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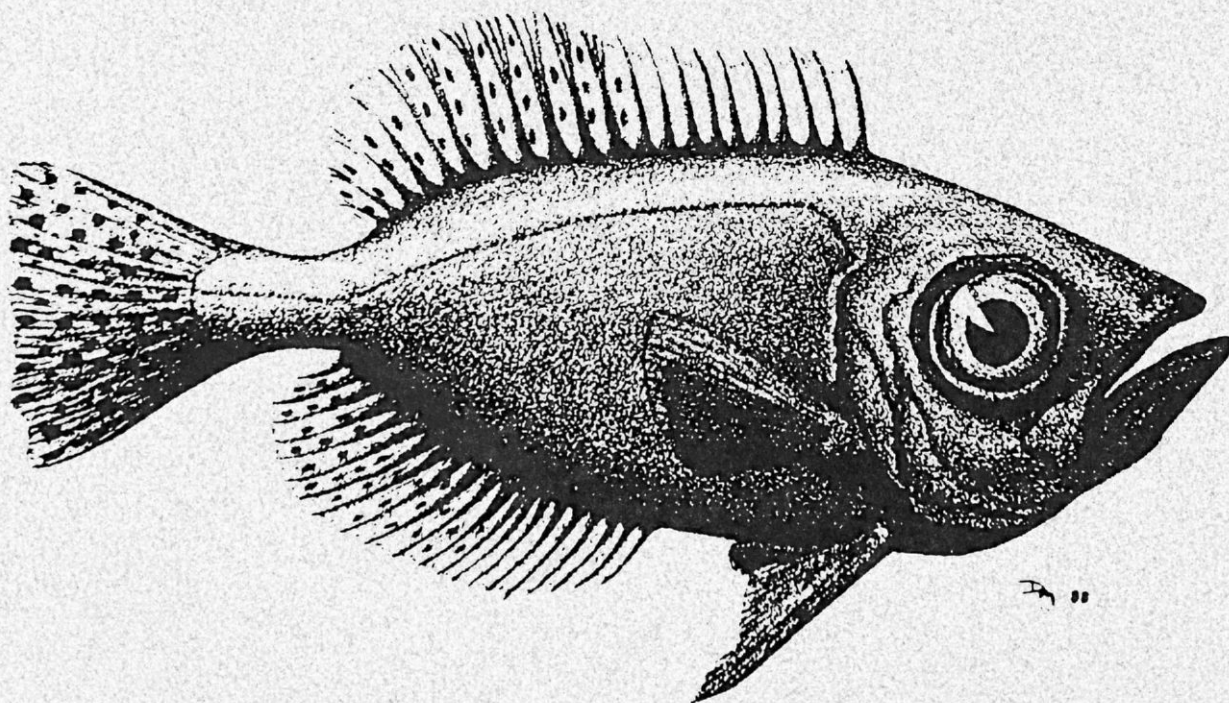
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Wild
EARTH
Volume 2, Number 3



BRON TAYLOR

FALL 1992



In This Issue:

Backlash Against The Endangered Species Act
Grandfather Mountain
Saving The Lynx
America's Last Woodland Caribou
The Dignity of Wild Things

\$6⁰⁰

Around The Campfire

By Dave Foreman



I write this while driving across North Dakota. Last night, Nancy and I camped in Theodore Roosevelt National Park. The song of the Coyote we heard, the cattle grazing outside the Park boundary, and the miles and miles of wheat and hay we see today are reminders of Aldo Leopold's sorrow — we live in a world of wounds. Perhaps nowhere else in the United States is this more obvious than in the Great Plains. People are few and far apart, but the land is scarred by plow, combine, exotic crops, pesticides, and fertilizers — and by loss of wildness and wildlife.

In Theodore Roosevelt National Park though, the wild land is coming back. There are Bison, Elk, and Pronghorn. TRNP shows us what can be restored if we only have vision and boldness. As I hiked yesterday and found my path blocked by a herd of free-roaming Bison, I was taken back one hundred and fifty years. When I heard the yip of the Coyote, I dreamed of the howl of the Buffalo Wolf.

It is the goal of *Wild Earth* to offer the bold vision of the New Conservation Movement. It is time to rewild North America; it is past time to reweave the full fabric of life on our continent. As I stood at Oxbow Overlook, gazing toward the detached southern unit of Theodore Roosevelt National Park fifty miles south along the Little Missouri River, I remembered George Catlin's proposal one hundred and fifty years ago for a vast wilderness park on the Great Plains.

Connecting the detached units of TRNP through the Little Missouri National Grassland, acquiring interspersed private land, removing the cattle, tearing down fences, giving the Bison and Elk room to roam, and then restoring wolf and Grizzly to their rightful place here is a vision for the twenty-first century. This is where tomorrow begins. This is why *Wild Earth* exists.

In October, you will receive a bonus as a *Wild Earth* subscriber — our first special issue. In addition to our regular four issues a year, we will publish special issues periodically. The one forthcoming in October is a joint venture of *Wild Earth* and The Wildlands Project, made possible by a grant from Doug Tompkins's Ira Hiti Foundation for Deep Ecology. It will set forth the vision of The Wildlands Project — to restore the wild biological diversity of North America.

We plan to print over 20,000 copies of this special issue. If your group would like to send copies to people on your mailing list, please contact Rod Mondt at The Wildlands Project (POB 5784, Tucson, AZ 85703). Also contact him for extra copies to hand out.

Until then, enjoy the Fall 92 issue of *Wild Earth* — chockablock as usual with wild vision from the boldest thinkers and activists in North America. Happy Trails.

—Dave Foreman, *The Buffalo Commons*

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WILD EARTH



FALL 1992

VOLUME 2, NUMBER 3

Viewpoints

- 2 Green Card by *Char Miller*
- 3 How To Save The Nationals by *Lance Olsen*
- 5 Was the Earth Summit a Failure? by *Sharon Wehner*
- 6 Night And Fog: The Backlash Against the Endangered Species Act by *R. Wills Flowers*
- 9 Letters

Natural World News

- 14 Forest Service vs Free Speech, Peninsula Bighorn, Mt. Rogers, Flatwoods Salamander

Biodiversity

- 17 Saving Grandfather Mountain by *Miles Tager*
- 21 Conserving Diversity In The Twentieth Century by *Mitch Friedman and Mark Skatrud*
- 25 America's Last Herd Of Woodland Caribou by *Evan Frost*
- 28 Southern California Biodiversity Sampler by *David Hogan*
- 34 Sugar Maple: Most American of Northern Hardwoods by *Robert T. Leverett*
- 36 Old-growth Adirondacks Quest by *Robert T. Leverett*
- 39 Knowing Tarantula by *Thomas Tanner*

Strategy

- 42 Practising Bioregionalism by *Naomi Rachel*
- 43 Sinapu Gains Wolf Study by *Michael Robinson*
- 44 To Break The Timber Industry's Death Grip by *Chris Van Daalan*
- 47 ORCAFORCE by *Captain Paul Watson*

Movement Mutterings

- 48 Blind to Biodiversity by *Lance Olsen*

Dr. Dioxin on the Toxic Trail

- 49 Farther Down the Road

Wilderness Proposals

- 50 Biodiversity Conservation Area Proposal by *Paul Hirt, Mark Fishbein, and Susie Brandes*
- 53 A Greater Big Bend Ecosystems Proposal by *George Wuerthner*
- 56 Woodpecker Wilderness by *Ray Vaughan*

Land Ethics

- 59 Mountains that Walk by *Max Oelschlaeger*
- 65 Radical Environmentalism in the 90s by *George Sessions*
- 72 Working The Woods by *Ron Steffens*
- 77 The Dignity of Wild Things by *Mollie Matteson*

Population Problems

- 82 Has The United States Exceeded Its Carrying Capacity? by *Monique Miller*

Readings

- 84 Exceptional Excerpts—*Pilgrims to the Wild* by *Sean O'Grady*
- 85 Book Reviews
- 90 Noteworthy Articles by *John Davis*

Announcements—94

Species Spotlight

- 96 The Snowy Plover (*Charadrius alexandrinus*)

Poetry

- 38 The River They Call Dead Now by *Patti D'Angelo*
- 82 Speed the Day by *Franklin Rosemont*

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On the cover: The Big Eyed Fish (*Priacanthus cruentatus*) by artist Douglas Moore.

Green Card

by Char Miller

NOT ANARCHIST
- same prospect for
ELECTORAL POLITICS

Senator Al Gore brings balance and ballast to the Democratic ticket, especially on environmental matters. He'll do more than just bolster Clinton's less than exemplary commitment to Mother Earth, however. Indeed, he'll mount a passionate and articulate defense of conservation as his *Earth in the Balance*, an elegant treatise on environmental ethics, testifies. Better yet, Gore can get down and dirty when necessary. In a recent appearance on CNN, for example, he squared off against Michael Deland, Chairman of the White House Council on Environmental Quality, pummeling the Bush administration's intransigence at Rio, castigating its refusal to sign the Biodiversity Treaty. His rhetorical success was matched by another shrewd calculation: he timed his responses so that he got in the last word.

But Gore is not as sharp as might be. This is particularly evident in his lack of understanding of the history of the American conservation movement, a history that could further energize his assault on the current administration's shoddy environmental record.

One of the president's conceits, for instance, is that he's a Teddy Roosevelt conservationist, a line he touted with great vigor just before the Rio summit. Deland argued on CNN, "you have to reach back to Theodore Roosevelt before you can find a president who's as committed, as dedicated to protection of the environment as is George Bush." Moreover, Bush, like his bully predecessor, disdains airy rhetoric, "standing tall in the face of political peril."

Gore should have debunked that claim, for it is undermined by the very history that the Bush camp claims as its own. Take the question of wilderness protection, something about which Roosevelt felt so intensely that he set aside millions of acres of public lands—including forests, monumental landscapes, prairie habitat and wetlands—to prevent their despoliation. Other presidents from both parties have followed suit. Although neither the Republican trilogy of the '20s nor Richard Nixon are noted for their environmental sensitivity, each managed to extend the range of the National Park system; and Nixon set up the Environmental Protection Agency.

That said, the Rooseveltian mantle has truly passed to the Democratic Party, first borne by the second Roosevelt, who matched his cousin's strenuous efforts on nature's behalf. FDR offered a new deal to the land much as he did to a desperate citizenry, unleashing an extraordinary array of conservation initiatives. Under the guidance of his Secretary of Interior, Harold Ickes, for instance, the government acquired vast tracts of abandoned and abused land and rehabilitated them through the Civilian Conservation Corps and other agencies. Lyndon Johnson proved a worthy heir, too: In 1964 he signed the Wilderness Act that further defined the nation's need for wild places and provided the legislative and financial means by which to preserve such land; one year later, at a White House Conference on Natural Beauty, he advocated a "new conservation" policy that stressed "restoration and innovation," not simply protection and development. It took the much-maligned Jimmy Carter, however, to consummate what historian Roderick Nash has called "the greatest single act of wilderness preservation in world history," when he signed the Alaska National Interest Lands Conservation Act into law. Its 104 million acres doubled National Park lands and tripled those in the National Wilderness Preservation System. Teddy would have been proud.

But not of George Bush. His administration has instead rolled back the federal government's commitment to wilderness, seeking to sell off valuable public lands containing exploitable resources, easing restrictions on wetland development, and stacking the courts with judges unsympathetic to environmental legislation and activism. Due to recent Supreme Court rulings, for example, it is increasingly difficult for citizens to challenge federal agencies that do not obey environmental laws. Worse, the Bush administration has opposed protection of endangered species. The Department of Interior, through the so-called "God Squad," can, with the stroke of a pen, send an endangered species into oblivion; and its ruling on the destruction of spotted owl habitat in National Forests in Oregon is a case in point. How fitting then that in the week before Rio, the Bush administration undercut its own reforestation proposals by submitting legislation that would enable lumber companies to clearcut nearly four million acres of old growth, some of which is located in the Roosevelt-preserved forests of the Pacific Northwest. George is no Teddy.

That's no less clear when one compares their views on the purposes of global conservation. TR understood that international conservation was critical to the establishment of a safer, more prosperous world. That is why he proposed the first World Conservation Conference, to be held at the Peace Palace in the Hague in 1909. Its goals were to create a world-wide inventory of natural resources, develop codes to preserve and protect them, and monitor "fair access" so that all nations and peoples would benefit equally. In the words of Gifford Pinchot, one of the conference's architects and chief of the U.S. Forest Service, the meeting should "reduce the danger of war, and work powerfully for permanent peace."

That might have been fulfilled, too, had not William Howard Taft scuttled the conference shortly after he replaced Roosevelt in the White House in 1909. The new president rejected Roosevelt's and Pinchot's commitment to conservation's pacific potential, pursuing instead a narrow "Dollar Diplomacy" that made American interests paramount. That slap at the cooperative spirit only intensified international distrust, of course, a strategy that George Bush has unfortunately emulated. Fearing that agreements at the Earth Summit on clean air and biodiversity might alienate domestic business interests, and thus hinder his chances for reelection, he weakened or refused to sign on to these and other treaties, inviting the world's opprobrium. So much for standing tall.

The electoral consequences of this for Bush may further remind us of Taft. When Taft rejected his predecessor's conservation policies, he opened the way for Roosevelt to enter the 1912 campaign on the Bull Moose ticket, during which Roosevelt hammered Taft's perfidy; that's one reason why the incumbent lost, and lost badly. Gore could insure that Bush suffers a similar fate this November, but to repeat that past he'll first have to remember it.

Char Miller teaches environmental history at Trinity University in San Antonio, and is writing a biography of Gifford Pinchot for Basic Books.

How To Save The Nationals From Themselves Without Really Trying

by Lance Olsen

I remember the bright, sunny day at Old Faithful, in Yellowstone National Park. A friend told me there was about to be a small, informal meeting out on the lawn. Such informal huddles are part of any gathering, and this one was a spinoff of an annual meeting of environmentalists concerned about the future of Yellowstone. The huddle was to be about grizzly bears, so my friend told me he thought I should be there. I hadn't been invited but he had, so he took me along. Out of maybe 200 environmentalists attending the larger meeting, this little huddle included six of us, and I came away surprised at what I heard from four of the others, all of them representing major national organizations. Two things stood out: presumptuousness and ignorance.

One of the national group reps was talking about the need to "organize" the grassroots environmentalists in Missoula, Montana. The others agreed that the locals in Missoula needed to be "organized." Because I worked in Missoula and was familiar with their work, I volunteered that these groups were already pretty well organized, and that organizing efforts would be better spent on other locals who were lagging behind the Missoula groups.

Two of the four enviros affiliated with national groups looked away in disgust. One frowned in dismay. The fourth told me in quiet, firm, paternal tones that, "Missoula is in real need of organizing." I wondered if "organizing" meant bringing under control, and what goals would be driving the effort to "organize" an already well-informed and active collection of people doing important work. I decided I wouldn't press the point, but the presumptuousness of this little knot of enviros made a strong impression.

As the conversation proceeded, I suggested that all of us who were concerned about the future of wilderness and grizzly bears ought to be dealing head-on with the jobs issue, because the charge that we were a threat to jobs was shaping up as the biggest barrier to winning the wilderness protection that grizzlies need. Again my comment earned impatience and dismay. One of the four told me in no uncertain terms that, "Nobody really cares about jobs."

During the several years since that little "strategy session," my continuing experience with the representatives of the major national environmental organizations has convinced me that they are asleep. If not asleep, they could not be so wildly presumptuous as to imagine they are ordained to descend upon intelligent locals for the purpose of "organizing" them. If not asleep, they could not be so ignorant as to say that "nobody cares" about important controversies that can make or break the efforts they presume to "organize." The nationals imagine that they should be in charge, running the show, but my experience with them has persuaded me that they are not equal to the tasks. It has been shocking to see them attempt to take over, derail, silence or otherwise "organize" the real experts in the local, grassroots groups who work hard to make a difference to wilderness, wildlife, and ultimately to the people who live and work where controversy over wilderness is most intense.

The nationals pride themselves on being "insiders" who know what is and is not "realistic." The nationals are not bad people, and are not entirely dull-witted bunglers, but they are asleep. They are, in fact, very easy to manipulate, as any politician or captain of industry knows quite well. The nationals are presuming to organize—i.e., manipulate—in the only way they know how: from an assumption of superiority. This is not where they intended to be when they began, but it is where they themselves have been "organized" to be as they have become increasingly numbed and distracted by the insiders' world of power and politics.

Part of what has numbed and distracted the nationals is their own rhetoric. They really do not understand

that their talk of "organizing" is a cover for attempting to control. Seduced by the rhetoric of the "politically realistic," they do not recognize that what really guides them is what is politically easy. Prey to their own rhetoric of achieving a "strong united front," they undermine the real work done by "unsophisticated outsiders."

These are harsh judgements, but I am NOT saying that anyone should go out and try to "do something" to the nationals. To react to the frailties, faults and foibles of the nationals is to let them set our agenda. To give time to the errors of the nationals is to let them put their ring in our noses, and divert us from our own work, just as they have been diverted from theirs.

The way to bend the nationals into shape is to humiliate them into following good and popular examples. This they will gladly do because they are politicians above all else, and politicians will speedily follow where others lead. Set an agenda. Stick to it, vigorously. See political reality as an ever-changing process, not as a finality that must set your limits, and set about changing the political reality that the nationals cling to like frightened children. They will come hurrying in

the wake of changes you create, and then you can take their frantic scurrying to say that your idea was their idea all along as the ultimate revenge for their cowardice and foolishness up to then. They may even be glad that you forced them to do what at least some of them secretly wished they could do before you made it possible.

Change the nationals by ignoring them, and instead forging ahead with the agenda you know to be right. Set your sights high, and don't be swayed as you march past the nationals' jeering squads of naysayer, insider, do-nothing detractors. Next thing you know, they'll be trying to co-opt you, and then you'll know that the ring is yours and the nose it's in theirs.

But remember that even after you dislodge them from their terrible crisis of confidence, the nationals will always be ready to recite a long list of reasons to ask for less. They'll run for cover the minute you aren't out in the lead, taking the heat.

Lance Olsen is the president of the Great Bear Foundation (POB 2699, Missoula, MT 59806) and editor of its journal, Bear News.



by Chris Billis

Was the Earth Summit a Failure?

by Sharon Wehner

There is danger in seeing the Earth Summit, held this June in Rio de Janeiro, as a failure. Danger and delusion, disempowerment and collusion.

The ideal immediate outcome of the Earth Summit would have been for world leaders to have experienced profound personal awakenings which would have led to agreement and understanding all round *and*, for the people of the world likewise to have experienced profound personal awarenesses of our own roles and responsibility in the present world crises. This miracle did not happen.

However, it may be better that treaties/agreements/commitments were not signed for "show" by governments who have no intention of upholding them. In fact, the process of bringing people together for discussion may have been the ultimate success in itself, for several reasons.

First, the Earth Summit was the first time ever that more than 100 Heads of State complete with negotiators have come together to understand each other's perspectives in what are finally being recognized as cross-boundary crises affecting the whole planet. It is not possible for a gathering of this magnitude, with the extremes and diversities present, to not effect change. The Earth Summit was not an event; it is a process. Deep changes begin unnoticed. And take time.

So many organizations and individuals, all over the world, are working to change perceptions and behaviors.

Second, making the assumption that the goal of the Earth Summit was for all nations to agree on issues that need international attention is assuming that agreement is the way. Some nations embrace the vision of a monoculture. For others the issue will always be respect and acknowledgement of their diversity and autonomy. A "melting pot" is not the answer. Recognition and acknowledgement of individual entities allows for greater trust and peace. Porous boundaries are the way the universe breathes. In the case of some treaties not being signed, the invisible victory may well be the "stumbling block" of diversity.

It is easy to lay the blame on others, to behave as spectators to a sport. In fact, this has become the prevailing dynamic in North America. It is as if responsibility lies solely in the hands of politicians and, for some, the church. How many people realize that, if George Bush had signed the climate change treaty, the lifestyle of each individual in the United States of America would have been significantly affected. Who says we need to wait for politicians before we change? The adjustment begins with us.

Before leaving Vancouver to attend the Earth Summit in Rio de Janeiro, I was aware that in light of global crises a call to action on two levels was needed. From the "leaves," a major readjustment in the guidelines set by government. And from the "roots," a major enactment of personal will, vision, and responsibility amongst the masses. It is important to understand why this hasn't yet happened.

Governments today are essentially owned by multi-national corporations. Though it was to the advantage of the planet and the people that major changes be set into action at the Earth Summit, the opposite was true for the multi-nationals. Exploitative power strives to maintain its power. As an example, the US's choice not to sign the biodiversity treaty was an act of greed primarily to protect the American industry of biotechnology. Such "topics" as militarism and consumerism were successfully omitted from the discussions—to protect industry interests.

The media, too, is controlled by multi-national corporations whose interest is to have the Earth Summit perceived by the public as a resounding failure. Ninety-nine percent of almost all the media's attention was on the "official" conference of the Heads of State, a conference exclusive in its participation. Among those not invited were Indigenous peoples. National governments are still operating in an elitist vacuum.

The media failed to expose to the onlooking world the tremendous presence of non-governmental power. Over 30,000 people from around the world gathered at the Global Forum, the Earth Parliament and other non-governmental forums to work at the grassroots level. This is where the change is happening.

As a participant in the non-governmental Global Forum, I have returned home tremendously inspired. So many organizations and individuals, all over the world, are working to change perceptions and behaviors. To be, for 12 days, in a 30,000+ member community of people all of whom are aware, open, and active was a miracle.

Seeing the news these past few weeks though, I have become aware of collusion. If the general public worldwide sees the Earth Summit as a failure, many will feel disempowered and give up. This would be the worst possible tragedy. It would re-inject a huge dose of power into the multi-national corporations. If the Earth Summit as a concept and a reality were allowed to quietly die, the powers of oppression would remain untouched and unquestioned. The silent collusion of the masses—the willingness to gently drift back into failure and passivity—is the greatest “army.” It must not be allowed to be.

The collusion is powerful because virtually every institution we encounter teaches us to give away our power and our responsibility. The church, the schools, our elders, the governments . . . we give them power to act for us, to be responsible for our well-being, our behavior. We are deluded into believing that we cannot think and act for ourselves, that others of authority and seniority do it better.

The Earth Summit made blatantly clear that ‘authority’ rarely acts in our best interests or in the best interest of planet Earth. If the authorities were genuinely concerned, they would without hesitation be entering into self-analysis and amendment. The truth is and always has been that authority is structure constructed to maintain power, power taken from some to feed a few.

I am concerned that many people may acquiesce to the Earth Summit’s apparent failure. If this happens, our days are numbered. The poor will grow poorer, the earth will grow bleaker, and the few who misuse power to enslave all else will cling on till their dying day. *How can this world flourish if we do not accept our true responsibility?* To believe that all is well in the hands of authority is to participate in the greatest delusion and collusion of all time. The power is within us. It always is and always has been.

Sharon Wehner is a citizen of conscious responsibility who participated in the United Nations Earth Summit process in Rio de Janeiro.

Night And Fog:

by R. Wills Flowers

Of all the ongoing commemorations and fifty year anniversaries of World War II events, the most bizarre has been unfolding during 1992. In 1942 and half a century later, two government committees met with very similar agendas. The 1942 committee became known as the Wansee Conference, which was convened to organize Hitler’s Final Solution and give it a patina of legality; the 1992 Endangered Species Committee, in May, gave Manuel Lujan and the timber industry a similar license to deal with the “spotted owl problem.” Both cases illustrate governments fixated on the idea that lesser, non-human creatures had become “obstacles to progress” and required removal. When the Endangered Species Act (ESA) comes up for renewal following fall elections, Congress could, by weakening or killing the Act, complete the process begun by the “God Squad” and make the United States the second country in history to give legal sanction to extermination as legitimate social policy. Why has the Endangered Species Act, which has been seen as a proud and uniquely American contribution to ethical development, run into so much trouble?

PLAYING “HITLER” AT THE ATLANTIC

In recent years, complaining about endangered species has become the last socially acceptable form of publicly airing racist proclivities. The same media that take the moral high ground with regard to hate-mongering against human minorities see no contradiction in passing on the same sort of ranting against non-humans. “Speciesism”, despite its rather dry academic sound, is a brand of racism: the appeals to base emotions, the whipping up of hatred, the scapegoating are done the same way, whether the chosen victims are Jews, Orientals, Africans, or spotted owls. It is perhaps a measure of the interconnectedness of all life that racist attitudes and rhetoric can be readily transferred back and forth between unpopular human minorities and inconvenient non-human species.

As most people involved in the human rights issues would agree, the truly insidious racism comes cloaked in guises of Logic and Science. Also, historically, difficult economic times lead to racism of all kinds. With the current recession (due in no small part to past orgies of growthmania) the developers and their political allies, long chafing under current environmental laws, are looking forward to a return to the pre-ESA days when wiping out plants and animals was no big deal.

In their January issue of this year, the *Atlantic* ran a “Playing God” spread of three articles that together give an excellent preview of the coming charge by the developers against the Endangered Species Act. “The Butterfly Problem” (Mann & Plummer 1992), and “The Case for Human Beings” (Palmer 1992), two triumphs of moral obtuseness and ethical obfuscation, sound notes we will no doubt be hearing with increasing frequency and volume: saving species is not necessary if it costs money and species have been going extinct for aeons anyway, so don’t worry, be happy.

Palmer, in a fine display of what David Ehrenfeld calls the “arrogance of Humanism,” professes himself concerned with the image of *Homo sapiens* “as a vast, featureless mob of yahoos mindlessly trampling this planet’s most ancient and delicate harmonies.” Most of us would say that image is rather accurate and, interestingly, Palmer himself raises no substantive contradictions. His preference is to retreat into the now-familiar, self-congratulatory New Age fantasizing about ourselves as “special planetary geniuses,” “the crown of creation” and the like. Mann and Plummer use an incident in Oregon, where a developer came up against an endangered butterfly while trying to build yet another golf course, to air a long litany of com-

The Backlash Against the Endangered Species Act

"The struggle against the great beasts is ended, but it is being inexorably carried on against the tiny creatures..."
—Adolph Hitler

plaints against the Endangered Species Act: it is complicated, political, and its mandate is far beyond its present capabilities. And it interferes with making money.

What both articles carefully avoid is the central issue: Endangered species get that way because humans are killing them and destroying their habitat. Obscuring this point has become a common debating trick of the extermination lobby, evidently with some effect: even some biologists (who should know better) talk confusedly of "the debate about preservation and management versus letting nature take its course" (Morowitz 1991). The "Playing God" metaphor invoked by the *Atlantic* is similarly devious (not to mention blasphemous); we are not "planetary geniuses" deciding whether or not to interfere in some tragedy caused by "nature." If metaphors are in order, a more recent one fits: the Lebensraum politics of half a century ago when a pack of hack politicians convinced a cultured, literate nation that their economic problems could be solved by taking over "underused" land populated by lesser beings who were obstructing progress for the "special Aryan geniuses." World War II and its aftermath resulted in formal legal recognition that genocide is legally indefensible. To claim that deliberate extermination is evil only when applied to human gene pools is itself a racist argument.

THE NEW FINAL-SOLUTIONISM

The negative reaction of developers to the ESA is predictable. Less understandable is the almost torpid response of many biologists and even many conservationists. Perhaps they are daunted by the prospect of thousands of snail-darter style battles. The term "triage" is now often used in discussions on endangered species. People on both sides of the issue like this word: it can let developers off a lot of legal hooks (one for each species deemed "too far gone" to save); it can let environmentalists pick and choose their battles with a eye to good publicity and, of course, winning. By using the triage analogy, they evade moral responsibility: the triage officer in a hospital is not the one causing the injuries. In the real world, some of the very interests that push a species to the brink of extinction get to shape the "compromises" that are supposed to save that species.

However, developers have taken a measure of the times and have decided that they need not settle for halfway measures; they seek a "flexible" Endangered Species Act that can be bent whenever a developer or land speculator might lose money. The attacks by developers, "wise-usesies" (including the "Moonies" who subsidize them), the Bush administration and other right-wing politicians, and obnoxious talk-radio gurus form what we may call the New "Final Solutionism." Like the first Final Solution, present-day Final Solutionism seeks the legal power to eliminate entire genetic stocks of beings that the dominant power structure deems "inconvenient." And like the original, the New Final Solutionism masks its true agenda with a fog of scientific and economic buzz-concepts. Even the propaganda the developers are using is recycled from fifty years ago: one of the bills offered with the intent to subvert the ESA is called the "Human Protection Act," as if we have to be protected from all those threatening hordes of almost extinct species. Those with a sense of history should note that as prelude to the Final Solution, the Nazis devoted considerable effort to cultivating the perception that the German people were in desperate need of "protection" from Jews, Slavs, Gypsies, trade unionists, Seventh Day Adventists, etc.

SPOTTED OWLS THROUGH NIGHT AND FOG

"The banality of evil" was Hanna Arendt's famous line describing the first Holocaust; one could apply the same to the politics of the present biodiversity holocaust. While the developers scheme and maneuver for their "flexible ESA," they are also busy slithering through legal loopholes in the existing Endangered Species Act to get on with the business of eliminating inconvenient life forms. When court rulings in the 1970s forced the government to protect species whether they were large and cute or not, the Endangered Species Committee was created under pressure from a mixture of developers and Republicans such as former senator Howard Baker. The committee became known as the "God Squad," but their mission can scarcely be called divine. They were created to find excuses, and a legalistic gloss, for the extermination of species whose existence crimps the money-making of this or that special interest. Given the nature of their mission, "God" seems rather inappropriate in a nickname for the ESC. My suggestion would be "Night and Fog Squad," named for the "Night and Fog" decree of the Third Reich—one of the decrees that gave legal cover for the killing taking place at Auschwitz, Treblinka, and elsewhere. Considering its unsavory political genesis, it is perhaps surprising that last May's "exemption" for the spotted owl is only one of two granted by our modern Night and Fog Squad. Administration spin doctors quickly pointed to the 2684 acres still off limits and Lujan's "alternative plan" [ed. note: also known, for no sane reason, as the "preservation plan"] which supposedly will keep the owl going for another hundred years. The other unique species of the Pacific Northwest old growth never even made it into the political dialogue (though salmon have belatedly been given some attention). Typical of political decisions, the ESC action on the owl is a "compromise" that guarantees extinction but not right away, so that current office holders and bureaucrats will not be held responsible for the consequences of their actions. Here again, comparisons between Hitlerism and "Lujanism" force themselves to our attention. As any competent analysis of the timber industry shows, the spotted owl is no more responsible for loggers' job losses than an "international Jewish conspiracy" was for the inability of the German army to stand up to American dough boys in

WWI. But Bush and Lujan have their scapegoat, which serves the double purpose of diverting loggers' attention from anti-jobs policies in their own industry, and of taking a whack at environmentalists, a group that the Right evidently needs as an enemy now that Communism has gone bust.

As the "owl vs. jobs" debate and all the other controversies surrounding the Endangered Species Act grind on, many conservationists talk of "protecting habitat" as a better alternative to the present law of protecting species. This looks attractive—until you start thinking like a lawyer. What, legally, is a "habitat"? How would you define and limit a



habitat or ecosystem in ways that would be comprehensible to the legal profession? Given the lack of agreement even among ecologists (remember the debate about whether climax communities are real?), there seems little reason to think anyone could draft a habitat protection law that would stand the legal buffeting that the Endangered Species Act has so far weathered. The *Atlantic's* "God" issue carried a third article about the "habitat alternative" and its great hope: Gap Analysis (Winckler 1992). As a tool of conservation biology, Gap Analysis could be very helpful (although it is not so very new: Ian McHarg years ago promoted an almost identical technique for rational urban development). It could also be a cover for yet more moral cop-outs: Winckler sees the strongest virtue of gap analysis as its ability to locate "species-rich land least encumbered

by controversy." Yet, a proper "habitat protection act" could be far more controversial than the ESA. As Noss (1991) has shown, only 2% of recognized ecosystem types in the United States may be adequately protected. Given that conservation biologists by and large agree that "adequate protection" means protecting large areas (like 1 million ha), one can imagine the howling and bellowing from the Wise-usies, Lujanistas, Quayle-udes, and their ilk once they got wind of such a plan.

"WHEN THEY CAME FOR THE BUTTERFLY, I DID NOT OBJECT..."

Racism is as often thoughtless as malicious. I suspect most practitioners and boosters of the New Final-Solutionism, from Manuel Lujan and Quayle's "Council on Competitiveness" to the loggers with their "eat an owl/wipe with a woodpecker" bumperstickers, would be genuinely upset to be confronted with the fifty year-old pedigree of their ideology. Insensitivity and selfishness come especially easy in economic hard times, when the "circle of expanding ethical concern" (Nash 1989) has a habit of contracting. The backlash against endangered species can be seen as part of such a general contraction, where women, inner city dwellers, and most ethnic minorities also find themselves being pushed outside the circle. The Nazi experience shows just how dangerous life outside that circle can be.

To some extent, the Endangered Species Act is analogous to the laws enacted by post-war Germany and Japan and recent civil rights legislation in our own country to atone for and prevent recurrence of past crimes of racism. With its current regulations and legal interpretations the Endangered Species Act is also the closest thing we have to legal recognition of the concept that "all life has value." Accordingly, any repeal or "watering down" of the ESA would also be a recantation of that concept of respecting all life, and a return to tacit legal acceptance of genocide. Even dyed-in-the-wool humanists should be uncomfortable with that. As John Rodman has written ("The Liberation of Nature?" *Inquiry* 1977), "the insane vision of an Aryan Europe purged of Jewish influence is intimately bound up with the equally insane vision of a humanized planet on which all other species have been either enslaved or liquidated."

In his book *The Rights of Nature*, Roderick Nash (1989) has drawn detailed parallels between pre-Civil War abolitionists and today's radical environmentalists. There are

Letters

similar connections between the Emancipation Proclamation and the Endangered Species Act. Both were enacted with very limited aims, but in both cases it soon became apparent that the act had broken new ethical ground which would cause fundamental changes in society. And today's backlash against the Endangered Species Act echoes an earlier backlash—in the North—against the Emancipation Proclamation. At the end of 1862, there was widespread disillusionment and discontent in the North and a strong sentiment to end the war and accept slavery or a divided nation. Freeing the slaves was costing more money and blood than many voters thought worthwhile. Against this backdrop, President Lincoln sent his State of the Union message to Congress. His defense of the moral necessity of the Proclamation applies with equal force today: by legalizing the right to life of every species, we further protect the right to life of all races and cultures of humans. "We—even we here—hold the power and bear the responsibility...In giving freedom to the slave, we assure freedom to the free—honorable alike in what we give and what we preserve. We shall nobly save or meanly lose the last, best hope of earth."

R. Wills Flowers is an entomologist, who made an appearance in Ed Abbey's last novel. He notes that "Florida A&M University does not accept responsibility for the views expressed in the essay, which are those of the author and should not be attributed to any other member of the Florida university system."

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TO WILD EARTH READERS:

See if your experience matches mine.

You read your first issue of *Wild Earth* and quickly subscribed. You sent gift subscriptions to friends, but soon ran out of friends. And you hoped *WE* was being read by key activists, educators, politicians, scientists, perhaps even those darn Forest Service people. What to do?

I wrote the *WE* staff and was told that they have a "wish list" of folks they'd like to send subscriptions to, people who could make *WE*'s efforts even more effective. So that, after renewing your own subscription, you can stop alienating your Uncle Bob and let the staff get *WE* to others who need it.

Now I'm sure Dave and staff are too polite to pull a Jerry Lewis and ask for "our choice" contributions. But being realistic, where can *WE* do more good—in the hands of a critical activist, or confusing your Uncle Bob?

So if, like me, you'd like to do something else to help this Wild Earth, consider the "our choice" option on the subscription blank, perhaps on a regular basis. If it helps, imagine Dave in a tux on a Las Vegas stage, arms around Ed McMahon and Spike Lee, asking you, imploring you, to do the right thing. Or... don't imagine that. Either way, *Wild Earth* will be getting where it's needed.

—Steve Mikals

ARTICLE REQUESTED

I have a request. The current issue (8/92) of *Natural History* features an article by Jared Diamond ("Must We Shoot Deer to Save Nature?") that seems (to me at least) to demand a response from a credible biologist with biocentric leanings. Could Reed Noss be persuaded to take Diamond on?

Diamond argues, as many do these days who seek to rationalize our war on life, that nature has been so impacted by people over the centuries—fragmenting land and wildlife populations, favoring some species and extinguishing others, etc.—that self-sustaining ecosystems can no longer exist. Nature has been so altered by us, this argument runs, that in order for ecosystems to function—or at least for certain species to persist—management by humans will have to be more intensive than ever. This argument is frequently used against those who would like our semi-wild lands left alone.

This apparently benign project, when examined more closely, resolves into a desperate acceptance of the anthropocentric value system that has brought us the ecological crisis. It denies the lesson we should have learned by now: that we who know so little should not presume so much. Only if one despairs of stopping our life-denying culture—or is unwilling to give-up its short-term benefits—i.e. only if one accepts that the degradation of

ERRATUM:

Our apologies to readers and to author Kelpie Wilson for our computer's consumption of a portion of her essay, "An Ecofeminist's Quandary" (*Wild Earth*, Summer 1992). Paragraphs 7 & 8 should have read:

When applying the Supreme Court test to Operation Rescue protests, however, the result is not so clear. By appearing day after day at the same clinic, blockading and harassing the same women, the intent would appear to be to physically obstruct women from obtaining legal abortions. Many women, especially young women, have been traumatized by the harassment to the extent that their right to a safe and legal abortion has been denied.

That these two cases must be examined in the same legal light brings up one of the fundamental failings of our society and our Constitution. While the 18th century rabble rousers managed to prevail upon the men of property to include the right to free speech, to bear arms and other freedoms, equal rights for whole classes of people: women, men without property and slaves were not included. While some of these omissions have since been corrected, we still lack an amendment giving equal rights to women. Abortion rights are presently based on the nebulous right to privacy, a right which is not clearly spelled out in the Constitution. The Constitution must be amended to give women equal rights, rights that do not extend to fetuses, even female fetuses.

healthy ecosystems will not abate, does it appear logical to think that more human intervention and manipulation will be necessary. But such a future need not be accepted. In fact, it must be fought! Wilderness is not something we (the planet) can do without.

I'm always amazed at the sort of coy self-delusion that enables people to announce that now, alas, (heavy sigh) "management" of nature is being forced upon us. As if we were reluctant to accept the task. As if the total control of nature is not where we've been heading, quite deliberately, all along. As if godlike control is not our deepest neurotic (necrotic?) fantasy.

We don't care about nature: our real fear is that if we stop managing nature, it will become "wild" again, no longer doing, i.e. producing all that we want. (The fear is justified but, let's face it (hah!), our lack of control is inescapable.)

I feel a scientific response to his article is what's needed right now. I think it's important to show that a vision of long term wilderness is not an idle fantasy but a biological possibility. (Even if the possibility is not now culturally favored.)

The question you must answer is: "What does wilderness recovery mean in light of the wildness that has been (irrevocably?) lost and the atrophied condition of what remains?"

Of course you know all this. That's what *Wild Earth* is all about. And I'm sure something similar to what I'm requesting will introduce your NA Wilderness Recovery Plan. Still I think it's important to respond to Diamond's essay, which appears in a widely read magazine and expresses a point of view that, fashion aside, most people in our culture want to hear. People need to know that the possibility of wilderness recovery still exists despite the disruptions we have caused. Just in case we decide sometime soon that wilderness is important to us. (How we get to that point is the big problem.) Along these lines, another lesson follows from Diamond's essay: Even Conservation Biologists may be coopted and become apologists for The System.

—Mike Seidman, 6236 S. 10th Street, Phoenix, AZ 85040



PURGATORIAL PURSUITS PONDERED

Bruce Morgan should study his metaphysics more carefully before claiming karmic brownie points for removing fallen surface creatures from the trophic dinner plate of the cave dwellers. After describing cave ecology as a "very delicate" system, he goes on to justify interfering with it by saying "if an animal can live and breed in the cave, I leave it alone," but if not, he will "rescue" it.

One can hardly call taking away nutrients from the base of the very short subterranean food chain "leaving it alone." It is hard to live and breed without food. How many isopods will starve as a result of Mr. Morgan's benignity? How many "mongers" from a decline in isopods? Though Mr. Morgan's shifting of nutrients from one food web to another is well intentioned, he and those who follow his example may well condemn many inhabitants of this sensitive underworld to starvation.

It is easy to be sympathetic to the plight of members of one's own ecosystem, the terrestrials, menaced by those of another, the subterraneans, a feeling well exploited by H.G. Wells in *The Time Machine*. But where does this lead? Shall I wrap nets around the trees overhanging my pond to keep clumsy caterpillars from becoming fishfood? Should teams of beachcombers be organized around Chesapeake Bay to throw back the thousands of jellyfish that inadvertently wash ashore each year, becoming food for sand fleas rather than the aquatic bacteria whose just desserts they are?

Mr. Morgan may hope his "good works" will gain him succor from entrapment some day, but the karmic odds are just as likely that he is increasing the probability of his perishing by starvation!

—Ron Huber, 1135 W. Chesapeake Beach Rd., Owings, MD 20736

AUTHORS' ADDRESSES REQUESTED

Dan Quayle would surely denounce me as a whining, liberal, no-good academic for even inquiring, but would it be too much trouble to ask that you folks publish at least a few of the addresses of the authors published in *Wild Earth*? More than once I have felt inspired to scribble a word or two of nodding agreement or some proverbial posits directly to the person responsible for some infectious

idea broadcast in your journal, rather than expect that you will publish a rather focussed question in this here Letters section. Heaven forbid that we should have to communicate solely through the media like the aforementioned Mr. Potato(e)-Head and others of his ilk. I don't expect to get the P.O. Box of the respected Miss Ann Thrope or the elusive Dr. Wanda Round, but it would be nice to be able to contact those people who are not living in fear of the ubiquitous Schwinn-pedaling FBI agent. In other words, would those who care to do so please include a means of contacting them with their articles? This would further facilitate the exchange of ideas and expressions of mutual support among us.

—Bruce C. Forbes, McGill U. Geography Dept., Montreal, Quebec H3A 2K6

ed. note: He's right. Henceforth we will generally include authors' addresses except when asked not to do so.—JD

THE KILLING CS

The first six issues of *Wild Earth* are ample testimony that there are a lot of clever and determined individuals in North America defending what is left of wildness. The prevention of further destruction of good habitat is undoubtedly of utmost urgency everywhere. Until the biocentric philosophical revolution sweeps our culture, we must unfortunately continue to concentrate on specific "brush-fires." *Wild Earth* has featured a lot of such struggles against three of the four "Bad 'C's" that menace ecosystems, namely cows (ranching), chainsaws (deforestation) and children (overpopulation). But as long as we continue to overlook the fourth "c" all our efforts are in vain.

The contributors and readers of this publication pride themselves on being "non Compromisers." It is the only effective way to be. But owning and operating a CAR is a big environmental compromise indeed.

No matter what sort of emission controls your vehicle may have, every gallon of gas you burn produces twenty pounds of carbon dioxide. And there's no use trading in your car for a more efficient one, or for an electric one, or even for one that runs on cowshit. It would do more harm than good, because a new car produces 25 tonnes of waste in its manufacture. That's more than your current vehicle will do in its lifetime of emissions. There's

no way of escaping the physics.

I admit that I was guilty of hypocrisy myself until I finally realized it was impossible to reconcile ownership of a motor vehicle with genuine concern for the future of the planet.

Automobiles and associated industrial activity represent by far the single biggest contributor to the ominous "triple threat." Greenhouse effect, ozone destruction and acid rain will ultimately leave no habitat unscathed, no matter how green your real-estate victories may look on a map.

I believe every environmentalist must show society leadership in embracing both sound populationist *and* transportationist morals.

No matter what your "bag," whether it be temperate rainforests, coral reefs or Antarctica, if you continue to drive you may win a few battles but we will lose the war.

—Tom DeMarco, *World Without Cars*, 7750 Matchette Rd., Windsor, Ontario, Canada N9J 2J4

J. Baldwin of the excellent *Whole Earth Review* wrote a letter in the Summer *Wild Earth* which compels me to comment in defense of urgent action for the Earth. His point—that certain computer programs and more-efficient cars are desirable for us all—follows a logic too compromising.

First let me say I use the tools of pollution (seldom a car; more frequently faxes, printing, etc.) in my role in the war to end pollution and to bring ecodeмокracy. I do so reluctantly, just as I reluctantly satisfy my hunger by consuming food transported to me (or to an eatery) via petroleum. My compromises had better be temporary, and they will, if the work of our movement is getting anywhere.

My bottom-line objection to J. Baldwin's position is, How long do how many people use up diminishing nature and despoil the ecosystem? Since computers and cars (even non-petroleum fueled) use prodigious amounts of finite oil for plastic parts, synthetic rubber, energy in manufacture, tires and asphalt, these products' days are thankfully numbered. But if we extract all possible materials from the Earth to extend this destructive industrial system both into the future and into new geo-demographic markets, the additional damage to the sky, water and land will leave us completely unable to recover a wild, beautiful planet. There is no time like the present to reject technological products and the "free

market," in recognition of entropic reality. Besides, electric cars would continue the road slaughter of critters and people.

Many *Wild Earth* readers reject J. Baldwin's claim that "the best we can do at this time is to make the things as efficient and safe as possible." All people should listen to Mostafa Tolba and David Suzuki—time is running out. We need a revolution for conservation, starting necessarily with a moratorium on new roads and parking lots. Not consuming manufactured junk will also help bring the expansionist central economy crashing down, hopefully for good, replacing it with decentralized living. Spare me the technological-fix/accommodate-growth recipe for ecocide, and give some attention, for example, to the wisdom of Dolores LaChapelle in the same pages of *Wild Earth*.

—Jan C. Lundberg, Publisher, *Paving Moratorium Update*, POB 4347, Arcata, CA 95521.



RESPONSE TO RODERICK NASH'S ISLAND CIVILIZATION

Of course, we all need visions. Since I was a child, I have found comfort in envisioning my surroundings completely natural, my mind blotting out the concrete, noise and cars. I'm still encouraged when I envision shoreline groves and geese where the Weyerhaeuser pulp mill now spews its deadly wastes. Thus, I can easily agree with Professor Nash's thesis statement, that "the essential thing is that we occasionally lift our eyes from everyday details to the far horizons of planetary possibility." I cannot concur, however, with the techno-metaphor of earth as spaceship: a spaceship can be repaired by people, is not self-sustaining, and implies movement; we cannot mend the earth, the earth would sustain far better without us, and we aren't going anywhere.

I'm also turned off by statements like "modern medical technology...Computers, television, and nuclear power are marvellous

tools." In addition to being a major cause of overpopulation, modern medical technology involves outrageous amounts of plastic, paper, radioactive, and infectious waste. While I can agree that a computer may be a useful tool, the silicon industry produces huge amounts of toxic waste. (I resisted getting a computer for years, but I now half-justify owning one by all the environmental writing I do). Television and nuclear power are not tools, however; television is a malignant medium and nuclear power is a product of nuclear plants, along with radioactive waste.

Professor Nash's "call for about 1.5 billion human beings" by 2992, and John Davis's rejoinder that 1.5 million would be just about right are both too casual. I agree with the many futurists who call for massive reduction in human population. What I want to see, however, is these same futurists offer some ideas of how we can achieve this. Back here in reality, the most plausible future scenario that I can see has humankind perishing from pollution and overpopulation and taking most of the lifeforms on the planet with it. In my more optimistic visions, earthquakes have crumbled all global coastlines and swallowed a great percentage of humanity along with all major techno-industrial centers and the centralized political power structure. In any case, many people will have to die...soon. Any future scenarios that have a much-reduced global human population should account for the major social trauma (like that suffered by North American aboriginal peoples after most of their populations were slaughtered by European weapons and diseases) that will surely accompany this.

Professor Nash's vision must include intensive mono-culture to provide food for his closeted populations—far from natural! His idea that all transportation will be in the air ignores likely ozone depletion, and his easy dismissal of the needs of the other lifeforms in those "few dozen square miles" that his futuristic human habitats will cover tells me that Professor Nash has not, as he claims, really changed paradigms. His vision, in my view, is simply a techno-extension of the same automated, inhumane never-never land that we presently call reality.

Professor Nash's faith in science and technology, his apparent ignorance about what produces toxic waste, and his image of humans living divorced from ecology makes me think that he has been living in the abstract world of

academia too long. When did Dr. Nash last blockade a logging road, fight to keep a toxic waste incinerator from being built in the hills behind his house, or even bend down and really see all the life in a few square inches, never mind a few square miles?

Criticism aside, however, I appreciate a person with a status-quo degree making statements like "humans are a cancer" and "whether by choice, coercion or catastrophe, there will be an end to the present unsustainable levels of growth and devastation." From where I sit, he's right.

—Bronwen Boulton, British Columbia

FURTHER RANGE CONDITION RUMINATIONS

A recent article by George Wuerthner (spring 92 *Wild Earth*) and a subsequent letter from Sue Thornton (summer *Wild Earth*) may have left some readers confused about the meaning of terms such as "satisfactory," "unsatisfactory," "poor," "excellent," etc. used by land managers to describe range condition and trend data.

While both authors make very useful points, and agree that our naturally unforested public lands are in disgraceful shape, neither really hit the mark defining these bureaucratic terms of art. Note that the term "range" itself implies primary use as forage for domestic livestock. Students of conservation biology need to consider whether other, non-agrocentric terms are more descriptive of the vegetation and ecosystems. For example: desert, grassland, prairie, or shrub steppe, with appropriate modifiers to describe local conditions.

Land managers have described the state of naturally unforested plant communities in terms of "range condition" for over 40 years. The system was intended to provide a standardized measure of forage production for livestock, and is based on a simple climax model of plant succession.

Range condition is defined as similarity to "potential natural community" (PNC), the presumed climax plant community for that site. The five arbitrary range condition classes are: excellent—more than 75 percent resemblance to PNC; good—51 to 75 percent; fair—26

to 50 percent; poor—0 to 25 percent; and other—land where ecological condition ratings are not applicable, such as land that has been seeded to non-native species. Excellent and good conditions are judged to be "satisfactory"; fair and poor sites are "unsatisfactory."

The related measurement of "trend" refers to the direction of successional change over time, whether toward or away from desired management objectives, but gives no indication of the all important rate of change.

Although well-established, these traditional terms have been increasingly criticized. Among the many objections are concerns that:

1) adequate descriptions of PNC and ecological status are extremely rare;

2) relationships between seral stages and range condition are not known;

3) condition classes do not relate very well to productivity even for livestock forage, much less other values;

4) a successional concept based on steady progress toward or away from single climax depending on grazing pressure is not generally applicable;

5) the related, implicit view that recovery of ecosystems degraded by overgrazing is automatic once livestock are removed is often untrue;



6) individual stands are not considered in a landscape context, interacting with other landscape components;

7) these terms have been applied by various land managers in a relatively uncoordinated manner.

Suggestions for specific changes in the analysis of range condition and trend were recently endorsed by the Society for Range Management (SRM). It is expected that those recommendations will soon be supported with an independent analysis of range condition by the National Research Council of the National Academy of Science.

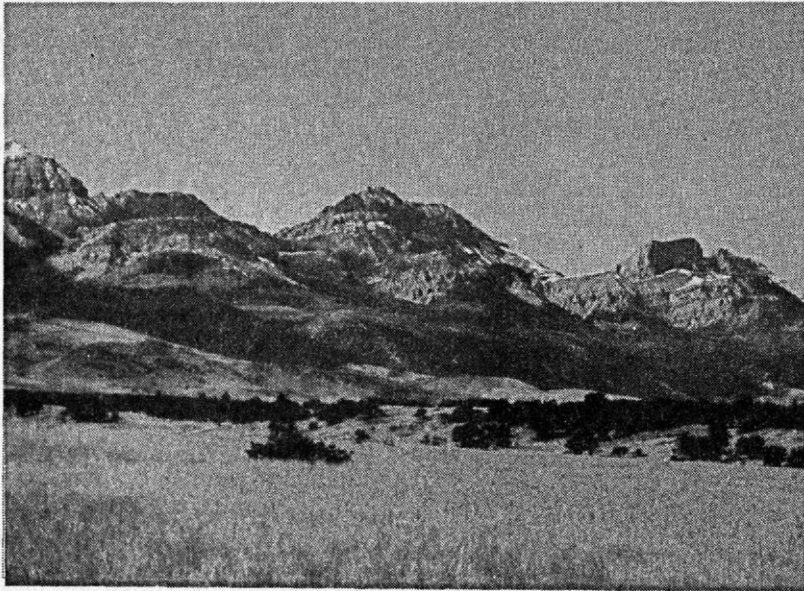
SRM urges that stands be classified as "ecological sites," using criteria based on physical characteristics affecting each site's ability to produce vegetation and to respond to management, such as elevation, slope, aspect, soil condition, and climate. Objectives for each site would be defined relative to a "desired plant community," and management status should be reported in terms of similarity to, and trend toward or away from, the desired plant community.

SRM also recommended that each stand be assigned a "site conservation rating" based on an assessment of the effectiveness of the present vegetation's ability to protect the site against accelerated wind and water erosion. The site conservation rating at which accelerated erosion begins is the "site conservation threshold." Whether the stand is above that threshold, or below it in a stage of degeneration, would have important implications for recommended management.

Whether these suggestions will be adopted by public and private land managers, and, even more important, whether use of different concepts will usher in a new era of better communication and improved land management, are open questions.

—Marc Liverman, 12465 SW Toozee Road, Sherwood, OR 97140

In the Summer 1992 *Wild Earth*, Sue Thornton of Wyoming questioned the use in my Spring 92 article on livestock grazing of standard terms such as "good," "fair" or "poor" range condition. Sue argued that such terminology is "misleading." She says a range conservationist told her that these terms only apply to the



George Wuerthner

rangelands' ability to support cattle and sheep. Thornton then argues that range may be in poor condition according to the range staff, but good for, say, a desert tortoise. She asked for my explanation.

I agree with most of what she says. However, I would add the following elaboration.

Although the actual methodology varies from agency to agency, range condition is supposed to be based upon ecological principles. In general, the terms good, fair, poor, etc. are supposed to reflect how much a particular piece of ground varies from its biological potential. This is judged by how much disturbance has changed the plants present on the site from what might be expected given that particular location's basic soil type, precipitation, and other factors. Soil erosion or lack thereof and a few other variables are also used in judging range condition. Since in most cases the climax species are also the more palatable species, they usually disappear first if an area is overgrazed. Thus a range person would look to see what percentage of the desirable species are absent given that particular site's potential to determine how much grazing has changed it.

Sue is correct that when a rancher says a site is "improving," it's usually in terms of its ability to support domestic livestock, not wildlife species.

Ground covered with prickly pear cactus on deep, well watered soils would probably indicate overgrazing since one would expect grass species here. On the other hand on shallow droughty, highly erodible soils, prickly pear may be the climax species since grasses may not grow on such sites. No "invasion" has occurred and these lands may be judged to be in excellent range condition. So one can't just go out and look at a plot of land and see cactus or sagebrush or other species that typically invade overgrazed sites and assume this means the area was mistreated.

