Conservation's Ecocentrics

A wild, some say macho, vision for saving species

By ELIZABETH PENNISI

In June, a dozen citizens angrily protested at a meeting of the city council of Takoma Park, Md., when a committee suggested establishing a conservation easement along a dry creek bed that meanders through the back sections of their lots. The city's "open-space" committee wanted to ensure that no single person could fence off the path through this 5-acre stretch of tulip poplar forest and to protect this pocket of green space — a refuge for raccoons, woodpeckers, and other urban wildlife — from being pockmarked with sheds or swimming pools.

Over the years, Takoma Park, which borders northeast Washington, D.C., had earned a reputation as a progressive, pro-environment city. It was one of the first nuclear-free zones in the country and a pioneer in full-service curbside recycling. No one can cut down a large tree without the city's permission. But that night, the council dropped the whole idea, more worried about the wrath of these few constituents than about the long-term protection of a little open space.

Given that political reality in one of the more environmentally conscious communities in the nation, it seems ludicrous that anyone would suggest converting millions of acres throughout North America not just to open space, but to wilderness off limits to people.

But then, political realities have never stopped Dave Foreman, founder of a radical environmental group called Earth First!

A week before the Takoma Park hearing, he and his colleagues made such a pitch at a meeting in Tempe, Ariz. In their proposal, called the North American Wilderness Recovery (a.k.a. Wildlands) Project, these environmentalists call for the restoration of whole landscapes and the creation of a vast system of connected wilderness reserves that would crisscross the continent. These reserves would dwarf the largest national parks. Within their boundaries, roads, dams, power lines, and other human-made structures would be dismantled. Planners would choose the reserve sites with plants and animals, not people, in mind, selecting them not for spectacular scenery or recreational opportunities but for ecological potential.

"Our goal is to create a new political reality based on the needs of other species," says Foreman.

At first glance, the Wildlands proposal seems too wild to warrant consideration by practical people, environmentalists included. But actually, research that is reshaping conservation science justifies some of Wildlands' underlying premises. Consequently, a growing group of scientists and activists, though critical of the details, find merit in this very radical plan. Already they have begun to focus on large-scale preservation.

The Wildlands proposal arose because of the shortcomings of current conservation efforts, its creators argue. Almost daily, government agencies and nonprofit organizations herald new successes in protecting biodiversity as they set aside property for use by threatened plants and animals. Many of these efforts started because scientists and the public became very focused on preventing the extinction of individual species.

But more and more, ecologists and others realize that true conservation entails saving not one but many species and doing so in their natural environments. "If you want to protect biodiversity, then you need to think about it on a landscape level," says John G. Robinson, a conservation biologist with the Wildlife Conservation Society in New York City.

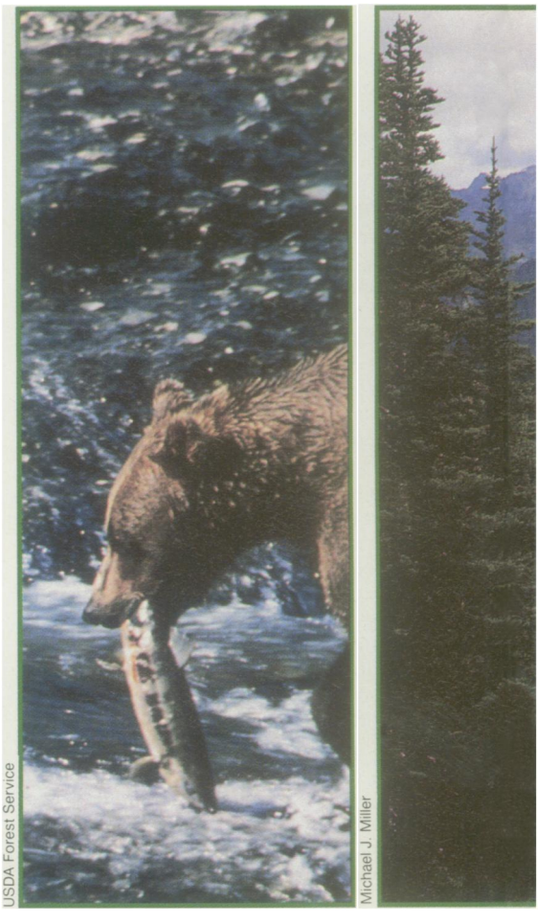
This perspective means that four goals should drive conservation, says Reed F. Noss, a conservation biologist based in Corvallis, Ore. First, protecting rare and endangered species remains crucial, he says. Second, protection must extend to "umbrella" species — plants and animals whose survival ensures that many other species will thrive — as well as to rare ones.

Third, a reserve must preserve an ecosystem's processes — the cycling of nutrients and water, succession of species, and energy flow through food chains, for example — and patterns, such as the distribution of different species. Finally, only reserves large enough to contain variations in the landscape will both allow natural selection to occur and enable organisms to adjust to climatic or other changes.

