genera now specially constituted for their reception. Many are of great interest in the light they throw on the external morphology of the group, and in the aid which they afford towards a philosophic conception of the significance of parts otherwise enigmatical.

I believe, therefore, that the value of the collection will be enhanced, and its instructiveness made more available if the technical description of the species be preceded by a few introductory remarks on the general morphology of the Plumularidæ, more especially on such points as receive important illustration from the species described in the present Report.

General Morphology of the Plumularidæ.

The Plumularidæ constitute a very natural section of the Calyptoblastic Hydroids. Their hydrothecæ are always sessile, and are carried on one side only of the supporting ramulus. Nematophores of a definite form, and with a definite arrangement, are always present. The gonangia are either fully exposed and destitute of any special protective apparatus, or they are enclosed or otherwise protected by more or less modified portions of the hydrocaulus.[1]

The Plumularidæ admit of division into two primary sections, characterised by the condition of the nematophores. In one—the Eleutheroplea (Pls. I., II., &c.),—the nematophores are attached only by their proximal end, and in almost every case are to a certain extent moveable on their point of attachment. In a very few instances the moveable nematophores are associated with nematophores of the fixed type (Pl. VIII. figs. 1–3).

In another section—the Statoplea (Pls. XI., XII., XIII., &c.)—the nematophores are adnate to the chitinous periderm for a greater or less portion of their length, or are fixed by a base too wide to admit of movement on the surface of attachment. No nematophores of the moveable type ever occur in this section.

Each of these sections admits of a further division into two main groups—the Phylactocarpa (Pls. XI., XII., XIII., &c.),[2] in which the hydrocaulus has become modified so as to form a more or less complete protection for the gonangia, and the Gymnocarpa (Pls. II., III., IV., &c., and Pl. VIII. and Pl. XIX. figs. 1–3), in which no protective apparatus is present.

[1] For definitions of the terms here used see p. 17.

[2] The collection contains no example of the phylactocarpal Eleutheroplea. For our knowledge of the occurrence of phylactocarpal forms among the Eleutheroplean Plumularidæ, we are indebted to Mr. J. Walter Fewkes, who detected the presence of this condition in two Hydroids, *Hippurella annulata* and *Callicarpa gracilis*, obtained by the dredge of the U.S. Coast Survey Steamer "Blake." *Bull. Mus. Comp. Zool., loc. cit.*