

THE CHANGING FLORA OF THE FERNBANK INTERGLACIAL SITE NEAR ITHACA, NEW YORK, USA

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The Fernbank Interglacial section (42°33'00"N, 76°37'12"W) by Lake Cayuga, near Ithaca, New York, is a rare North American interglacial locality, presumably Sangamonian and early Wisconsinan (ca. 130,000-115,000 years BP). It is therefore of special interest for the reconstruction of climate, flora and vegetation, especially because of abundant pollen and plant macrofossils. Pollen zones indicate deciduous forest preceded boreal forest. Transfer functions applied to the pollen spectra indicate mean July temperature ranged from 23°C to 18.0°C; the modern temperature is 20.3°C. Abundant seeds of thermophilic water plants (such as *Najas flexilis*) during the hypsithermal point to drier conditions and possibly to 1-2°C higher summer temperature than today. Special plant fossils such as *Physocarpus opulifolius* (Ninebark), *Eupatorium maculatum* (Joe-Pye Weed), *Rubus allegheniensis* (Allegheny Blackberry), *Euphorbia vermiculata* (Vermiculate Spurge) and *Rorippa islandica* (Islandic Water-cress) allow insights into the local, dry- and wetland herb vegetation and phytodiversity. In addition, a huge charcoal input shows that major fire events must have occurred during the terminal Sangamonian and beginning Wisconsinan. Single charcoal particles analysis reveals that pine stands (e.g. *Pinus strobus*/*Pinus resinosa*) burned down, and this sheds a first light on the climate-related fire history of the North American Continent ca. 118'000 years ago.