Physiographic History

The physiographic record has been discussed in the chapter on Physiography, so only a brief summary is given here.

The existing topography is the result of erosion and minor deposition with alternate peneplanations and uplifts that have been at work in this region ever since the Appalachian Revolution. Decomposition, rain wash and streams have been the tools with which Nature has carved the existing hills and valleys.

Presumably, the period of Schooley peneplanation in Tertiary time saw the entire area reduced to a featureless low-lying region with all elevations due to earlier earth movements destroyed. From this surface the present differences in elevation have been developed, following an uplift that revived the agents of erosion. Those areas with the most resistant rocks, such as the siliceous sandstones of Kittatinny (Blue) Mountain, have suffered least and now stand highest, whereas the softer and more soluble rocks, such as the limestones, constitute our valleys.

If this region maintains its present elevation with reference to sea level, the destructive processes of erosion will continue to modify the topography. The tendency will be to reduce the existing differences and produce even more subdued scenery, with the ultimate reduction to another base level plain. Under present conditions this may result in from one to three million years. From what we know of the earth’s instability, one may well question whether before that time there may not be interruptions or modifications in the erosive process caused by deformations of the crust.