

WILDERNESS—NOW MORE THAN EVER A RESPONSE TO CALLICOTT

REED F. NOSS (1994)

J. Baird Callicott's "A Critique of and an Alternative to the Wilderness Idea" is peculiar. It is nicely written and erudite, and it definitely provokes thought. But it also provokes, at least in me, a good deal of frustration. Many of us in the conservation movement have worked hard for years to promote ecological and evolutionary understanding as the logical foundation for land conservation (land in the sense Aldo Leopold used it, including air, soil, water, and biota), but coupled with the aesthetic and ethical appreciation of wild things and wild places for their own sakes. Following Leopold, we have tried to unite brain and heart, rationality and intuition, in the struggle to defend wild nature. Yet here comes Callicott, a leading environmental ethicist, a Leopold scholar, a professed lover of wildness, mounting an attack on the concept of wilderness. This article is only the latest in a series of essays in which Callicott assails the idea of wilderness as anachronistic, ecologically uninformed, ethnocentric, historically naive, and politically counterproductive. I believe Callicott is dead wrong and I will try to tell you why.

First, I must state emphatically that I agree with much of Callicott's essay. His progressive interpretations of biosphere reserves, buffer zones, transition zones, sustainable livelihood, and ecological management are all in line with what I and many others affiliated with the Wildlands Project have supported and proposed. But Callicott portrays all these integrative concepts as alternatives to wilderness protection, as things conservationists should spend their time on instead

of defending wildlands. To support his contention that the wilderness idea no longer has merit, Callicott erects a straw man of wilderness (based essentially on the Wilderness Act of 1964) that is thirty years out of date. No one I know today thinks of wilderness in the way Callicott depicts it. Anyone with any brain knows that wilderness boundaries are permeable, that ecosystems are dynamic entities, that humans are fundamentally part of nature (though arguably a malignant part), and that ecological management is essential in most modern wilderness areas and other reserves if we want to maintain biodiversity and ecological integrity. To “let nature run its course” in small, isolated reserves burgeoning with alien species and uncontrolled herbivores is to watch passively while an accident victim bleeds to death.

Callicott claims that “several recent and not so recent realizations are subverting this simple philosophy of nature conservation through wilderness preservation.” He goes on to provide a number of arguments in support of his thesis that the wilderness ideal is no longer useful. I will agree that “hands-off” wilderness areas in human-dominated landscapes often have minimal ecological value. But they do have some worth, for instance in serving as reference sites (though imperfect) for restoration and management experiments and as microrefugia for species sensitive to human disturbances. It is an overstatement to claim that wilderness preservation has failed. Indeed, one could more easily conclude from recent evidence over most of the continent that it is multiple-use management that has failed. Multiple-use areas, which constitute the vast majority of public lands, have been degraded far more than virtually any of our wilderness areas (Callicott himself provides several examples from the Greater Yellowstone Ecosystem). Roads run everywhere, the last old-growth forests are being converted to two-by-fours, cows munch and shit their way across public rangelands, and “ecosystem management” propaganda is being used to justify continuation of the status quo under a new guise. This evidence only strengthens the argument that we need more—not less—area

off-limits to intensive human exploitation. The more degraded the overall landscape becomes, the greater the value of real wilderness, even though it becomes ever harder to protect.

Callicott is absolutely correct that biological conservation was not a major consideration in the designation of existing wilderness areas. The biased allocation of land to wilderness—where areas of little economic value, except for recreation and tourism, are protected instead of more productive and biodiverse areas—is well known. That warped, unecological approach to wilderness protection has been thoroughly exposed in the technical and popular literature of conservation. Modern conservation programs, from mainstream government projects such as the National Biological Survey’s Gap Analysis to avant-garde efforts such as the Wildlands Project, are trying to correct this imbalance and better represent the full spectrum of biodiversity in protected areas. Callicott’s criticism of the wilderness movement on these grounds is disingenuous; we have learned and we have matured. We will no longer tolerate sacrifices of productive wildlands in exchange for a few scraps of rock and ice. Callicott’s claim that wilderness preservation is purely “defensive” only reflects the assaults wild areas face everywhere. Of course we are defensive. If we did not defend the last remaining wild areas, they would soon be gone. We lose most battles as it is; if we gave up, nothing would remain for long. Anyway, the wilderness movement today is not purely defensive. Indeed, the Wildlands Project seeks to move away from defensive, last-ditch efforts, away from saying what should not be done toward saying what should be done to restore whole ecosystems in all regions.

