Pleistocene:

	Feet.
Gravelly sand with some pebbles as much as 1½ inches in diameter, a few black phosphatized pebbles and water-worn sharks' teeth	4-5

Pliocene (Waccamaw):

Very coarse sand cemented by calcium carbonate and slightly stained with iron. Contains few shell fragments	1-1½
Blue to drab sand in which are many shells, sharks' teeth and bones	2½-3
Cobble bed with some of the pebbles as much as 3 inches in diameter exposed in base of pit.	

The Pliocene marl beds seem to occur in patches in the vicinity of Cape Fear River. An instance of this is shown about 13 miles northwest of Wilmington in the vicinity of Northwest Station. There two borings were made with an auger to determine the extent of the marl, but in neither case was the Pliocene marl encountered. The Pleistocene rests directly upon the Cretaceous. Only a few hundred feet away from the place where the borings were made the Pliocene marl outcrops and in character appears to be similar to that exposed in the marl pits of B. F. Keith at Neill's Eddy Landing on Cape Fear River. In one place the bed is at least 8 feet thick. The matrix consists principally of broken shells in which are many perfect shells.

Neill's Eddy Landing, Cape Fear River.—At this place fossiliferous Pliocene strata are well exposed, overlying Cretaceous beds. The shell marl has been extensively dug and is ground, bagged, and shipped for use as a fertilizer. The shell marl is about 10 feet in thickness and is made up almost exclusively of shells in a good state of preservation, contained in a matrix of broken shells. A small amount of quartz sand is present, but that this is a minor constituent is shown by the high percentage of calcium carbonate that is shown in the analyses. Some of the analyses show over 90% of calcium carbonate, while most of them run about 80%. Some calcium phosphate is also present. Black phosphatic pebbles from ½ to 2 inches in diameter are irregularly distributed through the marl. At this place extensive collections have been made and a wide variety of species determined.

An analysis of a phosphate nodule occurring in the marl showed a considerable amount of phosphoric acid. The more calcareous portions of the marl consist almost entirely of $CaCo_3$.

How extensive the deposit of Pliocene marl is can scarcely be determined because of the absence of exposures due to the level character of the surrounding country. At Cronly there is a large pit where the Cretaceous marl has been dug extensively for fertilizing purposes, and here the Pliocene marl overlies the Cretaceous, but is extremely thin. In