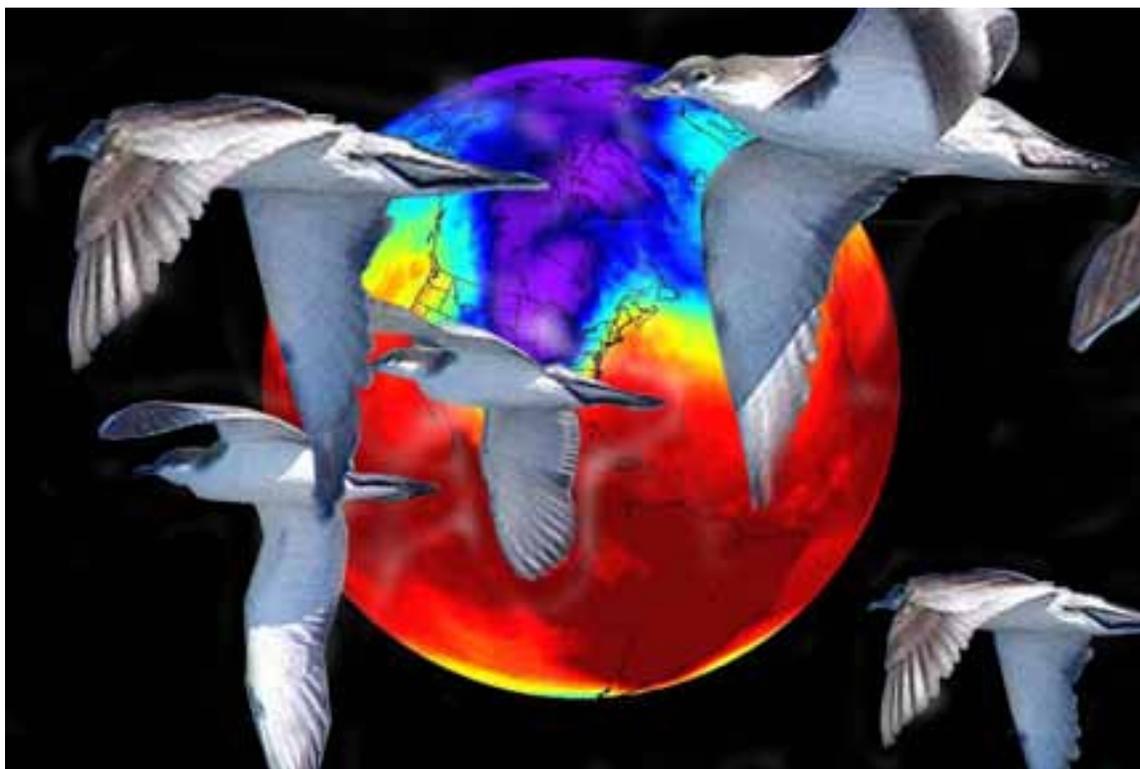


An Integrated Curriculum For The Washington Post Newspaper In Education Program

Some Species Have Survived



- Post Reprint: “These creatures faced extinction. The Endangered Species Act saved them.”
- Endangered Species Survivor Cards: Black-footed ferret, humpback whale, bald eagle, American alligator, grizzly bear, Florida manatee, California condor, gray wolf
- Student Activity: Endangered Animals in a Flash
- Student Activity: Introduce Endangered Animals
- Teachers Notes: Using the Cards
- Post Reprint: “Trump’s border wall could separate some other residents — the animals”

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These creatures faced extinction.

The Endangered Species Act saved them.

BY DARRYL FEARS

The federal Endangered Species Act has been called the world's gold standard for environmental protection. Passed in 1973, it strengthened earlier federal protections for animals that had been nearly wiped out by humans, including bald eagles, humpback whales and California condors.

But the act has faced opposition from those who believe it unfairly protects animals that sometimes poach livestock and that it unfairly restricts land use.

