

Ascidiozooids open independently. It is evident that although the form of the colony in the present species closely resembles that of *Pyrosoma*, still the inner surface lining the central cavity is homologous with part of the outer surface of the ordinary Compound Ascidian and not with the inner surface lining the central cavity of *Pyrosoma*. The present species is therefore to be regarded as an unattached Compound Ascidian, which shows, in the peculiar form of its colony, a transition to *Pyrosoma*.

The central cavity in *Cælocormus huxleyi* divides about the middle of the colony into two branches which end cæcally and are separated from one another by a rounded eminence (see fig. 10, B, and Pl. XXXVIII. fig. 1) bearing on its summit a large irregularly rounded opening. This is the only common cloacal aperture visible in the specimen.

The Ascidiozooids are rather smaller and more numerous near the open end of the

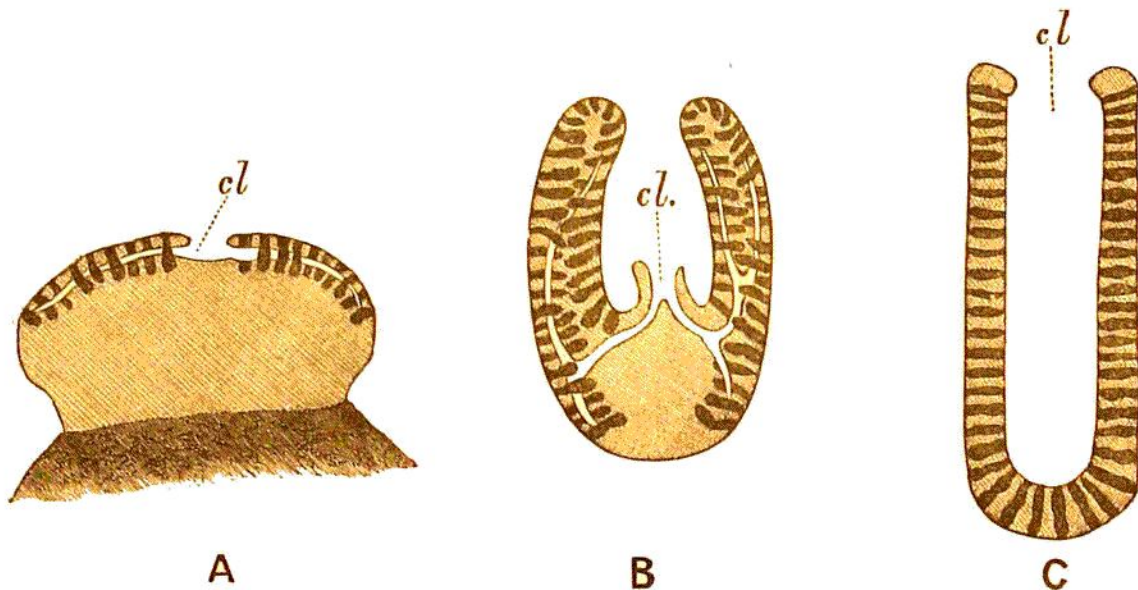


FIG. 10.—Diagrams showing the relations between—A, a typical Compound Ascidian ; B, *Cælocormus* ; C, *Pyrosoma*. In all cases the colonies are represented in longitudinal section, and *cl.* indicates the opening of the common cloacal cavity.

colony than elsewhere. They are of large size and are fairly abundant about the centre, while at the closed end they are almost absent (Pl. XXXVII. figs. 1, 2), that part of the colony being mainly a mass of solid test in which some very large tailed larvæ are found imbedded. Probably the young Ascidiozooids are formed by gemmation at the open end, which is thus the growing point of the colony, and gradually move farther and farther away from the common cloaca, which may be regarded as the oldest part of the colony. The older and larger Ascidiozooids, as they approach the rounded closed end, probably die and are expelled from the colony, leaving behind them, imbedded in the test, the embryos or larvæ which they have produced during the later part of their existence. If this interpretation of the life-history of the colony is correct, the Ascidiozooids reproduce by gemmation during the early part of their existence, and sexually later on, when they are adult.