ventral cormidia is in most Physalidæ permanent, sometimes larger, at other times smaller, than in *Alophota giltschiana*, fig. 3, *Physalia pelagica* (**77**, Tab. xxxv. fig. 2), &c.; it is lost afterwards in those species, in which the number of cormidia is exceedingly augmented, and all are confluent in a single crowded mass (as in *Arethusa challengeri*, figs. 4, 5, in *Caravella maxima*, and in *Physalia megalista*).

Ventral Cormidia.—The numerous secondary cormidia which compose the large main group of appendages, on the ventral side of the trunk, exhibit a great variety in number, size, composition, and arrangement. Possibly these differences are constant in different localities and possess therefore a systematic value; but they require a far more accurate anatomical examination than has been employed hitherto. Originally each secondary cormidium (in most species at least) seems to be monogastric, composed of a single siphon, a palpon, and a tentacle, and in small mature corms of a gonodendron (fig. 3); but usually the common pedicle of these medusomes afterwards branches, and produces a variable number of tertiary cormidia. Generally a single tentacle and the appertaining palpon, in the middle of the ventral group, becomes early much larger than all the others; this predominant main tentacle remains single in *Alophota* and *Physalia*, whilst a variable number of similar gigantic main tentacles (usually ten to twenty) is afterwards produced in *Arethusa* and *Caravella*. Many secondary cormidia remain sterile in most Physalidæ, and a small number only (usually eight to twelve) develop a large gonodendron. It may be, perhaps, that in the crest-bearing Physalidæ (*Physalia* and *Caravella*) the number of large primary air-chambers in the crest (usually eight to twelve) and their metameric succession often correspond to the segments of the trunk, from which arise the primary groups of ventral cormidia.

Siphons.—The feeding polypites exhibit in all Physalidæ the same shape, and are very similar to those of the Epibulidæ (Pl. XXII. fig. 6) and Salacidæ (Pl. XXV. fig. 5). The protosiphon (or the primary polypite of the basal cormidium) does not differ in structure from the numerous metasiphons (in the secondary cormidia of the large ventral group). The young siphons are simple spindle-shaped tubes, whilst the fully developed exhibit distinctly three or four different segments (Pl. XXVI. fig. 6). The two proximal segments, viz., the thin pedicle (*sp*) and the vesicular basigaster (*sb*), are usually small, and often confluent; the two distal segments, however, are always large and distinct. The stomach is a very dilatable sac, inside covered with numerous black hepatic villi (*sv*); the proboscis is a very muscular cylindrical tube, very contractile and expansible, and opens by a mouth, which may be expanded in the form of a circular or polygonal (often square) suctorial disc (fig. 1, *ss*); its margin is armed with a series of cnidocysts (compare on the structure of the siphons, Leuckart, **81**, Huxley, **9**, &c.).

Palpons.—All Physalidæ possess, intermingled with the mouth-bearing siphons, a larger number of mouthless palpons. These are of two kinds. The first kind exhibits the same structure as the siphons and differs only in the absence of a distal mouth-opening.