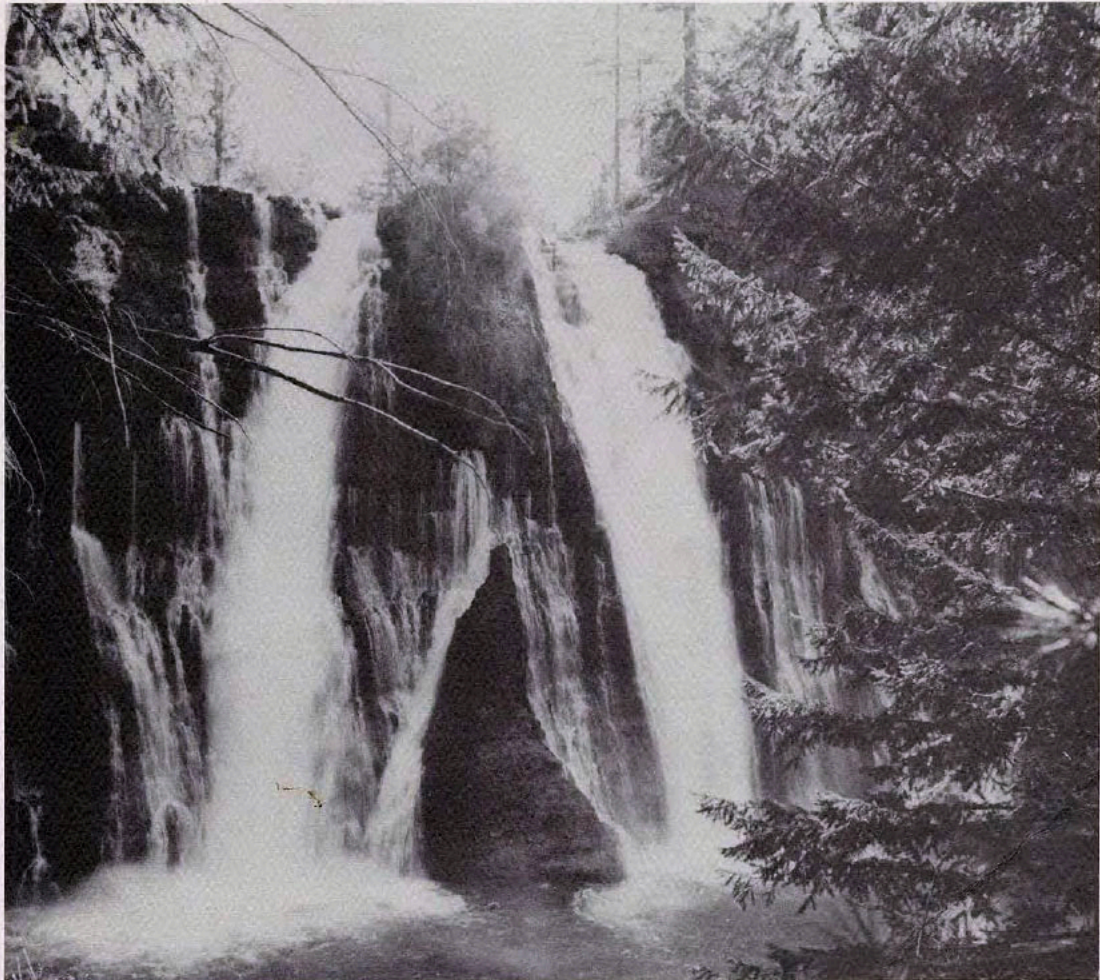


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ON THE FUTURE OF THE PARK RANGER, AND THE PROTECTION OF PARKS

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"It isn't important in which sea or lake you observe a slick of pollution, or in the forests of which country a fire breaks out, or on which continent a hurricane arises. You are standing guard over the whole of our Earth."

—Soviet cosmonaut Yuri Artyukin, on the experience of watching Earth from space.

This year, in the last decade of the twentieth century, we are celebrating the 125th anniversary of the California State Park Ranger. It's a good time to consider the future of the ranger profession, and to set a direction for our efforts into the next century. What do we want to learn more about? What is our role in the future of our society?

We are accustomed to think of the future in terms of wonderful technologies that will revolutionize our work and home life. Certainly this has been the story of the twentieth century. We have spent our lives pressed back into our seats, as it were, by the dizzying acceleration of technological progress. So it is as if we have come to see our technology as the main influence on our direction in the future. For most of us the very mention of the "future" evokes these images of fantastic technology. While floating patrol aircraft and animated interactive three-dimensional holographic interpretive displays may well be coming our way, we are doing ourselves a great disservice if we consider the future of our profession as a mere extension of the direction of technological change.

