Zoology Part XXXVIII: Report on the TUNICATA. Second Part. -Ascidiæ Cornpositæ. By William A. Herdman. Bound in Volume 14,188

feature in the present species is the shape of the stigmata. They are perfectly straight (Pl. XLVII. fig. 2, *sg.*), and in this respect differ from those of the other Molgulidæ. The only approach to this extraordinary condition is what is seen in the branchial sacs of *Ascopera pedunculata* and of *Molgula pedunculata*, where the stigmata are sometimes straight and sometimes curved.[1] They are never, however, arranged in regular transverse rows as they are in the case of the present species (Pl. XLVII. fig. 2, *sg.*). This structure of the branchial sac seen in *Molgula carpenteri* is exactly like that of most species of the Cynthiidæ, and in this respect the present species and *Ascopera pedunculata* form a perfect transition from the typical Cynthiid to the typical Molgulid condition. *Molgula carpenteri* is, however, notwithstanding its straight and regularly arranged stigmata, an undoubted *Molgula*. The other organs of the body have all the characteristics of the Molgulidæ, and the fact that an approach to the straight condition of the stigmata is found in *Molgula pedunculata* prevents the new species being raised to generic rank.

Family Cynthiidæ.

Most of the species described in this Appendix belong to this, the largest family of the Simple Ascidians, and the three subfamilies, the Bolteninæ, the Cynthinæ, and the Styelinæ, which were formed in the First Part of this Report, are all represented.

Subfamily 1. Bolteninæ.

This group of the Cynthiidæ is represented by a new species of the remarkable deep-sea genus *Culeolus*. I have named it in memory of Dr. R. von Willemoes-Suhm, who was the first naturalist to examine a species of the genus (*Culeolus perlatus*,[2] Suhm).

Culeolus willemoesi, n. sp. (Pl. XLVIII. figs. 1–4).

External Appearance.—The body is fusiform in shape, and the peduncle is very long and slender. The widest part is about the middle of the body, and both the ends taper to narrow points. The anterior end passes gradually into the peduncle. The dorsal edge is rather more convex than the ventral. The two sides are about equally rounded. The peduncle is slight, but moderately tough. It springs from the anterior end of the body immediately on the ventral side of the branchial aperture, and it runs at first anteriorly and then turns dorsally and posteriorly, and then goes straight to its base of attachment. The apertures are both conspicuous. The branchial is placed close to the

[1] See Part I. of this Report, pp. 65 and 74.

[2] See Part I. of this Report, p. 115.

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