



# OCEAN CREATURES FACT SHEET

Dive into colorful ecosystems just below the ocean's surface to meet a trio of sea creatures and their codependent sidekicks.



## CORAL

A close-up of a *Pocillopora meandrina* coral from the tropical eastern Pacific.

The familiar-looking cauliflower coral, or brush coral, is widespread and comes in a variety of colors and sizes. It hosts microscopic symbiotic algae that live inside it and supply it with food. Corals also boost their food by using their tentacles to capture unsuspecting prey that float by.



## SEA TURTLE/ TANG FISH

*Chelonia myda* from the Hawai'ian Pacific.

As sea turtles glide through the water, they are sometimes surrounded by an entourage of bright yellow and black tang fish. In their symbiotic relationship, the fishes feast on algae and dead skin from the turtles' shells and the turtle never has to take a bath.



## JELLY

*Cotylorhiza tuberculata* with symbiotic algae from the Mediterranean Sea.

Some like it ... sunny side up! The "fried egg jellyfish" has a smooth, elevated, yolk-yellow dome surrounded by a lighter ring of small cilia, which it uses to propel itself through the water. The jellies host photosynthetic algae symbionts that provide them with oxygen and nutrients for their entire lives.



The phylum, or way to group organisms with similar structures and evolutionary history

- Jellies belong to the phylum Cnidaria, along with corals and anemones.
- Corals belong to the phylum Cnidaria, along with jellies and anemones.
- Sea turtles belong to the phylum Chordata, along with amphibians, fish, and humans.



How do we study these creatures?

- Scientists can SCUBA dive and use instruments to visit these fantastic creatures and study them in their habitat. **LEARN MORE:** <https://www.nsf.gov/impacts/oceans>

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*The trio of ocean creatures lives just beneath the ocean's shimmering surface.*

The **cauliflower coral** helps form intricate coral reef systems, which offer a habitat for sea turtles. A quarter of the ocean's creatures depend on healthy coral reefs. As do many humans. The vibrant ecosystems protect coastlines from storms and erosion and support local economies. In fact, the world's coral reefs are estimated to be worth tens of billions of dollars per year.

**Fried egg jellies** have not been spotted near coral reefs; however, they also stay close to the water's surface to benefit from sunlight. Both the jellies and corals have symbiotic relationships with microscopic algae. The algae help the corals and jellies obtain the nutrients they need to survive. In turn, the algae have a safe place to live. The algae are called endosymbionts because they live within the creatures.

**Sea turtles** and tang fish have a much more visible symbiotic relationship. The fish can feast while the turtles get cleaned, often at a "*cleaner station*," which is a natural meeting point on a coral reef or similar structure. A clean shell also helps them avoid parasites and quickly glide away from predators! The fish are called ectosymbionts, meaning they live outside the turtles.



**LINK TO MORE EDUCATIONAL RESOURCES:**

<https://www.nsf.gov/focus-areas/earth-environment/educational-resources>