Zoology Part LXX: Report on the Hydroida. Second Part - Tubularinæ, Corymorphinæ, Campanularinæ, ... By Professor G.J. Allman. E

examples of the remarkable genus *Thecocladium*, in which every branch of the colony springs like the gonangium in *Synthecium* from within the cavity of a hydrotheca.

The few Gymnoblastic or Tubularian Hydroids in the collection belong to three genera, *Stylactis*, *Eudendrium*, and *Monocaulus*; the species by which the last is represented being perhaps the most remarkable Hydroid obtained during the Expedition. When we keep in mind that its stem measures half an inch in thickness by seven feet in height, and that its hydranth extends nine inches from tip to tip of its tentacles, we must admit that as regards size every other Hydroid sinks into insignificance when compared with it; while the depth of about four statute miles from which it was brought up adds to the special interest of this marvellous animal. It will further be seen that so far as the specimens admitted of anatomical study certain points of structure which scarcely yield in importance to the other characters have been demonstrated in it. Fortunately a drawing of it was made by Mr. J. J. Wild immediately after its capture, otherwise it would have been impossible to have given a correct delineation of its natural aspect.

The extent of the collection and its representative character render it eminently fitted for the illustration of general Hydroid morphology; for with the exception of the Hydrocorallinæ, which have already formed the subject of a separate Report by Professor Moseley, it contains examples of almost all the leading types of Hydroid form. I believe, therefore, that it will add to the value of the Report, and help to convey a definite conception of the terminology, if, before entering on the purely descriptive zoology of the species, a sketch be given of the morphology and classification of the Hydroida, aided by such illustrations as may be afforded by the various forms included in the Report.

SKETCH OF THE MORPHOLOGY AND LIFE HISTORY OF THE HYDROIDA.

I. Fundamental Form. General Architecture of the Hydroida.

The fundamental form to which every Hydroid may more or less directly be referred is that of a cylindrical tube closed at one end, and terminating at the opposite end in a conical prolongation, which carries on its apex an orifice through which the cavity of the tube communicates with the exterior. Projecting in a circle which surrounds the base of the cone are certain hollow cylindrical offsets, each of which has its axis occupied by an extension of the central cavity. This cavity is the digestive cavity of the Hydroid, the terminal orifice which opens into it is the mouth, and the cylindrical offsets which encircle the terminal cone or hypostome constitute a system of tentacles which form an apparatus of prehension and defence.

Retaining this fundamental type-form we have the fresh-water *Hydra*, but almost

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