

bivalved mantle. The central capsule is so enclosed between the two inner valves, that its three openings lie in the open frontal fissure between them.

The family *Cœlodendrida* differs from the preceding *Concharida* (its probable ancestral group) in the development of a conical galea or pyramidal cupola on the apical pole of each valve, and of three or more hollow radial tubes arising from each galea. They do not possess, however, the peculiar sagittal nasal tube or rhinocanna, which is constantly developed from the base of each cupola (and connected with its apex by a frenulum) in the following family, the *Cœlographida*. These latter differ also from the former in the constant possession of prominent verticillate styles.

The family *Cœlodendrida* was founded in 1862 in my Monograph (p. 360) and represented hitherto only by two species of the genus *Cœlodendrum*, there described (p. 361, Taf. xiii. figs. 1–3, and Taf. xxxii. fig. 1). This first description, however, contained some errors, which were afterwards (in 1879) corrected by Richard Hertwig; this author also gave the first accurate description of the central capsule and its three openings. In the rich collection of the Challenger, the *Cœlodendrida* are represented by four genera, but only seventeen species, some of which, however, are cosmopolitan and very common, particularly *Cœlodendrum*.

The two valves of the lattice-shell, dorsal and ventral, are either hemispherical, or somewhat more flatly vaulted or cap-shaped. They are never connected in the equatorial zone of the body, as I supposed in my Monograph (1862, *loc. cit.*); but they are separated by the girdle-fissure, a free circular equatorial interval, in which lie the three openings of the enclosed central capsule. Though the two valves, therefore, have no direct connection, they are, however, always opposed so accurately, that their equal free circular edges correspond exactly one to the other, so that the apex of each valve lies in one pole of the sagittal axis. From this apex there arises on each valve an irregular conical or three-sided pyramidal cupola, the galea (Pl. 121, figs. 3, 4, 8). The *Cœlodendrida* differ in the possession of this galea from the *Concharida*, and agree with the *Cœlographida*; but they never exhibit the peculiar rhinocanna or nasal tube, which arises from each galea in the latter family.

The siliceous lattice-plate of the two valves, and of the galea arising from them, is very thin and fragile, and its irregular roundish pores are extremely variable in size, number, and disposition. Sometimes the pores are so small and so scarce, that the plate appears nearly solid. At other times the siliceous plate seems to be really solid, and covered by a network of thin crests, the small dimples between which give to it the appearance of being fenestrated. Often the pores or the dimples are wanting in the central part of each valve, while they are very numerous and dense in the peripheral part. The same may be said of the lattice-plate of the galea, which is sometimes nearly solid, at other times richly fenestrated. The *Cœlodendrida* agree in this structure with the following