Callicott devotes quite a bit of space in his essay to the problem of excluding humans from wilderness when humans are really part of nature. I know of no philosophical problem more recalcitrant than the whole question of “what is natural.” Hell if I know. But Callicott doesn’t make much headway toward resolving this issue either. I agree that it was a mistake to extend the standard American model of national

parks to developing countries and exclude indigenous hunter-gatherer cultures from these areas. The idea that wilderness can include all primates except for the genus *Homo* is ridiculous. It is not ridiculous, however, to exclude people living profligate, subsidized, unsustainable, industrial lifestyles (including Callicott and me) from permanent habitation in wilderness areas. Even to exclude “native” people from some reserves is not ridiculous when these people have acquired guns, snowmobiles, all-terrain vehicles, bulldozers, and modern medicine. It is not exclusion from these reserves that separates us from nature; it is our culture and our lifestyles, which had already separated us long before we began designating wilderness areas. Yes, the Darwinian revolution united us with nature intellectually; but we have been trying our damndest to separate ourselves from nature emotionally and physically since Neolithic times (at least).

The problem of our estrangement from nature may lie in the increasing dominance of cultural over biological evolution in the past few millennia of our history. This cultural-biological schism also requires that we take measures to protect wild areas and other species from human exploitation, if they are to survive. The adaptations of most species are determined by biological evolution acting through natural selection. Except for bacteria species and some invertebrate species that have very short “generation” times, biological evolution is much slower than cultural evolution, taking hundreds or thousands of years to express itself. Through cultural evolution humans can respond much faster than most other species to environmental change. Because most environmental change today is human generated, we have created a situation in which our short-term survival is much more assured than that of less adaptable species. Some of these species are extremely sensitive to human activities. It seems to me that an environmental ethic, as Leopold, Callicott, and others have expressed it, gives us an obligation to protect species that depend on wilderness because they are sensitive to human persecution and harassment. I hasten to add that

few species “depend” on wilderness because they prefer wilderness over human-occupied lands; rather, they require wilderness because humans exterminate them elsewhere. Roadlessness defines wilderness. Where there are roads or other means of human access, large carnivores and other species vulnerable to human persecution often cannot survive.

Callicott correctly criticizes the idea of wilderness as a totally “unmanaged” landscape. I differ from some modern wilderness advocates in emphasizing that most wilderness areas today must be actively managed if they are to maintain the “natural” conditions for which they were set aside (see my book with Allen Cooperrider, *Saving Nature's Legacy: Protecting and Restoring Biodiversity*, Island Press, 1994). Certainly Native Americans managed the ecosystems in which they lived, principally through the use of fire. I think the evidence is plain that at some level of management *Homo sapiens* can be a true “keystone species” in the most positive sense, in that we can enrich the diversity of habitats and species in the landscape. We can play a role similar to that of the beaver, prairie dog, bison, woodpecker, or gopher tortoise, by providing habitats upon which many other species depend. Above some threshold of manipulation, though, biodiversity enhancement becomes biodiversity destruction. Diversification becomes homogenization. Man as part of nature becomes man at war with nature. We become too damn clever for our own good. I do not believe that human management or technology is inherently bad; but once we have crossed the threshold, we become a tumor instead of a vital part of the ecosystem. Again, this transformation provides all the more reason to set wild areas aside and protect them from human invasion. Those wild areas may very well require management, but the most positive management will usually be protection from overuse by people, restoration of structures and processes damaged by past human activities, and disturbance management (for instance, prescribed burning) to substitute for natural processes that have been disrupted.

