



THE LABORATORY OF TREE-RING RESEARCH

presents a talk by

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Calibrating Time Lags in Archaeological Tree-Ring Dating: the Colorado Old Wood Project, Phase I: Douglas Creek Arch and the Uncompahgre Plateau

Wednesday, April 25, 2012 - 12:00pm to 1:00pm

Room: Math East 20

Archaeologists have long been aware of the potential for serious overestimation of site ages based on radiocarbon and tree-ring dates from certain archaeological contexts. The “old wood problem” arises from the human use of deadwood elements for various purposes and the fact that trees are long-lived plants whose rings date to the years in which they were grown rather than to the years in which the organisms died. Despite a fairly unfocused concern with this issue, little effort has been devoted to quantifying the magnitude of the problem. The Colorado Old Wood Project (COWP) attempted to remedy this deficiency in western Colorado, where the problem is especially acute due to the paucity of freshly cut wooden elements in both prehistoric Fremont Culture and Ute sites. In order to assess the potential lag between deadwood dates and the actual time of wood use, COWP collected samples from firewood-sized pieces of dead wood at three locations. Mean lags between tree-ring dates and date of use (A.D. 2005) ranged from 482 to 219 years on a north-south environmental gradient from Rangely to Montrose CO. In addition, radiocarbon determinations on several samples that could not be tree-ring dated produced ages in excess of 1,000 years. These results indicate that radiocarbon and tree-ring dates from deadwood fuel and construction elements cannot be taken at face value but must be adjusted.