At a recent hearing to discuss "modernizing the Endangered Species Act," Sen. John Barrasso (R-Wyo.), head of the Senate Environment and Public Works Committee, said the ESA "is not working today."

On the House side, Natural Resources Committee Chairman Rob Bishop (R-Utah) said the act "has never been used for the rehabilitation of species. ... It's been used to control the land. We've missed the entire purpose of the Endangered Species Act. It has been hijacked."

A former U.S. Fish and Wildlife Service director at the Senate hearing responded to calls that the law needed a dramatic change by reminding committee members of how the law is viewed in other parts of the world. "The Endangered Species Act is the world's gold standard" for conservation and protection of animals, said Daniel M. Ashe, now president and chief executive of the Association of Zoos and Aquariums.

"It's not perfect. It can be better," Ashe said. "Your goal is to make it ... stronger and better."

The world's flora and fauna are experiencing a global extinction crisis caused by human activity, according to many experts. But humans have also learned how to protect species and help them make a recovery. Here are eight species that would probably have disappeared already were it not for the Endangered Species Act.

— Originally Published March 11, 2017



KIMBERLY FRASER/U.S. FISH AND WILDLIFE SERVICE VIA ASSOCIATED PRESS

Listed as endangered in 1967, the black-footed ferret was twice seen as extinct in the 20th century before a small group was found.

Black-footed ferret

If raccoons could get plastic surgery, they'd transform themselves into black-footed ferrets. This variety of ferrets is the only one that's native to the Americas, but Americans are shoving them off their habitat with development, and they inadvertently introduced a plague to their primary food source, prairie dogs. Along with development that causes prairie dogs to scatter, the sylvatic plague, which caused the bubonic plague in humans, wiped out entire prairie dog populations and spread to ferrets.

Black-footed ferrets exist on about two percent of their historic range. Listed as endangered in 1967, they were twice considered extinct in the 20th century before a population of about 20 was found. The Fish and Wildlife Service partnered with the Smithsonian Conservation Biology Institute in Front Royal, Va., and zoos to breed the animals in captivity and reintroduce them into the wild in a bid to save them. The federal agency is also experimenting with using drones to scatter plague vaccine, encased in peanut butter tablets, to protect the animals against disease. There have been hopeful signs of a small rebound, but as development continues to slice up their habitat, their fate is still dicey.



MICHAEL PENN/JUNEAU EMPIRE VIA ASSOCIATED PRESS

The humpback whale was listed as endangered in 1967. Nearly five decades later, the species has rebounded to about 20,000 whales.

Humpback whale

This is the famous singing whale. No one really knows why, but males, who do all the crooning, sing for up to 20 minutes at a time, sometimes all day, pausing only for a breath — an underwater opera. The singing nearly stopped in the 1960s, when more than a century of commercial hunting took its toll. Humpback whales were listed as endangered in 15 habitats worldwide, and their numbers fell to 1,600.

They were listed as endangered in 1967 under the Endangered Species Conservation Act that preceded the current act. Nearly five decades later, they've rebounded to about 20,000 individuals across the world, enough to be de-listed in all but a few of their habitats.



SCOTT AUDETTE/REUTERS

A bald eagle grabs a perch near Maryland's Conowingo Dam. Named the national bird in 1782, the species was nearly extinct in the 1970s.

Bald eagle

The bald eagle was designated as the national bird in 1782, just before the end of the Revolutionary War. Although the Americans and British stopped fighting, hostilities didn't end for eagles.

Name a threat, and bald eagles have faced it: illegal shooting, poisoning, habitat destruction and contamination of its food with the deadly chemical DDT. By the 1970s, when they were listed as endangered, bald eagles were on the verge of extinction. Wildlife officials teamed up with state and federal lawmakers to save them.

The first step was to ban DDT, ushering in a bald eagle recovery through conservation, including the protection of nesting areas. Bald eagle populations recently climbed to an estimated 70,000 birds from a low of about 400 breeding pairs in 1963, a recovery that the Fish and Wildlife Service called remarkable. They were removed from the endangered list in 2007.



