



**UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
ENDANGERED SPECIES PROGRAM**

TELEPHONIC INTERVIEW Time (9:52)

GILA TROUT (HOST – SARAH LEON WITH JIM BROOKS)

This transcript was produced from audio provided by FWS Endangered Species Program

PROCEEDINGS

(Music plays.)

MS. LEON: Hello there. This is Sarah Leon for the US Fish and Wildlife Service. I'm on the phone today with Jim Brooks, Supervisory Fish Biologist down at the New Mexico/Texas Fish and Wildlife Conservation Office. Hi, Jim. How are you today?

MR. BROOKS: I'm doing real well.

MS. LEON: Jim, I have some questions about Gila trout for you today. Do you have some time?

MR. BROOKS: Sure do.

MS. LEON: All right. Now Jim, what can you tell our listeners about this species?

MR. BROOKS: Well, it's one of only three native trout to the Southwestern United States, and one of only two in New Mexico. It was discovered in the early 1950s and described in a scientific journal by an old professor from the University of Michigan, Robert Rush Miller.

At the time of its discovery and scientific description, there were only five populations left. So it had really been threatened, endangered, and reduced in its distribution by the time it was scientifically known.

It's uniquely adapted to Southwestern environments, which means it does a lot better in

warmer water environments. A lot of the streams we've got, you can get water temperatures upwards of 85 degrees or so in the summer. This is atypical for what you would consider most native trout species.

It's kind of an olive-golden colored fish. It's got real fine, profuse spotting on it.

One of the interesting things about it is it's able to not overpopulate streams, something like a brook trout would do in a nonnative environment. They're able to adapt to their environment to not overpopulate and to not overuse their resources.

MS. LEON: All right, Jim. Why is this species in trouble?

MR. BROOKS: It's common to a lot of the native trout in the Western United States. Probably the biggest threat to Gila trout has been historically the production and stocking of rainbow trout into occupied habitat by native trout, and that includes Gila trout too.

Even though most of the occupied range of Gila trout was in what's now called the Gila Wilderness -- no roads, no easy access, no hoards of people -- the state of New Mexico and the Forest Service early on at the turn of the century began a pretty intensive rainbow trout stocking program. Rainbow trout hybridized with Gila trout.

They've also stocked brown trout, which can compete and actually completely eliminate Gila trout from the stream through competition.

More recently, fire suppression has resulted in more catastrophic fires when we have fires. That has a severe impact post-fire era to the streams. When you have really hot burns, which we have now because of fire suppression for several decades, then watersheds get more destabilized. Even a small rain event can have a significant effect by the water not being held in the slopes and scouring out the streams because of flooding after rainstorms.

So in general, it's primarily nonnative trout. But also, the effects that we have from fire suppression and the floods that result after catastrophic fires.

MS. LEON: So what are some of the major conservation actions currently under way and who all is engaged in these efforts?

MR. BROOKS: Because of the low distribution of Gila trout, at one time down to five populations, our big emphasis has been on removing nonnative trout. And then reintroducing Gila trout into these streams where we've removed the trout.

Nonnative trout are removed with an organically derived piscicide, which means a fish toxin called rotenone and sometimes antimycin. Those are the only two that are legally allowed for use in water, even in fresh water. It affects only gill-breeding animals. But they're very important tools from a fisheries management and a trout recovery

standpoint.

So that's kind of our biggest effort. This includes building barriers to prevent upstream movement of nonnative fish, selecting the best habitat, removing the nonnative trout, and reintroducing native.

We've also worked with a fire program from the US Forest Service to go in and perform rehabilitation projects in watersheds that have burned because of wildfire to prevent the catastrophic loss of habitat. Because when you have habitat loss caused by post-fire flooding, this could last for decades. So it's not like you can just wait a couple of years for the stream to repair itself. You have to actually help it. This is a very well-coordinated effort with not just the Fish and Wildlife Service. The Fish and Wildlife Service is just one of many players. The New Mexico Department of Game and Fish, the US Forest Service, and also scientists from the University of New Mexico are very important cooperators in this recovery program.

