

# CONSERVATION COMPASS

## Landscape Legacies – From the Past and to the Future



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IN EARLY JANUARY OF THE first year of the new millennium, I participated in a conference at Duke University with a group of scholars in the fields of ecology, history, and social science to discuss “landscape legacies.” The purpose was to bring a simple truth to the attention of land managers and ecologists. Simply, there is little or no land within the borders of the United States that has not been influenced, to greater or lesser extent, by the actions of people. The outgrowth from that recognition is that those influences on the landscape must be considered in current management. It was my assignment to discuss the role that wildlife has played in forming the landscape legacies that are ours today—and what might be our legacies tomorrow as result of our actions today.

I consulted my friend Webster and found legacy defined as “something transmitted by or received from an ancestor or predecessor from the past.” Landscape was defined as “the land forms of a region in the aggregate.” But landscape is also used as a verb: “to modify or ornament (a natural landscape) by altering the plant cover.”

So, I concluded that we humans, as all species, must exploit our habitat(s) in order to survive. In doing so, we alter that habitat directly or indirectly. The ensuing changes are cumulative, and have been passed down to us as a legacy.

### OF CABBAGES AND KINGS

Over time, varied professions have arisen that include “landscaping” in their tool kits, including foresters, farmers, range managers, wildlife managers, and others. When one of these landscapers carries out a land management action, some species of wildlife will be influenced thereby—for good or ill. Such changes are both immediate and cumulative as plant and animal communities respond to such activities.

The landscapes upon which we impose management today have been influenced by legacies from the past. It is equally important to understand

that the actions we take in the present likewise produce legacies to our successors. This is likely what the ecologist/philosopher Aldo Leopold had in mind when he quoted Robinson’s injunction to Tristram and applied it to humans in geological time:

“Whether you will or not,  
You are a King, Tristram, for you are one  
Of the time-tested few that leave  
the world,  
When they are gone, not the same  
place it was.  
Mark what you leave.”

### HABITAT EQUALS

**WILDLIFE AND VICE VERSA**  
All wildlife is a product of habitat. Overall habitats contain numerous niches that allow the simultaneous existence of many species on the same landscapes at the same time. Each species interacts with other species and with their habitats. Thereby, habitats and animal communities are altered—whether slowly or rapidly, whether obvious or not. So, wildlife are part of the landscape, and individually and collectively, influence the continuing evolution of the landscape.

The interactions between changing plant and animal communities combine with the alterations made by humans. These changes are included in a milieu of yet other influences such as fire, flood, wind, drought, and outbreaks of insects and disease. These factors combine to confound those who would forecast long-term results on the landscape. Current conditions on the landscape are, therefore, both a legacy from the past and the platform on which the landscapes of future generations are to be constructed.

### LAND ALLOCATIONS—A LASTING LEGACY

In the United States, the most dramatic influences on wildlife since the arrival of Europeans were, initially, the devastating reductions in ungulate wildlife during the period of settlement (1650-1880). During that period, species such as elk, whitetail deer, mule deer, and buffalo were reduced

by over 95 percent. The second era, that of lands being reserved and government agencies providing protection, reversed the trend toward extinction. These allocations were followed by an evolution (still continuing) of the stated purposes for the management of those lands to be ever more inclusive of and focused upon wildlife and environmental concerns.

The original intent of the federal government was to transfer the public domain into private ownership. In 1864 this policy was altered when the lands that would become Yosemite National Park were transferred from the United States to the State of California. In 1890 these lands were returned to the federal estate. President U.S. Grant followed this lead with the establishment of Yellowstone Park in 1872.

The Forest Reserve Act of 1891 authorized the President to reserve tracts of forested lands in federal ownership. A series of actions by Presidents between 1891 and 1907 reserved some 140 million acres in what are now known as national forests. Today, some 662.2 million acres are in federal ownership and 155 million acres are in state and local government ownership. This totals 817.2 million acres, or about 35 percent of the total area of the nation.

