Missouri River Part I: Saving Species

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(Brad Penner/Reporting) On a cool June morning, Todd Tessier and Lindsay Dummer head for their hunting grounds.

(Todd Tessier/Plover-Tern Survey Team) We come down to Ponca once a week. We try to come down on Mondays. This is one of our longer days.

(Brad Penner/Reporting) They stop at sandbars and beaches on the Missouri River, places where they expect to find what they're looking for. But the goal of this hunting trip isn't to take a life, but preserve it. Todd and Lindsay search for nests belonging to piping plovers, and least terns.

(Todd Tessier/Plover-Tern Survey Team) This is a new tern nest that wasn't here last week when we were here.

(Brad Penner/Reporting) The least terns are a threatened species, the piping plovers are endangered. Todd and Lindsay work for the Army Corps of Engineers as Park Rangers. They meticulously search potential nesting sites on the Missouri river between Yankton, South Dakota and Ponca, Nebraska.

(Todd Tessier/Plover-Tern Survey Team) The little noise you hear is actually logging the position with the global satellite. So we'll be able to go right to here next week.

(Brad Penner/Reporting) During the school year, Todd teaches science in Yankton, South Dakota, but he's tracked plovers and terns for several summers. Bird watching is Lindsay's summer job as well.

(Lindsay Dummer/Plover-Tern Survey Team) We're gonna take one or more of the eggs and float 'em in water. And depending on how long they float in the water, we know about how long these eggs have been here, and so I'm going to check it and make sure there aren't any cracks on either end, because if there are, that means that the chicks are possibly trying to hatch out.

(Todd Tessier/Plover-Tern Survey Team) We're gonna say by the way it's floating in the water that that one's got about two days of incubation.

(Brad Penner/Reporting) The survey crews track, test, and record the progress of the nests throughout the summer. It's one way to see if a species is recovering. Galen Jons oversees the program as a Natural Resource Specialist with the Army Corps of Engineers.

(Galen Jons/U.S. Army Corps of Engineers Natural Resource Specialist) We go visit that nest each week and we can follow the progress of this nest and determine the nest. You

know, hopefully no predators got to that nest or hopefully no human disturbance and hopefully we'll see those eggs hatch and those birds actually fledge to where they can fly. The best recipe for their success is a nice clean barren sandbar. And they need to be-I say sandbar, the sandbar has to be out in the river. We look for actually I say we, the birds look for a certain amount of water around the sand bar because if there's water between the sand bar and the shore, that helps keep the predators away.

(Brad Penner/Reporting) Under the right conditions, sandbars form naturally in the river.

(Galen Jons/U.S. Army Corps of Engineers Natural Resource Specialist) To create lots of barren sandbars like this, you need lots of water, lots of ice moving in the springtime. We have a lot of sandbars in the river right now. We have an abundance of sand bars, but we need a lot of water in the springtime pushing lots of ice down to scrub those-scrub the vegetation off of those sandbars.

(Brad Penner/Reporting) The clean sandbars used to form more frequently on the Missouri, before dams were built, and channels dredged for navigation. Casey Kruse oversees the Corps of Engineers' threatened and endangered species program in this region.

(Casey Kruse/U.S. Army Corps of Engineers Endangered Species Manager) Society has tasked the Corp of Engineers with developing the Missouri River system and we've done a pretty darn good job of that. One of the effects of that is that the river doesn't move around a whole lot. It doesn't change course and widen its top width, provide channel diversity backwaters and these types of things.

(Brad Penner/Reporting) Now the Army Corps of Engineers is attempting to re-create some of the lost habitat on the Missouri river. They built the new sandbars enjoyed by the plovers and terns using material dug from a new backwater channel. You can see the new channel and sandbars from the observation tower at Ponca State Park.

(Casey Kruse/U.S. Army Corps of Engineers Endangered Species Manager) Certainly you know, if it was a utopic world for the pallid sturgeon and the piping plover and least tern, the river would still be doing its business creating backwater shoots and islands in the river. This is-this is an attempt to continue to find the innovative and creative ways for the Missouri River to continue to provide a home for these species.

(Brad Penner/Reporting) The new, shallower channel provides calm water for the endangered pallid sturgeon and other native fish and wildlife.

(Casey Kruse/U.S. Army Corps of Engineers Endangered Species Manager) These types of habitats are very important for them to go into, find food for their young to use as nurseries and refuge areas and most importantly of course providing that type of diversity that's necessary for those species to perpetuate themselves.

