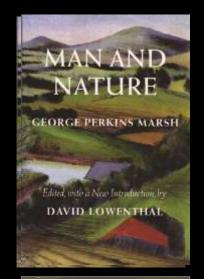


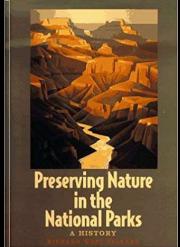
Center for Environmental Research at Hornsby Bend

Saving American Nature: Preservation, Conservation, and The Wild

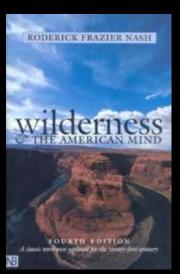
Kevin M. Anderson, Ph.D.

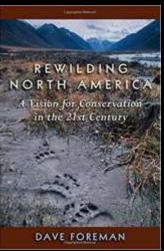
Austin Water – Center for Environmental Research







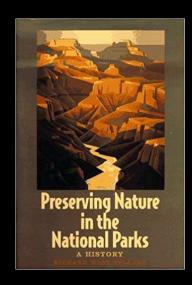


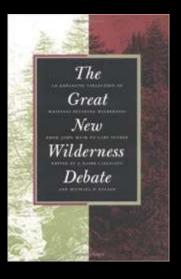


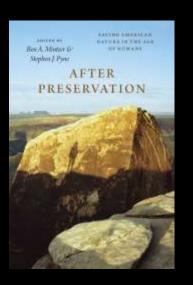
Saving American Nature: Preservation, Conservation, and The Wild

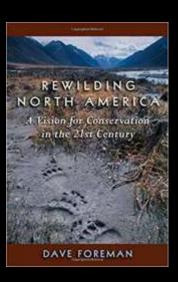
- Wilderness and the Wild
- Preservation, Parks, and John Muir
- Conservation, Forests, and Gifford Pinchot
- The Hetch Hetchy Debate
- Aldo Leopold, Thinking Like Mountains, and Wilderness Conservation
- Saving American Nature in the 21st Century Restoration, Rewilding, and Resilience

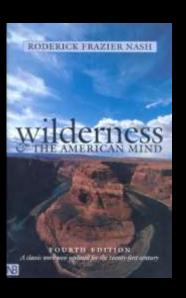












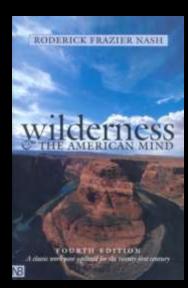




"wilderness is a matter of perception – part of the geography of the American mind"

Nash – "The difficulty is that while the word is a <u>noun</u> it acts like an <u>adjective</u>. There is no specific material object that is wilderness."

However, it is used to refer to specific material objects...





Wilderness and the American Mind A waste and howling wilderness

The Pilgrim leader William Bradford's well-known description of the forbidding Cape Cod shoreline as seen from the deck of the Mayflower in 1620.

He depicts it as "a hidious and desolate wildernes, full of wild beasts and wild men.

He findeth him in a desert land, In the howling waste of the wilderness.

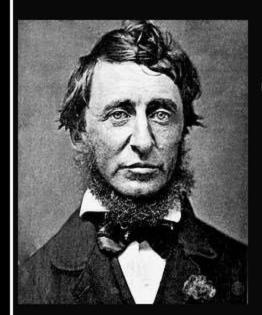
Deuteronomy 32:10

Outside the Puritan settlements there was nothing but, "A waste and howling wilderness, where none inhabited but hellish fiends and brutish men that Devils worshipped."

Michael Wigglesworth (1631–1705)







Generally speaking, a howling wilderness does not howl: it is the imagination of the traveler that does the howling.

(Henry David Thoreau)

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The Pristine Myth: The Landscape of the Americas in 1492

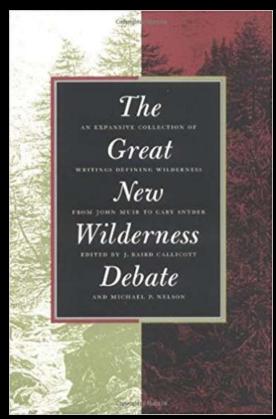
William M. Denevan

Department of Geography, University of Wisconsin

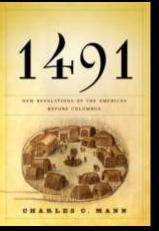
Abstract. The myth persists that in 1492 the Americas were a sparsely populated wilderness, "a world of barely perceptible human disturbance." There is substantial evidence, however, that the Native American landscape of the early sixteenth century was a humanized landscape almost everywhere. Populations were large. Forest composition had been modified, grasslands had been created, wildlife disrupted, and erosion was severe in places. Earthworks, roads, fields, and settlements were ubiquitous. With Indian depopulation in the wake of Old World disease, the environment recovered in many areas. A good argument can be made that the human presence was less visible in 1750 than it was in 1492.

