ART. XXXI.—*Geology of Mon Louis Island, Mobile Bay;* by DANIEL W. LANGDON, JR.

IN 1855 Tuomey* was handed some fossiliferous, ferruginous sandstone from the western shore of Mobile Bay, containing impressions of *Cardium magnum*, *Ostrea Virginica* and a *Modiola* resembling *M. demissa*, but was unable to fix definitely the locality. In 1885 Dr. Geo. H. Taylor, of Mobile, gave the writer a small box of shells obtained from the mud dredged in the channel of Mobile Bay, some ten miles from the Gulf. From their physical appearance they were supposed to be fossil —perhaps Pliocene or even Miocene, and with the idea of establishing this fact they were submitted to Mr. T. H. Aldrich, of Blocton, Ala., who in turn forwarded them for identification to Mr. W. H. Dall, of the National Museum. Mr. Dall decided that they were recent shells now living in the deeper waters of the Gulf and probably washed in the bay by submarine currents. Some time later Dr. Taylor submitted another lot of shells contained in the same matrix, an impalpable blue mud, and said to have been found on the Mon Louis Island, some fifteen miles below Mobile. A trip to the island proved its identity with Tuomey's locality, "Yellow Jack" being a creole patriarch whose descendants still inhabit Mon Louis. As was stated by Tuomey's informant, this fossiliferous stratum was found to be about three feet above mean tide, and was clearly the oxidized and lithified phase of the shell-bearing blue mud occurring at various elevations along the coast of the island to within about four miles of the Gulf, and found in the dredged channel of the Bay. These blue mud deposits are sometimes filled with

* 2d Bien. Report on Geol. of Ala., pp. 149–150, 1859.

shells, at others free from organic life, at times taking the form of extensive oyster beds, at others having more marine characteristics, containing *Natica duplicata*, *Arca transversa*, *Cardium magnum*, *Pecten* sp.?, et als.

Wells dug in the vicinity demonstrate the continuity of this bed inland, and Hilgard* has noted its occurrence farther westward. These wells reveal, too, a substratum of fetid black clay containing cypress logs, what seems to be the remains of a submerged cypress swamp. An interesting fact is that these same fetid clays have been encountered in wells dug in the suburbs of Mobile, but so far as the writer has been able to ascertain, the shell bed has never been found so far north.

Overlying these shell beds on Mon Louis Island and making the surface soil through south Mobile County are series of cross-bedded sands and loams usually very light colored and devoid of clay or pebble beds. These beds are about fifteen feet thick and are quite similar to the beds of sandy loam found in the western part of the city of Mobile. McGee* has determined these last named loams as belonging to his Appomattox group, and should his identification prove correct it would change the age of the Appomattox to a more recent date than he now seems to suppose.

It establishes, however, a further extension inland than that marked by the present coast line and a fluctuation in the elevation of the floor of the Gulf in post-Tertiary times, which fact is believed to have not been previously noted.

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