

an axial vesicular mass whose surface appears in the calyx as a rounded protuberance. Surrounding the central area is a broad vesicular zone in which can be detected the gradual growth upward of the corallum by the superposition of vesicular layers, 2 or 3 mm. in thickness, each layer terminating above in a thin covering of flexuous, continuous laminæ representing the position of the surface of previous calyces. The convex plates composing the vesicular layers are small, generally 1 mm. or less in length. The septa, starting at the confines of the central vesicular area, radiate outward as thin vertical laminæ and disappear in the peripheral region; they are represented on the calicular surface by the gradually broadening superficial convex ribs that are connected with each other laterally. In tangential sections at the margin of the calicular expansions the cut edges of the septal ribs, here about 3 mm. in breadth, appear as horizontal continuous parallel wavy lines. What appear to be septal carinæ or possibly structures analogous to the supporting processes of the septal laminæ as developed in some species of the genus are seen in the radial section of the corallum.

*Locality and formation.*—Anse à la Vieille, Baie des Chaleurs, one specimen collected by Sir W. E. Logan in 1843; Lower Helderberg formation.

ZAPHRENTIS GIGANTEA, Lesueur, sp.

*Caryophyllia gigantea*, Lesueur. 1820. Mém. du Mus., t. VI, p. 296.

*Zaphrentis gigantea*, Milne-Edwards and Haime. 1851. Polyp. Foss. Terr. Palæoz., p. 340, pl. IV, figs. 1, 1a-c.

" *gigantea*, Billings. 1859. Canad. Journ., vol. IV, new series, p. 121,

" *gigantea*, Nicholson. 1874. Rep. Palæont.. Prov. Ontario, p. 22, pl. III, figs. 1, 1a.

" *Eriphyle*, Billings. 1875. Canad. Nat. and Geol., vol. VII, 2nd. series, p. 233.

" *Hecuba*, Billings. 1875. Ibid, p. 234.

" *gigantea*, Rominger. 1876. Geol. Surv. Michigan, Fossil Corals, p. 145, pl. LII.