

of the spicules; length to breadth in mm.:—Rudimentary opercular scales; 0·27–0·2. Calyx and outer layer of cœnenchyma scales, 0·2–0·2; 0·12–0·15; 0·13–0·12; 0·12–0·18; 0·14–0·15 mm. The deep spicules of the cœnenchyma are jagged, often branched spicules of irregular form, or small, triangular, thick discs with prominences, 0·17–0·12; 0·09–0·1; 0·08–0·05 mm. The small scales which cover the calyces are not capable of giving to the latter the rigidity found in other Primnoids, hence the calyces possess a soft, yielding structure.

Habitat.—Station 145A, off Prince Edward Island; depth, 310 fathoms; bottom, volcanic sand.

Family IV. MURICEIDÆ, Verrill.

Muriceadæ, Studer.

In this family we include those Holaxonia with a horny axis in which the cœnenchyma and the polyps contain large and variously formed calcareous spicules; the projecting points and spines of these latter giving to the colony a peculiar, irregular, roughened appearance. The polyps consist of basal portions armed with spicules, the calyx; of a naked portion which contains the œsophageal tube, the œsophageal portion; and the oral disc with the tentacles; the latter contain spicules in their basal portions which rest upon a collerette of spicules lying peripherally under the tentacular crown. In repose the tentacles are folded inwards so that the spicules of their bases lie together forming a covering over the mouth, while the whole œsophageal portion of the polyp is folded into the body-cavity. The spicules of the tentacles thus form a covering over the oral region. The chief characteristic of the family therefore lies in the peculiar habit of the polyps. In repose, the tentacles are always folded together over the oral disc (which becomes a little contracted) by which the basal portions of the tentacles, armed with spicules, form an operculum over it; the infolding of the œsophageal portion brings this operculum over the oral portion; sometimes, as in *Muricea* and *Elasmogorgia*, draws it into the body-cavity itself. This infolding takes place indeed in a very different degree, as will be seen, according to the genus. It occurs in a minimum degree in *Acanthogorgia*, where the polyp body is very much elongated and indeed only invaginates the oral disc; but here, as in some sort a protection of the soft parts of the body, the edges thereof are armed with sharp spicules. It occurs at a maximum in *Muricea* and *Elasmogorgia* where the tentacular covering is even withdrawn into the body-cavity.

The family of the Muriceidæ embraces the genera and species included by Studer in the Muriceadæ as a subfamily of Primnoidæ;¹ it is only lately that Verrill has rightly raised the subfamily to the rank of a family.²

¹ *Monatsber. d. k. preuss. Akad. d. Wiss. Berlin*, 1878, p. 641.

² *Bull. Mus. Comp. Zool.*, vol. xi. No. 1, 1883.