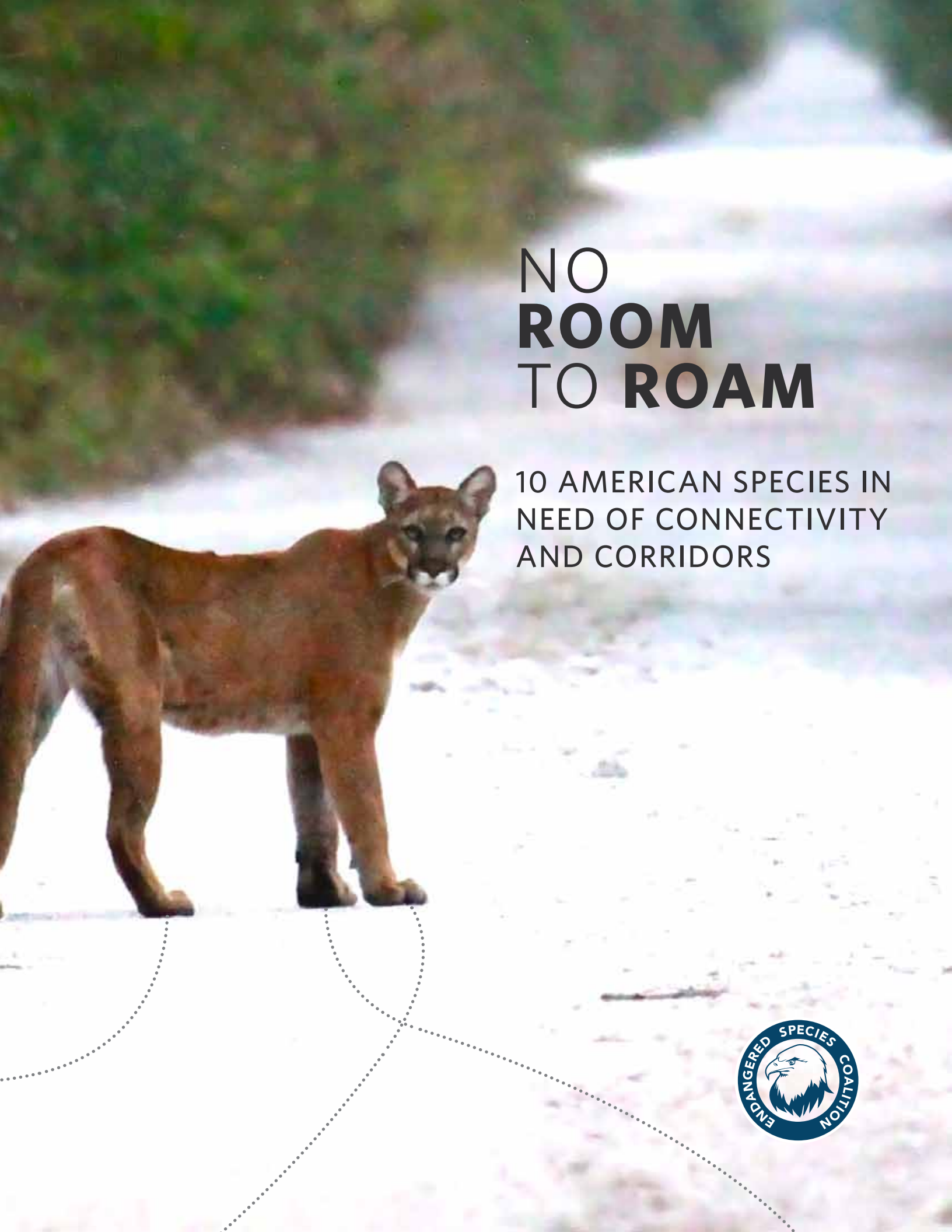

# NO ROOM TO ROAM

## 10 AMERICAN SPECIES IN NEED OF CONNECTIVITY AND CORRIDORS

ENDANGERED SPECIES COALITION

# INTRODUCTION

**Even today, the idea of conquering the land is still built into the national psyche of many Americans. We've crisscrossed the nation with miles upon miles of roads—4.09 million to be exact. We view unhindered travel across the country—by bus, car, train, plane, boat, or even on foot—as our right. We sing about it. We write great stories about it. We make funny, sad, and poignant movies about it. Snowstorms aside, we expect that we can travel whenever and wherever we'd like in this country. That idea is ingrained into how we see ourselves—who we are as a people.**

