The Matrix or the "maternal tissue of the pseudopodia" is formed in all Radiolaria by the thin layer of exoplasm or of extracapsular sarcode, which immediately envelops the central capsule and is itself enclosed by the calymma. This continuous sarcode-cover of the capsule communicates by its pores or openings with the endoplasm or the intracapsular sarcode; whilst from its outer surface arise the pseudopodia. The morphological signification of the matrix is very small, but the physiological importance is very great, for it seems to be the chief organ of many vital functions.

The Pseudopodia or the very fine, long, thread-like filaments of exoplasm arise in all Radiolaria in very great numbers from the surface of the matrix, and exhibit in general the same characteristic shape as in the other Rhizopoda. Their inner or proximal part is enclosed within the jelly-veil or calymma, whilst their outer or distal part floats freely in the sea-water. Their special motions and modifications exhibit considerable variations in different groups, their tendency to ramify, anastomose, and form networks being in some cases very small, in others very great. Also the characteristic motion of granules in the pseudopodia is very different. In general those most important exoplasmatic filaments serve as organs both for the vegetative functions of nutrition, and for the animal functions of motion and sensation.

The class Radiolaria can be divided according to its varying structure into four different legions or subclasses, the characters of which are the following :—

I. PERIPYLEA or SPUMELLARIA.

Membrane of the central capsule simple, perforated by innumerable very fine pores. Fundamental form originally homaxon or spherical. Skeleton wanting or siliceous. No phæodium in the extracapsular calymma. The Peripylea comprise two orders :—

A. Collodaria (without lattice-shell).
B. Sphærellaria (with lattice-shell).

II. ACTIPYLEA or ACANTHARIA.

Membrane of the central capsule simple, perforated by innumerable fine pores. Fundamental form originally homaxon or spherical. Skeleton acanthinic (not siliceous). No phæodium in the extracapsular calymma. The Actipylea consist of two orders :—

A. Acanthometra (without complete lattice-shell).
B. Acanthophracta (with complete lattice-shell).