



Environment & Society Portal

Suggested citation: Davis, John, et al., eds., *Earth First!* 9, no. 3 (2 February 1989).
Republished by the Environment & Society Portal, Multimedia Library.
<http://www.environmentandsociety.org/node/6908>

All rights reserved. The user may download, preserve and print this material only for private, research or nonprofit educational purposes. The user may not alter, transform, or build upon this material.

The Rachel Carson Center's Environment & Society Portal makes archival materials openly accessible for purposes of research and education. Views expressed in these materials do not necessarily reflect the views or positions of the Rachel Carson Center or its partners.



EARTH FIRST!

BRIGID EDITION

February 2, 1989

Vol. IX, No. III

THE RADICAL ENVIRONMENTAL JOURNAL

THREE DOLLARS

Colorado EF! Fights Welfare Ranching

by Mike Stabler

During the first week of the 1989 National Western Livestock Show held in Denver in January, dozens of Earth First! activists focused public attention on the abuses wrought by cattle and sheep upon our federal lands. Colorado EF!ers were joined by activists from New Mexico, Washington, Montana and California, and accomplished three actions in one week.

Monday saw the Livestock Show's opening day parade. It also saw Eric Doub and David Lucas hanging on a rope suspended between two buildings ten stories above the parade route. Hanging with them was a massive banner demanding that livestock grazing be stopped on public lands.

A mini-drama unfolded on one of the roofs when the building manager arrived and ordered his security guard to cut the rope. "I want to see them go splat," he said of Eric and David. Fortunately, Michael Robinson was able to physically intervene and deny martyrdom for the two. Eric and David, as well as their four support persons on the roofs, were arrested.

Saturday we peacefully picketed and handed out hundreds of leaflets. Mike Stabler had done outreach to animals rights and mainstream environmental groups, using the Earth First! grazing slide show. About 20 "first time Earth First!ers" came as a result. We'd expected a hostile crowd, but found the audience somewhat receptive, and got minor media coverage.

The most exciting action was on Sunday. We went to the very bowels of the cowboy myth, hanging a banner inside of the Show Coliseum during the rodeo! Lee Dessaux and Gary Schiffmiller sneaked into the show, climbed some pipes, and gained the catwalk. One hundred feet above the arena, they unfurled a banner stating, "WILDERNESS, WILDLIFE, CLEAN WATER — COWS OFF PUBLIC LAND!"

Crowd reaction was only very light booing. Perhaps others wanted to cheer, but feared for their lives! Lee and Gary then descended, and were apprehended by an usher in an aisle. Then an amazing thing happened.

The rodeo ended. The crowd wanted to leave, so another usher came along and demanded that no one stand in the aisle. Without a second thought, Lee and Gary ran, soon melting into the crowd and escaping!

Colorado EF! plans to keep the livestock grazing issue in the forefront. Denver is the home of the National Cattlemen's Association, the regional US Forest Service office and the state BLM office. More fun and games are planned. We won't quit until our public lands are safe once more from all range locusts, livestock and ranchers alike.

The Preferred Alternative:

A National Livestock Refuge System?

by Dale S. Turner

If wilderness areas represent the last large free and healthy (or at least recovering) communities of natural life in this country, then wildlife refuges serve as the intensive care wards for suffering species. So why do cows fill the beds, and why don't the administrators care?

National Wildlife Refuges are the only federal lands where wildlife preservation has been officially given higher priority than recreational, commercial, or other activities. Yet private ranchers graze cattle on 1.4 million acres of Refuge land in 90 different Refuges, cut hay on another 15,000 acres, and have a major influence on management decisions at all Refuges grazed by livestock. (For a discussion of ranchers' influence and of the ecological harm to Refuges caused by livestock, see George Wuerthner's article in Mabon, 1988).

Despite numerous studies showing the harmful effects of grazing on wildlife, officials of the US Fish & Wildlife Service (FWS) still support grazing as a "habitat management tool." The FWS is currently reviewing their management of Refuges nationwide, and their recently released draft Environmental Impact Statement (EIS)



Eric Daub (left) and David Lucas hanging above the Denver Livestock Show Parade.

photo by Mike Stabler

shows an absolute devotion to the status quo. They like cows in Refuges, and they're trying hard to avoid public pressure that might bring a change.

Modern Refuge management

According to Sean Furniss, national coordinator of the draft EIS, grazing "is a tool used in dealing with waterfowl." Insisting that "This is not just the company line," Furniss stoutly maintains that cattle serve a function of manipulating habitat on Refuges to benefit various wildlife species.

The draft EIS states that "grazing and haying are permitted on refuges when they enhance, support, or contribute to established refuge purposes. They are used primarily to maintain or increase the vegetation's values to wildlife with minimum cost. Grazing and haying may also be permitted as use of a renewable natural resource if compatible with the purposes for which a unit was established." Grazing programs are directed by the FWS Refuge Manual, which states, "Proper grazing of tall, mixed, and short-grass prairie can result in increased vigor, height, and overall diversity of the plant commu-

nity."

As a tool, grazing shows the patina of heavy use. FWS allowed cattle on 1.4 million acres of Refuge land in 1987. This represents only a small portion of the 88 million acres in the National Wildlife Refuge System, but it comprises 77% of all Refuge land that can be grazed. According to Furniss, grazing is prevented on most other grassland in the system by the constraints of laws (like the Endangered Species Act) or economics (as in some hot desert regions).

While much of the grazing takes place on just three big Refuges — Charles M. Russell (MT), Sheldon (NV & OR), and Hart Mountain (OR) — cows currently graze at least parts of 90 Refuges. That includes 33 Refuges in Region 1 (see map), fifteen in Region 2, six in Region 3, five in Region 4, two in Region 5, and 28 in Region 6. Also, under their own set of grazing regulations, three Refuges in Alaska (Region 7) issue permits for Reindeer grazing, along with cattle at one Refuge.

Russell, Sheldon, and Hart Mountain were made of land transferred from the BLM, and have livestock men-

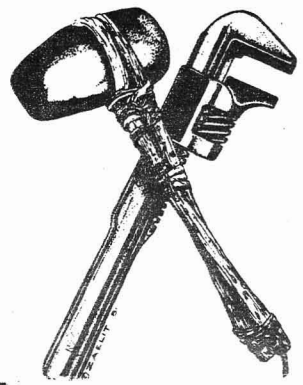
continued on page 5

EARTH FIRST!

NO COMPROMISE IN THE DEFENSE OF MOTHER EARTH!

Subscription is \$20 a year

POB 2358 * LEWISTON, ME 04241 * (207) 897-6988



A View of the Vortex

It has been called hypocrisy. It has been called environmental schizophrenia. It has been called rank expediency. Whatever may be the most apt appellation, most of us in the environmental movement have long practiced it. We call for more wilderness even as we drive cars, buy electric appliances, eat beef, and drink coffee. So it is in keeping with this tradition that the Earth First! Journal recently bought a laser printer. Contrary to initial fears among those of us at the paper house (excepting Dale, who is Macintosh compatible), this printer is not a by-product of Reagan's Strategic Defense initiative and has not sent us scurrying for our radiation suits. No, aside from the resources consumed producing the machine, it seems a relatively innocuous contraption and will "pay for itself" within a year by reducing typesetting costs.

The laser printer is stationed at a new facility. With Dave and Nancy contemplating a move from Tucson soon, the Journal production office has moved to downtown Tucson.

The reason for mentioning all this is to justify our tardiness. We are completing this issue late because of our move. We appreciate your patience.

Meanwhile, in Maine, Kris Somerville, our indefatigable business manager, is managing to keep our "business" functioning efficiently, even while having to wear so much lofty clothing to keep warm that she more resembles a successful tick than a successful administrator. Rumors that Kris has successfully applied for admission to Our Lady of the Woods Convent in much balmy California (see front page article Yule 88) are patently false. Kris has no proclivity for the cloistered life. At this point, where Kris and Les will live next year remains uncertain; but wherever situated, Kris will continue to be the person for all your EF! business needs. Orders and subscriptions should be sent to her, not to us in Tucson, else a delay ensues as we forward the money to her. Articles and letters for the Journal should still be sent to us in Tucson, however (same old PO box).

We are, incidentally, no longer a private business, but rather a *non-profit corporation*. (If you saw our financial records, you would not declare this an oxymoron!) This change matters little, except to EF! followers at the IRS. Henceforth, Ned Ludd Books and the EF! Journal will be separate entities. Dave Foreman, having paid his dues to the planet years ago, is finally "taking a break." He is retiring from his role as publisher of the Journal and as a spokesperson for the Earth First! movement. He will remain with us in an advisory capacity and as compiler of the Ned Ludd column, and will at last be free to devote attention to writing and his Ned Ludd Books business.

Several articles in this issue invite special mention. Keith Hammer, who recently accepted a position as a coordinator for EF! Biodiversity Project programs in the West, has contributed a summary of a landmark road monitoring effort on Montana's Flathead National Forest. Citizen monitoring, though not often covered in this or other environ-

mental journals, is proving effective, where practiced, at checking agency abuse of public lands.

Speaking of actions not covered in this Journal, it should be noted that the action articles herein represent but a sampling of the many Earth First! actions occurring throughout the US. Readers can obtain news of these actions by subscribing to local EF! newsletters. (In the EF! Directory, asterisks appear by the names of groups publishing newsletters.) Also, in a sequel to his article in this issue, Mike Roseille will later report on actions that the EF! Direct Action Fund has aided. Among recent actions not reported in the Journal are the following: Northcoast California EF! groups held a "Day of the Living Dead Hurwitzes" to condemn Maxxam's clearcutting of Coast Redwoods. San Diego EF! intervened against the Bighorn Sheep hunt in California desert mountains, and demonstrated against public lands livestock grazing. Los Angeles EF! also protested against welfare ranchers. Oregon EF! protested against deforestation and its contribution to the greenhouse effect, and against offshore mineral exploration proposed for the Oregon coast. Wild Rockies EF! took their demands for strong Montana and Idaho wilderness legislation to legislators' offices. Connecticut Valley EF! donned costumes to oppose proposed development on Mt. Greylock in western Massachusetts. Most significantly, hundreds of bold monkeywrenching actions occurred throughout the US last fall, especially in the Northwest and the Southwest.

Another article that invites special mention is Jared Diamond's discussion of preserves in New Guinea. We hope by reprinting this sterling piece to aid activists in designing wilderness proposals and to convince them to read Conservation Biology — which title applies to two books and one quarterly, all inculcating in the curious an appreciation for Nature, and providing them tools for conservation efforts. Indeed, we optimistically envision EF! becoming a bridge between conservation biologists and grassroots activists.

Readers would benefit from also reading Jared Diamond's articles in Natural History. In one recent article, Diamond explains that, within our lifetimes, New Guinea's and the world's last "first peoples" will be contacted by modern civilization; no untainted primal tribe will remain. In another, he discusses mixed species flocks — as of songbirds that derive feeding and safety advantages from traveling in multiple species flocks — and how humans have, in a sense, evolved in mixed species groups (e.g., with our friends the dogs).

Another area of science of particular import to environmentalists is Lynn Margulis's and James Lovelock's Gaia hypothesis and the studies it has generated. In this issue, David Abram shows the revolutionary implications of said hypothesis in an essay that complements Daniel Conner's review of Lovelock's latest book (Yule 88).

There are several particularly important notices in the Bulletins section of this issue. Roger Featherstone describes the

upcoming EF! Midwest Roadshow. Mitch Friedman outlines the first national old growth road show. *With your help*, both these tours could be as valuable for the movement as the wildly successful Alaska EF! tour described in this issue.

Readers will notice two new groups and a new column in this issue. Oklahoma Earth First! has manifested itself, against the BLM. EF! Scioto River Group has rushed to aid the Paddlefish (that fish than which no fish more bizarre looking can be conceived). "Fragments of Earth Wisdom," by Dolores LaChapelle, premieres.

If many will heed the words of Dolores LaChapelle, perhaps the interminable and intemperate bickering between various alternative factions will subside. Dolores has for years been explaining the importance of ritual in healthy cultures. One of the important aspects of ritual in primal groups was giving each individual a sense of significance. During rites of passage into adulthood, for instance, participants received special honors upon completion of some exacting trial. Nowadays we lack constructive rituals, and also lack genuine challenges. So deprived, we seek attention and excitement in other ways. We bicker and gossip. Again and again those of us working on the Journal are reminded of this. We receive numerous articles and letters lambasting some rival person or faction. Frequently, writers complain to us because their critiques of rivals are not printed. Hence the following suggestion: given that the present quarreling seems to be fulfilling some social need, why don't we begin instead to debate more pressing questions? Rather than debate the relative merits of deep ecology and social ecology, biocentrism and ecofeminism, or organizational structure and anarchy, why not focus debates around such real life questions as the following: When is it best to replant damaged lands, and when is it best to leave natural succession to begin anew? When, if ever, are captive breeding programs justified? Are computers a welcome addition to the activist's arsenal, or are they another destructive technology? What tactics are most effective in combating public lands livestock grazing? Most importantly, why is 'Pflugerville' spelled with a 'P'? In short, the EF! editors believe there are more urgent issues and more interesting questions than those being debated by the warring factions in the alternative movements. Some of this debate has value, but plenty of other alternative periodicals are covering it; whereas very few radical periodicals are discussing wilderness. Those of you who wish to see more human-oriented debate in EF! will continue to be disappointed. We are Earth First!, not People magazine.

One final point on this topic bears mentioning here. It is too easy to attack rivals through the written word. Writing tends to bring out the worst in opinionated persons. If we were to verbally debate differing ideologies with rivals, rather than debate through angry articles, we might be less prone to vilify persons with different ideas. So, let's save some of our philosophical debate for the debauchery around the campfire this coming Rendezvous!

—John Davis

EARTH FIRST!
Brigid Edition
February 2, 1989
Vol. IX, No. III

Earth First! The Radical Environmental Journal is published by Ned Ludd Books and is an independently owned newspaper within the broad Earth First! movement. It is not the "official newsletter" of the Earth First! movement. Entire contents are copyrighted 1988, but we are pleased to allow reprinting if credit is given, except for those articles specifically copyrighted by the author. Art and photographs are copyrighted by the individual artist or photographer and permission to use must be received from them. *Earth First!* is a forum for the no-compromise environmental movement. Responsibility rests with the individual authors and correspondents. The contents do not necessarily represent the viewpoint of this newspaper, the Earth First! movement, local Earth First! groups or individual Earth Firsters.

Although we do not accept the authority of the hierarchical state, nothing herein is intended to run us afoul of its police power. *Agents provocateurs* will be dealt with by the Grizzly Defense League on the Mirror Plateau.

Submissions are welcomed and should be typed or carefully printed, *double spaced*, and sent with an SASE if return is requested. Electronic submissions are even better, either on Macintosh disks or via Econet (login "earthfirst"). Art or photographs (black & white prints preferred, color prints or slides OK) are desirable to illustrate articles and essays. They will be returned if requested. Please include explicit permission to reprint slides. Due to our tight budget, no payment is offered except for extra copies of the issue.

Earth First! is indexed in the Alternative Press Index.

For subscriptions, merchandise orders, donations, inquiries, and general correspondence, send to: POB 2358, Lewiston, ME 04241. Phone: (207) 897-6988.

Letters to the Editor, articles, photos, etc. for *Earth First!* should be sent to: Earth First!, POB 5871, Tucson, AZ 85703. Phone: (602) 622-1371.

All poetry should go to: Art Goodtimes, Box 1008, Telluride, CO 81435.

John Davis, Editor
Dale Turner, Assistant Editor
Art Goodtimes, Poetry Editor
Helen Wilson, Cartography
Kris Somerville, Business Manager
Nancy Zierenberg, Mailing & Shipping

Contributing Editors and Correspondents: Peter Bralver, Jasper Carlton, Chim Blea, Lone Wolf Circles, Dan Dagget, Mary Davis, Rick Davis (Japan), Karen DeBraul, Bill Devall, Barbara Dugelby, Roger Featherstone, Mitch Freedman, Ed Grumbine, Lynn Jacobs, Greg King, Christoph Manes, Michele Miller, Sally Miller, R. F. Mueller, Reed Noss, John Patterson, Karen Pickett, Doug Peacock, Ned Powell, Rabinowitz, Jean Ravine, Randall Restless, Mike Roseille, Jamie Sayen, John Seed (Australia), Tom Skeele, Tom Stoddard, Robert Streeter, Paul Watson, Mark Williams, Howie Wolke, George Wuertner.

Contributing Artists: Brush Wolf, Lone Wolf Circles, Canyon Frog, Lourdes Fuentes-Williams, Mike Gouse, T.O. Hellenbach, Sky Jacobs, Juniper Berry, J. Luoma, Mad Jack, Christoph Manes, Peg Millet, Millipede, Mike Roseille, Claus Sievert, Carol Simpson, Jim Stiles, Karen Tanner, Gila Trout, Bill Turk, B. von Alten, Robert Waldmire, Malcolm Welis, Marcy Willow, Helen Wilson, John Zaeltit (deceased).

Contributing Photographers: Joe Cempa, David Cross, Roger Featherstone, Orin Langelle, Doug Peacock, Scott Smith, Howie Wolke, George Wuertner.

Mailing: Tucson Earth First! Group
Published by the Earth First! Journal, Inc.

SCHEDULE

Earth First! The Radical Environmental Journal is published 8 times a year on the old pagan European nature holidays: Samhain (November 1), Yule (December 21 or 22), Brigid (February 2), Eostar (March 21 or 22), Beltane (May 1), Litha (June 21 or 22), Lughnasadh (August 1), and Mabon (September 21 or 22). Deadlines for articles are three weeks before the cover date: October 10, December 1, January 10, March 1, April 10, June 1, July 10, and September 1.

Fellow Earth First!ers,

I'm writing to tell you about a fundraising plan that Southern Willamette EF! is using. The idea is to have your supporters sign up with a long distance carrier called "VIP/Phone America," and VIP will give you a 1% commission from your supporters' long distance phone bills.

At SWEF! we hope to have our basic phone/copying expenses covered from VIP commissions within a few months. VIP/P.A.'s major contract is with Allnet—the only long distance carrier available to us that doesn't do military contracts.

For information contact me at 503-726-4738 (home), 343-7305 (Friends of Cathedral Forest), or 683-1378 (David Atkins' office); or write POB 3499, Eugene, OR 97403.

—Karen Wood, Southern Willamette EF!

Dear Ned Ludd Books,

We are in the embryonic stages of a self-publishing operation up here in Brattleboro; we are also EFers, living 6 miles from Vermont Yankee nuke plant. We wish to establish contacts for mutually beneficial exchange.

One tentative project is a book about the history of anti-industrialist and radical ecological action.

Any suggestions, contacts, etc., would be appreciated.

—TW Montag, Stone Phoenix Books, POB 6462, Brattleboro, VT 05301.

To the Editor:

We want to thank all those who participated on October 26, 27 and 28 in our action to save Elkhorn Ridge near Branscomb. We successfully halted BLM's operation in that area. Also at risk is Brush Mtn. and Cahto Peak.

This area is one of the last intact temperate rainforests in the US and a Spotted Owl habitat. There are forests of Douglas Fir well over 200 years old.

Anyone wanting information or willing to participate, please write to us at POB 372, Laytonville, CA 95454. We need YOUR help!

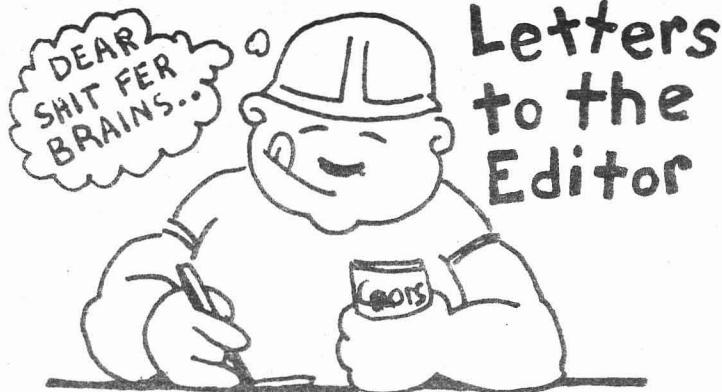
—Earth First!, Laytonville, CA

Colleagues,

On October 27, the French company that was supposed to market RU 486 caved in to the

international Spawning Lobby. RU 486 is the "abortion pill" that can be taken early in pregnancy to cure the condition. Family planning groups have high hopes for this drug in the Third World and it would be a major advance in birth control technology that would benefit everyone. The statement from the company, Groupe Roussel Uclaf, cited pressure from Catholics and other "right to life" fanatics, especially from groups in the United States, as reason for the decision. The company and its partner, Hoechst A.G., fear a boycott of their products in the US. They don't sell much here now but are planning a major market expansion and want to avoid bad publicity.

Fortunately, the French Ministry of Health has ordered Roussel Uclaf to resume distribution of RU 486. While the immediate crisis is over, the Fetus Lobby is sure to redouble their efforts to keep the pill out of the US. Earth First! might get profitably involved by threatening a boycott against companies that don't distribute RU 486. A good place to start would be the local representatives of Roussel Uclaf. They are: Hoechst-Roussel Pharmaceuticals, Rt 202-206 North, Somerville, NJ 08876; 201-231-2611. At present, H-R sells three non-prescription products here: Doxidan (laxative), Surfak (stool softener), Festal II (digestive aid). Their other products are prescription drugs (A/T/S, Claforan, DiaBeta,



Letters to the editor are welcomed. Lengthy letters may be edited for space requirement. Letters should be typed or carefully printed and double-spaced, using only one side of a sheet of paper. Be sure to indicate if you want your name and location to appear or if you wish to remain anonymous. Send letters to POB 5871, Tucson, AZ 85703.

Doxinate, Duadacin, Festalan, Lasix, Relefact, Topicort, Loprox, Trental). I plan to send H-R a nasty letter about how I'll remember their corporate cowardice next time I get all jammed up and if they think they'll avoid trouble by grovelling before the Spawning Lobby they're in the wrong parallel reality. If they get lots of similar letters, they might take our concerns seriously. They might even grow a spine.

—R. Wills Flowers, Tallahassee, FL

Open Letter to Women Warriors:

The Women Warriors booklet is on hold. Despite unanimous excitement in the women's caucus last summer, I've received a mixed response that I'm not sure warrants the energy and expense the project would demand.

I appreciate all the written contributions, encouragement and concern sent my way, and hope each person who wrote will forgive my not responding individually. We'll discuss it more next summer in New Mexico.

—Jean Ravine

Dear Shit-Fer-Brains,

I am an Earth First!er who is a Park Ranger at Death Valley National Monument. I have become aware of a recent act of stupidity that has been attributed to Earth First! here in Death Valley. The small sign at the Park boundary that says "Death Valley National Monument" was recently (on 12-9-88) burned and a bumper sticker of the "American Wilderness, Love It or Leave It Alone" was placed on the burned sign. This senseless act of destruction does nothing to advance the cause of wilderness preservation and only serves to cast EF! as a group of misguided idiots in the minds of people here in DV who are basically pro-wilderness. It is certainly possible that whoever did this was intent on discrediting EF!, but if it was an EF!er who did this, then he or she should consider working for the Earth rappers, since he or she obviously has the appropriately piss-brained mentality for it.

—Charles Conner, Death Valley, CA

Hello EF,

I must take exception to Dennis Fritzing's comments regarding flying the American flag upside down. Contrary to his belief, saving wilderness is not an All-American occupation. Destroying wilderness to fuel greed and the capitalist machine is. What the hell is so precious about our stupid flag or any other nation's for that matter? National flags and the whole concept of separate nations form artificial boundaries that divide the world and its inhabitants. These boundaries fuel hate, war, and environmentally destructive competition. Peace, harmony, and freedom will only evolve when we forego these nationalistic tendencies, and thus become one planet, one people, and one precious Mother Earth.

—Frank DeAngelis, New Rochelle, NY

Dear Shit fer Brains:

Thanks for the great Yule edition. Loved all those short & to the point pieces. Sometimes those long windy pieces really bug me — read enough long windy and over-written stuff in college. Don't need it now.

Would like especially to comment on Tom Stoddard's piece, "How Far Should We Go?" Everyone should go back and read it if it's not still fresh in your mind. As he said — we are not going far enough, or fast enough to keep up with the Earth rappers.

We must keep in mind that we are the

Earth reaching out to heal herself — we are needed now. We are the dying planet & the dying planet is us.

Get out those spikes & save a tree or two (thousand), get out that Crazy Glue & gum up some freddie locks, get out that valve grinding compound & service those ugly yellow machines.

Read Ecodefense. Remember that factories don't burn down by themselves — they need your help.

Don't get caught.

—Eric Resener, Santa Cruz, CA

Dear SFB,

Regarding the California Women's Caucus...

Judi Bari is a terrific organizer but she often suffers from "tunnel vision." Attending her first EF! Women's Caucus she came determined that the men of Earth First! were controlling all the purse strings and are all sexist, another victim of the media hype. Another woman felt she had been harassed the night before at a campfire.

Most of us were eager to plan a women's action and the next Women's Rendezvous and were dismayed to have to spend time dealing with Judi's misconceptions. We reaffirmed a pledge to assist if someone felt harassed or threatened and talked about confronting the problem as it occurs. Finally we were able to go on to the main focus of the meeting which was action planning. Another meeting had to be scheduled to complete the planning because of the diverted time in the first meeting. WE DIDN'T DECIDE "EF! MEN MAY BE ASSHOLES." That's Judi's opinion, not a group one! It's unfortunate she chose to write up "her version" of the Women's Caucus since she didn't even attend the second meeting and misreported the date of the action.

As white American women we are in the enviable position of being able to choose and pursue our own liberation. As EF! women we can stand toe to toe with any man who tries to belittle or harass us and know that we have the backing of our sisters and brothers in the movement. If we deserve the name "Earth Warriors" we must face problems WHEN THEY HAPPEN, confronting them directly, not whimpering about oppression later!

As a woman who barely survived the rapes and violence of the 50's*, chafed at being a "good wife" (read "rug") in the early 60's, and found sisterhood and a world to change in the late 60's and early 70's and then spent the last 12 years homesteading land alone, I agree with Sher Pierson that empowerment can only come from within. When you are strong and self-liberated in America in the 80's those you face have no choice but to adapt to you!

GRRRRRRRRR. . . .

—Sequoia

* Yes, it's true, I'm even older than the ancient Dave Foreman.

Then you must be a veritable and venerable Methuselah! —JD

Dear EF!

The '88 Women's Rendezvous was the debut of the Women's EF! T-shirt. At the time, there was discussion about the color and the slogan, and whether it should be changed for the next reprinting. I'm not up on how many have been sold or if it's slated to be reprinted but as the artist, I have some opinions and would be interested in hearing your ideas too.

I'd like to see the slogan changed to something more powerful. I like "Live wild or die." I heard somebody else suggest "The meek shall inherit nothing"; that's good too. Maybe other people with ideas could send them in.

I also have strong feelings about the colors, mostly that the ink needs to be black. I'd like to see more variety of t-shirt colors, too, preferably something more subtle. I suggest a pale green or blue/green, or maybe blue grey, or light purple. A paler color would contrast the image better, in addition to offering a choice for people who aren't into Bright.

My third idea is that we might want to sell these shirts for W.A.G., as a fundraiser for future actions, or newsletters, or whatever. I'd like to hear other women's thoughts on all this, so send your ideas in for the next newsletter. Thanks!

—Gena Trott

Dear SFB,

Two months ago I spent a week backpack-

continued on page 4

EARTH FIRST! PRESENTS

DAY OF THE LIVING DEAD WURWITZES

11:00 AM THURS. DEC. 8 SCOTIA

- OPTIONAL WEAR -
- BUSINESS SUITS
- FUNERAL CLOTHES
- ZOMBIE ATTIRE
- LOGGING OUTFITS
- EARTH FIRST! SHIRTS



FOR MORE INFO CONTACT EARTH FIRST! P.O. BOX 34, GARBerville CA 95440 247-3320 • 826-1621 • 485-0478

Letters . . .

continued from page 3

ing in the Sierra Nevada Mountains of CA. This delightful time climaxed on top of Mt. Whitney, the highest point in the US outside of Alaska. Unfortunately, this was not the experience I had hoped it to be. Three times I was buzzed by a military jet. On the first pass I actually could see the pilot as the plane was only 75 yards overhead. I did recover and took a picture, although this third pass was farther away than the others.

Now, these ecc-rapers have a 3000 foot ceiling (floor? —ed.) in national parks below which they cannot go. If this doesn't get your monkeywrenching juices flowing, picture twenty other backpackers dressed in their matching color-coded gortex suits (obviously having just stepped out of Eddie Bauer) madly cheering the Tom Cruise misfit on. They had an ecosophy as well developed as Reagan's and as promising as Bush's. So, I knew I would be the only dutiful citizen bringing this to the attention of the freddies in Lone Pine. And of course I got the predictable response



Navy jet buzzing Mt. Whitney.

with a "yeah, they've been doing that all summer and there's nothing we can do about it" attitude. They said the military believes they're protecting our national parks by doing this. And they gave me the address of the ever-mysterious "District Ranger" to whom I wrote and got not even a wishy-washy response.

So I bring this to all you wonderful folks. I do know that the jets are all from the China Lake Naval Weapons Center but I've been unsuccessful in finding an address. Editor, could you try to find this address so we all can tell these "park protectors" to "get the hell out of the skies and the hell off the mountains?" If not, the next time you hike Whitney, bring your slingshot.

—Faith Walker, Flagstaff, AZ

We don't have the address for China Lake handy (though as park protectors, you'd think they'd subscribe), but we can suggest some avenues. A new group, Citizen Alert (POB 5391, Reno, NV 89513), has published an outstanding illustrated guide for identifying and reporting military planes doing inappropriate things. Also, the National Public Lands Task Force (POB 1245, Carson City, NV 89702) has worked for years to control the creeping militarization of our Western public lands and skies. They put out a worthy newsletter covering that and many other issues. — Dale

Dear EF!

I am working with a public school in Santa Fe and All Species Projects to devise a fundamental ecological curriculum for elementary schools. As we don't want to reinvent the wheel, I am soliciting input from any of you who might be involved in existing programs. I would like to present to the parents and teachers an overview of what is out there and what is possible. If you have information that you think we might be able to use or are teaching in some sort of ecological educational forum and have ideas, please send them to me c/o NMEFI, 456 Amado St., Santa Fe, NM 87501.

—Rich Ryan

Dear SFB,

This is an appeal to all of the wild and crazy
Page 4 Earth First! February 2, 1989

EF! types in northeast Oklahoma; I know you must be out there, but I'd sure as hell like to know where! It's time we all got together and made a BIG impact on this area. There are pressing issues in Oklahoma that need immediate attention. Let's show 'em that even in Oklahoma there are people who believe there should be no compromise in the defense of our Mother Earth.

—Todd Kirk, 1536 N. Kingston Place, Tulsa, OK 74115, (918) 834-0771.

Dear EF!

There's a mention on p. 2 of the Yule issue of the "two slow-growth propositions" San Diego failed to pass on November 8th, and I'd like to elaborate on the facts a little, because I think it's a useful lesson for other environmentalists.

There were actually four slow-growth measures on that day's ballot, two at the City level and two at the County. The Sierra Club et al sponsored one of each with nearly identical language. On seeing this, the City Council and their County counterparts, terrified that a growth-control measure might actually pass and cut into their political contributions, promptly introduced their own pair of growth-

control measures, laden with three pages of exemptions each. Nevertheless, the latter measures would have been a slight improvement, and most environmentalists would have voted for them, but for a clause in each that said basically "if this proposition passes, the Sierra Club's proposition is null and void."

It was a beautiful piece of work, I must admit. The serious environmentalists told one another to vote for the strong measures and against the weak ones, while the developers plastered the county with signs exhorting people to vote down the strong ones, claiming they would triple housing prices in short order. The result was a divided votership; each of the four measures got about 40% of the vote, and none passed, and the builders won. I'm writing this so people in other parts of the country can look out for such maneuvers. I won't tell you what to do about them, because I don't know. But if somebody figures out a solution, tell me.

