

CHITONS

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MENU - A

SCIENTIFIC CLASSIFICATION

COMMON NAME:	chitons
KINGDOM:	Animalia
PHYLUM:	Mollusca
CLASS:	Polyplacophora
ORDER:	Order: Neoloricata 3 Suborders: <ul style="list-style-type: none">• Lepidopleurida• Ischnochitonida• Acanthochitonida
FAMILY:	
GENUS SPECIES:	About 1,000 species

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FAST FACTS

DESCRIPTION:	Chitons are flat, elongated molluscs with a broad foot and eight overlapping, dorsal shell plates. The mantle forms a thick girdle that either borders or covers the shell plates. The girdle may be smooth or have scales, bristles, or calcareous spicules. Without eyes or tentacles, the head is indistinct. Chitons are generally dull shades of red, brown, yellow, or green.
SIZE:	3 mm to 40 cm (0.12–15.7 in.); Most species average 3 to 12 cm (1.18–4.72 in.).The largest chiton is the gumboot chiton, <i>Cryptochiton stellari</i> .
LOCOMOTION:	The broad, muscular foot is used for adhesion and locomotion. Chitons can creep very slowly by muscular waves in the foot, the same way as snails. If dislodged, chitons have the ability to roll up into a ball.
DIET:	Fine algae and small organisms

FEEDING:	Food is scraped from the surface of rocks and shells with a radula.
REPRODUCTION:	Chitons are either male or female. Males release sperm and fertilization takes place in the water or within the mantle cavity of the females. Eggs are either shed into the sea or brooded within the mantle cavity of the females.
RESPIRATION:	Six to 88 pairs of bipectinate gills are used for gas exchange. The number of gills varies among species and within a species depending on size.
LIFE SPAN:	About 20 years
RANGE:	Oceans worldwide; most common in temperate rocky shores
HABITAT:	Intertidal to deep sea; common in rocky intertidal habitats.

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FUN FACTS

1. Many chitons have "homing sites," which they return to after nocturnal feeding or feeding during a high tide.
2. Many of the chiton species that inhabit the Pacific west coast are light-sensitive and are found underneath rocks, carefully protected from the sun.
3. A predatory chiton, *Placiphorella velata*, captures worms or small crustaceans, unlike other grazing chitons. It clamps down on these larger prey items with a large extension of the mantle, referred to as the "head flap." While waiting for prey, it lifts its front end and supports itself on tentacles fringing the mantle folds.
4. For more information, please visit the Tide Pool Infobook.

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ECOLOGY AND CONSERVATION

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 disrupt ecological processes and decrease the diversity in areas that are frequently visited. Because of their specific nutritional and physiological needs, certain animals, such as chitons have a much better chance for survival in their natural environment than in an unregulated home aquarium.

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