegs for ligatures joining the frames and strakes of ancient Mediterranean trading ships, dated by their cargoes to between 150 BC and 25 AD.

Recent discoveries of almost 2,000 ancient wooden components in the Gallo-Roman sanctuary at Saint-Martin-au-Val (Chartres, Eure-et-Loir), all belonging to a coffered ceiling, have raised new questions about the use of timber species in architecture. Once again, fir wood predominates, despite not being native to the area. Was fir chosen for its mechanical properties, ease of shaping, lightness, or strength? What were the timber supply routes, and how were the materials transported? How can we trace these routes today and gain a better understanding of the timber economy? Was there a specific supply chain for timber? Were certain species particularly prized, and if so, why? Did the choice depend on the type of construction? Was the historical distribution area of the species relevant?

As far as fir trees are concerned, numerous examples highlight how the selection of a species for different purposes can be surprising in terms of provenance, mechanical qualities, shape (e.g., twisted wood), or condition (e.g., reused or dead wood). These discoveries raise questions about the motives behind the selection process, as well as its biogeographical implications. Similar questions can be asked for other species such as cypress, ash, poplar, or strawberry tree.

The goal of this third *wood and architecture* workshop is to initiate a critical reflection on the choice of wood species in architecture during Protohistory and Antiquity, based on archaeologically attested case studies. Occasional historical comparisons, especially with medieval examples, are also encouraged. The workshop will focus initially on the Gallo-Roman, Italian, and Aegean areas (particularly Greece and Crete), but examples from other regions during antiquity, such as Western Europe, the Balkans, the Near East, Egypt, the Maghreb, and Japan, will also be considered. Although the case of Saint-Martin-au-Val allows

us to go beyond textual sources alone, the latter remain essential, as they shed light on how the Ancients understood the qualities of wood and its architectural potential. Both current and past knowledge of biogeography, as well as methodological aspects – from the management of wood during excavations to its conservation and analysis – will also be addressed, involving environmental science specialists. How can we best preserve these often exceptional and difficult-to-analyse remains? How can they be promoted as heritage objects to the public?

The workshop will be organised into four sessions:

- **Session 1: The Woods of Saint-Martin-au-Val**
To remain as close as possible to the archaeological evidence, the meeting will begin with a visit to the Gallo-Roman sanctuary of Saint-Martin-au-Val, featuring a presentation of the wooden parts discovered since 2018, followed by a discussion about the ceilings and the species used.
- **Session 2: Species Selection, Wood Biology and Mechanics**
Why choose one type of wood over another? Which species for which architectural function? What is the significance of wood? What about its availability and adaptability?
This session will focus on the mechanical properties and processing characteristics of today's species in comparison with the qualities highlighted by ancient authors. Case studies of different species in construction, both hardwood and softwood, will be presented.
- **Session 3: From Supply to Species 'Treatments'**
For example, is oak worked in the same way as pine? Can any type of wood be painted, particularly for use in painted ceilings?
The development of new archaeological methods (e.g., isotope geochemistry, DNA analysis) now offers new perspectives on locating and characterising selected woods.
- **Session 4: Differential Species Conservation**
The issue of preserving wood once it has been unearthed will be discussed: how do we decide which pieces to conserve and for what purpose? For display, enhancement, or future study? What methods are currently in use, and what is the best choice depending on the context under study?

Proposals for presentations, written in either French or English (approximately half a page), should be submitted by 17th January 2025 to the following address, along with a detailed CV: boisetarchitecture2025@gmail.com

A publication of the workshop proceedings is planned, in both French and English. Papers must be submitted within four months following the symposium.