

INTRODUCTION.

CHAPTER I.—THE HISTORY OF THE MONAXONIDA AS A GROUP.

The Monaxonida comprise by far the most commonly met with and abundant of all sponges. They occur in greater or less profusion in all parts of the world, but are more especially shallow-water forms. They may be collected between tide-marks almost anywhere, and on parts of our own coast are thrown up in great quantities after every gale.

With all these points in favour of the collection of abundant material for study, we might naturally be led to expect that our knowledge of the group would be in a correspondingly satisfactory condition. Yet this is not so. On the contrary, there are few (if any) groups of equal importance in the whole Animal kingdom which have been so little studied and with so little success.

If we seek a reason for this state of things it is to be met with largely in the great and exceptional difficulties which beset all attempts at a satisfactory classification. According to one of our oldest and most experienced workers at sponges, "the subject is actually repulsive from its difficulties;"¹ but we do not, ourselves, take quite such an extreme view of the case.

In the first place it is impossible to classify the group according to external characters, for often the external appearance of one and the same species varies almost indefinitely with its varying surroundings, and often two species, sometimes even of distinct genera, resemble each other so closely that it is impossible to distinguish them with certainty without microscopic examination. Hence nothing could be expected of the days before microscopic research, and, as a matter of fact, we find that nothing of importance was done. In the next place many of the distinguishing characters are so minute and difficult to observe, depending as they do upon the forms of the smaller spicules, that even with the aid of recent improvements in the microscope our best observers have often overlooked or misinterpreted them. Lastly, we must remember the fact that all the Monaxonid sponges which an ordinary observer is likely to meet with appear at first sight very uninteresting, and offer very little inducement to careful study. It is not

¹ Carter, Notes Introductory to the Study and Classification of the Spongida, *Ann. and Mag. Nat. Hist.*, ser. 4, vol. xvi. p. 3.