

fossiliferous slates and coarse arenaceous limestone, and a bed of gray sandstone with numerous indistinct impressions apparently of plants. In addition to several of the fossils found at Nietaux, these beds afford *Tentaculites*, an *Atrypa*, apparently identical with an undescribed species very characteristic of the Devonian sandstones of Gaspe [this is now known as *Leptocoelia flabellites*], and a coral which Mr. Billings identifies with the *Pleurodictyum problematicum*, Goldfuss, a form which occurs in the Lower Devonian in England, and on the continent of Europe."

It will thus be seen that I recognized, on the evidence of stratigraphy and fossils, in the district extending from New Canaan to Bear River, the following groups of rocks:—

1. The Niagara series, the Wenlock of English geologists, represented by the Dietyonema shales and the coral-bearing rocks of New Canaan. This group may be called either Middle or Upper Silurian, according to different classifications in use.

2. The Upper Arisaig series (of my arrangement, not of that subsequently advocated by Dr. H.) This is the equivalent of the Lower Helderberg series of America, the Ludlow of England, and is the upper member of the Upper Silurian as held at that time.

3. The Oriskany series, represented by iron ores, sandstones or slates. At that time the Oriskany was regarded by all as Lower Devonian. More recently some American geologists have proposed to place it in the upper part of the Upper Silurian, above the Lower Helderberg, with which its fossils have some affinity.

If I understand Dr. H., he admits the ages which I have assigned to Nos. 1 and 2 above mentioned, though, after his usual manner, without giving the slightest credit for the original discovery of the facts, but he assigns No. 3 to the horizon of the Medina sandstone, a formation older than the Niagara, and regarded as an equivalent of the Mayhill sandstone (Llandovery) of Great Britain. The first reason assigned for this opinion is one based on mineral character, "I at once recognized the Mayhill sandstone," &c. On this I may merely remark that any geologist who would profess to distinguish at sight the Oriskany sandstone from the Medina sandstone would be more characterised by boldness than prudence. The stratigraphy of the district is confessedly somewhat obscure, and I fail to find in Dr. H.'s paper any new light tending to the inversion of the section as it