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

TELEPHONIC INTERVIEW Time (6:09)

OZARK HELLBENDER (HOST – SARAH LEON WITH TRISHA CRABILL)

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 with the Fish and Wildlife Service and I'm on the phone today with Trisha Crabill, Fish and Wildlife Biologist from the Columbia, Missouri Field Office. Hi, Trisha, how are you?

MS. CRABILL: I'm good, how are you?

MS. LEON: I'm doing fine, thanks. Could you mind talking to us today a little about the Ozark Hellbender?

MS. CRABILL: I'd love to.

MS. LEON: I understand that the Ozark Hellbender may not be pretty, but it is pretty cool. Can you tell our listeners a little about this species?

MS. CRABILL: Yes, it is. It is a pretty unique animal and you're right, not everyone considers it pretty, but it is a pretty neat animal. First of all, they're one of the biggest salamanders in the United States. They can get up to almost two feet long. So a lot of 3 people don't actually know we have salamanders that can get that big. Most people probably won't ever see them because they stay pretty well hidden in the water. They're strictly aquatic, so they don't really ever come out of the water and they're found just in the pool's fast-flowing streams in the Ozark Plateau.

Some of the things that I find the most interesting about them is the adaptations they have for their environment. They've got these flattened bodies that allows them to fit

into crevices in the river, under rocks and that flattened body also allows them to kind of crawl along the bottom of the stream without getting sucked up into the current. Another adaptation that they have that I think is pretty neat is all these extra folds of skin along their sides. They breathe through their skin and all that extra skin allows them to get even more oxygen through the water, so I think they're pretty neat.

MS. LEON: And the Ozarks are known for their crystal clear-looking water and pretty scenery, but as we're finding out looks can be deceiving. Would you mind discussing habitat degradation, not only the causes, but also what it has meant for the Ozark Hellbender?

MS. CRABILL: Well, there's a lot of things that affect the quality of the water, some that we see and some that we don't. One of the main things that we're combating is siltation. Siltation can be caused by a number of things: timber harvesting around the rivers and its associated activities, erosion from roads, and also from cattle using the stream bay alongside the stream.

One of the other things we're looking at is increased levels of nitrogen and phosphate. That can be a big problem because they increase the algae and other vegetation in the streams, and those high levels have also been shown to have negative impacts on aquatic species. Sources for those nutrients are fertilizers, human waste from septic systems, cattle and horse access to the streams, and then other animal operations in the area.

Last, but not least, is also heavy metals in the water like zinc and lead from coal mining activities, other chemicals that can act as endocrine disrupters. So we know all these factors probably have a negative effect on aquatic life. It's hard to show a direct link as to how they're actually impacting the animals. So it makes it hard to combat these problems, so we're still working on them.

MS. LEON: Right, and you kind of mentioned this a little bit in your last answer, but I've heard the recovery of aquatic species is extremely challenging, perhaps even more so than that of terrestrial species. And why is this?

MS. CRABILL: That's an interesting question and I hadn't really thought about it like that before, but with an aquatic environment, if you're trying to restore the habitat once it's become compromised, it's not as suitable. There's a lot of things like we just talked about, what you can't see or they're not as obvious. And they're also very expensive to test for like endocrine disrupters. But I think probably why restoring an aquatic habitat would be more difficult than maybe restoring a terrestrial habitat is because there are so many influences for that water. The water in the streams and rivers is connected to several other sources of water, especially in the Ozarks where we have what we call karst features. That means in a landscape there's a lot of water falling underground through sink holes, caverns and other openings that have been created by the rocks dissolving underground.

So any contaminants directly entering the water within the whole watershed region or even just leaking into the water through the ground, all the contaminants eventually make their way into the stream. So all these miscellaneous versus pollution, they're hard to identify it individually and hard to address, but overall, they can have a considerable amount of contamination that's making its way into the streams.

MS. LEON: All right, and chytrid fungus is another serious factor in this species' decline and with so many obstacles like this fungal outbreak, habitat loss and degradation and now the onset of climate change, what does the future for this species look like?

MS. CRABILL: Well, it actually looks a lot better than it did five years ago. We're still struggling with the same issues, but now we're making progress and headstarting juveniles so that we can at least stabilize the population. We've gotten egg masses from the wild that we've collected, and we're able to hatch those and then raise the young where we can release them into the wild. So by headstarting them, we decrease a lot of the mortality that would occur naturally in the wild so we're able to put a lot more animals than would actually be surviving had they remained in the wild. So in that way we're able to stabilize the population while we're continuing to figure out what exactly the problems are with causing the population decline.

MS. LEON: Okay, well, great. Thank you, Trisha, for your time today. It was really great getting to know about some of the work that you're doing to help recover the Ozark Hellbender. It sounds like you're doing a fabulous job, so keep up the good work.

MS. CRABILL: Thank you.

MS. LEON: This is Sarah Leon for the U.S. Fish and Wildlife Service. Thank you for listening.

(Music plays whereupon the interview is concluded.)