

STUDIES IN AUSTRALIAN ATHECATE HYDROIDS.

No. III. THE HISTOLOGY OF *Myriothela harrisoni*, BRIGGS.*

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(Plates i-iii, and Figure 1.)

INTRODUCTION.

In Part I of this series of "Studies in Australian Athecate Hydroids," I described and figured the external characters of a new species of *Myriothela*, *M. harrisoni*, from the South Coast of New South Wales. The specimens, which were collected on the undersides of rocks below low-water mark at Bulli, were fixed in sublimate-acetic-alcohol and transferred to 70% alcohol. Serial sections of the hydranths with their attached blastostyles and gonophores were cut in a transverse direction, and afterwards stained with Ehrlich's hæmatoxylin followed by eosin. Grubler's picro-carminé proved a very useful stain for the differentiation of the fibrillar structure of the supporting lamella in the capitulum of the tentacles. For the study of the nematocysts, some of the sections were stained in methylene blue and orange G. The sections were cut in thicknesses varying from 6 to 8 μ .

In the present paper the histology of *Myriothela harrisoni* is described and figured, and particular attention paid to the form, structure, and distribution of the nematocysts since these bodies possess a special taxonomic significance in Kuhn's group of the Capitata.

Among the Athecate Hydroids, Broch¹ (1916) finds two characteristic principal forms of stinging capsules. In the Capitata there are large oviform or almost wholly spherical nematocysts, while the Filifera are characterized by the possession of very small, all but rod-shaped nematocysts.

Two distinct kinds of stinging capsules occur in the ectodermal tissues of *Myriothela*. Besides the typical oviform ones of the Capitata, there are also present narrowly oval or nearly cylindrical, rather large nematocysts. These dimorphically developed nematocysts of the Myriothelidæ bear a strong resemblance to the stinging capsules of the Milleporidæ which Broch includes in the Sectio Capitata of the Athecate Hydroids.

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

¹ Broch.—"Hydroïda." Danish Ingolf-Expedition, v, 6, 1916.