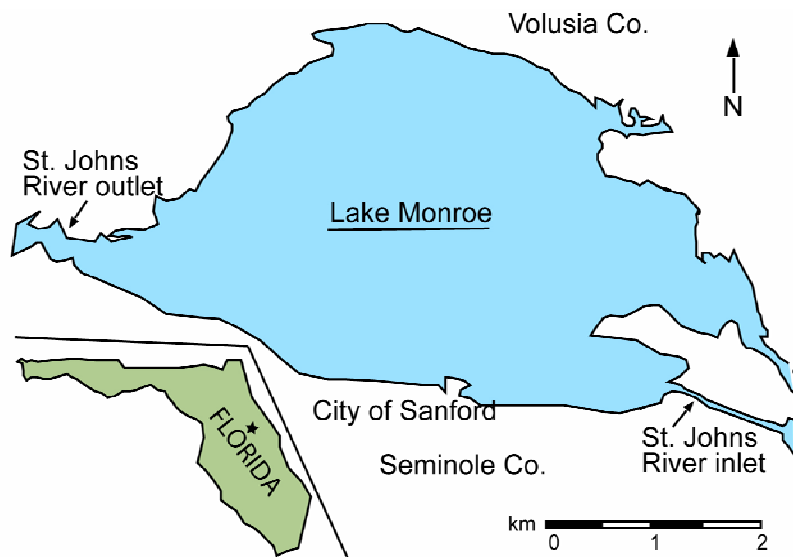


Stable Isotope (^{15}N , ^{13}C) Paleolimnological Investigation of Recent Sediments in Lake Monroe, FL, USA

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ABSTRACT

Stable isotope analyses of recent lake sediments from Lake Monroe, a sub-tropical hypereutrophic lake in central Florida, have been conducted for the purpose of reconstructing paleolimnological conditions within the basin since occupation and development began in the mid 1880's. Throughout the last 125 years, Lake Monroe has undergone significant increases in productivity and eutrophication in response to nutrient loading. The information gathered from the sediment record provides an effective means showing how the lake basin and surrounding watershed evolved through time. Organic matter (OM) recovered from lake sediment cores retrieved in October 2003 have been sampled, radiometrically dated, and analyzed for $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ with the objective of reconstructing paleoproductivity and nutrient availability in the basin. Changes in production can potentially be reconstructed through $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ records of lacustrine OM, as their signals can be correlated to increases and decreases in lake productivity.