

A Time to Kill

When catch-and-release is not always the right answer

▲ BRIAN IRWIN

GLACIER NATIONAL PARK'S Swiftcurrent Lake stretches into one of the most beautiful backdrops in North America. In 1998 I lived on its shores. Each night I'd wade into the cold water and cast to the evening hatch as the sun set behind the Garden Wall, the Grinnell Glacier shimmering in the falling light. Like clockwork the water would roil at sunset, indiscriminate brook trout inhaling anything you'd throw at them. Although tiny, each one stunned me with their bold colors and intricate wormwood backs. An ardent catch-and-release fisherman, I slid each one back into the lake. In retrospect, I now wish I'd have killed every one of those fish.

Eastern brook trout, not native to Western waters, were intentionally introduced into northwestern Montana's waters by local management groups and even the National Park Service in the early 1900s in an attempt to promote gamefishing in the region. The venerable Great Northern Railroad, which spread west, erecting grand hotels like the Glacier's Many Glacier Lodge (in which I worked), also stocked local waters to promote their mission. Eventually these nonnatives, which included not only brookies

Photo | Bryan Gregson

► **Yellowstone cutthroat** trout are the native fish in the South Fork of the Snake, but in recent decades their numbers have dwindled while rainbow trout and hybrids have steadily been on the increase.

but rainbows, lake trout, and kokanee salmon took hold, their populations often replacing the native westslope cutthroat trout.

Today, many lakes in Montana are dominated by these invasive species. They have not only competed for food in a tenuous ecosystem and preyed on young, native trout, in many cases they have hybridized with native cutthroats, yielding a new, dominant species that, according to the National Park Service, "have shown reduced growth and survival rates that may lead to their demise."

Even worse, the USGS has found introduced brook trout now "inhabit 40 percent of [native] bull trout streams in Montana and may be replacing native bull trout in that state through hybridization. Almost all the resulting hybrids are sterile."

Fishery management agencies have responded to this crisis by modifying creel limits, in some cases promoting unlimited removal of nonnative species. The nerve-wracking reality is that by removing nonnative species from these waters we invariably alter that ecosystem once again. The outcome of this solution is unknown. Regardless, there appears to be no other way to rectify the delicate balance that we wrecked. If we strive to restore the native species, there is no choice but to kill prized gamefish that are otherwise cherished.

Perhaps the most dramatic example of this philosophy is the current fish management policy on Wyoming's Yellowstone Lake. Lake trout were introduced to the 139-square-mile lake decades ago, although they weren't detected until 1994. Today the lake holds so many lakers, each one of which, according to the NPS, "can consume at least 41 cutthroat each year," that biologists fear the cutthroat population could be totally extinguished. This actually happened to the native westslope cutthroat population on Montana's Madison River, as it was overrun by rainbows, brooks and browns.

The impact of the laker takeover reaches far beyond the depths of the lake, where lakers live. The shallows are now thin, not thick, with cutthroat. Other species that rely on this valuable food source are suffering, including bears and birds. According to the Billings Gazette, the number of feeding osprey around Yellowstone Lake has plummeted, leaving



Photo | NPS Images

► **The National Park Service** has contracted commercial fishermen to reduce lake trout populations in Yellowstone National Park. In 2012 they removed more than 300,000 of the nonnative char.

empty nests waving in the wind. The Park Service has responded with an aggressive lake trout reduction program, culling or otherwise killing 1.1 million lakers out of the lake since 1994. Last year alone they removed over 300,000 fish, acknowledging that although eradication of the lake trout population is impossible, reduction in numbers will hopefully lead to resurgence of the cutthroat population.

Bruce Farling, executive director of Montana Trout Unlimited for the last 20 years, explained that to succeed in reestablishing the native cutthroat population "you need to [kill] 50 percent of the lake trout population every year. In last year's data there were tentative indications that the cutthroat population may be rebounding."

This is fortunate news, as Farling went on to cite that "the lake-based Yellowstone cutthroat population is now about 5 percent of its historical high, which likely occurred in the 1970s." The National Park Service, in conjunction with Montana TU's expertise, has launched a sophisticated lake trout eradication program. In addition to using radio-tagged lake trout to help identify breeding grounds which could then be targeted, they went one step further. They hired commercial fisherman to help kill lakers.

"The [National Park Service] has employed commercial fishermen in concert with the Park Service gill netting and trap netting program, which has allowed them to catch fish of all ages. This has allowed the reduction of spawners, as well as older fish."

Expensive the project may be, but it's not haphazardly executed or unstudied. In Idaho's Lake Pend Oreille a similar problem occurred when the exploding laker population, feeding on invasive *Mysis* shrimp, thrashed the Kokanee salmon population. Within eight years, through a series of techniques including bounty rewards for lakers and netting, the Kokanee population rebounded to levels that now allow creel limits.

Eat the Rainbows

The South Fork of the Snake River winds through Idaho's brushy canyons and granite slots. Its water is clean and pure, making it perfect habitat for the native Yellowstone cutthroat. Recreational stocking, both organized and illegal, has established a population of rainbow trout that, according to TU, "gained a toe-hold in the system sometimes in the early 1970s."

