

# Managing for Wilderness Experiences in the 21<sup>st</sup> Century: Responding to the Recent Wilderness Critique

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**Abstract**—This essay describes five major critiques of the wilderness idea and how wilderness managers might shape experience opportunities in wilderness in response. These challenges include the notions that the wilderness idea separates people from nature, that it denies the human story in “pristine” lands, that it privileges a kind of recreation favored by elites and consumed by gadgets, that it distracts attention from the environmental crisis at home, and that wilderness management is based on an outmoded concept of naturalness. My suggestions include management directives and educational programs that encourage more intimate contact with wilderness and with the resource. Educational programs must extend beyond Leave No Trace to include active partnership with managers in care of the wilderness, in programs for resource monitoring, and Adopt a Spot. Educational programs must foster experiential benefits, learning about the environment, and commitment to environmental sustainability beyond the wilderness boundaries and the visit. Researchers and managers need to focus on the meaning and facilitation of primitive experiences in wilderness, with special concern given to recent modern entertainment and communication technology in wilderness. Finally, managers, with input from an informed public, must consider alternate models to the protection of wild ecosystems and landscapes: “hands off,” ecological integrity, historical fidelity, and ecological resilience.

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## Introduction

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At many levels, wilderness represents one of America’s great success stories. The idea of wilderness, its meanings in the American mind, has changed profoundly over the decades and the centuries. Each successive wave of immigrants coming onto American soil and bringing with them their unique set of cultural, religious, and scientific beliefs about nature assigned new meanings to wilderness. Immigrants moved across the American continent, confronted wilderness, and changed wilderness. But just as surely, wilderness changed the immigrants,

and in the process helped to make them Americans, a hardy and independent people forged on the frontier. Artists, painters, and writers travelled with early exploratory parties and settlers and their romantic images and stories of the wild and rugged landscape of the West captured the hearts and minds of opinion leaders back East (Nash, 1982). Through time, attitudes about wilderness changed and wilderness took on new and multiple meanings. Thus, by the mid-twentieth century, wilderness was a place to find God, to find larger truths, to step away from the evils of industrialization and consumerism, to find serenity and peace, to confront the sublime in all its beauty or horror, to step back from modernity and all its “too-muchness,” to face challenge and test one’s skills, to test one’s virility, to contact raw wild nature, to escape noise and din, to escape technology, to live more simply, to respect and protect other creatures of the planet, to let other creatures be, to practice restraint, to experience firsthand the mystery and powers of the primal evolutionary forces of nature... in short, in the words of Henry David Thoreau (Torrey and Allen 1906), to confront only the essential facts of life, lest when we come to die, discover we have not lived. It all seems so good. It all seems so American.

Then the 1964 Wilderness Act codified into law the most elemental and pervasive of these American values and established a system of federally protected wilderness areas. This Act, the first of its kind in the world, protected places where “the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain... land retaining its primeval character and influence... managed to preserve its natural condition... and has outstanding opportunities for solitude or a primitive and unconfined type of recreation” (Wilderness Act, 1964; U.S. Public Law 88-577). This Act immediately established 9 million acres of legal wilderness on USDA Forest Service lands. By 2011, through the efforts of conservationists throughout the country, legally protected wilderness lands in America has grown to 107 million acres in 44 states and in four different federal agencies (the Forest Service, the National Park Service, the U.S. Fish and Wildlife Service, and the Bureau of Land Management). Visitor use of these areas has reached about 20 million visitor days. In addition, the Wilderness Act and the slow but steady addition of acres to the system have come to symbolize the best of America’s efforts to protect its natural heritage and to provide the benefits of wilderness to its people. Many countries

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around the world have adopted this means of protecting special areas as wilderness. It all seems good, and so American.

But all is not well with wilderness in America. Starting in the mid-1990s and continuing until the present, the very philosophical, scientific, and ethical foundations of the American idea of wilderness have been under attack by scholars both at home and abroad. Perhaps the first, the most thoughtful, and the most influential critique of the wilderness idea came from environmental historian William Cronon in the 1996 article, "The Trouble with Wilderness, or, Getting Back to the Wrong Nature." Two large edited volumes by environmental philosophers J. Baird Callicott and Michael P. Nelson followed: "The Great Wilderness Debate" (1998) and "The Wilderness Debate Rages On" (2008). All three authors are pleased that so many acres of land in America are protected as wilderness. But they question the worth of the American wilderness idea, the idea that has come down to us from our nation's forebears, as a wise and effective means to protect nature and to foster a responsible ethic and behavior about the environment. Indeed, Callicott and Nelson (1998) report that the "wilderness idea is alleged to be ethnocentric, androcentric, phallogocentric, unscientific, unphilosophic, impolitic, outmoded, even genocidal" (p. 2). In line with the contention that the wilderness idea is unscientific and outmoded, many landscape ecologists and a few environmental philosophers have been critical of the mandate of the Wilderness Act to protect and manage for naturalness in wilderness (Callicott 2008, Cole and Yung 2010). These authors note many problems with the concept of naturalness: its meaning is nebulous; it suggests humans are not part of nature; it ignores the fact that lands currently protected as wilderness have been profoundly influenced by humans in the past; and it suggests that in the absence of humans these areas will return to a steady state or climax condition representative of some historic past before the arrival of Anglo-Americans. All of these assumptions about nature and naturalness are unfounded.

While I believe some of these criticisms of the wilderness idea and in effect wilderness protection and management are overstated for dramatic effect, much of the critique has important implications for appropriate and ideal experiences in wilderness and how to manage for them. I believe that appropriate experiences in wilderness could largely defuse many of the criticisms of wilderness. Given this, I see an important role for social scientists and resource managers in responding to "the raging wilderness debate," and facilitating wilderness protection, management, and experiences to meet the ideals and challenges of the 21<sup>st</sup> century.

## Overview

For the remainder of this essay I list and describe five specific critiques of the wilderness idea: wilderness separates humans from nature; wilderness denies the human story in "pristine" lands; wilderness distracts attention from an environmental crisis at home; wilderness privileges recreation and recreation elites highly devoted to consumerism and technology; and wilderness with its focus on naturalness has its ecology wrong. For each of these criticisms I suggest ways that experiences

in wilderness can ameliorate or negate their negative import. As I do this, I often draw upon the writings of the critical reviewers themselves or upon the words of those wilderness philosophers or activists whom they criticize. In doing this, I find the writings of environmental historian William Cronon especially helpful. I then list specific actions that wilderness resource managers and research social scientists might take to encourage appropriate and ideal experiences.

