

or slightly-cupped disk, with a papilla in the centre receiving the upper end of the coil, with large oscular openings, and a fringe of delicate radiating spicules round the edge, was the top of the sponge, spreading out probably level with the surface of the ooze.

In essential structure *Hyalonema* very closely resembles *Holtenia*, and the more characteristic forms of the Hexactinellidæ. The surface of the sponge is supported by a square network, formed by the symmetrical arrangement of the four secondary rays of five-rayed spicules, and the sarcode which binds these branches together is full of minute feathered five-rayed spicules, which project from the branches like a delicate fringe. The oscula are chiefly on the upper disk, and lead into a number of irregular passages which traverse the body of the sponge in all directions. When we trace its development, the coil loses its mystery. On one of the *Holteniæ* from the Butt of the Lews, there was a little accumulation of greenish granular matter among the fibres. On placing this under the microscope it turned out to be a number of very young sponges, scarcely out of their germ state. They were all at first sight very much alike, minute pear-shaped bodies, with a long delicate pencil of silky spicules taking the place of the pear-stalk. On closer examination, however, these little germs proved to belong to different species, each showing unmistakably the characteristic forms of its special spicules. Most of them were the young of *Tisiphonia*, but among them were several *Holteniæ*, and one or two were at once referred to *Hyalonema*. In two or three hauls in the same locality we got them in every subsequent stage—beautiful little