RHONA WISE/AGENCE FRANCE-PRESSE VIA GETTY IMAGES

American alligators abound in the Everglades, where Burmese pythons are challenging them for the top spot on the food chain.

American alligator

Why does this member of the crocodile family look so scary? It's basically a dinosaur. Alligators have been on Earth for 200 million years, hunting other animals and devouring them.

Gators aren't the only merciless animal. Humans nearly put an end to their existence through hunts and habitat destruction. Like the black-footed ferret, alligators were listed as endangered in 1967. Authorities banned hunting to protect it, the American alligator quickly rebounded, and in 1987 the service declared that the animal had fully recovered.

American alligators exist from North Carolina to Florida on the Atlantic coast and from Florida to Texas on the Gulf coast. They abound in the Florida Everglades, where invasive Burmese pythons have begun to challenge them for the top spot on the food chain.



JIM URQUHART/REUTERS

The number of grizzly bears has grown from about 130 to 700 in the Greater Yellowstone Ecosystem.

Grizzly bear

There's no mistaking a grizzly bear. Its powerful build, its walk and claws are iconic. Those features are part of the reason scientists named grizzlies *Ursus horribilis*, "terrifying bear." Biologists don't like the term grizzly. They're a subspecies of the Kodiak bear and are officially the North American brown bear.

Other North American bears such as the polar bear are bigger. But grizzlies have a fearsome reputation. Some wonder why, considering that they are largely solitary, playful and can be communal eaters in areas where food is plentiful. Humans fear them, but grizzlies have proven no match for humans. Half a million grizzlies once roamed the Lower 48 states, from the northwestern corner of Washington to southern Wyoming. Now only about 1,800 remain. Grizzlies were listed as threatened in the lower 48 states in 1975 after being reduced to two percent of their historic range. In their southernmost territory, inside Yellowstone National Park, they were fiercely protected, and hunting outside the park was ended.

The bears' numbers have grown from about 130 to 700 in the Greater Yellowstone Ecosystem, and now Fish and Wildlife is considering removing them from the list, sparking an ongoing fight with ranchers on one side, conservationists on the other and the federal government in the middle.



SCOTT AUDETTE/REUTERS

In 2013, there were 800 manatee deaths, mostly caused by humans. Since the animal is rebounding, with about 6,200 in a recent count, USFWS proposed downgrading their status.

Florida manatee

Manatees have lived in Florida for about 45 million years, according to fossil records. They are big, gray, lumbering and docile marine mammals, plus they eat sea grasses, so people call them sea cows.

As Florida developed into a vacation and retirement paradise that swelled its population to 20 million, making it the fourth-most-populous state, sea cows found themselves in the path of boats. Sharp propellers butcher the animals, and they are harassed by snorkelers and tubers longing to touch them. Florida first acted to protect manatees as far back as 1893, and the federal government first protected them as an endangered species in 1967.

Aerial surveys in 1991 proved that their numbers had dropped from the tens of thousands to fewer than 1,300. In 2013, there were a record 800 manatee deaths caused mostly by humans. Faced with the extinction of the Florida manatee, an offshoot of the West Indian manatee that roams the Caribbean and South America, the state and federal government stepped up protections. They created manatee protection zones marked clearly for boaters, worked to minimize harassment, disturbance injury and mortality, and closely monitor the animal's habitat and population.



JOSEPH BRANDT/U.S. FISH AND WILDLIFE SERVICE VIA ASSOCIATED PRESS

California condors have been protected since 1967, but by 1982, only 23 were left worldwide. That number has now risen to 410.

California condor

They are among the largest flying birds in the world, speeding at up to 55 mph on air currents in a search for carrion such as deer. Thousands of years ago, they weren't just California condors. They existed as far away as Florida.

But like every other animal on this list, it couldn't overcome human expansion into America. "As people settled the West, they often shot, poisoned, captured and disturbed the condors, collected their eggs, and reduced their food supply of antelope, elk, and other large wild animals. Eventually, condors could no longer survive in most places," according to the California Department of Fish and Wildlife.

