

internode, and the extreme rim of the hydrotheca is surrounded by a narrow band of a colour somewhat lighter than that of the rest of the walls. The main stem has a thickness which is about twice that of the ramuli, and is divided into internodes, each carrying a hydrotheca on alternate sides exactly as in the ramuli.

The ramuli are given off from the main stem, each close to the point from which the peduncle of a hydrotheca springs. In the more proximal portion of the stem they all lie in one and the same plane with the hydrothecæ, but towards the distal parts they frequently, immediately after their origin, take different directions, and have thus, though all simply distichous at their origin, the appearance of being irregularly scattered.

*Thyroscyphus simplex*, n. sp. (Pl. XIII. figs. 1, 2).

*Trophosome*.—Colony attaining a height of nearly six inches; stems monosiphonic, clustered unbranched, and carrying along nearly their entire height pinnately disposed alternate ramuli. Hydrothecæ borne both by main stem and ramuli, deep, cylindrical, terminating below in a short unjointed peduncle, which is supported directly on the summit of a stout lateral process of the internode.

*Gonosome* not known.

*Locality*.—Off Somerset, Cape York, Torres Strait; depth, 8 to 12 fathoms.

*Thyroscyphus simplex* occurs in clusters of three or four erect simple stems which spring from a common creeping tubular fibre, and are regularly set throughout with alternate pinnæ, which towards the middle of the stems attain a length of nearly an inch. Every internode of stem and pinnæ carries close to its distal end, and on alternate sides, a short lateral process which directly supports the short peduncle of the hydrotheca. The hydrotheca at its base loses its exactly symmetrical outline and becomes slightly gibbous on the side which is turned towards the internode, and here an oblique diaphragm forms the boundary between its cavity and that of the peduncle. The four valves with which the hydrotheca is crowned are very thin and membranous, and form when in apposition a beautiful pyramidal roof. There is no marginal band.

In habit and general physiognomy *Thyroscyphus simplex* so closely resembles *Companularia insignis* that a careful examination is needed in order to distinguish the two forms.

### *Hypanthea*, Allman.

*Hypanthea*, Allman, Report on the Collections made by the Transit of Venus Expedition to Kerguelen Island, Phil. Trans., 1879, vol. clxviii. p. 284.

*Generic Character*. *Trophosome*.—Hydrothecæ borne each on the summit of a cylindrical peduncle, which springs from a creeping stolon, inoperculate, with the