Nutrient Ratios and Planktonic Composition in Salt Marshes

This project is a broad latitudinal survey of the Si:N:P ratios, along with some biotic parameters, in salt marshes from Maine to Georgia. We hypothesize that land use changes have dramatically altered the Si:N:P ratios in salt marshes, and these will be correlated with the dominance of diatoms in periphyton and the condition of consumers. We are planning two surveys, one in early June and one in either August or September. At each marsh we (Cheryl Whritenour, an undergraduate student and I) plan to sample along several low to high marsh transects for nutrient content in porewater, sediment, estuarine and/or creek water, *Spartina* and periphyton, as well as collecting benthic algae for enumeration. Ideally we would also collect ~25 *Melampus*, and potentially 3-5 *Fundulus heteroclitus* for condition analyses, depending on permit availability.