

patches, resting for the most part directly on the crystalline rocks. In the absence of fossils, physical criteria alone are available for the correlation of the Lafayette formation.

The materials are very similar in character to those found in deposits regarded as Lafayette, both to the north and south of North Carolina. The structure and composition of the strata are characteristic, and when to these is added the position of the beds at a high elevation along the eastern margin of the Piedmont belt, it is evident that the formation can only be correlated with the deposits regarded as Lafayette in adjacent areas.

Although the remnants of the formation in North Carolina are so dissected and isolated as to make it impossible to recognize the ancient terraced surface which is still found preserved in other districts and which can oftentimes be followed over considerable areas in Virginia and Maryland, still the strata are so similar to the Lafayette elsewhere and so unlike the deposits of earlier or later formations that there seems little reason to doubt that they represent the great Lafayette formation described as extending throughout the Atlantic and Gulf districts.

The age of the Lafayette formation is in much doubt. From its known stratigraphic relations it is younger than the latest Miocene beds and probably younger than the marine Pliocene, likewise. These earlier beds were apparently subjected to a long interval of erosion before the deposition of the Lafayette began. Again, after the close of the Lafayette, it is probable that an extensive epoch of erosion occurred before the Columbia deposits of Pleistocene age were laid down. The position of the Lafayette is therefore between the marine beds of Pliocene age and the oldest deposits of recognized Pleistocene age. The Lafayette formation is therefore, in all probability, of late Pliocene or early Pleistocene age. The consensus of opinion hitherto has been in favor of the former interpretation, but in the absence of fossils it is practically impossible to reach a positive conclusion. It is evident that more adequate evidence must be secured before the question can be regarded as settled. In any event, it seems certain that all of the materials referred by geologists to the Lafayette are not of the same age, and since Berry has shown¹ that the type locality in Lafayette County, Mississippi, is of Eocene age, it would seem that a new name was demanded for the high-level surficial deposits of the Atlantic border which have hitherto been referred to the Lafayette and which were earlier named Appomattox by McGee.

¹Berry, Jour. Geol., vol. 19, 1911, pp. 249-256.