Under these criteria, almost all existing parks, wildlife refuges, and sanctuaries are too small, too isolated, and too fragmented, says Foreman. They may satisfy the needs of a threatened bird or wildflower, but they cannot support larger animals, especially large carnivores — wolves, bears, puma — that once were crucial components of most North American ecosystems.

Also, maintaining nature's patterns and processes requires very large-scale thinking. For example, every 200 to 300 years, great fires destroy lodgepole pine forests that characterize Yellowstone National Park. Only by preserving forest stands throughout a much larger region, known as the Greater Yellowstone Ecosystem, could such natural events occur without threatening to destroy biodiversity, Noss says.

Many people do not realize that the seemingly vast expanses of undeveloped or protected land in the continental



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Michael J. Miller

United States still leave many of North America's ecosystems vulnerable, Foreman says. These natural areas include just 60 percent of the continent's ecosystems; only 19 percent of those ecosystems exist in preserves larger than 100,000 hectares—a block of land roughly 20 miles on a side. In addition, domestic animals graze on a third of federal "wilderness" lands, altering the naturalness of these areas, Noss adds.

The "ecocentric" activists such as Foreman find these percentages unacceptable and insist that they be changed, no matter how long it takes. "The Wildlands Project does not accept the limitations of time and space that we so often [find] constraining," says Michael Soulé, a conservation biologist at the University of California, Santa Cruz, and a creator of the proposal.

This long-term view extends well into the next century and beyond. Soulé and his Wildlands colleagues accept that restoring much of the continent to a natural state will take many decades, even centuries. But then, they hope the consequences of these efforts will last millennia.

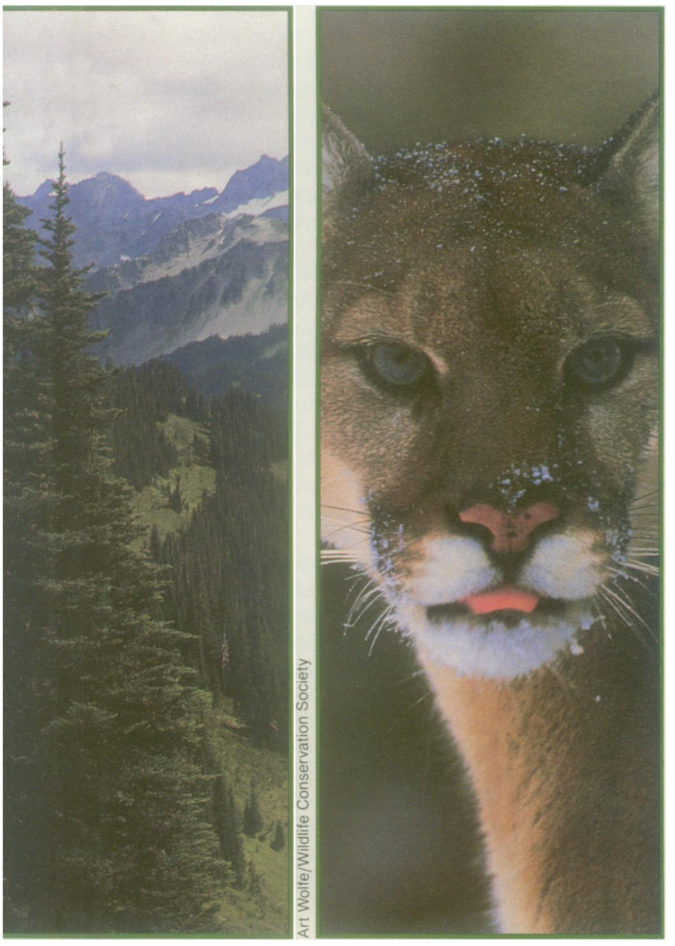
Noss and others consider populations of plants or animals "viable" only if a species can thrive for hundreds of years. To ensure such persistence, a plant or animal may need hundreds of individuals living close enough to breed, he says. For large animals in particular, that can require many, many acres of territory. Studies that monitored the movements and lifestyles of grizzly bears in Canada, for example, indicate that just 50 bears require about 12 million acres. One thousand grizzlies would need 242 million acres—an expanse of land made possible today only by linking existing refuges by natural "corridors." Connecting the Greater Yellowstone Ecosystem with a nearby region known as the Northern Continental Divide Ecosystem and with the Canadian Rockies could create such a system, Noss notes.

To curtail poaching and other damaging activities, no more than one-half mile of road per square mile of land should exist in these areas, he adds.

