Limestone Valley.—That part of the county occupied by the Cambrian and Ordovician limestones possesses a distinctly different appearance. The interstream areas are broad and so nearly flat that in many places one can not note any irregularities of more than a few feet for distances of several miles. The streams are few and commonly have very gentle valley slopes. The average elevation of the divides is about 400 feet. A few hills rise 20 to 60 feet above, and some sinks are 20 or more feet below the general level. The Lehigh River and the lower courses of the tributaries are about 200 feet below the general level.

The relatively few surface streams as compared with the slate region, and the numerous sinks bear witness to the development of an extensive underground drainage system.

Prongs or outliers of both slate and crystalline rocks break the continuity of the limestone areas. The best illustrations are Huckleberry Ridge and Haas Hill composed of slate, and Lock Ridge and South Mountain composed of gneisses. Saucon Valley is separated from the other limestone areas of the county, but is continuous with the limestone belt of Northampton County by means of a narrow pass through which Saucon Creek flows to enter the Lehigh River. A small, completely detached hill of crystalline rocks is cut by Little Lehigh Creek in the vicinity of Western Salisbury Church. All these occurrences of less soluble rocks in the limestone belts rise conspicuously above the level of the limestone floor.

South Mountain.—South Mountain and its offshoots present a striking contrast to the topographic features previously described. They are part of the Reading Prong of the New England Uplands and are composed mostly of pre-Cambrian crystalline rocks of various kinds but with intervening, partly enclosed valleys floored with Paleozoic sediments, especially limestones. This belt is continuous with the New England Physiographic Province which comprises practically all the New England States. The narrow prong widens to six to eight miles at the Schuylkill in the vicinity of Reading where the Triassic rocks come in contact with the Paleozoic limestones through an overlap. Beyond the Susquehanna River, the crystalline rocks again come to the surface and continue southwestward and southward to Georgia as the Blue Ridge Province.

Several different names have been applied to this belt of hills. The Second Geological Survey of Pennsylvania used the name Durham and Reading Hills. The mountain paralleling the Lehigh River between Bethlehem and Allentown has been called South Mountain and also Lehigh Mountain. Both of these names have also been applied to other portions of the belt. Names have been given to individual mountains also.

The use of the term South Mountain in this region sometimes results in confusion as it has been used more commonly for the mountains bounding the Appalachian Valley on the southeast in Adams and Franklin counties. Local usage, however, is followed rather than the proposal of a new name or the restoration of uncommon names.

As shown on the map, few generalizations can be made concerning the size, shape, height, or direction of the hills of this province.