State of our Trout Part II

Apaches, greenbacks, westslope cuts, and other salmonid successes.

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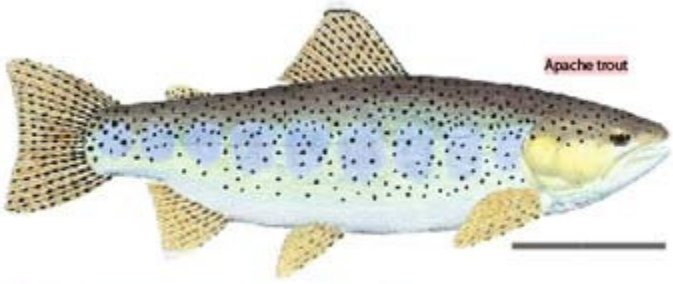

Last issue I promised and delivered some good news about the recovery of the West's imperiled trout, though in the case of Paiute cutthroat recovery—aborted for the fourth time by retired macroinvertebrate researcher Nancy Erman and her troupe of loud, aggressive, fish-stupid chemophobes—you had to look hard for it. Herewith, good news that— once you get past some discouraging elements—is more obvious.

Let's begin with Apache trout, Arizona's state fish. It's neither cutthroat nor rainbow, but a unique, heat-adapted salmonid of the high desert that evolved in Arizona's White Mountains. Listed as endangered in 1967 (via the earlier, weaker version of the Endangered Species Act), it was down-listed to threatened eight years later.

No native-trout recovery program has progressed more smoothly, and few have produced more spectacular results. For one thing, only brown trout occupy Apache habitat; so, while browns displace Apaches and must be chemically removed, introgression hasn't been an issue. Arizona is also blessed with a dearth of chemophobes, a plethora of ecologically literate anglers and enlightened fish managers at the state level and in the White Mountain Apache Tribe, which set about restoring these fish in the 1940s while state and federal resource agencies were flinging alien trout around America like confetti.

The recovery goal was 30 populations; today, there are 27. "We're hoping within the next two to three years to finish the last three," says Julie Meka, native trout coordinator for Arizona Game and Fish Department. The department has opened two recovered streams to catch-and-release fishing, and will doubtless open more in the near future. It also stocks large Apaches in non-recovery areas so that bucket biologists won't be able to contaminate recovered populations.

Greenback Cutthroat

Blighted by mine waste, over-fishing, de-watering and, especially, introgression and competition from non-indigenous fish, the greenback cutthroat trout faded from the Arkansas and South Platte Rivers in Colorado's Front Range mountains and its few native South Platte tributaries in southeastern Wyoming. In 1939 it was declared extinct.

Thirty years later a young Colorado State University scientist named Robert Behnke rediscovered greenbacks in a tiny headwater stream in the Roosevelt National Forest in north-central Colorado. When Congress passed the Endangered Species Act (ESA) in 1973, the fish became one of the first listings.

With the recovery plan underway in 1978, greenbacks were down-listed to threatened. It was purely a political move, but a smart one because it allowed catch-and-release fishing. With the angling community rallying around the project, there was intense political motivation. The alien brookies, rainbows and browns had never done well in greenback water. But, with the home-court advantage, the greenbacks became fat and robust, reaching lengths of 18 inches. Rocky Mountain National Park, a main sanctuary, became a destination fishery. In 1994, Colorado made the greenback its state fish.

Brookies, notoriously hard to eliminate, keep popping back up in greenback streams. For years the Park Service has been begging anglers to kill brook trout. In fact, you can legally keep 18 a day. Not that it matters much in overall greenback recovery, but so ingrained is the no-kill mindset that more than 90 percent of all brook trout caught by anglers in the park get released, according to 2007 creel-census data.

Environmental writers, including me, have long cited the greenback program as one of the most spectacular success stories of the Endangered Species Act. The recovery goal was 20 populations. Today, with at least 60 populations, greenbacks should have been de-listed from the Endangered Species Act. But in August 2007, much to the glee of the anti-piscicide axis, an ugly genetics issue arose.

