UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
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ENDANGERED SPECIES PROGRAM

TELEPHONIC INTERVIEW TIME (09:02)

YAQUI CHUB (HOST – SARAH LEON WITH BILL RADKE)

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: This is Sarah Leon for the U.S. Fish and Wildlife Service, and today I'm on the phone with Bill Radke, Refuge Manager of the San Bernardino and Leslie Canyon National Wildlife Refuges. Bill was recognized earlier this year by the Service as a Recovery Champion for his significant contributions towards the recovery of the endangered Yaqui chub.

Bill, what can you tell our listeners about this rare fish?

MR. RADKE: The Yaqui chub is a pretty small fish. It's about the size of a sardine. During the breeding season, the males get this really pretty bluish color. It's kind of a baby blue sheen to them. The rest of the year, both the males and females are kind of an olive green color.

These fish live in a really small area of the world. They are a headwater species, so they live in the springs and seeps at the headwaters of the Rio Yaqui River, which is a really big river system that we don't really know a whole lot about in the United States, because only 2 percent of that watershed is in the U.S. The rest of it is in Mexico.

MS. LEON: So, what's the story behind this species' decline?

MR. RADKE: It had, already, a small geographic range. So, it has very specific habitat requirements like water quality, temperature, and temperature stability—those are the things that it needs. And it's a desert fish, so it lives in an area that doesn't have much water anyway. So, what happened over time was just an increase in demand for the same water that the fish needs to survive. Agriculture and livestock production, mining, and domestic use of water have

impacted that species' habitat. In addition, we've had a long-term drought in the southwestern U.S., which has further restricted the species' habitat.

MS. LEON: Speaking of, the species was presumed extinct in 1969 after prolonged drought caused some of the wetlands where the species was found to dry.

MR. RADKE: Yes. It's found in such isolated areas that some of the wetlands that it lived in completely dried up while people were still learning about the species. And so, a lot of its recovery has been finding areas that it is still able to survive and reintroducing it into those similar habitats so that it can thrive again.

MS. LEON: Well, I understand that the downlisting criteria for the species, from the 1995 recovery plan, have actually been met. What has it taken to get to this point?

MR. RADKE: This definitely has not been a one person show. I've been really fortunate to work on the shoulders of people that have worked with the species before my time, and I'm currently working with so many people that are interested in the recovery of this tiny fish.

You know, a lot of this has been building toward the recovery of this species over time—monitoring both the health of the current fish and what habitats they occupy. And then some of it has been taking those fish and reintroducing them into additional habitat so we don't have all of our eggs in one basket. That is where some of the most innovative work has been done with the species. That's included reaching out to private landowners on adjacent lands that have seemingly good habitat or habitat that could be developed for this species, and working with them to acquire conservation easements on their property and setting up a system of agreements that can really effect the long-term survival of this fish.

Some of this has been things like Safe Harbor Agreements, where you work with landowners that don't currently have these endangered species on their property, but have an interest in them. And that Safe Harbor Agreement has been a popular method of ensuring landowner buy in by giving them some security in that the government isn't going to come and tell them "you can't use your water anymore because these endangered species are there." And then the conservation easements have been a real positive thing too. Some of the landowners here encompass huge tracts of property—ranchers that have thousands of acres of land. So, it's relatively simple to protect large tracts of property without having to do a whole bunch of conservation easements on properties. And so, we have worked with two primary landowners to protect and secure, in the long-term, conservation easements on close to 25,000 acres of property that are adjacent to Leslie Canyon Wildlife Refuge, where the species occurs. Those are some of the examples that have really helped in the recovery of this species.

MS. LEON: Would you tell our listeners about San Bernardino and Leslie Canyon. Is that right that these two refuges were created specifically for endangered aquatic species?

MR. RADKE: Yes. Both the refuges here were created to protect endangered fish, which is pretty unique within the U.S. Fish and Wildlife Service. Very few refuges in the system were created specifically to protect fish, and these two refuges were.

They are both desert refuges, but they are not the kind of desert that you picture from the old western movies with saguaros and tumbleweeds. This is a higher desert. The elevation here is between 3,000 to 5,000 feet, and it's a desert because there is limited precipitation during the year. It is very dry. Most of our rain comes in the winter time as snow on the adjacent

mountain, and then a lot of our rain comes in the summer time. And so, we really only have two opportunities to supplement water in the habitat that these fish need. The water has been and continues to be a real limiting factor for the species.

MS. LEON: These dry conditions are ideal for fire. And this summer, we've seen a number of devastating wildfires sweep across the Southwest. Can you tell us what impact the Monument Fire there in Arizona has had on this species?

MR. RADKE: You know, one of the most important things with endangered species that are endemic, or have really small and isolated geographic ranges, is to make sure that some devastating event doesn't come along and wipe out what's left of that small population. So, one of the recovery goals and one of the things that we've been really successful at is taking this fish and putting it into a variety of other suitable habitats, again, so if anything happens to one population, you still have other metapopulations that can survive. This summer has been a really good demonstration of why that's important.

The Chiricahua Mountains are a really large mountain range that feed most of the headwaters for the Yaqui chub. And the Chiricahua Mountains have been burning for the last two months. I mean, it is a huge fire that's 223,000 acres. You know, it's a whole mountain range that's been on fire. What that has forced us to do as biologists is go into the watersheds that are affected and salvage fish—try to get fish out of the streams and ponds that they occur in, before this rainy season, which is just now starting, creates flooding and ash flows and debris that are going to come down into these wetlands and smother the fish. We've been very busy over the last month getting into these areas, even in some instances when they are still burning, and getting fish—not in the hopes that we can save every individual Yaqui chub that's swimming out there, but to get a representative sample from all of these different areas so that you have some genetic diversity. And we are holding onto those fish at a couple different areas. One being a zoo in Tucson that has agreed to help salvage fish, and then we are holding some at refuge headquarters, and then we're holding some on secure wetlands on private property too with cooperators. After this mountain range stabilizes again and the vegetation is able to come back and the streams are flowing clean again, then we can put the fish back into those wetlands and move forward with recovery. So, it is still a pretty hands-on effort to recover the species.

MS. LEON: Thank you, Bill, for taking the time to talk with us today. Congratulations on your recent Recovery Champion award. It was a pleasure having you on.

MR. RADKE: There are so many people that have been involved in this, and they really are all recovery champions. It really is an encouragement to us at this refuge to be recognized for some of the successes that we've been able to help. Thanks for the opportunity to help spread the news about the Yaqui chub.

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