

# Trout invasion behind Yellowstone elk decline, study reports

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A bull Elk grazes October 8, 2012 in the Yellowstone National Park in Wyoming. Researchers trying to explain declining elk numbers in the Yellowstone National Park placed part of the blame Wednesday on a previously unlinked phenomenon—a predatory trout invasion.

Researchers trying to explain declining elk numbers in the Yellowstone National Park (YNP) placed part of the blame Wednesday on a previously unlinked phenomenon—a predatory trout invasion.

In a vicious circle of human interference that underscores the delicate balance of nature, the team said the illegal introduction of lake trout more than 20 years ago changed the diet of a key Yellowstone predator—the [grizzly bear](#).

The lake trout eat the bears' traditional prey, native cutthroat trout, and spawn in [deeper waters](#) where the [grizzlies](#) cannot reach them.

The bears, in turn, have started feeding more heavily on newborn elk calves—shifting the balance in their formerly fish-heavier diet.

"This synthesis suggests that even in core [wilderness areas](#) like Yellowstone, a human blunder in the aquatic system many years ago can have far-reaching impacts by forcing an omnivorous predator to seek new foods in the terrestrial landscape," said study leader Arthur Middleton of the University of Wyoming.

The researchers arrived at their conclusions from a synthesis of over 20 studies of bear diet and elk populations conducted between 1985 and 2012, as well as recent elk counts.

Most of the elk decline had hitherto been blamed on successive [droughts](#) and the reintroduction from 1995 of wolves that were extinct in the park by the 1970s.

Elk are migratory and spend their winters between 40 and 140 kilometres (25 to 87 miles) outside Yellowstone, which meant the effects of the cutthroat decline could reach far beyond park boundaries, said the team.

It may also hold implications for the management of wolves blamed for elk decline in areas that rely heavily on hunting.

"Our work highlights the importance of efforts by YNP to suppress lake trout in [Yellowstone Lake](#)," Middleton told AFP.

"If YNP can suppress lake trout low enough that native cutthroat trout can rebound, there could be major benefits for other species in the ecosystem."

The findings also highlight the need to coordinate fisheries and terrestrial wildlife management.

"If fish can affect elk, it means that if we don't look at what's going on in the fishery, we might not fully understand what's happening on the land," said Middleton.

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