But what if our travels weren't so easy, so smooth? What if our movement meant running an arduous gauntlet—crossing over obstacles many times our size, dodging objects zooming at us at unbelievable speed, or encountering the spray of deadly poisons? We can hardly imagine such conditions. But for much of America's wildlife, our unthinkable is their reality.

We've built fences, dams, roads, developments, and shopping malls over their homes. We've taken their water. And we've made it all worse with climate change, which is impacting living creatures everywhere and of every size—from the 8-inch California tiger salamander to the nearly 800-pound grizzly bear. Even insects and plants aren't immune.

This report details the stories of some of the U.S. species most in need of the right to roam. Without wildlife corridors, migration routes, and other connected habitat, wildlife cannot continue to reproduce, find food, disperse, and maintain enough diversity in their populations to survive into the future. Thankfully, we've begun to create solutions for wildlife. But much more must be done. Read on and reach out to decision-makers to help.

Sincerely,

George Fenwick
AMERICAN BIRD CONSERVANCY

Leda Huta
ENDANGERED SPECIES COALITION

Kerry Kriger
SAVE THE FROGS!

Greg Costello
WILDLANDS NETWORK

Kierán Suckling
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*front cover: Heather Green*
*www.heathergreenphoto.com*



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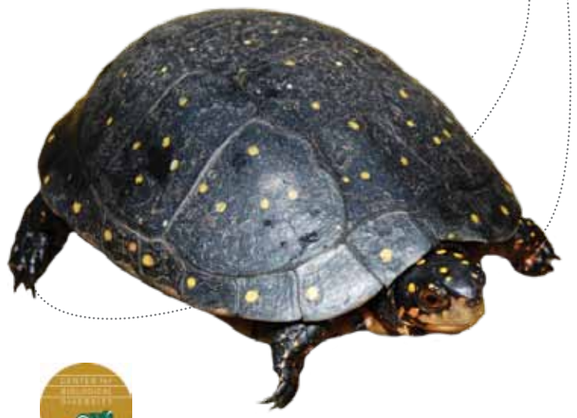
# SPOTTED TURTLES NEED ROOM TO ROAM

**The spotted turtle has a lot on its to-do list—forage, mate, nest, bask, burrow, hibernate.** And for all those activities, not just one kind of habitat will do. In the course of a year, spotted turtles typically visit different types of wetlands, including vernal pools, marshes, and small streams. They also venture onto dry land to reach those wetlands, as well as to nest and burrow during hot weather. But habitat fragmentation has taken a toll on these frequent travelers, which are found from southern Maine to northern Florida, as well as in the Great Lakes region. It's estimated the spotted turtle has declined by 50 percent, thanks in large part to the breakup and destruction of its habitat. Their wanderings also make them vulnerable to being hit by cars.



## Age Spots

A spotted turtle can be sprinkled with more than 100 yellow dots. Hatchlings, however, usually have just one spot on each segment of their upper shells. Since these spots can fade with age, it's possible for an older spotted turtle to be spotless!

## Oh, Canada Gets It

In Canada, the spotted turtle is protected under that country's Species at Risk Act. Several U.S. states protect the spotted turtle—and thanks to a petition by the Center for Biological Diversity, the U.S. Fish and Wildlife Service is considering adding the spotted turtle to the list of species protected under the Endangered Species Act.

## Act Now

Female spotted turtles are often hit by cars during May and June as they search for nesting sites. Be on the lookout for turtles when driving. Petition your local government to add turtle crossings, turtle crossing signs, and lower speed limits on roads frequented by turtles.

