

The soils of these counties also sustained an unexampled system of hard cropping, which, in years gone by, seriously lessened their productiveness.

By the adoption, however, of improved systems, including the use of the shell marl in some of the counties and other manures, their original fertility has been nearly restored to most of them.

The post tertiary which occupies most of the three lower counties and all the islands of the Chesapeake Bay, was evidently formed from the sediments derived from all the other formations, from the tertiary to the oldest.

As the currents of water by which these earthy matters were transported, lessened in force, they carried little else than the finest materials to these counties. Some of these soils, which, at the first glance resemble clay, are found to consist principally of quartz in the state of an extremely fine sand. But this fine sediment contained the mineral matters required by plants in sufficient abundance to constitute large areas of a fertile soil within these counties.

We have followed the progress of nature through the geological changes by which this part of the continent has been made to assume its present shape.

The "beginning" it is not for the geologist to arrive at by the study of natural causes. We must be content with the best evidence we have in reference to these rocks supposed to be the oldest, and which were formerly termed *primary*. I have indicated a narrow belt of these passing northwardly through nearly the centre of the State, and have briefly indicated the mode in which the remaining formations are supposed to have been deposited.

That each of these sedimentary strata was once the floor of an ocean, is proven by the numerous remains of marine shells and crustacea they contain. After being upheaved and they became "dry land," and were acted upon by the physical and chemical agencies before adverted to and converted into sands, clays and soils. All the inorganic or mineral elements required for the growth of plants, were derived from rocks, and must have been supplied to the primeval soils, otherwise plants could not have grown upon them, and our planet would have ever remained a barren waste.