

the various species from that horizon will be studied and illustrated, and then we shall have data for a more extended and accurate comparison of all the species belonging to the genus.

OBOLELLA CHROMATICA Billings.

Plate xi, figs. 1, 1a, b.

Obolella chromatica Billings, 1861. Pamphlet; Geology of Vermont, vol. ii, p. 947, figs. 346a-d. *Idem*, 1863. Geology of Canada, p. 284, figs. 288a-d. *Idem*, 1865. Pal. Foss., vol. i, p. 7, figs. 7a-d. *Idem*, 1876. Amer. Jour. Sci., 3d ser., vol. xi, p. 176, figs. 1, 2, 3; p. 177, figs. 4a-d. *Idem*, Ford, 1881. Amer. Jour. Sci., 3d ser., vol. xxi, p. 133, figs. 3, 4.

Original description.—"Broad oval, the rostral extremity obtusely pointed, front broadly rounded, greatest width a little below the middle; both valves rather strongly and uniformly convex, most tumid at about one-third the length from the beak. Ventral valve more acute above than the dorsal, beak depressed below the greatest elevation of the shell, slightly elevated above the margin, with a small area beneath it which is inclined backward at an angle which varies from 45° to 60° . Dorsal valve with an obtusely rounded umbo, the beak scarcely distinct from the cardinal edge and not elevated above the margin. Surface, with fine concentric striæ or small minutely rugose ridges of growth, of a variable size, from four to eight in one line, often smooth from exfoliation or wearing. Color of the shell in the reddish limestone a honey-yellow, in gray limestone grayish; when exposed to the weather becomes white and minutely fibrous.

"Length and breadth about three lines.

"In some specimens the ventral valve is depressed convex, the beak being on a level with the greatest elevation of the shell. The shell is thick and strong, and when well preserved breaks with a granular fracture. When weathered a tendency to fibrous exfoliation is manifested.

"This species is closely allied to the form that is found so abundantly in the Troy limestone, but the muscular impressions in that one are rather closer together and nearer the beak. (At least they are so in the specimens in my possession.)

"Many of the specimens are a little more obtuse in the upper half than those figured. The individuals are exceedingly numerous and differ little in size."

In 1876 Mr. Billings added the following details of the interior of the valves:

"In the ventral valve there is a groove in the hinge line for the passage of the pedicle. On each side of the groove there is a small, somewhat deeply excavated, cardinal scar. In the cavity of the valve there are two elongated scars, which extend from near the cardinal scars