

differs from the latter by the possession of spicula in the calymma. The peculiar "centripetale Zell-gruppen" on the inside of the capsule-membrane are probably due to radial cleavages of the endoplasm; as also occurs in other *Colloclaria*.

### 1. *Physematium mülleri*, Schneider.

*Physematium mülleri*, Schneider, 1858, *Archiv. f. Anat. u. Physiol.*, p. 38, Taf. iii. B, figs. 1-5.

*Physematium mülleri*, Haeckel, 1862, *Monogr. d. Radiol.*, p. 256, Taf. iii. figs. 6-9.

Spherical body limpid, somewhat opalescent, sometimes a little yellowish or brownish, rather soft. Central capsule with a thin, but firm, transparent membrane, its diameter eight to ten times as large as that of the central spherical nucleus. Membrane of the nucleus thick, porous, on its inside with some nucleoli. In the protoplasmic network between the large intracapsular alveoles, numerous large, pale, yellowish, or orange oil-globules. On the inside of the membrane numerous conical bodies, centripetally directed with the apex towards the centre; every conical body ("kegelförmige centripetale Zellgruppe") composed of three to nine (commonly four or five) nucleated cells (mother-cells of the spores?); in the axis of the cone there is often a yellowish, orange, or brown oil-globule. Extracapsular jelly-envelope thin, with short pseudopodia. Xanthellæ scarce or wanting. Spicula scattered in the jelly numerous, small, simple needles, commonly C- or S-like curved, smooth.

*Dimensions*.—Diameter of the whole jelly-sphere 3 to 6 mm., of the central capsule 1 to 5 mm., of the nucleus 0.1 to 0.5, length of the spicula 0.05 to 0.1.

*Habitat*.—Mediterranean, Messina; Schneider, Haeckel; surface.

### 2. *Physematium atlanticum*, Meyen.

*Physematium atlanticum*, Meyen, 1834, *Nova Acta Acad. Nat. Curios.*, vol. xvi., Suppl., p. 286 (162), Taf. xxxviii. (xxviii.) figs. 1-3.

Spherical body opalescent, pearl-like, with a violet or purple lustre, very soft. Central capsule with a strong, semi-transparent membrane, its diameter six to eight times as large as that of the central spherical nucleus. Membrane of the nucleus very thick, porous, on its inside with many small nucleoli. In the protoplasmic network between the alveoles very numerous, small, purple oil-globules. On the inside of the membrane a continuous simple layer of small nuclei, enclosed in radially striped protoplasm (mother-cells of the spores?). No centripetal conical bodies. Extracapsular jelly-envelope very thin, with short pseudopodia. No xanthellæ. Spicula scattered in the jelly numerous, small needles, straight or slightly curved, thorny owing to numerous small vertical spinules. This species and *Thalassolampe maxima* (p. 17) possess the largest central capsule.

*Dimensions*.—Diameter of the whole jelly-sphere 8 to 12 mm., of the central capsule 5 to 10 mm., of the nucleus 1 to 2 mm., length of the spicula 0.1 to 0.3.

*Habitat*.—Eastern Atlantic, between Canary Islands and Cape Verde Islands, Meyen; Lanzerote, Haeckel.