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Confronting America's Wildlife Extinction Crisis

By Matt Lee-Ashley and Nicole Gentile October 2015

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Introduction and summary

American environmental policy faces a sobering reality: The United States has enacted and implemented some of the world’s most effective wildlife conservation laws, yet U.S. wildlife populations are still in perilous decline. One in five animal and plant species in the United States—nearly 1,300 total species—is at risk of extinction.¹ Among mammals, the populations of more than two-thirds of all imperiled species in the United States, from the wolverine to the polar bear, are falling.²

The decline of American wildlife is consistent with what experts are calling a global “sixth mass extinction” in which species are disappearing at a rate that is 100 times to 1,000 times higher than before humans were present.³ Scientists have documented 899 extinctions in modern human history but acknowledge that tens of thousands of lesser-known or undiscovered species have likely perished without record.⁴

Human causes—such as deforestation, climate change, urbanization, habitat fragmentation, pollution, overhunting and overfishing, and the global transport of invasive species and diseases—have accelerated the pace of extinction in the past two centuries. Wildlife population surveys show that more than 22,000 species are now at risk around the world.⁵ “Each year sees the disappearance of thousands of plant and animal species which we will never know, which our children will never see, because they have been lost for ever,” wrote Pope Francis in “Laudato Si,” his encyclical on the environment. “The great majority become extinct for reasons related to human activity.”⁶

For U.S. species that are hurtling toward the brink of extinction, the Endangered Species Act, or ESA, is the steel guardrail between them and oblivion. Fewer than 1 percent of species protected by the ESA are recorded as later going extinct.⁷ If not for the ESA, scientists estimate that at least 227 additional American wildlife species would have gone extinct since 1973.⁸

The ESA is an indisputable success in preventing the extinction of American plants and animals, but because it focuses on species that are already in dire peril, it alone cannot arrest and reverse the widespread decline of American wildlife. The unprecedented scale of the wildlife crisis in the United States requires policymakers to develop new tools and strategies to halt the decline of wildlife species before they become imperiled and need the protection of the ESA.

This report proposes the establishment of a new category of wildlife designation—*at risk*—that would apply to species that are declining but do not yet have or merit protection as a threatened or endangered species under the ESA. The designation of a plant or an animal as at risk would enable federal, state, and local leaders to better coordinate existing conservation programs, incentives, and investments to encourage voluntary species protection and recovery efforts. Federal and state policymakers should also work to increase the availability of funding and resources dedicated to conserving at-risk species and their habitats. These investments and a clearer focus on early, voluntary conservation of rare and declining species would reduce the likelihood that they will require the mandatory legal protections of the ESA.

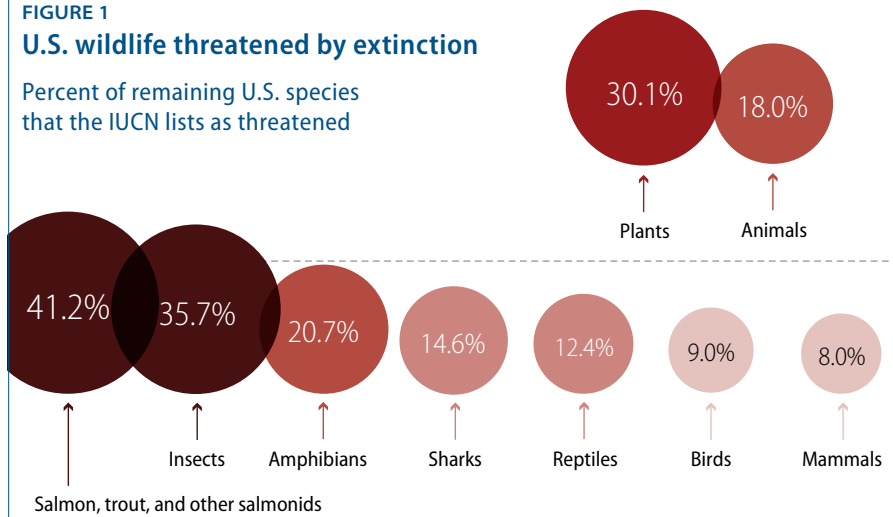
American wildlife populations are in decline

Improvements in wildlife data and databases over the past two decades are providing a clearer picture of the condition of U.S. plant and animal species. Although the federal government closely monitors the health of many species that are protected by the ESA, independent scientific databases maintained by NatureServe and the International Union for Conservation of Nature, or IUCN, present a more comprehensive summary of the status of threatened and non-threatened species in the United States.⁹

