
Bryozoans

The invertebrates called bryozoans are aquatic animals, of which the great majority live in the sea and only a few kinds inhabit freshwaters. They are tiny creatures averaging less than 1mm. in length, but invariably they grow together in colonies which commonly have dimensions of an inch or more. Some colonies of living species are as much as 30 cm. (12 in.) in diameter, and a few known fossil forms are at least 60 cm. (2 ft.) across (Fig. 5-1).

The name Bryozoa which signifies moss animals (Bryon, moss; zoon animals). Bryozoans are found in present-day seas in all latitudes and at depths ranging downward to at least 5,500 m. (18,000 ft.). They are most abundant in shallow seas of temperate and tropical zones.

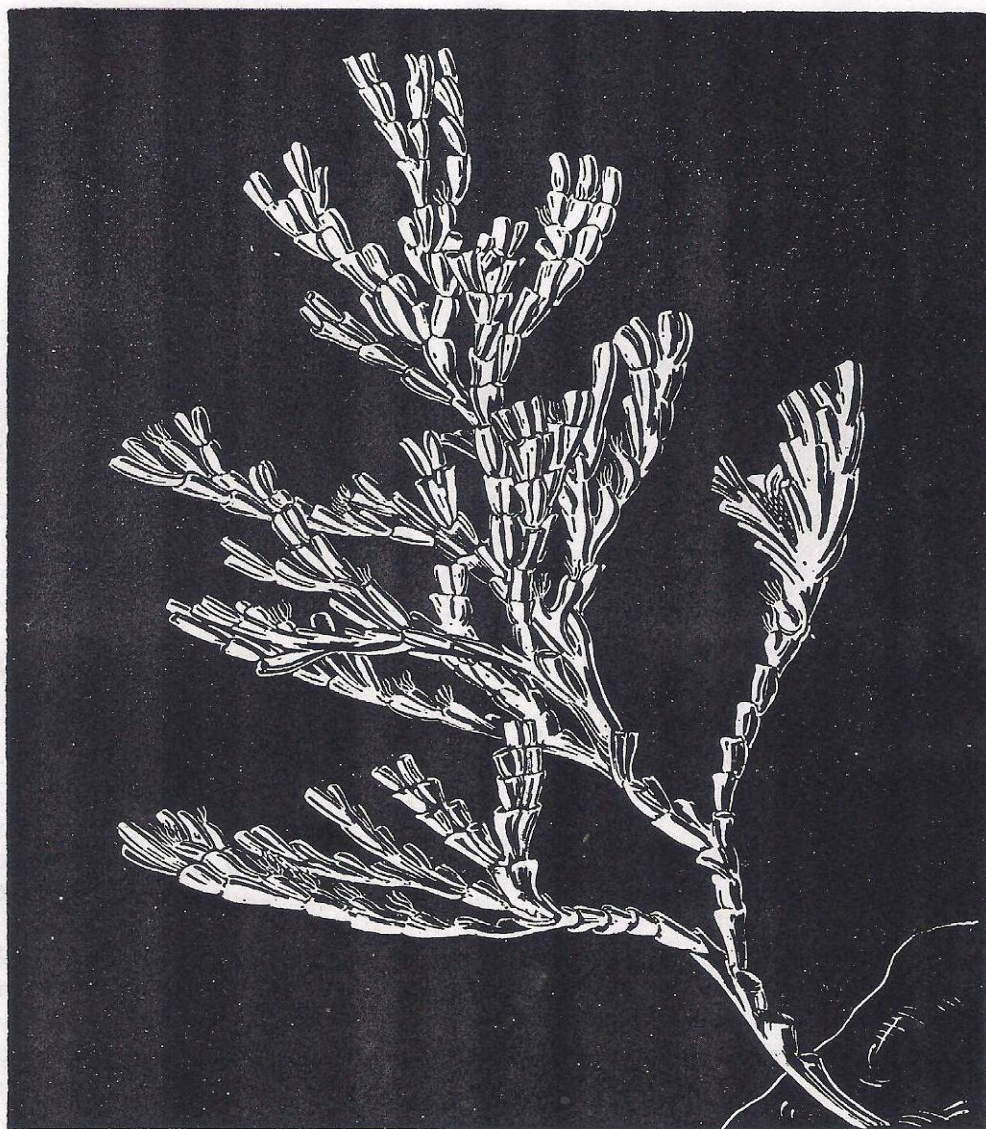


FIG. 5-1. A colony of the modern cheilostome *Bugula*. This bryozoan grows in bushy tufts 2 or 3 in. high. Four rows of zooecial chambers, which are chitinous and somewhat flexible, form each branch.

