

Finding Refuge

Imperiled Species and the National Wildlife Refuge System





Wildlife First

As the first nation to develop a formal network of protected areas, the U.S. has led the way in setting aside havens for native plants and animals. Today, our National Wildlife Refuge System includes 568 refuges—95 million acres of land and 760 million acres of submerged lands and waters dedicated to providing sanctuary for our nation's wildlife. Every state and U.S. territory has at least one wildlife refuge, and most of our major cities are within an hour's drive of one.

While the awe-inspiring beauty of our refuges attracts many human visitors, these are places where wildlife comes first. The mission of the refuge system goes hand in hand with the goals of the Endangered Species Act (ESA), the most effective law in the world for saving imperiled species and the ecosystems on which they depend.

Despite the special relationship between the ESA and the National Wildlife Refuge System, no robust tally of how many threatened and endangered species our refuges

harbor had ever been done until Defenders of Wildlife and the National Wildlife Refuge Association teamed up to figure it out. To compile an up-to-date list, we pored over hundreds of federal documents—with a focus on refuge Comprehensive Conservation Plans (CCPs), the management blueprint each refuge develops.¹ The final tally is astounding: **513 endangered and threatened species—nearly one-third of the total listed under the ESA—are found on, or dependent on, at least 444 refuges.**

The following pages feature the map we created to show at a glance how important refuges are to ESA-listed species and highlight four refuges that epitomize the role of the refuge system in supporting a diversity of imperiled species. We also note just a few of the critical threats to refuges and their wildlife and recommend actions policymakers and individuals can take to ensure the future of America's public lands network dedicated to our wildlife.

¹Full dataset and CCPs available at <https://osf.io/x5sm4/>.

The Refuge System and the ESA: Origins and Mandates

Spurred by a public concerned about wildlife and eager to protect it, President Theodore Roosevelt established the first refuge by Executive Order in 1903. From that single acquisition grew our National Wildlife Refuge System, a network of lands and waters with the primary purpose of protecting wild animals and plants. From refuge designation to the recreational activities offered and resource management tools used on each unit, the National Wildlife Refuge System is designed to serve and protect species and their habitats for the benefit of present and future generations of Americans.

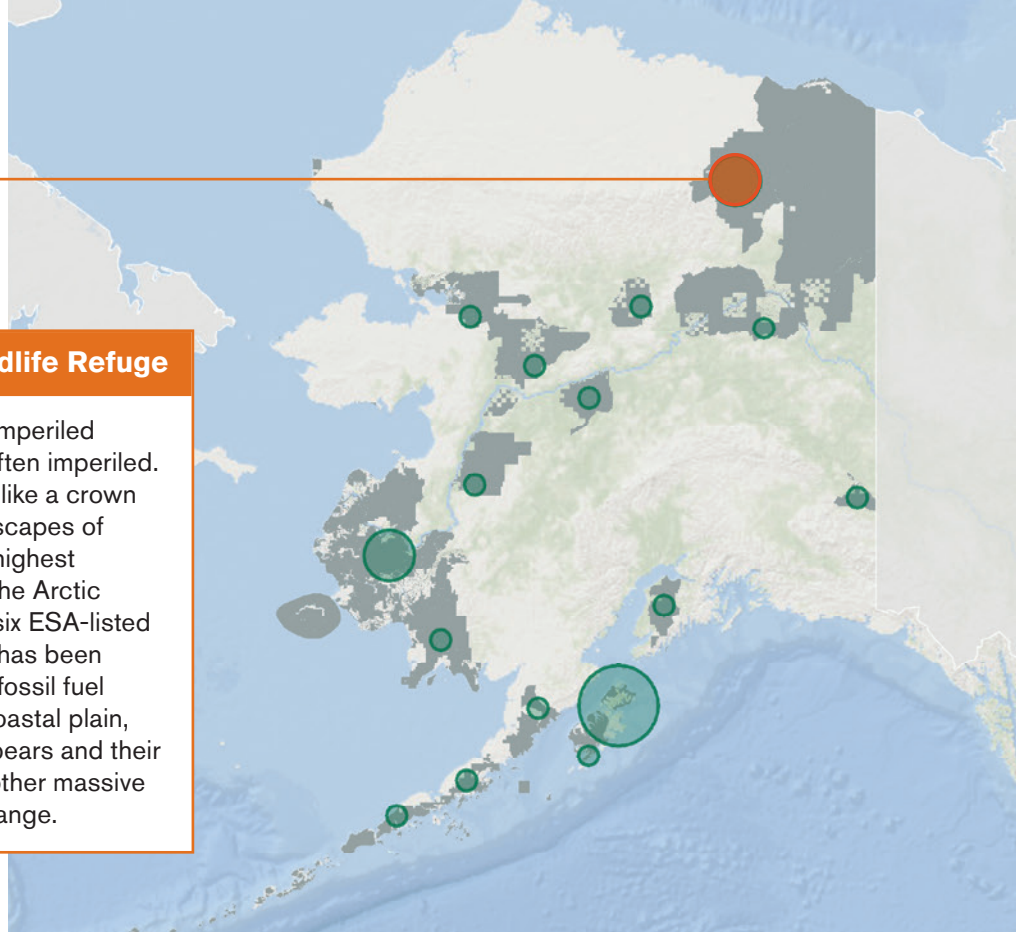
In 1973, President Richard Nixon signed the ESA, a landmark, bipartisan law that is now the global gold standard for saving wildlife in danger of extinction. The majority of species listed under the ESA are still with us today, and hundreds are on the path to recovery. Species listed as threatened or endangered under the ESA are afforded basic protections from harm. When they are found on refuge lands, they also receive dedicated attention to their conservation.



