

tabulate, and styles in both forms of them. The dactylozooids of *Archistylaster* were devoid of the knobbed tentacles, these were, however, retained by the gastrozoid. The gonangia were included in hollows in the cœnosteum.

In *Sporadopora*, the most ancestral *Stylasterid* at present known, the styles of the dactylopores have disappeared, and they only reappear apparently by reversion in *Allopora* and *Stylaster*. Rudimentary tabulæ are present in *Sporadopora* and *Pliobothrus*, but disappear in succeeding genera. In *Pliobothrus* the margins of the dactylopore mouths are raised up and prolonged into small tubuli, and the genus would thus lead to *Errina*, where the tubuli become nariform, were it not that in *Pliobothrus* the style of the gastrozoid is lost, and that the gastrozoid is devoid of tentacles and flask-shaped: a condition occurring again only in the most highly specialised members of the family *Astylus* and *Cryptohelia*. *Distichopora* appears to have been derived directly from some form allied to *Errina*.

Two separate modifications of the nariform projections of *Errina* are presented by *Porella* and *Spinipora*, in both which genera further complication ensues by the differentiation of two kinds of dactylozooids.

The process of the formation of cyclo-systems is seen in all stages in different parts of the surface of the single species *Allopora subviolacea*, as will be seen by reference to Saville Kent's figures,¹ or to the diagrams given on Plate I. of the present Memoir, figs. 10, 11, and 12. In this coral five or six dactylopores are grouped in a circle around a single centrally-placed gastropore. In some groups all the pores are simply circular (fig. 10). In others, shallow grooves, often only just indicated, lead radially from the dactylopores towards the gastropore. In others, these grooves are well marked and deep, and a complete cyclo-system is formed. It appears probable that this condition has been brought about by the continual bending inwards of the dactylopores to convey food to the gastropore. The grooves have been the result of the attempts of these zooids to reach the gastrozoid when further and further retracted. Thus, in most *Alloporas* and all *Stylasters*, all the pores have come to form regular cyclo-systems, in which the mouths of the dactylopores are drawn out into elongate chambers, and their tubular prolongations reduced to mere rudiments in many cases. At a very short distance below the surface in *Allopora subviolacea* the pores are found to be in all the systems still entirely independent (fig. 12), and this condition is maintained at greater depths in all *Stylasters*. It is to be noted that in becoming so remarkably modified into elongate slit-like cavities, the dactylopores of *Stylasteridæ* with cyclo-systems follow an ancestral tendency to modification, for these elongate pores are, taken separately, closely similar in form to the nariform dactylopores of *Errina* and its allies: they only have the lips of all the projections directed radially outwards.

¹ Proc. Zool. Soc., 1871, pl. xxv. fig. 2 a.