ENDANGERED EARTH

CENTER FOR BIOLOGICAL DIVERSITY • SUMMER 2023

A BOLD PLAN FOR JAGUARS IN THE SOUTHWEST

There was a time when jaguars roamed much of North America. In fact jaguars evolved here, and paleontologists have identified ancient jaguar remains in Nebraska and Florida. As late as the 1700s, jaguars could still be found from the Carolinas to California — including the Southwest.

Today, after centuries of persecution, jaguars are a ghostly presence in Arizona and New Mexico, with a few males occasionally wandering north from Mexico but no females to reestablish a population.

Jaguars have been protected as endangered since 1972, but the government has done little for their recovery. If jaguars are going to ever truly return to the United States, we need to think boldly and act with care and courage.

At the end of 2022, the Center filed a groundbreaking petition to begin restoring jaguars to the Southwest, including by protecting 14.6 million acres of habitat and reintroducing a population to New Mexico. We envision a population in Arizona and New Mexico, mostly in an area called the Mogollon Plateau, a region of mainly public lands between Arizona's Grand Canyon and the Gila National Forest.

This ambitious plan would be a key step to restoring one of North America's great carnivores to some of its historic lands.

Jaguars, the third-largest cat species in the world, have a troubled and tragic history in North America. After Europeans arrived, they were killed for their beautiful spotted pelts and to protect livestock. As forests were cleared and wetlands were drained, jaguars had fewer places to hide. They survived in the Southwest the longest, sheltered in semi-arid, rugged terrain that resisted widespread settlement.

Michael J. Robinson • Senior Conservation Advocate
Carnivore Conservation Program

Beginning in 1915, though, Congress appropriated annual funds for the U.S. government to systematically kill carnivores on behalf of the livestock industry. The U.S. Fish and Wildlife Service trapped and killed the last resident U.S. jaguar in Arizona in 1964.

Today we see only intrepid males in the United States, most famously the burly El Jefe, who was caught on camera in the Santa Rita Mountains outside Tucson, Arizona, in 2016. Footage of him was broadcast around the world and one other jaguar has been seen since then.

But we can't expect these lone wanderers to pave the way for full-on jaguar recovery in the United States. That's why reintroduction is so important.

Our petition recommends reintroducing jaguars to the 3.3-million-acre Gila National Forest in western New Mexico. Rugged and remote, it has a low road density, sizable areas where livestock grazing is not permitted, and plenty of deer and elk to serve as a prey base for a jaguar population. Scientists say that it's one of the best spots to help bring back jaguars. We're also asking the Fish and Wildlife Service to investigate other potential areas for reintroductions in Arizona and New Mexico.

Upon reintroduction, these jaguars will be protected under the Endangered Species Act and play a crucial role in the ecosystem. Like other large carnivores, jaguars are a keystone species that shapes the evolution of prey populations like deer and elk and controls harmful disease outbreaks.

Bringing jaguars back to the Southwest could also help those living in northern Mexico. It's unclear how many jaguars live there, but the two existing populations may be in decline and largely isolated from other populations. Jaguars in the Southwest could ultimately connect with jaguars in Mexico, improving genetic diversity and increasing the odds of a more viable regional population overall.

We're eagerly awaiting the federal government's response to our proposal and continue to fight ongoing threats to jaguars like the border wall and planned copper mines in Arizona. But I also know it's crucial to keep a big-picture view of jaguar recovery, and that means insisting on an ambitious approach that will return them home for good.

MORE THAN 500 RIVER MILES PROTECTED FOR STRUGGLING SOUTHERN FISH

Spend any time in the wild in the South and you'll know it's a global hotspot of aquatic biodiversity.

Nearly 500 fish species — 52% of all those in the United States — live in southern rivers. But freshwater fishes are at the leading edge of the extinction crisis. More than 30% of freshwater fish species are threatened with extinction.

