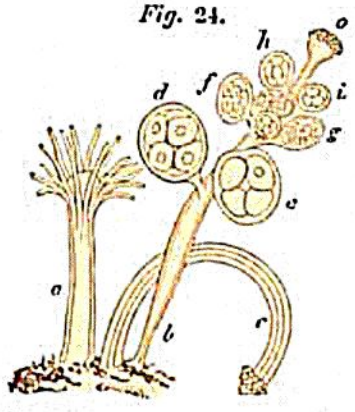
terminating with a larger Polyp, which is perfectly symmetrical; while the individuals which stand upon the sides of the branches are not only smaller but at the same time one-sided, the broader and more prominent side being turned outward, and the tentacles on that side being also larger than those turned toward the common axis.

Among the Hydroids, as among the Polyps, we find those in which the communities are formed by identical individuals differing, perhaps slightly, in size. This is the case in the families to which the genera Tubularia (Vol. IV., Pl. XXIV.) and Coryne (Pl. XVII., XVIII., and XIX.) belong. But there are others, in which we find, either constantly or at least at certain seasons, two kinds of individuals, differing not only in size, but also in form, and still farther in the presence or absence of tentacles, one kind being always sterile, while the other produces Medusæ buds that may be freed. This is the case with the Campanularians (*Figs.* 10, 15, 16, and 17) and the Sertularians (*Figs.* 18, 22, and 23). In the Plumularians, the differences are still more marked; for besides the fertile individuals there are several kinds of sterile individuals, grouped together in various clusters, the smaller ones being attached around the large ones. Finally, there is a genus—Hydractinia (*Figs.* 24 and 25)—which, among the Hydroids, exhibits the greatest range of difference thus far observed between the individuals of the same species. For in this genus we have, in the first place, two kinds of communities: one (*Fig.* 25) in which the fertile individuals produce only male Medusæ, and another (*Fig.* 24) in which the fertile individuals produce only female Medusæ. Again, the fertile individuals in both kinds of communities have tentacles (*Figs.* 24 *o* and 25 *b*, *o*) entirely different from those of the sterile individuals. The sterile individuals (*Figs.* 24 *a* and 25 *a*) differ also greatly among themselves, some being slender and almost thread-like; others slender, but with a distinct proboscis and a whorl of tentacles; others short, widening greatly upward, and assuming almost the form of a trumpet-mouth. All these individuals differ not only in their form and complication, but also in their color, so that we have in this genus about as great a diversity of individuals in one community, as is observed in the most complicated Siphonophoræ. The only difference between the two groups consists in this: that while all

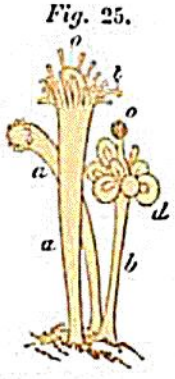
Fig. 24.



HYDRACTINIA POLYCLINA, Ag.

a Sterile individual. — *b* Fertile individual producing female Medusæ. — *d e* Female Medusæ containing advanced eggs. — *f g h i* Cluster of female Medusæ with less advanced eggs. — *o* Peduncle of the mouth with short globular tentacles. — *c* Individuals with globular tentacles, upon which no Medusæ have as yet appeared, or from which they have already dropped.

Fig. 25.



HYDRACTINIA POLYCLINA, Ag.

a a Sterile individuals. — *b* Fertile individual, producing male Medusæ. — *d* Clusters of male Medusæ. — *o o* Proboscis, with the mouth at the apex. — *t* Elongated tentacles of the sterile individuals; in the fertile one *b*, they are simple knobs upon the proboscis *o*.