

Suborder I. ASCIDIÆ SIMPLICES.¹

This group contains fixed Ascidiæ which are solitary, and very rarely reproduce by gemmation; if colonies are formed, the members of the colony are not buried in a common investing mass, but each has a distinct test of its own.

The Ascidiæ Simplicæ include four families. The Challenger Simple Ascidiæ were described in Part I. of this Report, and in Part II. Appendix A.²

Suborder II. ASCIDIÆ COMPOSITÆ.³

This group contains fixed Ascidiæ which reproduce by gemmation so as to form colonies in which the Ascidiozooids are buried in a common investing mass, and have no separate tests.

The Ascidiæ Compositæ include seven families. The Challenger Compound Ascidiæ were described in Part II. of this Report.

Suborder III. ASCIDIÆ SALPIFORMES.

This group contains free-swimming pelagic Ascidiæ which reproduce by gemmation so as to produce colonies having the form of a hollow cylinder closed at one end. The Ascidiozooids forming the colony are embedded in the common test in such a manner that the branchial apertures all open on the outer surface and the atrial apertures on the inner surface next to the central cavity of the colony. The first four Ascidiozooids are produced by gemmation from a rudimentary larva (the cyathozoid) developed sexually.

The Ascidiæ Salpiformes include a single family, the PYROSOMATIDÆ, containing one well-marked genus *Pyrosoma*.

Family PYROSOMATIDÆ.

Colony free-swimming, and having the form of a hollow cylinder closed at one end.

Systems—only one present, the terminal aperture being the common cloacal opening.

Ascidiozooids elongated antero-posteriorly, and placed in a single layer with their branchial apertures opening on the surface of the colony and their atrial apertures into the axial common cloaca. Body not divided externally into regions. Apertures not lobed.

¹ See also Part I. of this Report (Zool. Chall. Exp., part xvi., 1882), page 57.

² See also Appendix A. of the present Part.

³ See also Part II. of this Report (Zool. Chall. Exp., part xxxviii., 1886), page 28.