division of the Salina. The thickness of the shale and limestone varies from 150′ to 235′. (J. J. S.)

(*c*) *Eastern Border region.* — The Niagara limestone occurs in eastern Canada, some distance south of the St. Lawrence, being part, according to Logan, of an extensive formation, which stretches from northern Vermont, *eastward* over a part of northern New Hampshire and northern Maine, to Cape Gaspé on St. Lawrence Bay, as limestone with some massive and shaly sandstone. The formation embraces also the strata of the Lower Helderberg, and possibly part of those of the Lower Devonian. Niagara fossils occur in the lower part of the Gaspé limestone, as well as at some intermediate points. They have been found also near Penobscot Bay.

At Arisaig, in Nova Scotia, there are shales of the Niagara epoch, 1300′ thick; and they occur also in New Canaan and Pictou.

(*d*) *Arctic regions.* — In the Arctic, the Niagara limestone has been observed between the parallels of 72° and 76°, on the shores of Wellington and Barrow straits, and on King William's Island. The common chain coral *Halysites catenulatus* has been found at several localities, along with various Upper Silurian species, and also at other places between 79° and 82° N.

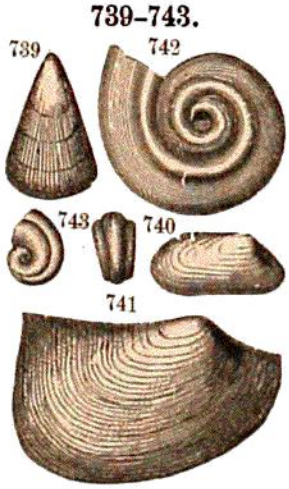
LIFE.

1. Plants.

Supposed Algæ or Fucoids, of branching form, of the genus Buthotrephis, occur in the Clinton group. They are various rounded casts looking like those of stems, or groups of stems, some of which are probably tracks of marine animals, as already explained.

2. Animals.

In the Niagara series no evidence of fresh-water or terrestrial species of plants or animals has yet been observed. Aquatic Vertebrates or Fishes have been reported from the Clinton beds.



MEDINA. — Fig. 739, Lingula cuneata; 740, Modiolopsis orthonota; 741, M. primigenia; 742, Pleurotomaria litorea; 743, Bucania trilobata. Hall.

The Medina beds contain few fossils. These are chiefly Brachiopods and Lamellibranchs, with rarely Gastropods and Cephalopods among Mollusks. Tracks of Sea-worms are common, because the beds are of mud-flat and sand-flat origin. The Clinton group has more numerous fossils, of the same general character, and partly the same species; but as it includes limestone beds, there are also Polyp-corals, Bryozoans, and Trilobites. The Niagara beds, which were largely formed in clear, open seas, contain a profusion of fossils of marine types: Bryozoans, Polyp-corals, Crinoids of various forms, Brachiopods in great numbers, and various kinds of Mollusks, with many small and large Trilobites.

The most common of Medina Brachiopods is the *Lingula cuneata*, Fig. 739, a wedge-shaped species. Figs. 740 and 741 represent Lamellibranchs; and 742, 743, Gastropods, the last a *Bucania*.