A three-year study led by University of Colorado researchers "found," reported The New York Times, "that out of nine fish populations believed to be descendants of original greenbacks, five were actually Colorado River cutthroat trout." And this item from The Western Native Trout Campaign—a cooperative venture by the Center for Biological Diversity and Pacific Rivers Council (which together sabotaged Paiute cutthroat recovery in 2003, after the groups swallowed retired macro-invertebrate researcher Nancy Erman's anti-piscicide snake oil hook, line, boat and motor), the Biodiversity Conservation Alliance and a genuine hero of salmonid recovery, Trout Unlimited: "Tragically, biologists recently discovered that several of the greenback populations were genetically contaminated by as much as 33 percent with Yellowstone cutthroat trout."

That is tragic news indeed. It is also incorrect news, at least according to Dr. Behnke, who probably knows more about trout and salmon than anyone alive. In any case, The New York Times and the Western Native Trout Campaign had no basis for reporting that the researchers "found" or "discovered" anything. Finding and discovering are not the same as "claiming."

Behnke submits that if there's something tragic about this and similar "erroneous conclusions" about greenback genetics, it's that they "have caused the recovery program to flounder in confusion" and "led to the poisoning of pure greenback brood stocks" (not that there aren't plenty left).

"Greenbacks," Behnke writes, "retain a little DNA from the other side of the continental divide. But this is a completely natural event….[Dr. Andrew Martin, the University of Colorado professor who oversaw this latest study and co-authored the paper] seems to be completely unaware of all that has gone on before him. He's been brainwashed by techniques, methods and state-of-the art statistical analyses. Any rational judgment based on a range and depth of knowledge is eliminated from his thinking. Doesn't he realize that all of the samples used in his study came from small, fragmented populations subjected to confusion caused by the founder effect?"

By "founder effect" Behnke means the natural and dramatic physical differences that appear when, after you place fish with a wide variety of genetic markers into multiple habitats, random selection by predators and disease leaves just a few "founders" of each new population.

Could it be that, having given the world back these fish, Behnke has allowed his emotions to cloud his objectivity? I know him well enough to state that such behavior would be alien to his character. Still, I asked Bruce Rosenlund of the Fish and Wildlife Service's Colorado Fish and Wildlife Management Assistance Office for his thoughts on the issue. He said this: "The more information we collect on this, the fuzzier the picture gets….I guess I'm not convinced that the markers indicate much of anything; I tend to be more in Behnke's camp."

Gila Trout

The Gila trout, down-listed to threatened in 2006 and native to the Gila and San Francisco river drainages in New Mexico and Arizona, is another heat-tolerant, high-desert salmonid. Most of its natural range is in New Mexico, where recovery has been nearly as spectacular as that of the Apache trout, whose range it slightly overlaps. But progress has been anything but smooth. Fires and overgrazing have decimated important populations. Competition by browns and introgression by rainbows—some of this facilitated by government-hating, mongrel-loving saboteurs—has continually frustrated fisheries managers.

Here—in the national epicenter of county supremacy where anything undertaken by the state or feds is regarded with suspicion and paranoia—regulatory bodies have been easily seduced by full-time anti-piscicide crusader Ann McCampbell and her minions. These include Grant County (which tried and failed to impede piscicide use by passing what it called the "Pollution Nuisance Ordinance Act"), the Water Quality Control Commission and even the New Mexico Game Commission. After the Game Commission stripped the state game and fish department of authority to use piscicides, I reported in July/October 2005 FR&R that Gila recovery had been "stopped dead in its tracks." But our ink was scarcely dry when a major obstacle—the Game Commission chair— got disappeared by the governor for alleged improprieties. Shortly thereafter, Gila project leader, David Propst, wangled permission to use antimycin, a piscicide even more effective and shorter-lived than rotenone.

His department needs it to fix a major setback. Brown trout have reappeared in the Upper West Fork of the Gila River, thought to have been cleansed of aliens in 2006. The recovery team was set to go in again with antimycin when word came from Arizona that antimycin had lost its kick. The single supplier, Nick Romeo, had died; and his contractors had apparently let water contaminate the formulation.

So Propst had to ask the Water Quality Control Commission to amend its order so that he could use rotenone. He figured this wouldn't be a problem because the commission had just okay-ed rotenone in Rio Grande cutthroat recovery. But, on the strength of McCampbell's junk science, it concluded that rotenone might somehow be more dangerous in Gila-trout water than in Rio Grande cutt water and

scheduled a new public hearing for May 28, 2008. Propst, who never seems to run out of energy and optimism, sounded dispirited when I talked to him on May 14.