## Critique #1: Wilderness Separates Humans From Nature

### Description

The dualism of humans and nature inherent in the wilderness idea and in the way wilderness is protected and managed in America is a subject of pervasive criticism. This dualism runs deep, all the way back to the beginnings of Western civilization, philosophy, and beyond. Indeed, this separation goes back to the beginnings of Judeo-Christian religion and to the Genesis story. In this story, God gave humans special status apart from nature and with dominion over nature. This status received added power and urgency when humans were cast out of paradise (Eden) and had to gain a living from nature. Millennia later, in a country and culture like America that is dominated by religion, this story still retains power (Stoll 2007). When the Pilgrims of a Reformed Protestant sect first settled the rocky coastline of New England, the wilderness was outside, dark, desolate, and dangerous. But over time and across space, the notion of wilderness among Puritans and ultimately among Americans made a polar switch. Wilderness was still apart in some other place, but now the place was goodness, a place to find truth, a sublime place, a paradise, but a place where defiled man did not live. Hence, the Wilderness Act of 1964 specifies that wilderness is a place where man is a visitor who does not remain.

But many environmental philosophers and historians think this story of humans, their relationship to nature, and the meanings given by our American forebears to wilderness is unscientific, unphilosophic, and outmoded. Not only is this story inaccurate, it does considerable harm to the environment. This separation of humans from wilderness reduces deep contact with wild nature and it also suggests nature of civilized landscapes is not wild, is not pure. It fosters an aloofness from nature and prevents a deep intellectual and visceral contact with nature. Hence, opportunities for learning and respecting nature's ways and limits are lost.

I agree with this critique. To the best of our knowledge, we humans are of the same stuff, the same wild matter, with all its complexity, mystery, and seemingly miraculous power, as all of the rest of nature. Yet at the same time we have obvious differences from the rest of nature. We have the ability to learn (and continue to learn) about nature's processes, to learn to respect nature, to feel kin with all of nature through our cognitive and our emotive abilities, to exert considerable control over nature, and to purposefully act with restraint over the rest of nature (Ouderkirk 2008).

I believe also that both the Judeo-Christian tradition and the great American wilderness philosophers (who tended in their mature years to reject the Judeo-Christian view of nature) can teach us about ideal human-nature relationships, about ideal experiences in wilderness, and how, ideally, to manage for them. For example, Sanders (2008) speaks of wilderness as representing in space what the Sabbath represents in time. For him, the Sabbath represents a “day free from the tyranny of getting and spending, a day given over to the cultivation of the spirit rather than the domination of matter” (p. 603). It represents a day away from work, control, and frantic busyness, a time for serenity and reflection. It also marks a day when farm boys such as myself as a youth (and others who worked for a living) could go off “when church was over” and spend the day “wild in nature”. There in creek bottoms, lakeshores, and woodlots we found wildness; we explored; we discovered and came to revel in the marvels of unclaimed earth. We found something beyond us whose ways were not our own, whose ways we came to respect and admire. And with the help of the Sabbath, we came to the wisdom of restraint, a kind of humility that guides our behavior as adults today. Without this day of the Sabbath, this totem of Judeo-Christianity, I am sure we would have worked seven days a week. Today, the Sabbath and its meaning in time can be found for many in a visit to wilderness. Wilderness contains similar meanings in space, as a cathedral in space, a place to reflect and to come in contact with wild nature, a place with rules we did not write, with ways we do not always understand, and with power that both nurtures us and humbles us. Most importantly, in wilderness we can learn and practice restraint.

Our great wilderness philosophers, our forebears whose ideas have come under criticism, shared the same “Sabbath” notions. Most famously, Henry David Thoreau withdrew from society to live more than a year in a primitive cabin, there to confront nature on its terms, to observe deeply and slowly, to touch with his spirit what his matter (his body) and its life force so forcefully demonstrated. He daily went on long walks near Concord to drink and learn at the fountains of nature. He called for New England villages to protect the woods, fields, and primitive swamps in their midst so that poets, philosophers, and all seekers of wisdom could find moral and intellectual truth. But not only did he call for contact, respect, and protection of nature close to home (the middle ground), he also called for poets and philosophers from time to time to leave their villages and bordering lands and go to the recesses of the wild, and there to make intense contact with the bracing tonic of wildness, large tracts of wildness, “not for idle sport or food but for inspiration and our own true re-creation” (to realize who and where we are) (Dean 2007, p. 84).

This Thoreau did himself on his now-famous climb of Mount Katahdin in Maine, a journey on which wild nature shook the very foundation of his “village truth” and perhaps even his “cabin truth.” On the Mount Katahdin climb, he contacted truly wild nature, a nature of forest fire and desolation, a nature that seemed not at all to care about him. He came off the mountain a changed man; his experience was transcendent. Thoreau and others since have written much about his Katahdin experience.

For me, and what matters in this essay, there are three things. First, he acknowledges the power and mystery of raw nature when real contact is made: “What is it to be admitted to a museum, to see a myriad of particular things, compared with being shown some star’s surface, some hard matter in its home! I stand in awe of my body, this matter to which I am bound has become so strange to me... What is this Titan that has possession of me? Talk about mysteries” (Torrey and Allen 1906 [p. 77-79]). Here Thoreau contacts living matter, the matter of the mountain, the same matter which is his body. But this matter has power beyond him, a power he does not know. He experiences mystery, fear, and awe. But he gives us a way out (our second lesson): “Think of our life in nature—daily to be shown matter, to come in contact with it—rocks, trees, wind on our cheeks, the solid earth! the actual world! the common sense! Contact! Contact! Who are we (our spirits)? Where are we (our bodies)?” The lesson here is contact. Contact is not separation from nature. Finally, and very importantly, Thoreau’s insights on Mount Katahdin provide us insights about transcendent, transformative experiences fostering human-nature connection. On the mountain, Thoreau discovered elemental wildness infused into matter, and once infused in matter, this wildness recycles through life, death, and rebirth, a recycling that preserves the physical world. Thoreau came to know this on the raw mountain, a place where there was both slow birthing and dying (mountain construction and destruction) and dramatic desolation and slow rebirthing (the forest fire). In both these slow and dramatic acts of wildness, Thoreau and we who follow see life feeding on death and being reborn. We realize we are part of this, part and parcel of nature. We realize our own limitations and mortality and we realize that we are not the measure of all things (Dean 2007). There is no separation from nature here. We humans can and should find wildness in our villages, but even as astute an observer of nature as Thoreau did not make his elemental breakthrough there. He called for us to go to wild places.

