



FORUM: ANIMALS IN MODERN U.S. HISTORY

# Canaries in a Coal Mine: Stories of Birds in American Environmental History

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The extinction of the passenger pigeon is one of the best-known cautionary tales in American environmental history. At one time, between three and five billion passenger pigeons blanketed the skies over central and eastern North America. Passenger pigeons were swift (they could fly as fast as sixty miles per hour) and gregarious (in the winter, thousands would roost together on a single tree, occasionally causing limbs to break beneath their weight). They survived primarily on the beechnuts, acorns, and chestnuts found in the mixed hardwood forests of the eastern United States. Between 1810 and 1867, Americans destroyed much of that habitat, clearing 200,000 square miles of woodlands (an area equal to the size of Illinois, Michigan, Ohio, and Wisconsin combined). The passenger pigeon was also tasty, which is why between about 1870 and 1900, market hunters reduced what remained of the population to only a few dozen. The last of the species, named Martha by its keepers, died in the Cincinnati Zoo in 1914. Even more than the North American bison, a few hundred of whom survived the hide hunters who slaughtered millions of them in the Great Plains in the late nineteenth century, the passenger pigeon's story exemplifies the wastefulness and shortsightedness of Americans' exploitation of animals in the early years of industrial capitalism.<sup>1</sup>

When we tell a story from American environmental history of the extinction or near-extinction of a species, we often follow it with another, related story, designed to ease our feelings of loss or regret, that narrates the efforts to preserve animals from extinction. Such stories reassure us that we have learned our lessons and will prevent such tragedies in the future. Just as the story of the passenger pigeon exemplifies Americans' proclivity for egregious waste, the history of the American conservation movement in the early twentieth century is replete with stories of saving birds from extinction. The story of the feather trade is one such narrative. In the last years of the nineteenth century, one of the greatest threats to bird life was plumage hunting—the killing of birds, notably egrets and herons but also the bright-pink roseate spoonbill, to provide feathers for women's hats. In 1900, the outcry against the hunting of birds for their feathers contributed to the passage of the Lacey Act, the first federal law regulating the interstate trafficking in the products of wildlife such as feathers. The story of the creation of the first national wildlife refuge in the United States is another such tale. In 1903, Theodore Roosevelt established Pelican Island in Florida to protect not only brown pelicans but also egrets, herons, and other native birds from hunters. The story of the protection of migrating

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<sup>1</sup>For the passenger pigeon, see Jennifer Price, *Flight Maps: Adventures with Nature in Modern America* (New York, 1999), 1–55. For deforestation, see Michael Williams, *Americans and their Forests: A Historical Geography* (New York, 1988), 111–189. For the bison, see Andrew C. Isenberg, *The Destruction of the Bison: An Environmental History, 1750–1920*, 2nd ed. (New York, 2020).



Figure 1. Whooping crane, Wisconsin, September 2003. Creator: Ryan Hagerty, United States Fish and Wildlife Service.

birds is yet another such narrative. In 1913, concerned about the danger hunters posed not only to ducks and other game birds but to other migrating birds such as sandhill cranes and whooping cranes, Congress passed the Migratory Bird Act, prohibiting the hunting of birds during their spring migrations (Figure 1). In 1916, the United States extended the protections for migrating birds by entering into a Migratory Bird Treaty with Canada, one of the first international agreements to protect wildlife.<sup>2</sup>

Despite the spate of bird protection laws in the early twentieth century, plumage hunting and habitat destruction continued apace. And thus, the protection of birds that figures so prominently in stories of conservation in the early twentieth century also figures in narratives of the environmental movement in the second half of the twentieth century. By the early 1940s, ornithologists were striving to save whooping cranes, roseate spoonbills, and bald eagles from extinction caused not only by plumage hunters but by a new threat: the use of chemical pesticides. Rachel Carson, in *Silent Spring*, her 1962 screed against pesticides, imagined a dystopian future without birdsong. She detailed how the spraying of the insecticide dichlorodiphenyl-trichloroethane (DDT) killed not only beetle flies that spread Dutch elm disease but also robins: when leaves from the sprayed elm trees fell to the ground, DDT passed to the soil, and then to the bodies of earthworms, and then to robins; roughly 90 percent of robins who inhabited sprayed areas perished. As Peter Matthiesen warned in *Wildlife in America*, first published in 1959, despite the passage in 1940 of the Bald Eagle Protection Act, one of the first laws designed to protect a specific wildlife species, the increasing use of DDT, sprayed with alacrity everywhere from fruit farms to city parks, devastated bald eagle populations. DDT washed into rivers and lakes, accumulating in the bodies of the fish on which bald eagles prey. Eagles that ingested DDT through contaminated fish produced eggs with shells so thin that they

<sup>2</sup>Evan B. Jaynes, "A Movement for the Birds: Pelican Island and the Origins of the First American Wildlife Refuge," *Florida Historical Quarterly*, 99 (Summer/Winter 2020), 53–77; Price, *Flight Maps*, 57–62; Kurkpatrick Dorsey, *The Dawn of Conservation Diplomacy: U.S.-Canadian Wildlife Protection Treaties in the Progressive Era* (Seattle, 1998), 165–237, 241.

