

SEA ANEMONES

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MENU - A

SCIENTIFIC CLASSIFICATION

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| COMMON NAME: | sea anemones |
| KINGDOM: | Animalia |
| PHYLUM: | Cnidaria |
| CLASS: | Anthozoa |
| ORDER: | Actiniaria |
| FAMILY: | 41 families |
| GENUS SPECIES: | About 800 species |

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FAST FACTS

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| DESCRIPTION: | Sea anemones are a soft-bodied marine invertebrate. The body has a pedal disc that attaches to a substrate, a columnar body, and an oral surface surrounded by tentacles. Submerged animals usually have their tentacles extended; anemones exposed at low tide are often contracted and camouflaged with tiny shells and rocks for protection. Sea anemones are often brightly colored and may be white, green, blue, orange, or red. |
| SIZE: | 1.3 cm to 1.5 m (0.5 in.–5 ft.) |
| LOCOMOTION: | Sea anemones are sedentary as adults. Though they mainly remain attached to a substrate, they do have the ability to move and relocate. |
| DIET: | Fishes, crustaceans, bivalves, and plankton. Some tropical species have a symbiotic relationship with zooxanthallae, a type of algae. While the anemone provides the zooxanthallae with protection and a safe home, the zooxanthallae produce food through photosynthesis for the anemone to consume. |
| FEEDING: | A mass of tentacles surrounds the mouth of the sea anemone. The tentacles are in multiples of six. These tentacles contain numerous |

nematocysts that the anemone uses to paralyze its prey. The anemone grasps the paralyzed prey with its tentacles and carries the prey to its mouth.

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| REPRODUCTION: | Some anemones will reproduce asexually by pedal laceration or by dividing into two equal parts. Sea anemones may be hermaphroditic or dioecious (individuals are either male or female). |
| RESPIRATION: | Gas exchange takes place through the body surfaces. Cnidarians do not have gills or gill-like structures. |
| LIFE SPAN: | Average lifespan is between 60 to 80 years. Carpet anemones may live up to 100 years. |
| RANGE: | All oceans, particularly diverse in tropical oceans |
| HABITAT: | Deep or coastal waters; attached to rocks or shells, or burrow in mud or sand. Anemones are either solitary or form colonies of clones. |

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FUN FACTS

1. In the Red Sea and Indo-Pacific, clownfishes (*Apmhiprion* spp.) live symbiotically among the tentacles of large sea anemones, a habit that would prove lethal to most other fishes. A coating of mucus probably protects the fish. Clownfishes have a mucus layer three to four times thicker than nonsymbiotic fishes. Also, the mucus appears to lack the chemical compounds that trigger nematocyst discharge. Researchers also believe that acclimation is involved; the clownfishes must "ease" into the tentacles and grow immune to them. The anemone provides protection and some food leftovers for the fish; the fish in turn protects the anemone from some predators, removes dead tissue, and by its swimming, ventilates the anemones and reduces fouling by sediment.
2. The green sea anemone's color is caused partly by pigments in its epidermis and partly by single-celled green algae living in the anemone's tissues. Certain individuals living in crevices away from sunlight tend to lack the algae; they are white.
3. Some species of anemones exhibit aggression towards non-clones or other anemone species. Specialized cnidocytes on searching tentacles are fired on contact with the other anemone. One or both anemones may suffer tissue damage. This behavior may provide spatial separation between species or clones.
4. A few sea anemones in European and American waters have nematocysts that can produce a severe toxic reaction in humans. They include the berried sea anemones, *Alicia mirabilis*, and the Caribbean sea anemone, *Lebrunia danae*. The most toxic sea anemone is believed to be the West Australian, *Dolleina armata*.
5. For more information, visit the Tide Pool Infobook.

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ECOLOGY AND CONSERVATION

Some species of sea anemones have become popular in the home aquarium trade. The over-harvesting of anemones is a concern in some regions. Also, removal of anemones could be damaging to some clownfish populations.

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 sea anemones have a much better chance for survival in their natural environment than in an unregulated home aquarium.

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BIBLIOGRAPHY

Buchsbaum, M. R. a. P., Vicki & John. (1987). Living Invertebrates. Pacific Grove, CA, The Boxwood Press.

Morris, R. H., D. p. Abbott, et al. (1980). Intertidal Invertebrates of California. Stanford, Stanford University Press.

Myers, P., R. Espinosa, C. S. Parr, T. Jones, G. S. Hammond, and T. A. Dewey. 2006. The Animal Diversity Web (online) <<http://animaldiversity.org>>

Ruppert, E. E. and R. D. Barnes (1994). Invertebrate Zoology. San Diego, Harcourt Brace College Publishers.

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