pending on basinal position. Evidence given by paleontology (typologic studies), paleoclimate records, eustatism, and geomagnetic dating of earliest Pleistocene glacial rocks favors a Pleistocene Epoch beginning 2.5–3.0 m. y. ago within the Gauss normal epoch. This time corresponds to the extinction horizon of *Globoquadrina altispira* and withdrawal of other warm-water species from the Caribbean and Gulf of Mexico. There is no reason to assume that worldwide onset of Pleistocene climate deterioration was diachronous, as would have to be postulated if the Pleistocene had begun in warm-water regions only 2.0 m.y. ago, as postulated by some workers.

A new species is described and discussed.

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SIGNIFICANCE OF PLIOCENE STRATIGRAPHIC PALEONTOLOGY, GULF COAST

Major oil reserves of South Louisiana are found in Oligocene, Miocene, and Pliocene sandstone reservoir rocks. Increasing rate of sediment concentration in depocenters explains the hydrocarbon richness of the upper Miocene and Pliocene strata. This same factor led to increasing provincialism of faunas in post-Oligocene time. The paleontologists' problems in younger Tertiary strata are compounded by an apparent slowing of foraminiferal evolution. Whereas there are 20 regional Oligocene marker zones that divide about 10,000 ft of section, there are no more than five or six Pliocene zones to divide twice as thick a section. Recognition of temporal clines is vital to the stratigrapher who would subdivide an interval so nearly devoid of index species. Stratigraphic subdivision is not an end in itself, but is an indispensable step in the delineation of depocenters and depositional trends.

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GEOLOGY OF WEST FLOWER GARDEN BANK, NORTHWEST GULF OF MEXICO

The Flower Garden banks, the most prominent of a series of topographic highs in the northwest Gulf of Mexico, have been noted and studied for years. Most of these physiographic expressions have been related to salt uplift. Previous investigations of the Flower Garden banks, located 130 mi south-southeast of Galveston, Texas, suggest that biohermal development has contributed significantly to the overall topographic expression.

The results of this study demonstrate that biohermal development during the present interglacial period occurred in a deep water environment in the northwest Gulf of Mexico; therefore, it is possible that buried fossil reefs formed within structural and depositional environments similar to those existing today on the outer continental shelf. If there are such fossil reefs, they offer a previously unrecognized exploratory objective on known structural features.

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SOME COMPARISONS OF NEOGENE MICROBIOSTRATIGRAPHY IN OFFSHORE LOUISIANA AND BLAKE PLATEAU

The Neogene calcareous nannoplankton from three deep-sea cores from the Blake Plateau were studied. The ranges of the nannoplankton were given and a tentative nannofossil zonation and correlations were suggested. We have attempted to relate the Blake Plateau nannofossil biostratigraphy to planktonic foraminiferal datum levels delimited in the course of a statistical study of foraminiferal distribution in four offshore Louisiana wells.

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DISTRIBUTION OF SILICATE MINERALS IN FLORIDA BAY

The predominantly carbonate sediments within Florida Bay contain small percentages of insoluble silicate minerals, ranging in our samples from 1.25 to 14.91% by weight. Quartz, chlorite, and montmorillonite compose most of the silicate fraction, with very minor amounts of illite and kaolinite. Clay-mineral distribution can be described by concentration gradients based on two end-member assemblages. A chloritic assemblage dominates in the eastern part of the bay, but declines westward; a montmorillonitic assemblage dominates the western bay and declines eastward. The two clay-mineral assemblages reflect different sources—chlorite from the Atlantic province, and montmorillonite from the Gulf of Mexico province. Shallow and subaerial carbonate mud banks and intervening basins inhibit mixing waters bearing the two clay assemblages; the result is the relatively abrupt transition from one clay suite to another in the 30–40 mi span of Florida Bay. The clay mineral fractions of *similar* ancient carbonate reef trends would be expected to show analogous concentration gradients in the backreef area.

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IMPACT OF SALT ON MAN'S ENVIRONMENT

The preservation of the quality of our environment is a major challenge to modern civilization. The saline environment is an important part of the ecologic system in which man lives and with which he interferes. This saline environment may be divided into two general categories: saline waters of the oceans and continental salt deposits.

Oceanic salt is both a boon and a bane to man. An appreciable part of the world's salt supply is produced from oceanic waters by solar evaporation. In this sense it is an asset. However, by denying the use, to man, of this great reservoir of water in its pure state, it constitutes a liability. Modern technology is developing effective techniques for desalinization. Paradoxically major advances in this field will result in unusable quantities of salt which will constitute a disposal problem.

Even though much less salt is locked up in continental deposits, the availability of major deposits are of great importance to man. Such accumulations of salt, particularly when associated with oil, gas, and sulfur, have been responsible for the development of major chemical complexes. These industrial centers provide raw materials and jobs, but also create massive pollution problems. Potassium minerals obtained from evaporite deposits serve as a major source of fertilizer. However, the exploitation of these minerals results in the accumulation of an unmanageable quantity of common salt.

Both solution mining and dry mining of salt can result in land subsidence and thus create an environmental liability. On the other hand, abandoned mines and solution cavities in salt offer a means of disposal of