

spherical or pyriform portion, the thickened exoderm of which is full of cnidocysts. From its base arises the single tentacle (figs. 35, 37, 42, *t*). The basigaster is separated from the pedicle as well as from the stomach by an annular constriction (sphincter). The basal sphincter is a very strong ring-muscle, and it is very probable that by its sudden contraction the three distal segments are frequently detached from the proximal pedicle. In my preliminary examinations of the large and well-preserved specimens of *Rhodalia miranda* collected by the Challenger, I could find in them neither siphons nor tentacles. I saw only the pedicles of the siphons attached to the cormidia, and judged them to be the highly contracted siphons, and their opening (the pylorus basalis) to be the true mouth. I was thus led into the same error as Gegenbaur thirty years before in *Stephanospira*. Some time afterwards I examined accurately the masses of horse-hair covering the bottom of the vessel in which the *Rhodalia* had been packed by the naturalists of the Challenger. There were entangled between the horse-hairs some irregular whitish lumps composed of interwoven long filaments and nodes. Further careful examination convinced me that the long coiled up filaments were the tentacles of *Rhodalia*, and the nodes were the detached siphons connected with the former (Pl. IV. fig. 20). A long time afterwards I received from Dr. John Murray the complete specimens of *Stephalia corona* taken in the "Triton" Expedition (1882), and in these the majority of the siphons and tentacles were still connected with the cormidia (Pl. VII.). Supported by this confirmation of my suggestions, I was able to restore the anatomy of *Rhodalia*, and to draw the entire corm with that completeness which is figured in Pl. III. At the same time this experience teaches afresh the lesson that much care and critical judgment must be employed in the anatomical examination of preserved specimens of Siphonophoræ, and of such specimens as come up in the tow-net or trawl from the deep-sea. Many parts of the corms, especially the nectophores and tentacles, but also often the siphons and palpons, are so easily detached, that they seem to be entirely wanting. I have no doubt that the "deep-sea Siphonophoræ, without tentacles," which have been described by Studer (40), Fewkes (45), and by former authors, are corms which have lost the tentacles during capture.

The stomach (*sm*), as the third and largest portion of the siphons, is a long cylindrical or spindle-shaped tube, often ovate in the inflated state, and separated by an annular constriction from the two neighbouring segments, the proximal basigaster (*sb*) and the distal proboscis (*sr*). It is easily distinguished from both by the dark longitudinal liver-stripes, which extend parallel and equidistant in its whole length (Pl. IV. fig. 20, *sh*; Pl. VI. figs. 35, 38, *sh*; Pl. VII. fig. 42, *sh*). The number of these hepatic ridges seems to be variable, sometimes eight, at other times twelve or sixteen. After removal of the glandular entoderm, the remaining exoderm of the stomach exhibits a large number of longitudinal parallel muscle-bands (Pl. IV. fig. 19, *ml*). No doubt the siphons are very expansible and contractile, as usual.