Terrestrial Vertebrates from Cretaceous and Tertiary Marine Strata in the Gulf Coastal Plain of Mississippi

David T. Dockery, III[1], and George E. Phillips[2]

[1]Mississippi Office of Geology, Mississippi Department of Environmental Quality, P.O. Box 2279, Jackson, Mississippi 39225-2279

[2]Mississippi Museum of Natural Science, Paleontology, 2148 Riverside Dr., Jackson, Mississippi 39202-1353

ABSTRACT

Important Cretaceous and Tertiary terrestrial vertebrate remains have been found in transgressive and highstand marine systems tracts in the Gulf Coastal Plain of Mississippi. However, no terrestrial vertebrate fossils are known from the state's terrestrial deposits with the exception of Pleistocene vertebrates and a tooth of the Late Pliocene horse *Nannippus*. In the Cretaceous marine record, dinosaur remains are known from the McShan Formation, lower Eutaw Formation, Tombigbee Sand, Coffee Sand, and Demopolis Formation. One Demopolis occurrence was that of a storm-rafted or perhaps a tsunami-rafted hadrosaur associated with lignitized wood in highstand marine chalk. Land mammals are known from the Lower Eocene T4 Sand of the upper Tuscahoma Formation, Lower Eocene marine sand and marl of the upper Bashi Formation, Middle Eocene limestone of the Archusa Marl of the Cook Mountain Formation, Upper Middle Eocene sand and marl of the Moodys Branch Formation, Upper Oligocene sand and marl of the Byram Formation, Upper Oligocene sand and marl of the Paynes Hammock Formation, and estuarine/deltaic clay and sand of the Middle Miocene Hattiesburg Formation. Tertiary land mammal finds in Mississippi provide an important link between the North American Land Mammal Ages of the Western Interior and the globally recognized marine stages found in the Gulf Coastal Plain. The larger land mammal fossils include: (1) the Middle Eocene titanothere *Notiotitanops mississippiensis*, (2) an unidentified late Middle Eocene brontothere, (3) the Early Oligocene amynodont *Metamynodon planifrons*, (4) the Early Oligocene rhinoceros *Subhyracodon occidentalis*, (5) a Late Oligocene rhinoceros cf. *Subhyracodon* sp., and (6) the Middle Miocene short-legged rhinoceros *Teleoceras medicornutum*. A significant small land mammal is reportedly the oldest (early Early Eocene) North American primate *Teilhardina magnoliana*.

Dockery, D. T., III, and G. E. Phillips, 2008, Terrestrial vertebrates from Cretaceous and Tertiary marine strata in the Gulf Coastal Plain of Mississippi: Gulf Coast Association of Geological Societies Transactions, v. 58, p. 241.