For example, the Sonoran Desert always was dominated by cactuses and some parts of the Great Basin never had more than saltbrush and sagebrush as the dominate species. But in both regions, the percentage of cactus and sagebrush has increased and spread into areas that were, prior to the advent of domestic livestock, largely grasslands or shrub-cactus-grass mixtures.

Like Sue, I object to the use of the terms fair, poor, etc. A piece of ground may have as much as 74% of the species absent which would otherwise grow on that site and be deemed "fair" condition rangeland.

You can have "good" or even "excellent" condition rangelands which are not good for certain wildlife species, as Sue pointed out. For example, a well managed site may have

all the right species according to the site potential, but if it was recently grazed so that all that remained was two inch stubble, it may not be of much value to a sharp tailed grouse trying to hide from predators.

However, not all subclimax rangelands are the result of livestock grazing and undoubtedly, even in pre-livestock days, some rangelands were not in "excellent" condition as judged by standard methods. Prairie dogs, for example, can chew a rangeland to dust in the immediate vicinity of their colonies. If range managers had to manage these areas for excellent range condition by the standard terms, they would have to get rid of the prairie dogs. Likewise, if a fire burns through an area, "invader" species may colonize disturbed sites. Given time, one would expect the site to return to a climax stage; however, in some areas natural fire frequency might prevent such a climax from occurring except rarely.

For the above reasons, some range people argue the idea of site potential as a basic for range evaluation should be dropped. They argue that it might be desirable to have, say, sagebrush, a plant group typically considered undesirable for livestock but good as deer winter browse. While this is true, there is a real danger to this line of thought. Any rangeland condition is good for some animal, and then it can become convenient to say that an overgrazed and deteriorated rangeland is being managed for such and such an animal. It is like the foresters who say they are clearcutting to make more "deer browse" without questioning whether you need more deer or browse. In most cases, it's just an excuse to clearcut.

No doubt in prelivestock days there was always a percentage of land in some disturbed subclimax condition. However, ample evidence suggests the ratio of these lands to those in more "pristine" condition has changed dramatically since the advent of livestock production in the West.

While I agree more accurate terms may be needed, the basic idea of comparing site potential with current conditions is a sound foundation upon which to judge livestock impacts. When a landscape is beat up by cows, the terms should accurately reflect this in a manner that anyone can understand.

—George Wuerthner, Box 273, Livingston, Montana 59047

Natural World News

FS DOES NOT STAND FOR FREE SPEECH

First Amendment freedoms were threatened in July when the U.S. Forest Service attempted to restrict the rights of New Mexico citizens to protest the expansion of the Santa Fe Ski Area.

The brouhaha began when Forest Guardians and La Voz del Cajon Grande announced they would hold a "picnic 'n' protest" on Forest Service land near the ski area. The event was scheduled for the same day as a promotional open house sponsored by the ski area owners. The open house had been advertised in a slick, widely distributed "report" that denounced opponents as "environmental zealots."

After Espanola District Ranger Lori Osterstock read about the planned "picnic 'n' protest" in the *New Mexican*, she sent a threatening letter to Victor Martinez of La Voz del Cajon Grande. Citing numerous Forest Service regulations, Osterstock claimed that a special use permit and special insurance policy would be required and that the event could not be held in a developed recreation area.

She charged in her letter that "La Voz del Cajon Grande has conspired with Forest Guardians to incite a public demonstration" and threatened that "violations of any term or condition of the permit that requires the expenditures of public funds for above-normal administration costs will result in La Voz del Cajon Grande being billed for those administration costs."

Then, in conversation with Keith Easthouse, a reporter for the *New Mexican*, Osterstock stated that protesters could not carry signs or distribute information that the Forest Service considered false or misleading. "If [Forest Service rangers] determine the signs are not factual, we will ask them to change their signs," she told the *New Mexican*. In a second letter to the press, she said that "obviously false information... would be restricted."

Osterstock's remarks ignited a hailstorm of criticism from environmentalists, the American Civil Liberties Union, Representative Bill Richardson's office, and the *New Mexican* editorial page. After discussions with attorney Douglas Booth, protest organizers decided they had a constitutional right to hold their event, regardless of Forest Service threats.

The day before the protest, Forest Service

officials finally heard the wake up call: Department of Agriculture attorney Mary Ann Joca told Espanola Ranger District officials they had to let the protest take place, without restrictions, and could not demand that they get a special use permit or insurance policy.

Forest Service regulations governing protesters have been found unconstitutional by federal courts, Joca said, and any Forest Service attempt to restrict the protesters' views would violate the First Amendment. "We're working on developing new [regulations] but right now the Forest Service does not have regulations [governing such events] that do not violate the First Amendment," she told the *New Mexican*.

—Pat Wolff, *Forest Guardians*, 612 Old Santa Fe Trail, Suite B, Santa Fe, NM 87501

PENINSULAR BIGHORNS NEED HELP

There are only an estimated 380 Peninsular desert bighorn sheep (*Ovis canadensis cremnobates*) remaining in the United States, making this subspecies one of the rarest large mammals in the US. Yet the US Fish and Wildlife Service has not placed it on the Endangered Species List.

Only 12 years ago, an estimated 1171 Peninsular bighorn still survived in the United States. Nearly one-third of the US population, then and now, live in the Santa Rosa Mountains just outside of Palm Springs, in Southern California. The Peninsular bighorn is currently listed as "threatened" under the California Endangered Species Act. It is thought that a few thousand additional Peninsular big-

horns remain in Mexico, enough to bring the population up to viable numbers.

Scientists recognize six subspecies of bighorn sheep in North America. The term "desert bighorn" is used to indicate the four races that typically inhabit dry and comparatively barren desert mountain ranges. These races are the *nelsoni*, *mexicana*, *weemsi*, and *cremnobates* (Peninsular desert bighorn). There are two species (dall sheep, bighorn sheep) and nine subspecies (races) of mountain sheep in North America. Bighorn sheep were estimated to number between 1,500,000 and 2,000,000 on this continent at the beginning of the nineteenth century.

As with most



Bighorn Sheep by Adolf Sehring

imperiled species, habitat destruction and encroachment are primary factors in the Peninsular bighorn's demise. Leading the charge to further reduce the Peninsular bighorn's range is developer Jim Hayhoe, Chairman of the Board of Alta West, Inc. of Indian Wells, California.

Mr. Hayhoe's goal is to build, directly adjacent to one of the bighorn's critical birthing areas, his proposed \$350 million Altamira Country Club. The development would include 450 luxury homes and an 18 hole golf course. This even though nearly 100 golf courses already exist in the surrounding Coachella Valley. Although the Peninsular bighorn is listed as a "fully protected mammal" under the California Fish and Game Code, this does not protect the bighorn from golf courses. Federal listing by the U.S. Fish and Wildlife Service could provide habitat protection—if the animal is listed in time.

In the Santa Rosa Mountains, Peninsular bighorn ewes usually give birth on north facing slopes, chosen for their isolation, rugged terrain and steepness. The ewe-lamb bond appears to become established immediately after birth when the mother eats the placenta and licks the newborn lamb. Even the slightest interference at this point may jeopardize this close relationship. Lambs are usually weaned by the time they reach 6 months of age but will remain closely bonded to their mother for about a year. The Peninsular bighorn's main predators are the mountain lion, bobcat, and coyote. Eagles are also capable of taking newborn lambs.

Bighorns face competition from domestic cattle and sheep for grazing land and risk catching diseases from domestic stock. A stress-related virus has been decimating newborn bighorn lambs for at least the last 12 years, which accounts for most of their recent decline. Roughly 90% of all newborns died during this period, due to the virus. This virus has been identified and a cure is being developed by biologist Jim DeForge of the Bighorn Institute.

At the foot of the Santa Rosa Mountains, DeForge has set up a modest on-site research and breeding facility for the Peninsular bighorn. DeForge and the Institute are using several strategies at once. First, with a small pilot herd in a large, fenced area, they have coaxed several successful births from the reclusive bighorn. Once the newborns have reached yearling age they are released into the

surrounding Santa Rosa Mountains to increase the size of the wild population. This strategy has been remarkably successful: More than half of the 40 or so Peninsular bighorns that roam freely in the northern Santa Rosa Mountains were born at the Institute. At the same time, the Institute is researching the cause and origin of the virus killing the newborns.

The Bighorn Institute is unique in that it is an on-site, hands-on facility with the goal of preserving one particular subspecies. The Institute can be viewed as a prototype, an experiment that can act as a model for programs to save other endangered species.

The Bighorn Institute has been drawn into battle with Jim Hayhoe and the Altamira Country Club development. Hayhoe has filed lawsuits against the Institute and the California Fish and Game Commission alleging, among other things, that "Bighorn Sheep are a nuisance to human beings," and asking for \$10 million in damages from the Institute. (These types of lawsuits are commonly known as SLAPP suits: Strategic Lawsuits Against Public Participation).

For more information, write Nature Guard, Box 7000-GRD, Redondo Beach, CA 90277 (310-378-0260); Bighorn Institute, Box 262, Palm Desert, CA 92261 (619-346-7334).

— Scott Trimmingham

Scott Trimmingham recently founded Nature Guard to assist the efforts of small groups and individuals, such as the Bighorn Institute and old growth champion Lou Gold. Nature Guard and the Bighorn Institute welcome donations.

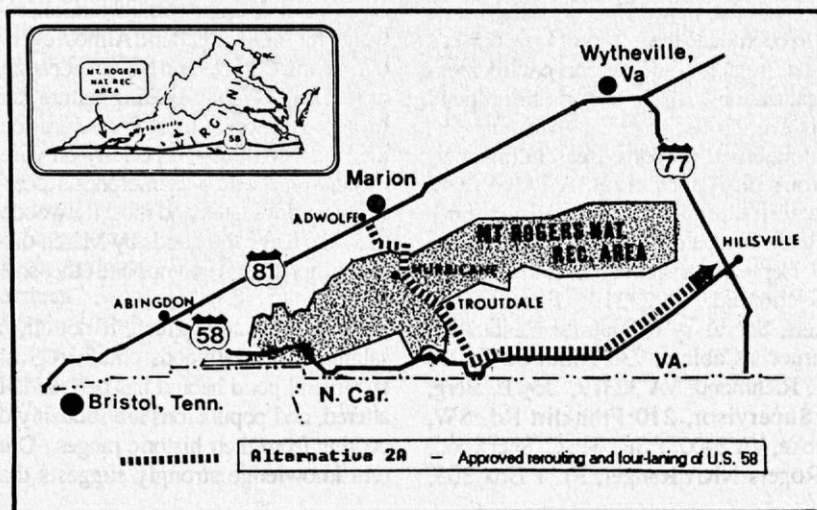
ROAD THREATENS MT. ROGERS

The Virginia Department of Transportation (VDOT) and local officials of Smyth and Grayson counties are planning to reroute and make four-lane a super highway through the Mount Rogers National Recreation Area. US Route 58, Alternative 2A, would go through 7.7 miles of National Forest and bisect the 154,000 acre NRA. US 58 runs from far southwest Virginia to Virginia's coast along the southern portion of the state. The Mount Rogers NRA section is a small part of the US Route 58 Corridor Development Program.

The Mount Rogers NRA is located in southwest Virginia in Smyth, Grayson, Washington, Wythe, and Carroll counties. It offers some of Virginia's most unusual flora and fauna.

By choosing Alternative 2A, VDOT has completely ignored recommendations by the National Park Service, US Forest Service, and Virginia Department of Conservation and Recreation (DCR). These agencies recommended Alternative 2B, the no-build interstate route. The no-build alternative would route US 58 from Abingdon to Hillsville using I-81 north to I-77 south. The interstate route is only three miles longer than the VDOT proposal, and would save taxpayers an estimated \$175 million in construction costs. Alternative 2B would have no environmental impact.

Alternative 2A would parallel and cross the Appalachian Trail, consuming a scenic waterfall and purple rhododendron patch. It would parallel Comers Creek and cross several other streams and the New River. It would



place a four-lane within five miles of Mount Rogers, Virginia's highest mountain.

In a 17 December 1991 letter to VDOT Planning Engineer Dick Lockwood, DCR stated its concern that "the depth of the environmental analysis conducted in the study is inadequate to clearly identify impacts which construction of the road would surely have on major state natural heritage, cultural, historic, visual, and recreational resources." DCR further states, "When the damage to these resources is compared to the benefits derived, it is difficult to see a strong justification for building much of this corridor."

Politicians are backing the route in the name of economic development. Smyth County Chamber of Commerce President Bob Nelson says the highway "will open up new vistas." Even though federal lands are involved, US Representative Rick Boucher insists he will not get involved in a "state matter."

The National Park Service in a 16 December 1991 letter to VDOT's Dick Lockwood said, "The approximately 62 mile section of the A.T. that passes through the US Route 58 Study Area is one of the more scenic and remote sections of the 2144-mile long trail. All of the alternatives presented in the US Route 58 Corridor Study, with the exception of Alternative 2B, appear to have significant adverse impacts on the A.T."

The US Forest Service also recommended the no-build alternative in a 14 Oct. 1991 letter to VDOT's Hugh Epperly. However, the Forest Service did provide VDOT with a second option—Alternative 2A—which the Commonwealth Transportation Board approved on 21 May 1992.

Formed in June 1992, Mountain Heritage Alliance is a new grassroots environmental group created to fight Alternative 2A. MHA plans to coordinate the efforts of local citizens with state, regional, and national environmental organizations. MHA supports the no-build Alternative, 2B.

Concerned persons are sending their opinions on Alternative 2A (Awolfe to Troutdale route) and Alternative 2B—the no-build interstate route: Ray D. Pethel, Commissioner, Dept. of Transportation, 1401 E. Broad St., Richmond, VA 23219; Elizabeth H. Haskell, Secretary of Natural Resources, Governor's Cabinet, 733 Ninth St. Office Bldg., Richmond, VA 23219; Joy E. Berg, JNF Supervisor, 210 Franklin Rd. SW, Roanoke, VA 24001; Stephen C. Sherwood, Mt. Rogers NRA Ranger, Rt. 1 Box 303,

Marion, VA 24354; L. Douglas Wilder, Governor, Capitol Bldg. 3rd Floor, Richmond, VA 23219; Rick Boucher, Congressman, U.S. House of Representatives, Washington, D.C. 20515; G.C. Jennings, VA Delegate, PO Box 231, Marion, VA 24354; William Wampler, VA State Senator, 40 Holly Lane, Bristol, VA 24201; Smyth Co. Board of Supervisors, PO Box 188, Marion, VA 24354; Grayson Co. Board of Supervisors, PO Box 217, Independence, VA 24348.

To obtain further information and a petition on US 58 contact Gary Slemp, Mountain Heritage Alliance, Rt. 3, Box 589, Marion, Virginia 24354 (703-783-9248).

FEDERAL PROTECTION SOUGHT FOR THE FLATWOODS SALAMANDER

On 8 May 1992, the Biodiversity Legal Foundation and an independent researcher in Gainesville, Florida, formally petitioned the US Fish and Wildlife Service to expeditiously list and protect the seriously imperiled flatwoods salamander (*Ambystoma cingulatum*) as Threatened or Endangered under the Federal Endangered Species Act. In 1991, for the first time, NO adult or larvae flatwoods salamanders could be found in their historic range in Florida.

Native to the southeastern coastal plain of the United States, flatwoods salamanders live in or near pine flatwood and wiregrass communities that support ephemeral ponds. They are small and stout-bodied with gills and dorsal fins. In western Florida, where most studies of this species have been done, they deposit their eggs in late October or November. The breeding season migration of both sexes depends on substantial rainfall, some of which must fall after dark. Almost every such rain during October and November stimulates movements of adults bearing mature gametes. In western Florida most eggs were found at the bases of shrubs, especially on wiregrass (*Aristida* species). Metamorphosis takes place about 90 days later, and most flatwoods salamanders leave the ponds by March or April, living thereafter in stumps and other sheltered locations.

Unfortunately, much, if not all, of the salamander's flatwoods pine/wiregrass and ephemeral pond habitat has been or is being altered, and populations are suddenly disappearing from their historic ranges. Our current knowledge strongly suggests that the

flatwoods salamander has a narrow ecological tolerance that makes it prone to extinction from both short-term and long-term environmental fluctuations and habitat alterations and losses.

Timber harvesting, site preparation (which eliminates stumps and other shelter), and winter prescribed burns threaten the flatwoods salamander. In the longleaf pine belt, late spring and summer is the season of natural fires. The US Forest Service burns and timber harvesting may cause severe sedimentation of ephemeral ponds, rendering them unfit for breeding. Thus, the flatwoods salamander has suffered rapid population declines in the National Forests. John Palis of the Florida Natural Areas Inventory says, "Habitat loss is undoubtedly the single most important threat to this species. Pine flatwoods habitat has been, and continues to be, converted to agriculture, silviculture, urban and suburban development. Public lands will likely be the last bastion of the flatwoods salamander."

Because of these serious threats to the flatwoods salamander, the BLF and co-petitioner have formally requested that the FWS recommend Critical Habitat be designated by the Secretary of Interior for this species. The petitioners noted that FWS is legally required to make a finding as to whether their petition represents substantial information that the listing may be warranted within 90 days of receipt of the petition.

Update: As of 31 August, FWS had not notified BLF of a decision.

—Jasper Carlton, Biodiversity Legal Foundation, POB 18327, Boulder, CO 80308-8327



Saving Grandfather Mountain

by Miles Tager

When French botanist and explorer Andre Micheaux first gained the summit in 1794, he proclaimed it the highest in the new world, and by his own account, burst into the Marseillaise.

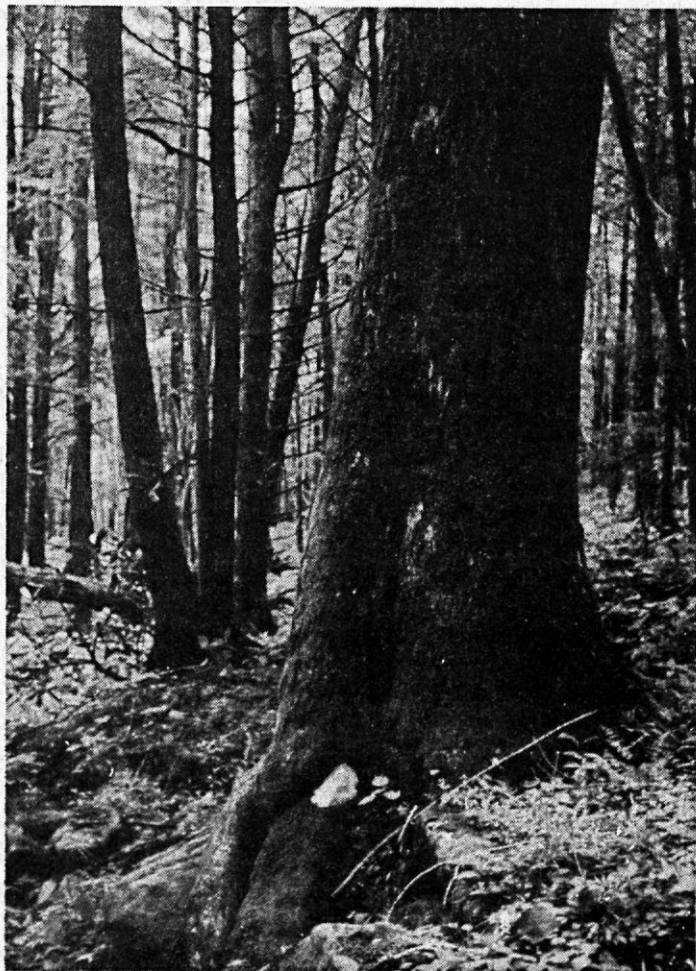
Given that he was without benefit of a surveyor, Micheaux's mistake, and his exuberance, are understandable. In the surrounding Blue Ridge country of subtle and graduated change, Grandfather Mountain's exposed rock face, jutting tors, and chiseled profile dominate like the craggy patriarch of an ancient clan.

As indeed he is. When Micheaux got down to more careful study, he discovered what every subsequent researcher has confirmed; western North Carolina's Grandfather Mountain is geologically, geophysically, and ecologically unique. Jutting 4000 feet out of the Piedmont plain to a height of 5964 feet, Grandfather is both the highest and oldest in the Blue Ridge chain.¹ The US Geological Survey places it among the oldest on Earth, estimating it has stood for over 700 million years. Samples from the Grandfather Window, rock pushed to the summit's surface from the mountain's core then exposed by the elements, are estimated by the Survey to be a billion years old, making the Window one of the oldest known geologic formations on the planet.

Alone among the high Southern Appalachian peaks, Grandfather's spine is stiffened with crystal quartzite, resistant to the weathering that throughout the millennia has beaten down most of these highlands from spiky pinnacles to domed brows. Scoured clean of vegetation by the sub-alpine environment and frequent 100 plus mile an hour winds, the summit retains the rugged profile, that of a sleeping ancient, which first inspired the name.

Beginning at the 5200 foot base of the Profile Cliffs, the north ridge sweeps for ten miles, protecting much of the north slope of the mountain from the prevailing northerlies, and creating singularly rich communities thriving on the year-round moisture in the soil. From the pristine Watauga River watershed below 3000 feet to the spruce-fir forest on the ridge, the North Slope is the crown jewel of Grandfather Mountain.

A Nature Conservancy / North Carolina Natural Heritage inventory concluded these few thousand acres have "global ecological importance." They contain more rare, threatened, and endangered species than any upland area in the eastern United States. This diversity makes Grandfather's North Slope exceptional even for the Blue Ridge—a region that offers one of the richest floras in the country, what the Audubon Nature Guide calls the "zenith of forest habitat development . . . encompassing the range of climates and habitats from Georgia to Newfoundland." The Blue Ridge Mountains are home to over 130 tree species, more than 1500 varieties of flowering shrubs and herbs, 350 mosses, 2000 fungi, 300 birds, and 16 salamanders, the latter among the greatest concentrations on Earth.



George Wuerthner

On the windswept ridges and in the sheltered coves of the North Slope, the system has blossomed in stunning complexity, like a fractal mimicking the region as a whole. Under the rock outcrops in the shadow of the Red Spruce-Fraser Fir forests² flourish a host of rare populations. Many, like Heller's Blazing Star, Blue Ridge Goldenrod, and Rock Gnome Lichen, are "the largest, best developed examples in the southern Appalachians," according to the North Carolina Natural Heritage Program, and are critically endangered.

Below 5000 feet in rare proximity are the Rich Cove, Acidic Cove, Red Oak and Northern Hardwood Forests, unusually abundant in mature Black Cherry, and Eastern Hemlock, sedges, lilies, avens, ferns and rhododendron. Most distinctive of the mid-slope communities is the boulderfield, a community described by the Heritage Program as a "heterogeneous mosaic of organic accumulations supporting lush beds of herbs." One of these herbs, the Bent Avens, is classified by The Nature Conservancy as G1, critically endangered globally, and grows in viable populations only on Grandfather Mountain. The boulderfields also boast most of Grandfather's remnant old growth, particularly Black Cherry, highly prized and heavily logged throughout the Southern highland forests.

At the base of the mountain run the headwaters of the Watauga River, a state classified Outstanding Resource, and Class B (native breeding) Trout Water. The Watauga is one of the very few rivers left in North Carolina that still has waters rated as High Quality.

Five federally listed or proposed Endangered species live on the North Slope, including the Peregrine Falcon and the Northern Flying Squirrel. There are 17 state listed species of "special concern," i.e. rare, threatened, or endangered. The Nature Conservancy (TNC) catalogues five G1 species as well as 11 others globally rare and endangered. TNC's survey states that further study is essential, since there is a "high potential for a number of other rare plant and animal species, including high potential for other G1 plants."

What more than 7000 centuries have created, however, a few years may well destroy. The North Slope has another name: The Wilmor Tract; owners John Williams and Hugh Morton. It is for sale.

When Hugh Morton first decided decades ago to sell it, his real estate agent was horrified. The agent contacted both the state and the National Park Service, but neither public nor private buyer could be found, and Morton decided to develop it himself. He upgraded the rough track up to the summit, and built a bridge connecting the twin peaks. Grandfather Mtn. Inc., North Carolina's largest private tourist attraction, was hatched, in 1947.

In a mountain region within a day's drive of half the US population and eventually attracting 15 million visitors a year, it flourished. Morton built trails, a small zoo, a nature museum. He promoted Scottish Highland Games on the high meadows below the summit and hang gliding off the Profile Cliffs. He garnered a reputation as both a savvy businessman and, in the context of the era, a responsible land steward. He cultivated powerful political connections throughout the Southeast.

In the post-war years, Morton pursued further development on his holdings. He formed a partnership with Oklahoma oil magnate John Williams Jr., a large landowner in the mountains and one of the builders of the Alaska pipeline. With the exception of the Blue Ridge Parkway and National Forest south and east of the mountain, the surrounding slopes were a no zoning zone, covered with golf courses, ski areas, condos and summer homes, billboards and boutiques.

Williams and Morton—Wilnor—built the Grandfather Mountain Country Club, a thousand acre resort on the northeast slope. Completed in the unrestrained growth period of the mid-sixties, it caused hardly a ripple of doubt about its environmental impact.

Next on the block was the 900 acres of the Wilmor Tract. The initial plans proposed a ski slope, golf course, shopping center, condos, an artificial lake, and housing sites. Morton and Williams decided not to build themselves, but to sell the development package outright, a quick killing.

But by 1988, much had changed. In the deepening recession, the high country was already overbuilt. Sustainable land use was a matter of frequent public debate, and although spoken in hushed undertones, so too the idea of no growth. With the announcement of the sale and destruction of the region's greatest natural resource, some of the murmurs of dissent swelled to full outcry.

Friends of Grandfather Mountain formed as the nucleus of protest, with an agenda of saving the land by any legal means: negotiation, mediation, purchase, confrontation, or litigation. Morton publicly savaged the group's credibility, but over a year later, with no offers on the table, and his own Sunday suit of good stewardship more than a little frayed, he retracted the resort plan.

Still intent on "using" the North Slope, Morton and Williams needed a way to soften the perceived impact of building on the land while insuring the huge profits—tens of millions of dollars—that the wholesale development package would have produced.

Enter The Nature Conservancy. In the spring of 1992, to great fanfare, the principals and Conservancy executives announced a "compromise" on the Wilnor Tract. A conservation easement would be deeded to the NC Nature Conservancy for roughly half the land, with the remaining 450 acres to become a commercial district and housing project.

Approximately 300 acres of the upper slopes and mid-level coves, to be divided into more than 60 3-5 acre plots, were actually flagged and staked prior to the public announcement³. Each site would cost about \$300,000. The entire Wilnor Property was tax valued at about \$2 million; now a third of it was to be sold for \$18 million. The road would start at the base of the hundred year old Shanty Springs Trail, now closed and posted. The new sign at the trailhead read: Closed for Conservation.

Midway to the top, the trail, and the proposed road, skirts the Glade, a classic upland boulderfield in the heart of the North Slope. Many rare herb communities, including one of the largest known populations of the Bent Avens, thrive here. The Northern Flying Squirrel, nesting in the big trees above, is a known visitor. The road, like the trail, would continue into the spruce-fir at the base of the cliffs, home to the mountain's only nesting Peregrines. All of the Shanty Springs as well as the entire Glade was flagged for construction.

The 150-acre business strip would line the base of the slope. Building would occur a few hundred feet uphill from the headwaters of the Watauga river.

Nature Conservancy negotiations are conducted in confidence. They will not comment on the development happening next door to their new purchase. Since their own scientific data confirm the rich biodiversity of all the North Slope, their subsequent statements at the press conference bear repeating. "This compromise will insure that we would protect all the rare biological resources" on Wilnor. Re-

Friends of Grandfather Mountain

Maybe all beginnings look a little unlikely in retrospect, but Friends of Grandfather Mountain's was truly inauspicious.

In 1988, after the news broke that the mountain was for sale, and a 900 acre resort projected, Kim Isaacs waited for somebody to do something. Her home of Boone, North Carolina is a university town, and the surrounding mountain counties a mecca for eco-sapiens of all stripes. Surely one of the established groups, maybe the local Sierra or Audubon chapters, would rise to the occasion.

The ensuing silence was deafening, so Kim called the first meeting herself, at her bookstore, the Dancing Moon. At least those who came were equally appalled. The small group included the trail guide who worked for the landowners on the North Slope...and who would soon resign. The participants shared an almost complete lack of money, time, activism experience, and political connections.

The developer was one of the most powerful men in the state. He knew every editor, businessman, government official, and politician. Worse, he had cultivated an environmental image, hitching his name to bandwagon crusades, like acid rain awareness, since acid rain affected the number of customers to his tourist attraction on Grandfather's summit.

Finally, all the affected land was privately owned, not adjoining any state or federal property. Federal and state governments normally only purchase lands adjacent to land they already own.

For the Friends, there seemed to be no solid ground on which to make a stand. Except, of course, the mountain. The group decided to fight.

For four years FOGM ran a textbook grassroots campaign; equal parts rant and reason, sure steps and stumbles, blind alleys, blind luck, soaring hopes and mortifying burnout. At the high point, the wholesale devastation plan was withdrawn under fire of the negative publicity. The low end was the "compromise" that followed—a deal engineered with The Nature Conservancy, not FOGM—that compromised the mountain's integrity but preserved Hugh Morton's reputation and profit. Extract from Websters Unabridged Dictionary; tell the whole world, one definition of compromise: "a shameful or dishonorable concession."

Now in the summer of 1992, Friends of Grandfather Mountain has fought to a standoff. Not one inch of the North Slope has been dozed or filled or cut. But neither will the developers negotiate a fair market purchase for preservation, or back off from planned construction.

Down slope from the Wilmor Property is another piece of the mountain for sale, but one whose owners want to see preserved. FOGM has raised grant money toward an option, natural inventory, and eventual purchase of this 300 acre tract, with its river to ridge diversity as beautiful and important as Wilmor's, and a perfect location for a locally owned and managed wildlife sanctuary and environmental education center.

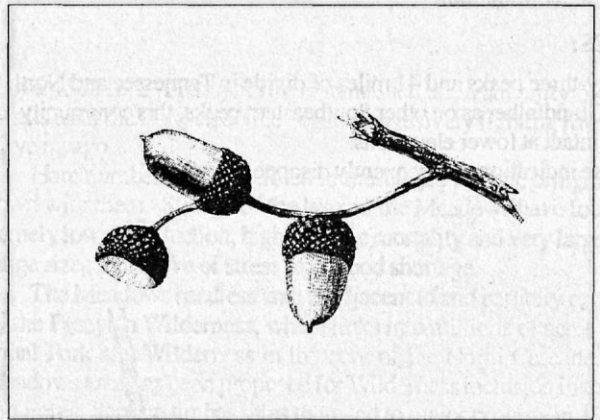
The Friends are as determined as ever to save all the remaining wildlands on the mountain. We have a little money, some good connections, a wealth of experience, and an outlook steeled in flames.

New regs are coming in North Carolina, new people and priorities. We've even found a few Audubon and Sierra people to come stand out on a limb with us. Welcome, and don't look down.

Friends of Grandfather Mountain welcomes donations and endorsements—legal, operational—for the MacDonald Sanctuary and injunctions against the Wilmor Development. Donations are tax-deductible and should be sent to FOGM, POB 965, Asheville, NC 28802.

Hugh Morton's address is: Grandfather Mtn. Inc. POB 128, Linville, NC 28646.

-Miles Tager



porters jumped on it: what about the Glade, the avens, the squirrel, the river? Then the new refrain: "this agreement will protect most of the important biological resources" on the tract. The question lingered as to what constituted an unimportant resource within a unique natural community.

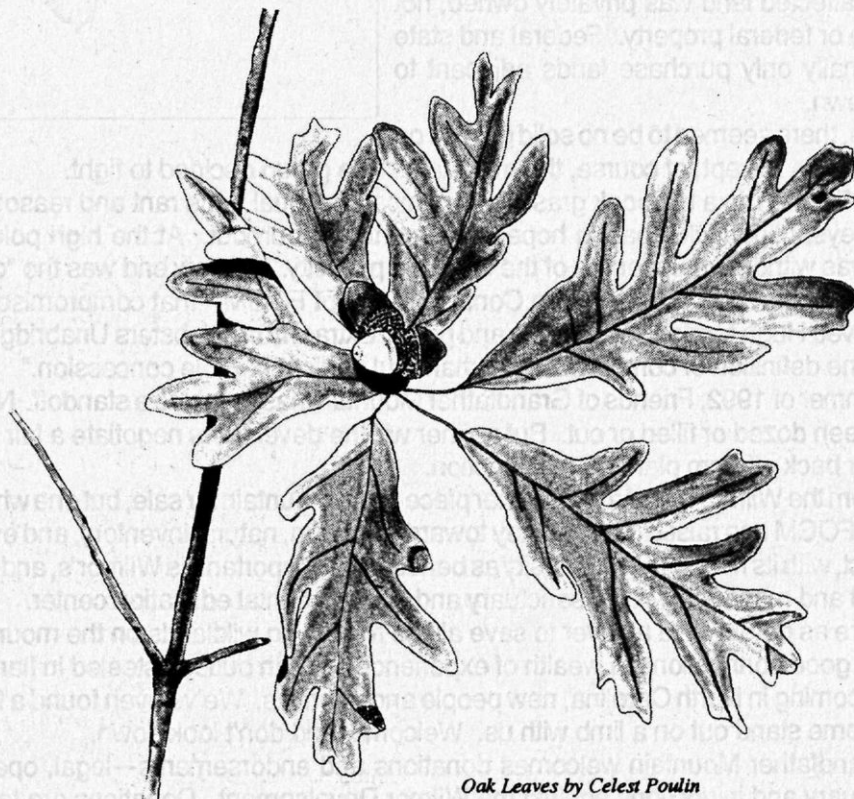
And what is the motive, behind the owners' overscale speculation in a collapsed local real-estate market in full-blown recession? Darker voices speak of vengeance, the petulance wrought by a challenge to the owners' paternal authority, the George Bush Syndrome. But Morton and Williams may also be looking to proposed regulations, both state and regional, that could ultimately put limits even on private property ventures. Stringent new zoning, watershed, native trout and most important, critical habitat regulations are all on the board in North Carolina, a radical departure for what has traditionally been one of the slackest regulatory arenas in the country. Although the end results of the proposals may well go the usual way of loopholes, exemptions and grandfathering, they nevertheless give fair warning that open season on the mountains is over.

There are no buyers yet for the Wilmor sites, no road, no construction. The stakes and flags have not been replaced. Legal action, or the soft realty market, could prolong the stalemate into eventual protection for the North Slope . . . or the dozing of the Shanty Springs road could begin tomorrow.

Miles Tager (353 Old Fort Rd., Fairview, NC 28730) is a newspaper correspondent in Asheville, NC., and Executive Director of Friends of Grandfather Mountain.

NOTES:

1. Forty-three peaks and 41 miles of divide in Tennessee and North Carolina exceed 6000 feet.
2. On Grandfather as on other Southeastern peaks, this community has been decimated by acid rain above 6000 ft., but remains relatively healthy and intact at lower elevations.
3. These indications subsequently disappeared.



Oak Leaves by Celest Poulin

Conserving Diversity In The Twentieth Century:

A Challenge Even in the Meadows

by Mitch Friedman and Mark Skatrud, Greater Ecosystem Alliance

In a high-elevation forested ecosystem in north-central Washington, known as the "Meadows," remains the last known concentration of lynx in the entire Lower 48. The Meadows encompasses the largest unprotected roadless area in the Northwest, totaling over 150,000 acres, supporting not only the rare lynx, but also grizzly bear, gray wolf, moose, Franklin spruce grouse, boreal owl, three-toed woodpecker, northern bog lemming, Cascade fox, and other species of concern.

The lynx gained center stage when studies in the 1980s found the cats stressed and dwindling in number due to habitat changes caused by fire suppression. Now major road-building and logging plans are in the works, partly rationalized as lynx management. In all likelihood the roads would lead to extermination of the lynx and of other reclusive species.

Although a boreal species, Canadian lynx once ranged parts of most northern states, including New England, the upper Midwest, and Western states as far south as Utah and Colorado. Little is known about lynx distribution today, but there appear to be only a few scattered individuals left in Montana, Idaho, and perhaps a couple other Western states. Estimates in Washington are as high as 200 animals, yet the only known healthy population is in the Meadows, where less than 25 lynx exist. Overlapping home ranges there indicate a concentration greater than anywhere else south of Canada.

Lynx are similar to bobcats, but they have massive feet. At low elevation these feet are a hindrance, and the timid lynx are displaced by the tenacious bobcat. But in northern regions and high areas the feet carry lynx efficiently atop snow as they hunt snowshoe hare, upon which they prey almost exclusively. Lynx are so dependant on the hare that in many areas their populations rise and fall as hare numbers boom and bust with forage conditions. In winter, snowshoe hare find optimal browse in young lodgepole pine forests, where buds of young trees peek out above snow but are not so high as to be out of reach.

In the Meadows, at the southern end of lynx range, there is no evidence of population cycles: The only recent measurable trend is downward. While hunting and trapping can deplete lynx populations, more permanent damage is caused by habitat declines. That is the problem in the Meadows.

The Meadows covers the eastern flank of the Greater North Cascades Ecosystem, and is comprised of lodgepole pine, subalpine fir, and Engelmann spruce forests, interspersed with wet meadow, largely

above 4500 feet. Frequent fires maintained an availability of young forests until the Forest Service began aggressively fighting fires about 50 years ago.

Hare numbers have declined in these aged forests, bringing lynx down with them. Studies of the lynx in the Meadows have found extremely low reproduction, high juvenile mortality and very large home range sizes indicative of stress from food shortage.

The Meadows roadless area is adjacent to and partially contained by the Pasayten Wilderness, which links into millions of acres of National Park and Wilderness in the core of the North Cascades. The Meadows area has been proposed for Wilderness inclusion in the past, and Forest Service timber sales there led to major protests in 1988.

The Meadows extends just into British Columbia, Canada, where it is also roadless. While lynx generally increase in abundance to the north, trapping data show populations in the Southern Interior of BC (just north of the Meadows) to be way down even though the population cycle should presently be at a high. BC officials provide comment space on an annual survey of trappers. One typical of these comments makes the cause of lynx decline clear: "the logging is destroying all of the marten, fisher, lynx, and most other furbearers." In all likelihood, the Meadows population is isolated from sources of natural lynx migration due to habitat destruction, fragmentation and overtrapping.

On the Washington side, the Meadows includes part of both the Okanogan National Forest (ONF) and the Loomis State Forest, the latter managed by the Washington Department of Natural Resources (DNR). The DNR has been unresponsive to the needs of lynx. In fact, only recently has the agency begun considering rules to protect state-listed threatened and endangered species (the lynx is now a candidate). Consequently parts of the Loomis forest are already extensively fragmented and the timber sales keep coming.

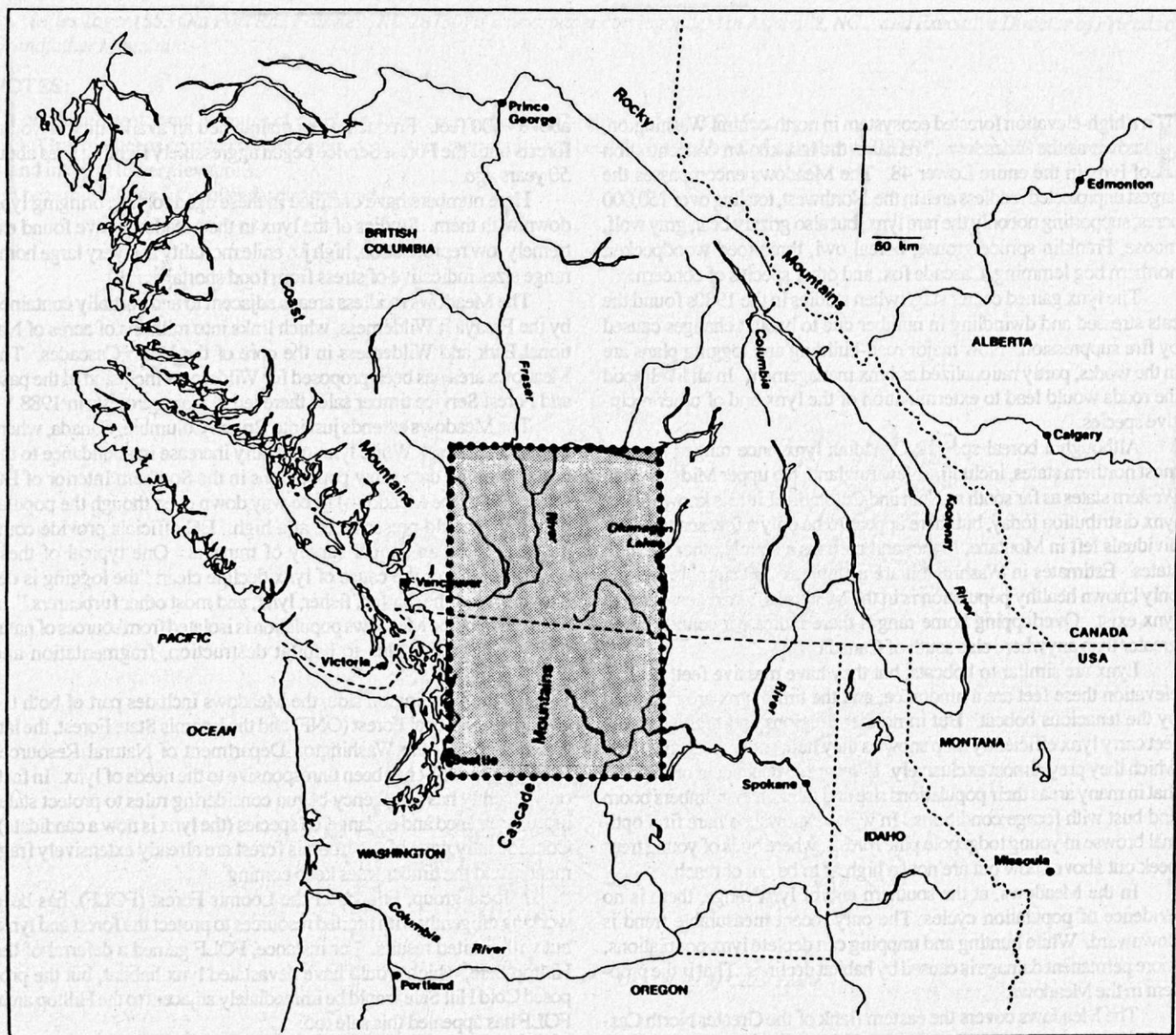
A local group, Friends of the Loomis Forest (FOLF), has been working diligently with limited resources to protect the forest and lynx, but with limited results. For instance, FOLF gained a deferral of the Hilltop Sale, which would have devastated lynx habitat, but the proposed Cold Hill Sale would be immediately adjacent to the Hilltop area. FOLF has appealed this sale too.

The Cold Hill Salvage Sale would include a 470 acre clearcut in documented lynx forage and travel cover. For 20-25 years, the Cold

Creek drainage would be dysfunctional for lynx. Many areas of this clearcut would not regenerate with lodgepole, since DNR does not intend to burn after cutting. Despite public concern and constant advice from the Department of Wildlife, the DNR still shows no regard for lynx.

The Forest Service plays a different game. The ONF's forest plan calls for "lynx management" in a roughly 75,000 acre part of the Meadows designated Management Area 12. The agency is planning well over 100 miles of road in MA 12 to allow checkerboard clearcutting, under the spurious justification of generating young lodgepole stands for the benefit of hare and lynx. The latent Forest Service tendency to solve all problems by logging is enhanced by rising lodgepole stumpage values and increasing forest health problems in the Meadows (and

Simply put, if the Meadows is roaded, the lynx are doomed.



throughout eastern Washington and Oregon.) The Forest Service's fire suppression has led to lynx habitat declines and accentuated insect epidemics in this large roadless area. Under all circumstances, one must be skeptical of the Forest Service, and skepticism proves warranted again here. Most of the Meadows outside MA 12 is allocated to intensive timber management. In MA 12, logging is supposed to correspond to lynx needs, but evidence is already emerging that far more roading and logging is being planned than was called for in the forest plan. Agency biologists are concerned about this, but pressure to get out the cut on the eastside forests of Washington and Oregon has been intense as spotted owl restrictions have lowered cutting to the west.

Even if logging was limited to forest plan levels, guidelines developed for logging in lynx management areas are unproven. These guidelines (from wildlife biologists Dave Brittel and Gary Koehler, who conducted lynx studies) include limits on cut size and width, and provisions on distribution of cuts over time and space and on travel corridors. None of these guidelines has been tested on the ground. The last concentrated lynx population is a poor choice for experimentation.

The most serious threat to lynx is roads. Roads don't necessarily impact lynx directly, but the people who travel them do. Lynx pelts are valuable, and the only reason lynx survive today in the Meadows is because hunter/trapper access is limited. The Department of Wildlife currently issues no lynx permits (due to recent conservationist actions), but poaching is an enormous threat. Throughout the lynx's original range, wherever roads have intruded, few if any lynx remain.

Closing roads after logging is not a valid option. Forest Service history is full of broken mitigation promises. There may be no funds to obliterate the roads. Gating roads does not stop three wheelers or snowmobilers. Poachers and ORVers have long known that road closures on public lands are not enforced. Neither the Forest Service nor Department of Wildlife have meaningful enforcement capabilities. Simply put, if the Meadows is roaded, the lynx are doomed.

Of course, the impacts to other species and processes that would occur with roading and logging are also significant, but these concerns do not stop the Forest Service from logging. Now that trees are dying in the Meadows from mountain pine beetle attack, both agencies are even more likely to take personal offense at natural processes and commit to logging—even though there is absolutely no evidence that the spread of insects can be thwarted by cutting the areas already impacted. In fact, soil compaction and other factors associated with logging aggravate forest health declines. (Research indicates that the forest epidemics in the Northwest are normal in their timing, but far more intense than historical occurrences.)

Given the long history of agency mismanagement of Washington forests, no easy solutions exist. If one accepts that some level of logging is either necessary (to promote young stands) or simply justified socially, then strict adherence to the cutting pattern guidelines developed by Brittel and Koehler is the minimum we should expect. Any logging done under these guidelines would have to carry a guarantee of faithful monitoring of impacts to lynx. Horse skidding and helicopter transporting are the only non-road alternatives for moving the logs. The Forest Service and DNR should address whether horse skidding is technically and economically feasible.

Prescribed burning has potential for restoring landscape diversity suitable for lynx. Crown fires are needed to kill old stands and allow young stands to come in. But crown fires are difficult to control under any circumstance, and especially after the 50 year build-up of ground

fuels (wood debris). Before any agency people would take responsibility for such a conflagration (the agencies will proudly accept clearcuts, but not fires), they would likely require roads, fire breaks, ground crews, etc. It would not be a benign operation. Even with intense management, the fire could escape and become massive.

Major fire potential exists even without intentional ignition. The Meadows is a dry ecosystem, and natural fires were frequent during summer in the Cascades. If we simply left the area alone, perhaps a major fire—consuming tens of thousands of acres—would occur, and this might be exactly what the Meadows needs. Yet such a burn would devour remaining lynx habitat, and it takes 15 years or so for optimal hare/lynx habitat conditions to develop after a major disturbance. With this population being so isolated from other lynx populations (i.e., southern B.C.), natural immigration may be unlikely. In other words, the Meadows lynx population may be so vulnerable and isolated that even natural disturbance could cause extinction.



ENDANGERED SPECIES ACT

This is the type of situation the Endangered Species Act was designed to help. Short-sighted logging plans could be prevented, and perhaps formal consultations and a recovery plan from the US Fish and Wildlife Service could identify solutions that would benefit the entire ecosystem and all vulnerable species within it, not just the lynx.

In August of 1991, a coalition of national and local environmental groups, including FOLF and the Greater Ecosystem Alliance, petitioned both the state and federal governments to list the lynx as Endangered. The state petition would cover all of Washington, and remains under

consideration. A decision will likely come in early 1993, but state recognition of the lynx's endangerment would have little effect since Washington has no state endangered species act.

At the time of this writing, 10 months have passed and the US Fish and Wildlife Service has failed to even make a 90-day determination of whether the petition to list the Meadows lynx population as Endangered "may be warranted." Such a low-threshold determination is required under the ESA, with a final proposal on whether or not to list due within one year of the original petition date.

In January, the agency indicated that the petition was denied, but did not issue a formal notice or publish their finding in the Federal Register. Thus the petitioners cannot yet challenge the decision. Since there appears to be no reason for the delay, we have notified the Service of our intent to sue under the ESA.

Other groups have considered petitioning for lynx Endangered status nation-wide. The National Wildlife Federation prepared a petition last year, but decided not to file it, in part because agencies initiated a "lynx/fisher/wolverine" (LFW) process. Coordinated by Bill Ruediger, a Forest Service biologist, this process recognizes that we know virtually nothing about the population and habitat status of

these mid-level carnivores across the West. The process seeks to coordinate research and development of a conservation plan outside of the ESA.

This is a good idea. The ESA has procedural hoops which can actually delay development of a good conservation plan. The stated intentions of the LFW group include attention to multiple landscape scales, from stand-level habitat requirements to regional landscape level concerns for large core areas

Mitch Friedman and Mark Skatrud work with Greater Ecosystem Alliance, POB 2813, Bellingham, WA 98227, (206)671-9950.

What you can do:

- Ask the Washington Wildlife Commission to list lynx as endangered in Washington. Dean Lydig, Chair, Washington Department of Wildlife, 600 N. Capitol Way, Olympia, WA 98504.
- Ask the DNR to prepare a comprehensive "block plan" for managing the Meadows. The plan should be coordinated with the FS and WDW and be based on the needs of lynx and other species. Commissioner Brian Boyle, DNR, Olympia, WA 98504.
- Ask the Forest Service to stop all timber plans for the Meadows and Granite Mountain evaluation areas. Supervisor Sam Gehr, ONF, POB 950, Okanogan, WA 98840.



Lynx by Maggie Brunger

America's Last Herd Of Woodland Caribou:

Endangered But Still Declining

by Evan Frost

As testified by the observations of Sullivan and other early explorers, woodland caribou were once common throughout much of Canada and most of the northern border states in the United States. Today this magnificent member of the deer family can only be found, south of Canada, in the Selkirk Mountains of northeastern Washington and the Idaho Panhandle (although they reappeared temporarily in northwest Montana and northern Minnesota in the 1980s), and is considered one of the most endangered mammals in the lower 48 states.

Woodland caribou (*Rangifer tarandus caribou*) are a related but distinctly different subspecies from the European reindeer and barren-ground caribou of Alaska and northern Canada. Unlike their relatives to the north, woodland caribou do not migrate great distances, but instead utilize several different habitat types at various elevations throughout the year. Winter habitat is old-growth spruce/fir and cedar/hemlock forests, which provide thermal cover and support large quantities of arboreal (tree) lichens, one of their primary foods. In summer, caribou move into subalpine basins and wet meadows, where they feed on a wide selection of succulent leaves and shoots.



Past market hunting, habitat loss associated with human-caused fires, and logging of old-growth forests, have led to the demise of woodland caribou throughout their historic range. By the early 1980s, the entire US population, numbering only 20-30 animals, was restricted to the Selkirk Mountains near the international border. After years of research and petitioning by the Idaho Department of Fish and Game, the species was emergency listed as Endangered by the US Fish and Wildlife Service in 1983. Since that time, several reintroduction efforts from British Columbia have increased the herd to 50-60 animals, but further habitat fragmentation, illegal poaching, and vehicle collisions still threaten the future survival of this last remaining herd.

One of the most serious threats to woodland caribou recovery is the logging of their mature and old-growth forest habitats, which continues unabated on the Colville, Idaho Panhandle, and Kootenai National Forests. Some Forest Service lands have been designated for caribou management, but this designation has not prevented additional logging and road construction. Timber sales continue to be offered in caribou habitat under the auspices of "habitat improvement" projects, which are typically selection harvests in mature stands. The Forest Service argues that these operations "enhance" caribou habitat; no peer-reviewed scientific studies support these claims.

At the height of land I was in hopes that we had struck an Indian trail, when suddenly our guide informed me that we had been travelling for the last half hour, not upon an Indian, but a cariboeuf trail, and that now we were forced to leave it. Cariboeufs frequent this part of the country in large numbers, as the woods are traversed everywhere by their beaten tracks.

—John Sullivan
*Palliser Expedition Journals
Selkirk Mountains, 1859*

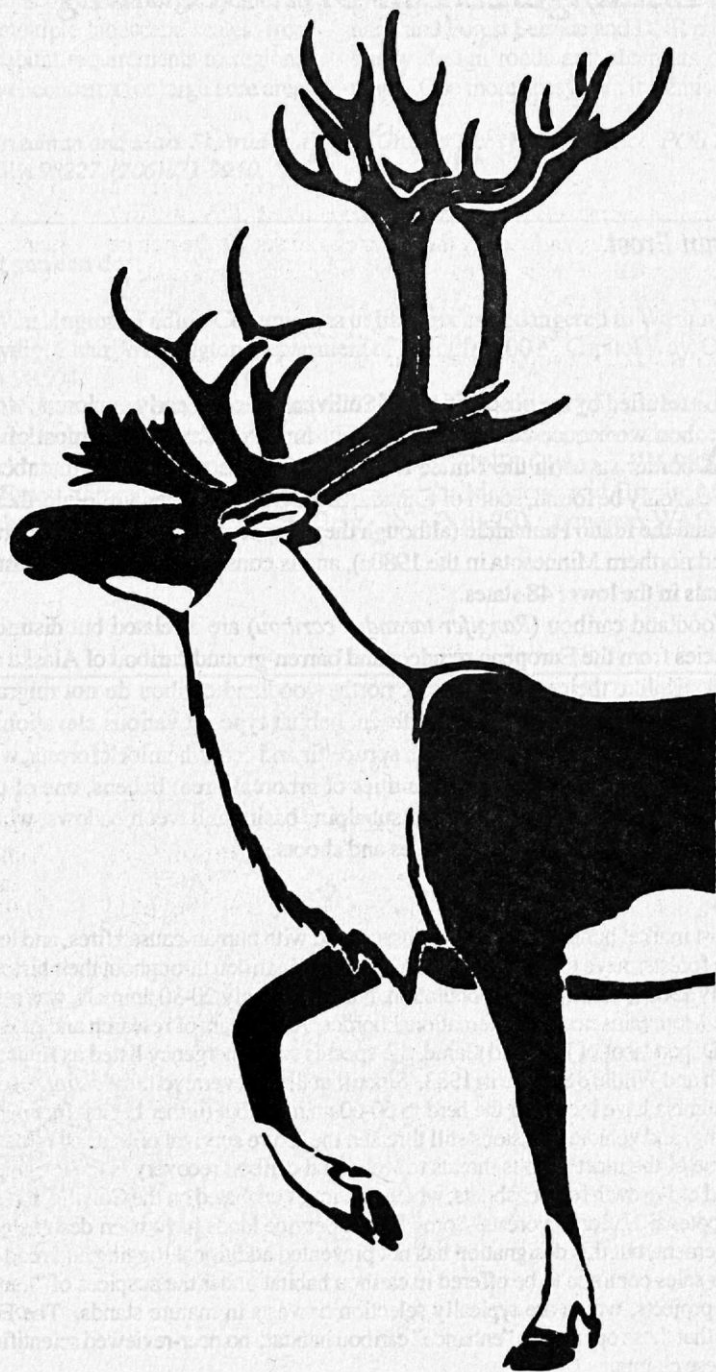
BLF Petitions for Critical Habitat

As a result of the failure of the US Forest Service and US Fish and Wildlife Service to protect the habitat of the Selkirk Mountains woodland caribou and the inadequacy of the 1992 Draft Caribou Recovery Plan, the Biodiversity Legal Foundation (BLF) filed a formal petition 17 August, with the Secretary of the Interior, Manuel Lujan, requesting Critical Habitat designation for the caribou in northern Idaho and north-east Washington.

