

The Dorsal Tubercle is placed far forward near to the base of the tentacles. It is inconspicuous and has a simple opening.

The Alimentary Canal is remarkable on account of its very great length. The stomach is elongated and is folded transversely, and the intestine is exceedingly long.

The Reproductive Organs are placed at the posterior end of the body and extend for a variable distance beyond the intestinal loop. They are hermaphrodite.

Locality.—Station 162, April 2, 1874; lat. $39^{\circ} 10' 30''$ S., long. $146^{\circ} 37' 0''$ E.; depth, 38 fathoms; bottom, sand and shells.

This species is founded for a single large colony obtained in Bass' Strait, between Australia and Moncœur Island, from a depth of 38 to 40 fathoms. It seems to be allied in some respects to the previously described *Tylobranchion speciosum*, but differs from it in many points, both of external appearance and internal structure, which are discussed below.

The colony is short and broad, and is wedge-shaped as seen in lateral view (Pl. XXIII. fig. 7). The base of attachment is much smaller than in the last species, being only about 2 cm. in diameter. The upper surface seems to have been unnaturally flattened during preservation. Probably when living it was slightly convex all over. The peduncle is 5.5 cm. in thickness at its upper end, and there is a distinct line where it joins the upper softer region of the colony.

The general colour is orange. On the peduncle it is tinged with grey, while in some parts of the upper surface it becomes a reddish-brown or burnt sienna. The outer layer of test over the whole colony is very smooth. The surface is much more even on the peduncle than elsewhere.

The bodies of the Ascidiozooids show through very slightly as the test is not nearly so transparent as in the case of *Tylobranchion speciosum*. The Ascidiozooids are not arranged with any regularity; their anterior ends occupy depressions in the surface layer of the test. They are probably larger than the Ascidiozooids of any other known Compound Ascidian. In one measuring 2.5 cm. in antero-posterior extent, the thorax is 7 mm. in length, the abdomen 15 mm., and the genital part or post-abdomen 3 mm. In some Ascidiozooids the genital region is much larger.

The apertures are very closely placed at the anterior end of the body, and in the greater part of its length the Ascidiozooid is relatively very narrow. The widest region is towards the posterior end of the abdomen, the thorax being unusually narrow. A branchial region 7 mm. in length is only 1.5 mm. wide.

The test is very much harder than in the case of *Tylobranchion speciosum*, but, like it, is rather softer on the upper surface than elsewhere. The yellow or light colour of the test is much more marked in the outer part than in the deeper layers, where it is grey with a slight yellowish tinge. The test cells are numerous and of rather large