

## Recovery Tour - Episode

[Valerie] Welcome to A Talk on the Wild Side, a U.S. Fish & Wildlife Service podcast.

[Intro music]

I'm Valerie Fellows bringing you today's episode.

Our first episode highlighted the stories of three species affected by pollution – the bald eagle, island foxes, and sea turtles – and how people played a major role in reversing these species' declines.

Today we're taking a Recovery Tour. We'll look at three species that recently reached the highest milestone an endangered species could ever attain – they have been to the brink of extinction and back - recovering so successfully that they are no longer considered to be in danger of extinction, and can be removed from Endangered Species Act protection -- The Foscett speckled dace, Monito gecko, and Interior least tern.

They join the bald eagle, gray wolf, American alligator, and others that have reached this pinnacle milestone.

So what does it take to make this list? What kind of habitat conservation needs to happen to help populations rebound and how do we decrease the threats facing imperiled plants and animals?

We'll start our tour in Oregon to visit a small fish found only in a small spring near the California border - the Foscett speckled dace, named for the spring it calls home.

[Alan] The Foscett speckled dace is a small minnow species, it resides in a small spring about the size of an office cubical. They're the only fish present in the spring in the stream.

[Valerie] Alan Mauer is a biologist in our Ecological Services Office in Bend, Oregon and is a key member of the recovery team for the dace.

[Alan] It's a pretty remote area. The Foscett speckled dace in the spring are there as a result of the ancient lake, which formed during the pluvial period of the pleistocene about 10,000 years ago when there was a lot more water in the northern basin.

[Valerie] Oregon's Coleman lake feeds Foscett spring, As the basin dried out, it became what's known as an ephemeral lake. That means sometimes, even most of the time, it doesn't look like a lake at all. In fact, ephemeral lakes only fill for brief periods of time after some type of precipitation.

[Alan ] So as the water receded from these lakes, the fish remained in the springs sort of as a remnant population.

[Valerie] And while a lot of the land around Coleman Lake and Foskett Spring was managed by the BLM, the particular parcel where the dace is found was on private lands.

[Alan] The private parcel was used for cattle grazing as most of the land in the winter basin is. The thing is the grazing that was occurring there was excessive to the point where it impacted the Foskett speckled dace. The fish were observed swimming in cattle hoof prints in the mud. This impact was seen as a threat to the continued survival of the Foskett speckled dace.

[Valerie] When the dace was first listed under the Endangered Species Act, biologists estimate there were 1500 fish left. They found these fish in the stream using something called a breadcrumb survey.

[Alan] Just throw some breadcrumbs on the surface of the water and see how many fish hit the surface – rising up to feed on the breadcrumbs. That was a good a number as we had at the time – about 1500.

The dace was listed as threatened in 1985 primarily due to this habitat disturbance.

[Valerie] After listing the Foskett speckled dace, our partners in the federal government, the BLM, purchased the private parcel for conservation purposes.

[Alan] – The BLM fenced the parcel of land to exclude the livestock grazing that was causing the threats to the species. Soon after that, the riparian vegetation flourished and grew back so that the Foskett speckled dace once again was in its undisturbed spring and stream habitat.

[Valerie] Riparian habitat is usually seen growing along streams, lakes and ponds - It's characterized by grasses, shrubs and other plants. It provides root strength and shading to the wetland environment.

[Alan] Well over the years, we've watched the vegetation along this spring pool and outflow stream grow quite a bit. There's bulrush along the edge of the stream habitat

and then it flows down into an area where there a lot of cattails and this vegetation seems to be choking out some of the open water habitat. Initially the monitoring showed an increase in the population, but then occasionally, we'd get to see drops in the numbers. Since 2005 we've seen the population fluctuate mostly between 4-10, 15,000. At one point it dropped to as few as 750 and that's what as a bit of an eye opener for us to think that maybe we needed to do something to assure there's open water habitat. So even though we had eliminated the main disturbance, the cattle grazing from the habitat, we still saw fluctuations in the population.