—Stephen Bloch, San Diego, CA

Dear SFB,

I have an update on the wolves in Glacier NP. Unfortunately, when I wrote my last update, I was upbeat. This time I have sad news. Two of the wolves in the Wigwam Pack were murdered by Canadian hunters north of the border in B.C. As has been noted, this part of Canada is open to wolf hunting, although they do have a limit (of three per season, I think) which, when exceeded, immediately closes the season. The wolves which died include a female pup from this year's litter and a yearling male. The hunters reported wounding a third wolf and when the pack was sighted by biologists during an overflight, one wolf was apparently limping and is very likely the wounded wolf.

The good news, if you can interpret it as such, is that no adult female wolves were killed (as far as we know) this year. That means the likelihood of successful reproduction next year is enhanced and it could be a good year for wolves in general, despite the recent losses.

—George Wuerthner, Montana

Editor:

I just finished reading my first issue of *Earth First!* Good work! It's informative and well edited, if a bit raucous. Being an environmentalist from way back, I decided to share one of my favorite (and saddest) stories with you.

In 1966, when I was editor of a rural paper, I received a press release from the National Forest Service. It reported that a researcher had found a stand of exceptionally old bristlecone pines in Nevada.

The scientist speculated that one gnarled Methuselah might be among the oldest living things. He tried to take a core for study, but the wood was so hard and tight-grained that his drills broke. His credentials won him a permit to cut the tree down. Triumphantly he counted the rings. With more than 4900 rings, the tree had been the oldest living thing on earth!

Men were just beginning to scratch crude drawings on cave walls when the tree germinated in 2900 BCE. It was ancient when the Roman Empire rose and fell. From then it was but a moment in the life of the venerable tree until the Pilgrims reached the shores of America. It lived from the stone age to the space age and might have survived to the day when men traveled to the stars had it been allowed to live.

The tree is not forgotten. Somewhere in a museum is a cross-section of the trunk, neatly labeled so tourists can, if they have time, patience and inclination, count its nearly 5000 rings and ponder a living plant that spanned almost 50 centuries.

The Forest Service carefully explained that the permit was for the cutting of only the one tree, and the rest of the grove still stands around the stump of the ancient monarch.

—Van Vanderveen, Los Angeles, CA

Howdy Troopers.

All of us *Journal* subscribers just received a plea for our financial support toward the EF! movement from Dave Foreman and the EF! Foundation. Hurray! Those funds will act as a good hit in the arm for us biodiversity, wilderness activist junkies. Yet I feel like more should be said on the issue of donations, and my babbling conscience decided to go for it.

I've been connected with this movement for almost four years now, and I've seen, read and heard about a lot of noble acts in defense of the REAL world. People quitting their "jobs" to work for the Earth, people getting arrested many times a year in defense of the Earth, people traveling (both physically and emotionally) great distances to act on behalf of the Earth. And success has come from these acts. It is down-right vibrating to think about what such committed acts can do.

What is not so down-right exciting, though, is thinking about how few people are doing this, given the obvious severity of the situation. But people who help, help in many ways. What of those people not on the front lines, but at home reading about it? Where do they — we — draw the line? Where do we give, and where do we just take?

Two stories come to mind that depict what I feel is a common perception about "donating" money! The stories involved two different friends, and though I may be critical I still love them for who they are. The seeming self-righteousness comes from a sometimes immobilizing fear that "It isn't enough." Both of these people work hard at paid jobs that contribute to the protection of the Earth, yet I still feel like "It isn't enough!"

Story one — A friend gave \$15 to SUWA (Southern Utah Wilderness Alliance) in hopes of staying informed about the Burr Trail and other areas through their newsletter. When SUWA sent a thank-you note for the donation but never gave him a subscription (the cost was \$20), my friend was pissed off. What, no subscription? Hell, he sent 'em \$15. Wasn't that enough? Or was it? For this friend once a year puts his mountain bike or backpack in his car, and drives to Utah to ride or hike around the canyon country. And this is not the only recreational trip he takes each year!

Story Two — Another friend once was asking questions about environmental groups, as she wanted to give her yearly \$100 donations away. Now \$100 shouldn't be sneezed at, especially if given to the most efficient of activist groups — EF! Yet, I found myself being critical here too. You see, this same woman owns four pair of cross-country skis! This way she is ready for any skiing conditions. Or is she?

The point I'm trying to make is that a

disproportionate amount of money is going to loving the Earth, and not enough going to caring for it. We all have "toys" we use to experience the joy of being on this planet — backpacks, rafts, skis, bikes. . . . Yet all the mountain bike rides through a wild canyon or ski runs down a snowy bowl aren't gonna bring us peace of mind when we know (and I mean know) that we're going to hell in a bucket. It's hard to be truly alive in the wild when it's bleeding all around you!

So next time you're going to spend money to play on this Earth, take a moment. Calculate how much money you make, how much goes to your personal needs (and I emphasize needs — survival stuff, food, water and shelter — ok, beer too), how much goes to "recreational" pursuits, and how much goes to taking care of your playground. As wilderness enthusiasts, we all play in the wild. But there is more to that place than self-renewal. I'm simply asking if we have truly paid our rent. Whether through physical action or monetary support, the time has come to pay our rent. Cuz if we don't, the landlord is going to evict us!

—Tom Skeele, California

Mole,

I'm on the East Coast now. Please send all further mailings from the inner sanctum of Pacific Gas & Electric Co. to Karen Pickett, POB 83, Canyon, CA 94516.

—Craig Stehr

Dear EF! friends,

First, I want to thank you for printing David Abram's "2nd Look at NABC3." The event was all that he wrote and more. Having committed my life to working for Earth, the bi-annual NABC gatherings are points of light on the path for me.

I wish to share with you one piece of work of the Economics Committee at NABC. The "Vision Statement" which follows was carefully created by about 8 people. No other group besides NABC could have crafted such a revolutionary statement. This is the economics we are working to bring about to guide our living "once the megamachine grinds to a halt."

" . . . Bioregional economics is a tool for implementing a social agenda informed by relationships, interdependence and diversity and is sensitive to the scale of Earth's systems. Bioregional economics distributes the gifts of Earth to sustain the health and richness of the biosphere in which we live and through which human needs are fulfilled. Decision-making is based on principles of local, democratic self-control and mutually friendly, cooperative and compassionate relationships between and among individuals, groups, communities, bioregions, federations and all species. . . ."

I would also like to thank John Davis for his review of my book, *Economics as if the Earth Really Mattered*. When I was compiling information for the book, I, too, was disturbed by the apparent lack of Earth-awareness in social change enterprises. Especially those relating to finance, jobs, housing, etc. — the "economic alternatives." Had I found more ecological projects relevant to the subjects of the book, they would have been included. John brings up an excellent point — and an important role for EF!ers and others concerned with Earth — "Why are not these well-endowed environmentalists pressing their agendas upon alternative economic establishments? Why are they not quietly guiding such institutions toward . . . putting the interests of imperiled wildlife on a par with those of downtrodden people?" There are a few possible "reasons" for this. The first is that ecological concerns are usually seen (even by activists) as necessitating a "trade-off" between the needs of humans and Earth. This has to do with an inability (and a very real fear) to FEEL our true connection with all Life here. We are able to separate our short-term "well-being" from our long-term well-being. Intellectually people know that without Earth and her wondrous diversity we will die ("And who will look with awe at the monuments of man?" asks Jim Scott in "Song for the Earth"). Yet, that knowing in the head does not translate into change, into action or even thinking that puts Earth First! To me, putting Earth first is only logical. I, too, am Earth.

Another reason has to do with politics and power and fear of taking risks. It has to do with a nagging hope that somehow we can co-opt the establishment. What is really happening is that many environmental organizations

continued on page 12

Livestock Refuge System...

continued from page 1

tioned in their formative legislation as part of their reason for existence. They are also among the most frequently cited examples of why grazing and Refuges don't (or shouldn't) mix.

A tool for what?

FWS has never done a comprehensive study of the effects of grazing on Refuges, or on its actual compatibility with the purposes for the individual Refuges or of the Refuge system as a whole. A 1976 EIS on Refuge management gave only a cursory discussion of the issue, and the current draft EIS offers little more. FWS has done studies on grazing at only a few specific Refuges, such as Russell, Sheldon, and Kofa (AZ), and those studies were forced by a court order. The resultant reports clearly stated the damage done by cattle in these Refuges and recommended either elimination of cattle or drastic reductions in stocking.

A comprehensive study was done in 1983, however, by a graduate ecology student at Cornell University, with funding from Defenders of Wildlife. Working with the cooperation of FWS, Beverly Strassman questioned Refuge managers, visited various areas, and did a thorough study of research on interactions between livestock and wildlife.

Strassman found that Refuge managers simply didn't have the time or money to conduct detailed studies on their areas, or even to keep up with the relevant literature. Even more significant, she found that managers generally shared a view that "good range management is good wildlife management." In particular, "there was a prevalent belief that game species benefit from grazing and other species were considered less important."

As part of her survey, Strassman asked Refuge managers to list wildlife species affected either positively or negatively by their grazing or haying programs. She also asked them to cite studies that supported their opinions.

The managers named 86 species as helped and 82 hurt by their grazing or haying programs. Most managers could not give a single reference as a basis for their answers, and depended instead on their professional training and general observations.

In looking at actual conditions and scientific studies, Strassman found they could just as well have been pulling answers from a cowboy hat. Among the very species most often targeted to benefit from cattle grazing, she found that almost all suffer more than they gain. Only four wildlife species, birds that depend on short grass conditions, could be said to clearly benefit from grazing or hay cutting, and all four could be equally or better served by prescribed burning of grasslands [and likely best of all by natural fires].

She also found that a pair of studies in 1977 and '78 concluded that livestock grazing is the single most important factor limiting

wildlife production in the West. In addition, four decades of research on the ecology of wild ungulates (e.g., deer and Pronghorn) have shown major conflicts with cattle, including competition for forage and fawn death due to loss of protective plant cover. At least 55 waterfowl studies have shown that grazing reduces waterfowl populations. Records on the Sandhill Crane, which managers commonly listed as benefiting from grazing, show their population grew from 1,200 to 3,200 at Bosque del Apache NWR (NM) after cattle were removed.

She also found that "An average of two federally listed and two state listed endangered and threatened species occur at each Refuge with grazing and haying programs." The effect of grazing and haying on these species is poorly understood, and the FWS has not developed recovery plans for most of them.

Who pays?

Besides the impact on wildlife, grazing damages the FWS budget, and thus cuts into their ability to work for the good of wildlife. Grazing fees on Refuges are higher than the giveaway prices on Forest Service and BLM lands (which will be raised on March 1 to \$1.86 per Animal Unit Month), but they are well below the fair market value of private lands. Refuge lease fees are figured on a Refuge-by-Refuge basis, and FWS doesn't keep track of those figures, but Strassman found they averaged about \$4.44 per AUM in 1980. She also found that Refuges overwhelmingly chose permittees by tradition, lottery, or negotiated sale rather than by competitive bid.

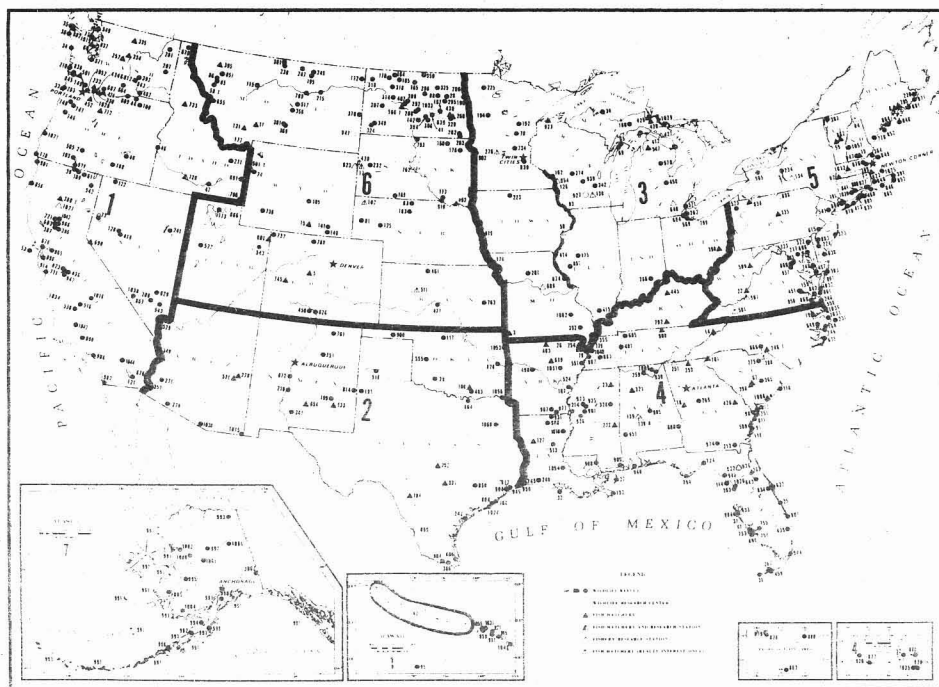
Grazing fees do not go to fund the activities of the Refuges. A substantial portion, some \$3.6 million for fiscal year '89, goes to the local counties as federal payments in lieu of taxes. The remainder goes directly to the federal treasury, to make its insignificant dent in that nasty deficit.

Funding for Refuge operations comes back out of that pot in similarly insignificant portions. A Wilderness Society study released last October found that the U.S. spends more on its eight military bands than on the entire National Wildlife Refuge System.

FWS does not record its costs for administering grazing and haying, but Strassman estimated they consumed about 9% of the entire budget for the Refuge system. That does not include the drain on staff time, which reached an extreme of 55% at Charles M. Russell. Direct costs include construction of pipelines, stockpounds, fences, and other "range improvements" which have their own impacts on native plants and wildlife.

Refuges for livestock

Faced with the long-recognized problems caused by cattle, FWS has reduced Refuge grazing levels somewhat in recent years, but with little enthusiasm on the part of top



NATIONAL FISH AND WILDLIFE MANAGEMENT AREAS

officials. Cattle were removed from the Kofa and Cabeza Prieta Refuges only by Congressional action, and cattle numbers on Russell were lowered because of a successful lawsuit by the Natural Resources Defense Council. (As reported in this issue, Malheur NWR now plans to increase livestock grazing.)

Furthermore, an April 1, 1983 memorandum from FWS Director Robert Jantzen stated, "Refuges with potential for increasing grazing activity should immediately initiate plans for increasing grazing in accordance with guidelines outlined in the Refuge Manual." And a June 23, 1988 memo from the Region 1 Director stated that, while wildlife should receive highest priority, "We do have a general 'good neighbor policy' . . . that we utilize to help out temporarily on natural disasters such as drought or flooding. In these cases, we should critically review our forage management program to see if there is some flexibility in our wildlife management efforts to accommodate some increased use of forage for a short period of time."

FWS has best demonstrated its unwillingness to change by its conduct of the current EIS process. The draft document, released in December, contains very little hard data about the status of the Refuge system and virtually nothing to evaluate changes since the 1976 study. It offers lots of excuses for a preferred alternative (A) that is also the No Action alternative, preservation of the status quo, which would continue such management practices as hunting, trapping, vegetation manipulation, and livestock grazing. The document then offers three extreme alternatives: maximize economic uses, maximize recreational uses, and do essentially no management at all.

The third of those is essentially wilderness management, which sounds great to those of us who believe in Wilderness for its own sake. Indeed, it's ideal for some Refuges, such as the huge Cabeza Prieta (AZ) or the embattled Arctic National Wildlife Refuge. For many Refuges, however, preservation of genetic diversity and restoration of habitat require substantial manipulation, because of past human disruption of natural ecosystems or artificial creation of ecosystems. Indeed, under wilderness management, the many small wetland Refuges that were artificially created and/or are artificially maintained would dry up and disappear.

Thus, the alternatives offer a clearly stacked deck, and FWS is playing it for all it's worth. After receiving considerable public input in 1986 on issues to be addressed in this document, they let the public forget about it. The draft EIS was released during the December holiday season with no fanfare. Ten public meetings were held, but very few people knew of them (the Washington, D.C. meeting attracted six people).

Even disregarding the lack of significant alternatives, the draft EIS is a generally worthless document. It ignores threats to the health of Refuges (in 1982 FWS identified 6,956 immediate threats, including cases of severe toxic pollution), completely ducks the issue of land acquisition to fill in gaps in the system, neglects issues of non-game species and predator control, and makes essentially no recommendations for system-wide policies that might guide management of the Refuges

into the next century. As Jim Norton of The Wilderness Society put it, "This is not a document that provides any vision of what to do. It doesn't view the Refuge system as a whole, but rather as a patchwork of little pieces."

The National Wildlife Refuge System sorely needs unifying direction. Refuge management is now directed by some 48 Acts of Congress, nine Executive Orders, nine international treaties, and a separate legislative statement of purpose for almost every Refuge.

Many of those directives seem reasonable on paper, but are distorted or ignored in practice. In particular, the mandate that all uses of Refuges be compatible with the purposes of the individual Refuges sounds fine, but the Secretary of the Interior has the authority to decide what's compatible and has no specific guidelines for making those decisions. In the Reagan Era, that led to a proliferation of pipelines, powerlines, roads, drill rigs, mining, timber cutting, and all manner of other "economic" activities (including, of course, grazing, though it's considered primarily a "management" activity).

Furthermore, many Refuges were created to aid specific species, commonly game species. Most management activities on those Refuges are focused specifically on the needs of those species, such that many have become essentially "duck farms." This narrow focus has been to the neglect or even detriment of native biological diversity.

Another potentially beneficial directive is Executive Order 11987, signed by Jimmy Carter, which orders federal agencies to prevent the introduction and establishment of exotic species into natural ecosystems on federal lands. Cattle, of course, are non-native species, as are many of the plants (like alfalfa) used by FWS in the course of their management. Unfortunately, the order also states that it does not apply if the Secretary of Interior or Agriculture finds that such introduction will not adversely affect natural ecosystems.

The National Wildlife Refuge System has grown from 32 to 88 million acres in the past decade, largely through addition of lands in Alaska. It has gone from 367 Refuges to 445, yet it is still directed and managed on a unit-by-unit basis. The system desperately needs an "organic act," something to provide a comprehensive direction as has been given to the National Park Service, US Forest Service, and Bureau of Land Management. An attempt at such was tried several years ago, and Congress may look at it again this session.

The draft EIS on management of the National Wildlife Refuges should be a draft agenda for insuring the future of our country's wildlife. It reads instead like an apology for livestock refuges and management by muddling through muddy political waters.

What you can do: Write to the National Wildlife Refuge EIS Team, US Fish & Wildlife Service, 2343 Main Interior Building, Washington, D.C. 20240. The comment deadline is March 13, so do it today. Ask for an end to grazing on Refuges. Insist on a real plan with real data and biological integrity, so that future Refuge management will benefit wildlife, not economic interests. Send a copy to your Congresspersons, and ask their support for an organic act for the National Wildlife Refuge System.

Malheur Plans Grazing Increase

The following is an update on the September 1988 *EF!* article concerning predator control at Malheur National Wildlife Refuge in eastern Oregon. The control was initiated in 1986 to slow the decline in Sandhill Crane populations on the Refuge. In 1986, 191 pairs of Sandhill Cranes nested at Malheur. Now despite three years of intensive predator control, which included killing 460 Coyotes in 1987 and 226 in 1988, the number of nesting pairs has fallen to 137.

The Refuge managers blame the decline on recent drought. Undoubtedly this is part of the problem, and undoubtedly Coyotes are a major predator of cranes. However, cranes and Coyotes have long survived together. What is different is cattle grazing on the Refuge, which (as explained in the September article) has adversely affected crane reproduction. Yet grazing has recently been increased on the Refuge after years of gradual decline. Now the US Fish and Wildlife Service says it wants to continue predator control for another five years! They are preparing a draft environ-

mental assessment (EA) to review this decision. Those angered by the continued subordination of wildlife values to ranchers' interests should write the Refuge manager and ask to receive the EA or at least its summary.

Remind the manager of the following: Over-wintering cattle on private lands just outside the Refuge are sustained in part by hay grown on the Refuge as well as by grazing on the Refuge. Afterbirth in the spring from these cattle provides extra food for Coyotes, thus increasing their numbers. Further, studies have shown a correlation between increased predation by Coyotes and loss of cover due to livestock operations. Thus, cattle grazing indirectly contributes to higher predation losses among cranes. To remedy this situation, all grazing and haying should be eliminated from the Refuge, as should killing of Coyotes. **Send letters to: Refuge Manager, Malheur NWR, HC-72, Box 245, Princeton, OR 97721.**

—George Wuerthner

Alaska: Keep It Wild!

TRAIL BOSS TAKES EF! MUSICIANS NORTH

A word from "Trail Boss" . . . and the word is 'awesome', from beginning to end. The whole tour was one rare moment after another. Our spirits were high as a snake in an eagle's beak!

As the ferry left Seattle, the passengers had no idea how their consciousness would change in the next days as we floated up the inland passage through Southeast Alaska. But it wasn't long before they realized that Glen Waldeck, Dana Lyons, Bill Oliver, and I had something important to say.

The first visible clearcuts were noticed but had little impact; the first barge loaded with old growth spruce was photographed like a hero floating by. The first official performance of "Alaska, Keep it Wild!" changed that train of thought.

Old growth and Spotted Owl, Admiralty Island and the falling Tongass, Cathedral Forest and the waste that shocks us, in these ancient trees, in these ancient trees . . .

Soon many people were wearing "Keep it Wild" t-shirts. Soon they were singing along, and more important, asking questions.

The seed had been planted and was growing by the time the "freddie" tour guide boarded in Ketchikan. He had no idea what awaited him. Hearing of our next performance, he acted nervous as a long tailed cat under a rocking chair. Maybe he thought we would blow his cover. Well, the truth did come out, and he did lose his sense of humor as he was put on the spot concerning the disappearing Tongass rainforest.

(Update: The Tongass Timber Reform Act passed in the House by a large count. It did not make it to a floor vote in the Senate because Senator Murkowski of Alaska threatened a filibuster. Southeast Alaska Conservation Council [SEACC, POB 021692, Juneau, AK 99802] will go back to work on this in spring.)

Anyway, it was a memorable boatride. We were preparing these tourists to look closely at wild Alaska and see how vulnerable it is.

We started writing a song a few miles out of Juneau, entitled "Alaska, Come Home." It would be the finale of the show. The first few verses came easy:

Where the wind blows, comin' down from the mountain to the sea.

Where deep in my heart, I know, here's a land where my spirit can run free.

Where the eagle soars, then rests upon the highest Sitka tree,

High above the forest floor, they fly across the land forever free.

Where whales appear, just long enough to give my eyes a thrill,

They breach then disappear, a sight so grand it makes my heart stand still.

We passed through the fiord and island studded lush Southeast, with its sheltered bays, steep precipices, expansive glaciers and ice fields. In a few days we would be only 300 miles from the Brooks Range, moving toward continuous daylight:

Where the Caribou run, gracefully across the tundra plain,

By the thousands they come, migrating northward once again . . .

Meanwhile, we stopped in Homer, which is at the end of the Kenai Peninsula. That's where I live, in a 10 X 14 cabin with a 4 X 6 window. The room with the view:

Where the fireweed stands tall, to adorn the sweeping countryside,

Without a sound, they sing a song that fills my heart with pride.

In this hayfield overlooking the bluff and beach of Kachemak Bay and the five mile long sand spit, we finished the song. The Homer Spit winds out into the water reaching for the other side. "Across the bay" is a term that has come to mean "wilderness." We can see Gull Island, China Poot Peak, and Grewing Glacier. Our next show would be "over there" at a quaint little gathering place along the boardwalk in Halibut Cove, the entrance to the fascinating wilderness of Kachemak Bay

State Park. Sea Otters, sea lions, seals, puffins, cormorants, and loons greeted *The Storm Bird* as we cruised by. We sang our new song to a record breaking crowd, a beautiful melody, matched with words describing the gifts of this wonderland, but also describing a poignant reality:

But in the darkest hour, in the land of the midnight sun,

There are those who vie for power, by the law and by the gun,

Who would drain and stain the tundra, just to take a little oil,

Who would rip apart the mountains for some minerals and soil,

Who would sluice the glacial rivers to extract a little gold

Who would cut down all the old growth . . . this cannot be so.

We sang the song countless times on our venture up the Kenai Peninsula to Anchorage, into the interior through Denali Park, and up to Fairbanks. Then, finally coming home to Homer, we learned of a shocking irony. This very landscape that inspired us to finish the song is now the subject of a potential disaster. This is the sad scenario:



The wild Alaska bunch: Wind, Boss, Juan, and Danook.

Kachemak Bay State Park was created in 1970 at the request of area residents, visitors, and the Homer and Seldovia Chambers of Commerce. (Seldovia is a small village across the bay.) There was growing concern about commercial development and logging along the coast. In 1971, 25,827 acres, the center of the park, was selected by the Seldovia Native Association (SNA), through the authority of the Alaska Native Claims Settlement Act.

In 1979, the state and SNA agreed to negotiate a trade of state lands elsewhere for SNA owned lands within the Kachemak Bay State Park. After seven years, the land trades resulted in a stalemate with roughly 23,000 acres of the park land still in native ownership. In 1987, timber rights of native holdings within park boundaries were sold to Koncor Forest Products, Inc, which made plans to clearcut up to 23,000 acres in China Poot Bay area.

Koncor, the company most busily clearing the Tongass, plans to begin cutting here this spring . . . unless the state can very soon arrange a trade that will satisfy not only SNA but also Koncor. Pressure on the state from concerned citizens has brought all parties to the negotiating table again.

At stake here is one of the richest bays in the world. It would take pages to describe the wide variety of marine life; from the mussel and clam beds of the estuaries and the salmon spawning streams to the rich life of the big water. The spruce forest is critical habitat for many animals. Bald Eagles circle overhead. Seabird rookeries adorn the cliffs. But the natives want revenue (it seems they've been watching how to do business in a white man's world).

So the plot thickens, as Koncor cruises the timber they hope to see on its way to Japan in spring. The positive note is the impressive organization of grassroots people here. Individuals from the community are in the midst of negotiations, while creative demonstrations and successful fundraisers are keeping the issue in the headlines. The evidence is strong here in Homer that seeds were planted during "Alaska's First Environmental Road Show." So now we come together and go walking hand

in hand.

We raise our voice forever, we will fight to save this land.

With the power of the Grizzly and the wisdom of the Wolf,

We will learn to work together and save Alaska that we love.

The people that had the chance to celebrate wilderness with us left with the passion to do what must be done up here. Those people will never be the same.

As for me, I witnessed the contagious effect on an audience of the spirit, commitment and genuine love of three of the best environmental troubadours in the world. . . . And I know I will never be the same again either.

Chorus

Alaska, the land has always called to me,

Alaska, the land, the sun, the sky and sea,

Alaska, we'll keep you wild, we'll keep you free

Alaska, Come Home. . . .

Keep it wild!

—Mavis Muller, *The Trail Boss*

ALASKA: Keep It Wild! Alaska's First Environmental Roadshow (we think) was dreamed up by Mavis Muller, of Homer, Alaska, at the 1987 RRR while she and Glen Waldeck and I were watching a simultaneous sunset and moonrise over the Grand Canyon. The time was right, she said, to stir up consciousness, see fantastic country, and have a hell of a good time. These things we accomplished.

Mavis enlisted Dana Lyons, Glen Waldeck and myself, and as the logistical problems came and went, we remained the core group. We covered a lot of ground in our six weeks by boat, plane, train, and trail. We swapped lies with rustic natives and fellow travelers. Our enthusiastic shows, over 20 of them, were simultaneously humbled and exhilarated by the show Alaska puts on. We saw eagles, Orcas, puffins, otters, fox, wolves, Porcupines, Grizzly and Black Bears, elk, Moose, and more. While we gave Alaska our philosophies and attitudes, Alaska gave us new perspectives, sense of purpose, and, literally, new personas.

Our first stop was the 1988 Rendezvous in north-central Washington. Mavis announced at the Sagebrush Patriots' Rally that we were "gonna set Alaska back 1000 years," and that our spirits were "rising like a corn cob in a cistern." She says stuff like that a lot, real good, too, which is partly why she is Trail Boss.

After a final row on Rowdy Ridge, Dana went off to support the Okanogan Forest Circus Demonstration and Dungbath. He agitated and entertained and got a friend to accommodate those not in jail.

Glen and I had a house concert in Spokane. Our hosts had several passionate hobbies: music, large parties, and medieval debauchery. We felt right at home.

Out of their collection of medieval costumes and weapons came a marvelous helmet that brings out the barbarian in all who wear it. It fit Wreckin' Ball Waldeck so well that they presented it to him as a farewell gift. Glen became "Big Juan," named after a huge ice tea a Taco Time waitress spilled in his lap. "In North Dakota I was someone. Now I am one big stain." He held up the empty cup, looked across the table at me and said: "I am Big Juan! You are Big Wind!"

California EF!ers Mary Hsi and Heidi Webb joined us for the three day voyage from Seattle on the Alaska Ferry Columbia, and would travel with us to about half the shows. Life on board was nonstop music and sightseeing. Our jam sessions ranged all over the boat. There were six of us and only a thousand of them. We had 'em surrounded. Our concerts were well received, except by the "ferry freddie" who got ruffled over our version of Tongass clearcutting. Dana (now "Danook") distinguished himself in this and later confrontations.

Trouble in Paradise was becoming more and more visible: massive clearcuts and huge barges of old growth on their way to the pulp mills of the Pacific Rim. We were inspired and enraged, which on a roadshow is as it should be, and we shared it with our audiences.

When the voyage ended, we headed for Homer. Memorable events on the way included my turning 40 in a lively Skagway bar, rain, mosquitos, and a mile long mudslide. It was our introduction to the Northland: pygmy Yukon forests, massive roadwork and wide load trucks on the Alaska Highway, glacial streams.

Homer is the granola capital of Alaska. Artists, hippies, music, bakeries, and public radio flourish along with the fishing trade. Local features include a glacier and volcano, both active. Much of the town is built along "the Spit," a five mile long peninsula into the Kachemak Bay. Almost all of this, as well as the Kenai Mountains that cup the bay, are visible from Mavis's cabin. Friends came and went, inviting us to midnight sun salmon bakes and rope swing parties.

An important member of the crew was waiting for us at Mavis's, Bailey the Wonder Dog, lead dog on roadshows in Montana and California, "feared by pit bulls and bulldozers alike." Resembling a small Arctic Fox, Bailey has a strong heart and good sense of humor.

During the four weeks to follow, we were deeply impressed by how vulnerable Alaska is to desecration. The Last Frontier could easily go the way of the other frontiers. Alaskans have a bravado about them, well earned, perhaps, by enduring the climate and isolation.

Like many locals, Alaskans are possessive and proud of their land and lifestyles, saying in one breath, "We know this is beautiful. This is ours to exploit." But we submit that it is not so much the rugged individuals of Alaska that pose the threat (although one small placer mine can sure mess up one beautiful stream); it is a larger institutional greed, coming from offices in Anchorage, Houston, Washington, DC, that threatens Alaska.

We met many hard working people who are pitching David and Goliath battles every day, just as activists are down in the lower 48, or "the Outside." If you feel inclined to reinforce them with encouragement, funds, energy or expertise, it will go a long way.

Our final two shows were back in Homer. Having to return a little early, Glen was back in Philadelphia, but the spirit of Big Juan remained. Once more I told Alaskans that "I come from a land called the 'lower 48,' which is 5 TIMES as big as Alaska, with 400 TIMES the people." As Big Juan says, "Many, many Anchorage. Really barbaric."

It was getting dark earlier now, about midnight, as we stood in Mavis's door for our last goodbyes. The strange Alaska light was even more eerie than usual as we huddled close together. Mavis was holding Bailey, who would occasionally lick a tear off her cheek.

"Now Danook, you take care of yourself, take lots of naps and don't get sick again for awhile, ok? Wind, you and Juan call me lots, promise? Do I still get to be Trail Boss?"

We couldn't believe it was over, couldn't make the final split. Then something came to me, perhaps the spirit of Big Juan.

"Cheer up you guys! WE DID IT!"

ENVIRONMENTALIST & BIG GAME HUNTER CONSIDER ALLIANCE

by Dana Lyons

A man wearing jeans, a flannel shirt, and boots approached me from the bar.

Hunter: "Sorry about the way some of the boys are acting during your show. They're being a little rude."

Dana: "Oh, that's OK. I guess they're just celebrating the day's exploits."

H: "'Exploits' ain't a good term to use around here. Most people are just trying to make a living."

