

them as known quantities. Besides this, they afforded in themselves a rich field for extensive comparisons with numerous other classes, with which some of their number had been associated at different times. And again, their remarkable modes of development could not fail to bring to a test the value of the changes which they undergo during their growth for the purpose of ascertaining the affinities and relative rank of animals. The circumstance that the study of this class has received less attention in America than any other, had also much weight with me, as it gives me an opportunity of making our students more intimately acquainted with those naturalists, who, in Europe, have given a new aspect to Zoölogy since the days of Cuvier, and who, not being ornithologists, entomologists, or conchologists, are hardly known here as they should be; for it is much to be regretted, that, with the Anglo-Saxons, Zoölogy has now become too much a descriptive or too much a speculative science.

To the general reader the first part of this volume may be of some interest, inasmuch as it presents a general account of the progress of Zoölogy since the time of Aristotle to the present day with special reference to the class of Acalephs, including, besides, such generalizations as may be deduced from a comparison of these animals with the representatives of other classes. To the professional naturalist I venture to recommend the second part as containing additional information respecting the structure of the Ctenophoræ not to be found in previous contributions to their natural history, and I ask especial attention to the discussions in which the value of the natural groups admitted in that Order is considered in detail.

In the preparation of this part of my work I have received much valuable assistance from my friend and colleague, Professor H. J. Clark, who has traced with me, for more than nine years, the metamorphoses of our Acalephs, and especially those of the Hydroids; besides which he has investigated for himself some special points of their structure, which are noticed as his contributions in the proper place: but I would particularly call attention to the description of the lasso-cells of the Ctenophoræ on page 237, and to the investigation of the structure of the eye of our Aurelia, which will be published in the next volume, and the illustrations of which, drawn by him, Pls. X^P., and XI^e., are issued with this volume.

Most of the plates were drawn from nature and on stone by Mr. Sourel; and it is but justice to him to say, that I do not know representations of Acalephs executed with greater accuracy, patience, and skill. Only those fully conversant with the whole range of our literature on this subject can do complete justice to their great merit; and I can truly say, that, without the aid of his persevering zeal, I could not have accomplished what I aimed at in this volume.

I have, further, derived much assistance in my work from the liberality of the Smithsonian Institution, in lending me books not to be found in the libraries of Boston and