Pearl darters are one of those species. These small, snub-nosed fish have a black spot at the base of their tail fin and live on river bottoms, using the spaces between rocks for hiding and breeding. They can be hard to spot, but male Pearl darters develop dark bands and splotches in the spring. After mating, female Pearl darters bury eggs in gravelly river substrate.

Sadly these tough little fish have faced some hard times in recent decades, losing 64% of their historic range in Mississippi and Louisiana due to oil and gas development, dams, mining, urbanization, and agriculture. Habitat destruction has clogged river bottoms with silt that inhibits the survival of adult Pearl darters and their offspring. The Southeastern Fishes Council even named Pearl darters one of the 12 most endangered fishes in the southeastern United States.

The darter was first placed on the waiting list for Endangered Species Act protection in 1991 — and then nothing seemed to happen. The Center petitioned for the species' protection in 2004 and filed a lawsuit in 2010 over delays. In 2017 the fish was finally protected as threatened under the Endangered Species Act.

But you can't save a species without saving the places where it lives. So we celebrated this spring when, after two decades of Center advocacy, the U.S. Fish and Wildlife Service designated 524 river miles as federally protected critical habitat for Pearl darters.

The critical habitat designation adds an important layer of safeguards, requiring any federally funded or permitted project to consult with the Fish and Wildlife Service to make sure Pearl darter habitat isn't harmed by any proposed activities. Importantly, the designation also includes areas where these native fish can be reintroduced and ultimately recover multiple healthy populations.

This victory has ramifications beyond Pearl darters. Part of what's so heartening is knowing that protecting these river stretches will also help scores of other species — like Gulf sturgeons, ringed map turtles, and a host of freshwater mussels and crayfishes. Southern rivers are the most biologically diverse in the temperate world, and we have a moral obligation to do whatever we can to keep their biodiversity intact.

And it's worth noting, of course, that when we protect rivers for wildlife like Pearl darters, we're also protecting the rivers for people, preserving freshwater ecosystems, and giving all living things a better shot at surviving on a planet where the wild is still alive for the generations that come after us.

Will Harlan
Southeast Director

Photo above by USFWS

IT'S TIME TO REINTRODUCE SEA OTTERS TO THE WEST COAST

One of the most popular exhibits at the Monterey Bay Aquarium is a two-story tank filled with playful sea otters. Watching these furry creatures wrestle and tumble underwater, then pop up to float and rest on their backs, you can't help but fall in love with their mischievous nature and cute, whiskered faces.

Growing up, I took many school field trips to the aquarium and always spent some time watching the otters frolic. As I got older and started venturing into the ocean near Santa Cruz with my boogie board and fins, I started seeing sea otters in the wild as well. Usually a sea otter would appear suddenly, observe me for a few minutes, and then go back to floating through the kelp and munching on urchins. I enjoyed this role reversal: once the watcher, and now the watched!

I was shocked to discover that sea otters today occupy only 13% of their historic range. Once numbering in the hundreds of thousands along the entire Pacific coastline, sea otters were decimated by commercial fur traders beginning in the 1700s. In fact, the species was thought extinct in California until a group of 50 or so were found near Monterey Bay in the early 20th century.

California's southern sea otters have been listed as threatened under the Endangered Species Act since 1977, but they aren't likely to recover without serious help, including reintroduction efforts.

Previous reintroductions have proven instrumental in helping sea otters recover in other portions of their range. More than 50 years ago, 59 northern sea otters were translocated from Alaska to Washington state, which helped establish a healthy population in that state. If it worked in Washington, couldn't it work in California and Oregon?

The Center submitted a petition in January asking the U.S. Fish and Wildlife Service to reintroduce sea otters to a large stretch of the West Coast, from San Francisco Bay north through Oregon (the largest gap in the otter's historical range), to recover the species and restore important coastal ecosystems.