Designation of Critical Habitat would provide more statutory protection than the caribou receives from simply being listed as Endangered: it would make clear to federal and state agencies what areas cannot legally be adversely modified and how much and which mature to old-growth forests must be preserved, if the caribou is to recover in the wild.

The BLF points out that the caribou is only one of the sensitive, Threatened, or Endangered species in the Selkirk Mountains. Others include the northern bald eagle, grizzly bear, the Rocky Mountain gray wolf, lynx, fisher, wolverine, and boreal owl. The Selkirk ecosystem is "the *last and only* place" in the lower US where these species still exist together in the wild, according to BLF director Jasper Carlton. Designation of Critical Habitat for the caribou would thus have benefits extending far beyond the caribou itself.

For further information contact the BLF at POB 18327, Boulder, CO 80308-8327; 303-442-3037. BLF welcomes donations.



As an example of Forest Service "caribou management" strategy, an EIS has just been released for the Leola Sullivan Timber Sale on the Colville National Forest. This timber sale is located immediately adjacent to the Salmo-Priest Wilderness, in the low elevation cedar/hemlock and mixed conifer forests that have remained largely intact until now. Further logging and road building in this area will fragment one of the largest blocks of mature and old-growth forests in the southern Selkirk Mountains, with potentially disastrous effects on caribou, grizzly bear, gray wolf, wolverine, and other sensitive species known to inhabit this wild northeastern corner of Washington state. Many additional sales in caribou habitat are being offered on the Idaho Panhandle National Forest.

Meanwhile, in southeastern British Columbia, where woodland caribou are more abundant but still in decline, clearcut logging continues at an unbelievable pace. The BC Forest Service has leased large tracts of caribou habitat, including critical winter ranges, to multinational timber companies. These areas have been heavily harvested over the last 10-15 years, particularly the lower elevations. As the rich cedar/hemlock forests in the valley bottoms are nearing depletion, the BC timber industry has turned to cutting the old-growth spruce/fir forests above 4000 feet. This new focus on the subalpine belt, forests once considered unacceptable for harvest by industry standards, imperils the last strongholds of the species.

Of immediate concern in BC is the West Arm Roadless Area, a majestic 125,000 acre wildland stretching from just south of the town of Nelson almost to the US border. The area acts as an important linkage zone between US and Canadian wildlands, which could enable subpopulations of caribou and other wide-ranging species to exchange individuals and re-colonize parts of their former ranges. However, the BC Forest Service, in conjunction with Darkwoods Forest Industries (a private timberland owner), is punching numerous roads and clearcuts into this area. Local activists have proposed to the BC government that the West Arm be given park or wilderness status, but the timber industry is determined to eliminate any such possibility. In the process, the potential for recovery of transboundary caribou populations is also being eliminated.

The US Fish and Wildlife Service (FWS) released a woodland caribou recovery plan in 1985, which established a short-term population goal of 100 animals in the southern Selkirks. Three caribou transplants totaling 72 animals were conducted between 1987 and 1990, with mixed success. Many of the released animals died, due to both human and natural causes.

Although augmentation of the herd is important, these efforts ring hollow, given that adequate habitat necessary for recovery has not been protected. A caribou recovery zone was identified in the recovery plan, but Critical Habitat was not delineated as mandated by the Endangered Species Act. Guidelines for timber harvest activities were developed, but these loose guidelines have not discouraged the logging of additional mature and old-growth forests within the present and historic range of the species. In short, the recovery plan was nothing more than a mandate for "business-as-usual" management in the National Forests.

Recently a revised version of the caribou recovery plan was released for public comment. Similar to its predecessor, the draft plan falls far short of the actions that are clearly necessary if this species is to recover. Blatant omissions include:

- 1) failure to designate Critical Habitat in accordance with the ESA.
- 2) no moratorium on the harvest of mature and old-growth forest in the recovery zone, considered by many to be the population-limiting factor.
- 3) no road closures that would significantly reduce human-caused mortality from poaching, accidental shootings, and vehicle collisions.
- 4) failure to identify additional recovery areas outside the Selkirks to meet long-term recovery goals.

Several conservation groups, led by the Biodiversity Legal Foundation and the Greater Ecosystem Alliance, are considering litigation that would seek to force the FWS to designate and protect critical caribou habitat.

The woodland caribou—this darkly majestic inhabitant of lichen-draped old-growth forests—is at a critical juncture in the Columbia Mountains. All of the scientific evidence suggests that the species and its habitat needs immediate help; yet the Fish and Wildlife Service, US Forest Service, and BC Forest Service continue their extinction-prone management and downplay the seriousness of the situation to the public. If the woodland caribou is to survive, an aggressive habitat protection and rehabilitation plan must be developed and carried out. Along with grizzly bear, gray wolf, northern bog lemming, and lynx, woodland caribou are a symbol of the biological richness of the Greater Columbia Mountains Ecosystem, and of the need for transboundary conservation efforts. The protection of their habitats in the US and Canada would allow for the continued survival of innumerable other life forms.

Evan Frost is a Conservation Biologist with the Greater Ecosystem Alliance, POB 2813, Bellingham, WA 98227 (206-671-9950).

WRITE LETTERS TO:

- **Andrew F. Robinson*, US Fish and Wildlife Service, Eastside Federal Complex, 911 NE 11th Ave., Portland, OR 97232-4181. Request a copy of the revised woodland caribou recovery plan, and submit comments on the need for Critical Habitat designation, road closures, and additional recovery zones.
- **Ed Schultz*, Forest Supervisor, Colville National Forest, 765 South Main St., Colville, WA 99114. Request a copy of the Leola Sullivan Timber Sale EIS (Sullivan Lake Ranger District), and submit comments for the "no action" alternative, since all other alternatives will detrimentally impact caribou by fragmenting remaining forest habitat in this critical area.
- **John Cashore*, Minister of Environment, Lands, and Parks, Room 112, Parliament Bldg., Victoria BC V8V 1X4. Urge the BC government to protect all caribou habitat in the southern Columbia Mountains, particularly the West Arm Wilderness and surrounding roadless lands (including the Lasca Creek watershed).
- **Dan Miller*, Minister of Forests, Room 128, Parliament Bldg., Victoria, BC V8V 1X4. Request that all timber harvest plans be reviewed by the wildlife biologists in the Ministry of Environment to determine their impact on caribou and other sensitive species.
- **Darkwoods Forest Industries*, RR #1, Nelson, BC V1L 5P4. Request a copy of the five year development plan for lands in the Nelson Forest Region, and demand a halt to the logging of mature and old-growth forests in the southern Selkirk Mountains.

Southern California Biodiversity Sampler

by David Hogan, San Diego Biodiversity Project

INTRODUCTION

Southern California endangered species issues have recently begun to hit national news. The following article was written to tell folks what's really happening to southern California sensitive species and habitats, and to try to offset the distortion of facts often caused by the national press.

The article focuses on the three rarest habitats in San Diego County: coastal sage scrub, southern maritime chaparral, and vernal pools. Since there are at least ten other fast disappearing habitat types in San Diego County alone, more articles are likely . . .

COASTAL SAGE SCRUB

Brown, dry, dusty; no splendid waterfalls or cathedral forests here. . . Welcome to the increasingly rare coastal sage scrub habitat of southern California and Baja California Norte; summer, fall, and winter. . .

Then spring. The foothills are vibrant with the bright greens of young sages, lemonade berry, and perennial bunch grasses. Wildflowers carpet entire hillsides. Sweet sage smells float down drainages on evening breezes.

According to the US Fish and Wildlife Service in their status review for the California gnatcatcher, the coastal sage scrub of southern California and Baja has been reduced to 10% of its former range. It once covered the coastline from Ventura County in the north to a region of Baja south of Ensenada, and reached up to 3500 feet on sunny, south facing slopes. Much of this coastline has been converted to asphalt or crops. For example, the Los Angeles basin was almost 80% covered by coastal sage scrub prior to the buildup of the LA megalopolis.

Southern California's coastal sage scrub community carried distinct characteristics, depending on latitude and variables such as ocean breezes and inland temperatures. Four variations of the coastal sage scrub community have been recognized in southern California: the venturan sage scrub, riversidean sage scrub, diegan sage scrub, and maritime succulent scrub, although considerable variation occurs within these types. All are considered greatly reduced in range by the California Natural Diversity Data Base (California Department of Fish and Game) and all are threatened with elimination.

Diegan sage scrub is one of two coastal sage scrub habitats occurring in San Diego County. This habitat type, as defined by the presence of *Artemisia californica* (coastal sagebrush), *Eriogonum fasciculatum* (buckwheat), *Galvisia speciosa*, *Haplopappus venetus* (goldenbush), *Lavatera assurgentiflora* (malva rose), *Lotus scoparius* (deerweed), *Malocathamnus fasciculatus* (bushmallow), *Malosma laurina* (laural sumac), *Rhus integrifolia* (lemonade berry), *Salvia apiana* (white sage), and *Stipa lepida* (foothill bushgrass), was once widely distributed from the area now obliterated by Los Angeles south into Baja California Norte. Venturan sage scrub was (and still is, barely) found north of this region, and riversidean sage scrub to the east. Only two small areas of diegan sage scrub remain in Los Angeles County; one in the Whittier Hills, and the other on the Palos Verdes Peninsula. California gnatcatchers are found on this same Peninsula, which was until recently in Earth history a channel island.

Orange County presently contains some of the finest remaining diegan sage scrub, in areas just east of Laguna Beach (Laguna Hills) and east of Irvine up to the base of the Santa Ana Mountains. In this most conservative county in the US, much of the remaining habitat will be doomed without the listing of the California gnatcatcher, and even with the listing, things will get uglier. Presently approved and soon to be constructed toll roads in the Laguna Hills and Santa Ana Foothills virtually assure the destruction of much of the remaining diegan sage scrub in Orange County.

Things are slightly better in San Diego County. Most municipalities are attempting to put on a good show for the coastal sage scrub and the California gnatcatcher in an effort to dissuade the US Fish and Wildlife Service from listing the bird in September. In reality, 80% of the original diegan sage scrub in San Diego County has already been eliminated, and city governments want to compromise away most of what remains.

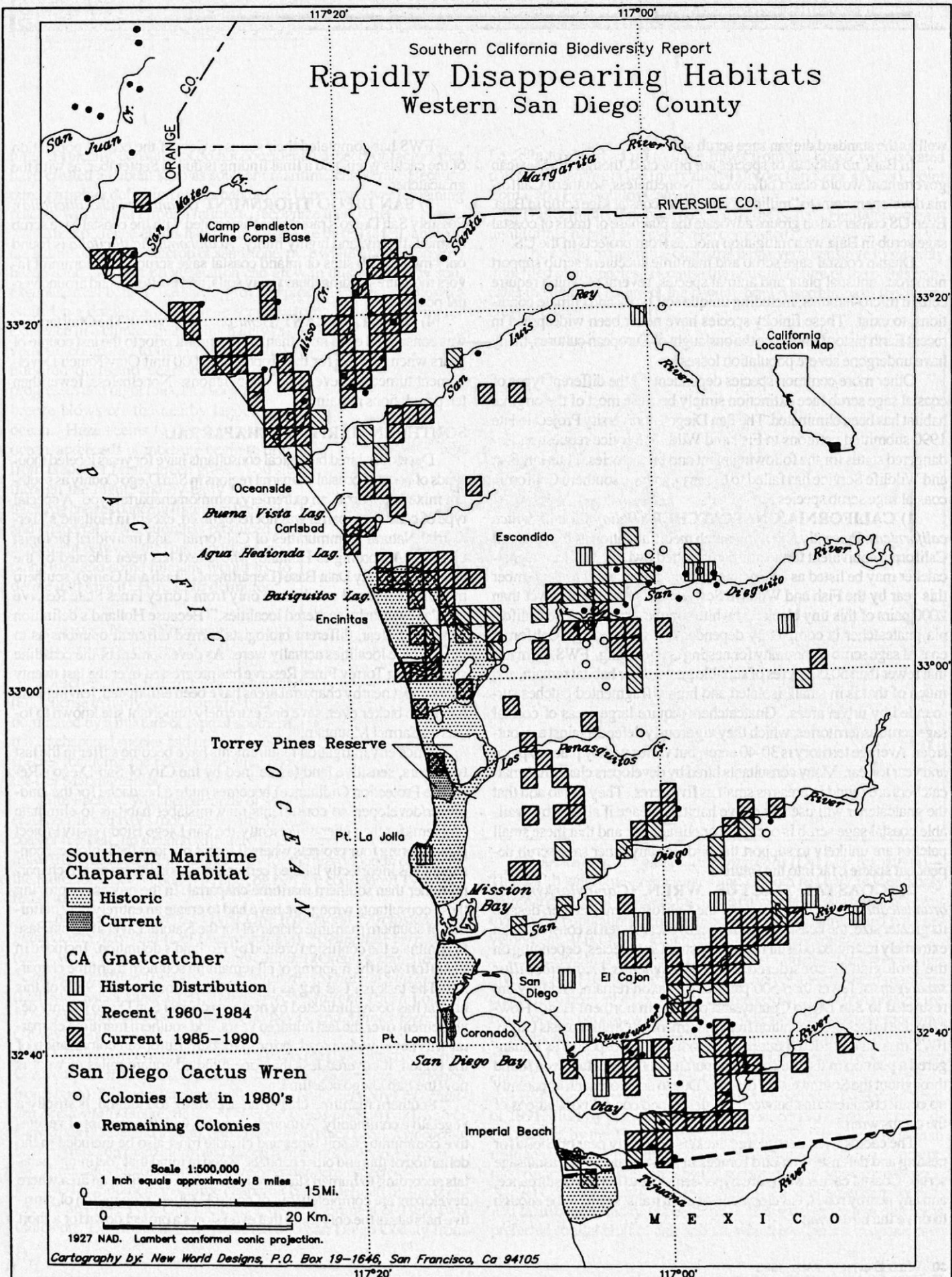
Maritime succulent scrub reaches its northern distributional limit in central San Diego County, and is the most common coastal sage scrub in Baja California Norte. This habitat has abundant populations of cacti and other succulents, as

117°20' 117°00'

Southern California Biodiversity Report

Rapidly Disappearing Habitats

Western San Diego County



well as the standard diegan sage scrub species.

In Baja, *no* habitats or species are protected, though the Mexican government would claim otherwise. Nonetheless, southern California developers point to "millions" of acres of coastal sage scrub in Baja. Even US conservation groups advocate the purchase of tracts of coastal sage scrub in Baja with mitigation monies from projects in the US.

Diegan coastal sage scrub and maritime succulent scrub support numerous unusual plant and animal species, several of which require certain micro-habitats, including unique soil types and climate conditions, to exist. These finicky species have never been widespread in recent Earth history, and since the onslaught of European cultures, many have undergone severe population losses.

Other more common species dependent on the different types of coastal sage scrub face extinction simply because most of the original habitat has been eliminated. The San Diego Biodiversity Project in late 1990 submitted petitions to Fish and Wildlife Service requesting Endangered status for the following plant and bird species. Thus far, Fish and Wildlife Service has failed to list any endemic southern California coastal sage scrub species.

1) CALIFORNIA GNATCATCHER (*Poliophtila californica californica*): Presently receiving much media attention as the southern California equivalent to the northern spotted owl, the California gnatcatcher may be listed as an Endangered species as early as September this year by the Fish and Wildlife Service. It is likely that fewer than 2000 pairs of this tiny black and white songbird remain. The California gnatcatcher is completely dependent on the southern California coastal sage scrub community for nesting and foraging. FWS estimates that fewer than 50,000 acres of suitable gnatcatcher habitat remain, and much of that is in small, isolated and highly fragmented patches surrounded by urban areas. Gnatcatchers require large areas of coastal sage scrub as territories, which they vigorously defend against any outsider. Average territory is 30-40 acres, but varies widely place to place and year to year. Many consultants hired by developers claim that gnatcatchers are found in areas as small as five acres. They fail to add that the gnatcatcher will use any native habitat acreage if all nearby available coastal sage scrub is occupied or eliminated, and that these small patches are unlikely to support the birds, or any other sage scrub dependent species, far into the future.

2) COASTAL CACTUS WREN (*Campylorhynchus brunneicapillus*): In the shadow of the California gnatcatcher, despite its greater size, the coastal (or San Diego) cactus wren is considered an extremely restricted coastal race or a distinct subspecies, depending on the biologist. If considered *Campylorhynchus brunneicapillus sandiegensis*, fewer than 500 pairs of the taxon remain, and they are restricted to San Diego County and one site in northern Baja. However, due to lack of recognition from the American Ornithologists Union, FWS instead considered our petition to list this subspecies as Endangered a petition to list the coastal population of the cactus wren found throughout the Southwestern deserts. Due to development, apparently no connection remains between the desert and coastal populations of the cactus wren.

The cactus wren needs large thickets of prickly pear or cholla for nesting and defense. The bird forages in the surrounding coastal sage scrub. Coastal cactus wrens are hyper-sensitive to human disturbance, and any nearby roads, development, or even trails, seems to be enough to drive the birds away.

FWS has completed their status review of the coastal population of the cactus wren, and a final finding is due in September, as with the gnatcatcher.

3) SAN DIEGO THORNMINT (*Acanthomintha illicifolia*): Possibly San Diego's rarest plant associated with the coastal sage scrub is small, thorny, and highly minty. *Acanthomintha illicifolia* is found only in about 10 sites of inland coastal sage scrub. The thornmint favors moisture-holding, heavy clay soils, and is often found around vernal pools.

4) OTAY TARPLANT (*Hemizonia conjugens*): The Otay tarplant was considered even rarer than the thornmint prior to the last couple of years when surveys for the proposed 40,000 unit Otay Ranch Development turned up several new populations. Nonetheless, fewer than ten populations remain.

SOUTHERN MARITIME CHAPARRAL

Developer-hired biological consultants have for years labeled thousands of acres of coastal chaparral regions in San Diego County as southern mixed chaparral, an extremely common chaparral type. A special type of coastal chaparral was not recognized, except in Holland's "Terrestrial Natural Communities of California" and individual biologist opinion. According to Holland, whose text has been adopted by the Natural Diversity Data Base (Department of Fish and Game), southern maritime chaparral was known only from Torrey Pines State Reserve and "a few nearby scattered localities." Because Holland's definition was never clear, different biologists carried different opinions as to where these localities actually were. As development of the coastline surrounding Torrey Pines Reserve has progressed over the last twenty years, most nearby chaparral areas have been eliminated, leaving little habitat to bicker over, save one extremely important site known to locals as Carmel Mountain.

Since city mitigation requirements have become stiffer in the last two years, sensitive land (as defined by the City of San Diego's Resource Protection Ordinance) becomes quite a headache for the landowner/developer, so consultants may mislabel habitats to eliminate problems for their clients. Presently, the San Diego Biodiversity Project is monitoring four projects where it seems obvious the biological consultant has incorrectly labeled certain areas as southern mixed chaparral rather than southern maritime chaparral. In the process of proving these consultants wrong, we have had to create an entirely new definition of southern maritime chaparral for the Natural Diversity Data Base to eliminate the confusion created by Holland's definition. Included in this effort was the mapping of all remaining southern maritime chaparral. The task isn't as big as it may seem, since at least 95% of this habitat has been eliminated by northern coastal San Diego County development over the last hundred years, and southern maritime chaparral was never widespread: prior to modern European colonization of the region, it covered less than one hundred square miles of what is now the San Diego coastline.

Southern maritime chaparral, according to Holland, is strictly a vegetative community. Although we agree with the concept of vegetative communities, soil types and climate must also be included in the definition of this and other habitats. Keep in mind that "defining" habitats according to human standards is a necessary evil in an area where developers are completely out of control. Often, recognition of sensitive habitats is the only thing that even slows a project down for a short

time. Typically, consultants do not consider all aspects or factors that have created a habitat such as southern maritime chaparral. Because ours is a tighter definition of this habitat, we hope that fewer remaining patches will be lost through failure to recognize their rarity.

An experience of this habitat might go like this: It is fall, and you are sitting on a small outcrop of sandstone, pure white like compressed beach sand. Almost no vegetation can grow in this poor sandy soil, except a small bonsai-like shrub, growing prostrate across and down a bluff. Up a draw nearby, a single scraggly torrey pine is fighting for existence in a climate that seems barely favorable, compared to that of a time a few hundred thousand years back. Sunset progresses and night falls, and soon a moist breeze blows off the nearby lagoon and ocean. Haze seems to develop over the ocean, and beads of moisture begin to drip from blades of bright green grass. You sit through the night; and by early morning, thick fog creates dancing figures in the pines and chaparral. Evolution has produced an agreement between the fog, sandstone, and plant life, and some humans would try to define it to save it. Here's our definition:

ELEMENT NAME: SOUTHERN MARITIME CHAPARRAL

Description: A low to medium height (8ft.), dense to fairly open chaparral usually dominated by a mixture of typical southern mixed chaparral species and unusual coastal species including the coast white lilac and the Del Mar manzanita.

Site Factors: Weathered sands of several specific soil types (not listed) within the coastal fog belt, up to approximately three miles from the ocean. Fire is necessary for the reproduction of most of the indicator species. Soil type and fog belt are considered Type One Indicators.

Characteristic Species: (Type One Indicators) **Arctostaphylos glandulosa crassifolia* (Del Mar manzanita), **Ceanothus verrucosus* (coast white lilac), **Chorizanthe orcuttiana* (Orcutt's spineflower), **Coreopsis maritima* (sea-dahlia), **Corethrogyne filaginifolia linifolia* (Del Mar Mesa sand aster), **Dendromecon saligna* (bush poppy), **Dudleya brevifolia* (short-leaved dudleya), and **Pinus torreyana* (Torrey pine).

(Type Two Indicators) **Baccharis vanessae* (Encinitas baccharis), **Cercocarpus minutiflorus* (coast mahogany), **Cneidium dumosum* (spice bush), **Comarostaphylos diversifolia* (summer holly), **Dichondra occidentalis* (spike moss), **Quercus dumosa* (scrub oak), **Salvia clevelandii* (Cleveland's sage), **Salvia mellifera* (black sage), **Xylococcus bicolor* (mission manzanita), and **Yucca schidigera* (Mojave yucca).

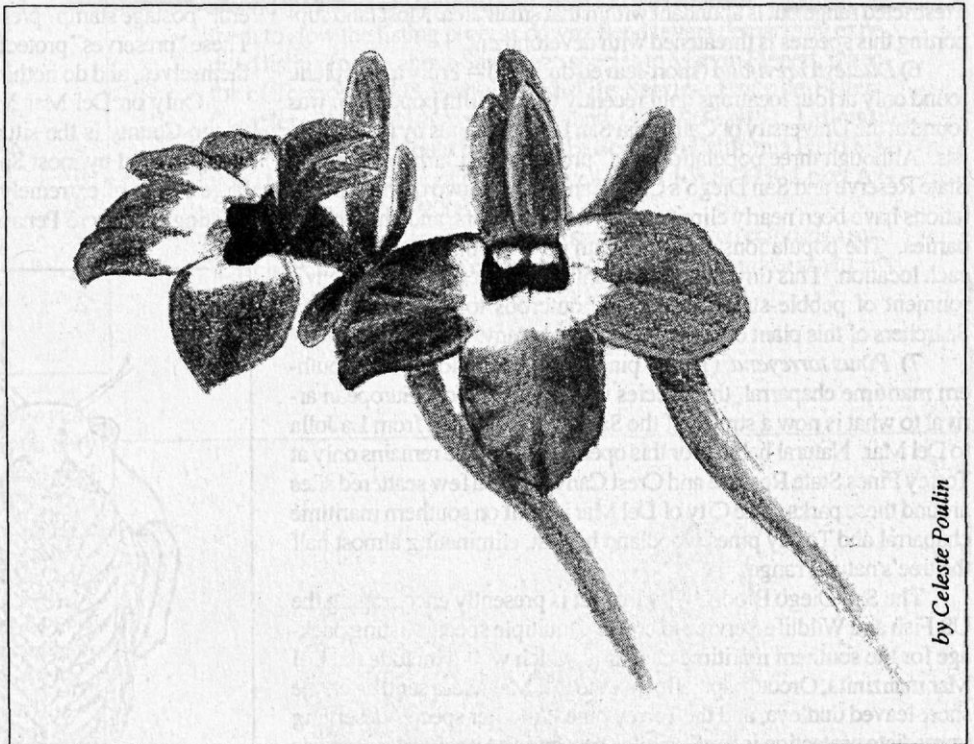
*indicates biologically sensitive or endangered species

NOTE: Southern maritime chaparral can be defined by the presence of any four Type One Indicators, or an assortment of Type Two Indicators. Distribution: Today restricted to San Diego County from

La Jolla to Carlsbad up to three miles from the coast, with isolated patches remaining at the International Border (Spooner's Mesa), Point Loma, and Penasquitos Canyon.

This definition has been adopted by the Natural Heritage Program until further habitat surveys can be completed.

The southern maritime chaparral has several sensitive to severely imperiled plant species. Because the unusual nature of the plants indicates the unusual nature of the habitat, brief descriptions of these species follow:



by Celeste Poulton

1) *Arctostaphylos glandulosa crassifolia* (Del Mar manzanita)—This shrub with blue-green leaves and smooth red bark is found only within the range of southern maritime chaparral. It is likely that fewer than thirty populations remain, most of which are threatened with development. It is limited to extremely poor, sandy soils.

2) *Ceanothus verrucosus* (coast white lilac)—This species has given those of us fighting for the protection of the southern maritime chaparral a headache because of a large population found outside the range of this habitat, where no other indicators of southern maritime chaparral are found. This species has a limited distribution, but is fairly abundant within that area, so extinction is unlikely. The scent of an entire hillside of white lilac in bloom blows the mind.

3) *Chorizanthe orcuttiana* (Orcutt's spineflower)—Before April of 1991, this tiny plant hadn't been seen since 1967, and was considered extinct by the Fish and Wildlife Service. Rediscovered in a small residential park in Encinitas completely surrounded by development, this species is now threatened by the construction of a community pool.

4) *Coreopsis maritima* (sea-dahlia)—Despite an extremely limited distribution, many populations of this species remain due to its preferred coastal bluff or cliff habitat, which is often left in open-space

while flatter areas are nuked. During the hot season, this plant is dormant, with only a dead looking two inch high stump to be seen by the human eye. With winter rains, however, the stump explodes into lush, fern-like growth and finishes its short winter/spring life stage with a five inch diameter sunflower type bloom.

5) *Corethrogyne filaginifolia linifolia* (Del Mar Mesa sand aster)—This blue daisy perennial is similar to the white lilac in that it has a restricted range but is abundant within that small area. Most land supporting this species is threatened with development.

6) *Dudleya brevifolia* (short-leaved dudleya)—Truly a cute plant, found only at four locations until recently when a fifth population was found at the University of California San Diego campus by local activists. Although three populations are "protected" within Torrey Pines State Reserve and San Diego's Crest Canyon Park, two of these populations have been nearly eliminated by bikers, hikers, and high school parties. The populations are small with no more than 1000 plants at each location. This tiny succulent is unique in that it mimics its environment of pebble-strewn sandstone outcrops to avoid predation. Searchers of this plant often resort to belly botany.

7) *Pinus torreyana* (Torrey pine)—The megaflores of the southern maritime chaparral, this species was limited before European arrival to what is now a stretch of the San Diego coastline from La Jolla to Del Mar. Natural habitat for this open, shapely pine remains only at Torrey Pines State Reserve and Crest Canyon and a few scattered sites around these parks. The City of Del Mar is built on southern maritime chaparral and Torrey pines woodland habitat, eliminating almost half the tree's natural range.

The San Diego Biodiversity Project is presently encouraging the US Fish and Wildlife Service to create a multiple species listing package for the southern maritime chaparral which would include the Del Mar manzanita, Orcutt's spineflower, the Del Mar Mesa sand aster, the short-leaved dudleya, and the Torrey pine. Another species deserving immediate protection is the Encinitas baccharis. Although this species is found primarily outside the range of the southern maritime chaparral, two populations are found in the Encinitas area, and could protect an important chunk of southern maritime chaparral if listed with the other species.

VERNAL POOLS

Once the most common mesa-top habitat in San Diego County, vernal pools are virtually gone. Rather than quote percentages, suffice it to say that coastal mesas are flat, and humans like to build in flat areas. On all mesas in San Diego County except one, vernal pools no longer function as an integral part of the mesa-canyon ecosystem; no longer provide winter and springtime water sources for deer and other critters. Most vernal pool sites are surrounded by development or agriculture, thus disconnected from larger wildish regions of San Diego County.

Vernal pools form each winter and spring when seasonal rains fill depressions on San Diego's mesas and inland plateaus. Some of these low spots resulted long ago from mounding of unknown origin (mima mounds). Vernal pools support an incredibly adaptable flora and fauna. Duration of ponding, depending on soil type and rainfall, can range

from one day to five months. Dependent on the standing water are numerous vernal pool species in San Diego County, with some plants preferring long periods of standing water, and others needing just a little winter moisture.

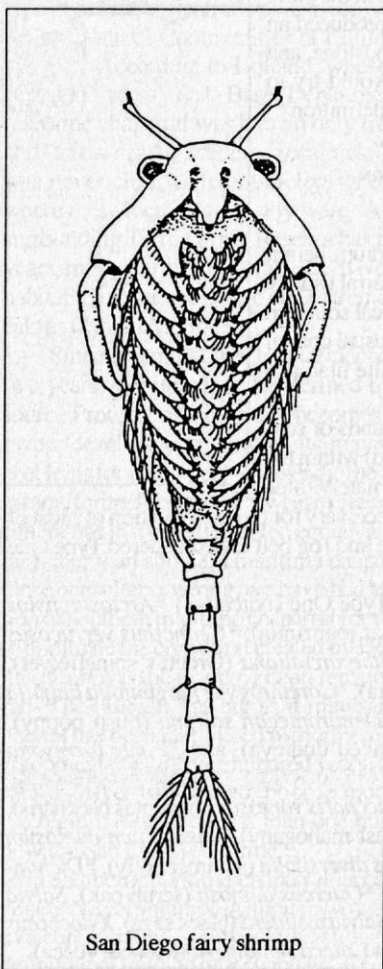
Vernal pools were the first sensitive habitat to be recognized by San Diego's different municipalities, and the result of that early "concern" of the late seventies and early eighties was the creation of several "postage stamp" preserves in the midst of approved development. These "preserves" protect only the plant and insect species of the pools themselves, and do nothing for the surrounding ecosystem.

Only on Del Mar Mesa/Carmel Mountain in north-central San Diego County is the situation better. The opportunity exists, and is being pushed by most San Diego environmental groups, to protect a large chunk of extremely sensitive mesa-top as a part of the already existing 5000 acre Penasquitos Canyon Preserve. This canyon is in

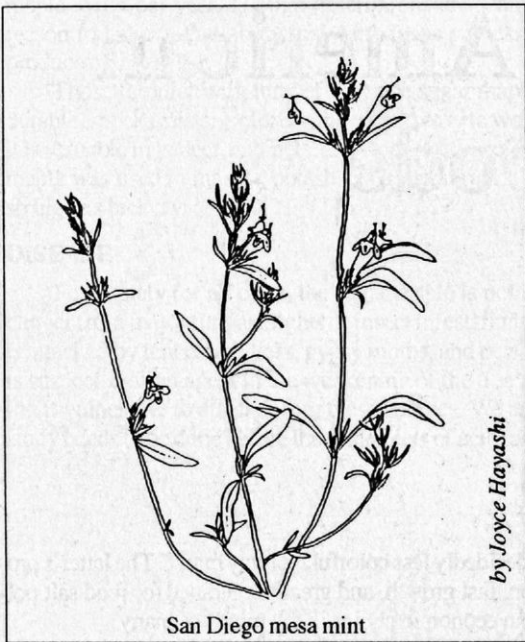
turn connected to wilder areas to the east, so some semblance of the natural ecosystem could be retained. Descriptions of the most sensitive vernal pool species follow.

1) San Diego fairy shrimp (*Branchinecta sandiegensis*) was only recently described as a distinct species. Before, it was considered the same species as a freshwater shrimp found in every state west of the Mississippi. The fairy shrimp hatches in the vernal pool within about a week of the first ponding of water and matures and breeds within two weeks of first ponding. As the water evaporates, the females die with eggs attached, and the eggs remain in the soil until the next year's wet season. All vernal pools supporting the San Diego fairy shrimp are threatened with destruction. The San Diego Biodiversity Project petitioned the Fish and Wildlife Service in January of this year for Emergency listing of this species as Endangered.

The listing of this species could, through designation of Critical Habitat, protect all San Diego vernal pools that don't have the luck to support the other soon to be listed sensitive plant or shrimp species.



San Diego fairy shrimp



San Diego mesa mint

2) The San Diego mesa-mint (*Pogogyne abramsii*), remaining in strong populations on only two mesas, is the only San Diego County vernal pool species already listed as Endangered by FWS. This single listing has afforded imperiled pools little protection. The mesa-mint favors pools with standing water that evaporates fairly quickly after winter-spring storms. It is found along the margins of these pools, forming a purple ring in the month of May. Extremely pungent, the mint can sometimes be smelled half a mile away on a windless day even by humans.

3-5) Fish and Wildlife, in November 1991, proposed the listing of the Coyote thistle (*Eryngium aristulatum parishii*), Otay mesa-mint (*Pogogyne nudiuscula*), and Orcutt's grass (*Orcuttii californica*) due to continued loss of vernal pool habitat. Coyote thistle, the most common of the three, is a spiny, prostrate member of the carrot family inhabiting many of the remaining San Diego vernal pools. Otay mesa-mint, very similar to the San Diego mesa-mint, is known from only two locations in the US, at Otay Mesa, and two locations in Baja, all threatened with development or agriculture. Orcutt's grass has a distribution similar to the Otay mesa-mint, but favors larger and deeper pools on heavy clay soils.

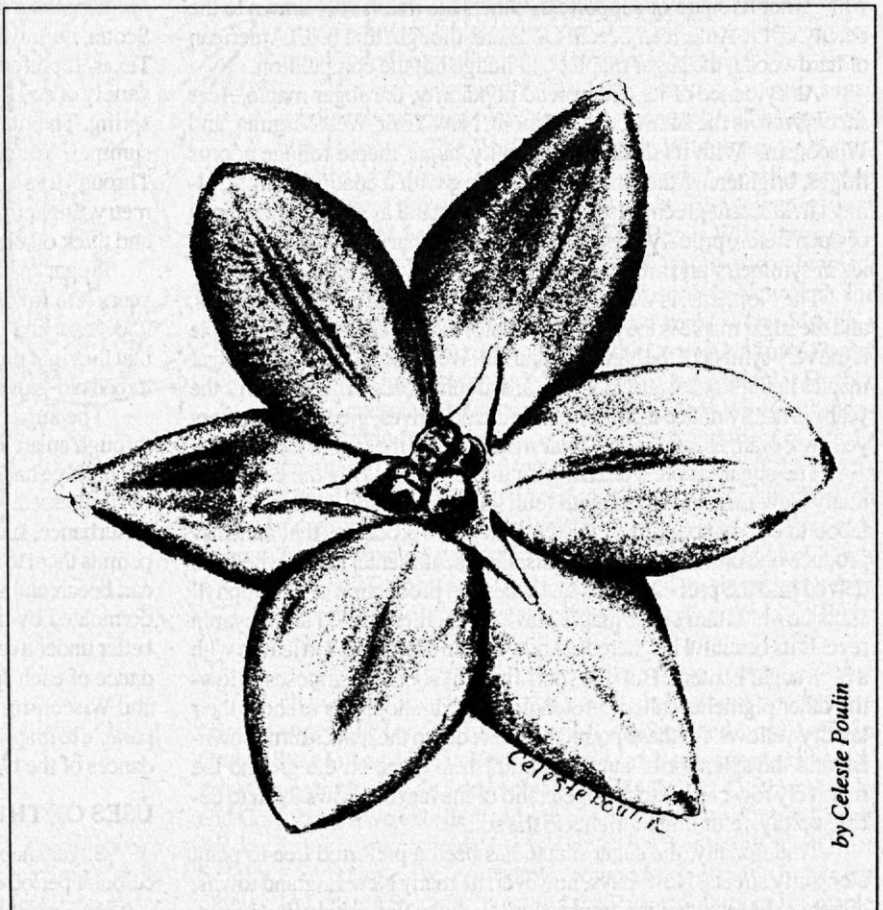
Most municipal ordinances protect recognized pool complexes, but the wrongful identification by biological consultants of potential or definite pool complexes as grassland or some other less sensitive habitat can lead to their destruction. Many municipalities accept biological surveys conducted during the summer or fall when pools are dry and look just

like the surrounding terrain or vegetation. Hundreds of pools have been lost to this misleading survey technique. The San Diego Biodiversity Project now monitors all consulting firms and their work in San Diego County.

WHAT YOU CAN DO:

Numerous petitions and listing packages for sensitive species in San Diego County, and indeed, the rest of the country, sit on the desks of the Bush administration in Washington. These folks have a noose around the necks of Regional and Field Office Directors, encouraging them to slow the listing process down. Send letters demanding expedited listing for the above San Diego species to Marvin Plenert, Director of Region 1, US Fish and Wildlife Service, Eastside Federal Complex, 911 NE 11th Avenue, Portland, OR 97232-4181. Letters of support (seriously) could be sent to the Southern California Field Station at Carlsbad for work generally well done: FWS, 2730 Loker Avenue, Carlsbad, CA 92008.

If your pockets are bulging with spare dollars, you could also send us a check to continue our most valuable work, and to make payments on my BMW: POB 1944, Julian, CA 92036.



by Celeste Poulin

Sugar Maple: Most American of Northern Hardwoods

by Robert T. Leverett

SYMBOL OF NORTHEAST

What tree best symbolizes the Northeast? Those enamored of tall trees may choose the white pine, *Pinus strobus*, the great lumber tree of colonial America. Some are drawn to the paper birch. With their white bark, *Betula papyrifera* has been poetically cast as the "candle of the forest." The venerable oak, symbol of strength and longevity, will garner its share of supporters. Others are irresistibly drawn to the beauty of the American beech. Odds are, though, that most American of hardwoods, the sugar maple, will nudge out the competition.

As evidence of its widespread popularity, the sugar maple, *Acer saccharum*, is the state tree of Vermont, New York, West Virginia, and Wisconsin. With its distinct reflectivity, sugar maple foliage adorns ridges, brightening the landscape in spring with a coating of light, almost iridescent green. Elsewhere, maples stand as staunch guardians of open fields, proudly presenting their gentle curving crowns as studies in symmetry and arboreal perfection.

The Northeast is world-famous for vibrant and colorful autumns, and the sugar maple is the chief contributor to that reputation. The maple is the very symbol of the New England fall. We are so accustomed to sugar maples lining stone walls, city streets, and rural roads that for most of the year we hardly notice them. Then as autumn arrives, greens turn to fiery yellows, oranges, and reds. Sugar maples color the countryside.

The sugar maple's dazzling autumnal beauty fills the coffers of many New England towns with tourist dollars. To me it almost seems taboo to overly scrutinize the subtle physical processes that annually produce one of nature's gala events. Less sentimental heads who have delved into the process tell us that when the production of chlorophyll shuts down within sugar maple leaves, a pigment called anthocyanin reveals its beautiful bright reds. Anthocyanin is produced in leaves with a high sugar content. But it is short-lived. It soon decomposes, allowing other pigments called carotenoids and xanthophylls to show their tawdry yellows. As these pigments break down the leaves turn brownish and the splendor of autumn diminishes. Once on the ground the relatively low carbon to nitrogen ratio of the leaves allows them to decay rapidly, returning nutrients to the soil.

Traditionally, the sugar maple has been a preferred tree to plant along city streets. Nowadays, however, in many New England towns, our cherished symbol is compromised with the flourishing, but brittle,

less sweet, and decidedly less colorful Norway maple. The latter's prolific regeneration, fast growth, and greater tolerance for road salt pollution makes it an economic choice in the minds of many.

DISTRIBUTION AND CHARACTERISTICS

Acer saccharum has a wide distribution. It grows northeast to Nova Scotia, northwest to Manitoba, southeast to Georgia, and southwest to Texas. It prefers deep, rich, well drained soils, though it can tolerate a variety of soil types. Individual trees are bisexual. They flower in early spring. The maple's two winged fruits mature in late spring or early summer. Young sugar maples' foliage is remarkably symmetrical. Through loss of limbs and thinning, older trees lose much of their symmetry. Sugar maple bark is gray to grayish brown—thin on young trees and thick on old ones. The bark often develops long, narrow ridges.

Sugar maples commonly grow to ages of between 125 and 200 years. On favorable sites, *Acer saccharum* has no problem reaching 250 years and there are records of 400 year old specimens. I suspect that the right minerals and proper microbial action in the soils of undisturbed old-growth stands lead to the greatest longevity in the species.

The sugar maple is a fire sensitive species. Once flames sweep through an area, sugar maples may not return for many years. Maples are highly shade tolerant. They can live 100 years or longer in a state of suppressed growth as a component of the understory. Eventually a disturbance, such as a nearby tree fall, releases them and rapid growth permits them to assume their role in the canopy. In the Northeast, American beech and sugar maple have an interesting relationship in forests dominated by the two species. Studies show that sugar maple grows better under a canopy of beech and vice versa. Consequently, the abundance of each species tends to oscillate in these forests. In Minnesota and Wisconsin, sugar maple and basswood form an association comparable to maple and beech in the Northeast, though oscillation in abundances of the two species may not follow the beech-maple pattern.

USES OF THE SUGAR MAPLE

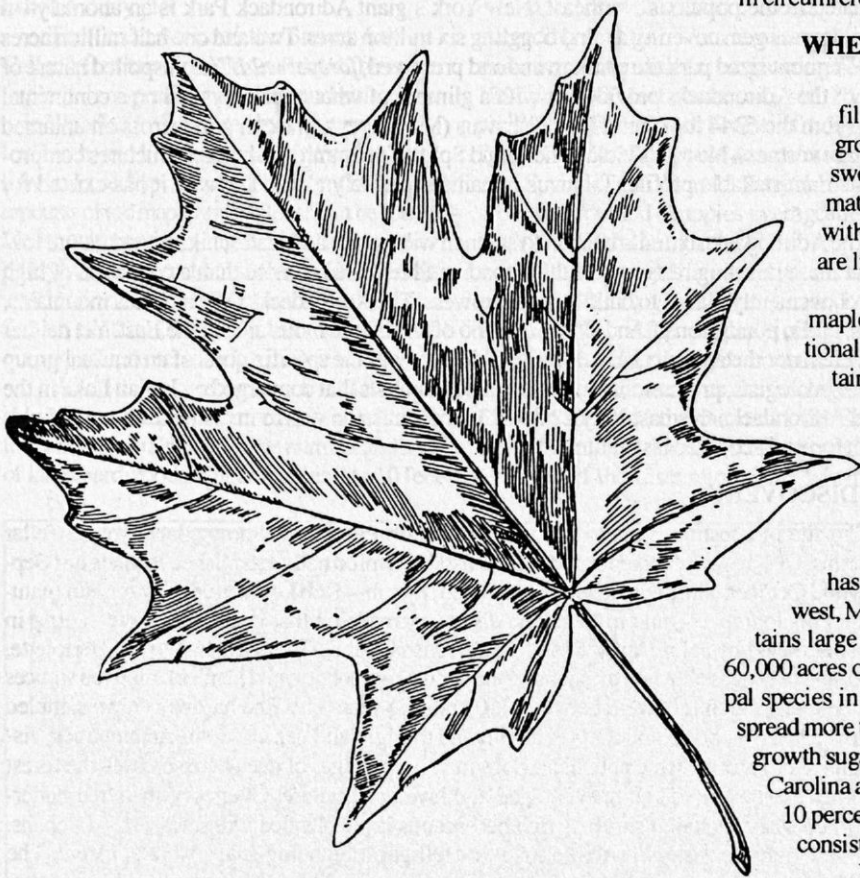
Sugar maple sap was the only source of sugar during the early colonial period of America. One maple tree may produce 12 gallons of sap per year. It takes 35 to 40 gallons of sap to produce one gallon of

pure maple syrup. Consequently, one tree can produce about a quart of maple syrup per year. Though descriptions are scarce, there is good reason to believe that aboriginal Americans processed maple sap to produce maple sugar.

Those familiar with lumber describe sugar maple wood as hard, durable, shock resistant, close-grained, and easy to work. Accordingly, it is valuable in veneer, cabinets, and flooring. In colonial times, sugar maple was used in making potash. As a fuel it ranks high, though not so high as hickory.

DISEASE

Fortunately for all of us, the sugar maple is not in any imminent danger from major fungal blights or insect infestations. Nonetheless, it is attacked by tent caterpillars, gypsy moths, and pear thrips. Acid rain is suspected as an agent in the weakening of the tree's defenses, making it vulnerable to attacks from these sources. We are told that more study needs to be done before the full effects of acid rain can be known.



Since this article is not about our nation's inadequate pollution control efforts, I will say no more about acid rain.

DIMENSIONS OF THE SUGAR MAPLE

The sugar maple is a large hardwood. As with other species, books give widely varying descriptions of both average and maximum sizes for the species. *Acer saccharum* commonly exceeds 3 feet in diameter

and approaches 100 feet in height, but it can grow significantly larger. Dimensions often reflect growing conditions. The largest diameter sugar maples grow in open conditions. The tallest grow inside the forest. Open grown trees, particularly those tapped for sugar, branch low and exhibit knots and bulbous growth around trimmed branches. They often appear deformed. These "spreaders" can easily exceed 10 feet in circumference, occasionally 20. They reach 80 to 90 feet in height. By contrast, their in-forest counterparts are amazingly straight-boled and often exceed the 100 foot mark, but their girths are usually in the 7 to 13 foot range. I have measured many old-growth maples in the 100 to 115 foot category that barely reached 7 feet in circumference. One soaring specimen along Cold River in the Massachusetts Berkshires tops 121 feet. The tallest of the Berkshire maples grows at the base of Todd Mountain in the Mohawk Trail State Forest; it reaches 134 feet.

Large sugar maples are not limited to the North. *Acer saccharum* can reach 13 feet in circumference in the Southern highlands, matching Northern specimens in size. The largest sugar maple recorded in the Smoky Mountains grows near Trillium Gap. It measures 15.25 feet in circumference.

WHERE TO SEE OLD-GROWTH SUGAR MAPLES

Few other trees exhibit such remarkably different profiles as does the *Acer saccharum* when open grown versus grown in a closed canopy forest. Thanks to the sugar maple's sweet sap, the Northeast is blessed with an abundance of mature sugar maples grown under both conditions. However, with a few notable exceptions, true old-growth specimens are limited to small patches in remote locations.

Anyone yearning to see large stands of virgin sugar maples should visit New York's Adirondacks. They are a national treasure. The West Canada Lake Wilderness Area contains an extensive, highly accessible stand. Another sizable stand grows on the side of Ampersand Mountain, west of Saranac Lake. The Five Ponds Wilderness contains a large acreage of virgin sugar maples.

Michigan may match or surpass New York for acreage of old-growth sugar maple. The Sylvania National Recreation Area in the Ottawa National Forest has extensive reserves of old-growth sugar maple. Farther west, Minnesota's Boundary Waters Canoe Area Wilderness contains large virgin tracts. Maple is listed as a component of nearly 60,000 acres of old growth. However, it is not clear to me if the principal species in this large acreage is red maple, *Acer rubrum*. Though spread more thinly, the Southern Appalachians have their share of old-growth sugar maples, particularly in the Smoky Mountains of North Carolina and Tennessee. It has been estimated that in pre-park days 10 percent of the forest cover in the watershed of the Little River consisted of sugar maple.

Numerous small virgin or near-virgin patches exist throughout the range of the sugar maple where one can see original sugar maples. Gifford Woods State Park and Lord's Hill in Groton State Forest, both in Vermont, have small areas containing old-growth sugar maples. In Massachusetts, Fife Brook, Dunbar Brook, and Cold River have excellent old-growth sugar maples. Ohio's Dysart Woods Laboratory contains sugar maple. Farther south, the Great Smoky Mountains have northern hardwood zones with big sugar maples. In fact, the Sugarlands area of the Park was famous for maple

syrup, though you will find few sugar maples in this area now, thanks to the lumber barons of the early part of this century.

WHAT'S IN A NAME

In these articles I use both common and scientific names for the trees. It may be useful to briefly consider the value of the scientific names? For the amateur first learning to identify plants and animals, it is usually enough to begin by learning the common names for the species. Taxonomy is complicated and initially most of us prefer to avoid the bottomless pit of scientific nomenclature. But as one becomes more proficient, the inadequacy of common names becomes increasingly apparent. Initially, sugar maple seems a sufficient handle for the species, so why burden the memory with scientific terminology?

The sugar maple is also called hard maple and rock maple. Occasionally it is called white maple. Trees given the latter name are also called soft maples by some. Confusing! There is only one scientific name for the sugar maple, *Acer saccharum*. It may be harder to remember, but it uniquely identifies the species.

Acer saccharum is closely related to *Acer nigrum*, the black maple. In the past some botanists considered the sugar and the black maple to be variants of the same species. However, today the two are considered to be separate species. The black maple has darker bark, slightly curled leaves, ranges farther west, and is adapted to somewhat drier conditions than the sugar maple. Nonetheless, *Acer nigrum* possesses the same sweet sap as its close relative.



Old-growth Adirondacks Quest

by Robert T. Leverett

THE ADIRONDACKS

Situated in the populous Northeast, New York's giant Adirondack Park is an anomaly—a wilderness gem covering a mind boggling six million acres. Two and one half million acres of the Vermont sized park are state-owned and preserved, *forever wild*. The unspoiled nature of much of the Adirondacks provides us with a glimpse of what once prevailed on a continental scale. From the 5344 foot summit of Tahawus (Mt. Marcy), one can gaze across an untamed mountain vastness. No roads violate the Cloud Splitter's summit. No human structures compromise its unmistakable profile. Tahawus remains supremely aloof. The way it has existed for millennia.

The Adirondack summits beckon to staunch wilderness advocates, hikers, and nature lovers, but these puzzling remnants of the Canadian Shield are far more than a collection of high peaks conveniently placed to build athletic prowess. The Adirondacks region blends mountains, gorges, lakes, ponds, forest, and sky as does no other mountainous area in the East. Yet neither athletic feat nor metaphysical savoring of wilderness was the specific quest of an unusual group of forest ecologists, professional foresters, and naturalists that converged on Indian Lake in the central Adirondacks this past May 22 and 23. Their mission was to investigate an area of old-growth forest discovered last autumn.

THE DISCOVERY

The site in question is a swath of deep forest on the side of Snowy, Lewey, and Cellar Mountains. Old-growth candidacy for the site had been informally established in visits last September and October. The September visit included my son—Rob Leverett Jr., Ray Asselin (naturalist and photographer), and myself. The discovery made on that visit led to a second trip in October attended by John Davis, Sean Markey, Jason Kahn, Gary Burnham, Don Bertolette, my son, and me. Ages obtained by counting the annual rings of downed hemlocks and red spruces indicated that the conifers were between 150 and 350 years old. The hardwoods we sampled yielded ages between 125 and 250 years. Beyond the ages and density of the mature trees, visible signs of old growth were abundant. Logs in varying stages of decay crisscrossed the forest floor. The forest exhibited an uneven-aged and layered structure. Overstory sheltered understory. Understory sheltered shrub. A rich herbaceous layer blended with mosses and lichens. There were numerous single and multiple tree fall gaps. Standing snags were apparent. The ground had the pit and mound topography characteristic of old forest. Successional species associated with human-created clearings were absent. A deep humus layer existed everywhere. There were no cut stumps, stump sprouts, skid roads, or other signs of past logging.

THE RENDEZVOUS

Our unbridled enthusiasm provided the impetus for another trip. As contrasted to the informal gatherings, this time we assembled an interdisciplinary group capable of analyzing the area. As May 22 drew near, the study team took shape: ecologists Dr. Peter Dunwiddie, Dr. Patricia Swain, Charles Orngbill, and Dr. Marilyn Jordan; professional foresters Dr. David Kittredge and

Don Bertollette; botanist Jean Anderson; PAW soil scientist Glen Ayers and forest ecology student Sandra Coveny; *Wild Earth's* John Davis, Paul Medeiros, Tom Butler, and Dr. Mary Davis; science teacher Jason Kahn; naturalist photographers Paul Rezendes, Paulette Roy, and Ray Asselin; and me. Laura Patenaude provided delicious nut breads to sustain us. Altogether, 28 dedicated souls attended the rendezvous.

The group assembled at Lewey Lake campground on Friday evening, May 22. Saturday morn found us all rhythmically swatting black flies as we attempted to study forest composition, measure trees, and sample the soil along Sucker Brook—a name that speaks for itself. Jason and I thrashed around hunting big trees while Peter, Charlie, and Dave established a study plot.

The forest types of the Snowy-Lewey-Cellar Mountain complex reflect differences in elevation, gradient, aspect, and soil moisture. Woodlands dominated by sugar maple, yellow birch, and beech are sprinkled with eastern hemlock, red spruce, and balsam fir. Lesser amounts of red maple and white ash can be found. Understory species include striped maple (*Acer pensylvanicum*) and hobblebush. Herbaceous species including dutchmans breeches, star flower, clintonia, trout lilly, bell wort, and wild ginger indicate semi-rich to rich woods.

What distinguishes the area from the more fragmented old-growth sites farther to the east in New England is the number and area of large hardwoods. Sugar maples 8 to 10 feet

around growing in proximity to yellow birches 9 to 11 feet in girth are abundant. The largest birches exceed 12 feet in circumference. Red spruce regularly reach 6 feet in circumference with 7.5 feet apparently being the limit. Most of the hemlocks are not exceptionally large, reaching 6 to 10 feet in circumference. Nonetheless, they exhibit the characteristics of advanced age and are in the 90 to 100 foot height class.

Charles Cogbill has studied the Adirondacks extensively. Consequently, he was able to provide comparative analysis between the Lewey Mountain site and other Adirondack old-growth stands. The statistics compiled by Peter Dunwiddie on the established plot show the site to be somewhat above average in terms of tree basal area per hectare. The overall canopy height varies between 80 and 95 feet with a small percentage of trees exceeding 100 feet. This is reasonable for a mature mountainside forest growing between 1800 and 2800 feet above sea level. By comparison, in "Old-growth Forests of Adirondack Park, New York" (*Natural Areas Journal*, volume 8, number 3), Donald Leopold says old-growth hardwood canopies average 65 to 98 feet (20 to 30 meters) in height.

