

## Deconstructing Myths Influencing Protected Area Policies and Partnering with Indigenous Peoples in Protected Area Co-Management

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Myths are powerful drivers of individual and national behavior. Quantitative Western science is not immune to myths, either. Science is, at bottom, about measurement in the process of hypotheses testing with replicable experiments. It is a powerful methodological tool. But unconscious and unarticulated cultural myths still determine what kinds of questions science does or does not ask; what its powerful lens focuses on or does not. Moreover, Western science is not the only valid epistemology. Native science, or traditional ecological knowledge (TEK), is far more inclusive and includes multi-generational observations of environmental changes and plant and animal knowledge. Both epistemologies—qualitative Native science and quantitative Western science—are now needed to better address unprecedented environmental degradation and change. But deconstruction of two prevailing myths will need to happen before Western science sees the value of the contributions indigenous cultures can make to ecological restoration and conservation for the protection of biodiversity, and before true co-equal partnering in the stewardship of protected areas can take place.

The first myth is the separation of human cultures with a history of good stewardship from what is considered “natural.” This myth is really not very old in the West—about 150 years old. It has replaced an earlier myth of indigenous peoples considered so much a part of nature that European colonials viewed them as incapable of being objective enough to manage nature or even themselves. Before the middle of the 19th century in the United States, Catlin, Thoreau, Audubon, and other environmental leaders were calling for national parks for both Indians and animals. But since Yellowstone was established as the world's first national park in 1872, a gradual shift has taken place which has increasingly viewed indigenous peoples as either of no beneficial consequence to natural systems or as actually harmful to them. Today, with the exportation of the Yellowstone model to every continent on earth, indigenous peoples are being evicted from their homelands to protect wildlife and so scientists can do “pure” scientific research. Both myths—first, indigenous peoples as part of nature, and then as separate from nature—promote the idea that indigenous peoples are ecologically incompetent or inappropriate.

The characterization of native peoples as ecologically harmful or incompetent has had disastrous consequences for both ecosystems and cultures. So has the second myth: Nature is entirely autogenic or self-regulating and in a perpetual state of balance or homeostasis, always returning to its optimal pre-disturbance state. Therefore nature is best studied or understood without humans. Even though a new ecological paradigm has been emerging over the last quarter-century that views nature as non-linear, asymmetrical, stochastic, chaotic, and with the potential, following disturbance, of not one but several possible pathways to recovery different from its pre-disturbance state (and not necessarily with the most optimum

result), government protected area policy-makers and managers are still living in the older, discredited intellectual world of homeostasis.

The consequences of these two myths to indigenous cultures have been catastrophic:

- Forced removal from homelands;
- Exclusion from livelihoods, resources, sacred sites, traditional cultural landcare practices, and knowledge;
- Loss of access to resources and equity in management in ancestral lands now designated as protected areas;
- Lack of secure land tenure;
- Landlessness;
- Joblessness;
- Homelessness;
- Political and economic marginalization;
- Identity loss;
- Psychological and social pathology, drug and alcohol addiction, abuse of spouses or children;
- Food insecurity and poor nutrition;
- Increased morbidity and mortality (coronary disease, diabetes, obesity, high infant mortality, short life spans);
- Disruption of social and economic institutions (traditional land tenure regulatory structure, i.e. self-governance of herding, hunting, fishing, gathering);
- Loss of native languages; and
- Loss of confidence in spiritual beliefs and medicine people.

Consequences to ecosystems occupied until eviction by indigenous communities have also been dire. These vacated homelands can be described as cultural landscapes—environments cared for over enough time (hundreds to thousands of years) to have helped shape, along with non-human processes and species, ecosystem structure and composition in some of the most productive, biodiverse, and unique plant communities. These include, in North America, oak–pine savannas and woodlands, prairie, wetlands, high-elevation montane meadows and woodlands, riparian areas, Great Basin pinyon–juniper savannas, Southwest U.S. desert grasslands, *Sequoia gigantea* forests, and whitebark pine communities. Frequent low-intensity burning by aboriginal peoples not only enhanced the productivity of the communities just described, but improved the productivity and diversity of resource-poor ecosystems such as redwood forests, boreal forests and wetlands, and other conifer forests by creating and maintaining various-sized gaps and openings, thus increasing structural and compositional heterogeneity and species richness. Ecological productivity translated into cultural plant and animal productivity. Even in regions of high lightning-fire frequency, such as the U.S. Southwest and Southeast, Indians couldn't always rely on lightning to strike and burn a particular patch or habitat when it was needed. Global examples of indigenous-enhanced resource-poor environments include Mediterranean mulga scrub, Australian eucalyptus forest, and sedgelands.

These time-tested and ecologically appropriate cultural landcare practices were as “natural” as any other non-human dynamic by a species, element, or process. Aboriginal people were in fact a keystone species and top carnivore in their far-reaching ecological effects. And like any other keystone species, when they are removed from their roles in ecosystems, unintended negative cascading effects occur.