Facing Threats: Arctic National Wildlife Refuge

While they harbor essential and abundant imperiled species diversity, refuges themselves are often imperiled.

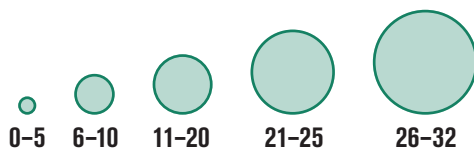
Sitting at the northern end of the nation, like a crown atop the refuge system, the unspoiled landscapes of Arctic National Wildlife Refuge harbor the highest biodiversity of any protected area north of the Arctic Circle. The iconic polar bear is among the six ESA-listed species that inhabit the refuge. The refuge has been under near-constant threat for decades by fossil fuel interests eager to drill for oil on its fragile coastal plain, an important denning site for female polar bears and their cubs. Oil extraction will only accelerate another massive threat to wildlife—and humanity: climate change.



POLAR BEARS © JOHANNA GRASSO

Imperiled Species on National Wildlife Refuges

Total number of ESA-listed species on refuge



Orange circles are featured refuges

BASE MAP: ESRI, NOAA; DATA SOURCE: USFWS



Ensuring the Future: San Diego National Wildlife Refuge

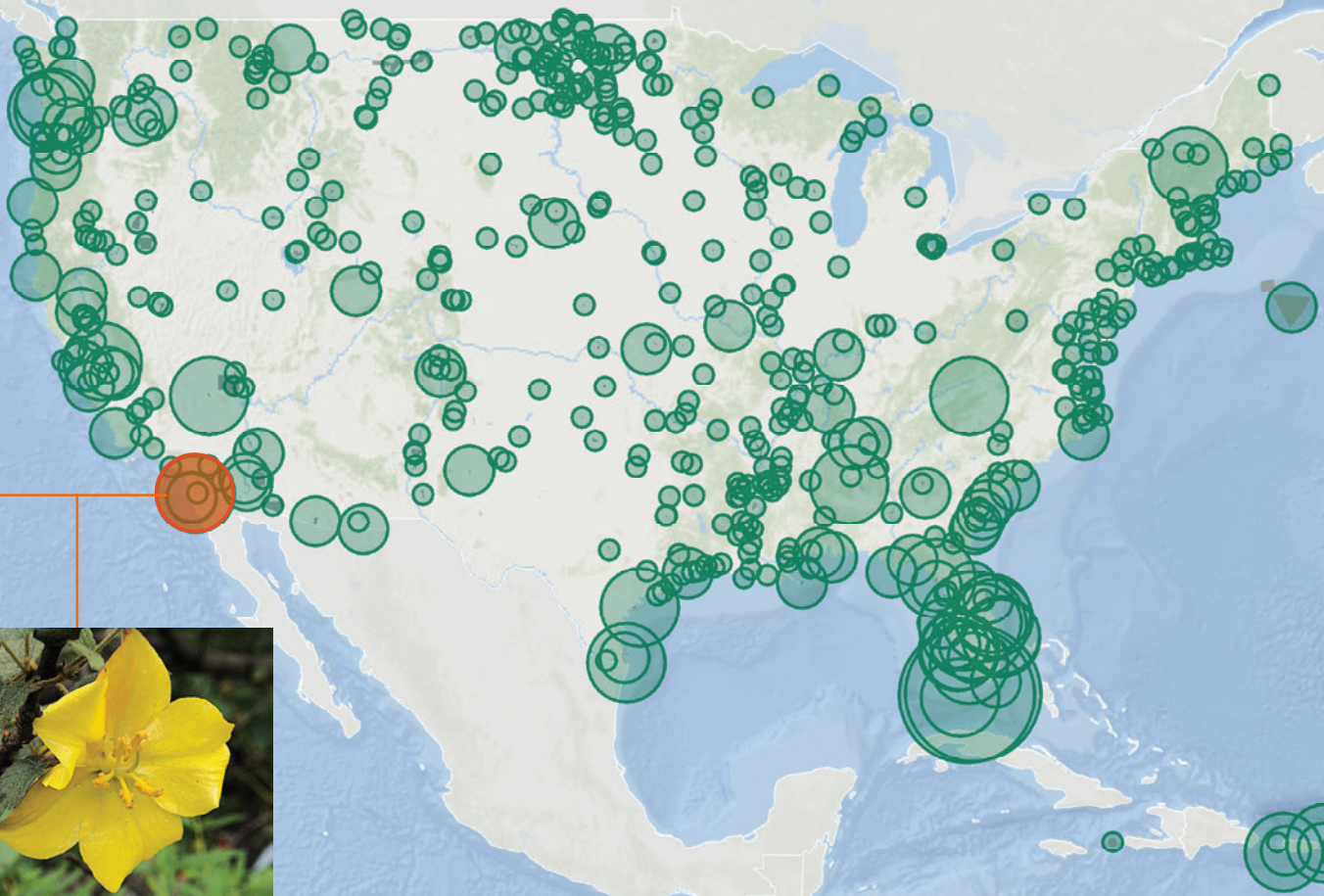
With the biodiversity and climate crises at hand and the emergence of science-based solutions like 30x30—the international effort to strategically protect 30 percent of the world’s lands and waters by 2030²—now is the time to grow and strengthen our National Wildlife Refuge System.

