of this formation might be quarried without being mixed with an excessive amount of dolomitic stone. In Berks County, the writer found a quarryable thickness of high-grade limestone within the Beekmantown, and it is not improbable that this county may locally contain similar material.Analyses are given in the chapter on Economic Geology.

Paleontologic characteristics.—Fossils are rare in the Beekmantown strata of Lehigh County, although it is probable that careful systematic search would yield successful results. Fragments of fossils are not uncommon. The most likely places to find them are on the weathered surfaces of the low-magnesian beds. About 1909 a Columbia University student found a gastropod in a loose block of limestone near the Ueberroth mine, Friedensville, which was recognized by A. W. Grabau as a Beekmantown form. Later one of the writer’s students found a specimen of *Lecanospira* sp. in a small quarry south of the Friedensville church. In the same vicinity a specimen of *Ophiuletta levata* was found in a diamond drill core.

A few additional forms have been obtained from Northampton County in the eastward continuation of the Beekmantown strata north of South Mountain. They are *Liospira*, *Orospira* cf. *bigranosa* Ulrich, *Hormotoma* cf. *H. artemisia* (Billings), *Lophospira gregaria*, *Leiospectum*, and *Orthoceras*.

Thickness.—As in the case of the other Paleozoic formations of the region, there is no known place in the county where reliable measurements can be made. Continuous exposures across the entire formation are lacking; minor and major folds and faults are present and dips change so rapidly that one is not justified in assuming the continuance of any dip beneath concealed areas. Attempts to determine the thickness at several points, all of which necessitate several unproved assumptions, have given figures from 700 to 2,000 feet. It is probable that the thickness is approximately 1,000 to 1,200 feet.

Name and correlation.—In the publication of the First Geological Survey of Pennsylvania, these limestones formed a part of the II Auroral Limestone. They constitute a part of the II Calciferous Limestone of the Second Geological Survey, a part of the Shenandoah Limestone of the U. S. Geological Survey from 1892 to 1908. This series was designated the Kittatinny by the New Jersey Geological Survey. Wherry and Miller in publications beginning in 1909 adopted the local name of Coplay from the town of Coplay in this county. Later, however, the local name was dropped as the fossils indicate proper correlation with the Beekmantown formation of the Mercersburg-Chambersburg area. This conclusion has been confirmed by E. O. Ulrich.

If and when further paleontologic studies are made of the fauna of the formation, it will be possible to discuss more exact correlations.

Stratigraphic relations.—In the region there are few exposures of contacts of formations. Close association of the Beekmantown and the underlying Allentown seems to indicate conformable strata. There may be a hiatus between the two formations since the New York section contains beds apparently not represented in this region.