

The economic application of the coal and other matters of this formation will be noticed in a subsequent chapter. Its geographic position will be seen by reference to the map which shows that, in this State, it only occurs in Allegany county, and in three separate basins.

FORMATION No. 20.

Mezozoic series of the Pennsylvania reports. New red sandstone of the New York reports and of the British geologists.

We have now enumerated the rocks of our State, beginning with the metamorphic and other of the oldest formations up to the coal. We have found, as a general rule, the older rocks successively covered by those of more recent origin as we proceeded westward. The most marked exception to this is in the case of the new red sandstone of Carroll, Frederick and Montgomery counties, which rest upon the metamorphic and the oldest of the sedimentary rocks.

It consists, at its base, of coarse red and brown sandstones and conglomerates upon which rests finer grained sandstones, followed by red shales of considerable thickness, some of which are calcareous. Upon these shales we find a coarse calcareous conglomerate or breccia of considerable thickness in the southern part of Frederick county.

The older rocks having now been briefly noticed, our attention will be directed to those supposed to have been deposited at much more recent periods, and which are found upon and southeastward of the metamorphic division, (No. 5.)

FORMATION No. 21.

Cretaceous group or chalk period. These do not exist either in Pennsylvania or New York.

It was long supposed by certain geologists that this formation did not exist in this State, or rather that it was covered by the tertiary beds. This view is expressed also in the article of the geology of the United States in that valuable work called "Johnston's Physical Atlas."

Although the present state of our work will not allow me to give its precise limits, yet there is ample testimony to prove that a wide belt of this formation exists in Maryland.

It consists of—

1. A thick group of sands and clays of various colors, but principally white, red and blueish gray, with some thin beds of feruginous sandstone resting immediately upon No. 5. In some localities it abounds in lignite derived from coniferous plants. The blueish gray varieties derive their color from