

TEXAS CONNECTION

Activity #26

Dynamic Duos



Extra Resources

Nature.com news blog
Crazy ants, info on their feeding
http://blogs.nature.com/news/2008/05/crazy_ants_go_wild_in_texas.html

Aggie Horticulture
Parasites
<http://aggie-horticulture.tamu.edu/archives/parsons/misc/parasites.html>

Ocean World
Coral Reef symbiosis
<http://oceanworld.tamu.edu/students/coral/coral3.htm>

Texas Overview

Every ecosystem has organisms that depend on each other or are interdependent. Below is a list of Texas organisms that are interdependent. You will find each type of symbiosis represented.

The accompanying PowerPoint can be used in several ways: It can be shown as a PowerPoint and used to explain to students about each relationship, or it can be used as a tool to check students understanding, or the pictures can be printed and set up around the room, allowing students to identify the relationship.

Mutualism

1. Agave and Mexican Long-tongued Bat: Bat getting nectar helps pollinate Agave flowers.
2. Monarch Butterfly and Antelope Horn Milkweed: Monarch eats milkweed and pollinates flowers.
3. Mockingbird and Hackberry Tree: Mockingbird eats the berries of the hackberry tree. The berries go through the bird's digestive system but the seeds do not get digested. The bird then spreads the seeds as it deposits its waste.
4. Pink Evening Primrose and Mycorrhizae Soil Fungus: Fungus helps the roots of the primrose get nutrients.
5. Red Admiral Butterfly and Texas Lantana: Butterfly spreads the lantana's pollen as it gets nectar from the flower.
6. Yucca Moth and Yucca Plant: Moth lays eggs in the flower of the yucca plant, transferring pollen from plant to plant.
7. Bluebonnets and Honey Bee: Bee spreads pollen from flower to flower as it gathers nectar.
8. Pecan Tree and Squirrels: Squirrels live in pecan trees. They bury pecans to ensure they have a stored food source, but they forget them allowing the nut to grow into a tree.

Parasitism

1. Prickly Pear Cactus and Cochineal Bug: Cochineal bug drinks the sap out of the cactus eventually harming it.
2. Oak Trees and Mistletoe: Mistletoe lives off the oak tree, taking its nutrients. The roots of the Mistletoe sink into the tree's branches getting food and water from it.

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3. Pitcher Plants and Insects: Insects are trapped in the vase of the Pitcher Plant. As a result, they die and decompose inside the plant, giving it nutrients.
4. Oak Trees and Insect Galls: Insects lay eggs in the bark (and sometimes the stems and leaves) of oak trees. The tree grows a protective layer of tissue over the eggs, making a hard ball-like structure that protects them.
5. Passionflower Vine and Trees: Passionflower vine grows rapidly and can completely cover a tree top and block out the sun.
6. Spanish Moss and Oak Tree: Spanish moss eventually can cover an oak tree and harm it.

Commensalism

1. Ball Moss and Trees: Ball moss lives at the top of a tree, allowing it to get plenty of water from rain. The tree is not harmed and the moss is helped.
2. Blue Jay and Mistletoe: Blue jays will try to eat mistletoe berries but because the berries are sticky, the birds have to rub them against the bark of a tree to get them off their beaks. This allows the seeds to be spread.