

for it has its representative in the condition of the ordinary hydrocladia in the Elcuthero-plean genus *Schizotricha* of the present Report.

In all the instances now described, the phylactocarps must, as we have seen, be regarded as more or less modified hydrocladia. To those which remain for consideration we must assign an entirely different significance, for we now find them to be variously formed appendages, which though specially developed as in the former for the protection of the gonangia, are superadded to the hydrocladia, which retain their normal form.

In *Cladocarpus pectiniferus* (Pl. XVII.) the phylactocarp is a bifurcating branch which springs from the proximal end of a hydrocladium, and supports the gonangia along its sides. It is destitute of hydrothecæ, and carries along its entire length a double series of opposite nematophores, which have assumed the form of long, spine-like processes, giving a pectinated character to the phylactocarpal branches. In *Cladocarpus formosus* of the Challenger and "Porcupine" expeditions (Pl. XVI. figs. 4 and 5), and in *Cladocarpus paradiseus*, *Cladocarpus dolichotheca*, and *Cladocarpus ventricosus*, of the Gulf Stream exploration, we find a branched phylactocarp essentially similar to that just described.

The morphological significance of the phylactocarp in *Cladocarpus* is not so obvious as in that of other Plumularidæ. In *Cladocarpus pectiniferus* (Pl. XVII. fig. 3), *Cladocarpus formosus* (Pl. XVI. fig. 5), and in some other species, the mesial nematophore of the hydrotheca, immediately behind which the phylactocarp springs, is entirely absent; and this fact, supported by the analogy afforded by other forms of phylactocarp, would lead us to regard the phylactocarp here as representing in a greatly modified form the mesial nematophore of the proximal hydrotheca—a view which is scarcely invalidated by the fact that it springs from a point not absolutely in the mesial line of the internode.

There are, however, other cases in which the mesial nematophore of the proximal hydrothecæ is still present, and then we may perhaps regard the phylactocarp as representing the mesial nematophore of a hydrotheca which had been itself totally suppressed—a view which is justified by the analogy of other forms of phylactocarp, to the formation of which, as we have seen, the greatly modified mesial nematophores of suppressed hydrothecæ largely contribute.

In *Pleurocarpa ramosa*, a remarkable Statoplean from St. Vincent, Mr. Fewkes describes the phylactocarp as composed of a series of ribs which take the places of hydrocladia near the proximal end of a branch, the hydrocladia towards its distal end remaining in their normal condition.¹ Though no gonangia appear to have been present in the specimen, there can be no doubt of the structure in question being a true phylactocarp; and then I should regard the ribs as representing the phylactocarpal appendages in *Cladocarpus* with the hydrocladia, which in this genus carry them suppressed. They are described by Mr. Fewkes as carrying along their length long tubular nematophores, and,

¹ *Bul. Mus. Comp. Zool., loc. cit., p. 136, pl. iii. fig. 2.*