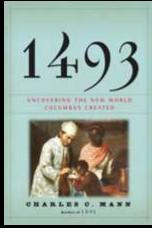
Annals of the Association of American Geographers, Vol. 82, No. 3, The Americas before and after 1492: Current Geographical Research. (Sep., 1992), pp. 369-385.

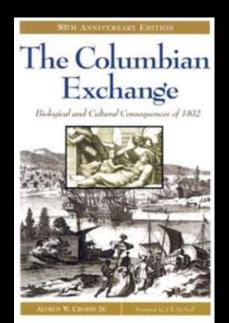




Wilderness and Humanized Landscapes of America

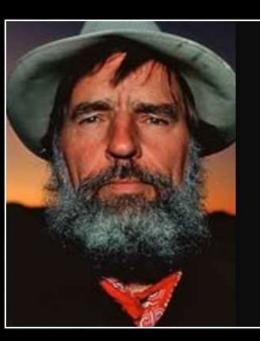








American Narrative of Wilderness and Wildness



Wilderness is not a luxury but a necessity of the human spirit, and as vital to our lives as water and good bread. A civilization which destroys what little remains of the wild, the spare, the original, is cutting itself off from its origins and betraying the principle of civilization itself.

— Edward Abbey —

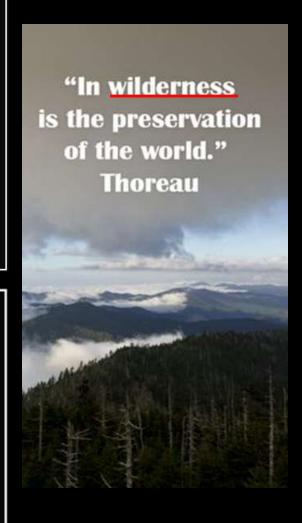
AZ QUOTES



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)

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Henry David Thoreau - Wildness and Human Society

"...Wildness is the preservation of the world...

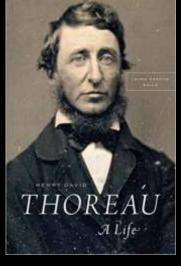
From the forest and wilderness come the tonics and barks which brace mankind. Hope and the future for me are not in lawns and cultivated fields, not in towns and cities..."

Walking

Trying to find a balance between human society and nature.

"I would not have every man nor every part of a man cultivated, any more than I would have every acre of earth cultivated: part will be tillage, but the greater part will be meadow and forest"

Walden

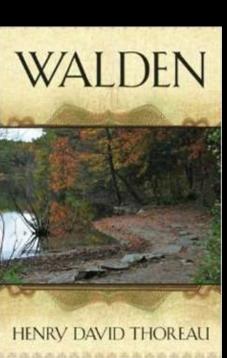


1817-1862

Thomas Cole "Oxbow" 1836









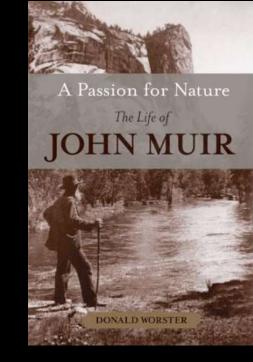
"In God's Wildness lies the hope of the world..."

Preservation of the Wild and Wilderness John Muir 1838 – 1914

The Transcendentalist concept of nature as a tonic for body and spirit

"The clearest way into the Universe is through a forest wilderness."

"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."





"Keep close to Nature's heart... and break clear away, once in awhile, and climb a mountain or spend a week in the woods. Wash your spirit clean."

John Muir

Prophet of Nature Preservation John Muir 1838 – 1914

- 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
- 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

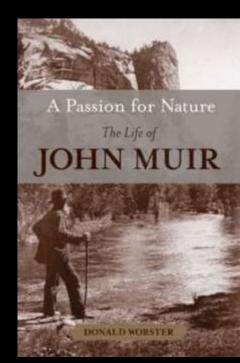
In early March 1867, an accident changed the course of his life: a tool he was using slipped and struck him in the eye.

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.

"How intensely I desire to be a Humboldt!"





The Humboldtian Years

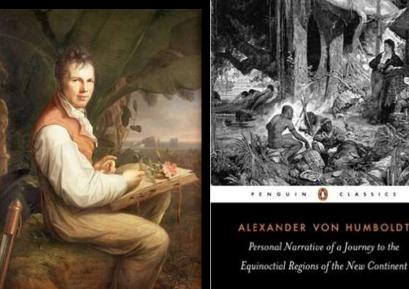
"When we try to pick out anything by itself, we find it hitched to everything else in the Universe."