But on May 29, he told me he was "feeling a whole lot better." McCampbell had missed the filing deadline and could only testify by a letter containing her boilerplate rants. Propst had been out the door before noon with the blessing of the hearing officer. And in August the Water Quality Control Commission granted him permission to renovate the Upper West Fork with rotenone.

There's still lots of work to be done, particularly in Arizona, but Gila trout are well on their way to recovery. In 1970 these fish barely survived in about 12 miles of stream in four drainages. At this writing, they're secure in about 78 miles in 13 drainages; and when the Upper West Fork of the Gila is reclaimed probably this year, the sanctuary will have expanded to 95 miles in 15 drainages.Game and fish opened two Gila streams to angling in the summer of 2007. One is no-kill. The other, because its fish are slightly introgressed, has a two-fish daily limit. (Comparison will provide important data on what kind of fishing pressure Gila trout can withstand.) On July 1, 2008, the department allowed catch-and-release on the lower part of Mogollon Creek, a showcase for the project because it grows 14-inch fish. With no advertising, the department got 170 anglers to file for its 2007 Gila-trout stamp (free but required so that it can collect creel census data).

Rio Grande Cutthroat

The Rio Grande cutthroat trout (New Mexico's state fish) has been extirpated from 90 percent of its historic range. It used to occupy the tributaries of the Rio Grande at elevations of 7,500 and higher. Now most populations have been pushed up to at least 8,250 feet. Of the 120 surviving significant natural populations, 112 exist as genetically isolated fragments.

Because 38 percent of Rio Grande cutthroat trout populations share habitat with non-native trout, aggressive piscicide treatments are desperately needed. But recovery stalled in 2005 when chemophobes got the Game Commission to revoke the New Mexico Department of Game and Fish's authority to use rotenone and antimycin.

"The Rio Grande Cutthroat is not an endangered species but is a popular sport species among fishermen," proclaimed the group Wilderness Watch. "It is both sad and ironic that it was Aldo Leopold who convinced the Forest Service to protect the Gila as our nation's first wilderness in the 1930s. Now, it is in danger of being converted to a fish farm for recreationists."

It was also Aldo Leopold who wrote: "If education really educates, there will, in time, be more and more citizens who understand that relics of the old West add meaning and value to the new."

One might suppose that an outfit with a name like "Wilderness Watch" might know about the work of Leopold, the father of wilderness, or at least be vaguely familiar with the language of the Wilderness Act, which, because of Leopold, provides for precisely the kind of replacement of wilderness parts the Rio Grande cutthroat recovery team is implementing. But no.

In any case, the argument that "the Rio Grande cutthroat is not an endangered species" and therefore shouldn't be recovered, brainless as it is, may soon not apply. On May 13, 2008, the U.S. Fish and Wildlife Service announced that it would develop a proposal to list the fish as either threatened or endangered. That's a huge boost to the program. And now that game and fish has regained authority to use piscicides, recovery is forging ahead.

"In the summer of 2007 we did a lot of work on Comanche Creek in the Valle Vidal, getting rid of white suckers and non-native trout," says Forest Service regional biologist Amy Unthank. "It went very well. There were very few protestors, and they weren't allowed near the stream."

Golden Trout

The California golden trout (the state fish) is not listed on the ESA but probably is more imperiled than its close relative, the threatened Little Kern golden. Both forms evolved high in the Sierra Nevada Mountains after post-Pleistocene heat in the Central Valley cut off primitive Sacramento-San Joaquin redband rainbows.
California goldens survive only in the South Fork of the Kern River and Golden Trout Creek, within the 303,287-acre Golden Trout Wilderness of the Sequoia and Inyo National Forests. Most of the Golden Trout Creek populations are in decent shape, though a few have been lightly contaminated by rainbows inadvertently stocked by the California Department of Fish and Game. But, with rampant introgression and brown trout knocking at an upstream barrier, the South Fork of the Kern needs mega-doses of rotenone.

"We're about to propose some treatments," says Christy McGuire, in charge of golden-trout recovery for fish and game. "We'll have to go through the NEPA [National Environmental Policy Act] process, and that takes a couple years. The Paiute cutthroat trout effort has been a real learning experience for our department."

