

SEDIMENTATION IN THE GULF OF MEXICO

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ABSTRACT

The basin of the Gulf of Mexico is bounded on all sides by long escarpments which in some cases are more than a mile high. Its floor has a conical shape, with vertex off the Mississippi River. In the two corners farthest from the vertex are found abyssal plains at about 2000 fathoms depth, on which fathom contours can be drawn. A small hill rises about 200 fathoms above the Sigsbee abyssal plain.

Throughout the basin the top layer of sediment is soft brown **Globigerina** ooze, 25 to 40 centimeters thick, which is interrupted by a white and a red turbidity current deposit in most of the cores of the Sigsbee abyssal plain. Beneath the brown layer is a dark gray silty lutite, with meager microfauna, which persists to the bottom of the core in every core in the basin. The change from brown to gray is interpreted as the boundary between Wisconsin and Recent.

During the Wisconsin glaciation the Mississippi River brought the gray layer (unknown thickness, greater than 30 feet) and a turbidity current process distributed it over the entire cone. The small hill in the Sigsbee abyssal plain received none of the gray Wisconsin deposit. If the Mississippi River originated in early Pleistocene, we must infer an extremely high rate of Pleistocene sedimentation.