Sea otters aren't just cute, after all — they're a keystone species. By keeping sea urchins and crab populations in check, sea otters promote growth of kelp forests and seagrass beds, ecosystems that provide important food, shelter and nursery habitat for a huge number of creatures. Reestablishing sea otters along the Pacific Coast would also allow these subspecies to intermingle, enhancing genetic diversity and helping them adapt to changing environmental conditions.

The Fish and Wildlife Service last year published an assessment finding that sea otter reintroduction to the Pacific Coast is biologically, socioeconomically, and legally feasible. It's also the right thing to do — a measure of justice for an iconic species that was once maliciously persecuted and deserves a chance to return home.

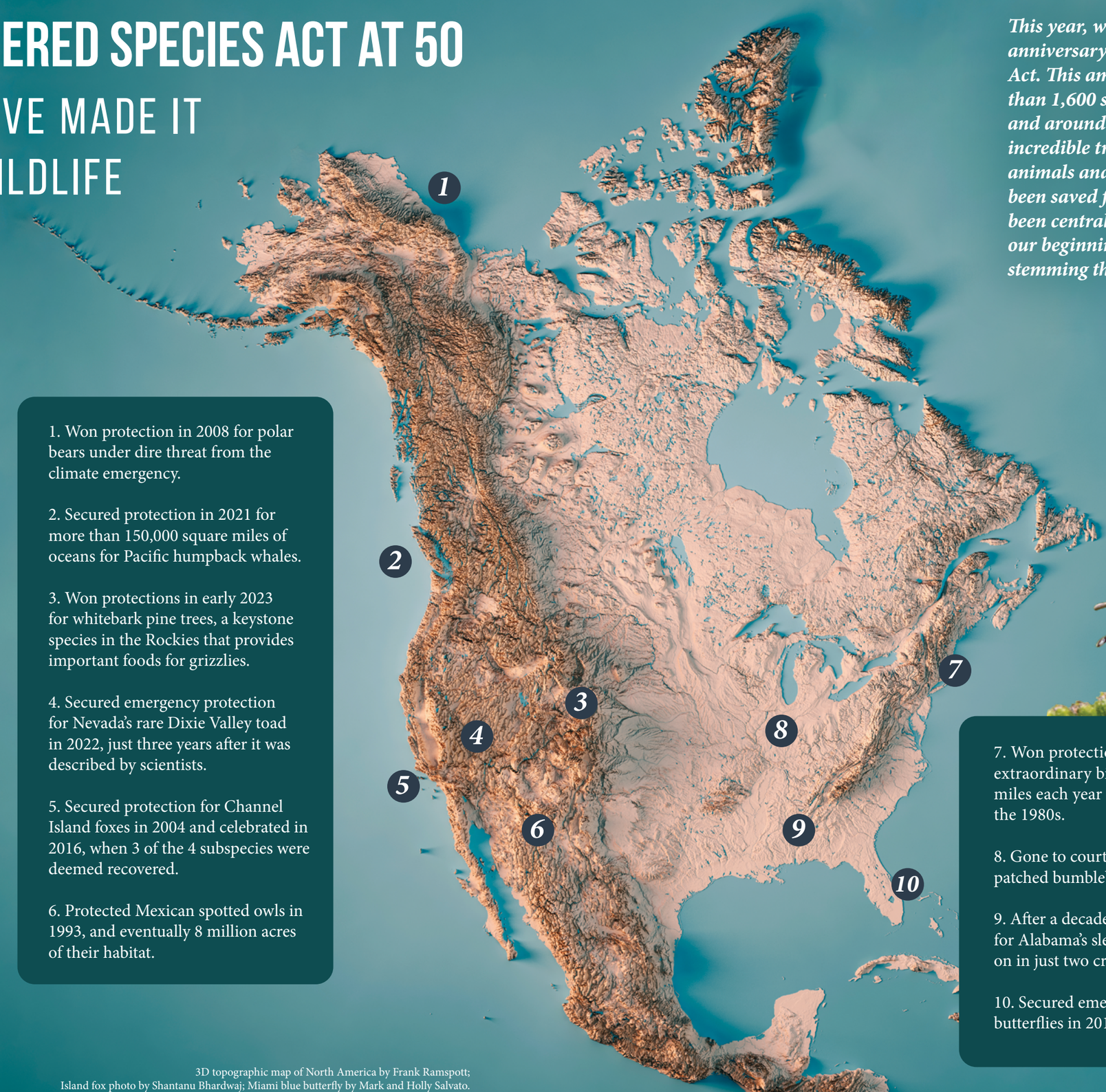
Photo above by James Brooks CC BY

Emily Jeffers • Senior Attorney
Oceans Program

THE ENDANGERED SPECIES ACT AT 50

10 WAYS WE'VE MADE IT WORK FOR WILDLIFE

This year, we're celebrating the 50th anniversary of the Endangered Species Act. This amazing law protects more than 1,600 species in the United States and around the world — and has an incredible track record: 99% of the animals and plants under its care have been saved from extinction. The Act has been central to the Center's work since our beginnings and remains crucial in stemming the wildlife extinction crisis.



1. Won protection in 2008 for polar bears under dire threat from the climate emergency.

2. Secured protection in 2021 for more than 150,000 square miles of oceans for Pacific humpback whales.

3. Won protections in early 2023 for whitebark pine trees, a keystone species in the Rockies that provides important foods for grizzlies.

4. Secured emergency protection for Nevada's rare Dixie Valley toad in 2022, just three years after it was described by scientists.

5. Secured protection for Channel Island foxes in 2004 and celebrated in 2016, when 3 of the 4 subspecies were deemed recovered.

6. Protected Mexican spotted owls in 1993, and eventually 8 million acres of their habitat.

7. Won protection in 2014 for red knots, extraordinary birds who migrate more than 9,000 miles each year but have declined by 75% since the 1980s.

