LUTETIAN-BARTONIAN STRATIGRAPHY AND EVENTS IN THE GULF COASTAL PLAIN OF THE UNITED STATES/STRONG

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The Lutetian-Bartonian transition in the Gulf Coastal Plain of the United States occurs within the well known Claiborne Group. Exposures of this interval have been dcoumented from Georgia to Texas and over the years have produced significant studies on paleontology, biostratigraphy, and most recently sequence stratigraphy. The Lutetian-Bartonian interval is characterized by marine to marginal marine sands and marls. Benthic foraminifera from this interval indicate that the marine beds were deposited from inner to middle neritic depths. Correlation of the Gulf Coast sections with the standard European Lutetian and Bartonian stages has been established by calcareous nannofossils. This correlation places the Lutetian-Bartonian boundary in the Gulf Coastal Plain at the contact of the Archusa Marl and Potterchitto Marl Members of the Cook Mountain Formation in Mississippi and within the upper Lisbon Formation in Alabama. Important biostratigraphic markers which occur at or near this horizon are the lowest stratigraphic occurrence of the calcareous nannofossil iReticulofenestra reticulata/i, the lowest stratigraphic occurrences of the benthic foraminifera iCibicidina subminuens/i and iCibicidoides truncatus/i, the highest stratigraphic occurrences of several species of miliolid foraminifera, and the lowest stratigraphic occurrence of the larger foraminiferan iLepidocyclina ariana/i. The Archusa-Potterchitto contact is conformable and lies within depositional sequence TE 2.4. Geochemical studies of bentonite beds near this contact will enable long distance correlation throughout the Gulf Coastal Plain. Further work in the region will attempt to evaluate the potential of selected sections to serve as a Global Stratotype Section and Point (GSSP) for the Lutetian-Bartonian boundary.