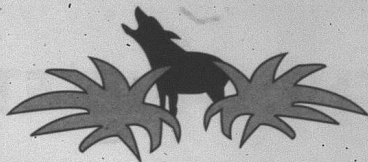


THE LAND ETHIC



A Brief History of the American Land Ethic Since 1492

By J. Baird Callicott

Conservation in the Old World seems to have evolved gradually. No doubt, a parallel, but very different, practice and conception of conservation also independently evolved in the New World. With the wholesale devaluation and destruction of American Indian cultures that occurred during four of the five hundred years of European discovery, conquest, colonization, and finally complete domination of the Western Hemisphere, indigenous New World conservation thought and practice was all but lost.

The depopulation of North America was so thoroughgoing — owing more to what might be called inadvertent biological warfare than to conventional warfare — that the English colonists could imagine that they had settled in a wilderness, not in a country once fully inhabited and significantly transformed by its indigenous peoples. Thus, two allied myths established themselves in the Euro-American consciousness: one, that the whole of North America was a "virgin" wilder-

slaughter of the bison herds, and the subjugation of the Plains Indians, the North American frontier palpably closed and the limits of North America's natural resources dawned on thoughtful Euro-Americans. Against the background of *laissez faire* exploitation — unregulated hunting and fishing, logging, mining, plowing, and so on — the necessity of conservation received a good deal of conscious reflection.

EARLY CONSERVATIONISTS

George Perkins Marsh is generally credited with first articulating an American conservation philosophy in the 1860s in his prophetic book, *Man and Nature or The Earth as Modified by Human Action*.

Marsh was mainly concerned about the adverse effects of deforestation on stream flow, soil stability and fertility, and climate. His conservation ethic was an early American version of contemporary Judeo-Christian stewardship.

Ralph Waldo Emerson and Henry David Thoreau had not attained the essential ecological understanding of the relationship between vegetation, soil, water, and climate that Marsh had. They were principally concerned rather with the aesthetic, psychological, and spiritual paucity of the prevailing American materialism and vulgar utilitarianism. As an antidote, they turned to wild nature — contact with which, they argued, invigorates and strengthens the body, inspires the imagination, energizes the mind, elevates the soul, and provides an occasion for transcending finite human consciousness. Because wild nature is a psycho-spiritual, as well as a material, resource, Emerson and Thoreau argued that Americans should preserve a significant portion of it undefiled.

Emerson and Thoreau thus stand at the fountainhead of the wilderness preservation philosophy of conservation. Thoreau was probably the first American to advocate what eventually became a national wilderness preservation policy: "I think that each town," he wrote, "should have a park, or rather a primitive forest, of five hundred or a thousand acres...where a stick should never be cut — nor for the navy, nor to make wagons, but to stand and decay for higher uses — a common possession

forever, for instruction and recreation."

This philosophy of conservation was energetically promoted by John Muir at the turn of the century. Through his lively writing, thousands of American readers vicariously experienced the beauty and spiritual redemption that he experienced directly and personally during his many and lengthy wilderness sojourns.

FROM NATURE TO NATURAL RESOURCES

Gifford Pinchot, a younger contemporary of John Muir, articulated a very different philosophy of conservation firmly grounded in utilitarian values and closely associated with the world view of modern

classical science. Pinchot crystallized the resource conservation philosophy in a motto — "the greatest good of the greatest number for the longest time." Pinchot bluntly reduced the "Nature" with which Marsh, Emerson, Thoreau, and Muir were variously concerned to "natural resources." And he even equated conservation with the systematic exploitation of natural resources: "The first great fact about conservation," Pinchot noted, "is that it stands for development."

For those who might take the term "conservation" at face value and suppose that it meant, if not nature preservation, then at least saving some natural resources for future use, Pinchot was quick to point out their error: "There has been a fundamental misconception," he wrote, "that conservation means nothing but the husbanding of resources for future generations. There could

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ness of continental proportions; the other, that North America's natural resources and especially its forests were inexhaustible. The second of these is conventionally called "the myth of superabundance."

While the wilderness myth has only been recently debunked, the myth of superabundance was abandoned around the turn of the century. With the completion of the transcontinental railroad, the



Aldo Leopold with saplings.