To find our way into the future, we should look at our past. By looking at what we represent as a cultural institution, we can get a better idea of our future role and usefulness. Mike Lynch (who represents the State Park Peace Officers Association of California in the efforts to commemorate this anniversary), has told me that the most striking thing he has learned in his historical research about rangers is how similar the basic aspects of the job are to what they were 100 years ago. The ranger is still faced with the task of educating park visitors, cajoling them and sometimes compelling them to behave in a manner appropriate to the park environment. The ranger is still the first one to get there in an emergency, and must know how to take prompt, appropriate action. And the ranger (when she/he has time) would still hope to somehow add something to the intellectual life of the park visitor, to deliver some from of truth about the world of nature and human history.

But the ranger's original and most basic role is protector or guardian of the parks. Indeed, when California's first ranger, Galen Clark, was appointed in 1866, his title was "Guardian of Yosemite." The authenticity of this role of guardian, and

the staggering multiplicity of threats to the parks we now face will, I think, determine the ranger's image in the future. And a reevaluation of what really threatens parks will lead us to change our ideas about how park protection is accomplished.

How Can We Protect the Parks?

Clearly rangers will have to continue to develop sophistication in methods of law enforcement in order to protect the parks in the most direct manner, which is to immediately halt criminal acts that threaten park resources or the visitor's experience. The wholesale destruction of Native American archeological sites in the Southwest by pothunters and grave robbers, airborne poaching in the Rocky Mountains and Alaska, large-scale marijuana cultivation in Northern California and Oregon all point to the need for these skills. In Africa, park rangers engage in full-automatic weapon skirmishes with poachers equipped with AK-47s and mortars. At stake are the last herds of elephants and rhinoceros which have been slaughtered by the thousands for their tusks and horns.

Yet there are signs that we should not trust in our skill in law enforcement alone to protect the parks. One of these signs is a sense of futility experienced by some rangers who are most involved with this part of the profession, in a social context of rapid population growth and social upheaval. The United States now has the highest per capita incarceration rate of any country in the world; we imprison a greater percentage of our population than the USSR or South Africa.¹ Yet many of us who work in "high enforcement" parks seem to feel that crime is rampant and that criminals are receiving light sentences. People we



The most direct kind of park protection is law enforcement. A park warden carrying a military carbine in Meru National Park, Kenya, guards a white rhinoceros. This animal was later killed by poachers.

Kennan Ward Photography

have worked hard to prosecute for serious criminal acts in our parks seem to reappear there on parole or probation mere weeks or months after incarceration. There are indications that the criminal justice system we are part of is proving ineffective in creating real change in behaviors in the society.

Perhaps more importantly, a growing understanding of the relationship of park ecosystems to surrounding ones now forms our idea of what park protection is. Resource managers and park scientists tell us that park wildlife, vegetation, and even weather cannot be considered as separate from the world that surrounds them. We are learning that we cannot preserve parks as islands of primeval nature, independent of surrounding ecosystems and the effect of our culture as a whole.

Global Change

The past decade has brought a new awareness, not just to specialists, but to the public at large, of a class of environmental problems known as "global change." They are problems such as global climate change due to human input to the atmosphere, global deforestation, the massive losses of topsoil from human-caused erosion, the reduction in the atmospheric ozone layer's protection from ultraviolet light, and the accelerating pace of species extinctions. They are understood to be "global" because both their causes and their effects transcend local and national boundaries. Let us look at the example of the relationship between the human input of carbon dioxide and other "greenhouse gasses" into the atmosphere and changes in the world's climate to understand how this class of environmental problems relates to park work.

