In an era of mass extinctions, six resilient species show that humans can make a difference for the better.

In 1966, the Louisiana legislature named the brown pelican the official state bird. It was an optimistic act: Pelicans had virtually disappeared from the state three years before.

During the 1950s, the population had plummeted. And then it was gone, with scientists only starting to figure out the cause: a pesticide called Endrin that washed into rivers and the ocean and, in some cases, was spilled directly into the Mississippi. Pelicans who ate Endrin-contaminated fish accumulated the poison in their bodies and died. (In Southern California, DDT caused pelicans to lay thin-shelled eggs that cracked when parents stood on nests to incubate them.)

By 2007, though, the species was back in Louisiana. The state reintroduced pelicans from Florida and, following a ban on Endrin, the birds multiplied to 24,000—more than Louisiana had in 1930. Tom Hess, a biologist program manager for the state, flew the last helicopter surveys that established the bird was no longer endangered. Today, even with hurricanes and oil spills, the population’s healthy, he says. “If you visit the coast, you’re likely to see a pelican—magnificent bird.”

With Southern California’s population also rebounding after a DDT ban, the species was removed from the endangered list in 2009. No one expects it to return.

Many scientists believe we are in the midst of a human-caused die out of species—the Sixth Great Extinction. But animals are also being saved. During the last half century, populations thought lost or forever diminished have recovered. The 1966 Endangered Species Preservation Act, the 1972 ban on DDT, the Marine Mammal Protection Act of that same year, and the 1973 Endangered Species Act (40 years old this December) protected animals and their habitats. HSUS staff and other advocates pushed for enforcement of the laws (see “Keeping Watch,” p. 20). Scientists, wildlife managers, conservationists, and volunteers did the work of bringing species back.

The black-footed ferret was deemed extinct several times before a population was found near Meeteetse, Wyo., in 1981,
hanging on in what was left of the prairie, with what remained of the prairie dogs. Four years later, this last known pocket of the species was struck by plague. So were the prairie dogs, who provide 90 percent of the ferrets’ diet. Researchers took 18 ferrets into captivity, carefully breeding them to avoid genetic defects and reintroducing them at scattered sites, including South Dakota’s Badlands National Park in 1994.

On a sweaty night in July of the following year, Travis Livieri, executive director of Prairie Wildlife Research, saw the first wild-born ferret documented in that state since the 1960s. He was watching the burrow of a female ferret with a spotlight. “We were looking for the eye shine. All of the sudden three heads poked out of the burrow. We saw multiple sets of eyes. … It was thrilling.”

By 2007 a population in South Dakota’s Conata Basin had reached 300—the largest ever recorded. In 2008, plague killed a third of the ferrets and most of their prey. Today, the struggling ferrets are helped by The HSUS and its partners in the Prairie Dog Coalition, which takes prairie dogs ranchers might otherwise poison or shoot and relocations them to the basin. Night after night, Livieri goes out to vaccinate the Conata ferrets and dust prairie dog burrows for the fleas that carry the disease.

“I know that black-footed ferret recovery can work,” he says. “I’ve seen it happen.”
MASTERS OF ADAPTATION

After development pushed American crocodiles off beaches and creek banks in southern Florida, their population shrank to a few hundred in 1975, when they were federally listed as endangered. Crocodiles adapted by nesting in human-created habitat: canals. Some were dug long ago to drain the Everglades. Others—168 miles of them—were excavated in the 1970s to cool water used in a nuclear power plant. Nesting on the narrow walls between, crocodiles multiplied to an estimated 2,000, says University of Florida professor Frank Mazzotti. The Endangered Species Act, which now lists them as threatened, keeps people from killing the returning crocodiles. Areas like Everglades National Park provide additional places to live. Now crocodiles are showing up in people’s backyards. That requires changes in human behavior—no more letting small dogs swim in canals—but previous generations learned to live with crocodiles, says Lindsey Hord of the Florida Fish and Wildlife Conservation Commission. “For people who have been down there a long time, it’s really not a surprise.”

