

CUMBERLAND COUNTY.

Topography.—No topographic maps have been made covering areas within the limits of this county. From railroad profiles and field observations it has been determined that in the eastern and southeastern half of the county the surface is made up of three Pleistocene terrace plains. The Wicomico plain forms a bordering terrace 2 or 3 miles wide along Cape Fear River probably throughout its north-south extent within the county limits, with elevations ranging from about 90 feet in the south to perhaps 120 feet in the north. The Sunderland plain, which is separated from the Wicomico plain by a well-defined scarp, with elevations probably ranging from 130 to 150 or 160 feet, covers a large area east of Cape Fear River. This plain has been considerably dissected by streams. The Coharie plain forms the surface of much of the county to the south and west of Cape Fear River, with elevations of 160 to 220 feet. It also has been much dissected around its borders. Along the western edge of the town of Fayetteville it is separated from the Wicomico plain by a steep, well-defined escarpment. The Sunderland plain is probably absent at this place, although it may be represented by small patches. The northern and western parts of the county come within the region known as the "sand-hills." The surface here consists of rolling hills with elevations of from 230 to over 400 feet.

Geology.—The Patuxent formation, consisting of arkosic sands and drab compact clays, underlies the entire county, and this in turn rests upon crystalline rocks. The beds are best exposed in the bluffs along Cape Fear River. The formation attains a maximum thickness in the southeastern part of the county of something like 300 feet. In the southeastern part of the county the Black Creek formation overlaps the Patuxent formation and rests upon it unconformably. It consists of laminated, lignitic sands and clays. The thickness probably does not exceed 100 feet within the county. Overlying the Patuxent and Black Creek formations are the surficial loams, sands and gravels of the Coharie, Sunderland, and Wicomico formations, and in the sandhill region the sands and gravels of the Lafayette formation.

Water Resources.—But few deep wells have been drilled in Cumberland County. Most of the inhabitants depend upon open and driven wells, the depths of which average 15 to 25 feet. At places open wells are not over 6 feet deep. Driven wells are in places as deep as 35 or 40 feet. On the hills west of Fayetteville and at Montrose and Inverness, where the land is higher and the relief greater, the level of ground water is lower and many of the open and driven wells are over 60 feet in depth. Most of the shallow wells obtain their supply from Pleisto-