

several pendent *Medusaria*. The different genera of the family may then be characterized by the peculiarities of their *Hydræ* and of their *Medusæ*. The *Campularians* as a family may be described as *Hydraria* with two kinds of *Hydræ*: some being sterile and more numerous, while others are fertile and produce *Medusæ* from their proboscis. The different genera may easily be distinguished by the peculiarities of the two kinds of *Hydræ*, as well as by their *Medusæ*. Similar differences exist among the Siphonophora. The *Velesidæ* are simply *Hydraria* arising from a single *Hydra* which grows larger and larger until it produces other *Hydræ* of a different form, and from these single *Medusæ* buds spring forth and finally free themselves. The *Physalidæ*, on the contrary, are *Hydro-Medusaria*, arising, like the *Velesidæ*, from a single *Hydra*, which also grows larger and larger, and even acquires an enormous size, forming in the end the large swimming-bag, from which single additional *Hydræ* at first arise, and afterward a larger and larger number, forming several distinct *Hydraria* suspended from the original enlarged *Hydra*. These *Hydraria* themselves consist of heterogeneous *Hydræ*, though of *Hydræ* only. Others produce *Medusaria*, and thus become *Hydro-Medusaria*; so that a *Physalia* community is really made up of many heterogeneous communities attached to a gigantic *Hydra*. The *Diphyidæ* are also *Hydro-Medusaria*, but of a very different kind from those of the *Physalidæ*. Here the community begins with a medusoid individual, from which arises another *Medusa*, thus forming *Medusæ* twins. This twin community produces a string of medusoid *Hydroids*, from each of which arises another kind of *Medusæ*, in close connection with their *Hydroids*, thus forming secondary twin communities, each of which consists of a medusoid *Hydra* and a genuine *Medusa*. In the *Physophoridæ*, the combinations are still different. The community constitutes also a *Hydro-Medusarium*; but it arises from a single *Hydra*, from the upper part of which bud sterile *Medusæ*, while other *Hydræ* arise from its lower part, between which, finally, a number of *Medusaria* make their appearance.

As soon as it is conceded that the so-called sexual organs of the Siphonophora are themselves individual animals provided with ovaries and spermaries, there is no possibility of avoiding the conclusions presented in the preceding paragraphs respecting the structural constitution of the Acalephs, and the close affinity of the Siphonophora and *Hydroids* proper becomes very striking. For, notwithstanding the extraordinary diversity of the form of these animals, there are, properly speaking, only two kinds of individuals among them: the sterile ones, for which the name *Hydræ* is most appropriate; and the fertile ones, which we may best call *Medusæ*. I must, however, qualify this statement somewhat, in order to avoid every possible misapprehension. There are fertile *Hydræ*, if the production of buds constitutes fertility, for most *Hydræ* produce *Medusæ* buds; but *Hydræ* are themselves destitute of sexual organs, there being neither males nor females among them; and