a smaller branch leading to the genera *Oxycorynia*, *Colella*, and *Distaplia*, and a more important one, which has given rise to all the remaining forms (see fig. 13). In the ancestral forms of *Oxycorynia*, as in those of *Chondrostachys*, a peduncle has been formed, while the upper part of the colony forms an enlarged mass, the head, in which the short-bodied Ascidiozooids are imbedded.

The Ascidiozooids probably underwent very little change in form after they diverged from the ancestral Polyclinidæ at the point C. (fig. 11), and no antero-posterior elongation like that of the Polyclinidæ has taken place. In the genera *Colella* and *Distaplia* a remarkable modification of the peribranchial cavity has been effected, resulting in the formation of a large incubatory pouch in which the embryos undergo their development (see p. 89).

The chief branch springing from the point G. (fig. 13) gave rise, with very little change, to the well-known genus *Distoma*, and the allied form *Cystodytes*. This latter genus is similar to *Distoma* in most respects, but differs from it in having a remarkably modified test, in which discoid calcareous spicules are produced (see p. 135).

From the ancestors of *Distoma* a series of forms arose in which, while the general characters of the Distomidæ were preserved, some important changes were effected in the test and in the reproductive organs. The test cells acquired the property of producing spherical or stellate calcareous spicules, while the vas deferens assumed gradually the spirally coiled form which is so characteristic of the Didemnidæ (see p. 254). This ancestral line divided at the point H. into two branches, one leading with comparatively little change to the Didemnidæ and the Diplosomidæ, and the other producing the remarkable *Cœlocormus*, and eventually *Pyrosoma* (see fig. 13). In this second line diverging from H. the ancestral condition of the male reproductive organs found in the Distomidæ was retained, along with the partially coiled arrangement of the vas deferens which was present in H., and which afterwards became emphasised in the Didemnidæ. At the same time the colony became detached, and its upper surface sank in so as to produce an axial cavity, the lining of which is really morphologically a part of the outer surface of the colony (see p. 318), thus giving rise to the genus *Cœlocormus* (fig. 14, B).

The value of *Cœlocormus* as a transition form between the ordinary Compound Ascidian colony, such as a species of *Distoma* (fig. 14, A), and the pelagic *Pyrosoma* (fig. 14, C) has already been pointed out in the systematic part of this Report (see p. 319). *Pyrosoma* has probably descended from an ancestral form, allied to *Cœlocormus*, by slight changes in shape, resulting in the formation of an elongated hollow cylinder, and by a modification in the relations of the Ascidiozooids whereby they came to open independently into the large axial cavity, which is thus virtually converted into a huge common cloacal cavity (see fig. 14, C.). The colony is free-swimming, and the Ascidiozooids have acquired light-producing organs placed laterally on their anterior ends in the positions occupied by the masses of pigment cells in *Polycyclus jeffreysi* (see p. 68).