A review of IUCN’s “Red List of Threatened Species” database, which incorporates data from NatureServe and other sources, reveals two concerning trends. First, large proportions of the species for which there is sufficient data have populations that are in decline or are threatened with extinction. The IUCN classifies 18 percent of all remaining animal species and 30 percent of all remaining plant species in the United States as threatened. (Notably, the IUCN classification of “threatened” species is distinct from the federal government’s classification under the ESA. The IUCN’s classification of a threatened species incorporates plants and animals that, according to the organization’s standards, are critically endangered, endangered, or vulnerable.) Among animal species, more than one-fifth of remaining amphibians, one-third of remaining insects, and two-fifths of remaining salmon, trout, and other salmonid fish are threatened. Among the 35 mammal species that the IUCN lists as threatened, the populations of more than two-thirds are declining.¹⁰

FIGURE 1
U.S. wildlife threatened by extinction

Percent of remaining U.S. species that the IUCN lists as threatened

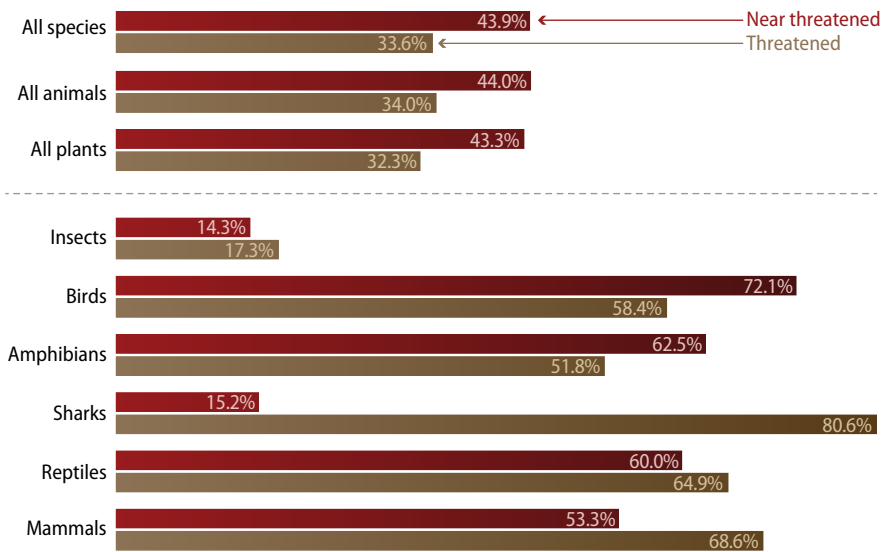


Source: Authors' review of International Union for the Conservation of Nature and Natural Resources, "The IUCN Red List of Threatened Species" (2015), version 2015-3, available at <http://www.iucnredlist.org>.

The IUCN “Red List” data reveal a second notable trend among U.S. species: A higher proportion of plants and animals that the IUCN classifies at lower risk of extinction are declining than species that the IUCN lists as threatened by extinction. Whereas 34 percent of threatened animal populations in the United States are declining, 44 percent of “near threatened” animal populations are declining. Among plants, 32 percent of threatened species are declining, compared with 43 percent of near threatened plant populations. The IUCN defines a species as “near threatened” if it does not meet the criteria for being critically endangered or vulnerable “but is close to qualifying or is likely to qualify for a threatened category in the near future.”¹¹ Among bird species, this gap is even more pronounced: 58 percent of threatened bird populations are declining, compared with 72 percent of near threatened birds. Mammals, sharks, and amphibians appear to be outliers in this trend; among these groups, higher proportions of threatened species are in decline.¹²

FIGURE 2
Declining U.S. wildlife species

Percent of species that the IUCN lists as threatened or near threatened that have declining populations



Source: Authors' review of International Union for Conservation of Nature and Natural Resources, "The IUCN Red List of Threatened Species" (2015), version 2015-3, available at www.iucnredlist.org.

Why are near threatened species faring worse than threatened species in the United States? The Endangered Species Act may supply at least part of the answer: The law has halted or reversed the decline of many of the species on the IUCN threatened list, such as the California condor and the black-footed ferret.¹³ The ESA, however, protects only a subset of IUCN threatened species. One recent study found that of the species that the IUCN classifies as threatened, more than 40 percent of U.S. birds and more than 80 percent of “lesser-known taxa,” such as insects, crustaceans, and amphibians, are not listed under the ESA.¹⁴ Still, one study found that of the species reviewed, plants and animals that the IUCN rates as more imperiled are more likely to also be protected by the ESA.¹⁵

Although there is widespread evidence of the ESA’s effectiveness in protecting endangered species, the high rate of decline among near threatened species foreshadows a grim future.¹⁶ Unless policymakers can help curtail the threats to near threatened animals and plants and their habitats, hundreds—if not thousands—more U.S. wildlife species will become imperiled in the coming decades.

