ing the seaward portion of the Coastal Plain from the Neuse River to Mobile Bay" (p. 17) . . . " in North Carolina and Virginia the Columbia is little more than a flowing mantle masking the more rugged framework of the older Appomattox" (p. 32).

In 1898[6] Lewis Woolman described the occurrence of fossil mollusks and diatoms in materials dredged from the bottom of the Dismal Swamp Canal and gave lists of the forms determined. He concludes that the deposits from which they were obtained are either of late Pliocene or early Pleistocene age. These beds are now referred to the Pleistocene.

In their text-book which appeared in 1906, T. C. Chamberlin and R. D. Salisbury[7] expressed the view that the Lafayette and Columbia formations of the Atlantic Coastal Plain were largely of fluviatile and subaërial origin. According to their interpretation, the deposits were laid down on flat peneplaned surfaces bordering the coast. Streams flowing from higher bowed-up regions to the west were unable to carry their load of sediments across this flat region, and consequently deposited them in the form of flood plain or broad alluvial fan accumulations. Those deposited farthest inland, owing to later elevation brought about by continued bowing up of the region to the west, may have been picked up again by the rejuvenated streams and carried forward and redeposited nearer the coast, and this process may have been repeated a number of times. This view is directly the opposite of that held by Dr. G. B. Shattuck,[8] who regards the surficial deposits of the Coastal Plain as having originated chiefly as marine and estuarine terrace deposits.

A monographic study of the Pliocene and Pleistocene deposits of Maryland by Dr. G. B. Shattuck[9] appeared in 1906. His conclusions regarding the nature and origin of these deposits will be referred to later in this report. The classification which he proposed is as follows:

Pliocene period:
Lafayette formation.
Pleistocene period:
Columbia group—
Sunderland formation.
Wicomico formation.
Talbot formation.

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[6]Acad. Nat. Sci., Proc., 1898, pp. 414-428.

[7]Geology, vol. 3, 1906. Lafayette, pp. 301-308; Columbia, pp. 447-454.

[8]Johns Hopkins Univ. Circular, No. 152, May-June, 1901, pp. 69-75; Amer. Geol., vol. 28, 1901. pp. 87-107.

Pliocene and Pleistocene deposits of Maryland. Maryland Geol. Survey, 1906, 237 pages, plates 75.

[9]Op. cit.