central Frederick and Carroll counties, where the covering of sandstones and shales has been removed, are found penetrating the limestones and phyllites. It seems probable that the dikes before referred to as occurring in the eastern division of the Piedmont Plateau are of similar origin. The diabase is holocrystalline and is composed chiefly of plagioclase and pyroxene with olivene and magnetite. The rocks penetrated have been at times considerably metamorphosed by the molten rock, which was forced into their fissures, generally with a hardening of the beds by partial solidification and re-crystallization. The diabase decomposes with considerable rapidity, although the surface is generally covered with large boulders of undecayed material which show characteristic weathering.

The Appalachian Region.

The geology of the Appalachian Region, as in the case of the Piedmont Plateau, cannot be fully comprehended without taking into consideration the great belt of which it forms a part. The beds of sediments which form the limestones, sandstones and shales of the Appalachian mountains were deposited in a wide, long trough, which once extended from north to south throughout the region now occupied by the mountains. This trough was undergoing gradual depression through most of Paleozoic time, until many thousands of feet of conformable beds had accumulated in it, mainly as the debris of a continental mass lying to the east.

This vast accumulation, at the close of Paleozoic time, was so compressed as to be forced up into a series of great folds, forming lofty ranges of mountains. The present Appalachians are merely the remains of these ancient folds worn down by natural processes through many successive periods. It is by no means certain that the mountain crests ever stood higher than at present, for from the moment the land rose above the sea the forces of denudation became active, and with varying intensity have continued to the present day. The great folds have been from time to time planed down to be again sculptured as the result of elevatory movements. The compressive force which raised these mountains acted from the east toward the west, hence the