fibrillar cords (an upper and an under) lying on it with the peculiar nerve epithelium lying above them. Extensive plexuses of fibrillæ with large multipolar and spindle-shaped ganglion cells run out thence and spread chiefly on the subumbrella. The finer structure of the nervous system and the organs of sense have been recently described in detail by Claus in *Charybdea marsupialis* (1879, *loc. cit.*). His endeavour to compare the condition of this structure of the Cubomedusæ with that of the Craspedota, is, however, untenable, as the two have arisen independently of one another, and are, therefore, not homologous. The nerve ring of the Cubomedusæ also corresponds only to the lower (subumbral) nerve ring of the Craspedotæ, whilst the upper (exumbral) ring of the former is entirely wanting. On the other hand, the central nervous system of the Peromedusæ is probably essentially closely allied to that of the Cubomedusæ.

The gastrovascular system (figs. 1–10) resembles that of the Stauromedusæ in the simplicity of its formation (*Tesserantha*, Pl. XV.; *Lucernaria*, Pls. XVI., XVII.). The principal stomach or axial intestine is connected by four horizontal perradial gastral openings with four wide quadrangular radial pouches, which are divided in their entire length by four narrow interradial septal selvages, and communicate by a narrow circular canal at the distal end of the selvages. The axial principal intestine, or the stomach in the wider sense ("gaster principalis"), really consists in most Cubomedusæ of the same three sections as in the Stauromedusæ and Peromedusæ, viz., an aboral basal stomach, a middle central stomach, and an oral buccal stomach; the pyloric opening ("pylorus," *gy*) also forms in this case the boundary between the basal and the central stomach and the palatine opening ("palatum," *gp*), that between the central and the buccal stomach. In *Charybdea*, however, as in many other Charybdeidæ, the pyloric opening is very wide and the pyloric stricture very slightly developed, so that, taken together, the basal and the central stomach seem to form a single, simple, somewhat flat, quadratic chamber.

The buccal stomach or œsophagus ("gaster buccalis," *gα*)—the "oral funnel" of Fritz Müller, "oral peduncle" of Claus—is comparatively small in our species, and forms a flat quadrate pyramid. Its truncated point is formed by the narrow palatine opening (fig. 9, *gp*), its angles by the four perradial strong oral ribs, thickened selvages of the gelatinous plate, which gives consistence to the whole stomach. The oral ends of these buccal ribs project considerably at the quadrate oral opening, and cause the formation of the four lanceolate or oval "oral lobes." A deep perradial groove runs on the axial endodermal surface of these frilled triangular oral lobes; it bends with a sharp turn towards the outside at the palatine opening, and runs, enclosed in the mesogonial fold, on the inner surface of the subumbral wall of the central stomach as far as the middle line of the radial pouch (figs. 4, 6, *gs*). The thickened oral rib itself, which at the same time forms the midrib of the leaf-shaped many-folded oral lobe, runs at the palate immediately into the low mesogonial fold. The folded oral tubes, which were strongly contracted in our