

ANATOMY OF THE ANTIPATHINÆ.

In the limited time at my disposal it has not been possible to prepare an account of the structure of the whole of the genera and species of Antipathidæ examined, and the following remarks are offered as a preliminary contribution to the subject. Owing to the length of time which has elapsed since the Challenger Collection was made, many of the specimens preserved in strong spirit do not show histological details satisfactorily, added to which, the small size of the polyps of most species makes them difficult of manipulation. I have on these accounts been unable to avail myself of the methods of maceration, &c., which yielded such excellent results in the hands of the brothers Hertwig when studying the histology of the Actiniaria.

The histological structure of the Antipathinæ is in its main features similar to that of Actiniaria, but in this respect there is a closer approach to the condition found in Zoanthidæ and Cerianthidæ than to the Hexactiniæ. Two features are of special interest, viz., the extremely rudimentary condition of the muscular system and the thin homogeneous mesogloea, which is apparently entirely devoid of stellate connective tissue cells. These have, however, been observed in *Cladopathes* amongst the Schizopathinæ, in which genus the mesogloea is thicker than in any other observed, and approaches more closely to the Hexactinian type.

In addition to the works enumerated in the Bibliography, the following have also been studied in so far as they have a bearing on the anatomy of the Antipatharia:—

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