

Shorter Contributions

Abstracts from the Big Levels Symposium

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LONG-TERM VEGETATION AND FIRE HISTORIES AT SPRING POND, VIRGINIA — Both long-term vegetation and fire histories were reconstructed for the region surrounding Spring Pond, Virginia for the last 18,000 years. Pollen grains and charcoal particles were identified and quantified in a 2.20 meter long core in order to reconstruct the past vegetation and fire histories. A series of AMS radiocarbon dates were used to determine sedimentation rates and a time chronology. The results from the pollen analysis showed that three major vegetation communities (*Pinus-Picea*, *Quercus*, and *Quercus-Pinus*) have occupied the forest surrounding Spring Pond since full-glacial. From 18,000 to 10,000 years BP, a conifer forest dominated by *Pinus* and *Picea* occupied the site. Low abundances of charcoal were found in the sediment during this period, indicating the low importance of fire. A sharp transition between the Pleistocene and Holocene periods (10,000 year BP) marks the replacement of the conifer forest by a *Quercus-Tsuga* dominated community. The persistence of low charcoal flux at the transition suggests that fire was not an important factor during this vegetation shift. However, these results differ from other regional sites (Brown Pond, VA and Trout Pond, W.VA) where charcoal abundance increases sharply at that transition. The *Quercus-Tsuga* forest occupied the community surrounding Spring Pond until 6,000 BP when *Tsuga* declined and *Pinus* re-emerged. This established the *Quercus-Pinus* dominated community of modern times. Charcoal flux increased during the reemergence of *Pinus*, suggesting a greater importance of fire during the *Quercus-Pinus* period.

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