Saturday night, a campsite discussion commenced during crew changeover - i.e. flies to mosquitos. After properly oiling myself with Skin-So-Soft, I oozed about the campsite distributing literature, as the ecologists and foresters debated the merits of the Snowy-Lewey-Cellar Mountain old-growth site. Charlie led the discussion. This wizard is a

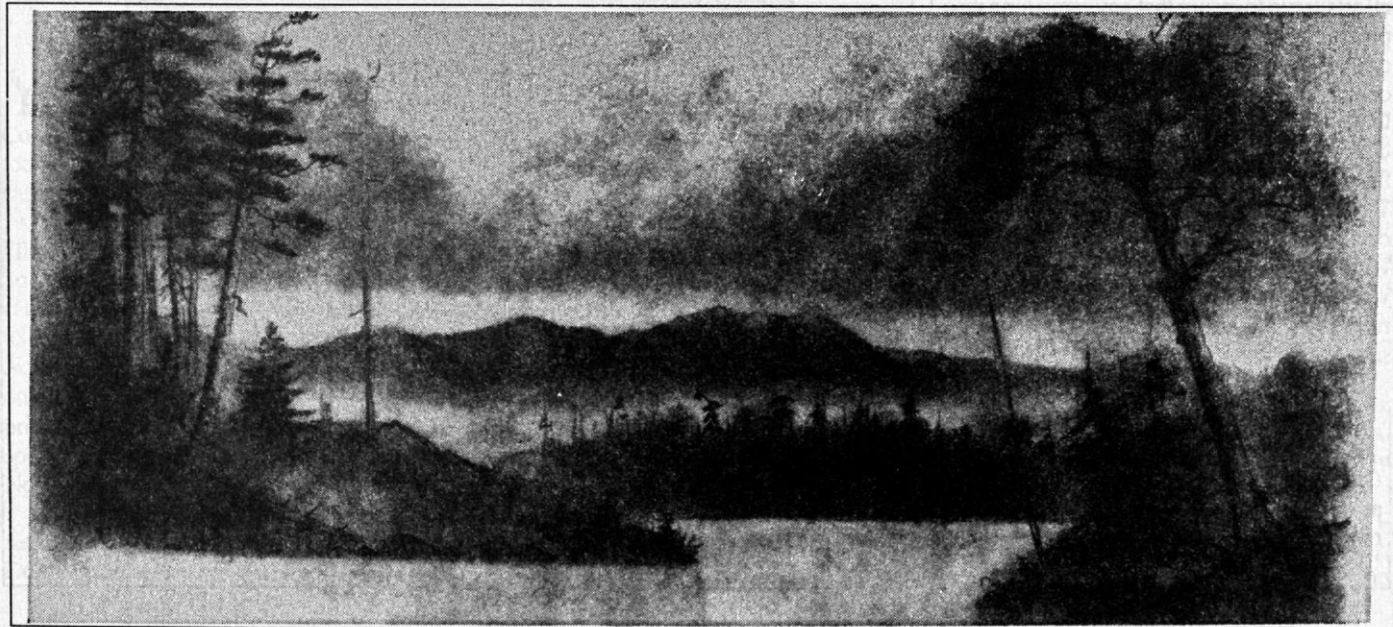
veritable encyclopedia on the ecology of Northeastern forests.

There was no apparent disagreement within the group that the swath we had investigated was bonafide old growth. Nonetheless, the requisite questions were asked. Was there a sufficient percentage of red spruce, given the widespread distribution of the species in historic times? Should there have been more species diversity? Could we rule out some form of highly selective logging? On this last question, Charlie was cautious. Dave Kittredge and Don Bertollette saw no evidence of human tampering. As professional foresters, their observations carried a lot of weight with me. The consensus was that the Snowy-Lewey-Cellar Mountain site meets the strictest definition of old growth. As to amount, it is a sizable area, but much work remains to be done before that can be determined definitely.

HOW MUCH OLD-GROWTH?

After returning from the rendezvous, Charlie Cogbill dug into his "archives" and uncovered a 1973 reference by Earl Stone to Lewey Mountain. Stone listed Lewey Mountain as one of a handful of sites containing old forest. Peter Dunwiddie and Jean Anderson examined maps at the Blue Mountain Logging Museum which indicated the entire area around Indian Lake had been trashed. Our investigation showed this to be untrue.

The Snowy-Lewey-Cellar old-growth rediscovery raises the question of how much old growth in the Adirondacks escaped the



by Rob Leverett Jr.

destruction of the 1800s. Most older sources of information are likely to be incomplete, contradictory, or misleading. Many suggest that there is little or no old forest left in the Adirondacks. Current sources acknowledge old growth but present widely varying estimates of the amount. In the May 92 edition of *Natural History* magazine, author Edwin Ketchledge suggests that there are 200,000 acres of old-growth forest left in the Adirondacks. In the May-June 92 *Audubon*, Paul Schneider says only 60,000 acres of virgin forest remain in the park. Neither article names specific sites. Having explored an area of ancient forest that previously had been inappropriately classified and escaped the notice of all but a few, I'm hopeful that Ketchledge's figure of 200,000 acres will be substantiated.

THE VOID

The lack of widely accepted old-growth criteria, a shortage of researchers experienced in recognizing old forest characteristics, and—until recently—the lack of a continuing effort by a single organization to catalog old-growth sites has left large gaps in our knowledge of remaining Eastern old growth. Rediscovery of old growth on the Cellar-Lewey-Snowy Mountain complex shows that much work remains to be done.

Several site-specific studies have been directed recently toward identifying and verifying old growth in the eastern United States. Colleges, government agencies, environmental organizations, and private individuals are the participants. But will these independent efforts serve to insure that any remaining unprotected old growth receives protection? We can ill afford to take the risk. The time has come to consolidate efforts. In the opinion of this author, Dr. Mary Davis's publication, *Old-Growth in the East*, is the best vehicle for reflecting up-to-date data on Eastern old growth. We have commenced plans for a conference on Eastern old growth to be held next year. *Wild Earth* plans to co-sponsor the event. I would appreciate any views or suggestions readers have, such as agenda items and possible conference sites.

Note: I am in the process of updating *Old-Growth in the East*, and should greatly appreciate hearing from readers with information about sites to include.

—Mary Byrd Davis

The River They Call Dead Now

An elder faces the torrent that roars
throughdiversions of concrete and men
At the place he once cast his net
and pulled in the line with so many fish
he'd smoke the slabs on the riverbank.
Worn shoes are tucked beneath his curled knees
his body bent toward his own world.
He devours a stewed goose wing
Sucking juice from the marrow
Tearing bits with his teeth
Chewing fast, spitting into the wind.
He throws the cleaned bones toward the river
The river they call dead now, since the damming.
He rises, tears dry grass from a crevice.
With a swift and hard brushing, he rids his hands of grease
and tosses the bundle away.
The river and the eaten flesh hold fast to him
He carries what remains.
The bones sit on the rocks and speak to a different death:
the river, lost in a new direction,
fills its emptiness with buried spirits
Who once knew the words of water so well
They'd sing to the dreams of the living.

—Patti D'Angelo
(site of first rapids, La Grande River, Quebec)



woodcut by Patrick Dengate

Knowing Tarantula

by Thomas Tanner

In lower Canyon 4 you were stopped by a slot. Entering, you found that its tight meanders quickly rendered it lightless but for the delicate line of blue above, changing shape and direction with each step. Soon the walls were only half a foot apart, so you retreated to the canyon mouth and out onto the sagebrush floor of Dry Fork Cougar, seeking a safe route up the naked orange slickrock. You found it, ascended, worked back to the west rim of lower 4, looked down to where you'd walked an hour before: level sand floor dotted by wisps of ricegrass, boxed in by smooth sandstone cliffs; opposite wall rising abruptly, embellished with vertical streaks of desert varnish, iridescent midnight blue on an ochre field; a single hackberry, the only tree in the lower canyon, nearly hidden in the alcove below, where the west wall curved back beneath you to overhang the floor. You found your shadow on the opposite wall and made it wave back to you, then walked the rim until you were above the slot that stopped you earlier. You descended to its lip, walked that, found access to the floor, continued up canyon. Soon the slot became a wide sand wash, then narrowed again where the floor was a series of dry waterpockets carved in bedrock. Above these, you crawled where the slot narrowed from waist level up, then chimneyed up and over where it narrowed from head level down, then twisted sideways through several tight turns that ended suddenly at a pouroff from the channel above. And here you now are, chimneying up, soles against one wall and back against the other. Your head emerges at floor level of the upper canyon, facing the west wall. You see that you are in a broad U-shaped channel carved in pink-grey bedrock, overhung by a protruding shelf of more resistant white material. Above that, salmon-hued sandstone slopes up and away, littered with blocky cubical black boulders.

As you push out of the slot, you turn and look at the east wall. What happens next is scarcely under your control — a leap with arms extended, a shout that reverberates down the canyon. You are looking up into a tributary channel. It is spanned by a white stone bridge, glowing softly amber in the golden light of late afternoon.

Next morning you will find a perfect spearpoint, red on one surface and pink on the other, just a few yards from where you now stand. Someone else saw your bridge, a thousand years before you.



Years ago, the Sierra Club published a coffee table book, *The Place No One Knew*. In photos it revealed the lost beauty of the Colorado River's Glen Canyon, in words it told why Glen Canyon died: too few knew what was there. To be saved, beauty must have advocates; to have advocates, its existence must be known.

Not far from Glen is another place no one knows. When I go there I find no human footprints. No Vibram tracks across the cryptogams, no black scuffmarks on the walls of slots. Thus no hikers. No trails, campfire rings, charcoal. Thus no boy scouts. No tire tracks, beer cans, toilet paper, styrofoam. Thus no ORVs or mountain bikes or hunters. No ancient rusted bean cans, thus no cowhands. I've left in place the only litter found: a few potsherds and tiny corncocks in Dry Cougar, a broken white arrowhead in Canyon 5, that perfect red-and-pink spearpoint in Canyon 4. Thus, some Anasazi or Fremont or Paiute. No one else. No one.

But the chamber of commerce types are at work even here, in southern Utah's remotest outback. They want ORV groups to visit the Dominguez Desert, of which this place is the heart.

Progress up Canyon 1 is stopped after a quarter mile by a pouroff. You stand in the dry plunge pool below, examining the smooth sandstone, seeking a way up. No handholds, of course. Where the rare rains of a million years cascade over Navajo sandstone, over homogeneous petrified dunes, they leave no handholds. They may carve a convoluted tapestry of fluting as they've done here, offering difficult stemming possibilities; but hiking alone, you must practice caution, so you scramble up out of the pool and walk back toward the canyon mouth to find a route up.

Here in the lower canyon a head-deep coulee cuts a meandering path through the otherwise level alluvium floor. At some turns it is choked with the desiccated tumbleweed skeletons of Russian thistles, at others it is clogged by the living plants. Inspecting one closely, you find it to be densely covered with tiny red-and-white flowers, closely appressed to the branches, invisible to the inattentive eye.

Up on the canyon floor, crowds of sacred datura create hallucinatory tableaux at the foot of vertical walls. Huge white trumpet flowers, impossibly dark green leaves, bright orange sandstone. Even with no

nibbling of its flowers, the effects of datura can be slightly psychedelic.

Walking here, you recall the seemingly drainage-specific distribution of plant communities in the lower reaches of these dry canyons. Cottonwoods dominant in 8, willows in 7, box elders in 6, sunflowers in 3, and now Russian thistle and datura, 1. Contemplating further, you remember scarcely a tree in lower 1-5, whereas 6-8 not only have trees, but thirsty ones — streamside species sans streams. For some reason not readily apparent, there's a fair amount of subsurface water down that way.

From its highest buttes and domes, the Tarantula benchland slopes away almost imperceptibly to north and south. Its north edge is a precipitous plunge into the cottonwoods along the Dominguez River, as much as 900 feet below the rim. On the south it is bounded by Dry Fork Cougar Gulch, whose walls are similarly sheer, but reach far less imposing heights. The south-sloping half of Tarantula is composed of eight roughly parallel drainages, winding their way from the highlands down to eight separate confluences with Dry Cougar. Although differing in detail, these eight valleys conform to a general pattern. The upper section of each is a shallow expansive basin of domes, small reddish dunes, patches of slickrock, sand washes, and irregular outcrops of varied hues and textures. A few wildflowers scatter a church window of colors over the dunes — gilia scarlet, globe mallow orange, blazing star gold, locoweed blue, evening primrose white. Here and there are gnarled little pinyon pines and junipers, and venerable waist-high oaks festooned with roseate apple galls. But plant life is nowhere so dense that it cloaks the ground or obscures the view; rock and sand dominate every vista. A rare shower here will send water racing down a score of courses, opaque ruddy rivulets converging just above the valley's middle section, where the now single channel cuts through bedrock, carving slots and waterpockets and bridges and sinuous ribbons of fluting. Only here does the word *canyon* begin to describe the drainage with real accuracy. This section ends at a pouroff or impassably narrow slot, below which is the alluvial floor of the lower canyon, a gorge bounded by vertical cliffs of orange or pink or salmon, its mouth a gap in the north wall of Dry Cougar.

The eight canyons are unnamed on my 7.5 minute topo map from the U.S. Geological Survey. Perhaps they have names in some old worn leather diary back in Dominguez town, or in the memories of the leathery old ranchers sipping coffee together in the Golden Circle Cafe. They have none at the local office of the Bureau of Land Management, and I like to think that they don't, anywhere. Nameless canyons are more exciting.

But perhaps they are also more vulnerable. Three dry canyons immediately west of mine flow from Late Bloomer Bench in the north down to Dry Cougar in the south; a popular book identifies them as Scary Gulch, Ghost Canyon, and Hellfire Gulch. Hikers drawn to them by that book have become their champions, and have had some success in promoting them for permanent protection as Wilderness, along with the stretch of upper Dry Cougar into which they flow. Canyons 1-8, where I don't find human footprints, and adjacent lower Dry Cougar, where I seldom do, still await their champions, and their future is probably more at risk.

I have found many good things in them:

An arch on the skyline over near 6, visible for a few moments as I crossed the ridge between 4 and 5. In Dry Cougar, a strange petroglyph panel covered with figures resembling bird feet. A promontory bearing both a balanced rock and an arch; scramble up and you can view one through the other.

A sandslide piled against the west wall of lower 3, right up to the top; you can run down in giant leaping bounds. A slender hoodoo, composed of caprock and fifty-foot pedestal, the whole visible only from within its own little basin.

A sphinx moth who had never seen a human, darting and hovering about me in the hummingbird manner of its race, wings a blur of speed, long proboscis testing my brightly patterned shirt for nectar.

The one canyon that doesn't pour off or slot down into its own lower reach. Instead, it cascades directly into a deep narrows of Dry Cougar, where you can walk in semidarkness at midday for almost a half mile.

Big pug marks where a cougar, walking up a slot to water, leaped a four-and-a-half foot pouroff without breaking stride. In the same wash, the parallel trails of a smaller lion and a smaller one yet. Mother and cub walking together.

An echo chamber at the head of one lower canyon, where the walls are great concavities arching smoothly up from the canyon floor, almost touching above you, framing the entrance to the slot before you. Down canyon, on the outside wall of a curve, the long horizontal sweep of a hanging alcove forty feet above the canyon floor. On the back wall, the wet seep that created it, unreachable, swathed in ranks of greenery — red monkeyflowers above maidenhair ferns above poison ivy.

Natural bridges. To date I've discovered four in the Tarantula canyons. Each spans a narrows where a million flash floods have scoured away at the walls of a water pocket, enlarging it to room size, finally punching through the downstream wall into the streambed below.

And the many features less rare or spectacular, less noteworthy or thrilling, but all very good. Coyote tracks in a sand wash, the clean white skeleton of a mule deer, the glossy dark brown luster of an ancient but still active woodrat midden. The many little sand gardens scattered across the slickrock; in this one a yucca, a silver buffaloberry, an Indian paintbrush; in the one just down the slope a Mormon tea, a scarlet gilia, a bonsai pinyon pine. Fishhook barrel cacti in flat pockets of black rough gravel, their auras of spines and pubescence glowing silver, haloes backlit by the rising sun.

The Tarantula Wilderness Study Area comprises just fifty-six square miles of the Dominguez Desert. In 1986, the BLM's draft wilderness report recommended that only one-quarter of the WSA be added to the National Wilderness Preservation System, protected from the incursions of roads and buildings, commerce and extraction, engines and motorized recreation. Dry Cougar, Canyons 1-8, and the three adjacent canyons called Scary, Ghost, and Hellfire constitute most of the three-quarters not recommended. But the last three were gaining advocates, thanks to that hiking guidebook. So BLM's final report, published four years later, added those three and the upper stretch of Dry Cougar, to which they are joined. Canyons 1-8 and lower Dry Cougar were still excluded.

As it turned out, the final report is not the basis for either of the two rival Utah wilderness bills now in Congress. One would protect not only the entire Tarantula Wilderness Study Area, but also certain

contiguous lands not studied for wilderness status by BLM. The other bill would revert to the agency's draft report, protecting only one-quarter of the WSA. The first, introduced by Representative Wayne Owens (D-UT), would add 42 new Wilderness Areas, totaling more than five million acres, to the Wilderness System. The other, by Representative James Hansen (R-UT), would add only 1.4 million acres, in 29 new areas. The Wilderness Areas of the Owens bill, H.R. 1500, tend to be significant tracts of land capable of sustaining wilderness experience and, it is hoped, ecological integrity. Those of the Hansen bill, H.R. 1501, run more to isolated wedges and strips with a gerrymandered look to them. The Wilderness Society, Sierra Club, Southern Utah Wilderness Alliance, and the other 32 member groups of the Utah Wilderness Coalition support H.R. 1500, which also has gathered more than a hundred cosponsors in the House.

When you write your congresspersons about these bills, don't mention Tarantula by name. First, because the five-plus million acres of H.R. 1500 are full of secret places needing protection; Tarantula is but one among many. Second, because there is no Tarantula. Oh, the place is real, but the name is fictitious, as are the others — Dry Fork Cougar, Scary, Ghost, Hellfire, Late Bloomer, Dominguez. Wanting to see the Tarantula saved from mechanized recreation and development, but fearing too many hikers, I've made this unsatisfactory compromise. Nevertheless I welcome you to Tarantula should you care to visit, and I offer these two clues to its location: My descriptions are reasonably accurate, and my names, though fictional, are similar to the real ones, those found on USGS topo maps or in BLM reports or in that guidebook (from Wasatch Publishers of Salt Lake City). If you're sufficiently motivated to earn Tarantula with some serious sleuthing, you may be sufficiently dedicated to leave it as you find it, with no

campfire detritus, no burned or buried toilet paper, no footprints on the crunchy places. If so, I invite you cordially.

When you've found Tarantula, try a hike in 8. Before you've gone far in, you'll begin to notice natural objects on the floor that seem quite out of place here. Keep them in mind as you watch for the little clump of dark green milkweeds against the east wall, a mile up from the mouth; they mark the spot where you can scramble up to walk the rim. Once you're up there and past the pouroff, you'll see the source of those anomalous objects, the only one I've yet found in all of Tarantula. Go down to investigate the huge dry waterpockets beneath it, but don't slip in or you'll be in the same predicament as a couple of lizards and a coyote I've found elsewhere in 8. (The lizards were rescued, the coyote was dead.) If you explore the drainage extensively, you may eventually find yourself in a deep narrow V with a head-high shelf on one wall; examine it for evidence that you're in a cougar's lair.

I know a waterpocket in 8 that is full long after others are dry, because of the way it is shaded by its own lip. Should you find it, I recommend leaving the water for the fairy shrimp and tadpoles, for the deer and coyotes. They can't import water, as you can. If you import enough, take an extra day up there and hike over into 7. What will you find? Maybe a bridge, maybe an arch, maybe a slender fifty-foot hoodoo, maybe me.

I am pretty confident about what you *won't* find.
Footprints.

— Thomas Tanner is professor of environmental studies at Iowa State University. He is the author of *Ecology, Environment, and Education* (1974) and editor of *Aldo Leopold: The Man and His Legacy* (1987).



Practising Bioregionalism:

BOULDER COUNTY RESOLVES TO SAVE ITS FORESTS

ANCIENT FOREST RESCUE, BOX 1309, LYONS, COLORADO 80540 (303-823-5429).

"NOW, THEREFORE, BE IT RESOLVED, that the Board of County Commissioners urges the Forest Service to discontinue timber sales in the county, until a revised forest plan can be developed and approved, or a consensus by interested parties in Boulder County on a particular sale is reached."

Is this an environmentalist's daydream? A county board concerning itself with federal land? It started last winter, when Roz and John McClellan were hiking in the mountains above Boulder and stumbled upon a logging operation at Twin Sisters. NIMBY worked. Roz had spent years working to save the larger ecosystems in the San Juans and throughout the Southwest. She had been arrested at Redwood Summer, but here, in "the people's republic of Boulder," logging of 300 year old Ponderosa Pines (for firewood) was proceeding unchecked.

The usual scenario played for awhile. Local groups looked for ways to preserve Twin Sisters. Some equipment was damaged. Then Roz and other activists associated with Ancient Forest Rescue (known as the SWAT team by mainstream environmental groups) decided that it was time to deal with the entire picture. In addition to the Forest Service's "business as usual," the mountains around Boulder were suffering from real estate development. A new way of looking at management was needed.

Ancient Forest Rescue asked for a moratorium on logging on federal lands in Boulder County "until an old growth inventory is completed . . . until the cumulative impacts of roading on Boulder County's ecosystems is known . . ." Ancient Forest Rescue presented an Ecosystem Plan for the County with biodiversity protection (replacing multiple-use) as the guiding philosophy.

The plan set five biodiversity management goals:

1. Restoring a complete distribution of tree age classes, with emphasis on old growth.
2. Maintaining habitat integrity by fail-safe road closures and a policy of no new roads or road upgrades.
3. Preserving long-term soil productivity by preventing soil erosion from roads and removal of forest biomass.

4. Recognizing that logging and human management can never truly mimic nature, for that reason returning at least the core reserves to a natural disturbance regime, where natural cycles rather than human intervention take place.
5. Retaining trees in their dead and down state, recognizing that a tree labeled as defective by the Forest Service may be at the beginning of its most biologically productive phase, as a snag, as a nesting site, as a feeding ground for insect loving birds, and as a source of nutrients as it decays into the soil.

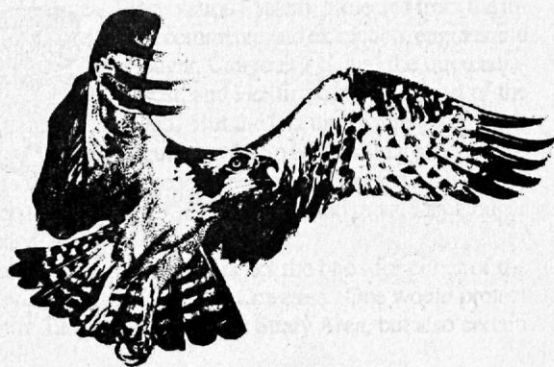
A public hearing provided an excellent educational opportunity for the public and the media. Although a county resolution is not binding on federal lands, the Forest Service representatives were very upset, and seemed to realize the moral force of such a resolution. Now a task force will be created and representatives from Ancient Forest Rescue will be part of the decision-making process. There is power in a county that asks for part of the decision-making process over federal lands within. Also, from a SWAT team's point of view, if the trees keep falling, when the base camp is established and the tree-sitter climbs up to the platform, BOULDER COUNTY RESOLUTION 92-118 provides community government support for the actions. That, to Ancient Forest Rescue, is what bioregionalism is all about.

For more information on the resolution and how readers can begin to formulate ecological plans for forests within their counties, write or call ANCIENT FOREST RESCUE, Box 1309, Lyons, Colorado 80540 (303-823-5429)

— Naomi Rachel

COLORADO'S DIRTY DOZEN

Ancient Forest Rescue is selling a handsome map on an ugly subject, Colorado's timber sales. Bordered with native wildlife drawings, the map locates all sites of timber sales, with emphasis on the twelve worst ancient forest sales. On the back are a list of sales and suggestions for action. Contact Ancient Forest Rescue, Box 1309, Lyons, CO 80540 (303-823-5429). Maps are \$6 each or 2 for \$10.



Sinapu Gains House Order for Wolf Reintroduction Study in Colorado

SINAPU, POB 3243, BOULDER, CO 80307 (303-237-6280)

The committee report accompanying the current House Interior Appropriations bill directs the US Fish and Wildlife Service to spend up to \$50,000, in cooperation with private groups, to study the feasibility of wolf reintroduction in Colorado. Introduced by Representative David Skaggs (D-CO), the amendment marks the first substantial step toward possible wolf reintroduction in Colorado, and a triumph for Sinapu, a group named for the Ute word for "wolves," whose goal is returning wolves to the state.

Sinapu was formed in March 1991 by an Earth First!er, a forest activist, and a Bureau of Land Management economist, each of whom had advocated wolf reintroduction and been stymied by the usual aggregate of special interests. Opponents of reintroduction included the Colorado Wildlife Commission and the US Fish and Wildlife Service (FWS) and US Forest Service (FS). The state's stance, while carrying a lot of political weight, has no legal standing. So we have focused on the federal agencies. Their obstinacy, ironically, led to US Representative Skaggs calling for a study.

As each National Forest in Colorado starts to rewrite its ten-year land management plan, we deluge it with requests to consider wolf reintroduction. We do so not under the auspices of the Endangered Species Act (ESA); rather, as a "multiple-use" of the Forest. When we generated 135 letters, out of less than 600 total, in the scoping stage of the Arapaho-Roosevelt National Forest's plan revision, the agency pledged to turn them over to FWS, which implements the ESA. We cited the Multiple-Use Sustained Yield Act, and reiterated the reasons we wanted wolves on the forest: enhancement of biological diversity, a natural range management tool for elk, economic benefits to surrounding tourist-dependent communities, and aesthetic and spiritual edification for users of the Forest. None of these "multiple-uses" is the jurisdiction of FWS.

The Forest Service responded with a startling assertion: "Forest Service biologists have made a general assessment of the forests and found no areas where the habitat is suitable to establish a viable wolf population." We immediately filed a Freedom of Information Act request to examine this "general assessment," and were told, "[t]he statement about Forest Service wildlife biologists making a general survey is not documented in writing. In this day of electronic and telephone communication, we often fail to keep paper records of conversations and computer messages."

When we pointed out the obvious inadequacy of any "assessment" that could not be documented, they finally got to the point: They wouldn't go any further without "agreement" from the state division of wildlife and inclusion of the Forest in a Fish and Wildlife Service wolf recovery plan. In a subsequent meeting, they even claimed the ESA prevented them from proceeding with wolf reintroduction!

Our populist base proved too strong, though, and the agency backed



down. With over a quarter of their scoping letters asking them to address wolf reintroduction, they were driving straight into a wall named NEPA. What, we asked them, was the point of soliciting letters if they planned to ignore them? They finally agreed to request from FWS a "wolf habitat model" and to plug their own geographic data into it.

When we see that model, we will watch for economic or social criteria masquerading as biology. If it turns out the FS has already so damaged the Forest as to preclude immediate wolf re-inhabitation of it, we will ask them to describe the restoration strategies (removing livestock, closing roads, etc.) necessary to allow successful reintroduction. We will force the agency to admit the feasibility of reintroduction, and to base any opposition on values, not on spurious biology.

The Fish and Wildlife Service proved as reasonable as the Forest Service. With an amendment upcoming to the Northern Rocky Mountain Wolf Recovery Plan, we asked them to include Colorado regions as recovery zones. Agency personnel said they couldn't, because they had no information on wolf habitat in the state. And they couldn't request money for a habitat study, they said, as long as Colorado isn't included in the recovery plan. That Catch-22 apparently struck Representative Skaggs as reason enough to direct them to study the potential for Colorado reintroduction.

The state and federal governments engage in such convoluted logic because of their subservience to the livestock industry. In the late 19th century, ranching co-dominated Colorado's economy (along with mining). As was the case in the rest of the West, the federal and state governments spent millions of dollars in Colorado to exterminate the wolf. The last wolf in the state was killed in 1945.

But since 1920, the state has been largely urban. Today, agency opposition to restoring wolves flies in the face of an overwhelmingly urban populace's desire for natural conditions on the public lands.

Sinapu has been exposing the absurdity of the agencies' positions on wolves. Given overwhelming public support for wolves, and growing Congressional support, the agencies will soon have to start responding.

Sinapu seeks to expand its grassroots base. Please contact us if you'd like to help restore wolves to Colorado.

—Michael Robinson

To Break The Timber Industry's Death Grip

SAVE AMERICA'S FORESTS, 4 LIBRARY COURT, SE,
WASHINGTON, DC 20003, (202)544-9219

by Chris Van Daalan

The destruction of America's forests has received unprecedented attention recently in the media and in Congress, and public awareness has grown dramatically. Changes in federal forest policy seem inevitable. Yet the best approach to addressing the ecological and political forest crisis has been the subject of a great deal of debate among forest protection activists.

Should we reform forestry practices, or ban all logging on public lands? The state-by-state pursuit of Wilderness now seems inadequate, but how can we address the needs of each ecosystem in a nationwide bill? Ecosystems know no political boundaries, so what about state and private lands?

Activists have looked at the various bills and proposals out there, attempting to understand the ecological, philosophical, and political ramifications of each. Our first imperative, by which we should judge any plan, is ecological: what will work for the forest and its inhabitants? Our political imperative is to break the timber industry's policy death-grip—we'll protect nothing until we do this. Given these imperatives, disagreement among grassroots activists on what approach to take is understandable.

ECOLOGICAL CONSENSUS

In order to resolve these disagreements and map an effective strategy, let's begin by looking at the points we do agree on.

If anything, we have consensus on our overall mission. As grassroots forest activists, we seek to protect the forests, and help them recover from damage already done. We're talking about protecting habitat and biological diversity, which points to one thing—protecting and restoring the integrity of native forest ecosystems on a continental scale. Is this an overarching vision we could agree on, one we would seek to implement?

Excellent work is being done to articulate this vision, work that deserves support from every corner of our movement. The Native Forest Council began it in 1990 with the Native Forest Protection Act, which has become a unifying vision for forest activists nationwide, if not yet a legislative vehicle. Now The Wildlands Project is developing science-based proposals to protect and restore ecosystems across North America. Save America's Forests hopes to help craft such a proposal into legislation so we can begin the long process of implementation.

I sense consensus among grassroots activists on this vision of ecosystem protection and restoration. Disagreement sets in when we discuss what we should do in the meantime, what vehicles we should use to pursue this vision. In order to create a common frame of reference for this discussion, let's look at the various bills and proposals:

PROPOSALS (NOT YET BILLS IN CONGRESS)

The Native Forest Protection Act would protect native forests

(those that retain or have regained their native biological characteristics and diversity) on federal public lands, nationwide, and mandate sustainable forestry techniques on the remaining lands to protect and rehabilitate native biodiversity.

The Native Forest Council (NFC) has also proposed another alternative: A Complete Ban on Logging in National Forests. The reasoning is simply that these lands belong to all Americans, and there is no economic or environmental justification for logging any more of them; that losing 95% is already a compromise beyond reason. "Not another twig."

As said above, there is now movement toward a continent-wide native ecosystem protection proposal which would cross political boundaries. This would be developed using concepts of conservation biology and modern mapping techniques, region-by-region. A model for this is the Northern Rockies Ecosystem Protection Act, proposed by the Alliance for the Wild Rockies. It would protect 15 million acres of wild forest lands in 5 states: Montana, Wyoming, Idaho, Oregon, and Washington. Biological corridors would connect greater ecosystems, and Wilderness Recovery Areas would be established where clearcutting has devastated the landscape. *

BILLS IN CONGRESS

HR 1969, the Forest Biodiversity and Clearcutting Prohibition Act, by Representative John Bryant (D-TX), would ban even-age logging (clearcutting) on all federal lands, nationwide, and mandate the agencies to "provide for the conservation of native biodiversity...the full range of variety and variability within and among living organisms and the ecological complexes in which they would have occurred in the absence of significant human impact." These provisions would be upheld by the critical Citizen Enforcement provision, which empowers any citizen to sue the government for violations and provides cash penalties.

HR 2501, the Timber Cost Recovery Act, by Representative Jim Jontz (D-IN), would eliminate below-cost timber sales, nationwide. Although Jontz predicts this bill would shut down up to 80% of timber sales, it has received only tentative support among grassroots activists, possibly because it does not address the ecological issues of Forest Service mismanagement.

HR 4899, the current Ancient Forest Act, by chairmen of Agriculture, Interior, and Merchant Marine and Fisheries Committees, would protect ancient forests in Washington, Oregon, and northern California based upon the "Gang of Four" Scientific Report, which gives 14 alternatives for protection and management of unprotected areas. Option 12c has emerged as the environmental "bottom line," but now a dangerous compromise between pro-timber and environmental Congressmen seems to be shaping up.



INDUSTRY ATTACKS

In order to implement positive legislation, we must understand and oppose the many legislative attacks launched by the timber industry, which threaten to shred the last native forest remnants in America.

HR 2463, the Forests and Families Protection Act, by Representative Jim Huckaby (D-LA), would create a Northwest ancient forest "reserve" in which disease, insect, and fire suppression; road building; and even salvage logging would be permitted. The most dangerous thing about this and other industry bills is that they undermine environmental laws nationwide and restrict judicial review.

HR 4980, the National Forest Health Act, by Larry LaRocco (D-ID)—a response to "forest health threats" in the Northwest—would expedite salvage logging and roadless area invasions nationwide. Salvage is the Forest Service's newest rhetoric to justify ever-greater clearcutting and roading. Watch out for this dangerous bill; it's moving.

S. 1696, the Montana National Forest Management Act, by Sena-

tors Max Baucus (D-MT) and Conrad Burns (R-MT), is now pending in the House after passing in the Senate. This destructive bill poses as a "Wilderness Compromise" but actually releases to development 4.8 million of 6.5 million acres eligible for Wilderness designation. Over 90% of the suitable timber on the lands in question would be released, and judicial review of future decisions would be restricted. Despite intense opposition in the Senate and the House, the way seems clear for passage of this bill for the sake of Democratic party politics—the reelection of Representative Pat Williams (D-MT).

Now, back to the discussion.

A QUESTION OF APPROACH

Organizers of the recent Forest Reform Pow-Wow in Virginia framed the discussion of options for a forest protection strategy as a debate between National Forest logging prohibition (as per the NFC proposal) and forestry practices reform (as per HR1969). After an initial volley of contentious remarks on the relative advantages and dis-

advantages of each, Tim Hermach and I raised a question everyone seemed to be overlooking. Are these approaches necessarily mutually exclusive? Can't we pursue both goals without compromising our strategy or our vision? The answer, I believe, is not only that we can, but we must.

Obviously we are seeking to protect life and restore ecosystem integrity, so we must pursue logging prohibition or a native forest ecosystem recovery plan. I believe that to be our ecological consensus.

REDEFINING FORESTRY: HR 1969

In any case, logging will continue on some lands. We all use paper and wood, but supplying these doesn't necessarily have to destroy the forest. We must begin to define what ecologically sensitive and sustainable forestry practices would be. The Forest Biodiversity and Clearcutting Prohibition Act, HR 1969, is the first legislative foray into what promises to be a long process of discovering that definition.

In the last issue of *Wild Earth*, in an article criticizing HR 1969 and selection forestry, biologist Reed Noss accurately points out that "No forest bill before Congress comes close to an ecological approach to forest protection and restoration nationwide." HR 1969 does not do everything. It does ban clearcutting, nationwide, and it provides a working definition for selection management while mandating that the "full range" of native biodiversity and "ecological complexes" be conserved.

If the bill's definition of selection management would in fact create the "green illusion" Noss speaks of, forests "missing many critical components," then, by law, the practices would have to be improved. And citizens—that's us—could challenge the practices in court, if necessary.

CITIZEN ENFORCEMENT

Without attempting to be a complete solution, HR 1969 is undeniably the strongest piece of forest legislation and the only nationwide ecological bill now before Congress. While the Forest Service attempts to remove citizen appeals, HR 1969's citizen enforcement provision would give citizens the tools to challenge and stop all but the most benign timber sales on public lands. Other visionary proposals are being developed to complete the ecosystem protection picture, but until they are ready to be moved as legislation, HR 1969 is the only bill that counters the timber industry's

nationwide legislative attacks on our last intact ecosystems.

TIMBER TARGETS

Reed Noss also accurately points out that if National Forest timber-yield targets were to remain the same, selection management could do even greater ecological damage, as more acres would have to be logged to produce as much timber. He criticizes the bill's author, Ned Fritz, who has stated that we could provide as much wood through selection logging. Yet Fritz, along with 57 other members of the Save America's Forests Coalition, testified in February before the Interior Appropriations Committee to eliminate, not reduce, congressional timber targets.

It is important here to understand the congressional process of creating timber targets. Short of an outright ban, timber yield will not be addressed in prescriptive legislation such as HR 1969. That is the jurisdiction of the Interior Appropriations Committee. This points to another essential aspect of our approach—an appropriations strategy to eliminate timber targets, one that we hope to fully act on in the coming year.

BREAKING THE INDUSTRY'S GRIP

There is one more reason why support for HR 1969 is critical at this time. The timber industry, the largest industry in the world, has dictated public lands forest policy for decades. Our forest protection movement seeks to break this death-grip, and to do so we must accomplish two things. First, we must build a popular movement of informed, active citizens from all walks of life, which has enough political power to "dictate" forest protection. Second, we must break into the political arena where these policies are made—we must establish ourselves as a credible force in Congress, and we must educate our activists on how to influence the congressional process. HR 1969 serves as a beacon to forest activists nationwide, a bill that will do something for every National Forest. It is an inspiring proposal that we should all support as a first step. With it, we can cut our teeth on the Washington, DC political process, where the views of grassroots activists have never been adequately represented. As a vehicle, HR 1969 is helping us learn the basics of grassroots political organizing, which we must master if we hope to save our forest ecosystems from government bureaucrats and corporate plunderers. And as a piece of legislation, it is bringing critical eco-

logical concepts of biodiversity and sustainability into an otherwise conservative political debate.

These are the fundamental strategies of Save America's Forests, and they're already working well. HR 1969 now has 69 cosponsors in the House, purely as a result of the efforts of grassroots activists from across the nation, including many who got involved for the first time with this campaign.

We have not yet articulated our full ecological vision in Congress, but we should not sit on our hands until we get our dreams down on paper. By then it will be too late. The critical decision-making processes are occurring now in Congress, and the industry is still controlling the agenda. Dangerous, forest-destroying bills are on the verge of passing. The tide is beginning to turn, however, as grassroots activists take their stories and passion to the marbled halls. For now, we must fight for the strongest piece of forest legislation in Congress, the Forest Biodiversity and Clearcutting Prohibition Act.

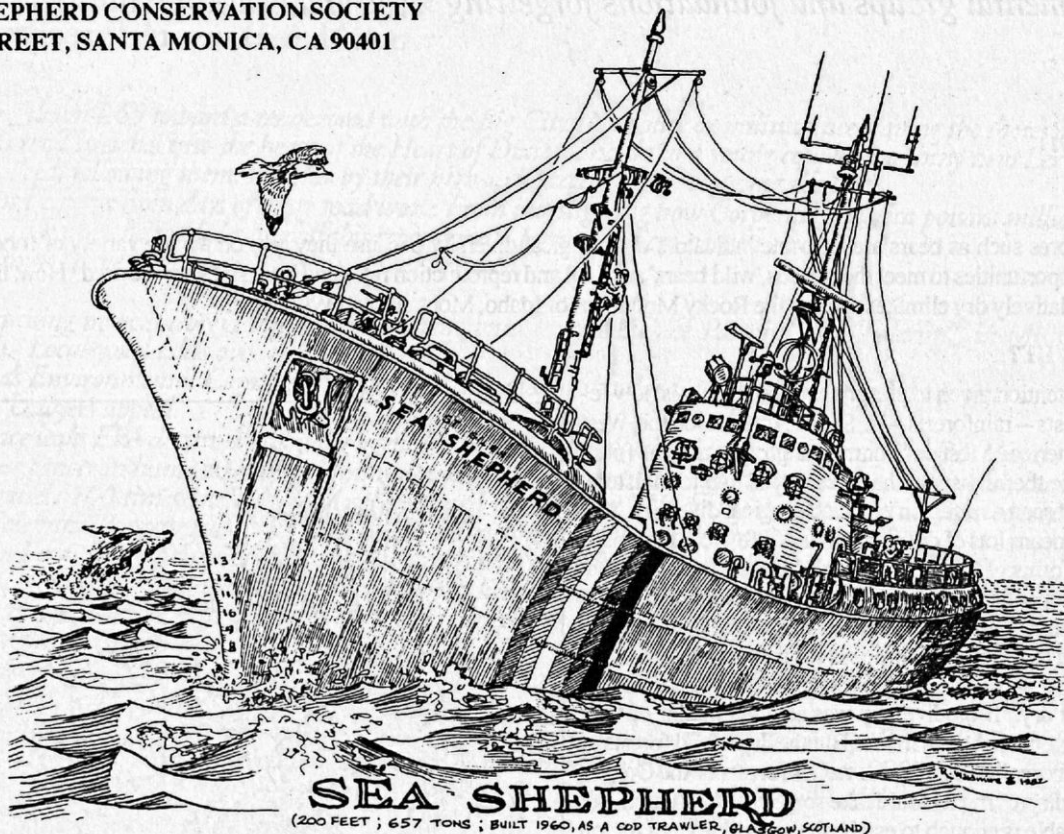
Chris van Daalen is a co-founder of Save America's Forests. SAF suggests that readers write their representative (House of Representatives, DC 20515) and senators (Senate, DC 20510). SAF urgently needs donations to continue its campaign for the forests. Send to the office at 4 Library Court, SE, Washington, DC 20003.

* Late note: Just before going to press, we received the good news that the Northern Rockies Ecosystem Protection Act has been introduced in the House by Rep. Kostmayer, as HR 5944. Letter writers may want to recommend this bill to their congresspersons.

Science Editors note: I stated my reasons for opposing HR 1969 in the summer 1992 issue of *Wild Earth*. Despite the best of intentions, HR 1969 could easily turn out to be a forest destroying rather than a forest restoring bill, unless federal timber targets are dramatically reduced **first**. The biodiversity provisions in HR 1969 are vague and weak. The bill obfuscates rather than clarifies ecological issues and, therefore, provides little basis for effective citizen lawsuits. The Forest Service could easily claim, under the bill's definitions, that it is increasing biodiversity with timber management, just as it does now under the National Forest Management Act of 1976. Stop HR 1969! —RN

ORCAFORCE: Oceanic Research and Conservation Action Force

THE SEA SHEPHERD CONSERVATION SOCIETY
1314 2ND STREET, SANTA MONICA, CA 90401



To continue to be successful and to avoid becoming stagnant and unimaginative in our approach, it is essential that we constantly evolve new strategies and tactics.

The onslaught against marine wildlife and habitats is escalating at an alarming rate. The problem is global. There is a need to be in many places at the same time. There is a need to develop tactics that are both aggressive and responsible.

The Sea Shepherd Conservation Society has developed into an effective policing agency. There is no other group taking this law enforcement approach. There is a need to investigate, document and enforce international laws, regulations and treaties. We can meet this need.

To do so, we need to organize ourselves into a more efficient policing agency. We need full-time agents. Volunteers have served us well in the past, but only when they have been carefully supervised by the very few of us who

consistently remain at the helm. We must train these agents to skillfully document evidence. Most important, our agents must be able to effectively take action against criminal operations in such a manner as to avoid injury and to avoid running afoul of the law ourselves.

I propose to maintain a small crew of field agents on Peace Corps type wages, which means minimal support. These agents will be given a base on board the Sea Shepherd vessels and given ongoing instruction in investigation techniques, documentation, enforcement, scuba diving, mechanics, navigation, survival skills and fund-raising.

Once trained and ready, we can dispatch crews to areas where marine wildlife and habitats are threatened. A crew of two people who know what they are doing can stir up issues quite effectively.

I propose giving this small group of agents the name of Oceanic Research and Conservation Action Force: ORCAFORCE. The

Orca is a powerful symbol—aggressive and intelligent, powerful yet capable of great gentleness when it so chooses.

To be more effective, we should investigate and document every seal hunt, every dolphin kill, every whaling operation, every large oil spill and as many threats to marine wildlife as possible. Once we target an illegal operation, we will then be able to direct appropriate measures toward enforcement. This may include politically strong-arming the enforcement body that has jurisdiction in the area. If there is no enforcement organization with jurisdiction, then ORCAFORCE will assume jurisdiction.

The Sea Shepherd Conservation Society is looking for ORCAFORCE agents. To qualify, people must be in good physical condition, willing to be trained, comfortable with an organized and disciplined approach, and willing to be paid a minimal subsistence wage.

—Captain Paul Watson

Blind to Biodiversity

Are environmental groups and foundations forgetting xeric and arid communities?

by Lance Olsen

Large omnivores such as bears are first-rate indicators of biological diversity because they rely on a wide variety of foods and habitats. Without diverse opportunities to meet their needs, wild bears' survival and reproduction rates and litter sizes are reduced. How, then, can grizzly bears survive in relatively dry climates such as the Rocky Mountains of Idaho, Montana, and Wyoming?

ARE WE ALL WET?

Most of the attention given to preserving biodiversity is now focused on wet forests—rainforests—in South America or the West Coast of North America. Most environmental groups, and the foundations that finance them, assume that diversity is tied to moisture. The Rockies aren't seen as a region of rich biological diversity.

Biodiversity means lots of different kinds of life, from the smallest to the biggest forms of living things. And there is no doubt that life of all kinds depends on water. It is no coincidence that the rainforests of South America or Southeast Alaska are both wet and full of life. But the Rockies hold surprises for the unaware.

Compared to tropical rainforests, forests of the Rocky Mountains are generally dry. If biodiversity was solely a matter of wetness, the Rockies would not have much. But the dry inland forests of Montana may be more diverse than the wetter forests of the Oregon coast. Proving or disproving it would take some costly research, but the evidence available is enough to establish the Rockies as a region with a rich variety of life.

Species lists are dull, but they can make a point about biodiversity. Consider this incomplete list of life found in the dry Rocky Mountains: grizzly bears, black bears, gray wolves, wolverines, martin, fisher, mink, river otters, weasels, yellow-bellied marmots, mice, voles, ground squirrels, elk, mountain goats, bighorn sheep, moose, pronghorn (antelope), bison, mule deer, trout (several species), grayling, salmon, char, salamanders, frogs, toads, bald eagles, golden eagles, peregrine falcons, whitebark pine, limber pine, ponderosa pine, scores of grasses, lichens, forbs, and shrubs.

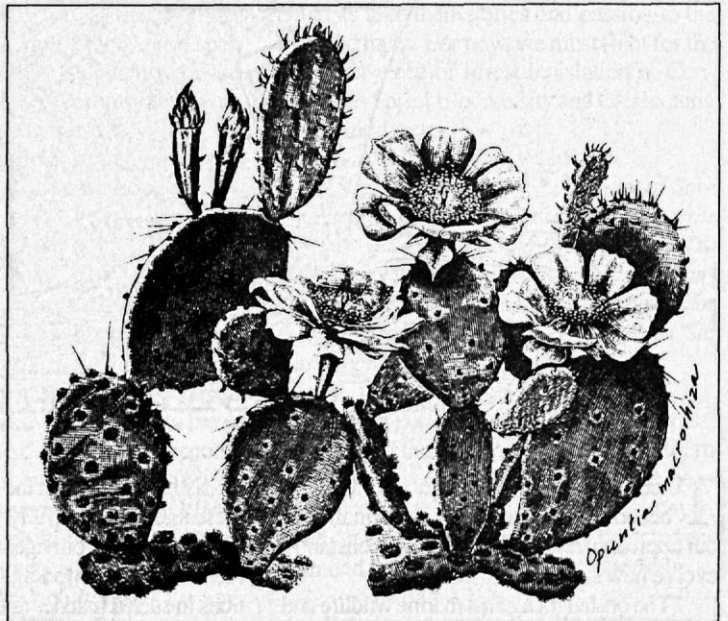
That's not the end of it. Here and there in the Rockies are significant pockets of wet forest. Rainforest in the Rockies? Not exactly. Much of the moisture falls in winter, as snow. But some places get 60 or more inches of precipitation a year. (In comparison, most forests in the East get between 30 and 50 inches.) These wet islands of forest in the Rockies are unknown to most environmentalists and foundations.

CAN'T SEE "OLD-GROWTH" FOR THE TREES?

There's still more to the "image" problem of the Rockies. Some environmentalists and most foundations still don't know that there is "old-growth" forest in the dry Rockies. They see old-growth forest as little more than big trees in a wet environment. Yet there are trees in the Rockies of at least six feet in diameter, and not all of them are in wet places. And old-growth is certainly the right name for trees hundreds of years old, no matter how thick they may be.

The clincher, however, is that old-growth forest means more than size and age. An old-growth forest is one with living trees of mixed ages, standing dead trees, fallen dead trees, and other features that are as true of the Rockies as of other places where old-growth forest still survives. Now the task is to get beyond the blindness that stops so many enviros and otherwise friendly foundations from saving biodiversity.

Lance Olsen is the president of the Great Bear Foundation (POB 2699, Missoula, MT 59806) and editor of its journal, Bear News.



Dr. Dioxin on the Toxic Trail

Farther Down the Road

Ripping-down I-65 toward a rendezvous with the Big City. No police or militia since leaving the shores of the Singing River. This road stretches into the heart of the Heart of Dixie. Thanks to a young couple in a shiny new Lexus, I move at breakneck speed, following them, shielded by their high-tech radar gadget, violating the law.

Tonight I emerge from days of dusty road work. From investigating how Corporate America poisons millions of us each day. With an eye on the road, I rattle off this report into a Japanese micro-cassette recorder.

These things have happened:

- In a surprising move, Georgia Pacific replaces renowned lawyer Eugene Partain, aka "Paladin," in Mississippi dioxin litigation. Local yokel takes over.
- Alabama's Environmental Commission upholds state's dioxin standard, then admits it fails to protect the most exposed citizens. Lawyers appeal.
- Greenpeace leaks EPA document showing agency to be reassessing dioxin's deadly characteristics. Document states TCDD "does cause cancer in humans." And: "Immunotoxicity and reproductive effects appear to occur at body burdens that are approximately 100 times lower than those associated with cancer." Industry spokespersons call the report "premature" (EPA's Scientific Reassessment of Dioxin, A Status Briefing For the Administrator, 2-14-92).
- Activist in Perry, Florida, is severely beaten by 3 thugs who warn her not to sue Proctor & Gamble (paper mill). Residents cautioned of contaminated wells. Local news reports link pollution to paper mill. Mill is sued.
- Canadian environmentalists identify petroleum refineries as producers of dioxin, further broadening scope of ongoing TCDD nightmare.
- Vice President Dan Quayle visits Mississippi, holds private council with Governor and executive of paper industry. Quayle bashes lawyers, dioxin suits.
- Series of lawsuits is filed against Proctor & Gamble, alleging that the company severely polluted the Fenholloway River, along with the local aquifer which supplies water to numerous wells in the area. Over 8000 people sue both Georgia Pacific and International Paper in southern Mississippi. Similar suits are under way in Alabama, Arkansas, and Tennessee.
- Having survived her throat being sliced and breasts burned, Perry activist is now recuperating while law enforcement officers search for her assailants.

Dioxin was not meant for this world. Promoters of the Industrial Age—which brings us such goodies as Clorox, Hostess Twinkies, Weed Eaters, Clearasil, Apple Macs, and Ross Perot—threw dioxin into the bargain. Your government is impotent to end dioxin's journey through the food chain. Ditto for environmental groups more concerned with newfound corporate-hood than with putting their members' money on the line.

It has come to this: Either the law will provide relief for the thousands of us seeking to rid America's waters of dioxin, or we're destined to wear chlorine atoms as inner-cellular jewelry until the walls come tumbling down. An amazing thing, this law. Blind Justice. Too bad it rarely works.

The Mississippi Press reported it like this:

"Vice President Dan Quayle and Mississippi Gov. Kirk Fordice have called for a curb on lawsuits such as the ones charging south Mississippi paper mills with pollution" (AP story, Gulfport, MS, 3-5-92 and *The Clarion Ledger*, 3-6-92).

The Vice President made a quick stop to the State capital to discuss the Administration's plans to help "eradicate frivolous lawsuits in America."

"Warren Richardson, general manager of Leaf River Operations, Inc., Georgia Pacific's pulp mill in New Augusta, told Quayle the plant is bracing for \$20 billion in civil suits by 8260 plaintiffs in 162 cases."

Here's what Governor Fordice had to say about it: "We're going to do something about it [suits] or I'm going to die trying" (Ibid.). Now, there's an idea . . . I digress.

This is the year to end the dioxin thing. "Chlorine free by 93." Remove chlorine from industry's veins and the thing grinds to a halt. Dioxin is ravaging the poor amongst us; it is spreading like AIDS through sensitive biological zones of aquatic America. It must be stopped.

—Dr. Dioxin

Biodiversity Conservation Area Proposed for AZ and NM

by Paul Hirt, Mark Fishbein, and Susie Brandes

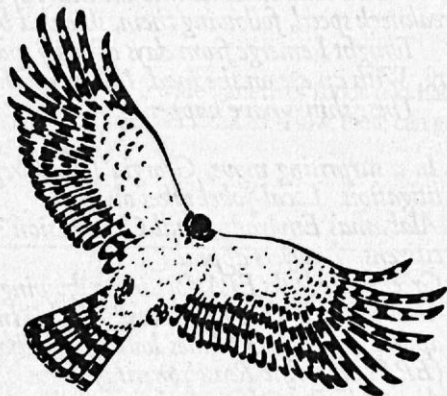
A unique coalition of scientists and conservationists has banded together to promote the conservation of biological diversity in the Southwest borderlands of Arizona and New Mexico. The forested mountains ("sky-islands") and desert and grassland valleys of the Southwest borderlands provide habitat for one of the greatest diversities of plant, mammal, reptile, and insect species in North America north of Mexico. Perhaps the greatest diversity of breeding land birds north of Mexico is also found here, as well as an incredible array of rare, endemic, and threatened species. The region is a living laboratory of ecological and evolutionary diversity.

While ecologists have long been aware of the biological uniqueness of the sky-islands, the public is generally aware only of the topographic and climatic diversity and the presence of a few charismatic species like the elegant trogon. In order to call the public's attention to the region's biodiversity and to promote an integrated regional conservation strategy, the "Sky-Island Alliance" came together in 1991. A secondary motivation for initiating this effort was the US Forest Service's discussions with the Arizona congressional delegation in mid-1991 on the possibility of designating three Coronado National Forest mountain ranges as a National Recreation Area (NRA). The Bush administration has been doling out extra money for recreation, and the Coronado NF managers hoped to improve their chances of getting a slice of the pie. This FS proposal for an NRA is still alive.

