Focus
Wild Arizona

Key Words

Food web: a group of food chains within a single ecosystem

Invasive species: plants and animals from other areas that cause or may cause harm to Arizona's economy, human health or environment.

Larvae: early, immature form of an animal that changes in structure before becoming an adult (for example, a tadpole that becomes a frog, or a caterpillar that becomes a butterfly)

Microscopic: so small that it cannot be seen with the naked eye (for example, plankton)

Omnivore: an animal that eats plants and animals

Organism: a plant or animal

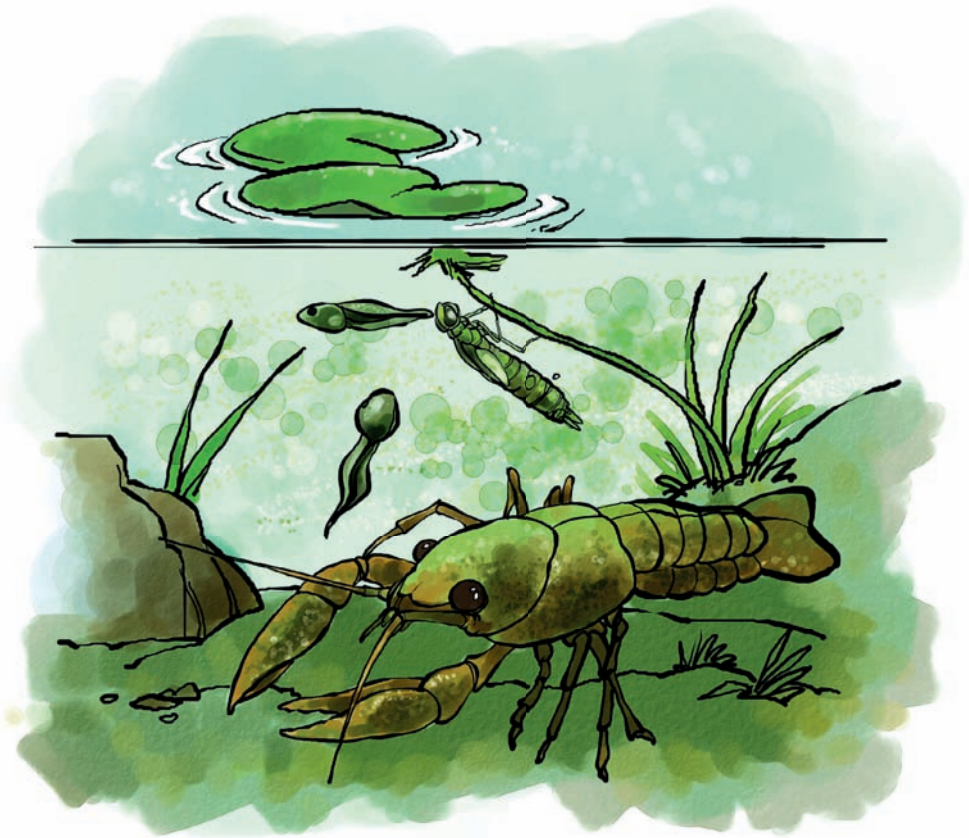

Illustration by Tracy Hill

In many parts of Arizona, rivers and lakes are rare. Where they are found, they are the center for life. Many species of animals and plants live only near these water sources. Other animals, like ducks and geese, use these areas to rest during their migration. These **organisms** depend on rivers and lakes to survive. Small changes to these areas can be devastating to the plants and animals.

Invasive species can be introduced into lakes and rivers, sometimes by accident. These organisms can be harmful to the other animals and plants. The crayfish is an example of an invasive species that can be particularly bad for some Arizona waterways. Not originally found in Arizona, these small lobster-like animals were introduced to Arizona for use as fishing bait. They are **omnivores**, eating just about anything they can grab, including algae, plants, fish, frogs and even eggs. When the other animals and plants are not used to being around the crayfish, they can have trouble surviving. In larger lakes, crayfish may not create such a problem — fish like smallmouth bass and brown trout may make crayfish part of the menu. But in smaller streams and lakes, a group of crayfish can remove most of the plants and animals in a short time.

Do the science:

You are hiking and discover a small pond. You decide to study its animals and plants. After some research, you determine there are a number of creatures that live in the pond. Here is information about each of the organisms.

Microscopic organisms: These small creatures use the sun to make food.

Algae: A slimy green organism that grows on the rocks at the bottom of the pond. It uses the sun to make food.

Mosquito: A small insect. The **larvae** swim in the water, eating microscopic organisms. The adults fly, usually eating blood.

Dragonfly: A large flying insect. The larvae swim. Both the adults and the larva eat other insects.

Springsnail: A small snail that lives in the water. It primarily eats microscopic organisms, algae and plants.

Speckled dace: A small fish that eats algae, insects and snails.

Leopard frog: During the tadpole stage, they eat algae. As adult frogs, they primarily eat insects and snails.

A **food web** shows all of the organisms in one area. Arrows are drawn from each organism to show what animals it eats. For example: dragonflies → mosquito larvae → microscopic organisms

Using the information about the organisms found in this pond, draw a food web in the space below.

You return to your pond a few years later and make some startling discoveries. First, you notice that there are no longer any fish in the pond. You are able to find only two frogs. Then, you discover that crayfish are living in the water.

Do the science:

Add crayfish to your food web.

What do you think has happened to the animals in this pond?

What are some things you could do to save the few remaining frogs in the pond?