

New Ferocity Marks Ancient Debate Over Humanity's Relationship to Nature

Some scholars question whether wilderness, as a place untouched by people, really exists

By DAVID L. WHEELER

The ancient debate over humanity's relationship with nature is being revived with a new ferocity as environmental scientists, historians, and philosophers argue about how human needs should be balanced with those of other species.

The ideological debate is often masked by the details of confrontations over preserving tropical rain forests or endangered species, but scholars who are tracking the discussion say it could determine the future of the environmental movement.

At the core of the latest round of arguments, which are being expressed in forums as varied as *Bioscience*, a magazine for ecologists, and last month's meeting of the Association of American Geographers, is the question of whether humans should try to manage nature or if nature should be left alone to manage itself. In looking at the state of the planet today, scientists are questioning whether wilderness, usually conceived of as a place untouched by humans, really exists.

While many scientists say that ecosystems untrammelled by humans do exist and need to be kept pristine, others argue that humans have already shaped most of the planet's landscape, even what was once considered virgin forest.

Arturo Gómez-Pompa, a professor of botany at the University of California at Riverside, says that in more than 20 years of research in the tropics of Mexico he has been searching for undisturbed forest to compare with vegetation where Mayans have lived to see how the Indians affected their environment.

"I began seeing that it was very difficult to find places we were sure were undisturbed," Mr. Gómez-Pompa says. "There was always something that led me to believe people had been there."

'Absurd and Wicked'

In an article called "Taming the Wilderness Myth" in the April issue of *Bioscience*, Mr. Gómez-Pompa and Andrea Kaus, a graduate student in anthropology, argue that many other regions of the planet once considered to be free from human influence have been altered by civilization's presence. Scientists, the authors say, need to look to rural people of the present and the past to gather wisdom about how humans can coexist peacefully with their natural environment.

But many people believe that the idea that wilderness does not exist is an attempt to justify unchecked population growth and the exploitation of resources in wilderness areas. "To define away 'wilderness' as a concept just because nothing is pristine is

both absurd and wicked," says David Ehrenfeld, a professor of biology at Rutgers University and the editor of the journal *Conservation Biology*. "There are places where no people or scarcely any people can get to, and these places are wilderness. Just because there are effects you can demonstrate from civilization doesn't negate that."

The winning argument about wilderness could carve the intellectual riverbed down which the environmental movement will run. A belief that humans have already left their stamp on what used to be considered remote, undisturbed jungle leads more readily to a strong role for humans as the best managers of the environment in the future. The view that wilderness was shaped largely before the arrival of humans and represents powerful forces beyond our intelligence and control is more apt to lead to "nature reserves" that would be fenced off from human influences.

An Ideological Conflict

James D. Proctor, a doctoral student in geography at the University of California at Berkeley, has studied the controversy over saving the northern spotted owl in the old-growth forests of the Pacific Northwest. He says he found an ideological conflict between the environmentalists' "ecocentrism" and the timber industry's "neo-anthropocentrism."

Mr. Proctor says paper companies, min-

ing corporations, oil companies, and others in the business of extracting resources from land have updated their turn-of-the-century position that America's forests should be used to create jobs and make products for Americans.

"The timber industry now argues," he says, "that forests need to be managed not just to help us but because nature is a bit untidy and a little inefficient." A video produced by Caterpillar Inc., which makes heavy equipment used in logging, shows lightning starting a forest fire and then goes on to suggest that logging both keeps forests healthy and helps humans by clearing out dead wood and old trees.

Ecocentrism, Mr. Proctor says, holds that humans have a moral obligation to let other species thrive. "You can't always wait for a human argument to protect the environment," he says. "There are aspects of nature that are less glorious than majestic old-growth forests but that still need to be saved."

Radical environmental groups such as Earth First! scoff at mainstream environmental groups that will use any argument available, including possible benefits for humans, to argue for the preservation of wilderness.

The Planet as an Ark

Roderick Nash, a professor of history and environmental studies at the University of California at Santa Barbara, says groups like Earth First! are "not just looking at the planet as recreation or scenery for human beings but as an ark where other species should be allowed to do their thing."