Beginning as an ad hoc group of environmental activists and professional biologists, the Alliance spent six months drafting a paper summarizing the region's unique ecological features and appending to it a proposal to designate portions of the Coronado National Forest a "National Sky-Island Biodiversity Conservation Area." This initial proposal considers just the Coronado National Forest in southeast Arizona and southwest New Mexico, but the Sky-Island Alliance's larger aim is to promote interstate and international efforts to conserve native species and ecosystems in the sky-island bioregion. The Alliance proposal now has the formal support of the Grand Canyon Chapter Sierra Club, Tucson Audubon Society, Arizona Native Plant Society, and The Wilderness Society. Other conservation groups and scientific organizations are being asked to join the Alliance and support the Biodiversity Conservation Area proposal.

UNIQUE BIOLOGICAL, SCIENTIFIC, AND EDUCATIONAL VALUES

The sky-island bioregion of southeastern Arizona, southwestern New Mexico, and the northern portions of the Mexican states of Sonora



and Chihuahua is one of the most ecologically diverse landscapes in North America. It is the meeting place of four North American biogeographic provinces: the Sonoran and Chihuahuan deserts, and the Rocky Mountain and Sierra Madrean forests (Brown, et al. 1979). Plant and animal species from all four bioregions intermix here. The great variation in elevation from valleys to mountain peaks creates a vertical layering of habitats that further intensifies species richness in this region. The mountain "islands" rise to cool and moist forested heights above the surrounding "sea" of desert and grassland—the latter as inhospitable to many mountain inhabitants as the analogous seas are to land dwellers of oceanic islands. Five of Merriam's seven Life Zones of North America, and the only contiguous rise from Sonoran and Chihuahuan deserts to Canadian-type (Hudsonian) habitats in the US, occur here.

Southeastern Arizona is internationally renowned for its rich variety of plants and animals. For example, the US Fish and Wildlife Service reported that southeast Arizona harbors the greatest diversity of mammal species of any area north of Mexico (FWS 1978). The report proposed protection for eight "unique and nationally significant wildlife ecosystems" in Arizona, and *all but one occurred in the southeast part of the state*. A US Forest Service "Sensitive Plant List" for the Southwest Region (May 1990) and a "Sensitive Species List" for the Coronado National Forest (August 1988) identified 56 species of plants and 128 species of mammals, birds, fish, reptiles, and amphibians listed as endangered, threatened or potentially threatened under state and federal conservation programs. This number far exceeds that of any other National Forest in the Southwest Region (Figures 4-9). Botanists Janice Emily Bowers and Steven McLaughlin estimated that each mountain range managed by the Coronado is inhabited by 800-1200 plant species and that the flora of the entire Forest probably exceeds 2000 species (McLaughlin 1992). This total is potentially greater than that for

any other US National Forest and exceeds the total number of plant species inhabiting the entire northeastern United States.

Conservation of biological diversity is perhaps the most important facet in the global effort to maintain a healthy environment for present and future generations (Soulé 1986; Shafer 1990). In 1991, at least five bills were introduced in the US House of Representatives to protect the nation's biodiversity. The Forest Service's most recent national management program (1990 RPA Program) recognized the need for vigilant protection and restoration of native ecosystems on National Forest lands (USDA Forest Service 1990b, p. S-18). Yet efforts to inventory and protect native species diversity on the National Forests have languished while timber cutting, livestock grazing, and the development of roads and recreational facilities continues apace.

THE SKY-ISLAND ALLIANCE'S PROPOSAL FOR THE CORONADO

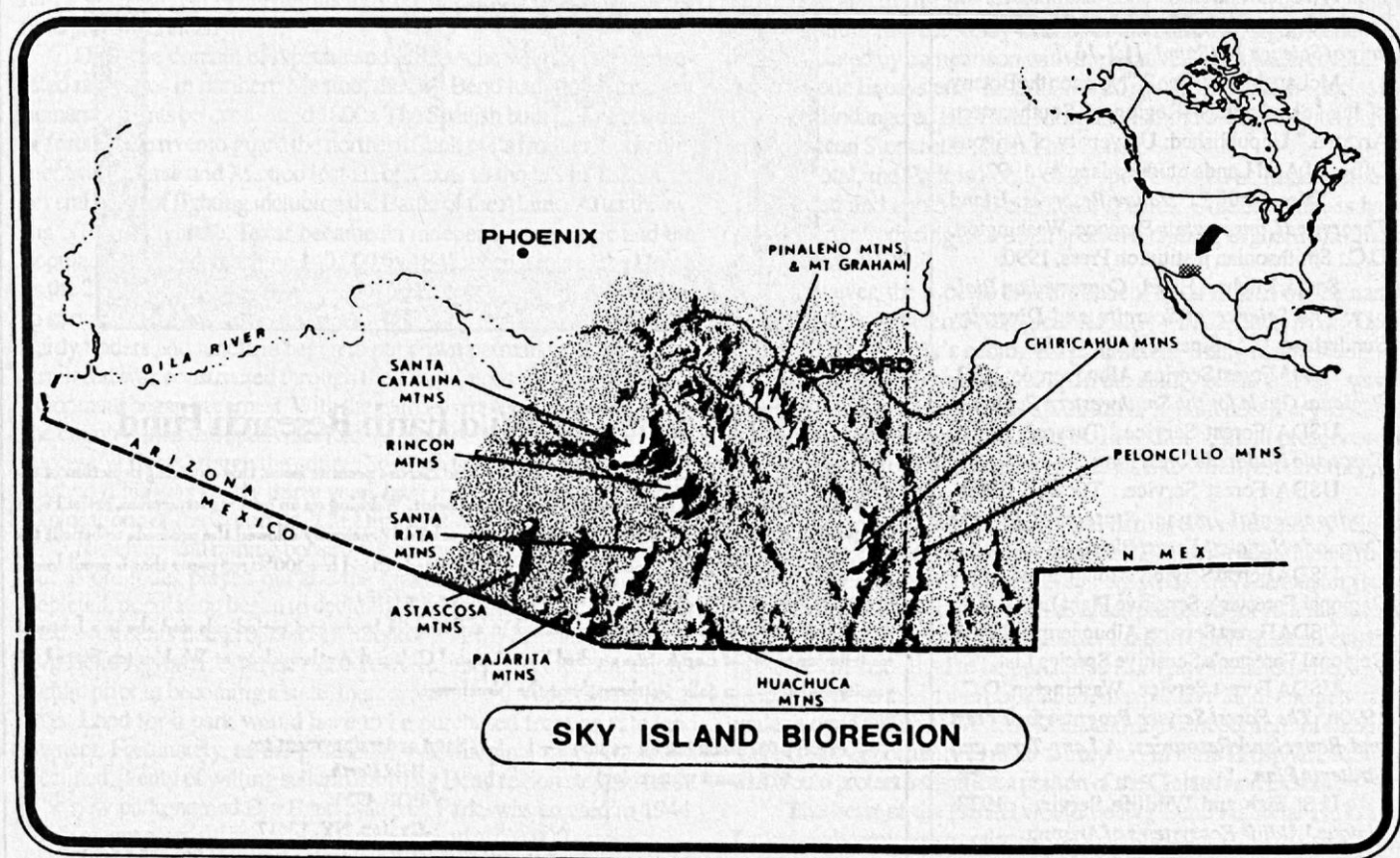
We propose that the Forest Service and Congress designate the most ecologically rich mountain ranges of the Coronado National Forest as a Biodiversity Conservation Area. We recommend most of the National Forest acreage on eight mountain ranges of the Coronado for designation in this initial proposal: the Santa Catalinas, Rincons, Santa Ritas, Atascosa-Pajaritos, Huachuca, Chiricahuas, Peloncillos, and Pinalenos. These include all the ranges in southeastern Arizona with elevations over 8500 feet (supporting conifer forests at their summits), plus two additional ranges that provide crucial international migration

corridors for wildlife (the Atascosa-Pajaritos and Peloncillos). Specific boundaries will be drafted after further consultation with the Forest Service and public interest groups.

We propose that the conservation and appreciation of biological diversity be elevated to the highest management priority for the area designated, and that this priority be explicitly recognized in all management decisions regarding the conservation area. With this special area designation, the FS should shift administrative emphasis from demand-based management to conservation-based management. Goals in the current Coronado National Forest Plan for restoring all riparian areas to a healthy condition, monitoring populations of key "habitat indicator species," maintaining viable populations of all native species, and recovering threatened and endangered species should be given greater financial and institutional support.

WHY NOT A NATIONAL RECREATION AREA?

The Coronado hopes a "National Recreation Area" designation will strengthen its ability to control future recreational use by securing for the Forest a larger recreation budget. This is a classic bureaucratic approach to problem solving. The trouble is, an NRA designation would likely exacerbate, rather than resolve, future problems by focusing public attention on recreation opportunities. The label "NRA" informs the public that recreation is considered the highest and best use of the area in question. The Coronado should strive to manage recreational use rather than encourage more of it. A designation focusing on biological



values would strengthen the agency's hand in managing future recreational demand.

WHAT TO DO:

Contact the Sky-Island Alliance if you would like to get involved (1639 E. 1st Street / Tucson, AZ 85719 / 882-0830 or 323-0547). Alliance supporters are writing to the Coronado National Forest (Jim Abbott / Coronado National Forest Supervisor / 300 West Congress / Tucson, AZ 85701) and telling him they oppose a National Recreation Area designation on the Coronado and support a designation emphasizing conservation of biological diversity. They are sending copies of their Forest Service letters to Arizona's US Senators McCain and DeConcini with cover letters asking them to sponsor legislation for a Biodiversity Conservation Area (no bill has yet been written) and to support more funding for biodiversity protection on the Coronado.

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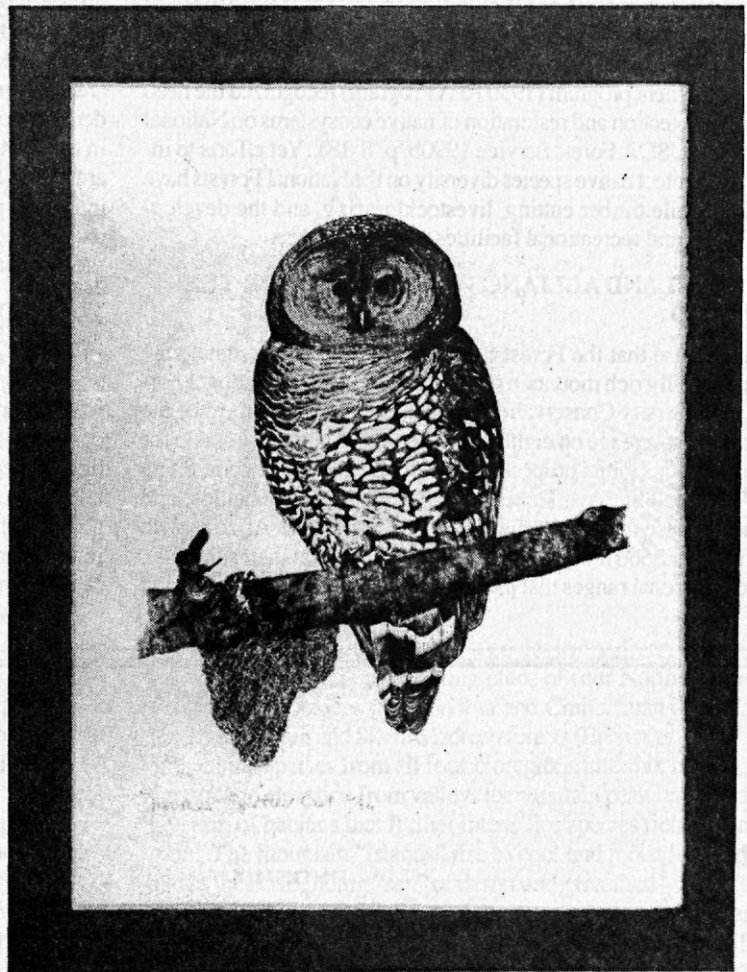
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Northern Spotted Owl Fine Art Print



To Benefit The Wild Earth Research Fund

The same image which graced the cover of *Wild Earth's* premier issue, this stunning depiction of the Northern Spotted Owl is now available as a fine art print. Working on an antique letterpress, artist Peggy Sue McRae has created a limited print run of this work and graciously allowed the proceeds to benefit the Wild Earth Research Fund. Each piece (11x14 in.) is printed on acid free 100% rag paper that is mouldmade in France. Each print is hand signed and numbered by the artist.

Peggy Sue McRae's work has appeared in a variety of books and periodicals and she is a frequent contributor to *Wild Earth*. She studied Fine Art and Cultural Anthropology at Washington State University and shows in galleries throughout the Northwest.

Price: \$50 (black ink on paper)
\$75 (hand watercolor)

Send orders/payment to:

Wild Earth
POB 492
Canton, NY 13617
(NY residents please add 7% sales tax.)

A Greater Big Bend Ecosystems Proposal

by George Wuertner

For most of its length, the western border of Texas is defined by the Rio Grande. Approximately three hundred miles south of El Paso, the river makes a long U-shaped loop — the Big Bend. Known as the *despoblado*, or uninhabited land, by the Spanish, it is still one of the last frontiers in the United States. In an area the size of Maryland live only 13,000 people — most in a few small towns like Alpine, Marathon and Marfa.

The reason for its light population density is water or the lack thereof. This region lies at the northern reaches of the Chihuahuan Desert, one of four major desert regions in North America. Most of the Chihuahuan Desert is in Mexico. This desert is characterized by its relatively high elevations, cold dry winters, "wet" hot summers and abundance of succulent species such as lechuguilla and agave. Castolon on the Rio Grande near Mariscal Mountain receives only five inches of rain a year, but higher elevations may receive more than 25 inches of precipitation annually.

Once the domain of Apache and Comanche who raided the isolated rancheros in northern Mexico, the Big Bend had few permanent human residents before the mid 1800s. The Spanish built a few Presidios or forts on the river to guard the northern flank of its frontier, but settlement was sparse and Mexico lost all of Texas to the US in 1836 after several years of fighting including the Battle of the Alamo. After throwing off Mexican rule, Texas became an independent republic and the population swelled, reaching 140,000 by 1845 when it joined the Union as the 28th state. The federal government began to sponsor expeditions to survey and map the border region beginning in the 1850s and a few hardy traders and ranchers began to put down permanent roots. When a railroad was constructed through the Trans Pecos region in 1881 development began in earnest. With the railroads, ranching developed and the country attracted sparse settlement, but not until 1889 was the first successful float through the entire Rio Grande canyon system accomplished. This was nearly thirty years later than John Wesley Powell's explorations of the Colorado. The Big Bend was truly remote.

Ranching and mining became the mainstays of the local economy, but as ore lodes played out and the grasslands were overgrazed and depleted, population began to decline again. By the 1930s a number of Texas residents had proposed creation of a new National Park in the Big Bend region. However, since Texas had been an independent republic prior to becoming a state, there were no large federal land holdings. Land for a park would have to be purchased from private land owners. Fortunately, as the profitability of marginal ranch operation declined, plenty of willing sellers in the Big Bend region stepped forth. The new park, named Big Bend National Park, was created in 1944. With recent acquisitions, it now includes nearly 780,000 acres.

Scenically, it is unsurpassed in Texas. Canyons like Boquillas,

Mariscal and Santa Elena are carved more than 1,500 feet into the Earth by the river, and mountains rise up in craggy relief to nearly 8,000 feet above sea level. At the center of the park are the rugged Chisos Mountains, southernmost mountain range in the United States.

Big Bend habitat ranges from desert scrub to riparian gallery forests along watercourses to conifer forest on the highest peaks — with a corresponding multitude of lifeforms. This diversity has been internationally recognized with Big Bend's designation as a Biosphere Reserve.

More species of birds (434) have been recorded here than at any other National Park in the nation. For example, cited within Park borders have been 52 species of warblers. Mammal representation is equally impressive with 78 species including Black Bear, Mountain Lion, and Sierra del Carmen Whitetail Deer and dozens of bat species.

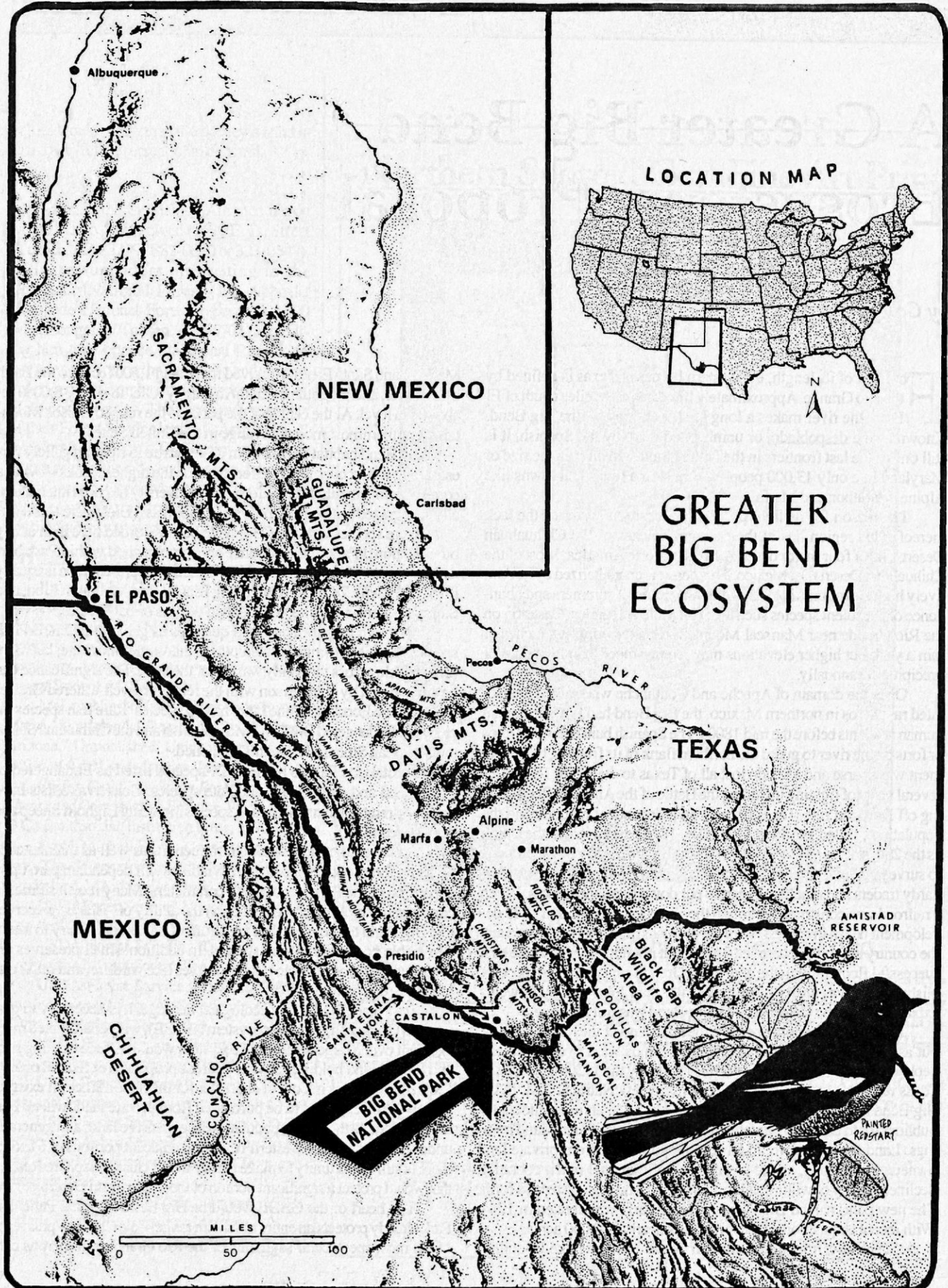
Although most of Big Bend qualifies as genuine desert, 34 fish species inhabit the limited watercourses that sometimes rage, but more often trickle across the sandy washes of the Park. The significance can be appreciated by comparison with the relatively well watered Greater Yellowstone Ecosystem: the latter has 20 species. Rare fish species include the Endangered Big Bend Mosquitofish and the Chihuahua Shiner and Mexican Stoneroller, both Threatened.

In total, the Park is home to 21 species listed as Endangered or Threatened and another 20 candidate species. Conservationists have proposed reintroducing extirpated species including Bighorn Sheep and the Mexican Wolf.

However, the success of reintroductions as well as maintenance of the region's long term biological viability will depend, in part, upon expansion of the Park's ecological parameters. Many recent studies in conservation biology cast doubt upon the ability of "island" preserves like Big Bend to provide a full spectrum of habitat necessary to maintain viable populations of all species. In addition, small preserves are inadequate to protect ecological processes like wildfire, and other disturbance regimes.

To protect Big Bend's ecological heritage, it is necessary to designate a Greater Big Bend Ecosystem (GBBE), with coordinated management over a large area. The Ecosystem would include existing state and federal land holdings as well as areas proposed for federal or state acquisition. This is not out of character for the region since all existing preserves in Texas had to be purchased from private landowners. Fortunately, due to the sparse population, inexpensive land, and generally undeveloped nature of western Texas and adjacent portions of Mexico, there is still opportunity to make a truly world class Biosphere Reserve that would protect a significant portion of the Chihuahuan Desert.

The heart of the GBBE would be Big Bend National Park. The Park already protects an entire mountain range—the Chisos—plus some of the most spectacular segments of the Rio Grande's numerous can-



LOCATION MAP

GREATER BIG BEND ECOSYSTEM

MEXICO

NEW MEXICO

TEXAS

CHIHUAHUA
DESERT

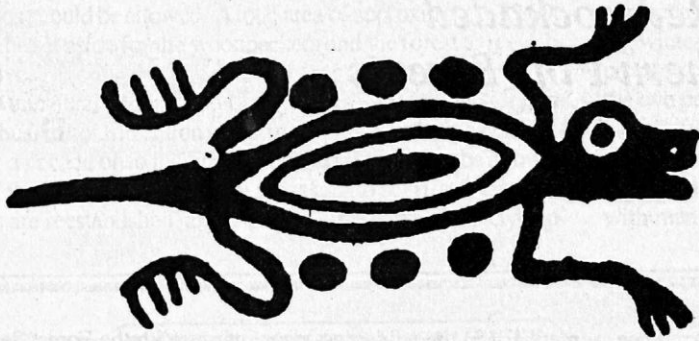
**BIG BEND
NATIONAL PARK**

Black Gap
Wildlife
Area

AMISTAD
RESERVOIR

PAINTED
RESTART

MILES
0 50 100



yons. Two state owned holdings—Big Bend Ranch State Park and the Black Gap Game Management Unit—are adjacent to the National Park and would be natural extensions of the ecosystem reserve. Big Bend Ranch State Park, a 215,000 acre parcel purchased only four years ago, lies along the western flanks of the National Park, taking in some sixty miles of the river including Colorado Canyon and the volcanic Bofecillos Mountains. The Black Gap Game Management Area is 112,000 acres that borders the Park on the east.

Additional federal purchase of lands to the north, including the Christmas Mountains and the part of the Rosillos Mountains outside of the Park, would further expand Big Bend National Park. If possible, all the private lands between the Rio Grande and Alpine and west to Marfa should be acquired. However, given today's political climate, such a massive acquisition is not likely to be accepted and the more modest proposal outlined above is probably the best hope at this time.

Ecosystems know no political boundaries; vistas likewise. And when in Big Bend nearly all visitors cast their eyes across the river into Mexico at the sheer, limestone escarpment of the Sierra Del Carmen rising nearly 5,000 feet above the Rio Grande. Since 1935 there has been discussion of creating a sister park centered on the Sierra Del Carmen and Sierra Fronteriza in the Mexican state of Coahuila. The northern extension of the Sierra Del Carmen is protected within Big Bend National Park, where they are called Dead Horse Mountains. The remainder of the range in Mexico should come under some kind of protected management as well.

The volcanic Sierra Fronteriza, to the southeast of the Sierra Del Carmen, offer even greater biological treasures since they reach elevations of nearly 9,000 feet. Atop these mountains are flowered meadows amid forests of aspen, Douglas-fir, Ponderosa Pine and Arizona Cypress where Black Bear still roam. Some of the forests were logged years ago, but most tracts are still virgin. Furthermore, there are no livestock or permanent residents in these mountains. Interest in Mexico for establishing a new park is at the highest level in decades. The most recent proposals would protect up to two million acres as a national park or preserve.

Big Bend National Park when combined with acreage in the Big Bend Ranch State Park and the Black Gap Game Management Area would encompass nearly a million acres. Add to this another million or two in Mexico and a sizeable parcel of the Chihuahua desert begins to have potential ecological viability. But the Greater Big Bend Ecosystem must expand beyond even these bounds, and be linked to other islands of habitat by faunal movement corridors.

For example, recent proposals to establish a new National Park in the Davis Mountains should be pursued. The Davis Mountains contain Texas's second highest peak and are a major natural upland island bridging the gap between Big Bend and the Guadalupe Mountains on the New Mexico and Texas border. Smaller intervening mountain ranges between the Davis Mountains and New Mexico's Guadalupe Mountains will provide a natural corridor for some wide ranging species, if conservation easements and other means secure permanent protection.

Rivers are among the best corridors. Mammals can hide in riparian vegetation and travel without detection. Fish can move up and down the waterway and many bird species use rivers as migration routes. Therefore, the entire 191 mile Rio Grande Wild and Scenic River corridor, much of it outside of Big Bend National Park, should be expanded to protect side canyons and uplands from Big Bend National Park all the way to Amistead Reservoir, by Langtry, Texas. Though the Wild and Scenic River System was established originally to preserve recreational and free flowing rivers, its role should be expanded to include linkages in island archipelagos of protected wild landscapes.

I have limited knowledge of Mexico beyond the Sierra Del Carmen and Sierra Fronteriza, so can not suggest how these areas might be linked up with other major ecosystems in that country. However, if new energy were focused on designing a Greater Big Bend Ecosystem reserve for the region, scientists and conservationists in Mexico would likely join the effort, making this a truly international cooperative effort.

Land purchases or changes in management will not correct all the problems facing the Big Bend Ecosystem. Air pollution from distant industrial sources often obscures the sky and pesticides from agriculture in Mexico wash down the Rio Grande. Overgrazing has led to soil erosion, loss of native plant communities, and the extirpation of many species including the Mexican Wolf. And given that people live within the broader Big Bend Ecosystem area, some accommodation of existing uses will have to be built into the project. However, through education, persuasion and proper incentives, uses that compromise the ecological integrity of the region could be mitigated or eliminated.

With luck, future residents and visitors to the Big Bend region may chance to see Comanche moonrises over the landscape in autumn, while a wolf howls somewhere in the distance. Then will the potential of the Greater Big Bend Ecosystem have been realized.

George Wuertner is a wildlife biologist and author of numerous articles and books on natural areas, including Texas' Big Bend Country, published by American Geographic.

Woodpecker Wilderness

A Last Stronghold for Red-cockaded Woodpeckers and Southern Pine Forests

by Ray Vaughan

Located in the steep hills of west-central Alabama, the Oakmulgee Ranger District of the Talladega National Forest has one of the highest densities of red-cockaded woodpecker colonies in the National Forest system. As of early 1992, this area had over 300 colonies of this Endangered species, with over 130 of them active at the time. The number of red-cockaded woodpeckers there is so high (relative to their scarcity elsewhere) that many of the colony trees are right next to roads, including some next to a state highway that runs through the forest.

With so many of the legally protected birds present, much of Oakmulgee has been spared the clearcuts and short-term rotation pine plantations that have decimated many of our southern National Forests. Although not virgin forest, large expanses of natural, mature pine forests remain, and wildlife in these areas is abundant and diverse. Spring brings yellow-throated warblers, prairie warblers, pine warblers, brown-headed nuthatches, indigo buntings, summer tanagers and other birds in great numbers. These forests provide a chance to see the South as much of it once was...and perhaps shall be again.

Wilderness designation for the roadless portion of the Oakmulgee [and Wilderness Recovery designation for the rest] would assure continued protection for the woodpecker and restoration of a small part of the southern pine forests of long ago. Many areas protected from cutting due to the woodpeckers' presence already have pines in the 100-plus year old range. Just a few more decades of undisturbed rehabilitation will allow this land to regenerate itself to the way it once was, and luckily, a core area that can easily be set aside is available.

A tiny, 650-acre portion of the most completely federally-owned block of land in the National Forest was considered for Wilderness designation under the old RARE II program. This parcel has been administratively protected as Reed Brake Research Natural Area. During the RARE II process, the Forest Service wrote favorably about the wilderness qualities of Reed Brake, but its tiny size and lack of a constituency kept it from gaining Wilderness designation. Indeed, when the environmental groups were negotiating to make a small addition to the existing Sipsey Wilderness in the Bankhead National Forest (see "Compromising the Wilderness," *Wild Earth* Winter 1991/92, p. 74), Reed Brake and the surrounding land in the Oakmulgee were completely ignored, except by Earth First!, which published a story outlining a 160,000-acre wilderness plan for Alabama's National Forests. That plan included Reed Brake and the land around it. I was the only environ-

mentalist in the wilderness negotiations with the Forest Service who had been to Reed Brake.

Revisiting Reed Brake in the spring of 1992, after an embarrassingly long interval, I was amazed to find so much of it intact. Other areas that could have been saved as Wilderness in the early 1980s have been logged, mined, roaded, or otherwise damaged, but much of the Oakmulgee remains wild. The Forest Service recently cleared the hardwood understory in certain areas to give the older pines room to grow. This action was designed to improve the woodpecker's habitat. Many forest tracts needed this help, due to decades of Forest Service fire suppression. The goal is to recover the area to a park-like pine forest with rolling, well-drained hills of old pines rising above the hardwood forests of the Mayfield Creek system.

Although unadaptable to man's way of managing forests, the red-cockaded woodpecker is an amazingly intelligent bird. They take up to five years to build their nesting holes in live pines old enough to have heartwood rot; then they peel the bark and drill tiny holes around the nest hole such that pine sap coats the tree around the hole. The hardened sap becomes a slippery and chemically noxious barrier past which rat snakes cannot climb. Faithful to their colony and family, these cooperatively nesting birds pass cavity trees down through the generations, as prized family homes are passed down among close-knit human families.

Years after signing away most of Alabama's National Forest land in order to get the Sipsey Addition, environmental groups here are beginning to look around to see if any other land could still be preserved. As mentioned in "Compromising the Wilderness," Dugger Mountain is still intact, and The Alabama Conservancy has taken an interest in getting it designated as Wilderness. Ned Mudd, gonzo environmental lawyer and *Wild Earth* correspondent, and I have brought the Oakmulgee to the attention of Alabama's environmental groups. Apparently having learned from past mistakes, these groups now want Wilderness protection for everything left. What will be considered a "reasonable" wilderness proposal for the Oakmulgee by the environmental groups remains to be seen; but here is our proposal for an Oakmulgee/Red-cockaded Woodpecker Wilderness. In light of the extensive degradation of almost all of Alabama and the paucity of designated Wilderness in the state—only 34,000 acres—we think it is very reasonable.

The accompanying map shows the location of the Oakmulgee and the potential Wilderness within it. The area has several recent clearcuts,

but they will recover with time. There is also an underground natural gas pipeline through part of this area, but it has little effect on the forest. It could be grandfathered in for its structural lifetime, but it should be removed when its present structure is no longer useful. Paved highways dissect our proposal into three main areas (one large, two smaller); no more roads should be allowed. A total area of approximately 72,000 acres could be set aside for the woodpeckers and the forest to reestablish themselves.

Due to unnatural suppression of fire, a hardwood understory developed. Thus, in contravention of normal policy for designated Wilderness, for a decade or so the Forest Service may need to be allowed to clear out the hardwoods in certain areas and to set fires. Once the pine forests are reestablished, and if natural fires can adequately sup-

press the hardwoods, then the area can be left alone. [Science editor's note: *Isolated, fragmented forest patches may not receive lightning strikes often enough to maintain a fire-dependent community. Continued use of prescribed fire will probably be necessary.*] To protect this 72,000-acre area, only a few dirt roads would have to be closed and converted to trails; many of these roads are already closed except during winter hunting season. Very little private land is located within the proposed Wilderness boundaries, and most of the inholdings are along the two paved roads that will remain open. One inholding exception is a beautiful old church that has been in use since 1845. Exceptions to allow travel to this and a few other historic churches in the area on Sundays along confined routes will have little impact on the forest. As with many southern forest areas, biological diversity can be restored

and maintained even if the area is not totally "pristine" from an aesthetic viewpoint. Occasional road use for historic churches, two paved highways and the gas pipeline will not prevent the recovery of the forest. Allowing these minor concessions to continued human use could mean a greater area of Wilderness designation than would otherwise be possible. Of course, acquisition of the inholdings and other additions to federal land to expand the Wilderness in the future should lead to the eventual removal of the pipeline and roads.

Because red-cockaded woodpeckers inhabit much of the Oakmulgee, logging is unlikely in most of the Ranger District. The Endangered Species Act forbids the adverse modification of the bird's habitat. Although the Forest Service here does the best job either Mudd or I have ever seen of actively managing the forest for protection of an Endangered species, as long as Bush remains President, the ESA is in danger, and along with it, all the rare creatures that it protects. To assure continued protection for the woodpecker and for its habitat here, Wilderness designation is necessary. With Wilderness designation and ESA protection, nature will have the opportunity to recreate a small example of what the great southern pine forests once were.

WHAT YOU CAN DO:

It will be several years before Alabama's congressional delegation considers another wilderness bill. But watch this magazine for when the proposed designation of the Oakmulgee and Dugger Mountain comes up; then contact your senators and representative. If you come to Alabama, visit the Oakmulgee, and then write Alabama's congresspersons and tell them how the Oakmulgee was an important part of your tourist agenda and how you would like to see it preserved, as you would then be able to return to Alabama with your tourist dollars.

Ray Vaughan is an environmental attorney and wildland advocate in Alabama.



Mountains that Walk: Excursions and Reflections

by Max Oelschlaeger

TRAILHEAD

In the fashion of Thoreau, or St. Henry, as John Graves calls him, my life runs into my writing into my life the round dance of being. "Mountains that Walk" reflects excursions over the last two decades, some with paper and pen, some with the environs of the San Juans, the Sangre de Cristos, the Guadalupe, and the Rockies of Rocky Mountain National Park. Like Thoreau, I try to escape the contingency of the Western outlook on time, an outlook deeply, inextricably embedded in the Judeo-Christian narrative tradition. The events of these twenty-some years run together as snow-melt rivulets down the mountainside, excursions and reflections into a single stream here-now. So too the writings of those who inspire me: I read texts, and mountains run into texts into mountains. "Time is but the stream I go a-fishin' in."

Michael Cohen—Muir's best biographer—understands these things. Michael now summers in a fifty-year old Forest Service lease cabin, close to the east side of Yosemite. "Every time I go into the Sierra," he writes in a recent letter, "something magical happens."

The written narrative, now in its third iteration, was originally an account of how mountains moved through me into a wilderness book. The walking continued through an academic conference on Heidegger, cast into a Thoreauvian metaphor. Mountains walk still. A story continues to unfold. Wherever my feet go, it seems, so too goes Thoreau. "Walking" moves across every page, dogs my every step.

As mountain excursions the walking started long ago. Mountain geology is so interesting. Mountains are moving slowly in the same cosmic flux through which we big-brained bipeds frenetically race, caught up in the belief that we are going somewhere. Mountains that walk help me to escape the illusion of Euroculture that opposes spirit and matter. The mountain paths I hike are walking in me. We are flesh of the earth.

Gadamer haunts me, now as I write at my desk, and even when my boots travel gravelly trails. Are we at "the end of our linguistic culture," he asks. He means Greek culture. Greek metaphysics. There is a suspicion seeping into consciousness that "if we continue to pursue industrialisation, to think of work only in terms of profit, and to turn our earth into one vast factory as we are doing at the moment, then we threaten the conditions of human life in both the biological sense and in the sense of specific human ideals even to the extreme of self-destruction." (T&M, 49) True enough, Gadamer is anthropocentric. Still, he is not a characteristic Western philosopher: He knows that earth exists. Then again, he trails in the wake of Heidegger, who sowed the seed of suspicion for the late-modern mind caught between a failed past and a future powerless to be born.

Like alpine tundra, my essay is marked by crossings and recrossings. The Heideggerian trace is indelible, but he is not in academic fashion these days. Even his most lucid expositors, such as Michael Zimmerman, feel compelled to reassess their interpretations. Heidegger was involved with National Socialism. Zimmerman also believes a strain of anthropocentrism infects his philosophy. And yet, Erazim Kohák advises, we should not be too hard on Heidegger's lapse of political judgment; all human beings have feet of clay. What remains inexcusable is his failure to repudiate National Socialism, to realize and publicly acknowledge his naïveté, his culpability.

Whatever the fashion among intellectuals these days, I walk a pathless way. I am no Heideggerian in any academic sense. With Dolores LaChapelle's reading in mind, I celebrate

... mountains are most worthy of deep study. For everywhere you turn, they present to every sense a multitude of objects to excite and delight the mind. They offer problems to our intellect; they amaze our souls. They remind us of the infinite variety of creation, and offer an unequalled field for the observation of the processes of nature.

— Josias Simler,

*De alpibus
commentarius
(1574)*

Heidegger in his fullness as edifying philosopher, as one who impels at least a few along a pathless way, Being's odyssey. In the context of the world midnight he is the philosopher of this century. As Dolores writes, "The difference between authentic and inauthentic being-in-the-world is the heart of the matter." (EW, 81)

Where are the words that speak for Nature, Thoreau asks, the words that still have earth clinging to their roots? If we late-moderns could find those words might we not also discover authenticity—a good, wild and sacred path, Gary Snyder might say. Think of the numbing reality which is the daily existence of Dasein, the lives of quiet desperation, of alienation worse than Thoreau knew.

Remarkably, there are among us storytellers weaving postmodern Thoreauvian tales. Leslie Marmon Silko's brilliant deconstruction of the legitimating narrative of the West, *Almanac of the Dead*, thrusts into my consciousness. The modern story turns upon itself, consuming itself, the earth and sky, mortals and immortals. And so, with Gadamer, "we are led to ask, whether there may not be hidden in our experience of the world a primordial falsity; whether, in our linguistically transmitted experience, we may not be prey to prejudices or, worse still, to necessities which have their source in the linguistic structuring of our first experience of the world and which would force us to run with open eyes, as it were, down a path whence there was no other issue than destruction. . . ." (T&M, 491)

Yet Gadamer and his brethren take a path that I cannot, though I do not deny the merit of those who pass that way. Those who hope to embrace Being must go to the mountain sans civilization's accoutrements. In wildness, indeed, is preservation of the world. Merleau-Ponty intimates that authentic philosophy "consists in restoring a power to signify, a birth of meaning, or a wild meaning, an expression of experience by experience, which in particular clarifies the special domain of language." (V&I, 155) There exists a possibility for the recovery of Being in the Mountains: a possibility open to anyone with an "average and vague understanding of Being as a fact." (B&T, 6)

My narrative is of my own round dance of Being, realizing through the immediacy of being in the mountains the interrelation of earth, sky, gods and mortals—the onefold. I seek with Henry Bugbee "the primordial address of the place in which the potential of speech may be trued and renewed." Mountain walking gives lie to my socialization as Euroman. I cross the divide between wilderness and civilization. To find the primordial address of place, the source, I must let the mountain walk. I stop thinking, abandon the analytic habit of mind, silence the "brain-box chatter" (as David Abram has called it) that separates me from Being. I make it possible, to paraphrase Hans Peter Duerr, "for an archaic mode of perception to reveal itself." (D, 121) I escape the contingency of cultural conditioning.

There is a pathless way for mountain walking. Certitude is but a reflection of the illusion that method produces truth. As Heidegger says, "Thinking is perhaps, after all, an unavoidable path, which refuses to be a path of salvation and brings no new wisdom. The path is at most a field path, path across fields, which does not just speak of renunciation but already has renounced, namely, renounced the claim to a binding doctrine and a valid cultural achievement or a deed of the spirit. Everything depends on the step back . . ." (PLT, 185) By stepping back we step forward on a crusade, on an excursion which follows a pathless way. Our crusade is a walk à la Sainte Terre. We are but pilgrims on a crusade for Being. We saunter along the pathless way across the ruins

of infidels to the Holy Land, to mountains where we embrace earth and sky, mortals and immortals.

As the flower children gathered at Yagur's Farm once sang, we are star dust, and we've got to get ourselves back to the Garden.

PINE TOP AND OTHER MOUNTAINS

say, have a sandwich. why on earth don't you want to develop this area?

**it's a real good possibility—
mountains all around
crater lakes, hot springs, right there.**

**Saddle Mountain
well of course Saddle Mountain
and that big crater's probably older than hell itself.
why sure! you could fix it up like Hell . . .
tourists will flock from all over.**

— Miyazawa Kenji, from "Some Views Concerning the Proposed Site of a National Park" (trans. by Gary Snyder)

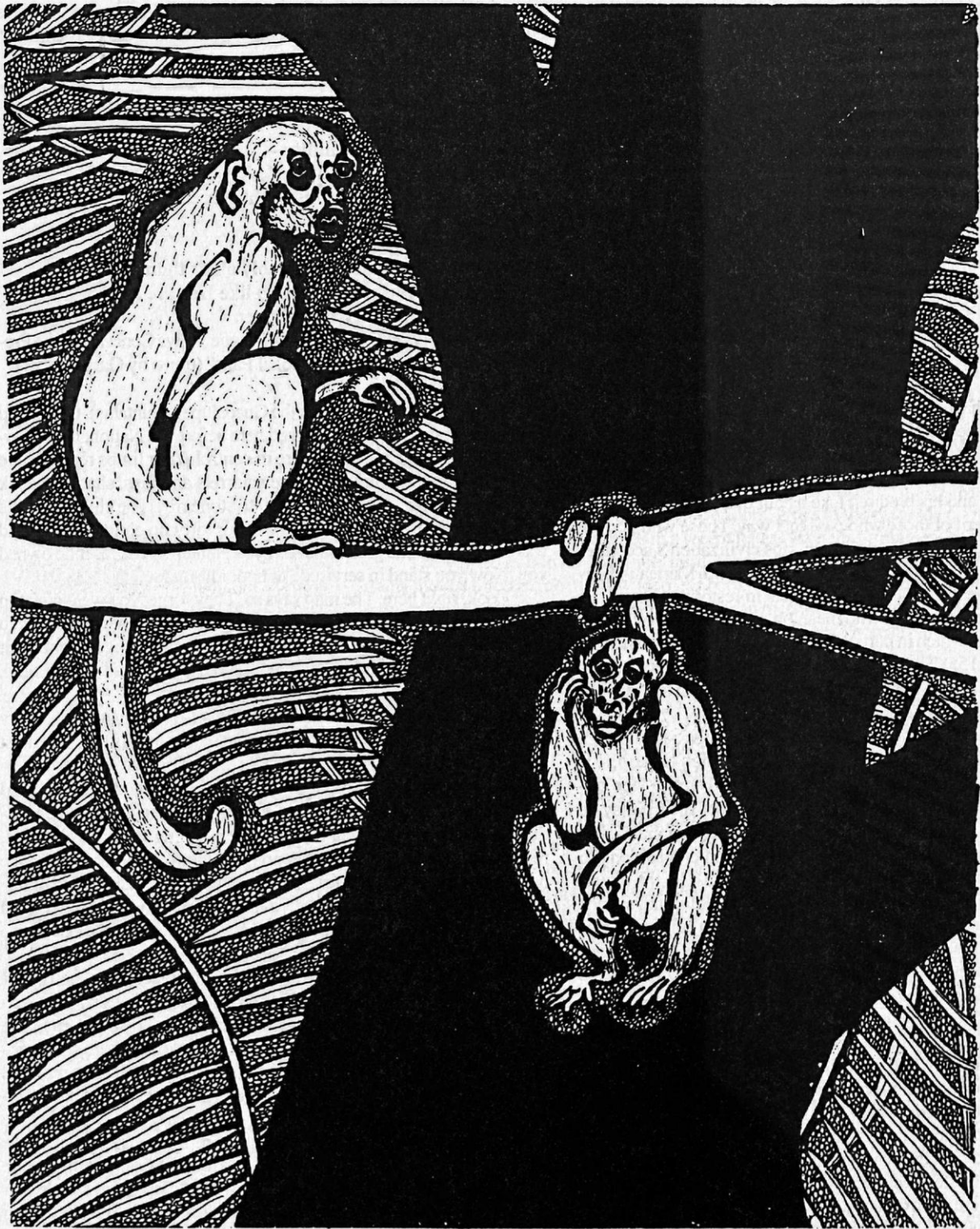
Pine Top (a prominent peak in the Guadalupe Mountains), they called you, the ancient ones who lived here before the National Park Service came; now the green suits are in control. Your limbs received the sunlight, your cones nourished the squirrels and jays, shaded the elk and deer, and your roots held the soil to stone ribs. The children of the rock communed with the gods from your lofty precipice: the ground was sacred. Now the green suits call you Hunter's Peak, as if he owned you. Now you stand in servitude to honor his name.

Look, right here. The map says so. They forget you were pine top long before there were dark eyes set in red faces to see your jagged silhouette. And soon you shall again be pine top, no longer monument to man. The bronze marker that pierces your breast shall pass in time, too.

What did they think they were doing? A few like Muir and Jeffers have discovered with radical astonishment mountain wisdom. But most are sightless, caught in the channels of convention, mountain truth obscured. What people know of mountains are commodities marketed and consumed: Walt Disney would approve. Mountains have been rendered *invalids* in that peculiar inversion of Being which is the West, replaced by the artifice of convention, of culture, their alpine essence now standing reserve. Western culture, in that most radical kind of linguistic confabulation, has alienated itself from Being, and substituted that which is merely phantasmagorical Heaven, the soul, the ego cogito for the ground of existence.

"Think of life in nature," writes Thoreau. Contact. "The solid earth! the actual world!" We once profaned mountain meadows with hooved animals of our making; wild wool was only prized by children of the rock. Woolly locusts no longer graze alpine meadows to bare soil; highways and condominiums grow in their place, economic having replaced ecological succession. Laughter and the whistle of money have supplanted bleating. Caterpillars belching acrid smoke have drowned the smell of sheep shit. Motor touring and alpine skiing are big business. The naked apes have come, dressed in artificial fabrics, bearing plastic cards that mirror their own being. They ride upon steep slopes, ensconced in cocoons of metal and air conditioned oblivion, following highways prepared by bureaucratic leviathans for the masses.

We humans, you know, have conquered Everest. And bagged all



by Jim Nollman

of Colorado's fourteeners. They say you can do Long's Peak, Lady Washington and Meeker in one day.

MOUNTAIN WIND

In an otherwise azure sky, Guadalupe Peak (at 8749 feet the highest point in Texas) is wreathed in clouds, pulled down by the mountain as if a billowing balaclava, perhaps to warm her bald pate. Or perhaps to hide her shame of the stainless steel pyramid, erected by big brained bipeds who thought such things brave testimony to...? to what? Big brains? Kilroy was here. And so is the Park Service.

As the sun's rays caress her flanks she releases her covering. Currents of warm air push against the fleecy cap, dispersing the cloud into desert environs. But mountain zephyrs do more than move clouds and shape rocks—they move naked apes, too.

Here is Being's presencing in being. In Nature there is a subtle magnetism, Thoreau counsels, that will direct the pilgrim on the pathless way. Mountains walking. My life moved and moving, beginning when sun soaked breezes stirred alpine forests: I am an instrument of mountain destiny.

How can wild nature spawn an intuition? an idea to be borne? a life to be directed onto a strange and altogether compelling course? But such questions presume perspective. We must step back. Heidegger writes,

**When the little windwheel outside
the cabin window sings
in the gathering thunderstorm . . .**

**When thought's courage stems from
the bidding of Being, then
destiny's language thrives.**

**As soon as we have the thing before
our eyes, and in our hearts an ear
for the word, thinking prospers. (PLT, 5)**

Here the sober skeptic creature of social perspective, ensconced in hallowed halls of the academy, is sure to point out the overt Romantic, aesthetic nature of such talk. Mountain walking, indeed! "Sustainable development" is the last word about nature these days. The United Nations has bought Gro Brundtland's buzz-word. "Sustainable development" is ready for export. Buy stock now in the managing planet Earth industry.

Still, Thomas Mann suggests, there is a magic in the alpine air. There is mystery in those leaves whose fluttering presence animates thinking. Even the systematic philosopher cannot cogently deny the possibility that the effect of quivering quakers on naked apes is more than mere romance. The danger here in our being as Professor is philosophizing. The consequences of succumbing to matters of scholarship are catastrophic—inauthenticity; nihilism; the darkening of the world. One is reminded of Thoreau's remark that "there are nowadays professors of philosophy, but not philosophers." And Leopold's, too. Professors are men charged with the duty of examining the construction of life. "This process of dismemberment is called research. The place for dismemberment is called a university." (SCA, 162)

Whatever happened to Rachel Carson? Out of sight, out of mind? No. It's not that simple, Leopold tells us. The obvious, glaring dispar-

ity between the enormous influence Rachel Carson had on public opinion, a whole generation of Americans, and the relative lack of influence she has on her colleagues is easily explained. The dismemberment of nature was to her an abomination. "The 'control of nature,'" she writes, "is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man." (SS, 261) As Grace Paley says, "Rachel Carson thought that loving the world was what science had to be about. That it is essential to love the natural world before you can understand it. This was not sentimentality. She knew it would be dangerous to undertake understanding without that love, as well as love's classy child awe and its everyday child responsibility." Carson knew that professors associated naming with owning, "that owning preceded using, and that using naturally preceded using up."

Dare we think? Dare we speak of Being? Dare we abandon society and succumb to the temptation to embrace the onefold? Can we let destiny's wind shape us, as it shapes the mountain top? "When thought's courage stems from the bidding of Being, then destiny's language thrives." Heidegger gently reminds us of the pathless way and of the stark reality of our Euthyphroean predicament. We suffer from the illusion that we are the masters and possessors of language. "Few are experienced enough in the difference between an object of scholarship and a matter of thought." To allow thought to eventuate from social context—to be governed by the language of the contemporary scholastic and the contingencies of the industrial growth society—is to not think at all.

And yet, paradox of paradoxes, to be human is to be linguistically and historically enframed. Zen master Dōgen writes in the Mountains and Water Sutra that "even if you see mountains as grass, trees, earth, rocks, or walls, do not take this seriously or worry about it; it is not complete realization. Even if there is a moment when you view mountains as the seven treasures shining, this is not returning to the source. . . . Even if you have the highest understanding of mountains as all buddhas' inconceivable qualities, the truth is not only this. These are conditioned views."

Mountains walking remind me that the name that can be named is an artifice. Tao is the mother of the ten thousand things.

Are we at the end of our linguistic culture? Where are the words that speak for Nature? Heidegger says, "We never come to thoughts, they come to us." There is a pathless way beyond when the windwheel sings and the aspens rustle.

What is the sound of one hand clapping? Smell the forest. Feel the wind. Love the fossils. Think like a mountain.

MOUNTAIN ROCK AND THE BLOOD OF CHRIST

Long before the big-brained bipeds walked upon your rock came the furry quadrupeds, gracing your meadows and crags, finding nourishment in your grasses. In your presence they will sometimes again talk to us, stand by and near, unafraid of those who ride the mountain with them, at peace with those who have cast off contingency.

And the Lord God commanded the man, saying, Of every tree of the garden thou mayest freely eat: but of the tree of the knowledge of good and evil, thou shalt not eat of it: for in the day that thou eatest thereof thou shalt surely die.

— Genesis 2.16-17.

What an arrogant species we have become!

Kilroy was here, indeed. We are to these rock ribs as a feather in the wind, blown by chance to an alpine rendezvous, motes of protoplasm propelled in Being's stream. Beneath our feet and within our consciousness lies Being's odyssey. We ride a solid crust of stellar debris, risen from the ashes of stars long ago gone dark. But, as Heidegger says, "Only man dies." Cultural mirror play creates death, a reflection of the Western story. Muir calls the tradition a "death orthodoxy" which all town children are taught. Mountain walking teaches us "that death is stingless, indeed, and as beautiful as life, and that the grave has no victory, for it never fights. All is divine harmony." (T-MWG, 71)



Mountains that walk are part of the round dance. We are to mountain rock as grass to soil and deer to grass. Mountain walking establishes our presencing, here-now. We are as we are, blown by destiny to grace fleetingly your slopes. "Mortals are who they are, as mortals, present in the shelter of Being. They are the presencing relation to Being as Being." (PLT, 179) Mountains walking.

As we flow with your terrain we again become children of the rock, playing in the rock, fusing with the rock. We remember what we have forgotten in the accident of human birth. Here is Mother's womb, the void which is the fullness of Being. The children of the rock thought like a mountain. The mountain tops were holy places where immortals had intercourse with the sacred, reunited in an eternal mythical present. That world was centered, directed, focused. Here-now.

Blood of Christ they call you! Sunlight spilled red across your peaks long before warrior Messiahs perished on Roman crosses. Blood spilled by errant men who killed the gods in fear of death and hunger for knowledge. Through Sangre de Cristo we embrace the gods from whom we have been sundered. A severed head, it has been said, is an ugly thing. Head in the clouds, the strictures of the world are loosened. Here humans dare think. Basking on your sun-warmed peaks, the icy hold of Athens and Jerusalem is melted. Through your exposures and the reality of personal oblivion we take a step back and move ahead toward Being. "We never come to thoughts, they come to us."

We walk your narrow ledges, cold hands and quaking heart, finitude now real. "Rational living beings must first become mortals." Mountains walking have no fear of death. Everyday in the mountains is a resurrection day, every death a glorious birth. "One day," Muir writes, "is as a thousand years, a thousand years as one day, and while yet in the flesh you enjoy immortality." (ONP, 102)

From the peak we see Santa Fe with astonished eyes, against the blue horizon, the Holy Faith over which the gods watch, nestled in the Blood of Christ, cradled in your arms of earth. And suddenly the metaphysical mirage of Western culture, by which Being is concealed, is shattered in the mirror play of being in the mountains.

"The world presences by worlding. . . . As soon as human cognition here calls for an explanation, it fails to transcend the world's na-

ture, and falls short of it. The human will to explain just does not reach to the simpleness of the simple onefold of worlding."

— (PLT, 180)

We see now the natural world, the creation: the World of Rocks and Things is Good.

By the Sangre de Cristo forgive us all, for we have sinned. Our soul is not the center of all things, this world not a vale of tears. We have fallen but may yet rise as we climb á la Sainte Terre. As we saunter the step back lies immediately before us. We are mountains walking. We see again with the eyes of the children of the rock and recognize the intrinsic, transhuman beauty of things. This is no mere shift of attitude or perspective. The step back departs "from the sphere of mere attitudes. The step back takes up its residence in a co-responding which, appealed to in the world's being by the world's being, answers within itself to that appeal." (PLT, 181-82)

MOUNTAIN LIGHT

"How glorious a greeting the sun gives the mountains! To behold this alone is worth the pains of any excursion a thousand times over."

— John Muir, *The Mountains of California*

Diamonds, diamonds, burning bright, revelation of Being's light. Long before the big brains came, your light caressed these slopes. And then they looked up. And we, riding Perseus's mighty arm, beheld celestial splendor—Andromeda's light launched ere eyes to see, those ancient photons now caressing comprehending plasm. Those starry embers connect directly with the consciousness of existence. Being's poem, just begun, is humankind. In the illuminated clearing we are being comprehending Being.

