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ENDANGERED SPECIES PROGRAM

TELEPHONIC INTERVIEW (Time 9:14)

RIO GRANDE SILVERY MINNOW (HOST SARAH LEON WITH AIMEE ROBERSON)

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

P R O C E E D I N G S

(Music plays.)

MS. LEON: Hello there, this is Sarah Leon for the US Fish and Wildlife Service, and I'm on the phone today with Aimee Roberson, Fish and Wildlife Biologist at our Trans-Pecos Sub Office. Hi Aimee, how are you?

MS. ROBERSON: I'm doing well today, Sarah. How are you?

MS.LEON: I'm doing fine Aimee, thanks. I was actually hoping that you could spend some time today and tell our listeners a little about the silvery minnow. Does that sound alright?

MS. ROBERSON: I'd love to. I'm grateful for the opportunity.

MS. LEON: Great, what can you tell our listeners about this species?

MS. ROBERSON: Well, as you might guess from its name, the Rio Grande silvery minnow is a small, shiny fish that lives in the Rio Grande. It was once the most common fish in the Rio Grande from northern New Mexico to the Gulf of Mexico, and also in the Pecos River from near Santa Rosa, New Mexico to its confluence with the Rio Grande in Texas. Until 2008, when we began releasing fish in the Big Bend reach of the Rio Grande in Texas, the species only occupied about 5 to 6 percent of its historic range. It was only found in New Mexico—the species no longer occurs in the Pecos River.

The Rio Grande Silvery Minnow is a pelagic spawner, meaning that it releases its eggs into the water column when the conditions are right. One female, for example, can release more than 4,000 eggs in a 12 hour period, but only a few of these eggs are likely to survive the juvenile stage. The others will be eaten by predators, or perhaps hatch out in areas where there is not enough food to support them. The silvery minnow eats algae and diatoms, and generally prefers to occupy parts of the river that are shallow and have slow moving water.

MS. LEON: Alright, and what conservation actions are currently underway and who are some of the key conservation partners helping to carry these actions out?

MS. ROBERSON: Well, in New Mexico and also in the Big Bend reach of the Rio Grande in Texas and Mexico, we're working with many, many different partners on research and monitoring and on habitat restoration. We're developing and implementing environmental flows to help support the species and other aquatic life; and we're also working on population augmentation in New Mexico, so they actually release fish from captive propagation to augment the population that is there in New Mexico. And then, as I said, in 2008 we started releasing fish into the Big Bend reach as well.

Now in terms of partners and key players, the Fish and Wildlife Service, of course, has a very active role in working towards the recovery of the silvery minnow. The offices most involved are the New Mexico Ecological Services Field Office, which has lead for the species; the Trans-Pecos Sub Office, where I work; the New Mexico Fish and Wildlife Conservation Office; and the Dexter National Fish Hatchery and Technology Center. But there's no way the Fish and Wildlife Service could accomplish all this alone. I'd like to think that the Rio Grande silvery minnow recovery project is an excellent example of many agencies and stakeholders working together toward a common conservation goal.

MS. LEON: So we're talking about the Southwest here. We all know that it's hot and super dry in this region. And what's worse is that the Rio Grande actually has a severe problem with over allocation of water rights. Aimee, how do you achieve recovery given this obstacle of water scarcity?

MS. ROBERSON: Well, by the time the Rio Grande gets through El Paso, there's really not that much water left in the river because of diversions and depletions for various human reasons. So of course you're right that this is a huge obstacle towards the recovery of the Rio Grande silvery minnow. After all, a river is not much of a river without water. There are some people who might say that we can't recovery the silvery minnow or species in similar situations because the river is no longer functioning at the scale it once did. However, we are working with our partners in Colorado, New Mexico, Texas and Mexico to find ways to meet human needs and also the needs of the river and the species it supports.

