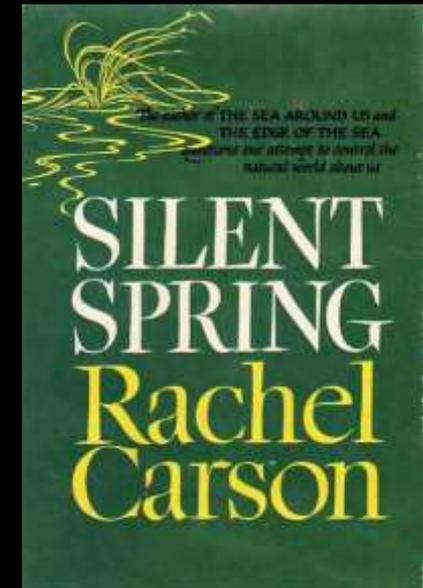
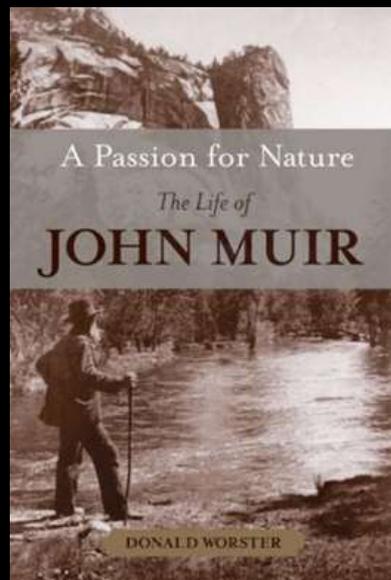
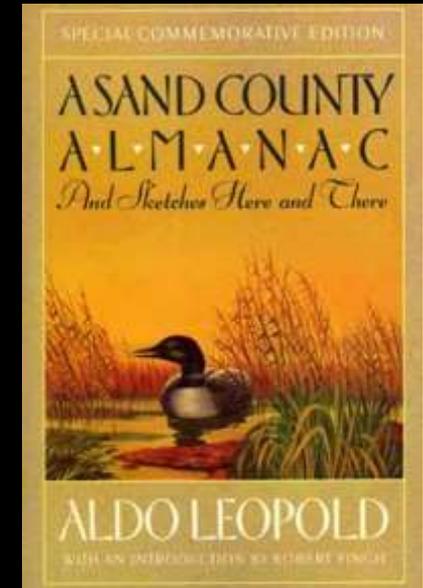
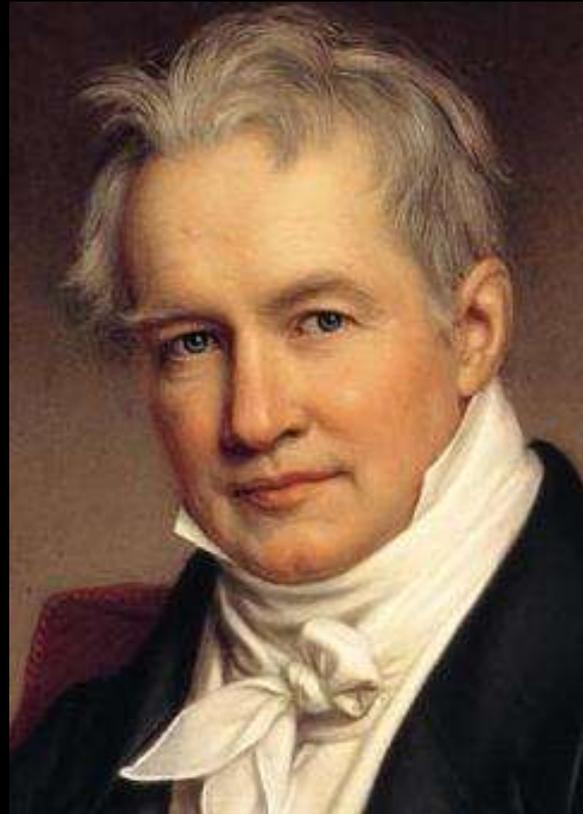
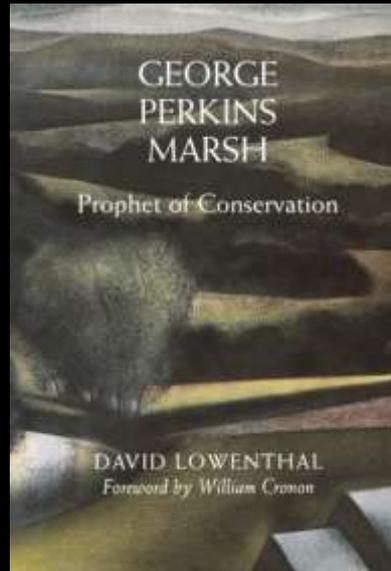
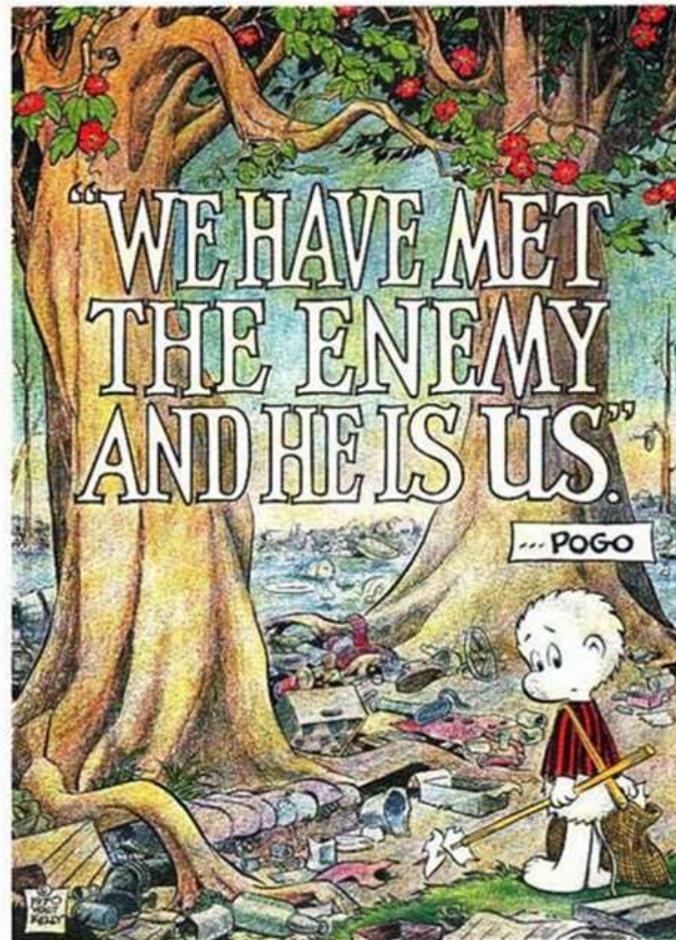


# The Great Disruptors: Environmentalism and the Idea of American Nature Kevin M.

Anderson Ph.D.

Austin Water Center for Environmental Research

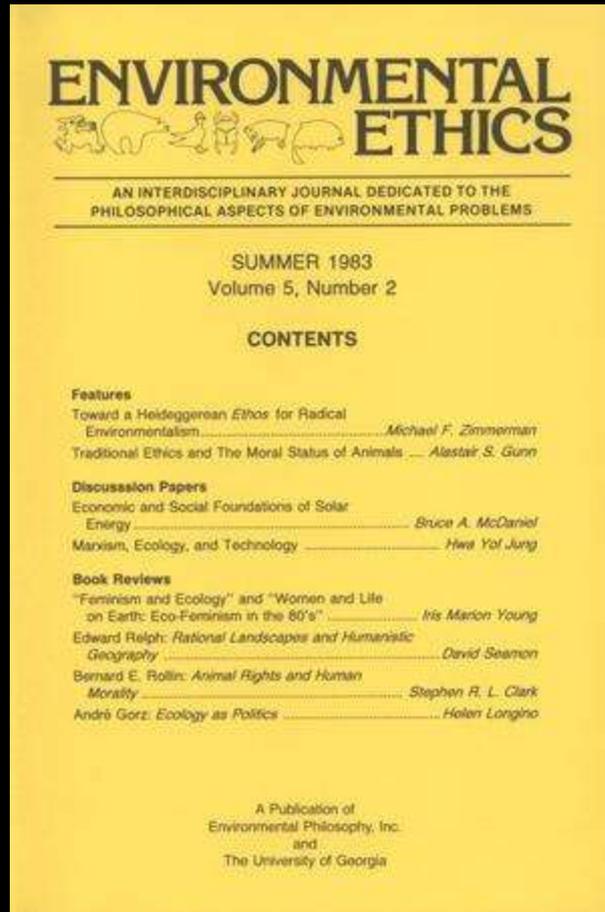




Walt Kelly's poster for the first Earth Day

# Environmentalism and Environmental Ethics

- the discipline in philosophy that studies the moral relationship of human beings to the environment and nonhumans.
- The value and moral status of the environment and nonhumans
  - Anthropocentrism vs Ecocentrism/Biocentrism



## Basic issues for Environmental Ethics

- Anthropocentrism and Utilitarianism (the greatest good for the greatest number of humans)
- Moral standing for Future Generations?
- Moral standing for Nonhumans – intrinsic value or instrumental value?
- Ethical Grounding – Rights? Virtues? God?
- Hume – You cannot derive an “ought” from an “is”

# Humboldtian Environmentalism

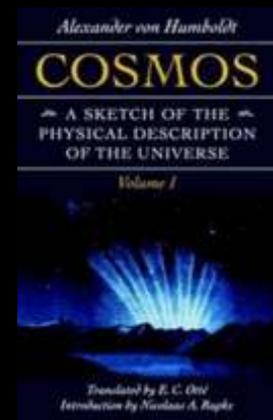
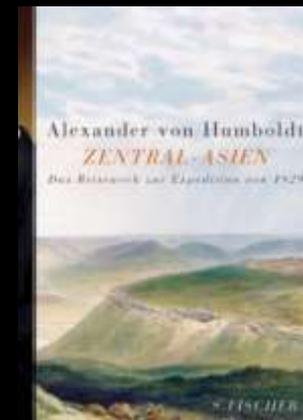
In his book *Central Asia*, Humboldt listed three ways in which the human species was even then affecting the climate:

“Through the destructions of forests, through the distribution of water (irrigation and drainage), and through the production of great masses of steam and gas at the industrial centers.”

