

spirit specimen and appear thickly frilled at the margins, are probably capable of greater expansion in the living animal.

The central stomach in this *Charybdea*, as in most Charybdeidæ, is joined to the basal stomach, as the pyloric stricture between the two is not developed and only faintly indicated by the slightly projecting pyloric valves. These two divisions of the stomach therefore compose a wide, but very flat pouch, or a low chamber, quadratic in outline. Its bottom or lower wall represents the thin quadrate plate, which at the same time forms the fundus of the cubic umbrella cavity. This muscular plate is pierced in the middle of the palatine opening, from whose four perradial corners the gastral grooves already mentioned (figs. 4, 6, *gs*), run to the middle of the four gastral openings. The horizontal cover of the low gastral chamber or its upper wall is formed by the smooth endodermal surface of the cap-shaped umbrella apex (figs. 2, 3, *gu*). The four interradian corners are occupied by the four pyloric valves, the narrow "bow-shaped fused lines" (Claus), which are placed perpendicularly at the proximal ends of the long septal selvages. On the other hand, the four perradial side walls of the chamber between the selvages are represented by the four gastral openings (fig. 6, *go*), four narrow horizontal clefts, which lead from the stomach into the four radial pouches. We find here a complicated arrangement of valves, by means of which the stomach can be completely shut off for a time from the radial pouches, These four perradial "pouch-valves" alternate with the interradian pyloric valves (*gy*). Above each pyloric valve the stomach forms a peculiar evagination in the form of a low triangular pouch, and the phacelli or dendritic bunches of gastral filaments (*b*) are placed in this pyloric pouch.

The gastral filaments (fig. 7, *f*), are much more strongly developed in *Charybdea murrayana* than in the closely-allied *Charybdea marsupialis*; in each of the four interradian corners of the stomach they form a visible phacellus or bush, composed of ten to twelve larger and several smaller branches. The stems of these branches are connected below at the root, where they rise from the aboral surface of the subumbrellal pyloric valve, and so actually represent the principal branches of a single, very short, powerful stem, a primary interradian primitive filament. The lower (distal) half of each branch consists of a strong, simple, or bifurcate stem, the upper (proximal) half of a pencil-shaped bunch of numerous branches, which are partly simple, partly dichotomised (figs. 9, 10). The solid axis of the filaments is formed by a thick cylindrical or flat ribbon-like gelatinous filament (a process of the supporting plate of the subumbrella); its endodermal epithelium is mostly composed of gland cells, having many flagellate cells at the base and urtricating cells at the point.

The four broad quadrangular radial pouches (figs. 2-6, *bp*), occupy the greater part of the subumbrella, and are only separated from each other by four narrow interradian septal selvages (*ks*). These correspond to the septal nodes of the Tesseridæ and Peromedusæ, and to the septal selvages of the Lucernaridæ; and, like the latter, have