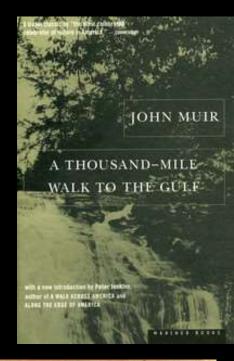
"My plan was to simply to push on in a general southward direction by the wildest leafiest, and least trodden way I could find, promising the greatest extent of virgin forest."

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 he only makes it to Cuba before malaria forces him to New York and a boat for California.







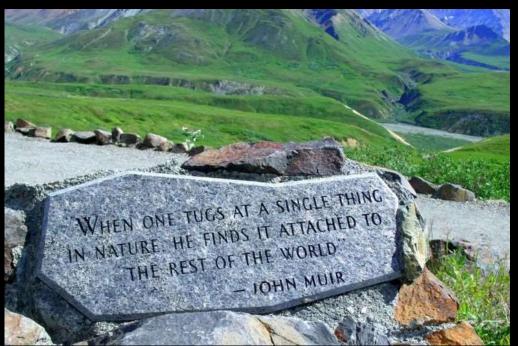




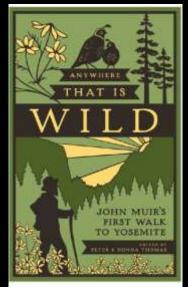
Mountains and Glaciers - The Sierras and Yosemite From tropics to mountains...

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."

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







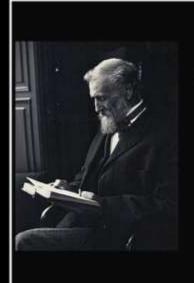


Nature Preservation – The Natural Theology of Wilderness

- Preserve the mountains as parks for re-creational, spiritual sanctuary from human society
- Yosemite 1890 National Park, founds the Sierra Club 1892

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

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



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)

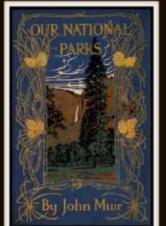
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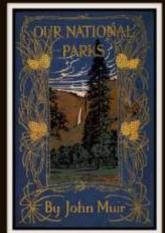


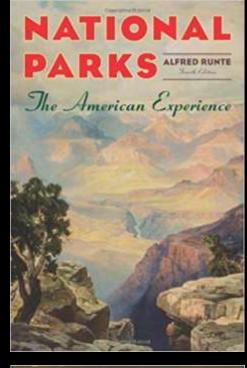


Nature Preservation/Conservation and National Parks

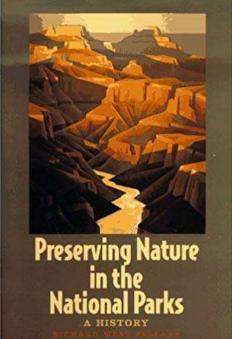
- Paradox of public use to foster nature preservation
- **Railroad Interests and Tourism**
- **Economic Argument The Worthless Land Thesis**
- Yosemite 1864 State Park, 1890 National Park
- Yellowstone 1872
- Mt. Ranier 1899
- **Grand Canyon 1908**
- National Park Service created 1916











The Paradox of Wilderness Preservation/Conservation and National Parks Aldo Leopold

"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."



In 1916, when the National Park Service was created, there were a dozen national parks, all of them in the West, visited by 326,506 people.

Today, 412 parks, national monuments and historic sites cover more than 84 million acres and were visited more than 307 million times last year.

The Prophet of American Nature Conservation
George Perkins Marsh
Humans as "Disturbing Agents" and Unintended Consequences

Man and Nature, or, Physical Geography as Modified by Human Action - George Perkins Marsh Published 1864

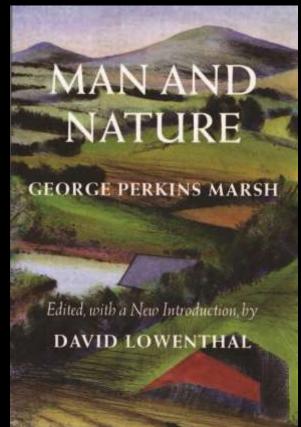
"Man is everywhere a disturbing agent.

Wherever he plants his foot, the harmonies of nature are turned to discord"

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

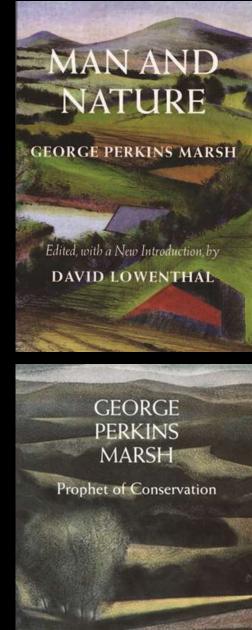


George Perkins Marsh 1801-1882



The Prophet of American Nature Conservation

- 1. <u>Unintended Consequences</u> "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".
- 2. <u>Finite World</u>"...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"
- 3. <u>Usufruct</u> "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."