“The wants and restless activity of large communities of men gradually despoil the face of the Earth.”

- Humans are part of nature
- Nature/Cosmos is bigger than us
- Most human impacts are unintended consequences
- Limits of human understanding of nature
- Knowing nature leads to valuing/loving nature
- Knowing is both rational and emotional
- [Hume – You cannot derive an “ought” from an “is” ]

Humboldt said it was the duty of scientists to examine the changeable elements in the “economy of nature” to understand human impacts.



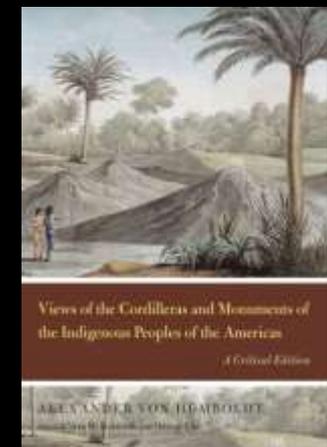
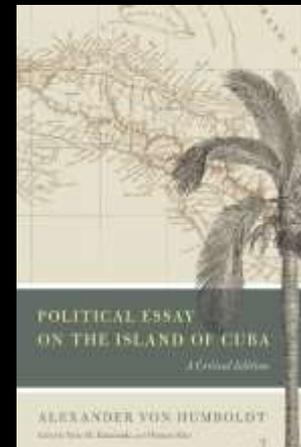
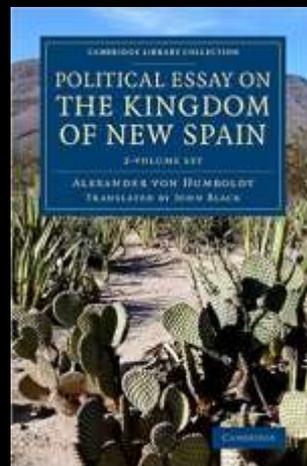
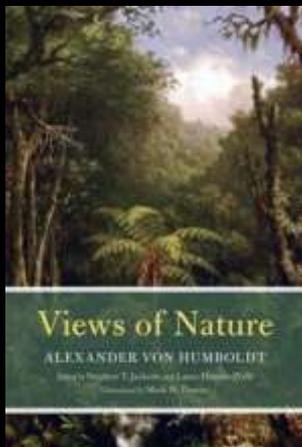
# Humboldtian Environmentalism – The Human Place in Nature

*Views of Nature* – Nature offers not only deep insights about the Cosmos but also solace and sanctuary from human failings without erasing humanity

*Political Essays* – Vehemently anti-slavery, anti-racism – unity of human species  
“All are alike designed for freedom”

Cultural Diversity – Celebrates the accomplishments of non-European cultures

Internationalist – Science as a bridge between nations and cultures, and a means to promote understanding and peace



## Humboldt the Atheistical?

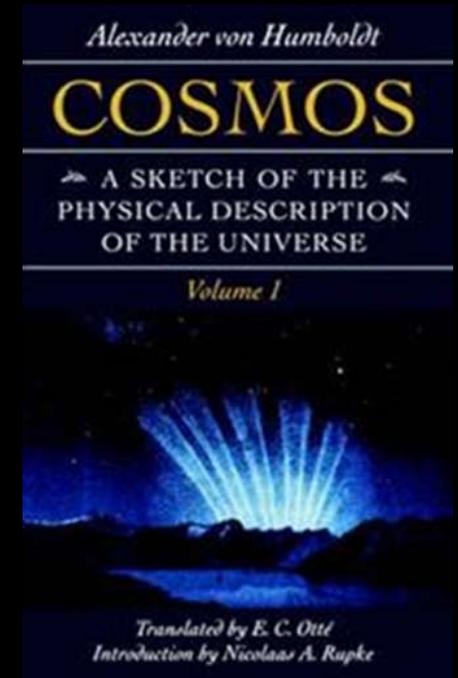
His emphasis on the “unity in diversity of nature” often has been misinterpreted as reflecting a kind of Deism.

He believed in the smallness of humankind in the face of natural creation – not in any Creator.

### Westminster Review 1846

“a sketch of the universe in which the word ‘God’ appears nowhere, but the spirit of God is supposed everywhere, will perhaps be regarded as dangerously Atheistical by the stickler for The Word.”

Humboldt – All religions had “three distinct parts – First, a code of morals, very pure and nearly the same in all – next, a geological dream – and thirdly, a myth or historical novelette; which last becomes the most important of all.”



The Artistic Humboldt of the New World  
Frederic Edwin Church  
1826-1900





Heart of the Andes, 1859  
Frederic Edwin Church  
1826-1900

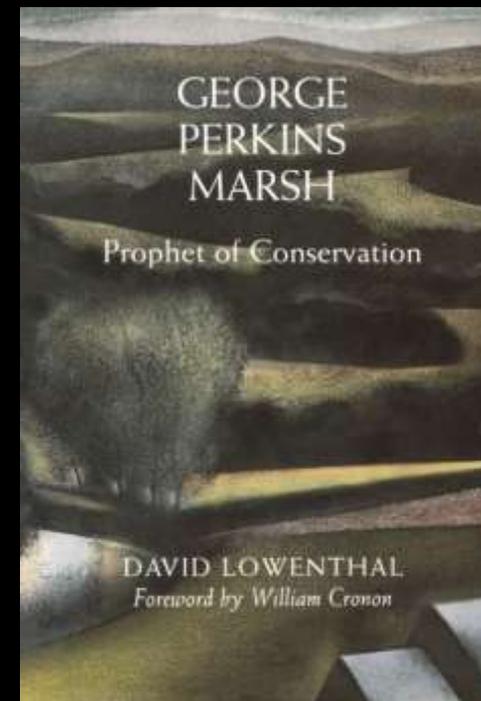
Humboldt's Cosmos

# The Birth of Humboldtian Environmentalism

George Perkins Marsh 1801 – 1882

American diplomat and philologist and “Prophet of Conservation”

- Greatly influenced by reading Humboldt to observe and compare Old World and New World environmental change.
- Humboldt was the “greatest of the priesthood of nature”
- Marsh was born in Vermont, educated at Dartmouth College and taught Greek and Latin before becoming a lawyer and moving to Burlington, Vermont.
- In 1839, he was elected to the U.S. House of Representatives and went to Washington, where he was a key figure in the establishment of the Smithsonian Institution.
- Most known in his lifetime as a philologist. Knew 20 languages and wrote a history of the English language, championed Norse sagas.
- Marsh began the diplomatic phase of his career in 1849, when he was appointed to serve as the Minister to the Court at Constantinople.
- In 1861, Lincoln appointed him as ambassador to the Kingdom of Italy and he spent the rest of his life as ambassador in Italy.



# *Man and Nature, or, Physical Geography as Modified by Human Action*

Published in 1864

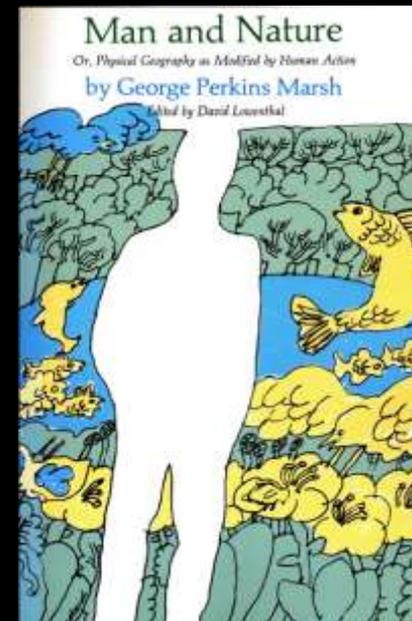
Wallace Stegner “the rudest kick in the face that American initiative, optimism and carelessness had yet received.”

