

# A BRIEF HISTORY OF Wildlife Conservation IN THE UNITED STATES

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... WE MUST BECOME  
ACTIVISTS IN THE SENSE  
OF EDUCATING POLITICAL  
DECISION MAKERS,  
SO THAT SCIENCE  
BECOMES THE BASIS  
OF CONSERVATION  
POLICY.



When Teddy Roosevelt became President of the United States in 1901, a new era of wildlife conservation began. Roosevelt was an avid hunter and outdoorsman, with a good sense of history. He opposed market hunting and was concerned that America would lose some of its major games species as well as our unique scenic

areas. Roosevelt was advised by Boone and Crockett Club members Gifford Pinchot and George Bird Grinnell, and to some extent by John Muir. Roosevelt formed the Bureau of Biological Survey to survey the nation's biota. This started as a research agency, but later developed into a management and regulatory agency—the U.S. Fish and Wildlife Service.

Roosevelt also supported the Reclamation Act of 1902, which recognized the authority of the federal government over the rights of states in national natural resources issues, such as water projects. He also believed in protecting as much land as possible for public use. In 1903, Pelican Island, Florida, became the first unit of the National Wildlife Refuge System, which now encompasses more than 40 million acres. In all, Roosevelt set aside 148 million acres during his presidency, or more than 50,000 acres for each day he was in office, including 16 national monuments, 51 wildlife refuges, and five national parks.

### The State Efforts

Although Roosevelt backed the need for the federal government to protect national resources, control of game populations was still the responsibility of the states. By 1910 every state had some sort of commission for the protection of wild game and fisheries. But funding for those state commissions was still a problem. In 1913 Pennsylvania became the first state to issue a hunting license. When more than \$300,000 came into the state's treasury the next year, many other states followed suit.



**In 1903, Pelican Island, Florida, became the first unit of the National Wildlife Refuge System. Above, first warden Paul Koregel, circa 1907, was the only law that stood between the diminishing pelican rookery and poachers.**

These funds paid for wildlife restoration efforts, enforcement of game laws, and predator control. Despite substantial evidence to the contrary, hunters still believed that predators limited game abundance. Many states used license fees to pay bounties for wolves, cougars, foxes, coyotes, bobcats, hawks, owls, and even eagles.

### **Gamebird Market Hunting Curtailed**

It was not until 1913 that Congress finally addressed the problem of market hunting of waterfowl. The Weeks-McLean Migratory Bird Act again asserted the federal government's power over state's rights, in this case to set hunting seasons and limits on migratory birds. Three years later the United States signed a Treaty with Great Britain for the Protection of Migratory Birds in the United States and Canada. This landmark legislation was the first between two countries to protect wildlife. Debates continued in the state houses and at the national level over the concepts of preservation versus conservation.

Dr. William T. Hornaday, superintendent of the National Zoo, published *Our Vanishing Wildlife* in 1913 and led his followers to oppose hunting. He actively opposed the Migratory Bird Act, as well as federal funding of waterfowl restoration through hunting fees. New organizations like the Izaak Walton League, Forests and Wild Life, and American Wild Fowlers (later to become Ducks Unlimited) were created by hunters and conservationists to expand on the efforts of the Boone and Crockett Club





to support hunting laws and wildlife restoration.

### **A Broader View In Schools**

Wildlife science in universities began to move beyond taxonomy. The university scientists had a close

relationship with the Biological Survey, and together they developed better methods of counting wildlife and studying food habits, cover requirements, and disease issues on the national parks and refuges. As ecology developed as a discipline, the concepts of plant succession, niche, community scales, trophic levels, and food chains were developed and debated. The American Society of Mammalogy and the Ecological Society of America were formed to publish scientific research.

### **National Parks Expansion**

Preservation of public land continued, with the formation of new national parks at Glacier (1910), Lassen (1916), Denali (1917), and the Grand Canyon (1919). The National Park Service (NPS) was formed in 1916 to manage these lands and their wildlife. The NPS was eager to sustain wildlife in their parks for visitors to see. They too hired biologists to study the natural resources they managed. Efforts by the NPS were instrumental in saving the trumpeter swans, grizzly bears, bighorn sheep, and wild burros.

