

which may be stained by carmine and is probably identical with the jelly of the calymma. The latter is probably in direct connection with the former by the central pore of the nodal cavity, which is placed on its inside and surrounded by the astral septa; these separate the tangential tubes, radiating from one nodal point, completely, and are thin and simple, but very solid lamellæ of silica. Therefore the nodal stars of broken shells usually remain united, whilst the single radiating tubes composing them are broken off (Pl. 110, figs. 3, 8, 10). But it happens only rarely (and only in certain individual species) that complete single tubes separate; usually the fragments of the connected neighbouring tubes remain on their ends. The two small terminal openings of each tangential tube, which lead from its cavity into the nodal cavity, and are surrounded on each end by the truncated ends of two neighbouring astral septa, are very difficult to observe (Pl. 110, figs. 8-10).

The wonderful elegance and the high complication of these regular skeletons of the Aulosphærida, produced by a single cell, becomes increased by the graceful and manifold appendages and apophyses which are usually developed on the radial tubes. In only a few species these are simple, as in the common and cosmopolitan *Aulosphæra trigonopa*. Usually lateral or terminal appendages are developed in great variety, a selection of which is figured in Pls. 109-111. The lateral branches are either irregularly scattered spines (Pl. 110, figs. 3-7) or regular verticils of cruciate or radiate spines; each verticil is usually composed of four perpendicularly crossed horizontal branches (Pl. 109, figs. 3, 4, 7, 10, &c.), more rarely of a greater number of radiating transverse branches.

The terminal appendages of the radial spines exhibit a striking similarity with those of the Aulacanthida (Pls. 102-105). They are either forks with two or three divergent branches (Pl. 111, figs. 3, 4), or regular crosses with four branches opposite in pairs (Pl. 109, figs. 2, 6, 7, 10), or elegant crowns or verticils, composed of numerous radiating branches (Pl. 110, figs. 1-6). The distal ends of the terminal as well as of the lateral branches are either simple, pointed, or armed with a spinulate knob, or with a terminal spathilla. The variety and elegance of these terminal ornaments, the function of which is that of capturing tentacles, is in the Aulosphærida not less admirable than in the Aulacanthida and Cœlodendrida.

The *central capsule* of the Aulosphærida (Pl. 111, fig. 2) was first figured in my Monograph (1862, Taf. xi. fig. 5) of *Aulosphæra elegantissima*, as a sphere of 0.2 to 0.3 mm. in diameter. I described there the large nucleus (of half that size) as a spherical "Binnenblase," and the numerous pseudopodia which arise from the capsule and radiate through the meshes of the lattice-shell. But I had not observed at that time the three typical openings of the capsule, which were first discovered and accurately described by R. Hertwig (1879, *loc. cit.*, p. 94, Taf. x. figs. 2, 4, 5, 8, 14). The large astropyle with its radiate operculum and proboscis, and the two smaller lateral parapylæ, provided with