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A Relative Sea-Level Record from the Mississippi Delta, 7.7-10.7 ka

Elena Steponaitis (1), Lael Vetter (2), Torbjörn E. Törnqvist (1), Brad E. Rosenheim (3), and Glenn A. Milne (4)

(1) Department of Earth and Environmental Sciences, Tulane University, United States (estepona@tulane.edu), (2) Department of Geosciences, University of Arizona, United States, (3) College of Marine Sciences, University of South Florida, United States, (4) Department of Earth and Environmental Sciences, University of Ottawa, Canada

The early Holocene is a critical interval for understanding paleo sea-level changes, as it featured rapid ice sheet melt and warm temperatures, yet there are relatively few existing high-resolution sea-level records from this period. A basal peat relative sea-level (RSL) record from the Mississippi Delta reveals a rate of RSL rise in this region of 5-6 mm/year (7.7-10.7 ka). This record, which includes both upper limiting and index points and is vertically precise, provides a useful basis for comparison with global records. Globally, other far-field records show a much higher rate of RSL rise than our Mississippi Delta record during the early Holocene. Comparison of our Mississippi Delta record with glacial isostatic adjustment (GIA) model results yields insights into possible ice sheet contributions to global sea-level rise during the early Holocene.