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Yellowstone Is Saving Native Trout With Lessons Learned From (Gasp!) The Commercial Fishing Industry

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Last week I had the opportunity to speak with [David Hallac](#), the chief of resource management and science at Yellowstone National Park. The topic: Native Yellowstone cutthroat trout restoration in Yellowstone Lake.



Oncorhynchus clarkii bouvieri (Yellowstone cutthroat trout) (Photo credit: Wikipedia)

First, some background: [Sometime in the late 1980s](#), lake trout were introduced into Yellowstone Lake, very likely by a fisherman. Up to that point—for millennia, really—the lake had only been home to one *salmonid*: The Yellowstone cutthroat.

The lake trout soon created a serious problem for the cutthroats, for once the lakers reach a certain size, they become piscivorous, that is, they begin feeding mainly on fish. And the native cutthroats, according to gut-content samples, quickly became their favorite meal.

Within a few years lake trout numbers began to boom and the population of cutthroats began to plummet, so much so that the cutts have been monitored by fish and wildlife specialists as a possible candidate for listing as an endangered species. There may have been other factors involved in the demise of the cutthroats—the Yellowstone area has been in a long term drought and [whirling disease](#), a parasite that can kill trout, has been discovered in some populations of Yellowstone cutthroats. “But scientists basically said that the introduction of lake trout was an extra stressor and is

probably what has put them over the edge in terms of population decline,” says Hallac.

The importance of Yellowstone cutthroats in the lake, and in the park in general, cannot be overstated. They are what’s known as a “keystone” species, having a significant impact on the rest of the ecosystem, mostly as one of the main food sources for black and grizzly bears, eagles, ospreys and a variety of other wildlife species in the park. They also happen to be a very important fish for recreational anglers.

Fisheries biologists realized they needed to take action. They began trying to net the lake trout. But their initial efforts had a negligible impact on the lake trout populations. The netting was too small in its scale.

So they turned to a rather unlikely source of inspiration: The rather grim lessons that have been learned over the last few decades from the commercial fishing industry. “We studied fish populations that had been overharvested by commercial fishing,” says Hallac. “In a somewhat unfortunate sense, we have enough science now on exactly how to make a fish population collapse.”

The solution turned out to be rather simple science: Just overfish the lake trout. And that’s just what they’ve been doing.

Starting in 2012, Yellowstone officials began what they called “net nights,” where a fleet of fishing boats set 100-meter nets for 24 hours at a time. That year, with some 40,000 “units” of netting, they caught and killed around 300,000 lake trout. This past summer, they caught and killed roughly the same number of fish.

On the surface, this might sound like very little, if any, progress has been made in one year’s time. But the opposite is true. In 2013, it took the fishing boats more net units—57,000 as opposed to 40,000—to catch the same amount of fish, which indicates the population of lake trout is decreasing. (The fish are caught in gill nets, which kill most of the fish.)

So what exactly does Yellowstone do with all of these dead fish? They do not sell them. “These are non-native fish and we do not want to create an economic incentive to catch them,” says Hallac. Instead, they put the carcasses right back into the lake. This is done for ecological reasons. “Every one of those lake trout was built through nutrients in the lake. Those nutrients are important, and we wouldn’t want to remove that amount of biomass from the ecosystem,” says Hallac. “Back in the lake, they can decompose and become part of the food chain.”

The initiative costs \$2 million a year. Half of that money comes from donations through the [Yellowstone Park Foundation](#).

Hallac says that while the ultimate goal is to eradicate the lake trout from Yellowstone Lake, the best they can hope for now, given the resources, is to control the population and minimize the impact it has on the native cutts.

There are, of course, ethical ramifications that come with trying to control and/or eradicate a species, regardless of whether it is native or not. [Ted Turner](#) was [criticized by some](#) when he poisoned the portion of Cherry Creek that runs through some of his Montana ranch property to get rid of nonnative brown and rainbow trout and restore a population of cutthroat trout. And Yellowstone officials have been accused of “playing God” many times before, most vehemently in Alston [Chase](#)’s 1987 [book](#).

But Hallac argues that, from an ethical standpoint, *not* doing anything to help is worse. “If we don’t do anything, we’re saying that we’re OK with losing a species that been here for tens of thousands of years,” he says. He points to the arctic grayling, a species that once flourished in Yellowstone before being out-competed by nonnative trout. The species is now all but gone.

Hallac also argues that Yellowstone—and all national parks, for that matter—are unique entities within our broader natural landscape, and should be treated that way. “National parks, in my mind, are special places that have been set aside to be managed for native ecosystems and the preservation of native species.”