

*Gonosome*.—Gonangia large, oviform, perfectly smooth, narrowing below into a short peduncle which springs from a point just below a hydrotheca, and terminates in a short and wide tubular prolongation which carries the circular entire orifice.

*Locality*.—Station 135c, Nightingale Island; depth, 100 to 150 fathoms.

*Sertularia leiocarpa* is a rather strong-growing form with large distant hydrothecæ, each borne close to the distal end of an internode, where the hydrocaulus forms a well-marked geniculation. The joints separating the internodes are often obscure. The specimen has a height of about three inches, and springs from a small plexus of hydrorhizal filaments, while the proximal end of the stem is for some distance destitute of hydrothecæ.

The gonangium is large, its height exceeding twice that of an internode. It is perfectly smooth, showing no trace of annulation or rugæ.

The perisarc is transparent and allows of a good view of the included soft parts, which are well preserved in the specimen. The hydranths have about fifteen tentacles, and in extreme retraction present a condition hitherto unnoticed among Hydroids, the gastric cavity emitting then a lateral, long, hernia-like protrusion which extends from the base of the hydranth to a point beyond the origin of the tentacular crown (fig. 1a). This remarkable condition gives to the body of the hydranth the appearance of being doubled on itself, and forcibly recalls the formation of the alimentary canal in a Polyzoon.

The fleshy bands which extend from the sides of the gonophore to the walls of the gonangium were well preserved, and at their points of attachment to the gonangium were flattened out in a stellate fashion. The bands had often become broken away from their points of attachment, leaving these behind in the form of stellate cells (fig. 1a).

*Sertularia unilateralis*, n. sp. (Pl. XXV. figs. 2, 2a, 2b).

*Trophosome*.—Hydrocaulus many times pinnately branched, forming a dense tuft in which the ramuli are all directed towards one side of the colony. Hydrothecæ alternate, borne close to the distal end of each internode, those of opposite sides lying in two different planes, adnate to the internode for about one-third of their height, epicauline side ventricose towards the base, margin divided into four strong teeth, and with a thickened rim.

*Gonosome*.—Gonangia oviform, equalling in height about three internodes of the stem, attached by a short peduncle to the internode just below a hydrotheca, annulated for the greater part of their height, and opening by a tridentate terminal orifice.

*Locality*.—Station 149, off Accessible Bay, Kerguelen Island; depth, 20 fathoms.

*Sertularia unilateralis* by the profusion of its branches forms a dense tuft which is upwards of an inch in height, and in which the ramification is rendered remarkable by