Current policies and resources are insufficient to confront the U.S. extinction crisis

In the congressional corridors of Washington, D.C., the decline of American wildlife is a problem that is largely unknown, ignored, or denied. The predominant wildlife debate in Congress centers on whether to weaken—rather than strengthen—the Endangered Species Act. In fact, since the beginning of the current Congress in January 2015, legislators have introduced more than 80 bills or amendments to weaken protections for at-risk wildlife, more than any other year in at least the past two decades.¹⁷ The latest congressional budget proposal in the House would cut the U.S. Fish and Wildlife Service, or FWS, funding for ESA listings in half, on top of millions of dollars in broader cuts to endangered species programs in the past five years.¹⁸

Lacking adequate resources and personnel, the FWS and the National Oceanic and Atmospheric Administration Fisheries Service, or NOAA Fisheries—the two U.S. agencies responsible for protecting and recovering threatened and endangered species—are unable to keep pace with the growing number of plants and animals that need the protection of the ESA. A total of 146 plants and animals are awaiting potential ESA protection on the FWS “Candidate Species” list.¹⁹ NOAA Fisheries currently lists a 37-animal backlog on its similar “Species of Concern” list.²⁰ Species can wait in limbo on these lists for decades before agencies are able to turn their attention to them. The Dakota skipper butterfly, for example, waited as a candidate species from 1975 until 2014, when the FWS finally protected it as an endangered species.²¹

In addition to being hampered by inadequate resources, U.S. wildlife policies favor certain orders of species over others. Mammals, fish, and iconic bird species receive a higher share of funding for research, listing, and recovery than insects, plants, and less recognized species. Of the 25 threatened and endangered species on which the U.S. government and state agencies invested the most money in 2013, not a single one was a frog, snake, tortoise, tree, flower, butterfly, lizard, or any other kind of

reptile, amphibian, plant, or insect.²² The disproportionate focus on conserving well-known species is a consequence of several factors, including political pressure from elected officials who worry about the regulatory impacts of conserving species that are not widely recognized and nongovernmental advocacy that emphasizes threats to what are known as charismatic megafauna, such as the polar bear and gray wolf.

As a result of a shortage of resources, prioritization of popular species, and political pressures, U.S. wildlife policy provides fewer incentives and opportunities to conserve plants, less charismatic animals, and near threatened species that may already be trending toward extinction. For policymakers, the challenge is to fill this gap in wildlife management with politically palatable policies that effectively sustain and recover all species and their habitats.

The greater sage grouse: A template for improving the protection and recovery of at-risk wildlife

On September 22, 2015, the U.S. Fish and Wildlife Service announced that the greater sage grouse, an imperiled bird that inhabits 11 Western states, does not need the protection of the Endangered Species Act to survive.²³ The FWS's decision hinged on the Obama administration's success in convincing federal agencies, state governments, and private landowners to voluntarily commit to plans that cover approximately 70 million acres of the greater sage grouse's habitat. "Government at every level, ranchers, industries, firefighters, scientists, and conservation organizations came together to reduce threats to the bird and to conserve the sagebrush ecosystem," said U.S. Secretary of the Interior Sally Jewell in announcing the decision. "This has been an extraordinary effort on a scale we have never seen before."²⁴

The protection of the greater sage grouse provides a template for how policy-makers can help slow and reverse the decline of other species before they need to receive the protection of the Endangered Species Act. There are four lessons to draw from the Obama administration's approach to the greater sage grouse. Specifically, the administration:

1. Acted early to engage federal, state, and local partners, several years before the FWS was scheduled to decide whether the species merits the protection of the ESA²⁵
2. Collaborated with state wildlife agencies to develop landscape-scale conservation plans²⁶

3. Provided additional federal conservation funding to support state and private conservation efforts²⁷
4. Incentivized and rewarded landowners who committed to protecting and restoring habitat on their lands²⁸

