

in *Anthozoans*, than does the very curious simulation which exists in its cœnosteum. The resemblance is, however, in both instances merely superficial, and of no genetic significance.

The branched and fringed processes of endoderm described as embracing the embryos in *Errina* and *Stylaster* appear to correspond with the similarly branched structures in *Cordylophora lacustris*, described and figured by Allman and F. E. Schulze.¹ I have described them as outgrowths of the spadix, but possibly the cup-shaped endodermal structure supporting the ova should not be so designated.

The endoderm of the Stylasteridæ is always coloured, and seems most frequently to assume various shades of red or violet coloration, but in *Astylus subviridis* it is green. The cœnosteum itself is in some species coloured, especially, it would appear, in *Distichopora*, but no doubt in many instances the coloration ascribed to the calcareous structures is in reality due to endoderm dried up within the interstices of the corallum.

In a former paper I conjectured that possibly shallow water Stylasteridæ might bear free gonophores, and perhaps medusiform ones, and that the occlusion of the gonophores within calcareous structures, and their adelocodonic condition, was due to the fact that the forms examined lived in the deep sea. This suggestion was in accordance with the observations of Allman, who has found fixed sporosacs in all deep-sea Hydroids examined by him.² I find, however, from specimens sent me by Count de Pourtalès, that ampullæ are especially well developed on the shallow water *Stylaster roseus*; those in the female stocks being very large and prominent. There can, therefore, be little doubt that these structures occur throughout the family.

In all the Stylasteridæ in which the gastropores have styles, the gastrozooids must be protrusible in the expanded condition to a very slight extent. And the fact that in some genera the gastrozooids lose their tentacles seems to bear out this supposition. No doubt in active life the dactylozooids extend like long and filiform tentacles and catch and convey food to the gastrozoid, which nourishes them in return by means of its basal canals and the general circulation. It is to be noted that in those genera in which the gastrozooids have no tentacles, tentacles are wanting in the entire stock.

The nariform and tubular projections of *Errina* are no doubt contrivances for extending the reach of the dactylozooids, whilst at the same time protecting them. In *Acanthopora* the bases of the dactylozooids are pushed out to a remarkable distance from the gastropore mouths, and subsidiary dactylozooids of a smaller kind seem to be necessary to ensure the conveyance of food to the gastrozoid. G. O. Sars, who is the only naturalist who has observed a Stylasterid alive, never saw the zooids raise themselves above the level of the mouths of their cyclo-systems.

¹ F. E. Schulze, Über den Bau und die Entwicklung von *Cordylophora lacustris*, Leipzig, W. Engelmann, 1877, p. 34, plates iii., iv.

² Allman, Gymnoblastic or Tubularian Hydroids, vol. ii. p. 155; Nature, Oct. 28, 1875, p. 566.