

with more confidence, and with a clear understanding respecting the true value of the differences noticed between the animals now referred to it, and also that I may point out the various names under which the different parts of these animals have been designated by different authors in their descriptions.

It is much to be regretted that no uniform nomenclature has yet been adopted in describing these animals. Indeed, there are scarcely two authors, among those who have contributed most to build up our knowledge of the Acalephs, who describe their parts under the same name, and this ever-recurring discrepancy is a serious obstacle to an easy perusal of their works. This difficulty has arisen from two causes. First, from a difference of opinion among investigators respecting the real nature of the parts described, and secondly, from a laudable desire to avoid expressing premature opinions upon these structures. Thus, special names were given to any parts in the body of Acalephs that seemed to present characteristic differences, even though these parts might be homological. This conflicting nomenclature has not only made it very difficult to understand the full meaning of the descriptions of Acalephs published by different writers, but has also led to the impression, that the differences among the different families of this class are far greater than is really the case. Such Acalephs, for instance, as have a certain external resemblance to Polyps, as the Hydroids, have been described with the terminology generally applied to Polyps; while the Medusæ proper have been designated by a nomenclature of their own; and the Siphonophoræ in another way still: the latter, indeed, being described in one way by those naturalists who consider them as single animals, and in another way by those who look upon them as communities of combined individuals.

To avoid this complication of nomenclature hereafter, I deem it indispensable to consider not only their relations among themselves, but also their relations to the members of the other classes of the same type. Now, surely, if Acalephs are Radiates, they should bear such a structural relation to the Polyps and Echinoderms, assuming that they belong to the same type, as the Acephala, Gasteropoda, and Cephalopoda, considered as Mollusks, bear to each other; or the Worms, Crustaceans, and Insects considered as Articulates; or the Fishes, Reptiles, Birds, and Mammals considered as Vertebrates. This is so well understood in our days with reference to the Vertebrates and Articulates, and in a measure also with reference to the Mollusks, that no naturalist could consider it as a progress in his science were a new name introduced to designate the webbed hand of a bat or the flapper of a Cetacean, or the rudimentary extremity of the Lizards with imperfect feet, or any other such serial gradation in the development of their different systems of organs. On the contrary, modern naturalists constantly endeavor to simplify the nomenclature of Zoölogy by tracing the homologies of the most