Other American wilderness philosophers and activists have valued, promoted, and lived a life of deep contact between humans and nature in wilderness. John Muir went on long treks over weeks into the wilds of Yosemite. He climbed trees and clung to their tops to feel the fury of wild storms and to learn the message of wildness. Bob Marshall went on prodigious hikes and climbed mountains. He lived with native people in Alaska to learn their human-nature interactions. Aldo Leopold, considered by many to be the father of modern protected wilderness in America, successfully lobbied for wilderness protection of wild land so that the common man, the common hunter, would not lose intimate contact with wild nature and would not have a contact filtered and cushioned by new technology (in those days, roads and the Model T).

Yet the recent critique of wilderness suggests that today’s wilderness idea, given its human-nature dualism, is not fostering human-nature contact and connection. I now make suggestions on how wilderness managers and social scientists might facilitate experiences that enhance deep contact with wildness in wilderness.

I preface my suggestions with some words of caution and humility. One of the great values of the wilderness idea and wilderness as place is freedom... freedom to let nature be and freedom to let humans be (and of course I am writing to reduce the divide between them). Second, I see ever greater need for the management of wilderness to be nuanced. It should not be, it cannot be, the same for all areas across the entire wilderness preservation system. The wilderness idea is complex; it allows for different values to be emphasized across space and time. Individual wilderness areas have different histories, different ecologies, different use levels, and different agency traditions and mandates. Each area is a separate place with its own place meanings. Whatever suggestions I make must be evaluated in the context of the individual place. This makes the wilderness manager's job more complex and more difficult. But providing more meaningful visitor opportunities will result in richer experiences and will protect nature better.

### Suggested Management Actions

- Encourage an increase in length of stay in wilderness; promote overnight use rather than day use. For example, at the Boundary Waters Canoe Area Wilderness, the amount of overnight use is restricted and a fee is charged. Day use has no such use limitations and no fee is charged. To promote deep contact with wildness, this policy might be reversed.
  - Encourage repeat visits to a given wilderness area so that visitors might develop a richer understanding, commitment, and relationship to the place. This might be done by developing and promoting a wilderness area-specific protective association to which the public might join. Members of such an association would assist in certain management activities in the area. Another possibility would be to free repeat visitors from certain access restrictions or user fees.
  - Encourage visitors to slow down, to spend more than one night in one spot, to get to know the spot.
  - Conceptualize solitude not as the number of encounters with others per day, but instead as time spent alone with nature, time in silence, time in meditation or reflection in the presence of wild nature.
  - Encourage visitors to “Adopt a Spot,” to become involved as partners with managers to care for, protect, and if necessary, restore a spot, a community, a place in wilderness. Professional resource managers need to provide both oversight on partner practices and incentives to maintain long-term involvement. Resource managers need to provide partners with educational workshops on agency and resource policies and practices along with assistance with on-the-ground management interventions.
  - When possible (in lightly used wildernesses and in lightly used wilderness zones) move beyond LNT (Leave No Trace). LNT advocates leaving little human imprint on the land and for that it has value in high-use areas. But it can divorce people from the land, lessening contact. It can isolate the wilderness and wilderness use from the larger environmental context (Simon and Alagona 2009). As examples, the LNT principle “minimize campfire impacts” recommends the use of lightweight camping stoves instead of open fires. But the principle likely inadvertently reduces ecological learning, learning about what lives in and under dead and down wood, what kind of wood burns best, how to start a campfire and how to cook over a fire. It likely lessens contact with wildness within us and with nature around us. It also supports the use of petroleum, a nonrenewable natural resource that is transported across the long sea lanes of the world. Under the principle of “leave what you find,” LNT suggests that recreationists carry in camp chairs rather than construct makeshift furniture in the wilderness. But how about sitting on the ground or on a rock? The portable chair cushions one from the environment. It reduces contact. I fear LNT will become Smokey the Bear—valuable when applied with nuance, an environmental mistake when applied *carte blanche* across time and space.
  - As a general rule, encourage visitor use of wilderness zones that vividly demonstrate nature's wildness. Examples might be areas of recent great natural disturbance such as the recent wind-throw and forest fire areas of the Boundary Waters Canoe Area Wilderness. Use quotas for access into these areas might be increased. The purpose would be to provide visitors with a Mount Katahdin experience, to come in contact with raw nature. Another possibility, where ecologically permissible, would be to increase the level of visitor contact with keystone species in wilderness. As Dustin (1999) suggests, wilderness is an ideal place to come in contact with life unfolding, to marvel at life unfolding, to discard the protective armor that shields us from life itself, and to live life at the edge. Dustin believes if you take risk out of life, you take life out of life.
  - Where wilderness managers now teach LNT at visitor contact points, instead or in addition, tell a story of a positive human-nature interaction at the place. This story might be about past human use of the area. It might be an Adopt a Spot story; it might be a story about a transcendent experience. It could be a re-wilding story or a story about humans helping a keystone species.
  - Encourage visitors to leave communication technology with the outside world behind. Such technology likely distracts. It likely slows down the gradual escape from the frenzied consumerism of the outside world. This technology tends to focus attention on Lord Man. It likely clashes with primitive values for which wilderness was created. It reduces contact with wildness.
- Of course, these suggestions beg for a social science research program. Do these practices reduce dualism between humans and nature? Do they reduce freedom too much? Do they conflict one with another? Do they increase ecological knowledge and commitment to conserving wild nature? Do they encourage humility and human restraint about the environment? Do they do more harm than good?