SPECIALLY BUILT UNDERPASSES BENEATH A HIGHWAY AND A RAILROAD HAVE ALLOWED SPOTTED TURTLES TO MAINTAIN ACCESS TO THEIR FULL HABITAT.

# SAVING
## FLORIDA'S STATE ANIMAL

**The Florida panther once roamed a large area of the Southeast. But habitat loss and persecution—there was a bounty in Florida on panther scalps until 1950—drastically reduced its numbers.** It's now one of the world's most endangered mammals. There are just 100-180 adults left living in the tip of south Florida. This area is only 5 percent of the panther's historic range.

Panthers require large territories to find prey, mates, and good den sites. Males need about 200 square miles, and females 75 square miles. Development in Florida continues at a fever pace. So large tracts of connected wild areas must be conserved now. We need to share the landscape with these solitary predators. So conservation groups work with wildlife agencies, providing the public with information on these big cats, including ways to live responsibly with them.

### Please Share My Umbrella

The Florida panther is an umbrella species— protect it and the many plants, animals, and natural resources in its territory will be protected too. That includes the groundwater that Florida greatly depends on, which gets replenished in the large tracts that make up panther habitat.

### Give Panthers a Brake

Vehicle collisions are one of the leading causes of panther deaths. In 2014, a record 25 panthers were killed this way.

With help from Defenders of Wildlife, a slow-speed panther zone was created along a deadly stretch of road in the Okaloacoochee Slough State Forest. Signs there alert drivers to slow down to save panther lives. These cats still need more slow-speed zones and wildlife underpasses.

### Purring Pumas

Panthers can chirp, peep, whistle, moan, scream, growl, and hiss. They can even purr!

### Act Now

Push for increased funding to purchase conservation land. Contact elected officials to request support and funding for wildlife crossings. Florida drivers can purchase a *Protect the Panther* license plate and remain alert for wildlife while driving!

THE FLORIDA PANTHER IS THE LAST MEMBER OF THE PUMA SPECIES STILL SURVIVING IN THE EASTERN UNITED STATES.



# PINING
## FOR LUPINE

**Karner blue caterpillars don't ask for much—just some wild lupine to eat.** But nowadays, wild lupine is hard to find in Karner blue territory, which once stretched from Maine to Minnesota. That's bad news for this insect, since lupine is the only food its caterpillars can survive on. The plant grows in the sandy soils of pine barrens and oak savannas. And it needs wildfire to open up the tree canopy so sun can reach it. But habitat destruction and fire suppression have led to a drastic decline in lupine. The Karner blue is now found only in tiny holdouts in about half the states it once called home. This small butterfly can travel almost a mile and a half across unimpeded landscapes. So there was a time when it could flit to ever-changing lupine locations to lay its eggs. Now, it comes up against roads and buildings in its search for what little lupine remains.

The Caterpillar Lab

### Empowering butterflies

Utility companies routinely clear areas near power lines so trees and other vegetation won't interfere with them. These open areas can make good wild lupine habitat. So companies should time mowing to protect wild lupine.

### Nursery Attend-Ants

Karner blue caterpillars are often found with a common species of ant. This buddy system benefits both insects. The caterpillars secrete a liquid the ants feed on. In turn, the ants appear to ward off caterpillar predators.

### Out Of Synch And Out Of Time?

Several thousand Karner blues once lived at the Indiana Dunes National Lakeshore, but a recent survey found none. A heat wave likely contributed to the crash. In 2012 record-setting temperatures led Karner blue caterpillars to hatch before lupine leaves had emerged. And that summer was so hot and dry that the lupine died off early. Researchers think caterpillars probably starved. Similar disasters may be in store for other Karner blues because of climate change.

### Act Now

Volunteer on a preserve where Karner blues are found, such as the Albany Pine Bush Preserve in New York.

THE KARNER BLUE POPULATION HAS CRASHED BY 99 PERCENT, SO THIS BEAUTIFUL SPECIES IS BARELY HANGING ON!

