

The big carnivores are in trouble -- and that's no little thing

The majority of Earth's largest carnivores are threatened with extinction, and the trickle-down effects of that decline can be seen everywhere.

By [Laura Moss](#) Thu, Jan 16, 2014 at 8:24 AM



Photo: UIG/Getty Images

The big carnivores like lions, [wolves](#) and bears may inspire fear, but it's their absence we should be worried about. These animals — which are essential to our survival — are declining, according to [a recent study](#) published in the journal Science.

As populations of carnivores decrease, there is a ripple effect throughout the natural world, and scientists say it causes more damage than we realize.

For example, when there are fewer wolves, their prey multiplies. Deer, elk and other animals then consume more plants, and all the other creatures that depend on those plants, such as insects, are affected.

Even streams can change as a result of fewer carnivores, according to William Ripple, an ecologist at Oregon State University and the study's lead author.

When deer populations surge because of a lack of predators, the deer eat more vegetation along banks, which causes [erosion](#).

"The stream actually changes course," Ripple told [NPR](#). "So we're finding that the predator can actually affect the shape of the stream."

Ripple and his colleagues found that the planet's largest carnivores are in decline. Most of the species occupy a fraction of their original range, and more than half of the carnivores are threatened with extinction.

In the paper, Ripple argues that humans are ethically obligated to protect these animals and he makes compelling arguments for how healthy carnivore populations benefit mankind.

He notes that parks with large carnivores attract tourists who stimulate local economies. According to the paper, wolf tourism in [Yellowstone National Park](#) is worth \$22 to \$48 million annually.

Regions with a healthy big carnivore population also slow global climate change. When carnivores maintain the size of other animal populations, less vegetation is consumed, which means there are more plants to soak up carbon.

But while most people understand the basics of the [food chain](#), they're often less interested in the plight of carnivores because they fear them.

"We have trashed the large carnivores for sure," said Rolf Peterson, a research ecologist at Michigan Tech. "But it was the large carnivores to a great extent that maintained that fabric of life that formed us."