8. Gone to court repeatedly to save habitat for rusty patched bumblebees, who were protected in 2017.

9. After a decade of work, won protection in 2021 for Alabama's slenderclaw crayfish, who is hanging on in just two creeks.

10. Secured emergency protection for Miami blue butterflies in 2011 after a 99% decline.

3D topographic map of North America by Frank Ramspott;
Island fox photo by Shantanu Bhardwaj; Miami blue butterfly by Mark and Holly Salvato.

PROTECTION, FINALLY, FOR CALIFORNIA SPOTTED OWLS

The first time I saw a California spotted owl was in 1998. It was high in the branches of an incense cedar tree in the San Bernardino Mountains of Southern California. I was helping a team of scientists better understand the owls' status, and part of my job was hiking through their habitat pretending to be one by imitating their four-note hooting call.

California spotted owls, one of three spotted owl subspecies, live in mature and old-growth forests in the Sierra Nevada and in the mountains of coastal and Southern California. Lately, though, they've been in a severe decline due to historic and current logging practices that have decimated the large trees and dense forest habitat they need to survive.

Now, after decades of Center advocacy on behalf of California spotted owls, the U.S. Fish and Wildlife Service has announced as part of a legal agreement that it will protect the owls under the Endangered Species Act. It's a hopeful sign for a species that has waited far too long for help.

The Center's efforts for these owls began in 2000, when we helped submit the first petition to protect them under the Endangered Species Act. In 2001, although they didn't get listed, the owls appeared to catch a break. Under the Clinton administration, the U.S. Forest Service adopted measures to protect the mature forest the owls call home, including a strict 20-inch-diameter limit that applied to logging activities across 11 million acres of public land in the national forests of the Sierra Nevada region. Sadly, however, those measures were short-lived. Despite the stacks of scientific research showing that spotted owls need intact forests thick with canopy cover, the Bush administration reversed course, raising the 20-inch limit to 30 inches and letting the Forest Service and the timber industry once again wreak havoc on owl habitat.