# DAMS KILL A FISH THAT ASTEROIDS AND ICE AGES COULDN'T

**The pallid sturgeon is an ancient fish that feeds by sucking up prey with its toothless mouth.** This sturgeon can grow to 6 feet long and live up to 50 years. It survived ice ages and even the asteroid hit that wiped out the dinosaurs. Once, it swam in rivers from northern Montana down to New Orleans. But human-made obstacles have brought this "living fossil" close to extinction.

Dams on rivers in Montana and North Dakota block adult pallids from their spawning grounds and trap pallid embryos in areas without oxygen, so they die. It's probably been 60 years since these fish have successfully produced young in the upper Missouri River. The federal government releases hatchery-born sturgeon into these rivers. But because of dams, those fish won't have any better luck at breeding. Meanwhile, the remaining 125 or so wild-born fish are reaching the end of their lives.

## That Sinking Feeling

Hatched pallid sturgeon embryos are at the mercy of water currents. For millions of years, that's worked out just fine. But dams on the Yellowstone and Missouri Rivers have disrupted normal water flow. That's led to dead zones—areas that have no oxygen. When hatched embryos hit one of these zones, they sink to the bottom and suffocate.

## Squeezing By

Pallid sturgeon that try to reach spawning grounds on the Yellowstone River are blocked by a dam. But when waters rise high enough, they can swim through a natural side channel. Now, federal officials want to rebuild this dam even higher. They also want to plug the natural side channel and build a multi-million dollar bypass. But studies of artificial bypasses show that sturgeon rarely use them. So this project is likely to make a bad situation worse.

## Act Now

Contact your elected officials and newspapers to demand that the Bureau of Reclamation dismantle the Intake Diversion Dam on the Yellowstone River and give full passage to the pallid sturgeon.

PALLID STURGEON SPAWN PERHAPS ONLY EVERY THREE YEARS!



# FOWL PLAY IN LESSER PRAIRIE CHICKEN COUNTRY

## Fences Make Bad Neighbors

Lesser prairie chickens fly low, making collisions with fences common. The danger is especially great for females who sometimes fly great distances in search of good nesting sites. Adding markers to help these birds spot fencing should be a priority in their habitat.

**Lesser prairie chickens need large areas of short-grass prairie and shrubland to thrive, but they've lost about 85 percent of their historic range.** Oil and gas rigs, power lines, fences, and roads divide much of their remaining habitat in Texas, Oklahoma, Colorado, New Mexico, and Kansas. These human activities have created small, isolated populations at risk of inbreeding and from disasters like drought.

Despite the bird's dire situation, the U.S. Fish and Wildlife Service didn't protect it under the Endangered Species Act until 2014. But the agency granted it the less-protective status of "threatened." It also added exemptions allowing activities that may harm the bird. But even these lax regulations were too much for the oil and gas business. An industry trade group recently convinced a federal judge to remove the lesser prairie chicken from the endangered species list, claiming that voluntary measures are enough to save the bird. As one conservationist put it, "This essentially means that oil companies can build an oil derrick over these birds' nests.

## Dance-Off

Booming calls, foot stomping, and great leaps in the air — these are all part of the spectacles put on by male lesser prairie chickens to impress hens. Males gather in open areas known as leks. When a female arrives, the competition begins. As part of their courtship, males also inflate red air sacs along their necks and fluff up their bright yellow eye combs. How could a hen resist?

## Act Now

Urge the Fish and Wildlife Service to protect the lesser prairie chicken as endangered under the Endangered Species Act.

THERE WERE ONCE AS MANY AS 2 MILLION LESSER PRAIRIE CHICKENS. TODAY ONLY ABOUT 1 PERCENT OF THAT NUMBER REMAINS IN THEIR FIVE-STATE RANGE.