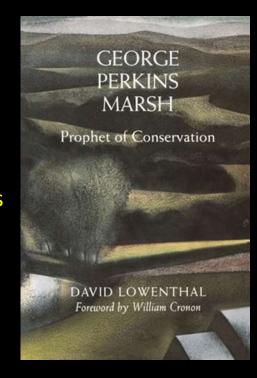


DAVID LOWENTHAL Foreword by William Cronon

Father of American Forest Conservation

"If the present value of timber and land will not justify the artificial replanting of grounds injudiciously cleared, at least nature ought to be allowed to reclothe them with a spontaneous growth of wood, and in our future husbandry a more careful selection should be made of land for permanent improvement. It has long been a practice in many parts of Europe, as well as in our older settlements, to cut the forests reserved for timber and fuel at stated intervals. It is quite time that this practice should be introduced among us."

- 1876 The Office of Special Agent for forest research is created in the Department of Agriculture to assess the state of the forests in the United States.
- 1881 The Office of the Special Agent is expanded into the newly formed Division of Forestry.
- 1891 The Forest Reserve Act of 1891 authorizes withdrawing land from the public domain as "forest reserves," managed by the Department of the Interior.
- 1901 The Division of Forestry is renamed the Bureau of Forestry.
- 1905 The Transfer Act of 1905 transfers the management of forest reserves from the General Land Office (within the Department of the Interior) to the Bureau of Forestry (within the Department of Agriculture). The name of the agency changes to the Forest Service.

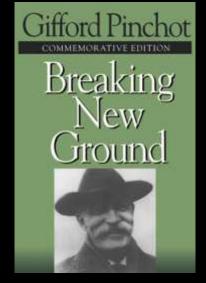


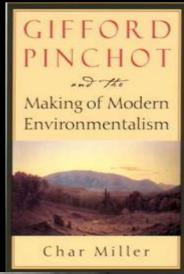


The First Conservationist – Gifford Pinchot Scientific Forestry and Natural Resource Conservation

- 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.
- He and his father 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.





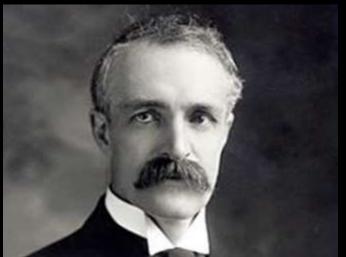




The First Conservationist – Politics and Forests Gifford Pinchot 1865-1946

- 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.
- Pinchot's authority was substantially undermined by the election of President William Howard Taft in 1908. Taft later dismissed Pinchot for speaking out against his policies.
- With Theodore Roosevelt, Pinchot helped to found the progressive Bull Moose Party in 1912.
- In 1920 he was appointed state forester of Pennsylvania and began a systematic administration of the forest areas of that state.
- From 1923 to 1927 and from 1931 to 1935 he was governor of Pennsylvania.



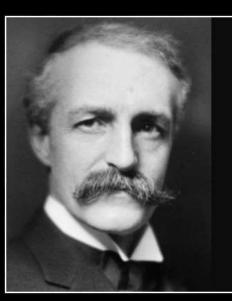


Nature Preservation vs. Natural Resource Conservation

Pinchot saw conservation as a means of scientifically 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."

Wise Use = Conservation for present and future generations



The purpose of conservation: The greatest good to the greatest number of people for the longest time.

— Gifford Pinchot —

AZ QUOTES



President Taft protects Secretary Ballinger as Roosevelt lurks behind Chief Forester Pinchot

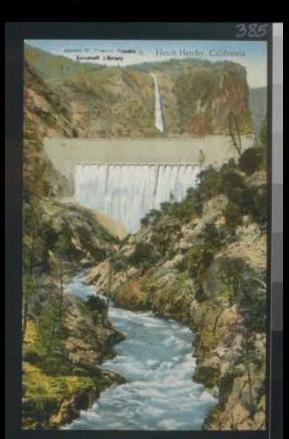
The Hetch Hetchy Debate 1908–1913 Nature Preservation vs. Natural Resource Conservation

"To waste, to destroy, our natural resources, to skin and exhaust the land instead of using it so as to increase its usefulness, will result in undermining in the days of our children the very prosperity which we ought by right to hand down to them amplified and developed."

– President Theodore Roosevelt, State of the Union Speech, December 3, 1907.

- John Muir was the romantic environmentalist (preservationist).
- Gifford Pinchot was the progressive environmentalist (conservationist).





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.