The Center and allies fought back, filing new listing petitions and lawsuits to counteract the political interference and government foot-dragging. Our most recent suit, filed in 2020, forced the Biden administration to abandon the Trump administration's illegal denial of protection for California spotted owls. As a result, on February 23, 2023, the U.S. Fish and Wildlife Service finally did what it should have done long ago — propose the protection of the owls under the Endangered Species Act.

So now, 25 years after catching my first glimpse of a California spotted owl, I'm eagerly awaiting final protection, which must be granted by February 2024. I'm hopeful this step will allow these magnificent owls to fully recover and will mean, finally, that the federal government acknowledges that logging is the problem — not the solution.

And then, one of these days, I'll step back into the forest and listen. Not for the roar of chainsaws, but for the four-note hoot of the California spotted owl.

Justin Augustine • Senior Attorney
Public Lands Law Center

Photo above by Brett Hartl/Center for Biological Diversity

SAVING THE SLOWEST AMONG US

There are few sounds more comforting than the damp, satisfying chomp of a gopher tortoise reaching with outstretched neck and ripping off a sheaf of tasty grass. As a born-and-raised Floridian, I'm fond of these tortoises, who I see plodding along a roadside or peeking out of a burrow at my local preserve.

Easily overlooked for their slow pace and docile disposition, gopher tortoises are quiet powerhouses of the forests, savannas, and coastal dune ecosystems where they live, supporting more than 360 other southeastern species. Their deep burrows provide refuge from extreme temperatures, weather, and natural fire for animals called "burrow associates," like threatened eastern indigo snakes and Florida mice. Scientists have documented more than 30 birds, from wild turkeys to palm warblers, using the sandy "aprons" at burrow openings for dust bathing, foraging for insects, and more.

Gopher tortoises also help shape plant communities by eating fruits and seeds and passing them — literally — on to new areas. Rare species like the gopher tortoise shell moth, whose larvae feed exclusively on the shells of deceased tortoises, directly depend on the tortoise's survival for their own existence.

Sadly these slow-moving forest caretakers are steadily disappearing from the landscape. They have already lost 97% of the longleaf pine savannas through which they historically roamed. And now the U.S. Fish and Wildlife Service projects that we stand to lose nearly three-quarters of all remaining gopher tortoise populations by the year 2100. Even that bleak projection fails to fully account for rapid habitat destruction in a swiftly urbanizing southeast — in addition to threats from car crashes, disease, invasive species like fire ants, and climate change.

Gopher tortoises have lost 97% of their historic range.

Despite this grim outlook, the Service has delayed lifesaving Endangered Species Act protection for decades. Finally, after a Center lawsuit, the Service made a decision. But the Service inexplicably denied the tortoise the protection it so desperately needs. So we're taking the agency to court again.

We know that the health of many southeastern ecosystems depends on securing a future for our gopher tortoises. Without them, who will dig the protective burrows? Spread the native seeds? Feed their fellow creatures? Endangered Species Act listing — and the habitat protections that come with it — is the best chance to safeguard a future for our gopher tortoises and the precious, wild places we all love and depend on.

Elise Bennett • Senior Attorney
Director, Florida and Caribbean Program

Photo above by Renee Bodine/USFWS

MONARCHS REMAIN IN TROUBLE

The annual count of migratory monarchs who winter in Mexico brought more bad news: A 22% decline from 2022, leaving the butterflies highly vulnerable to extinction.

Help can't come soon enough.

The Center and allies petitioned to protect monarchs under the Endangered Species Act back in 2014. They're now on the waiting list, and the U.S. Fish and Wildlife Service has till 2024 to make a decision.

After the latest counts, the total number of monarchs is 64% below the minimum threshold scientists say is necessary for the migrating pollinators not to be at risk of extinction in North America. Monarchs east of the Rocky Mountains — once a common sight — have declined by around 90% since the mid-1990s.