## Humboldtian Environmentalism

- "Man is everywhere a disturbing agent. Wherever he plants his foot, the harmonies of nature are turned to discord"
- "...Man, who even now finds scarce breathing room on this vast globe, cannot retire from the Old World to some yet undiscovered continent, and wait for the slow action of such causes to replace, by a new creation, the Eden he has wasted"

## Non-Humboldtian Christian Environmental Ethic – Usufruct and Utilitarianism

- Marsh reframes Humboldt through Christian doctrine and a Biblical interpretation of usufruct
- Intergenerational obligation enforced by God - “The Earth belongs in usufruct to the living” Thomas Jefferson [Wendell Berry – Christian Agrarianism]
- “Man has too long forgotten that the earth was given to him for usufruct alone, not for consumption, still less for profligate waste. Nature has provided against the absolute destruction of any of her elementary matter... But she has left it within the power of man irreparably to derange the combinations of inorganic matter and of organic life.”



# Two Key Humboldtian Insights from Marsh

## – Destruction and Reclamation

### 1. Unintended Consequences

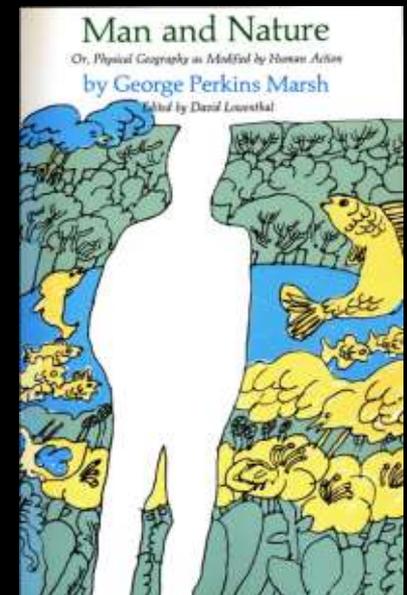
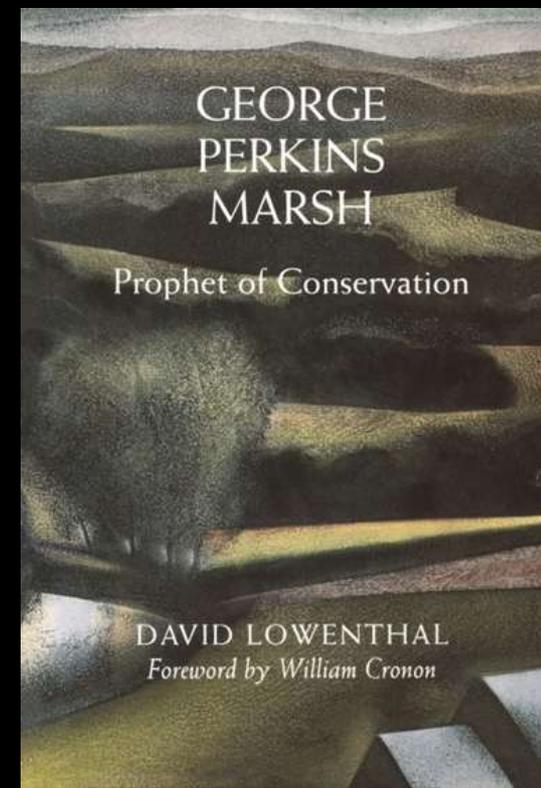
Most human impacts are unintentional. “Vast as is the . . . magnitude and importance [of] intentional changes”, they are “insignificant in comparison with the contingent and unsought results which have flowed from them”.

“The equation of animal and vegetable life is too complicated a problem for human intelligence to solve, and we can never know how wide a circle of disturbance we produce in the harmonies of nature when we throw the smallest pebble into the ocean of organic life.”

### 2. Commitment to the Future

The whole force of *Man and Nature* lies in its assumption that the welfare of future generations transcended immediate gains. Americans who disdained to practice a better husbandry for themselves should feel morally obliged to do so for their offspring.

Conservation Impacts - It led to the passage of the 1873 Timber Culture Act, which encouraged settlers on the Great Plains to plant trees. It also prepared the ground for the 1891 Forest Reserves Act, which took much of its wording from Marsh and from Humboldt's earlier ideas.



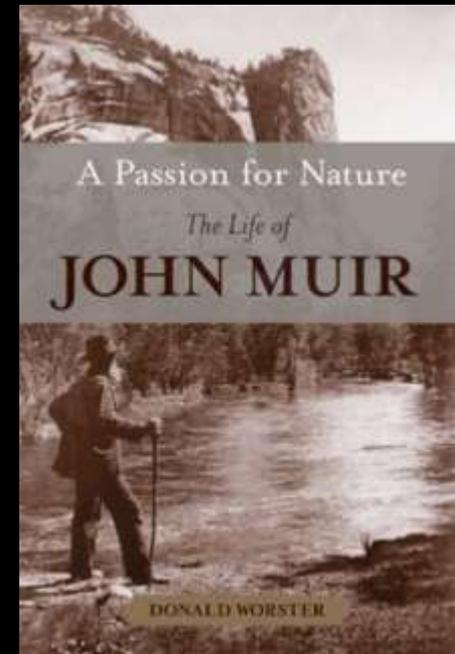
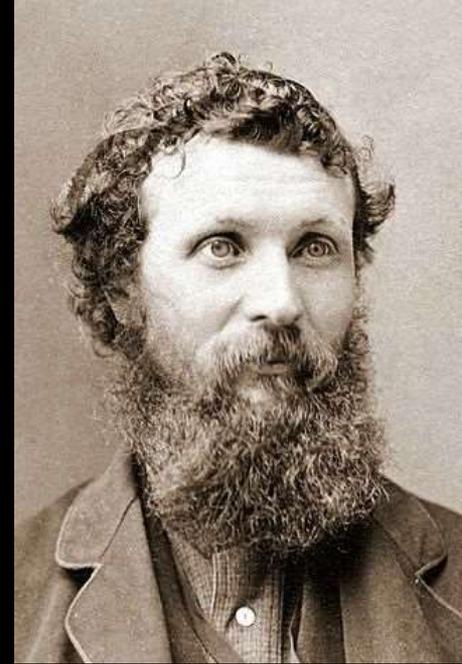
# Humboldtian Environmentalist

John Muir 1838 – 1914

"When we try to pick out anything by itself, we find it hitched to everything else in the Universe."

- Born in Scotland, immigrates with his parents to the US in 1849
- Grows up in Wisconsin on a farm and a "mechanical genius"
- Strict evangelical Protestant upbringing - "I never tried to abandon creeds or code of civilization; they went away of their own accord... without leaving any consciousness of loss."
- Attends University of Wisconsin 1860-63 – a bright but indifferent student – leaves without completing degree, studies geology and botany, reads Humboldt
- Leaves for Canada 1864 with his brother Daniel and avoids the draft during the Civil War, returns 1867 to Indianapolis

In early March 1867, an accident changed the course of his life: a tool he was using slipped and struck him in the eye. He was confined to a darkened room for six weeks, worried whether he would ever regain his sight. When he did, "he saw the world—and his purpose—in a new light". From that point on, he determined to "be true to [himself]" and follow his dream of exploration and study of plants.



## The Humboldtian Years – 1860-1890

### Tropical Quest

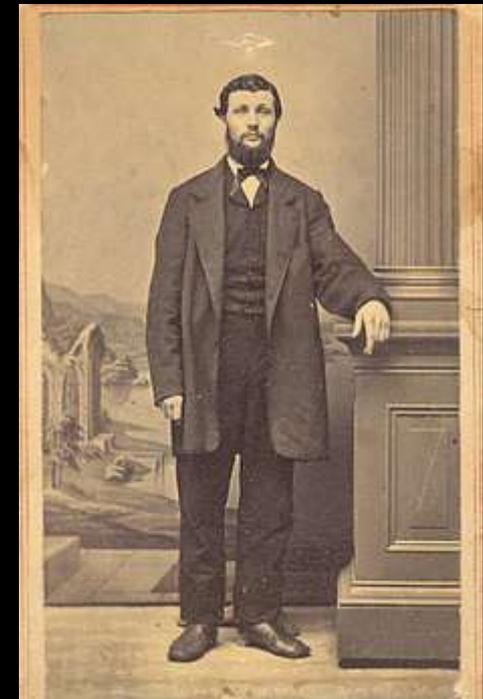
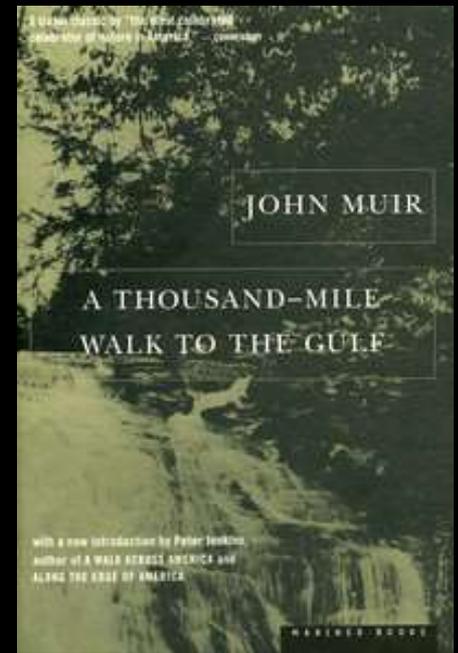
#### *A Thousand Mile Walk to the Gulf*

How intensely I desire to be a Humboldt! 1865

"My plan was to simply to push on in a general southward direction by the wildest leafiest, and least trodden way I could find, promising the greatest extent of virgin forest."