### **Depression-Era Problems**

The Stock Market Crash of 1929 and the Dust Bowl era of the early 1930s were disastrous for American wildlife. Federal conservation funding had to be cut at the same time waterfowl and gamebird habitat was disappearing into the dust bowl of the Midwest. Finally, in 1934 Congress, recog-

**The Civilian Conservation Corps produced lasting change on America's national wildlife refuges. By 1942, 53 national wildlife refuges had hosted CCC camps, where young men erected fire towers, stabilized stream banks, planted seedling trees, moved millions of cubic yards of dirt for levees and jetties, and restocked fish. B&C member and director of the Biological Survey, Ira Gabrielson concluded about the CCC in 1943, "at first the event did not seem of great interest to wildlife conservationists, but it was another of those happenings which none considered epochal at the time, but which later have brought about startling results.**



# Wildlife Conservation

## IN THE UNITED STATES

nizing the lack of funding for wildlife passed the Migratory Bird Hunting Stamp Act, better known as the “Duck Stamp Act.” Since waterfowl are migratory across state boundaries, their seasons and bag limits are set by the federal government, and these stamp funds have now protected more than 4.5 million acres of waterfowl habitat.

During the Depression the Civilian Conservation Corps employed thousands of out-of-work factory workers and farmers. They helped to save thousands of acres of waterfowl breeding grounds. They constructed dozens of national parks, restored streams, and planted millions of trees. The Dust Bowl led to the establishment of the Soil Conservation Service (now called the Natural Resources Conservation Service). These improvements had a powerful positive effect on wildlife in North America—including the restoration of deer to the Northeast and waterfowl to the Midwest.

### “Ding” Darling’s Tenure

President Franklin Roosevelt hired political opponent and Boone and Crockett Club member Jay “Ding” Darling, a political cartoonist critical of the New Deal wildlife programs, to head the Bureau of Biological Survey. Darling was a visionary who saw the need to develop wildlife research programs and to enhance educational programs to produce more and better wildlife managers and biologists. In 1934 he urged Congress to establish the Cooperative Wildlife Research Program. There are now 40 such two- to four-scientist units in the country.

Housed at universities, they provide research on practical wildlife problems, teach university courses, and have trained thousands of wildlife and fisheries biologists.

Darling also helped start The Wildlife Management Institute, a private organization that lobbies for conservation laws and conducts professional reviews of university wildlife programs and state wildlife agencies. It also convenes the annual North American Wildlife and Natural Resources Conference. The first meeting, held in 1935, produced more scientific information on wildlife in its Proceedings than had ever before been accumulated in one volume in North America. Darling’s vision also led to the North American Wildlife

Federation, which later became the National Wildlife Federation, a private organization which now counts more than 2.5 million members, and the North American Wildlife Institute, which later became the North American Wildlife Foundation, a private granting agency of the federal government.

### Leopold’s Contribution

Despite the economic downturn of the Depression, the 1930s saw the beginning of wildlife management research in the United States. The leader of this effort was Boone and Crockett Club member Aldo Leopold. Although trained as a forester at Yale, he became “the father of wildlife management” in the United States. He conducted the first intensive analysis of wildlife popu-

by Leopold developed a Model [State] Game Law, recommending that states set up wildlife commissions of volunteers, which were to be appointed by governors for staggered terms. That eliminated the problem of turnover of state wildlife agency personnel caused by new governors firing supervisors after each election.

### P-R Funding Starts

In 1937 scientists teamed with conservation groups to lobby Congress to pass the Pittman-Robertson Federal Aid in Wildlife Restoration Act (P-R Act). This act utilizes

an 11-percent “excise” tax on all hunting firearms and ammunition. The funds are collected by the federal government and distributed to the states based on the number of hunting licenses they sell, their human populations and their land area. The funds are used for wildlife restoration projects, research, and education. This is still one of the major sources of funding for wildlife conservation in the United States—and, of course, these funds come directly from hunters.

### Government Reorganization

The Wildlife Society, an organization of professional wildlife biologists, was formed in 1936. The

American Fisheries Society and Society for Range Management also represented professionals and published scientific journals. Just before World War II the Bureau of Fisheries in the Department of Commerce and the Biological Survey of the Department of Agriculture were merged into the U.S. Fish and Wildlife Service under the Secretary of the Interior. This merger, and its new home, was significant, as governmental leaders recognized that fish and wildlife were more than just crops to be grown and harvested. Predator control was left in the Department of Agriculture, eventually in a unit called Wildlife Services.

