

of the four radial canals of the subumbrella. Only rarely do these portions become more or less rudimentary, so that the medusoid form is lost and passes over into a more or less degenerate "sporosac." The tentacles on the umbrellar margin of the gonophores have usually disappeared; sometimes, however (as in some Calyconectæ), four rudiments are recognisable, and at other times even a corona of tentacular rudiments (*Desmophyes*). The Disconanthæ, in which free reproductive Medusæ in the sexually mature state are not yet sufficiently known, may perhaps bud off four or eight separate gonads either from the manubrium, or from the subumbrella.

As to the distribution of the two kinds of gonophores on the corm, it must be noticed that most of the Siphonophoræ are monœcious. Some Calyconectæ (*Mitrophyes*, *Galeolaria*) and some Physonectæ (*Apolemia*, *Athoralia*) are dicecious. Among the monœcious corms both kinds of sexual persons occur, sometimes in separate cormidia (diclinous), sometimes associated in each single cormidium (monoclinous). The gonodendra, or the clustered groups of gonophores, are usually distylic, all their branches bearing Medusæ of the same sex; male and female gonodendra arising separately. But sometimes there are monostylic gonodendra, the basal part of the single branched gonostyle bearing female, and the distal part male, gonophores (as in the Auronectæ and Cystonectæ, *Forskulia*, &c.). On the other hand, hermaphrodite persons (*i.e.*, gonophores which form both spermatozoa and ova) are not known in this class. The male persons are known as androphores, the female as gynophores. Usually the androphores are slender, more oblong, and bear a spindle-shaped or cylindrical spermarium; the gynophores are thicker, more rounded, and bear an ovate or ellipsoidal ovarium.

FUNDAMENTAL FORM (PROMORPH).

The promorphology of the Siphonophoræ has led to very different views respecting the ideal geometrical fundamental form (or the "promorph"), which may be recognised by abstraction from the concrete single forms of these Acalephs. One group of authors regards the Siphonophoræ as "*Radial animals*," whilst another group maintains that they are "*Bilateral animals*." These opposed views are both right in a certain sense. On the one hand, a typical *radial structure*—generally a quadriradial form, composed of four equal quadrants—is recognisable in all Siphonophoræ (mainly in the gonophores and nectophores), and this is in my opinion produced by inheritance from the older ancestral Medusæ. On the other hand, a distinct *bilateral structure*—or a dipleural fundamental form, composed of two symmetrical halves or antimeres—is recognisable in most Siphonophoræ, *viz.*, in all Siphonanthæ, whilst it is wanting in the Disconanthæ. This bilateral type is partly inherited from the bilateral Medusæ, which we regard as the ancestors of the Siphonanthæ (Protomeda), and the essential form of