Nestled in the hills east of the city, San Diego Wildlife Refuge is an imperiled species hotspot that supports 17 ESA-listed species, including the Quino checkerspot butterfly, southwestern willow flycatcher, California red-legged frog and Mexican flannelbush, a rare shrub. Importantly, Congress did not just set aside the refuge’s current 11,500 acres for wildlife; it authorized the U.S. Fish and Wildlife Service to expand the refuge up to 52,000 acres as land becomes available. Expanding this refuge—and others like it—is essential to addressing the growing biodiversity crisis and mitigating and adapting to climate change.

²Dinerstein, E. and colleagues. (2019). A Global Deal For Nature: Guiding principles, milestones, and targets. *Science Advances*, 5, eaaw2869.

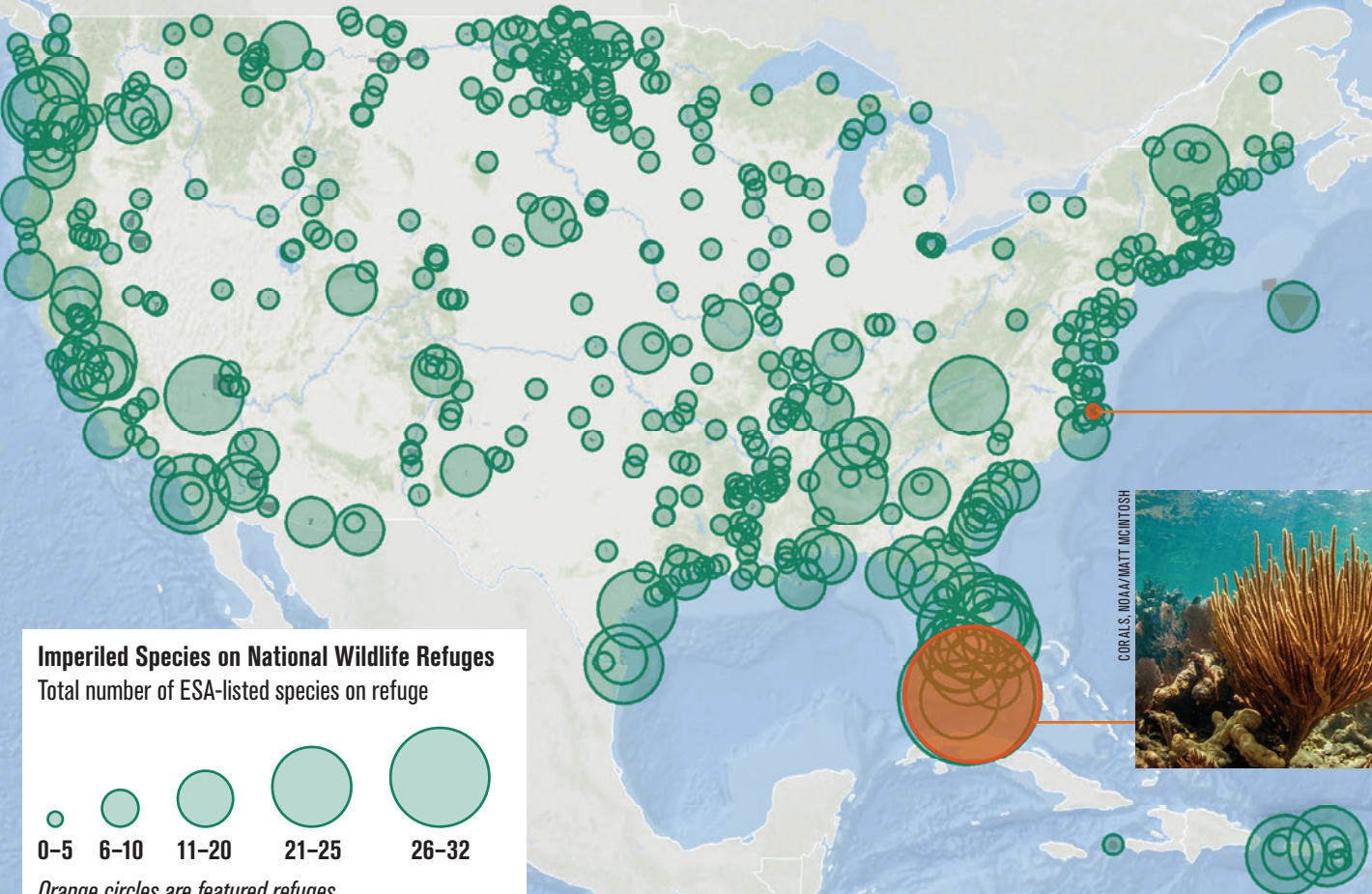


QUINO CHECKERSPOT BUTTERFLY © ANDREW FISHER/CC BY 2.0



MEXICAN FLANNELBUSH © JOHN RUSK/CC BY 2.0

RED WOLVES © POINT DEFANCE ZOO & AQUARIUM (CAPTIVE)



Finding Refuge: Alligator River National Wildlife Refuge

Many refuges are critical strongholds for ESA-listed species, including some found only on a particular refuge.

Alligator River National Wildlife Refuge in eastern North Carolina stands out as the only place in the world where red wolves, which once ranged across the entire southeastern U.S., are found in the wild. From the moment captive red wolves were released on the refuge in 1987 to reestablish the species in the wild, Alligator River has exemplified the critical role the refuge system plays in restoring and protecting threatened and endangered species.



RED WOLF PUPS. USFWS/RYAN ANDROSEN (CAPTIVE)



KEY DEER. FLORIDA FWC/CAROL LYNN PARRISH

Harboring Diversity: Key Deer National Wildlife Refuge

Some refuges harbor a particularly high diversity of ESA-listed species, underscoring the refuge system's importance to not just a select few species, but to many.

Extending along the Florida Keys, Key Deer National Wildlife Refuge is home to 31 marine and terrestrial ESA-listed species, from corals and sea turtles to snail kites and Key deer. Protecting a diversity of connected lands and waters where wildlife comes first—places like the Key Deer refuge—is essential to mitigating the complex threats of climate change and development.