MS. LEON: All right. It sounds like the recovery program's been successful. As I understand, this species was actually downlisted from endangered to threatened in 2006.

With this reclassification to threatened status, I understand a special rule was established. This allows recreational fishing of the Gila trout. I can imagine that this makes anglers extremely happy.

Can you tell our listeners a little about this?

MR. BROOKS: That's correct. One of the biggest obstacles we've had from a public perception standpoint is that when you have a listed species like the Gila trout -- and at the time, it was the only trout listed as endangered, and since the beginning of the Endangered Species Act. So it was the only endangered trout. And when you have an endangered trout in a stream that means you don't fish, basically, from a regulatory standpoint.

So there was a significant amount of public concern related to loss of nonnative trout fisheries; rainbow trout and brown trout fisheries. A lot of people fished in the Wilderness, maybe not as many as what some people would like to you think. But nonetheless, there was concern about these projects where we removed nonnative trout and reintroduce Gila trout as an endangered species. And they couldn't fish for them so they were losing fishing opportunities. So you had a fair amount of public opposition anytime you proposed a project. And you have to have public buy-in and support, obviously, in these projects.

With downlisting, downlisting was finalized in June 2006. It included the 4(d) rule. The 4(d) rule allows for take of a listed species, and it also gave the state of New Mexico direct lead for management authority. What that allowed the state to do was to implement a recreational angling program that included data collection to evaluate the

impacts of angling on native trout populations.

So the 4(d) rule provided the opportunity to actually give some fishing streams back to the public, which in turn lessened some of the public opposition. There's still some there, but we gave the public something back. We gave them back a very unique animal that they couldn't otherwise have fished for. Many people are extremely happy about that.

We have a hatchery-supported program that has three different broodstocks of Gila trout in it from three distinct lineages. Every year we produce excess trout to recovery needs. These trout then are provided to the state who stocks them into streams for increased angling opportunities by the public.

This includes the culling of broodstock every three to four years. So we have extremely large fish in the range of 3-4 pounds, over 20 inches in total length that are also stocked out in some of the larger rivers. They provide a pretty significant opportunity for large fish angling to the public.

MS. LEON: All right, Jim. And I've got to ask, climate change -- it's a hot issue right now. I know that you mentioned earlier that this particular species is more tolerant to higher temperatures.

But how might this species and other cold water trout species be affected with the onset of climate change; can you tell us about some of the future implications for recovery?

MR. BROOKS: You bet. It's not just going to be the change in water temperature. Snow packs are going to come off earlier in general. If you look at the climate change models, they don't all agree, but 80 percent of them say the same thing for the Southwestern United States and the Western United States. In general, we're going to get warmer and we're going to get drier. So what that means is less of a snow pack, less of a spring runoff, and an earlier spring runoff.

Gila trout now typically spawn more or less in April. Most of the runoff in the Gila Wilderness in New Mexico occurs in late March into early April.

The projections are from the climate change models that our runoff is going to be less and it's going to be earlier in the year. So we're not sure how that's going to affect the Gila trout. We presume that fish that naturally spawn earlier are going to be a little more successful from a recoument standpoint because of more favorable habitat conditions.

But then, as you mentioned, warmer water temperature tolerance is a big issue here, I think, for them. There's a lot of research from the 1970s that looked at the critical thermal maximum, the maximum temperatures at which these fish can swim, live, and still perform well. The native trout in the Southwest actually have higher maximum temperatures than European brown trout, which is always considered to be the most warm water tolerant salmonid out there. It's actually not true at all.

So from a water temperature standpoint, we think that Gila trout will actually fair relatively well. It doesn't mean that climate change isn't going to have an effect on them from a temperature standpoint, but they'll do better than nonnative trout in the Southwest now.

MS. LEON: Well, thank you so much, Jim, for taking the time today to talk to us a little bit about this species. It was a real pleasure having you on.

MR. BROOKS: You bet. Thank you very much.

MS. LEON: For the US Fish and Wildlife Service, this is Sarah Leon. Thanks for listening.