

TABLE SHOWING CORRELATION OF EOCENE FORMATIONS.

	NEW JERSEY.	MARYLAND AND VIRGINIA.	NORTH*CAROLINA.	ALABAMA.
Eocene	-----	-----	Castle Hayne -----	Jackson.
	-----	-----	Trent -----	Claiborne.
	-----	Nanjemoy -----	-----	-----
	-----	Aquia -----	-----	Wilcox.
	Shark River -----	-----	-----	Midway.

ST. MARYS FORMATION.

The St. Marys formation rests unconformably on underlying deposits. Its continuity with the St. Marys formation of Virginia and Maryland has been established. The beds have been studied throughout the entire area from Maryland to North Carolina. The materials, which consist predominantly of argillaceous sands, often of a dark bluish-green color with coarser beds interstratified, present the same characteristic features throughout the entire district. They have been examined in successive river basins, and there seems to be little doubt but that they are stratigraphically continuous throughout.

The more sandy phase of the Chesapeake Group, recognized under the name of the Choptank formation in Maryland, gradually dies out near the Virginia line, while the underlying Calvert formation with its basal diatomaceous beds gradually disappears between Petersburg and the North Carolina line, beyond which the St. Marys formation directly overlies the older deposits.

The fossils are very numerous and characteristic. Dr. Julia A. Gardner of the Johns Hopkins University, who has been engaged in an exhaustive study of the Virginia and North Carolina Miocene faunas, has prepared the following statement regarding their significance. She says:

"The Miocene in Maryland has on paleontologic as well as lithologic grounds a threefold division, the Calvert, Choptank, and St. Marys. The Calvert fauna is distinguished by the temperate element so prominent in it. Of the forms peculiar to the Calvert in Maryland and occurring outside of the State, 56% are found in the Miocene at Shiloh and Jericho, New Jersey. The Choptank fauna is merely the biologic expression of changing physical conditions and is, in general, a sandy-bottom facies of the Calvert. The St. Marys is differentiated by an influx of new forms and by the absence of those species peculiar to the cooler water of the Calvert and the sands of the Choptank. It is, however, rather unsatisfactory as a reference fauna. Although 43% of the St.