STUDIES IN AUSTRALIAN ATHECATE HYDROIDS.

No. IV. Development of the Gonophores and Formation of the Egg in *Myriothela harrisoni*, Briggs.*

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(Figures 1-3.)

INTRODUCTION.

The following account of the development of the gonophores and the formation of the egg in *Myriothela harrisoni* is based on a single female and several male specimens collected on the undersides of rocks below low-water mark at Bulli, forty miles south of Sydney. Although *M. harrisoni* is a diœcious form, it bears a distinct resemblance in its gross morphology to *M. cocksi*, which occurs under similar conditions on the coasts of Great Britain and western Europe. Both species have a chitinous investment by perisarc covering the hydrorhiza and forming a firm basis of attachment to the surface of the sub-stratum. This likeness is further emphasized by a study of the development of the gonophores and the formation of the egg, which follows through a series of stages very similar in their general details to those I have already described for *M. australis*.

Unfortunately, corresponding stages in *M. austro-georgiæ* are not available for comparison, since Jäderholm figures only a fairly advanced male and female gonophore. In his drawings on plate iii, figure 1 shows a female gonophore before the fusion of the plasmodial areas to form the definitive ovum, while figure 2 depicts a male gonophore in which the sub-umbrellar cavity appears to be filled with densely-packed secondary spermatocytes. Although Thomson's figures[1] illustrating his "Note on the Gonostyles of two Antarctic Siphonophora" refer to *M. austro-georgiæ*, they are too diagrammatic and lacking in detail to be of any value for comparative work.

The paper concludes with a brief discussion on the geographical distribution of the members of the genus *Myriothela*. Previous to the discovery of *M. australis* and *M. harrisoni*, the representatives of the genus had hitherto been recorded only from the circumpolar seas of the Northern and Southern Hemispheres, but the range of *Myriothela* must now be extended to include the warm coastal waters of eastern Australia in the neighbourhood of Lat. 34° South.

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* For Numbers I, II and III see RECORDS OF THE AUSTRALIAN MUSEUM, Vol. xvi, No. 7, 1928, p. 305; Vol. xvii, No. 5, 1929, p. 244; Vol. xviii, No. 1, 1930, p. 5.

[1] Thomson.—Proc. Roy. Phys. Soc. Edinb., xvi, 1904-1906, pp. 19-22.