often broke before the young birds could hatch. By 1963, the bald eagle population had fallen to fewer than 1,000.<sup>3</sup>

In the early 1970s, the federal government responded by enacting more effective protections for endangered avifauna. The Environmental Protection Agency's ban on DDT in 1972 helped to stave off the extinction of the bald eagle (its population is now over 300,000). The culmination of the environmental movement's wildlife protection laws came in 1973 with the passage of the Endangered Species Act. The law, like other environmental protection laws enacted in the early 1970s, had bipartisan support and sailed through Congress, passing the House by a vote of 390-12 and the Senate by a vote of 92-0. The Endangered Species Act was far stronger than any previous law protecting birds or other wildlife: its scope went beyond a handful of iconic species such as the bald eagle; it contained provisions for the protection not just of endangered species but for their habitat; and it provided for the reintroduction and restoration of endangered species.<sup>4</sup>

In narratives of the environmental movement, the Endangered Species Act is a bright point: after three-quarters of a century of insufficient, patchwork measures, federal regulators had, seemingly, finally gotten it right, and enacted legislation that would effectively protect American birds and other wildlife. And yet, while the Endangered Species Act in aiming to do more than just protect a single iconic species from extinction was a notable improvement over a law such as the Bald Eagle Protection Act, it nevertheless resembled that law in measuring its successes by whether individual species on its endangered list were extant—even if a species remained in very small numbers. For instance, the California condor, the largest land bird in North America, is in many ways an Endangered Species Act success story. The bird, a vulture that subsists on carrion, once ranged from the Pacific coast to the Gulf of Mexico. By 1987, owing to habitat destruction, lead poisoning (from hunters' lead-based ammunition left behind in the carcasses that the California condor ate), and the lingering effects of DDT on eggshells, the number of California condors had fallen to 27. Conservationists captured the remaining animals, bred them in zoos in Los Angeles and San Diego, and in the early 1990s reintroduced them to southern California and Grand Canyon National Park in Arizona. Thirty years after reintroduction, the population of California condors had risen to over five hundred. Like the whooping crane, roseate spoonbill, and bald eagle, the California condor has been spared from annihilation. It is a story very much like that of the passenger pigeon—but with a happier ending.<sup>5</sup>

Despite well-reported success stories such as those of the bald eagle and the California condor, the overall story of bird populations in the United States in the last fifty years is one of decline. Since 1970, the population of birds in North America has fallen by almost three billion—a 29 percent loss. The prime culprits are the same features of industrial capitalism that did in the passenger pigeon—habitat loss and unregulated hunting—plus a new feature, climate change. The largest losses are among common, everyday birds: sparrows, warblers, blackbirds, and finches. Population losses are not limited to these species, however. According to the Cornell Lab of Ornithology, ninety bird species have lost at least half of their population since 1970.<sup>6</sup>

<sup>3</sup>Rachel Carson, *Silent Spring* (Boston, 1962), 103–108; Peter Matthiessen, *Wildlife in America* (1959; New York, 1987), 253–266; Kathleen Kaska, *The Man Who Saved the Whooping Crane: The Robert Porter Allen Story* (Gainesville, 2012).

<sup>4</sup>Thomas R. Dunlap, *DDT: Scientists, Citizens, and Public Policy* (Princeton, 1981), 96; Dunlap, *Saving America's Wildlife* (Princeton, 1988), 112–172; James Morton Turner and Andrew C. Isenberg, *The Republican Reversal: Conservatives and the Environment from Nixon to Trump* (Cambridge, MA, 2018), 81–83, 100.

<sup>5</sup>Peter S. Alagona, *After the Grizzly: Endangered Species and the Politics of Place in California* (Berkeley, 2013), 122–148.

<sup>6</sup>Kenneth V. Rosenberg, et al., “Decline of the North American Avifauna,” *Science*, 366 (Sept. 19, 2019), 120–124; U.S. Committee of the North American Bird Conservation Initiative, “State of the Birds 2022.” <https://www.stateofthebirds.org/2022/> (accessed Sept. 30, 2024).



**Figure 2.** Northern spotted owl, Oregon, April 2008. Creators: John and Karen Hollingsworth, United States Fish and Wildlife Service.

