



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

TELEPHONIC INTERVIEW Time (5:49)

KENTUCKY ARROW DARTER (HOST – SARAH LEON WITH MIKE FLOYD)

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 U.S. Fish and Wildlife Service, and I'm on the phone today with Mike Floyd, Fish and Wildlife Biologist at the Kentucky Ecological Services Field Office. Hi Mike, how are you today?

MR. FLOYD: I'm doing fine, thank you.

MS. LEON: We've got some new candidates for protection under the Endangered Species Act, and one of them is a colorful, unique looking fish. Mike, what can you tell us about the Kentucky arrow darter?

MR. FLOYD: Well, the Kentucky arrow darter is a subspecies of the arrow darter. It's a small member of the perch family, and it's restricted to headwater streams in the upper Kentucky River basin. That's in Eastern Kentucky. It encompasses about nine counties in Eastern Kentucky. The Kentucky arrow darter reaches a maximum length of about four and a half inches so it's a fairly large darter, as darters go. It has a slender body and is really brightly colored, especially during the spawning season. The males are blue-green in color, and they have scattered scarlet spots and scarlet orange vertical bars on their body, very, very striking.

MS. LEON: So this is now a candidate species. Can you tell our listeners what this means?

MR. FLOYD: What this means is that the Fish and Wildlife Service has evaluated the status and the threats for the Kentucky river darter, and we determine that it meets the

definition of threatened or endangered as defined by the Endangered Species Act, and it now warrants federal listing under the Endangered Species Act. The first official step in the process is for the Kentucky arrow darter to be recognized as a candidate for federal listing, and we put it in the candidate notice of review and publish that in the Federal Register.

The actually listing of the subspecies will have to wait because of other higher listing priorities. We have other species in the past, other candidates, continuing candidates with equal or greater threats, and they'll have to be considered first. And the Kentucky arrow darter will be considered after those. So it has to wait just a little bit. Someone may ask how we did the analysis. We determine that it deserved listing, but how do we do that?

Over the last three years, we worked really closely with one of our state partners, and that's the Kentucky Department of Fish and Wildlife Resources, and we surveyed, and about 90 percent of the historic sites for the Kentucky arrow darter. So those were in those nine counties in Eastern Kentucky. We document all the fishes that occur at each site, and then based on those surveys and bar analysis of potential threats in each of those areas, we've discovered that the arrow darter had declined significantly across its range really. And it was threatened by several of the five listing factors that we use when we evaluate a species for listing.

And the five categories are destruction, modification or curtailment of habitat or the species range, over utilization for commercial, recreational, scientific or educational purposes, disease or predation. A fourth is the inadequacy of existing regulatory mechanisms. In other words, are current regulations, state and federal law sufficient to protect the subspecies. And then the last thing is kind of a catchall, just other natural or manmade factors. So really, we look at all five categories of threats, three of those represented actual threats to the Kentucky arrow darter, so based on that, and then it's decreased range, we determined that it deserve listing.

MS. LEON: What are the major threats to this species or reasons for its decline?

MR. FLOYD: It's really a broad range of things, and this kind of applies to any aquatic species in probably Eastern America for that matter, but activities such as coalmining, logging, agriculture, gas and oil, exploration activities, simply human development, development activities. All those things have contributed to degradation of streams within the subspecies range. But probably the most significant threat is coalmining related activity. What we noticed during our three year survey effort is that mine watersheds throughout the Kentucky arrow darter's range, tend to have different water quality and habitat conditions compared to streams in unmined watersheds.

And we saw this time and time again during our fieldwork. Steams in mine watersheds, especially those with valley fills where they've actually filled part of the valley, when they do their mining activities, those streams tend to have increased conductivity, increased

sulfates and other dissolved solvents. And once those actions occur, the Kentucky arrow darters are excluded from those habitats.

MS. LEON: Wow, so those fish sounds like it's really in trouble right now. What's going to be done to help improve this species' status?

MR. FLOYD: The Department of Fish and Wildlife Resource is kind of ahead of the curve on the species because in 2005, they recognized it as a species of concern, and they included it in their State Wildlife Action Plan. And one of the first things they proposed to do, and they've actually initiated, is a propagation effort for the subspecies. There's a facility in Knoxville, Tennessee, Conservation Fisheries, Inc., they're actually growing Kentucky arrow darters, and those offspring of those fish are being placed back in historic habitats for the species.

Habitats that we know are suitable, but for some reason, the fish are now gone and those are being augmented in the south fork of the Kentucky River system. The same agency has also initiated, and I believe completed, a couple of stream restorations in the historic range, which will benefit the species long-term. And of course, now that the species has been elevated to candidate status and recognized this having declined, we'll obviously be working without state and federal and private partners on additional efforts to prevent or preclude listing.

MS. LEON: Thank you so much, Mike, for taking the time out of your day to tell us about this fish. It was a real pleasure having you on.

MR. FLOYD: You're welcome.

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