

flask-shaped, or barrel-shaped, or cylindrical, with the margin entire or variously cleft or dentate, and with the sides to a greater or less extent adnate to the hydrocaulus, orifice with or without an operculum. Hydranth with conical hypostome.

*Gonosome*.—Gonophores adelocodonic, gonangia springing from one side of the hydrocaulus, each from a point near the base of a hydrotheca, and without a chitinous marsupium in either sex.

The old Linnæan genus *Sertularia* included, as may well be expected, many forms which subsequent systematists have placed in distinct generic groups. Even after the *Sertularia* of Linnæus had undergone the revision to which it had been subjected by Lamouroux and by Lamarck, there still remained species which later authors believed themselves justified in removing from it.

J. E. Gray broke up the genus *Sertularia* as left by Lamarck into two genera, *Sertularia* and *Sertularella*, the former including such species as had their hydrothecæ opposite, and the latter such as had them alternate. The insufficiency of the grounds on which this dismemberment was based soon became apparent, and Hincks, while accepting Gray's genus *Sertularella*, attempted to give it a greater systematic value by connecting with it characters of more importance than those derived merely from the alternate disposition of the hydrothecæ. The characters especially insisted on by Hincks as affording legitimate grounds for the dismemberment proposed by Gray are found in the condition of the margin of hydrotheca, which in *Sertularella* carries three or four denticles or cusps, and gives support to an operculum formed of three or four triangular membranous valves; while in *Sertularia* proper the margin is either even or with a simple cleft, and according to Hincks is destitute of an operculum.

Since the time when Hincks published his history of British Hydroid Zoophytes, many species from various parts of the world have come under examination, and show that the distinctions relied on in that valuable work have by no means the systematic importance which had been attributed to them. Some species which by their even or merely cleft hydrothecal margin would come under *Sertularia* proper have their hydrothecæ as truly alternate as in the most typical representatives of *Sertularella*, and even the characters derived from the presence of an operculum in *Sertularella*, and its supposed absence in *Sertularia*, are found to be by no means of universal application. Some species whose hydrothecæ in no essential point differ from those of the typical *Sertularia pumila*, either in the condition of the rim or in their absolutely opposite disposition (*e.g.*, *Sertularia distans* and others, see Hydroids of the Gulf Stream), are provided with opercular membranous valves, and yet few systematists would think of separating these generically from the closely allied species in which no valves are present.

What has been called the operculum consists in most cases of three or of four very thin membranous triangular valves, composed, like the general perisarc, of chitin, and