As with the Civil War and World War I, conservation efforts took a backseat

THE ADMINISTRATION OF  
PRESIDENT RICHARD M. NIXON  
WAS ONE OF THE MOST  
ENVIRONMENTALLY  
PROGRESSIVE OF ALL  
AMERICAN PRESIDENCIES.  
IN ADDITION TO THE ESA, NIXON  
SIGNED THE MARINE MAMMAL  
PROTECTION ACT, THE NATIONAL  
ENVIRONMENTAL POLICY ACT, THE  
CLEAN AIR ACT, AND THE CLEAN  
WATER ACT, AND HE ESTABLISHED  
THE ENVIRONMENTAL  
PROTECTION AGENCY.

lations in the Midwest. In 1933 he became the first professor of game management at the University of Wisconsin and published *Game Management*, the first textbook of its kind in the U.S.

Leopold was well known for his many essays on “the land ethic,” and he developed a set of wildlife management principles, which included the concepts that every species has a defined set of habitat requirements that sets it apart from all other species, that all animal and plant biota are interconnected, and that the habitat has a seasonal “carrying capacity,” which should not be exceeded. He said the tools of wildlife management were “the ax, the plow, the cow, fire and the gun.” In 1930 a committee headed

during World War II. After the war, however, hunting license sales grew from 7 million per year before the war to 12 million by 1947. States benefited from the influx of hunting license fees and the P-R funds they generated, as did federal agencies from the sale of duck stamps. Large restocking efforts resulted for deer, pronghorn, elk, mountain goats and sheep, bears, beavers, and turkeys. By then most land-grant universities had wildlife departments, and the G.I. Bill allowed returning service men and women to pursue wildlife biology as a profession.

In 1948 Aldo Leopold died, and his final essays were published in a book titled, *A Sand County Almanac*. This became a “must read” for Americans interested in conservation for generations to come.

### The 1950s Sees Downturn, and a Response

During the 1950s funding for conservation took another downturn as the federal government, concerned about military threats in Europe, redirected money toward increasing the size and power of America’s military. Concern over funding for restoration of freshwater fisheries led to the Dingell-Johnson Federal Aid in Fisheries Restoration Act (D-J Act).

The act is funded by an excise tax on fishing equipment and boats, and it functions much as the P-R act does for wildlife. During the ‘50s Americans flocked by the millions to national parks, wildlife refuges, seashores, and forests, thus establishing recreation as an integral component of the natural resource value of our public lands.

In response to the decrease in federal land acquisition, The Nature Conservancy was formed in 1951 to preserve lands the government could not afford. Bird watching became a popular pastime with the publication of Roger Tory Peterson’s *A Field Guide to Birds*. Disney Studios had a huge impact on the public’s attitude towards nature and wildlife, with the feature film *Bambi* and television documentaries, such as *The Living Desert*. Wildlife viewing began to attract a public well beyond those primarily interested in hunting.

### Silent Spring and the 1960s

This new prosperity and growth brought

with it more commercial development of land for housing and agriculture, concentrated farming and livestock operations, and a loss of wildlife habitat. Farming efficiency was helped not only by mechanization, but by liberal use of pesticides and herbicides.

In 1962, a former USFWS editor, Rachel Carson, published her book *Silent Spring*, documenting the impact of these chemicals on the environment, especially

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on wildlife. This resonated with the public, and no book before or after has had as great an effect on arousing the American public’s awareness of environmental concerns. It set the stage for the environmental movement for the next three decades.

President John F. Kennedy made the environment part of his political platform, and he established the Land and Water Conservation Fund to acquire land for scenic, recreational and public values. In 1964 President Lyndon B. Johnson passed the Wilderness Act, which incorporated areas of 5,000 or more roadless acres into Wilderness Areas and removed them from the National Forest inventory. Next, Johnson signed the Wild and Scenic Rivers Act, setting aside seven major rivers for recreational and conservation purposes.

### ESA’s Debut

Concerns over pesticide toxicity eventually led to public concern over predator control techniques. Under the Nixon Administration, an Executive Order prohibited the use of chemical poisons on all public lands. In response to public outcry over the potential loss of our national bird, the bald eagle, and other species, Congress in 1969 passed the Endangered Species Conservation Act, but it had little in the way of enforcement power or funding.

