

We are here reminded of the genus *Synthecium*, in which the gonangia have an origin exactly similar to that of the branches in *Thecocladium*, the peduncle of the gonangium occupying in *Synthecium* the cavity of the hydrotheca, at the orifice of which it becomes free in order to bear the gonangium on its summit.

*Thecocladium flabellum*, n. sp. (Pl. XXXVIII. figs. 1-4).

*Trophosome*.—Stems springing from one side of a rooted but otherwise free stolon-like tube, monosiphonic, much branched, branches alternate, all in one plane; stems and branches closely set with hydrothecæ. Hydrothecæ alternate, tubular, tumid below, adnate to the hydrocaulus for nearly their entire height; orifice circular and entire, with the margin continued for a short distance as a free, thin, membranous prolongation.

*Gonosome*.—Gonangia springing each from a point just below the base of a hydrotheca, oboviform, annulated, terminating distally in a sessile, even orifice, and with a longitudinal furrow running along the epicauline side.

*Locality*.—Simon's Bay, Cape of Good Hope; depth, 10 to 20 fathoms.

*Thecocladium flabellum* is the only representative as yet known of the remarkable genus to which it belongs. The stolon-like tube from which the stems arise sends off from distance to distance a cluster of root-fibres, but is free in the intervening spaces instead of being as in other Hydroids creeping and adherent throughout. It usually assumes an arched form, and from the convexity of the arch the stems arise at nearly equal intervals. The stolon is destitute of hydrothecæ, but the stems carry them along their entire length.

Soon after their origin the stems begin to give off pinnately disposed branches, which differ in no respect from the main stems except in being shorter. The branches as well as the stems all lie in the same plane, and this gives to the colony a somewhat flabelliform habit, which, however, is not strictly maintained in the older specimens. The branches are sometimes prolonged by tendril-like, coarsely annulated extensions of the axis, which, uniting with neighbouring branches, contribute still further to the flabelliform habit of the colony. These prolongations of the branches usually direct themselves towards the orifice of a hydrotheca, where they become attached, and are probably here in direct communication with the contents of the hydrotheca.

The hydrothecæ are very regularly alternate, and with their tumid bases give a slightly wavy outline to the stems and branches. Their distal ends are continued for a short distance by a delicate and easily torn membranous extension of their margin.

The disposition of the branches is alternate and pinnate in accordance with that of the hydrothecæ, out of whose orifices they extend themselves. They occur, however, at no regular distances, and there is nothing in the position or form of the hydrothecæ