In September 1867, Muir undertook a walk of about 1,000 miles from Kentucky to Florida where he gets malaria and so leaves on a boat to Cuba with plans to follow Humboldt's path to South America, but the tropics weaken him and he leaves for California.

From tropics to mountains...



## The Humboldtian Years – 1860-1890

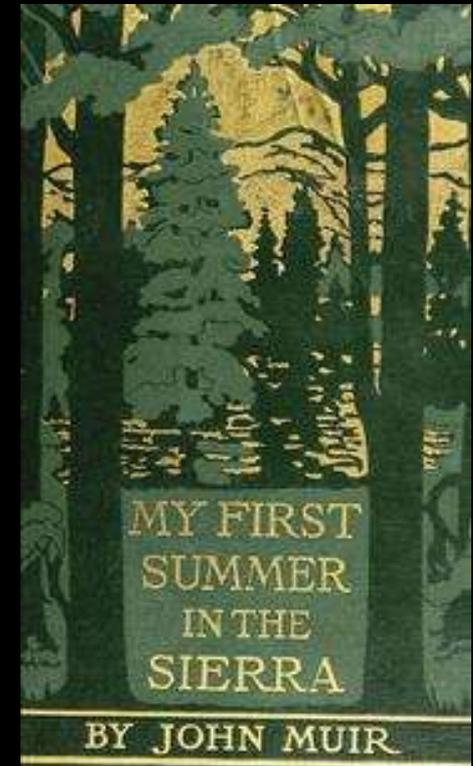
### Mountains and Glaciers - The Sierras and Yosemite

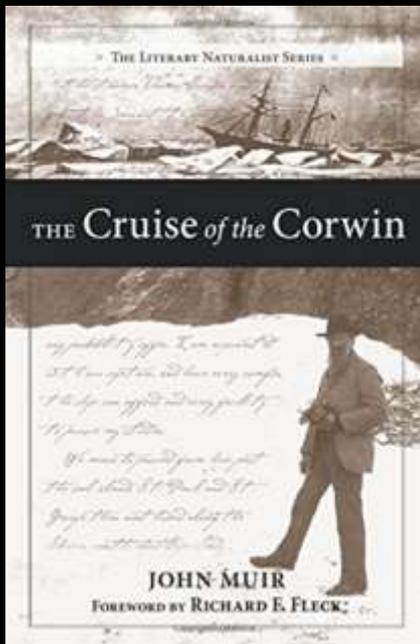
It was California's Sierra Nevada and Yosemite that truly claimed him. In 1868, he walked across the San Joaquin Valley and into the high country for the first time. "Then it seemed to me the Sierra should be called not the Nevada, or Snowy Range, but the Range of Light...the most divinely beautiful of all the mountain chains I have ever seen."

By 1871 he had found living glaciers in the Sierras and had conceived his controversial theory of the glaciation of Yosemite Valley.

He began to be known throughout the country. Famous men of the time - Asa Gray and Ralph Waldo Emerson - made their way to the door of his pine cabin.

Beginning in 1874, a series of articles by Muir entitled "Studies in the Sierra" launched his successful career as a writer.



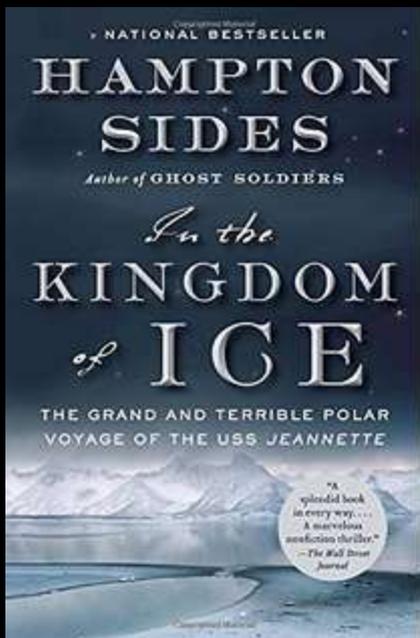


## Humboldtian Exploration

### *The Cruise of the Corwin* 1881

*The Cruise of the Corwin* is the story of a voyage John Muir took in 1881 on the steamer Thomas Corwin, which set sail from San Francisco for arctic waters off the coast of Alaska in search of the Jeannette, a ship tragically lost two years before.

The Jeannette was never found, but Muir's account of his voyage conveys the excitement of far and little-known horizons.



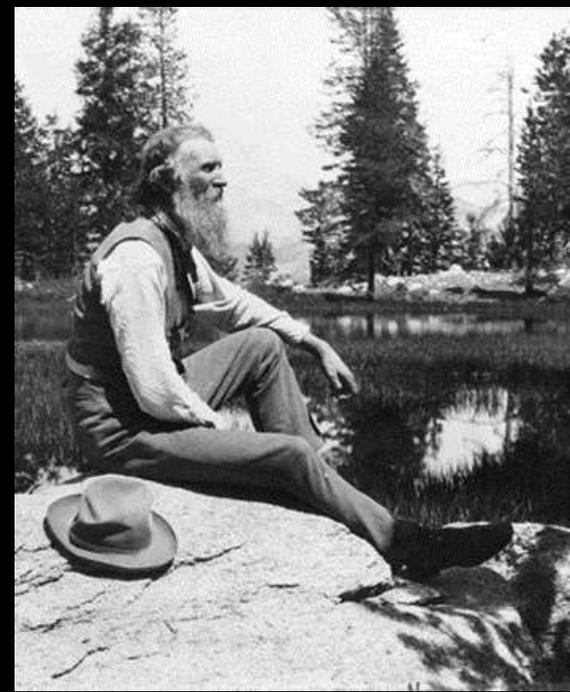
Here we find Muir sketching glaciers and examining rare flora; discovering Wrangell Island off the coast of Siberia and claiming it for the United States; observing seal, walrus, whale, and reindeer; exploring the wind-swept islands of the Bering sea; and investigating a "village of the dead," where whole clans perished of starvation in the unforgiving landscape.

# Breaks with Humboldt's Science Preservation – The Natural Theology of Wilderness

- Founds the Sierra Club 1892
- Mountains as re-creational, spiritual sanctuary from human society
- Ecocentric Environmental Ethics

Muir's embrace of "wilderness preservation" was a significant retreat from his earlier, more Humboldtian approach to nature.

"Climb the mountains and get their good tidings. Nature's peace will flow into you as sunshine flows into trees. The winds will blow their own freshness into you, and the storms their energy, while cares will drop away from you like the leaves of Autumn."



1906



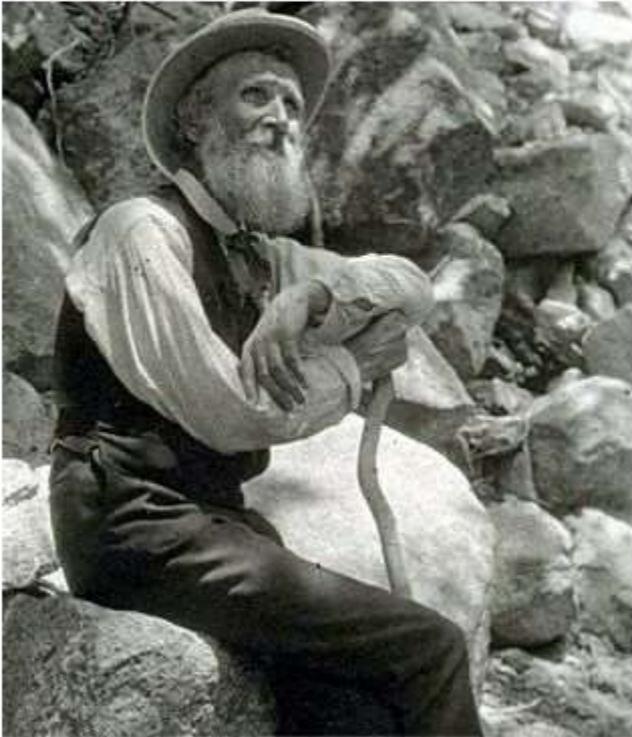
In God's wildness lies the hope of the world—the great fresh unblighted, unredeemed wilderness. The galling harness of civilization drops off, and wounds heal ere we are aware.