D: "Oh, I just meant that they were here to let off a little steam after a day's work."

H: "Well, anyway, what is your 'Alaska: Keep it Wild! Tour' about? I hope you're not the Sierra Club. They came up here and made deals trading wilderness with the oil companies and developers."

D: "We're not the Sierra Club; we're a bunch of friends touring Alaska to speak about saving Alaskan wilderness. We don't trade wilderness for anything."

H: "What do you think about hunting and trapping?"

D: "I'm against trophy hunting and trapping for fur."

H: "That's what I do for a living."

Talkeetna, Alaska, looks the way I imagined Alaskan towns would look. The main street is unpaved, potholed and muddy. "Downtown" has a grocery store, roadhouse, sandwich place, two "flight-seeing" offices, the Denali National Park Service office, and the Fairview Inn. We were performing and staying at the Fairview, a bar and roadhouse built during "the rush." Everything in the Fairview was built out of thick wood, the type of place that could last through bar room brawls.

It was nearly our tenth performance on the tour. Six of us had started out from the Earth First! Round River Rendezvous in Washington and hopped a ferry in Seattle bound for Alaska.

In the beginning of the tour our shows were attended mostly by tourists and environmental sympathizers. Only a few loggers and

forest industry employees had come to see what we were about. Talkeetna was the first show where half the audience were hunters, trappers, miners and loggers. Nearly everyone in the room was from Talkeetna, and proud of their back-to-the-land Alaskan individualism.

D: "What do you hunt?"

H: "Everything."

D: "Even endangered species?"

H: "There are no endangered species up here."

D: "You hunt grizzly and wolf?"

H: "Yep."

D: "They're not endangered?"

H: "Nope."

D: "If you make your living hunting, how do you insure that the animals you hunt won't gradually be wiped out?"

H: "The Fish and Game Department regulates how many animals are taken. In my district we're allowed one Moose per hunter per year, one Black Bear, one Grizzly every four years and so on. I'm the only licensed hunting guide in my area. I keep in close contact with Fish and Game about different populations. I want to manage the region well so someday my son can be a guide."

D: "Who hires your hunting guide service?"

H: "Big game hunters from all over America. Europe."

D: "You mean you sell out your knowledge of the wilderness and these beautiful animals to rich slob hunters? How can you betray the animals to these people?"

H: "When they hunt with me I try to teach them about the wilderness. I love the wilderness. I try to help them understand the wilderness so they in turn will help to protect it."

D: "If you want to protect wilderness then how can you destroy these incredible creatures so they can be mounted on some executive's living room wall in suburban Houston?"

H: "I tried to make a living as a guide for photographers. There isn't the same money in it. I want to make a living from the land. I want to raise our family out here."

D: "I'm from Washington state. The

Grizzly and wolf are extinct there now. And the same things that made the Griz and wolf go extinct in Washington are happening here in Alaska. What if I had a crystal ball and could show you the Griz going extinct in 30 years. Would you agree that we should stop trophy hunting now?"

H: "It's not the hunters that are doing the major damage. It's the big developers. If hunters take too many Griz in my district, Fish & Game can close the season for 10 or 20 years until they come back. If the big developers put in the condo complex and resort they're planning for south Denali National Park, they'll wipe out 25 Grizzly dens for good. That's nearly 75 bears. I know where those dens are, and they want to build right on top of 'em. Once the buildings go up, and the people come in, the habitat and Grizzly are gone forever. I want to stop this development. Environmentalists and hunters need to set aside their differences and work together to fight the real enemy. We are the little guys in this battle. You don't have money. I don't have money. And the big oil companies and developers are laughing at us bicker while they wreck the land."

D: "You've got a point. Development is the ultimate enemy for both of us."

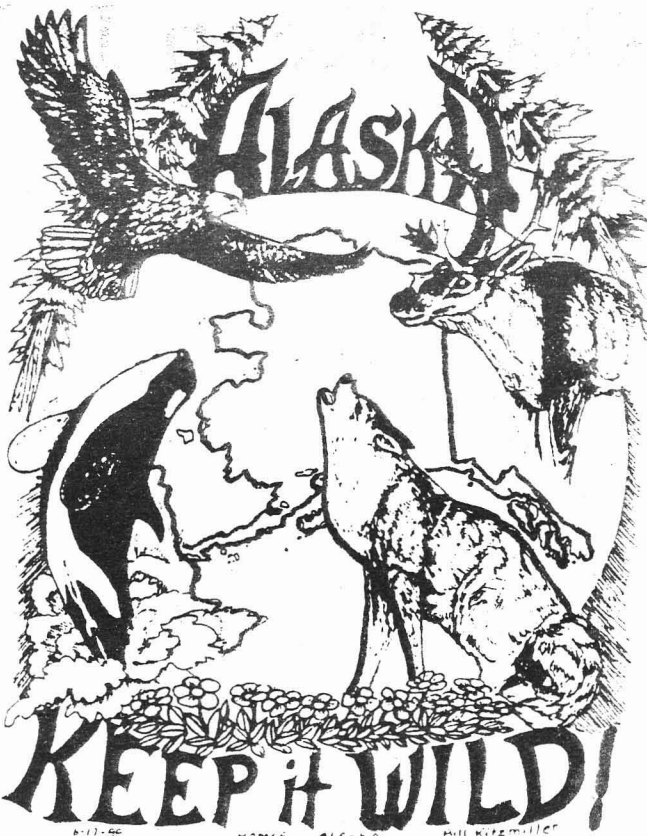
H: "Yeah, we need to work together now or there won't be anything left to hunt or save."

D: "What do you think of vandalism?"

H: "Oh, you mean 'monkeywrenching.' I've read *The Monkey Wrench Gang*. Great book. There are plenty of monkeywrenchers up here. You city environmentalists don't understand. Most of the hunters and trappers here love the land, and they'll do anything to protect it."

D: "I'd like to talk to you more about your approach to the wilderness. I'd like to go on a hunt, to see how you teach the hunters about the land, and to talk more about how hunters and environmentalists can team up."

H: "You're welcome to come. I'll fly you out there and take care of your food. Bring your own beer if you want any. But I've got two conditions for you. First that you don't interfere with the hunt. And second, that you



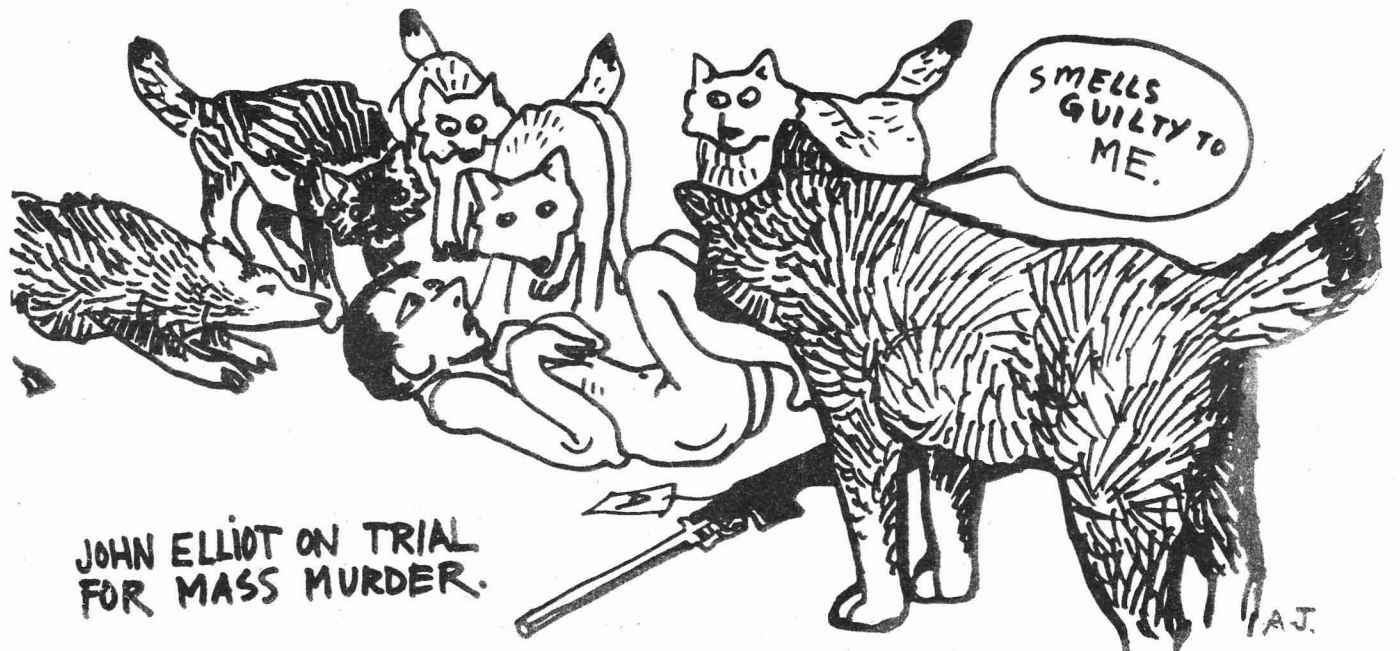
write an article about my approach to the wilderness to be published in one of the environmental journals. I want city environmentalists to understand what they have in common with hunters and trappers, so we might be able to work together on some of these issues."

A few weeks later I joined two hunting guides and the hunter who had hired them for four days on a ten day Moose hunt. Each day we would quietly walk away from our camp along a glacial river on the southern border of Denali National Park, toward a lake or swamp where a Moose had been spotted by plane the previous day. Moving slowly through the woods and swamp gave me time to appreciate the thick green moss with red berries, the trees, and the blueberries. One morning an owl swooped down within two feet of my head. The slow pace, the silence, and the intense awareness of one's surroundings while hunting were new to me. One day we sat silently in a swamp in the rain with mosquitos and blackflies buzzing around for six hours. The guide told me that normally we would stalk through the woods looking for Moose, but since the client was so loud and unfit, we would have to wait for the Moose to come to us. The Moose never came, but I had a great day watching an Alaskan swamp change in the shifting mists and rains of September.

What most impressed me about the hunting guides was their incredible knowledge of the wilderness and of the animals they hunt. Both had been hunting and trapping in Alaska for 15 years. Their love of the land and respect for the animals was intense, and while trophy hunting and trapping for fur seemed to me a sad way to show their love, I understood how hunting and trapping allowed them to make a living in the woods, and hence to be among the animals in the wild.

The guides I met are sincere about protecting wilderness. They keep in close contact with Fish & Game about population levels. One guide has proposed a ban on off-road vehicles in the management district. He is also working in local groups to stop the proposed tourist development at Denali National Park.

So my hunting trip left me in a quandary. While fur trapping and trophy hunting still disgust me as serving no purpose other than appeasing human vanity, I think the hunting guides I met in Alaska are correct in that development does pose the greatest threat to the land and animals. I also agree, at least in the case involving southern Denali National Park, that the hunters and environmentalists separately may not have enough power to stop the development. Tourist facilities in Denali are owned almost entirely by one company, and that company and the National Park Service are pressing ahead with plans to build a hotel, condos, and visitor center near the Ruth Glacier on the south side. To stop the south Denali development, I believe the environmentalists and the hunters and trappers do need to set aside their differences. Our shared strength is in our knowledge of the land and our determination to protect it. In south Denali and in some other areas, the environmentalist and the hunter can work together, in the halls of power and in the woods, to stop our common enemy: development.



JOHN ELLIOT ON TRIAL FOR MASS MURDER.

The Real Destruction of Yellowstone

by Philip R. Knight

By now anyone who is listening knows that Yellowstone National Park, despite the intense forest fires of 1988, is not a wasteland of cinders and ash. On the contrary, the greening of Yellowstone will bring an explosion of biodiversity. The federal government's "let-burn" policy, one of the most enlightened federal land management techniques to emerge this century, appears fairly safe for now, to the chagrin of Western congressmen, who would have us believe that let-burn is the tool of Satan.

The most destructive aspect of the 1988 fires was not the flames. It was the lies and misconceptions promulgated by the Forest Service, politicians and the news media which have spread a smoke-screen over the real and ongoing destruction of Yellowstone.

Fire has not and will not ruin Yellowstone, barring, perhaps, the eruption of the Yellowstone Caldera. Rather, it is insidious development and resulting loss of biodiversity which threaten to erase the thin patina of life which overlays the groaning Earth. The news media does not bleat and howl about the massive clearcutting of the Targhee National Forest nor the leasing of huge tracts of the Bridger-Teton National Forest for oil and gas development. No. These are "normal" events, while the fires are a "disaster." Yellowstone has burned many times before, but never has she faced oil wells, clearcuts, ORVs, roads, resorts and all the hideous aspects of Western civilization.

The one good thing the media's fire blitz did was to focus international attention on Yellowstone. Unfortunately, it was only to report that the Park was destroyed. With fires still burning in the minds of the public, now is the time to publicize what is really happening to the world's first National Park and the wildlands around it.

While the federal government, to its credit, has stood behind the let-burn policy, this is one of the few bright spots in a morass of mismanagement in the Greater Yellowstone Ecosystem (GYE). We should commend the National Park Service (NPS) for sticking by their decision to allow the fires to burn, but we should not let that one good policy obscure the overall grim picture.

Yellowstone Earth First! supports let-burn, but there are considerable problems with the current policy. The major one is lack of ecosystem-wide coordination of policy among different land managers. While the NPS may allow a fire to burn, if it nears a non-wilderness area outside Park boundaries the NPS is forced to attempt suppression to prevent burning of precious timber on Forest Service or private lands. In addition, each National Forest and some individual ranger districts have different interpretations of let-burn, as the official policy does not adequately outline parameters by which

to determine when a fire should be snuffed and when to let burn. This disjointed fire management makes a travesty of a sound policy, which policy should allow for return of a natural fire regime, and instead turns it into a means of further imposing humanity's artificial boundaries on the natural landscape.

The NPS and Forest Service (FS) are now busily responding to the "emergency" created by the fires. As Bobcat put it so aptly in a recent *EF!* article on salvage cutting in the North Kalmiopsis, they are "mugging a burn victim." The harsh treatment of stressed ecosystems began during the fires. Little heed was paid to the environmental effects of fire suppression efforts. Fire lines were slashed through roadless areas; lines which had virtually no chance of stopping the immense fires. I have found these lines, resembling utility corridors, hacked through old growth untouched by fire. Fire retardant, full of poisonous chemicals, was sprayed widely. Fire camps were set up and occupied for months on fragile meadows. Helicopters buzzed incessantly above the quiet plateaus. Trees were clearcut from around developments.

The hammering of Yellowstone didn't end with the November snowstorms. Frantic "rehabilitation" efforts continue. Large areas on the Bridger-Teton, Shoshone and Gallatin National Forests have been seeded to prevent erosion of damaged soils. This sounds good, but it mostly involves broadcasting seed from aircraft. Much of the seed is of exotic species, taken from government warehouses. It is supposedly "weed free" but this is questionable and the spread of noxious weeds in reseeded areas is nearly inevitable. Nor was there any coordination of rehabilitation efforts across the GYE. No public involvement was solicited and information on rehabilitation efforts remains hard to find.

Wherever flames reached the main roads in Yellowstone Park, the NPS has been felling all burned trees 100 feet on either side as a "safety measure." They allowed locals to take these cut trees for firewood. The NPS also allowed Brand S Lumber of Livingston to salvage cut trees. Logging trucks rumbled through Yellowstone Park for 10 days until snow closed the roads. This set a horrible precedent: NPS invited no public review of the salvage, they sold trees from a National Park, and they plan to do the same next spring.

In a tragically classic example of FS overreaction, a 100 foot corridor was cut 3 miles into the North Absaroka Wilderness along a trail through a burned area of the Shoshone National Forest. Seems a hunter broke his leg when his horse threw him after being spooked by a falling burnt snag. Ahh, liability!

And now begins the salvage. Salvage logging constitutes the most severe im-

mediate threat to the health of the Greater Yellowstone Ecosystem. Not all of the salvage proposals are horrendous; some are in flat, degraded areas already slated for logging, particularly on the Targhee. Nonetheless, the speed and lack of cost-benefit or environmental analysis with which the sales are being offered truly rankle. In addition, National Forest salvage sales in the GYE and elsewhere are subject to new "emergency rehabilitation" appeal regulations (36 CFR 211.16) that reflect the changes the entire FS appeals process is likely to undergo. Under the new regulations, handed down from the ivory towers in DC, only 30 days are allowed for public review of a sale. No extensions will be granted. Appeal is limited to one level: a decision made by a forest supervisor can only be appealed to the regional forester. Very few appeals will reach the chief's office. These regulations speed up the appeals process, creating the illusion that an actual emergency exists which can only be remedied by salvage, and make it more difficult to effect any change via appeals.

Despite this weakened appeals process, Yellowstone Earth First! on December 8 appealed the decision of Bridger-Teton Forest Supervisor Brian Stout to proceed with the Hunter Fire Salvage Sale. As far as we know, this is the first appeal of a fire salvage sale in the GYE. The environmental assessment (EA) for this sale is a biased document which assumes that the only acceptable means of attaining reforestation on the severely burned site is to cut down all the burnt trees and plant new ones. The EA gives only passing mention to the extremely unstable soils of the area. It ignores the several woodpecker species that inhabit the area and would benefit from the snags and associated insects. It dismisses as unlikely the very real possibility of displacement due to logging activities of Elk and Moose wintering in surrounding unburned areas. And we get all this for a loss of only \$44,000! The YEF! appeal states "As this EA is one of the first salvage-related documents to emerge in the wake of the Yellowstone fires, the lack of analyses . . . should be rectified to avoid setting a poor precedent for salvage programs in the GYE." This appeal gives us the opportunity to test the new appeal regulations and to monitor and influence the "salvage flogging" of Yellowstone.

Of potentially worse consequence is the salvage program developing on the Clarks Fork district of the Shoshone National Forest. The Clover Mist fire cooked 18% of the timber base on the district. The SNF is frantic to salvage as fast as possible. Sales will soon be proposed. The SNF promised 10 million board feet/year for the next 2-3 years to Cody Lumber, twice what the mill usually processes, before any public or environmental review was undertaken. The district plans to put "green sales" on hold

until salvage is completed, then resume the green sales. Much of this salvage would be done in environmentally sensitive areas where logging has long been a hotly contested issue. YEF! will continue to oppose salvage in sensitive areas throughout the GYE.

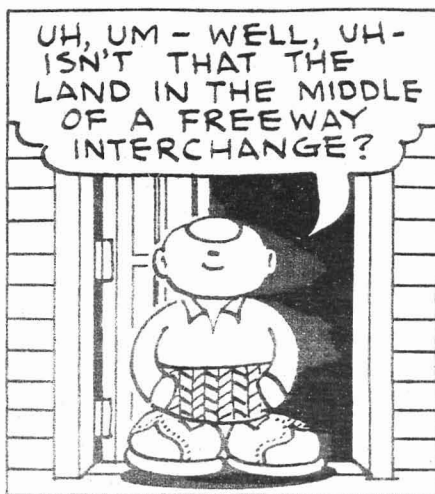
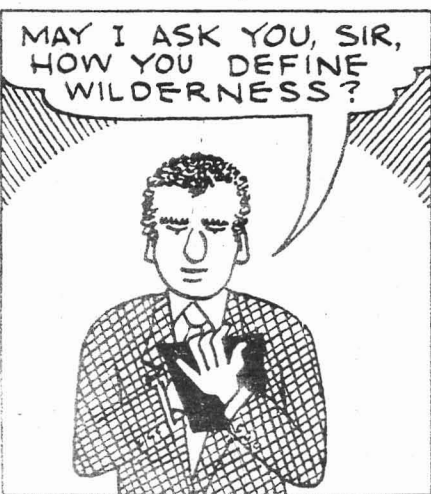
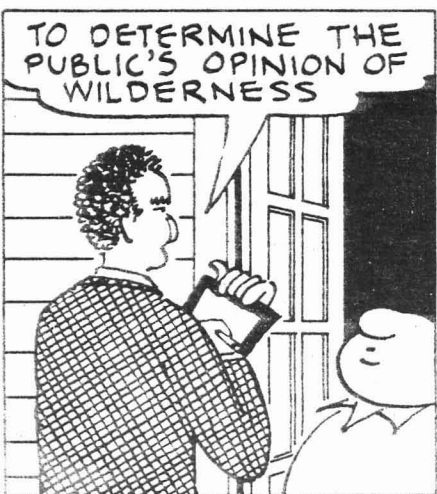
The GYE is not the only area that faces salvage logging. Glacier National Park and the Rocky Mountain Front in Montana also had severe fires this past summer, and the North Kalmiopsis Roadless Area in Oregon burned in 1987. All these areas are being salvaged or are slated for such. In Glacier Park, the Red Bench fire burned 30,000 acres. This is all being logged! Most of us know the story behind the Kalmiopsis. On Montana's Lewis and Clark NF, salvage is planned for the Falls Creek-Silver King area where the Canyon Creek fire burned in a RARE II area. This program *must* be stopped, as it would entail roading a RARE II area that was never in the LCNF timber base. This area was in the vetoed 1988 Montana Wilderness Bill and enjoys the most widespread public support for Wilderness designation of any area in the state. Salvage would exempt it from further consideration for Wilderness and would defy the Ninth Circuit Court's *California v Block* decision, leaving the area open to the horrors of multiple abuse.

Salvage logging and rehabilitation on FS lands constitute a severe threat to all forested wildlands in the US. Fire is being increasingly used as an excuse to punch roads into and "manage" areas that were formerly protected. There are no legitimate biological reasons for salvage logging, despite FS descriptions of fires, insect kills and blowdowns as "disasters." Though fire has always been a part of the ecology of temperate forests, it may become a more familiar part if predicted climatic change via the greenhouse effect takes hold, bringing more drought.

I have walked through and flown over burned areas of Yellowstone, and it is clear that enough forest remains that Yellowstone could burn again just as hot next year. And the next. Meanwhile, we need to oppose federal overreaction to fire and especially the use of salvage as an excuse to log. Let it BURN! The forest will return if we let it.

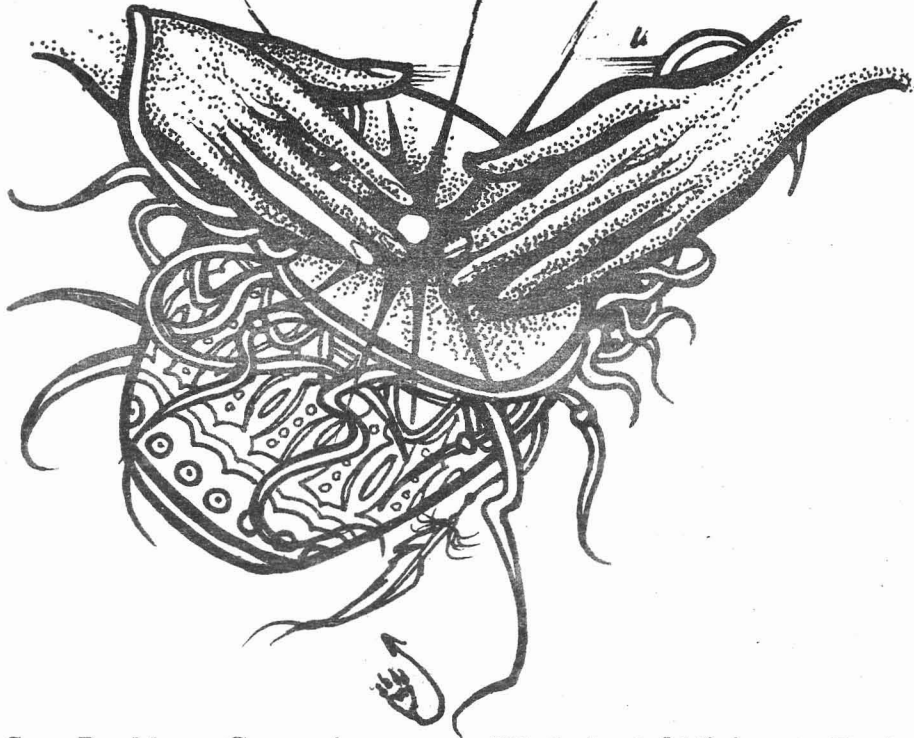
I have gone into detail on salvage and rehabilitation partly to show what a real threat these activities are, but also as a here-and-now example of the sort of hidden tumors gnawing away at Yellowstone. The 1988 fires were heralded as the end of Yellowstone, but the real and imminent end may come from the cumulative effects of hundreds of destructive, self-serving human activities. Watch future articles for specifics.

Phil Knight is a leader in the Yellowstone and Wild Rockies EF! groups, and the coordinator of the EF! Grizzly Bear Task Force.



b. von alten

TRIBAL LORE



Save Buckhorn Canyon!

Here we were, participating in the system like they say we never do... reading the damn EIS, *testifying* at the public hearing on a proposal for a 350 foot high dam in the East Bay that would flood over 1000 acres of a relatively pristine canyon. Buckhorn Canyon, bordered on two sides by regional parks, is one of the most important wildlife habitat areas left in the Bay Area, and includes valuable riparian habitat.

So as we're participating in the damn system, the lead agency proposing the damn, East Bay Municipal Utility District (East Bay MUD), up and cancels the public hearings! Scheduled one and two weeks before the election, these hearings were the only time to present the facts to the voting public. EB MUD had put on the ballot an "advisory measure" on the proposed damn, in an attempt to gain a mandate to proceed. Problem was, the "mandate" would come from a public in the middle of a drought year; a public whose water was being rationed; a public being subjected to scare tactics regarding the availability of water in the event of another drought year should this dam not be built. With MUD's propaganda presenting Buckhorn Damn as the only option (say what? conservation and reclamation?), the cancelation of hearings was dirty politics.

Earth First! doesn't like dirty politics, so we brought the public hearing process to EB MUD at their board meeting, replete with signs and testimony. Prior to invading the meeting, we held a press conference outside, graphically depicting the real issues behind the proposed dam: The dam is to facilitate new development, not alleviate the effects of drought. We had accused MUD of being in bed with developers, and there they were, the board president and general manager, under the covers with Mr. Developer, giggling and tossing money around.

We can and will stop Buckhorn Damn. There will be more public hearings and there will be direct action if the bulldozers start their engines. Contact Bay Area Earth First! for more info.

—Karen Pickett, Bay Area EF!, POB 83, Canyon, CA 94516

Elk Judged Oblivious to Tanks

The Montana Army National Guard recently concluded that tank and helicopter battle maneuvers would have "no significant impact" on 2831 acres of mountains, trout streams, and prime winter range and spring calving grounds for Elk. In its environmental assessment, the Guard stated that options other than the Bearmouth Ranch in western Montana were not considered because "no alternative site exists."

The report played down impacts of weekly war games. The Guard, for example, claimed no fish lived in the ranch's two streams (which routinely yield 3-4 pound trout). While acknowledging fish in nearby Clark Fork River, the report referred to the "long-nose bass," a nonexistent species.

Major Judith Shell, the officer responsible for the report, declined comment and referred all questions to the Guard's public relations division.

The Infernal Debate Spreads to Germany

The series of attacks upon the Earth First! movement by leftists, which began with the Alien-Nation controversy [see EF!, Samhain 87][on second thought, don't see Samhain 87], has perhaps reached its climax in a hot debate in the West German media about the Austrian animal ethologist Konrad Lorenz. Lorenz, who turned 85 on November 7, gave interviews to various West German magazines on the occasion of his anniversary. In the November issue of the environmental periodical *natur*, Professor Lorenz stated that he is to an extent sympathetic to AIDS as a means to combat human overpopulation. Lorenz is one of the few ecologists here in Europe who views overpopulation as a problem central to the environmental crisis. As early as 1970, he issued dire warnings about the population explosion. In many ways, Lorenz comes closest among European ecologists to a deeply ecological understanding of the natural world. He shares much common ground with the Earth First! and deep ecology movement in the United States.

Following his controversial statement

concerning AIDS, a series of comments appeared in the December issue of *natur*, mostly highly critical. Jutta Dittfurth, a spokeswoman of the West German Greens, launched a scathing attack, saying: "Konrad Lorenz, who is to an extent sympathetic to AIDS, has political allies in the US whom he perhaps doesn't even know. AIDS is nature's answer to overpopulation, say some representatives of the eco-group Earth First!..."

Dittfurth then went on to warn of groups like Earth First! and various environmental movements in Germany and Austria, which in her opinion promote fascism and racism under the guise of ecological concern. She stated that EF! and other "eco-fascist" groups endorse the idea of an authoritarian state whose task it would be to save nature and the white race. According to Dittfurth, the argument against overpopulation only serves as a pretext to prevent "inferior" races in the Third World from increasing in number, while white women are actually to be encouraged to breed in order to propagate the "superior" white race.

This slanderous statement by one of West Germany's leading Green spokespersons illustrates that moderate, left-wing and humanist environmental groups are attempting to discredit the Earth First! and deep ecology movement by associating deep ecologists with fascism and racism. In light of these vicious attacks, a potential coalition between EF! and a radical left-wing group like the IWW [International Workers of the World, or Wobblies] might be of strategic importance to EF!, as it would take the wind out of the sails of those hell-bent on denouncing EF!ers as raving right-wingers.

EF!ers wishing to comment on the recent attacks should write the editor of *natur*: Manfred Bissinger, Chefredakteur *natur*, Isartorplatz 5, Postfach 260 153, 8000 Muenchen 26, WEST GERMANY.

—Friedrich Hecker, West Germany

South Texas Needs Your Help to Complete Lower Rio Grande Valley National Wildlife Refuge

Congress recently allocated monies from the Land and Water Conservation Fund to acquire land to add to the Lower Rio Grande Valley National Wildlife Refuge. Conservationists in South Texas, nonetheless, will continue their efforts to enlarge the Refuge.

The Lower Rio Grande Valley is a subtropical paradise for wildlife. Nowhere else in North America are such a large number of bird species found in such a small area. Ten different plant community ecosystems survive here. Four of the five remaining wild cat species in the United States are found in this area, including the Ocelot and Jaguarundi, both Endangered Species. Fifty years ago, the Jaguar and Margay were here as well, but as their habitat succumbed to clearing, they became extinct in the US. Habitat loss has been unrelenting — 95% of the Valley has been cleared. Now state and federal agencies, with support from conservationists around the country, are trying to reverse this destructive trend and protect a "wildlife corridor" of brush and riparian habitat along the last 190 miles of the Rio Grande. This wildlife corridor encompasses the Lower Rio Grande Valley NWR. Its value is so high and its existence so threatened that the US Fish and Wildlife Service ranks it number one on their nation-wide priority list for refuge land acquisition.

Currently, land prices are low, and because of the depressed local economy there are lots of willing sellers. Five years from now will be too late. In the past 8 years only 18% of the targeted 107,000 acres has been acquired, so an accelerated acquisition program to complete the Wildlife Corridor is vital.

Please write your senators (US Senate, Washington, DC 20510) and representative (House of Representatives, DC 20515) urging them to appropriate enough money to complete the Lower Rio Grande Valley National Wildlife Refuge. For more information contact The Wildlife Corridor Task Force, POB 8124, Weslaco, TX 78596 (512-968-1719). Please send us copies of your letters so we can keep you on our mailing list and see how we're doing. You can also support the Wildlife Corridor by buying an Ocelot t-shirt (kids s, m, l and adult s, m, l, xl). To do so, send \$10 plus \$1 for shipping to Wildlife Corridor Task Force, T-shirt Division, 1008 Pat Neff, Harlin-

gen, TX 78550. Include UPS address.

—Frontera Audubon Society, POB 8124, Weslaco, TX 78596

1080 and Strychnine — Down But Not Out!

"A frenzy of howls and shrieks of pain, vomiting and retching as froth collects on tightly drawn lips...racked by painful convulsions from the most inhumane poison conceived by man," is the description of the death of a Coyote poisoned by Compound 1080 (sodium monofluoroacetate) given Francois Leydet by Montana rancher and state senator Arnold Rieder. A US Fish and Wildlife Service biologist told me dying from strychnine was even worse — but quicker.

The Environmental Protection Agency recently banned all use of these poisons.

The Environmental Protection Agency banned the use of 1080 as a predicide in 1972. Meanwhile 610,000 pounds of the stuff was being distributed yearly to kill rodents. One-five-hundredth of an ounce will kill a 150 pound human.