In the City of Angels, Being's light is lost in the glow of artificial illumination. But from the mountain top, grounded in rock and surrounded by sky, the starry messengers yet glow.

When the early morning light quietly grows above the mountains

The world's darkening never reaches to the light of Being.

We are too late for the gods and too early for Being. Being's poem, just begun, is man. (PLT, 4)

The mountain peak is the first to receive morning light and the last to darken in the evening. Night comes first to the hinter lands, to the place of culture, and last to the peak, the place of revelation. From the top of the mountain we see the darkening of the world, the world midnight. Even as the Heavens wheel the stench of the smoke from Auschwitz burns our nostrils. We cannot forget; and yet by taking the step back we can recover authenticity. Those to whom the mountain light beckons must seek their own path and step back on a way without signs that seeks Being. The air, now, is charged, this medium in which we encounter the experience of thinking. We run the risk of falling off mountain exposures. We encounter the danger of philosophizing. On a mountain slope, on a mountain face, one confronts danger and feels exhilaration. The way is pathless.

A VIEW OF THE TOP FROM THE BOTTOM

"What is this Titan that has possession of me? Talk of mysteries! 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? where are we?"

— Henry David Thoreau, *The Maine Woods*

Does a person experience an existential epoche on top of a mountain? Must we pace Kohák live in the radical brackets in order to recover Being? Or might we leave Husserl at your foot? A mountain top is a primordial place where mortals find a Sympathy with Intelligence, aspire to talk with the gods, to think like a mountain. A mountain is a place of vision, of perspective, of arrangement and order, of parts related to whole. A place where the eternal and necessary transects the contingent and evanescent—where a human can let Being be. A place where a person is enframed as human, as mortal clinging to the ground, subject to the presence of Being, grasped to its bosom. Life and death are here merely words.

One does not see a peak when standing upon it. Who are we? Where are we? echoes the voice of a nineteenth-century wilderness sage astride his Ktaadn. What is our place in nature? asks Scheler. And I, mere excavator searching amid the ruins for truth—mountain walking.

In the city, in the university, in the lecture hall we forget Being. Language enframes us, enervates us, blinds us to the manifestness of Being. We are embedded in History, caught up in a linguistic labyrinth of our own making. Even the idea of history, as Paul Shepard perceives so clearly, is "a Western invention whose central theme is the rejection of habitat. It formulates experience outside of nature and tends to reduce place to location. . . . History conceives the past mainly in terms of biography and nations. It seeks causality in the conscious, spiritual, ambivalent character of men and memorializes them in writing." (N&M, 47)

Yet mountains walking redirect us to the primal address of place, the source. Through mountain walking we relinquish the analytic habit of mind, escape the contingency of culture, of history. The mountain peaks standing presence reminds us of the glory of things in their thingness, of things thinging, of things grounding. Mountain peaks are a Thoreauvian laboratory: a stepping back from the nihilism of experiment and ratiocination, feet now our mind, hands our head, skin our measure, eyes our calculus. We are astonished? Better, in being with Being there is astonishment! In being in the mountains there is a disclosure of Being. We dissolve into the fullness of the rock, become people of Indigen (aboriginal) wisdom, become one with the mountain, become one with the fourfold. Come home to Being. Mountains that walk.

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Radical Environmentalism in the 90s

by George Sessions

WHAT IS RADICAL ENVIRONMENTALISM?

Any adequate characterization of radical environmentalism must include both its theoretical and practical aspects. Radical environmentalism thus involves both *theoria* and *praxis*. The theoretical groundwork was laid in the 19th century by the naturalists Henry David Thoreau and John Muir, and further developed in the 20th century by literary figures such as D. H. Lawrence, Aldous Huxley, Robinson Jeffers, Gary Snyder, and Edward Abbey, and by ecologists such as Aldo Leopold, Rachel Carson, Paul Ehrlich, Paul Shepard, and Michael Soulé. Beginning in the 1960s, philosophers, historians, and other academics including Lynn White, Theodore Roszak, Roderick Nash, Arne Naess, Paul Taylor, Baird Caldicott, and Warwick Fox, entered the radical ecological dialogue. Academic radical environmentalism continues in the pages of such journals as *Environmental Ethics*, *The Trumpeter*, and in other periodicals and books.²

Radical environmental activism has been influenced by this academic debate over philosophical basics. Contemporary radical environmental activism has been exemplified in groups around the world attempting to live bioregionally, and in direct action groups such as John Seed's Australian rainforest action groups, Greenpeace, Sea Shepherd Society, and Earth First! and in some animal rights groups.

The philosophical basis of radical environmentalism is the concept of ecocentrism, which continues to be inspired by new insights from the science of ecology. Viewed negatively, ecocentrism is a rejection of anthropocentrism in all its forms. Viewed positively, it is an affirmation of the idea that all the wild species of the planet have an equal right, along with humans, to exist and flourish largely without interference by humans in their natural habitats; in this respect no species is privileged. Radical ecological consciousness, then, is ecocentric consciousness together with ecological wisdom (ecosophy). If carried to a deeper philosophical level, there is a spiritual/religious component to ecocentrism involving a psychological and emotional identification with nonhuman individuals, species and ecosystems resulting in what Arne Naess calls an "ecological self." And beginning with Thoreau and Muir, there has also generally been a tendency toward a pantheistic identification of God with Nature. As Max Oelschlaeger clearly demonstrates in his remarkable reinterpretation of Western culture, *The Idea of Wilderness*, radical environmental consciousness involves a major departure from traditional and modern Western modes of thought. This search for a postmodern cultural paradigm has its roots in the work of Charles Darwin, Thoreau, Muir and Aldo Leopold and leads to the recultivation of Paleolithic consciousness.³

One of the key insights of ecological consciousness is the realization that humans have taken over far more than their share of the planet, resulting in habitat loss for the other species and accelerating rates of species extinction. The priority of radical environmental activism, given the present rates of destruction of wild Nature and the resultant danger to the integrity of Gaia, has been, and should be, to redress this imbalance by (1) promoting the protection of the remaining wild and semi-wild habitat on Earth; (2) promoting the restoration of wild Nature to protect wild species and natural evolutionary processes; (3) promoting the stabilization and reduction of the human population on the planet; and (4) promoting ecologically benign ways of life for humans.

Recent "risk assessment analysis" by scientists has borne out the priorities of radical environmentalism and the deep long-range ecology movement. They have found that the most serious threats to the integrity of the biosphere are the exponential growth of the human population, the greenhouse effect, ozone layer depletion, and species extinction as a result of habitat loss. Various forms of urban pollution and pesticide poisoning, the usual foci of the Environmental Protection Agency (EPA), the general public, "social ecologists" and many anthropocentric reform environmental groups, have a much lower risk factor. Some population biologists have argued that 1 to 2 billion people living lightly on the planet would be sustainable given the ecological requirements of carrying capacity for all species. Such a human population decrease (by humane means such as steady low birth rates) would be good for humans and for the diversity of human cultures, as well as for wild species and ecosystems. Arne Naess once suggested that an ideal balance on the planet to meet the above requirements might consist of 1/3 wilderness (wild species habitat), 1/3 "free nature" (where there are mixed communities of human and wild species living in largely non-domesticated ecosystems), and 1/3 cities, roads, agriculture, etc. for intensive human inhabitation.⁴

Various forms of non-violent direct action have also been characteristic of modern radical environmental activism, though this article focuses more on radical environmentalism's philosophical beliefs, consciousness, lifestyles, and long-range ecological goals.

THE HISTORY AND DEVELOPMENT OF RADICAL ENVIRONMENTALISM

Radical environmentalism began in the 19th century. Thoreau and Muir were the early founders and both were essentially ecocentric. As if to underscore his commitment to ecological equality, John Muir once claimed that if a war were to break out between humans and bears, he would tend to side with the bears.⁵

Ecocentric environmentalism became more clearly defined after World War II, as the insights of the science of ecology began to influence

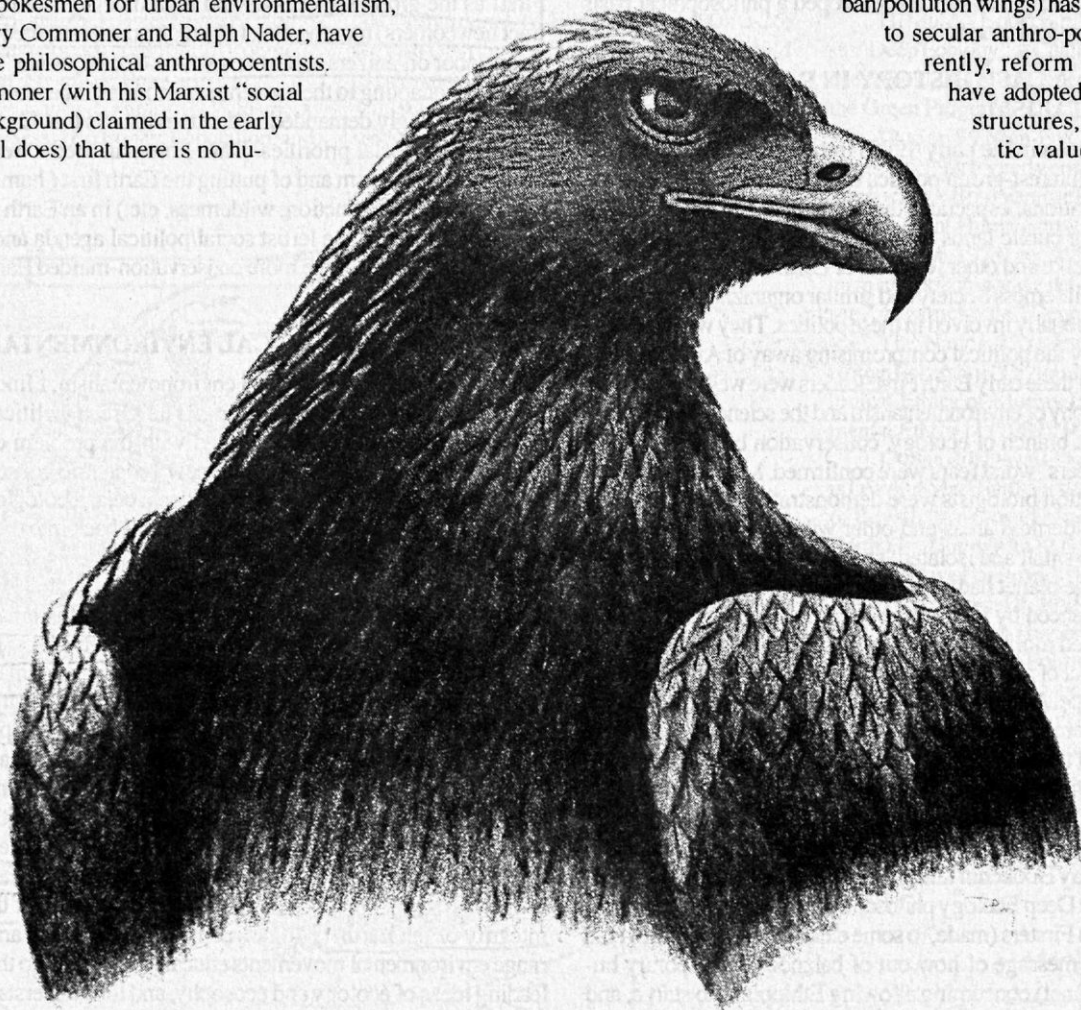
environmental thinking. In the late 1940s Aldo Leopold's "land ethic" promoted the health of the planet's ecosystems as ethically primary. Also in the late 40s concerns were raised from an ecological standpoint over the exponential growth of the human population by William Vogt, Sir Julian Huxley, and others. In the 1950s, a concern for halting human population growth was integrated into the ecological perspective promoted by Aldous Huxley.⁶

In the 1960s, radical/ecocentric environmentalism rapidly gathered momentum, spurred on by Rachel Carson's *Silent Spring* which led to the tremendous outpouring of support for environmentalism on Earth Day 1970. During this period David Brower was attempting to radicalize and ecologize the Sierra Club. And virtually all of the biologists who were making the science of ecology accessible to the public, from Raymond Dasmann to Paul Ehrlich, were calling for a halt to human population growth.

New environmental concerns over urban pollution became a major part of the environmental agenda in the 1960s. Typically, spokesmen for urban environmentalism, such as Barry Commoner and Ralph Nader, have tended to be philosophical anthropocentrists. Barry Commoner (with his Marxist "social justice" background) claimed in the early 70s (and still does) that there is no hu-

man overpopulation problem. Stephen Fox (in his history of environmentalism) points out that these newer "man centered environmentalists" of the late 60s distrusted the wilderness protection concerns of the Muir-Brower tradition, were primarily urban and pollution oriented, and had little or no interest in wild Nature.⁷ Urban pollution is clearly a crucial part of the environmental crisis, and has now led to such global problems as worldwide air and water pollution, the greenhouse effect, ozone layer depletion and acid rain. But environmentalists concerned primarily with urban pollution fail to grasp the full dimensions of the ecological crisis and its philosophical implications.

Ecocentrism is a radical departure from anthropocentric Western thought (which sees the non-human world essentially as "resources" for humans) and, as such, it has been difficult to sustain in the crisis atmosphere of the 1970s and 80s. David Brower was ousted from the Sierra Club in 1969 partly for his radical views and actions, and mainstream reform environmentalism (both the traditional wilderness and the newer urban/pollution wings) has essentially reverted to secular anthropocentrism. Concurrently, reform environmentalists have adopted huge bureaucratic structures, yuppie materialistic values, and pragmatic



Golden Eagle (*Aquila chrysaetos*) by Douglas Moore

special interest group politics. Designated Wilderness Areas are seen by the new yuppie Sierra Clubbers, for example, primarily as recreational playgrounds, rather than as sanctuaries for wild ecosystems and unmanaged habitat for wild species, as John Muir (the founder of the Sierra Club) and the ecologists have viewed them.⁸

By the late 70s environmentalism (both radical and reform) was all but eclipsed as Americans turned to conservative anti-environmental Republican leadership. But the accelerating global environmental crisis could not be ignored forever, and this eventually led to a new public outpouring of concern resulting in Earth Day 1990. Some of the overriding ecological issues, however, were not emphasized, such as the need for human population reduction, the need to protect wild habitat, and the need for industrial countries to drastically reduce their consumption levels. Again, narrow anthropocentrism and urban pollution issues prevailed; the simplistic message presented by the media seemed to be that we can solve our environmental problems by recycling.

Academic radical environmentalism thrived, nonetheless, during the 1970s and 1980s as ecocentric environmental ethics was refined, and as Arne Naess and others further developed a philosophical basis for the deep ecology movement.

EARTH FIRST!: A CASE HISTORY IN RADICAL ENVIRONMENTALISM

Earth First! arose in the early 1980s in reaction to the anthropocentric pragmatic interest-group politics of the mainline reform environmental organizations, especially the political compromises being made in classifying public lands as Wilderness. Dave Foreman, Bart Koehler, Howie Wolke and other founders of Earth First! had been staff members of The Wilderness Society and similar organizations and were themselves professionally involved in these politics. They were shocked and disillusioned by the political compromising away of America's last wild places. Most of these early Earth First! leaders were well-versed in the history and philosophy of environmentalism and the science of ecology.

As the newest branch of ecology, conservation biology, arose in the 1980s, EF! leaders' worst fears were confirmed. Michael Soule and the other conservation biologists were demonstrating that existing legally protected wilderness areas and other wildlife preserves around the world were too small and isolated; as a result natural evolution for many species on the planet had ground to a halt.⁹

Heavily influenced by Edward Abbey's ecocentric novels, some of which dramatized monkeywrenching, Foreman and the others saw the need for a revival of a radical environmentalism of the Muir-Brower no-compromise type. About the same time, Arne Naess's articulations of deep ecology were becoming well known, and many in Earth First! saw themselves as an activist wing of the Deep Ecology movement. Earth First! was highly successful throughout the 80s in its wilderness campaigns and in publicizing its ecocentric philosophy, and attracted a great deal of media attention and a large following.¹⁰

In 1987, Murray Bookchin and his Social Ecology group attacked Earth First! and the Deep Ecology philosophy.¹¹ Certain casual remarks by individual Earth Firsters (made, to some extent, for their shock value to drive home the message of how out of balance contemporary humans are on the planet) concerning allowing Ethiopians to starve, and AIDS as Nature's population control device, provided Bookchin the opportunity he needed.

Bookchin had been a pioneer in calling attention to urban pollution as early as 1962 but had remained aloof from traditional environ-

mental concerns.¹² He had criticized leading ecologists (such as William Vogt, Paul Ehrlich, and David Ehrenfeld) for years, calling them reactionary Malthusians, racists, and misanthropes, for their emphasis upon the human overpopulation problem, and wild habitat protection. In his 1987 attack, Bookchin ridiculed the idea that humanity was overpopulating the planet and destroying the biosphere. Further, he downplayed the science of ecology, claiming that it "zoologized" humans, and proposed that the intelligence manifested in the human world of culture should take over and guide the evolution of wild Nature. As a "social ecologist," Bookchin has been concerned mostly with social justice. The underlying thesis of social ecology seems to be that we cannot solve environmental problems without first solving social problems. This results in an anthropocentric agenda. One prominent Bookchinite ecofeminist claimed, at a public symposium, that if a choice had to be made between Africans starving and the future of wildlife in Africa, then the wildlife would have to go. This is a far cry from Muir's statement about siding with the bears in a war against humans.

Concurrent with Bookchin's attack, dissension grew within Earth First! as the group's successes and high media visibility began to attract newcomers from the ranks of urban anarchists, the Rainbow Coalition, labor organizers, and others with a "social justice" background.¹³ Instead of adapting to the ecocentric vision and agenda of Earth First!, they increasingly demanded in disruptive ways that Earth First! adapt itself to their social priorities. Dave Foreman tried to reassert the priorities of ecocentrism and of putting the Earth first (human population stabilization and reduction, wilderness, etc.) in an Earth First! Journal article in 1987, but the leftist social/political agenda and tactics were soon to drive many of the more conservation-minded Earth First! leaders out of the group.¹⁴

THE FUTURE OF RADICAL ENVIRONMENTALISM

As for the future of radical environmentalism, I find the situation with Earth First! very distressing. The Green political movement throughout the world has struggled with the problem of whether to embrace the Age of Ecology (the new ecocentric consciousness and paradigm) and rise above the old political/social ideologies (neither left nor right, but out in front), or whether to fall back into the leftist rhetoric of social class struggle. Many of the problems within the Green Movement stem from their inability to deal successfully with this issue.

Two political scientists writing in a recent professional journal have pointed out that the "cutting edge of environmentalism" is to be found in those countries where wilderness has provided the main impetus to national Green movements, and where radical political traditions have not been exclusively industrial-Marxist and thus anthropocentric.¹⁵

Radical environmentalism, in my judgement, is at a major crossroads. Will the radical environmentalism of the future move beyond pre-ecological political ideologies and genuinely put Earth first, or will the momentum of ecological consciousness be lost as we regress back to anthropocentric ideologies and social agendas which fail to integrate the human social problems into the wider framework of the health and integrity of the Earth? Will newcomers to the radical and deep long-range environmental movements educate themselves to the history and leading ideas of ecology and ecosophy, and thus understand a genuine ecocentrism, or will they continue to bring their past baggage with them and demand that existing radical environmental organizations conform to their pre-ecological ideologies and priorities? Aspiring radical environmentalists need to engage in some serious soul-searching along these

lines in the immediate future.

NOTES

1. The original version of this paper was presented at the "Conference on Radical Environmentalism" University of California at Santa Barbara, March 1-3, 1991.

2. For histories of the development of academic radical environmentalism, see Stephen Fox, John Muir and His Legacy: The American Conservation Movement (Boston: Little, Brown, and Co., 1981); Max Oelschlaeger, The Idea of Wilderness: From Prehistory to the Age of Ecology (New Haven: Yale University Press, 1991); Roderick Nash The Rights of Nature: A History of Environmental Ethics (Madison: University of Wisconsin Press, 1989); George Sessions, "The Deep Ecology Movement: A Review," Environmental Review 11, 2 (1987): 105-25; Warwick Fox, Toward a Transpersonal Ecology: Developing New Foundations for Environmentalism (Boston: Shambala Press, 1990).

3. Max Oelschlaeger, The Idea of Wilderness.

4. Arne Naess, "Ecosophy, Population, and

Free Nature", The Trumpeter 5, 3 (1988): 113-19.

5. For recent discussions of Muir's ecocentric philosophy, see Fox, John Muir and His Legacy, pp. 43-53, 59, 79-81, 289-91, 350-55, 361; and especially Michael Cohen, The Pathless Way: John Muir and American Wilderness (Madison: University of Wisconsin Press, 1984), chs. 1, 6-7.

6. For a history of the development of environmentalism, and concern for human overpopulation in the 1940s and 50s, see Raymond Dasmann The Last Horizon (New York: Macmillan, 1963); Stephen Fox, John Muir and His Legacy pp. 292-315.

7. Stephen Fox, Ibid.

8. For a penetrating discussion of the changing perceptions of the functions of designated wilderness, see Thomas H. Birch, "The Incarceration of Wildness: Wilderness Areas as Prisons," Environmental Ethics 12, 1 (1990): 3-26; see also Gary Snyder, The Practice of The Wild (San Francisco: North Point Press, 1990).

9. For discussions of Conservation Biology, see Michael Soulé (ed), Conservation Biology:

The Science of Scarcity and Diversity (MA: Sinauer Press, 1986); George Sessions, "Ecocentrism, Wilderness, and Global Ecosystem Protection", in Max Oelschlaeger (ed.) The Wilderness Condition: Essays on Environment and Civilization (San Francisco: Sierra Club Books, 1991) forthcoming.

10. For discussions of activist radical environmentalism and the origins of Earth First!, see Christopher Manes, Green Rage: Radical Environmentalism and the Unmaking of Civilization (Boston: Little, Brown, and Co., 1990); Dave Foreman, "Earth First!" The Progressive (October 1981): 39-42; Dave Foreman, Confessions of an Eco-Warrior (New York: Harmony Books, 1991); Rik Scarce, Ecowarriors: Understanding the Radical Environmental Movement (Chicago: Noble Press, 1990); Roderick Nash, The Rights of Nature, pp. 161-213.

11. Murray Bookchin, "Social Ecology versus 'Deep Ecology': A Challenge for the Ecology Movement," Green Perspectives: Newsletter of the Green Program (Summer 1987).

12. See Stephen Fox, John Muir and His Legacy, p. 292; for early criticism of Bookchin as a technological utopian, see David Ehrenfeld, The Arrogance of Humanism (Oxford: Oxford University Press, 1978) pp. 54, 127; for further criticism of Bookchin and a defense of deep ecology see Kirkpatrick Sale, "Deep Ecology and its Critics," The Nation 22 (May 14, 1988): 670-75; Robyn Eckersley, "Divining Evolution: The Ecological Ethics of Murray Bookchin," Environmental Ethics 11 (1989): 99-116.

13. See Bill Devall, "Maybe the Movement is Leaving Me," Earth First! Journal 10, 8 (1990): 6; Devall, "An Open Letter to Earth First!ers," Earth First! Journal 11, 2 (1990): 30.

14. Dave Foreman, "Whither Earth First!?" Earth First! Journal 8, 1 (1987): 21-2.

15. See Peter Hay and Marcus Haward, "Comparative Green Politics: Beyond the European Context?" Political Studies 36 (1988): 433-48.

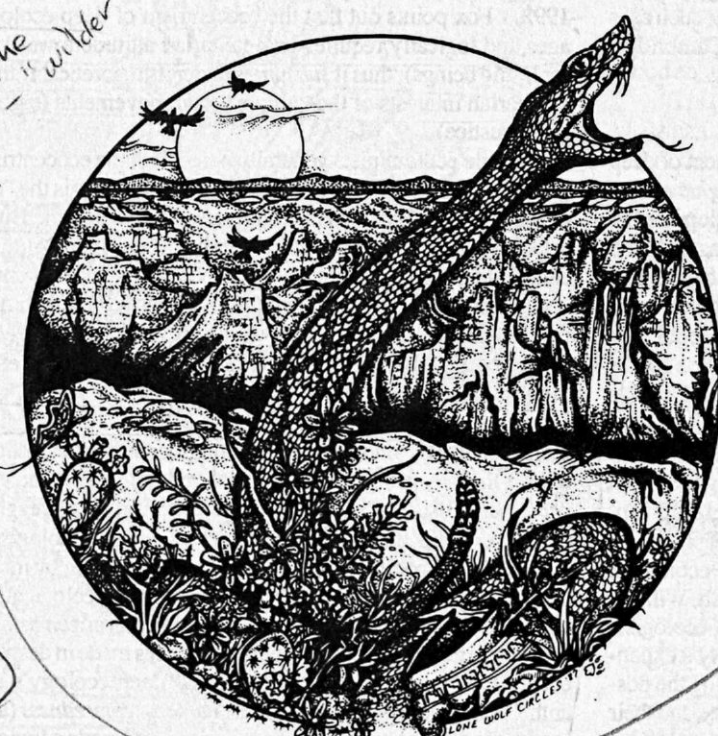
George Sessions teaches at Sierra College. He is a widely published deep ecology theorist whose best known work is Deep Ecology, which he co-authored with Bill Devall.

"Here is the official version - 'wilderness'"

NS

BT: Isn't this just silly? Social Ecologists say you can't locate the ecological crisis within the context of bad human social structures. Sessions says you must locate the human problems within the wider framework of the health of the E. while both must locate

human behavior & responsibility?



"ANTHROPOCENTRISM" IS THE "ROOT CAUSE" OF ECOLOGICAL DECLINE. (BUT DOES THIS HOLD UP?)

Postscript to "Radical Environmentalism" March, 1992

My paper "Radical Environmentalism" was written somewhat hastily, relying on accounts in *Earth First! Journal*, in order to make a presentation a year ago at the Radical Environmentalist conference at UC Santa Barbara. While I still stand by the basic overall analysis contained in it, further reflection, together with new documents and events over the past year, calls for updated comments and a somewhat revised evaluation.

One document I had not seen was Steve Chase (ed.) *Defending the Earth: A Dialogue Between Murray Bookchin & Dave Foreman* (South End Press, 1991). This is a revealing exchange which repays close study by "radical environmental" watchers and activists; it includes a carefully thought out "apology" and closing statement by Dave Foreman. While Steve Chase's introduction, I think, *attempts* to be fair and insightful, there are a number of misrepresentations of deep ecology, such as (1) "the primary long term goal of many deep ecologists is not transforming society but rather drastically depopulating the Earth..."; (2) "The deep ecology movement lacks... a consistent commitment to humane social ethics"; (3) "social ecologists offer a needed alternative to these antihuman extremes within deep ecology philosophy..." (pp. 20-21). A reading of deep ecology *philosophy*, such as is found in Arne Naess's *Ecology, Community and Lifestyle* (Cambridge, 1989), should help correct these kinds of misunderstandings.

MURRAY BOOKCHIN AND DEEP ECOLOGY

Chase misrepresents Bookchin's role in the development of deep ecology. He *interprets* Roderick Nash as saying (*The Rights of Nature*, 1989) that Bookchin "contributed greatly to the development of deep ecology." Chase points out that a Bookchin essay was included in Michael Tobias's anthology *Deep Ecology* (1984), and claims that Murray Bookchin was "prominently quoted as a deep ecology pioneer" in *Deep Ecology* by Devall and Sessions (pp. 9-10). Tobias's book was *not* a book on deep ecology, despite the name (the story of the Tobias and Devall/Sessions books is told in the introduction to Dolores LaChapelle's *Sacred Land, Sacred Sex*, 1988). Bookchin is quoted several times in our book in connection with a critique of reform environmentalism; one of his books is referenced in the reading list. I am not aware of any influence that Bookchin has had on the development of the deep ecology movement.

Rather, Bookchin has tended to stand apart from the ecological movement since the 1960s, criticizing George Perkins Marsh, William Vogt, Paul Ehrlich, David Ehrenfeld, and other prominent ecologists for their claims that there are ecological limits on humanity's expansion into the natural (wild) world, their skepticism concerning the possibility and desirability of a technological utopia for humanity, and their public warnings of an impending human overpopulation/ecological crisis. This trend continues in his recent article in *The Progressive* (Dec. 91) where he attacks the idea of the sacredness of the Earth, while misrepresenting and criticizing, among others, Arne Naess, Thomas Berry, James Lovelock and the Gaia hypothesis, and Paul and Anne Ehrlich's

excellent new book, *Healing the Earth* (Addison-Wesely, 1991). Given his general dismissal of the relevance of the science of ecology for humans, together with his refusal to accept the analysis of the nature, dimensions, and causes of the ecological crisis by ecologists, it is not clear why Bookchin refers to his position as a social "ecology."

On the other hand, the advocacy of reinhabitation and bioregionalism (scaled-down democratic ecological non-hierarchical communities) in the 1960s and 70s by Raymond Dasmann, Peter Berg, Gary Snyder, and others, beginning in the late 60s and early 70s, has been very influential for American supporters of deep ecology.

FOX'S RESPONSE TO BOOKCHIN'S CRITIQUE OF DEEP ECOLOGY

The essential rejoinder to social ecology (and ecofeminist) critiques of deep ecology philosophy occurs in Warwick Fox's "The Deep Ecology-Ecofeminism Debate and Its Parallels" (*Environmental Ethics* 11, 1989) (This article will appear in an anthology, *Environmental Philosophy*, on deep ecology, social ecology, ecofeminism, and environmental ethics, edited by Michael Zimmerman for Prentice-Hall, Fall, 1992). Fox points out that the ecocentrism of deep ecology encourages and logically requires an egalitarian attitude toward *all* entities (or living beings); thus it *subsumes* under its theoretical framework the egalitarian interests of the various social movements (e.g., feminism, social justice).

While ecofeminists generally agree with the ecocentrism of deep ecology, they reject the claim that anthropocentrism is the "root cause" of the ecological crisis. Bookchin rejects ecocentrism. But why, Fox asks, should we focus with ecofeminism on androcentrism (male-centeredness) as the "root cause" rather than race, Westernization, or social hierarchy and capitalism (as in the case of Bookchin)? For it is possible to imagine a society in which social, racial, and gender equality has been realized, but which is still highly exploitive ecologically. Singling out androcentrism (or social hierarchy) as the "root cause" actually leads to overly simplistic social and political analyses. Further, such critics tend to remain anthropocentric; they continue to focus on their respective human social and political agendas while the ecological crisis and issues receive a low priority, or are ignored.

Fox claims that both ecofeminists and social ecologists miss the point of deep ecology's critique of anthropocentrism by interpreting it to mean that *humans* are the root cause of the ecological crisis, and equating this with misanthropy. Confusion has arisen as the result of apparently misanthropic "in group" utterances made in despair by some ecological activists. But philosophical deep ecology's critique of anthropocentrism is directed against human-centeredness (a legitimating ideology), not humans per se. Critics have made a logical mistake which Fox calls "the fallacy of misplaced misanthropy." Deep ecology is justified in focusing upon anthropocentrism as the "root cause" of the environmental crisis while appreciating and learning from the social analyses of other perspectives.

13

OK - BUT ISNT IT ALSO SIMPLISTIC TO SAY THE KEY SIN IS ANTHROPOCENTRISM?

Insofar as "radical" means "root" (in the sense of "root cause"), then it seems justifiable to associate radical environmentalism, as I did in my paper, with the critique of anthropocentrism, and with ecocentrism and deep ecology.

THE RELATION OF DEEP ECOLOGY TO THE GREEN MOVEMENT

Arne Naess substantiates Fox's analysis and further clarifies the situation in his recent discussion of the Green movement and sustainable societies (see his "The Third World, Wilderness and Deep Ecology"—to appear in the Zimmerman anthology—and "Politics and the Ecological Crisis" in *Revision*, Winter, 1991—special issue on deep ecology). Naess claims that the objectives of the Green movement can essentially be conceived of as (1) the anti-poverty movement, (2) the social justice movement, (3) the alternative technology movement, (4) the ecological movement, and (5) the peace movement. It promotes only confusion, he claims, to identify the Green movement (and all its component movements) with the ecological movement. The deep ecology movement strongly supports sustainability for all societies, but sustainability in the ecologically "wide" sense of protecting "the full

richness and diversity of life forms on the planet"; it is beneath human dignity, Naess claims, to aspire to less.

Even though societies will not have reached full sustainability until the goals of *all* the various movements comprising the Green movement have been attained, a very high priority must be placed on ecological issues. "Considering the accelerating rate of irreversible ecological destruction world-wide, I find it acceptable to continue fighting *ecological* unsustainability whatever the state of affairs may be concerning the other goals of green societies," Naess writes. Supporters of the deep ecology movement, Naess says, "should concentrate on specific issues relating to the *ecological* crisis (including its social and political consequences)."

THE LEFT-GREEN TAKEOVER OF THE US GREENS

Lorna Salzman, an activist with the New York Green Party since its inception, has recently written a 5-page article outlining the takeover of the US Greens by the Bookchin-inspired Left Greens ("The US Greens: A Dream Ends, A Nightmare Begins," Jan. 92, unpublished MS; for a copy write her c/o 29 Middagh St., Brooklyn, NY 11201). In this regard one might ask, what happened to the Green slogan "We are neither left nor right, but out in front"?

National membership, she claims, has now dropped from 3000 to an all-time low of 1000. The new Green program, developed by the Left Greens "is a one-dimensional collection of sentimental and self-indulgent homilies that does not pay even lip service to the accelerating multiple global ecological crises. . . it banishes ecology to the periphery (the word itself is hardly used). . . The Left Green economics section calls for public ownership of virtually everything: land, energy, food and production; it may be the last socialist program in the world."

This domination of the US Green movement by the Left Greens, Salzman claims, "has led many locals to drop away over the years; others were simply tired out by the Left Greens' endless argumentative adversary approach, *ad hominem* attacks, Machiavellian techniques, not-so-subtle perversions of the truth, and their endless late-night meetings." Salzman summarizes the present situation of the US Green movement as: "manipulated and dominated by the Left, its female leadership intimidated and silenced; devoid of any ecological mission; . . . moralizing about right and wrong but in violation of its own principles and values with regard to social responsibility and post-patriarchal values. . . intent more on achieving 'unity in diversity' than on confronting the toxic myths of the industrial society."

Salzman further claims that "what the Left succeeds at, all too well, is subverting any promising movement or philosophy for their own purposes."

This situation, as reported by Salzman, seems to echo Fox's analysis (above) that social ecologists remain anthropocentric; fixated on their social and political agendas while either cynically ignoring, or being ideologically incapable of comprehending, the full dimensions of the ecological crisis. In terms of Naess's analysis (above), the "social justice" component of the Green movement (insofar as the Left Greens purport to represent the "social justice" aspect of the movement) has dominated or eliminated the ecological and other components of the movement.

Charlene Spretnak points out, though, that the Green movement is already rejuvenating itself through new organizations, the Campus Green Network and the Green Politics Network, and largely at state levels. These are separate from the domineering Left Green influence.



Mara Bannigaly 2-92

The ongoing centrality of
the 'ecological consciousness'

EARTH FIRST! AND THE LEFT

My initial impression of the events leading up to the change in leadership of Earth First! (and the editorship of the Journal) was that this was essentially the same kind of take-over by the Left as that of the U.S. Greens (but this time of an explicitly ecological activist organization), inspired also in part by Murray Bookchin, and involving essentially the same kinds of hypocritical and unscrupulous tactics. The new voices in Earth First! also appeared to be rechanneling the ecological mission, demanding that the Journal minimize the publication of articles on ecology, conservation biology, and human overpopulation, and deemphasizing wilderness protection (for further discussion of the change in Earth First!, see Dave Foreman, *Confessions of an Eco-Warrior*, Harmony Books, 1991, esp. ch. 19).

Bookchin himself analyzes the situation as an ideological shift in Earth First! from deep ecology to social ecology. He has written:

My regret about the Earth First! movement...is that so many of its activists do not openly acknowledge that this de facto ideological shift has occurred. So much has the debate between deep and social ecologists biased many well-meaning people against social ecology that a certain moral pressure obliges them to call themselves "deep ecologists" even when they actually behave as social ecologists and even when some of them clearly have leftist backgrounds. Even Judi Bari, with her long-time background as an IWW labor organizer, has denied that she is a "leftist"...She also continues to misrepresent my views. I was shocked to read recently her unfounded assertion that I believe in anthropocentrism and that "human beings are a higher form of life." (Chase, *Defending the Earth*, pp. 121-22).

Judi Bari, however, claims that she is an ecocentrist. She has also claimed (correctly, in my estimation, and to the dismay of Murray Bookchin) that the contours of an ecological society are "not spoken to in any leftist theory" (Chase, pp. 13, 122).

A recent article on Earth First! (Bron Taylor, "The Religion and Politics of Earth First!" *The Ecologist* 21 Nov/Dec. 1991) divides EF! into the newer Bari/Cherney/Roselle faction, the "Holies" (a holistic perspective); and the Foreman/Manes faction, the "Wilders." Taylor claims, contrary to Bookchin, that both factions remain biocentric (ecocentric); the schism "is grounded more in disagreement about strategies and tactics." More fundamentally, he claims that "the primary dispute, then, is over the relative priority Earth First! should place on social issues which may not at first glance appear as environmental issues."

I am not as confident as is Taylor that both factions are clearly ecocentric. A grounding in ecological science and conservation history, an awareness of the principles and findings of conservation biology, and a knowledge of and commitment to ecological priorities (all of which are needed for effective ecological programs and strategies) are characteristic of the Foreman faction, but not characteristic of the "Holies." This is not to detract in the slightest from the heroism of Judi Bari and others involved (and, in some cases, seriously injured) in the Redwood Summer campaign, but it is one thing to attempt to save isolated redwood groves, quite another to recognize the plight of wild ecosystems and species and to begin to formulate and vigorously promote ecologically informed far-ranging plans for the massive system of protected refuges and interconnecting corridors called for by conservation biology to protect wildness and biodiversity on the Earth. Putting the Earth first, and being ecocentric, surely must mean that one's

first priority, in some ultimate sense, is to protect the biological integrity and evolutionary processes of the planet: defending what little remains of the Earth's wildness and wild creatures, and planning for major long-term ecological restoration of the Earth's wildness. As Arne Naess correctly emphasizes, supporters of the deep ecology movement "should concentrate on specific issues relating to the *ecological crisis*" which includes protecting the ways of life of primal and other traditional peoples living non-destructively with the wildlife in "free nature."

Further, an identification with the wild has increasingly come to characterize the ecocentric perspective and a fully developed ecological consciousness. This is reinforced by Theodore Roszak in his new book (*The Voice of the Earth*, Simon and Schuster, 1992) where he asserts that "repression of the ecological unconscious is the deepest root of madness in industrial society." This is also essentially the diagnosis of Paul Shepard (*Nature and Madness*, Sierra Club Books, 1982) and Gary Snyder, in his many writings over the years (see e.g., Snyder, *The Practice of the Wild*, North Point Press, 1990; see also the essays by Shepard and Snyder in Max Oelschlaeger (ed.) *The Wilderness Condition*, Sierra Club Books, 1992). This identification with the wild is, as well, the point of Naess's "wider identification" thesis (the "ecological self"), and the thrust of Dolores LaChapelle's writings, together with Max Oelschlaeger's call for the recultivation of Paleolithic consciousness—not necessarily a "return to the Paleolithic," but a return to Paleolithic consciousness (Oelschlaeger, *The Idea of Wilderness*, Yale Univ. Press, 1991). This line of analysis points inexorably to Thoreau and Muir as the pioneers of contemporary ecological consciousness and radical ecology in the modern West.

In privileging what he calls "second nature" (the domain of civilized urban culture) over "first nature" (the domain of the wild, and primal peoples), Murray Bookchin conceptually opens up wild nature to continued humanization and domestication through biotechnological and other kinds of manipulation and exploitation. As an heir to the philosophical tradition of German idealism (Fichte, Hegel, Marx, Marcuse), Bookchin, (along with the ecologically unreconstructed New Age vision of Teilhard de Chardin) holds that the wild is "liberated" and made "free" when humans override natural spontaneous processes, and "rationally" take control and determine the future direction of Earth's evolutionary processes (see Robyn Eckersley, "Divining Evolution: The Ecological Ethics of Murray Bookchin" *Environmental Ethics* 11, 1989; John Passmore, *Man's Responsibility for Nature*, 1974, pp. 32-35).

Misanthropy, racism, sexism, social hierarchy, and anti-technology stances have never been a part of deep ecology philosophy; but sustainability, in the ecologically "wide" sense of protecting "the full richness and diversity of life forms on the planet," is. I continue to have confidence in the deep ecocentrism of the so-called "Wilders." I feel that the ecocentrism, and a whole-hearted commitment to the protection of biodiversity, of the so-called "Holies" has yet to be adequately demonstrated. I also wonder whether their concern with "social issues" will dilute, render less effective, or even overwhelm, the crucial original ecological mission of Earth First! The verdict on whether Earth First! will continue to be a truly radical ecological organization is, as far as I can determine, still out.

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Working The Woods

Toward A Wilderness Work Ethic

by Ron Steffens

When I first went to work in the woods I cleaned the toilets and firepits of Canyon Campground in Yellowstone National Park. The job was anything but glorious but I quickly became proficient with pine oil and mop—because if my toilets were clean by early afternoon I could sneak off into the Lodgepole forest and sit undisturbed for hours, alone on a log, waiting for whatever might pass my way. A deer stopping as she stared into my blinking eyes, a raven croaking through the pines, a revelation arriving with the wind.

Some afternoons I'd search for wild strawberries on the edge of the Buffalo meadows, or wander along the chalk-rocked rim of the canyon. Below the falls was an Osprey nest that I watched, and one afternoon I saw a speck in the water, a Black Bear struggling as the current pushed it over the edge and down into the death of the canyon.

Later I heard that seasonals on both sides of the canyon had watched the bear—seasonal interpreters calling seasonal laborers calling seasonal rangers, everyone hoping the bear would reach safety.

That was 13 summers ago and ever since, I've been working outside. Every year I discover more reasons to quit this silly seasonal work but instead, like so many seasonals, I've become more adept at finding winter jobs. I teach, I do freelance writing. But above all I keep my summers free for the Park Service.

I do this work because it pleases me—"I like my job," Ed Abbey wrote of seasonal work as he began his diatribe against industrial tourism in the parks—and I do it with the hope that by simply returning, season after season, to wild places from which we originated, I might teach others to honor the heritage that lives in the land. I keep remembering that flailing bear—not out of a sense of mourning but because with our brains so connected to the power of an individual image, we must witness the death of a single bear if we are to discover the conglomerate of images that will prevent the deaths of entire species and ecosystems.

And it is the fate of that bear, and of others like it, and of their shrinking habitat, that has lately made me wonder if my seasonal work is a bit self-indulgent, if perhaps I'm just pleasuring myself, feeding my love for nature rather than actually loving nature. I've even asked myself if I might better serve the environment as a Park Service bureaucrat, administering some grand scheme for protecting the parks while sitting in an office with a good view of the mountains.

At this point, while my legs are strong, the answer is no, and I say this with conviction because I've both battled and befriended many permanent National Park Service bureaucrats. It may sound egotistical, but I think the permanents need me in my current incarnation as a wilderness seasonal, as one of the many ornery and independent seasonals who migrate to National Parks and National Forests every summer.

I say all this because I would like to discuss how we manage our wildlands, particularly our Park Service wild areas, and it seems as if the seasonal employee, unencumbered by any permanent commitment to bureaucracy, is well qualified to question the status quo that so often hamstring any bureaucracy, particularly the Park Service.

We seasonals make good critics simply because we care enough about the land to work for dirt. Another qualification is that we're rotten at paperwork. Our role models have become literary icons of iconoclasm: we savor the heritage of former seasonals like Jack Kerouac going cold-turkey in the fire lookout of *Dharma Bums*, or Ed Abbey raising hell in books drawn from the wildest parts of the West, or Doug Peacock yelling about mismanagement of bears while teaching you to talk softly as the Grizzly breathes in your face.

It is my self-appointed job, and the job of many seasonals, to protect the Wilderness from the cattle, horses, and misguided people, and when necessary from the Park Service itself.

I would argue that it is the historical role of seasonals to keep the permanent rangers honest. While not every seasonal is rebellious enough to bite the hand that holds the paycheck, few are willing to kiss the emperor's hand. And it is the emperor, overly concerned with his uniform when he'd be better off naked, who appears too often in the wilderness. On the fire-lines as the night cools and burning stumps flicker in the dark like stars fallen to earth, the talk of our fire crew too often turns to the pitfalls of micromanagement, or to that insidious product of top-down management, the yes-man syndrome.

A wilderness (unless your CEO is paying for the fishing lodge) shouldn't suffer such debates. But the particular wilderness I now inhabit, like all the rest I've worked in, is being actively managed by man, partly because it is surrounded by man (and woman, and child—the city of Tucson holding nearly 600,000 of them). I work in the oxymoron known as urban wilderness. On the Fourth of July the fire crew climbs Spud Rock and against our mountain's blackness we watch pinprick fireworks, the celebration of Tucson's spreading metropolis. On two sides of the mountain we're flanked by crowded houses, criss-crossing roads, airports—all the urban infrastructure that increases the value of wilderness even as it threatens its future. And inside the wilderness we're invisibly tied, by chain-of-command and radios and mid-season evaluations, to the Park Service bureaucracy.

It is our job (as defined by the Park Service) to manipulate the forest, but we try to manipulate it with a naturally inspired grace. We leave no stumps on our pruned trees, we cover up our old fire lines, we pick up trash (dropped mostly by horsepackers, since they have the tools on which to carry more trash, although we've also discovered helium balloons, and hospital bills and fast food wrappers that have wafted into the air from a landfill 20 miles away). In between the pruning and fires and trash, however, we spend afternoons bushwhacking through the forest, learning to walk like deer.

On our good days we attempt to be environmental artists, our aesthetic driven by invisibility and humility. But a bureaucracy must constantly strive for some verifiable improvement, not stasis.

I have no proof, yet also no doubt, that the model of modern bureaucracy is the military. My theory is supported by the Park Service, a bureaucracy infused with martial obedience, with good soldiers who are always trying to win a war, whether it is against environmental degradation or against the environment itself. You might be fighting tourists as a law enforcement ranger, or fighting ignorance as an interpreter, or fighting the trash that tourists leave, or fighting fires so the tourists won't complain of blackened trees. No matter what the fight, you are trying to justify your salary by enacting some change upon the environment.

The Park Service is charged with preserving resources and with providing for the enjoyment (and protection) of visitors, and in this contradictory mission the Park Service often chooses the tameness of a well policed park over the danger inherent within the wilderness. I am in no position to solve this contradiction, but perhaps it will focus the debate if the issues of wilderness management are separated from the stultifying prose of government documents. Wilderness, as seen by those who work within it, is a much more specific place.

My wilderness, for example, is mostly administered by Saguaro National Monument, which is a moderately sized unit of the National Park system. But 40 percent of the 100,000 acre Saguaro/Rincon Mountain Wilderness (named for the Saguaro, that infamous symbol of the

Southwestern desert, and because the mountain forms a huge right angle, *rincon* meaning corner in Spanish) is administered by the US Forest Service. So when a fire starts below our mountain, on Forest Service land, we have to ask them to control it.

Beyond administrative confusions, the mountain itself is more complicated than it appears from the visitors' center. We talk casually about heading up the mountain, and sometimes, when a fire is burning, it can be as casual as a 15-minute helicopter flight. But usually the trip entails a steep nine-mile hike, usually at night to avoid the 110-degree heat of the desert. And we are walking not to a single mountaintop but along the flank of a two-humped mountain ridge, a green wave frozen as it's about to crest. This ridge runs for 12 miles; you traverse cliff-and-boulder canyons and climb from Saguaro into mesquite, from juniper into oak into pine until finally you reach the ecological equivalent of Canada—the mixed conifer forest. We live in tents and share a historic cabin near a huge right angle where the long ridge joins another ridge, which is capped, about eight miles away, by a rocky shark's-tooth peak.

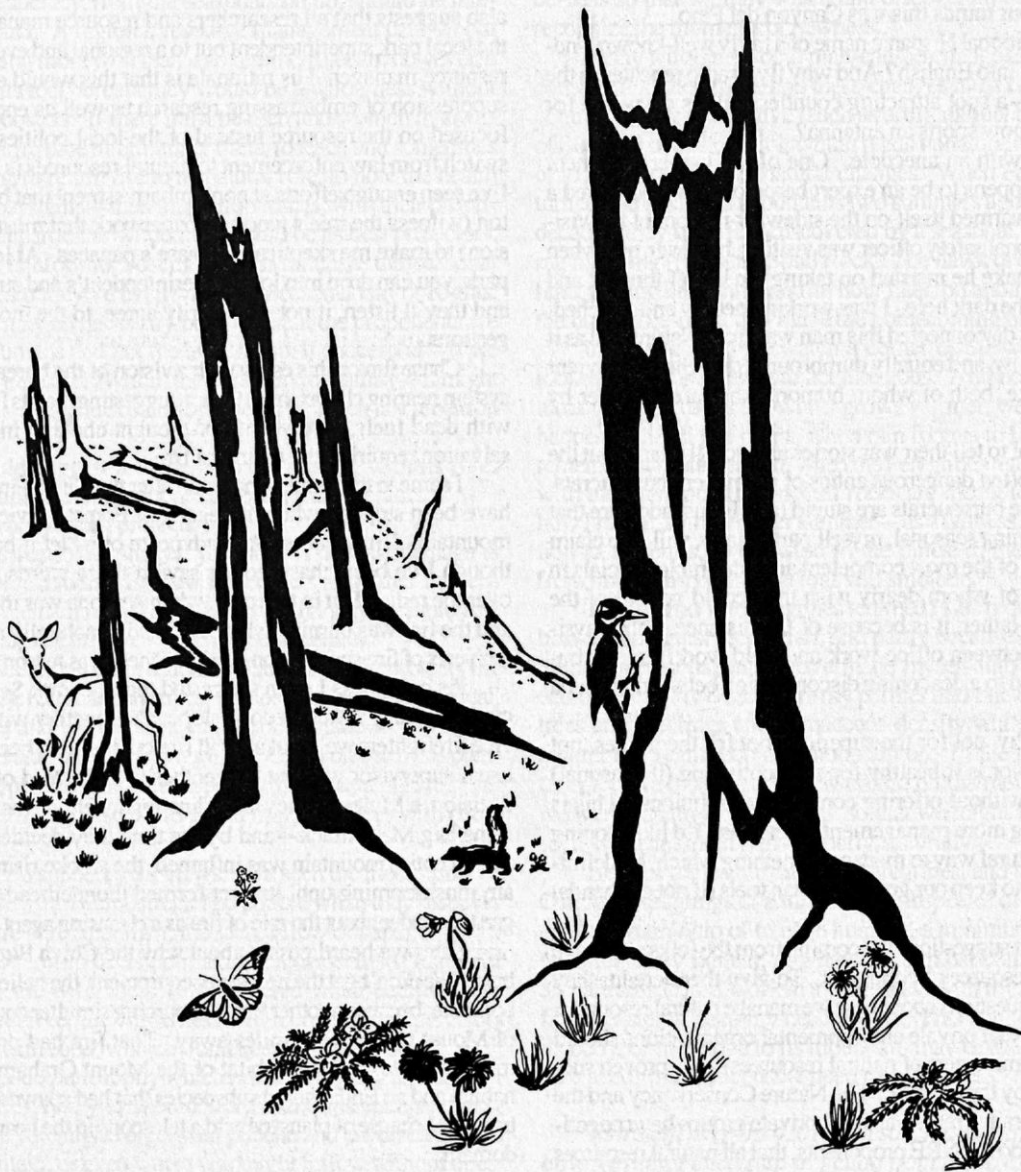
All this is surrounded by barbed wire to keep the cattle out, and protected from technology and other modern intrusions by the Park Service. It is my self-appointed job, and the job of many seasonals, to protect the Wilderness from the cattle, horses, and misguided people, and when necessary from the Park Service itself.

Amid the great environmental battles facing us these days, a niggling debate between one seasonal fire crew and the permanent bureaucracy may seem irrelevant. But if wilderness is to survive in its present form—as a national shrine to wild ecosystems and as a Rorschach test of human independence—then we must debate and revise our human management of these extra-human regions.

As it stands now, wilderness is defined by legal and aesthetic fictions; we believe (and have duly legislated) that a Wilderness Area should be dominated by natural processes. Yet if you core a Ponderosa Pine in the Saguaro/Rincon Wilderness you will discover an alarming sign of change which, according to one theory, is human-caused. The regular cycles of slow-growth and fast-growth, the product of drought years and wet years, is conveyed by two hundred years of rings, growing narrow when the tree shuts down during drought. But 40 years ago—about the time when copper smelters began spewing sulfur dioxide en masse, followed by an even greater mass of automobile exhaust, and coupled with an unnatural suppression of wildfire and the subsequent reduced access to sunlight and nutrients—the tree's growth stops and never begins again. Forty years worth of rings are often indistinguishable; an inch or two of growth simply did not occur.

The unfortunate lesson to be drawn from this is that we need one bureaucracy to fight the other. While we seasonals are happily complaining, up in the seemingly fresh air of the mountains, the Park Service permanents are fighting to maintain the purity of a "Class I airshed," as defined in the latest Clean Air Act, and they're fighting just as hard within the bureaucracy to get a prescribed fire plan approved—a plan which would allow fire to return to its natural role on the mountain.

In this world of dueling bureaucracies the Park Service is undeniably a good guy. Yet I feel obliged to complain about some of their preferred methods, particularly when they replace wooden trail signs with shiny metal ones, impervious to the scratching of bears; and when they urge me and my crew to prune trails to super-highway specifics; and when they fly in a \$30,000 solar-powered water filter and tank (just



by Helen Wilson

like in Yosemite), even though our water is as pure as any you'll find.

These offences against Nature are often merely cosmetic. But in a culture that judges every book by its cover, a wilderness should look like a wilderness. We've often accused the backcountry ranger here, the only permanent who spends much time with us, of issuing orders that needlessly demonstrate our bureaucratic presence. This ranger is a good friend—of mine and of the mountain—and he is often merely following orders from above. But he has taken the initiative in insisting that the crew saw down standing snags next to trails or campgrounds,

which had a few decades remaining before their hazardous teetering might outweigh their usefulness as nesting and roosting sites.

These trivial offences trouble me because the damage is mostly psychological, and wilderness—at least the solace to be found within, and possibly the political compromise which allows its continuing existence—depends on our psychological perception of its wildness.

It is this psychological disservice to wilderness that draws the line between permanent bureaucrats and seasonals. We value the mountain while they value the paper that describes the mountain. The fire

crew still complains about a press release that appeared after a fire burned half a mountainside—nearly 9000 acres—in little more than a day. The Chiva Fire of 1989 according to the interpretive staff, had roared up Pine Canyon, a fact that confused and then enraged us, since on our maps and in our minds this was *Canyon del Pino*.

Why deny a traditional Hispanic name of a fairly well-known landmark by translating it into English? And why fly a radio repeater to the top of Rincon Peak—a spot attracting countless hikers desperate for wild scenery, which now sports an antenna?

