

they melt into short, thick, hyaline rods, the so-called "gelatinous cilia." The myophriscs are found only in the order *Acanthometra*, and are wanting in the *Acanthophracta*, as well as in the other three legions of Radiolaria.

A. The "*ciliary coronas*" on the skeletal rods of dead *Acanthometra* were first described by the discoverer of this order, Johannes Müller, and referred to as "the stumps of the contracted, thickened threads" (L. N. 12, p. 11, Taf. xi.).

B. The "*number of the gelatinous cilia*" I found constant in certain species of *Acanthometra*, and stated in my Monograph (L. N. 16, p. 115) "that here is to be found the first differentiation of the diffuse sarcode into definite organs of regular definite number, size, and position, which deserve the name tentacles rather than pseudopodia."

C. The nature of the myophriscs as fibrillæ allied to muscles was first discovered by R. Hertwig, who described them as "structures of peculiar nature," under the name of "contractile threads," and pointed out in detail their histological and physiological peculiarities (L. N. 33, pp. 16-19, Taf. i.).

97. *The Exoplasm of the Peripylea.*—The extracapsular protoplasm of the SPUMELLARIA or PERIPYLEA is in communication with the intracapsular sarcode by the innumerable fine pores of the capsule-membrane, and like these pores is evenly distributed over the whole surface. The sarcomatrix which immediately surrounds the central capsule is moderately strong, and sends out innumerable long, thin pseudopodia, which probably correspond to the pores of the membrane. Their number is markedly greater in the SPUMELLARIA than in the other three legions. The ramifications and communications which the radiating fibres of the sarcomatrix undergo within the calymma, apparently present the most manifold variations, so that the sarcoplegma or intracalymmar network thus formed has very diverse forms. On the surface of the calymma the exoplasmic threads constitute a variously disposed sarco-dictyum, a regular or irregular exoplasmic network, by the silicification of which a primary lattice-shell arises in the majority of the SPUMELLARIA. The free ends of the pseudopodia, which arise from this extracalymmar network and radiate out into the water, appear in most SPUMELLARIA to be relatively short, but exceedingly numerous. Specially modified pseudopodia and axial threads in particular do not seem to occur in this legion. Perhaps, however, among the latter may be reckoned the remarkable pseudopodia which combine to form the sarcode flagellum in many *Discoidæa* (and perhaps in other SPUMELLARIA). This axoflagellum is a particularly strong thread of sarcode, arising from a definite point in the central capsule; it is cylindrical or slenderly conical in form, much longer, stronger, and more contractile than the ordinary pseudopodia; it contracts in a serpentine fashion on mechanical irritation and seems to originate by the fusion of a bundle of pseudopodia (compare § 95, C).

98. *The Exoplasm of the Actipylea.*—The extracapsular protoplasm of the ACANTHARIA or ACTIPYLEA differs in several important respects from that of other