## Critique #2: Wilderness Denies the Human Story in “Pristine” Lands \_\_\_\_\_

### Description

This critique suggests that American wilderness philosophers, activists, and authors of the 1964 Wilderness Act got their science and their history wrong. The wilderness idea celebrates pristine land—land largely without humans and their works. The Wilderness Act seeks to protect such lands in their natural or natural-appearing state. But Cronon (1996), Callicott (2008) and Denevan (1992, 1996) all contend that at the time of European contact, the landscape of the New World was entirely a humanized one. The number of Native Americans certainly numbered in the millions. These people lived across the Americas and through hunting, farming, and use of fire they had drastically altered the landscape and the ecology of the hemisphere. The Native Americans might be considered a keystone species. The vacant land encountered by settlers, with its dark forests and abundant wildlife, sublime in its horror and its beauty, was in fact quite artificial. Upon contact, European diseases such as smallpox and influenza had traveled through the native population ahead of the advance of the settlers and reduced the population by as much as 90%. This “unnatural” state allowed a very cultural landscape to go wild.

In addition, the wilderness critics contend that European-Americans displaced living Native American communities from their land in the name of the wilderness idea. This accusation seems problematic (Havlick 2006). Sadly, Native Americans were pushed off their lands for timber, farming, mining, grazing, commerce, settlement, and even a bit for national parks, but not for wilderness. Protection of “pristine” lands for wilderness values did not happen until the administrative reserves of the 1920s and the legal reserves after 1964. This was long after the last forced removal of Native Americans from their lands. Indeed, with the passage of the Alaska National Interest Lands Conservation Act (ANILCA) (U.S. Public Law 96-487) and the establishment of large blocks of legally designated wilderness lands in Alaska, management agencies have worked diligently with Native Americans to respect and permit their continued traditional uses of the land.

Finally, with passage of the so-called Eastern Wilderness Areas Act of 1975 (U.S. Public Law 93-622), many areas in the East and Midwest with a long history of settlement and use by American settlers were placed in the National Wilderness Preservation System. These areas are re-wilding, but they are by no means “pristine.” They have a human story and to pretend otherwise is a denial of history (Cronon 1996). It is also a denial of ecology. The effects of the labors of European-Americans are typically visible on the landscape. Cronon’s essay (2003) on the recently established legal wilderness on the Apostle Islands National Lakeshore represents a case in point. These islands were used and inhabited by white fur traders, loggers, fishermen, quarry excavators and farmers for hundreds of years. Native Americans altered the landscape for thousands of years before that. Cronon believes that this human story should be told. Without it, visitors go away without a complete and rich

story of a place and its landscape ecology. To ignore this story is to be dishonest and to lose a chance for deep contact with a “humans within wild nature” story.

### Suggested Management Actions

- Learn the extent of past human use and imprint upon your wilderness. Some wilderness areas and zones of wilderness have high past use. But Native Americans, explorers, or pioneers apparently did not live in some wilderness areas or zones. Instead they periodically moved through the areas, hunted in them, gathered there for special occasions or simply visited them for rest and leisure. Other areas, often “the rock and ice” portions so common to wilderness, have had little past human use (Vale 1999). Areas with different levels of human imprint should be managed differently.
- Unless past human activity (such as, structures, landscape modifications, and even apple trees) are causing unsafe conditions or serious ecological harm, let them be. They tell a story for the visitor. They help embed the visitor in nature.
- Many wilderness areas have a current human use story beyond public recreational use. These include grazing, some water developments, and outfitters making a living and raising families anchored in wilderness use. In the past wilderness managers and researchers sometimes labeled at least some of these uses as nonconforming but allowable. These wilderness activities should instead be embraced and the story of the complexities of their management in wilderness and as a part of wilderness should be told.
- Recognize, acknowledge and interpret off-site the human story of the wilderness. Look especially for compelling stories; often those stories will be environmentally sensitive and even reflect restorative effects of inhabitation by humans. But sometimes the story might be one of past human destruction and how nature was later able to re-wild. Cronon (2003) recommends having interpretation of past human activity done within wilderness. I would tell the story outside wilderness, with suggestions on how visitors on their own might find, observe, and connect with the human story within wilderness.
- Place as much emphasis upon telling the human ecology and the re-wilding story as on teaching Leave No Trace, at least in mid- to lightly used areas.
- Learn and manage for the layered meanings of the place. Some would call this creating and protecting public memory of the wilderness (Stewart in press). People act to protect a specific place as wilderness because of the meaning it has for them. Often these meanings are informed by past deep interactions or memories of the place. Acting out these memories can solidify long-term commitment to a specific place.

Environmental change is constant and normal. Research by archeologists, anthropologists, and landscape ecologists is

needed to learn about the additional long-term environmental change caused by Native Americans. Native Americans themselves can help with the interpretive story. Researchers need to discover and document the environmental use histories of wilderness landscapes by European settlers. Social scientists must help to find layered meanings of the place and to determine whether firsthand contact and interpretation of the human story results in greater understanding, enjoyment, and commitment to human-nature integration.

### **Critique #3: Wilderness Distracts Attention and Offers Little Help on Environmental Crises at Home**

#### **Description**

This critique comes largely from Cronon (1996) and he does so largely on philosophical grounds. Cronon purports that the wilderness idea has so romanticized pristine nature that human activity, development, and industrialization represent a fall from grace. In this romantic view, humans come in contact with the mysterious Other, the life force of nature that flows without any need of humans, a force that engenders wonder and humility in pristine nature, in places away from where we make our homes. We protect these pristine places but we cannot live there. We do not see wildness in the tulip poplar in our backyard, where there may be a life and death struggle among aphids, ladybugs, and the tree (Lewis 2007). We have “pristine blinders” that prevent us from seeing wonder all around us and from learning lessons of beauty and promise. We fail to engage in environmental problems and possibilities at home.

But there is no research to show that wilderness activists or frequent wilderness visitors are less likely to engage in sensible environmental activities and activism at home. Indeed, one could argue that just as courses in art appreciation and visits to an art museum can increase sensibilities to beauty, so too might encounters with the wild of a sublime nature in wilderness increase the likelihood of finding the wild in a dandelion growing in the crack of the sidewalk. Certainly Thoreau’s Mount Katahdin experience changed what he saw and how he felt about what he saw on his daily walks at the border of the village. Cronon, late in his essay, and Havlick (2006), in response to the essay, hint that the philosophical divide between humans in pristine nature and humans at home might be bridged. I now turn to that with suggestions for wilderness managers.

