

Subgenus 1. *Procyttarium*, Haeckel, 1879.

Procyttarium, Haeckel, Natürl. Schöpfungsgeschichte, ed. vii. p. 705.

Definition.—Central capsule spherical.

1. *Actissa princeps*, n. sp. (Pl. 1, fig. 1).

Central capsule spherical, colourless or a little reddish, transparent, with a thick double-edged membrane. Nucleus central, spherical, one-third as broad as the central capsule, containing a single, central, glossy nucleolus. Protoplasm finely granulated, without oil-globules, with numerous clear spherical vacuoles of equal size and at equal distances; the superficial layer of protoplasm (immediately below the membrane) radially striated (fig. 1). In some older specimens the nucleus was divided into numerous small nuclei (fig. 1*a*), which by further division gave the nuclei of the flagellated spores (fig. 1*b*); each spore with a very thin lateral flagellum (fig. 1*c*). Jelly-like calymma twice as broad as the enclosed capsule, without xanthellæ or yellow cells, pierced by innumerable, very thin and long, undivided pseudopodia, which arise from the sarcode-matrix on the outside of the membrane (six to eight times longer than shown in fig. 1).

Dimensions.—Diameter of the central capsule 0·1 to 0·12, of the nucleus 0·03 to 0·04, of the jelly calymma 0·2 to 0·3.

Habitat.—Indian Ocean, Ceylon, Belligemma, Haeckel, 1881; also in a preparation from Station 271, Central Pacific, surface.

2. *Actissa primordialis*, Haeckel.

Thalassolampe primordialis, R. Hertwig, 1879, Organismus der Radiolarien, p. 32, Taf. iii. fig. 5.
Procyttarium primordiale, Haeckel, 1879, Natürl. Schöpf., ed. vii. p. 705, Taf. xvi. fig. 1.

Central capsule spherical, dim-yellowish, with a thin, simple-edged but compact membrane. Nucleus large, central (about half as broad), with one or two dark nucleoli; on its side an excentric oil-globule, nearly of the same size. Protoplasm between nucleus and membrane, in the younger specimens finely granulated and radially striped; in the older specimens with numerous hyaline globules (vacuoles). Jelly-envelope or calymma very voluminous, ten to twelve times as broad as the central capsule, structureless, containing numerous yellow bodies (xanthellæ?), pierced by very numerous simple pseudopodia.

Dimensions.—Diameter of the central capsule 0·11 to 0·18, of the nucleus 0·04 to 0·09, of the jelly-like calymma 1·2 to 1·5.

Habitat.—Mediterranean, Messina, Hertwig, 1878, surface.

3. *Actissa prototypus*, n. sp.

Central capsule spherical, red-coloured, with a thick, double-edged membrane. Nucleus central, spherical, half as large as the radius of the capsule, containing a large number (forty to sixty) of small