A few remaining condors were backed into the Southern California mountains by the turn of the last century. It's been illegal for anyone to kill a condor in California for 100 years. But the same chemical that nearly doomed eagles, DDT, was an invisible killer of condors. Compounding the problem, carrion killed by leadshot poisoned birds that fed on the carcasses. They've been protected by federal law since 1967 and state law since 1971.

By then, they were already too far gone. In 1982, only 23 were left worldwide. Five years later, they were rushed into a captive breeding program for intensive recovery. Without it, condors would probably no longer exist. In 1992, federal officials started releasing a few into the wild, and now there are 410 birds. Although the recovery program says there are "more California condors flying free in the wild" since the program's start, their survival is still an open question.



U.S. FISH AND WILDLIFE SERVICE VIA ASSOCIATED PRESS

Gray wolves were hunted, shot, trapped and poisoned throughout the lower 48 states until they were on the brink of extinction.

Gray wolf

The gray wolf, *Canis lupis*, has a public relations problem that's hard to overcome. In fables, it menaces Little Red Riding Hood and blows down the houses of pigs. In horror tales, a man unfortunate enough to be bitten by a werewolf transforms into one.

But wolves once roamed the whole of North America, the greatest distribution of any wild animal, and were an essential part of the ecology. They helped control populations of deer, elk and bison, ensuring that those animals roamed about rather than ruin areas by remaining too long, trampling the ground and demolishing trees that other animals relied on for habitat and safety.

As humans colonized the east and expanded to the west, ranchers came to despise wolf packs that killed cattle on instinct learned over thousands of years of hunting prey. They were hunted, shot, trapped and poisoned throughout the lower 48 states until they were on the brink of extinction.

Gray wolves were listed as endangered in 1978. Although some progress was made toward their recovery, they continue to be listed as endangered in 39 states and parts of another five because shooting and trapping still happen. A distinct north Rocky Mountain population was de-listed due to recovery six years ago.

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Additional Reading



PHOTO COURTESY OF CHUCK GRAHAM
VIA U.S. FISH AND WILDLIFE SERVICE

A pair of island foxes, which have made a quick comeback from the brink of extinction.

“These adorable foxes, once nearly extinct, have made a record-breaking comeback”

By Karin Brulliard, August 11, 2016

https://www.washingtonpost.com/news/animalia/wp/2016/08/11/these-adorable-foxes-once-nearly-extinct-have-made-a-record-breaking-comeback/?tid=a_inl&utm_term=.998291bf6905

“After court ruling, wolves could soon be shot on sight in Wyoming”

By Darryl Fears, March 3, 2017

https://www.washingtonpost.com/news/energy-environment/wp/2017/03/03/wolves-could-soon-be-shot-on-sight-in-wyoming-an-appeals-court-rules/?tid=a_inl&utm_term=.03a575defeed

“EPA environmental justice leader resigns, amid White House plans to dismantle program”

By Brady Dennis, March 9, 2017

https://www.washingtonpost.com/news/energy-environment/wp/2017/03/09/epas-environmental-justice-leader-steps-down-amid-white-house-plans-to-dismantle-program/?tid=a_inl&utm_term=.e47126cfd740



CHRIS CRUZ/ WILSON CENTER, ENVIRONMENTAL
CHANGE AND SECURITY PROGRAM

Mustafa Ali of the Environmental Protection Agency speaks on human rights and the environment during a Wilson Center event in Washington June 2016.



AP PHOTO/SUSAN MONTOYA BRYAN

A female Mexican gray wolf at the Sevilleta National Wildlife Refuge in central New Mexico.

Name _____ Date _____

Endangered Animals in a Flash

The Endangered Species Act (ESA), passed by Congress in 1973, continues to provide federal protections for animals and plants that are endangered. “Endangered” means they are in danger of becoming extinct. Without the help of the ESA, many species could have disappeared, including the Black-footed ferret, humpback whale, bald eagle, American alligator, grizzly bear, Florida manatee, California condor, and gray wolf.