The five hottest years in the last hundred have occurred in the decade of the 1980s. In June of 1988, Dr. James Hansen of NASA's Goddard Institute of Space Studies told the U. S. Senate Energy Committee that he was 99 percent certain that an observed rise in average global temperature of 0.6 to 0.7 degree Celsius has occurred due to the rise in atmospheric carbon from human activities.² As early as 1896, Swedish chemist Svante Arrhenius postulated that burning of coal, oil, natural gas, and peat would add carbon dioxide to the atmosphere, resulting in a warmer Earth.³ Measurements of atmospheric carbon dioxide have been made since 1870, but until 1957, there was no clear conclusion that carbon levels in the atmosphere were rising. In that year, a study by Scripps Institute of Oceanography concluded that half the carbon dioxide released by human activity was being permanently trapped in the atmosphere. The

following year, Keeling and Revelle began the first continuous measurements of atmospheric carbon dioxide in the (locally) uncontaminated atmosphere of Mauna Loa Observatory in Hawaii. This study has measured an increase in atmospheric carbon dioxide from 315 parts per million to 349, in the past 30 years. This means that carbon dioxide levels have risen about 10 percent in our lifetime. Studies of air bubbles trapped in glacial ice put the pre-industrial revolution level at 280 ppm. It appears the planet has not seen the equivalent of current levels of atmospheric carbon dioxide in 160,000 years.⁴

If the observations of Dr. Hansen and his colleagues are correct, it may take decades to fully understand the effects of the warming trend. However, certain effects of heat and drought on wildlands have already been observed, and should be of great concern to park rangers. One notable effect of warmer temperatures is on fire behavior. By summer's end in 1988, the hottest year on record, with the worst drought in a hundred years, the United States had lost three million acres to forest land to fire. The fires that scorched Yellowstone National Park took place in the setting of the driest summer in the 112-year history of the park.⁵

In 1987, the largest spontaneous forest fire in modern history occurred in the Black Dragon region over the Russian-Chinese border, burning 18 million acres.⁶ Other effects are predicted due to the varying climate requirements of animals and plants, and the resulting migration of species distributions. A temperature increase of one degree Celsius translates into a shift in vegetation zones of 60 to 100 miles northward.⁷ If this change occurs too fast, it will outstrip the ability of species to adjust, and might result in mass die-offs. Increase in global temperature also causes melting

of the world's glacial ice and polar icecaps, as well as expansion of the water in the oceans. The resulting rise in the level of the oceans, so far under 15 centimeters, is expected to have disastrous effects on coastal ecosystems, including those of coastal parks, if it continues.

It is believed that the primary cause of the rise in atmospheric carbon is the burning of various fuels for energy, accounting for some 5.5 billion tons of carbon per year. The United States has the highest per capita output of atmospheric carbon from fossil fuels of any nation: 2.28 tons each year for every man, woman, and child. Deforestation, resulting from the burning of forests to create rangeland and cropland in developing nations, and the harvesting of trees for lumber and firewood, accounts for some 1 to 2.5 billions tons of carbon per year.⁸

Rethinking Park Protection

The protection of parks and wilderness areas has traditionally involved communicating to visitors about the type of behavior that would limit the visitor's impact on the land during the visit, such as exercising care with fire and not cutting down trees and other vegetation. This "minimum impact ethic" was dispensed to the public in a largely successful public relations campaign by the U. S. Forest Service, National Park Service, and other land management agencies during the 1970s. However, if we look at the model of carbon dioxide and global climate change, we may conclude that our visitors are having a greater impact on our parks as they conduct themselves in their everyday lives, than when they are actually in the parks. They, our American visitors, are the world's most prolific producers of atmospheric carbon. So in order to fulfill our mission of protecting the parks, we may have to export the idea of

"minimum impact" out of the parks. As William E. Brown pointed out in his 1971 activist-ranger manifesto Island of Hope:

Before the world got so small it used to be enough for park and recreation people to protect the properties under their management: Don't build that road (pipe line, factory...) in my park! What goes on outside my boundary I can't help. Period.

But now the rules have changes. Because the simplest understanding of ecology makes us aware that no park or recreation resource can exist unimpaired if its natural context is degraded or destroyed and its social context is human misery and discontent. Nor do boundaries themselves have any real meaning today. Air and water circulate through, under and above boundaries.⁹

But who are we to tell our visitors how they should conduct their lives? After all, global climate change is only one of many global environmental effects. Isn't there some other class of professionals more qualified than us to undertake this task?

Maybe not.

Park rangers are uniquely placed in society to see what is happening, and to tell people about it, in terms they can understand. We have an unusual perspective, in that we have been placed in charge of little islands of relatively unspoiled nature, and from these islands we watch the destruction of the rest of the globe. As residents of these islands, our perspective is very much like the perspective of the grizzly bear, the wolf, and other species who look out from their stronghold on a world growing smaller and sicker.

