

cylindrical, but enlarging at its proximal end into a bulbous expansion which gives off from its base a dense plexus of capilliform tubes.

Gonosome.—Gonophores ovate, borne in clusters on short, closely crowded, branching peduncles, which spring from a zone just above the base of the proximal circlet of tentacles.

Localities.—Station 237, off Yokohama, Japan; lat. $34^{\circ} 37' N.$, long. $140^{\circ} 32' E.$; depth, 1875 fathoms.

Station 248, North Pacific; lat. $37^{\circ} 41' N.$, long. $177^{\circ} 4' W.$; depth, 2900 fathoms.

The magnificent species of *Monocaulus* to which the name of *imperator* has been here assigned was obtained in the North Pacific Ocean, from the enormous depths of 1875 and 2900 fathoms. It far exceeds in size all known Hydroids. One of the specimens captured had its dimensions noted by Sir Wyville Thomson and Mr. Moseley immediately after being brought on board, and was found to measure 9 inches from tip to tip of the tentacles which form the proximal circlet, while its stem rose from its point of attachment to a height of 7 feet 4 inches. As Sir Wyville Thomson remarked, however, in a letter to myself describing the capture, the animal was measured as it lay extended over the surface of the trawl net, and though, of course, capable in life of becoming extended to the length then measured, this may not have represented the height habitually assumed by it. When in the state of extension which would seem to be normal to it the stem had a diameter of about half an inch.

Immediately after the capture a drawing of one of the specimens was made by Mr. Wild, the artist of the expedition, and it is fortunate that this precaution had been taken, for though the specimens were at once put into spirits they have lost almost every character of importance. Indeed, Sir Wyville Thomson, writing to me from on board the Challenger soon after the capture of the great Hydroid, says "these delicate things, drawn up rapidly through the water from a depth of nearly four statute miles, and transported into such totally different conditions of temperature, pressure, &c., suffer greatly from this violent change. They are, in fact, almost knocked to pieces, and their fine tissues are in a nearly deliquescent state, so that our great anxiety is to put them at once into some reagent which may tend to harden them. It is wretched to see them melting away absolutely under our eyes. When put into any of our fluids they at once contract out of all form. But this cannot be helped, and I thought it best that you should have them as well preserved as we could manage, so I only gave them a cursory glance and sent them on."

Notwithstanding the impossibility of preserving the animal in anything like a satisfactory state, some points by no means without interest have been made out in its structure. One of the most important of these is the fact that the stem, instead of having its axis occupied by a pith-like core as in *Corymorpha*, contains a wide cavity