Directions: Use Animal Planet’s Endangered Species website to gather information about an endangered animal. Then, make a flash card that has a picture of the animal on the front and key information about the animal on the back. Use the chart to help organize your information. (<http://www.animalplanet.com/wild-animals/endangered-species/>)

Common name of animal
Scientific name of animal (in Latin and italics)
Habitat
Food Sources
Man-made reasons for endangerment
Natural predators
Number remaining
How I may help

Common name and species group
Federal Listing Status
Date of Listing Status
Where found in U.S. (and other countries)
Habitat and/or environmental concerns

7. Science and Government Working Together. Within the animal profile of your selected animal (#6), select one of the Federal Register Documents to explore. What kind of information is provided for your animal? For example, could you answer these questions:
- a. How does an animal get on the endangered list?
 - b. How does the U.S. Fish & Wildlife Service amend the list of species that are at risk? Use the “Background” section to learn more about the scientific basis for these changes.
 - c. What organization was responsible for advocating for the animal to get on the list?

Summarize one piece of background information that you found of particular interest.

8. Compile a listing for your class’s guide to endangered species.
- a. Write the introduction to your endangered animal. In this summary, be sure to explain where your animal lives and why it is endangered.
 - b. Provide current status. How is your animal’s status addressed in government legislation?
 - c. Explain how your organization works to combat its extinction.
9. Brainstorm with whom you can share this guide.

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Using the Cards

We turned the text of Darryl Fears March 2017 article, “These creatures faced extinction. The Endangered Species Act saved them,” into cards. In addition, you may wish to use a previous Post NIE curriculum guide that has similar cards to use with students. However you choose to use the cards, we suggest you print them on heavy stock or laminate them for durability. For all activities, teachers should define “threatened,” “endangered” and “extinct” and other related terms: “acclimate,” “adaptive capacity” and “vulnerability.”

“These creatures faced extinction.”

The eight cards provide a brief update on endangered animals that live in different regions of the U.S. Students might be divided into eight groups, one animal per group. Prepare a presentation that includes geography and habitat, introduction to the animal and its current status. Teachers may have a U.S. map on which students could show where their animals live.

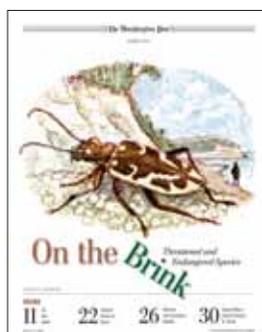
Endangered Animals in a Flash

This activity is meant for younger students. When students read the first paragraph, teachers could give students the eight cards to be read quietly or aloud by students. The *Animal Planet* website is very child friendly with photographs and easy-to-read text. “How I may help” might include school media articles, column or PSAs; talk at clubs, libraries or to parent groups; help with a neighbor’s pet and talk about endangered animals.

Introduce Endangered Animals

Depending on teachers’ goals for your students, you may choose for students to work individually or in pairs on this assignment. For the first chart, students may choose any animal or focus on animals native to your region.

- To complete the U.S. Fish and Wildlife Service chart, students will need to use the first chart on the worksheet and click on their specific animal on the U.S. Fish and Wildlife Service website.
- Not all animal listings will provide information for each section of the chart; students may have to use additional online resources to supplement the missing information.
- Teachers may also provide guidelines or a template for the listing (#8) in order to compile a uniform guide that may be distributed. The guide may be presented to younger students, science teachers, scout groups, libraries, parents and local animal advocacy groups.



On the Brink

This *Post* NIE curriculum guide from March 2009 has 17 cards that include plants and animals that were threatened or endangered. You will find on page 5 of that guide ideas for using the flash cards. In addition, you could ask students to find each plant and animal on the current list of threatened and endangered species to verify their current status.