Park ranger are the keepers of the only major governmental institution embodying the idea that quality of life, in part, is dependent on the opportunity to have contact with elemental nature. This 19th-century

Romantic idea of the elevation of the human spirit by contact with the wilderness was at the heart of the original preservationist parks movement, in full swing at the turn of the century. Much of the mystique and longterm popularity of the park ranger in the eyes of the public is traceable to this idea. The park ranger was (and sometimes still is) seen as the physical manifestation of human nature made noble by life in the outdoors. Peter Steinhart writes of the expectations of early (urban) park visitors:

The early park visitors believed human character was what counted and that life in nature made men of courage, resourcefulness, good cheer, wisdom, and willingness to help others. They expected to find such character in the ranger. The ranger's duty was not just to tell them about bears and rescue them from difficulties. It was to prove good land could make good people.¹⁰

The park ranger these early visitors encountered did live up to these ideals, and in many cases still does. This lineage has given the park ranger great credibility as a spokesperson for embattled nature. When we are at our best, people feel as if we represent nature itself. So knowing that we enjoy this natural credibility, we would be remiss if we did not step forward now and tell the park visitors how to protect the parks they love. Let me suggest five components that should be included in this new park protection message.



FIVE COMPONENTS OF A NEW PARK PROTECTION MESSAGE

1. What Is Special Here
2. What the Threats Are, and No Park Is an Island
3. The Park Is a Hopeful Place
4. Nature Enjoyed in Place Versus the Enjoyment of Consumption
5. Looking at Our Philosophy of Human Beings in Nature

A DISCUSSION OF THE MESSAGE

1. What Is Special Here: We should first of all continue to interpret the parks. We should build the visitor's understanding, enthusiasm, and love for the beauty of the natural world. The visitor should have a sense of how special this particular place is. Eventually, there is a growing realization that all natural places are special in some, albeit less spectacular, way.

2. What the Treats Are, and No Park Is an Island: Now we must dispel the myth of separateness. We must expose the falsehood of the idea that this beauty can continue to exist regardless of what we do in the rest of the world. No effort to share the beauty of a natural community is complete or truthful now without a discussion of the threats from our collective effects on the world. If we discuss migratory birds in the summer in Alaska, we should discuss the disastrous effects of habitat loss on their route to the wintering grounds in the south. If we discuss golden trout in the lakes of the Sierra Nevada, we should discuss the changes in acidity in those lakes as a result of acid rain from the huge population centers of Southern California. If we talk about beach ecology in a coastal park, we should talk about the rising ocean and global climate

change. We should talk about oil spills. And we should talk about both effects not as an environmental evil perpetrated by oil companies, but as a result of our own demand for energy, and the absurdity of a transportation system which involves the movement of a ton of automotive steel to get one human body weighing 200 pounds to the beach.

3. The Park as a Hopeful Place: We should not be leaving the park visitor with a sense of doom. It is essential that people be inspired to take positive action. To this end, natural area parks can and should be demonstrations of human life in a "minimum impact" mode. Our administrative buildings and visitor centers should be models of energy conservation and be fitted with solar and wind energy equipment. Efficient narrow-gauge trains and bicycle trails should replace automobile routes. Sewage systems employing the incredibly backward and expensive idea of mixing human feces with clean water should be replaced with composting toilets.

It is interesting to have a discussion with park visitors about their optimism or pessimism about the future of humankind. It seems that a good many people feel that the disappearance of our species due to some sort of environmental or political catastrophe is inevitable. Many seem to think that this is acceptable, or to some people fatalistically desirable, because the world and its other inhabitants, will go on without us. In one such discussion I had, a man in his thirties said, "Mankind will never change. We will keep on doing what we're doing until we kill ourselves off. There is nothing we can do about it." When I questioned his pessimism, and advanced an alternative view of a revolution in human thought, the man said: "That's unrealistic. I'm just being realistic."

This point of view, however widely held, is unacceptable for several reasons.

First of all, the catastrophic disappearance of our species is not an isolated event. Whether played out as a nuclear war, or a massive environmental disaster, the effects will fall not only on us, but on our fellow inhabitants of the planet. This will involve species extinctions of even greater scale than current levels. The act of our collective suicide is more like a murder-suicide. We must restrain ourselves from suicide because we have no right to destroy what is around us in carrying it out.

Secondly, the widely held belief that such a conclusion of the environmental crisis is unavoidable merely serves to absolve the individual from the duty to make changes in whatever part of the world he/she can touch.

Finally, we must be aware of the power of our collective idea of where we are headed, as a self-fulfilling prophecy. If we believe we are doomed, we may indeed be doomed. So it is not very constructive to believe in total destruction, however likely it may seem, based on an extrapolation of current trends.