(John Muir)

izquotes.com

# Preservation vs Conservation

**John Muir**



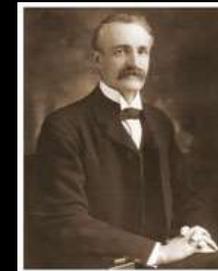
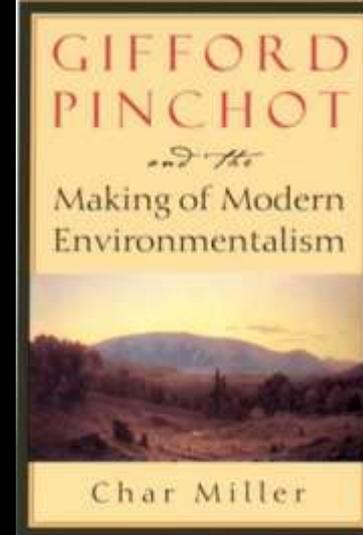
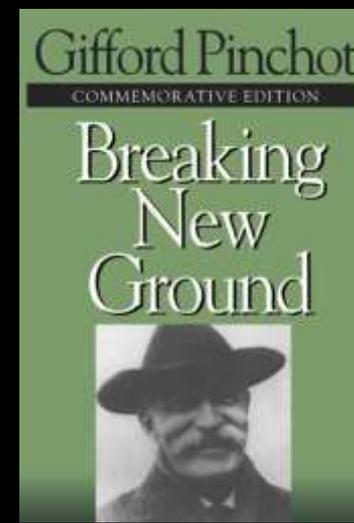
**Gifford Pinchot**



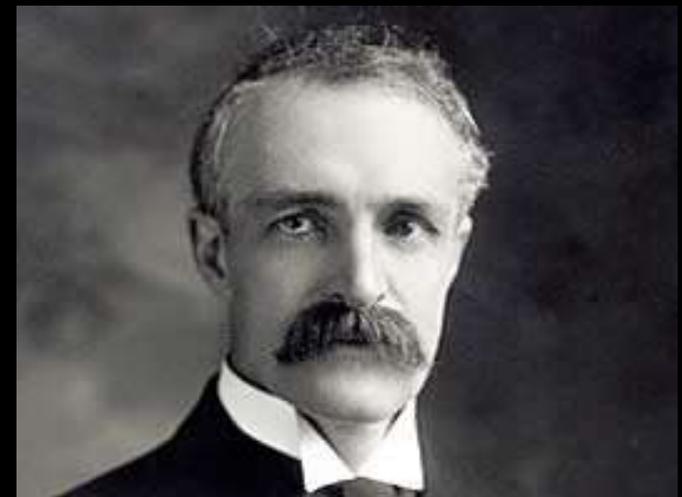
# Forests and Natural Resource Conservation

## Gifford Pinchot 1865-1946

- Born to wealthy family, father pushes him to be forester
- Receives George Perkins Marsh's *Man and Nature* as a gift from his parents on his 21st birthday
- Pinchot graduated from Yale in 1889 and studied at the National Forestry School in Nancy, France, and in Switzerland, Germany, and Austria. Upon his return home in 1892, he began the first systematic forestry work in the United States at Biltmore, the estate of George W. Vanderbilt, in North Carolina.
- In 1898 he was appointed chief of the Division, later Bureau, of Forestry and then the Forest Service (created 1905) in the Department of Agriculture, which office he held under Presidents William McKinley, Theodore Roosevelt, and William Howard Taft, until 1910.
- He founded the Yale School of Forestry at New Haven, Conn., as well as the Yale Summer School of Forestry at Milford, Pa., and in 1903 became professor of forestry at Yale. In 1920 he was appointed state forester of Pennsylvania and began a systematic administration of the forest areas of that state.
- With Theodore Roosevelt, Pinchot helped to found the progressive Bull Moose Party in 1912. From 1923 to 1927 and from 1931 to 1935 he was governor of Pennsylvania.



Gifford Pinchot  
1865 - 1946  
The First  
Conservationist



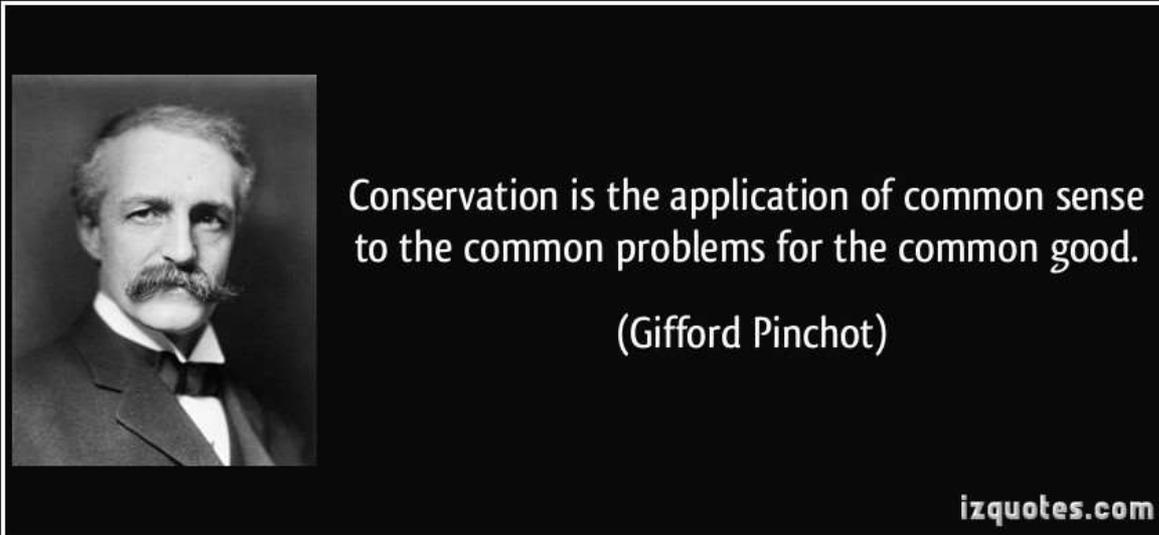
# Nature Preservation vs. Natural Resource Conservation

## Anthropocentric and Utilitarian Environmental Ethic

Pinchot saw conservation as a means of managing the nation's natural resources for long-term sustainable commercial use. As a professional forester, his view was that "forestry is tree farming," without destroying the long-term viability of the forests.

"Without natural resources life itself is impossible. From birth to death, natural resources, transformed for human use, feed, clothe, shelter, and transport us. Upon them we depend for every material necessity, comfort, convenience, and protection in our lives. Without abundant resources prosperity is out of reach."

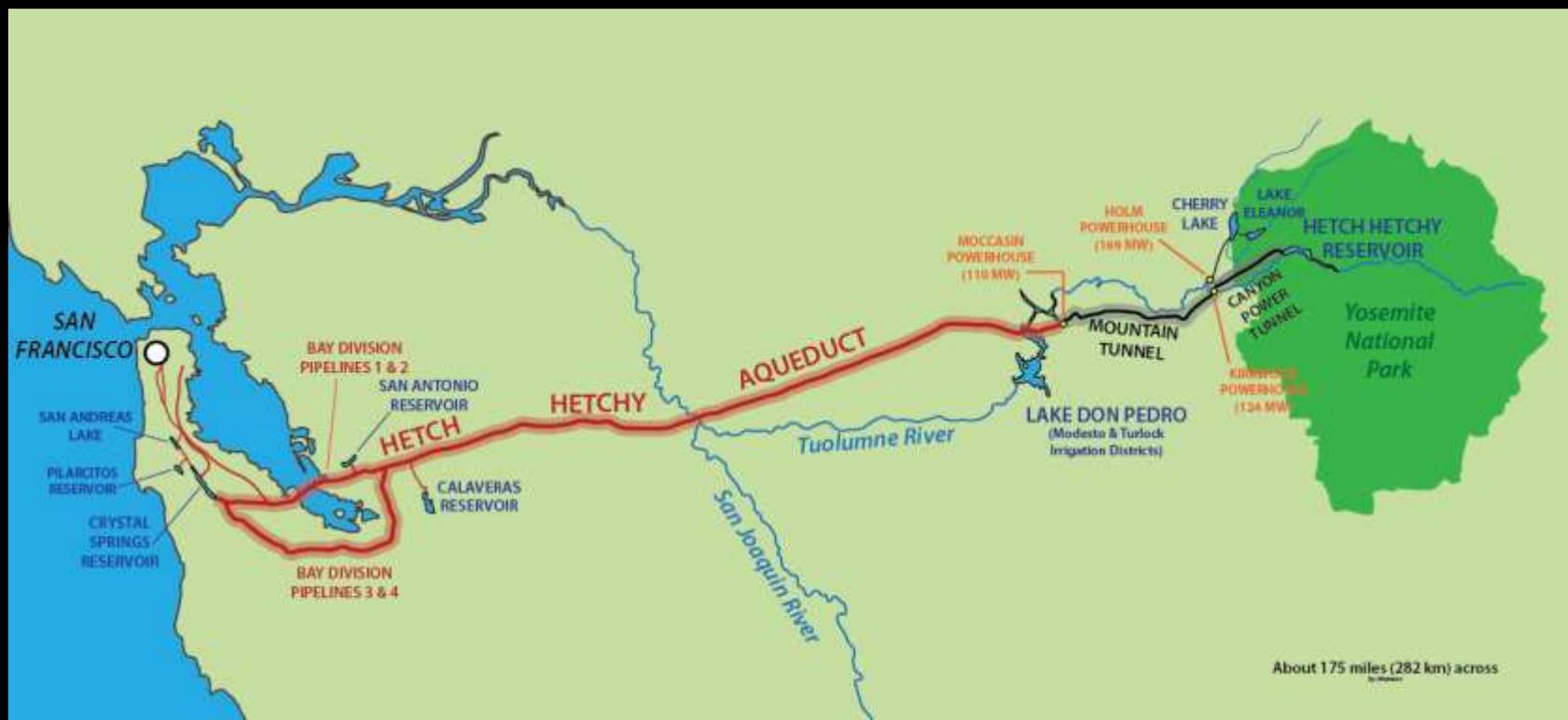
Pinchot and Roosevelt had envisioned, at the least, that public timber should be sold only to small, family-run logging outfits, not to big syndicates. Pinchot had always preached of a "working forest" for working people and small-scale logging at the edge, preservation at the core



# The Hetch Hetchy Debate 1908–1913

The Hetch Hetchy Valley lies in the northwestern part of Yosemite National Park and is drained by the Tuolumne River.

