

different on the two poles of it. The prevalent number of rays on each end is three or four, often also two or five, rarely six. All spicula smooth, more or less bent.

Dimensions.—Diameter of the capsules 0·1 to 0·2, length of the spicula 0·05 to 0·15.

Habitat.—South West Pacific, Station 165, surface.

Subgenus 3. *Rhaphidonura*, Haeckel.

Definition.—Spicula of three different kinds: one kind simple, needle-shaped; the second kind radiate, with three to six shanks radiating from a common central point; the third kind geminate-radiate, with rays on both poles of a middle rod.

11. *Rhaphidozoum polymorphum*, n. sp.

Spicula of three different kinds; simple needles, radiate, and geminate mixed. The simple needles straight and stout. The radiate spicula commonly with three or six, rarely four or five, rays. The geminate-radiate spicula prevalent, with three or four, rarely two or five, shanks on each end of the middle rod. Number very variable. All shanks straight and smooth.

Dimensions.—Diameter of the capsule 0·1 to 0·2, length of the spicula 0·05 to 0·15.

Habitat.—South Pacific, Station 295, surface.

12. *Rhaphidozoum pandora*, n. sp. (Pl. 4, fig. 6).

Spicula of three different kinds; simple needles, radiate and geminate mixed. The simple needles thin spindle-shaped, often curved. The radiate spicula commonly with three or four, rarely five or six, curved rays. The geminate-radiate spicula commonly with three or four, rarely two or five, shanks on each end, often different on the two ends of the middle rod. Number and form very variable. All or most of the shanks more or less bent and thorny.

Dimensions.—Diameter of the capsule 0·1 to 0·3, length of the spicula 0·05 to 0·2.

Habitat.—South Atlantic (near Ascension Island), Station 343, surface.

Order II. SPHÆRELLARIA, Haeckel, 1881.

Sphærellaria, Haeckel, 1881, Prodrömus, p. 421.

Sphæridea vel *Peripylea*, Hertwig, 1879, Organismus der Radiol., p. 133.

Definition.—SPUMELLARIA with latticed or spongy shell.

The order Sphærellaria, the second order of Radiolaria, comprises all those SPUMELLARIA in which the skeleton is a latticed or fenestrated, often more or less spongy, siliceous shell. Originally this shell is a simple extracapsular lattice-sphere, in which the central capsule is included; from this simple ancestral form an enormous