# RISKING IT ALL TO MIGRATE

**The smiling California tiger salamander looks like a miniature prizefighter, with its thick-body, broad head, and blunt snout.** But it's a lightweight when up against the havoc that development has brought to its habitat. This amphibian is found mostly in the grasslands and foothills of central California. It needs two very different kinds of terrain to thrive. Most of its life is spent in underground burrows. But rainy nights in winter and early spring trigger mass migrations across land to vernal breeding pools. Some venture more than one mile to the water. Try doing that if you're only eight inches long! But this beautiful species now faces obstacles like housing developments, shopping malls, and roads on these treks.

SAVE THE FROGS! savethefrogs.com

## The Goldilocks Zone

Seasonal ponds that fill with water during the winter and spring make the best breeding grounds for California tiger salamanders. These vernal pools stay wet long enough for larvae to fully develop, but not so long that predators colonize the water. Now for the bad news—an astounding 90 percent of vernal pools in California are gone. So these salamanders have been forced to lay eggs in livestock ponds that often contain fish, bullfrogs, and insects that eat salamander larvae.

## I Dig It... Not

These salamanders are not very good diggers, so they mooch in on ready-made burrows, excavated mostly by California ground squirrels.

## Make a Plan, Uncle Sam

As part of a court-ordered settlement, the U. S. Fish and Wildlife Service recently released a draft recovery plan for California tiger salamanders in Santa Barbara County. It focuses on protecting up to 34,000 acres of ponds and surrounding land. The FWS must also create final recovery plans for salamanders in central California and Sonoma County. Let's hope they're put into effect in time.

## Act Now

When driving in California tiger salamander territory on wet nights, slow down so you can be on the lookout for these migrating amphibians.

IT'S BEEN FEDERALLY PROTECTED FOR YEARS. BUT THE CALIFORNIA TIGER SALAMANDER CONTINUES TO DECLINE DUE TO HABITAT FRAGMENTATION AND LOSS.



# BEAR, MEET BEAR

**Grizzly bears used to roam throughout the American West, but by the early 1900s, they'd been shot, poisoned, and trapped out of most of the country.** When the grizzly bear was listed under the Endangered Species Act in 1975, only about 150 remained in the Yellowstone National Park area. Today, there are about 600 to 800 bears living in and around the park. These bears, and another population in northwest Montana, are the last significant populations of grizzlies in the lower 48 states.

The Yellowstone grizzly bear's comeback is a success story of the Endangered Species Act. But Yellowstone's bears are still isolated from other grizzlies, which may spell trouble for their genetic diversity and long-term viability. This is bad news. Genetic diversity helps animals fight off diseases and adapt to other threats. The Yellowstone bears need safe wildlife corridors so they can breed with other grizzly bears in Montana, Idaho, and Washington.

The U.S. Fish and Wildlife Service is considering removing Yellowstone's grizzlies from the endangered species list. The agency has been under pressure from some states to do so and also says it's satisfied with the number of grizzlies. If the bear comes off the list, states have said that they'll allow grizzly hunting. If that happens, it will further decrease the chances of Yellowstone bears connecting with other bears to the north and west.

## Beetles, Bark, and Bears, Oh My!

The fatty seeds of whitebark pine cones have been a primary food source for Yellowstone grizzlies in the fall. But a native mountain beetle that's thriving in our warming climate has decimated Yellowstone's whitebark pines, which are barely hanging on now. As grizzlies search for other food sources, they'll need protected habitats and corridors. Wildlife managers will need to ensure people secure items like garbage that can attract bears and lead to conflicts with humans.

## Mama Bears & Baby Bears

Grizzly bears give birth in the middle of winter while hibernating. There are usually two cubs in a litter. The arrival of cubs is something to celebrate since grizzlies are one of the slowest reproducing land mammals. Females give birth only once every three to four years.

## Act Now

Urge the U.S. Fish and Wildlife Service, the U.S Forest Service, and state wildlife agencies in the Yellowstone region to make safe wildlife corridors a priority for grizzly bears.

WILDLIFE MANAGERS MUST ACT NOW TO REDUCE HUMAN–BEAR CONFLICTS AND SAFEGUARD WILDLIFE CORRIDORS FOR GRIZZLY BEARS.

