

an inch in length, and though pinnate at their origin, are all directed unilaterally towards the distal ends of the main stems. Hydrothecæ deep, flask-shaped, with a deep antero-posterior constriction just below the margin; margin entire, directed forwards; mesial nematophore adnate to the hydrotheca wall for nearly half the height of the wall, and then continued for about the same distance as a free beak-like process, which is provided with a lateral as well as a terminal orifice; lateral nematophores in the form of long tubular cylindrical processes, which project far beyond the margin of the hydrotheca.

*Gonosome* not known.

The type of form presented by the hydrotheca of the present species is very remarkable. The deep antero-posterior constriction, the nearly vertical direction of the hydrotheca mouth, with its even margin, so exceptional among the Statoplean Plumularidæ, and the long cylindrical lateral nematophores which project like a pair of ears over the margin, confer on it an aspect singular and striking. The constriction below the hydrotheca mouth is entirely confined to the antero-posterior direction, so that though very striking in profile, it is not apparent in a front view of the hydrotheca.

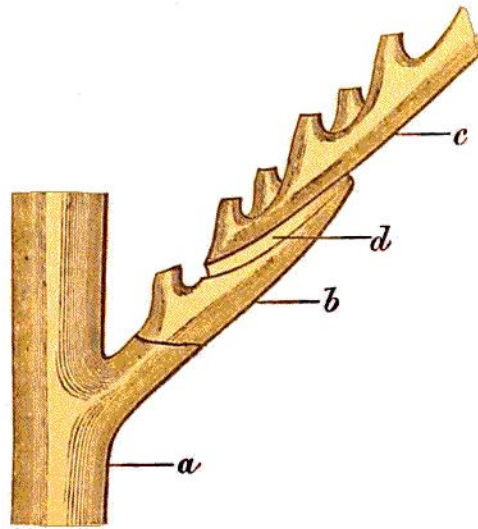


FIG. 3. Origin of a primary pinna in *Lytocarpus longicornis*, showing the splice-like joint near the proximal end of the pinna.

- a. Main stem.
- b. Proximal portion of pinna.
- c. Distal portion. The bases of the secondary pinnae or hydrocladia are seen with a second disposition, along the length of the primary pinnae.
- d. Splice-like joint separating the proximal from the distal portion of the primary pinna, and filled with a colourless chitin.

The doubly pinnate ramification of the colony, with the unilateral direction of the very short hydrocladia, afford other striking characters. The hydrocladia are carried each on the summit of a strong process of the primary pinnae, and being all directed towards one side of these, their really pinnate disposition may be easily overlooked. The basal process on which each stands has on its inner side a tubular nematophore.

The primary pinnae, or those which being themselves destitute of hydrothecæ support