

*Test* gelatinous or cartilaginous, often thickened at the base to form a peduncle, which may be traversed by large canals containing the vascular appendages of the Ascidiozooids.

*Branchial Sac* well developed; usually no internal longitudinal bars present.

*Dorsal Lamina* in the form of languets, rarely a plain membrane.

*Alimentary Canal* placed at the posterior end of the branchial sac.

*Reproductive Organs* in the intestinal loop, or alongside it.

I use this family name in a somewhat different sense to that in which it has been employed by previous writers. Giard considered that the family Distomidæ contained three genera—*Distoma*, *Diazona*, and *Sigillina*. The last named form I regard as one of the Polyclinidæ, and *Diazona* seems to be a connecting link between *Chondrostachys* and *Clavelina*, and is therefore extremely difficult to place. Perhaps the best way might be to leave it, as Della Valle placed it in 1877, in a distinct family by itself. This reduces Giard's Distomidæ to the genus *Distoma*. To this Della Valle added *Distaplia* in 1881, and in von Drasche's classification (1883) we find the family Distomidæ consisting of these two genera with the addition of a subgenus of *Distoma*, viz., *Cystodytes*. In a distinct but adjacent family, the Chondrostachyidæ, he places Macdonald's *Chondrostachys* and his own *Oxycorynia*, both interesting forms. So far as I can make out from von Drasche's definitions and descriptions, he distinguishes the two families upon the rather slender ground that in the Chondrostachyidæ the colony is supported upon a peduncle traversed by canals, while in the Distomidæ this is not the case, but the Ascidiozooids are provided with vascular ectodermal appendages. Now in the Challenger collection there are a considerable number of forms which are allied to *Distoma* and *Distaplia* in certain characters but they have peduncles, in some cases long and in others short, and these peduncles are traversed by canals, which, however, contain vascular appendages prolonged downwards from the posterior ends of the Ascidiozooids. Hence it is perfectly obvious that these forms, to which I have given the generic title *Colella*, unite the characters of the Chondrostachyidæ and the Distomidæ, and consequently render it impossible any longer to separate the two families. I have retained the older name, derived from what has all along been considered as the central form of this group, viz., *Distoma*, but the family has now much wider limits than it has had hitherto, and embraces at least the genera—*Chondrostachys*, Macdonald, *Oxycorynia*, von Drasche, *Colella*, Herdman, *Distoma*, Gaertner, *Cystodytes*, von Drasche, *Distaplia*, Della Valle, and, probably, *Symplegma*, Herdman. Whether or not *Diazona*, Savigny, should be added must be left doubtful.

The general form of the colony throughout the family is very variable, but usually it is of large size. Sometimes it is an irregularly rounded mass (as in *Distoma crystallina*), occasionally it is a more or less incrusting layer (as in *Cystodytes draschi*); while very