

the Ludlow rocks of Mr. Murchison's Upper Silurian group.

No. 11. *Helderberg Series*.—This division includes that portion of the Upper Silurian rocks of the above Table, which comprises the formations from 22 to 14 inclusive. Mr. Hall mentions that, after leaving the western extremity of Lake Erie, the Niagara limestone, the Onondaga salt group, and the Helderberg limestones (Nos. 13, 12 and 10 of my map), are so blended together, that it is impossible to define their limits in the same manner as in New York. He has therefore united them in his map; and represented them under one colour in Ohio, Indiana, and Illinois; and I have followed the same plan.

No. 12. *Onondaga Salt Group*.—This remarkable formation of red and green argillaceous shale, marl, and shaly limestone, with veins and beds of gypsum, and productive brine springs acquires a thickness of 1000 feet in New York, near the Niagara region, and in the county of Onondaga, where it is largely developed; but it is a group of partial extent in the Upper Silurian division.

No. 13. *Niagara and Clinton Groups*.—These, it will be seen, form the chief part of the Ontario division of the New York system. The Niagara limestone and shale correspond in their fossils with the Wenlock or Dudley limestone of England, and would therefore be classed by Mr. Murchison as Upper Silurian.

The Clinton group, as containing the *Pentamerus oblongus* in abundance, would be considered in England as Lower Silurian; but Messrs. Murchison and De Verneuil regard this fossil in Europe generally as