NRDC NATURAL RESOURCES DEFENSE COUNCIL

# UNDONE BY UNGULATES

**Some species need just a little bit of connected habitat to call their own.** That's the case with the palila, a finch-billed honeycreeper once found in forests on three Hawaiian islands. Now it's restricted to one high-elevation slope of one dormant volcano on one island—less than 5 percent of its historic range.

The palila eats the seeds of the māmane tree and almost nothing else. In the past, this bird could follow the seeds as they appeared at different elevations along the slope—but no more. Non-native cattle, goats, and sheep have destroyed many māmane trees. That, plus drought, has wiped out nearly 70 percent of palila since 2003. Only about 2,000 of these birds remain, squeezed into a small area on a single slope on Mauna Kea on the Big Island.

## Please Fence Me In

A federal court has ordered the removal of sheep on Mauna Kea. In the past, the state had been slow to respond, and the hunting community has opposed the order. Things are improving though. The state has removed thousands of sheep in recent years. Meanwhile, a fence is being built to keep out the sheep. But it has been vandalized, showing that opposition still remains. Completion of the fence and removal of the remaining sheep are necessary to prevent outright extinction of the palila

## One Bird's Poison

Palila don't have any competition for the māmane seeds that make up most of their diet. That's because the seeds contain enough toxins to kill other small animals! Researchers don't understand how the palila tolerates the poison.

## Wipeout

With only one isolated population left, this lovely little bird could be wiped out by a single disaster such as a fire or hurricane.

## Act Now

Hawaiians can urge their state legislators to support immediate sheep eradication on Mauna Kea.

IN NATIVE HAWAIIAN TRADITION, THE CALL OF THE PALILA IS THOUGHT TO SIGNAL RAIN.

AMERICAN BIRD CONSERVANCY



# EASTERN PRAIRIE FRINGED ORCHIDS NEED A HELPING HAND

**With lacy white flowers and a stem that can grow over three feet tall, the eastern prairie fringed orchid is a showstopper.** This plant used to spread all over prairies and wetlands mainly east of the Mississippi River. But its prairie ecosystem is pretty much gone now. Wetlands continue to be drained and developed. Today, there are 70 percent fewer of these elegant wildflowers to admire.

These orchids can get crowded out by non-native plants and other vegetation that take over when fire is suppressed. So just a few orchids end up growing in the isolated patches of habitat left to them. The orchids rely on just one family of insects, the hawkmoths, to pollinate them. Hawkmoths may not find the few orchids in any one area. They also may not be able to fly the distances between areas. Volunteers are carrying pollen from plant to plant and site to site to increase seed production. Even plants need to be connected!

## As Hawkmoths Go, So Goes the Orchid

Hawkmoths are the only insects with a proboscis (an insect's version of a tongue) long enough to reach nectar deep in the orchid. These moths are critical to the survival of the orchid, but we know very little about them. One researcher calls our lack of hawkmoth knowledge the "weak link" in eastern prairie fringed orchid conservation.

## Sister Species

The eastern prairie fringed orchid looks a lot like the western prairie fringed orchid, but they're different plants. The western species is only found—you guessed it—west of the Mississippi. Both are pollinated only by hawkmoths. But the hawkmoths who pollinate the western orchid collect pollen on their eyes, not their proboscises.

## Act Now

In the Chicago area, volunteers can help restore orchid habitat and even help to pollinate them.

Center for PLANT Conservation

AROUND SUNSET, THESE FLOWERS RELEASE A FRAGRANCE THAT ATTRACTS NIGHT-FLYING HAWKMOTHS.

# BANNED
## FROM EXPANDING

**The killing campaign against Mexican gray wolves that began in the late 1800s was all too effective.** It took only a few decades to eliminate them from the mountainous areas of the Southwest. Today, thanks to a U.S. Fish and Wildlife Service (FWS) captive breeding program, about 110 Mexican gray wolves roam the Gila and Apache National Forests and nearby areas in New Mexico and Arizona. But the future of the smallest and rarest members of North America's gray wolf family remains uncertain.