A PLACE TO CALL HOME

To restore natural conditions, Everglades National Park stopped the ocean from entering old canals in the 1980s. As canal water became less and less salty, crocodiles nested there more and more.
TENACIOUS SURVIVORS

From the 18 Wyoming ferrets taken into captivity in 1985, as plague wiped out the species in the wild, a thousand ferrets now live at 15 sites across the prairie. Plague remains the greatest challenge, though. The disease is moving east, with fleas carried by wildlife. Shaun Grassel, tribal biologist for the Lower Brule Sioux in South Dakota, had success reintroducing ferrets in 2006 and 2007. Seventy settled in a small prairie dog colony and had spread to other places by 2011. Then plague reached Lower Brule. Nearly half the prairie dogs died and the ferret population fell to 27. Today, Grassel does what he can, dusting burrows (with funding from The HSUS), moving ferrets, and vaccinating whichever animals he can trap. For the vaccine to be effective, individual animals must get it twice. Prairie dogs can’t be practically injected—there are too many—so scientists are developing a vaccine-laced bait. Grassel’s helping test it, hoping it will be ready in five years, not knowing whether the Lower Brule ferrets can hold on that long. He knows enough ferrets at other sites will survive. “I’m optimistic for the long term—the future.”

REPOPULATING THE PRAIRIE

Captive-born black-footed ferrets were reintroduced to the wild over two decades at 20 carefully monitored sites scattered within the species’ historic range. They survive at all but five.

Source: Black-Footed Ferret Recovery Implementation Team
Even when species are listed as endangered, watched over by scientists, and protected by specially written laws, they still need help from advocates such as The HSUS. “We have to be vigilant,” says Nicole Paquette, vice president of wildlife protection.

Lead ammunition helped place the California condor on the endangered list. The majestic vultures ate the remains of animals killed by hunters, ingested lead pellets, and died in such numbers they disappeared from the wild. Saved by captive breeding, the species was reintroduced in California beginning in 1992, and the state later banned the use of lead ammunition within the bird’s known territory. But condors still die of lead poisoning. At press time, HSUS-backed legislation that would phase in the use of non-lead ammunition throughout California awaited the governor’s signature or veto. A statewide switch to nontoxic ammunition would benefit birds of prey besides the condor, further bolstering the bald eagle, whose numbers have rebounded since the ban on DDT.

Gray wolves repopulated parts of the United States because the Endangered Species Act protected them from widespread bounty hunting that had decimated their numbers. Now, even though populations remain tenuous, the government has delisted gray wolves in the Northern Rockies and western Great Lakes. Some states have already moved to allow recreational hunting and other widespread killing again; half of all wolves in the Northern Rockies were killed last year. In response, The HSUS and other animal advocacy groups have filed lawsuits to reinstate wolves’ protected status under the Endangered Species Act. In Michigan these organizations are working to put a measure to stop wolf hunting on the 2014 ballot.

Grizzly bears are also at risk of losing protection, having multiplied in and around Yellowstone National Park. With a mountain pine beetle infestation killing trees that provide one of the animals’ primary foods—pine nuts—The HSUS is asking the U.S. Fish and Wildlife Service to maintain their threatened status.

“The purpose of the Endangered Species Act is not just to recover species in numbers, but to make sure that their populations are healthy and sustainable over the long term,” says Ralph Henry, HSUS deputy director of animal protection litigation.

Polar bears were listed as threatened in 2008 because the sea ice they use to pursue prey is disappearing. Yet U.S. hunters keep trying to make it legal to import trophies from bears they shoot in Canada. Their latest attempt: two bills (H.R. 1818 and S. 847) that The HSUS is fighting. Earlier this year, a federal court rejected lawsuits brought by hunters to delist polar bears and allow imports of their heads and skins. The decision, a victory for The HSUS, was affirmed in June when an appeals court rejected the hunters’ argument.