#### **Suggestions for Management Actions**

Suggestions on how to facilitate transcendent and wonder experiences are contained under Critique #1. What follows here are suggestions on how to translate learning benefits of the wilderness to the home environment.

- Foster ecological empathy and learning during wilderness visits. Emphasize pervasive environmental threats

that occur both inside and outside the wilderness, such as global climate change, air pollution, and water pollution. Engage wilderness visitors in monitoring ecological processes and pollutants.

- Facilitate partnerships with the public on ecological restoration activities. Wilderness users and interest groups can Adopt a Spot in wilderness.
- Facilitate wilderness use and learning by educational groups. Consider removing group size limits and permit requirements for educational groups in low use wildernesses or during shoulder or low use seasons of high use areas. This is to permit more youth to have contact with wildness and wilderness. Provide hands-on learning, monitoring, and restoration activities.
- Teach decision-making strategies and practices regarding sustainability in wilderness that reach beyond LNT, strategies and practices that extend behavior ethics beyond time of visit and boundaries of the wilderness. Wilderness sustainability includes the same dimensions as sustainability at home—a concern for the environment, a concern for community and social justice and a concern for economic wellbeing. Questions of environmental sustainability in wilderness address the dimensions of water conservation and pollution, soil conservation, biodiversity protection, and carbon footprint, just as for the environment at home. Wilderness visitors should be asked to consider the ecological, social, and economic ramifications of the clothes they wear, the food they eat, and the gadgets they use in wilderness. They should think about resources they use to transport themselves to wilderness and ways to reduce resource consumption. Wilderness visitors should be encouraged to think about the amount of energy used to produce and transport the goods and services they use. They should think about whether labor and environmental laws were followed and whether fair labor practices were used. They should know and consider who gets the economic benefits of their wilderness use, whether it is the local community surrounding the wilderness or whether the benefits largely flow outside the region. They should know how protection and management of their wilderness is funded and ask themselves if the funding mechanism is equitable and sustainable. Helping the visitors ask the right questions and find meaningful answers for themselves seems to me as important as prescribing a set of actions, actions that almost certainly cannot be appropriate for all wildernesses all the time. Possible questions asked or possible prescriptions of a beyond-LNT ethic might include Conscious Impact Living (CIL), a call to live simply; think globally and plan ahead; follow the precautionary principle; reduce, reuse, recycle, relearn; follow nature’s lead and blend into one’s surroundings; use appropriate technology and use technology appropriately; and show respect and compassion for all forms of life (Moskowitz and Ottey 2006; Cachelin, Rose, and Dustin 2011). Another possible and idealistic working model for an outdoor recreation ethic in wilderness might be ASAP (As Sustainable As Possible)

(Bulger, Sveum, and Van Horn 2008). This prescription considers gear (renewable materials, recycled materials, carbon emissions, distance from production to purchase, synthetic compounds, and multi-use), location (purpose of trip, distance traveled, mode of transportation, and knowledge and skill of local practices) and food (organic, local, non-genetically modified, and home-grown and locally gathered). Again, one prescription almost certainly does not fit all. My call is that managers recognize that the wonder and close contact with nature common to the wilderness experience foster empathy for nature and this empathy is conducive to environmental moral reasoning and pro-environmental attitudes and behaviors (Berenguer 2007, 2010). Resource managers can and should build upon this to promote sustainable environmental behavior both in the wilderness and in the communities within which visitors live their daily lives.

Research is needed on whether current wilderness visitors and activists engage in environmentally sensitive behavior and activism at home any more than does the general public or non-wilderness recreationists. Does involving the wilderness visitor in monitoring and restoration activities in wilderness reduce or enhance the quality of wilderness recreation experiences? Would such activities result in greater wonder, appreciation, knowledge, commitment, and action? How can managers encourage the commitment of visitors and interest groups to these activities across time? Would involvement in these stewardship activities foster greater environmental sensitivity, commitment, and action at home?

## **Critique #4: Wilderness Privileges Recreation and Recreation Elites Highly Devoted to Consumerism and Technology**

### **Description**

This critique is summarized well by Callicott (2008) and as so often happens with his writing about wilderness, his words do take my breath away. Callicott complains that American wilderness was created for the wrong reasons—for virile and unconfined recreation and for spiritual rapture in monumental scenery. This has made wilderness preservationists strange bedfellows with the wealthy urban elite, a social class with enough time and money for both the desire and the ability to trek into remote wilderness. Wilderness areas are the playground for the minority bourgeoisie. In addition, while law mandates that wilderness recreation be primitive, over time the activity has become the most gadget-laden and rule-bound of all sports available (Callicott 2008). Instead, Callicott believes that in today's global conservation crisis, wilderness areas have a much higher calling. They must become biodiversity reserves. They must be selected, protected, and managed as places for non-humans, for species that have a need to roam widely, and for species that do not co-exist well with humans. In short, these areas must become places where natural processes flow

freely and where species threatened and endangered by humans can be restored. Callicott suggests that the job of wilderness science should be reserve selection, design, and management. The task of social science research should be finding a more politically appealing name than “biodiversity reserve.”

Certainly wilderness areas are currently playing a large role in landscape ecology. The wilderness idea has formally included ecological values since at least the time of Aldo Leopold. Foreman (2008) makes the case that the so-called Eastern Wilderness Areas Act (P.L. 93-622) was explicitly about extending ecosystem representation in the National Wilderness Preservation System and it formally recognized that damaged ecological systems could re-wild as wilderness. But I agree with Callicott that our wilderness areas can and must play a larger role in biodiversity protection in the future.

I turn now to Callicott's critique of recreational use of wilderness. As Callicott well knows, the experiences in wilderness about which we social scientists care so much have the force of law and stand on more than 200 years of American thought and identity. Callicott stretches the truth a bit when he suggests that wilderness values are elitist. While some early proponents of the wilderness idea and wilderness protection (for example, Teddy Roosevelt, Henry David Thoreau and Bob Marshall) lived lives of privilege, other early and current activists for wilderness did not. John Muir grew up on a humble Wisconsin farm and as an adult worked as a machinist and as a sawmill operator. Both Edward Abbey and Dave Foreman claimed to be rednecks (Cahalan, 2001; Foreman 1991). Dave Foreman takes pride in his dirt poor Scots-Irish ancestry. Callicott is right that current wilderness visitors are more likely to be male and they tend to have somewhat higher-than-average incomes and come from urban areas. But so do almost all outdoor recreationists. The one characteristic where wilderness visitors are very different from other Americans, and even other outdoor recreationists, is their higher level of education. The desire to spread the opportunities for wilderness experiences to a larger segment of the American population is one that wilderness policy makers, planners, and managers all share (although Callicott apparently does not).

