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Changes in Epipelic Diatom Diversity from the Savannah River Estuary

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ABSTRACT

Littoral zones can be characterized with temporal exposure of algae to diurnal desiccation at low tides. Combinations of diverse freshwater, marine, and brackish diatoms dominate exposed mud samples. With enlargement of the delta of the Savannah River, Georgia and other anthropogenic influences, changes in the rich epipelic community will not be estimated accurately without baseline data. In the current study, mud samples were taken from the Savannah River estuary along with physicochemical characteristics every two months throughout 2011. Live algal communities were assessed in every sample and live to dead diatom proportions in the communities were calculated. Cleaned diatoms were analyzed following standard protocols. Community indices were compared between sampling events and with literature reports from similar habitats in the Southeastern USA diverse diatom community of 241 species was documented and 39 of those species should be described as new to science. Decrease in species richness and diversity was due to dominance of representatives of the genera *Cymatosira* and *Minidiscus* during the summer months.

KEYWORDS

Epipelic Diatoms; Brackish Water; Savannah River

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