4. Nature Enjoyed in Place, Versus the Enjoyment of Consumption: All necessities and luxuries of life are made from raw materials that come from somewhere on earth and involve some level of disturbance of natural systems in their extraction and conversion into finished goods. The two main factors in the demand for these natural commodities are the number of people using them and the level of individual consumption. In the United States, the average person consumes most of his or her own weight in raw materials each day, which puts us at the pinnacle of world consumption.¹¹

At a particularly inspiring location on a tour, submit to your visitors that there may well be raw materials at this location that are exploitable: trees, minerals, oil underneath the ground, the furs of animals, the land itself that could be bulldozed for a shopping mall or housing development. Ask them if they think these values should be used, or the place left as it is. Allow them to take in the sensations of the place for a while, then ask them if the pleasure of standing in a forest might be worth as much to them as the lumber that could be extracted from it.

Public parks and wilderness areas represent a relatively new cultural tradition. The idea is around 130 years old, younger than the human-caused increase in atmospheric carbon. Behind the human-centered language of the enabling legislation, such as "for the enjoyment of future generations," is a concept of the preservation of nature for its own sake and the rights of other entities in nature to exist unimpeded. One has only to read John Muir, Bob Marshall,¹² or the writings of others who were responsible for the creation of these institutions to see this ethic at work.

It is precisely such an ethic of not converting everything possible to human use that is needed to face the prospect of global environmental change. It is an ethic of limits on human economic activity when that activity is to the detriment of natural systems—a setting of boundaries, like park boundaries. This is not to say we ought not kill a single tree. Species killing others to meet their basic needs is a pattern seen throughout the rest of nature. But levels of consumption of energy and commodities far in excess of needs, the wastefulness of luxury, will probably have to be curtailed very soon.

What will replace the pleasure derived from these material luxuries, in industrialized countries such as the United States? Perhaps

a kind of pleasure experienced by park visitors when they stand in the forest, or on an undeveloped coastal bluff: a kind of pleasure at the continued existence of other life.

5. Looking at Our Philosophy of Human Beings in Nature:

If we see our environmental effects, such as global change, acid precipitation, species extinctions, deforestation, toxics pollution, and the like, as a series of unrelated problems deserving of separate study and separate solutions, they will continue to confound us. As Murray Bookchin has pointed out, the Exxon Valdez disaster, Chernobyl, and Three Mile Island are treated as accidents: isolated phenomena that erupt without warning. Bookchin says that they are in fact inevitable outcomes of the fundamental assumptions of our society.¹³

According to environmental historian Carolyn Merchant, the advent of early modern science and industrialism in the 16th and 17th centuries was accompanied by a changing view of nature. In ancient times, says Merchant, nature was seen as a great living organism and nurturing mother. In many areas of the world, the various manifestations of nature were seen as having spirits and personalities. This required a kind of consideration of the needs of the people balanced with the needs of other beings. According to Merchant, the extraction of value and wholesale destruction of natural features we now see was made possible by a shift in conception of nature as devoid of feeling, spirit, and soul.¹⁴ You can see this in the philosophy of Rene Descartes (1591-1650), and his famous axiom "I think, therefore I am." Here, Descartes was saying to animals and trees "You don't think, therefore you don't exist

in the same way I do." Descartes divided entities into those capable of thinking, and those that weren't. Because the latter class didn't have thoughts and feelings, it was impossible to wrong them.

The idea that all of nature is somehow less than human has been the dominant worldview in our culture since Descartes but is now being questioned by environmentalists.

In his history of environmental ethics, *The Rights of Nature*, historian Roderick Nash points out that the debate surrounding the abolition of American slavery in the 19th century was in many ways similar to the current debate over the rights of living and non-living things in the global environment. Southern slave owners asserted that their economy depended on slave labor, and that slaves were undeserving of the rights of free men, because they were less than human.¹⁵ Compare this argument about slavery to the current discussion over cutting the last stands of old-growth conifers in the United States. Proponents of the cuts argue that without the harvest of the big trees, the mills and the economic health of timber-producing regions will suffer. Opponents say that the spotted owl and other members of the forest community have a right to existence.

The unpopularity of the idea of the rights of spotted owls, and the attendant idea that we are not the most important species on the planet, bears a striking resemblance to the unpopularity of the idea that the earth was not the center of the solar system in the 17th century. In 1632, Galileo Galilei, then a professor of mathematics at the University of Padua in Italy, published a book titled *Dialogues Concerning the Two Chief World Systems*. Building on the work of astronomers Nicholas Copernicus and



Ultimately, in order to protect the parks, we must extend our influence beyond park boundaries. Park rangers can present more than facts to visitors; we can help them examine their fundamental beliefs and feelings about their place in nature.

