Ecosystems

Habitats and Niches

Define niche

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 shellfish, crabs, fish, and plants. They also eat dead animal matter. In winter, terrapins burrow into the mud to hibernate. They come 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.

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

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 symbiotic relationships: 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 fall 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 or digest food in the intestines of their hosts.

What is mutualism?

What is commensalism?

What is parasitism?

What is predator?