



## Coral

Coral is often mistaken as rock or part of the plant kingdom, when it is in fact, a complex organism made up of both plant and animal. Coral is made up of millions of polyps- tiny carnivorous animals that live in colonies. An alga, known as zooxanthellae, lives within the polyps creating a symbiotic relationship; The polyps provides a home for the plant, and the photosynthetic algae provides energy for the polyps, so both benefit greatly from their relationship.

Polyps in the colony are identical to one another, with each individual one forming a cuplike shape, with a circle of tiny poisonous tentacles around the mouth that catch zooplankton for food. Surprisingly, coral is carnivorous, despite the fact that it doesn't move from place to place. The corals have stinging cells called nematocysts on their tentacles. If a small organism passes too close to the polyp, it will be captured, paralysed and consumed by the digestive tissue in the body of the polyp.

Corals are related to sea anemones, however they differ in the way that coral creates a skeleton made of mineral for protection. The stony corals grow over time because the polyps secrete calcium carbonate (also known as limestone) to form a new exoskeleton with each successive year. On average, about two centimetres is added to the coral skeleton each year. We can estimate the age of coral by examining the number of growth rings formed by each annual layer of mineral.

Coral is greatly affected by sea temperature. High water temperatures can cause 'coral bleaching' by stopping photosynthesis turning carbon dioxide into sugar, allowing poisonous products to build up and harm the zooanthellae in the coral. As a result, the coral removes the zooanthellae, which leaves the coral white, or bleached. The bleaching can be reversed, but only if cooler waters return and the algae are able to grow again. However, without the zooanthellae the coral will eventually starve to death if the water stays too warm for too long.

The Ningaloo Reef located south of Exmouth, is the closest coral reef to a landmass in the entire world, making it a fantastic tourist attraction. It stretches a total of 260 kilometres long and covers 5000 square kilometers of ocean. With around 250 species of coral, 520 fish species, 600 mollusc species and many various invertebrate species, Ningaloo Reef is ranked in the top seven of the most biodiverse marine environments in the world! Whale sharks, turtles, manta rays, humpback whales, and dugongs all rely on the Ningaloo Reef in some way or another, whether it is for migration, feeding, breeding, or protection.

### Did you know?

Some corals have been known to produce certain compounds that can be used to make drugs for cancer treatment.