

gonodendron are produced by budding. Each branch of the gonostyle is a secondary cormidium, composed of a sterile distal palpon, a large female medusome, and a group of clustered small male medusomes.

Pneumatophore (fig. 5, *p*).—The float is pyriform, 3 mm. long and 2 mm. broad, with a red pigment-cap in the apical third. The enclosed pneumatocyst is subspherical, 1.2 to 1.5 mm. in diameter; it fills the upper or apical portion of the air-sac, which is separated by an annular diaphragm (pylorus infundibuli) from the spheroidal lower or basal portion, the air-funnel. This is lined by the greenish hypocystic tapetum, which also enters by the pylorus into the cavity of the air-flask and lines its basal third as endocystic tapetum. No radial septa or villi arise from the air-funnel.

Siphon (fig. 5, *s*).—The single siphon of the monogastric cormidium is spindle-shaped, 6 to 9 mm. long and 2 to 3 mm. broad. Its ampullaceous basal portion (basigaster) is attached by a short pedicle to the base of the pneumatophore. The dilated middle portion, or the stomach, is covered inside with numerous yellowish-brown hepatic villi (*sh*). The thin tubular proboscis (*sr*) is very muscular and opens by a mouth, which may be expanded in the form of a circular suctorial disc (*ss*).

Tentacle (fig. 5).—The single tentacle (*t*) which arises from the base of the siphon, on its dorsal side, is a slender cylindrical tube, beset with a series of tentilla. These are simple cylindrical filaments, and bear on their dorsal side a multiple series of cnidocysts; the structure is similar to that of *Nectophysa* (Pl. XXIII. figs. 5, 6).

Palpons (fig. 5).—The corona of rose-coloured tasters which protects the siphosome is attached to its base, immediately beyond the nectosome. It is composed of about thirty spindle-shaped palpons, besides the small buds of young ones. Their pointed distal end is closed, whilst the proximal end of their cavity communicates with the pedicular canal of the siphon.

Gonodendron (fig. 5, *gd*).—The single large clustered gonodendron, which is attached to the base of the siphon, on its ventral side, is similar to that of the Rhizophysidæ. The gonostyle is richly branched, and each ultimate branch bears a single gonopalpon on its distal end (Pl. XXIII. fig. 8, *gg*), and above it a single medusiform gynophore (*f*) and a cluster of several (four to eight) ovate androphores (*h*).

Family XXI. RHIZOPHYSIDÆ, Brandt, 1835.

Rhizophysidæ, Brandt, Prodrömus descriptionis, &c., 25, p. 33.

Definition.—Cystonectæ polygastricæ, with a long tubular trunk of the siphosome, bearing in its ventral median line numerous monogastric cormidia, separated by free internodes. Each cormidium with a single siphon and a single tentacle. Pneumatocyst large, without radial septa and pericystic radial pouches, but with eight or more radial groups of hypocystic villi.