

exoplasm on the surface of the calymma. These and other differentiations seem to indicate that the pseudopodia in the ACANTHARIA are more highly developed than in the SPUMELLARIA, and justify the denomination of the former as "Actipylea."

*Synopsis of the Orders and Suborders of ACANTHARIA.*

I. ACANTHOMETRA. Skeleton composed only of acanthinic radial spines not forming a complete lattice-shell.	}	Radial spines in variable and indefinite number, disposed irregularly, . . . . .	1. Actinelida.
		Radial spines constantly twenty, disposed regularly after the Müllerian law of Icosacantha, . . . . .	2. Acanthonida.
II. ACANTHOPHRACTA. Skeleton composed of twenty acanthinic radial spines (disposed after the Müllerian law) and of a spherical or variously shaped complete lattice-shell.	}	Radial spines all twenty of equal size; shell and central capsule spherical, . . . . .	3. Sphærophracta.
		Radial spines of different sizes; shell and central capsule ellipsoidal, discoidal, or heteromorphous, . . . . .	4. Prunophracta.

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Order III. ACANTHOMETRA, Johannes Müller, 1855.

*Acanthometra*, J. Müller, 1855, Monatsber. d. k. preuss. Akad. d. Wiss. Berlin.

*Acanthometrida*, Haeckel, 1862, Monogr. d. Radiol., p. 371.

*Acanthometrea*, R. Hertwig, 1879, Organismus d. Radiol., p. 133.

*Acanthonida et Litholophida*, Haeckel, 1881, Prodrömus, pp. 465, 469.

*Definition.*—ACANTHARIA without complete latticed shell.

The order *Acanthometra*, the third order of Radiolaria, comprises all those ACANTHARIA in which the acanthinic skeleton is only composed of radial spines arising from one common central point, but never forms a complete latticed shell. By the absence of such a latticed or fenestrated shell the *Acanthometra* differ principally from the nearly allied *Acanthophracta*, the second order of ACANTHARIA, which constantly possess such a complete shell.

Johannes Müller, who first detected and described the *Acanthometra* (in 1855, *loc. cit.*), defined them as follows:—"Radiolaria without shell, with siliceous radial spines" (1858, Abhandl. d. k. Akad. d. Wiss. Berlin, p. 46). He described and figured eighteen species of them, disposed in four genera (*Acanthometra* with fifteen species, and *Zygacantha*, *Lithophyllum*, *Lithoptera*, each with a single species). Among those eighteen species, however, were two "*Acanthometræ cataphractæ*," appertaining to the following order, the *Acanthophracta*.

In my Monograph (1862, p. 371) all true *Acanthometra* were united into a single family, *Acanthometrida*, with the following definition:—"Skeleton composed of a number of radial spines, piercing the central capsule and united in its centre, without