IX.—*Descriptions of New Species of Fossils, from the Upper Silurian Rocks of Port Jervis, N. Y.; with Notes on the occurrence of the Coralline Limestone at that Locality.*

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GENUS DISCINA, LAMARCK.

DISCINA JERVENSIS, New Species.

Shell obtusely oval in outline, extremities equal and broadly rounded; dorsal valve depressed convex; apex midway between the centre and the posterior margin, abruptly elevated behind and sloping gently forward, the lateral slopes ending in a broadly flattened margin; ventral valve slightly elevated in front of the foramen, and broadly concave between this elevation and the anterior margin. Foramen oval, about the same distance from the posterior border as the apex of the upper valve. The impression of the outer surface of the lower valve shows the imprint of fine raised concentric striæ, about seven of them to one-twelfth of an inch of the longer diameter near the front of the shell. The upper valve is similarly striated, and its cast has the apex divided by an impressed line, which is prolonged toward the front. Length of an average specimen, ten lines; greatest breadth, eight lines. Elevation of apex, 0.15 of an inch. The upper and lower valves of this shell are often found united, but with their surfaces so much injured by exfoliation that the external markings are only determinable by an examination of the matrices, which are generally covered with a thin portion of the shell.

This fossil is very abundant in a layer situated among the higher strata of the Oriskany group, at Port Jervis, N. Y., to which village the specific name refers.

GENUS TREMATIS, SHARP.

TREMATIS (SCHIZOCRANIA) SUPERINCERTA, New Species.

The upper valve of a patelliform shell, externally like the *Orbicula* (?) *flosa*, H., = *Trematis flosa*, H., = *Schizocrania flosa*, H. and W., is found, very rarely, in the Trilobite layers, or uppermost Lower Helderberg strata, of this village. It is twice or thrice as large as that shell, broadly ovate in general outline, convex, highest behind the middle, and widest anteriorly. Apex obtuse, marginal. Surface jet black, shining, radially marked by elevated filiform striae, which are more or less arcuate toward the beak. Very fine concentric striae cross these, preserving their full size over them, and imparting to them a sub-nodose or slightly moniliform appearance. Stronger concentric lines and laminations of growth are intermixed with these very fine concentric ones. Radiating striae arising independently, rarely if at all bifurcating, ten to twelve in the width of one line over the rostral region, five to eight in the same space nearer the front. Length and width of valve sub-equal, from twelve to fifteen lines in the largest specimens yet seen. Lower valve, and internal markings of upper valve, unknown.

One or two valves have been seen attached to larger shells, precisely like specimens of *Schizocrania flosa*, from the Cincinnati Group. One was fixed upon a large *Strophomena*, its margin conforming to all the external inequalities of the larger shell, and spreading widely over its surface. It must have grown in that position, and have been, like the *Schizocrania* (?) *flosa*, parasitic. Other valves have been found in a similar position, but not with the spreading margin. In the absence of the lower valve, I can see no reason for not referring this shell to the same genus with the *Trematis* (*Schizocrania*) *flosa* H., and H. and W. It has been labeled *Trematis* by Prof. Hall, perhaps without being aware of its parasitic habit. But it seems to me to be very questionable, notwithstanding the eminent authorities upon the other side, whether parasitic habits alone can justify the erection of the new genus *Schizocrania*. I prefer, until its generic position is better established, to place it, provisionally at least, under

Sharp's genus, *Trematis*. The specific name refers to its mode of growth.

GENUS *RECEPTACULITES*, DE FRANCE.

RECEPTACULITES LATERITIUS, New Species.

Conoidal, basal margin narrowly rounded upward, base slightly concave, apex obtuse. Height and greatest breadth sub-equal, each about nine lines. The divisions of the exposed portions of the surface of this species agree with those of other species of this genus, but are finer than in most of them. The rhomboidal cells or casts of the inner surface of the ectorhin cover the upper two-thirds, and the quadrangular spaces or impressions of the inner surface of the ectorhin cover the lower third of the exposed side, portions not exposed being covered by the ectorhin itself. These divisions accord with those of the late Prof. Billings' excellent paper upon this genus, in *Palæozoic Fossils*, Vol. II. Rhomboidal spaces, 0.02×0.02 inch; quadrangular, 0.02×0.06 inch. The quadrangular spaces have a fanciful resemblance to a brick wall, to which aspect the specific name refers.

From the Delthyris Shale, Port Jervis, N. Y.

GENUS *DIPHYPHYLLUM*, LONSDALE.

DIPHYPHYLLUM INTEGUMENTUM, New Species.

A simple cylindrical coral belonging to the above genus is tolerably abundant in strata lying about forty to fifty feet below the Dark Blue Tentaculite Limestone, at Mr. William Nearpass' quarry, in the State of New Jersey, three miles south-west of Port Jervis. It has generally a dense epithecal covering; the vertical septa are strong, forty-four in the specimen were counted, springing from a broad peripheral rim, alternately longer and shorter, the longest ones reaching the centre. A thin, mounted, transverse section shows three divisions—an inner one, occupying about two-thirds of the diameter of the calicle, closely reticulated with dissepiments uniting the septa; a portion, occupying about half the remaining third of the diameter, entirely without dissepiments; and the peripheral rim. Weathered specimens show a tolerably deep cup at one end. Diameter of calicle, $\frac{2}{3}$ of

an inch. It is associated with *Cyathophyllum* (*Columnaria*) *inequale*, the (*Leptæna*) *Strophodonta*, figured without a specific name in Vol. II, Pal. of N. Y., pl. 74, figs. 3a and 3b, *Rhynchonella lamellata*, *R. nucleolata*, *Calymene camerata*, *Stromatopora constellata*, and some other species of the Coralline limestone, along with *Halysites catenulatus*, *H. agglomeratus*, *Callopora* and *Trematopora*, species not determined, *Cladopora seriata*, *Favosites* resembling the spheroidal forms figured in the same volume for the Niagara Group, *Rhynchonella pisa*, *Ambonychia acutirostra*, *Aulopora precius* (?), *Spirorbis inornatus*, *Caninia bilateralis*, *Streptelasma*, species not determined, *Proetus*, and some other forms not yet identified.

The association of some of the Niagara forms of the Ohio, Wisconsin, and Illinois palæontology with the coralline fossils of Schoharie, is very interesting. The Coralline, I think, is continuous from Schoharie along the Hudson to Rondout, and thence southwardly along the Appalachian folds to and beyond this village.

The forty feet of rock lying between the Coralline Limestone and the Dark Blue Tentaculite Limestone seems to agree very well with what is called the Water-lime group by some, and the Salina or Onondaga Salt group by others. At the top it has about ten feet of thinly laminated, much contorted, ashen-colored strata, with vertical sutures, and an abundance of calcite in sheets, with the appearance, on the outside, of the *Lignilites* of Prof. Eaton. The contortion of this bed is all the more striking because there is none of it in the strata above or below. The rest of the rocky strata between this contorted slate and the Coralline Limestone may be generalized as consisting of two light-blue beds, weathering buff, with an intermediate limestone. The entire series from the Dark Blue to the Coralline is palæontologically connected with the Tentaculite Limestone, and I like best the division which makes the Water-lime an extension downward of that subdivision of the Lower Helderberg group.

This Coralline Limestone is in no way connected with or related to the ("Favosite Limestone") *Stromatopora* Limestone of my former paper.* The species are entirely different.

*Annals of the N. Y. Lyc. Nat. Hist., 1876, Art. 27.