

GENERAL HISTORICAL INTRODUCTION.

All siliceous Sponges in which the spicules belong to the triaxial type were, in 1870, designated by Oscar Schmidt "Hexactinellidæ." This title, which I would only modify into Hexactinellida, since the termination *idæ* should be exclusively reserved for the designations of families, soon found general acceptance, although Wyville Thomson had previously established under the name of Vitrea an order of siliceous Sponges in which the characteristic peculiarity was defined by the reference of all the spicules to the hexradiate type. The older title proposed by Wyville Thomson has not gained currency, since among the representatives of Vitrea enumerated by him forms occur in which the skeletal elements are *not* referable to the hexradiate type, and which accordingly belong to another order.

Confining myself at this stage to a short review of the historical development of our knowledge of the Hexactinellida in general, I purpose subsequently to preface the description of each genus with an accurate account of the relevant literature.

First of all, there are a few isolated contributions of comparatively ancient date, which give some account of certain structures which differed essentially in their peculiar form and siliceous framework from any marine forms then known, but which, when subjected to careful criticism, can be referred to certain now fairly familiar Hexactinellida. Thus Rozier's Journal de Physique for 1780, and a transcript from that work in the Magazin für das Neueste aus der Physik und Naturgeschichte (published by Lichtenberg, Bd. 1, Gotha), 1781, contain a description and a very characteristic representation of a form belonging to the genus *Dactylocalyx*. This contribution, for an acquaintance with which I am indebted to Dr. W. Marshall of Leipzig, is probably the earliest notice of a Hexactinellid. In the Synopsis of the Contents of the British Museum for 1832, Gray described a peculiar "glass rope like" structure preserved in the British Museum. This he named *Hyalonema*, and described it carefully, though without recognising its real nature as the basal tuft of a Hexactinellid.

In the Voyage de "l'Astrolabe," 1833, Quoy and Gaimard figured and described, under the name *Alcyoncellum speciosum*, a sponge form which undoubtedly belonged to the Hexactinellida.