DIATOM COMMUNITY SIMILARITIES BETWEEN LITTORAL ASSEMBLAGES ALONG SOUTHEASTERN U.S. COASTAL REGIONS

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Few studies have been dedicated to the littoral zones found throughout brackish waters in the Southeastern United States. Littoral zones can be characterized with temporal exposure of algae to diurnal desiccation from high tides. Fifty five years ago Friedrich Hustedt examined two mud samples that were taken from Beaufort, North Carolina. In his study he reported a total of 369 species of diatoms and 25% of the reported were new to science. In the current study, mud samples were taken from the Savannah River estuary along with physicochemical characteristics. Mud habitats can serve as sieves and concentrate taxa from plankton, upstream drifters together with periphyton and attached algae. Through examination of present algal communities and their current response to environmental factors, inferences can be made about the environmental conditions 55 years ago. Live and cleaned diatoms were analyzed following standard protocols. Community indices were compared between the two sampling events, along with bio-volume of common taxa in comparison with published literature. Representatives of the genus *Pseudonitzschia* were the most abundant taxa observed. Several centric diatoms are proposed as new to science. Similarities between the littoral communities 50 years prior and today are reported. Considering the difference in methodology of collection and enumeration between the two datasets, i.e. taxonomic evaluation without predetermined number constrains vs. routine valve count, the observed similarities imply potential stability of diatom communities of the littoral mud zones along the Atlantic US coast.