Correlation of high-resolution seismic profiles from the Georgia continental shelf with available core data reveals a stratigraphic interval of Miocene to recent age. The sedimentary components consist of relatively thin, aerially extensive units which grade from primarily shallow-water carbonates and clastics nearshore, to predominantly open-marine, fine-grained clastics offshore.

A prominent erosional scarp, developed in the middle Miocene adjacent to and beneath the present coastal area, extends from Ossabaw Sound, Georgia, to Daytona Beach, Florida. Prograding seaward over this scarp are large-scale clinoforms of Pliocene age.

Although the regional tectonic framework of the Georgia coast and continental shelf is considered to be that of a stable, passive margin, several large-scale, low-relief, north-south trending undulations within Miocene and Oligocene sediments are present: a high beneath the coastline and inner shelf of Georgia which follows the trend of the Beaufort arch; the Inner-Shelf low, into which Pliocene clinoforms have prograded; and the Outer-Shelf high, which broadens and rises to the north. These features probably resulted from gentle folding and subsequent erosion. The latter two features significantly influenced sedimentation on the shelf during late Miocene and Pliocene time.

The Neogene stratigraphic section consists of a sequence of deposits, separated by unconformities that appear to be related to glacio-eustatic fluctuations in sea level. With the notable exception of the Pliocene section, the sequences are comparable with the third-order global cycles of sea level changes proposed by Vail et al.

Irregular bottom topography, shallow, large subbottom channels, and smaller cut-and-fill structures similar to sedimentary structures in present-day barrier island inlet and back-barrier complexes are evidence of a midshelf Quaternary stillstand event at or about the 30-m isobath.

FORDE, EVAN B., and TERRY A. NELSEN, NOAA, Miami, FL

Variability of Sedimentary Textures and Processes on Continental Margin North of Wilmington Canyon

Sedimentary properties and processes of a 7,500-km^2 corridor seaward of the Baltimore Canyon Trough off New Jersey were studied in detail using over 100 bottom samples consisting of grab samples and box, hydroplastic, and piston cores.

The sediments in both canyon and intercanyon areas are primarily bioturbated, olive-gray, sandy silts with local features indicative of gravity-induced mass sediment movements (i.e., graded sequences and load structures). C^{14}-based sediment accumulation rates vary by a factor of three in cores separated by as little as 6 km. These variations seem to be a function of shelf-edge spillover rates.

Detailed analyses of the sand grain-size distribution throughout the corridor reveal that the sand component of the slope and rise sediments contains a high percentage of material currently present on the adjacent shelf. The relatively large percentage of sandy sediment in the upper parts of cores from Spencer Canyon suggests its recent role in transporting shelf sediments seaward. Sandy intervals in other slope cores are commonly obscured by intense bioturbation. Cores from the continental rise show an upward decrease in the number of sand layers and lenses.

Active transport of sediment to the slope and rise occurred during the late Pleistocene and, although the intensity has declined, the slope is presently the site of deposition for both fine and coarse sediment.

GIBSON, THOMAS G., U.S. Geol. Survey, Washington, D.C.

Stratigraphy and Depositional Environments of Miocene Strata of Central Atlantic Coastal Plain

Transgressive pulses of relatively short duration inundated the middle Atlantic Coastal Plain during Miocene time, resulting in a discontinuous depositional pattern. The spottiness of the strata is more pronounced in the Albemarle Embayment of North Carolina than in the Salisbury Embayment which extended from New Jersey to Maryland. The locus of deposition also changed, which further fragmented the continuity of the record. In the Salisbury Embayment, the depocenter generally moved southward during the Miocene, but a northward movement of the locus is indicated for the Albemarle Embayment.

Biogenic deposition of highly diatomaceous clay took place in two pulses in the Salisbury Embayment during the early and early middle Miocene; three pulses of phosphatic clay and sand and intercalated diatomaceous clay characterize the Albemarle Embayment during the early and middle Miocene. Depositional environments are interpreted largely on the basis of faunal data combined with sedimentologic characteristics. Miocene strata preserved onshore generally range from marginal-marine to shallow open-marine environments; environments approaching middle-shelf water depths are present in the Albemarle Embayment.

The southward building of deltas from southern New Jersey into the northern part of the eastern shore of Maryland brought significant amounts of clastic sediment into the Salisbury Embayment during the early middle Miocene, and deltaic sedimentation continued throughout the rest of the Miocene. Uplift of the Appalachian source area, beginning in the northern part of this area in the middle Miocene, brought widespread clastic sedimentation to both embayments during the late Miocene.

GRADSTEIN, FELIX, Geol. Survey of Canada, Dartmouth, Nova Scotia, JOHN EXTON, Petro Canada Exploration Inc., Calgary, Alberta, and JIM OGG, Scripps Inst. Oceanography, La Jolla, CA

Jurassic Chronology and History of Atlantic Basins

Stratigraphic backbone for the eleven stages of the Jurassic period, 200 to 135 m.y. ago, are ammonite zonations with local resolution close to 1 m.y. Micropaleontologic zonations largely have stage-level resolution. Facies-dependence and provincialism limit universal application, and calibration to ammonite and (at the Jurassic-Cretaceous boundary) to calpionellid zonations is limited. The geomagnetic reversal scale (with few events only), stage designations, and linear time scale are not well integrated either. Uncertainty may be on the order of a stage.

Two examples of recent progress in Jurassic stratigraphy are: (1) calibration of the Early Jurassic foraminifer and ostracod zonation for Portugal and Grand Banks to a standard ammonite scheme; it shows that the post-evaporite-dolomite marine transgression occurred at the Sinemurian-Pliensbachian boundary as in east Greenland and northwestern Europe; (2) acquistion of a continuously cored, fossiliferous Middle and Late Jurassic record in Deep Sea Drilling Site 534, Blake Bahama Basin, in the Jurassic magnetic quiet zone. Oceanic pillow basalt (31.5 m) occurs below a strong basement seismic reflector, which proves normal ocean crust exists under the Jurassic magnetic quiet zone.