The homeostasis myth has been the most persistent and has had the most negative consequences for natural systems in protected areas. A well-known example is Yellowstone National Park’s management of elk. Tourists adore elk and come expecting to see them in large numbers. So the park encouraged elk by eliminating predators such as cougars and wolves (and a number of lesser predators as well). Elk multiplied, and as herds grew (artificially fed with hay in winter), they eliminated aspen, willows, and other riparian vegetation. Deprived of a major food source, beavers soon disappeared. Ranges were severely overgrazed, eliminating native species and encouraging exotic grasses and forbs.

Unbelievably, managers expected that elk birthrates would automatically drop and death rates would rise when elk exceeded the carrying capacity of the land. What they did not understand, or chose not to examine, was the long history of aboriginal involvement with Yellowstone as carnivores even more effective than wolves in reducing game numbers: the all-year “Sheepstealer” Bannock residents, and the Kicked-in-the-Belly Band of Crow, Shoshone, Utes, and Blackfoot who hunted there in the summer. Removal of Indians and wolves was devastating to Yellowstone’s ecosystem.

But that was yesterday. Today, wolves (but not Indians) have been re-introduced. Yet, while wolves are beginning to take a toll on elk, elk numbers still far exceed the carrying capacity of the range. Beavers are still not anywhere near historical numbers. And wolves, to survive in the *long term* in an artificially small ecosystem which is now a park surrounded by hostile ranchers, need beaver as a winter supplemental food source in order to stay in the park.

Another example of ecological problems resulting from an uncritical acceptance of the myth of homeostasis is that natural lightning-fire regimes, *not supplemented by Indian burning*, are sufficient to maintain healthy ecosystems in the northern Rockies. The Yellowstone fires of 1988 were catastrophic for some, but for park managers, many fire ecologists, and most environmentalists, it was nature’s way of rejuvenating the land—despite the relatively high percentage of places where the soil was sterilized by the extreme heat of stand-replacing fires. It was viewed as “natural” even though a number of fire cycles of lesser severity had been missed, and fuel loads were unhistorically high, and was therefore far outside of the natural or historical range of variability.

Lodgepole pine regeneration—millions of new seedlings growing out of the ashes—was viewed as a successful natural event. Apparently, few realized that whitebark pine, an endangered keystone community of critical importance to the life cycles of grizzly bears, red squirrels, and Clark’s nutcrackers, had extended historically downslope to the lodgepole pine belt, where historic periodic light Indian burns reduced fuel loads and took out enough lodgepole regeneration that smaller, non-contiguous stands burned up after 80 to 100 years or longer *without a major, region-wide conflagration*. But, in 1988, crowded, senescent lodgepole stands were ready to go up in a very unnatural way.

Indian burning at elevations below and into the lodgepole belt protected the whitebark pine community by regularly reducing fuel loads and thinning lodgepole saplings and poles. Moreover, lodgepole seedling establishment is faster than that of whitebark pine. Whitebark pine seedling establishment did not occur until 1990 and 1991—too late to compete successfully with lodgepole pine. And that was only from the few whitebarks that did not burn up in 1988.

Of course, a half-century of effective fire suppression played an important role. But with the removal of Indians from Yellowstone and surrounding areas after 1872, that many more low-intensity fire cycles were lost. This monumental oversight by park managers was encouraged by a phenomenon known as “shifting baselines.” Lightning-ignited fires have always played an important role in the northern Rockies, with fires in the higher elevations kept in check by a colder, wetter environment—but only when fuel loads at lower elevations were kept in check by lightning *and* Indian fires. Leaving Indian burning and lower-elevation whitebark pine stands out of historical baselines in this case masked the true damage done by the Yellowstone fire. (White pine blister rust and infestations of mountain pine beetle of course are other factors in whitebark pine mortality, yet studies show the benefits of smoke from regular low-intensity fires in reducing pathogens such as blister rust as well as the benefits of light prescription fires—the historical fire regime which includes Indian burning—in enhancing tree vigor and resistance to beetles.)

Examples like these abound throughout the world where indigenous peoples have been removed from their homelands. The most egregious cases involve environmental BINGOs (big international nongovernmental organizations) such as the World Wide Fund for Nature, Conservation International, and The Nature Conservancy. BINGOs have bought into the myth that nature works best without humans—even humans who have a proven track record in ecologically sustainable landcare practices. They in turn influence the eviction policies of third-world governments. They just look the other way when evictions occur.

