Vol. XXVII

FEBRUARY 2, 19
Entered as second class matter at the post office at RICHMOND, VA. Subscription, \$2.00 per year.

Number

Climate and Its Causes

(BION H. BUTLER)

UCH stress is laid on the climate of the Sandhills country until many people assume that climate is the chief natural advantage of this section when selecting a location for a home. Possibly climate is the first inducement, but unless all of the causes of climate are considered one other agency must be given a close second to climate and that is the sandy surface of the ground. Thirty miles north of Pinehurst the climate, as far as the normal average temperature is registered, is not much different from that of Pinehurst. Yet the actual climatic manifestations as far as they affect personal physical comfort, are decidedly different from those experienced at Pinehurst. This is in a measure at least the result of the character of the soil and of the earth far below the surface in the Sandhills area.

The rocky foundation of North Carolina slopes from the

mountain summit in the west end of the state to the edge of deep water some miles out beyond the point where land and water meet at the coast. From the mountains to the junction of the Piedmont and the Coastal plain the slope to the eastward is rapid. From the junction to the sea it is much less of a drop. It looks as though at some remote day in the past the slow moving wash from the mountains had filled in a broad plain reaching down to the sea and out miles into the water, and that broad plain is a sediment of clay and sand, with sand largely in evidence on the surface in the counties from Pinehurst to the coast.

In the vicinity of Pinehurst and Southern Pines the blanket of sand is some 200 feet thick. A little farther north it is thinner, and presently the underlying rocks crop out. The sand and clay arising from the weathering of those rocks has washed down with the movement of the material towards the sea. Much of what was at one time rocks in the sandy section has weathered and made clay and sand to add to the sand-clay covering. As clay is more soluble than sand it is carried more readily from the surface, leaving the sand behind. So we find that most of the surface of the Sandhill area is sandy, although clay is found not far below the surface in nearly every neighborhood. Neither sand nor clay are laid down in well defined stratification as most of the rocks of



Mrs. Marjorie Graham, of New York, mounted on Chichester, one of her favorite hunters. Mrs. Graham is spending the winter at the Carolina at Pinehurst and takes an active part in all equestrian events.

recent geological periods are. Rather the sand and clay have been carried in moderate amounts to where they are found if they happen to be deposited material, or where they fell when broken from the rocks of their origin if they are residual material. So the relations of sand and clay to each other as ground making materials are largely haphazard. But the sand is so abundant on the surface as to give the coastal plain the appearance of a vast bed of sand, and it is that mass of surface sand that gives to the region known as the Sandhills one of its most valuable characteristics.

The sandy surface and the beds of sand beneath the surface have much to do with the water supply of the Pinehurst vicinity, and better water is hard to find any place on earth, or a more persistent supply, summer and winter. While the rocky country a few miles north of Pinehurst is faced with severe water

shortage at times in the summer, Pinehurst has seen the rainfall absorbed by the porous sand to be given out in regular supply all the year, instead of falling on rocks to run off in torrents and leave the ground empty of water supply for the periods between rains. And there begins another powerful influence. In the sandy country immediately after the rain has fallen it is possible to be out of doors, for the sand has taken up the rain, the surface is dry, the air is free from the humidity rising from the fogs and saturation of moisture. That is why at Pinehurst a man may play golf in a shower it he has a rubber coat, and the ground will not be out of condition for his play. The sand under the Bermuda grass takes up the water as it falls, and mud is practically an unknown factor. So in building roads, unless too much clay is put on the road it is always a dry road. That is why the Pinehurst roads are in good shape summer or winter. The sand is the insatiate collector of moisture, gathering it as fast as it comes, and storing it for the day when it is needed.

That gives a dry, stimulating atmosphere, summer and winter, and the Sandhills are never oppressive in summer because humidity is almost an unknown word in this vicinity. In winter the cold nights that are felt are not so uncomfortable as if the soil had a

(Continued on page 13)