At the end of summer, eastern monarchs migrate from the northern United States and southern Canada to high-elevation fir forests in central Mexico. Scientists estimate their population size by measuring the area of trees turned orange by the clustering butterflies. The annual count is conducted by Mexico's National Commission of Natural Protected Areas and World Wildlife Fund Mexico. The eastern population has been perilously low since 2008.

Monarchs are threatened by pesticides, climate change, loss of U.S. grasslands, and illegal logging of their overwintering forests. They're also threatened during their migrations by mortality from roadkill and habitat fragmentation.

Monarchs have lost an estimated 165 million acres of breeding habitat in the United States to herbicide spraying and development in recent decades. Their caterpillars only eat milkweed, but the plant has been devastated by increased herbicide spraying in conjunction with corn and soybean crops that have been genetically engineered to tolerate direct spraying. They're also threatened by neonicotinoid insecticides, fungicides, and other chemicals that are toxic to young caterpillars.

Most monarch butterflies west of the Rocky Mountains overwinter on the central coast of California. Their numbers rebounded this year to more than 330,000 butterflies during Thanksgiving counts. But deadly storms led to a 58% drop, with only 117,000 butterflies surviving into January. Overall the western population is down more than 95% since the 1980s.

Photo above by Liz West CC BY

An Extraordinary Lifeline

From the Director

Kierán Suckling

It's hard to imagine what the Center would be without the Endangered Species Act.

Our work began more than 30 years ago with a loose organization of wildlife-lovers trying to save Mexican spotted owls from chainsaws in the Gila National Forest. We ultimately got them protected under the Act in 1993, along with 8 million acres of habitat.

Since then we've secured protection for more than 740 species, including jaguars, corals, foxes, salamanders, polar bears, penguins, orchids, toads, frogs, mollusks and fish. Along the way, we've protected a half a billion acres of wildlife habitat: forests, deserts, tundra, oceans, beaches, rivers and streams.

But this extraordinary story doesn't happen without the most extraordinary law ever passed to protect animals and plants from extinction.

This year we're celebrating the 50th anniversary of the Endangered Species Act. The law, approved with profound bipartisan support and signed by President Nixon in December 1973, marked a key inflection point in our history and culture — a moment when the United States collectively decided that we would go to any length to save wildlife from extinction.

The Act has an amazing record of success. More than 99% of species under its care have been saved or are on the road to recovery. It's the reason there are bald eagles on the wing from coast to coast, grizzly bears roaming the Rocky Mountains, sea turtles swimming in the ocean, whooping cranes flying across the Great Plains, and black-footed ferrets on the intermountain prairies.

The Act has also become a beacon for other countries in their pursuit to protect what's wild and remains a crucial tool for organizations like the Center taking action on behalf of wildlife, especially when political systems fall short.

This work is far from over, of course. We still face the possibility of losing 1 million species in the coming decades, but the Act remains our best path forward for saving life on Earth for the next 50 years and beyond. As always, I'm grateful to have you with us in this lifesaving work.

ENDANGERED EARTH is the membership newsletter of the Center for Biological Diversity. With the support of more than 1.7 million members and supporters, the Center works through science, law, media and activism to secure a future for all species, great or small, hovering on the brink of extinction. *Endangered Earth* is published three times yearly in January, July and October.

ON THE COVER
Rusty patched bumblebee by USGS

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JOIN THE Owls Club

Cactus ferruginous pygmy owl by Sky Jacobs

The Center for Biological Diversity's decades-long history is unmatched: We've secured protections for more than 740 species and more than half a billion acres of wildlife habitat. Help us continue this extraordinary legacy by joining the Owls Club.

By leaving a legacy gift through a bequest, or making the Center a beneficiary of your retirement plan or other estate plan, you'll be supporting the fight to save endangered wildlife for generations to come. To learn more about your legacy giving options, please call Paula Simmonds at (646) 770-7206 or email owlsclub@biologicaldiversity.org.

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