

cruciform hollow space found in the middle of the arm disk, and from which the eight arm canals run out downwards (*ch*). These lie adradially, but in pairs, above the eight limbs of the tufted rosette, and must be regarded as distal bifurcate branches of the four perradial pillar canals. Each arm canal immediately divides into three narrow canals, which run parallel to the ends of the three corners of the arm; one of them lies ventrally or axially, the two others dorsally or abaxially. Hence it comes that the whole free, triangular part of the arm must be regarded as the under arm; only the short basal part of the arm, containing a simple canal, which is fused with the arm disk, corresponds to the upper arm of the *Rhizostomæ multicrispæ*. Numerous branches run from the axial or ventral canals of the arms up to the tufts of the oral rosette (*ab'*) and down to the ventral funnel frill of the distal bunch of tufts (*ab³*). The two axial or dorsal canals are only branched below, and this branch runs on the two dorsal funnel frills of the bunch of tufts. The distal ends of the three arm canals run in the three wings of the triangular terminal knobs so far as the point where they seem to open by a common terminal aperture.

The peripheric coronal intestine shows essentially the same conditions which I first described in *Crambessa tagi* (1869). Sixteen strong radial canals pass out from the periphery of the cruciform central stomach, run in the subumbrella to the umbrella margin, ramify thickly, and form a delicate, vascular network. Of the sixteen canals, the shortest are the four perradial, which spring from the distal end of the four limbs of the gastral cross (immediately above the four pillar canals), and which widen like an ampulla at their proximal base (fig. 4, *cp*). The four interradianal canals are the longest; they spring from the corner between every two limbs of the gastral cross, and are beset with cæcal diverticula (fig. 4, *ci*). The eight adradial canals are shorter than the latter and stronger than the former; they spring from the two corners of the distal end of the limb and diverge in the form of an arch towards the umbrella margin. All the sixteen canals are connected by a strong coronal canal (fig. 4, *cc*). This lies in the subumbral coronal furrow, which separates the central umbrella disk from the velarium. The peripheric vascular network is divided by the coronal canal into two different sections, of which the narrower lies inside the coronal canal, and the broader outside. The intracircular vascular network is only 4–6 mm. broad, fills the space between coronal canal and the distal ends of the limbs of the cross in the form of a narrow zone, and consists of from three to four rows of loose meshes, irregularly polygonal in shape. The extracircular vascular network is three times as broad (12–16 mm.), consists of an extremely fine thin mesh work (whose finest meshes are hardly visible to the naked eye), and fills the whole subumbral side of the velarium, from the coronal canal, as far as the thin margin of the marginal lobes (fig. 4).

The genitalia (Pl. XXXII. figs. 1–6, *s*) in *Leonura* show, on the whole, the same conditions of form and structure which Grenacher and Noll (1876) described minutely in