In 1985 the EPA reintroduced 1080 as a predicide and as a rodenticide on federal lands where it had been forbidden for over a decade.

Eighty-three percent of 1080 applications are made in ground squirrel regions of California. Because the toxicant is virtually indestructible, its primary danger lies in secondary and tertiary poisoning of the dozen or so critters that eat the furry rodent. In the 1960s, ten California Condors — one-fourth the population at that time — were found dead during 1080 squirrel poisoning. Six were examined and discovered uninjured. Another was necropsied and contained 1080. How many flew away to die in solitude is unknown.

The most recent (and scientifically advanced) studies show the rodent doesn't compete with livestock for forage. Hydrologists aver its burrows are the most important conduit for California foothill percolation. In the words of Don Duncan and Thomas Newman of the San Joaquin Experiment Range, "the squirrel is ecologically and economically important."

Nonetheless, the National and California Cattlemen's Associations and the California Department of Food and Agriculture are waging a campaign to have another 1080 ban reversed. They are writing their congresspersons and Douglas D. Camp, Director of EPA's Office of Pesticide Programs, requesting that a public hearing be held in Sacramento — the bastion of 1080 death wishers. Studies and hearings date back 25 years and the evidence has always been preponderant that the only critters who benefit from the promotion and application of the poison are those who earn quite decent livings from promoting and applying it — frequently at taxpayer expense.

A counter attack is necessary. Letters should be written not only supporting the ban but advocating the outlawing of 1080 manufacturing. History clearly demonstrates that today's ban by executive or departmental order more often than not turns into tomorrow's reversal, while laws stay on the books forever. Not only do poisons whose use is illegal but whose manufacture and export are not have a way of getting back across the border, but they also devastate the areas where they are applied. A Grizzly was killed by 1080 in Mexico.

Senators can be reached at US Senate, Washington, DC 20510; representatives at House of Representatives, DC 20515. Douglas D. Camp's title is Director, Office of Pesticide Programs, Environmental Protection Agency, Washington, DC 20460. Write and make things right!

—J.P. Bernhard

OK EF! Decorates BLM HQ

The aroma of cow manure was thick in the night air as Oklahoma Earth First! assaulted the Bureau of Land Management office in Tulsa. In an action to support anti-grazing activities in Denver and elsewhere, we presented the BLM with a truckload of manure, dumped so that entry to the building would be impossible until some brave soul waded through the several feet of bullshit. The manure propped up an enormous sign that made clear our purpose. We glued posters to windows to state our demands, as set forth in a press release of 1-3-89.

The display remained untouched until af-

continued on page 10



The happy trio snuggling up in their sidewalk bed.

photo by Karen Pickett

Tribal Lore...

continued from page 9

ter noon the next day. Radio and TV stations covered the event and spread part of our message. BLM estimates of Oklahoma land leased for grazing were progressively reduced as our protest gained attention, from 7000 acres on Friday to 2000 acres on Monday. Unfortunately the media failed to mention why we oppose livestock grazing. Still the action successfully drew the public's attention to a national problem. The fact that the local BLM staff had to wade through the same stuff we go through when working with them was a bonus.

—Lynette Setzkorn, Todd Kirk, OK EF!

Jeep Joins BLM and FS

A recent television ad run by Chrysler Corp. for its Jeep 4WD vehicles shows a Jeep splashing down the middle of a beautiful stream in a pristine forest to the tune of "Row, Row, Row Your Boat." According to Larry Carl of CME Advertising, the spot "... depicts a Jeep owner experiencing an afternoon of enjoyment driving on an authorized trail. It does not depict recklessness or destruction of the land; Jeep is continually involved in conserving the environment ... Jeep has joined forces with the Forest Service and the Bureau of Land Management to help promote a nationwide education program called Tread Lightly. Tread Lightly explains the uniform signage system placed in wilderness areas to designate legal usage. In viewing the commercial, note that there is an 'approved' sign of the National Forest Service designating the stream as an offroad vehicle path."

Mr. Carl assured me that the ad was blessed by the Freddies and the BLM before it appeared. If this does not reassure you, contact: Larry Carl, CME Advertising, 913-339-6444; or write CME Advertising, 27777 Franklin Rd, Suite 1000, Southfield, MI 48034, Attn: Jim Caponigro; or Chrysler Motor Corp., POB 1718, Detroit, MI 48288.

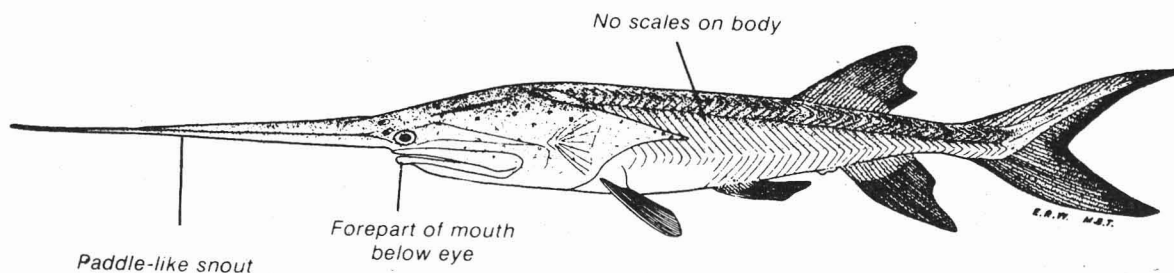
—Lynette Setzkorn, Oklahoma EF!

Attack of the Ecoterrorist Pie Brigade (and others)

If the Western Forestry and Conservation Association (WFCA) thought they could hold their annual gathering in Seattle and not be visited by Earth First!, then their heads are infected with dwarf mistletoe. To our credit, we had already planned to protest for old growth on December 5, even before we knew about this meeting of the oldest, most prestigious deforestation conspiracy in our hemisphere. When field reconnaissance found no active timber sales, it seemed natural to crash their party.

On the 4th, we prepped more than 20 people, many of them new friends met at the recent Decade of the Rainforest Conference, for nonviolent confrontation and arrest. This was, as always, tedious, but undoubtedly we'll do it again before long. What fun is living in an emerging police state if you don't know how to get arrested in good form?

Our plans for the protest were both nebulous and multifaceted. There would be several small direct actions, followed by leafleting outside the Seattle Sheraton, site of the conference. This approach offered flexibility in execution (in the procedural sense of the word; we didn't kill anyone).



As background, the WFCA was formed 79 years ago to create a forum for technical discussion of fire and insect control, reforestation, and other concepts fitting the old use of the word 'conservation.' They still meet annually and exchange ideas on how to teach wild forests servility to humans. Last year's congregation passed four resolutions: 1) against reform on the Tongass National Forest; 2) in favor of herbicide spraying on National Forests; 3) advocating reform of the National Forest Management Act to ease regulations; 4) encouraging the federal government to stop funding "environmental terrorists" (while we think that refers to us, we still wonder what the hell they mean — perhaps the \$57 United Way check?).

The Relentless Fanatic, posing as a photographer, sneaked in early to get a front row seat. He brought with him a pie, flavored "green eco-meringue." At 10AM, several others of us entered the hall and joined some 300 foresters. While our informal attire and rolled up banners stuck out, our stolen official conference name tags earned us entry. Soon, one EF!er walked to the front of the room and unfurled his statement, "GO CLEARCUT IN HELL." He was joined behind the lectern, then occupied by FS deputy chief Boring Drone, by two others holding a "SAVE THE OLD GROWTH" banner, while "WFCA: TIMBER TERRORISTS" was unrolled in the back of the room.

Then, the most obnoxious one of us stood up and began yelling, "You are all environmental terrorists. Clearcutting is terrorism," and other relevant opprobrium. Our mistake was that, instead of taking over the lectern and awaiting arrest and bodily removal, we simply walked out. Needless to say, they were loath to allow us to return.

As the next speaker, WA Public Lands Commissioner Brian Boyle, spouted forked tongue rhetoric, a green eco-meringue pie was hurled his way, turning graceful pirouettes as it whistled by his ear. Before the umpire could call ball one, Jakubal was out the door, laughing insanely despite his bad aim. (We do not recommend this tactic; it didn't go over well.)

Soon, the executive director approached us to negotiate. He offered to allow us 30 minutes to address the gathering on Wednesday if we'd limit our disruptions to sidewalk leafleting until then. We accepted his offer, contingent on his convincing his trustees (which he failed to do). We then proceeded to the headquarters of the Mt. Baker-Snoqualmie National Forest. Since we were unsuccessful there in our bid to take over the agency and redirect its policies, I'll end this part of the story here.

FROM ONE TERRORIST TO ANOTHER

Our guerrilla assaults on the Western Forestry and Conservation Association conference had earned us an invitation to formally address the group. However, when the director brought the proposal before his board of 40 trustees, all men, all foresters, it seems they were rather miffed about the attempted pieing of one of their speakers. They offered instead

a summit meeting between us and them in the Sheraton Hotel Ballroom. At 6 PM, we four entered the room and joined 30 men at their round table.

The somewhat strained meeting began with introductions: We were Jean Mischel, Greg Mills, Beth Funsch, and myself; they included state and provincial agency foresters, former National Forest supervisors (including Wenatchee's Don Smith), and chief foresters from Weyerhaeuser, MacMillan Bloedel, Fletcher Challenge, and others. Then a stately gentleman, acquaintance to Gifford Pinchot and Colonial Greeley, delivered an account of his organization's proud history. In keeping with the tone of our formal meeting, he began, "Mr. President, ladies and gentlemen ..." I wondered when was the last time he wore calk boots.

What most struck me was the history of American forestry recounted first person in his tale. He was proud, and rightfully so, to tell how the WFCA had formed in reaction to the cut-and-run operators so prevalent even less than a century ago. He revealed the past evolution of modern forestry — the emergence of replanting, fire management, and public relations.

He meant no disrespect to Earth First!ers as he explained the development of industrial forestry. To his breed — and make no mistake, they're still running the show — this was the natural order of progress, and everything is just fine. He could no more see the world in our terms than we in his.

Next I was asked to relate the history and ideology of Earth First! If there is such a thing as benign malevolence, that is what I saw as I scanned the "men's club" to which I was speaking. And while I'm not generally an optimist, I think I sensed among them, at least the younger ones (still twice my age), an understanding. At least they tried to comprehend when I spoke of the rights of species, and the biological failings of tree farms.

Much of the meeting was spent in heated debate over the extent of our crises and the appropriateness of various tactics for changing the course. The oldest ones were the most defensive. One even defiantly proclaimed how many trees he'd planted in his life, as if this absolved him from the guilt of how many he'd cut. But I think it had really shaken them being called environmental terrorists earlier that day. I think they were further shaken to see that their accusers were articulate, rational, and respectful people.

While we didn't subvert their paradigm, we may have put it on notice. And while we didn't convince them to allow our perspective in their general session this year, we did at least get two women into the their trustees meeting, and that may be a first.

—Mitch Freedman, Washington EF!

Write for Utah Wilderness

The Utah Wilderness Coalition and Representative Wayne Owens (D-UT) have proposed protection as Wilderness for 5.1 million acres of Bureau of Land Management roadless lands in Utah. UWC considers that passage of legislation protecting this amount would be a major victory, given that Utahns tend toward extreme conservatism and their governor, Norm Bangerter, is very pro-development. Earth First!, in the Beltane 86 issue of the Journal, released its 16 million acre Utah Wilderness Proposal. The BLM, in its draft proposal, recommended only 1.9 million acres, of the 22 million acres it manages in Utah, as Wilderness. The BLM will release its final wilderness proposal in March, and it is not expected to differ much from the draft.

Letters are needed: 1) Write to Representative Owens thanking him for supporting Utah wilderness but asking him to strengthen his proposal in accordance with Earth First!'s 16 million acre Utah Wilderness Proposal. 2) Write any senators and representatives, asking them also to support the EF! proposal. 3) Write the BLM in support of the EF! proposal.

Senators: US Senate, Washington, DC

20510

Representatives: House of Representatives, Washington, DC 20515.

BLM District Office, 2370 South 2300 West, SLC, UT 84199.

Up Shit Creek Without a Paddlefish

Fifty million years before the first dinosaurs appeared, a meek, odd-looking fish with a paddle-like snout browsed for plankton in the inland waterways of our continent. This primitive fish adapted to changing climates and water conditions and lived on as the dinosaurs died off and as giant ferns were slowly pressed into coal. ... Now, after a few thousand years with humans, this creature that has lived for eons may be leaving forever. The Paddlefish (*Polyodon spathula*) lives in sluggish pools, bayous and backwaters of large, slow moving streams. It dislikes current so much, unlike other fishes, that it migrates only during low water stages. Man's damming of rivers has blocked off the Paddlefish's upstream spawning areas for decades. Now there may be almost no breeding populations left in the wild.

Earth First! Scioto River Group, in joint effort with the EF! Biodiversity Project, has begun a research and action campaign to find and protect Paddlefish populations in Ohio and elsewhere. We're tired of hearing that the Midwest is befouled beyond hope! We demand proper and viable aquatic habitat for the Paddlefish, thereby improving conditions for other wildlife as well.

—Steve Moore, EF! Scioto River Group, POB 91, Greencamp, OH 43322

Umetco Radwaste Dump Update

Despite a huge public outcry, the Colorado Department of Health and a lame duck board of Montrose County good-old-boys approved a state-initiated proposal to site a low-level radioactive waste dump for Denver radium waste on a bench above the San Miguel River in the Colorado River Basin. Worried about possible spills and the negative impacts on Utah's tourist economy, Utah officials were considering a lawsuit against the state and county decisions.

Also bringing in the lawyers was the Western Colorado Congress, the local citizen's group leading the charge against the proposal by Umetco Minerals Corp. (read Union-Carbide, of Bhopal fame). Big business Democrat Roy Romer supports the proposal.

While the approvals ignored the testimony of several hundred citizens opposed to the project in two public hearings, and a petition bearing 5000 names gathered in ultra-conservative Montrose County itself, all is not lost. The project has several hurdles to overcome, including a land trade to obtain the site for the project from the BLM. Writing letters to that rapacious agency requesting a full-blown environmental impact statement (they only want to do an environmental assessment, which would not mention how the traded land would be used) is the most effective action for Earth First!ers short of dumping radwaste on the desks of Umetco officials at their headquarters in Grand Junction.

Write District Manager, BLM, 2465 S Townsend, Montrose, CO 81401 and insist on an EIS before public land is traded with the state of Colorado at Spring Creek Mesa in Montrose County for Umetco's proposed radium waste dump site.

—Navajo Sam

BC Wolf Update

The Gray Wolves in British Columbia received a grand Winter Solstice present with the announcement of the cancellation of this winter's aerial gunning of wolves in the Muskwa region in the northern part of that province. The Vancouver Sun article on the decision stated that the Ministry of Environment had conducted a technical review of wolf

photo by Hal Carlstad



Billboard in Berkeley, improved just before the Buckhorn vote and still standing.

and big game populations in the region. Ralph Archibald, Ministry fur carnivore coordinator, was quoted as saying, "Right now we have enough big game animals to support a viable hunting industry for both resident and non-resident hunters."

The 13 wolf activists who talked with Archibald and his boss, wildlife branch director Jim Walker, felt that their warnings of intervention, and following day protests, had something to do with the decision. They also felt that all who have joined in the letter writing campaign and boycott of BC tourism and products have been influential. When asked whether the demonstrations in the US and publicity surrounding last winter's court victory (which stopped last winter's Muskwa aerial killing) affected the Ministry's decision, Archibald said he could "only guess that when politicians consider an issue like this, they don't just consider the technical aspects." I have since received a yet unconfirmed report that the Ministry's decision was due to still existing technical obstacles stemming from last winter's legal injunction.

Whatever the reasons, pro-wolf actions, in which EF!ers have played a significant role, have helped. Not only is the Muskwa program dead for the second winter in a row, but the various BC government schemes to "control" wolves are getting much public attention.

Yet there is much more to do. The Ministry is still issuing poison baiting permits, which allow up to 395 baits to be set per year. It is continuing its trapping of wolves, aiming, on Vancouver Island, to diminish the wolf population density to 1 per 150 square kilometers. Wildlife control officers are killing "problem wildlife" — those wolves deemed a "threat" to humans and their property. Wolves are still a big game animal open to hunting throughout most of the province.

That is why, on January 9, demonstrations were held in five locations across the US. The message was simple: *We are pleased with the Ministry's decision to cancel the aerial kill, but we vow to continue our campaign until all BC's wolf killing programs are stopped.* EF!ers gathered at BC tourism offices, Canadian consulates, and airports in Seattle, San Francisco, Portland, Minneapolis, and Boston. They made it clear to the Ministry of Tourism, the Canadian federal government, and airlines that do business in BC that we are still outraged at the government's overall attitude toward wolves.

WHAT YOU CAN DO: The wolf issues across the continent have been covered in the pages of this journal for the past year. Read back issues and continue to write to wildlife officials, educate the public, and support protests and boycotts. Contact the Wolf Action Network (address in Directory) for more details.

—Tom Skeele, WAN coordinator

Greens Howl for BC Wolves

Responding to a request from Trudy Frisk, International Liaison, Green Party of British Columbia, Green Parties around the world stated to BC and Canadian governments their adamant opposition to trapping and poisoning of BC wolves. Herculano Pombo of Os Verdes, Portugal, telegraphed, "... Protected Iberian wolves ask for protection for their brothers in BC."

The Earth Green Federation, Japan, wrote to BC and Federal governments: "... We have heard that your Ministry of Environment is continuing to sponsor a multi-offensive war aimed at significantly reducing wolf population throughout the province. ... We are going to publicize such barbarity of your country throughout Japan and urge Japanese public to boycott British Columbia's tourism and products until killing is stopped for good. ... (Kiyohsi, Osada, International Coordinator, for Ryu Ohta, President, Earth Green Federation)

After these messages were sent, Robert Lyle of Grupo Lobo in Portugal asked that a motion be introduced in the European Parliament calling on member nations to 1) ask the government of BC to halt the destruction of wolves on its territory; 2) ask the individual Member States to organize campaigns to prevent travel agencies in the Community from continuing their involvement in the wolf hunts; 3) ask the hunting associations in the Community to hold a campaign among their members to bring wolf hunting in BC to a complete stop. Grupo Lobo is awaiting the

Parliament's reply.

Most BC tourists are from West Germany, Japan and the US. Last year's demonstrations in the US played a significant role in stopping the Muskwa/Kechika hunt in 1988, and the possibility of escalated demonstrations elicited a promise that no aerial hunting will be done for four years. Continued US pressure against all BC wolf killing combined with adverse publicity in Japan and Europe can end this national disgrace!

Free Trade Denounced

Giving comments such as "I don't give a damn about business in Bellingham, free trade is bad for North American ecosystems," Washington Earth First! baffled Canadian media November 11, 1988, with an all American protest against the United States/Canada free trade agreement. Coupled with a joint American/Canadian Green demonstration at the Peace Arch on October 28 during which protesters symbolically traded Canadian resources for US waste, the action was a clear statement that to be against free trade is to be for a sustainable North America.

Against all reason, Canadians reelected the government of Prime Minister Brian Mulroney, an instigator of the free trade agreement, insuring job losses in Canadian industry relocating south of the border. Meanwhile, with the media devoting attention to the greenhouse effect and acid rain, nuclear power is being touted in the US as an alternative to coal and oil, which both emit carbon dioxide and sulfur dioxide. Canada has abundant uranium and tritium. Ontario Hydro is seeking markets for its tritium.

Montana EF!er Steve Leash suggests using the environmental impact statement process, mandated for federal projects in the US, to delay any joint projects that will adversely affect the environment of North America. (In Canada an EIS is not required!) Please send suggestions on this to T. Frisk, 6009 Dallas Dr, Kamloops, BC, Canada V2C 5Z9.

Oil Spill Hits BC

Oil from the spill off Washington's coast hit Vancouver Island on December 31 and has fouled some of BC's most scenic wild beaches, killing hundreds of birds and mammals and threatening Sea Otter colonies. Although Canadian authorities were advised of the spill on December 22 by the Washington State Department of Ecology, nothing was done until January 3. Finally, volunteers from all over BC arrived to attempt to clean up the contaminated 150 kilometers of beaches.

Meanwhile government departments analyzed the spills to determine who was responsible and who would pay for clean up. Only Parks Canada acted without waiting for other government departments to respond. Bruce Strachan, BC's Minister of Environment originally said, "It's not my problem." Only outraged calls for his resignation promoted Strachan to go look at the damage.

—Trudy Frisk, Kamloops, BC

Canada Persecutes Sea Creatures

The Animals' Agenda (POB 6809, Syracuse, NY 13217) has been providing much valuable coverage on wildlife issues lately, in addition to their attention to domestic and captive animals. The following two items are from their December issue:

The Vancouver Aquarium has killed seven narwhals in a 20-year effort to be the first in Canada to display these scarce marine mammals. Now they're after more. Protest to Parks Commissioners, 2099 Beach Ave, Vancouver, BC V6G 1Z4, Canada. Send a copy of the letter to Mayor Campbell and the City Council, 453 W 12th Ave, Vancouver, BC V5Y 1Y4, Canada.

In Atlantic Canada last spring, 70,000 seal pups were massacred, despite a Canadian government claim that the hunt has ended. After a lapse, the hunt is actually expanding to provide cheap food for fox ranchers and supply seal penises to Oriental aphrodisiac vendors. Protest to the Minister of Fisheries and Oceans, 200 Kent St, Ottawa, Ont. K1A 0E6, Canada.

MO Waters & Forests Suffer Over the Holidays

On the day before Thanksgiving a barge filled with 1400 tons of sulfuric acid by the

Doe Run Mining Company of Herculaneum, Missouri, sank in the Mississippi River. Doe Run operates the nation's largest lead smelter in that town. Subsequently 220,000 gallons of the acid were released in the Mississippi.

In early December the Eastern Region of the Forest Service issued two leases to Doe Run totaling 3743 acres in Mark Twain National Forest near Winona, Missouri. The leases will allow more exploration and drilling, but will deny any mining development pending further environmental review and public involvement. Beside the fragile karst topography and beauty of the area, at least three species on the Endangered Species list are thought to inhabit the region: the Bald Eagle, Gray Bat, and Indiana Bat. Some say the Eastern Cougar still survives here too.

On the day before Christmas a Shell Oil pipeline ruptured near the Gasconade River by Vienna, MO, spilling 840,000 gallons of crude oil into the Gasconade, which flows into the Missouri River and thus reaches the Mississippi above St. Louis. It is being described as one of the worst inland oil spills in United States history. In early 1989 the spill forced the St. Louis Anheuser-Busch Brewery to shut down for almost a week after the taste and smell of oil was detected. On January 6, the St. Louis Post-Dispatch reported that landowners near the spill have spotted dead fish in the Gasconade and a hunter brought in the body of an oil soaked Beaver found in a trap by the river. The severe consequences of this disaster will not be understood until all aspects of the spill are studied.

—Orin Langelle, Big River EF!

Oil Spills Foul Alaskan Waters

Within two weeks in January, two major oil spills occurred at the Alyeska Pipeline Company's Valdez Terminal Facility in Valdez, Alaska, at the end of the Trans-Alaska Pipeline. Both released thousands of gallons of North Slope crude oil into the rich habitat of Prince William Sound.

The Alaska Department of Environmental Conservation needs increased funding to adequately monitor this facility and prevent further environmental degradation. Please write or call the following to express your concern over oil development in this delicate ecosystem:

Governor Steve Cowper, Suite 758, 3601 C St, Juneau, AK 99811; 907-561-4228

Alaska Dept of Environmental Conservation, Suite 1350, 3601 C St, Juneau 99811; 563-6529

Environmental Protection Agency, Alaska Operations Office, 701 C St, Juneau 99811; 271-5083

Representative Bette Cato, 3111 C St, Juneau 99811; 561-7625

Alyeska Pipeline Service Company, Environmental Protection Office, 1835 S Bragaw, Anchorage, AK 99512; 907-265-8055

Virginia News

Earth First! and Virginians for Wilderness under the leadership of activist Cricket Hammond are organizing citizens in opposition to the policies of the George Washington National Forest (one of the most hidebound in the nation!). Cricket, a retired nurse, joins Brenda Vest [who contributes articles to the Journal on the fight to save Pond Ridge] as one of our most effective Freddie-foilers. She's an old hand at stopping clearcutting timber sales, and has also been instrumental in stopping ATV trails pushed by the Freddies and crazy bikers. On January 14, she organized a public meeting on forest management attended by more than 100 hunters, fishers and nature lovers, as well as the local Freddies. Notice was served to the GWNF that henceforth only ecologically-based management would do. EF! and Virginians for Wilderness received excellent TV coverage.

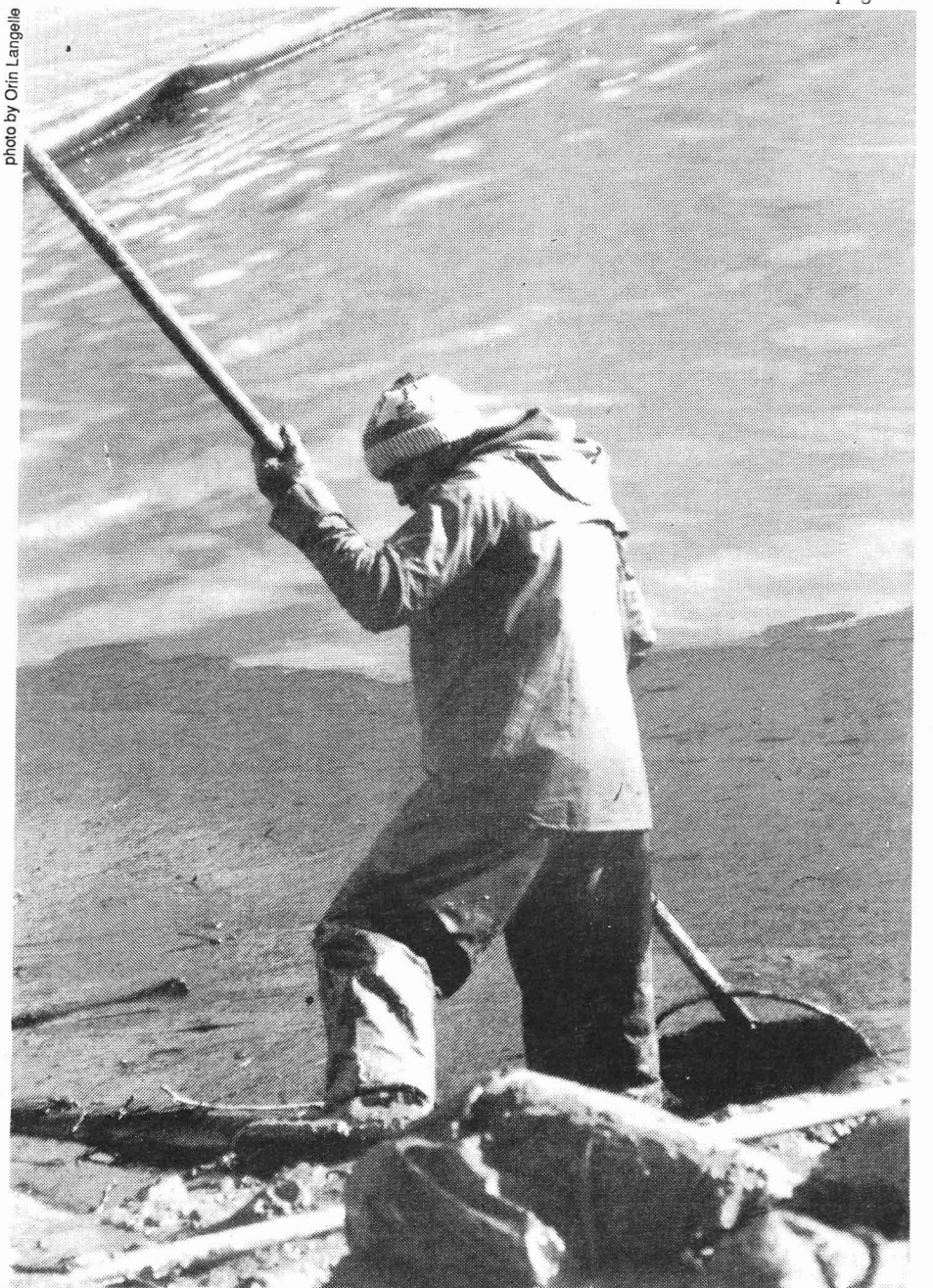
Cricket has the ear of Representative Jim Olin, a power on a House Agricultural Committee, and could influence possible reform of the Forest Service as a whole.

—R.F. Mueller, EF! Virginia contact

Earth Kinship Trailguide Available

To help overcome our modern unbalanced relationship with Nature within and without, Dr. Mike Cohen, director emeritus of the National Audubon Society Expedition Institute, and author of Our Classroom Is Wild America, Prejudice Against Nature and How Nature Works: Regenerating Kinship With Planet Earth (see EF! Books), has designed a radical way of intimately knowing the natural world and is, at cost, making his 25 page guide available for use by EF! outdoor persons, naturalists, and environmental educators.

continued on page 12



A worker from an environmental clean-up crew tries to contain some of the 840,000 gallons of oil that spilled into the Gasconade, Missouri, & Mississippi Rivers near Vienna, MO.

Tribal Lore...

continued from page 11

Based on *How Nature Works*, the Earth Kinship Trailguide reconnects people to Nature by showing that rational thinking and language are but 2 of 43 different means by which we can know the workings of the global life community. The natural world wisely governs itself through all kinds of sensory communications, and the Trailguide activates over 30 of these regulatory callings that still exist in us.

The Trailguide's procedure consists of participants stopping in natural areas that attract them, and then doing suggested readings, guided imageries, exercises, critical analyses, projections, role plays, writings, and meditations. The guide may be used on established nature trails.

The Trailguide connects people with the signals through which natural systems organize, perpetuate and regenerate themselves. It lets us know natural life as natural life knows itself, and this rejuvenates some of Nature's peace within our frantic lives. The guide's activities lead to recognizing the following:

*Experience is the best teacher because whole experiences consist of many ways of knowing.

*Our inherited nature-connecting sensation receptors become dormant as our upbringing programs us to disconnect from Nature and addicts us to using our intellectual abilities alone. Our excessively indoor childhoods demean or bury the vital regulatory signals emitted into our consciousness by the ancient, sensate portion of our mind.

*The natural world regulates itself through sensitivities and tensions like color, temperature, form, smell, taste, sound, space, fun, direction, community, hormones, beauty and trust. Nature does not utilize words and numbers, for it is illiterate.

*We are part of the global life community which was born over four billion years ago. This ancient community is based on affinities between relatively simple minerals and microorganisms that invented all of life's essential chemical systems and genetic properties, as well as reproduction, fermentation, photosynthesis, respiration, nitrogen fixation, and community formation.

*Each of us is a recombination of multibillion year old microbial communities that, through rudimentary forms of awareness and interaction, continue to organize the planet.

*Our personal bodies consist of 10 quadrillion animal cells and another 100 quadrillion bacterial cells, and when we die, microorganisms recycle us back into our other body, the global life community. In essence, we and the natural world are one; what happens to it, happens to us and vice versa.

Those interested in utilizing or further developing the Trailguide, please write: Mike Cohen, TRAILGUIDE, National Audubon Society, Sharon, CT 06069 (203-364-0522) and enclose a self-addressed stamped envelope. Dr. Cohen is available upon request for lectures, workshops and outings that explore Earth kinship.

Shell Canada Destroys Alpine Wilderness

Prairie Bluff Mountain, on the east edge of Alberta's Rocky Mountains, is being ravaged by one of the world's largest multinational companies. Shell Canada Limited has gouged a road into the fragile alpine environment, and now has two immense rigs there drilling for gas.