The Obama administration applied a similar approach to another high-profile species that appeared destined for listing as endangered. In February 2014, the administration secured landscape-scale, voluntary habitat protections for the lesser prairie chicken, which lives in the fast-disappearing short grass prairies of Kansas, Colorado, Oklahoma, New Mexico, and Texas.²⁹ Because energy companies and state agencies in all five states developed a strategy that focused on more than 10 million acres of core habitat, the FWS determined that the lesser prairie chicken can be recovered using the more permissive threatened designation and an accompanying rule that adds flexibility for wildlife management.³⁰

Although the administration's approach to conserving the greater sage grouse and the lesser prairie chicken was innovative, it required a high degree of direct engagement from agency leaders, cabinet officials, and other administration officials to succeed. This model is not sufficiently stable or sustainable over the long term. The conservation of imperiled wildlife should not depend on the high-level involvement of political leaders whose priorities may change from year to year and from administration to administration. Policymakers should build a new tool for conservation that institutionalizes the lessons learned from the protection of these two species and improves the conservation of near threatened and less recognized species.

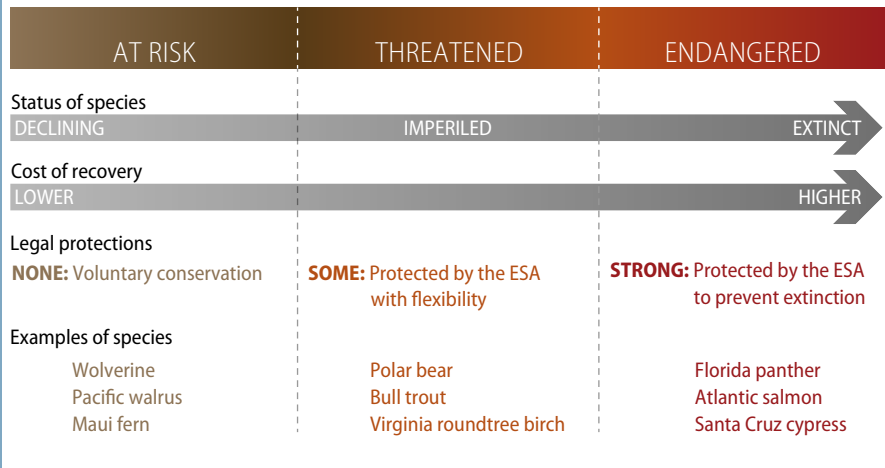
A new classification to incentivize the voluntary conservation of at-risk species

The Endangered Species Act provides legal and regulatory protections for two categories of species. Congress established initial protections for the first category of species—those at greatest risk of extinction, or “endangered” species—through laws passed in 1966 and 1969.³¹ In enacting the Endangered Species Act of 1973, Congress expanded protections to a second category of plants and animals, called “threatened” species, which are “likely to become an endangered species within the foreseeable future.”³² Lawmakers created the threatened category as a means of conserving species before they reached the brink of extinction.³³ “This important measure grants the Government both the authority to make early identification of endangered species and the means to act quickly and thoroughly to save them from extinction,” wrote President Richard Nixon as he signed the ESA of 1973 into law.³⁴

Plants and animals that are listed as threatened or endangered under the ESA have an excellent chance to not only survive but also—given adequate time and support—recover.³⁵ Yet four decades of experience with the law has shown that its protections are typically not applied as early as lawmakers originally intended. By the time species are listed as endangered or threatened, their populations and habitats have often already declined dramatically. Resource limitations are partly to blame for the ESA’s shortfalls. Lacking adequate appropriations from Congress, scientists at the FWS and NOAA Fisheries have to engage in a form of triage: listing only species that are facing the greatest imminent risk, while sidelining dozens of others as “warranted” for listing but “precluded” from protections due to inadequate resources.³⁶ Notwithstanding Congress’ intention in 1973 of facilitating the early conservation of imperiled species, the threatened and endangered classifications alone are not able to help the growing list of species that are declining.

In order to fill this gap and to complement the wildlife protections afforded by the ESA, the Center for American Progress proposes that the Obama administration establish a third classification for imperiled species—*at risk*. This new classification would encourage the voluntary conservation of animals and plants that are not yet defined as threatened or endangered.

FIGURE 3
How an at-risk classification would work



An at-risk designation would provide a plant or an animal no new regulatory or legal protections. Furthermore, the new classification would not strengthen, weaken, or otherwise modify the protections or listing criteria in the ESA. An at-risk designation, however, would encourage voluntary conservation by prioritizing federal funding streams for habitat conservation, encouraging federal land managers to reduce disturbances to public lands and waters that the species inhabits, and incentivizing state and private habitat conservation.