During the late 19th century, the valley was renowned for its natural beauty – often compared to that of Yosemite Valley – but also targeted for the development of water supply for irrigation and municipal interests.



## The Hetch Hetchy Debate 1908–1913

John Muir was the romantic environmentalist (preservationist).

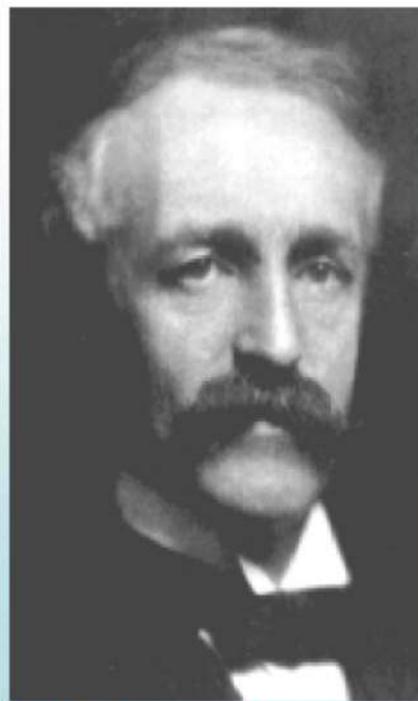
Gifford Pinchot was the progressive environmentalist (conservationist).



**Muir on Hetch Hetchy:**

...the Phelans, Pinchots and their hirelings will not thrive forever....

These temple-destroyers, devotees of ravaging commercialism, seem to have a perfect contempt for Nature, and instead of lifting their eyes to the God of the mountains, lift them to the Almighty Dollar. Dam Hetch Hetchy! As well dam for water-tanks the people's cathedrals and churches, for no holier temple has ever been consecrated by the heart of man.



**John Muir & Gifford Pinchot, ca. 1913**

**Pinchot on Hetch Hetchy:**

The star witness in 1913 hearings on legislation to dam Hetch Hetchy to provide water and hydropower for San Francisco, Gifford Pinchot testified: "If we had nothing else to consider then the delight of the few men and women who would yearly go to Hetch Hetchy Valley, then it should be left in its natural condition. But the considerations on the other side of the question, to my mind, are simply overwhelming.... I never understood Muir's position on Hetch Hetchy."

**In 1923, the O'Shaughnessy Dam was completed on the Tuolumne River, flooding the entire valley under the Hetch Hetchy Reservoir**

## The Land Ethic: Beyond Preservation or Conservation

The land ethic: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

*"The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land."*

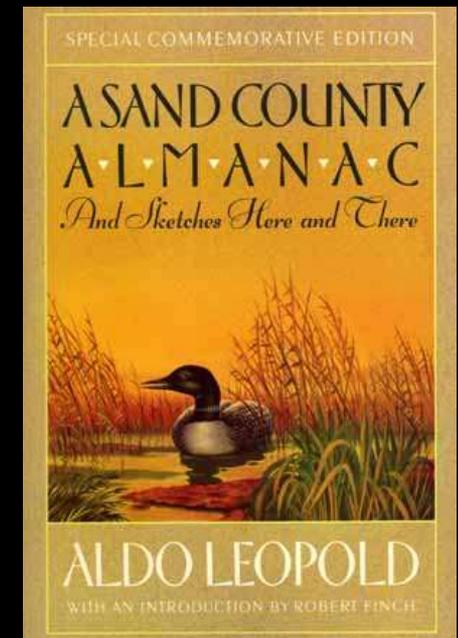
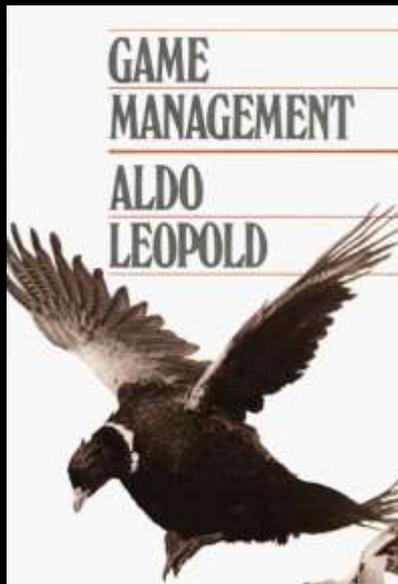
*- Aldo Leopold*



# Humboldt's Children – Ecology and Conservation

## Aldo Leopold 1887-1948

- "The last word in ignorance is the man who says of an animal or plant: "What good is it?" If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering."
- "Conservation is getting nowhere because it is incompatible with our Abrahamic concept of land. We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."



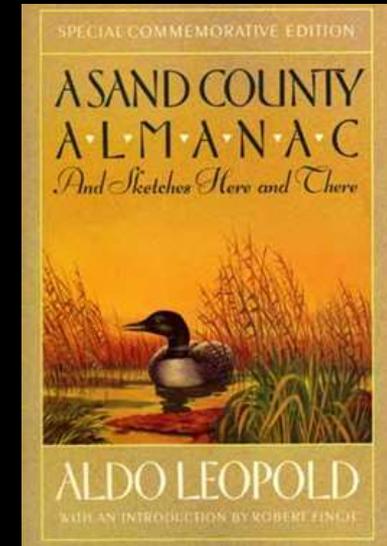
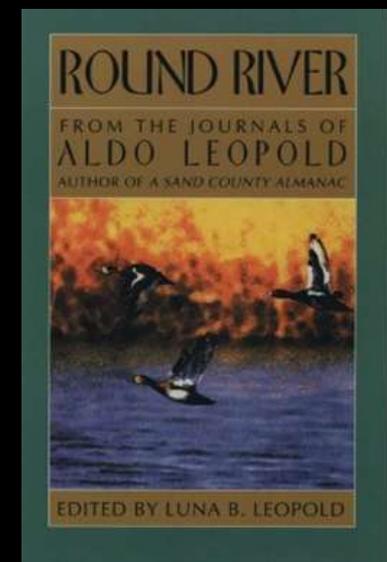
## Conservation and Science - Biotic Navigation

Ecology is an infant just learning to talk, and, like other infants, is engrossed with its own coinage of big words.

Its working days lie in the future.

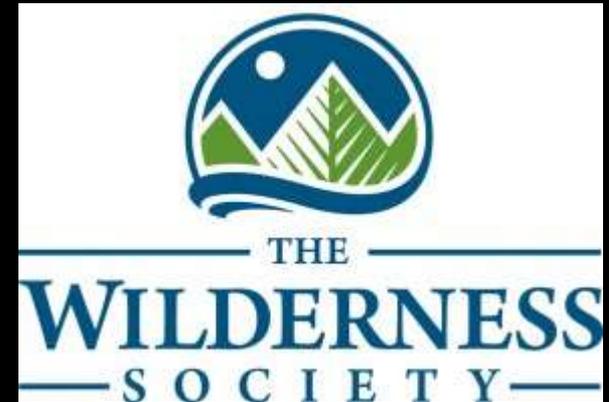
Ecology is destined to become the lore of Round River, a belated attempt to convert our collective wisdom of biotic materials into a collective wisdom of biotic navigation.

This, in the last analysis, is conservation.



In 1924, Leopold convinced the Forest Service to protect as wilderness 500,000 acres of New Mexico's Gila National Forest. It was the National Forest System's first officially designated wilderness area.

The Wilderness Society was formed in 1935 by Aldo Leopold, Bob Marshall and Benton MacKaye



## The Paradox of Wilderness Conservation

“All conservation of wildness is self-defeating, for to cherish we must see and fondle, and when enough have seen and fondled, there is no wilderness left to cherish.”

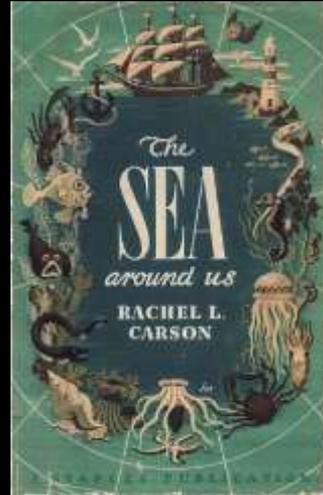


Humboldt's Children  
 Science and Contemporary Political  
 Environmentalism  
 Rachel Carson 1907-1964

Aquatic Biology and Oceanography  
 US Fish and Wildlife Service

Under the Sea Wind (1941)  
 The Sea Around Us (1951)  
 The Edge of the Sea (1955)

Silent Spring (1962)



"DDT is good for me-e-e!"

