

Symbiosis in the Sea: Jonathan Bird's Blue World

Name _____



When animals interact it is called **symbiosis**. Some interactions are good and others are negative. Mutualism, commensalism, and parasitism are examples of symbiosis that occurs in nature.

- **Mutualism** is a relationship where both animals benefit from the interaction.
- **Commensalism** is a relationship in which one animal benefits, but the other does not, although it is not harmed in any way. Some relationships are not always good for both animals.
- **Parasitism** occurs between a parasite and a host. In that case, the parasite harms the host in some way.

WHAT TO DO: Read each summary below and then identify the type of animal relationship. Write “M” for Mutualism, “C” for Commensalism, and “P” for Parasitism to the left of the paragraph.

Burrowmates: Watchman Goby fish and snapping shrimp live together on coral reefs. Snapping shrimp are blind, so they can't see predators. That's okay! Goby fish “lookout” while the shrimp dig (with one antenna on the Goby's tail). The Goby wiggles its tail to warn the shrimp of danger. Then both roommates hide in the burrow.

Smile Crocodile!: The Nile crocodile opens its mouth wide and allows the Egyptian plover to eat off leeches that get attached to its gums. _____

Remora Menu: The remora fish attaches itself to a shark using a sucker on its dorsal fin. It eats upstray food scraps as the shark feeds. Fortunately, the shark never interrupts the remora's eating to make *it* into a meal!

Strain in the Stomach: Many different strains of tiny bacteria live in the stomachs and large intestines of animals—including humans! These strains don't cause pain. They feed on partly digested foods, and even aid digestion. _____

Bad Barnacles: Barnacles attach themselves in large numbers to docks, boats, rocks, and sea turtles' shells. Because barnacles can't move on their own, boats and sea turtles transport them to new places. Often, too many attach themselves to a sea turtle's shell and cause infections that make it sick.

Clowning Around: A sea anemone has nematocyst cells that sting anything that comes close to it—except the clownfish. That may be because these animals have similar slimy coatings on their skins. The clownfish cleans the anemone of algae and the anemone provides a safe place for the clownfish to live and spawn. _____

Coral Bleaching: Algae called zooxanthellae (ZOah-zan-THEL-uh) live inside coral polyps—tiny animals that form a coral reef. The algae keep polyps alive by making oxygen. They also give coral their colors. If the water gets too warm, the algae die. The polyps then lose their color and oxygen, which causes the corals to die, too.

Coral Reef Car Wash: The cleaner wrasse polishes off dead skin and parasites—from the interior of fishes to the exterior! Fish line up and give the green light to be cleaned by remaining still, spreading their fins and gills, and opening their mouths. _____