

## **A paleoecological survey of salt marsh sediments in the Bagaduce River**

High rates of salt marsh accretion leads to the rapid preservation of ecological indicators in the sediments (Roman et al. 1984). As these indicators, in this case pollens and microcharcoals, are buried, they act as natural documentation of the ecological conditions at the time of their deposition. The objective of this study was to determine how pollen genera and microcharcoals changed over salt marsh sediment depth. This was done by collecting marsh cores and subsampling five different depths within them. Samples were processed through the University of Maine's standard HF palynology separation protocol (Nurse 2005), an adapted form of the Faegri et al. 1989 standard, then counted under a microscope. Pollen counts were found to be outside the expected distribution ( $\chi^2$ ) and highly variable, while charcoals were shown to increase with depth. Some pollen genera were absent completely while others were observed at a higher than average frequency, however several trends were seen in some pollens such as *Betula*. Further study of sediments in this area would reveal more about its history.

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