Surveys showed that in 1995, rainbows and rainbow-cutthroat hybrids accounted for 16 percent of the fish population. By 2002 that number had tripled, and rainbow catches equalled that of their native brethren.

You can't net the South Fork. It's a thrashing waterway strewn with boulders. There's no way to sift the water and kill all the invasives you find. On the South Fork, the hunter is the angler; those of us who cast for the creatures. As a community, if everyone supports removal and killing of nonnative trout on this river, and kills those that we catch, we turn back the clock on this river.

Maine Salmon

In 1999 I spent a month living on Maine's Long Pond in the Belgrade chain. This string of lakes has historically been a strong salmon fishery, with dense runs between lakes. Fat brookies filled in the gaps. Yellowing photos of strings of native fish hang in the 50-year-old general store and marina. Behind it, a small dam links Long Pond with Great Pond.

Each night the washwater under the dam would sparkle as salmon rolled in the foam. I caught a few, saw many. I moved away, and years later moved back, settling on the outlet of the lake that fed Long Pond. The tannin-stained water still eased under the bridge, the one where I'd caught a 3-pound landlocked salmon years back. But the water was slower, thicker. It had become choked with milfoil, one of the most voracious of the invasive plant species.

The salmon were also gone, or so was the word at the lakeside general store. Just a few years prior, the deli counter was a raucous arena of one-upmanship, each old-timer talking about how many times their landlocked jumped, what it hit, how much it weighed.

By the time I moved back, the shop was quieter, enthusiasm had waned, and the fishing was poor. I'm not a great fisherman, and I didn't troll, but in my three years on the lake, fishing more than 100 days each year on fly, I didn't catch a single salmon. But I had a nice dock and canoe, and every night I knew I could get a fight if I hit the topwater at dusk. Mouse patterns, or even buggers, were effective tools at landing pike. They were a reliable catch. Again, I let them go.

The Maine Department of Inland Fisheries and Wildlife reports that "pike illegally introduced into the Belgrade Chain of Lakes in the 1970s are now present in at least 16 lakes in the Kennebec, Androscoggin, and coastal river drainages." These predators, which were likely introduced by "bucket biologists" who illegally stocked some waters to increase the chance of their catch, have the carnivorous potential to decimate the native brook trout and salmon population in the bulk of northern New England.

When a person stocks even a few fish into a body of water, an ecologic cascade occurs. The ecosystem, floral balance, chemistry of that water changes forever.



Photo | Bryan Gregson

► **Fly fishers** have been oriented toward catch-and-release for decades, but in some places, killing (and eating) nonnative fish is the best choice.

So how does this leap? How can it spread? Through natural and unnatural means of transport. Fish eggs can be durable and withstand low water and high heat, surviving even in a sun-baking mud puddle. Some fish, like the repulsive Northern Snakehead, can survive out of water for four days, if they stay damp, and travel up to a quarter mile out of water. The truth is that fish migrate. Even over land.

When a deer walks through a drying mud puddle, sturdy, fertilized fish eggs can stick to its legs. The same can happen with wading birds. Probably more adhesive to bioflora than anything is the sticky felt that dons many of our boot waders. While these have been banned in Alaska, and Maryland, and other states, and should be avoided by anyone, the point is simple. If eggs stick to legs in one pond and those legs wade in another, a species can leapfrog with terrifying efficiency. Without hyperbole, it is true that one illegally stocked pike can lead to destruction of an entire region's native trout.

As a child I'd swing my line in the water of Triadelphia Reservoir near my hometown in Maryland. A bold sign was nailed to a tree near the boat ramp. It showed a photo of a snakehead, an aggressive, air-breathing Asian fish that had been introduced to Maryland waters via dumped home aquariums. The sign implored anglers to kill any of these fish they catch. Snakeheads have no natural predators in the U.S., are durable, and can lay up to 15,000 eggs five times a year, making them a credible threat.

I never caught one, or even saw one. Rather, I spent most of my early years wearing felt-free Chuck Taylors,

fishing the plunge pools and rips of Big Hunting Creek in the Catoctin Mountains, a tributary of a tributary of the Potomac.

But in May 2012 two separate fishermen on two separate occasions caught northern snakeheads in the Potomac River, portending that if we lose control of the snakehead population, all of the streams in the Potomac watershed, comprising the belly of Maryland and much of Virginia's water, could be under siege. The Maryland DNR has responded briskly, even administering a pesticide to one water body to kill all its fish after snakeheads established a complete takeover there.

Killing isn't slaughter, it's natural selection. We are purportedly the most intelligent creatures on earth, yet we rarely kill the animals that take over other animals' habitats. Instead we kill the people who take over other peoples' habitats. Perhaps it's time to stop killing the people who determine the price of a barrel of oil and time to start rectifying the disrupted ecosystem that we, as humans, disrupted.

And don't forget to eat what you kill. Unless it's a snakehead. 🐍

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