

(Pl. IV. figs. 16, 17); but the intervals between the neighbouring cormidia, or the internodes of the stem, are so small, that the arrangement often appears to be more irregular, and the whole surface of the siphosome is like a bunch of cauliflower (Pl. II. fig. 6; Pl. III. figs. 13, 14). Each cormidium arises from the surface of the common trunk by a thickened base, which is sometimes a short conical protuberance, at other times a longer cylindrical pedicle, or a lateral branch of the trunk (Pl. IV. figs. 15, 16). Sometimes the cormidia seem to arise united in small groups from a common pedicle, and if we regard one of these groups as a single cormidium of higher order (or a main-branch of the trunk), we may say that the cormidia are polygastric (Pl. VI. figs. 34, 35). In some specimens (or perhaps in certain species?) the arrangement seems to be more irregular, and the cormidia more or less loose. The common pedicle of each cormidium is traversed by a network of anastomosing canals, often with a wider axial main canal.

Each cormidium is originally composed of the following four organs (Pl. VI. fig. 37): (1) a single siphon (*s*); (2) a long tentacle arising from its base (*t*); (3) a clustered monostylic gonodendron (*g*); and (4) a slender palpon arising from its distal portion (*q*). This regular composition of the monogastric and ordinate cormidia is obvious in the majority of the specimens examined. But in some specimens of larger size the two main branches of the very large gonodendron are so deeply divided, that two gonodendra arise separately from the common base of the cormidium (Pl. I. fig. 2). More rarely there are single cormidia, in which the two gonodendra (or only one of them) are again forked, so that three or even four gonodendra arise from separate pedicles.

*Siphons* (Pl. IV. figs. 19, 20, *s*; Pl. VI. figs. 32–38, *s*; Pl. VII. figs. 39–42, *s*).—The feeding polypites of the Aurnectæ exhibit in general the same form and structure as in the Physonectæ. They are in the spirit specimens observed all more or less contracted, thick-walled, spindle-shaped or cylindrical tubes, tapering towards the basal as well as the distal end. Their length in the small Stephalidæ is 2 to 4 mm., in the large Rhodalidæ 8 to 10 mm.; their breadth in the former 0·6 to 0·8, in the latter 2 to 3 mm. In the expanded state they may reach double the size or more. The four usual segments of the siphons are often very distinct. The cylindrical pedicle (*sp*) which arises from the cormidium is a thick-walled cylindrical tube of variable length, opening inside in the main canal of the cormidium, outside in the basigaster. The transverse section of the pedicle is very similar to that of a gonostyle (Pl. I. figs. 4, 5); it exhibits a thick, structureless, cartilaginous fulcrum, from the convex outside of which arise numerous branched radial folds (*z*<sup>1</sup>). These bear the parallel fibres of the longitudinal muscles (*ml*), while the concave inside of the fulcrum is lined by a thin muscle-plate composed of circular fibres (*mc*). The entodermal epithelium, inside the latter, forms a single layer of high cylindrical cells (*d*), whereas the exodermal epithelium covering the outside is stratified, composed of three to six or more layers of polyhedral cells (*e*).

The second segment of the siphons is the basigaster (figs. 37, 38, *sb*), usually a hemi-