Scholars say the ideological battle between anthropocentric and ecocentric views may come to the fore at an "Earth Summit"—officially the United Nations Conference on Environment and Development—in Rio de Janeiro in June. At the meeting, the desires of developed countries to save species, reduce pollution, and preserve the environment are expected to come into conflict with the needs of developing countries, which do not want strict environmental controls to halt their progress toward the prosperity that developed countries already enjoy.

A compromise is already being crafted using the term "sustainable development," usually defined as economic growth that does not destroy the natural resources necessary for future human prosperity or survival.

But the sustainable-development concept could run into sharp opposition from some environmental scientists who are expected to attend the meeting



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Arturo Gómez-Pompa (in a Mexico City park): "It was very difficult to find places we were sure were undisturbed."

alongside politicians. "The idea of sustainable development is a fraud," says Rutgers's Dr. Ehrenfeld. "Continued expansion and growth aren't compatible with preservation."

The beginnings of a clash between human economics and the natural world may have been born between 10,000 and 15,000 years ago during the beginning of agriculture, historians and philosophers say.

Mr. Nash, the environmental historian and the author of *Wilderness and the American Mind* (Yale University Press, 1982), says that after the advent of domesticated animals and farming, land and animals outside the control of humans may have become "wilderness."

Europeans, who were used to being surrounded by cultivated land, came to America viewing its wilderness as a dangerous, dark, and "howling" wasteland. Today, Mr. Nash says, Americans appreciate the wilderness so much that places like the

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Grand Canyon are being "loved to death" by backpacking and river-rafting enthusiasts.

Others note that along with the appreciation of wilderness has come a negative, if sometimes correct, portrayal of humans as vile creatures who have trashed the earth.

The environmental movement has "had a great deal to say about how we should not do this and not do that," says William R. Jordan, III, director of public outreach at the arboretum at the University of Wisconsin at Madison. Mr. Jordan is also the editor of a journal called *Restoration and Management Notes*, which runs articles about returning damaged natural areas to their original states.

"Even though that's sometimes sound advice," Mr. Jordan says, "it leaves us with the impression that nature would be better off if we weren't here. The idea that nature is everything we haven't touched is pretty depressing."

'Last Great Places'

One preservation group has decided that the best solution, both practically and philosophically, to resolving the man-versus-nature conflict is to try to save preserves by also working with the people who live near them. Last year, the Nature Conservancy, which has usually been concerned solely with buying and preserving land, announced a "Last Great Places Initiative."

The "great places"—core areas owned by the conservancy that are critical to the survival of a species or a type of ecosystem—are to be surrounded by "buffer zones" that the conservancy does not own. The group will try to persuade neighbors of the core areas to adopt agricultural, water-use, and industrial practices that do not threaten the preserve. Those who live near preserves will also be recruited as vol-

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unteers to work in the preserves themselves.

Looking at humans as an integral and helpful part of endangered ecosystems may require changing the direction of research, environmental scientists say. Marjorie Holland, public-affairs director of the Ecological Society of America, says Mr. Gómez-Pompa's recent paper "sets the stage for more interdisciplinary research."

While the "Man in the Biosphere Program" of the United Nations has attempted to conduct research on what role humans play in ecosystems since 1971, its critics say that too often scientists in the program have found it easier to study hydrology or geology than to work with social scientists and consider the unpredictable variables that humans can introduce to nature.

'Sustainable Biosphere'

Now more ecologists may begin to take their cue from Mr. Gómez-Pompa and the Ecological Society of America's "Sustainable Biosphere Initiative." The effort calls for careful consideration of human population demographics, economic demands on ecosystems, and the recognition that, according to a booklet published by the society, "humans are essential elements of the ecosystem we study."

While some environmental scientists are calling for more research on the human role in ecosystems and the potential of human management of ecosystems, others worry about the effects of too much management and about scientists' creating the illusion that they know more about natural processes than they do. Mr. Nash has written that a "garden scenario"—a pastoral vision of the future with humans as benevolent managers of the earth—is as threatening to the wilderness and the environment in general as the "wasteland scenario"—in which asphalt, steel, and toxic wastes cover the earth.

"Preservation is a concept of planetary modesty where wildness is a civilization in and of itself," says Mr. Nash. "There's a civilization of the elk, the beaver, and the chickadee." ■