Let me answer with an anecdote. One of the law-enforcement rangers (who also happens to be an expert herpetologist) had boxed a rattlesnake that had warmed itself on the sidewalk in front of the visitors' center. The regional safety officer was visiting, however, and when he heard about the snake he insisted on taking the lid off the box and putting his face into the dark hole. I was working nearby and watched, dumbfounded at how disconnected this man was from Nature, red as it can be in tooth and claw, and equally dumbfounded by the subservient ranger and rattlesnake, both of whom humored the safety officer by refusing to bite.

Ask any seasonal to tell their war stories and you'll hear about the silly, unnatural, and often dangerous antics of permanent bureaucrats. This is not because the bureaucrats are stupid (and I must add here that nearly every complaining seasonal, myself particularly, will also claim friendship with some of the most competent and admirable officials in the Park Service, all of whom dearly wish they could get out of the office more often). Rather, it is because of the distance, both physically and mentally, between office work and field work. In any bureaucracy this can lead to a deadening disconnection between the head and the toes.

This is not healthy, not for the superiors, not for the snakes, not for the wilderness. Nor is it healthy for my continuing (if seasonal) career if I complain without offering constructive solutions. This is why I've been reading more management theory than I'd like, hoping to discover a more natural way to manage something which, by definition, we are supposed to keep our grubby human tools (if not our hands) away from.

Perhaps the worst suggestions are coming from the folks who have proposed the New Resources Economics. To give them credit, they are raising important questions about how we manage natural resources, and one suggestion—that private environmental organizations should become the foremost managers of natural resources—has proven successful, as witnessed by the efforts of The Nature Conservancy and the Third World debt-for-rainforest swaps that private groups have negotiated. But to claim, as do the NRE proponents, that all natural resources can be managed according to their best economic use—that wilderness, for example, could best be protected by recognizing its economic value—is to claim that the dollar can accurately measure value. When Aldo Leopold formulated his Land Ethic, he warned farmers (and the rest of us) to “quit thinking about decent land-use as solely an economic problem. Examine each question in terms of what is ethically and aesthetically right, as well as what is economically expedient.” The fallacy to be fought, both then and now, is “the belief that economics determines all land use.”

In an NRE dominated book called *The Yellowstone Primer* there is another suggestion that might also backfire, even though it comes from Alston Chase, one of the preeminent Park Service critics. In a

wise attempt to counteract both the economic and political determination of land use, Chase suggests that parks be managed as ecosystems and that the resource management staff should become all-powerful over the current law-enforcement regime of the Park Service. But he also suggests that all researchers and resource managers report not to the local park superintendent but to a regional and eventually a national resource manager. His rationale is that this would eliminate political suppression of embarrassing research as well as encourage decisions focused on the resource instead of the local politics of tourism. The switch from law enforcement to natural resources is long overdue, but I've seen enough efforts at non-embarrassment that began in Washington (witness the tree's worth of paperwork that must justify any decision) to make me skeptical of Chase's panacea. At least in my current park, you can drop into local superintendent's and supervisor's offices and they'll listen, if not necessarily agree, to the most rebellious suggestions.

Chase flavors his essay with a vision of the bureaucracy as an ecosystem nearing climax, a metaphor suggesting that its forests are clogged with dead fuels, its diversity of thought choking in the shadows, its salvation requiring the rebirth of fire.

I came to this same conclusion after the Chiva Fire, a fire that might have been stopped where it began, on Forest Service land below the mountain. I'm an outspoken advocate of a “let it burn” policy, even though I've been chastised for saying those words aloud, especially over the radio. But in this case, when Arizona was in a record drought and the fire was burning where fuel had unnaturally accumulated during years of fire suppression, I believe there was reason to put the fire out.

As crew boss I even suggested that the Park Service find a helicopter to ferry my crew downslope, and together with the Forest Service firefighters we'd put a small fire out before it became too big. My usual supervisor was out on another fire. Instead of his usual quick decision, a Multi-Agency Coordinating meeting was held—we called it the Big Mac Attack—and by the time they decided to fly us to the fire an entire mountain was inflamed, the smoke rising a mile into the air, mushrooming until its heat formed thunderheads above us. I began to wonder about the role of fire as a cleansing agent of bureaucracies.

Later we heard gossip about why the Chiva Fire was allowed to burn. We didn't get the necessary equipment, the helicopters and slurry bombers, because another fire was burning simultaneously on the slopes of Mount Graham, 50 miles away. That fire had priority because it might burn toward the habitat of the Mount Graham Red Squirrel, a habitat and an Endangered subspecies that had spawned a national controversy because of plans to build a telescope in the heart of the squirrel's domain.

In other words, the intertwined bureaucracies of wildland firefighting, as well as the Park Service's insistence on proper etiquette, coupled with the University of Arizona's telescope plans, plus a drought and a bolt of lightning, all combined to create a very large and expensive fire—nearly \$1 million for suppression, plus an estimated \$300,000 to rebuild trails and outhouses. For a few days after the Chiva Fire I might have even supported the most radical proposal to rejuvenate a bureaucratic ecosystem—that being Dave Foreman's idea of burning all bureaucracies by converting wilderness areas into truly wild areas, without maps or trail signs or helicopter rescues—except such a grand disenfranchisement would put me out of a summer job.

All of these solutions, from the NRE's free market dreams to

Foreman's dream of pure freedom, overlook one of Leopold's seminal points, which is that we must be tied to the land, economically and ethically. To accomplish such an ethical reform I would suggest that any necessary bureaucracy, from the seasonals on up, should be integrally tied to the land. A regional resource management czar would not be tied to anything more wild than a government sedan; however, a wilderness off-limits to a bureaucracy would be a wilderness without any bureaucratic boosters. If there must be men and women in a wilderness—to maintain a bare minimum of trails, to teach and sometimes rescue backpackers, to return fire to its natural role, to note the health or illness of the ecosystems—then these individuals, with their proprietary interest in that particular wilderness, could be its best protectors.

A movement is afoot in Yosemite to enfranchise the seasonal workforce; I've heard they've even written a Seasonal Bill of Rights. Such a movement may be necessary but at present the proponents are emphasizing the humans and not the land. Also, if successful—if we begin sleeping too intimately within the Park Service family—it might dilute the seasonals' authentic focus for rebellion, which is a rebellion for the land.

Instead I would suggest a wilderness work ethic, with its rules beginning simply and becoming more verbosely bureaucratic:

1. Just say no to busy-work projects.
2. Rely on your feet, your shovel, your axe. The least damage is done with the oldest tools. Eschew helicopters and other modern technologies but remain flexible; it's better to charge your radio batteries with a solar panel than a gas powered generator.
3. Honor the land, not the bureaucracy that ostensibly protects the land. Look for the forest and the trees, the species and the individual, the relationships and the names, and amid the shadows you might discover your version of a mountain's truth. Give voice to these opinions—fervently, politely, and with respect to the bureaucratic requirements that hamstringing good decisions and hasty mistakes with equal diffidence.
4. Write memos to support your views. I've seen the most stubborn permanent rangers turn dumbstruck and pliable when they discover that seasonals are participating in the sacred flow of paper.
5. Support a bottom-up decision-making process. Insist that your observations of the wilderness be considered when decisions are being made that affect the wilderness. Welcome your supervisors into the woods with food, whiskey, and needling questions.
6. Avoid the can-do philosophy which is both the glory and bane of wilderness work. Yes, you should work and think independently (since otherwise you might forget your poncho and die on some cold lonesome mountain, or even worse you might follow without question some cockamamie crew boss into the bellows of a fire)...but do not follow the advice of industrialist H. Ross Perot, who allowed his employees such autonomy that "if someone saw a snake, they'd kill it." If you see a rattlesnake, move it off the trail, but avoid being so dedicated to the job that you muck up the wilderness with tools, gaudy trail signs, or other signs of human industry.
7. Above all, ask yourself if the job you are doing would stand up to Aldo Leopold's Land Ethic: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

This last rule, inspired by busy-work projects that seemed counter to wilderness values, also highlights the most authentic rationale for

paying seasonals a salary, since I would argue that the integrity, stability and beauty of a wilderness must be constantly reaffirmed. We need human eyes, and a few carefully placed human footprints, inside a wilderness so that we may watch and discover all that is old in order to recognize the moments of newness.

In any wilderness both man-caused change and natural change is constant and inevitable, and these changes must be noticed in order to control what is destructive (such as artificial fuel buildup, the product of 80 years of fire control, which feeds unnaturally catastrophic fires) or to simply honor the natural changes. When Peregrine Falcons returned to the Rincon Mountains two summers ago, for the first time in decades, they were first discovered by a seasonal, a firefighter watching lightning from atop Spud Rock. The hawk dive-bombed from behind, tearing his t-shirt, and an hour later, on another rock, I identified the black face-mark that made the homecoming official.

In a wilderness we watch a corner of the world as it may have looked before we began to act like gods. And now, as our hubris returns to haunt us, as the world grows warmer, we should know what happens when a fire burns, when rain forgets to fall. And we should remember what it feels like when the Peregrines return to their old rocks, with their reminder that not all rocks are meant to be shared. This is how I return, summer after summer—as a witness who must pay attention to the birds, to the wind in the pines, to the grasses that sprout from black earth while the logs still smolder.

The summer the Peregrines returned I was promoted from fire crew boss to biological technician, and partly because of the support of innumerable permanents I have made myself into something of a fire ecologist. For two summers my partner and I have counted overstory trees and seedlings and herbaceous density while asking what is the natural fire regime on this mountaintop. In the process of installing test plots we discovered a new orchid on the mountain, but officially we were quantifying the forest so that we might know, in 20 years or so, if we're letting it burn properly, naturally.

Besides the orchid, and the Peregrines, and the hoot of a Spotted Owl, and fledglings of a threatened subspecies of Goshawk, I discovered a certain ratio of trees to humans, a minimum of perhaps 15,000 trees for every human, at which I feel most comfortable. For some archaic reason, as I work in a wilderness with my hands and my feet, I find it easier to keep my head honest. This connection of the head to its body, of the office to its mountain, may explain why the Park Service needs me as much as I need its wilderness.

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The Dignity of Wild Things

by Mollie Matteson

PREFACE: The ideas presented in the following essay are continually evolving. Through publication, I hope these ideas will not only resonate with a wider audience, but will also generate feedback that can contribute to a more robust, powerful argument for ethical, ecologically-minded behavior.

I would like to recommend that in judging the rightness of our actions toward the natural world, we be guided by a fundamental respect for the *dignity* of wild nature. Dignity is the intrinsic quality in all beings that we are morally obligated to uphold. If our behavior does not infringe on the dignity of animals, plants, rocks, rivers, and the relationships among them, our actions are proper and sustainable, both ethically and ecologically.

Except for overly romanticized tales of the hunt, with their "dignified" elk, rams, or other majestic quarry, our culture rarely ascribes dignity to creatures of the natural world. Traditionally, dignity has been considered a quality of humans—a quality by which we retain our humanity, and without which we become something less than human. Many popular social movements have as their focus the maintenance of human dignity—for example, the dignity of aboriginal peoples, the terminally ill, the poor, and other persecuted, disenfranchised, or relatively powerless groups. Dignity is a common theme of literature and art. In the face of great suffering and privation, tragic heroes still manage to hold on to their own dignity. Persons of dignity are not, nor will they allow themselves to be, debased. To maintain one's own dignity is to be true to oneself. The corrupt, the thoroughly downtrodden, and the self-deceiving have given up their dignity, and in so doing have abandoned themselves.

The word "dignity" derives from the Latin *dignus*, which means worthy. To keep possession of that which is most worthy, and to honor what is most worthy about others, is to value dignity. To not value, to not respect the dignity of others (including, as I will argue, other species and wild things) is to let go of one's own dignity. Those who disregard or deny the worthiness of others are shielding or aggrandizing their own egos; they seek power through control and domination of others. Ironically, this is a shallow, flimsy, very often self-destructive sort of "power," if it can be called that at all. It depends entirely on the submission of the outer world to one's own desires.

The dignity of wild things should serve as an alternative moral guide, superior to the two major schools of environmental ethics that are widely discussed in our society today. Although professional philosophers and others may disagree with the way I identify and group these ideas, I see on the one hand a philosophy of "rights"—which can range from a very narrow focus on sentient animals only, to a broad advocacy for the rights of all of nature. On the other hand, I see a philosophy of "stewardship" which is influenced by utilitarian thinking and characterized by a belief in the superior wisdom and power of humans. While I have serious doubts about both these viewpoints, they do offer ways of behaving ethically toward nature. The unfortunate truth is that the *modus operandi* in our culture is based on ignorance, indifference, egotism, greed, and most extreme, a fervent belief in the worthlessness of unexploited nature. At best, most people act as if their relationship with the natural world is amoral: ethics are irrelevant. At worst, people are inimical to wild things, to the world not made or controlled by "Man."

Increasingly, conflicts over natural "resources," wildlife, and wilderness include debates over appropriate ethical behavior. While most people are not professional philosophers or biologists, many speak with moral conviction about what's right for the environment—as well as for humans. (Witness the hunting rights vs. anti-hunting controversy, where a majority of those on either side of the issue have minimal biological knowledge but are motivated by strong philosophical beliefs. Both sides make the argument that their way is "best for nature.") The struggle for the moral high ground is central to many environmental disputes, not peripheral. I believe the ethical system that gains ascendancy amongst those who care, or claim to care, about the environment, will have immense influence on the future of the human-nature relationship and of the planet itself. Thus, after briefly describing the two popular types of environmental ethics, I offer my own ethical guide, which I call the dignity of wild things.

RIGHTS FOR NATURE

One of the main arguments against a philosophy of rights for animals, or for nature in general, is that, according to opponents, only humans can possess rights because only beings with the ability or potential ability to take on the responsibilities concomitant with the possession of rights can legitimately hold them. This is a legalistic and much narrower concept of rights than that put forth by rights for nature advocates. What I find difficult about "rights for nature" is its absolutism, and thus its distance from ecological realities. Rights imply rules, a "thou shalt not" approach to behaving well. Rights are respected, or they are violated. There is no middle ground, no partial retention of



rights. If nature is to have rights equal to humans, there can be no hedging about such acts as killing, owning, or using without just compensation various parts of the natural world. In my view, animal rights does not allow for any use of animals that, if the animals were people, we would find reprehensible. This includes usurping territory (destroying or taking over wildlife habitat) and enslaving (keeping pets or other domestic animals). Thus, a true adherent to animal rights must not only be a vegan (someone who eats no animal products and uses no materials made of animals), he or she also must not eat any food the production of which involved appropriation of animal habitat or removal of animal forage. This is the logical conclusion, and it is a practical impossibility.

Some try to get around this trap by acknowledging rights only for certain species. The most common basis for discrimination between creatures with rights and those without is sentience—which is often equated with the ability "to feel pain," in the words of 19th century utilitarian philosopher Jeremy Bentham, "to suffer." This differentia-

tion is helpful as a practical matter, eliminating all but about 5% of the animal species on Earth from the circle of rights holders (i.e., all invertebrates—not to mention plants, bacteria and other organisms), but it is biologically indefensible. Sentience is usually understood as consciousness, or the ability to perceive, but all organisms are aware of their environment, in their own way. Unconscious plants turn toward light; "non-sentient" snails seal their shells when exposed to dry air. Lack of a consciousness similar to that of humans does not mean an organism cannot behave in ways conducive to its well-being.

Likewise, lack of consciousness does not mean organisms cannot "suffer." From a broader perspective, suffering can mean simply having to respond to injury by changing one's internal state—be it on a physiological, behavioral, emotional, cognitive or some other level. The ability to react to harm has obvious survival value. Different organisms just do it in different ways. When I forget to water my houseplants, and they begin to wilt and droop, they are suffering in ways that only plants understand. I presume wilting is a defense, as well as a result of too little water. Perhaps the plants are not transpiring as much, and thus can survive—temporarily—with less moisture. Pain, suffering, and feeling cannot be simply categorized into present or absent. They are experienced in millions of different ways—perhaps as many ways as there are species. Thus it seems to me entirely arbitrary to base moral worth on sentience.

The solution to discriminatory recognition of rights, for some, is to recognize the rights of all of nature. Presumably this includes not only all living things, but the physical environment as well. Aside from the theoretical conflicts this brings up, I find it difficult to imagine how one could incorporate this idea into real-world decision making and action: rights would continually be at odds. The only "right" I can envision for all entities is the right to their own dignity.

STEWARDSHIP

The stewardship idea, even if ostensibly based on science, holds many more practical dangers than a rights of nature philosophy. The latter at least contends that animals, or natural things in general, are equal in value to humans. Stewards believe they are superior and have a complete, or at least completely adequate, understanding of the world. While stewardship is clearly based on a utilitarian ethic, the most insidious aspect of this kind of thinking is that manipulation of nature is seen as *necessary* for nature's "own good." I distinguish this from the widespread and more blatantly self-serving belief that nature can and should be used by "Man" in whatever way he sees fit; i.e., nature should be manipulated for the good of the people.

However, much damage can also be done in the name of saving something from itself. Until recently, corporal punishment was a widely accepted method of disciplining children. The justification was "spare the rod and spoil the child," i.e., beating is for a child's own good. In truth, as Alice Miller writes in *For Your Own Good*, such treatment of children served the needs of the adults—their need to control others, have power, and take revenge for the way they were treated as children. Manipulation often occurs in ways more subtle, and seemingly

benign: children are pushed to be high achievers—in music, academics, sports—because of the insecurities and unfulfilled dreams of their parents, for example.

I do not offer myself as an expert in either child development or ecological processes. However, I would like to suggest that the results might be spectacular, revolutionary even, if all people viewed it as their role to advocate for children, not indoctrinate them, and to advocate for nature, not try to “improve” it. What if raising children “properly” was not the goal of parenting, but instead, providing the fertile soil in which children could grow and develop in their own unique ways? And what if it was resolved that we abandon technologies and projects that seriously undermine natural processes, and to the greatest extent possible, respect the wildness, the unpredictability of nature?

Of course, this is a great threat to authority, in all its manifestations (e.g., governments, dictatorial parents, the Forest Service, many religions). Thus, there is stewardship, which allows the authorities to maintain their positions of power while claiming to do good for their “flocks.” The word “steward” literally means “the ward of the hall or sty” (from the Old English “sti” and “weard”).* Though this derivation has some positive meanings (a “ward” may be a guardian, a watcher, a protector), “ward” also means “the state of being under guard; esp: CUSTODY,” a “division of a prison,” and the “person under guard, protection, or surveillance,” as in “ward of the state.” The “sti” is the center of domestic life—noble if it is a hall (as in the castles of lords and princes), and lowly if it resembles the place where swine are kept. Thus, a steward of nature is not just one who may guard (protect) nature; the guard may also prevent escape or wrongful behavior (in the manner that prison wardens guard inmates). A steward of nature does not view his “ward” as independent or capable of taking care of itself. Nature is a household that requires management.

An approach to nature, to other cultures, to other individuals, that presumes to know best, no matter how benevolent the motives, inevitably threatens what makes an ecosystem, tribe, or person functional and unique. I am not proposing as a solution, however, that we just need to be “more altruistic.” I believe it is impossible in any situation, under any religion or philosophy (including the one I am proposing), to not be motivated to some extent by selfish interests. The answer lies in acknowledging one’s own needs and desires, while simultaneously holding deep respect for the freedom and dignity of others. The frightening thing about such an acknowledgement—for our society, as well as individuals—is that it means giving up the illusion of having complete control, admitting to mistakes, and recognizing that fear, hurt, sadness and other so-called “negative” emotions are normal.

Stewardship is also dangerous because it makes no hedges against the possibility that our understanding of nature may be wrong or inadequate. If we fail, we bring down ourselves and our “wards” with us. A far wiser and more ethical course is one in which humans are compelled only to act responsibly toward—not have responsibility over—nature. As both a moral and practical matter, an ethic of dignity entails taking responsibility for ourselves.

DIGNITY

In fact, an ethic of dignity demands that we respect the self-directedness of others. When we refuse to pay attention to ways of being or processes we do not understand, we affront the dignity of others—people, creatures, or places—and injure our own dignity.

Context shapes the way in which a respect for the dignity of wild things works as a practical moral guide. While some may write off a situation-dependent ethic as relativism, I find this denial of context to be a major flaw of most moral arguments. Thus, for example, while I believe it absolutely necessary to consider the context in which hunting occurs in order to determine whether it is right or wrong, the hunting rights lobby fervently defends all hunting, in any context, as their god-given entitlement. On the other hand, some animal rights advocates contend that killing of any animal in any situation is a gross moral violation.

Understanding context means knowing what has come before and what is here now, socially, technologically, and ecologically. It means acknowledging that change occurs, and that change prompts new responses, whether we give them willingly or not. For example, the changes brought about by overpopulation demand new responses from us in terms of procreation and mortality. Either we choose to reduce human population now through voluntary, non-violent means, or human population will eventually be reduced through disease, war, widespread sterility via environmental toxins and radiation, or other unpleasant mechanisms.

Responding to changes in context is what all organisms do, and even what all non-living things must do (as when increased precipitation prompts faster erosion rates in rocks and soils). This is a basic tenet of ecology, and in this sense, the philosophy I am outlining not only acknowledges ecological principles, but is also modeled on them. To behave in a manner that disregards change in context is ecologically unsound and undermines dignity. Thus, when a man hunts an animal that is nearing extinction, or when a man is well-fed and clothed by resources other than those derived from the hunt, or when a man persists in behavior that was necessary and not permanently injurious years ago (in another context) but is not now necessary for his health and is likely to cause great harm (as in reducing genetic diversity, causing local extirpation or preventing recolonization of former range), or when a man’s hunting hinders or destroys the wild existence of his prey, that man has ignored or denied the change in context, and has violated his own dignity and the relationship he had with the once-wild thing.

The idea of wildness is central to a philosophy of nature’s dignity. To be wild is to be self-willed. To be self-willed, self-directed, self-defining is to have unique value, or worth. It is to have dignity. However, possession of dignity does not mean exemption from disease, privation, and death. In fact, where humans try to prevent these things in nature, wildness is removed. Wild processes such as fire, forest decay and seasonal flooding form part of the identity of wild things. Deer, for example, are formed in part by wolves and other predators.

Removing the predators, thus upsetting the predator-prey relationship, changes the identity of the deer. It means we do not truly respect “deerness”: the deer’s dignity, its worth without consideration for our own needs and desires.

Some will wonder whether I reserve for humans alone the ability to violate another’s dignity. My answer is that while I don’t believe *Homo sapiens* is necessarily the only species capable of this behavior, it is the only one I know of that is. I believe humans are uniquely capable of understanding dignity because they have a particularly keen ability to think ethically. I suspect that moral calculation is not part of the repertoire of most non-humans. Evolutionarily, most species have never needed that ability. Certain species, such as dolphins and chim-

panzees, may be guided by social codes that are in some ways similar to human moral belief systems. Perhaps, in time, we will learn more precisely how "conscience" is manifested in the minds of other species.

Homo sapiens has a sophisticated ability to develop and operate according to ethical principles because these have survival value. However, our ethical systems thus far have been inadequate, and thus our species now faces the very real possibility of causing our own extinction.

When ethical consideration** is applied only to those groups, species, or other entities for which it is convenient to do so, then a true ethical system does not exist. To discriminate is to go against what ethics is about, which is to move beyond consideration of the individual self and its needs to consideration of other selves and their needs. To be selective in applying ethical consideration is to demonstrate that selfish interests still predominate.

Aldo Leopold and others have said that ethics are an enlargement of the self. To be ethical is to push out the boundaries of self, so that others—other people, other species, other ways of being—become part of one's own identity, and are accorded the same respect, care, and consideration that the individual self deserves. Unfortunately, in a society such as ours where a majority of people do not truly respect and care for themselves, but instead use material goods, addictive substances, social status, violence, political power and other things to compensate for their own insecurity and under-developed selves, it is extremely difficult to accomplish this enlargement of the self.

Indeed, a deep concern for the spiritual/psychological health of humans lies at the foundation of the dignity ethic. This is not because *Homo sapiens* is any more deserving of consideration than other inhabitants of the planet. Rather, it is because of the uniquely human ability to impinge so drastically on the self-will of other beings, and because human pathology is responsible for the disintegration of the environment. This does not mean that advocates for wilderness and wildlife must abandon their activities for more "socially-oriented" projects. In fact, such people are vitally important as leaders in the movement to expand culturally accepted notions of "self." However, in a field where one's work is often seen—even by oneself—as an effort to stop, limit, and contain people, the dignity ethic corrects the perspective: advocacy for nature is simply speaking out for a part of our selves that we had forgotten, abandoned, and abused. Those who no longer deny, and are most sensitive to the abuse and loss of this part of the self, speak out first and loudest. Perhaps they simply have had the opportunity or willingness to experience that aspect of our enlarged selves that most people have not.

The practical ramifications of the dignity ethic are much too numerous and complex to address in this paper, and I have only begun to think about the many areas in which the ethic would apply, from farming to wildlife management, from parenting to population control, from education to government. However, I will offer a few fundamentals that derive from a belief in dignity—for all beings, including humans.

- Notice things. Be observant. This means people's feelings, the color of the grass, the sound of a marmot's whistle. You cannot enlarge your sense of self if you do not know what goes on beyond the boundaries of your skin.
- Eat as low on the food chain as possible. The human body is not designed for high meat consumption, and in this day and age meat production is responsible for great environmental destruction and animal suffering.



by Jake Vail

- Pay attention to and respect children. They are learning how to regard themselves and the rest of the world, and they learn from the examples adults set for them.
- Understand that human overpopulation is the ultimate cause of nearly every current environmental problem, as well as many social dilemmas. Control your own reproduction, and fully support efforts to make birth control affordable, available, and acceptable to all people.
- Live simply. Minimize consumption of energy and material goods. Replace acquisitiveness with creativity.
- Refrain from violence.
- Be critical of authority. Seek and speak the truth. Dignity exists only where truth exists also.
- Defend yourself from attackers and defend others who are wronged, threatened, and harmed (whose dignity is not respected by certain people or groups). This includes tropical rainforests, rivers, whales, animals used for testing cosmetics, and victims of war.

A philosophy of dignity proposes that humans are neither superior nor inferior to any other beings. Instead, when they are true to themselves (maintain their dignity) humans are "wild," or self-willed, just as are Earth's other inhabitants. Many if not most humans, however, have given up their wildness, and therefore their dignity. This happens, as it has throughout history, when people attempt to remove or deny the self-willedness of others in a vain (both meanings of the word) effort to aggrandize their own power. Because all once-wild

things—including people and natural forces such as fire and floods—will always struggle to return to a self-willed state, the power gained through control over others is tenuous and temporary. To respect the power within oneself and in all others, including the plants, animals, rocks and rivers, is to believe in and maintain the dignity of wild things.

*The definitions and etymologies are from Webster's 7th New Collegiate Dictionary, 1965.

**There are many other types of "consideration" besides the moral kind, and other species, along with humans, definitely apply them on a selective basis. For example, one can regard another on the basis of genetic relatedness, utility (e.g., what can it do for me?), beauty, potential danger, or pain (e.g., does it hurt me?).

A FEW SUGGESTED READINGS

The diversity of this list reflects the many thinkers and wide-ranging disciplines from which I have drawn my ideas. I definitely do not agree with the opinions of all of these authors! Some titles are provided here as good background information on animal rights, stewardship, and the development of environmental ethics—not as supporting arguments for my thesis regarding dignity. Others, like Miller and Kasl, write on topics that seemingly have nothing to do with wilderness preservation, but provide a way of viewing the human development of self and relationships with others that serves as a rich analogy for the relationship of humans and the natural world.

Callicot, J. Baird. In *Defense of the Land Ethic: Essays in Environmental Philosophy*. 1989. (Leopold, various approaches to environmental ethics.)

Chase, Alston. *Playing God in Yellowstone: The Destruction of America's First National Park*. 1986. (Epitomizes the "we know what's best for nature" attitude, despite accusations that the National Park Service is "playing God.")

Collard, Andree. *The Rape of the Wild: Man's Violence against Animals and the Earth*. 1988. (Animal rights, a feminist perspective.)

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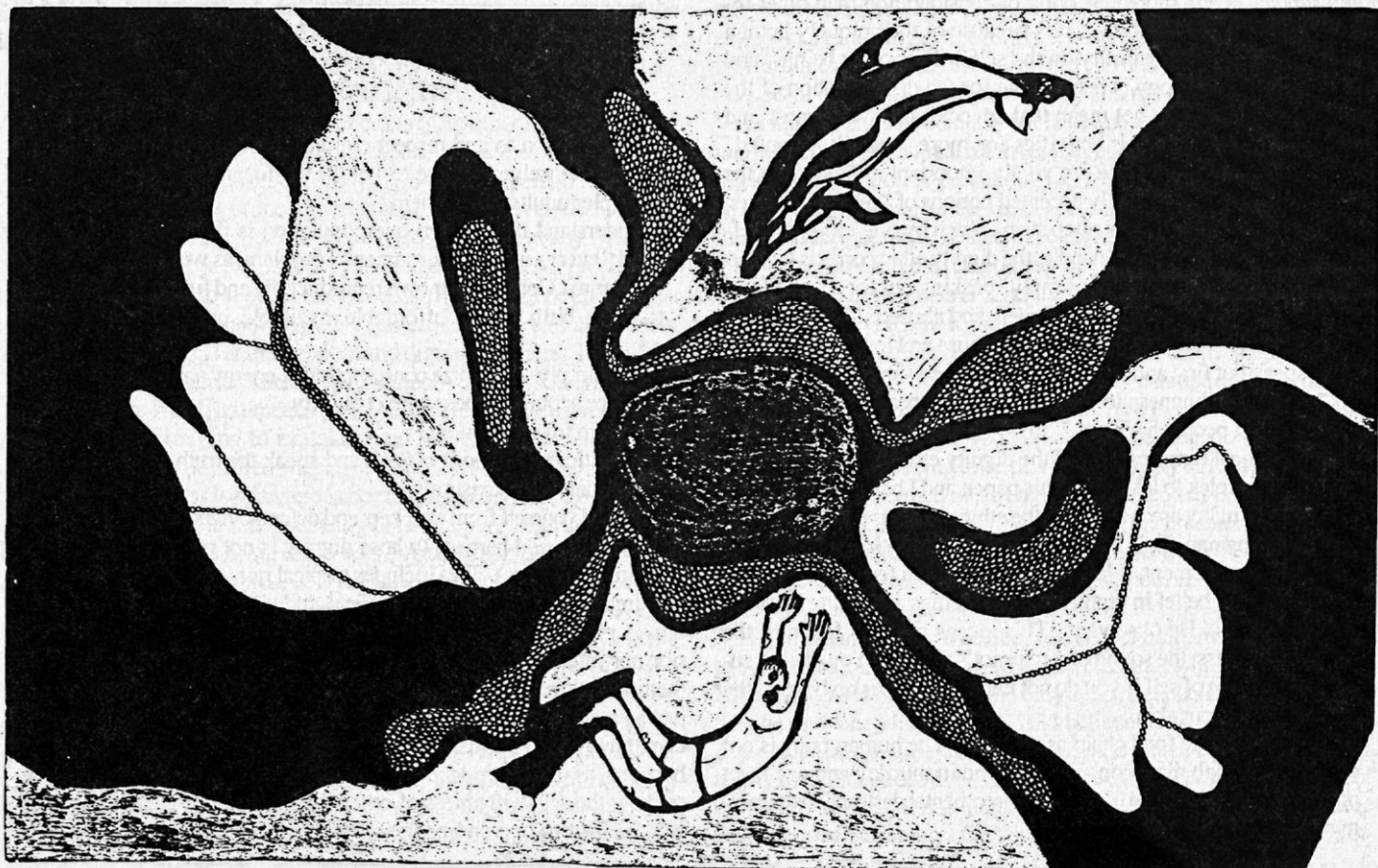
Kasl, Charlotte Davis. *Women, Sex and Addiction*. 1989. (The search for power outside the self as an ineffective, damaging way to achieve true inner power and balance. A metaphor for abusive attitudes toward nature.)

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Mollie Matteson is a wildlife biologist and writer who has studied wolf packs in northwestern Montana.



Has The United States Exceeded Its Carrying Capacity?

by Monique Miller

Some observers are alarmed that the U.S. population is increasing by three million people every year, making it the fastest growing industrialized nation. Other people are convinced that population growth is beneficial. Since there is no consensus on this crucial public policy issue, an essential contribution to the debate would be to determine the "carrying capacity" of the United States.

Carrying capacity refers to the number of individuals who can be supported in a given land area over the long term without degrading the physical, ecological, cultural and social environment. For a long time, the concept was applied only to animal populations. Biologists understood that if a species exceeded the carrying capacity of its geographical region, it would eventually experience a die-off.

Human beings were constrained by natural limits for thousands of years. Our ancestors' numbers were maintained at a sustainable level by disease, famine and drought. Although the advent of technology permits humans to exceed natural carrying capacity limits in some respects, the ultimate size of any human population is still constrained by amounts of arable land, potable water, and other resources. The unique limiting factor of energy is also on any modern society's list of required assets.

Has contemporary American society exceeded its carrying capacity in terms of these vital natural resources? Does the fact that we are increasingly forced to reach beyond our borders for energy and other resources indicate we are already overpopulated?

Land is essential for the production of food and other basic human needs, such as fiber, fuel and shelter. However, one to two million acres of agricultural land in the United States are being converted annually into roads, homes and cities or lost through erosion. Once land is paved over, it can never be used as farmland again. We are currently losing topsoil 18 times faster than replacement levels; ero-

sion is a problem on one-third of US cropland; salinization is increasing. Americans do not have any more land available to feed our rapidly increasing population, since nearly all the arable land in the United States is already in production.

Water supply is crucial in determining the size and location of human populations. Yet groundwater in this country, much of which was stored during the Ice Age and is non-renewable, is currently being pumped out of the ground 25 percent faster than it is being replenished. Ninety-eight percent of our rivers have already been dammed. Some California communities have turned to desalination of ocean water to ensure future water supplies, but have found it to be not only costly but pollution—and energy—intensive.

The remarkably high crop yields distinctive of American agriculture depend on the availability of cheap foreign oil for fertilizer, pesticides, irrigation, cultivation and harvesting. According to Drs. David and Marcia Pimentel of Cornell University, 3000 calories of fossil energy are being used to produce 1000 calories of food. This 3:1 ratio is clearly unsustainable, and leaves those dependent upon American agricultural productivity highly vulnerable to future fossil-fuel crises.

Furthermore it is a myth that the "wide open spaces" of the arid West will provide the land necessary for agriculture and human settlement as the population grows. Half the West was never claimed under the various 19th century land grant laws, mainly because it was useless for farming. Nine-tenths of the Western US consists of "marginal land" too dry, cold, mountainous or rocky to support any considerable population over time.

Fifty million people now live in the American West: Nevada grew by 50% between 1980 and 1990. Dr. Dennis Brownridge of the University of California estimates that the area's carrying capacity has already been exceeded by a factor of two or three. As resources are drawn in from elsewhere to support growth in marginal areas, the carrying capacity of the source areas declines.

Human carrying capacity is not determined exclusively by land, energy and water constraints. Dr. Garrett Hardin of the University of California, Santa Barbara was the first to use the term "cultural carrying capacity" to explain the role that human choice plays in determining optimum population. The more clean air, fresh water, wilderness, solitude and biodiversity that humans deem necessary, the more population will need to be reduced.

Increased levels of material consumption ultimately reduce the carrying capacity of any ecosystem. Individual freedom deteriorates as human numbers increase, and social problems such as budget deficits, school overcrowding and deterioration of social services become more intractable.

The population of the United States (255 million) has more than tripled since 1900. U.S. fertility rates are rising, up from 1.7 in the 1970s to 2.1 today, and legal immigration from foreign countries now results in over one million new permanent residents each year. Within the next 80 years, U.S. population is projected to double to 500 million. Global population is increasing by nearly 100 million each year.

The determination of carrying capacity in any given geographical area is a dynamic process. It is a function not only of available land, energy and water, but of affluence, technology and human values. Dr. Robert Constanza of the University of Maryland estimates that the ideal population for the United States—based on renewable resources with consumption rates *one-half* current levels (and given some concern for the needs of future generations)—would be 170 million people.

Whether such estimates are accurate or not, it is obvious that U.S. population growth is not sustainable. We need to initiate a public debate on the carrying capacity of the United States. Then we can decide what we want the ultimate population of our country to be.

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Speed the Day

When the coudung of Texas
 stops degrading itself
 by pretending to be
 the President of the United States
 then my friends
 and only then
 will ten thousand mammal-chewing lice
 from Atlantis
 burst out singing
 the songs of my childhood
 those joyously riotous
 all-for-one-one-for-all
 songs
 overflowing with uproarious riddles
 in the shape of waterproof sparks
 songs the exiled alchemists sang
 in their invisible garden in Byzantium
 songs sung with a magic touch
 of Buster Keaton's smile
 the good old Hopi way

Yes it's true
 then and only then
 when the last parking lot in the world
 is overgrown with redwoods
 will my eyes ear nose and throat
 rejoice to hear
 those glorious wonderful
 fresh-gulps-of-mountain-air
 songs
 so delicious
 so frantic
 so resonant with old maps of Peru
 that sperm-whales sing them round the clock
 every First of May
 and Forty-Third of June

Yes I'll say it again and again
 When the Baltimore orioles decide
 to fly back to Baltimore
 when Liberty refuses
 once and for all
 to be a statue of Hitler's mother
 when god money government fatherland
 war profits police suburb jail clearcut
 pesticide steel-jawed trap
 and all the other ugliest words in all languages
 are obsolete at last
 then and only then I say
 will we all dance
 for the first time
 with true abandon
 those delightfully splendid
 nothing-can-stop-us-now
 dances

Yes for the first time
 dances around the campfire
 around the world
 dances that are the very opposite
 of disposable chopsticks
 dances steeped in the moral argument against
 Calvinism
 dances richly underlined
 in red pepper and black
 dances ripe with all the things
 Mary Wollstonecraft dreamed of by day
 dances impervious to rust
 dances older than hiccup
 yet forever breathlessly new
 dances full of nutmeg
 and nightshade
 and the wild secrets
 of Antarctica

—Franklin Rosemont, from *Lamps Hurlled at the Stunning Algebra of Ants*
 (1990, by Franklin Rosemont with drawings by Karol Baron; Surrealist Editions,
 distributed by Black Swan Press, 1726 West Jarvis Ave., Chicago, IL 60626)

Exceptional Excerpts

PILGRIMS TO THE WILD

by John ("Sean") P. O'Grady, forthcoming from the University of Utah Press, Spring 1993.
Excerpted from the Preface with permission.

This preface should have been written atop a mountain. I tried. Before I wrote the bulk of this book, I climbed Koip Peak in the Yosemite High Sierra late one dark afternoon in August, 1990, outfitted with notebook and good intentions. But an immense thunderstorm—outstanding disturbance—interrupted my jottings, routing me from the peak into a panic of self-preservation. Yosemite National Park was set afire, I almost perished from hypothermia, and that preface was never completed. No one told me this would be the most difficult part of the book to write. The word "preface" itself is a contradiction—literally a "speaking before"—and, as every reader knows, the preface is the final bit of book indited. Herein lies an austere beauty: The last written shall be the first read. The beginning is the ending.

Koip Peak offered me no words. A mountain needs no preface, requires no apology, no explanation. So I turn instead to literature, to a poet who lived his most significant days and hours beyond the mountains. In the late 1930s, Kenneth Rexroth composed a book-length manuscript entitled "Camping in the Western Mountains." Written under the auspices of the Federal Writers Project, the book for some reason never saw publication. Perhaps it was ahead of its time—or maybe just too idiosyncratic, too ornery to have found a market. In any case, this manuscript, yellowed and languishing now in a prosaic library, provides a thorough introduction to all aspects of backcountry camping as it was understood at the time; its subjects range from sleeping bag construction to the arcana of equine constipation. Although he clearly intended his book to be a technical self-help manual for the outdoor enthusiast, Rexroth the poet / litterateur / anarchist could not refrain from interjecting his own, unmistakable voice into the treatise, and in so doing revealing his love for the subject matter.

Toward the end of the manuscript, he suggests a number of books that might be useful to those of his readers unfamiliar with the "philosophy" of roughing it. He says that "there are books that have nothing to do with camping, and less to do with the Western mountains, that are valuable preparations for a camping trip." Rexroth recommends the novice camper stuff a remarkable assortment of books into the pack: Izaak Walton's *The Compleat Angler*, Gilbert White's *The Natural History of Selbourne*, and—most remarkable of all—John Bunyan's *The Pilgrim's Progress*. Although the first two books are tangentially related to outdoor pursuits, the backpacking reader may wonder why Rexroth declares Bunyan's work among "the three best manuals for camping and woodcraft that will ever be written." Lofty praise indeed, even exaggerated, but Rexroth's words are insightful, providing us with a point of departure: The pilgrim is a spiritual bushwacker. Or to phrase it in more anthropological terms: "A pilgrim is one who divests himself of the mundane concomitants of religion. . . to confront, in a special 'far' milieu, the basic elements and structures of his faith in their unshielded, virgin radiance" (Victor and Edith Turner 15).

Pilgrims to the Wild is a series of meditations focused upon literary journeys to "the wild," what I call secular pilgrimages. Though Bunyan's pilgrim traveled only with his soul, tracking his bliss into heavenly oblivion, the five figures I will be following travelled in real places, with their bodies as well as their souls...

Each of my pilgrims to the wild—Henry David Thoreau, John Muir, Clarence King, Mary Hunter Austin, and Everett Ruess—is a writer who documents the crossing of thresholds....

Book Reviews

THE NINEMILE WOLVES

by Rick Bass; 1992, 192 pages, cloth, \$22.95, Clark City Press, Box 1358, Livingston, Montana, 59047.

In the spring of 1975 I encountered the first of the two wolves I have seen who were not semi-domesticated pets. Six of us were in Wyoming's Wind River Mountains, doing a 200 mile ski tour, when I saw the wolf. At first I thought it was another of the dozens of coyotes we had seen and heard each day and night. I was watching this lone canine intersect our route a hundred yards ahead when, with the help of a telephoto lens, I realized this was no coyote. He (or she) was too big, had a different tail and nose and moved with a gait and purpose and presence unnatural to coyote. This was a wolf, a healthy one, on a mission. I watched for perhaps a minute, riveted by the sight and the awareness that my belief that all the wolves of Wyoming had been "eliminated" was false. There was at least one, and the environment became richer beyond measure with the presence of that wolf.

It inspired me to become more cognizant of wolves and their stories. I've learned that behind every story, hidden in the detail, briefly glimpsed through the telling like a set of bright eyes that blink and vanish in a woods at dusk, is a mystery. And what is more mysterious than the lives of wolves, those much maligned beasts who create beauty and brutality, awe and dread, hope and terror, respect and hatred in the human imagination?

Rick Bass has written a clear, moving story about a pack of wolves living in one of Montana's innumerable valleys where raising cattle for slaughter is the local economic base. The Ninemile wolves became part of the US Fish and Wildlife Service's efforts to reintroduce the wolf to the Rockies. Bass's story is about survival and extinction and what it means to live in a hostile environment. It is about the tangled bureaucratic/political/economic web in which the FWS and, really, all of America exists.

This well crafted essay is not about wolves in the wilderness because, in a pure sense, there is no wilderness left in America.

This is a story about the significance of that fact. These wolves' habits are carefully scrutinized. Some wear radio collars. They have been tracked, trapped, injected, inspected, trucked and tenderly nurtured by some good men and women, in particular, Mike Jimenez of FWS.

Despite the care of Jimenez, the concern of many private Montana citizens, and the deterrence of a jail sentence and \$100,000 fine for killing a wolf, the fate of the Ninemile wolves—like the fate of all wild creatures—is shaped by man in tragedy and brutal stupidity and, sometimes, imagination. Through it all shines the mystery of a thin survival and, therefore, a strand of hope. It is not a string much less a rope.

Bass writes with a clean eloquence suitable to the tale, but this is not objective journalism. The author is on the side of the wolves of the world and wants the reader to join him there. He makes a compelling case for wolf's natural place and right to live in modern America. More, he indicates how much we are diminished and demeaned by the murderous attitude that dominates nature and the consequent scarcity of wolves in our landscape.

After Bass had completed the original manuscript and the book was in production, Mike Jimenez's position was "dissolved" by the FWS. Bass stopped the presses to write an angry plea to his readers. It has been inserted into the body of the book.

As with so many calls to the defense of nature, most people who will read this fine work have already heard the alarm. But the reader will be treated to a good story about creatures of great and wild heart. Both heart and story are imbued with truth and laced with wisdom to use and pass on in appropriate circumstances.

For those who believe the only good wolf is a dead wolf, the last paragraph of Bass's acknowledgements is cautionary, instructive and, perhaps, prophetic: "What was lost, in this whole story—two steers, and two lambs? May we all never be judged by anything so harshly or held to as strict a life or unremitting of borders as the ones we try to place on and around wolves."

—Reviewed by Dick Dorworth

THE WILDERNESS CONDITION: ESSAYS ON ENVIRONMENT AND CIVILIZATION

Max Oelschlaeger, Ed. Sierra Club Books, 1992, Hardcover, \$30; 345 pages.

Any book containing an essay that combines a story about climbing the Grand Teton with the anxieties of postmodern historiography has my blessing. Such is *The Wilderness Condition*, a collection of ten essays about modern culture and wildness, which possess a degree of imagination and sophistication rarely found in environmental writing, however one defines the term.

The subject matter is wide-ranging—from the Chinese concept of *li* to the genetic imperative of the hunt. And the contributors encompass a variety of biocentric perspectives: Gary Snyder, Paul Shepard, George Sessions, Dolores LaChapelle, Max Oelschlaeger, Michael P. Cohen (who wrote the Teton piece), and others. But a single theme unifies the book, the question of how to restore the natural, the wild, the "savage," in the history and language of our denaturalized civilization. All the human sciences, from philosophy to ethics to psychology to anthropology, are having to come to grips with this issue in one way or another. An anthology on the topic could not be more timely.

The essay that addresses this question most directly is Shepard's "A Post-Historic Primitivism." Those familiar with Shepard's works will recognize his thesis that the roots of our environmental and social disorientation go back to the destruction of the hunter-gatherer way of life. The argument is reinforced by two decades of new scholarship, allowing Shepard to deconstruct with gleeful exactitude the fictive histories of the primitive that project all of civilization's woes—wars, pestilence, famine—onto the "savages," the hunter-gatherers.

Along the way, the essay scintillates and rumbles, like a snow-dusted bison, trampling lesser thinkers under foot. With incandescent satire, Shepard illuminates the relevance of the hunt to our culture, arguing that we not only can, but must, relearn the undomesticated gaze

of the Pleistocene hunter. This can be done not by transforming five billion people into deer-slayers, but by recapturing the significance of the hunt. "What is important is to have hunted," writes Shepard. "It is like having babies; a little of it goes a long way."

Gary Snyder's "The Etiquette of Freedom" may be one of his most poised essays, centering on the wildness still discernible in our artifacts, our bodies, our words. Above all else, it is a contemplation of language, the proper idiom for speaking about the wild and the nonhuman. What better way to understand the depreciation of the natural world in humanist texts than as an ugly fit of impolite speech from boorish dinner guests like Descartes sulking at the universal potluck?

The editor of the volume, Max Oelschlaeger, author of the historical magnum opus *The Idea of Wilderness*, also contributes the concluding piece, "Wilderness, Civilization, and Language." Oelschlaeger offers a unique, powerful interpretation of Thoreau, concentrating on the "speaking" of nature as Thoreau understood it, or rather rediscovered it, under the Transcendentalist bric-a-brac of Emerson. This experience of communication with the nonhuman, familiar to animistic peoples but enigmatic to us, is rapidly becoming a central point of inquiry for environmental philosophy, replacing jejune debates over ethical systems. Devotees of Foucault, like myself, may quibble with Oelschlaeger's Heideggerian assumptions about language, but by placing Thoreau, our culture's primeval bard of biocentrism, into this dialogue, Oelschlaeger has performed an important service.

While most of the other essays offer similarly creative leaps, the book does suffer from several shortcomings. It would have profited greatly by including one or two essays on animism, and on the rise of literacy, which generated and transfigured the institutions that produced the denaturalized people we have become. A great deal of ground-breaking scholarship is taking place in this area. Also, the essays often overgeneralize about "the West," "Euro-" this and "Euro-" that. The West and Europe have many traditions, some good, some bad. The precise issue, as postmodern historians have persuasively argued, is how motifs (such as reason, madness, progress, sex) are used by particular institutions (such as the clinic, the factory, the university) in response to power to produce the civilized, serviceable modern subject that is

uprooting the world.

But no book can do everything at once. What *The Wilderness Condition* has done is assemble an uncommon chorus of ecological imagination. In the end this may be the only thing that can save us—the imagination to restore a history that includes the nonhuman, to reanimate language, to recapture our wild selves. Guided by hints, signs, intuitions, spoor, like practiced hunters, the essayists in this book take us farther down that path of rediscovery on which our culture now finds itself.

—Reviewed by Christopher Manes, author of *Green Rage: Radical Environmentalism and the Unmaking of Civilization*.

REGREENING THE NATIONAL PARKS

by Michael Frome; 1992; The University of Arizona Press, Tucson; x plus 289pp., notes, sources, index; \$30 cloth, \$19.95 paper.

This is a very troubling book, indeed, at times a very depressing one. The title seems positive enough—it is time to "regreen" the National Parks, to restore to the National Park Service in particular its historical sense of mission, purpose, and esprit de corps. "I don't mean to be combative or a scold," Mr. Frome writes, "but I envision national parks as cathedrals of spirituality and emotion; as models of

respect for all land and water and all of life; as a powerfully creative social ideal" (p. 4). All the more reason to decry the depressing realization that the Park Service today has become so bureaucratized and politicized that what needs to be done never even gets started. Bluntly, if you stick your neck out in the agency, proposing to do what is "right," you are liable to find yourself in the fast lane leading to the end of your career.

It just should not be that way, Frome contends. But it is, and he proves it time and again in stories of people fighting the establishment and, in general, losing both their jobs and reputations. Frome does not make his charges lightly, nor is he just another disgruntled muckraker. This is the Michael Frome, author of more than a dozen books and hundreds upon hundreds of articles, essays, and commentaries dealing with the National Parks, National Forests, and wildlife conservation. He does not just know *where* the skeletons are buried; he knows *who* buried them, and why. At times, accordingly, some critics have tried to bury *him*, and in two memorable instances got him fired from leading magazines, only to see him rise again to take on—in new offices—the bulldozing, billboarding, and bureaucratizing American Establishment. Privately among friends, he notes that one of those magazines lost more than half its circulation after he left,

NATIONAL RESEARCH COUNCIL DOCUMENTS NEED FOR SCIENCE-BASED MANAGEMENT OF NATIONAL PARKS

A report released in August by a National Research Council committee concludes that the US National Park Service needs much better scientific knowledge to protect the nation's parks. Finding the Parks beset by exotic plants and animals that compete with native species, stresses from the millions of people who visit parks each year, and air pollution even in some of the largest parks (including Yosemite, Grand Canyon, and Great Smoky Mountains), the committee recommends increasing Park Service science program funds "to create and support the needed long-term inventories and the monitoring of park resources." The committee also calls for "a scientific metamorphosis within the Park Service and an explicit mandate from Congress establishing the authority, mission, and objectives of the national park science program."

The National Research Council is an agent of the Congressionally-chartered National Academy of Sciences and National Academy of Engineering. The committee's report, *Science and the National Parks*, is available from the National Academy Press at 2101 Constitution Ave., NW, Washington, DC 20418.

and indeed, has never recovered since. The point is that he believes right *does* triumph over expedience. But only if good people speak out, only if an organization or institution is "sparked by risk takers driven by dreams and goals" (p. 11).

As a risk taker himself, Mr. Frome's credibility soars. So too the integrity of his message has been underscored by the University of Arizona Press, which passes its authors through a grueling intellectual peer review. At the end of the gauntlet, Mr. Frome emerges unscathed, while the Park Service—shades of the US Navy Tailhook Convention and the bankruptcy of the savings and loan industry—emerges bloodied and demoralized, another victim in the ongoing meltdown of American values and institutions.

Indeed, is it any wonder, Frome asks, that the Park Service is adrift? Just look at a day in the life of any park superintendent. That day is not filled with meetings on how to preserve the environment, but rather with seeing developers, concessionaires, and chamber of commerce officials, all of whom want the parks to "pay." "The higher a parks person rises on the ladder," Frome notes, "the less he or she knows about the smell and feel of resources, and the more acclimated he or she becomes to meeting in city hotels and to their conveniences" (p. 107). Is it any wonder, then, that the staff of any national park is top heavy with managers to oversee all of the "deals" and paper shuffling, rather than with naturalists, historians, ecologists, and anthropologists charged with protecting the parks and educating the general public?

Fortunately, Mr. Frome does not give us the Bad News and then turn tail. Rather he carefully, deliberately, and passionately builds his case for how a "regreening" might occur. His ten-point program alone is *must* reading for anyone interested in the National Parks; moreover, it should be *required* reading for everyone associated with the National Park Service. Essentially, Frome maintains, it is time again to champion the National Parks rather than simply to manage them. Will the reader be convinced? That depends on whether the person is a champion of honesty and integrity. Bureaucrats, undoubtedly, will absolutely hate this book, because it is about their duplicity and failures. Vintage Michael Frome, to be sure. Only this time he can't be fired.

—Reviewed by Alfred Runte, author of *National Parks: The American Experience* and *Yosemite: The Embattled Wilderness*.

ENVIRONMENTALISM AND POLITICAL THEORY: TOWARD AN ECOCENTRIC APPROACH

by Robyn Eckersley; 1992; SUNY Albany, NY.

Robyn Eckersley, currently at Melbourne University, is an important voice in the growing Australian ecophilosophy movement. One criticism of her book—and it is directed not at her but her editors—is, why did they replace Robyn's brilliant prospective title, *Emancipation Writ Large*, with the dreary neo-academic sobriquet on its cover? It's as if there is an unwritten rule among publishing houses that only boring titles are allowed.

Eckersley does a fine job of covering the highly complex terrain where radical ecology and radical politics converge, and outlining a comprehensive, non-misanthropic deep ecology. Even when I disagree with her, as in some of her criticisms of bioregionalism, I am impressed with how fair and non-inflammatory her arguments are.

She starts by tracing the development of ecopolitical thought, and identifies three major schools: Survivalist, Participatory, and Emancipatory. The survivalist perspective is fleshed out in the well-known writings of Garrett Hardin, William Ophuls and Robert Heilbroner, who have argued that the gravity of the ecologic crisis is such that it warrants the intervention of strong, coercive institutions.

Other writers have argued that world problems are rooted in maldistribution of goods and influence between the developed and less-developed worlds, rich and poor. John Rodman speaks of a "crisis of participation."