Congress followed with a tougher

Endangered Species Act (ESA) in 1973. It defined and divided species and subspecies into threatened versus endangered. It eliminated all commercial traffic in live, dead, parts or products from endangered species, and it funded research on why species were becoming threatened and how to recover them. The act defined “critical habitat,” included harassing wildlife to be a “taking,” set substantial fines, and required teams of scientists and managers to develop recovery plans for each endangered species. The ESA is often touted as the most significant conservation legislation ever enacted in the United States, although it is still controversial in its applications.

### Nixon’s Contribution

Surprisingly to many, the administration of President Richard M. Nixon was one of the most environmentally progressive of all American presidencies. In addition to the ESA, Nixon signed the Marine Mammal Protection Act, the National Environmental Policy Act (NEPA), the Clean Air Act, and the Clean Water Act, and he established the Environmental Protection Agency.

These acts, taken together, had a monumental impact on guiding what could and could not be done with America’s natural resources, and clearly established the environment as an issue of national importance. In 1969, the United States signed an international treaty, the Convention on International Trade in Endangered Flora and Fauna Species Act (CITES), making it illegal to import or export items made from endangered species.

### A Wildlife Professional Boom—and Contraction

The 1970s saw an expansion of enrollment in natural resource programs at universities, and an explosion of hiring in state and federal wildlife agencies. Now, 30 years later, those universities and agencies are facing retirements of literally thousands of wildlife managers, biologists, and scientists. In 1980, the Alaska National Interest Lands Conservation Act expanded the National Wildlife Refuge System by 53 million acres, but funding for federal agencies and university wildlife research continued to lag.

Nonetheless, conservation groups found a new source of revenue for preserving and restoring wildlife habitat. The federal Farm Bill establishes the authority and funding for the Department of Agriculture and its many crop subsidy

and price support programs. It is renewed every five years. During the '80s and '90s conservation became more prominent each time the bill was renewed. Programs such as the Conservation Reserve Program (CRP), the Wetlands Reserve Program (WRP), the Wildlife Habitat Incentive Program (WHIP), the Grasslands Reserve Program (GRP) and the Environmental Quality Incentive Program (EQIP), all managed by the Natural Resources Conservation Service, provided private land owners with payments to take land out of production or to make conservation improvements.

### Biological Resources Division

During the Clinton Administration, Secretary of the Interior Bruce Babbitt felt that there was too much duplication among the scientific research projects by the many agencies of that department, so he reassigned all Interior scientists to a new organization that became the Biological Resources Division of the U.S. Geological Survey. Subsequently the Departments of Interior, Agriculture, Commerce, and Defense formed a coalition with university researchers to conduct the additional needed research, as well as additional educational and outreach programs. The organization, known as the Cooperative Ecosystem Studies Units, now contains 270 universities organized into 17 regions.

### Funding Challenges Continue

But as we entered the 21st Century, state and federal funding for non-game species management was still inadequate. A concerted effort to correct this was developed and supported by more than 3,000 conservation organizations, including the Boone and Crockett Club. Termed the Conservation and Reinvestment Act (CARA), it would have used an excise tax on non-hunting/fishing outdoor recreational items, like canoes, binoculars, and birdseed to provide \$350 million a year to the states in much the same manner as the P-R and D-J acts. A few equipment manufacturers supported this, but many others strenuously opposed it. A compromise was reached in 2001 with "CARA-lite," now called the State Wildlife Grants Program, which diverted \$50 million a year from the USFWS budget to the states. Importantly, it required each state to develop a comprehensive state wildlife conservation plan. Those were completed in 2005.

### North American Model Works

The North American Model of Wildlife Conservation, based on the Public Trust Doctrine of public ownership of wildlife, has had a checkered history, but in general it has

served us well in the United States. Wildlife conservation is still a political issue, with multiple stakeholders. Conservation issues, such as drilling for oil in the Alaska National Wildlife Refuge, control of urban deer, or shooting wolves have become highly emotional in our society. As our population becomes more urbanized and children spend less time outdoors, the public, though supportive of conservation, becomes less knowledgeable and less able to make informed decisions.

Accordingly, it is critical that we hunters and conservation group members

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provide public and private educational programs to inform our citizens about the choices before us. Furthermore, we must become activists in the sense of educating political decision makers, so that science becomes the basis of conservation policy. If we do not, then the democracy of conservation will be in peril, as will the very plants, birds, and animals that we enjoy. ■

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