Federal, state, and tribal governments would all play a role in determining which species merit classification as at-risk species. The FWS and NOAA Fisheries, for example, should classify the species on the “Candidate Species” and “Species of Concern” lists as at risk; these are the species that are awaiting a decision on whether they should be listed under the ESA. Species that have been removed from the ESA list or that agency scientists determine do not meet the criteria for ESA protection could likewise be designated as at risk to minimize the likelihood that the species will relapse or decline further.

To determine what additional declining or rare species might benefit from early, voluntary conservation through an at-risk classification, the secretary of the interior should direct the U.S. Geological Survey, or USGS—which is devoted to providing impartial scientific information on the natural world—to conduct a review of the IUCN “Red List,” NatureServe databases, and other relevant wildlife information.

This review could assess the overall health of the species; the expected benefits of early, voluntary conservation efforts; the condition of the habitat and concentration of other at-risk species in the habitat; and other factors. The USGS would then provide recommendations to the FWS and NOAA Fisheries on which species would most benefit from an at-risk classification.

In addition, the wildlife agencies of state and tribal governments should have the authority to nominate species to the at-risk list based on their own plans and assessments. In 2005, Congress required every state to develop and maintain a State Wildlife Action Plan, or SWAP, a document that identifies imperiled species in the state—known as Species of Greatest Conservation Need, or SGCNs—and voluntary actions that would assist with their protection and recovery.³⁷ The state plans currently identify approximately 12,000 species that are declining, are rare, or could soon become threatened or endangered.³⁸ State and tribal governments would identify which of these SGCNs or other vulnerable species should be nominated for consideration as at-risk species and prioritized for federal funding and voluntary conservation initiatives. Citizens could also nominate a species for consideration as at risk if there is adequate scientific information to indicate that its population is declining and potentially imperiled.

For federal, state, and tribal governments, an at-risk classification would help natural resource agencies deploy their voluntary conservation programs in a more effective and coordinated fashion. For the federal government in particular, an at-risk designation would create a clear process and standard by which the government could align and deploy habitat protection funding and programs at the U.S. departments of the Interior, Agriculture, Defense, and Commerce, as well as other agencies. The U.S. Department of Agriculture's Natural Resources Conservation Service, or NRCS, for example, has used the Working Lands for Wildlife program to promote private conservation efforts targeting seven wildlife species, including the greater sage grouse and the lesser prairie chicken.³⁹ The presence and distribution of at-risk species could inform NRCS's decisions about its future priorities for this program.

An at-risk classification could also help prioritize conservation investments from other programs in the departments of Agriculture and the Interior, such as the Conservation Reserve Program,⁴⁰ the Healthy Forests Reserve Program,⁴¹ the Environmental Quality Incentives Program,⁴² and the Cooperative Endangered Species Conservation Fund,⁴³ which reward private and state landowners for good stewardship practices. A farmer who has important aquatic habitat for an at-risk amphibian, for example, could receive priority consideration for funding from the

Agriculture Department's Wetlands Reserve Program. A land trust that is working with a rancher to place a conservation easement on high-priority habitat for at-risk species might likewise get favorable consideration from the Land and Water Conservation Fund or the Agricultural Conservation Easement Program.⁴⁴

The U.S. Department of Defense, or DOD, natural resource programs would also benefit from a clear classification for imperiled species. The DOD currently manages 400 federally listed threatened or endangered species and more than 500 other imperiled species on the 19 million acres of lands and waters it oversees.⁴⁵ In total, the DOD manages 9 times more imperiled species per acre than the Bureau of Land Management, 6 times more per acre than the Fish and Wildlife Service, 3.5 times more per acre than the National Park Service, and 4.5 times more per acre than the Forest Service.⁴⁶ A formal at-risk classification could help the DOD prioritize its habitat protection efforts through the Readiness and Environmental Protection Integration Program,⁴⁷ the DOD Legacy Program,⁴⁸ the Partners in Flight program,⁴⁹ and the Partners in Amphibian and Reptile Conservation program.⁵⁰

In addition to stimulating new federal funding streams, the FWS could develop voluntary agreements—either Candidate Conservation Agreements with Assurances, or CCAAs, or Candidate Conservation Agreements, or CCAs—with states, tribes, and private landowners to protect at-risk species.⁵¹ Parties that voluntarily participate in these programs receive guarantees that if a species is eventually protected by the ESA, the listing will not adversely affect the activities on the land to which the agreement applies.

