

Mollusks

- *Molluscus* = soft
- Soft-bodied animals that usually have an internal or external shell.
- Includes snails, slugs, clams, squids, and octopi.
- True coelom
- Complex, interrelated organ systems

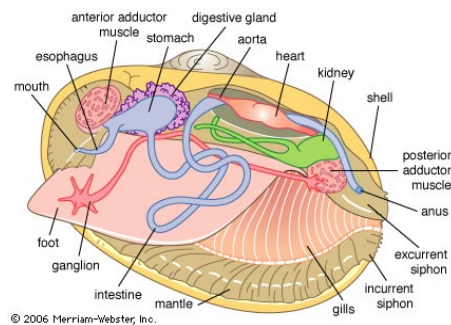
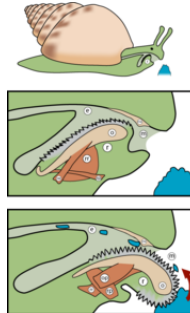
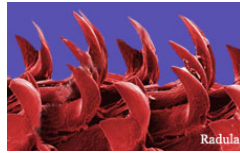


- The body plan of most mollusks have 4 main parts:
 - Foot: muscular; may be used for crawling, burrowing, or tentacles for capturing prey
 - Mantle: thin tissue layer that covers the body (cloak)
 - Shell: made by glands in the mantle that secrete calcium carbonate
 - Visceral mass: internal organs

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Feeding

- Many (snails, slugs) use radula: flexible, tongue-shaped structure with hundreds of tiny teeth to scrape food, or drill into other animals
- Octopus: sharp jaws to eat prey
- Clams, oysters, scallops: filter feeders; use siphon - tubelike structure through which water flows



Respiration/Circulation/Excretion

- **Aquatic mollusks** use gills
- **Land mollusks** use mantle cavity; large surface area lined with blood vessels is kept moist and oxygen diffuses across.
- Open circulatory system: (snails, clams) blood is pumped through vessels by a simple heart and works its way into the sinuses; blood then passes to the gills, where oxygen and carbon dioxide are exchanged.
- Closed circulatory system: (octopi, squid) capable of transporting blood faster

(better gas exchange)

Response

- Clams ([bivalves](#)): simple nervous system, small ganglia, nerve cords and simple sense organs (eyespots, chemical receptors)
- [Octopi](#): active predators; most highly developed nervous system of all invertebrates; well-developed brains; capable of complex behaviour, such as opening jars, responding to rewards.

Reproduction

- Variety of methods; snails and bivalves reproduce sexually by external fertilization
- [External fertilization](#): large number of eggs are released into the water, then fertilized by sperm; develop into free-swimming larvae.
- Tentacled mollusks: internal fertilization
- Some are hermaphrodites

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Attachments

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