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Trump's border wall could separate some other residents — the animals

BY DARRYL FEARS

• Originally Published January 29, 2017

The “big, beautiful wall” that President Trump vowed again this week to build along the Mexican border won't block just humans. Dozens of animal species that migrate freely across the international line in search of water, food and mates would be walled off.

A list of animals that dwell near the 1,300-mile expanse that the proposed wall would cover seems endless. In May, in a report called Trump Wall, *Outside* magazine, using information compiled by the U.S. Fish and Wildlife Service, pointed out more than 100 species between California and Texas that are listed as threatened and endangered under the Endangered Species Act, or are candidates for a spot on the list.

At a time when the Trump administration has restricted communications from the Environmental Protection Agency and other agencies, federal agencies may be reluctant to weigh in on any topic in a way that appears critical of the president's ambitions.

But outside the government, scientists, who've studied how 670 miles of walls and fences erected



BUFFALO ZOO VIA AP

An ocelot kitten at the Buffalo Zoo in January in New York. Ocelots are among many endangered animals that live where President Trump hopes to build a massive border wall along the Mexican border.

as part of the Secure Fence Act under former president George W. Bush in 2006 tell, stories of animals stopping in their tracks, staring at barriers they couldn't cross.

“At the border wall, people have found large mammals confounded and not knowing what to do,” said Jesse Lasky, an assistant professor of biology at Penn State University. Deer, mountain lions, jaguar and

ocelots are among the animals whose daily movement was disrupted, he said.

Trump's proposed wall, estimated to cost between \$15 billion and \$25 billion, would cover parts of the border that the Bush project, which was essentially abandoned because of its cost in 2009, does not.

Research on the impact of the current barrier fence is limited

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USFWS/EUROPEAN PRESSPHOTO AGENCY

A Mexican jaguar dubbed “The Boss” seen in Tucson.

because the 2006 act gave the Homeland Security secretary sweeping power to build quickly, without the need for environmental impact studies or other analysis that would show how the land would be disturbed and how flora and fauna could potentially be harmed.

While at the University of Texas, Lasky led a study on the impact of barriers published in the journal *Diversity and Distributions* in 2011. The study’s main conclusion was that the “new barriers would increase the

number of species at risk.”

A big concern, Lasky said in an interview Friday, was that over time the populations of threatened and endangered species would decline. A wall cutting off isolated populations from those on the other side of the wall would exacerbate the problem because they couldn’t mate, at least not in a sustainable way.

“There are concerns about small populations mating with each other and inbreeding, and getting genetic disorders from inbreeding,” Lasky

said. Their problems wouldn’t end there. “We didn’t talk about it much in the paper, but with climate change, if an animal or any organism is going to stay in the temperatures it prefers, it has to move to track those conditions. That’s going to be important for the persistence of a lot of species.”

A 2008 study mentioned the decline of carnivores, such as the grizzly bear and gray wolf, at the U.S.-Mexico border and renewed interest in protecting Neotropical cat species there. “In the U.S.A., there are no known breeding populations of jaguars and only two ... populations of ocelots,” according to the study by scientists at Pace University in New York and the Universidad Autónoma de Querétaro in Mexico.

The cats “are threatened by land development and land conversion, predator control by cattle growers, an increase in disease exposure, construction of highways, international bridges and immigration-control infrastructure,” meaning border walls. More walls would greatly magnify the threat, the researchers said.

Two recent studies have shed light on the often-overlooked effects walls have on wildlife.

① The fences can “curtail animals’ mobility, fragment populations and cause direct mortality,” according to an article published last month in *Review of European, Comparative and International Environmental Law*. Authors of another study, released earlier this year in the journal *PLoS Biology*, write that barriers “represent a major threat to wildlife.”

② The latter study focused on Slovenia, which has for about a year been fencing its border with Croatia in an attempt to block an influx of refugees that the government fears could morph into an outright “humanitarian catastrophe.” So far, 111 miles of barbed- and razor-wire fencing have been erected along about one-third of the frontier. A slew of mangled animal carcasses — especially deer — have been found in, on or around the “temporary technical obstacles.”