

# Macrofossils from No Bottom Pond, Nantucket reflect three millennia of changing land use and depositional environment

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Nantucket, a 270-square-kilometer island off the Massachusetts coast, accommodates a unique ecosystem of flora, heavily influenced by human presence. In macrofossil, charcoal, and weight loss on ignition analysis, the top meter of a peat core taken in 2011 from No Bottom Pond—a kettle hole bog in central northern Nantucket—reveals vegetation changes over the last 200 years. An increase in organic content around 45 centimeters may reflect the decline in eroded sediment from plowing due to the mid-1800s decrease in farming activity. This signal parallels a decline in grasses, cattails, pennyworts, bog shrubs, charcoal, and insect abundance. The pond sediment changes to Sphagnum peat with *Woodwardia* fern in the upper part of the core. Pollen analysis, carbon dates, and continued macrofossil analysis of the entire 6 meter core promise to contribute further to understanding of human and natural impacts on vegetation, in and beyond Nantucket.