

Conservation

Aliens Among Us/By Michael Hamilton

There's a new bully in Montana's Bitterroot River neighborhood, a voracious predator that feeds day or night. It eats frogs, salamanders, mice, small snakes, birds, and insects; loves to snack on other fish—and aggressively commandeers habitat and kicks out resident natives with no eviction notice. This miscreant is implicated in the reduction of many native fish populations. Paradoxically, it is also the favored target of many fly anglers. Any guesses?

“Brown trout populations have quadrupled over the last decade in streams like the East and West Forks of the Bitterroot River,” states Chris Clancy, Montana Fish, Wildlife & Parks (FWP) biologist. In the East Fork alone, he says, brown trout populations have jumped from 100 to 600 in specific sampled sections. Worse, notes Clancy, browns are now thriving in some of the valley floor's major creeks and even showing up in higher mountain tributaries where the water is cold and clear. He says, “Our immediate concern is the impact of browns expanding into the native spawning habitat of bull trout and westslope cutthroat in the tributaries of the Bitterroot.”

Bull trout, explains Clancy, are already scarce and listed as endangered. Because both browns and bull trout spawn in the fall, he fears that “the browns are most likely to outcompete the bull trout for food and, more importantly, breeding habitat.”

Further, notes Clancy, native cutthroat can't compete with browns either, but thus far his annual sampling data show that their populations are holding steady.

Brown trout are not native to Montana. They were brought to the state from Europe and first stocked, in the Madison River, in 1889. Generally browns prefer lower-gradient, warm-water rivers and reservoirs across the state. With their numbers growing three- and four-fold, Clancy says, MFW needed more information before considering options on how to solve the brown invasion.

In 2012, Robert Al-Chokhachy, research fisheries biologist with the U.S. Geological Survey Northern Rocky Mountain Science Center, wrote a research grant with the goal of assembling conclusive evidence as to why the numbers of browns are growing unchecked. Through

the course of his work, Al-Chokhachy met with several area biologists to compare fish communities, densities, biomass, range, abundance, and production from nearly 50 long-term monitoring sites located in the Bitterroot, Rock Creek, Thompson River, and Clark Fork drainages. His preliminary assumptions point to a changing climate



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and increased water temperatures. “The last decade has been pretty darn hot in Montana. In addition, the massive forest fires of 2000 ravaged timber and sparked erosion throughout the Bitterroot drainage, causing water temperatures to rise,”

he says. As evidence, he points to several summer angling closures enacted when water temperatures reached near 70 degrees. “No question we are experiencing reduced winter flows, with a couple of exceptions, and warmer water temperatures throughout the summer in the last decade,” he says. “It's not getting any better. The models we've built based on the research show this trend continuing.”

The brown trout assault is not limited to the Bitterroot drainage. In streams like Montana's famed Rock Creek, brown trout have continued to move in behind populations of rainbows and cutthroat that were decimated in the 1990s by whirling disease. “The numbers tell all,” says Brad Liermann, MFW fisheries biologist for the Rock Creek region. “In the lower reaches of Rock Creek, where browns averaged 75 fish per mile through the early '90s, they now number 750 to 950 per mile. The same is true in the upper reaches near Hogback Creek. We may be witnessing one species replacing rather than simply displacing another.”

Thus far, solutions are as scarce as snowstorms in August. Clancy reports that MFW liberalized catch regulations in 2012, allowing anglers to keep three browns of any size in the East and West Forks of the Bitterroot. However, he admits, encouraging fly fishers to kill trout, be they browns, rainbows, or cutthroats, is akin to asking a vegan to order prime rib. “The issue is really a paradox with no easy answers,” he says. “If scientists and conservation groups are focused on preserving native fish, then the invasion of browns or any nonnative species is a huge threat. However, if it simply comes down to a question of just ‘catch numbers,’ guides and anglers might think it's no big deal.”