

The Pinehurst Outlook.

VOL. II., NO. 14.

PINEHURST, N. C., JAN. 27, 1899.

PRICE THREE CENTS.

GEOLOGY OF NORTH CAROLINA.

Even the casual observer who travels across the State of North Carolina from its eastern shores to its western boundary will see that when he has gone about half way he passes from a region which is very level or gently undulating, and the surface of which is covered with sand and loam soils from which hard rocks are entirely absent, to another, the surface of which becomes more and more hilly until it culminates in mountains in the western portion of the state, and the soil of which is more or less mingled with the hard granite and slaty rocks from which they have been formed.

A little more traveling in this region will be sufficient to indicate that the geologic formations of the eastern half of the state, which has been designated as the Coastal Plain region, are radically different and much younger than that of the western half, embracing the Piedmont Plateau and Mountain regions. The boundary line which separates these two great geologic divisions extends from near Weldon on the north by way of Raleigh to near Wadesboro on the southwest.

In age instead of being contiguous the areas are widely separated; the formation covering the Coastal Plain being one of the most recent, while those of the Piedmont Plateau (excepting the limited red sandstone or Trias areas) being among the oldest.

The Coastal Plain region, along its eastern borders contains the sounds, bays, the sand dunes and ridges, the swamps and marshes and other characteristics of a seashore region. Further inland it is generally level, and has more of upland and less of marsh. Toward its western boundary the swamps nearly or quite disappear, the upland predominates, the surface becomes more undulating and even hilly in places, and soils which further eastward were composed of fine sand and silt, along the western border of this region contains a larger proportion of coarse sand or gravel mingled with clay.

Along the banks of such rivers as the Cape Fear and Roanoke where these streams have cut down through the surface and left the high steep bluffs the material composing half a dozen geologic formations are exposed to view, the oldest the Potomac gravel, sands and clays, lying at the bottom on the irregular surface of granite and slates; cretaceous sands and clays; tertiary (eocene and miocene) marls and clays; the Lafayette yellowish and brownish sands and loams; and the Columbia sands, gravels and clays, lying one successively above the other—the last of these, the youngest of all, being on top. Along the western border of these Coastal Plain formations occasional outcrops of hard granites and slates are exposed along the beds of streams where the once overlying sands and clays have been washed away, but besides these no large masses of hard

rock are to be found in this region other than the limited beds of limestone which are exposed along the banks of the streams in a number of eastern counties, especially in the southern portion of the state.

In these southeastern counties, the limestone is exposed at the surface along the banks of the streams in a large number of localities, and this rock may be used for the making of lime, macadamizing roads, and in some cases it will do for building purposes. In a few places, as in the neighborhood of Castle Haynes, New Hanover county, this limestone contains numerous phosphate pebbles and over considerable areas the limestone has dissolved away and left the phosphate pebble in form of phosphate gravel, which has been worked for a number of years, and can be worked with equal success on the adjoining Hermitage property. Other phosphate deposits have been found in Duplin, Pender, Onslow and Brunswick counties.

In the Piedmont Plateau region, the geology is much more complex. There are, however, two narrow belts of comparatively recent rocks; triassic or red sandstone. The more eastern of these two belts extending from Oxford, in Granville county, across the state through portions of Wake, Durham, Chatham, Moore, Montgomery, Richmond and Anson counties, has a maximum width of about 15 miles. In this formation are found the coal deposits of Moore and Chatham counties and the valuable beds of red, gray and brown sandstone, which are described more fully under head of coal and of building stone. The more western of these two belts is much more limited in area, extending from the Virginia line across portions of Rockingham and Stokes counties, and having a maximum width of four or five miles.

The older crystalline rocks, (granites, gneisses and slates), extend in belts of varying width and length obliquely across the state, having a general north-east and southwest course. The most marked of these is the great slate belt which extends across from Virginia, through Person, Orange, Chatham, Randolph, Stanley, Union and adjoining counties. It has a maximum width of some forty miles; the rocks are everywhere folded or broken, and tilted; and are penetrated by numerous dikes and veins; many of the latter being impregnated with gold bearing ores. And in the western part of this slate belt, especially in Davidson and Carrabass counties, these gold ores have associated with them ores of silver, lead, zinc and copper. The region is one of hills and valleys and rapid streams, along which have been developed numerous excellent water powers. Just west of this slate belt lies a belt of granite and other kindred rocks; extending across the state; having a width varying from ten to

