

Hook-sacs bearing about twenty long hooks, placed in the bottom of the sac, and several shorter on the lateral walls, of which the extremities come to the same height as those of the bottom hooks when the sac is evaginated.

The other characters are the same as for the genus. The specimens of this species always show a constriction in the posterior half of the body, behind the dorsal spot, and at the height of the lateral gill.

Length.—Maximum, 22 mm.

Colour.—Grey-brown; a thin longitudinal white line, in the middle of the back, extending backwards to the above constriction.

Challenger Specimens.—Station 158, March 7, 1874; Termination Land to Melbourne; lat. $50^{\circ} 1' S.$, long. $123^{\circ} 4' E.$

Station 314A, January 22, 1876; Sandy Point to Falkland Islands; lat. $51^{\circ} 24' S.$, long. $61^{\circ} 46' W.$

Between Stations 332 and 333, March 11, 1876; Rio de la Plata to Tristan da Cunha; lat. $36^{\circ} 22' S.$, long. $26^{\circ} 1' W.$

Habitat.—Antarctic Seas, within the isothermal line of $50^{\circ} F.$ for August (it often does not even pass beyond the isotherm of 40°); from long. $60^{\circ} W.$ to long. $123^{\circ} E.$, and probably all around the Antarctic Pole. The extreme observed latitudes are lat. $36^{\circ} 22' S.$ (Challenger Expedition, March 11, 1876), and lat. $54^{\circ} 30' S.$ (d'Orbigny). The localities, "New Britannia, Marquesas," in the Hamburg Museum, are certainly erroneous.

Observations.—It is evident from one of the original drawings of Pteropoda by Dr. Hooker (sent to me with the Challenger Pteropoda) that the English Antarctic Expedition (1840), had obtained *Spongiobranchæa australis*. But this drawing does not bear any indication of locality. D'Orbigny only knew a single very small specimen of this species (7 to 8 mm. long); and it is thus easy to understand why he only saw six suckers on each buccal appendage. He says nothing about the lateral gill; but he ought to have recognised it, as it may be seen in his figure.¹ It is extraordinary that he says: anus "à gauche,"² the anus being on the right side as in all the Gymnosomata.

I have already³ expressed the opinion that *Trichocyclus dumerili*, Esch.,⁴ is the larva of *Spongiobranchæa*. I support this interpretation on the length of the labial tentacles of this larva.⁵ Johannes Müller had already said⁶ that, for this reason, *Trichocyclus* appeared to him to be more the larva of *Clione* than of *Pneumonoderma*;

¹ Voyage dans l'Amérique méridionale, t. v., pl. ix. fig. 2.

² *Loc. cit.*, p. 131.

³ Description d'un nouveau genre de Ptéropode Gymnosome, *Bull. Sci. Départ. Nord*, 1886, p. 218.

⁴ Bericht über die zoologische Ausbeute während der Reise von Cronstadt bis St. Peter und Paul; *Oken, Isis*, 1825, p. 735, pl. v. fig. 4.

⁵ I may here notice that Eschscholtz's figure is not exact, because it shows the first ciliated ring anterior to these tentacles.

⁶ Ueber verschiedene Formen von Seethieren, *Archiv f. Anat. u. Physiol.*, 1854, p. 70.