

extends forward for a distance of about one-half the length of the valve, gradually widening and becoming more shallow till it disappears. A portion of the dorsal valve close to the margin is sometimes nearly flat all around. The internal markings are not well enough shown in any of the specimens that I have seen to admit of description. The surface is ornamented with very fine concentric striae and numerous close-set radiating striae, the whole just visible to the unassisted eye.

"The ventral valve is not certainly known. The width of the largest dorsal valve that I have seen is 0.14 of an inch and the length 0.10 of an inch."

The above description and the figure of a type specimen are all that we have of the species.

Formation and locality.—Middle Cambrian. Even-bedded and conglomerate limestones on the ridge east of the city of Troy, New York.

Genus ORTHIS Dalman.

Orthis Dalman, 1827. See Brit. Foss. Brach., vol. i; Genl. Introduction, p. 101.

ORTHIS ? HIGHLANDENSIS n. sp.

Plate viii, figs. 3, 3a, b.

Shell about the average size of the Cambrian species, but below the size of those from the Silurian. Transversely oval or subrotund, front broadly rounded and nearly straight in the dorsal valve; hinge line shorter than the greatest width of the shell. Ventral valve moderately convex, most elevated toward the beak, which is slightly arched over to meet the nearly perpendicular area; mesial sinus broad and shallow or nearly obsolete; area flat; foramen unknown. Dorsal valve associated in the same hard specimens of limestone, more convex than the ventral valve; hinge line very short; median fold but slightly raised above the general surface; area unknown. Surface marked by concentric lines of growth and finer striae. No traces of radiating costae are seen except on the interior of the shell towards the margin.

Casts of the interior of the ventral valve show the dental plates, median ridge and bifurcating ridges extending nearly to the margin; also, two lateral grooves. The specimens of the interior of the dorsal valve show only faint impressions of a large oval scar each side of the median line.

The form of the dental plates, the prolonged ridges, and the short median ridge of the ventral valve associate this species with *Orthis* rather than *Orthisina*. The interior of the ventral valve allies it closer to *O. Pepina* Hall (Sixteenth Ann. Rep. N. Y. State Cab. Nat. Hist., p. 134, pl. vi, figs. 23–27) of the Wisconsin and Texas Upper Cambrian (Potsdam) horizon than to the species of the Middle Cambrian, unless it be *Orthisina ? Orientalis*. It is to be regretted that we have not better material for the study of this and the species placed under *Orthisina*.