

MARINE SNAILS

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SCIENTIFIC CLASSIFICATION

COMMON NAME:	Marine snails
KINGDOM:	Animalia
PHYLUM:	Mollusca
CLASS:	Gastropoda
SUBCLASS:	Prosobranchia
ORDER(S):	<ul style="list-style-type: none">• Archaeogastropoda• Mesogastropoda• Neogastropoda
FAMILY:	About 100 families
GENUS SPECIES:	About 18,000 species

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FAST FACTS

DESCRIPTION:	The name gastropod means "stomach-foot." Marine gastropods have a single valve and a muscular foot. Gastropods exhibit torsion; the visceral mass, mantle, and mantle cavity is twisted 180° counterclockwise. The eyes are on tentacles on each side of the head. A typical gastropod shell is a conical spire composed of tubular whorls. The shells have a wide variety of colors, patterns, shapes, and sculpturing. Some gastropods have reduced shells or complete shell loss.
SIZE:	Marine snails show extreme variations in size. The smallest marine snails are only a few millimeters in size. The largest marine snail is the Australian trumpet, <i>Syrinx aruanus</i> , ranging from 12 to 70 cm (4.7–27.6 in.).
LOCOMOTION:	A gastropod "crawls" by gliding along on its foot. The foot is a broad, flat muscle. It also adheres to rocks and other surfaces. As the gastropod moves, waves of fine muscular contractions sweep along the foot. The contractions lift the animal's foot, then returns it to the surface a little farther ahead, pulling the animal forward.

DIET:	Herbivore, detritivore, or carnivore
FEEDING:	Gastropods are either herbivores, carnivores, or detritivores, as well as deposit feeders, suspension feeders, or parasites. Almost all gastropods use a radula for scraping the substrate, grasping and biting, tearing flesh, rasping, boring through shells, and even harpooning. When the gastropod feeds, it places its radula against the substrate. The radula carries the pieces into the mouth.
REPRODUCTION:	Gastropods produce eggs and sperm. Fertilization and development vary among groups of gastropods.
RESPIRATION:	Marine gastropods use gills to respire.
LIFE SPAN:	Life span is highly variable. The limpet <i>Patella vulgate</i> can live 5 to 16 years. The periwinkle, <i>Littorina littorea</i> can live 4 to 10 years.
RANGE:	Oceans worldwide; more common in temperate and tropical waters.
HABITAT:	Various benthic habitats including tide pools, coral reefs, and rocky reefs

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FUN FACTS

1. The gastropods comprise more than 80% of all living molluscs.
2. A gastropod shell opening can be tightly closed with an operculum: a "trap door," which seals the opening of the shell when the animal pulls in its foot.
3. The violet snail, *Jathina jathina*, is pelagic in warm seas. It floats upside-down at the surface, with the foot attached to a raft of air bubbles trapped in dry mucus.
4. Cone snails (Family Conidae) are toxoglossan neogastropods inhabiting tropical and subtropical areas in the western Atlantic and Indo-Pacific oceans. They stab and poison their prey items with their radular teeth. Prey items include polychaete worms, other gastropods, or fishes. The teeth are long, grooved, and barbed at the end. The bite, or sting, of some South Pacific species is high toxic to humans, with a few deaths reported.
5. A gastropod shell may be spiraled clockwise or counterclockwise. This is also referred to as right-handed or left-handed. A spiral is right-handed when the aperture (opening) opens to the right of the central axis (columella) (if the observer is looking directly at the aperture). A spiral is left handed when it opens to the left. Most gastropod species are right-handed, some are left-handed, and some species have both right-handed and left-handed individuals.
6. The prosobranch archaeogastropods are thought to be one of the most primitive life forms. They include the slit snails, keyhole limpets, and abalones.

7. For more information, please visit the Tide Pool Infobook.

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ECOLOGY AND CONSERVATION

Gastropod habitats, such as coral reefs, are threatened by global climate change, overfishing, and other factors. These habitats are vital to marine snail populations and changes in habitats could lead to decreases in gastropod diversity and population numbers.

Many gastropods are collected for human consumption and aquarium trade. If not closely regulated, marine snail populations are at risk for exploitation.

Beachcombers, tidepoolers, and divers must remember not to disturb or collect any specimens that they may encounter. The removal of animals from an ecosystem may disturb ecological processes and decreased the diversity in areas that are frequently visited. Because of their specific nutritional and physiological needs, certain animals, such as marine snails have a much better chance for survival in their natural environment than in an unregulated home aquarium.

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