Callicott's straw man of wilderness reaches its zenith in his statement that "wilderness *preservation* [his emphasis] suggests freeze-framing the status quo ante, maintaining things as they were when the 'white man' first came on the scene." While it is logically consistent, such an interpretation of the wilderness ideal is idiotic. No ecologist interprets wilderness in the static, pristine, climax sense that Callicott caricatures it. Nonetheless, to throw out knowledge of the historical, pre-European condition of North American landscapes would be equally stupid. Those presettlement ecosystems developed through thousands and even millions of years of evolution of their component species without significant human intervention [excepting the possible role of human hunters in eliminating many of North America's large mammals 10,000 to 15,000 years ago]. Sure, the environment in which these communities developed was dynamic, but the rate and magnitude of change was nothing like that experienced today. As ecologists Stewart Pickett, Tom Parker, and Peggy Fiedler (in *Conservation Biology*, edited by P. L. Fiedler and S. K. Jain, Chapman and Hall 1991) pointed out with regard to the "new paradigm in ecology," the knowledge that nature is a shifting mosaic in essentially continuous flux should not be misconstrued to suggest that human-generated changes are nothing to worry about. Instead, "human-generated changes must be constrained because nature has functional, historical, and evolutionary limits. Nature has a range of ways to be, but there is a limit to those ways, and therefore, human changes must be within those limits."

Yes, many North American ecosystems were managed by Indian burning for perhaps as long as 10,000 years; but in most cases, the Indians did not create new ecosystems. They simply maintained and expanded grasslands and savannas that developed naturally during climatic periods with high fire frequency. Furthermore, the importance of Indian burning is often exaggerated. As many ecologists have pointed out, the natural thunderstorm frequency in some regions, such as the Southeastern Coastal Plain, is more than enough to explain the

dominance of pyrogenic vegetation there. In any case, the native Americans in most cases (megafaunal extinctions of the late Pleistocene aside) clearly operated more within the functional, historical, and evolutionary limits of their ecosystems than did the Europeans, who transformed most of the North American continent in less than 200 years. The modern wilderness idea, as embodied in the Wildlands Project, does not say humans are apart from nature. It simply says, in line with Leopold's land ethic, that we need to impose restraints on our actions. We need to keep ourselves within the limits set by the evolutionary histories of the landscapes we inhabit. Until we can bring our numbers down and walk humbly everywhere, let us at least do so within our remaining wild areas.

Callicott discusses the biosphere reserve model as if it were an alternative to wilderness. I agree that the biosphere reserve model is useful—we base our wildlands network proposals on an extension of that model. Biosphere reserves are not, however, an alternative to wilderness. In fact, wilderness is the central part of the biosphere reserve model: the core area. Without a wilderness core, a biosphere reserve could not fulfill its function of maintaining the full suite of native species and natural processes. A wilderness core area may still require ecological management, especially if it is too small to take care of itself (less than several million acres). A healthy long-term goal is to recreate core areas (ideally at least one in every ecoregion) big enough to be essentially self-managing, areas that do not require our constant vigilance and nurturing. Those true wilderness areas will have much to teach us about how we might dwell harmoniously with nature in the buffer zones.

Callicott's alleged dichotomy of "either devote an area to human inhabitation and destructive economic development, or preserve it in its pristine condition as wilderness" is false. The reserve network model applied by the Wildlands Project recognizes a gradient of wild to developed land, but encourages a continual movement toward the wild

end of the gradient over time as the scale and intensity of human activities decline. And human activities must decline if Earth is to have any future. Callicott's idea of "sustainable livelihood" is entirely consistent with this model. But how are we to figure out how to manage resources sustainably (while sustaining all native species and ecological processes) without wild areas as benchmarks and blueprints? How are we to show restraint in our management of resources in the landscape matrix when we don't have enough respect to set aside big, wild areas for their own sake?

We need no alternative to wilderness. Rather, we need to incorporate the wilderness ideal into a broader vision of recovered but dynamic landscapes dominated by wildland but complemented by true civilization. As Ed Abbey stated, a society worthy of the name of civilization is one that recognizes the values of keeping much of its land as wilderness. We need the wilderness ideal in these days of frivolous "ecosystem management" more than ever before. We need it to provide a "base-datum of normality," as Leopold put it, to give us reference sites for comparison with more intensively managed lands. We need it to counter the arrogant belief that we can manage and control everything. We need it to inspire us, to put our lives at risk, to humble us. And, more importantly, the bears need it too.