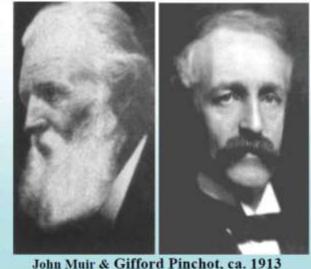


In 1923, the O'Shaughnessy Dam was completed on the Tuolumne River, flooding the entire valley under the Hetch Hetchy Reservoir

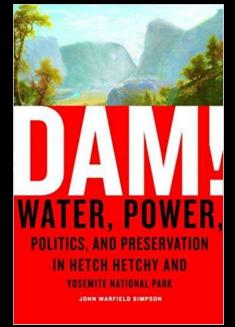


Muir on Hetch Hetchy: ...the Phelans, Pinchots and their hirelings will not thrive forever....

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.



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 other side of the question, to my mind, are simply overwhelming.... I never understood Muir's position on Hetch Hetchy."

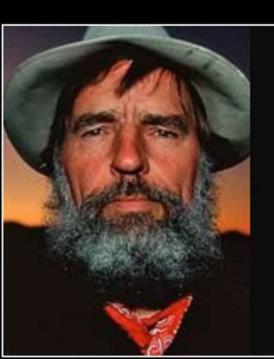








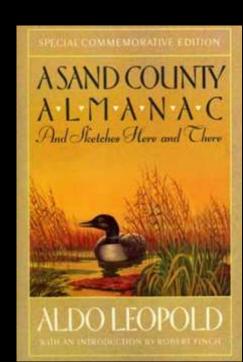
Nature Preservation vs. Natural Resource Conservation Spirit vs. Science



Wilderness is not a luxury but a necessity of the human spirit, and as vital to our lives as water and good bread. A civilization which destroys what little remains of the wild, the spare, the original, is cutting itself off from its origins and betraying the principle of civilization itself.

— Edward Abbey —

AZ QUOTES



Scientific Conservation and Cultural Values
Thinking like a mountain – Aldo Leopold 1887-1948

"A deep chesty bawl echoes from rimrock to rimrock, rolls down the mountain, and fades into the far blackness of the night...

Only the mountain has lived long enough to listen objectively to the howl of a wolf...Only the ineducable tyro can fail to sense the presence or absence of wolves, or the fact that mountains have a secret opinion about them...

My own conviction on this score dates from the day I saw a wolf die...

In those days we had never heard of passing up a chance to kill a wolf. In a second we were pumping lead into the pack...

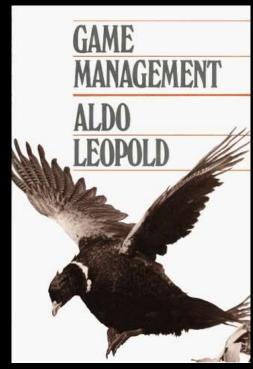
We reached the old wolf in time to watch <u>a fierce green fire dying in her eyes.</u>

I realized then, and have known ever since, that there was something new to me in those eyes - something known only to her and to the mountain. I was young then, and full of trigger-itch;

I thought that because <u>fewer wolves meant more deer</u>, that no wolves would mean hunters' paradise.

But after seeing the green fire die, I sensed that <u>neither the wolf nor the mountain agreed with such a view."</u>





Thinking like a mountain Ecological Vision of How Nature Works

"Since then I have lived to see state after state extirpate its wolves. I have watched the face of many a newly wolfless mountain, and seen the south-facing slopes wrinkle with a maze of new deer trails. I have seen every edible bush and seedling browsed, first to anemic desuetude, and then to death...

I now suspect that just as a deer herd lives in mortal fear of its wolves, so does a mountain live in mortal fear of its deer...

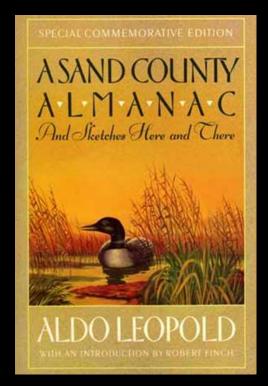
So also with cows. The cowman who cleans his range of wolves does not realize that he is taking over the wolf's job of trimming the herd to fit the range.

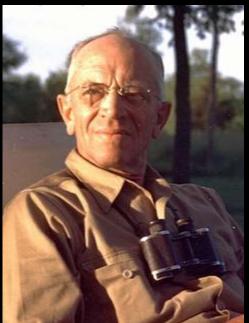
He has not learned to think like a mountain. Hence we have dustbowls, and rivers washing the future into the sea...

Too much safety seems to yield only danger in the long run.

Perhaps this is behind Thoreau's dictum: <u>In wildness is the salvation of the world.</u>

Perhaps this is the hidden meaning in the howl of the wolf, long known among mountains, but seldom perceived among men."