[Valerie] We had swung from one extreme to the other – from fish swimming in mud puddles, to a really rich, full riparian habitat that was, unfortunately, restricting free-flowing water. At the time of the listing decision, it was suggested that these minnows might actually benefit from open water habitat, which would improve conditions for them. So along with the Bureau of Land Management and Oregon Department of Fish and Wildlife, we worked to dig out some of the dense riparian vegetation to allow for more open pool habitat.

[Alan] We've put together a conservation management plan to guide decisions on when and how much of this type of habitat enhancement to do in the future.

{Valerie] This type of management is referred to as conservation reliance because we have to do a little work every now and then to help the species succeed.

[Alan] So in effect, we've kind of reversed the natural trend in the vegetation growth for the time being. It's likely we'll continue to have to dig out these pools on a regular basis over time – hopefully it'll only have to occur every decade or so.

[Valerie] While the conservation success of the dace seemed fairly straight forward, it did take some time to get all the pieces right. Now, the little minnow found in a remote area of Oregon is doing well and is no longer in need of Endangered Species Act protections -The Foscett speckled dace was removed from the endangered species list in September 2019.

Another species on our recovery tour is also only found in a very remote location – a tiny, uninhabited island off the coast of Puerto Rico. To help us understand the struggle of this species, we'll talk to Jan Zeggara, a biologist with the Caribbean Ecological Services Field Office.

[JAN] The monito gecko was first discovered in the early '70's. It's a tiny little gecko, it's a reptile that lives only in Monito Island, which is an isolated island off the west coast of Puerto Rico. Does not occur anywhere else in the entire world, so that makes it already pretty special.

When the researchers first got there and saw this gecko, they only found one. And other researchers went there afterward and they were also finding very few geckos.

[Valerie] While they weren't able to find very many of these geckos, they did find a lot of animals – rats.

[JAN] So Monito Island occurs right next to Mona island which is a much larger island. And that island used to be used by industry to extract guano from the bats. It's believed that big boats would just anchor right next to Monito Island, and that's how rats probably got there in the first place. The Monito gecko population was being affected by the rats, by predation of the rats.

[Valerie] Since there wasn't anything to then predate on the rats, their population kept growing and decimated the geckos.

[Jan] When the researchers first got there and saw all these rats and very few geckos, well everybody thought then the rats were eating all the geckos or suppressing the population and that's basically why the species got listed in the first place.

Naturally the recovery action that was in the priority was to eradicate the rats. So in the early 90's with the Puerto Rico Department of Natural Resources through section 6 funds...

[Valerie] Section 6 of the Endangered Species Act is a tool that provides grants to states and territories to participate in voluntary conservation projects for candidate, proposed, and listed species.

[Jan] ...they implemented an eradication project for the rats. And it took them a while but they did an amazing job. It's a very difficult island to work out of. There's not a dock, you have to basically jump onto the island from a boat very carefully with all your equipment and then just stay there on the island a few nights camping – no fresh water so you have to take everything there. So they did an amazing job and effort.

[Valerie] It's not just geckos that benefitted from controlling the rats; Monito Island is also home to sea bird colonies.

[Jan] It's also harbors two other listed species, the yellow-shouldered blackbird and a cactus that occurs in Mona and Monito as well. So it was also a benefit for all the sea bird species that nest there in the island. So the recovery of the Monito gecko goes beyond just one species or even just one agency, and it's an example of how conservation cooperation basically can be highly successful

[Valerie] And with all these partners working together, there is an conservation community that is celebrating the Monito gecko's full recovery and removal from the endangered species list in October of 2019.

[Valerie] From the waters in Oregon to a remote island near Puerto Rico, now we're going to take to the skies for our final stop on this recovery tour. Jane Ledwin has spent years working on the recovery of the interior least tern.

