

a canal in transverse section (fig. 3). The distal (lower) half of the lower arm consists of a frilled, tassel-shaped bunch of tufts, with a projecting, pointed, triangularly pyramidal terminal appendage or gelatinous knob at its end. The bunch of tufts is composed of three strongly frilled, many folded leaves, forming the distal process and expansion of the three angles of the arm. One of these three arm frills lies axially on the inner side of the arm, and appears as the distal part of the originally simple ventral frill, whose proximal part is an arm of the eight-rayed tuft rosette of the oral area; these two are separated from one another by the broad interspace of the naked upper half of the arm. The other two arm frills lie in pairs on the outer side of the arm, and so correspond to the dorsal frills of the *Rhizostomæ multicrispæ* (*Pilemidæ* and *Crambessidæ*, comp. my System, pp. 464, 581). Of the three narrow wings of the triangularly pyramidal terminal knobs, one also lies axially, and the other two abaxially; they are the terminal processes of the three frills, but they have lost their funnel frills, and look as if they had been ground down. The numerous and irregular oral openings on and between the folds of the frills are sometimes cleft-shaped, sometimes funnel-shaped; the margins of these funnel frills, which were formerly called sucking-mouths, are thickly beset with numerous microscopic small oral tentacles or digitella. Here in *Leonura*, as in all other *Rhizostoma*, there are "prolonged urticating papillæ of the ectoderm," solid cylindrical processes of the gelatinous substance of the arm, whose ectodermal epithelium partly forms thread cells, partly epithelial muscular cells (comp. Otto Hamann, *Die Mundarme der Rhizostomen und ihre Anhangs-Organen*; Jena. Zeitschr. für Naturw., Bd. xv. 1881).

The gastrovascular system (figs. 2, 4-8) of *Leonura* is almost completely homologous with that of the closely-allied *Leptobrachia*, and also in many respects with that of *Crambessa*, of which Grenacher and Noll (1876) have given a description which is very accurate and true to nature (comp. my System, 1879, p. 616, taf. xxxviii.-xl.). As in all *Acraspedæ*, we can distinguish the central principal intestine from the peripheric coronal intestine. The central principal intestine consists of the large cruciform central stomach and of the smaller buccal stomach connected with it by the four pillar canals and the vascular system of the arms, which runs out from the latter. The central stomach (figs. 2, 4, *gc*) has the cruciform shape and extent of the gastrogenital membrane already described (*gg*), which forms its lower wall; the upper wall is formed by the smooth endodermal surface of the central gelatinous umbrella disk. The sixteen radial canals composing the peripheric coronal intestine run towards the outside on the peripheric margin of the central stomach (*gm*), where its upper and wider walls touch, whilst, at the same time, the four perradial pillar canals ("canales pilastrales," *cd*) pass downwards. The latter spring from the distal ends of the four cross limbs of the central stomach, immediately below the starting point of the four perradial subumbrellar canals, run from above and outside, below and inside on the axial inner side of the four arm pillars, and these open into the buccal stomach (*ga*). We shall apply this name to the small