Prairie Bluff Mountain is only 24 miles from Glacier National Park, Montana, and only 10 miles from Glacier's sister park in Canada, Waterton Lakes National Park. Together the two parks are known as the International Peace Park. Prairie Bluff Mountain is in the Waterton Biosphere Reserve, one of only four such Biosphere Reserves in Canada. Shell has already drilled over 60 wells in this area, all with government approval. At the hearing regarding whether the permits to drill the Prairie Bluff wells ought to be granted, citizens interested in wilderness were chastised by Shell and the government hearing board (a quasi-judicial board known as the Energy Resources Conservation Board) for being anti-development. This is in a province where over 50,000 wells have been drilled in the last 10 years, with the rate now up to 6000 wells a year, and *not a single one has been denied for environmental reasons.*

The two wells and the access road pierce the Northern Continental Divide Ecosystem, the bulk of which is in Montana. In this ecosystem lives the lower 48's largest Grizzly Bear population. Additionally, Shell's drilling rigs on Prairie Bluff are in Bighorn Sheep summer, fall, and winter range. The sheep are attempting to recover from a stress-related die-off in 1982, during which 70% of the population died. Many of the Bighorn females present in the population lamb (or *did* lamb) in the immediate vicinity of Shell's site. Also present in the area are Elk, Mule Deer, Mountain Goat, Black Bear, and Wolverine, the latter considered endangered in Alberta even though the province has no endangered species legislation.

This is the legacy the oil and gas industry wants to export to Montana. BEWARE!

WHAT YOU CAN DO: To express an opinion on the actions of Shell Canada and the government, write to the Premier of the Province and send copies to the others listed:

Premier Don Getty, 307 Legislature Bldg, Edmonton, Alberta, Canada T5K 2B6
Minister of the Environment, Room 533, Confederation Bldg, Ottawa, Ontario, Canada K1A 0A6

Ray Martin, Leader of the Opposition, 204 Legislature Bldg, Edmonton, Alberta, Canada T5K 2B6

Editor, Calgary Herald, Box 2400, Stn M, Calgary, Alberta, Canada T2P 0W8
Also, boycott Shell and tell them why you are doing so: J.M. Macleod, President, Shell Canada Limited, Box 100, Stn M, Calgary, Alberta, Canada T2P 2H5.

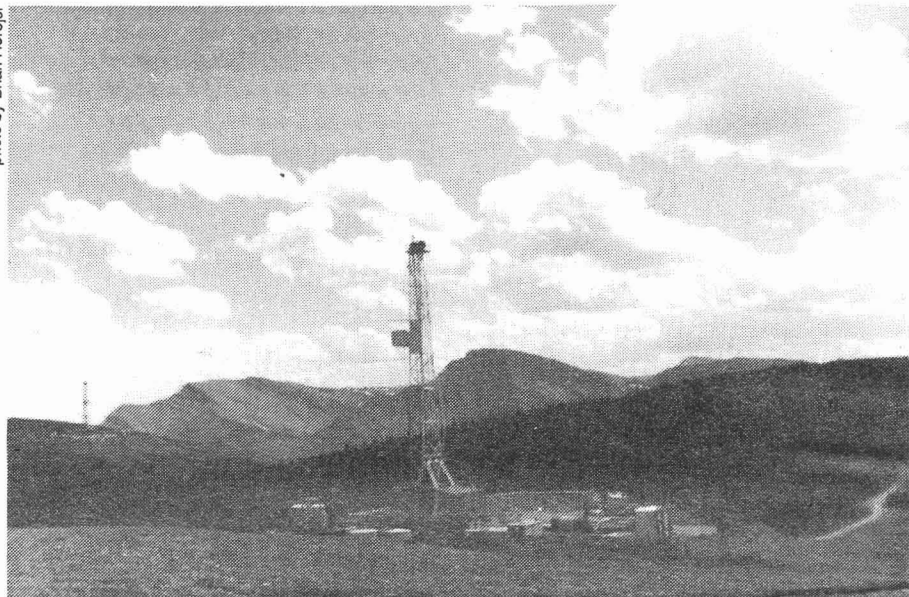
—Brian Horejsi, Alberta

photo by Brian Horejsi



Bighorn Sheep summer, fall and winter range. The road was built right along a former sheep trail. The valley was also prime Grizzly Bear habitat. Most of the road was cut through bed rock. It can *never* be reclaimed.

photo by Brian Horejsi



Bulldozers and drill rigs invade the fragile alpine environment of Prairie Bluff. Shortly after these photos were taken, Shell obtained a court injunction to prevent public access to the area during road and lease construction.

Letters...

continued from page 4

are being co-opted instead. And many don't even know this. We think we can use their power against them. And to a limited extent, we can. Yet, more important is using OUR OWN POWER, which comes from our oneness with Earth. Thomas Berry says we must listen to the Earth. Trees, mountains, waters, plants, animals, rocks, air... are all wise, all conscious, all participants in this work. We must begin the hard and often dangerous work of taking back our power and using it for Earth. Those of us beginning to do this must take on the additional responsibility of communicating with those who aren't there yet.

In a recent conversation with Richard Grossman, he asked the question "Do we want to be respected by the polluters or by the polluted?" Many environmental organizations feel they can have it both ways. Ultimately, this is not possible.

In the summer issue of *Gaean Voices* (the newsletter of the Institute for Gaean Economics which I direct) I wrote: "Those of us aware of the real connection between ecology and economy must create ways of making that connection at once clear and practical."

Dan Hemenway, an advisor to IGE and permaculture instructor, has developed a "Code of Environmental Ethics" that "are to be used, in addition to traditional economic criteria to reinforce and strengthen our new models of alternative financial institutions and systems such as revolving loan funds, barter systems and the like." The Code:

*Economic decisions must be aimed at enhancing the self-reliance of the home bioregion;

*Non-renewable resources must not be exported from the home bioregion;

*Reliance on resources of the bioregion should be a paramount goal;

*Actions which improve the health of the Earth, including her people, shall be encour-

aged. Enrichment of the future is seen as the highest good.

If we encourage economic alternatives in our areas to put such a code into their by-laws and guidelines for projects, it would make a big difference. This would mean, for example, that housing projects for low and moderate income people (which many economic alternative institutions support) would be constructed in ways that do not harm Earth. It would mean more cluster housing, energy efficient housing, alternative septic and water systems, etc.

One more thing and then I'll close. I'd like the help of EF!ers in gathering information for my next book project, *People's Action Guide to the Tropical Forests*. This book will focus on the economic, particularly corporate, connections to tropical forest destruction. It will look at the institutions currently working on the tropical forest issue, from the largest to the grassroots. Any information on grassroots projects (either in the US/Canada or in the tropics themselves), little insidious tidbits about corporations, and any other info you feel would help would be appreciated. We have qualified researchers donating time, so I don't need clippings from mainstream press or even from the more mainstream alternative press. It's the obscure info I seek. If you aren't sure, send it anyway, or write or call. Your help will be acknowledged in the book.

In closing I want to thank you all for the work you do. As time goes on, we are all going to have to take the risks so many EF!ers have already taken.

—Susan Meeker-Lowry, Catalyst, 64 Main St, 2nd Floor, Montpelier, VT 05602; 802-223-7943

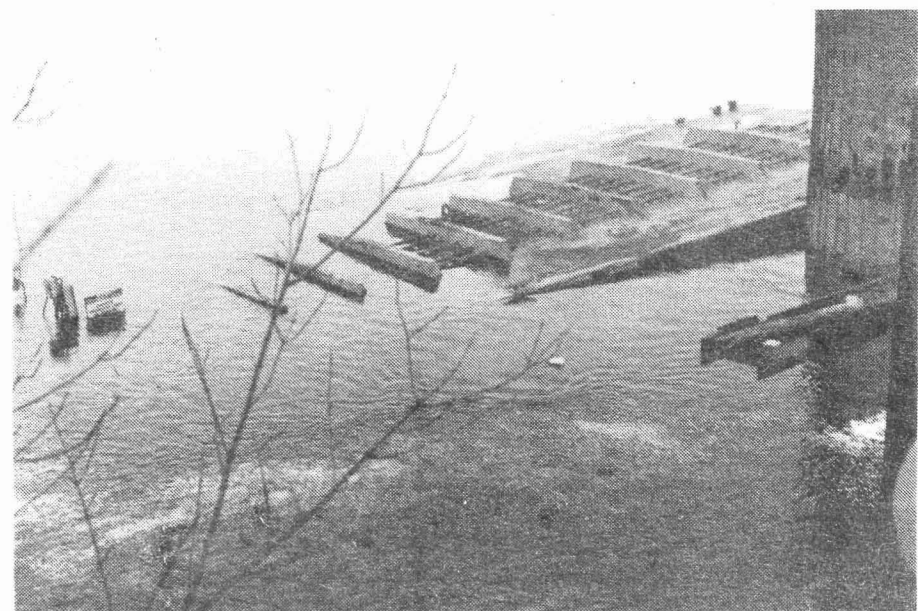
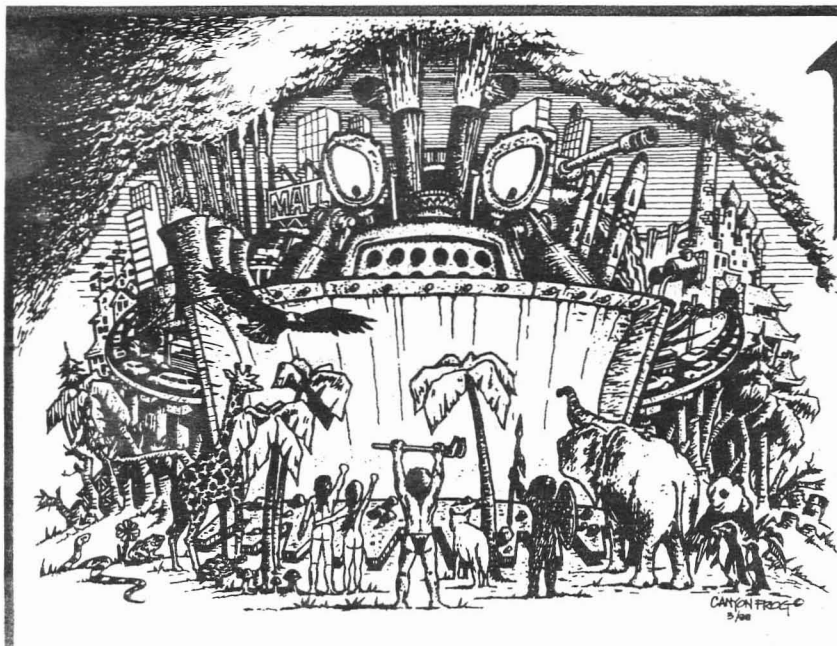


photo by Olin Langelle

220,000 gallons of sulphuric acid were released into the Mississippi River when this barge sank after picking up the hazardous cargo from the Doe Run Mining Company in Herculaneum, MO (note the sulfuric acid bubbles in the foreground). Doe Run was just issued leases to explore and drill in Mark Twain National Forest.

International News



Australians Protest for Penan

Six weeks in the Land Down Under and today is the second time I've found myself in the thick of environmental actions (see accompanying warships action article). It's October 31, day of worldwide protests in support of the Penan tribe of Malaysia and against the logging of their rainforest in Sarawak.

Above the rush hour traffic of the city of Sydney, population 3 million, I see John Seed, Dean Jeffries (best known for his paint bombing of US nuclear-armed warships from his "Ultra-lite" motorized hang glider), and two Sydney Rainforest Action Group members unfurling banners from the roof of a ten story apartment building: "Save the Penan Tribe," "Earth First!" and "Boycott Rainforest Timbers." The four protesters barricade themselves on the roof.

The media arrive as the cops tear down the latter banner. Finally the four are brought down from the roof and released. The building commissioner decides not to press charges. This building was the site of a similar action when the Daintree rainforest, 2000 miles to the north, was threatened.

As the day proceeds, more actions evolve. Sydney RAG members leaflet workers entering the office of a construction company that is vying to build a railroad into the heart of Sarawak. Several stop-work meetings with construction workers are arranged on sites where meranti lumber is being used. Meranti, or pacific maple as it is also known, is one of the major timbers being imported from Sarawak.

At 1 PM we hold a rally outside the Japanese consulate. Japan is responsible for the import of 80% of Sarawak's rainforest timber, turning much of it into TV and stereo cabinets and packing crates. It then finds its way into the homes of American consumers.

We hand out flyers translated into Japanese to the Japanese tourists. Street theatre attracts a crowd of 150. Two members of Sydney RAG go up to the Japanese consulate in an attempt to speak with a representative, and get rebuffed. We decide to storm the consulate. About 80 people ride elevators to the 34th floor and pack into the visa application room. Of course, the consul is out to lunch.

The police threaten to arrest us if we don't leave. Stalling tactics ensue. We're suddenly all here to fill out visa applications. A few people are having a hard time getting their pens to work. John is on the couch and typing away on his laptop.

"What are you doing here?" a cop asks him.

"I'm writing a story about what's happening here."

"If you do not leave you will be placed under arrest. You can quote me on that."

"All right, I will" tap, tap, tap.

People reluctantly file out. The elevators are the only method of leaving the building, as the stairwells are rigged with an automatic fire alarm. People in the first group going down jam the elevators by pushing buttons for all 50 floors.

Police patience wears thin. Three people remain in the room — John and two women. They are arrested. At the cop shop, they are released on their own recognizance, and John does a live radio interview from the lobby pay phone.

The next day the news of the sit-in hits Japanese national radio, complementing the

protests in Tokyo and Kyoto. It was a successful day in Sydney and reports come in from 30 other Ozzie towns of similar actions.

For information on how to get involved with the campaign to halt the import of Malaysian rainforest timbers, contact the Rainforest Action Network, 300 Broadway Suite 28, San Francisco, CA 94133.

EPILOGUE: Due to the attention environmental groups worldwide have called to the plight of the Malaysian rainforests, the October 31 trial date of 43 Penan, Kayan and Kelabit tribespeople arrested for blockading logging operations and burning bridges was moved to April 24. On this date will be another world wide protest. This gives us time to prepare for another great day of agitating. Contact RAN (Rainforest Action Network) to find the nearest Rainforest Action Group, or for details on how to form your own.

—Stella Reed

Greenies Confront Warships

On October 12, before our roadshow at Melbourne University, Stella and I headed to Port Melbourne for an action to try to prevent the docking of nuclear-armed warships from the United States, United Kingdom, and France, here to join Australia's bicentenary celebrations. We watched from shore with 70 other protesters as warships moved toward the jetties. Fifty people out in the water with all manner of boats, surfboards, and swimgear tried to block the nuclear-armed craft.

Earth First!ers Rob Burrows and Ian Cohen swam through the police cordons and grabbed the bows of the *USS Ingersoll*, a destroyer carrying two Tomahawk cruise missiles, and the French warship *Colbert*. TV footage that night showed police zipping around in inflatables beating the fingers of the two with rods to dislodge them and then arresting them. Two Greenpeace inflatables played cat and mouse with the police fleet, tempting them into a chase away from the piers under

which surfboarders waited for an opportunity to dash toward the warships.

On shore, police on horses kept the gates clear. As sailors of different nations drove out, subversive bumperstickers were slapped on their cars, as well as on the horses' rumps.

Ian had followed the warships down, taking part in actions in Brisbane and Sydney. He and Rob had both also taken part in the actions against the *Rika*, a ship carrying rainforest timbers from Sarawak, which traveled to Brisbane and then Sydney in the shadow of the warship fleet.

Shortly after our roadshow took us west to Adelaide, 1000 people protested in Melbourne alongside the *Ingersoll*. Among protesters were 12 wearing caps of fluorescent red and yellow, which colors are the international symbol for lifesavers. The 12 swam toward the *Ingersoll*, planning to raise a rainbow flag up the anchor chain, to impound the ship for bringing nuclear weapons into the Port of Melbourne. Nuclear weapons are illegal in Australia, violating 12 treaties of international law. One of the group made it to the ship and was raising the flag when the police dived into the water and arrested him. That day, 21 were arrested (one for discharging a "missile" — an apple that hit a French sailor in the head!). Meanwhile, the Seamen's Union refused to tow the British nuclear-armed aircraft carrier *Ark Royal* to its berth, so the ship had to cancel its Melbourne visit. This got front page coverage in the UK as well as Oz.

—John Seed, Australia EF! contact

Norway Challenges Israel on Nukes

In 1959 Israel bought 20 metric tons of heavy water (deuterium oxide) from Norway for its Dimona nuclear reactor, then under construction in the Negev Desert. In 1963 Israel purchased an additional metric ton from the United States. On both occasions Israel pledged that the heavy water would be used only for peaceful purposes, i.e., commercial electricity. Moreover, both Norway and the US retained the right to on-site inspection to verify compliance.

Heavy water looks like ordinary water, but is extra rich in deuterium. Its "usefulness" as a coolant is in allowing nuclear reactors to run on natural uranium instead of the enriched variety, which is difficult and expensive to produce. In the late 1950s Israel did not yet

have the capability to enrich uranium — hence Israel's interest in acquiring heavy water from two nations geared to produce it. Acquisition of heavy water made possible the easier path to nuclear power . . . and nuclear weapons.

During the next twenty-odd years, neither the US nor Norway inspected Israel's heavy water — despite the fact that as early as 1968 the CIA had informed President Johnson of the existence of an Israeli nuclear arsenal.

Then in 1986, after years of denials by Israeli diplomats, Israel's deception was exposed when a former Israeli nuclear technician, Mordechai Vanunu, who had worked at Dimona for 8 years, presented irrefutable evidence, including nearly 60 photos taken inside Dimona, of an Israeli nuclear arsenal numbering 100-200 warheads. Vanunu's revelation was featured in an expose in the London *Sunday Times* on October 5, 1986, generating a shock wave that is still reverberating.

What this all means is that the heavy water Israel purchased was not used to generate electricity at Dimona. It was used instead to produce plutonium for nuclear weapons. In other words, Israel flouted its promises to Norway and the US, marking the first known instance that a nation has violated the pledge of "peaceful use." (Other nations, including France and India, are under suspicion.) As for Mr. Vanunu, subsequently he was kidnapped by the Mossad, hauled back to Israel, tried in a kangaroo court in Jerusalem and sentenced to 18 years in prison — where he now languishes in solitary confinement.

Several months after the story broke, Norway, alarmed that its heavy water might have been used to produce weapons, asked Israel to allow the International Atomic Energy Agency (IAEA) to inspect the heavy water purchased in 1959. Israel refused, claiming the IAEA could not be trusted to be objective. Israel's claim was nonsense: in recent years the IAEA has inspected heavy water at other nuclear facilities in Israel, without objections.

Finally Norway submitted a formal demand for international inspection. As of this writing, talks between Israel and Norway are in progress. Although an agreement is unlikely, should an honest inspection occur, it would no doubt establish a violation of the original contract. By law Norway could then seize whatever remains of the original heavy

continued on page 14



Australian protester surfs the bow wave of an American warship carrying nuclear weapons.

International News...

continued from page 13

water, possibly shutting down Israel's Dimona reactor. Moreover, Norway could also confiscate all plutonium illegally produced, which would lead to the dismantling of Israel's nuclear arsenal.

Already Israel has been accused of secretly purchasing unused heavy water from Rumania to substitute for the original load, in an effort to deceive inspectors. Once heavy water has been used to produce plutonium, it is easily distinguished from "clean" heavy water due to tell-tale high concentrations of tritium.

As for the US, though it retains the same inspection rights as Norway, the US government has indicated it will not enforce its non-proliferation policy vis a vis Israel, nor support Norway's legal challenge. Not surprisingly, international fallout due to the incident has further undermined US credibility. Because the US has staked its entire non-proliferation policy (as have all nuclear suppliers) on the idea that the peaceful pledge should be respected, non-proliferation will live or die by the record of compliance. This is why the significance of Israel's breaking of the pledge cannot be overestimated. If the US is willing to tolerate non-compliance with its own policy by its ally Israel, the entire non-proliferation regime collapses. Already, various Third World nations in Africa, the Middle East, and Asia are reconsidering their support of the Nuclear Non-proliferation Treaty, which Israel has refused to sign.

Moreover, the recent media furor over chemicals must be understood in this context. Moves in recent years by Arab states such as Syria and Libya to construct chemical weapons plants should be seen as the consequence of Israel's role as nuclear pariah. Chemical weapons are regarded as the poor man's alternative to nuclear weapons. Because the US has ignored its own laws and policies in providing cover for Israel's clandestine nuclear agenda, it is unlikely any ban on chemical weapons can be achieved.

Needless to say, these developments do not bode well for peace in the Middle East, nor elsewhere. In the next few years another blow-out is all too possible, one that could lead to a confrontation between the US and USSR.

The case is clear. If Israel wishes to be treated as a member of the community of nations, it must honor its own pledge and abide by international law. As for the US, it must join Norway in demanding accountability according to law. In fact, it now has no alternative other than the frightful prospect of international nuclear anarchy.

SOURCES

1. "Revealed: The Secrets of Israel's Nuclear Arsenal," London *Sunday Times*, 10-5-86.

2. Gary Milbollin, "Heavy Water Cheaters," *Foreign Policy*, winter 87-88.

3. *Israeli Foreign Affairs* (POB 19850, Sac., CA 95819; \$20/yr), 11-87, 1-88, 7-88, 12-88.

4. *Dimona: the third temple? Behind the Vanunu Revelation*, Amana Books, Brattleboro, VT: soon to be released.

Mark Gaffney's first book, *Dimona: the third temple?, a study of Israel's nuclear weapons program*, will be published this winter by Amana Books.

Amazonian Indians Fight For Their Forest

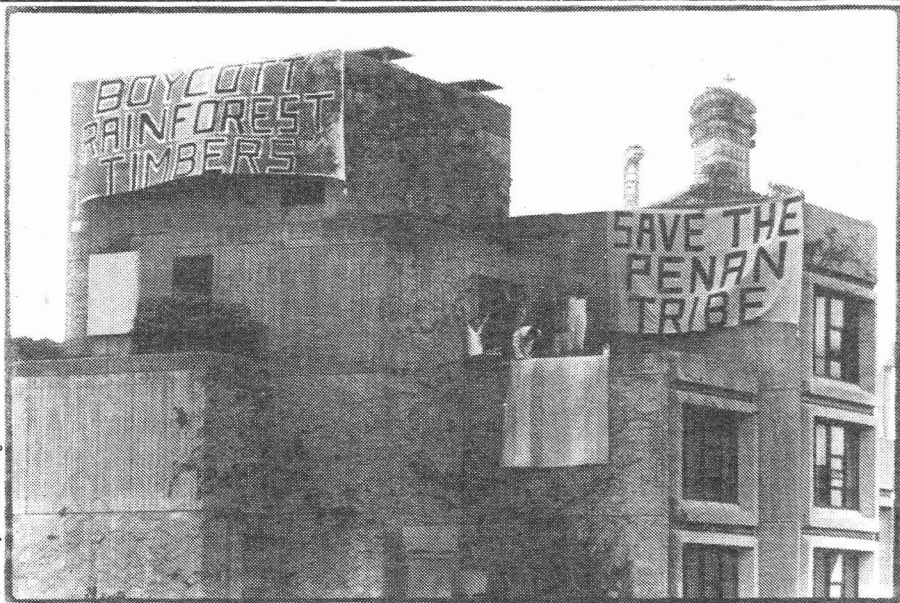
condensed from a news alert by Terence Turner

An unprecedented attempt by Amazonian Indians to organize themselves to resist the destruction of their forest habitat is being launched in central Brazil.

For the past two decades, the great Amazonian forest (the world's largest rainforest, with one-third of the surviving rainforest area on Earth) has been under attack by settlers, miners, ranchers, and hydroelectric dam builders, encouraged by "development" policies undertaken by the Brazilian government and supported by foreign government aid programs and lending institutions. The Amazon's native peoples have been widely regarded as on the way to extinction, victims of progress like the forest itself. Yet, against all odds, these primitive peoples have begun to organize and project themselves with great political skill as a major factor in the struggle to save the rainforests.

Under the leadership of the Kayapo tribe, 28 indigenous nations of the Central Amazonian region are banding together to construct a huge inter-tribal village of 3000 people in the path of a proposed hydroelectric dam complex at Altamira on the Xingu River. The dams, if completed as planned, would flood more than 1600 square kilometers of forest, creating the largest man-made lake in the world. The village is conceived as the Indians' own "Altamira Project" — a living community, in contrast to the drowned forest that the Altamira hydroelectric project would create. A small permanent population will remain at the site to oppose dam construction. At the great council to be held at the new village, scheduled for February 21-26, the Indians will form an alliance to work with Brazilian and foreign supporters to save the forest. To the council, the Indians have invited media representatives, and spokespersons for Brazilian government agencies, the World Bank, and the President of Brazil. The latter will be asked to explain their reasons for building the dams, and for not consulting the Indians about the use of their land. The Indians, in response, will present their critique of the dams and other development policies in the region. At the same time, they will celebrate the Kayapo New Corn ceremony. The joint building of the village and ritual celebration are intended as the indigenous alliance's first concerted actions.

A Kayapo leader, Payakan, has just completed a tour of Europe and North America to generate support and raise money for this project. In his talks, Payakan stressed the need for cooperation among the different organizations engaged in fighting destruction of rainforests, native cultures, and human rights in the Third World: "... The groups trying to save the races of animals cannot win if the people trying to save the forest lose; the people trying to save the Indians cannot win if either of the others lose; the Indians cannot win without the support of these groups; but the groups cannot win without the help of the Indians, who know the forest and the animals and can tell what is happening to them. ..." Both in Europe and North America, this message had great impact. Many environmental, indigenous advocacy, and human rights



Penan demonstration in Sydney barricaded on the roof.

groups, such as Friends of the Earth, World Wildlife Fund, Survival International, and Cultural Survival, began to cooperate with one another in sponsorship of Payakan's tour. Many feel that the tour may have marked a historic turning point in the perspective and tactics of these organizations, from mutual dissociation and distrust toward mutual cooperation.

Donations to help stop the hydroelectric project are still urgently needed. Please send checks to: Kayapo Support Fund, c/o Cultural Survival, 11 Divinity Ave, Cambridge, MA 02138.

Terence Turner, U of Chicago anthropology professor, has worked with the Kayapo Indians for 25 years, and is coordinating the Kayapo Support Group.

Appropriate Use for Military Found!

The Spanish Guardia Civil has formed a Nature Conservation Branch that will employ 1000 men to monitor all "anti-Nature" activities and specifically to protect species in danger of extinction!

—Trudy Frisk, British Columbia

Seal Virus Spreading to Porpoises

The virus that struck down thousands of seals in Europe last summer has jumped species — killing three porpoises later found dead on the shores of Northern Ireland. Whales could be next.

According to Seamus Kennedy, a British government scientist, the virus may already be at large among sea mammals over a wide area. Dead seals have been found in large numbers because they inhabit shores. But the seals could originally have been infected by porpoises, which are more likely to die unnoticed at sea.

Kennedy pointed out that the annual migratory pattern of porpoises through the European seas parallels exactly the spread of the disease. He suggested it could be only a matter of time before the virus moves across the Atlantic to decimate other populations.

He said that the only way to control the spread of the disease would be to find a "vector vaccine" which sea mammals transmit to each other. The development and use of such a vaccine would be difficult and expensive, requiring international collaboration. (*New Scientist*)

Epidemic Strikes Swedish Elk

Swedish scientists have announced that a mystery virus has killed at least 600 Swedish Elk in the past two years. A spokesman for the State Veterinary Laboratory said the virus is spreading and so far has proved impossible to treat.

Iceland Debates Ending Whaling

In recent months, the Icelandic parliament and cabinet have waged a bitter debate over a possible end to the killing of whales. The debate has been fueled by fishing interests crippled by the growing international boycott of Icelandic seafood. Fishing groups argue that Iceland's defiant whaling policy is suicidal, since they already stand to lose tens of millions of dollars annually in fish contracts canceled by U.S. and European companies joining the boycott.

Unfortunately, Iceland's most powerful family gained their wealth from whaling, and they have successfully (so far) pushed the fisheries and foreign ministers to oppose any change.

In related news, a group of 19 conservation and animal welfare groups brought suit in November against the U.S. secretaries of State and Commerce for their subversion of U.S. whale conservation policy with regard to Iceland. Internal documents obtained by the plaintiff groups show that the State, Defense and Commerce Depts. conspired with the National Security Council to prevent the use of clearly justified sanctions against Iceland. (*Monitor*)

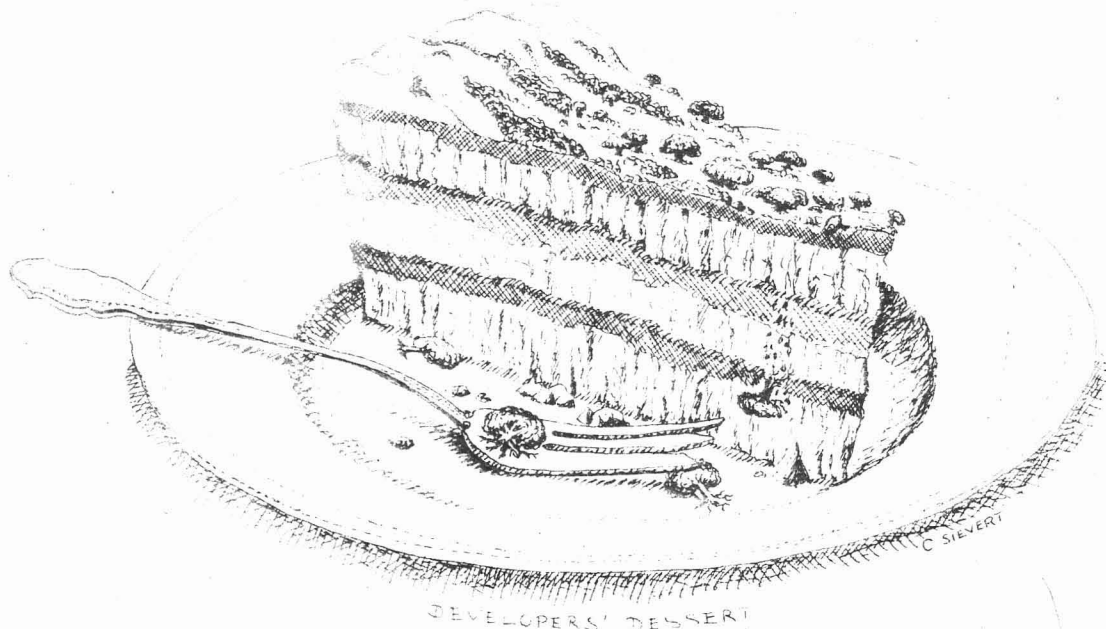
Aussies Fight Fast Train

A coalition of Australian environmental groups is fighting a proposal to build a new hi-tech train line between Sydney and Melbourne, near the country's southeastern corner. They are currently seeking a joint Federal-State Inquiry into the full effects of the privately funded Very Fast Train project.

The proposed route would run through sensitive national park and wilderness areas in East Gippsland, causing major disruptions to wildlife along with erosion problems. Of particular concern is the impact of the train on the Brodribb River Valley. The proposed route would disturb the valley floor and almost certainly involve destruction of pockets of protected rainforest and riparian vegetation.

The VFT would send trains moving at speeds up to 250 kilometres an hour, causing a noise similar to that of a jet aircraft. It would run between lines of continuous fencing, blocking wildlife movement. Massive cut-and-fill operations to level the rail bed would bring major situation problems.

What to do: write in opposition to the VFT project to The Honourable R.J. Hawke, Prime Minister of Australia, Suite MG 8, Parliament House, Canberra, 2600, Australia. Also write to The Honourable Graham Richardson, Minister for the Environment, Suite MG61, Parliament House, Canberra, ACT, 2600, Australia.



DEVELOPERS' DESSERT!

Traditional Asian Medicine Brings Death to Wildlife

by Mark Sunlin

Since the 1960s, the mystique surrounding Chinese folk or traditional medicine has appealed to many in the Western world, causing certain Asian herbs, such as ginseng to come into vogue. Books and TV documentaries have increased the allure of such remedies by depicting Chinese "barefoot doctors" tending peasants in the countryside with seemingly effective folk cures. While Western interest in Chinese medicine centers primarily around herbs, what reports have failed to show is that foremost among the "remedies" utilized in Asian folk medicine are products derived from animals, and that by their interest Westerners may unknowingly endorse practices which are

among the cruelest anywhere.

Many of the animal products utilized in Asian medicine are so bizarre that they seem to harken back to the days of witchcraft in medieval Europe. British freelance zoo veterinarian David Taylor has observed, for example, that in Bangkok, Thailand, snake bile - obtained by slitting the gall bladder of live snakes - is valued today as an aphrodisiac. The gall bladder of bears, too, is sought for this and other reasons. This has created a problem even in California, where poachers, lured by the promise of as much as \$500 (US) from Asian pharmacists in the San Francisco Chinese community for a single bear gall bladder, track bears at night with dogs fitted with electric shock collars.