The great expectations held for DDT have been realized. During 1946, exhaustive scientific tests have shown that, when properly used, DDT kills a host of destructive insect pests, and is a benefactor of all humanity.

Pennsalt produces DDT and its products in all standard forms and is now one of the country's largest producers of this amazing insecticide. Today, everyone can enjoy added comfort, health and safety through the insect-killing power of Pennsalt DDT products . . . and DDT is only one of Pennsalt's many chemical products which benefit industry, farms and homes.

**GOOD FOR FISHERIES**—Eel grasses, marine mollusks . . . the list is a miniature fact sheet—compared, in restricted circles—headlines run up to 100 pounds a year when protected from fish and many other pests with DDT emulsions.

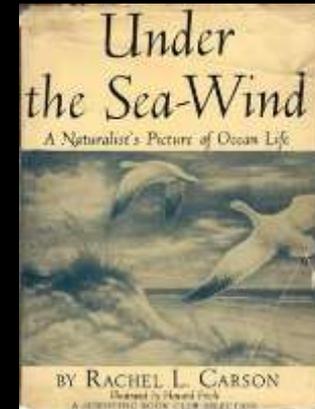
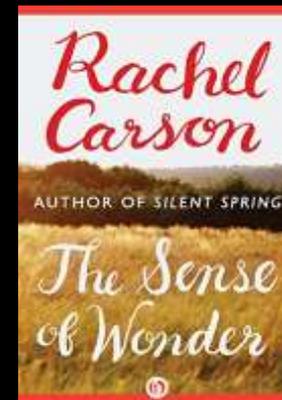
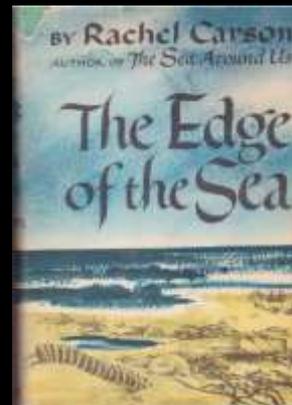
**GOOD FOR THE HOME**—helps get rid of cockroaches, mice, mosquitoes, flies, etc. . . . prevents some family bugs, fleas, lice, ticks, etc. . . . DDT is safe and sprays as directed . . . don't wash the legs "like the doctor".

**GOOD FOR FRUITS**—Ripe apples, peaches, berries, etc. are free from insects, worms, etc. . . . all benefits resulting from DDT dusts and sprays.

**GOOD FOR RUM CROPS**—25 more barrels of potatoes per acre . . . 100% DDT yields have shown crop increases like that! DDT dusts and sprays help reach farmers' goals along to you.

**GOOD FOR INDUSTRIES**—Food processing plants, laundries, dry cleaning plants, hotels . . . dozens of industries gain with DDT long control, some processes such as sterilization with Pennsalt DDT products.

**PENN SALT CHEMICALS**  
 87 Years' Service to Industry • Farms • Homes  
 PENNSYLVANIA SALT MANUFACTURING COMPANY  
 WOMER BUILDING, PHILADELPHIA 5, PA.

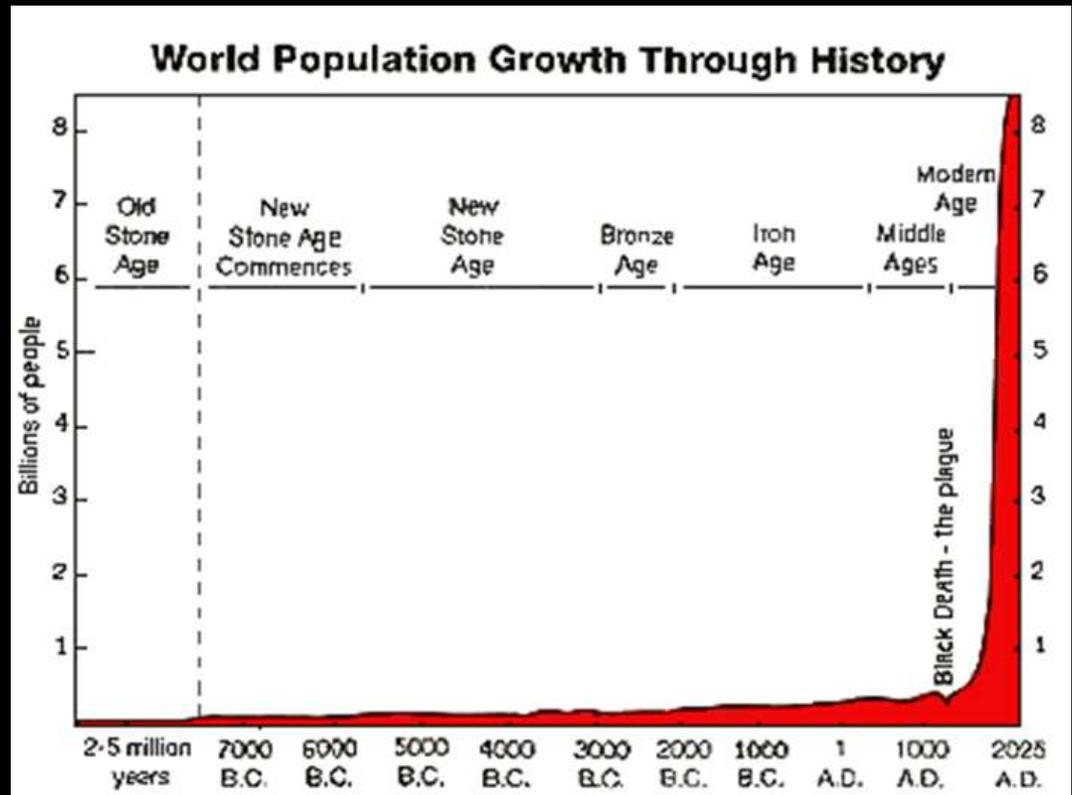
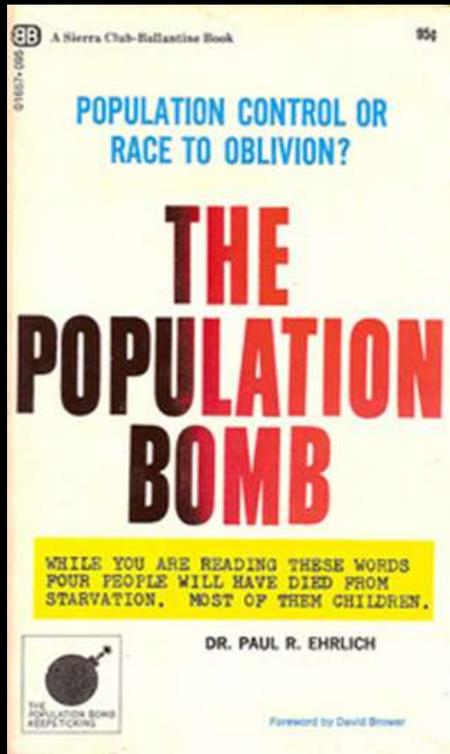
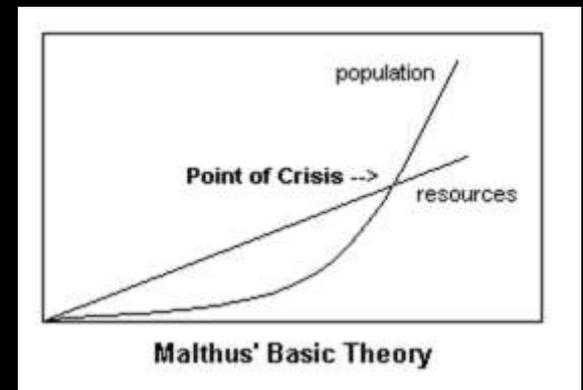


# Humboldt's Children Science and Contemporary Environmentalism Population

Paul Ehrlich b.1932

*The Population Bomb* 1968

Population Control – Neo-Malthusians



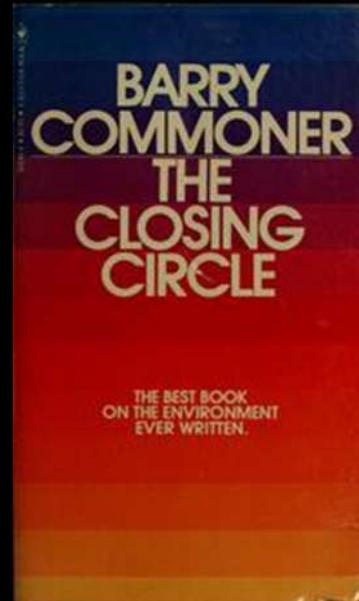
Humboldt's Children  
Science and Contemporary Environmentalism  
The Environment and Sustainability

Barry Commoner 1917-2012

*The Closing Circle* 1971

Commoner's 4 Principles

1. Everything is connected to everything else.
2. Everything must go somewhere.
3. Nature knows best.
4. There is no such thing as a free lunch.