twenty miles. These rocks are also penetrated by numerous veins which carry gold bearing ores; and in some cases, especially in Guilford county, these are also highly impregnated with copper ores, and in some places this granite belt, as well as the slate belt, contains valuable deposits of iron ore. Lying west of this granite belt and extending from it to the foot hills of the Blue Ridge, is a large area, the rocks of which are of gneisses and granites, with here and there more limited belts of slate. The rocks are very old, belonging probably to the Archaean age. They are often deeply decayed, forming fertile loam soils. In some places valuable and extensive beds of granite are to be found. At intervals throughout the entire region the rocks are penetrated by quartz veins which contain in many places gold bearing ores, the more noted gold bearing areas of this region being those in eastern Catawba, about the South Mountains in Burke, McDowell and Rutherford counties, and in the western part of Caldwell county. There are also in this region valuable deposits of iron; notably those in Stokes, Gaston, Macon and Catawba counties. This region is exceedingly hilly, being penetrated by the Brushy Mountains, south of the Yadkin, and the South Mountains, south of the Catawba river.

The geology of the mountain region is perhaps fully as complicated as that of the Piedmont Plateau. Over the larger part of the region are to be found the older crystalline rocks, greatly folded and turned on their edges; and they contain at intervals valuable deposits of iron ore; notably magnetic iron ores in the region about Cranberry in Mitchell county; in Ashe and Madison counties, and in a number of places these rocks are also penetrated by veins carrying gold, silver and copper bearing ores. Along the line of the Blue Ridge and again along the line of the Great Smoky Mountains are narrower belts of rocks, belonging to what has been designated the Ocoee period. The age of these is not known, though it is certain that these rocks are much younger than the slates and gneisses which have just been described. These rocks of the Ocoee formation contain also in places deposits of minerals, especially the marbles and brown iron ores of Cherokee county. In this region, as in the Piedmont Plateau, the rocks are decayed to a considerable depth, thus producing deep soils which vary in character from sandy and gravelly loam to those containing a large proportion of clay in regions where the rock itself contains large proportion of hornblende. These soils are porous and fertile, and for the most part on the slopes of the mountains are still covered with virgin forests.—*North Carolina and Its Resources.*

Advertise your business through the columns of THE OUTLOOK.

The Queen's Furniture.

All the furniture in the queen's palaces, whether it be the property of the crown or the personal possession of her majesty, is in the care of the lord chamberlain. He is represented at Buckingham palace and at Windsor castle by a resident inspector who receives a salary of \$2,500, with a residence and other emoluments. These inspectors have under them various clerks, and at Windsor castle there are also two brothers holding the office of tapissier, their duty being to superintend the safe packing and unpacking of the queen's luggage.

There is at Windsor an immense encyclopedia, which comprises more than 50 volumes, and contains an exact inventory of every article belonging to the queen, and every article whose use she enjoys during her life. Minute particulars are preserved of the origin, description and artistic value of every item, and the time of one of the inspector's clerks is occupied in writing up these volumes and in taking amateur photographs of the objects with which they deal.

The list is constantly growing, as her majesty's possessions increase in number every day, and there has been unusual activity in this department during the last twelvemonth, in consequence of the additions to the possessions of Windsor castle of thousands of diamond jubilee gifts.

These are now being distributed amongst the royal palaces according to their decorative value, but before they are parted with, the precaution has to be taken of preserving at Windsor an exact description of them. In this inventory an entry is carefully made, in order to distinguish those articles of which the queen enjoys the absolute disposal from those which pertain to the crown. Many of the pictures and "bric-a-brac" in the state apartments have not changed their position for many years.—*Keystone.*

The Boarding House Brute.

"I know the pumpkin pie was rather thin as to filling," said the landlady, almost crying, "but I don't think he had any right to say what he did."

"What did he say," asked the second table boarder.

"He asked me if I didn't think that the piecrust would be improved if it had another coat of paint."—*Indianapolis Journal.*

Absent-minded Professor (after the wedding ceremony.) "So now, dear Emma, we shall always belong to each other."

Emma. "Yes Ferdinand—but please make a note of it and don't forget it."—*Fliegende Blätter.*

Mother (drilling Teddy for his first party): "And now, darling, what is a greedy boy?" Teddy: "A boy who wants everything I want."—*Truth.*