To set up this and other protected open spaces, Noss calls for the establishment of "core" reserves off limits to all people and stripped of all human artifacts. "I suggest that at least half of the land area of the 48 conterminous states should be encompassed in core reserves and inner corridor zones," he wrote in the Wildlands proposal presented in June. Buffer zones, in which limited human activity could occur, would surround the cores and their corridors, insulating them from detrimental effects of more crowded, settled environments. Ultimately, inhabited land would exist as islands surrounded by this wilderness network.

Moreover, conservationists should not be satisfied by just saving species, or even habitats or ecosystems, argues Soulé. Like other Wildlands proponents, he urges the United States, actually all of North America, to go even further and preserve "wildness."

"Wildness is a state of nature, a state of mind," he says. To him, the term implies bigness and spaciousness—an entire undeveloped watershed or mountain range, for instance. But to be truly wild, these places must also possess a fierceness, he adds.



"The land has given much to us; now it is time to give something back—to begin to allow nature to come out of hiding and to restore the links that will sustain both wildness and the spirit of future human generations."

—Mission Statement,
Wildlands Project

Though viewed as bold, even outrageous, this plan drew strong applause from participants at the annual meeting of the Society for Conservation Biology in June when it was presented by Foreman, Soulé, and Noss.

"It's the right vision, it's the vision we have to pursue or say good-bye to Mother Nature," says Mark Shaffer, vice president of resource planning and economics at The Wilderness Society, an environmental advocacy group based in Washington, D.C.

"It pushes traditional [environmental] organizations in a manner very appropriate and [brings to the] forefront that the reserves we've created are too small, that our focus is too narrow," adds Sara Vickerman, who finds the idea intriguing, if impractical. Vickerman coordinates activities in Portland, Ore., for Defenders of Wildlife, another environmental organization. "Just stopping destructive projects is not enough," she says.

Other conservationists point to shortcomings of existing species-preservation projects. "Current recovery efforts are too timid and too influenced by socioeconomic decisions," says J. Michael Scott, a U.S. Fish and Wildlife Service research biologist based at the University of Idaho in Moscow. He cites a recent analysis of species-recovery plans—efforts to protect or breed enough individuals of a particular endangered or threatened species so that they can produce enough offspring in the wild to remain viable. That analysis revealed that in one-quarter of the more than 300 species "helped" by these efforts, "the goal was less than the population size at the time of listing," he says. For 60 percent of the species, the projects will not increase the population above what scientists would consider endangered, he adds.

These failings make a broader approach—to protect environments so that species will never become threatened—quite appealing to environmentalists. "It's no longer enough to save one wetland here and a prairie there," says Frank J. Popper, a land-use planner at Rutgers University in New Brunswick, N.J. "You need to do [conservation] regionally."

Of course, the Wildlands Project, as now set forth, contains its share of shortcomings, not the least of which may be lack of public appeal.

"It certainly is justifiable scientifically," says Peter F. Brussard, a conservation biologist at the University of Nevada at Reno. "But [this kind of idea] scares the pants off of everybody in Nevada. Things like gays in the military pale in comparison."

Critics point out that the proposal fails to explain how societal and wildlife needs can meld or how the acquisition of land will overcome economic constraints and personal values. "It is perceived as an extreme proposal . . . inconsistent with the values of mainstream society," says Vickerman.

"It's unrealistic to expect biodiversity to become our first priority," Robinson adds.

Others question the need to link "wildness" with the preservation of biological diversity and challenge Soulé's definitions. "It doesn't have to be big and I don't have to feel threatened for it to be wild," says Deborah Jensen, a biologist with The Nature Conservancy in Arlington, Va. "This is a male definition of wildness."

Few if any large tracts of land have survived as pristine ecosystems with the same species diversity that existed before Columbus landed in North America. So restoration of habitats and species — a fledgling science at best — will also take quite a lot of time, energy, and money. Yet the proposal does not discuss who will finance the acquisition, restoration, or continued preservation of this land, skeptics note.

Scott cautions that many forces will reshape the Wildlands plan over the next decades. Issues of equity, of the rights of property owners, and of how and what should be set aside will take a long time to resolve, he says.

If people do not accept "off limits" for so much countryside — which seems a certainty — then "it's going to take a pretty heavy hand to set aside thousands of acres and keep people off," Brussard predicts.

