

land is so full of *Camarotoechia plena*. There is nothing in the typical Chazy which corresponds to the ostracod layers such as the *clavigera* zone and the limestone in the 20 feet above it. Excepting the ostracods, nearly all the fossils from this horizon upward are species found also in the Black River and Trenton. The fauna found in the upper 15 feet is evidently Lowville, *Tetradium cellulosum* and *Bathyrurus extans* being the guide fossils. Many of the fossils found below this layer are known in the Lowville but the absence or rarity of *Tetradium cellulosum* gives the fauna a slightly different aspect. It may be significant that this *Tetradium* first becomes common in beds above the "pebble beds" (No. 1. in the section at Mechanicsville.) The pebbles in these beds are from 1 to 3 inches in diameter and have well rounded edges. They are somewhat greenish in color, and remind one of some of the green limestone layers in the upper part of the Chazy at the Hogs Back. They are in a rather pure limestone matrix which is very fossiliferous, *Cyrtodonta huronensis* being abundant, and cephalopods common. Though it cannot be called a conglomerate, this bed indicates some sort of a physical change, and, coupled with the slight change in fauna, may prove to be of some importance.

While the pebble bed may be the base of the Lowville, it seems more probable that the line should be drawn 35 feet lower down, at the base of the sandstone containing *Clionychia* and *Vanuxemia* (No. 6 of the second section at the Hogs Back and No. 4 of the section on the road beyond Robillard's quarries.)

At the Hogs Back there are two of these thick beds of sandstone, which, coming as they do in the midst of a series of limestones, indicate a pronounced change in the conditions governing sedimentation. The change in the fauna at this point, though not striking, can be seen. The principal difference noted is in the ostracods, which, below this sandstone are often so abundant as to make up the entire mass of certain layers, and, moreover, these ostracods are usually smaller than those found above. Certain species, such as *Isochilina? clavigera* and *Bathyrurus angelini*, are not found above this sandstone.

These rocks which lie above the highest bed containing *Camarotoechia plena* and below the sandstone with *Vanuxemia* and *Clionychia* are similar, lithologically, to a formation which occurs in northwestern New York. This formation was described by Dr. H. P. Cushing,\* who gave it the name Pamela. The formation, in New York, is from 60 to 150 feet thick, and consists of 10 to 20 feet of shale and sandstone at the base.

\*Bull. Geol. Soc. Am. Vol. 19, p. 55, 1908