The more interesting controversy is deciding what the mandated “primitive recreation experience” is and how to manage for it. There has been little discussion about the meaning of this value (Borrie 2004). Almost no research has been done on what contributes to and takes away from experiencing the primitive, while most available research funding has been spent studying the comparable value of solitude. The value of primitive living in the American mind apparently comes from the frontier era when contact between humans and nature was unmediated, unfiltered, uncushioned, and more direct. Such contact had spiritual and intellectual value (see Henry David Thoreau) and also physical and psychological value (see Bob Marshall). Testing oneself in nature, on one's own, on the frontier, in wild nature, and developing coping skills without the crutches of modern gadgetry apparently builds and built the American spirit of independence, competence, and strength. The learning of woodcraft in the 1920s and 1930s, and the scouting and camp movements of that time, demonstrate this

strong cultural value (Turner 2002). Leopold first called for wilderness protection of land when he saw opportunities for primitive recreation (such as the horse pack trip and hunting) slipping away. He was reacting against roads and the Model T invading wild country. He was also trying to retain two other important values: the opportunity to engage deeply with the place at hand (the national forest) and to permit the common man, even the poor man, to have access to wilderness hunting trips, packing trips, and trips to backcountry lakes (Havlick 2006).

But the question today is what technology violates the prescription of primitiveness? Each year there are more gadgets for wilderness recreationists to consume and to make wilderness trips more safe and comfortable. Should only motorized travel and mechanical equipment be prohibited? What about kevlar canoes, lightweight backpack stoves, fish finders, GPS units, satellite phones, cell phones, and all sorts of communication technology? Havlick (2006) defends today's wilderness by noting that almost all human products and activities, modern or not, are allowed. For him wilderness is not a retreat to a pre-industrial age. It is instead a chance to encounter each other and the environment under a different set of prescribed conditions than at home. But for Callicott and for me, many of these gadgets should be discouraged in wilderness. For me, gadgets that enable contact with modernity outside wilderness should be discouraged. They reduce the likelihood of contact with wild nature inside the wilderness. Other gadgets of all sorts that filter, cushion, and reduce contact might be discouraged. But here, much public input and judgment are required. I am certainly not suggesting a prohibition on lightweight backpack tents. Finally, gadgets that hold the potential to reduce or disrupt other people's contact with wild nature should be discouraged or used in a considerate manner.

### Suggested Management Actions

- Consider ways to encourage a broader segment of the American population to visit wilderness. Work with schools, women's groups, and Elderhostels to introduce currently underserved populations to wilderness/wildness.
- Recruit young people into wilderness. Work with school groups, scouts, and camps. Encourage youth to leave communication and entertainment technology at home. Remove any institutional barriers to wilderness visitation by youth groups.
- Encourage primitive woodcraft skills, at least in lightly used wilderness areas and zones. This is to encourage contact with wildness.
- Discourage use of communication and entertainment technology in wilderness. This is to encourage personal contact with the unfettered wildness of nature.
- Encourage visitors to learn ecological processes and conditions such as fish finding, way finding and reading the weather without the crutches of modern technology.
- Evaluate current recreational activities in wilderness to see if some might be done in a more primitive way, in a

way that encourages deeper contact with wildness. For example, if hunting occurs, could there be an archery hunt or a black powder hunt?

A research program related to these suggestions might include questions of whether recruitment activities result in more long-term use and enjoyment by currently underserved groups. Does learning woodcraft skills result in increased knowledge, sensitivity, and commitment to nature protection? How much does the public support or resist discouragement of use of modern communication and entertainment technology in wilderness? Does modern communication and entertainment technology increase or decrease contact with wildness in wilderness?

## Critique #5: Wilderness With its Focus on Naturalness has its Ecology Wrong

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### Description

This critique comes primarily from evolutionary biology, conservation biology, and landscape ecology. But it lies at the very heart of wilderness protection and management. Indeed, the Wilderness Act calls for "wilderness to retain its primeval character and influence... protected and managed so as to preserve its natural conditions and which generally appears to have been affected primarily by the forces of nature, with the imprint of man's works substantially unnoticeable..." (Wilderness Act, P.L. 88-577). This represents a clear call for management for naturalness. But the naturalness concept is now known to be vague and ambiguous. Chase (1986) in his book "Playing God in Yellowstone" has pointed to huge mistakes made by resource managers in their efforts to protect naturalness in Yellowstone National Park. Naturalness has multiple and conflicting meanings. It might mean that wilderness lands should be self-willed, that ecosystems and landscapes should be free to go their own way without the imprint of man. But we know that the imprint of man is ubiquitous; it is everywhere. Indeed, many would argue that *homo sapiens*, at least the primitive human, was a keynote species affecting the function, composition, and structure of ecosystems and landscapes everywhere. To get back to some historical state would simply be a value-laden selection of a date and time. But whatever time is chosen, say the time of European contact, would require active human intervention to attain. It certainly could not be achieved by "letting the system go its own way." Too many past and present influences, such as habitat fragmentation, loss of top predators, invasive species, altered disturbance regimes, pollution, and climate change, have profound effects on protected areas (Stephenson and others 2010).

When the Wilderness Act was passed in 1964, popular conceptions of ecological thought still reflected the belief that ecosystems, if left alone, protected from human activity, would achieve a stable state, a state of equilibrium and a climax community. From time to time, natural disturbances would occur, setting back succession, but then the orderly process toward a



stable climax community would begin anew. We now know that disturbance is the norm, often by nature and more frequently by humans. The norm is a state of flux (Callicott 2008). With recent pervasive anthropocentric disturbance, ecosystems might evolve into systems never before seen in historic and even prehistoric times.

