

The Dorsal Tubercle is circular or slightly elongated transversely, one end is turned out and one turned in.

This is a curiously shaped little species, and like *Polycarpa pedata* has the posterior end of the body prolonged to form a peduncle (Pl. XXIV. figs. 3 and 4). The lower end of the peduncle gives off a number of fine prolongations or rootlets, by means of which the animal is attached.

The test is rather thick and strong, is not irregular on the surface, but has sand grains attached here and there. The folds in the branchial sac are well marked, and have the internal longitudinal bars closely placed, while in the interspaces they are few and distant (Pl. XXIV. fig. 5); consequently the meshes are wide, and contain mostly ten or twelve stigmata. The transverse vessels are of two sizes, arranged so that three smaller and one larger alternate. The tentacles are numerous and closely crowded. There are numerous yellow polycarps present.

In external appearance this species is not unlike *Polycarpa pedunculata*, Heller,¹ but is much smaller, and differs in several details of internal structure, such as the number of tentacles.

Two specimens of this species were collected, both in Australia. One is from Port Jackson, depth, 6 fathoms; the other was trawled off Twofold Bay, south-east coast of Australia, at Station 163; April 4, 1874; depth, 120 fathoms.

Family ASCIDIIDÆ.

Body fixed; usually sessile, rarely stalked.

Test cartilaginous or gelatinous, rarely chitinous. Branchial aperture usually eight-lobed; atrial aperture usually six-lobed.

Branchial Sac not folded; internal longitudinal bars present, and usually papillated; stigmata straight or curved.

Tentacles simple, filiform.

Intestine either placed at one side of the branchial sac, or extending beyond it posteriorly.

Genitalia always in close connection with the alimentary canal.

This is a very compact family, its only close allies being the Clavelinidæ, from which it is sharply defined by its want of the property of budding. From the other two families, the Molgulidæ and the Cynthiidæ, it is distinguished by its branchial sac not being disposed in folds. The remaining characteristics given above, though none of them alone would sufficiently define the family, are all of importance, and when taken collectively separate the Ascidiidæ from other Simple Ascidians.

¹ Beiträge zur nähern Kenntniss der Tunicaten, p. 24.