## American Fishes >>>

## Gila Trout

By Craig Springer

The cutting light of morning breaks over the walls of Black Canyon in southern New Mexico, and makes moving pictures for your occupation. Illumined is a land of stark distinctions. Ancient alligator juniper and spare grasses stud the friable dirt on the south-facing rocky hillsides. The shaded slopes with a northern aspect are wetter, forested with cinnamon-yellow ponderosa pines that smell like candy. A thin green ribbon of trees bisects the canyon bottom, snaking from wall to wall following the flowing water in a curling fashion. Gila trout colored with a touch of lemon, like the light that peeks over the ridgeline, swim

Well inside the Aldo Leopold Wilderness, this place is as remote as the moon. Cool creek water comes off the Continental Divide in the Black Range flowing westward toward the Sea of Cortez. But it will never make it. What doesn't evaporate will irrigate chile fields or slake thirst in Phoenix. In this canyon bottom, water freshly off the high mountains courses into pools scoured under alder root masses where Gila trout lie. It's a fish that swims nowhere else in the world, but in the headwater streams of the Gila River.

It must be a clarifying experience to angle a Gila trout. Think of this: until very recently, there was probably no one alive who had legally caught a Gila trout in its native waters. These beautiful yellow trout flecked with pepper-spots, ornamented with parr marks, and striped with a faint rosy-pink band, were closed off from fishing for over 50 years. That was until 2007. It had been for a time, the

nation's only trout endangered with extinction.

In 1973, at the time of its listing under the Endangered Species Act, scientists estimated the Gila trout swam in just 20 miles of water in only four streams. That stands in stark contrast to the estimated 600 miles it once occupied in New Mexico as late as the 1890s. It's been a strong current that this trout has had to swim against.

The U.S. Fish and Wildlife Service's Fish and Wildlife Conservation Offices in New Mexico and Arizona diligently expanded the range of the trout in stream-to-stream transfers with a mind of adding geographic security by widely separating the replicated populations. It's paid off, too. These arid mountains of the Gila are prone to forest fires and trout don't do well in ash-laden waters. That came to the fore this past summer when the massive Whitewater-Baldy Fire burned 7 of 14 streams holding Gila trout.

Conservation of Gila trout would not be possible without the Mora National Fish Hatchery. This facility has been a refuge for wild fish faced with grim prospects. Four times Gila trout have gone there from the wild in advance of moving wildfires and held there safely in quarantine, only to be returned to the wild later.

Despite its beauty, this trout has not been known to science for very long. But folks have known about Gila trout for centuries. Beaver trapper, James Ohio Pattie, one of the first writers of English to traverse this remote place made mention of fish—and quite likely Gila trout. He wrote of

his 1824 experience at the confluence of the West and Middle forks of the Gila River. "On the morning of 13th [December] we started early, and crossed the river Helay, here a beautiful clear stream about thirty yards in width, running over a rocky bottom and filled with fish. We found here a boiling spring so near the main stream, that the fish caught in one might be thrown into the other without leaving the spot where it was taken. In six minutes it would be thoroughly cooked."

The boiling spring is still there and still used, but for soaking hikers' feet. The Gila trout retreated from the lower main-stream reaches of the Gila River to headwater streams of the West, Middle, and East forks. After settlement of the area, fishing pressure increased, nonnative fishes were introduced and the native Gila trout couldn't keep up. Gila trout hybridized with nonnative rainbow trout, creating a mongrel trout population that was neither Gila nor rainbow. What was Gila trout habitat became overrun with other nonnative fish species like brook and brown trouts.

The Gila trout wasn't formally recognized by scientists as a unique fish species until 1950, 125 years after trapper Pattie cooked them in a hot spring. But conservationists early on in New Mexico's history knew that the Gila trout was distinct. The New Mexico Department of Game and Fish attempted to culture them in the 1920s at a small hatchery deep in the Gila National Forest, and later ceased stocking nonnative trout in the wilderness waters of Gila.

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A Gila trout, native only to the upper reaches of the Gila River system, reflects a copper-yellow sheen. The fish had been closed to angling for 50 years, and was the only trout considered endangered with extinction until 2006, when it was down-listed to threatened.

So, there must be some clarity that comes from catching a Gila trout by hook-and-line. Things opposite one another clarify each other. There is no darkness without light, no day without night; Gila trout nearly swam into a dark abyss of extinction, and today you can try outwitting them with fur and feathers on a hook. The prize of a Gila trout today is not the size of fish that you can angle. You won't catch big fish in small waters.

Gila trout are swimming expressions of antiquity, artifacts of epochs past. In their genes they carry a time capsule. Coiled in the double-helix of their DNA lies the lexis of the environment from which they sprung forth, giving them the temperament to make a living in a harsh place.

The success of Gila trout conservation is a swimming expression of human experience, good science and the

dedication of those determined to see what had been this nation's only endangered trout turn upstream from the sweeping current of extinction. The Gila trout remains, however, one of the rarest trout in the world. •