

Homogenization temperatures of two-phase fluid inclusions in cements, recrystallized allochems, overgrowths, and vein and cavity fillings show that Paleozoic carbonates of the Llano uplift have experienced at least three phases of temperature-related, pervasive crystallization-recrystallization. These phases have modes at 70 to 80°C, 110 to 120°C, and 200 to 210°C, with ranges of 60°C, 90°C, and 60°C, respectively. These phases may represent distinct heating-cooling events, or they may be the results of a single, thermally complex event.

The lack of any discernible regional trends in the data and the fact that Cretaceous rocks locally have been heated to at least 110°C suggest that heating was not related to regional metamorphism during the Ouachita orogeny. Yet, these temperatures seem too high to result merely from heating due to depth of burial associated with any reasonable geothermal gradient.

We postulate that northeast-trending faults, which cut basement and overlying Paleozoic rocks in the region, provided avenues for pervasive heating by contemporaneous fluids from the lower crust. These faults, like those of the Balcones-Luling and Talco-Mexia zones to the east, may be genetically related to late Paleozoic-early Mesozoic opening of the Gulf of Mexico. Waning geothermal activity associated with this rifting would explain the localized heating of Cretaceous rocks.

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Paleoecology of Midway and Wilcox Groups of Alabama

Paleocene benthic foraminifera of the Midway and Wilcox Groups of Alabama have been investigated within the framework of planktonic foraminiferal biostratigraphic zonation.

The benthic foraminifera communities of these clastic sediments are characterized by low diversity and high dominance. Relation between faunal diversity and dominance places these formations in a less than ten-fathom (60 ft or 18 m) marine environment. The characteristic species of the Paleocene shallow-water environments are present in high abundances. Fluctuations in composition, large populations, and high morphologic variability are also observed.

High frequencies of the genera *Bulimina* and *Epistominella* have suggested in the past deeper marine environments, because of the recent distribution of these genera in greater depths. These two genera occur in large numbers in association with an Alabama Paleocene shallow-water community structure. Therefore, it is reasonable to think of a shallow-water environment for these two Paleocene genera. It is also possible that these genera may have lived in both deep and shallow waters and then disappeared in the shallow-water environment.

Alabama Paleocene deposits, which belong to the eastern part of the north Gulf Coast sedimentary province, are believed to have been deposited in deltaic marine and inner neritic environments. Benthic foraminiferal communities have proven to be most useful for this paleoecologic interpretation.

Poster Session Presentations

Abstracts of the Poster Session Presentations will be published in the 1981 *Transactions, Gulf Coast Association of Geological Societies*.

CASEY, RICHARD, Rice Univ., Houston, TX, et al
Preliminary Results from a Year's Study of Impact on and Recovery of Microplankton and Microbenthon Following the Burmah Agate Oil Spill

FREDRIKSEN, N. O., U.S. Geol. Survey, Reston, VA
Biostratigraphy and Paleoecology of Lower Paleozoic, Upper Cretaceous, and Lower Tertiary Rocks in U.S. Geological

Survey New Madrid Test Holes 1 and 1-X, Southeastern Missouri

JACKSON, MARY L. W., Bur. Econ. Geology, Univ. Texas at Austin, Austin, TX, and L. E. GARNER, Resource Assessments, Inc., Austin, TX

Environmental Mapping in Jackson-Yegua Lignite Belt, Southeast Texas

KREITLER, CHARLES W., and SHIRLEY P. DUTTON, Bur. Econ. Geology, Univ. Texas at Austin, Austin, TX
Meteoritic Water Versus Formation Water Origin of Salt Dome Cap Rock

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Lithostratigraphy and Biostratigraphy of Paleocene Subsurface Strata in Southwest Alabama

MCCARLEY, ANN BOGGS, Univ. Texas at Austin, Austin, TX

South-Central Colorado Rejected as Provenance for Lower Eocene Sandstones, Texas Coastal Plain

MILLER, R. J., U.S. Geol. Survey, Corpus Christi, TX, et al
Sedimentologic Effects of Hurricane Allen on South Texas Coast—Model of Storm Influence on Barrier-Island Coast Evolution

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Multiple Late Cenozoic Shore Indicators or Tectonic Lineaments, Northeast Gulf of Mexico

PRICE, W. ARMSTRONG, Consulting Geologist, Corpus Christi, TX
Hurricane and Standing Wave, Lagoonal Pattern Makers, Texas Coast

REZAK, R., D. W. MCGRILL, and T. J. BRIGHT, Texas A&M Univ., College Station, TX

Geology, Hydrology, and Biology of Flower Garden Banks, Northwest Gulf of Mexico

SHIDELER, GERALD L., U.S. Geol. Survey, Corpus Christi, TX, et al

Late Quaternary Stratigraphy of a South Texas Barrier Island Complex

VAN MORKHOVEN, F. P. C. M., Shell Oil Co., Houston, TX

Cosmopolitan Tertiary Bathyal Benthic Foraminifera

WOODRUFF, C. M., JR., CHRISTOPHER D. HENRY, and CHRISTINE GEVER, Bur. Econ. Geology, Univ. Texas at Austin, Austin, TX

Regional Hydrodynamics within Edwards Limestone, South-Central Texas