

goes retrograde formation at the same time, the former originate the characteristic internemal gastral pouches of the *Æginidæ*, which were primarily placed in pairs between every two tentacles (as in the tetranemal *Ægina*, System, 1879, p. 337, taf. xx.). The two pouches which have a tentacle between them are therefore the distal halves belonging to a former pernemal gastral pouch, *i.e.*, of a radial canal at the end of which each tentacle was originally placed. But the two pouches lying between every two primary tentacles are opposite distal halves of two adjacent radial canals. This view is justified by the fact, that in all the older and simpler forms of the *Æginidæ* two gastral pouches are always placed between every two tentacles. In our *Æginura* (as in *Æginopsis*) each of the eight lobe pouches is divided a second time. The peculiar formation of the festoon canals of the *Æginidæ* can only be explained in this way. It shows essentially the same conditions as in the *Cunanthidæ*. Here as there, the originally simple circular canal is divided into the same number of separate arches or "lobe canals" as there are umbrella lobes, and each lobe canal opens with two mouths beside the base of two neighbouring canals. But whilst in the *Cunanthidæ* the opening of the lobe canal is found in the middle of the distal margin, in the *Æginidæ* it occurs immediately in the periphery of the stomach. In the former the undivided proximal part or principal part of the radial canals (or of the pernemal gastral pouches) has entirely disappeared, and the internemal lobe pouches only are left (as remains of the divided distal part). The inverted halves of every two adjacent lobe canals are also connected with a "double canal" or double "peronial canal." In the *Æginidæ*, as the proximal half of the umbrella margin has retrograded, and the distal half become proportionally more strongly developed, the double canal appears very much prolonged, and has the deceptive appearance of "a simple radial canal opening into the periphery of the stomach between every two internemal gastral pouches." Thus very simple and clear homologies exist between formations apparently very different, as I have already shown in my *System der Medusen*, 1879, pp. 305, 306, &c.

The specimen of *Æginura myosura* was a male, and its sixteen testes (the sixteen "internemal gastral pouches") contained masses of ripe spermatozoa. They did not however, fill up the cavity of the pouches, but were placed on the outside of its subumbrel wall. In transverse sections the internal side of the subumbrel wall showed the same high cylindrical epithelium as that of the peronial canals (figs. 7, 12), whilst the endodermal epithelium of the opposite umbral wall consisted, in both cases, of a thin layer of flat plate cells covering the gelatinous substance of the umbrella. The spermarium, on the contrary, lies like a thick plate immediately under the exoderm epithelium of the subumbrella from which it originates, and is divided from the high cylindrical epithelium of the endoderm by a distinct supporting plate. In *Æginura* as in *Pegantha* (p. 34, Pl. XI. figs. 5, 6), the subumbrel ectoderm sends out supporting fibres containing nuclei into the spermarium which lies under it, and is derived from it. Here,