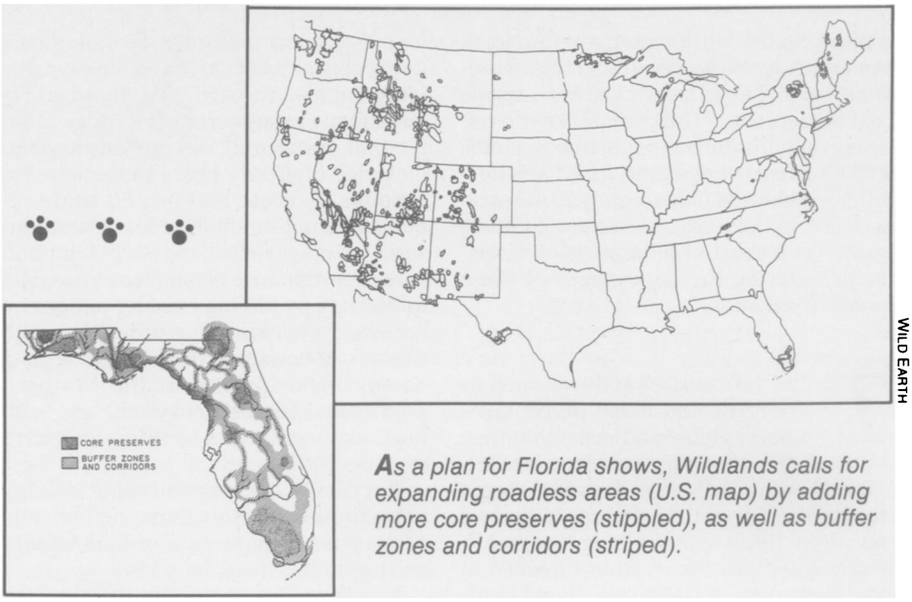
"[Wildlands] really makes the rest of us [environmentalists] look reasonable," Vickerman concludes.

So is the Wildlands Project too wild an idea? Maybe not.

Other seemingly wild ideas have begun to take hold, much to the surprise of even those who first proposed them.

Six years ago, Popper and his wife, geographer Deborah E. Popper of Rutgers and of New York University, suggested that 139,000 square miles across 10 Great Plains states become a "buffalo commons." They wanted to allow marginal, bankrupt farmland to return to natural habitat.

"It started out very much as an academic fantasy, but it's also clear that it's actually happening now," says Frank Popper. When the Poppers first suggested this idea, many feared they wanted to kick people off this land. But the East Coast academics say they are simply advocating that people use land in ways that are more compatible with the terrain and climate.



As a plan for Florida shows, Wildlands calls for expanding roadless areas (U.S. map) by adding more core preserves (stippled), as well as buffer zones and corridors (striped).

WILD EARTH

Now, driven by economic at least as much as by conservation motives, the transformation of cattle ranches and even some farms into buffalo reserves and ranches has begun. "People are actually leaving because of economic difficulties," says Frank Popper. Those staying are eying buffalo harvests and tourism as new ways to help make ends meet. Even some Indian reservations want to jump on the buffalo bandwagon, a niche in the meat market that has grown fivefold since 1987, he notes.

Three years ago, the Wildlife Conservation Society in New York City began coordinating the Paseo Pantera project, an effort to connect remaining patches of wilderness in Central America with wilderness "corridors" that would allow panthers to once again wander throughout their natural range. "It's thinking about [conservation] on the landscape level and at the same time recognizing that other activities need to go on," Robinson says. "It's a big project and it's going to take decades."

Despite what happened in Takoma Park, governments are beginning to act as well. They, too, are thinking big. In June, the provincial government of British Columbia decided against a $430 million mining project and instead set aside 2.5 million acres — the watershed of the Tatshenshini and Asek rivers — as a national park that will link with Alaska and Canada's Yukon Territory to create a 21-million-acre reserve. Momentum is building in the U.S. Congress to set aside 7 million acres as part of the California Desert Protection Act. Another bill calls for enhanced protection of 20 million acres in the northern Rockies.

The Nevada Biodiversity Project will outline conservation needs for that state, Brussard says. As part of the proposal, U.S. Fish and Wildlife Service researchers at Utah State University in Logan are mapping species distributions with existing land uses to determine what new wildlife preserves are needed. He hopes the project will ensure that a few-hundred-square-mile mountain range in the southern part of the state will remain pristine, part of it as a "mini-wildland" and part set aside for recreational use.

Noss has worked up a regional plan for Oregon's coastal range. Among other goals, the 200-year proposal calls for stopping logging in old-growth forests, closing unnecessary roads, and restoring damaged streams. "I'm amazed to see that many land managers are taking my idea seriously," Noss says.

Furthermore, in June, the Pew Charitable Trusts, one of the United States' largest private philanthropic organizations, gave a nod to the Wildlands idea by selecting Noss as a Pew Scholar in Conservation and Environment for 1993. Over the next three years, Noss will receive $150,000 to support his efforts to organize grassroots conservation planning for the North American "bioregions" identified as Wildlands priorities.

Even if that planning waters down the Wildlands objectives, the proposal will still have served an important purpose, say conservationists. "Probably deep down all of us wish [Wildlands] would happen," says Brussard. "Being a little pragmatic, we know it won't."

"But once a position like this is established, you've sort of drawn your line in the sand. It defines the left end of the spectrum of what's good for biodiversity," he continues. "[As a result] we'll probably be able to get some reasonable compromises."

Wild, isn't it? □