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**Abstract Title:**  
*Late Pleistocene Vegetation and Fire in Western North Carolina, USA: Evidence from Whiteoak Bottoms*

is part of the Paper Session:  
**Reconstructing Paleoenvironments since the Last Glacial Maximum**

scheduled on Monday, 2/27/2012 at 12:40 PM.

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**Abstract:**  
 We examined the vegetation and fire history of Whiteoak Bottoms (35°04'44"N, 83°31'50"W), a peat-forming wetland located along the Nantahala River in western North Carolina. Previous research by J. McDonald and D. Leigh of the University of Georgia revealed that this wetland formed in a paleochannel of the Nantahala River beginning prior to 14,000 cal years BP. We obtained additional AMS radiocarbon dates, carried out high-resolution loss-on-ignition and macroscopic charcoal analyses, and examined pollen and microscopic charcoal assemblages in a 157-cm core from the McDonald and Leigh study. Variations in organic matter content suggest variations in peat production and deposition through the history of this wetland, likely driven in part by variations in effective moisture. Conditions during the Late Pleistocene favored peat deposition and preservation. Sedimentary charcoal reveals low incidence of fire during the late Pleistocene. An abrupt change in stratigraphy and organic matter content at 37 cm indicates truncation of the peat profile by an erosive event that may be related to 20th century logging. Radiocarbon dates indicate that much of the Holocene is missing from the Whiteoak Bottoms record. Pollen analysis reveals that pollen of wetland herbs and shrubs occur through the profile, along with forest taxa. Late Holocene sediments contain pollen assemblages consistent with mixed broadleaved and pine forests, while late Glacial sediments contain higher percentages of spruce.

**Keywords:**  
[Vegetation History](#), [Fire History](#), [Nantahala](#), [Pollen](#), [Charcoal](#), [Wetlands](#), [Appalachian](#), [Paleoenvironment](#)

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