Among the menagerie of animals used by Asian traditional medicine today are worms, slugs, leeches, birds, deer, and Tigers. Rhinoceros horn is perhaps the animal product most commonly associated with Asian medicine. A 1981 survey found that 65% of Asian pharmacies were selling rhino products, chiefly the horn. In the mid 1970s the influx of rhino horns into Japan, Taiwan, and South Korea had increased tenfold over the level of a decade before, according to Edmund Bradey Martin, of the University of Nairobi in Kenya.

Although often regarded as being utilized in traditional medicine as an aphrodisiac, Martin found that the most common use of rhino horn in Asia was as an aspirin-like pain and fever reducer. In China and Indonesia "Laryngitis Pills" containing 10% Rhinoceros horn and 7% bear gall are sold for about five cents (US) apiece. The Tsinan People's Medicine Works, in Tsinan, China, manufactures "Rhinoceros and Antelope Febrifugal Tablets," which are claimed to reduce fever and symptoms of the cold and flu. The 50-volume *Pen Ts' so Kang*, a pharmaceutical text penned in the 16th century and often cited by Western health food herbalists today, lists Rhinoceros

horn for use against snake bite, hallucinations, typhoid, fever, and devil worship. In Burma, a "sedative for all nervous afflictions" called "Padamy Rejuvenating Powder" contains rhino blood plus "rubies and valuable minerals."

Rhinoceros horn is comprised primarily of keratin, a tough protein which also comprises the main structural material in such similarly tough animal coverings as feathers, hooves, reptile scales, and fingernails. In fact, Rhinoceros horn is not a true horn at all, for it is composed of nothing more than densely matted hair. This has prompted suggestions from concerned naturalists that any medicinal effects obtained from Rhinoceros horn could be obtained more peacefully by chewing one's nails or eating hair clippings. Actually, Rhinoceros and antelope horn - like hair and feathers - are indigestible. Even wild carnivores pass the hair or feathers of prey animals they have eaten through their system intact, and the same is likely to hold true for humans consuming rhino or antelope horns, even in the form of ground tablets. The belief that such objects have medicinal value is therefore pure superstition. Unfortunately, logic, like compassion, is likely to prove an ineffective weapon against superstition, spears, or the automatic weapons now being used to kill such animals.

Mark Sunlin has authored a number of scientific papers on the subject of pharmacognosy (the study of pharmaceuticals derived from natural sources), including for the journal American Laboratory.

Mystery of the Beached Whales

by Mark Sunlin

It has happened again: A herd of Pilot Whales, heading south on their annual migration from arctic seas, stranded themselves on a Cape Cod beach, and Associated Press photos depicted familiar scenes of rescue workers valiantly attempting to push or drag the floundering behemoths back to the sea from whence they came. This time, about 20 of the 50 whales died, either of suffocation under the enormous weight of their bodies, or from lethal injections given to spare them such a lingering fate.

Whale beachings such as this have long been a mystery. Some attempts to explain the phenomenon have consequently been nearly as extraordinary as the event itself. It has been proposed, for example, that fluctuations in the Earth's magnetic field may at times disrupt the whales' ability to navigate, and therefore, presto!, whales on the beach. A more down-to-earth explanation is that whales occasionally mistake a beach for a shallow sand reef and are simply trying to swim over it when they become stranded. But this idea has not gained acceptance, probably because the highly intelligent whales would realize soon enough to turn back from such a "reef" once the water became too shallow for proper swimming. Furthermore, the whales are definitely trying to get on the shore, for even after being towed back to sea, they frequently return to the beach. It appears that thus far those seeking to explain the whale beachings are not thinking enough like a whale.

Another view, favored by Kenneth Norris, natural history professor at UCSC, is that the whales come ashore because one or more of them is ill. This idea came to Norris after he himself contracted viral pneumonia while examining a beached whale. Since whales are extremely social creatures, Norris feels that "the group is so important" that if one or more sick whales heads for the beach the others may follow like sheep. Accounting for the whales' social drive does help to view this in a more whale-like perspective, but it still leaves unanswered the question of why even a sick whale would see the beach as a sanctuary. There is something about actually being on the beach which is acting as a siren call to lure the whales ashore, and whatever it is, is peculiar to whales.

Or is it peculiar to whales? Sea mammals other than cetaceans, such as seals and Walruses (pinnipeds), come ashore regularly, especially to give birth. But since seals and Walruses are able to hobble about well enough on land using their flippers, no one thinks twice about this. Even the enormous Elephant Seal manages to waddle about on shore during the birthing season. Still, these semi-aquatic sea mammals are gradually becoming adapted to a completely aquatic existence: The nostrils of Walruses appear to be evolving backwards along the top of their heads so that they need not surface completely to breathe. Before long - in a few million years or so - their nostrils will be along the top of their heads like the blowholes of whales. Before finally giving up the land altogether, there will be a point at which pinnipeds still come ashore very rarely.

Could this be the evolutionary point at which whales find themselves now? Are the whale beachings the result of not-yet-forgotten ancestral urges calling the

whales up onto the beaches which the Walruses still occupy?

Whales have been fully developed since the Oligocene epoch, some 27 million years ago. But before reaching this state, they spent 20 million years in a seal-like state. Even today whales retain the ancestral traces of a pelvis in their skeleton. It may be that they similarly retain traces of a now-useless affinity with land which at times urges them ashore. Killer Whales have long been known to retain enough familiarity with land to successfully hunt seals and penguins on the ice by throwing themselves partly onto the shore and, as one 1837 account noted, "drive them if possible with their fins into the sea where they immediately become an easy prey." And Killer Whales, Norris notes, are among the whales most likely to intentionally beach themselves.

The Pilot Whales who cast themselves upon the shores of Cape Cod presented evidence reminiscent of seal-like ancestral urgings: Most of these whales were females, and most were pregnant. Since it is during the birthing period that seals, Walruses, and Elephant Seals are most inclined to come ashore, it might be expected that this would be the whales' final ancestral tie with the land. It may be that whales are not yet as fully adapted to the sea as they physically appear, and so, like a kitten climbing high into a tree where he is out of his element, the whales may sometimes be lured by ancestral familiarity into an environment in which they are no longer physically adapted, thus becoming stranded.

This may or may not be the actual answer to the mystery of the beached whales, but it is attempting to think more like a whale, and that is at least a step in the right direction.

-Mark Sunlin, Saratoga, CA

Animal Agents Arrest Asian Apothecaries

Early last March, California State Department of Fish and Game officers announced that they had made 52 arrests and seized evidence valued at \$100,000 as a result of a two-year covert investigation into what they termed "bear trafficking." The investigation, known as "Operation Ursus," was targeted at bear poachers and apothecary shops selling bear parts.

The Yau Hing Apothecary Shop in San Francisco was one outlet selling bear gall bladders, Rhinoceros horn and powder, Tiger and seal organs, and other illegal animal products as cures. In the Los Angeles area, undercover agents found bear gall bladder products fetching as much as \$540 an ounce, or \$20 a gram. In some instances, they discovered gall bladders of cows and pigs being sold as bear gall. Nonetheless, "Such sales are illegal and help maintain the black market for bear galls," said Charles Monroe, Fish and Game patrol chief for the San Francisco bay area.

Altogether, 15 apothecary shops in northern California face charges of selling illegal animal products. Yet this undercover operation has not stopped the problem so much as revealed its extent. As Monroe emphasized, "Illegal trafficking in bears is part of a \$100 million wildlife loss every year in California."

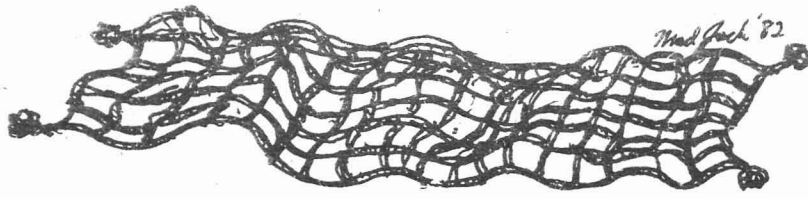
-Mark Sunlin



**MOVING?
SEND
US YOUR
NEW
ADDRESS!**



SASQUATCH DID IT!



NEMESIS NEWS NET

by Australopithecus

Sushi Connoisseurs Cough Up Worms

The upsurge in sushi consumption has caused the upchucking of live worms. Raw fish dishes such as sushi and sashimi have become fashionable and with them has spread the once-rare parasitic disease *anisakiasis*. Victims of this disease, upscale and genteel though they may be, do occasionally — and not without embarrassment — regurgitate live worms. So far only 50 cases of *anisakiasis* have been reported in the US, but three pathologists recently warned in the *New England Journal of Medicine* that "This is probably only the tip of the iceberg, because the infection is difficult to diagnose." (UPI) The small worms, which initially infest krill that are then eaten by fish, are *Anisakis simplex* and *Pseudoterranova decipiens* — words we may expect soon to be hearing muttered by numerous and pained upper crust consumers. It has been suggested by lower crust environmentalists that these diseased sushi eaters should avail themselves of their new intestinal contents by supplementing the feeding of captive pelican chicks and other young birds wont to eat regurgitated food.

Kangaroo Thumps Aussie Hiker

In October, a male Gray Kangaroo pounced on and kicked Shaun Fitzpatrick, 36, in a popular camping area in Grampians National Park in Victoria, Australia. Fitzpatrick had been feeding bread to 5 of the marsupials when one of them attacked him. The man's family fled to the car during the incident, and he subsequently received 30 stitches. (AP)

Portland Oak Still Stands

In a recent NNN, we reported on the valiant efforts of local citizens to save a giant Oregon White Oak in southwest Portland from a housing developer. A reader has sent us an update on this tree: The great Corbett neighborhood oak still stands, but will be surrounded by a house. Several architects told the developer that integrating a large tree into a building is easy and in this case would actually enhance the building.

Flukes & Nukes Mix at Bangor

Stating that there would be no environmental harm to Washington's Hood Canal from the project, the US Army Corps of Engineers recently approved the US Navy's plans to build 16 dolphin pens at the Bangor submarine base. The trained Atlantic Bottlenose Dolphins held therein will serve as underwater security guards. Greenpeace denounced the Navy environmental assessment as inaccurate, and said the introduction of a dolphin species not native to the Northwest might harm other marine mammals. Greenpeace spokesperson Ben Deeble stated that the mysterious disease that killed 60% of the East Coast's Atlantic Bottlenose Dolphins in the summer of 1987 could be introduced into the Pacific by the Navy. Greenpeace further objected that military use of marine mammals is unethical. Meanwhile, two local biologists objected that the dolphins, which are being captured in the Gulf of Mexico, might become sick in the colder water of Hood Canal. The Navy (as reported in a past NNN) has been training dolphins and sea lions as underwater agents for many years, particularly at the Naval Ocean Systems Center in San Diego. There it is now training dolphins, sea lions, and Beluga Whales — over 100 in total — to detect

frogmen and mines. The new pens are due to be finished in the summer of '89. They will be sited at an existing pier at the Bangor base, which affords a view of the Trident strategic missile submarines. (*Seattle Post-Intelligencer*, 11-18-88)

Amidst the controversy surrounding the Navy's plans, Rick Trout, an employee of Science Applications International Corp., a La Jolla defense contractor that provides trainers for the animal militarization program at the Naval Ocean Systems Center, revealed that dolphins and sea lions were beaten and deprived of food during training. After making this revelation, Trout received a telegram from his employer warning that he was vulnerable to prosecution for disclosing classified information. (*San Francisco Chronicle*, 11-11)

Noise Threatens Sea Life

Noise from underwater blasting and drilling and from icebreakers plowing through pack ice adversely affects fish and sea mammals, according to recent studies by University of Miami marine biologist Arthur Myrberg Jr, an expert on acoustic communication between fish. Loud underwater noise forces fish to flee, damages fish eggs, reduces growth rates of fry, and destroys the hair cells of the auditory organs of some fish. Beluga Whales emit alarm calls when an icebreaker is 50 miles away and flee when such a boat approaches within 25 miles. Migrating Bowhead Whales make wide detours around drill ships operating in their paths in Alaska's Beaufort Sea. Wedell Seals in McMurdo Sound, Antarctica, have suffered inner ear damage from underwater dynamite explosions. Such damage is particularly serious for this species, as Wedells spend much of their time at depths beyond which light penetrates and communicate by emitting whistling sounds. Explosions in Antarctic waters, used in seismic research of sedimentary layers, are likely to become much more frequent now that Antarctica is to be opened to mineral development. Dr. Myrberg has called for immediate restrictions on oceanic noise. (*NYT*, 12-13)

Chilean Crab Fishers Kill Dolphins

As consumption of the prized delicacy Chilean crab increases, populations of crabs and sea mammals off Chile's coast plummet. Crab fishers have severely depleted populations of several crab species and of their illegal choice of bait, Commerson's Dolphin. They are now killing other species for bait as well — Peale's Dolphin, Dusky Dolphin, Southern Sea Lion, Southern Fur Seal, and several penguin species. Only 60 years old, the trade in Chilean crabs has increased 500% in the last decade, and new crab factories have been built in the Magalennas area. The National Committee for the Protection of Fauna and Flora in Chile reports that crab fishing vessels have extended their range as far south as Cape Horn and are taking smaller species now that larger ones are scarce. Early this decade, the Chilean government enacted restrictions on crab fishing, but these are weak and often violated. Crab fishers catch their bait with harpoons or guns, and their crabs with nets (illegal) or set traps. The main importers of Chilean crab are the United States, Japan, West Germany, France, Holland, Belgium, and Italy. (*WWF News*, 11/12-88)

Japan Seeks to Domesticate Whales

With its unending hunger for whale flesh, Japan is not only proceeding with its "research" killing of Minke Whales in the Antarctic Ocean, it is also experimenting with domesticating whales in freshwater lakes. Hisao Izawa, experiment leader and professor

of veterinary medicine at Hokkaido University, voiced a view that might surprise some physiologists: "Whales are, so to speak, cattle in water without feet . . . Their stomachs and kidneys are very similar." Food and water salinity are the main complicating factors. Whales eat up to 4% of their weight daily in fish or plankton. Japanese scientists plan to implant in the whales' stomachs a microbe that digests cellulose and normally lives in bovine bellies, so that the behemoths can eat grass. They plan to gradually reduce the salinity of waters holding whales. They recently tried this with three dolphins in a pool. The dolphins lived normally in fresh water for a week but then lost their appetites. Japan has been importing whale meat from Iceland and killing Minke Whales (violating the IWC moratorium), but it desires abundant and secure sources of this traditional dish. If domesticating whales proves unfeasible, perhaps Japan will satiate its compulsive whaling habit by harpooning cows.

Animal Liberationist Seized for Planting Bomb

Fran Trutt, a Queens, New York, woman of 33, was seized in November for planting a homemade bomb outside the headquarters of the US Surgical Corp. in Norwalk, Connecticut. The corporation uses 1000 dogs a year in its training of surgeons and salesmen of its surgical instruments. Animal rights advocates at a conference at Columbia U. shortly after the bombing attempt agreed that lab animal research must be stopped, but not by planting bombs. Nonetheless, police suspect Trutt did not work alone. Anti-terrorist investigators are trying to determine whether Trutt received help in making the sophisticated bomb, and whether other institutions are targeted. Police arrested Trutt, after receiving a tip, as she placed a radio-controlled bomb filled with roofing nails under a bush near a parking space used by company chairman Leon Hirsch. They discovered two other bombs in Trutt's apartment. She now faces attempted murder charges. (*NYT*, 11-14)

Shortly before going to press, we received a phone call from an animal rights activist saying that investigators now suspect that Trutt was framed, perhaps by an agent who posed as a fellow animal liberationist. The caller also said that some people think the NIH (National Institutes of Health, a federal agency responsible for many of the lab animal experiments performed in the US) may have been somehow linked to the crime.

Pay a Meter to Save a Tree

The San Francisco Department of Public Works is donating its old parking meters to Bay Area zoos. The SF Bay Area chapter of the American Association of Zoo Keepers plans to donate proceeds from these meters to buy and preserve tropical forests. Each meter will show the slogan "Give Your Change to Make a Change." When a person feeds the meter, a picture of a Jaguar or anteater will appear instead of a time arrow. One proponent of this plan opined that the Beetles' famous song "Lovely Rita, Meter Maid" should be concurrently promoted, on behalf of rainforests' thousands (millions?) of beetle species, perhaps enhancing this meter method's great potential. Annually, about 114 million people visit US zoos. If each person put 50 cents in a meter, the American Association of Zoo Keepers could buy and protect 4.8 million tropical acres a year. Their first land purchase will be for Guanacaste National Park in Costa Rica, a project being organized by conservation biologist Dan Janzen that if successful will preserve 293 square miles of tropical dry forest. The cost of this land will be about \$300 per hectare. (*Newsweek*, 12-12)

Grizzlies Face Senseless RAGE

Grizzlies are meeting opposition from an unexpected quarter — Washington hikers. Robert DeGraw of Kirkland, Washington, has formed a group called RAGE — Residents Against Grizzlies in our Environment — to oppose efforts to reintroduce or augment Grizzly Bear populations in Washington's North Cascades. Other similarly feckless hikers and campers have joined DeGraw's group, and even an author of Washington trail guidebooks, Ira Spring, has voiced opposition to Griz recovery in Washington. Federal and state officials, led by Washington Game Department biologist Jon Almack, are conducting a five year study to determine whether Grizzlies should be encouraged in the North Cascades. Almack thinks 10-30 Grizzlies inhabit the area between Snoqualmie Pass and the Canadian border, and he will study the feasibility of increasing the number to 90. Researchers have still not confirmed for certain that the bears exist in the 10 million acre search area, but hikers have reported 20-30 sightings a year in the 1980s. (*The Olympian*, 12-12) Unfortunately, RAGE may prove a serious obstacle to Griz recovery, as reintroduction and augmentation programs tend to be stymied if they face any public opposition. So if you happen to encounter their leader, remember these words of a Washington bear proponent, "declaw DeGraw!"

Hippo Trounces Zoo Keeper

A mother Hippopotamus, defending its baby, stomped on and bit zoo keeper Rick Coonrod at the St. Louis zoo in July. Coonrod's right leg was fractured. (*L.A. Times*, 7-3) Incidentally, the two involved Hippos were not "Hippopotami." "Hippopotamus" is not a Latin cognate.

L-P Blames Environmentalists for Mill Closure

Environmentalists do occasionally win! Louisiana-Pacific will close its sawmill in Potter Valley, northern California, this April. L-P's four other mills in the area will try to absorb the mill's 132 laborers, but it does appear that environmentalists are forcing L-P to scale back slightly its deforestation activities here. In announcing the forthcoming closure, L-P blamed the 1987 fires and environmental groups for a recent timber shortage. The Potter Valley mill obtains most of its wood from Mendocino National Forest and has annually cut 40-50 million board feet, mostly Ponderosa Pine, Sugar Pine, and Douglas-fir. According to L-P, the 1987 fires burned 67,000 acres in the Mendocino, and, combined with preservationists' appeals of the subsequent Forest Service fire salvage sales, reduced the board footage L-P could supply the mill. Showing great modesty, environmentalists have denied that they are responsible for the mill closure. They aver that L-P's overcutting is leading inexorably to mill closures, as timber supplies dwindle. (*Ukiah Daily*, 11-29)

Wild Woolly West Reaches Nova Scotia

Not only have Coyotes reached the Northeast, as reported in Samhain NNN, they've already won the hatred of land exploiters in that area. Indeed, in a situation reminiscent of the Western states in times past and present, the Nova Scotia Sheep Producers Association has convinced Nova Scotia's Department of Agriculture to obtain a permit to test the infamous poison Compound 1080 to kill Coyotes. The Department of Environment granted a permit to place up to 600 milligrams of sodium monofluoroacetate on up to 20 plastic collars worn by lambs used for bait. The permit did not stipulate when or if the sheep producers would actually employ the poison but it is likely they will do so this spring. David Orton of the environmental group WEBB voiced his group's fears that, in addition to causing intense suffering for the Coyotes, the poison would kill many other animals as well, such as hawks, owls and ravens that would eat the Coyote carcasses. The province of Alberta already has a 1080 poisoning program. In the US, 1080 was recently banned by the EPA but the ban could be rescinded (see J. Bernhard's article in this issue).



Get your T-Shirts Now!

Short sleeve shirts in: White, Teal, and Lilac. S, M, L, XL. \$9.00
 Long sleeve shirts in: White, Red. S, M, L, XL. \$12.00
 100% Cotton

Order From:

Wild Rockies T-Shirts
 834 Sherwood
 Missoula, MT. 59802

EQUAL RIGHTS FOR ALL SPECIES!

EARTH FIRST! BIODIVERSITY TASK FORCE

BIODIVERSITY

Bumper stickers are only \$1.50 each, or dig deeper and help us aggressively protect lesser known wildlife species, communities of species, and the biological integrity of natural ecosystems in this country. EARTH FIRST! BIODIVERSITY PROJECT, 2365 Willard Road, Parkersburg, WV 26101.

GIVE A SNAKE A BREAK

STOP RATTLESNAKE ROUND-UPS
 EARTH FIRST! BIODIVERSITY TASK FORCE



WOLVES FOR A GREATER YELLOWSTONE

EARTH FIRST! BIODIVERSITY TASK FORCE

SPECIAL to the EF! JOURNAL
EARTH FIRST! ROAD-SHOW MECHANDISE
 (proceeds benefit continuing EF! roadshows)

COST: pendant with sterling silver snake chain \$45.00
 pendant w/o chain \$20.00
 pendant mounted on tie-tac pin \$25.00
 please add \$2.00 postage and handling per order
 14 carat gold pendant price available upon request



SHOWN ACTUAL SIZE
 SOLID STERLING SILVER PENDANTS AND PINS
 FROM THE STUDIO OF EF! JEWELER JACKIE TAYLOR
 PENDANTS AND PINS ARE BOTH HANDMADE HEAVY
 STERLING SILVER, ABOUT DIME SIZE

1988 ROUND RIVER RENDEZVOUS SHIRTS



Order directly from local groups; not from Tucson!

ORDER FROM:
 ROGER FEATHERSTONE
 Box DB
 BISBEE, AZ 85603
 ATTN. ANGELIKA
 (602)432-4145

5 color on light blue
 100% cotton
 short sleeve M,L,XL
 \$8 ppd -- send check to:
 Okanogan Highlands EF!
 BOX 361
 Republic, WA 99166

NEW MEXICO EARTH FIRST! T-SHIRTS

100% COTTON - DESIGNS BY LONE WOLF CIRCLES



THINK LIKE A MOUNTAIN
 3-colors on pale yellow \$11.00 postage paid



BRING BACK THE LOBO!
 Black on gray \$9.00 postage paid

MAKE CHECKS PAYABLE TO: NMEF!
 456 AMADO ST.
 SPECIFY SIZE: (S-M-L-XL) SANTA FE, NM 87501

LIVE WILD OR DIE.... IT'S A CHOICE!!

There's a new journal on the horizon, momentarily called "Live Wild or Die." Rumor has it that it's being put out by a renegade group of ex-Stump Suckers. Tired of "organizations" disguised as "movements," bored by "radical" journals which are edited so heavily that only the voice of a few is ever really heard, dumfounded that the "avante garde of the environmental movement" has a political structure similar to any given Capitalist government, and is slowly but surely giving in to mainstream pressures, this journal promises to make sure that the grassroots keeps sprouting new seeds, and that no one loses their sense of humor.

"Live Wild or Die" will have no editors and no leaders. It simply promises to be an open forum for the most radical, most fun-loving environmental subversives in the land.

If you have anything to contribute, or want a copy for yourself, write to the current contact, L.W.O.D., POB 2962, Bellingham, WA. 98227, or you can obtain copies from your local EF! contact person.

Remember, Wilderness or Die, it's a fact, not an organization.

The Earth First! Directory

The Earth First! Directory lists the contact points for the international Earth First! movement. It is divided into four sections: 1) National EF! offices in the United States; 2) International contacts; 3) Active EF! Chapters or Groups; and 4) Contact persons where there is as yet no active EF! group. If you are interested in becoming active with the Earth First! movement, reach the folks listed for your area.

Earth First! The Radical Environmental Journal is an independent entity within the international Earth First! movement, and is not the newsletter of the Earth First! movement. It does, however, provide a forum for Earth First!ers around the world. This directory is provided as a service to independent EF! groups. If you would like to be listed as a contact or as a group, PLEASE contact Bob Kaspar (305 N. Sixth St., Madison, WI 53704 (608)241-9426). Please send address changes or corrections to him also. If you do not have a phone number listed, please send it to him. Bob acts as coordinator for local EF! groups for the EF! movement.

LOCAL NEWSLETTERS: Addresses marked with a "*" produce either an Earth First! newsletter or regular mailings for their area or issue. Contact them directly to receive their newsletter or otherwise be on their mailing list.

NATIONAL EF!

ALASKA TASK FORCE
POB 1019
San Raphael, CA 94915
(415) 337-1654

EFI BIODIVERSITY PROJECT *
Jasper Carlton
2365 Willard Road
Parkersburg, WV 26101-9269
(304)428-5405

Keith Hammer
Species Defense Coordinator Western States
POB 2072
Kalispell, MT 59903
(406)755-1379

EFI DIRECT ACTION FUND *
Mike Roselle
POB 210
Canyon, CA 94516
(415)376-7329

EARTH FIRST! FOUNDATION
POB 50681
Tucson, AZ 85703

EFI GRIZZLY BEAR TASK FORCE
POB 6151
Bozeman, MT 59715

EFI INDEPENDENT ORGANIZER
Roger Featherstone
Box DB
Bisbee, AZ 85603
(602)432-4145

**EARTH FIRST! JOURNAL EDITORIAL
CORRESPONDENCE**
Earth First!
POB 5871
Tucson, AZ 85703
(602)622-1371

**EARTH FIRST! JOURNAL
SUBSCRIPTIONS & TRINKETS**
POB 2358
Lewiston, ME 04240

EFI RAINFOREST ACTION *
Bay Area Earth First!
POB 83
Canyon, CA 94516
(415)376-7329

EFI REDWOOD ACTION TEAM (RAT)
Greg King
POB 1031,
Redway, CA 95560

EFI SPEAKERS BUREAU
Bob Kaspar
305 N. Sixth Street
Madison, WI 53704
(608) 241-9426

EFI WOLF ACTION NETWORK *
Tom Skæle
HCR 79, POB 1046
Crowley Reservoir, CA 93546
(619) 935-4720

**PAW (PRESERVE APPALACHIAN
WILDERNESS)**
Jeff Elliott & Jamie Sayen
POB 36
Jefferson, NH 03583
(603)586-4432

INTERNATIONAL EF! GROUPS

AUSTRALIA
John Seed
Rainforest Information Centre
POB 368, Lismore
New South Wales 2480
Australia
phone: 066-21-85-05

Marianne Heynemann
PO Box 256
Mitchem, 3132
Australia

BRITISH COLUMBIA
Paul Watson
POB 48446
Vancouver, BC
V7X 1A2 Canada
(604)688-SEAL

Boreal Owl
Box 1053
Kamloops, BC
Canada

Columbia Mountains EFI
Orrie Amos
POB 1668
Salmon Arm, BC
Canada VOE 2T0

ONTARIO
EFI Canada c/o M. Kaulbars
2709 Regina St.
Ottawa, ONT
CANADA K1S 5B6

ENGLAND
Chris Loughton
c/o 57 Wood Lane
Greasby, Wirral, L49 ZPU

Eric Holle
1126 James Canyon
Boulder, CO 80302
(303) 442-5518

FLORIDA EARTH FIRST! *
POB 13864
Gainesville, FL 32604
(904)371-8166

MAINE EARTH FIRST!
Gary Lawless
Gulf of Maine Books
61 Main St.
Brunswick, ME 04011
(207)729-5083

MIDWEST HEADWATERS EFI *
Hank Bruse
235 Travis Drive
Wisconsin Rapids, WI 54494
(715)423-5636

Chicago EFI
POB 6424
Evanston, IL 60204
(312)281-0599 - Gina

Paul Rechten
7405 Shields Rd.
Harvard, IL 60033
(815)943-4178

Twin Cities EFI
213 W. 26th Street
Minneapolis, MN 55404
(612)879-0630

MISSOURI EARTH FIRST!
The Gateway EFI Tribe
POB 1961
St. Louis, MO 63118
(314)752-5011

Big River EFI
POB 754
High Ridge, MO 63049
(314) 343-7756/285-3449

MONTANA EARTH FIRST! *
Yellowstone EFI
Randall Restless
Box 6151 Bozeman, MT 59715
(406)587-3356

Wild Rockies EFI
Jake Jagoff
834 Sherwood
Missoula, MT 59802
(406)549-2485(h) (406)243-6273(w)

Jim Field
POB 4784 Missoula, MT 59806
(406)549-6082

NEW MEXICO EARTH FIRST!
Brad Lagorio *
2405 Meadow Rd SW
Albuquerque, NM 87105
(505)873-0299

Ron Mitchell
Route 14 Box 257B
Santa Fe, NM 87501
(505)473-4203

Rich Ryan
456 Amado St.
Santa Fe, NM 87501
(505)984-1097

NEW YORK EARTH FIRST!
Long Island EFI
POB 812
Huntington, NY 11743
(516)424-6499

OHIO EARTH FIRST!
Scioto River Group
Steve Moore
POB 91
Greencamp, OH 43322
(614)528-2517

OREGON EARTH FIRST!
POB 1437
Merlin, OR 97532

Portland EFI
POB 13765
Portland, OR 97213
(503)238-0351

EFI Siskiyou
Bobcat
POB 212
Williams, OR 97544
(503) 846-7342

Southern Oregon EFI
Kevin Malmstrom/Tony Estevez
POB 341
Wolf Creek, OR 97497
(503)866-2526

S. Willamette EFI
Barry Martin/Karen Wood
POB 3499
Eugene, OR 97403
(503) 726-4738

TEXAS EARTH FIRST! *
Christi Stevens
POB 7292 University Station
Austin, TX 78713
(512) 320-0413

East Texas EFI
Dave Burkart
Rt. 3, Box 114
Cleveland, TX 77327
(713)592-7664

VERMONT EFI
Erik Sohlberg RR1, Box 80-A
East Corinth, VT 05040
(802)439-6266

VIRGINIA/DC EARTH FIRST!
Robert F. Mueller
Rt. 1 Box 250
Staunton, VA 24401 (703)885-6983

WASHINGTON EARTH FIRST! GROUPS
Columbia Plateau EFI
Brian Barry
913 S. 41st #17
Yakima, WA 98908
(509)965-2241

Okanogan Highlands EFI
POB 361
Republic, WA 99166

Chesterwood EFI
POB 10147
Olympia, WA 98502

Olympic Peninsula EFI
Robin McMillan
POB 368
Port Townsend, WA 98368

Seattle EFI
George Draffin
POB 95316
Seattle, WA 98145
(206)522-0441

Shuksan EFI
David Helm
POB 1731
Ferndale, WA 98248

Southwestern WA EFI
Boxholder #893
3203 SE Woodstock Blvd.
Portland, OR 97202

WASHINGTON EARTH FIRST! *
Mitch Freedman
POB 2962
Bellingham, WA 98227
(206)734-6419

WYOMING EFI
655 North Cedar
Laramie, WY 82070

LOCAL CONTACTS

ARIZONA
Gristle
POB 1525
Prescott, AZ 86302

CALIFORNIA
Dakota Sid Clifford
15440 St. Hwy 174
Grass Valley, CA 95945
(916)273-7186

Chuck Youmans
3105 Pefumo Canyon Rd.
San Luis Obispo, CA 93401
(805)544-5532

COLORADO
Larry Hartsfield
543 E. 5th Ave.
Durango, CO 81301
(303) 259-1812(h) (303) 247-7478(w)

DELAWARE/MARYLAND
Greg DeCowsky
Upper Shore Ecology Center
POB 71
Georgetown, MD 21930
(301)275-8091

FLORIDA
Black Rhino Vegetarian Soc.
MaVynne O. Beisch
Rt 3, Box 292
American Beach, FL 32034