In contrast to these views, which correspond roughly to the old "right" and "left" political poles, Eckersley introduces the concept of "Emancipation Writ Large," which seems to combine what is best in the old world views while discarding the excess baggage. Emancipatory theorists recognize that "the modern ecological crisis is the quintessential crisis of *industrialism* rather than just Western capitalism" (p. 22). "To ecocentric theorists, freedom or self-determination is recognized as a legitimate entitlement of both human and nonhuman lifeforms. . . . the goal of an ecocentric political theory is 'emancipation writ large,'—the maximization of the freedom of all entities to unfold or develop in their own ways" (p. 91). "The wisest course of action from an ecocentric perspective is not to presume that we know the thrust of evolution

but instead to remain open minded and simply 'tread lightly' in the course of sustaining ourselves" (p. 157).

Robyn Eckersley does the best job I've seen of defusing the oft-repeated hysterical claim that deep ecologists require a "final solution for humanity." (Even the academic journal *Environmental Ethics*, Spring 1992, prints a piece by Richard Watson repeating this slanderous charge!) "Ecocentrism is not against humans per se or the celebration of humanity's special forms of excellence; rather, it is against the ideology of human chauvinism. Ecocentric theorists see each human individual and each human culture as just as entitled to live and blossom as any other species, provided they do so in a way that is sensitive to the needs of other life forms" (p. 56).

And "to say that humans cannot be nonanthropocentric is like saying that a male cannot be nonsexist or that a white person cannot be nonracist because they only perceive the world as male or white subjects. . . . humans are quite capable of cultivating a nonanthropocentric consciousness" (p. 56).

Eckersley deals at length with challenges from eco-marxism, eco-socialism and eco-anarchism. She outlines limitations and drawbacks of traditional leftist theory, including its "discredited cornucopian assumptions," its desire to seek "freedom in sheer material plentitude," and its basic misunderstanding of ecology in general: "The ecocentric objection to the post-scarcity utopia of humanist eco-Marxism is that it would cultivate a type of human who, . . . through science and technology, is thoroughly insulated from, *and in control of*, the cycles of nature and the myriad of other nonhuman life-forms" (p. 93).

Eckersley also addresses well the population question: ". . . ecocentric theorists do not only advocate a long term, gradual reduction in absolute human numbers in response to the population issue, as some of their critics suggest. They also advocate a more equitable inter-human distribution of resources, a lower overall level of resource consumption per capita, and the introduction of ecologically benign technologies. . . ." (p. 158).

One objection I have to the section on eco-anarchism is that Eckersley spends too much time on the theories of Murray Bookchin, who tends to dominate the headlines and obscure the fact that there are a variety of non-bookchinite eco-anarchist approaches, such as the "primitivist" perspec-

tive of the *Fifth Estate*, and other periodicals of the anti-authoritarian milieu. Although initially most of these periodicals mirrored Bookchin's muscular attacks on deep ecology, many have by now distanced themselves from the extremist rhetoric and attempted some form of rapprochement with deep ecology (though the overall outcome is still anything but certain).

All told, Robyn Eckersley's book is a fine addition to the "real work" of deep ecology, and despite the title, is an accessible, concise overview of the often perplexing, never dull (!) interaction between ecocentrism, eco-socialism, eco-anarchism and other political theories.

—Reviewed by Bill McCormick

WORLDWATCH PAPER 108, LIFE SUPPORT: CONSERVING BIOLOGICAL DIVERSITY

by John C. Ryan, 1992, Worldwatch Institute. 62 p.

Where have all the orchids, elms, chestnuts, bedstraws, songbirds, frogs, salamanders, pearly mussels, snails, salmonids, dolphins, tuna, oysters, whales, monkeys, owls, cheetahs, panthers, eagles, bears, wolves, condors, coral reefs, tallgrass prairies, ancient forests, and indigenous cultures gone, long time passing...?

The Cenozoic Era is crashing down as a result of wasteful consumption and rapid population growth of the human species. Through a clearly written and well documented paper, John Ryan takes the tangle of information on the failing health of the world's ecosystems and turns it into a well woven web describing the state of global biological diversity.

In the first half of the paper, Ryan recounts seemingly endless examples of tragedy and loss; from damage caused by high seas driftnets to the stress-induced bleaching of coral reefs, from the genetic erosion of salmon caused by hatcheries to the massive American oyster population declines in Chesapeake Bay.

But it's not just another gripe session. Reasons for loss of diversity are presented, and clearly connected to greed, poverty, entrenched politicians, and ignorance. All examples are well referenced and convincingly stated. Even the seasoned conservation biologist will learn something new from this booklet.

Ryan explains that the current rate of ex-

inction surpasses that of the Cretaceous, when the dinosaurs died out, with an additional difference being that modern extinctions are solely attributable to the activities of humans. He points out that we are losing diversity at all levels. He discusses the three commonly recognized levels of biodiversity (genetic, species and ecosystem) simply and succinctly. He identifies the loss of entire ecosystems, such as forests, wetlands and coastal waters, as the single most important factor behind the current mass extinction.

Ryan compares traditional people's conservation methods to modern park systems. He argues that the former are more effective, and that, while impressive on paper, current protected areas are actually quite vulnerable to human abuse. He includes logging, mining and hunting as threats within park boundaries, though he misses the impact of human recreational use.

Ryan is well versed in the ideas of the new conservation movement. For example, he discusses the need for large areas of wildlands to let fires and other natural disturbances play their roles. He warns of commercial interests posing "sustainable" alternatives heavy with half-truths and rhetoric. He discusses the need for ecological restoration, and a revolution in the social conduct of humans. And he concludes that a necessary goal is to cease "developing" any more relatively undamaged ecosystems. Inadvertently, perhaps, he illustrates the need for nothing less than the fall of industrial civilization and replacement with a society based on a land ethic.

Ryan's is, in sum, an eloquent distillation of information on the worldwide biodiversity crisis. His paper should be required reading for beginning biologists, and recommended reading for experienced ones.

The few complaints I have mostly regard semantics, not serious flaws. One point of contention, however, I must address. He asks why we should be concerned about these losses of biological diversity, and summarizes by saying "a species is the unique and irreplaceable product of millions of years of evolution, a thing of value for scientific study, for its beauty, and for itself." First, I would substitute the word "result" for "product," to avoid implying there is something to be consumed. Second, I would change the reasons to "for its beauty, for itself, and for the promise of continued diversity of life on this planet." I would also remind the readers that the value of sci-

ence is in what it teaches us about the natural world; nothing exists for the sole purpose of being studied by scientists.

—Reviewed by Sandra Coveny, POB 724, Durham, NH 03824

Other Recommended Titles

People of Color Environmental Groups Directory

Robert D. Bullard; 1992; Published by Robert D. Bullard, Dept. of Sociology, Univ. of California, Riverside, Riverside, CA 92521; 82pp.

This directory is the first formal attempt to identify and catalog African-American, Latin/Hispanic, Asian, and Native American groups working on environmental issues in Canada, Puerto Rico, and the United States. With key facts on 205 groups, the listing will help environmentalists network with groups of color. The directory is not exhaustive, and the author plans to continue gathering information to expand his list. The Charles Stewart Mott Foundation is making copies available. Contact the foundation at the Mott Foundation Building, Flint, MI 48502-1851 (313-238-5651).

The Naturalist's Path: Beginning The Study of Nature

Cathy Johnson; 1991; Walker and Co., 720 Fifth Ave., New York, NY 10019; 220pp; \$14.95 paper.

Cathy Johnson tells the reader how to become receptive to the natural world, points out specific phenomena to observe, and suggests activities to increase sensitivity, including writing and sketching in a journal. Sketches from her own notebook increase the book's attractiveness. Her emphasis is rightly on knowing well the area where one lives.

Biodiversity: Social and Ecological Perspectives

Vandana Shiva, Patrick Anderson, et al.; 1991; Zed Books, 171 First Ave., Atlantic Highlands, NJ 07716; 123pp., \$15 paper.

Essays by members of the World Rainforest Movement, an international coalition of grassroots groups, present Third World views of biodiversity. The enemies of biodiversity in the tropics, the authors write, are the state bureaucracy, big business, the military, and international development agencies including the World Bank, which have financed the replacement of indigenous cropping

systems with monocultures. Production must shift back to systems based on diversity.

Burma: The Next Killing Fields?

Alan Clements; 1992; Odonian Press, Box 7776, Berkeley, CA 94707; 95pp; \$5 paper.

Clements vividly presents the forces ravaging Burma's environment. To finance a brutal military regime, an area larger than the state of Massachusetts is cleared of teak each year, and the coastline opened to foreign fishing boats that use small-holed nets. The text concludes with information on "How you can help." Clements directs the Burma Project USA, 45 Oak Road, Larkspur, CA 94939; 415-924-6447, which can furnish additional information.

The Ancient One

T. A. Barron; 1992; Philomel Books, 200 Madison Ave., New York, NY 10016; 367pp.; \$17.95 hard.

Barron weaves a tale of adventure around the struggle of a girl and her aunt to prevent the logging of an ancient forest in Oregon. While he entertains, he teaches about the value of the natural world and ancient ways of life. The ending, a return from the past to the present, is somewhat of a letdown; but perhaps this is a necessary part of the lesson. For young people and other lovers of fantasy.

VDU Terminal Sickness: Computer Health Risks and How to Protect Yourself

Peggy Bentham; 1991; Green Print, 10 Malden Rd., London NW5 3HR, UK (dist. in the US by Inbook, POB 120470, East Haven, CT 06512); 201pp.; \$15.99 paper

This book is relevant for wildland activists because many of you use computers and some of you suffer computer-induced ailments that could terminate your efforts. Peggy Bentham explains that, depending on construction and condition, standard computer terminals with cathode ray tubes may emit very low frequency and extremely low frequency radiation, infrared and ultraviolet radiation, positive ions, radio waves, microwave radiation, static, and x-rays. Among the medical problems they have been proven to cause are eye damage and repetitive strain injuries. Another book from the same publisher, *Allergy and Intolerance*, by George Lewith and others suggests that certain individuals may be especially sensitive to electromagnetic radiation just as some are to chemicals. According to Bentham, steps like

shielding the terminal with earthed copper, asking a technician to check it regularly, and buying special furniture reduce but do not eliminate the dangers; and such steps are costly.

This thoroughly documented book should be read by computer users and by the directors of the organizations that employ them. Unfortunately, Bentham does not compare standard terminals to portables with liquid crystal displays. These portables are reputed to be safer, but, if so, how much safer? Bentham is British, and she points out that the European Community is putting into effect safety standards for computers. While waiting for positive developments in this country, users can test computers for electric fields, an approximate index to magnetic fields, by walking around them with a transistor AM radio, turned on at high volume and tuned to a spot between stations. Listen. "Then howl for protection."

ed. note: Or bash your computer.—JD

Voting Green: Your Complete Environmental Guide to Making Political Choices in the 1990's

Jeremy Rifkin and Carol Grunewald Rifkin; 1992; Doubleday; 390pp; \$15 paper.

The Rifkins describe green legislation introduced in Congress, grade members of Congress on their greenness, and analyze the environmental record of the Bush administration. They assert that an informal and heretofore largely unrecognized group of legislators who consistently work for environmental protection and justice is emerging. A handy compendium, although to readers of *Wild Earth* many of the bills discussed may seem bland.

Colonialism On Trial: Indigenous Land Rights and the Gitksan and Wet'suwet'en Sovereignty Case

Don Monet and Skanu'u (Ardythe Wilson); 1992; New Society Publishers, 4527 Springfield Ave., Philadelphia, PA 19143; 212pp; \$17.50paper.

Don Monet, a cartoonist, and Skanu'u, a Gitksan researcher and speaker, have compiled a fascinating collection of cartoons, photos, clippings, and segments of transcripts that present various facets of a controversial sovereignty court case in BC, courageously initiated by Indians as a result of the clearcutting of land that they claimed. The book includes accounts of direct action to prevent logging, and the handsome cover is a native artist's depiction of an Indian driving a front loader away from a logging site. Introductory material

includes a chronology of Indian history in Canada.

—Mary Byrd Davis

The 1992 Information Please Environmental Almanac

compiled by World Resources Institute, 1709 New York Ave NW, Washington, DC 20006; published by Houghton Mifflin Co (Boston); 600p., \$9.95.

This is a reference book to keep on hand whenever you may need information on energy, water, forests, pollution, and other environmental issues. It's loaded with pertinent facts. Ironically, but characteristically, WRI seems weakest in covering US public land issues—even making some mistakes such as saying federal subsidies for timber cutting, grazing, and mining are being withdrawn. The 2-page biographies of each of the world's nations offer a convenient way to find, say, what are the environmental calamities besetting Guinea-Bissau (deforestation from slash-and-burn agriculture, soil degradation from livestock overgrazing), or the human population growth rate in Syria (3.6%, one of the world's highest). Beware, though, that the deforestation estimates are often misleading. The US is given a deforestation rate of 0 (zero!) square miles a year, because the estimates are based on areas cleared without intent to reforest; and of course the Forest Service and timber companies commonly boast about how many more trees they plant than cut.—*JD (Even so, forest is being rapidly lost in some parts of the U.S., e.g. Florida has lost 21% of its forest in the last 50 years. —RN)*

State of the World 1992, a Worldwatch Institute Report on Progress Toward a Sustainable Society

250p.; \$10.95; Worldwatch Inst, 1776 Massachusetts Ave NW, DC 20036; with WW Norton & Co., 500 Fifth Ave, NYC 10110.

Of all the fact-filled, multi-author, multi-subject environmental books and series on the market today, Worldwatch's is probably the best. This year, Worldwatch tackles these problems: Denial (of dearth), diminishment of Biological Diversity, Energy consumption, Nuclear Waste, the Livestock Economy, Women's Reproductive ailments, Mining, Cities, and Jobs in Industrial Countries. Sandra Postel's "Denial in the Decisive Decade," John Ryan's "Conserving Biological Diversity," Jodi Jacobson's "Improving Women's Reproductive Health," John Young's "Mining the Earth," and Lester Brown's "Launching the Environmental Revolution," are outstanding. —*JD*

Noteworthy Articles

A Look at Conservation Literature

by John Davis

"Fungi: A neglected component of biodiversity crucial to ecosystem function and maintenance," by David Hawksworth; *Canadian Biodiversity*, winter 1992, p.4-10. The Canadian Museum of Nature has started a quarterly of news, views, and papers on life (\$25, or \$8 for people in developing countries: Canadian Centre of Biodiversity, Canadian Museum of Nature, PO Box 3443 Station D, Ottawa, Ontario K1P 6P4). This issue includes an excellent overview of fungi, without which 80% of the world's vascular plants would be deprived of their root symbionts. "The greatest threat to fungi in Canada is undoubtedly air pollution"; so get off the grid and read this article by candlelight.

"Mapping the Distribution of Coral Reef Fishes," by Callum Roberts & Julie Hawkins; *Sea Wind*, Jan-March 92, p.3-8. *Sea Wind*, the quarterly bulletin of Ocean Voice International (\$25; 2883 Otterson Dr, Head Office, Ottawa, Ontario K1V 7B2, CANADA), publishes short articles and reviews pertaining to ocean conservation. This article discusses the need to map the ranges of the world's coral reef fishes—a highly diverse and increasingly imperiled group. Maps have been drafted for 950 of the 4000 fish species known to be found on reefs, and the maps are revealing a surprising number restricted to small areas. See also in this issue the review of *Success Stories of Women and the Environment* (p.13-14).

"National Park Dreams," by Max Finkelstein; *Borealis*, spring 92, p.32-42. The Canadian Parks & Wilderness Society's quarterly, *Borealis*, picturesquely covers the gamut of wildland issues in Canada from a conservative but ecologically informed perspective. "Park Dreams" discusses the Green Plan to

"complete" the federal park and other protected areas systems in Canada. The goals are modest: 12% of the country to be protected, 1/4 of this in national parks (3%). One of Canada's federal parks is the subject of another important article, "NASA in the Wilderness," by J. David Henry. This describes NASA's plans to conduct a global warming research project in Saskatchewan's Prince Albert National Park—a worthwhile study, perhaps, but in an area that should not be defiled by the concomitant towers, trailers, and other trash.

"Deforestation in Zaire," by John Witte; *The Ecologist*, 3/4-92, p.58-64. This important article discusses two underrated rainforest regions: Central and Western Africa. It focuses on Central Africa's largest nation, Zaire, which has so far lost only about 14% of its rainforest cover, and has the bulk of Central Africa's rainforest. Central Africa has 20% of the world's remaining rainforest. The legacies of colonialism, however—combined with the avarice of Japanese, European, and US transnational corporations—are leading to accelerating logging in the Zaire River watershed.

"Paper Industry Report," by Ian Penna; *Japan Environment Monitor*, 4-92. Australian conservationist Ian Penna has been researching Japan's far-reaching paper industry (now poised to deforest northern Alberta) and has published through Friends of the Earth Japan a preliminary summary report, "Japan's Paper Industry," and a shorter synopsis in *Japan Environment Monitor*. As with most *JEM* articles, this is dismaying but important reading. After all, Japan leads the league in denudation, having surpassed the US as the world's foremost feller of forests. The full report is available from FOE Japan, 150 Tokyo-to, Shibuya-ku, Uguisudani-cho, 17-1, Shibuya Mansion 801, Tokyo, JAPAN. (Copy this carefully, for the fastidious Japanese postal service will brook no variations in addresses.)

"Antarctica not secure yet," by Alan Hemmings; *Forest & Bird*, 5-92, p.14-18. Published quarterly by New Zealand's Royal Forest and Bird Protection Society (PO Box 631, Wellington, NEW ZEALAND), *Forest & Bird* is a periodical worthy of emulation by America's generally more moderate environmental magazines. This article explains the deficiencies of the recent Antarctic Environmental Protocol. Note also the articles on the destruction caused by grazing of sheep and cattle in NZ's national parks ("Parks and Grazing," p.33-37), and NZ's new system for setting priorities in efforts to save imperiled species ("Who Goes into the Ark," p.38-41).

"Global Warming: An Imminent Threat to Birds?" (p.9-12) by Elliott Tramer, "From Puffins to Petrels" (p.14-21) by Stephen Kress, "Killing Them with Kindness" (p.26-31) by Paul Sherman and Brad Semel; *Living Bird*, spring 92. Important lessons are in this issue of the Cornell Ornithology Lab's quarterly (159 Sapsucker Woods Rd, Ithaca, NY 14850; \$30/yr): Anthropogenic climate change could induce vegetation changes and sea level rises drastic enough to severely impact neotropical migrants, Arctic-nesting birds, waterfowl and others. Puffins and terns have been successfully coaxed back to islands off the Maine coast, and petrels to safer ground in the Galapagos, through use of decoys and tape-recorded bird sounds. If not properly placed, boxes for wood ducks do more harm than good (encouraging intraspecific brood parasitism unless hidden in the woods). As always, see Rick Bonney's "Beyond the Field Guide" column, which offers ways to make bird-watching a bird-saving avocation.

"The Environment and Population Growth," *Population Report* #10, Population Information Program, John Hopkins University, 527 St. Paul Place, Baltimore, MD 21202 (\$2 per report). Here is a good overview of what

human overpopulation is doing to the world. It warns: "Actions in this decade, too, could determine whether world population stops growing at less than 9 billion or passes 19 billion by 2100."

"The Elk-Ranch Boom," by Ted Williams; *Audubon*, 5-6/92, p.14-20. Ted Williams is the kind of investigative reporter every big environmental magazine should have. This time, he unearths the quietly expanding business of elk ranching. Through no fault of their own, domesticated elk threaten to contaminate wild elk herds with red deer genes, bovine tuberculosis, and (you guessed it) *Elaphostrongylus cervi*. So serious are the dangers that even the Colorado Division of Wildlife is concerned.

"No Home for Snails," by George Wuerthner; *Defenders*, 5-6/92, p.8-14. A true Friend of the Gastropods, George Wuerthner here describes the plight of 7 of the shelled mollusks in the Snake River watershed: Homedale spring snail, Snake River physa snail, Banbury lanx, Bliss Rapids snail, Utah valvata snail, Idaho springsnail, and Bruneau Hot Springs snail. Cattle ranchers, the Idaho Power Company (which wants to build a 12th dam on the Middle Snake River), and fish hatchery operators are chief enemies of these tiny species. The US Fish and Wildlife Service is yielding to pressure from the aforementioned fell forces and failing to list the snails as Endangered.

"The Legacy of Columbus: Five Hundred Years of Deforestation," by John Ryan (p.5), "Logging the Boreal Band: Canada's Forests Fall," by Louis Schmittroth (p.6-7), "Options for Sustainable Development in the Tropics," by John Browder (p.12-13); *Inner Voice*, 5-6/92. In this issue of the journal of the Association of Forest Service Employees for Environmental Ethics (AFSEEE, POB 11615, Eugene, OR 97440; \$20/yr), the emphasis is global. These 3 articles summarize the present state of and threats to forests in North and South America and Siberia and Southeast Asia.

"Hard Rock and Heap Leach," by George Wuerthner; *Wilderness*, summer 92, p.14-21. The indefatigable George Wuerthner here enumerates the continuing problems and the new threats that mining poses to vast areas of the West and smaller parts of the East. The mining articles in this issue by Kim Heacox and Tom Turner (p.22-28) are also gloomily edifying.

"Scrub Jays and the Politics of Race" by David Wilcove (p.6-7), "Save Now or Pay Later" by Greg Butcher & Rick Bonney (p.9-13), "The Birds and the Damselflies," by John Alcock (p.24), "Tunnel Vision in the Neotropics" by Herb Raffaele (p.32); *Living Bird*, summer 92. The Cornell Ornithology Lab's quarterly continues to offer excellent bird conservation articles. In this issue, see especially Wilcove on how reauthorization of the Endangered Species Act could affect Florida scrub jays and other subspecies; Butcher & Bonney on the unique vulnerability of neotropical migratory songbirds (which depend on healthy habitat not just in 1 region but all along a route across thousands of miles); Alcock on how the males of many birds and damselflies stay close by their mates not so much as shows of fidelity but to prevent the females from mating with other males; and Raffaele on the need to include local scientists in all studies of birds in the tropics.

"Bring Back the Forests," by Leslie Sauer; *Wildflower*, summer 92, p.27-34. The Canadian Wildflower Society (1848 Liverpool Rd, Box 110, Pickering, Ontario, Canada LIV 6M3; \$30/yr) has found a *tour de force*. Leslie Sauer brilliantly summarizes what we must do to prevent the death of the Eastern Deciduous Forest. In addition to discussing the need for wilderness cores, wildlife corridors, and other accepted essentials of biodiversity preservation, Sauer calls attention to matters commonly forgotten by wildland proponents—hydrology, for instance, and the perils posed by storm sewers.

Leslie Sauer's article "Soil and water conservation in a landscape perspective" in the May-June 1991 issue of the *Journal of Soil & Water Conservation* (p.194-196) also raises overlooked problems. For instance, upland habitats may be more xeric now than when today's old-growth forests were established, due to accelerated runoff and other human-related factors; and soil types may have been altered through deposition, erosion, and disrupted hydrologic regimes. Sauer is one of the few ecologists stressing "conservation of natural hydrologic patterns."

The summer *Wildflower* issue has other important articles too. "Harvesting Medicinals in the Wild" (p.18-22) explains why we need to regulate the gathering of wild medicinal plants in North America, some of which may be imperiled by collectors. "Oil Companies Relinquish Rights" shows that Canada is ahead of the US in efforts to establish a Grassland National Park, in southern Saskatchewan, where oil interests have been persuaded to leave alone a relic

grassland.

"The Problem Will Get Worse," by Howard Wilshire & Jane Nielson; *GSA Today*, 6-92, p.123. Geologists tend to be staid and stolid members of the scientific establishment. Not so these two; they challenge their counterparts to realize that the public has little reason to believe scientific assessments, given that many scientists allow their work to be misused by government agencies and corporations. They cite these examples (and others):

"*The University of Arizona hired a public relations firm in an attempt to circumvent NEPA and subvert the Endangered Species Act, to get on with erecting a 'world-class' observatory on Mt. Graham. In essence, the Arizona astronomers and collaborators functioned as a self-interested political pressure group."

"*Testimony requested for public hearings on potential problems with offshore drilling in the Pacific Northwest was suppressed by the [US Geological] Survey.

"*USGS is about to be in court over its undocumented computerized methodology that may grossly overestimate undiscovered mineral resources in recommended Wilderness and other areas."

"Strategy and Tactics for Conserving Biological Diversity in the United States," by Peter Brussard, Dennis Murphy, & Reed Noss (p.157-159), "Education and the Ecological Design Arts," by David W. Orr (p.162-164), "Sea Turtle Conservation and Halfway Technology," by Nat Frazier (p.179-184), "Do Appalachian Herbaceous Understories Ever Recover from Clearcutting," by David Duffy & Albert Meier (p.196-201), "Alien Flora in Grasslands Adjacent to Road and Trail Corridors in Glacier National Park, Montana" by Robin Tyser & Christopher Worley (p.253-262), "Assessment of the Environmental Risk Posed by an Exotic Fish: The Proposed Introduction of Channel Catfish (*Ictalurus punctatus*) to New Zealand," by Colin Townsend & Michael Winterbourn (p.273-282), "Genetic Variation and Population Structure of Red-cockaded Woodpeckers," by Peter Stangel, Michael Lennartz, & Michael Smith (p.283-292), "Toward a Theory of Inter-Refuge Corridor Design," by Robert Harrison (p.293-295); *Conservation Biology*, summer 92 (\$41/yr; Blackwell Scientific Publications, 238 Main St, Cambridge, MA 02142). This is about a third of the table of contents of the Society for Conservation Biology's latest journal, and these articles really are all important for conservationists. Among many other lessons, they show that her-

baceous understories in the Appalachians do not, at least during human lifetimes, recover their full diversity after clearcutting; sea turtle conservation efforts based on hatch and release programs are ignoring the fundamental causes of sea turtle decline; roads and even trails have served as con-

healing the environmental damage we have wrought.

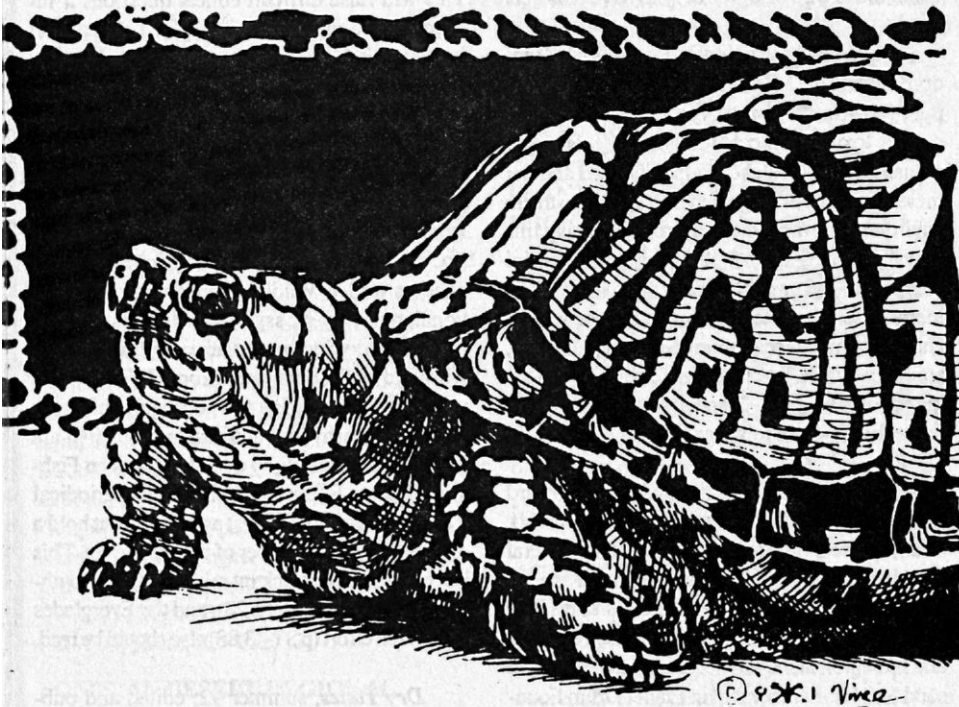
"The Mushroom Chronicles," by Doug Peacock; *Outside*, 6-92, p.118-122, 164-167. Doug Peacock has penned (or rather, keyed) a

"Rising from the Bogs," by Greg Breining; *Nature Conservancy*, 7-8/92, p.25-29. The Nature Conservancy has saved "500 sites containing peat, covering more than 250,000 acres throughout the United States." Unfortunately, most of the world's 2 million square miles of peatlands are protected, if at all, only by their bogginess and inaccessibility, as this article explains. Threats to peatlands include mechanized harvesting for power plants—especially in the former Soviet Union, Finland, Ireland, and Germany. These low oxygen, high carbon wetlands are one of the great unknowns in global climate predictions, as William Stolzenburg explains in another important article herein, "Biodiversity's Burning Issue" (p.30-31). Stolzenburg discusses the perils plants will face as their thermoclines move rapidly northward.

"Dangers in Paradise," by John Ross; *Sierra*, 7-8/92, p.44-51, 83-88. Southern Mexico, once a paradise of rainforests, beaches, coral reefs, mangrove thickets, the famed monarch butterfly winter habitat in the Sierra Chincua, and other marvels is now beset by loggers, Pemex oil company, acid rain, fertilizer factories, pollutants that cause at least one river (the Coatzacoalcos) to catch fire regularly, Laguna Verde nuclear power plant (Mexico's only one, so far), and tourism. The proposed North American Free Trade Agreement spells further troubles for all of Mexico, as does human overpopulation.

"Great ideas in ecology for the 1990s," by Eugene Odum; *BioScience*, 7-8/92, p.542-544. Packed into this brilliant article are 20 ecological concepts fundamental to understanding life—which concepts all thinking persons and Republicans should ponder. Number 6, in particular, needs to be more widely acknowledged by scientists: "Natural selection may occur at more than one level."

See also in this issue "Africa's troubled waters" (p.476-481) and "Keeping aliens out of paradise" (p.482-485). The former says that introduction of the Nile perch into Lake Victoria has eliminated at least half of the lake's 400 endemic haplochromine cichlid fish species, in what may be "the greatest vertebrate mass extinction in the modern era," so far ... The latter describes the efforts of the Hawaii Department of Agriculture and other agencies and environmental groups to stop the alien invasion of the Hawaiian archipelago. Introduced species have already eliminated much of Hawaii's native biota. Biologists especially fear the brown tree snake: if it escapes in Hawaii, it might do there



duits for the spread of exotic grasses in Glacier NP.

"Saving By Selling," by David Ehrenfeld; *Orion*, summer 1992, p. 5-6,9. *Orion: People and Nature* (Orion Society, 136 E 64th St, New York, NY 10131; \$25/yr) has completed its first decade of exploring Nature and human relationships thereto. Ehrenfeld's column, "Raritan Letter," in this special tenth anniversary issue discusses the perils of "making conservation pay for itself." Marketing nuts and fruits from tropical forests, for instance, diminishes the diversity of some types of rainforest; and sea turtle "farming" may be disrupting the demographic structure of natural sea turtle populations.

This anniversary issue features powerful Nature and history writings by John Elder, Barry Lopez, Frederick Turner, and John Hay. The interview with Albert Gore inadvertently (as it took place months before Gore's nomination as vice presidential candidate) provides hope that the White House may soon have a leader who believes civilization must be reoriented toward

beautiful story about the fruiting bodies of our fungal friends. Doug assures us that far more mushrooms are delectable than are deadly; a few are both! See also *Outside's* best column, "Natural Acts" by David Quammen, who this time pays homage to coyotes, including those who prey upon pool-side poodles.

"A Humongous Fungus Among Us," by Stephen Jay Gould (p.10-18); *Natural History*, 7-92. "The discovery of an enormous underground organism raises some basic questions about individuality." Gould explains the significance of the 37 acre individual fungus *Armillaria bulbosa*, and proposes a biological definition of individuality that would help scientists better know how to deal with aphids, corals, fungi and other organisms where the question of what constitutes the individual becomes fuzzy (like puffballs, another enigmatic fungal taxon). See also in this issue Dafila Scott's article on Bewick's swans, and Sue Boinski's article on squirrel monkeys.

what it did in Guam, where it caused the extinction of 9 of that island's 11 forest bird species.

"Live & Let Die," by Conger Beasley Jr, *Buzzworm*, 7-8/92, p.28-33, 53, 85 (whoever lays out this magazine ought to be forced to compose a treatise on Occam's Razor). Herein is explained CITES, the Convention on International Trade in Endangered Species of Flora and Fauna, and its latest meeting. There the US tried unsuccessfully to block Appendix 2 listing (which regulates but does not prohibit trade) of the North American black bear, and successfully to block protection for the Atlantic bluefin tuna. The US did, however, support extending the ban on elephant ivory trade—which ban was maintained, thanks to the efforts of non-governmental conservationists.

The disgraceful showing of the US at both the CITES meeting and UNCED prompts an aside: We are exterminating life's superlatives. Atlantic bluefin tuna were the largest and fastest of bony fish, sometimes weighing over 1500 pounds and swimming over 50 miles per hour. Nowadays, thanks in part to US meddling in ecosystems everywhere, Earth may have lost forever its swiftest Atlantic bluefin tuna, biggest blue whales, fastest cheetahs, fastest diving peregrine falcons, most massive elephants, largest whale sharks, slowest three-toed sloths, comeliest golden lion tamarins, and deadliest villager-consuming tigers.

Buzzworm's article on SLAPPs (Strategic Lawsuits Against Public Participation) is also helpful. Activists are beginning to "SLAPP BACK" and win.

"Alternatives to Procreation," and "Thank you for sharing," by Les U. Knight; *These EXIT Times* (POB 86646, Portland, OR, 97286), #2 1992. The long-awaited second newsletter of the Voluntary Human Extinction Movement (VHEMT, pronounced "vehement") is out and even better than the first. Knight offers great ideas on baby surrogates:

"Both men and women can feel a need to nurture and, rather than producing a new human to care for, nurturing Earth's 'children' can be a viable alternative. Wildlife rehabilitation and protection, habitat preservation, reforestation, Adopt-A-Stream, and gardening are some possibilities.

"For those who can't substitute Nature for humans, there are plenty of children in need of parenting. Adoption, step and foster parenting, borrowing relatives' children, and big brother/sister programs might fill the need...."

Also, for those finding some of their friends reluctant to accept the desirability of voluntary human extinction, Knight offers *positive* suggestions to spread vehemence, such as sending cards "congratulating friends for using surgical contraception," and calling radio talk shows to speak for the VHEMT concept. A key rule of being a Volunteer, he says, is "stay positive"; don't condemn those who disagree or who have children.

"Chemical Reaction in the Animal Kingdom," by Ann Misch; *World Watch*, 7-8/92, p.34-36. Almost always, reports about the dangers of toxic chemicals focus on effects to humans. After all, Rachel Carson is dead and her message has transmogrified into the mainstream environmental movement. Here, though, is a fine news piece on how 3 families of industrial chemicals—organochlorines (dioxin, PCBs, many pesticides, etc.), aromatic hydrocarbons, and heavy metals (cadmium, lead, mercury, and, arguably, ACDC)—are having dire effects in the kingdom Animalia, "especially among vertebrates living close to water."

"Bioregional Gatherings: A Start Toward Eco-Governance," by Peter Berg, Judy Goldhaft, et al.; *Raise The Stakes* #18/19. This special double issue of *RTS*, *The Planet Drum Review*, offers access to bioregional groups and ideas throughout the continent. Wildlands recovery and bioregionalism will necessarily be linked, so send \$20 for membership in Planet Drum Foundation, POB 31251, San Francisco, CA 94131.

"Wild at the Heart," by George Tukel; *Upriver Downriver* #14, p.10-15. Shasta's own bioregional journal is back. *Upriver Downriver* will again be letting fly bioregional news and thoughts from Gary Snyder, Seth Zuckerman, Freeman House, Ellen Taylor and other inhabitants of northern California. This first new issue offers a good introduction to designing wild core/buffer/corridor networks by George Tukel, and a discussion by Seth Zuckerman of what might be the boundaries of "Alta California." Subscribe by sending \$10 for 4 issues to Planet Drum Foundation, Upriver/Downriver, POB 103, Petrolia, CA 95558.

"Hypovirulence of Chestnut Blight Fungus Conferred by an Infectious Viral cDNA," by Gil Choi & Donald Nuss; *Science*, 8-7-92, p.800-803. No doubt, your heart fairly leapt when you read that title. Though half this article is utterly unintelligible to the non-scientist, its essence is clear enough: Recovery of the American chest-

nut may soon be within reach. Scientists have found natural strains of the chestnut blight fungus that "exhibit reduced virulence" and offer a way to combat the severe form of the blight. The article concludes, "it is conceivable that the release of improved, genetically engineered hypovirulent *C. parasitica* strains could lead to the restoration of this valuable forest species." This will raise difficult ethical questions if indeed genetic engineering is required. For a short layperson's (or rather, short, layperson's) summary of the article, see the *New York Times Science Times* of 8-18.

"Fish Alert," by Edward Ricciuti; *Wildlife Conservation*, 7-8/92, p.45-47. *Wildlife Conservation* is published by the New York Zoological Society for numerous zoos and zoological societies, as well as Wildlife Conservation International, and it is glossy. Nonetheless, it offers natural history and conservation news well worth wildland defenders' attention. "Fish Alert" warns that 364 species and subspecies of North American freshwater and anadromous fish are in trouble, according to a 1989 American Fisheries Society Report published in its periodical *Fisheries*. The Southwest and Southeast hold a disproportionate number of these species. This issue's articles on pack rat middens (p.8), southern elephant seals (p.22-28), and the Everglades restoration effort (p.37-43,88) also should be read.

Dry Times, summer 92; edited and published by Larry Campbell. Montana wildlands defender Larry Campbell has produced a special "Montana Waterwatch Publication" devoted to saving Montana's watersheds, which are threatened by the usual overgrazing, timber cutting, roads, and mining. See especially Chris Clancy's "Impacts of Land Use on Fish," Bruce Farling's "Mining Impacts on Water," Larry's "Overwhich Creek Comes Apart at the Seams," Peter Bengeyfield's "Watershed Scenarios for the Northern Rockies," and George Wuerthner's "Livestock Production and Water Quality" (their relationship is inverse). To obtain this timely tabloid, write Montana Waterwatch, POB 204, Darby, MT 59829; and send a donation if you can.



Announcements

INTERNATIONAL TEMPERATE FOREST CONFERENCE

The First International Temperate Forest Conference, *Towards a Global Temperate Forest Action Plan* will be held 16-17 Nov. 1992 in Deloraine, Tasmania, Australia. The Native Forest Network is organizing the conference to foster cooperation between representatives from countries whose temperate forests are facing overcutting and environmental stress. Participants will examine the threats to temperate forests and the need for a plan to combat unsustainable production. Speakers will formulate options to deal with the global crisis. The keynote speakers will be Prof. David Bellamy of the Conservation Foundation and Prof. Jamie Kirkpatrick of the University of Tasmania. Registration costs \$100 for non-government organizations; \$300 for others. Accommodations "ranging from backpackers' style to elegant colonial" can be arranged. For a registration form and a program, contact Deloraine Environment Centre, 112 Emu Bay Road, Deloraine, Tasmania 7304; phone 003-622713.

SONORAN DESERT REGIONAL CONFERENCE

The Lincoln Institute of Land Policy, in association with the Sonoran Institute, will offer *Land Use Changes in the Western Sonoran Desert Border Area: A Regional Forum* at Ajo, Arizona, 22-25 Oct. 1992. The forum will focus on management of existing natural and cultural resources and the past and projected impacts on those resources of various changes in land use. The central theme will be protecting resources while meeting community needs and promoting binational cooperation. The area of concern includes parts of the Gulf of California, lands of the Tohono O'odham Nation, and the Goldwater Aerial Bombing Range, Cabeza Prieta National Wildlife Refuge, Organ Pipe Cactus National Monument, and the Pinacate region as well as the communities of Ajo, Lukeville, and Why, Arizona, and Puerto Penasco and Sonoyta in Sonora. Sponsors include Ajo Native Americans for a Future, US National Park Service, Friends of Cabeza Prieta, Centro Intercultural de Estudios de Desiertos y Océanos, Arizona Game & Fish, and the Sierra Club. The registration fee

of \$25 includes reception, lunch, and dinner. For information contact Wendy Laird, Director, US-Mexico Borderlands Program, or Paul Willman at the Sonoran Institute, 6842 E. Tanque Verde, D, Tucson, AZ 85719 (602-290-0828). To register contact Ann Long, Registrar, Lincoln Institute of Land Policy, 113 Brattle St., Cambridge, MA 02138 (800-526-3873).

PLANT CONSERVATION RESOURCE BOOK

The Center for Plant Conservation has published *The 1992 Plant Conservation Directory*. The directory includes federal and state government contacts at the resource level; contacts in state Heritage Programs, Native Plant Societies, and national private organizations; rare plant laws by state; and sources for obtaining state lists of rare and endangered plants. It costs \$15 post paid from the Center, at the Missouri Botanical Garden, POB 299, St. Louis, MO 63166.

ACTION CAMPAIGN FOR THE OZONE LAYER

On 1 July groups in over 40 American cities and towns staged actions to raise public awareness of the threat posed by depletion of the global ozone layer. Their Day of Action coincided with the effective date of the federal Clean Air Act ban on releases of ozone-destroying chemicals from refrigeration and air cooling systems. Organizers dramatized their belief that the US Environmental Protection Agency is not prepared to enforce the law. Targets for local actions were determined at the grassroots. NO SWEAT, a group in Olympia, Washington, was the primary coordinator. The message of the Day of Action reached hundreds of thousands of people through coverage of local actions and through radio interviews with key organizers across the country.

Now that a nation-wide network of activists is in place, further initiatives are on the way. *The network seeks creative ideas for action 17-21 Nov. during a major United Nations meeting to discuss updating the Montreal Protocol on ozone-destroying chemicals. *Activists are wearing radiation suits Wednesdays to alert fellow humans to the perils of ozone depletion. For radiation suits (\$5) and Rad Wednesday posters, write Greenpeace, Attn: Rad-Wednesday, 1436 U

Street NW, Washington DC 20009. *A North-west Atmosphere Protection Coalition is being formed. The first issue of the coalition's periodical will be available from NO SWEAT free of charge. *NO SWEAT is serving as a temporary clearinghouse until other networking centers emerge. The group asks to be kept informed of atmosphere protection (ozone layer, greenhouse effect, etc.) activities. To become a part of the network, contact NO SWEAT, POB 10346, Olympia, WA 98502 (206-943-7259; 206-661-2817).

RIPARIAN AREAS CONFERENCE

Managing Riparian Areas: Common Threads and Shared Benefits will be held 4-6 Feb. 1993 in Albuquerque, NM. The conference will offer riparian land managers, land owners and users, information about integrated management of riparian areas flowing through several jurisdictions. People interested in submitting posters should request information. Sponsors include the US Forest Service, American Rivers, Environmental Protection Agency, Soil Conservation Service, and Council of Energy Resource Tribes. For information, contact the Water Resources Center, University of Arizona, 350 N. Campbell Ave., Tucson, AZ 85721 (602-792-9591).

SUGARLOAF TIMBER SALE

In a "Hatfield Rider" sale, the US Forest Service may award rights to log the Sugarloaf area in Siskiyou National Forest as early as this fall. Logging Sugarloaf would destroy the integrity of the 25,000-acre Kangaroo Roadless Area, just north of Red Buttes Wilderness in southwest Oregon. The Kangaroo is an important wildlife corridor, as it links the Klamath River ecosystem to the Rogue/Applegate region. The logging would mean the removal by helicopter of 10.5 million board feet of old-growth timber at an elevation of 5000-6000 feet. To express your opinion, write to Joe Burns, US Fish and Wildlife Service, Suite 100, 2600 SE 98th Ave., Portland, OR 97266; Senator Mark Hatfield, 475 Cottage Street NE, Salem, OR 97301; and Rep. Peter Defazio, Room 287, Federal Building, 211 E. Seventh St., Eugene, OR 97401. For more information and maps, contact Kangaroo Defense, POB 332, Williams, OR 97544.

Mundane Matters

WHITEWATER "ECOLYMPICS"

Project RAFT (Russians and Americans For Teamwork) and Norwegian Wildlife & Rafting have announced that the fourth international whitewater championship, *Norway '93: A World Championship For Our Living Earth*, will be held on the Sjoa River in Norway's Heidal Valley 13-22 July 1993. The championship will combine world-class raft, kayak, and catamaran competition, with a World's Most Endangered Rivers campaign and local cultural festivities. Applications are now being accepted from qualified whitewater enthusiasts around the world. Fifty teams of seven athletes will participate in the 10-day rally. For information, including how to create or join a team, contact Susie Dodge, Project RAFT, 2855 Telegraph Ave., Suite 309, Berkeley, CA 94705 (510-704-8222).

THE BIG OUTSIDE

Dave Foreman's and Howie Wolke's *The Big Outside: A Descriptive Inventory of the Big Wilderness Areas of the United States*, first published by Ned Ludd Books in 1989, is now available in a revised, updated edition from Harmony Books, a division of Crown Publishers. The book identifies all the large roadless areas remaining in the United States. See your local bookstore or write to Ned Ludd Books for a free catalog.

NATIVE CALIFORNIA NEWS

In the spring of 1992 *News from Native California* published a special supplement on California Indians and the environment. The supplement develops the view that the relationship between people and wildlife can be one of reciprocity. The various articles show that Indians increased the bounty of the California landscape by intelligently gathering its resources. Today, efforts are under way in California to revive Indian practices in order to help restore harmony between people and the land. The supplement describes a few of these projects.

News from Native California is published quarterly by Heyday Books, POB 9145, Berkeley, CA 94709 (510-549-3564). Subscriptions are \$16 per year (California residents \$17.16).



ABOUT SUBMISSIONS

Notwithstanding our aversion to the prevailing patriarchal paradigm, *Wild Earth* welcomes submissions. Poems should be sent directly to our Poetry Editors, Art Goodtimes (Box 1008, Telluride, CO 81435) and Gary Lawless (Gulf of Maine Books, 61 Maine St, Brunswick, ME 04011). Poets should realize that we receive hundreds more poems each quarter than we can publish. Articles and letters should be sent to the Editor at our main address (POB 492, Canton, NY 13617). They should be typed or neatly hand-written, double-spaced. Those who use a computer (heaven forbid) can help us by including a copy on disk. We use Macintosh but can convert from PCs ("personal [like hell] computers"). Writers who want their material returned should enclose a self-addressed stamped envelope.

Articles, if accepted, may be edited down for space or clarity, though if substantive changes are made, the author's approval will be sought. Articles with significant scientific content (e.g., most biodiversity reports and wilderness proposals) will be reviewed by our Science Editor for accuracy and clarity. Wilderness proposals will also be reviewed by our Executive Editor, and controversial or complicated pieces may be peer reviewed. Lengthy biologically-based articles generally should include literature citations.

Wild Earth occasionally reprints articles; but due to the surfeit of submissions we receive, reprints will usually be low priority. We generally welcome other periodicals to reprint articles from *Wild Earth*, provided they properly credit the articles.

In matters of style, we follow the *Chicago Manual of Style* loosely and Strunk's & White's *Elements of Style* religiously. Also we suggest that authors remember several basic rules when writing for *Wild Earth*, since we always have far more material than we can print and we expect our writers to be lucid, perspicacious, and ineffably winsome.

1. Eschew surplusage. (Twain)
2. Thou shalt not verbalize nouns. (Abbey, 1988)
3. Do not affect a breezy manner. (Strunk & White, 1959)
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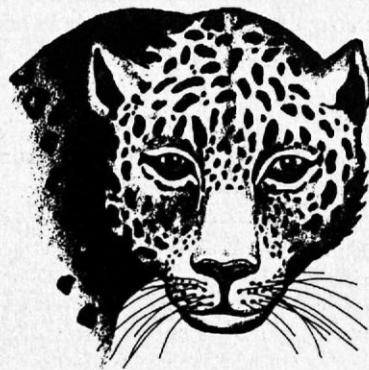
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Portrait of An Angry Young Plover

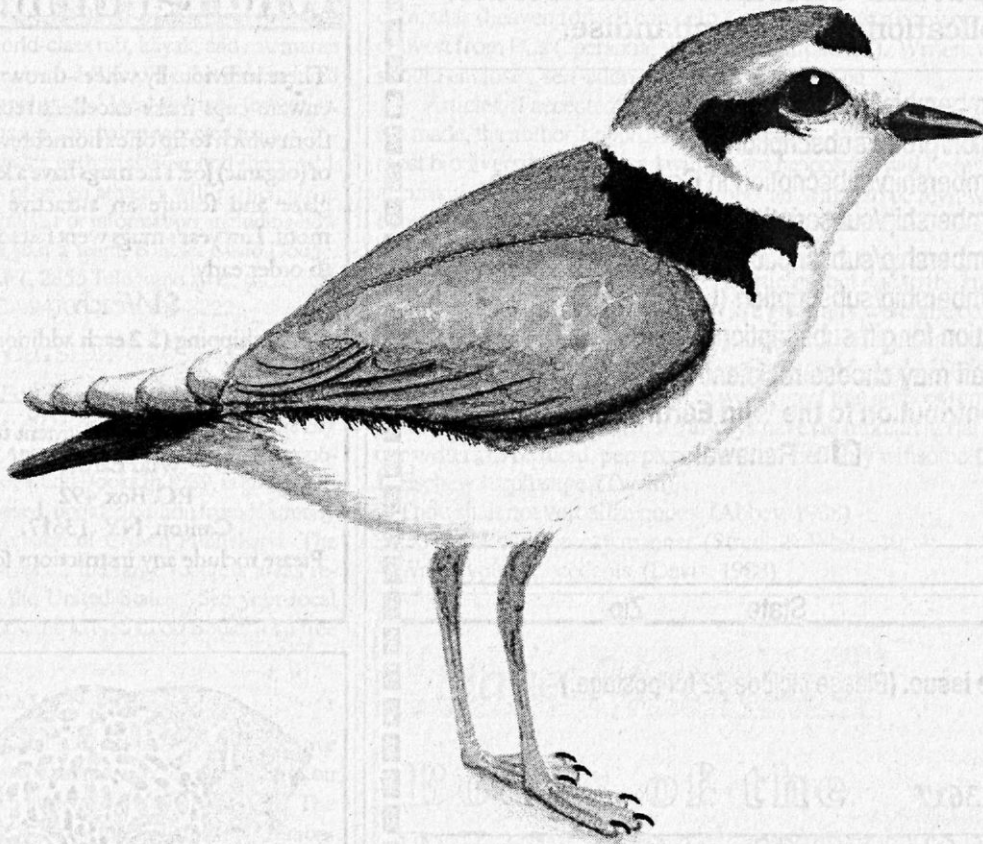


Illustration (ink wash) of the Snowy Plover (*Charadrius alexandrinus*) by Douglas Moore

The Endangered Snowy Plover (*Charadrius alexandrinus*), while found worldwide, ranges in North America on the Pacific coast from southern Washington to Baja and on the Gulf Coast from Mexico to the Florida panhandle. Beach-nesters, they are imperiled by habitat loss/alteration due to coastal development, Off Road Vehicles and other human impacts upon their beach homes.

Artist Douglas Moore is a marine invertebrate ecologist and artist who resides in Tucson, AZ. His work also appears on the cover (*Priacanthus cruentatus*) and on pg. 65 (*Aquila chrysaetos*). A graduate of the University of California, Santa Cruz, he returned there to complete the school's graduate program in Natural Science Illustration. Mr. Moore works in a variety of media depending on the subject matter and has had his work published in various publications including *Wildlife Damage Review*. He is a member of the Guild of Natural Science Illustrators.

DOUGLAS W. MOORE



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Contributions to the Wild Earth Research Fund are vital to our ongoing efforts to publish well researched and timely articles on matters of great ecological import. *Wild Earth* contributing writers include many of the conservation world's most important activists and thinkers. No other environmental periodical brings together such an eminent and diverse group of authors—and sets them loose on the central issue of our time: the restoration and preservation of a wild and whole planet Earth.

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Wild Earth's mission of providing an independent voice for the New Conservation Movement and publishing wilderness recovery plans of The Wildlands Project is important work. Please support it through the Wild Earth Research Fund.* And please support your grassroots conservation organization in its vital work for biocentric change, for preservation of biodiversity, for recovery of **Wild Lands and Life.**

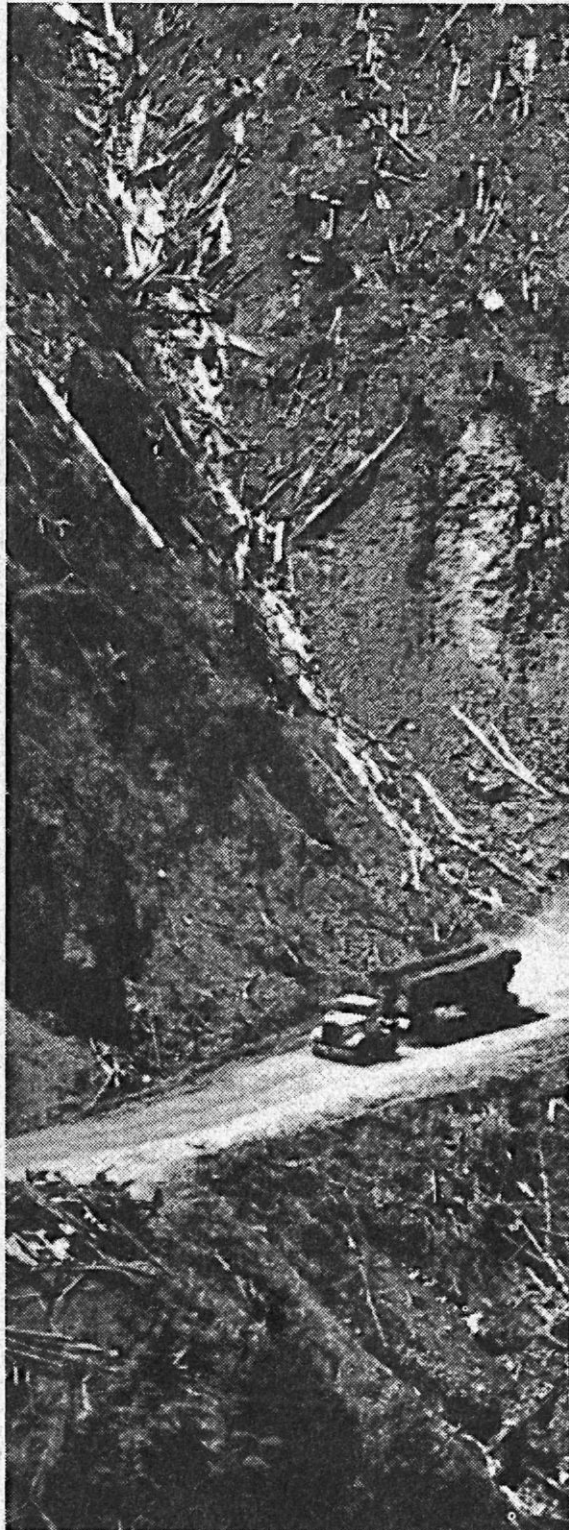
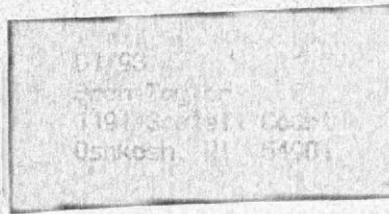
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Trillium by Peggy Sue McRae



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