which since about 800 B.P. reduced the strength of the currents and waves from the east.

Chenier ridge configurations depend primarily on the original outline of the shoreline and upon the conditions of sediment supply from the sea, from deltas, or from the estuaries. Different ridge patterns develop if the dominant littoral drift approach direction is similar or identical with that of the main sediment source area. In the present case a substantial part of the ridge sands came by the drift from the east, and most of the sediment probably came from the west, the area of an active Mississippi subdelta. A similar situation exists on the western bank of the Sabine Pass, eastern Texas, where the ridges developed from the southwest and most of the sediment supply came from the east with the prevailing drift and from the direction of Sabine Lake on the north.

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MEGAFAUNAL FACIES, ESTUARY TO SHELF EDGE, SURROUNDING GULF OF MEXICO

Nearly 20 years of marine benthic studies along the rim of the Gulf of Mexico permits recognition of areal (environmental) facies, most of which have exact counterparts in the Gulf Coast Tertiary. These facies have been recognized on the basis of invertebrate faunal diversity, benthic community size and structure, geomorphology of sea bottom, and sedimentary characteristics.

Ultimate facies control is exhibited by prevailing climates around the Gulf Coast, ranging from tropical moist in the southeast and southwest to almost xerophytic (dry) in the west. Northern regions are cool-temperate in winter and subtropical in summer with average moisture conditions ranging from very wet for several years to prolonged droughts in following years —the most variable climate in the world.

Megafaunal assemblages in shallow waters consist of those found in saltwater and freshwater marshes, river estuaries, low to medium salinity enclosed bays (inter-reef), low and high salinity oyster or mollusk reefs, high salinity open bay centers; open bay sandy margins, inlets, and sand or clay open beaches. Open Gulf or deeper water assemblages are characteristic of shallow shelf (1–20 m), intermediate shelf (21–72 m), outer shelf (73–132 m), and upper slope (132–700 m). Detrital carbonate muds provide slight variations to these facies in areas on the south. Reef-forming organisms create micro-epifaunal habitats modified by wave energy and depth.

Faunal composition within each of these habitats is controlled by sediment type and by stability of other environmental factors. Unstable environments with wide ranges of ecologic variables and clay sediments produce low species diversity within small populations. Stable environments on sand-clay mixed bottoms produce high diversity within large populations. Principles used to define these habitats can be applied to Tertiary formations in mapping ancient environments.

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URANIUM ON HORSEBACK, OR, SOUTH TEXAS REVISITED[1]

In 1968 minerals' explorers flocked back to South Texas to have another look at the Tertiary sedimentary prism between the outcrops of the Jackson and Goliad Formations. In a trend belt 200 mi long and 50 mi wide, uranium has been discovered in quantities which challenge the traditional position of the established mining districts of the Colorado Plateau and Wyoming.

History, background, and a review of 1968 developments set the South Texas uranium scene. The lure of major opportunities for future discoveries finds Texas sharing in a greatly stepped-up mineral activity that is based on growing world demand for nuclear fuels.

The geologist who would try to set the complex uranium phenomenon in a simple framework faces several alternatives, all credible. Not the least part of the dilemma is the coincidence(?) of oil-field structural features with the occurrence of ore. Despite an element of inexactitude in the state of the art, refinements in tools and techniques which the prospector brings to uranium exploration leave little chance that significant mineralization will be overlooked.

Oil companies with an eye on diversification have moved vigorously into the uranium field. The economics of familiar, relatively shallow sediments of the Texas coastal plain offers excellent profit opportunity, and there is confidence that the emerging uranium industry will see steady, responsible growth in the future.

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ENVIRONMENTAL SIGNIFICANCE OF PHYSICAL ATTRIBUTES OF CALCAREOUS SEDIMENTARY PARTICLES

Physical attributes of carbonate particles closely reflect environmental conditions. Features such as the degree of aging of shells, particle roundness, particle staining, and shell fragmentation are particularly useful in interpretation of shelf sedimentation. Such particle attributes indicate the relict, shallow-water nature of most shelf sediments off the southeastern United States.

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USE OF RADIAL PORES IN TAXONOMY AND PALEOECOLOGY OF OSTRACODA

On the lateral surface of the carapace, ostracodes have radial pores of two types—"simple" and sieve. The functions of these two pore types are not fully known. Studies of the carapace with a scanning electron microscope reveals differences between the pores of Myodocopa, Platycopina, Cladocopa, and Podocopina. Sieve pores demonstrate the greatest dimorphism and are confined to the superfamily Cytheracea. A basic pattern of pores was formulated.

Type A.—Single pore with a sensory hair. A′ Normal pore without a lip. A″ Normal pore with a lip.

Type B.—A sieve plate without a well-defined central or subcentral pore with a sensory hair.

Type C.—Type A superimposed on Type B. A sieve plate with a pore and sensory hair emerging from its center.

Type D.—Combination of Type A and Type B. A sieve plate, and a separate single pore with a sensory hair.

These types can be utilized in future systematic studies of Ostracoda