George Perkins Marsh Revisited

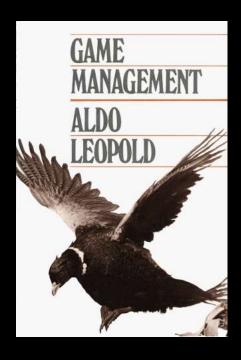
Unintended Consequences and Conservation

The first precaution of intelligent tinkering

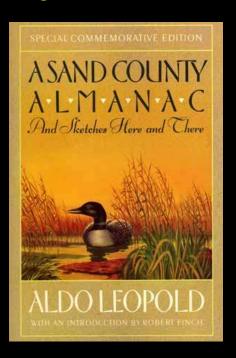
"The last word in ignorance is the man who says of an animal or plant: "What good is it?"

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."



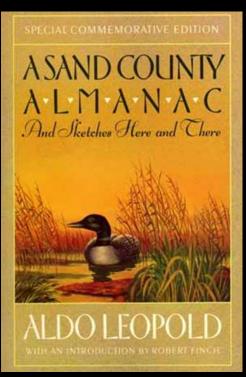




- The Land Ethic the Ecological basis for Environmental Ethics?
- "A thing is right when it tends to preserve the <u>integrity</u>, <u>stability</u>, and <u>beauty</u> of the biotic community. It is wrong when it tends otherwise."
- "The land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land."
- "...In short, a land ethic changes the role of Homo sapiens <u>from conqueror of the land-community to plain member and citizen of it</u>.

It implies respect for his fellow-members, and also respect for the community as such."





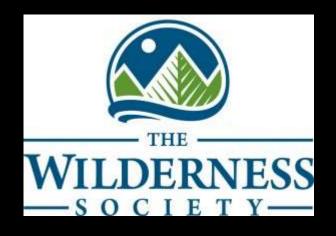
Leopold and Wilderness

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



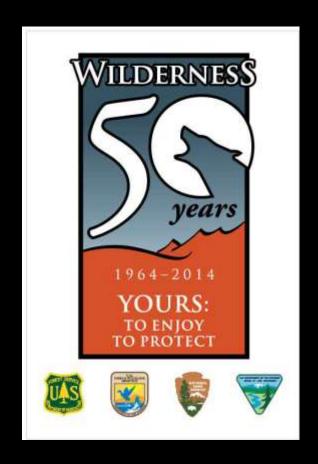






Wilderness And the American Mind

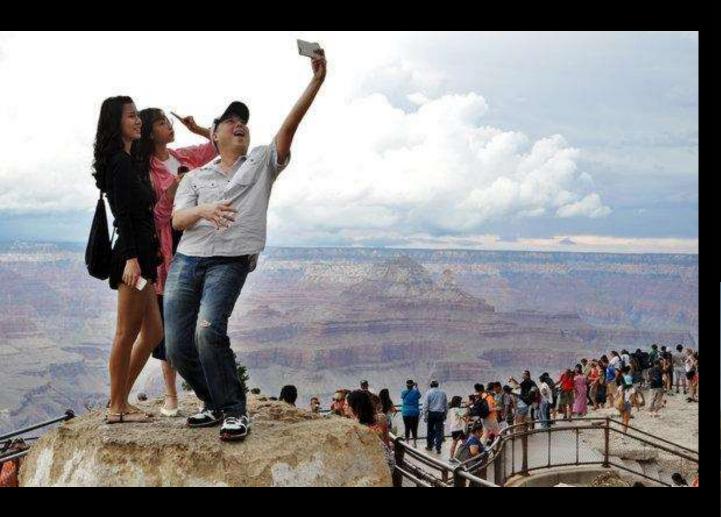


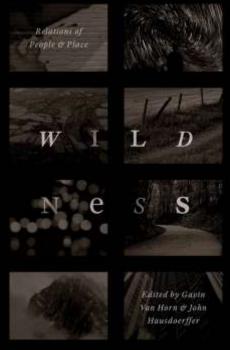


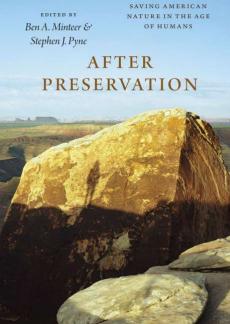
The U.S. Wilderness Act of 1964

Wilderness is defined (both conceptually and legally): "...in contrast to those areas where man and his own works dominate the landscape,...an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain"

Saving American Nature in the 21st Century







Restoring the West

The Buffalo Commons as Regional Metaphor

In 1987, Drs. Frank and Deborah Popper developed their bold new idea for a Buffalo Commons.

The Buffalo Commons is a conceptual proposal to create a vast nature preserve by returning 139,000 square miles of the drier portion of the Great Plains to native prairie, and by reintroducing the American bison that once grazed the shortgrass prairie.

Their continuing research showed that hundreds of counties in the American West still have less than a sparse 6 persons per square mile — the density standard Frederick Jackson Turner used to declare the American Frontier closed in 1893.

