

Hydróids, a fourth: unless we separate at once the Sertularians with their horny stem and bell as a sub-order, distinct from the Tubularians, with their soft Hydroids, which seems to be the more appropriate course. Diphyidæ and Physophoridæ may require to be subdivided in the same way.

Now that the investigations of Olfers, Leuckart, Quatrefages, and Huxley, have made us as fully acquainted with the structure of Physalia as we are with that of the other Siphonophoræ, it is hardly worth while to recall the opinion of DeBlainville upon these animals, as it is evident from his description, that he could never have entertained such views about them, had he ever had an opportunity of studying them for himself. DeBlainville considered Physalia as a single animal, which he referred to the type of Mollusks in connection with the Heteropod Gasteropods, considering the crest of the bladder of Physalia as its foot, similar to that of these Gasteropods, and the pendent appendages as gill-like organs similar to those of the Dorsibranchiate, while he describes the opening of the bladder as their mouth. But I myself have had repeated opportunities for examining Physalia alive, and this examination has left no doubt on my mind that it constitutes a compound community of a great variety of individuals, presenting all the characters of true Hydroids.

It is important here to remark, that this great discrepancy in the opinions expressed respecting the affinities of these animals was in a measure owing, either to an insufficient acquaintance with their true structure, as was no doubt the case with Blainville when he referred Physalia to the type of Mollusks, and with Vogt when he referred the Ctenophoræ to the same type, or to a want of familiarity with the other objects associated with them, as is no doubt the case with the German authors, who, from a want of opportunity of examining Corals alive, have so generally united the Hydroids and Siphonophoræ with the Polyps. It is a remarkable circumstance, that the naturalists who have known the Polyps best, as Milne-Edwards and Dana, never thought of associating the Siphonophoræ with them, though they were equally acquainted with both, and though we owe to Milne-Edwards in particular, some of the most minute investigations extant upon the Siphonophoræ. As to the Hydroids, though they are associated by Milne-Edwards with the Polyps, he considers them as forming by themselves a natural division in that class, coequal with the Halcyonoids and Actinoids; while Dana goes one step farther in the right direction, by uniting the Halcyonoids and Actinoids in one natural division, to which he opposes the Hydroids as another division of equal value. But even this position Dana has lately abandoned, and he now unites the Hydroids with the true Acalephs; so that it may be truly said, that, in proportion as our knowledge of the Siphonophoræ, the Hydroids, and the Polyps, has gradually advanced, naturalists have perceived more and more distinctly the