

The History of Longleaf Pine in Florida¹

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ABSTRACT

Pine species of Florida with needles in fascicles of three (*Pinus palustris*, *P. taeda*, *P. serotina*, *P. elliotii*) are difficult or impossible to distinguish from one another as micro- or macrofossils in lake sediments. However, the genus has a distinctive and informative fossil record.

Pine pollen is infrequent in lake sediments and, by inference, pine trees were rare in Florida from about 10,000 to 8,000 years before present (yr. B.P.). From 8,000 to 5,000 yr. B.P. pine pollen increased steadily in frequency until it reached its present values. There was a simultaneous expansion of bayhead vegetation and cypress swamps. Before 5,000 yr. B.P. the landscape around Lake Louise, near Valdosta, Georgia, was covered by oak (*Quercus*) forest with some prairie-like vegetation. At Camel Lake west of Tallahassee, Florida, in the Apalachicola National Forest the period from 12,000 to after 8,000 yr. B.P. is characterized by a more diverse but still oak-rich forest with little pine which is abundantly present in recently formed sediments. Camel Lake is surrounded by longleaf pine forest. In Florida pine occurs in the period from 40,000 to 12,000 yr. B.P. in strongly fluctuating frequencies.

The longleaf pine forests came to prominence after about 5,000 yr. B.P. at a time of changing climate and rising water table. A change in seasonality related to well-documented changes in the sun's orbital parameters may have favored the competitiveness of pine over oak by increasing winter and reducing summer temperatures.

¹ Abstract only; no paper submitted.