PAN
c/o 1507 Edgevale Rd
Fort Pierce, FL 34982
(305)466-0833

IDAHO
Kay Morris
809 Ranch Road
Boise, ID 83702
(208)345-5718

ILLINOIS
EFI Edwardsville
POB 861
Collinsville, IL 62234

INDIANA
Marjean Stephenson
3415 Stone Road
Marion, IN 46953
(317)674-5670

IOWA
John Christensen
RR1
Storm Lake, IA 50588

LOUISIANA ARKLALEX EFI
c/o Eddie W. Hand
504 W. Louisiana #4
Ruston, LA 71270
(318)251-2580

MARYLAND
Leonard J. Kerpelman
2403 W. Rogers
Baltimore, MD 21209
(301)367-8855

MASSACHUSETTS
Atticus Finch
36 Howard St. #2
Cambridge, MA 02139
(617) 876-6640

Andrew Power
1874 Commonwealth Ave. #7
Brighton, MA 02135

Connecticut Valley EFI *
POB 324
Rowe, MA 01367
(413)339-4216

MICHIGAN
Brian Lacy
1374 Harpst #1
Ann Arbor, MI 48104
(313)747-7127

Mary Miscil
Oakland University
128 W. Hopkins
Pontiac, MI 48055
(313)332-9426

MISSOURI
Sue Skidmore
1364 S. Plaza
Springfield, MO 65804
(417)882-2947

Herb Simon
POB 3
Holden, MO 64040
(816) 732-6400 (w) (816) 331-9410 (h)

NEW YORK
Gary Bennett
127 Vassar St
Rochester, NY 14607
(716)461-0797

OHIO S.E.C.T./Rick B. Van Landingham III
c/o Office of Student Activities
Student Union, Room 3518
U of Toledo, 2801 W. Bancroft St.
Toledo, OH 43606

OKLAHOMA
James D. Chamberlain
1633 N. MacArthur
Oklahoma City, OK 73127

Todd Kirk
1536 N. Kingston Pl.
Tulsa, OK 74115
(918) 834-0771

Lynette Setzkorn
2102 S. Cincinnati, Apt. E
Tulsa, OK 74114
(918) 582-0269

ONTARIO
Devon Hornby
49 Pendrith St.
Toronto, Ont. Canada M6G 1R6
(416)535-3786

OREGON
Desert Dog
c/o 1245 NW Newport
Bend, OR 97701
(503)388-8927

PENNSYLVANIA
John McFarland
POB 179
Pt. Pleasant, PA 18950

David Hafer c/o Otzinachson
POB 65
Lewisburg, PA 17837
(717)523-3107

Antoinette Dwina
842 Library Ave.
Carnegie, PA 15106

Tom "Bigfoot" Byers
1075 Steuben St. #2
Pittsburgh, PA 15220
(412)921-8269

TENNESSEE
Jeff & Kim Turner
1726 Forest Ave.
Knoxville, TN 37916
(615)522-8521

TEXAS
Kathy Porter
POB 311712
New Braunfels, TX 78131
(512)629-0584

VERMONT
Pete Tinsman
Elmore, VT 05657
(802) 888-7630

VIRGIN ISLANDS
Freebird Creations
POB 8307
Cruz Bay, St. John, U.S.V.I. 00831
(809) 776-7512

USUAL DISGUSTING PLEA FOR MONEY

The Earth First! movement runs on your financial support. We don't need as much as other groups since we are grass-roots, volunteer, decentralized and have low overhead. Moreover, you get to select where your hard-earned money goes. Don't send your contributions to this newspaper; send them directly to one of these hard working groups:

*Earth First! Foundation, POB 50681, Tucson, AZ 85703 (contributions to the Foundation are tax-deductible)

*Arizona Earth First!, POB 3412, Tucson, AZ 85722

*Bay Area Earth First!, POB 83, Canyon, CA 94516

*EF! Biodiversity Project, Jasper Carlton, 2365 Willard Road, Parkersburg, WV 26101-9269 (contributions to the EF! Foundation earmarked for the Biodiversity Project are tax-deductible)

*Colorado Earth First!, Box 1166, Boulder, CO 80306

*Florida Earth First!, 6820 SW 78th St., Gainesville, FL 32608

*Grazing Task Force, POB 5784, Tucson, AZ 85703

*Redwood Earth First!, POB 368, Bay-side, CA 95524

*Los Angeles Earth First!, POB 4381, North Hollywood, CA 91607

*Midwest Headwaters Earth First!, POB 516, Stevens Point, WI 54481 *New Mexico Earth First!, 456 Amado St, Santa Fe, NM 87501

*Nomadic Action Group, POB 210, Canyon, CA 94516

*Ohio Earth First!, Scioto River Group, POB 91, Greencamp, OH 43322

*Oregon Earth First!, POB 1437, Merlin, OR 97532

*PAW (Preserve Appalachian Wilder-ness), POB 36, Jefferson, NH 03583

*Portland Earth First!, POB 13765, Portland, OR 97213

*Santa Cruz Earth First!, POB 344, Santa Cruz, CA95061

*Southern Willamette Earth First!, POB 3499, Eugene, OR 97403

*Texas Earth First!, POB 7292, Univer-sity Station, Austin, TX 78713

*Wash-ington Earth First!, POB 2962, Belling-ham, WA 98227

*Wild Rockies Earth First!, c/o 834 Sher-wood, Missoula, MT 59802

*Wolf Action Network, HCR 79, POB 1046, Crowley Reservoir, CA 93546

*Yellowstone Earth First!, Box 6151, Bozeman, MT 59715

This fundraising appeal is placed as a serv-ice to the Earth First! movement. THANK YOU for your support!

EF! BULLETINS

COUNCILS OF ALL BEINGS. The Council of All Beings is a series of re-earthing rituals created by John Seed and Joanna Macy to help end the sense of alienation from the living Earth that most of us feel, and to connect us with new sources of joy and commitment that follow from union with Gaia. John will return to the States this summer to conduct more Councils. He will be at the RRR, then will tour Western states. Write RAN for his schedule: Rainforest Action Network, 300 Broadway, SF, CA 94133.

LESSONS FROM THE ANCIENT FOREST: Earth Wisdom and Political Activism, Slides and Stories from the Oregon Wilderness by Lou Gold. Lou Gold is a former professor of American government at Oberlin College who in 1983 became a wilderness activist helping Earth First! and local conservationists in their successful campaign to stop bulldozers from cutting the first road onto Bald Mountain in the Siskiyou National Forest of southwestern Oregon. For the past 6 summers he has maintained a mountaintop sanctuary where he conducts a vigil deep within the still endangered North Kalmiopsis Roadless Area. Lou is now touring nationally to draw attention to the plight of old growth ecosystems and to mobilize support for the creation of a Siskiyou National Park. To schedule events, contact Beth Howell, POB 13070, Portland OR 97213; 503-281-4486.

ENVIRONMENTAL LEGAL SERVICES NEEDED. Pro-bono attorneys in Washington, DC, are needed to work on a voluntary basis with the EF! Biodiversity Project. Efforts involve the legal defense of rare and endangered animal and plant species and their ecosystems in the contiguous United States. Write: Jasper Carlton, EF! Biodiversity Project, 2365 Willard Rd, Parkersburg, WV 26101-9269.

ATTENTION PACIFIC RIM VISUAL ARTISTS: "GAIA PACIFICA - THE ART OF ACTIVISM," April 14 - May 7, Centro Cultural de la Rosa, San Diego, CA. Ecological Life Systems Inc. and Centro Cultural de la Rosa are sponsoring an art exhibition celebrating the spirit of all life and the struggle for its continuance around the Pacific Rim. Gaia Pacifica will raise money through a series of events culminating in an auction of artwork from this exhibition. Funds will support local conservation efforts that affect the Pacific as a unified bioregion. For more information contact: Mary Hsi, POB 53, San Diego, CA 92014; 619-481-6784.

ANCIENT FOREST EXPEDITION. If you wanted to dramatize an impending death, you'd take to the people a body in a casket, wouldn't you? Well, that's what EF! plans to do with the old growth forests. We call it the Ancient Forest Rescue Expedition.

Here's the plan: On April 29, amidst the largest-yet ancient forest demonstration in Seattle, a log truck will begin a month-and-a-half long, nationwide journey. On this truck will be a 10 foot diameter Douglas-fir, salvaged from the Olympic rainforests. In the caravan will be Lou Gold with his slide show and disarming sincerity, Dana Lyons and Bill Oliver with their guitars and wit, and me. We'll be joined by others concerned enough to give their time and gas money, and will be a self-contained demonstration.

George Draffan in Seattle will coordinate national media. For local events (press conferences and slide shows in many towns, demonstrations in big cities such as Chicago, New York, DC), we'll need help from Earth First!, Audubon Society, Sierra Club, and local contacts.

As expensive as this will be, it will cost less than 30 seconds of prime-time TV advertising and will reach, intimately, millions of people. The EF! Foundation is contributing \$1000; the Direct Action Fund thousands more. We hope the national big groups contribute too. But we need more. Our expenses will probably be \$8-12,000 and we'll need an additional \$15-20,000 in interest-free loans for the log and truck.

The obvious question raised by the Expedition is the fate of our tree buddy. We hope to interest museums around the country in buying cross sections for exhibition. If we can raise back the money invested in the log by selling these sections, the balance of the tree will be donated to a worthy forest floor, to rot undisturbed for the next century.

We need your help. We need money, places to sleep, travelers, entertainers (especially women; balance is important), organizers and contacts around the country. Slide show presentations to schools, clubs, politicians, etc. will require local effort. Advance postering and publicity will be needed for demonstrations.

Washington Earth First! will handle the organizing, and the travel route will depend on where we have local support. Please join us. Our tentative schedule is as follows:

April 29: Seattle	5/26-28: New York
April 30: Portland	5/28-30: Philadelphia
May 2-3: Boise	5/30-31: Baltimore
5/5-6: Salt Lake City	5/31-6/4: Washington, DC
5/9-12: Denver/Boulder	6/4: Independence, VA
5/13-14: Omaha	6/6-8: Atlanta
5/14-17: Lawrence, Kansas City	6/10-11: Nashville
5/17-18: St. Louis	6/11: Memphis
5/18-20: Chicago	6/12: Little Rock
5/21-22: Madison	6/13: Dallas
5/22-23: Lansing	6/14: Austin
5/23-25: Ann Arbor	6/18: New Mexico
5/25-26: Toledo, Cleveland	
5/26: Pittsburgh	

7th ANNUAL WESTERN PUBLIC INTEREST LAW CONFERENCE. Environmental experts will confront major issues including international conservation, old growth, and acid rain during the Western Public Interest Law Conference at the University of Oregon School of Law in Eugene, Oregon, March 3-5. The theme of this year's conference is: Community Activism and Global Conservation. Among the highlights will be speeches by David Brower, founder of Earth Island Institute, and Ms. Meenakshi Raman, Malaysian public interest lawyer. For information, call Lori Houck or Don Mooney at 503-686-3823 or write: Western Public Interest Law Conference, c/o Land Air Water, U of OR School of Law, Eugene, OR 97403.

NEW CANADIAN EF! GROUP. An Eastern Canada Earth First! group is slowly getting organized. To get information, contact Mike Kaulbars, POB 4612, Station E, Ottawa, Ontario, K1S 5H8.

EARTH FIRST! SPEAKERS BUREAU THE SPECIFICS

- 21 Feb 89—Mitch Freedman—Highland Community College, Des Moines, WA
- 22 Feb 89—Dave Foreman—Colorado College
- 23 Feb 89—Dave Foreman—UC-Boulder-Wilderness Study Group
- 4 Mar 89—Dave Foreman, Bill Oliver—Tucson, AZ
- 3 April 89—Dakota Sid—St. Norbert College, DePere, WI—NOT FIRM
- 12 April 89—Dakota Sid—St. Louis Comm. Coll, St. Louis—NOT FIRM
- 19 April 89—Dave Foreman, Mitch Freedman, Ed Grumbine?—U of Idaho, Moscow, ID
- 24 May 89—Dave Foreman—UC-San Diego, LaJolla, CA.—Wilderness and Human Values class with Dr. John Stewart.
- 6 July 89—Dave Foreman—Sierra Club International Assembly—Windsor, Ontario

THE GENERALITIES

Lou Gold—Touring the West currently, will be in the East during March and April.
Dakota Sid Clifford—Touring the Midwest in April, the East in May.
Dolores LaChapelle will be in Wisconsin during April.
Walkin' Jim Stoltz will be touring the Southwest during April, and the West Coast in May. Will be in Phoenix April 29.
 For all of the above, contact the Speakers Bureau for information and bookings.

ENVIRORAD WICCAN WRITERS GROUP FORMING. Are you tired of society's lame response to environmental problems? Does the moronic attitude of politicians annoy you? Are you fed up with the stupidity of liberal mainstream solutions? If you answered yes to any of these questions, and like to write, let's form a group and give the scum hell. Contact Craig Stehr, POB 464, Cambridge, MA 02238-0464.

The Earth First! Direct Action Fund

A progress report

by Mike Roselle

When most people think of Earth First!, they think of direct action. Being an Earth First!er means being an activist. It means organizing, whether it's just a few old friends or the whole damn bioregion, whether it's for a public hearing or for a midnight wilderness outing. It means taking responsibility for the legacy of destruction that homo shiticus is leaving for future generations of life on Earth. It means adopting the warrior spirit.

We are not a think-tank or policy group. We are a loose association of self-motivated activists. While we share a common worldview that recognizes the right of the natural world to continue to thrive and evolve, we can disagree on most anything else and still work together on the most critical issues facing this planet. We believe that there is no shortage of work to be done and no one person or group has all the answers. Activists in this movement tackle any issue they feel strongly about and don't feel obliged to have their plans approved by others who are not working with them. That is one of the beauties of Earth First! We waste little time with internal process and are able to focus our energy and outrage on more appropriate targets.

Although we are different than other movements in many respects, we are still a movement and we have to maintain and build our movement if we are to accomplish our goals. Mailing lists, bank accounts, computers, boards of directors, and yes, even payrolls are now part of the Earth First! movement. Whether we like it or not, our movement is undergoing structural change as it grows, and the risks and benefits of these changes are not well understood by the movement as a whole. Indeed, there has not been much dialogue lately within Earth First! about who we are, where we are going, and how we will get there.

When we (the now notorious five redneck cowboys) first visualized Earth First!, we had a clear set of goals and a well thought out plan for getting there. Well, amigos, we made it! We set out to create an identity for the radical ecology movement, to create a forum

for our views, and to raise the critical issues. We wanted to work with others who felt the way we did, and we wanted to take on the whole rotten system, not just single issues. We wanted to confront and subvert the dominant paradigm that propels our foolish human arrogance.

So... now what?

The greenhouse effect, ozone depletion and global deforestation have changed the way the people of the world look at themselves. Deep ecology is no longer the driving philosophy of just a few writers and activists, but part of a broader shift in global consciousness. And while the New World paradigm of greed and efficiency still dominates land use policy, some positions we took five years ago that seemed extreme then are now being proposed by the political mainstream. This leap in consciousness has not made our work any easier. The phone rings with more requests for help, the mail piles up, and travel schedules are insane. We are fighting each of these battles as though it is our last. We all know how high the stakes are. This is the warrior spirit.

So what does all this have to do with the Direct Action Fund?

Well, as a long-time grassroots organizer, I have dealt with the nuts and bolts of many Earth First! campaigns to protect natural diversity. I have hiked in the dark past armed security guards, spent cold nights shivering in a ditch, and gone to jail and stood in court with some of EF!'s finest activists. It is these people who give Earth First! its vitality, and it is their actions that make this movement possible. And it is for them that the Direct Action Fund was established. The DAF helps local Earth First! groups across the country with the expenses involved in direct action. Whether it is climbing gear for old growth activists or travel expenses or material to make a banner for some corporate stockholders meeting, the DAF can provide funding on short notice, often after just one phone call. This allows people to spend more of their time fighting for the wilderness instead of fundraising.

The Direct Action Fund is not an organization. We have no staff or officers. All the work is done by volunteers in their own homes. The DAF does not plan or organize actions. Funds are made available to Earth First! groups or individuals directly involved with Earth First! campaigns. Our funding base is made up of other Earth First!ers who respond to the fundraising appeals that we send to EF! Journal subscribers.

As the founder and coordinator of the Direct Action Fund, all final decisions regarding the dispersal of funds are presently my responsibility. The buck stops here. Many people were not enthusiastic about our idea of raising money for direct action. Citing issues such as the dangers of creating another bu-

continued on page 29

1989 MIDWEST EF! ROAD SHOW

With spring approaching, change is in the air. A changing of the guard in Washington hasn't happened, but change is in the air. Earth, "planet of the year"? At last the media seem to be waking from the slumber that has allowed the devastation of our wilderness. It's time for EF! to charge across the continent and fire people up. In March and April, a band of Earth First! snake oil salespersons will do just that, winding a circuitous route cross country.

Twenty-one shows are booked so far; our goal is at least 30. We planned to stop where the Midwest became East, but have enlarged our plans. This is the first notice for you eastern EF!ers. If you are west of the Atlantic and want to do a show, contact me. We'll also do fire-side chats, kids' shows, Earth First! meetings, most anything that will draw a crowd. We'll visit most of the Rainforest Action Groups, gaining support for the Penan in Malaysia, making sure Brazil's Chico Mendes didn't die in vain. We'll show the film "Peacock's War" where so desired.

On her first EF! tour in the lower 48 will be Susan Grace Stoltz. Yes folks, Walkin' Jim isn't the only talented musician in the family, and no, she doesn't sing baritone. Susan lives in Fairbanks, Alaska, and is now putting together her first album. There will be at least one other performer, but the selection hasn't been made yet.

Please apply if interested. We'll spend two days at most venues, one to do the show, the next to talk to people. We will be a traveling EF! library, with info packets from EF! task forces and EF! videos and slide shows.

If interested in hosting a show or helping us in any way, contact Roger Featherstone, POB 91476, Long Beach, CA 90809-1476, (213) 985-0120.

TENTATIVE SHOW SCHEDULE

February 25	San Diego, CA	April 3	Lacrosse, WI
February 28	Tucson, Arizona	April 4	Winona, MN
March 1	Santa Fe, New Mexico	April 5	Milwaukee, WI
March 2	Boulder, Colorado	April 7	Chicago, IL
March 5	Tulsa, Oklahoma	April 10	Kalamazoo, Michigan
March 7	Springfield, Missouri	April 12	Travers City, MI
March 9	Lawrence, Kansas	April 14	Ann Arbor, MI
March 11	Kansas City, MO	April 16	Urbana, IL
March 13	Carbondale, Illinois	April 17	French Lick, Indiana
March 14-16	Saint Louis, MO	April 19	Asheville, North Carolina
March 17	Bloomington, Indiana	April 24	Lansing, MI
March 22	Ashland, Wisconsin	April 25	Hillsdale, MI
March 27	Ladysmith, WI	April 27	Washington, DC
March 29	Madison, WI	April 28	Princeton, New Jersey
March 31	Storm Lake, Iowa	April 29	New York, New York
April 2	Minneapolis, Minnesota	April 30	Centereach, NY
		May 3	Lewiston or Brunswick, Maine

The Design of a Nature Reserve System

by Jared Diamond

ed. note: The following is reprinted with permission from Conservation Biology: The Science of Scarcity and Diversity, edited by Michael E. Soule. Like its predecessor of the same title, this book is one of the most important available for environmentalists designing wilderness proposals or otherwise trying to save biodiversity. Earth First! Books sells it for \$29.50; libraries may obtain ordering information from the publisher: Sinauer Associates, Inc., Sunderland, MA 01375. (Due to space considerations, we have omitted the citations and several portions of Jared Diamond's essay, including a powerful plea to biologists to become active in the field of conservation; we highly recommend these to our readers.)

In this chapter I shall illustrate how biological principles have been used in the comprehensive design of a terrestrial nature reserve system for Indonesian New Guinea. I shall draw further examples from Papua New Guinea and other Pacific countries where I have also worked as consultant in the design and establishment of reserve systems.

My presentation will focus on terrestrial vertebrates, the species with which I am most familiar. In practice, considerations of public relations require conservation biology to emphasize vertebrates, because the public cares far more about vertebrate species than about other taxa. For example, the public appeal of tigers, big mammals and the California condor induced the governments of India, Kenya, and the United States, respectively, to set aside as reserves large areas of habitat that would otherwise surely not have been spared.

Fortunately, there are reasons why reserves designed to protect vertebrates are likely to be valuable for protecting other species. First, distributions of most terrestrial vertebrate species depend on habitats defined by plants, just as do the distributions of invertebrate species. Hence there is often much overlap between distributions of vertebrates, invertebrates, and plants. Second, large-bodied vertebrates tend to be the species with the lowest population densities. Thus, any reserve large enough to contain self-sustaining populations of large vertebrates is likely to contain self-sustaining populations of other species whose distributions are centered on that reserve. Finally, the top predators in an ecosystem are generally vertebrates. For that reason, significant losses of vertebrates may cause losses of many other species.

Nevertheless, in discussions of reserve design that focus on vertebrates, one must beware of overlooking considerations important for other species. For instance, many species of invertebrates and plants occurring at high population densities may be endemic to a very small area that in itself would not warrant a reserve for vertebrates. Thus, plants and invertebrates may require small "vest-pocket reserves" in addition to the larger reserves needed for vertebrates. To name one example, the world's largest butterfly, the Queen Alexandra Birdwing, is confined to a small area in the lowlands of the northern watershed of New Guinea's southeastern peninsula. The Papua New Guinea government wisely decided to set aside a protected area, the Hurupa-Jagiko Wildlife Management Area, centered on the range of this splendid butterfly. However, the converse is not true: while the large reserves essential for vertebrates are likely to be valuable for other species, the vest-pocket reserves required for local species of plants and invertebrates will play little role in vertebrate conservation and will require more intensive management and habitat manipulation.

CONSERVATION IN NEW GUINEA

My work in conservation biology takes place on the islands of the southwest Pacific, primarily for the governments of Papua New Guinea and Indonesian New Guinea, the government of the Solomon Islands, and the South Pacific Commission (the regional consortium of Pacific countries). Among Pacific nations the threats to the biota vary, and so do the conservation programs. At one extreme, the New Zealand Wildlife Service operates one of the most advanced and boldest conservation programs in the world. At the other extreme, some Pacific countries

have no effective conservation program. This discussion will emphasize the island of New Guinea.

The New Guinea biota

New Guinea is one of the world's biological treasures. It is the world's largest island after Greenland, and the largest tropical island. Along with the Andes and the mountains of East Africa, New Guinea's Central Cordillera, rising to 16,500 feet, is one of the three places in the world where glaciers occur on the equator. New Guinea actually functions as a miniature continent; it is large enough to have supported numerous cases of speciation in both birds and mammals by the mechanism otherwise virtually confined to the major continents - namely, formation of geographic isolates within a single land mass.

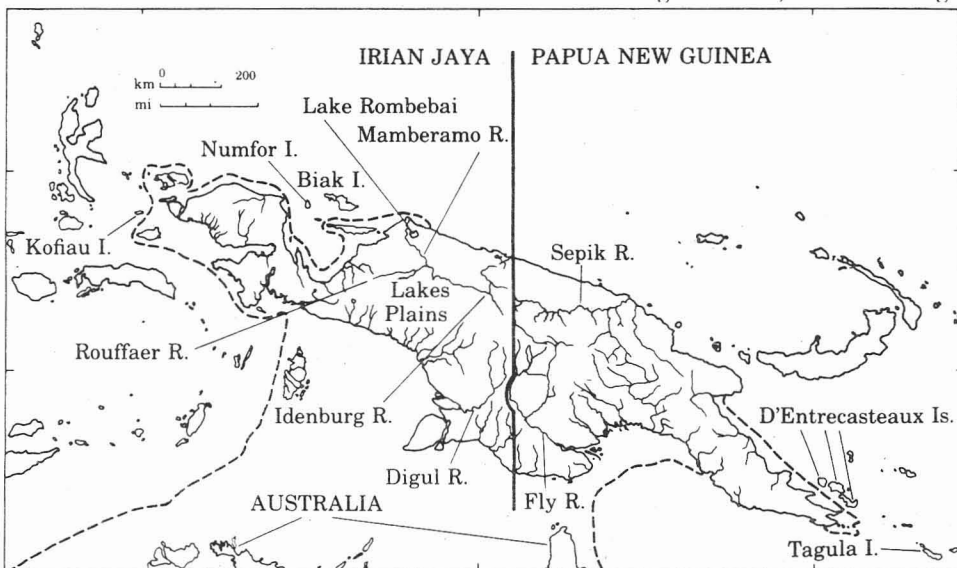


FIGURE 1. Map of New Guinea, showing the international border (heavy, nearly vertical line) between Irian Jaya in the west and Papua New Guinea in the east; the edge of the New Guinea-Australian continental shelf as a dashed line (the area within this dashed line was dry land at low sea level times of the Pleistocene); oceanic islands lying off the continental shelf; some major rivers and lakes; and the inland basin of the Lakes Plains.

The mammals of New Guinea comprise about 200 species, most of which are endemic to the New Guinea region. These mammals are approximately equally divided between marsupials, rodents and bats. The best known and largest of the marsupials are tree kangaroos, wallabies, and phalangers. There have been several radiations of rodents, including giant rats. The radiation of bats includes some of the world's largest bats, *Pteropus* fruit bats with a five-foot wing spread.

The breeding avifauna consists of over 500 species. About half of the species and many of the genera are endemic, so that New Guinea has the most distinctive avifauna of any comparable-sized region in the world. Best known of the birds are the birds of paradise, bowerbirds, mound-builders, and cassowaries. Many of the other birds appear superficially similar to Eurasian warblers, flycatchers, nuthatches, and creepers and were long classified as such. However, recent biochemical studies have shown that these New Guinea and related Australian taxa constitute an independent local radiation, an example of convergent evolution similar to that of the marsupials.

The reptiles on New Guinea include an endemic species of freshwater crocodile, and the world's longest lizard (*Varanus salvadorii*, which can be up to 15 feet long). New Guinea's insects include the birdwing butterflies (*Ornithoptera*), among which is the world's largest butterfly; and a group of large flightless beetles, whose backs bear specialized pits in which grow miniature forests of moss, lichens, and liverworts, in which in turn lives a miniature fauna comprising an endemic family of mites plus rotifers and nematodes. New Guinea's plant communities include the world's largest expanses of mangroves, a large variety of orchids and rhododendrons, and large areas of sago swamp (*Metroxylon sago*).

At present, the New Guinea biota is still intact, with large expanses of natural habitats and no documented extinctions. However, problems are accumulating.

Socio-political considerations

The island of New Guinea is politically divided into two halves whose differences in government require very different approaches to conservation. The eastern half, the independent country of Papua New Guinea, was formed from the former

British colony of Papua and the former German colony of Kaiser-Wilhelms-Land after a long period of Australian colonial mandate government. The population consists of several million New Guineans and only very small European and Chinese minorities. The people are divided into over 400 mutually unintelligible languages, each language being spoken on the average by a few thousand people. In the highlands the languages replace each other approximately every 10 miles. Every bit of land in the country is owned by some clan, and people feel close ties to the land.

Papua New Guinea is a successful democracy. Since independence there have been three elected changes of government, all of them smooth. In addition to the national government, there are strong

provincial governments with considerable responsibility for economic development and other local affairs. Related to Papua New Guinea's democratic government and New Guineans' long tradition of freedom from higher authority, the government does not forbid private ownership of firearms or free movement of people throughout the country. Because all land is privately owned and viewed as nearly sacred, the government finds it difficult to acquire land for any purpose, including national parks.

Because government acquisition of land in Papua New Guinea is difficult, conservation will largely depend on an indigenous concept called wildlife management areas. Under this concept, local people manage their wildlife for their own benefit: they are permitted to exclude other people as hunters, but in return must accept restrictions on their harvest designed to ensure self-sustaining populations. Papua New Guinea already has numerous functioning wildlife management areas, plus several small national parks.

BIOLOGICAL CONSIDERATIONS RELEVANT TO THE DESIGN OF IRIAN JAYA'S RESERVE SYSTEM

The remainder of this chapter emphasizes the reserve system of Irian Jaya, whose design involved compromises between biological and socio-political considerations. The biological input into the selection of protected areas requires considering four questions:

1. What are the likely potential causes of extinctions?
2. What are the major types of habitats that support distinctive biological communities?
3. What are the major biogeographic districts that constitute separate centers of endemism?
4. How much area is required for effective conservation?

Let us now consider these questions in turn.

Modern causes of extinctions

... Even under natural conditions, local populations of vertebrates risk extinction. The two main predictors of natural extinction rates are small population size, and large temporal coefficient of variation of population size. While natural processes are responsible for many witnessed extinctions of local subpopulations on islands and in habitat patches, the modern background rate of natural extinctions for whole species is very low. Instead, nearly all recorded modern extinctions of vertebrate species appear to have been caused by man. For example, man is in one way or another responsible for the extermination of about 63 of the 4200 modern species of mammals and about 88 of the approximately 8500 modern species of birds since AD 1600. The diverse mechanisms by which man has caused these extinctions fall into five categories:

1. *Overkill.* This is the sole mechanism by which man has exterminated or decimated marine species, such as Steller's sea cow plus various species of whales, seals, turtles, crocodiles, and fish. It has also been the or a main cause for virtually all extinctions of large terrestrial mammals and giant tortoises, plus about 15% of bird extinctions and some extinctions of trees logged for wood or sap. In New Guinea the terrestrial species most under hunting pressure are Goura pigeons, large cockatoos and Pesquet's Parrot, birds of paradise, imperial pigeons (*Ducula*), hornbills, tree kangaroos, and wallabies.

2. *Habitat destruction.* This has become the leading cause of extinction worldwide, especially as the destruction of tropical rainforest - the world's most species-rich habitat - has accelerated. Two related but distinct effects are involved: reduction of total habitat area, and fragmentation of large chunks of habitat into small pieces. The most frequent form of habitat destruc-

for Indonesian New Guinea

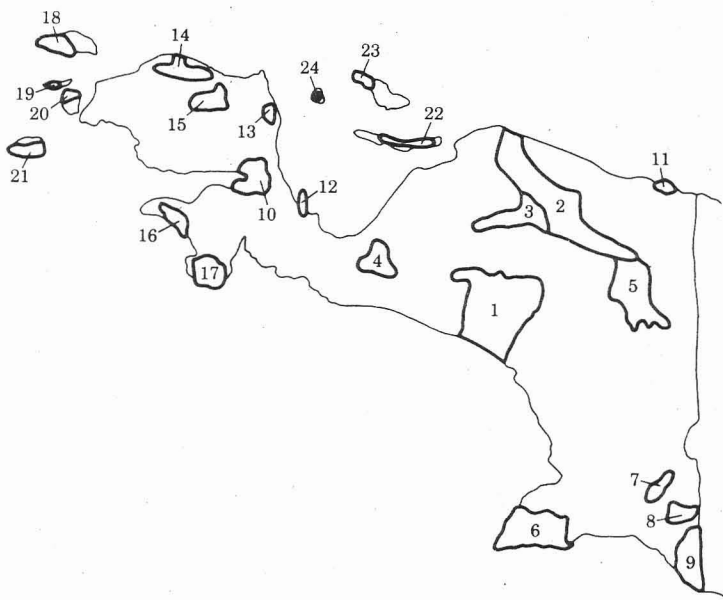


FIGURE 2. Terrestrial reserves established or approved in Irian Jaya as of 1983. Reserves 1 and 2 exceed 5000 square miles in area, while reserves 3, 4, 5, 6, 9, 10, 14, and 15 exceed 1000 square miles. The northern, southern, and Vogelkop lowland centers of endemism are protected by reserves 2 and 3, 1 and 6, and 10 and 14-17, respectively. The main west-east blocs of the Central Cordillera are in reserves 1, 4, and 5. The outlying mountain ranges of the New Guinea mainland are in reserves 2 and 11-17. Reserves 18-22 are on land bridge islands, while reserves 23 and 24 are on oceanic islands. There are large protected areas of savanna in reserves 6-9; mangrove in reserve 10; and marshes, lakes, and major rivers in reserves 2-4 and 7. Eleven smaller reserves are not depicted on this map.

tion has been deforestation for timber, agriculture, or stock grazing. Other forms include impacts by introduced grazing and browsing animals, especially goats and rabbits, and wetland drainage and fire. Commercial logging, subsistence agriculture and commercial oil-palm plantations are currently the main motives for habitat destruction in New Guinea.