Over time, fish and wildlife welfare steadily increased as a significant concern in the management of public lands. Other allocations within these publicly-owned areas evolved over time—particularly in the last half of the 20th century—as wilderness areas, wild and scenic rivers, wildlife refuges, national recreation areas, national monuments, and other allocations where the needs of wildlife received ever greater attention from the public and politicians, and even primacy among land managers.

### NEW LAWS PRODUCE NEW FOCUS

In the period 1969-1970, a spate of environmental laws was enacted which combined to dramatically increase the influence of wildlife and the actions taken to favor wildlife

upon landscape legacies. These laws included the National Environmental Policy Act, Endangered Species Act, National Forest Management Act, Multiple-Use Sustained-Yield Act, and Wilderness Act.

As a result, prescriptions for land management were ever more inclusive of actions taken to protect or benefit wildlife. Examples include: sizing, spacing, and timing of timber harvest units, location and closing of roads, retention of dead trees for cavity-nesting birds, and protection of riparian zones. Federal land managers were suddenly leaving far different legacies than had been the case a decade earlier.

#### THE OTHER SHOE DROPS— THE ENDANGERED SPECIES ACT

By the 1990s, compliance with the Endangered Species Act, in combination with the other environmental laws, were forcing frequent and dramatic changes in public land management. For example, adjustments made to deal with threatened species (spotted owls, marbled murrelets, and salmon) in the northwestern United States dropped the timber cut per year from federal lands from 4.5 billion

board feet to some 250 million board feet by the year 2000. Some 4.7 million acres of old-growth forests and highly productive timberlands were placed in reserve to maintain and engender old-growth forest habitats.

Streams were bordered by buffers of 150 to 300 feet in width within which trees could not be cut. Surreally, by 1999, serious consideration was being given to the removal of four power dams in the lower Snake River to allow uninhibited passage for migrating salmon and steelhead. These discussions were taking place in the face of increasing power demand in the West that was rapidly outstripping supply, and “rolling blackouts” became common imagery as power was diverted to California.

Increasingly, private lands were likewise being managed with greater attention to wildlife. By the 1950s, more and more landowners were formulating land management schemes to produce game birds and mammals for their own consumption or for the sale of hunting privileges, or both. Private landowners, individual and corporate, found that the modification of land management to benefit certain species of wildlife was simply good business.

By the 1980s, private landowners were increasingly subject to the vagaries of the Endangered Species Act and state equivalents as manifested in government-imposed constraints on land management. Many private landowners expressed their feeling that these constraints represent a “taking” by the government. So far, the Federal Courts have not agreed. As a result, resentment continues to build in rural communities as more feel threatened.

#### SIGNATURES UPON THE LANDSCAPE

Clearly, landscapers apply their tools, both mental and physical, to alter landscapes. In the process they leave landscape legacies. The ecologist/philosopher Aldo Leopold said:

“I have read many definitions of what is a conservationist, and written not a few myself, but I suspect the best one is written not with a pen, but with an axe. It is a matter of what one thinks about while chopping, or deciding what to chop. A conservationist is one who is humbly aware that with each stroke he is writing his signature on the fact of his land. Signatures of course differ, whether written with axe or a pen, and this is as it should be.”

**Kings write their signatures upon the land. As we kings consider the legacies we leave, we would do well to consider our every stroke with full appreciation of consequences—for today and tomorrow.**



So, I concluded that we humans, as all species, must exploit our habitat(s) in order to survive. In doing so, we alter that habitat directly or indirectly. The ensuing changes are cumulative, and have been passed down to us as a legacy.

Those empowered by the transitory circumstances of land ownership or control write their signatures on the landscape through either action or inaction. It is in the accumulation and breadth in the way these signatures are applied that landscape legacies emerge and are altered, in turn, by succeeding generations of landscapers.