Anatomical features:

The individual bryozoan animal (**zooid**) considerably more advanced in body organization than the coelenterates, which it resembles in having tentacles and a tubular or a sac-like body form. The tentacles are joined at their base to a fleshy ring (lophophore), which surrounds the mouth. The chief distinguishing structure within the body of the bryozoan is the possession of a U-shaped, digestive tract which consists of an esophagus, a stomach, and an intestine (Fig. 5-2).

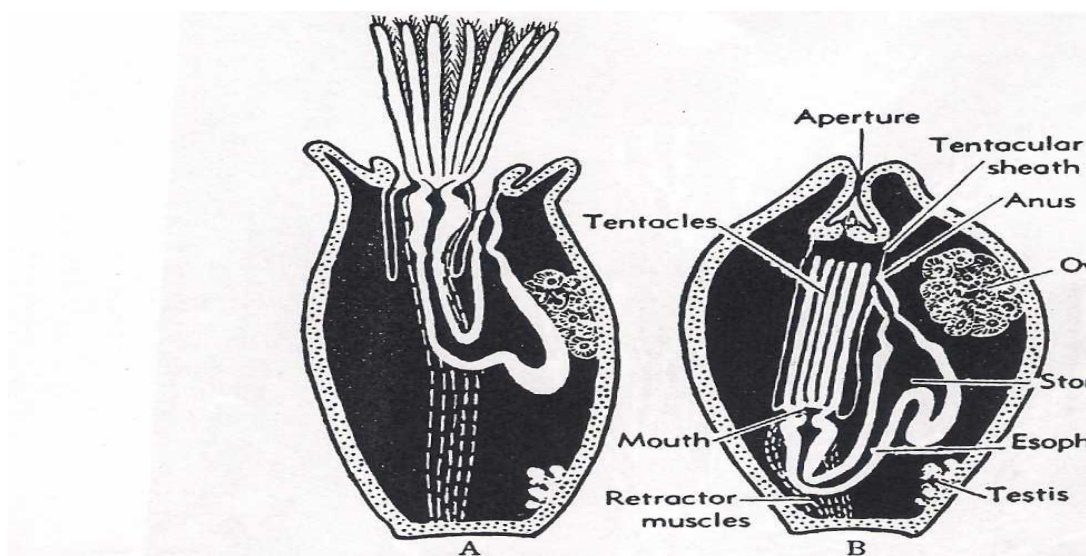


Fig. 5-2. Anatomy of a living bryozoan species. The body wall of this form, *Aicyonidium albidum* Alder, is membranous and flexible; hard parts are lacking. The drawings show the animal in longitudinal section, (A) with the zooid extended, and (B) retracted.

Classification:

Bryozoans are divided into two very unequal groups. The smaller of these includes fresh water forms. They lack hard parts and are characterized by tentacles arranged in a horseshoe shape and by a lip which overhangs the mouth. These are assigned to the class Phylactolaemata (meaning protected gullet).

Remaining bryozoans, so preponderant in numbers as to include nearly all, mostly have hard parts, a circular row of tentacles around the mouth, and no lip. Virtually all are marine. Paleontological study of bryozoans is wholly devoted to this class called Gymnolaemata (meaning uncovered gullet).

Main Divisions of Bryozoans:

1- Phylactolaemata (*class*), fresh-water bryozoans having a horseshoe-shaped loop of tentacles around the mouth which is protected by an overhanging lip. Recent (not known as fossils).

2- Gymnolaemata (*class*), almost exclusively marine bryozoans having a circular row of tentacles around the mouth. Ordovician—Recent.