

HYOLITHES PRINCEPS Billings.

Plate xiii, figs. 5, 5a, b.

Hyolithes princeps Billings, 1872. Can. Nat., new ser., vol. vi, p. 216, figs. 4a, b, of p. 213.

Original description.—"Shell large, sometimes attaining a length of three or four inches, tapering at the rate of about three lines to the inch. In perfectly symmetrical specimens, the transverse section is nearly a semicircle, the ventral [dorsal] side being almost flat, usually with a slight convexity, and the sides and the dorsum [ventrum] uniformly rounded. In many of the individuals, however, one side is more abruptly rounded than the other, in consequence of which the median line of the dorsum [ventrum] is not directly over that of the ventral [dorsal] side, and the specimen seems distorted. This is not the result of pressure, but is the original form of the shell. Sometimes, also, there is a rounded groove along the median line of the dorsum [ventrum]. The latter is somewhat more narrowly rounded than the sides. Lower [upper] lip uniformly convex and projecting about three lines in a large specimen. Surface with fine striae and small subimbricating ridges of growth. These curve forward on the ventral [dorsal] side. In passing upwards on the sides, they at first slope backwards from the ventral [dorsal] edge, and then turn upwards and pass over the dorsum [ventrum] at a right angle to the length.

"When the width of the aperture is seven lines, the depth is about five. The operculum has not been identified."

With the exception of referring to the convex side as the dorsal and the flattened side as the ventral, I will not attempt to add to the above description.

Hyolithes excellens Billings (Can. Nat., new ser., vol. vi, p. 471) is a very closely related species; the differences are in the greater apical angle of *H. excellens*, 22°, and the rounded lateral angles, those of *H. princeps* being quite sharp and the apical angle 15°.

The smaller shells of *H. princeps* are much like those of *H. Americanus*, the principal difference being in the sharper ventral angle of *H. Americanus*.

This is the largest species of *Hyolithes* known, *H. elegans* Barrande (Syst. Sil. Bohême, vol. iii, pls. xi and xv) and a few other species alone equaling it in size.

The specimens of this species from Silver Peak are identical in form with those from Canada and occur in a limestone containing *Olenellus Gilberti*, Kutorgina like *K. cingulata*, and several species of sponges—*Ethmophyllum*, &c.

Formation and localities.—Middle Cambrian. In the conglomerate limestones of St. Simon and Bic Harbor, below Quebec, on the St. Lawrence River; also, on Silver Peak, Nevada, long. 117° 20' W., lat. 38° N.