

Molluscs: The Survival Game Fact Sheet

Mollusc is from the Latin, *mollis*, meaning soft.

The diversity of molluscs impressively demonstrates how a basic body plan can evolve into a variety of different forms that allow survival in specific environments.

Molluscs include: bivalves (clams, oysters, scallops), limpets, snails (land and sea), nudibranchs, tusk shells, chitons, and cephalopods (nautilus, squids, octopuses).

Features of the Phylum

- Molluscs have a rasping organ called a radula, except bivalves.
- Muscular foot: used for locomotion and other tasks like obtaining food
- A sheath of tissue called the mantle that covers the body and secretes the shell (if there is one)
- A mantle cavity that houses gills or lungs
- A calcium shell: Though some molluscs have greatly reduced shells, e.g., squid, others have completely lost it, e.g. slugs, nudibranchs, and octopus.

Key words and concepts

Radula: a feeding organ made of teeth-like structures that scrapes food, slices flesh, and drills into shells. In some, the teeth have become dart-like structures for delivering venom.

Mantle: a tissue that covers the gut organs and secretes the animal's hard shell

Buoyancy: the ability to regulate depth in the water column. The nautilus regulates its depth by changing the amount of fluid in the chambers of its shell (see video of scientist Peter Ward).

Chromatophores: pigment-containing skin cells, the control of which determines the rapid change of color patterns in cuttlefish, squid and octopuses.

Inking as defense: Squid, octopus and cuttlefish squirt out clouds of ink to mask themselves or to confuse a predator into attacking the ink while the animal jets away. (In the mollusc video there is a squid and an octopus inking).

Venom in molluscs: Some molluscs inject a poisonous fluid into their prey. The venom of the blue-ringed octopus and some cone snails can be deadly to humans. Some components of cone snail venom are used in medicine.