pores sporadic, with tabulæ and without styles, and with two kinds of zooids, with knob-bearing tentacles; with a tendency also in the dactylozooids to form ring-like groups around a gastrozooid. This form may be termed "Archihydrocorallina."

Archihydrocorallina was probably derived from a form in which all the zooids composing the stock were provided with mouths and generative organs. In such stocks further development may be conceived of as having arisen by either of two processes. All the zooids may have become gradually modified, so that each performed only one function, and thus had certain of its structures aborted to fit it for this special end. If such be the history of the development of the Hydrocorallinæ, then the gastrozooids, dactylozooids, and generative zooids are to be looked on, as they have been regarded throughout the present memoir, as zooids which have become more or less rudimentary by disease. Or, on the other hand, the view may be taken that the gastrozooids alone represent the original zooids of the ancestral stocks. They remain, having lost their generative organs, and, to a greater or less extent, their prehensile ones, because additional zooids have been formed by budding in order to provide for the wants of the colony in these particulars. On this view the generative zooids and dactylozooids were originally budded out in the condition in which they now exist, or in one not so complete as it is at present, nor so perfectly adapted to their present functions. On this view they have lost no structure by disuse, but have rather advanced in complexity with development, but only in their own special direction.

The former view of the antecedent history of the sub-order Hydrocorallinæ seems to me to be most worthy of acceptation, because the presence of several structures which occur as rudiments in connection with the dactylozooids and generative zooids, but which are fully developed in connection with the gastrozooids, seems to bear out this conclusion. As examples, may be cited the tentacles of the dactylozooids of the Milleporidæ and the styles of the dactylozooids of certain Stylasteridæ. The Stylasteridæ in the complexity of their compound stocks form an interesting parallel to the Siphonophora. In the Siphonophora the several components of the compound organisms are by the best authorities regarded not as individual degenerate zooids, but as buds which tend to assume more and more the form of individuals. The diverse elements composing the organism in the case of the Siphonophora may seem closely paralleled by those of which a Stylasterid is made up, and yet the past history of the two organisms may be very different. In the one case, an ancestral already compound organism may have gradually modified its similar zooids to subserve division of labour; whilst, in the other, a simple ancestor may have gradually developed a similar compound organism by throwing out buds of various forms which have come more or less to approach itself in complexity.

From Archihydrocorallina, Archistylaster was developed with a branching cœnosteum; with a strong tendency to assume a flabellate form, and to develop its pores only on one face of the flabellum, and at the sides only of the branches; with its pores sporadic and