So what is a wilderness manager to do? Cole and Young (2010), in their edited volume, provide four options, each of which is based on but might be considered an extension of the naturalness construct. The first is a “hands-off approach”; let nature roll the dice in wilderness. We do not know what we will get; we might lose biodiversity. But in allowing nature to be self-willed, we accept nature’s autonomy. We celebrate wildness. We accept evolutionary change. We develop scientific respect (Landres 2010). A second approach is to manage for ecological integrity. The goal here is the conservation of nature and biological diversity. It does this by protecting all the important parts and proper functions of ecosystems. This approach assumes that humans have been keystone species in most systems and active management by humans is integral for the success of this approach. Humans select ecological goals, indicators, and prescriptions for the system (Woodley 2010). A third kind of naturalness is to manage for historical fidelity—to restore an ecosystem (such as a sequoia grove) or landscape to some valued condition of the past. As already indicated, this goal can only be relative, not absolute. It requires active management by humans, and while historical processes are important, fidelity to past composition and structure is essential. A possible drawback is that it constrains possible novel evolutionary elements of biodiversity, thus potentially reducing ecological integrity and resilience (Cole and others 2010). Finally, managers might have a goal of ecosystem resilience, or enhancing the capacity of the system to adapt to change (Zavaleta and Chapin 2010). This requires active intervention by humans and views the ecosystem in its larger regional context. It seeks to reduce exposure and sensitivity to stresses. It seeks to build adaptability into the system. Humans intervene by viewing the ecosystem in a matrix of scales across the region. They connect the protected area with both ecological paths and cultural memory. They connect the system to local people. Managers look at crisis as an opportunity for constructive change. A novel outcome might be the “natural” outcome of evolutionary change.

The lesson here is that there is no one approach to system protection. In addition, each approach has different outcomes. Each involves human intervention in varying degrees. Whatever approach is ultimately chosen for a wilderness or a wilderness system involves a value judgment. This value judgment cannot be and should not be made by public policy-makers and managers alone. Instead, an interested, knowledgeable, and involved citizenry is required. The most effective protection of biodiversity and attainment of human goals is likely to result from a diversity of approaches. Even after a general strategy of resource conservation is selected, more specific objectives and indicators of performance must be selected. Finally, managers are treading new pathways here. They need the freedom to experiment, to monitor results, to adapt, to begin anew. In

the end, nature bats last. We can never know for certain where evolutionary forces, where wildness, will lead us.

## Suggested Management Actions

Implications for management flowing from the critique of naturalness primarily involve the ecological aspects of protected area management, but some involve human response to wilderness.

- Educate the public, interest groups, and wilderness visitors about the past and current human-induced changes on protected area systems.
- Educate the public, interest groups, and wilderness visitors about the values and required human intervention of the four strategies for protected area conservation: “hands off,” ecological integrity, historical fidelity, and ecological resilience.
- Obtain input from the public, interest groups, and wilderness visitors on which of the four conservation approaches is preferred or which combinations are preferred.
- Obtain public input on the selection of goals, objectives, and performance standards for the conservation strategy(ies) selected.

Research is needed on how best to educate the public and obtain their preferences on the four conservation strategies outlined here.

## Conclusion

The meaning of wilderness in the American mind has evolved and will evolve across time. Today the idea is represented in part by a system of about 107 million acres placed in the National Wilderness Preservation System. This system represents a special kind of resource protection and, unique in the world, special kinds of experiences for people. The kinds of experiences that are celebrated and models of resource protection employed typically flow slowly across the American scene. But from time to time, philosophers, writers, and scientists offer and advocate wilderness ideas that jolt conventional ways of thinking about wild nature. The last two decades in America represent one such time of change. Environmental historians, philosophers, conservation biologists, and landscape ecologists have offered a major critique about wilderness and the way it is protected and managed. In this essay, I subjected five of these challenges to thoughtful analysis and suggested implications for the delivery of experiences in wilderness. These challenges include the notions that wilderness separates humans from nature, that it denies the human story in “pristine” lands, that it privileges a certain kind of recreation that is out of touch with today’s social and environmental values, that it distracts attention away from environmental crises at home, and that its management is based on an outmoded concept of naturalness. Much of this critique seems valid to me. I have suggested ways that wilderness managers can shape opportunities for experiences that may begin to address these criticisms.

These include emphasizing different aspects of the wilderness experience, calling for different visitor regulations and different educational messages and the way they are delivered, and the implementation of different kinds of resource protection models. All represent an effort to bring wilderness visitors in more intimate contact with wild nature, with wildness, and to take the learning benefits of wilderness to their home environment. To accomplish these tasks, managers will have to be more astute and agile than ever. They will need more help in the future from wilderness visitors, interest groups, wilderness outfitters and guides, and the general public than they have had in the past.