Today, Indians still remember with a mixture of sadness and anger how they were forced out of their homes; homelands; hunting, fishing, and gathering places; and livelihoods. Trust can only be restored by granting access to and co-management of their ancestral lands in protected areas. In a changing world, the time has come for real, co-equal partnering between dispossessed tribes and governments. Access, equity, and the legal right to sustainable stewardship of resources with traditional practices such as intentional fire are the touchstones of restored trust. Reciprocity is now in order. But restitution has to come before reconciliation and restoration. Government policy-makers need to consider the following concrete steps:

- Reserved treaty rights law, traditional resource rights, and intellectual property rights need to be enforced and facilitated.
- Remove the distinction between “historic” and “nature.” For example, amend the U.S. National Historic Preservation Act by expanding the definition of “cultural resources” to include culturally important biological species (e.g., protect the plants used, not just the artifacts that processed the plants and their seeds).
- Expand the definition of “ecological integrity” to include competent and time-tested traditional cultural landcare practices.

- Encourage the recognition by Western science of the *ecological* importance of Native landcare systems. Instead of a hard and fast line between “historical-cultural” and “natural,” there is a continuum which runs from self-organizing, autogenic nature at one end to purely historic sites (e.g., buildings, places where artifacts occur) or ecologically inappropriate landscapes at the other end. Between these two extremes is where culture overlaps with nature (cultural landscapes)—indeed where culture *is* nature.
- Let dispossessed tribal peoples tell the true story of how national parks were created. Educational material for parks should be co-authored by both protected area managers and indigenous elders who have lived through the nightmare of dispossession and loss of identity with place.
- Assign as much weight to culture impact statements as to environmental impact statements.

We have seen changes recently in government policy-makers toward indigenous reserved treaty rights and access to and co-management of protected areas. Associative cultural landscapes are now increasingly seen not just in terms of material evidence of *past* cultural activities, but in terms of present spiritual significance of place and the importance of the continuation of past practices into the present and beyond, as well as the indivisibility of cultural and natural values in the aboriginal landscape. Examples are Tongariro National Park in New Zealand; Uluru-Kata Tjuta National Park in Australia (and the Australian Natural Heritage and Burra Charters); the Laponian Area in Sweden; IUCN’s category V (protected landscapes); changes in Parks Canada policies where 50% of Canada’s aboriginal peoples now have access to traditional sacred and natural/cultural resource areas; and the blending of cultural and economic activities with nature conservation in Mexican parks.

The U.S. lags far behind in accommodating indigenous peoples. Only Death Valley National Park has allowed some small measure of co-management to the Timbishe Shoshone. Even here, their legal tenure as co-managers hangs by the thin thread of an executive order by President Clinton. If U.S. national parks really believe in diversity—i.e., in biocultural diversity in the case of co-management—they need to follow the example of other countries and embrace the future in a changing world.

## References

- Adams, J.S., and T.O. McShane. 1992. *The Myth of Wild Africa: Conservation without Illusion*. Berkeley and Los Angeles: University of California Press.
- Brockington, D., and J. Igoe. 2006. Eviction for conservation: A global overview. *Conservation and Society* 4:3, 424–470.
- Buggey, S. 1999. *An Approach to Aboriginal Cultural Landscapes*. Ottawa: Historic Sites and Monuments Board of Canada.
- Chase, A. 1987. *Playing God in Yellowstone: The Destruction of America’s First National Park*. San Diego: Harcourt Brace Jovanovich.
- Cram, F. *Maori and Science: Three Case Studies*. Auckland, New Zealand: University of Auckland, International Institute for Maori and Indigenous Education.
- Dowie, M. In prep. (Global survey of evictions from protected areas.)

- Keenleyside, K. 2006. *Draft Standards and Guidelines for Ecological Restoration in Canada's Protected Natural Areas*. Gatineau, Quebec: Ecological Integrity Branch, Parks Canada Agency.
- Keller, R.H., and M.F. Turek. 1998. *American Indians and National Parks*. Tucson: University of Arizona Press, Tucson, Arizona.
- Lanner, R.M. 1996. *Made for Each Other: A Symbiosis of Birds and Pines*. New York: Oxford University Press.
- Martinez, D. 2006. *Ecocultural Restoration Standards and Policies for Parks Canada Restoration*. Sydney, B.C., and Ottawa: N.p.
- Martinez, D., and E. Higgs. 2004. Cultural Landscape policy sections, Society for Ecological Restoration International, Science and Policy Working Group. *The SER Primer on Ecological Restoration*, ver. 2. Tucson: Society for Ecological Restoration.
- Nabakov, P., and L. Lawrence. 2004. *Restoring a Preserve: A Documentary Overview of Native America and Yellowstone National Park*. Norman: University of Oklahoma Press.
- Smith, L.T. 1999. *Decolonizing Methodologies: Research and Indigenous Peoples*. London and Dunedin, New Zealand: Zed Books and University of Otaga Press.
- Spence, M.D. 1997. *Dispossessing the Wilderness*. New York and Oxford: Oxford University Press.
- Tomback, D.F., S.F. Arno, and R.E. Keane, eds. 2001. *Whitebark Pine Communities: Ecology and Restoration*. Covelo, Calif.: Island Press.
- Worster, D. 1994. *Nature's Economy: A History of Ecological Ideas*. 2nd ed. Cambridge, U.K.: University of Cambridge Press.