



MOLLUSCS

# Bivalves

Domain	Eukaryota
Kingdom	Animalia
Phylum	Mollusca
Class	Bivalvia

## 500 MYA – PRESENT

Bivalves are a large class in the phylum Mollusca and include pippies, oysters, scallops, mussels, and clams. They have two bilaterally symmetrical shells, that are hinged and held together with a flexible

ligament, allowing them to open for feeding or close tightly for protection. Some bivalves have a muscular foot that can be extended outside the shell for movement or burrowing.

### Fossil Record

Bivalves first appear in the fossil record in rocks from the early Cambrian, approximately 540 million years ago, but they did not diversify much until the Ordovician, 485 million years ago. They were largely unaffected by the major end-Permian and end-Cretaceous mass extinctions. Bivalves continued to diversify and proliferate to form a major part of today's marine fauna.

and even into solid rock. Others are sedentary, using tough threads to attach themselves to an object or cement one valve to a rock.

Most bivalve species are either male or female, and during reproduction eggs and sperm are released into the water en masse, where the fertilised eggs become free-swimming larvae before settling on the sea floor.

### Fossilisation

Bivalve fossils are commonly found in marine sediments such as limestones, sandstones, and mudstones. Bivalves are readily fossilised as preserved shells, internal and external molds, and casts.

### Habitat and Lifestyle

All bivalves are aquatic and most live on the sea floor in shallow marine environments. Many bivalves are mobile, either crawling slowly on the sea floor or swimming freely. Some bivalves burrow, digging into the mud and sand on the sea floor, into wood,

Bivalves are filter-feeders. They can filter up to 95 L of water a day. Not only is this how they get their food, it also keeps ocean waters cleaner.



Bivalve, *Corbula ephanilla*, Early Miocene (about 20 million years old), Victoria. Image from Chris Fitzgerald.



Oysters are a common bivalve species. Image from K Baucherel, pixabay.

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### ? DID YOU KNOW



Some bivalves, such as scallops, can actually swim for short distances by snapping their shells shut to squirt a jet of water. They use this ability to escape from predation.