Kennan Ward Photography.

Tycho Brahe, Galileo skillfully supported the argument that the Sun, not the Earth, was the center of planetary motion. This point of view was at odds with church doctrine of the time. A few months later the book was banned and Galileo was forced to recant his beliefs before the Inquisition under threat of torture.¹⁶ Like Galileo, many contemporary conservationists have been accused of (economic) heresy in their efforts to protect natural communities against exploitation, including many of the parks we now work in.

We park rangers ought to take a long critical look at what our cultural assumptions about nature are and then help park visitors look at them too.

We tend to see ourselves as the highest form of life on the planet. Why? Because we seem to have the most complex brains and diversity of behavior (I include the development and

use of technology in the category of behavior). This is like saying that we are the best people on the planet because we are the best at rangers. Yet most of us have unquestioningly accepted this brainpower standard and a hierarchy of life forms that allows us to view the trees in ancient forests as something less than ourselves. Brain power is merely a ranking criteria we have selected because we happen to have it. Clearly, if the criteria were the ability to produce food from sunlight and live for 2,000 years, Sequoia trees would be at the top of the life-form hierarchy. Beyond this, we should be questioning the every idea of a hierarchical view of life on earth.

If the various aspects of the environmental crisis are the ultimate threat to our wellbeing, then careful consideration of our fundamental beliefs is exactly what we need to do. We need a philosophy that leads us to make choices that are in keeping with our actual context: our survival is totally dependent on the infinitely complex workings of a fragile network of life we may never fully understand. We have a duty to give park visitors more than facts about nature. We must help them examine their fundamental beliefs about their relationship to nature. It would be a shame if park rangers, out of a sense of duty to appear bureaucratically impartial or from an unquestioning acceptance of the culture's dominant view of the world is erroneous as the Earth-centered solar system and the enslavement of Africans.

To see the real possibilities in the future or our profession, we have to look beyond the shallow kind of futurism that views technology as the main influence on human events. We need to look at what the ranger represents as a cultural symbol. In cathedrals and monuments throughout Europe dating back as far as the fifth century, there appears an image carved in stone and wood of a man

with vines and leaves growing out of his head: half man, half plant. He has been called "the Green Man." William Anderson, in his book *Green Man: The Archetype of Our Oneness With the Earth*, writes:

The Green Man, as a composite of leaves and a man's head, symbolizes the union of humanity and the vegetable world. He knows and utters the secret laws of nature. When an image of great power such as the Green Man returns as he does now in a new aspect after a long absence, the purpose of its return is not only to revive forgotten memories but to present fresh truths and emotions necessary to fulfilling the potentialities of the future.¹⁷

What is a ranger? A ranger is a guardian. A ranger is the 19th-century Romantic idea of human beings ennobled by living in nature. A ranger is the Green Man and the Green Woman. Knowing what we can symbolize to our society what should we do? We should do what we were hired to do. Protect the parks. In order to accomplish this, we shall have to extend our protective influence to the rest of the world by helping park visitors to think and feel about their place in nature.

Footnotes

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2. Richard Monastersky, "Scientist Says Greenhouse Warming is here," *Science News*, Vol. 134, No. 1, July 2, 1988, p. 4
3. At the same time, in the United States, John Muir was publishing his biocentrist writings. Clearly, for these visionary men, the threats we now face were already evident.
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7. Lester R. Brown, et al., "Whither the Trees?" *Solstice*, January 1989
8. Christopher Flavin, *Ibid.*, p. 19 (source is Oak Ridge National Laboratory)
9. William E. Brown, *Island of Hope*, Alexandria, VA, 1982, pp. 18-19
10. Peter Steinhart, "Surviving on Sunsets," *Audubon*, September 1990, p. 20
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12. Marshall, of the U. S. Forest Service and The Wilderness Society, was instrumental in setting aside what were then known as "primitive areas," during the 1930s. These areas were later included in the Wilderness Preservation System under the 1964 Wilderness Act. See James M. Glover, *A Wilderness Original: The Life of Bob Marshall*, Seattle, 1986
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14. Carolyn Merchant, "The Death of Nature: Woman, Ecology, and the Scientific Revolution," San Francisco, 1990
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