The firewall of the Endangered Species Act has thus far prevented these species from going extinct, but not from declining. For instance, the listing in 1990 of the Northern spotted owl as a threatened species—over the fierce resistance of the timber industry in the Pacific Northwest—has slowed but not stopped the decline of the spotted owl population (Figure 2). Even Fish and Wildlife Service game wardens’ “lethal removal” of the barred owl, a species native to eastern North America that has invaded the Pacific Northwest, has not stopped the decline. Other species—the Canada goose, for instance—have managed to increase in population in the last fifty years, owing to their ability to adapt to suburban areas and city parks. Yet, climate change has radically altered the migration patterns of the Canada goose. Through the 1980s, the small town of Sumner, Missouri, touted itself as the “Wild Goose Capital of the World” because some 200,000 geese wintered at the nearby Swan Lake National Wildlife Refuge. The wintering geese supported the town’s lucrative geese-hunting tourist economy. Owing to climate change, however, Canada geese now winter farther north, in Minnesota, the Dakotas, and southern Canada. In the winter of 1995, there were only 34,000 Canada geese in Sumner. In 2013, there

were about 1,400. Environments, as invasive species and climate change attest, are dynamic systems that can defy our attempts to legislate the protection of species.<sup>7</sup>

The construction of a narrative is an exercise of power. A narrator has considerable power to shape a story—eliding some events, highlighting others, and steering the tale toward a preferred ending. Yet narrators also reflect the cultures in which they are embedded, often in ways they do not recognize. Our stories of the extinction or salvation of birds, like all historical narratives, are inescapably part of the culture of capitalism. Oftentimes this is quite conscious and deliberate, as when such narratives draw attention to the effects of capitalism on the environment, or to the effort to protect the environment from capitalist exploitation. Sometimes it is unrecognized, as when we persist in telling stories of birds saved from extinction while bird populations plummet because of the environmental costs of our capitalist economy. In 2024, the United States Department of the Interior marked the fiftieth anniversary of the Endangered Species Act as “50 Years of Success in Wildlife Conservation.” The department pointed to the bald eagle as a notable instance of an “Iconic Species Mak[ing] a Remarkable Comeback.”<sup>8</sup> We continue to tell stories of extinction, of course, but we relegate them to the musty past, to the era of the passenger pigeon (and other species such as the Carolina parakeet, the last of whom, a captive named Incas, died in the Cincinnati Zoo in 1918, in the same cage that Martha, the last passenger pigeon, had inhabited). According to the stories we tell, in this bygone, benighted age, Americans were less sensible than we are to the deleterious environmental effects of their behavior. Now we are different, we tell ourselves, because we have saved iconic species such as the bald eagle, California condor, and whooping crane from extinction. We know we are different because we enjoy the aesthetic pleasure of seeing one of the few remaining California condors or bald eagles. We know we are different because we feel the moral satisfaction of knowing that our society actively prevented the extinction of certain species.<sup>9</sup>

There are sound reasons to keep telling stories of birds saved from extinction, for the same reason that we tell stories of successful environmental reforms, and of environmental regulations that that produced positive results. Without them, students of environmental history are liable to believe that there are no solutions to the many environmental problems we face. Surely this is what the authors of two books for young readers, *Saving Birds: Heroes Around the World* and *Saving the Spotted Owl: Zalea’s Story*, were thinking.<sup>10</sup> Numerous environmental historians have also rationalized narrating stories of species saved from extinction (or other narratives of successful environmental reform) by casting their stories as blueprints for future action. These rationalizations are not wrong. Yet there are less sound reasons to tell such stories, too. Few environmental historians have escaped the pressure—usually coming from outside the field—to avoid “declensionist” stories. Given the waves of extinctions and animal population declines in recent decades owing to the environmental consequences of industrial capitalism, Marxist scholars would not hesitate to label that pressure, and the narratives that result from

<sup>7</sup><https://www.fws.gov/press-release/2024-08/strategy-manage-invasive-barred-owls-protect-imperiled-spotted-owls> (accessed Nov. 28, 2024); Braden T. Leap, *Gone Goose: The Remaking of an American Town in the Age of Climate Change* (Philadelphia, 2019), 3–4.

<sup>8</sup><https://www.doi.gov/blog/endangered-species-act-celebrating-50-years-success-wildlife-conservation> Accessed November 27, 2024.

<sup>9</sup>William Cronon, “A Place for Stories: Nature, History, and Narrative,” *Journal of American History*, 78 (March 1992), 1347–1376; Andrew C. Isenberg, “The Moral Ecology of Wildlife,” in *Representing Animals*, ed. Nigel Rothfels (Bloomington, 2002), 48–64.

<sup>10</sup>Pete Salmansohn and Stephen W. Kress, *Saving Birds: Heroes Around the World* (Ann Arbor, MI: Tilbury House, 2006); Nicola Jones, *Saving the Spotted Owl: Zalea’s Story* (Toronto, 2023). See also Oliver H. Orr, Jr., *Saving American Birds: T. Gilbert Pearson and the Founding of the Audubon Movement* (Gainesville, 1992); Kaska, *The Man Who Saved the Whooping Crane*.

succumbing to it, as “false consciousness.” Scholars are not wrong to push back against the pressure to steer environmental narratives toward happy endings.<sup>11</sup> When it comes to birds in modern America, both we and the critics who fear “declensionism” would do well to remember that our present environmental context is one in which birds are disappearing at unprecedentedly rapid rates.

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<sup>11</sup>Sverker Sörlin, “The Contemporaneity of Environmental History: Negotiating Scholarship, Useful History, and the New Human Condition,” *Journal of Contemporary History*, 46 (July 2011), 610–630; Ron Eyerman, “False Consciousness and Ideology in Marxist Theory,” *Acta Sociologica*, 24 (1981), 43–56.