regard to the hydrotheca, becomes much elongated and transformed into the great protective rib.

The whole morphology of the corbula thus becomes beautifully distinct. We have only to complete the transformation by supposing the costal hydrothecæ, with their peduncle and lateral nematophores to become suppressed, and the ribs to become confluent by their edges, in order to convert the curious open cage of *Lytocarpus myriophyllum*, and of the Gulf Stream and Challenger Plumularians, into the ordinary closed Aglaophenian corbula.

In the two species of the Gulf Stream exploration (*Lytocarpus distans* and *Lytocarpus bispinosa*), the hydrocladium, which is to become transformed into a phylactocarp, retains its normal condition for a greater distance than in *Acanthocladium huxleyi* continuing to bear from three to five scarcely altered hydrothecæ before the change begins which results in the formation of a phylactocarp.

An intermediate condition will be found in those instances of an open corbula (*Aglaophenia filicula* and *Aglaophenia attenuata*, Pl. XI. figs. 5 and 9), in which, while the hydrothecæ as in the ordinary closed corbula become suppressed, the leaflets remain distinct from one another.

A very interesting and instructive form of phylactocarp is found in *Lytocarpus racemiferus* (Pl. XIII.). In this beautiful Plumularidan, the hydrocladia on each side for a certain length of the principal branches become, as in the other instances, modified so as to form protective supports for the gonangia (fig. 4). The modification here consists in the entire suppression of the hydrothecæ, while the mesial and lateral nematophores are retained in a scarcely altered form. The hydrothecal internodes also continue distinct, and the places of the suppressed hydrothecæ are taken by the gonangia, which are thus disposed in a single series, one on each internode, from the proximal towards the distal end of the rachis. Near the distal end, however, the suppressed hydrothecæ are not replaced by gonangia, though here, on every internode, we still find the three nematophores, the mesial and the two lateral, of the absent hydrotheca. In this form of phylactocarp there are no rib-like appendages; and the mesial nematophores, which in other forms become converted into ribs, here retain their normal condition.

In *Lytocarpus spectabilis* (Pl. XV.) we have another instructive example of a phylactocarp in which no ribs are developed. Here, as in the instances already cited, the phylactocarps take the places of hydrocladia, of which they are obvious modifications (fig. 4). The proximal internode carries a hydrotheca with its normal mesial and lateral nematophores, but in all the other internodes the hydrothecæ with their mesial nematophores are suppressed, while the lateral nematophores are retained as a pair of strong blunt spines.

In the specimen from which the figures on Pl. XV. had been drawn, no gonangia were developed on the phylactocarps. In another, however, a gonangium (fig. 2, p. 44)