

Return of the Wolves

Just how important are wolves to Yellowstone's food web?

The lives of predator and prey are closely connected. A drop in the number of prey, for example, means fewer predators can survive. But what happens when a top predator is completely removed? The United States accidentally found out in the 20th century when it hunted wolves out of existence in Yellowstone National Park, which sits where Wyoming, Montana, and Idaho meet.

The wolves were targeted because they sometimes killed cattle and other livestock. They also competed with human hunters for elk and other game. Many people thought the world would be better without wolves. But once the wolves were gone, their absence sent ripples of change throughout the Yellowstone **food web**—a complex network of **food**

chains, or orders of animals and plants in which each feeds on the one below it.

Population Explosion

Wolves' biggest prey had been elk. Once wolves weren't there to eat them, the number of elk increased. The larger numbers of hungry elk did a lot of damage to the willow trees that line the park's river.

But elk aren't the only animals that rely on willows. Beavers use them for food and for materials to build dams. Without access to willows, the number of beavers decreased—and so did the number of beaver dams.

And the changes didn't stop there. Beaver dams affect the flow of rivers and create shady pools that some fish need to raise babies. So fish populations were also thrown off balance.

Park officials tried to fix the problems by hunting elk to decrease their population. But it didn't help enough. Then they wondered—could returning wolves to Yellowstone put things back in balance?

A Reintroduction

In the 1990s, new wolves were released into the park. Since then, scientists have carefully watched the wolf population and studied the whole food web. The number of nibbling elk has decreased. To avoid wolves, the elk must stay on the move and eat a wider variety of plants. That means less damage to the willows. And as willow trees have recovered, the population of beavers has bounced back.

Scientists hope that, slowly but surely, wolves will help restore the natural balance of the food web in Yellowstone.

