

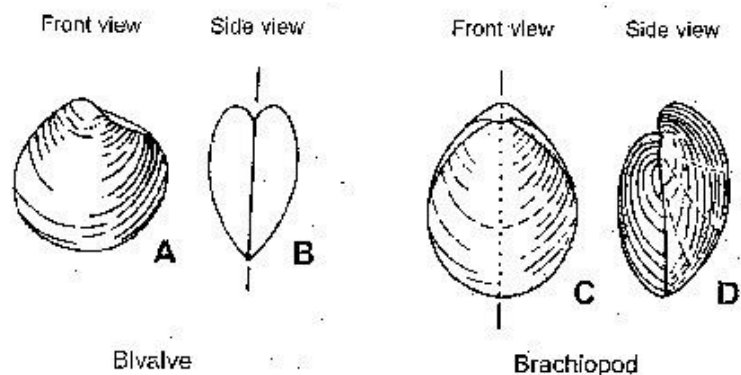
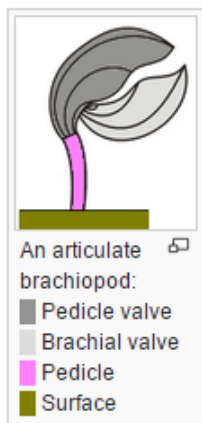
Phylum Brachiopoda (pg. 1 of 4)

Brachiopods are a phylum of marine animals that have hard "valves" (shells) on the upper and lower surfaces. Most species of brachiopod went extinct during the P–T extinction over 250 million years ago, but many survive today.

Brachiopod valves are hinged at the rear end, while the front can be opened for feeding or closed for protection. **Articulate** brachiopods have toothed hinges and simple opening and closing muscles, while **inarticulate** brachiopods have untoothed hinges and more complex muscles. In a typical brachiopod a stalk-like **pedicle** projects from an opening in the hinge or from a hole in the larger valve, attaching the animal to the seabed but clear of silt that would obstruct the opening.

Brachiopods have a **mantle** that **secretes** and lines the shell, and encloses the internal organs. The body occupies typically about one-third of the internal space inside the shell, nearest the hinge. The rest of the mantle encloses a water-filled space containing the **lophophore**, a crown of tentacles that **filters** food particles out of the water. In all species the lophophore is supported by **cartilage** and by a **hydrostatic skeleton**.

The **lophophore** **filters** food, mostly **phytoplankton**, out of the water. From there the food is transported in succession to: the grooves along the bases of the lophophore's tentacles; the **mouth**; **pharynx**; **oesophagus**; and finally the **stomach**, where the food is **digested**. Nutrients are transported from the stomach throughout the **coelom** (main body cavity), including the mantle lobes, by **cilia**. The wastes produced by **metabolism** are broken into **ammonia**, which is eliminated by **diffusion** through the mantle and lophophore.



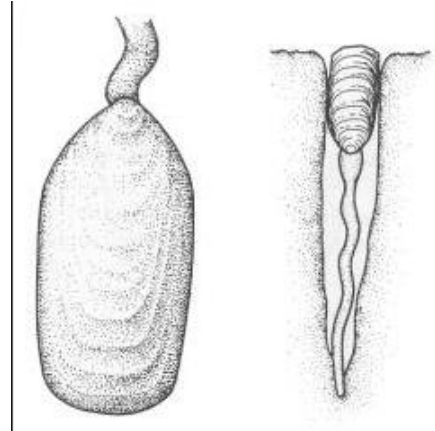
Phylum Brachiopoda (pg. 2 of 4)

Class Inarticulata

21. Genus *Lingula*

Inarticulate species lack interlocking teeth and muscles to open and close the valves.





Class Articulata

22. Genus *Atrypa*



Articulate Brachiopod

23. Genus *Composita*



Phylum Brachiopoda (pg. 3 of 4)

Articulate Brachiopod

24. Genus *Juresina*



Articulate Brachiopod

25. Genus *Leptaena*



Articulate Brachiopod

26. Genus *Mucrospirifer*



Phylum Brachiopoda (pg. 4 of 4)

Articulate Brachiopod

27. Genus *Platystrophia*



Articulate Brachiopod

28. Genus *Rafinesquina*



Articulate Brachiopod

29. Order Rhynchonelida

