

Soft structures of *Cryptohelia pudica* (Pl. IX.).

*Cænosarc.*—This differs in structure in no essential particular from that of *Astylus subviridis*. Similar axial canal systems are present in the branches and similar surface networks, but these latter are finer and more complicated in the present form than in *Astylus*. The lid and its support consists of a reflection of the surface layer of ectoderm, beneath which is a prolongation of the surface network of the cænosarc canal, and in the thicker portion of the stem of the lid run abundance of prolongations of the deeper and larger vessels (Pl. IX. L). Rounded nematophore sacs, closely similar to those of *Astylus subviridis*, are dotted about over the upper surface of the lid, and, as in *Astylus*, a single one of these bodies is placed at the margins of each cyclo-system over the outer extremity of each pseudoseptum (Pl. IX. NN). The pigmented endoderm cells are coloured brick-red as in *Sporadopora dichotoma*.

*Zooids.*—The zooids of both kinds most closely resemble those of *Astylus subviridis*.

*Dactylozooids.*—These are elongate conical in form, tapering to a point. Their bases are attached as in *Astylus subviridis*. In retraction the part of them nearest the base is doubled back in the wide slit-like chamber of the dactylozooid towards the periphery of the cyclo-system, and then the remainder of the zooid is bent over in the reverse direction and doubled down into the mouth of the gastrozooid (Pl. IX. D Z).

*Gastrozooids.*—These are flask-shaped and closely similar in structure to those of *Astylus subviridis*, being, like it, devoid of tentacles (Pl. XI. fig. 1). The mouth appears at the flat summit of the neck of the flask as a cruciform aperture. The cavity of the zooid is lined with the usual gastric endodermal cells of elongate form, and the layer formed by these cells becomes, as in the gastrozooids of *Sporadopora dichotoma*, thinner as the base of the zooid cavity is approached. There is a thick investing ectoderm layer in the upper part of the zooid, between which and the endoderm layer is a well-marked layer of longitudinal muscular fibres, which fibres are, as in *Sporadopora*, continued for insertion along the main canal offsets of the base of the zooid (Pl. IX. M).

The gastrozooid sac is attached just beneath the origin of the neck of its flask-shaped mass. The main canal offsets spring from the periphery of the rounded base of the zooid, with a radiating disposition (Pl. XI. fig. 1). They curve upwards to be distributed as in *Astylus subviridis*. The calcareous wall of the upper chamber of the gastropore lies in the interval between these canals and the outer surface of the sac of the zooid. No canals spring from the under surface of the zooid.

*Gonophores.*—A fragment of a male specimen of *Cryptohelia*, obtained off the Japanese coast, was examined in a cursory manner, and it was seen that, at first sight at least, it resembled *Astylus subviridis* in the structure of its gonophores. Unfortunately it was mislaid, and I have been unable to find it again.