above limestone, when not transported thereon by water, consists of the impurities previously existing in the rock. If these were principally grains of quartz or sand, the soil will of course be what we term sandy. If, however, they be of such minerals as have been fully decomposed, the soil will be stiff, as in the case of limestone No. 10, and some other rocks.

Slates and shales when very siliceous, are slowly upon acted by carbonic acid and other atmospheric agents, and produce light soils; but those of a fine texture, as in Middletown valley, produce good stiff soils.

In considering the means by which rocks and mineral masses are decomposed, and their constituents in part transformed into clay, sand, and soil, we have thus far only referred to such as remain where they were produced. Such soils are said to be "in situ," or "in place," by way of distinguishing them from such as have been transported by water to greater or less distances.

We have abundant evidence that in all ages of our world water was evaporated, converted into clouds, and again fell to the earth in the form of rain. We have all noticed that during heavy rains the water flowing from the land into the streams, carries with it earthy matters, or in common language becomes muddy.

In this way the debris of rocks in the form of sand and clay is constantly carried from the higher to lower levels. Portions are often deposited near at hand, whilst the remainder is deposited in our rivers, in the bay, or in the bottom of the ocean.

There was a period when the only portions of what now constitutes the territory of Maryland, which was above the tide level, were the formations in the table numbered from 1 to 7.

These were probably much more elevated, especially along their southeastern border, than at present. Rains fell upon them, and the streams and waters generally flowed westward, (just the reverse of what now takes place.) These carried the debris from this elevated land into the great ocean on the west, upon the bottom of which it was deposited. These deposits, with remains of the animals of the ancient ocean, have been successively elevated by subterranean forces, so that we find as a general rule that the formations as we proceed westward are of generally more recent origin, as is demonstrated by their fossils. The last that was deposited was the coal formation, (No. 19,) with the exception of the new red sandstone No. 20. This last, although newer than the coal, rests upon the oldest of our sedimentary rocks in Carroll and Frederick counties.

It extends from the centre of Virginia, through Maryland, Pennsylvania, and New Jersey, near New Brunswick, and is