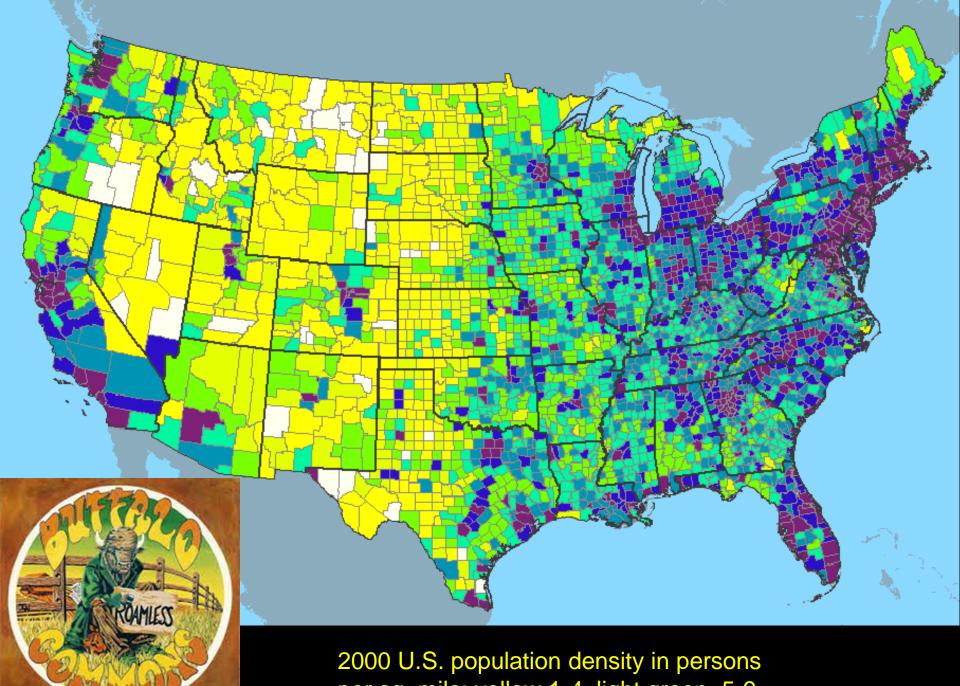
The frontier never came close to disappearing, and in fact has expanded in the Plains in recent years.

The 1980 Census showed 388 frontier counties west of the Mississippi. The 1990 Census shows 397 counties in frontier status, and the 2000 Census showed 402.

Most of this frontier expansion is in the Great Plains. Kansas actually has more land in frontier status than it did in 1890.







per sq. mile: yellow 1-4, light green, 5-9

Rewilding the West

...and Beyond



The Rewilding Institute (TRI) mission is to explore and share tactics and strategies to advance continental-scale conservation and restoration in North America and beyond.

We focus on the need for large carnivores and protected wildways for their movement; and we offer a bold, scientifically credible, practically achievable, and hopeful vision for the future of wild Nature and human civilization on planet Earth.



Dave Foreman, Founder of The Rewilding Institute and coiner of the term "Rewilding"

- From 1976 to 1980, he was a board member for the New Mexico chapter of The Nature Conservancy.
- Co-founded Earth First! in 1980 with Howie Wolke, Ron Kezar, Bart Kohler and Mike Roselle.
- In the 90's, he co-founded The Wildlands
 Project which eventually led to what was
 then called a conservation think-tank, The
 Rewilding Institute, in 2003.

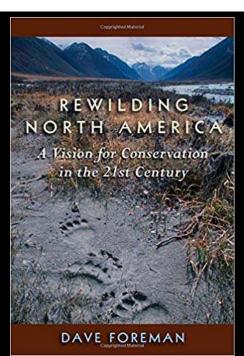
Rewilding – Cores, Corridors, Carnivores

The idea is to actively promote the restoration of large wild vertebrates into North America in preference to the 'pests and weeds' (rats and dandelions) that will otherwise come to dominate the landscape. This 'Pleistocene rewilding' would be achieved through a series of carefully managed ecosystem manipulations using closely related species as proxies for extinct large vertebrates, and would change the underlying premise of conservation biology from managing extinction to actively restoring natural processes

Rewilding North America

A plan to restore animals that disappeared 13,000 years ago from North America offers an alternative conservation strategy for the twenty-first century argue **Josh Donlan** and colleagues.





Rewilding – Cores, Corridors, Carnivores









Resilience, Nature Conservation, and Humans

Peter Kareiva, UCLA Institute of the Environment and Sustainability Former Nature Conservancy Chief Scientist



Conservation is widely viewed as the innocent and uncontroversial practice of purchasing special places threatened by development. In truth, for 30 years, the global conservation movement has been racked with controversy arising from its role in expelling indigenous people from their lands in order to create parks and reserves. The modern protection of supposed wilderness often involves resettling large numbers of people, too often without fair compensation for their lost homes, hunting grounds, and agricultural lands.



