

*Eastern Border Region.* — In southeastern Newfoundland, on Manuel's Brook, occur shales, with some limestone, overlying a conglomerate, in all 400'; above occur beds with the Paradoxides fauna, and below it, within 40' of the conglomerate, species of the Olenellus fauna; the former occurs also at Topsail Head and on Conception Bay (Walcott). In the Acadian trough, Lower Cambrian fossils are reported from the north side of the Straits of Belle Isle, at L'Anso au Loup, and on the opposite coast at Canada Bay, Labrador; Middle Cambrian, as gray and black shales, in New Brunswick, near St. John, with also Upper Cambrian beds; in eastern Massachusetts; the Lower Cambrian at Nahant, and in Bristol County, near northeastern Rhode Island, and the Middle Cambrian at Braintree, where a thick conglomerate, much flexed, underlies 500' to 1000' of slate.

*Continental Interior Region (west of the Appalachian protaxis).* — Along the Green Mountain region in Vermont and Massachusetts, among the rocks of the Taconic series, a great quartzite formation, having intercalations of hydromica and mica schist and occasionally ottrelite schist, has been shown by fossils to be in part or wholly Lower Cambrian. The Sillery sandstone of Logan, in Canada, is part of the quartzite formation. The limestone (white marble), adjoining the quartzite on the west, has afforded Lower Cambrian fossils to the eastward and northward of Rutland. The continuation of this limestone belt, in Massachusetts, called the Stockbridge limestone, is too highly crystalline for fossils; it may be in part Cambrian. West of the Taconic limestones in central Vermont, Lower Cambrian is represented by the red sandrock of the region. In northeastern Vermont, at Georgia, magnesian limestone, 1000' thick, is overlaid by a great thickness of shales; at Highgate the same limestone is 1200' thick.

The reddish, mottled "Winooski limestone," of the Georgia Cambrian, is worked for marble at Swanton.

West of the New England line, Lower Cambrian occurs in Washington County, New York, near Bald Mountain and elsewhere; in the western part of Rensselaer County, at Troy, in shales and limestone and at Schodack Landing; at several places in Dutchess County, at Stissing Mountain, where Middle Cambrian fossils also occur.

West of Lake Champlain, about the Adirondacks, the Potsdam sandstone, chiefly Upper Cambrian, has a thickness in St. Lawrence County of 60' to 70'; in St. Lawrence valley, of 300' to 600' or more; in Warren and Essex counties, of about 100'. But in Dresden, Washington County, it occupies a depression at a height of 912' above Lake Champlain. A lower portion of the sandstone, according to Walcott, is Middle Cambrian.

In New Jersey, Sussex County, at Hardistonville, Olenellus occurs in sandstone, and other Cambrian fossils in the Magnesian limestone near Franklin Furnace, and north of Franklin Furnace Pond (C. E. Beecher). Foerste has found the Olenellus fauna in the same region, and also south of Sparta Junction, northeast of Long Pond; and he has traced it southwestward into eastern Pennsylvania; he shows that the quartzite of the region, instead of being Potsdam Upper Cambrian, is mostly Lower Cambrian as in Vermont (1893).

The Lower Cambrian has been traced by Walcott from New Jersey southwestward across Pennsylvania. In southeastern Pennsylvania, west of the Susquehanna, over parts of York, Adams, Franklin, and Cumberland counties, about South Mountain, east of the river in Lancaster County, and in adjoining parts of Maryland, the Lower Cambrian includes a great thickness of quartzite with overlying shales or slates and limestone; and besides these rocks there are, in South Mountain, large flows of basaltic and rhyolytic rocks. In Virginia, fossiliferous shales of the Lower and Middle Cambrian occur near Natural Bridge and Balcony Falls.

W. B. Rogers states, in connection with a contribution on the geology of Virginia to Macfarlane's *Geological Railway Guide* (1879), that the "Potsdam or Primal Group, where complete in Virginia, includes, besides the Potsdam sandstone proper, the ferrife-