One example of this kind of collaborative effort is in developing environmental flows, which are kind of a flow prescription for the river that will allow habitat for native species to be maintained or created, while still allowing for human consumptive use. You know, it's really an enormous challenge, it really is. But we are hopeful that we can work towards the recovery of the silvery minnow while improving the overall ecological functioning of the Rio Grande.

MS. LEON: Alright, and you've mentioned a couple of times a project that's happening in the Big Bend reach of the Rio Grande. Can you tell our listeners what's going on there?

MS. ROBERSON: After years of preparation and outreach to other agencies, the public, and various stakeholders, in December 2008 the Fish and Wildlife Service published a final rule designating a non-essential, experimental population area under section 10J of the Endangered Species Act for the Rio Grande silvery minnow in the Big Bend reach of the Rio Grande. We began releasing silvery minnows into that area in December 2008. So the Rio Grande silvery minnow reestablishment project in the Big Bend reach of the Rio Grande is a really important step in fulfilling the recovery goals identified in the Rio Grande Silvery Minnow Recovery Plan. To this end, the Service released approximately 425,000 silvery minnows in 2008 and approximately 510,000—so a little over half a million fish—in 2009.

Just recently we had some really exciting news. One of my colleges, Jason Remshardt, who works for the Fish and Wildlife Service in New Mexico, was out doing some egg sampling and he found some eggs. He actually found three different kinds of eggs that looked like different kinds of fish eggs, and he was pretty sure that one of the kinds of eggs was silvery minnow. But, because in New Mexico we have only the one pelagic spawner—the Rio Grande silvery minnow that releases its eggs directly into the water column—it's really easy to know that when you pick up eggs there that they're silvery minnow. Down here, we have a couple of other pelagic spawners, so we just really wanted to be sure. So he sent some of the eggs the he'd collected to the University of New Mexico. There are a couple of researchers there, Dr. Tom Turner and Dr. Megan Osborne, who work on the genetics of silvery minnow. Megan was able to run those eggs and confirm that, indeed, some of them were silvery minnow. So that was really exciting for us because that was the first reproduction that we'd actually been able to document from this population in Big Bend.

We got this news actually right before Mother's Day this year, so it felt kind of fitting to be able to say "happy Mother's Day" to the silvery minnow. And it's really, really exciting, after working several years on this project, to see this result, which I think is indicative that we are moving in the right direction and moving towards successfully reestablishing this species in the Big Bend reach.

MS. LEON: And just lastly Aimee, can you tell our listeners at home why people should take an interest in this particular species' recovery? I know it's hard for some to kind of

associate with a species, you know this little, tiny fish. You can't fish for it, so what value does it have?

MS. ROBERSON: Right. Ya, I think you're right that most people who are interested in fish conservation look at it from the perspective of sport or recreational fishing, which is great. However, the silvery minnow is not a trophy fish and it's not one that most people are interested in catching or eating or anything like that. So it might be hard for some people to relate to.

But you know, I think the metaphor of the "canary in the coal mine" is probably overused, but it does have some applicability to the species. It's no secret that the ecological health of rivers all over the world is suffering. We have taken water out of the rivers, we've put pollutants into the rivers, and generally have managed them in a way that's not sustainable for the long-term for people or the species the river supports. The story of the Rio Grande silvery minnow and its decline is really the story of the Rio Grande itself and really of most rivers that have been heavily impacted by people. The silvery minnow was once the most abundant fish in the Rio Grande and Pecos Rivers, and its absence from much of its historic range is a strong sign that the rivers themselves are in decline. I think if we can figure out how to recover the silvery minnow, we'll have gone a long way towards trying to figure out the ecological integrity of the Rio Grande and the ecosystem services that it provides.

This is something that most people would care about if they took the time to understand the issue and the importance of clean rivers that are fully functioning ecosystems. This is something that is so important not only to fish, but also to people and the health of individuals as well as societies.

MS. LEON: Thank you so much, Aimee, for taking some time out of your day. It was a real pleasure having you on.

MS. ROBERSON: It was my pleasure, Sarah, and again I appreciate the opportunity.

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