

*Formation and localities.*—Middle Cambrian. In conglomerate limestones of St. Simon and Bic Harbor below Quebec, on the St. Lawrence River, Canada; also, in the even-bedded and conglomerate limestones on the ridge east of Troy, New York.

HYOLITHES COMMUNIS var. EMMONSI Ford.

Plate xiv, figs. 4, 4a, b.

*Salterella* Ford, 1871. Amer. Jour. Sci., 3d ser., vol. ii, p. 33.

*Hyolithes Emmonsii* Ford, 1873. Amer. Jour. Sci., 3d ser., vol. v, p. 214, figs. 3a-c.

*Original description.*—"Shell elongate, slender; apex neatly pointed, transverse section subtriangular; sides gently rounded and meeting to form a tolerably prominent though often scarcely perceptible dorsal [ventral] ridge in the forward part of the shell, which quickly dies down, so that a transverse section taken near the apex would be almost a semicircle. Ventral [dorsal] side flattened, with a wide, shallow depression along the middle, which runs the whole length of the shell; lateral edges rounded up to the sides. The most projecting point of the lateral walls occurs close to the ventral [dorsal] side. When the width is 0.24 of an inch the depth is 0.18 of an inch. The walls of the shell are thick and appear to be made up in some instances of successive layers of laminae. The surface is ornamented with very fine concentric striae, which run directly around the shell or at right angles to its longitudinal axis. The tubes sometimes attain a length of 2 inches, even when imperfect, but the majority of the specimens in my possession are less than an inch in length.

"The operculum has the same contour as a transverse section of the shell taken at about the mid-length, and is, accordingly, distinctly emarginate at the middle of the border of the ventral [dorsal] limb. The ventral [dorsal] limb itself is in the main flat, or nearly so, and embraces not far from two-thirds of the whole superficies of the operculum. Through the middle of it, beginning at the emargination, runs a low, rounded, conical elevation having the apex directed toward the dorsal [ventral] limb and slightly encroaching upon it. The dorsal [ventral] limb, unlike the ventral [dorsal], is highly convex, except a narrow space near the margin, which is flat. A narrow groove, extending from the apex of the cone just mentioned, or nucleus of the operculum, to the margin, occupies the central portion of this limb and divides it into two equal parts. (A similar division is frequently well shown in the opercula of adult specimens of *Hyolithes Americanus*.) A portion of the operculum about the nucleus, of a triangular shape, is sometimes more elevated than the rest of the surface, and appears like a little plate added for strength. The surface is covered with fine, thread-like, concentric striae.

"In the slender form of the shell, the direction of the surface lines of the same, and the internal thickening already noticed, this species approaches closely the structure of a *Salterella*. Especially is this true