(Brad Penner/Reporting) Today, the majority of pallid sturgeon come from hatcheries. Herb Bollig runs the Gavins Point hatchery near Yankton, South Dakota. He says they've learned a lot about raising the endangered fish, but it takes time to build up the numbers.

(Herb Bollig/U.S. Fish & Wildlife Service, Gavins Point Hatchery) You see these fish down here in the tanks, these are from 2002. And they'll probably be 13 more years before they're actually spawning.

(Brad Penner/Reporting) Last August, U-S Fish and Wildlife released young pallids into the Missouri during the Lewis and Clark commemoration. Every summer they release the fish at different spots along the river.

(Herb Bollig/U.S. Fish & Wildlife Service, Gavins Point Hatchery) We've put in perhaps 10,000 or so, in stocking areas between Great Falls, Montana, the upper Missouri River, clear down to Booneville, Missouri.

(Brad Penner/Reporting) But it's still unclear how well the pallid sturgeon do once they're released. And it's believed few reproduce in the wild. The Corps of Engineers and Fish and Wildlife Service hope new shallow water habitat will help the fish survive and grow in numbers.

(Casey Kruse/U.S. Army Corps of Engineers Endangered Species Manager) In the grand scale of things, it is an experiment. We do know that you know, the one thing we do know is we need to know a lot more about these critters out here. We, the pallid sturgeon in particular is a species that is very rare. There's not a lot of them out there to learn from.

(Brad Penner/Reporting) The laboratory extends much further downstream. The Army Corps of Engineers built or altered hundreds of structures in the lower stretch of the Missouri River. John Remus supervised the construction.

(John Remus/U.S. Army Corps of Engineers) This is a dike notch that we did. You can see the stone structure here. Riverward, you can see the notch that we cut. We actually cut a notch way back here into the bank. This was an effort to make some shallow water habitat.

(Brad Penner/Reporting) Remus says the ultimate goal is to restore the ecosystem of the Missouri by helping the river form new back channels and sandbars.

(John Remus/U.S. Army Corps of Engineers) Our studies show that naturally, before the channelization, we had about 100 acres of shallow water habitat per mile, regardless of the flow. Now we have, in the reaches of Nebraska, anywhere from 1 1/2 to six acres per mile, depending on the flow and where you're at on the river, so this what's really lacking in the river cross-section, so to speak.

(Brad Penner/Reporting) The Corps proposed creating thousands of acres of new shallow water habitat as a way to meet requirements of the endangered species act. Last winter, a

federal court agreed, as long as the Corps created at least 1200 acres of habitat by July 1, 2004. They met the deadline by notching dikes, lowering dikes, and building chevrons to alter the flow of the river in specific areas.

(John Remus/U.S. Army Corps of Engineers) This is a little bit bigger point bar than I actually expected to see. Better than I thought. What this provides is, instead of just a sharp drop-off at the bank, you provide basically a beach slope, which provides shallow water habitat. It's also slower moving, if you look at tjhe current out here, you can see the fast moving current, you can see a slow moving current. This provides some refuge for young of year fish, this provides some places where it can feed.

(Brad Penner/Reporting) Remus says the Corps of Engineers will build more habitat creating structures next year, and beyond. In the meantime they'll study what they've done to see if it's working.

(Casey Kruse/U.S. Army Corps of Engineers Endangered Species Manager) The best way to do these things we're going to monitor these places extensively, learn to see if the fish respond, if it benefits the fish community and the fish are here in this are along with the whole Missouri River System, and continue to adapt and modify our methods according to that and if we need to do some additional modifications to how the Missouri River is operated, we'll certainly need to look at that.

(Brad Penner/Reporting) By mid-July, another survey crew found least tern chicks scampering on the new sandbar. Young piping plovers skitter along the shore of the sandbar. Their nests are less common. A newly hatched least tern doesn't know it belongs to a threatened species. It doesn't know this sandbar was built just for him and the other birds protected by the endangered species act.

(Todd Tessier/Plover-Tern Survey Team) When the corps created these sand bars, the hope was that the birds would build nests here. And they have. I think the last time you were here with us we may of had six or eight nests. Now we're up into the 40s. The last time there were no plover nests and now we have several. In fact we actually have a brood of plover chicks on hand.

(Brad Penner/Reporting) The baby birds don't care why it's there, or how it got there. But they know this sandbar in the Missouri River is home.

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