

# Shells And Our Living Coral Reefs



## Introduction to Shells

When you find a shell on a beach, it is the partial remains of an animal called a mollusc.

Mollusca are a "Phylum" in the animal kingdom, a unit comparable to the Articulata (Insects, Crustaceans) and the Vertebrates (Fish, Birds, Mammals).

There are three different-looking major groups of molluscs: **gastropods, bivalves, and cephalopods.**

## Gastropods

- Largest class of molluscs—AKA univalve, meaning "one-shell"
- Have a head with tentacles and eyes, a foot for crawling and grasping, and a mantle that forms the shell
- Feeds on anything edible, but often specialized to one food source
- Live everywhere on earth from gardens to the depths of the oceans



**Cowry**



**Land Snail**



**Abalone**



**Harp**

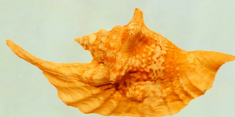
**Cone**



**Murex**



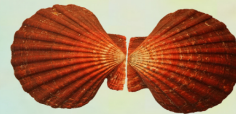
**Wentletrap**



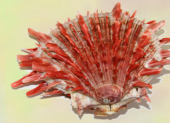
**Conch**

## Bivalves

- Composed of two shells making up symmetrical halves (valves), hinged together: opened and closed by a strong muscle
- Have eyes along the mantle since they have no head
- A small mouth ingests food that their gills filter
- Live in different watery environments
- Pearls are formed by nearly all gastropods and bivalves when dirt gets into the shell and gets coated. Pearls in some oysters have the familiar shiny silvery appearance



**Scallop**



**Oyster**



**Clam**



**Cockle**

## Cephalopods

- Unlike other molluscs, cephalopods are active swimmers
- Some cephalopods such as the nautilus have external shells, while the cuttlefish (cuttlebone) and the squid have internal shells. The octopus has no shell
- Active hunters (predators) who locate prey with their eyes
- Among the most intelligent marine animals apart from seals and dolphins



**Octopus**



**Nautilus**



**Squid**



**Cuttlefish**

## Live Molluscs



Photos courtesy of Jana Kratsch and Felix Lorenz

## Protect Our Environment

- Our ocean environment consists of many dynamic components, such as reefs, trees, beaches, and the open water and provide a habitat for an array of marine species, including: corals, sponges, crustaceans, mollusks, fish, and whales.
- The food chain links the animals to each other by the food they eat. Oxygen producers include those living in water such as algae, corals, and other plant life.
- **Unfortunately, around the world many of these coral reefs are dying. This is occurring through multiple reasons.**
- **Some known causes are beyond our control such as warming events (El Niño). However, other causes we can control such as excess factories that allow toxic runoff, as well as pollution from various sources.**

*Help protect the natural beauty of our entire world by:*

- Conserving water
- Never litter
- Recycling trash when possible
- Do not waste food
- Encouraging car-pooling or using other forms of transportation (walking, biking)
- Spreading the word about the importance of coral reef conservation, protecting our oceans, as well as entire landmass and planetary environment



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