#### PRESERVATION AND ACTIVE MANAGEMENT

Beyond land allocation, there are two primary means through which land management is applied to attaining objectives for wildlife. These are preservation and active management. Mandated responses to meeting the requirements of the Endangered Species Act and the regulations issued pursuant to the National Forest Management Act have increasingly led to preservation schemes (*i.e.*, maintenance of the *status quo*) that largely preclude active management. As these effects accumulate, the numbers of persons adversely influenced rises, and the volume of political debate increases. Various versions of the “spotted owls versus jobs” debate have spread across the nation.

#### ACRIMONY ACCUMULATES

In the Presidential election of 2000, Vice President Al Gore was perceived as a strong proponent of governmental regulation to achieve environmental goals. Governor George W. Bush was perceived as a proponent of modifications in regulations to achieve environmental goals while relieving some regulatory pressure. Political scientists are pouring over the results from that election looking for patterns. Some insights are beginning to emerge.

Vice President Gore carried 676 counties—the vast majority urban in nature. Governor Bush carried 2,436 counties—the vast majority classified as “rural.” Some analysts believe these results can be partially explained by the building resentment of those segments of the “rural” population that are most directly effected by environmental regulations and resultant enforced changes in land management.

Actions taken to maintain threatened and endangered species (in combination with other environmental laws) seems to be a likely factor in catalyzing political opposition and, perhaps, voting patterns.

Obviously, concern over wildlife welfare and actions taken to benefit wildlife has emerged as an increasingly significant factor in determining the landscape legacies that we inherit from the past and those we pass on to the future. However, as times and circumstances change, the signatures that we write upon the land have changed and will change with times and circumstances.

#### LANDSCAPE AND ETHICS

When we worry ourselves, individually and as a society, over the landscape legacies we inherit and those that we are in the process of passing on to following generations, we may be fulfilling Aldo Leopold’s vision. That vision was that we, as a people, are in the process of extending the consideration of ethics beyond the human community to include “soils, waters, plants, or collectively: the land.”

We cannot take that giant mental leap without coming face-to-face with issues of ecological/economic/social equity between ownerships, regions, nations, and generations. Perhaps the most significant question we face over the longer term is how exploitation of the good earth can be carried out, over the generations, in a sustainable and equitable fashion. Such should be the ultimate concern of we who fret over legacies. If we cannot answer that question satisfactorily, there are, over the very long term, simply no other questions worth asking.

#### WILDCARDS AND LEGACIES

We should not be too certain as to where the actions of today will lead us in terms of the landscape legacies we leave. There are simply too many wild cards in the deck—ecological, ethical, economic, social, demographic, legal—to be so certain about the projected outcomes. Constant adjustments in land management techniques will be required as

new knowledge emerges—adaptive management at its best. Yet the mere concept of understanding the landscape legacies we have inherited and fully recognizing that our actions today influence the legacies that we pass on tomorrow is an exciting prospect to ponder as an additional guide to land management.

#### LANDSCAPE LEGACIES AND THE PRIVATE SECTOR

Over the last several decades, private sector organizations have come into being and have flourished by focusing on saving relatively pristine lands from subdivisions and preventing their loss as wildlands or open spaces. Some of these organizations are Ducks Unlimited, the Rocky Mountain Elk Foundation, and the Nature Conservancy. The Boone and Crockett Club has taken a hand in this game with the purchase and operation of the Theodore Roosevelt Memorial Ranch on the East Slope of the Rockies in Montana. More and more private landowners are contributing or selling easements to protect their properties from development in perpetuity, thereby creating a legacy to the landscapes of future generations.

#### KINGS CAN LEARN—AND CHANGE

Those actions alone will leave, at least for the foreseeable future, a legacy of “open space.” But the subsequent management of those lands will determine the legacy of plant and animal communities passed on to the future. We can take some comfort in knowing that we “kings” can learn, evaluate, regret, repent, and redirect power so as to influence the landscape legacies we are always in the process of creating.

We kings have come to understand that our powers are limited by the constraints that nature and past actions impose. Kings write their signatures upon the land. As we kings consider the legacies we leave, we would do well to consider our every stroke with full appreciation of consequences—for today and tomorrow. ▲▲▲