

For a list of 163 Upper Silurian species found at Arisaig, Nova Scotia, see H. M. Ami, *Nova Scotia Inst. Sc.*, 1892. In this paper Ami remarks on the relations of the fossils that "they are much closer to the Ludlow rocks of Kendal, in Westmoreland, England, than to either the Upper Silurian species of Anticosti, of Ontario, or those of the state of New York." The species range from the Medina to the Lower Helderberg.

Hall remarks that many Niagara species have their nearly related or representative species in the Lower Helderberg: thus, *Orthis elegantula* is represented by *O. subcarinata* and *O. perelegans*; *O. hybrida* by *O. oblata* and *O. discus*; *O. punctostriata* by *O. tubulostriata*; *Spirifer Niagarensis* by *S. macroleurus*; *S. sulcatus* by *S. perlamellosus*; *S. crispus* by *S. cyclopterus*; *Strophomena (Orthotheses) subplana* by *S. (O.) Woolworthana*. So also *Pentamerus fornicatus* of the Clinton is represented by *P. galeatus*.

FOREIGN.

The rocks of the Upper Silurian are widely distributed over the globe, though less universal than those of the Lower Silurian. They occur in Great Britain, Scandinavia, Russia, Germany, Bohemia, and Sardinia, and in Asia, Africa, and Australia. They seem on a geological map to cover but small areas, but only because they are concealed by later formations.

The rocks in Great Britain where best displayed are subdivided as follows:—

1. **May Hill (Gloucestershire) Sandstone, or Upper Llandovery group.**—Sandstones, with some arenaceous limestone ("Pentamerus limestone"), which terminate above in the Tarannon shales.—*American Equivalent*, the Medina and Clinton groups.

2. **Wenlock Group.**—Consists of (1) the Woolhope beds, limestone and shale; (2) Wenlock shale; (3) Wenlock or Dudley limestone.—*Amer. Equiv.*, the Niagara shale and limestone.

3. **Ludlow Group.**—Consists of (1) the Lower Ludlow rock; (2) the Aymestry limestone; (3) the Upper Ludlow; (4) Tilestones.—*Amer. Equiv.*, the Onondaga and Lower Helderberg groups.

These subdivisions are well exhibited in Shropshire or western England and in eastern and southern Wales. Between the Tilestones and the Ludlow are one or two thin *bone-beds* consisting of remains of Fishes and Crustaceans. In North Wales, and in Westmoreland, Cumberland, southern Scotland, and southwestern Ireland, the beds are mostly grits and shales, and are much upturned, with the subdivisions not distinct. The Wenlock group is represented by the Denbighshire grit in North Wales, and the Coniston grits in Cumberland. The thickness is stated to be from 3000 to 5000 feet.

Upper Silurian beds outcrop: in Russia over a large area south of the Gulf of Finland; in southern Sweden; about Christiania and some points to the north in Norway; in the Bohemian basin near Prague, where Barrande's formation E corresponds to the Niagara and Onondaga periods, and his F, G, H, approximately to the Lower Helderberg and Oriskany; in the Fichtelgebirge; and the upper section only in the eastern Hartz, where the