COURTESY OF UNIVERSITY OF WISCONSIN-MADISON ARCHIVES (PACS 1097)

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THE CONSERVATION SCHISM

John Muir and Gifford Pinchot were, for a time, friends and allies. Their very different philosophies of conservation, however, led to a falling out. The personal rift between Muir and Pinchot symbolizes the schism that split the North American conservation movement into two mutually hostile camps at the beginning of the twentieth century. Pinchot commandeered the term "conservation" for his philosophy, while Muir and his followers came to be known as "preservationists."

Pinchot's philosophy dominated conservation in the public sector of the United States — the Forest Service (of which Pinchot himself was the first Chief), the Fish and Wildlife Service, the Bureau of Land Management, and state departments of natural resources. Muir's philosophy prevailed in non-governmental conservation organizations such as the Sierra Club (which Muir founded), The Wilderness Society, and the Nature Conservancy.

THE LEOPOLDIAN LAND ETHIC

Aldo Leopold was employed by the Forest Service for 15 years. Thus, he began his career as a conservationist solidly in the Pinchot camp. Nevertheless, he gradually came to the conclusion that Pinchot's conservation philosophy was inadequate because it was based upon an obsolete pre-ecological scientific paradigm.

As Leopold put it: "Ecology is a new fusion point for all the sciences... The emergence of ecology has put the economic biologist in a peculiar dilemma: with one hand he points out the accumulated findings of his search for utility in this or that species; with the other he lifts the veil from a biota so complex, so conditioned by interwoven cooperations and competitions that no man can say where utility begins or ends."

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Leopold realized that the Muir-Pinchot schism had left North American conservation in an unfortunate "zero-sum" dilemma: either lock up and preserve pristine nature or efficiently and fairly develop it... and, in doing so, necessarily degrade or destroy it. Reflecting the unequal political strength of the conservationists and the preservationists, the contiguous forty-eight United

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Accordingly, Leopold set out to define conservation in the following terms: as "a universal symbiosis with land, economic and aesthetic, public and private;" as "a protest against destructive land use;" as an effort "to preserve both utility and beauty;" as "a positive exercise of skill and insight, not merely a negative exercise of abstinence and caution;" and, finally, as "a state of harmony between men and land."

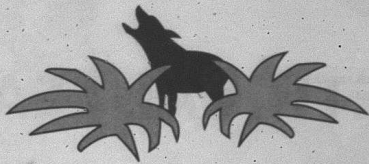
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"Ecosystem integrity," on the other hand, refers to an ecosystem's historic structure — its complement of component species in their characteristic numbers. Maintaining ecosystem integrity, so understood, is a more exacting norm of ecosystem management, since ecosystem functions may be little impaired by the incidental loss of non-keystone species, by the competitive exclusion of native species by exotics, or by

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Leopold's harmony-with-nature philosophy of conservation is the only twentieth century North American philosophy of conservation that seems likely to be viable in the twenty-first century. It recognized that human beings are as much a part of nature as any other species. But it would urge that, like most other species, we human beings learn to live symbiotically with our fellow-denizens in the various ecosystems that we inhabit.

LESSONS FOR ECOSYSTEM MANAGEMENT

From the perspective of Leopold's harmony-with-nature philosophy of conservation, what is ecosystem management? And how does it differ from resource management? Ecosystem management aims, first and foremost, to maintain the health and integrity of ecosystems. Commodity production is a secondary and subordinate aim, to be pursued to the extent that it is compat-

the gradual and orderly change from one-type of community to another.

In addition to directly managing ecosystems to maintain their health and integrity — by prescribed burns, afforestation, culling weedy species, excluding or eradicating exotics, protecting or reintroducing natives, and so on — ecosystem management entails managing human economic activities. It means finding new ways of living on the land. Leopold himself was especially distressed by the increasing industrialization of agriculture during the mid-twentieth century and looked for ways of making agriculture more compatible with ecosystem health and integrity.

A human harmony-with-nature conservation philosophy is more consistent with evolutionary and ecological biology than are both preservationism and resourceism. The ideal of this philosophy of conservation is to share the Earth with all our "fellow-voyagers... in the odyssey of evolution" and to provide all the Earth's species with adequate living space.

As things presently stand, however, to nurture biological diversity at every scale takes more than setting aside habitat. It requires ecosystem management, which is managing ecosystems primarily for their

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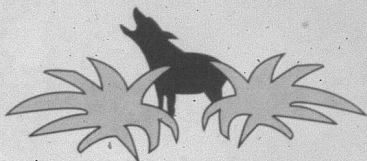
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