

tertiary septa into chambers of the third (sometimes even of the fourth) order (compare Olfers, 79, fig. 1; Leuckart, 81, fig. 2; L. Agassiz, 36, fig. 1, &c.). Possibly the number of these chambers corresponds to that of the cormidia, which arise in metameric succession from the opposite ventral side of the trunk; it is different in the various species. The Physalidæ are able to compress the float and the crest in a very variable manner, and to change their form in a most extraordinary degree. The external form of these hydrostatic organs, therefore, is of little value for the distinction of species.

*Cormidia*.—The numerous groups of polymorphous persons and organs which compose the corm of the Physalidæ are usually loose, and represent, especially in the larger species, a clustered mass of crowded parts, which seem to be aggregated without any regular order. A comparative examination, however, of the younger stages and larvæ, and especially of the small mature *Alophota* (Pl. XXVI. figs. 1–3), informs us that at the very beginning the cormidia are here also more or less ordinate. A single series of a few cormidia (four in *Cystonula*, fig. 2; six in *Alophota*, fig. 3; eight to ten in *Arethusa*, fig. 4) is here attached along the ventral median line of the trunk, and usually each of these cormidia (excepting the basal group at the distal end) is composed of a siphon, a palpon, and a tentacle; and in mature corms also of a gonodendron. The internodes of the trunk, or the free intervals between the succeeding cormidia, are very distinct in the smaller and younger forms (figs. 2, 3), whilst they disappear in the larger and older forms (figs. 4, 5). The cormidia of the former are originally monogastric (as in the Rhizophysidæ), whilst they become polygastric in the latter (as in the Salacidæ).

*Basal Cormidium*.—The distal end of the trunk, which is the posterior in the usual position of the corm (with horizontal main axis), bears in all Physalidæ a separate cormidium of special interest (figs. 3, 4, *su*). We call it the “basal cormidium,” since it is placed at the base or the distal pole of the main axis, opposite to the apical stigma on its proximal pole (*po*). This primary or basal cormidium remains always sterile, and has a different morphological and physiological value from the numerous secondary cormidia which arise from the ventral side of the trunk and afterwards produce gonodendra. In the simplest case (fig. 3) the basal cormidium consists of a single siphon (*su*), a palpon (*g*), and a tentacle. The siphon placed at the very distal end, in the prolongation of the horizontal main axis, has the greatest morphological interest; it is the primary siphon of the youngest larva (fig. 1), and therefore the original manubrium of the primary medusome, the umbrella of which is the float; we call it the protosiphon or primary siphon, in order to distinguish it from all the other siphons, secondarily produced, or the metasiphons. The primary tentacle (fig. 1, *t*) which belongs to the protosiphon, remains either as the single tentacle of the basal cormidium, or it is afterwards lost; but I have never seen secondary tentacles developed in this distal group; usually it is composed afterwards of a series of small secondary siphons or palpons (twelve to twenty or more). The interval between the basal cormidium and the larger group of