[Jane] The interior least tern is great little shorebird species. It's not very large, oh maybe not even the size of a robin. It really is a water-dependent bird. The range stretches from roughly the Mississippi river in the east all the way to many of the western rivers on the Great Plains. It relies on un-vegetated sand bars or islands or sand flats... Pairs will nest often in large groups called colonies and it will raise a few eggs there and then it will rely on the adjacent water body, whether it's a lake or a river or stream to eat fish and bring that back to raise its young.

[Valerie] A bird that can fly thousands of miles during migration, it's considered an indicator species – something akin to the canary in a coalmine - for the health of rivers and streams. As people moved westward over the last 100-150 years, we modified rivers and streams for navigation, flood control, power generation, and water supplies.

[Jane] The species depends on free-flowing rivers and streams and many of those modifications did have effects on, not only the birds nesting habitat, but also the forage habitat as well.

Areas that had periodic flooding and then lower river levels, areas that had sandbars and mid-channel islands were often modified to provide a stable large central channel for navigation and that really reduced the number of suitable nesting areas for the species.

[Valerie] Over time, the limited amount of nesting habitat available led to significantly lower populations of the interior least tern along many inland rivers. Numbers were so low, the tern was listed under the Endangered Species Act in 1985.

[Jane] At the time of listing, it was estimated that there were only 2,000 birds throughout the range, the interior part of the country. Because it's such a wide-ranging species, it really is a national, federal responsibility to ensure that those habitats and those areas are functioning.

[Valerie] So, along with partners like the Army Corps of Engineers, we're able to better track, monitor, and understand the species across thousands of miles. And we're able to make easy changes in the way we do business on our rivers – like performing maintenance at the least disruptive times – outside of nesting season, or adjust river operations so broods can survive and thrive.

[Jane] This species recovery is a great success story, Partnerships that we developed with other federal agencies, conservation partners, and the work of the states, all reinforced one another as we looked for ways to make sure the activities that we conduct along these rivers and streams are supportive of not only the nesting habitat –

those sand bars and islands, but also support the forage, the fish, that the species depend upon. There's more areas that we are documenting as nesting habitat than there ever has been.

[Valerie] In just over 20 years, the interior least tern has gone from only 2,000 birds remaining to 18,000. In October of 2019, the interior least tern was proposed for removal from Endangered Species Act protection, a milestone for a species that has come so far. By working together, we've been able to keep our rivers working for us AND the terns.

[Jane ] We're very excited at the recovery of the least tern particularly because it is so widespread throughout its range. It's important that we keep track of the species and keep track of the health of the rivers because the two are so incredibly intertwined as are the fisheries in those rivers, and I'm cautiously optimistic that we're up to the challenge and we'll be able to see these birds for many, many years in the future.

[Valerie]

Endangered species recovery is complex and challenging work, often requiring substantial time and resources. The reasons for their decline occurred over many years; usually taking an incremental toll on the species. Today, hundreds of species are stable or improving thanks to management actions of federal agencies, state and local governments, conservation organizations and private citizens. Many partners share a commitment to build on the previous accomplishments and expand innovative ways to conserve plants, animals, and their habitats into the future.

We hope you enjoyed our recovery tour today as we celebrate the diversity of species, people, and conservation strategies to help keep our shared ecosystems balanced. Thanks for listening to this episode of A Talk on the Wild Side.

[Kayt] Thank you so much for joining us for today's episode of A Talk on the Wild Side. Special thanks to Alan Mauer, Jan Zeggarrá, and Jane Ledwin for lending their expertise. Valerie Fellows reported for us today.

To learn more about the Fosskett speckled dace, Monito gecko, or Interior least tern or for notes and a transcript of today's show, visit [www.fws.gov/openspaces](http://www.fws.gov/openspaces).

Music in this episode from audioblocks. Our theme music is Settling In by Dexter Britain.

Until next time.

