

gonangia are borne on the branches of the phylactocarp instead of being carried at its base by the stem. From *Cladocarpus ventricosus* it further differs in the cylindrical instead of ventricose form of the hydrotheca.

The pectination of the branches of the phylactocarp is due to the presence of nematophores, which are disposed in two opposite series from the base to the summit of the branch, and which, instead of remaining in the usual condition of small sessile cups, have become developed into long cylindrical tubes. In *Cladocarpus dolichotheca* and *Cladocarpus ventricosus*, the nematophores, which are also present on the branches of the phylactocarp, are disposed in a single series, and retain their normal form.

The hydrocladial internodes of *Cladocarpus pectiniferus* are provided with numerous transverse intra-cauline ridges, situated at equal distances from one another. Owing to the transparency of the chitinous periderm, these are very distinct, and give to the internode the appearance of being divided into distinct chambers by regular septa—a character which is very obvious and striking.

The hydrotheca of the internode, from which the phylactocarp springs, is destitute of mesial nematophore, and the phylactocarp springs not exactly from the mesial line of the internode, but from a point a little to the side of this, just below the hydrotheca. The absence of a mesial nematophore, in its normal form, is here not without significance, and affords grounds for believing that the phylactocarp, notwithstanding its slight displacement, is its homological representative.

Cauline nematophores are borne in a single series along the front of the stem, and give to its lower end, where this is destitute of pinnæ, an appearance easily comparable to that of some of the single-sided graptolites. Like most deep-water species, *Cladocarpus pectiniferus* is distinguished by the delicacy and transparency of its chitinous periderm.

Dredged at Station 76, July 3, 1873, lat. 38° 11' N., long. 27° 9' W.; depth, 900 fathoms; bottom temperature, 4°·2 C.; bottom, globigerina ooze.

*Cladocarpus formosus*, Allm. (Pl. XVI. figs. 4, 5).

*Cladocarpus formosus*, Allman, Trans. Zool. Soc. Lond., vol. viii., 1873.

*Trophosome*.—Colony attaining a height of about four inches; stem simple or very sparingly branched, fascicled below, becoming monosiphonic distally, springing from a tuft of delicate tubular filaments; hydrocladia alternate, attaining a length of about one inch. Hydrothecæ cylindrical, with crenate margin; mesial nematophore divided by an imperfect transverse septum into a proximal and a distal half, adnate for somewhat more than half its length to the hydrotheca, then becoming free, attaining the level of about half the height of the hydrotheca, and opening by a wide terminal emarginate orifice; lateral nematophores short, cup-shaped, very slightly overtopping the hydrotheca.

*Gonosome*.—Phylactocarp in the form of a slender branch, which springs from the