

Comparison of Sutherland Pond and Sutherland Bog pollen profiles over the last 12,000 years.

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Preliminary pollen analysis and AMS radiocarbon dating of sediments from Sutherland Bog, Black Rock Forest, NY provide a record of forest history spanning the last 12,350 radiocarbon years (yr BP). These data are compared to fossil pollen, plant macrofossil, and charcoal data from

Sutherland Pond, a large basin, 4.05 ha in surface area (Maenza-Gmelch, 1997a,b).

Preliminary results indicate a mixed pollen assemblage of boreal and temperate tree taxa (*Picea*, *Abies*, *Ostrya/Carpinus*, *Fraxinus*, *Quercus*) and herbs like *Cyperaceae*, *Gramineae* and *Tubuliflorae* from 12,350 to 11,300 yr BP. This is followed by increased dominance of *Pinus strobus* and *Betula* pollen until ~10,000 yr BP.

The early Holocene (~10,000 to 8500 yr BP) is characterized by increased *Quercus* pollen percentages and sustained high values, expansion of *Tsuga canadensis* pollen at ~9500 yr BP and a decrease in pollen percentages of *Pinus*. From 8500 yr BP to present is a dominance of *Quercus* pollen, high pollen percentage values of *Alnus*, *Ericaceae*, *Cyperaceae*, *Tubuliflorae* and spores of *Sphagnum*, possibly signaling a well developed fen environment.

A comparison of the two sites reveals that both sites begin recording pollen of the mixed boreal and temperate tree assemblage at approximately the same time: 12,350 +/- 70 yr BP for the bog and 12,600 +/- 380 for the pond. The bog accumulated approximately 250 cm of sediment in roughly 12,000 yrs. whereas the pond accumulated 830 cm of sediment during the same period. Both sites appear to have had the same sensitivity in recording the diversity of plant taxa.