That's because in those two states FWS blocks these animals from migrating into prime wolf habitat north of Interstate 40. If a wolf is caught in this forbidden zone, it's either taken back south, put in a breeding facility, or is killed.

This forced removal goes against recommendations made by FWS's own scientific advisors. They say the Mexican gray wolf is doomed to inbreeding and extinction if it can't increase its numbers. To survive, the wolf must establish populations in the Grand Canyon and in northern New Mexico/southern Colorado—and that means traveling north of I-40.

### Last of the Lobos

After settlers shot out its native prey of deer and elk, the Mexican gray wolf, known as the lobo, turned to the growing number of cattle in its territory. In response, ranchers trapped, poisoned, and shot the wolves out of existence. Pups were even dug out of their dens and killed.

### Where's the Plan?

The FWS admits that the Mexican gray wolf population is doomed to extinction if it can't grow. But almost 40 years after these wolves were listed as endangered, the agency still hasn't issued a recovery plan for them. This may reflect the anti-wolf sentiment of western state governments and the livestock industry.

### Act Now

Urge the U.S. Fish and Wildlife Service to implement the Mexican gray wolf recovery plan that the agency's science advisors have developed.

HUMANS ONCE TARGETED MEXICAN GRAY WOLVES FOR DESTRUCTION. WE CAN RIGHT THAT WRONG BY GIVING THESE ANIMALS THE WILDLANDS THEY NEED TO RECOVER.




*A mere ten species need connectivity? We don't think so! Our scientists made the hard decisions to highlight ten animals and plants in dire need. Now, the Endangered Species Coalition staff want you to learn about one more. It has one of nature's most amazing stories.*

# RESTORING CONNECTIONS
## FOR A CONNECTOR

### Hungry Orcas

The endangered orcas off of the Pacific coast are slowly starving into extinction. Known as the Southern Resident killer whales, they depend on the fatty Chinook for the vast bulk of their diet. With salmon so scarce, this orca population has been on a steady decline.

### Act Now

Ask President Obama to issue an executive order to remove the four dams on the lower Snake River.

**Everything from eagles to bears to orcas eats Chinook salmon.** Even amphibians and insects dine on salmon carcasses and eggs. And many different plants grow in soil fertilized by this food chain. In fact, Chinook salmon connect to more than 190 plants and animals. That makes it a keystone species. Remove them from the environment, and things start to unravel.

Chinook start out life in the rivers of the Northwest, including the Snake, the Klamath, and the Sacramento. Then these marathon swimmers head to the Pacific Ocean, where they'll spend up to four years at sea. But dams on these rivers kill millions of juvenile salmon each year. And these outdated structures block adults trying to make their way back to spawning grounds. It's no wonder Chinook numbers have plummeted. This decline has been devastating for orcas off the U.S. Pacific coast, since salmon is pretty much all they eat.

But this ecosystem doesn't have to stay broken. If the four dams on the lower Snake River were demolished, that would restore the largest remaining potential salmon habitat in the lower 48 states. Just imagine what connections that would create!

CHINOOK ARE ALSO KNOWN AS KING SALMON—AND WITH GOOD REASON. THIS FISH CAN GROW TO 100 POUNDS OR MORE.

# ACKNOWLEDGEMENTS


**Our thanks go out to each member group and its staff who nominated species for this year's report, and particularly to these organizations whose ten stories are included in our report:**

**American Bird Conservancy**
Dr. Chris Farmer

**Center for Biological Diversity**
Jenny Loda, Tanya Sanerib

**Center for Plant Conservation**
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**Defenders of Wildlife**
Elizabeth Fleming, Steve Forrest

**Grand Canyon Wildlands Council**
Kelly Burke, Kim Crumbo

**Natural Resources Defense Council**
Dr. Sylvia Fallon

**The Caterpillar Lab**
Sam Jaffe

**SAVE THE FROGS!**
Dr. Kerry Kriger, Michael Starkey

**Wildlands Network**
Kim Vacariu

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