He had a long-running debate with Ehrlich and his followers, arguing that they were too focused on overpopulation as the source of environmental problems, and that their proposed solutions were politically unacceptable because of the coercion that they implied, and because the cost would fall disproportionately on the poor.

He believed that technological and, above all, social development would lead to a natural decrease in both population growth and environmental damage

# Humboldt's Children

## Science and Contemporary Environmentalism

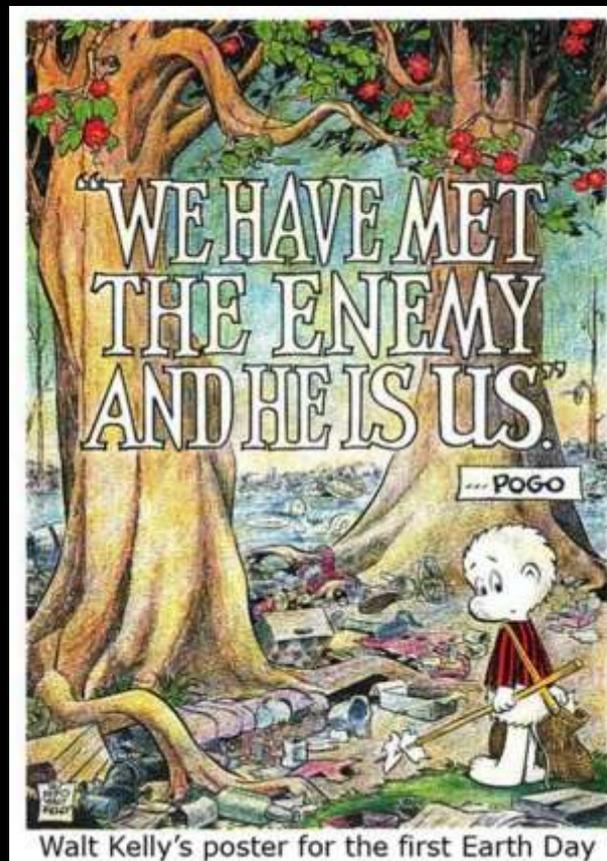
### The Environment and Mass Culture

#### Earth Day – April 22, 1970

The idea came to Earth Day founder Gaylord Nelson, then a U.S. Senator from Wisconsin, after witnessing the ravages of the 1969 massive oil spill in Santa Barbara, California.

Senator Nelson announced the idea for a “national teach-in on the environment” to the national media; persuaded Pete McCloskey, a conservation Republican Congressman, to serve as his co-chair; and recruited Denis Hayes as national coordinator. Hayes built a national staff of 85 to promote events across the land.

As a result, on the 22nd of April, 20 million Americans took to the streets, parks, and auditoriums to demonstrate for a healthy, sustainable environment in massive coast-to-coast rallies.



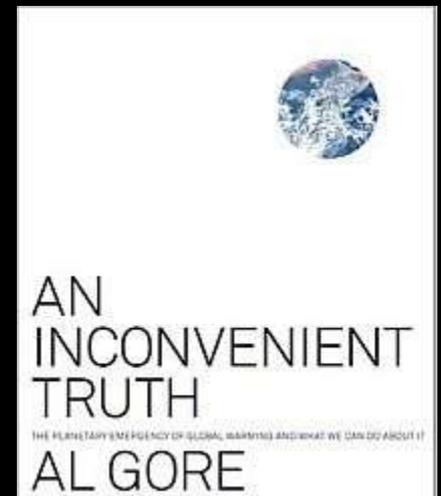
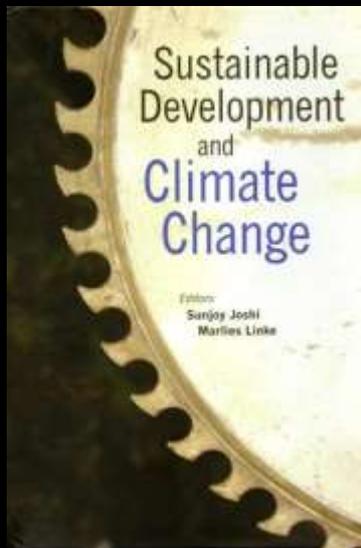
Walt Kelly's poster for the first Earth Day



# YOU CONTROL CLIMATE CHANGE.



TURN DOWN. SWITCH OFF. RECYCLE. WALK. **CHANGE**

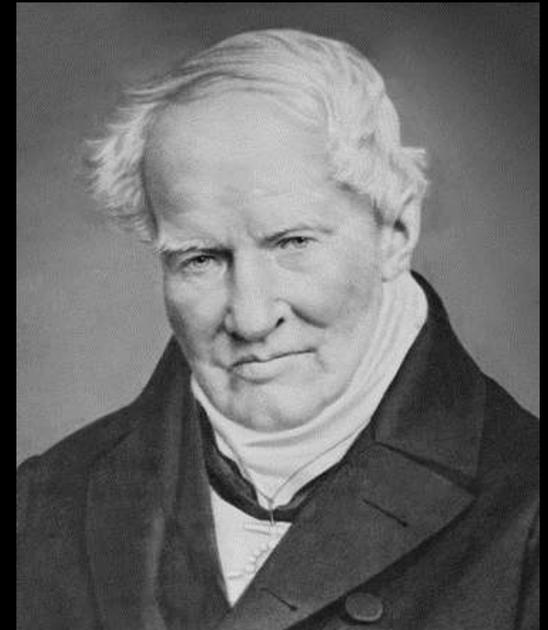


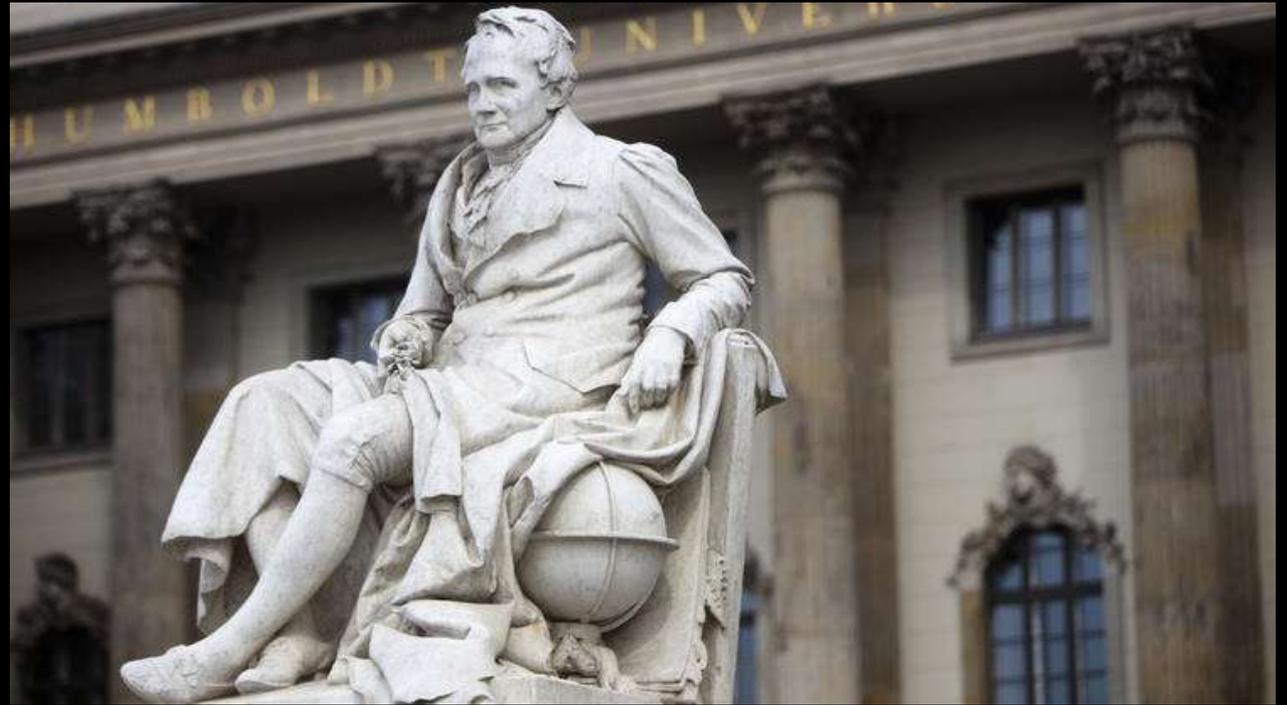
# Humboldtian Environmentalism

“Through the destructions of forests, through the distribution of water (irrigation and drainage), and through the production of great masses of steam and gas at the industrial centers.”

“The wants and restless activity of large communities of men gradually despoil the face of the Earth.”

- Humans are part of nature
- Nature/Cosmos is bigger than us
- Most human impacts are unintended consequences
- Limits of human understanding of nature
- Knowing nature leads to valuing/loving nature
- Knowing is both rational and emotional
- [Hume – You cannot derive an “ought” from an “is” ]





Alexander von Humboldt 1769 – 1859

