At the Forefront of Conservation:
America’s Historic Role in Conservation Management and Science
Mark Madison, U.S. Fish and Wildlife Service Historian

Early game agents with illegal guns and extinct wildlife.
Wilderness Vision

Albert Bierstadt, “Mt. Corcoran” (1887)
Wildlife Vision

Beavers toiling at Niagara, (1715).
George Perkins Marsh  
(1801-1882)  

America’s first conservationist.
Man is everywhere a disturbing agent. Wherever he plants his foot, the harmonies of nature are turned to discords.
North Africa from Breadbasket to Wasteland

Roman ruins in the deserts of Tunisia.
Fish Came First
U.S. Commission on Fish and Fisheries (est. 1871)

Woods Hole Marine Biological Laboratory (est. 1885)
Spencer Fullerton Baird

- Fish Commission estd. 1871
- Spencer Baird commissioner (1871-1887)
- Science, stocking, information dissemination
National Fish Hatchery System

- First Hatchery 1872, Baird Station
- Food fishes propagation, acclimatization, and study
- Interstate transport
Science for Fisheries

- Woods Hole
- Research vessels
- Mentoring and field stations
- Commission Reports
Fish Cars

- Fish Car Era
  1881-1947
- Innovative technology
Bureau of Biological Survey

Death Valley Expedition in 1891
Early Ecology

C. Hart Merriam’s Life Zones 1889
Passenger Pigeons

1867 passenger pigeon hunt.

“Martha” RIP 1914
Bison

John Stanley, “Buffalo Hunt” (1845)
Buffalo Wars

Buffalo skulls in 1870s to be ground into fertilizer.
Game Hogs and Market Hunts
Feathered Fashion
Audubon Society (1886)
Boone & Crockett Club (1887)

Future President Theodore Roosevelt.
Lacey Act (1900)

Early Lacey Wildlife Agent with Chesapeake Bay poached swans.
John Perry and “Dopey”

Clean-cut Perry in uniform.

“Dopey” a hobo on Chicago waterfront.
Gifford Pinchot

President Roosevelt and Chief of Forestry Pinchot in 1907.
Early Forest Destruction

Unsustainable forestry practices.
U.S. Forest Service

New Forest Service uniforms in 1907.
The Preservation Idea

Meadow at Yosemite.
John Muir with Sierra Club in Yosemite Hetch Hetchy Valley (1909).
Roosevelt and Muir

Roosevelt and Muir in Yosemite (1906).
Hetchy Hetchy Before Dam
Hetchy Hetchy After Dam
The National Park Service (1916)

Stephen Mather at NPS Superintendent’s Conference (1925).
The Wilderness Idea

Arctic National Wildlife Refuge.
Theodore Roosevelt on second refuge created, Breton Island, LA (1904).
Refuge

Theodore Roosevelt on second refuge created, Breton Island, LA (1904).

TR [in Louisiana], 1915 [4]

June 1915
Producer unknown
Pelican Island, FL (estd. 1903)

1903 hand-painted glass slide of Pelican Island refuge and happy pelicans.
Florida Egret Trade
A Man, an Island, and a Big Gun

Paul Kroegel petting a pelican, 1903.
The North American Model for Wildlife Management

1. Wildlife belongs to the American people.
2. Market and commercial hunting is banned.
The North American Model for Wildlife Management

3. Allocation of wildlife by law.
The North American Model for Wildlife Management

4. Equal opportunity to hunt and fish.
The North American Model for Wildlife Management

5. Wildlife to be hunted for food and sustenance.
The North American Model for Wildlife Management

6. Wildlife managed as an international resource.
7. Science is the cornerstone of wildlife management.
Economic and Ecological Disaster

Dust storm in Great Plains (1935).
Climate Change
“Duck” Bowl

Ding Darling cartoon of duck disaster.
Bucks for Ducks

Darling letter to FDR (1935).
Bucks for Ducks

Darling sketch of a New Deal for ducks.
Flyways

Central Flyway first major wildlife corridor.
Wildlife Refuges Today
Refuges from 1903-2003

National Wildlife Refuge System
Creating a new conservation constituency.
Civilian Conservation Corps

1939 CCC boys at work.
Wildlife Coop Units (1935)

Art Hawkins and Aldo Leopold in front of Wisconsin Coop Offices.
Wildlife Coop Units (1935)

- Conduct research basic to the management of fishery and wildlife resources.
- Educate fishery and wildlife biologists at the graduate level.
- Provide technical assistance to conservation agencies and groups.
Pittman-Robertson Act (1937)

State Game Warden with hunters in 1938.
Aldo Leopold

26 TAKING A BREAK
ALDO LEOPOLD IN APACHE NATIONAL FOREST IN 1910 WITH FLIP, FOREST SUPERVISOR JOHN GUTHRIE'S DOG.
From Game Management

Leopold bow hunting.
To Wildlife Management

Leopold the wildlife scientist.
Ethics

The Evolution of Ethics
Leopold and Murie at Wilderness Society
Rachel Carson

Five-year old Rachel Carson reading to dog.
Rachel Carson

Rachel Carson in Florida Keys, 1952.
Rachel Carson: Nature’s Bureaucrat
Silent Spring

New Yorker cartoon, 1963.
DDT

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with and without D.D.T.

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Buy Bug-a-boo at your favorite store or dealer.

"Now, don't sell me anything Rachel Carson wouldn't buy"
Silent Wildlife

Bald eagle chicks vulnerable to DDT.
The Big Picture

Rachel Carson at Hawk Mountain, PA.
Balance of Nature?

The ethical debate.
Nixon as Tree-Hugger

- Clean Air Act (1970).
- Marine Mammal Protection Act (1972)
- Endangered Species Act (1973)
Earth Day

First Earth Day in 1970.
The Wilderness Act (1964)

President Johnson signing The Wilderness Act.
The Wilderness Resource
Endangered Species
Habitat for All Species
Rebound Species
Slow Growth
Charismatic
Non-Charismatic
Bald Eagle Recovery

Releasing radio tagged bald eagle.
Whooping Cranes

Operation migration.
Whooping Cranes

Operation migration.
Wildlife Corridors

Yellowstone to Yukon Ecoregion

North American Flyways
- Pacific
- Central
- Mississippi
- Atlantic
Alaskan Refuges
Marine National Monuments

Protecting Marine Treasures

Areas President Bush will designate today as marine national monuments

Papahanaumokuakea Marine National Monument (Designated by Bush in 2006)

Maug Islands
Asuncion
Mariana Islands
Saipan
Guam
Wake Island
Johnston Atoll
Kingman Reef
Palmyra Atoll
Line Islands
Baker Island
Howland Island
Jarvis Island
Rose Atoll

NOTE: The five island groups in the center constitute one of the three areas.
Wilderness
“Evolution is Our Employer”

Olaus Murie and fox.
Invasive Species

Burmese python in Florida.
Climate Change

Adrift in a brave new climate change world.
Invasive Species:

*Man is everywhere a disturbing agent. Wherever he plants his foot, the harmonies of nature are turned to discords.*

Climate Change:

*The earth is fast becoming an unfit home for its noblest inhabitant, and another era of equal human crime and human improvidence, and of like duration with that through which traces of that crime and that improvidence extend, would reduce it to such a condition of impoverished productiveness, of shattered surface, of climatic excess, as to threaten the depravation, barbarism, and perhaps even extinction of the species.*

Generational Change:

*The great question, whether man is of nature or above her.*
Wildlife management is comparatively easy; human management is difficult.

Aldo Leopold, 1943
Thank You for the Helping Hand!
The End