

Figs. 11 and 12, *Atrypa neglecta*, (Hall,) NIAGARA AND CLINTON GROUPS.—Professor Hall says this shell is “ovoid or subpyramidal, beak acute, shell gradually enlarging from the beak to the base, which, in old shells, is deeply sinuate; dorsal valve more convex than the ventral valve, surface marked by simple sharp plications, which are crossed by fine concentric striæ, and sometimes by a few imbricating lines of growth; ventral valve with a mesial sinus below the middle, and a corresponding fold upon the dorsal valve.”

“In the young shells the valves are equal, and there is neither sinus or elevation; but as the shell advances in size, the sinus becomes conspicuous. There are generally three, and sometimes four plications in the sinus, and four or five elevated on the opposite valve. The plications usually appear as if smooth, except near the base where there are some strong imbricating lines of growth. It is a very common species, and sufficiently distinct in all its phases to be readily recognized.”

It is found in all the localities of the shale of the Niagara Group, and it also occurs in the Clinton group.

Fig. 13, (*Atrypa cuneata*,) DALMAN.—The principal character of this species is its long triangular shape. The plications are ten or twelve, three or four depressed on the ventral, and elevated on the dorsal valve. The beak of the ventral valve is nearly straight, and perforated at the extremity.—This shell is somewhat variable in shape, and the specimens are usually flattened and distorted. *Cuneata*, Latin, wedge-shaped.

It occurs in the Niagara shale, and also in several countries in Europe in the Silurian rocks.

Figs. 14 and 15, *Leptena transversalis*, (Dalman,) NIAGARA GROUP.—This species is semi-circular, and the ventral valve very convex, while the dorsal valve is equally concave. The hinge line is sometimes equal to and often longer than the width of the shell, as in fig. 14. The surface is marked by a number of elevated radiating ridges, the intervals between which are more finely striated. Professor McCoy says of the English specimens, that they are more globose than *Leptena sericia*, and “distinguished externally by the fewer and more distant linear ridges, and the very much finer longitudinal striæ between the thread-like ridges, and their being besides so faintly impressed as to be, in almost all cases, invisible to the naked eye, or a lens of low power. The interior of the dorsal valve shews well the long parallel muscular impressions. Fig. 15 is a view of the hinge line, exhibiting the elevation of the marginal ridges by which these impressions are bounded.—This is one of the most abundant of fossils in the Upper Silurian rocks of America, and we have specimens in our possession from the Trenton Limestone that much resemble it. In Europe it is also quite common.

Figs. 16 and 17, *Leptena subplana*, (Conrad,) NIAGARA GROUP.—This shell is “semi-elliptical, length and width nearly equal, hinge line extending beyond the width of the shell. The surface is marked by prominent sharp striæ, which frequently bifurcate before reaching the margin. The radiating striæ are crossed by strong concentric striæ. The area (Fig. 17,) extends