describes (Miocene) materials along the Neuse River below New Bern and on the Tar River, near Tarboro, and the (Pliocene) marl along the Beaufort Canal. All of these materials are described merely as marls or limestones, with no discussion of their age or correlation.

VANUXEM, LARDNER.—See S. G. Morton *(Geological Observations on the Secondary, Tertiary, and Alluvial Formations of the Atlantic Coast of the United States of America)*.

1828.

MITCHELL, ELISHA.—*On the Character and Origin of the Low Country of North Carolina.* Amer. Jour. Sci., vol. 13, pp. 336-347, 1828.

The author combats the view, apparently common at that time, that the Coastal Plain materials were accumulated by the currents of the Gulf Stream, and also the view of Hayden, published in 1820, that they were transported by a great flood from the northeast, and comes to the conclusion that "the strata of the low country were formed in the bed of the sea, and this district became dry land either by a depression of the level of the ocean or by the elevation of its bed, by a force operating from beneath." He believes that the "low country" is made up of recent strata, as evidenced by the character of the shells. He refers to the discovery of the remains of both the mastodon and the elephant in digging the Clubfoot and Harlow Canal, near the mouth of the Neuse River. The deposits of marl at the Natural Well, at Wilmington, and at Rocky Point, are briefly described.

1829.

MORTON, SAMUEL G.—*Geological Observations on the Secondary, Tertiary, and Alluvial Formations of the Atlantic Coast of the United States of America.* (Arranged from the notes of Lardner Vanuxem.) Acad. Nat. Sci., Phila., Jour., vol. 6, 1829, pp. 59-71.

In this report the author names the localities south of Delaware in which the "Secondary" strata had, up to that time, been observed to occur, as follows: Ashwood, near the Cape Fear River, North Carolina [3 or 4 miles below Whitehall]; Mars Bluff, on the Peedee River; Effinghams Mills, Florence County, South Carolina; near the Eutaw Springs, Berkeley County, South Carolina [now known to be Eocene]; and Cockspur Island, near the Savannah River, South Carolina [likewise an Eocene locality].

1832.

CONRAD, T. A.—*Fossil Shells of the Tertiary Formations of North America.* Vol. 1, No. 1, 20 pp., 6 pls., Phila., 1832. Republished by G. D. Harris, Washington, 1893.

The Tertiary deposits of North Carolina are referred to the "Upper Marine" or "Upper Tertiary." *Arca limula*, *Arca transversa*, and *Cypricardia arata*, from New Bern, are described and figured.

1834.

CONRAD, T. A.—*Observations on the Tertiary and More Recent Formations of a Portion of the Southern States.* Acad. Nat. Sci., Phila., Jour., vol. 7, pp. 116-129, 1834.