

Ecosystems

Habitats and Niches

habitat and niche

A **habitat** is the specific part of an ecosystem where an organism lives.

A **fiddler crab's habitat**, for example, could be a tank in an aquarium or a wetland, or flooded area, found where rivers flow into oceans.

In a salt marsh, a fiddler crab spends its life in or near its burrow. If the sun is too hot, the burrow offers a shady hiding place. It also offers protection from enemies like raccoons. When the tide comes in, a crab crawls into its burrow and plugs the top with a ball of mud. This traps air for the crab to breathe. At low tide, the crab comes out to look for food. It scoops sand and mud into its mouth. It eats the bacteria, fungi, and plant and animal matter between the grains. Then it spits out the dirt.

Within the salt marsh, a fiddler crab does a number of things. When it digs burrows, it lets oxygen into the soil, which marsh plants can use. The crab's diet includes dead plant and animal matter, which helps return nutrients to the soil. A crab is also food for predators like herons, a wading bird. All the things an organism does in its habitat make up its **niche**, or specific role, in the habitat.

Different species within a habitat have different niches. Diamondback terrapins, or water turtles, live in salt marshes, too. They feed on shelled animals, worms, fish, and plants. They also eat dead animal matter. In winter, terrapins burrow into the mud to hibernate. They mate in spring and build nests in the grasses. Their eggs and young offspring are eaten by a variety of animals, including gulls, crows, and foxes.



Add labels to the diagram above to identify three things that help define an organism's niche.

Define niche.

Our goal is to find out about habitats and niches and how species interact in a community

Standards ny science 52a

Interactions Among Species



How do different species in a community interact?

The species in a community interact in many ways. Animals that hunt and kill other animals for food are **predators**. The animals they hunt are their **prey**. For example, alligators are predators that feed on turtles. Alligators and turtles have a **predator-prey relationship**.

Species that interact very closely with one another have **symbiotic relationships**. **Symbiosis** is a close relationship between two or more species. There are three types of symbiosis: mutualism, commensalism, and parasitism.

Mutualism In this symbiotic relationship, both species benefit. Many species of bacteria live in human intestines and help digest food. The bacteria obtain food from this relationship. The presence of the bacteria helps people absorb more nutrients from the food they eat.

Commensalism In this symbiotic relationship, one species benefits and the other species receives neither harm nor benefit. The remora is a fish that uses a sucker-like part of its body to attach itself to a shark. The remora benefits by feeding on pieces of food that float away from the shark's mouth during feeding. The shark neither benefits nor is harmed by this relationship.

Parasitism In this symbiotic relationship, one species benefits and the other is harmed. The organism that benefits is called a **parasite**. The organism that is harmed is the **host**. Fleas and lice are parasites that suck blood from their hosts. Tapeworms are parasites that feed on digested food in the intestines of their hosts.



Sharks and remoras have a commensal relationship.

What is mutualism?

What is Commensalism?

What is parasitism?

What is a predator?

What is prey?

read pages 268
269 and 270 of
your text.
NY science - grade 6

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