

*Errina* is the only genus of Stylasteridæ in which the definite cellular structure of the surface layer of the ectoderm could be determined, although no doubt a similar structure exists in that of all the species of the family.

In places the cells composing the layer appear to overlap and sometimes to form a double layer, as seen in the figure. Possibly this appearance is due to the action of reagents.

Nematocysts of two kinds, larger and smaller, occur, and of the usual forms. The larger are mostly gathered into thickly set masses or nematophores (Pl. IV. NN), but occur also scattered, or in twos or threes, within the surface layer (Pl. XI. fig. 10, N). These scattered nematocysts have the appearance of lying within the polygonal cells composing the surface layer (Pl. XI. fig. 10), as is the case in *Hydra viridis*, as shown by F. E. Schulze.<sup>1</sup>

The smaller nematocysts occur scattered in the surface layer (Pl. XLIV. fig. 10, N), and thickly set in the tentacles of the gastrozooids and outer surfaces of the dactylozooids.

*Dactylozooids*.—These are simple elongate mouthless conical bodies, closely similar to those of *Sporadopora*, but somewhat more attenuated in appearance (Pl. XXXVII. D Z). They are attached to the bases of sacs which line the cavities of the nariform dactylopores of the cœnosarc, the walls of which sacs are continuous in structure with the surface layer of ectoderm.

*Gastrozooids*.—These are cylindrical in form (Pl. IV. G Z), with a rounded conical hypostome and four tentacles set in a single whorl at its base. The tentacles are, in the contracted condition, clavate in form. The base of the zooid rests on the style of the containing gastropore, which in the retracted condition of the zooid appears to project into the gastric cavity to a considerable distance as in *Sporadopora*. The ectodermal covering of the gastrozooids is composed of transparent ovoid cells (Pl. XI. fig. 4), which form a layer resting upon a substratum containing numerous nuclei and bounded by the basement membrane. The gastric endodermal lining of the zooids is composed of elongate cells of closely similar nature to those occurring in *Sporadopora*. The mouth appears, when closed, as a crucial slit; four main canals usually lead from the base of the zooid cavity to the cœnosarcular meshwork.

*Growth by Budding*.—Fresh zooids are added to the colony by means of buds arising from the surface layer of the cœnosarc at points where this is joined by offsets of the superficial canals of the cœnosarcular meshwork. Such a bud is represented in Plate IV. D. The part of the superficial layer immediately surrounding the bud is depressed, and forms the sac of the zooid.

*Gonophores*.—Only female examples of *Errina labiata* was obtained for examination.

<sup>1</sup> Über den Bau und die Entwicklung von *Cordylophora lacustris*, Leipzig, W. Engelmann, 1871, Taf. vi. fig. 10.