

Shenandoah valley, a part of the Great Valley above described, is composed of a series of blue and gray limestones and dolomites in which locally slates and sandy shales become imbedded. In certain places in eastern Washington county beds of pure fine-grained white marble are also found. The thickness of the Shenandoah formation is estimated to reach approximately 2500 feet. The slaty limestones and sandy shales are considered to form a series about 1000 feet below the top of the formation, and the white marble is known to lie below them. The structure is so complicated that the position of the various members of the formation is much obscured, and both the relations of the beds and the thickness of the formation can only be approximately given. Fossils are found in the lower portion of the limestones, but they are exceedingly rare. They are mainly trilobites and brachiopods of Cambrian age. The upper layers of the formation contain an abundance of fossils of lower Silurian age, and as no physical break occurs within the series of deposits the line between the Cambrian and Silurian cannot be definitely determined.

The limestone deposits have been but little altered, but the shaley beds have been generally more metamorphosed with the production of mica, which causes a more or less clearly defined schistosity. The decay of the limestone through solution has left an insoluble residuum of red clay, through which protrude at times beds of harder materials. The more rapid solution of the Shenandoah limestone than the rocks of the other formations has produced the broad fertile Hagerstown valley. Similar deposits also underlie much of the Frederick valley as well.

THE SILURIAN PERIOD.

The rocks of the Silurian period are found to the west of the Cambrian formations, which have just been described. They constitute a portion of the Great Valley, and together with the Devonian deposits enter into the formation of the Appalachian Mountains proper. They consist of sedimentary materials that have been but moderately metamorphosed since they were deposited, although at times subjected to considerable structural disturbances. Six divisions have been recognized in the sequence of Silurian deposits, known respectively