

Beecher and Clarke in the *Am. Jour. Sc.*, 1892; of eastern Pennsylvania, by I. C. White in *Penn. Geol. Rep.*, G 6, 1882; of Illinois, in the *Geol. Rep.*, Ill., by Worthen, vol. iii.; of Canada, in *Can. Geol. Rep.*, 1863, and also in later Annual Reports. Among the Brachiopods of the Oriskany occur the genera *Orthis*, *Stropheodonta*, *Leptæna*, *Rafinesquina*, *Chonetes*, *Leptostrophia*, *Meristella*, *Cyrtina*, *Spirifer*, *Rhynchonella*, *Centronella*, *Cryptonella*; also the genera *Rensseleria*, *Eatonia*, *Leptocælia*, which are more largely developed in the Oriskany than in any other period. *Orthis hipparionyx* = *Hipparionyx proximus*, *Spirifer arenosus*, *S. arrectus*, *Leptocælia flabellites*, *Cyrtina rostrata*, *Rensseleria ovoides* are characteristic species.

The Illinois beds, of cherty limestone, have afforded *Anoplia nucleata*, *Rhynchonella speciosa*, *Eatonia peculiaris*, *Leptocælia flabellites*, *Newberria Condoni*, *Amphigenia elongata*, *Strophostylus? cancellatus*, *Platyceras spirale*, and other species. At Becrafts Mountain, the species include, according to C. E. Beecher and J. M. Clarke, six species of *Dalmanites*, two of *Phacops*, a *Homalonotus*, *Cyphasphis*, *Proetus*, *Acidaspis*; a Cirriped of the genus *Turrilepas*; corals of the genera *Zaphrentis*, *Romingeria*, the Crinoid *Edriocrinus sacculus*. The unusual number of Trilobites for the Oriskany indicates apparently clearer waters along the Hudson River valley than to the westward along central New York. The Lower Helderberg species obtained are *Acidaspis tuberculata* of the Shaly limestone, a *Cyphasphis*, two *Dalmanites*, and a *Phacops* of L. H. type; *Tentaculites elongatus*; *Orthis perelegans*, and *O. oblata?* of the Shaly limestone; *Leptostrophia Becki*, *Trematospira multistriata*, of the Shaly; a *Cælospira*, *Anastrophia*; *Eatonia medialis*, of the Shaly; a *Zaphrentis*, Shaly in type. The Devonian forms are *Dalmanites phacoptyx* (known previously only from the Upper Helderberg of Ontario), a *Phacops*, *Leptostrophia perplana*, a *Chonetes?*, *Hemitrypa?*, *Fenestella celsipora* of the Corniferous. At Parlin Pond, in western Maine, there occur *Rensseleria ovoides*, *Leptocælia flabellites*, *Spirifer arrectus* H., *S. pyxidatus* H., *Stropheodonta magnifica* H., *Rhynchonella oblata* H., *Orthis musculosa* H., *Dalmanites pleuropteryx*, etc. (Billings).

See, further, on the relations of the Lower Helderberg, Oriskany, and Devonian faunas, the remarks on page 569.

2. CORNIFEROUS PERIOD.

The Corniferous period includes two epochs, the SCHOHARIE and the CORNIFEROUS. To the former belong the *Cauda-galli grit* and the *Schoharie grit*, now considered cotemporaneous formations; to the latter, the *Corniferous limestone*.

ROCKS — KINDS AND DISTRIBUTION.

The rocks of the Corniferous period in New York have their greatest thickness in the region of the Eastern Interior Sea, along the Appalachian belt. The *Cauda-galli grit*, a dark gritty slate, thickens toward the Hudson, being 50 or 60 feet thick in the Helderberg mountains, and 100 to 150 feet east of the Hudson River in Becrafts Mountain, near Hudson; and the Schoharie grit is best displayed in the eastern counties of New York, Albany, Greene, and Schoharie. Neither formation is found to extend far west over the Oriskany beds of western New York and Ontario. The *Cauda-galli*, like many seashore deposits, is almost destitute of fossils; but the Schoharie beds abound in them, and they are closely related to those of the following Corniferous epoch.

The Corniferous limestone — so called by Eaton, with reference to the hornstone or flint often imbedded in it (from the Latin *cornu*, *horn*) — extends