Little Kern goldens, surviving in five populations above barriers and mostly in the Golden Trout Wilderness, have suffered little introgression, though McGuire and her colleagues have identified a few contaminated populations that they plan to clean out.

"Our big accomplishment in 2007 was comprehensive DNA testing on California goldens and Little Kern goldens throughout their range," says McGuire. "So now we know what we've got and can start implementing restoration."Before the department's stunning victory on Lake Davis (see "State of Trout: Part 1" November/December 2008), golden-trout recovery seemed like a long shot. Now I'd call it a good bet.

Westslope Cutthroat

Once abundant in Montana, Idaho, Wyoming, Washington, Oregon, British Columbia and Alberta, westslope cutthroat trout are in desperate trouble. But Montana, which has designated the westslope its state fish, has undertaken what may be the most important and ambitious native-fish recovery effort ever attempted.

For the better part of a century, the lakes of Swan Mountains in the Flathead National Forest have been dribbling alien genes from rainbow-Yellowstone cutthroat hybrids into the last best westslope sanctuary —the mainstem and tributaries of the South Fork of the Flathead River, isolated from rainbow invasion by the Hungry Horse Dam.

Now, with mitigation funds from the Bonneville Power Administration (which operates the dam), Montana Fish, Wildlife and Parks has begun a 10-year program to eliminate the hybrids and replace them with pure westslopes. It can't be called a "reclamation" because the lakes were originally fishless. But the Swan Mountains have become an important angling destination, and there's no good reason to deprive the local economy of this huge source of revenue. There is, however, an excellent reason to establish pure westslopes where none existed—the genes they will contribute as they make their way

into the South Fork system will help reverse the process of introgression by genetically swamping the mongrels.

Wilderness Watch has been working overtime to kill the project. Of all its outrageous claims, the most disingenuous is that the westslope broodstock (recently infused with new genetic material from pure South Fork fish) aren't quite the same as the downstream natives and therefore might degrade their genes. But the downstream natives now face extinction from the hybrids Wilderness Watch wants left alone.

In June 2006, Wilderness Watch and Friends of the Wild Swan tried to stop the project by filing an administrative appeal with the Forest Service. Interestingly, Friends of the Wild Swan had successfully petitioned to list the bull trout as threatened. Why would it care about bull trout and not westslope cutthroats? The answer is that it cares about neither; it's just that listed species are advantageous to its political agenda.

While that agenda—protecting the Swan Mountains from slap-dash development—is laudable, using one listed species while simultaneously engaging in activity likely to cause the listing of another is precisely the kind of behavior that provides ammo to critics of the Endangered Species Act who claim "environmental extremists" are misusing it.

If the administrative appeal wasn't discouraging enough, many (maybe most) of the wilderness-fishing outfitters want the project stopped. Although the westslopes will grow faster and bigger because they're better adapted to the habitat, it will take two or three years for the fish to reach catchable size. And, while there will be plenty of hybrids left in lakes yet to be treated, these outfitters don't want even a small and temporary reduction in fishing opportunity.

It's fine with them if America's rich and diverse trout-gene library continues to degrade into one big pile of homogenous mush, provided their clients' rods get bent. Barbara Burns, co-owner of the Bob Marshall Wilderness Ranch—one of the oldest and best-known operations in the project area—tells me this: "There are a lot of other lakes that they could poison. Why take big, healthy, fat fish and kill them? If they want to play God outside the wilderness, fine. Are any of us pure? We're all mongrels."

But, like I said, there's lots of good news. And here's the best I found anywhere: The U.S. Forest Service —the agency that cut and ran when challenged on Paiute recovery—denied the appeal of Wilderness Watch and Friends of the Wild Swan in language so forceful that it amounts to a stern rebuke. Rotenone treatments started in 2007 with what appears to be complete removal of hybrids from Black and Blackfoot lakes. Two down, 19 to go.

Onward with native-trout recovery, and upward with all those brave, dedicated, enlightened souls in government and the private sector who make it happen.

Ted Williams' column appears in every issue of FR&R. His latest book is Something's Fishy, available at flyrodreel.com. The illustrations in this column are from Freshwater Gamefish of North America: An Illustrated Guide, to be published in 2009 by Fly Rod & Reel Books.