

TRACE 2023

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Book of Abstracts

WELCOME

Welcome to TRACE 2023, held in the University of Coimbra, Portugal, and organized by the Dendrochronological lab, MedDendro. The MedDendro lab was founded in 2005, a baby compared with the age of the University of Coimbra, founded in 1290. The MedDendro lab has several research lines, from studying the climate-growth relations of Mediterranean tree species, to the ecological meaning of intra-annual density fluctuations, xylogensis of conifers, impact of drought on the physiology and growth of trees, and more recently, on archaeological and historical woods.

Associated with the celebration of the 250 years of the Botanical Garden of the University of Coimbra, the MedDendro lab prepared an exhibition about wood anatomy, called INSIDE OUT, that you can visit during the TRACE conference.

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A Dendroarchaeology for Anatolian Bronze and Iron Ages - potentials and pitfalls

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This paper is a critical overview of our dendroarchaeological case-studies in Turkey within the framework of the Balkan-Aegean Dendrochronology Project: “Tree-Ring Research for the Study of SE-European and East Mediterranean Civilizations” with a discussion of existing challenges and prospects for the future. Tree-ring research and dendrochronology were formally introduced to archaeology of Turkey as early as the 1970s through Peter I. Kuniholm’s pioneering study on a 2750-year-old Iron Age tumulus housing a wooden burial chamber built of juniper logs with nearly 900 rings, the oldest known standing wooden structure in the world. This work together with his subsequent dating projects resulted in long regional tree-ring chronologies covering mostly the late antique and Ottoman periods in the wider Mediterranean region. The main goal of our project was to revive and build on this work through new collaborations, materials and perspectives in such a landscape full of huge archaeological potential offering a diverse set of data and questions on ancient societies. Another major goal was to extend such existing chronologies, identify problems, and fill in the gaps especially for the second and first millennia BCE, a time period that witnessed the rise and fall of many great polities in ancient Anatolia, such as the Hittites and the Phrygians, the emergence and disruption of long-distance trade networks, and a major crisis resulting in a new “house of cards”. Besides dating of a number of exceptional Late Bronze Age contexts, such as the 3500-year-old sacred spring of ancient Nerik, and identification of wood species and their origins, such as the Black pine timber posts used by the Early Bronze Age inhabitants of Seyitömer Höyük ca. 4700 years ago, we were able to identify issues arising from the quality, quantity, and management of available material. Our revisit to existing Anatolian tree-ring chronologies has revealed that sequences from Bronze and Iron Ages are still floating and represent only a small fraction of what has been unearthed thus far. During fieldwork we also observed a general loss of interest in dendrochronology among archaeologists, probably caused by the increasing popularity of other forms of absolute dating and long disappearances of dendrochronologists especially in less-favored areas. Our ultimate goal is to restore and foster the role of dendroarchaeology in shaping and answering questions on human past and

environment while outlining prospects for the future in collaboration with local researchers in a geography offering many great challenges but full of surprises.

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