Despite opposition, the Endangered Species Act works, says Henry. “Without this law, we wouldn’t have wolves, we wouldn’t have grizzly bears, and we wouldn’t have bald eagles, in the lower 48.”
Gray seals nearly vanished from New England waters during the decades when Maine and Massachusetts paid people to exterminate them and as many as 135,000 were killed (it was thought seals ate too many fish). After bounties ended in 1962 and the Marine Mammal Protection Act 10 years later stopped the killings and reduced accidental takes by fishing vessels, the species rebounded. Today, seals haul out and pup by the thousands on Monomoy and Muskeget islands off Cape Cod. “They’re wall to wall,” says Sarah Oktay of the University of Massachusetts. A one-day survey counted 15,000 off New England, says Gordon Waring of the federal Northeast Fisheries Science Center in Woods Hole, Mass. The return of seals is helping restore an ecosystem that includes their predators, great white sharks. Tourists and tour boat operators are happy. Sharon Young, HSUS marine issues field director, and others defend seals in public forums against fishermen who complain the animals steal their catch: New research shows seals eat mainly sand lances and other small species that are not commercially valuable. To find out more about seal diets and movements, Waring and other scientists are tagging animals who swim between the U.S. and Canada. Meanwhile, the population continues to grow and expand south, he says. “Gray seals have taken ownership.”
AIDED BY SAFER WATERS

Slowly, very slowly, the North Atlantic right whale population has quadrupled in size. That’s despite annual migrations that take them up and down the East Coast through polluted waters and busy shipping lanes and fishing grounds—between the whales’ calving area in the southeastern U.S. and where they feed off New England, straining plankton from the sea with their baleen (photo). There are still so few right whales that scientists at the New England Aquarium have a catalog with a picture of each one, and fairly precise counts: The latest federal estimate is 444. The HSUS’s Sharon Young used to study whales. Now she argues on their behalf, with the help of the Endangered Species Act, the Marine Mammal Protection Act, and a series of successful HSUS lawsuits. Reduced ship speeds and stronger fishing regulations mean fewer whales will be hit by vessels or entangled in nets and other gear. Young also serves on a take reduction team that successfully argued for sinking the ground lines between lobster and crab pots to the ocean floor so they don’t float up in arcs that can accidentally snare right whales. “This is not an academic issue for me—this is personal,” she says. “I’ve seen them entangled. I’ve watched them dying.”

100
Estimated number of North Atlantic right whales at the time hunting them was banned in 1935 (believed near extinct by the 1980s)

400-500
Number of whales now (at least 444 in 2009)
**EASTERN BLUEBIRD**

Saved by a Backyard Army

Human help is bringing the bird of good fortune a happy ending. In the 1800s, the eastern bluebird became a common sight as fields replaced forests across the United States. Open grass provided habitat where the bird could hunt insects. But the species suffered die-offs during severe winters and almost disappeared as invasive house sparrows and starlings, as well as more aggressive native birds like the house wren, claimed tree cavities for nests. When Anne Sturm, Maryland director of the North American Bluebird Society, saw her first bluebird around 1970, she had to look it up to identify the species. “I said, ‘Wow, that is beautiful—and it’s not a blue jay.’” In 1979, a *Parade* magazine article on efforts to restore the bluebird led 80,000 people to send in a quarter for information (Sturm helped remove coins taped to reply forms). The army of recruited admirers brought the birds back, putting up hundreds of thousands of specially constructed houses and checking nests along "bluebird trails" to make sure competitors and predators didn’t hurt or force out the friendly species. Today in many places bluebirds are once more common, though cold winters remain a threat. Sturm sees two families daily on her property. Ornithologist Chandler Robbins, who founded the North American Breeding Bird Survey in the 1960s, says the bluebird is a welcome exception to a general trend of declining species numbers. “It takes dedicated people.”

**COMMON AGAIN**

Eastern bluebird populations have climbed steadily since 1980, with dips during harsh winters. Thousands of volunteers have made all the difference. They build nest boxes with holes too small for invasive starlings, put those up in groups along trails, and watch over eggs and hatchlings (below), driving off competitors that can displace or kill bluebirds. They even try to see bluebirds through cold weather, supplying roosting boxes where birds can shelter and share body heat.

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**BLUEBIRD SURVEYS**

Source: U.S. Geological Survey
Patuxent Wildlife Research Center