from the axial tube and protrude externally through interstices between the tubes of the peripheral fascicle.

The genus *Cryptolaria* was founded by Busk for a group of Calyptoblastic Hydroids, whose fascicled stems and sessile tubular hydrothecæ, destitute of limiting floor, and adnate to the axial tube on its free portion, afford easily recognisable characters.

The specimens obtained by the Challenger have furnished the means of working out in further detail the structure of this curious group, and not only of satisfactorily determining the essential constitution of its trophosome, but of rendering us to some extent acquainted with its gonosome, which had not previously been detected.[1]

The existence of two distinct elements, a peripheral and an axial, in the hydrocaulus of *Cryptolaria* is an important and unexpected character, and with the exception of four other genera, *Lafoëa*, *Lictorella*, *Perisiphonia*, and *Grammaria*, for a knowledge of whose essential structure we are also indebted to the dredgings of the Challenger, *Cryptolaria* is the only genus, so far as is yet known, in which this condition is present.

In all the known species of *Cryptolaria* the peripheral tubes cease to envelop the axial at some distance from the distal extremities of the branches, and the axial tube thus becoming free and naked shows here, without further preparation, the relation between it and the hydrothecæ. The structure of that part of the colony where the axial tube is still covered by the peripheral can be best demonstrated by careful maceration in caustic potash, which diminishes the adhesion between the constituent tubes and facilitates their separation under the microscope.

The gonosome has as yet been found only in three species of *Cryptolaria*. Two of these, *Cryptolaria abyssicola* and *Cryptolaria diffusa*, have been dredged from the vast depths of 2600 and 2500 fathoms respectively, while the third, *Cryptolaria geniculata*, has been brought up from a depth of 315 fathoms. In all these the relation of the gonangia to the axial tube is very similar to that of the hydrothecæ, and like the hydrothecæ, they protrude at intervals from between the component tubes of the peripheral fascicle. They suggest indeed an obvious comparison with the hydrothecæ, from which they differ chiefly in their greater size and more sac-like form. No other element of the gonosome beyond the gonangia has been detected.

The collection of the Challenger is very rich in the species of *Cryptolaria*. These have been obtained from widely separated localities and from various depths, ranging from 20 fathoms to nearly the greatest which have yielded any living forms to the dredge. No species of *Cryptolaria* have as yet been recorded from European seas.

In distinguishing the species for purposes of systematic description the zoologist

[1] In the Report on the Hydroids of the Gulf Stream I described a remarkable structure which was found attached to the stems of a species of *Cryptolaria*, and which I regarded as exhibiting undoubted affinities with the Hydroid genus *Coppinia*, suggesting at the same time the possibility of its turning out to be the gonosome of the *Cryptolaria*, nothing having been at that time known of the gonosome of this genus. It is now evident that the structure in question is an independent growth, having nothing to do with the gonosome of the Hydroid on which it had taken up its abode.