## References

- Berenguer, Jaime. 2007. The effect of empathy in proenvironmental attitudes and behaviors. *Environment and Behavior*. 39(2): 269-283.
- Berenguer, Jaime. 2010. The effect of empathy in environmental moral reasoning. *Environment and Behavior*. 42(1): 110-134.
- Borrie, William T. 2004. Why primitive experiences in wilderness? *International Journal of Wilderness*. 10(3): 18-20.
- Bulger, Hilary; Sveum, Paul; Van Horn, Paul. 2008. As sustainable as possible: A working model to assess and improve the sustainability of outdoor education and recreation. Paper presented at the Wilderness Education Association's National Conference, San Diego, CA, February 14, 2008.
- Cachelin, A.; Rose, J.; Dustin, D.; Shooter, W. 2011. Sustainability in outdoor education: Rethinking root metaphors. *Journal of Sustainability Education*, 2 [Online]. [http://utah.academia.edu/JeffRose/Papers/499297/Sustainability\\_in\\_Outdoor\\_Education\\_Rethinking\\_Root\\_Metaphors](http://utah.academia.edu/JeffRose/Papers/499297/Sustainability_in_Outdoor_Education_Rethinking_Root_Metaphors).
- Cahalan, James. 2001. *Edward Abbey, a life*. Tucson: The University of Arizona Press. 357 p.
- Callicott, J. Baird. 2008. The implications of the "shifting paradigm" in ecology for paradigm shifts in the philosophy of conservation. In: Nelson, Michael P.; Callicott, J. Baird, eds. *The wilderness debate rages on*. Athens: The University of Georgia Press: 571-600.
- Callicott, J. Baird; Nelson, Michael P., eds. 1998. *The great new wilderness debate*. Athens: The University of Georgia Press. 697 p.
- Chase, Alston. 1986. *Playing God in Yellowstone*. New York: The Atlantic Monthly Press. 446p.
- Cole, David N.; Yung, Laurie, eds. 2010. *Beyond naturalness: Rethinking park and wilderness stewardship in an era of rapid change*. Washington, DC: Island Press. 287 p.
- Cole, David N.; Higgs, Eric S.; White, Peter S. 2010. Historical fidelity: Maintaining legacy and connection to heritage. In: Cole, David N.; Yung, Laurie, ed. 2010. *Beyond naturalness: Rethinking park and wilderness stewardship in an era of rapid change*. Washington, DC: Island Press: 125-141.
- Cronon, William. 1996. The trouble with wilderness; Or, getting back to the wrong nature. *Environmental History*. 1(1): 7-28.
- Cronon, William. 2003. The riddle of the Apostle Islands: How do you manage a wilderness full of human stories? *Orion*. 22(2): 36-42.
- Dean, Bradley P. 2007. Natural history, romanticism, and Thoreau. In: Lewis, Michael, ed. *American wilderness: A new history*. New York: Oxford University Press: 73-90.
- Deneven, William M. 1992. Native American populations in 1492: Recent research and a revised hemispheric estimate. In: Deneven, William M., ed. *Native populations of the Americas in 1492, 2<sup>nd</sup> ed.* Madison: University of Wisconsin Press: 17-29.
- Deneven, William M. 1996. Pristine myth. In: Levinson, D.; Ember, M., eds. *Encyclopedia of cultural anthropology*, Vol. 3. New York: Henry Holt and Company: 1034-1036.
- Dustin, Dan L. 1999. *The wilderness within: Reflections of leisure and life, 2<sup>nd</sup> ed.* Champaign, IL: Sagamore Publishing Inc. 153p.
- Foreman, Dave. 1991. *Confessions of an eco-warrior*. New York: Harmony Books. 229p.
- Foreman, Dave. 2008. The real wilderness idea. In: Nelson, Michael P.; Callicott, J. Baird, eds. *The wilderness debate rages on*. Athens: The University of Georgia Press: 378-397.
- Havlick, David. 2006. Reconsidering wilderness: Prospective ethics for nature, technology, and society. *Ethics, Place and Environment*. 9(1): 47-62.
- Landres, Peter. 2010. Let it be: A hands-off approach to preserving wildness in protected areas. In: Cole, David N.; Yung, Laurie, ed. *Beyond naturalness: Rethinking park and wilderness stewardship in an era of rapid change*. Washington, DC: Island Press: 88-107.
- Lewis, Michael, ed. 2007. *American wilderness, A new history*. New York: Oxford University Press. 290 p.
- Moskowitz, D.; Ottey, D. 2006. Leaving LNT behind: Towards a holistic land use ethic. *Green Teacher*. 78 (Spring).
- Nash, Roderick. 1982. *Wilderness and the American mind, 3<sup>rd</sup> ed.* New Haven: Yale University Press. 425 p.
- Nelson, Michael P.; Callicott, J. Baird, eds. 2008. *The wilderness debate rages on*. Athens: The University of Georgia Press. 723 p.
- Ouderkirk, Wayne. 2008. On wilderness and people: A view from Mt. Marcy. In: Nelson, Michael P.; Callicott, J. Baird, eds. *The Wilderness Debate Rages On*. Athens: The University of Georgia Press: 435-360.
- Sanders, Scott R. 2008. Wilderness as a Sabbath for the land. In: Nelson, Michael P.; Callicott, J. Baird, eds. *The wilderness debate rages on*. Athens: The University of Georgia Press: 603-610.
- Simon, Gregory L.; Alagona, Peter S. 2009. Beyond Leave No Trace. *Ethics, Place and Environment*. 12(1): 17-34.
- Stephenson, Nathan L.; Millar, Constance I.; Cole, David N. 2010. Shifting environmental foundations: The unprecedented and unpredictable future. In: Cole, David N.; Yung, Laurie, eds. *Beyond naturalness: Rethinking park and wilderness stewardship in an era of rapid change*. Washington, DC: Island Press: 50-66.
- Stewart, William P. In press. Creating public memory of wilderness. In: Cole, David N., comp. *Wilderness visitor experiences: Progress in research and management; 2011 April 4-7; Missoula, MT*. Proc. RMRS-P-66. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.
- Stoll, Mark. 2007. Religion "irradiates" the wilderness. Lewis, Michael, ed. *American wilderness, A new history*. New York: Oxford University Press: 35-53.
- Torrey, Bradford; Allen, Francis H., eds. 1906. *The writings of Henry David Thoreau*. Boston: Houghton Mifflin. 458 p.
- Turner, James Morton. 2002. From woodcraft to "Leave No Trace": Wilderness, consumerism, and environmentalism in twentieth-century America. *Environmental History*. 7(3): 462-484.
- U.S. Public Law 88-577. *The Wilderness Act of September 3, 1964*. 78 Stat. 890.
- U.S. Public Law 93-622. *(Eastern Wilderness) Act of January 3, 1975*. 88 Stat. 2096.
- U.S. Public Law 96-487. *The Alaska National Interest Lands Conservation Act (ANILCA) of December 20, 1980*. 94 Stat. 2371.
- Vale, Thomas. 1999. The myth of the humanized landscape, an example from Yosemite National Park. *Wild Earth*. Fall: 34-40.
- Woodley, Stephen. 2010. Ecological integrity: A framework for ecosystem-based management. In: Cole, David N.; Yung, Laurie, ed. 2010. *Beyond naturalness: Rethinking park and wilderness stewardship in an era of rapid change*. Washington, DC: Island Press: 106-124.
- Zavaleta, Erika S.; Chapin, F. Stuart III. 2010. Resilience frameworks: Enhancing the capacity to adapt to change. In: Cole, David N.; Yung, Laurie, ed. 2010. *Beyond naturalness: Rethinking park and wilderness stewardship in an era of rapid change*. Washington, DC: Island Press: 142-158.