To ensure that the National Wildlife Refuge System continues to serve its conservation purpose in the face of the biodiversity and climate crises, we must work together to protect, strengthen, grow and connect this incredible network of lands and waters.

The National Wildlife Refuge System is *the* public lands system for wildlife and is especially crucial to protecting and restoring threatened and endangered species. From the rainforests of Hawaii to the tundra of Alaska, from the woodlands of New England to the tropical waters of the Florida Keys, refuges are a cornerstone of habitat and wildlife protection in the U.S. But the refuge system can't do it alone—your support is essential to protecting the places that safeguard species as diverse as polar bears and Florida manatees, California condors and bog turtles. Here are a few simple things policymakers and the public can do:

- **Fight** for full and comprehensive funding for the National Wildlife Refuge System, including programs designed to support the protection and recovery of ESA-listed species that depend on the system.
- **Support** efforts to enlarge, strengthen and connect the National Wildlife Refuge System, with an emphasis on expanding and designating refuge lands and waters identified as essential for biodiversity conservation, climate adaptation and equitable access to public lands as part of the broader 30x30 and social justice movements.



MANATEES © JAN REYNIERS

- **Push** back on resource extraction and other harmful activities that would degrade the integrity of the National Wildlife Refuge System and individual refuges.
- **Vote** for candidates who support the National Wildlife Refuge System and a strong ESA. *#Vote4Wildlife*
- **Volunteer** at a refuge near you. You can also help advance threatened and endangered species conservation using these new technologies:
 - Habitat Patrol:* Help our data scientists to identify habitat loss using satellite imagery
 - iNaturalist:* Become a community scientist and report your nature observations with this free phone application.
 - SkyTruth Alerts:* Be in the know with this website that notifies you of environmental incidents in areas you care about.

FOR MORE INFORMATION



defenders.org



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Wildlife Refuge
ASSOCIATION

refugeassociation.org