- If there is no wilderness,
- if nature is resilient rather than fragile, and
- if people are actually part of nature and not the original sinners who caused our banishment from Eden,
- what should be the new vision for conservation?





Preservation vs Conservation

It would start by appreciating the strength and resilience of nature while also recognizing the many ways in which we depend upon it. Conservation should seek to support and inform the right kind of development -- development by design, done with the importance of nature to thriving economies foremost in mind. And it will utilize the right kinds of technology to enhance the health and well-being of both human and nonhuman natures.

None of this is to argue for eliminating nature reserves or no longer investing in their stewardship. But we need to acknowledge that a conservation that is only about fences, limits, and far away places only a few can actually experience is a losing proposition.

Protecting biodiversity for its own sake has not worked. Protecting nature that is dynamic and resilient, that is in our midst rather than far away, and that sustains human communities -- these are the ways forward now. Otherwise, conservation will fail, clinging to its old myths

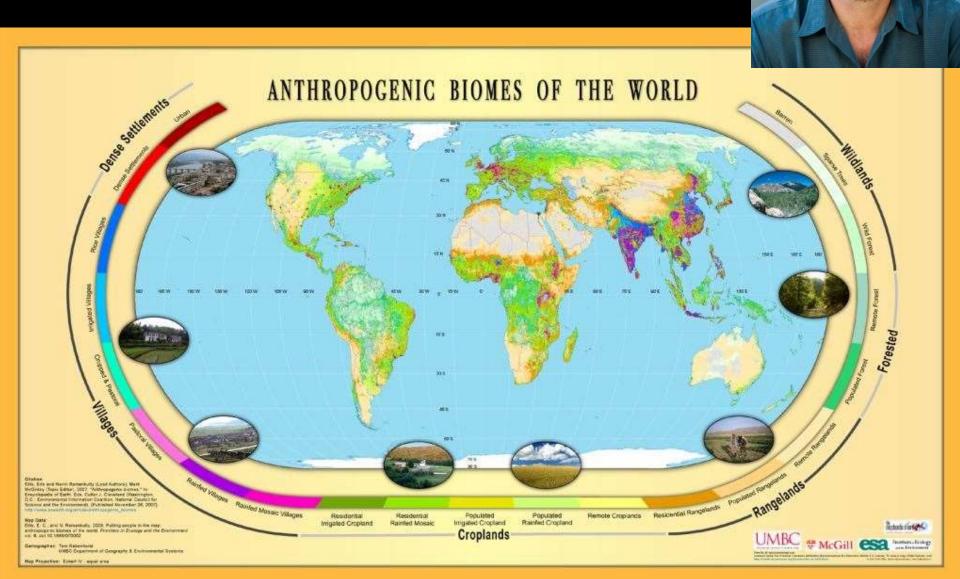






Anthropogenic Landscapes, or "Human Landscapes" http://ecotope.org/ Dr. Erle Ellis

Anthropogenic Biomes ("Anthromes"), describe the globally-significant types of anthropogenic landscapes.



Human-Nature and the American Mind

"Anthropogenic biomes point to a necessary turnaround in ecological science and education, especially for North Americans.

Beginning with the first mention of ecology in school, the biosphere has long been depicted as being composed of natural biomes, perpetuating an outdated view of the world as 'natural ecosystems with humans disturbing them'.

Anthropogenic biomes tell a completely different story, one of 'human systems, with natural ecosystems embedded within them'. This is no minor change in the story we tell our children and each other. Yet it is necessary for sustainable management of the biosphere in the 21st century." Erle Ellis





Henry David Thoreau - Wildness and Human Society

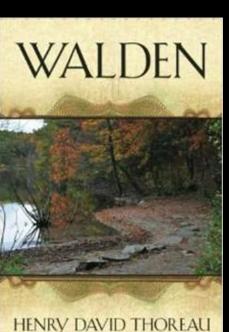
Trying to find a balance between human society and nature.

"I would not have every man nor every part of a man cultivated, any more than I would have every acre of earth cultivated: part will be tillage, but the greater part will be meadow and forest"

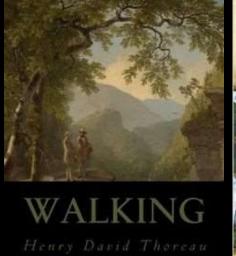
Wildness is the preservation of the world.

Life consists with Wildness. The most alive is the wildest. Not yet subdued to man, its presence refreshes him.

In short, all good things are wild and free.









Ben A. Minteer & Stephen J. Pyne SAVING AMERICAN
NATURE IN THE AGE
OF HUMANS

AFTER PRESERVATION

















