

Legion I. SPUMELLARIA,
vel Peripylea, vel Peripylaria (Pls. 1-50).

Spumellaria (exclusis Spyridinis), Ehrenberg, 1875.

Peripylea (inclusis Thalassicollis et Sphærozois), Hertwig, 1879.

Peripylaria (inclusis Collodariis et Polycyttariis), Haeckel, 1881.

Definition.—Radiolaria with simple membrane of the central capsule, which is everywhere perforated by innumerable very fine pores. Extracapsulum without phæodium. Skeleton wanting or siliceous. Fundamental form originally spherical.

The legion SPUMELLARIA vel PERIPYLEA, in the extent here defined, was constituted by me in 1883 in my paper on Die Ordnungen der Radiolarien.¹ I propose to retain for this legion either the name SPUMELLARIA of Ehrenberg (1875) or PERIPYLEA of Hertwig (1879), although both groups have not quite the same extension. We exclude from the SPUMELLARIA the Spyridina (united with them by Ehrenberg) and include the Collodaria. With the Peripylea of Hertwig we unite his Thalassicollea and Sphærozoëa. To avoid any confusion it would perhaps be better to name this legion "Peripylaria."

The SPUMELLARIA agree with the ACANTHARIA in the structure of the simple capsule-membrane, which is perforated by numerous small pores (but devoid of the large main opening, which the NASSELLARIA and PHÆODARIA possess), whence we unite both the former as Holotrypasta, both the latter as Merotrypasta.

The difference between the two legions of Holotrypasta is determined by the skeleton, which in the SPUMELLARIA is either siliceous or wanting, whilst in the Acantharia it consists of the peculiar organic substance, acanthin.

The legion SPUMELLARIA is by far the largest and most important of the four legions of Radiolaria, as well with respect to the number of different forms, as to the enormous masses of individuals, which we encounter living and fossil. We distinguish in this legion not less than thirty-two different families, three hundred and sixteen genera, and more than seventeen hundred species.

The classification of this large group requires for its better comprehension a careful division into larger and smaller groups. We divide it therefore first of all into two orders, Collodaria and Sphærellaria, as proposed in the paper mentioned above.²

The Collodaria have no perfect latticed skeleton, and comprise two suborders or sections: in the Colloidea the skeleton is entirely wanting, in the Beloidea it is represented by a variable number of siliceous needles or spicules, scattered in the calymma around the central capsule.

¹ *Sitzungsb. med.-nat. Gesellsch. Jena*, February 16, 1883.

² *Loc. cit.*