To further assist state and tribal wildlife agencies in their efforts to help at-risk species, Congress should significantly increase its investments in early, voluntary conservation programs. The National Wildlife Federation recently recommended that Congress invest at least \$1.3 billion annually in the Wildlife Conservation and Restoration Account, or WCRA.⁵² Congress established the WCRA in 2001 to protect and recover species before they reach the brink of extinction. Providing dedicated funding to the WCRA would enable Congress to also expand the State and Tribal Wildlife Grants, or SWG, program, which is dedicated to helping state and tribal governments protect and recover species before they reach the brink of extinction. Since its establishments in 2000, the SWG program has helped agencies in every state achieve wildlife conservation successes, from helping stabilize the Washington ground squirrel in the Northwest to improving habitat for the least tern in Rhode Island.⁵³ Although the program was funded in 2002 at \$85 million per year, Congress cut it more than 30 percent to \$59 million in 2014.⁵⁴

While additional investments in wildlife conservation are desperately needed to confront America's species extinction crisis, the at-risk classification would itself require little money to implement and, by improving the coordination and effectiveness of other federal programs, would result in a higher rate of return from current conservation investments. By relying primarily on candidate lists, scientific reviews from the USGS, and recommendations from state and tribal governments, professionals at the FWS and NOAA Fisheries could establish and maintain the at-risk list using existing processes and resources. The creation of the new classification, meanwhile, would help federal, state, tribal, and non-profit partners better coordinate their habitat and wildlife conservation investments, yield better outcomes for wildlife, reduce the likelihood of high-cost ESA listings, and incentivize earlier protection of species.

Conclusion

The reasons to encourage earlier, voluntary protections for declining, imperiled, and lesser-known species are both practical and moral.

The practical reasons are worth restating. Simply put, earlier and more effective conservation of imperiled species would reduce pressure on the Endangered Species Act and lower the financial costs of recovery. Studies have shown that it is more cost-effective to recover a species before it needs the protection of the ESA than after its population declines to the point of being threatened or endangered.⁵⁵ And although the FWS and NOAA are now using a wide range of tools that increase the flexibility and reduce the economic costs of ESA listings, the legal and regulatory protections afforded to species under the ESA can result in unwanted expenses for businesses that have to change their practices to minimize effects on protected animals and plants. Earlier voluntary conservation can also help avoid costly and time-consuming litigation for businesses, conservation groups, and others engaged in using and protecting wildlife habitat.

Moreover, protecting America's biodiversity carries broader economic benefits. A government study found that more than 90 million Americans participated in wildlife-related recreation, including bird watching, hunting, and fishing, and spent \$144.7 billion on related consumer goods and travel in 2011.⁵⁶ The bird-watching industry alone supports 666,000 jobs and generates \$13 billion in local, state, and federal tax revenue annually.⁵⁷ Declines in American wildlife threaten the economic future of this sector.

“Why should we care? What difference does it make if some species are extinguished, if even half of all the species on earth disappear? Let me count the ways. New sources of scientific information will be lost. Vast potential biological wealth will be destroyed. Still undeveloped medicines, crops, pharmaceuticals, timber fibers, pulp, soil-restoring vegetation, petroleum substitutes, and other products and amenities will never come to light.”

— E.O. Wilson⁵⁸

Although utilitarian arguments for conserving wildlife are well documented and even codified in U.S. law, the most powerful arguments for confronting America's wildlife extinction crisis are moral.⁵⁹ The belief that humans have a responsibility to the animals and plants with whom we share the Earth is a pillar of every major spiritual tradition. With the 1986 Assisi Declarations, for example, leaders from five of the world's most-followed religions—Buddhism, Christianity, Hinduism, Islam, and Judaism—affirmed that conserving species is a fundamental aspect of each faith.⁶⁰ Leading philosophers have likewise argued that wildlife have their own intrinsic value, independent of humans. Holmes Rolston III, a pioneer in environmental ethics, writes, “endangered species are objectively valuable kinds, good in themselves; they do have their own welfare. Respect for life ought to be directly based on this value.”⁶¹

This shared moral sentiment—whether based in religion or ethics—has guided every major wildlife conservation gain in U.S. history, from President Theodore Roosevelt's creation of the first national wildlife refuges to the passage of the Endangered Species Act. Faced with a wildlife extinction crisis on a scale that scientists are only beginning to understand, this moral imperative should inspire new innovations and advancements in America's wildlife conservation policy so that future generations may continue to experience the richness of the nation's natural heritage.

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