3. *Impact of introduced species.* The most spectacular effects of introduced species on native faunas have been the effects of introduced predators on faunas lacking experience of functionally equivalent predators. About half of all extinctions of island birds have been due to introduced mammals (especially rats and cats) on islands lacking native mammals and also lacking native land crabs (the invertebrate equivalent of rats). Native birds of islands with either native rats or native land crabs have been virtually immune to introduced mammals.

Predators are not the only introduced species that have contributed to extinctions. As indicated above, introduced mammalian herbivores have eliminated native plants on islands whose plants evolved in the absence of mammalian browsers. Victims of introduced pathogens have included Hawaiian native birds, the American chestnut, and Swayne's hartebeest and other African ungulates, decimated by avian malaria, chestnut blight, and rinderpest, respectively. Notable impacts of introduced competitors have included effects of introduced fish on native fish throughout the world (often involving mixed predator-competitor effects), effects of introduced placental herbivores on native Australian marsupial herbivores, and the impact of introduced deer on New Zealand's flightless grazing rail, the takaha.

While introduced predators and herbivores are the main cause of extinctions on Pacific islands from the Solomons eastward, they are not currently a major threat in New Guinea, whose biota was "immunized" by long exposure to native predators and herbivores. The introduced mammals with feral populations established to date consist of several rat species, pigs, dogs, cats, and rusa deer. Potentially far more dangerous would be the transport of monkeys to New Guinea from other Indonesian islands.

4. *Pollutants.* Chemical toxicants are rising in importance as agents of extinction. Victims to date include barn owl populations decimated by the new generation of superpoisons against rodents, and Guam birds to whose elimination pesticides may have contributed.

5. *Secondary effects.* One extinction may lead to other extinctions as a secondary consequence. The best documented examples are the chains of extinctions in rivers or lakes following introduction of piscivorous fish. Other examples involve plant-pollinator and fruit-frugivore systems.

The relative importance of these modes of extinction varies from case to case. Hence one of the practical tasks of the conservation biologist is to determine which modes have been or are likely to be operative in a given situation. For example, on Rennell Island, an island of the Solomon Archipelago with no native mammals and numerous endemic bird taxa, I was especially concerned with the risk from introduced rats and forest destruction. On Guam, where practically all native forest-dwelling land birds have recently become either extinct or endangered, habitat destruction has been a negligible factor, while introduced diseases, chemical pollutants, and especially an introduced snake appear to be the main factors. The efforts of the New Zealand Wildlife Service to protect two endangered native bird species, the takaha and saddleback, are focusing on an introduced competitor in the former case, and introduced predators in the latter. For most bird species of the continental tropics today, the main risks come from habitat fragmentation and habitat destruction. For New Guinea today, I consider overkill and habitat destruction the main risks.

Habitat considerations

New Guinea's mountains rise to 16,500 feet. From lowland rainforest one ascends through hill forest, oak forest (*Castanopsis*), southern beech forest (*Nothofagus*), sub-alpine forest, and alpine grassland to glaciers on the highest peaks. An essential consideration in reserve design is that almost all species occupy only a fraction of this altitudinal gradient. For instance, 90% of New Guinea bird species have altitudinal ranges spanning less than 6000 feet, and many span less than 1000 feet. A further consideration is that even species occupying broad spans, such as certain birds of paradise and bowerbirds, often require the whole span for their life cycle: they breed at high altitudes but live as immatures at low altitudes. Species diversity decreases with altitude, but the proportion of species endemic to New Guinea increases with altitude. Hence the foremost habitat considerations in reserve design are that reserves must be selected to represent all altitudinal bands, and that the protected altitudinal bands in a given district must be joined as a continuous transect in order to permit seasonal and age-related altitudinal migration of individual animals.

In addition to this vertical sequence of communities, there is a horizontal sequence at the same altitude. While most of New Guinea is covered by forest of various types, extensive dry areas of southern New Guinea are covered by savanna woodlands of *Eucalyptus* and *Melaleuca*, with a biota more similar to that of Australia than to the rest of New Guinea. Other nonforest communities include several lakes of modest size (Rombebai and Bian in the lowlands, Wissel and Anggi in the

mountains), several major rivers (Fly, Digul, Mamberamo and its tributaries the Rouffaer and Idenburg, plus the Sepik in Papua New Guinea), extensive marshes (especially in the basin termed the Meervlakte or Lakes Plains that includes the Rouffaer and Idenburg Rivers, plus the marshes of the Fly River and other areas of southern New Guinea), strand vegetation and grassland (largely anthropogenic in the mountains). Among specialized forest types New Guinea's mangrove forests are the most extensive in the world, and its swamp forests (especially those dominated by sago, *Metroxylon sagu*) are also extensive. Substrates associated with distinctive forest types include limestone, ultrabasic rocks, and alluvium. On a given substrate, closely related taxa can be found replacing each other between high- and low-rainfall areas (e.g., the fruit dove *Ptilinopus pulchellus* vs. *P. coronulatus*).

The Irian Jaya reserve system has been designed to incorporate these specialized vertical and horizontal sequences of communities. The system encompasses a complete altitudinal cross section of New Guinea, including its highest peaks and equatorial glaciers. There are large areas of savanna in the reserves at Kumbe/Merauke and Pulau Dolok, and there is a large mangrove reserve at Teluk Bintuni. The major lakes, most of the Lakes Plains, and the whole length of the Mamberamo River, and extensive portions of other marshes and rivers are also included in reserves.

Biogeographic considerations

Let us consider first the differentiation between New Guinea itself and its offshore islands, then differentiation of biogeographic districts within New Guinea.

New Guinea's offshore islands fall into three categories. First come those islands of the north and southeast coasts that lie off the shallow shelf surrounding New Guinea (the Sahul Shelf). These lacked Pleistocene land connections to New Guinea and were colonized overwater from New Guinea. Of these, Biak is the largest and has the most endemic species, followed by Kofiau and Numfor of Irian Jaya plus Tagula and the D'Entrecasteaux group of Papua New Guinea. The islands of the Sahul Shelf (Yapen, Salawati, Batanta, Waigeu, and Misol) had intermittent land connections to New Guinea during the Pleistocene and received overland some colonists that subsequently differentiated, especially on Waigeu and Batanta. All these major islands of Irian Jaya have planned reserves except for Kofiau, on which logging had unfortunately proceeded too far before the reserve system was set up. Finally, New Guinea's numerous scattered small islands share some species ("supertramps") absent from the New Guinea mainland, and the small islands serve as important breeding sites for marine turtles and certain pigeons. Many of the small islands, including Mapia, Sayang, Auri, Asia, Aju, and Sabuda, are included in reserves whose importance for the terrestrial biota is overshadowed by their importance for the reef biota and as turtle nesting beaches.

New Guinea itself contains many centers of endemism, each with its own set of endemic species. For instance, among the ribbon-tailed birds of paradise (genus *Astrapia*), the species *A. nigra* is confined to the Arfak Mountains, *A. rothschildi* to the mountains of the Huon Peninsula, and *A. splendissima*, *A. mayeri*, and *A. stephaniae* to the western, central, and eastern portions respectively of the Central Cordillera. Thus, it is not enough to have one reserve for each habitat type; there must be multiple reserves in different parts of the New Guinea "continent."

Clearly, information about species distributions and centers of endemism is critical in deciding where reserves are needed to protect local species. Let us briefly summarize New Guinea biogeographic distributions for the Central Cordillera, outlying mountains, and lowlands.

The Central Cordillera runs east-west for 2500 miles, with no passes under 5000 feet. Hence, for those hillforest species confined to elevations under 5000 feet, the populations of the northern and southern watersheds are isolated, and each watershed has endemic taxa (such as the honeyeater *Meliphaga montana* of the northern watershed and *M. mimikae* of the southern watershed). For species living over 5000 feet endemic taxa replace each other east-to-west, as in the example of *Astrapia* species given earlier in this section. The four main divisions of the Central Cordillera are: (in Irian Jaya) the Snow Mountains and Weyland Mountains in the west, the Star Mountains and Jayawijaya Mountains in the east; (in Papua New Guinea) the Central Highlands just east of Strickland Gorge in the west, and the southeast peninsula east of Menyamy in the east. Each of the large blocks in Irian Jaya is the site of a large reserve.

Isolated from the Central Cordillera by a "sea" of lowlands inhospitable to montane species are nine mountain ranges along the north coast (Huon, Adelbert, and North Coastal Range in Papua New Guinea; Cyclops, Foja, van Rees, Wandamen, Arfak, and Tamrau of Irian Jaya) and two on the south coast (Fakfak and Kumawa in Irian Jaya). All except the van Rees, the lowest of these mountains, have endemic montane species, such as the previously mentioned *Astrapia* species of the Arfak and Huon Mountains (Diamond, 1985b). Of these isolated ranges, the Arfak, Tamrau, and Huon have the highest mountains and are richest in endemics, followed by the Foja Mountains. All these isolated mountain ranges of Irian Jaya have planned reserves except for the van Rees Mountains, which are low, have few inhabitants, and are remote from risk of exploitation in the foreseeable future.

Just as New Guinea's mountains are carved into island-like centers of endemism for montane species by the lowlands, so too New Guinea's lowlands are carved into districts with endemic lowland species by its mountains. The three main lowland biotas are that south of the Central Cordillera in both Irian Jaya and Papua New Guinea, that north of the Central Cordillera in both Irian Jaya and

continued on page 26

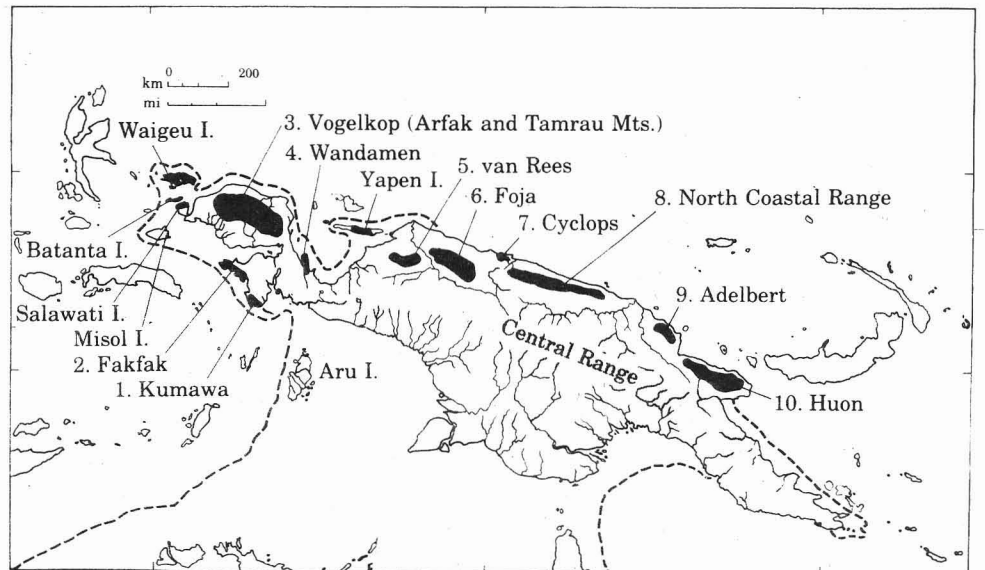


FIGURE 3. Map of New Guinea, showing the Central Cordillera, shaded; the outlying mountain ranges of the New Guinea mainland, numbered and in solid black; the edge of the New Guinea-Australian continental shelf as a dashed line; the five large islands of the continental shelf, which were connected to the New Guinea mainland during the Pleistocene by land bridges; and the mountain ranges on these land bridge islands in solid black.

Out of Sight, Out of Mind

Flathead Inventories Overlook Miles of Roads

Adapted from *Roads Revisited: A Travelway Inventory*
by Keith J. Hammer

The Flathead National Forest in north-west Montana provides occupied habitat essential to the survival of the Grizzly Bear (a Threatened species), and the Gray Wolf and Bald Eagle (both Endangered species). Big game is given special emphasis in the Flathead Forest Plan, which calls for increasing the size of Elk populations on the Forest. Recent studies, however, show that the Flathead has been careless in its evaluation and management of one important need that these creatures share in common—solitude—room to roam away from human disturbance.

The Swan View Coalition of Kalispell, Montana, recently completed a detailed report on the status of travelways—open roads and trails—on the Upper and Lower Swan geographical units of the Flathead National Forest. The Coalition had earlier completed a similar study of the Noisy Face unit. These surveys found that Forest Service inventories greatly underestimate the numbers and mileages of open roads and trails on the Forest. For example, the Flathead's 1987 Road Inventory omitted 70% of the "temporary" (also called "80,000 Series") roads that were found by the Coalition's survey team. In addition, the Coalition found roads listed as closed that were easily entered by motor vehicles, and discovered that the Forest did not evaluate the effects of trails as travelways, and that the Flathead had no system for insuring that roads listed as "obliterated" were ever actually closed.

One effect of these errors is that biologists did not have accurate information to use in estimating the effects of roads and trails on wildlife for the Forest Plan, and allowed planning for more roads in some places that already have road densities above the tolerances of species the Forest is required to protect.

The Importance of a Good Roads Survey

Two recent studies demonstrate why it is essential to have an accurate road and trail inventory before assessing the effects of forest roads and trails upon forest resources. On the Monongahela National Forest in West Virginia, citizen concerns expressed during the forest planning process moved the Monongahela to conduct a thorough inventory of its road system. The final Monongahela Forest Plan states:

This inventory included not only those roads that met the standards for a Forest Service-designed route (and therefore are currently identified in the Forest Service road inventory), but also State roads, temporary roads, orphan roads, and others. Instead of 1,070 miles of road identified as existing in the Forest Service inventory in the draft Plan, there are in fact 3,376 miles of road existing on National Forest land.

In other words, the inventory used in the draft plan underestimated road mileage on the Monongahela by about 68%.

An inventory similar to the Monongahela's was conducted on a portion of the Flathead National Forest's Noisy Face Geographic Unit by Swan View Coalition in 1985. The on-the-ground inventory increased the recognized road and trail mileage for the Noisy Face unit by more than two-thirds: 32

The Effects of Roads and Trails on Sensitive Wildlife

Open forest roads have profound negative effects on wildlife habitat. Researchers with the Forest Service's Intermountain Research Station found that open-road densities of 1 mile per square mile reduced the effectiveness of Elk habitat to only 60% of its potential. As open road densities increased, habitat effectiveness continued to decrease, resulting in less than 20% effectiveness when open-road densities reached 6 miles per square mile.

Grizzly Bear studies conducted on the Rocky Mountain Front of Montana found that Grizzlies generally avoid areas within 500 meters of each side of an open road. Similar findings were made during studies in Yellowstone National Park. Open forest roads also contribute to the death of Grizzlies through poaching and, especially during the Black Bear hunting season, mistaken killing.

Of the sediment produced by logging and road construction, 80–90% is generally attributable to the road itself. The Flathead Forest Plan shows that on the extensive Landtype 73, described in the plan as complexes of glacial tills, thin residual soils, and rocklands on slopes over 60%, 98 tons of sediment are produced per mile of road. Eighty percent of this sediment reaches the streams below. In Flathead streams, a 10% increase in fine sediment to spawning gravels may result in a 50% decrease in the spawning success of Bull Trout, the Forest's indicator species for stream sedimentation.

The 1987 Travel Plan

The Flathead's 1987 Travel Plan analysis was summarized in a "Road Density Spreadsheet." It lists by geographic unit the resultant open-road density when the sum of each unit's open "system" (permanent) roads and open "80,000 Series" (temporary) roads is divided by the total square miles in that unit.

For example, the spreadsheet indicates that 52 miles of road need to be closed in the Lower Swan geographic unit in order to meet the Forest Plan open-road density standard of one mile per square mile for occupied Grizzly Bear habitat. However, a closer look at the Road Density Spreadsheet indicates that it

miles of roads and trails were found in addition to the 27 miles of officially recognized roads and 19 miles of officially recognized trails.

Based on the improved inventory, the forest program biologist calculated a road/trail "impact" density of 2.2 miles/square mile for the central portion of the Noisy Face and concluded that effects associated with the road and trail network "may adversely affect" Grizzly Bear habitat. The Flathead conducted a formal Section 7 consultation with the Fish and Wildlife Service (FWS) as required by the Endangered Species Act. In its draft biological opinion, FWS found that the existing road and trail network reduced the effectiveness of Grizzly habitat to as low as 40% of potential, and that it was "likely to jeopardize the continued existence of the grizzly bear."

Concurrent with the Noisy Face analysis, the Flathead released its 1987 Flathead Travel Plan. The Travel Plan did not include an extensive inventory such as that done by the Monongahela, nor did it use the road and trail inventory of the Noisy Face Geographic Unit conducted by Swan View Coalition. As a result, the Flathead calculated a unit-wide open road density of 0.57 miles/square mile and estimated that the Grizzly Bear habitat effectiveness for the Noisy Face Geographic Unit was as high as 93% of potential. As a result of the more extensive Noisy Face analysis, many roads and trails have since been closed to motor vehicles. With the fate of the Grizzly hanging in the balance, inaccurate inventories cannot be tolerated.

may underestimate the miles of road needing closure, and thus jeopardize the area's Grizzlies. This is because 1) trail impacts in the geographic units are not factored into the road-density analysis (see sidebar "Estimating the Effects of Roads and Trails"), and 2) unreasonable acreages were included in the calculations, causing the analysis to understate open-road densities in important habitat areas.

The US Fish and Wildlife Service told the Flathead that road densities calculated using large geographic unit areas, such as the 87,300-acre Lower Swan unit, are biologically meaningless. Using smaller analysis areas and boundaries that approximate seasonal ranges of wildlife species eliminates unsuitable habitat from the calculations. This prevents underestimating road densities in important areas of wildlife habitat. In the case of the Grizzly Bear, high-elevation summer habitat is of no use in the spring or fall. Hence, high-elevation acreages should not be factored into spring/fall road density calculations.

As a result of conservationist appeals of the Flathead's 1987 Travel Plan, the Regional Forester instructed the Flathead to redo the plan. The new analysis will break down geographic units into smaller units of 5000 to 15,000 acres, and compare open-road densities in these smaller analysis areas to the Forest Plan standard.

The 1987 Travel Plan analysis did not follow these guidelines, though the concurrent Noisy Face analysis did. (See sidebar: "Good Roads Survey.") This is one reason the Travel Plan found a road density of only 0.57 miles per square mile while the more thorough Swan View Coalition inventory suggested a road/trail density of 2.2 miles per square mile. A second reason is that, while the Noisy Face analysis factored the effects of trails into the road density calculations, the 1987 Travel Plan analysis did not.

Moreover, the Flathead acknowledges an error in the Road Density Spreadsheet which underestimates the actual road densities in a third way. The Flathead did not figure 113.3 miles of "obliterated" 80,000 Series roads into the calculations. Such roads, located throughout the non-Wilderness Forest, are identified as "obliterated" in the 80,000 Series Road Inventory. The Forest engineer, however, disclosed that "obliterated" means merely that the road has been identified as in need of obliteration—and there is no apparent mechanism by which a road marked "obliterated" on the computer inventory actually gets obliterated on the ground.

Findings of the Swan View Coalition

In 1986, the Swan View Coalition published its first survey concerning roads and wildlife habitat on the Flathead National Forest. That study found that 38% of the road-closure devices inspected were ineffective in restricting conventional passenger vehicles. The Coalition in 1985 completed an on-the-ground inventory of the Noisy Face unit that increased the recognized road and trail mileage for the unit by more than two-thirds. With this background, and in view of the clearly insufficient data used by the Forest Service in the 1987 Travel Plan, Swan View Coalition prepared its own inventories of the Upper and Lower Swan geographic units of the Flathead's Swan Lake Ranger District.

Stage 1 of the Coalition's inventory mapped 758 corridors in the Upper and Lower Swan units from aerial photographs. Stage 2 was an on-site inspection (ground-truthing) of potential travelways to determine which actually "provide access and mobility."

From May to July of 1988, survey mem-

bers inspected 44% of the 758 potential travelways by foot, mountain bike, or pickup truck. Data on the physical characteristics of each travelway and the type and relative degree of access it provides were recorded. Additional travelways not found on aerial photos during Stage 1 were found to exist in the area ground-truthed. These were added to the Stage 2 inventory.

The 419 travelways inventoried in Stage 2 total 184.1 miles in length. They were divided into 464 travelways segments, in three travelway segment categories:

- reclaimed (no longer provides a significant corridor for forest access)—18.9 miles;
- trail (provides a corridor for forest access less than 40" in width)—50.0 miles;
- road (provides a corridor for forest access by conventional passenger vehicles greater than 40" in width)—115.2 miles.

Of these 115.2 miles of road in 292 road segments, 80% were receiving passenger vehicle use. Another 6% were listed as vulnerable to passenger vehicle use due to inadequate closure.

The Coalition found that most "temporary" travelways have neither been added to the Forest Transportation Information System nor closed and revegetated. The Flathead's Road Inventory recognized only 34.8 miles of the 115.2 miles of "temporary" road ground-truthed in Swan View's study.

Erosion, Noxious Weeds, and Open Roads

In addition to surveying road mileage, Swan View Coalition compiled data on the condition of the roads with respect to erosion, presence of spotted knapweed (a noxious weed favoring disturbed areas), and the adequacy of those road-closure devices found to be in place.

The Coalition recommended that the Forest Service assess the need for erosion control measures on 32% of the 419 travelways inventoried.

Spotted knapweed was found growing on 40% of the travelways. The Forest's road network apparently facilitates the spread of this weed by providing travelways by which the seed is dispersed and dry, bare mineral soil which encourages knapweed growth.

Finally, the Forest Service is legally required to close and revegetate all "temporary" roads over 10 years old, and in the interim must close the roads to public travel unless they are

Estimating the Effects of Roads and Trails on Forest Resources

The most common way of evaluating road and trail impacts is to compare the miles of road and trail receiving use to a threshold standard. The threshold standard is developed by biologists and identifies the level of road and trail densities above which the impacts to wildlife or other resources are unacceptable.

In its simplest form, road density is calculated by taking the total miles of roads open to motor vehicle travel in a given area and dividing by the area size in square miles. In the Flathead Forest Plan, the threshold density standard is 1 mile/square mile for the 79% of non-Wilderness Forest that is occupied Grizzly Bear habitat. For the remaining 21%, the road density standard is 1.8 to 3.2 miles/square mile, where security for big-game species of wildlife is the limiting factor. [The Wilderness portion of the Forest is, of course, roadless.]

A more sophisticated comparison figures in the impacts of trails by assign-

Legal Requirements for Forest Road and Travelway Inventories and Management

In the early 1970s, the public, Congress, and the Forest Service recognized problems with both the proliferation of roads on the National Forests and the excessively high standards to which they were being constructed. In response, several laws and regulations were passed to insure better road management.

Forest Service Regulations—Current Forest Service directives covering the inventory and management of roads and trails require that “all...facilities that provide access and mobility” to the forest must be inventoried (*Forest Service Manual (FSM) 7703.1*). In addition, no “facility” may be dropped from the “forest development transportation system...until all functions as a transportation facility cease...or until the occupied area is returned to resource production” (*FSM 7711.2*). Finally, *FSM 2431.36b* makes it clear that “temporary” roads must be used “only for short-term non-recurrent purchaser use” and are to be closed to public use.

The National Forest Management Act of 1976—NFMA requirements direct the Forest Service to evaluate and revegetate those roads not added to the Transportation System:

Unless the necessity for a permanent road is set forth in the forest development road system plan, any road constructed with a timber contract or other permit or lease shall be designed with the goal of reestablishing vegetative cover on the roadway and areas where the vegetative cover has been disturbed by the construction of the road, within ten years after the termination of the contract, permit, or lease either through artificial or natural means. Such action shall be taken unless it is later determined that the road is needed for use as part of the National Forest Transportation System (*16 USC § 1608 (b)*).

In sum, NFMA and Forest Service regulations require that 1) all travelways be inventoried, 2) all “temporary” roads be closed to public use, and 3) only those no longer usable and that have been returned to the production of trees, forage, or other vegetative resources may be dropped from the inventory.

Accurate trail and road inventories are also necessary for implementation of NFMA requirements that off-road vehicle use be regulated to minimize negative effects on natural resources (*36 CFR 219.21(g)* and *219.27(a)*) and that the FS maintain and improve habitat for indicator species (*36 CFR 219.27(a)(6)*). On the Flathead NF, these include the Grizzly Bear, Elk, and Bull Trout, all of which are sensitive to the effects of roads.

The Endangered Species Act—The ESA prohibits significant disruption of the feeding, breeding, and sheltering habits of Threatened and Endangered species. Disruption by public use of roads and trails may constitute a “taking” of the species.

Section 7 of the ESA also requires the best scientific and commercial information available be used in managing Threatened and Endangered species. The Forest Service must follow these requirements when evaluating

Society, National Forest Action Center, 1400 Eye St. NW, Washington, DC 20005. Make checks payable to The Wilderness Society.

For other questions and information contact the Swan View Coalition, POB 1901, Kalispell, MT 59901.

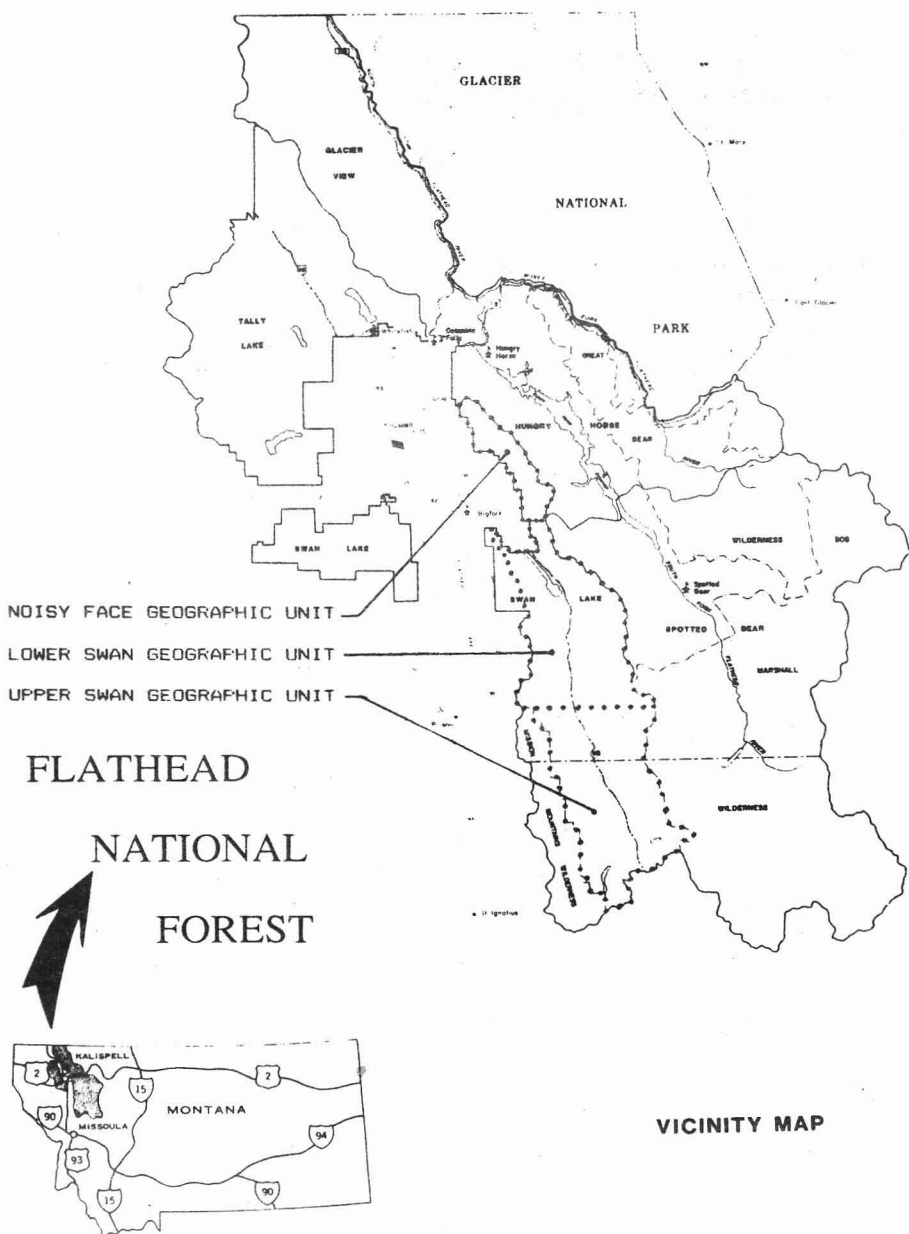
the effects of roads and trails on Threatened or Endangered species, such as the Grizzly Bear. Grizzly Bear expert Dr. Charles Jonkel has written to the Flathead Forest Supervisor:

As you are well aware, there exists a large number of temporary roads or spur roads which have never been numbered, inventoried or mapped, but which remain open to ORV use and to other human traffic. To conserve the bear, each of these roads in MS1 and MS2 [occupied habitat] areas should be inventoried then be effectively closed...To properly favor the bear, the most effective road closure is revegetation. If roads are closed but remain in existence, there is still a significant activity level due to hikers, ORVs, motorcycles, and the like.

The National Environmental Policy Act

The requirements of NEPA control all planning of activities and programs on the National Forests. NEPA requires that the Forest Service evaluate the impacts of roads and trails not only at the individual project level, but cumulatively at the Forest-wide level.

Obviously, this means that a proper inventory is necessary where roads are being planned for a timber sale, and where roads and trails must be coordinated and assessed cumulatively with the Forest's Travel Plan, Transportation Plan, and Forest Plan.



committed to the “permanent” Forest System. (See sidebar: “Legal Requirements.”) On-site inspection indicated that most of the 51 roads recognized in the Flathead’s 80,000 Series inventory are well over 10 years old and should no longer be on the “interim” inventory. The remaining 241 of the total 292 road segments have been omitted from the Forest System.

The Coalition’s report concludes that closure devices need to be installed or improved on 247 roads to secure them from passenger vehicle use. Only 25 of the 247 roads are inventoried as “existing” in the Flathead’s Transportation Information System. Each of the remaining 222 roads found in need of closure qualify as 1) a “temporary” road not intended for recurrent use, 2) a “trespass” road in need of closure, 3) an 80,000 Series “obliterated” road receiving passenger vehicle use, or 4) a road “abandoned” by the Forest Service through its inventory procedures.

Extrapolation of Underestimated Road Miles

The implications of these results, when extrapolated Forest-wide, are disturbing. Prefacing its own estimates with the disclaimer that they should be regarded as providing only a “ballpark” figure, Swan View Coalition calculates a Forest Service underestimation of more than 1300 miles of road on the Flathead. In addition, the Coalition calculates that Forest-wide trail mileages may be underestimated by more than 815 miles.

As directed by the Regional Forester in response to conservationist appeals, the Flathead is revising its 1987 Travel Plan. Although they have not yet completed their data collection, engineering field personnel have found an additional 77 road miles in the Upper and Lower Swan units. They also have found roads at higher than allowable densities in at least 13 of the 31 geographical units on the Forest. Swan View Coalition has presented its survey results for consideration during the preparation of the new Travel Plan.

Citizen-Generated Inventories—A New Tool for Conservationists

With roadless areas and endangered habitats rapidly shrinking, more and more citizens are generating their own data of what is actually on the ground in their local forests. In the Northwest, the Audubon Society is sponsoring “Adopt-a-Forest” workshops that teach citizens techniques for mapping old-growth forests. Elsewhere, conservationists are surveying the success rate of Forest Service reforestation efforts.

As this report pointedly reveals, the time for assessing road and trail status, impacts, and densities is long overdue. It is clear from the ground-truthing work done by Swan View Coalition that the Flathead does not have adequate control over its transportation system. This is likely to be true for other forests nationwide.

Activists interested in conducting similar inventories may wish to order Roads Revisited: A Travelway Inventory by Keith Hammer. This report provides a travelway inspection form and instructions for conducting a travelway inventory. Copies are \$2.50 each, the cost of printing and postage, from The Wilderness

ing them a percentage of the impact of a road. That is, based on the estimated level of a trail’s use, a mile of trail might equate to 10% of the impact of a mile of road and would be “weighted” that percentage of the trail’s actual mileage. The Forest Service did this and summarized it in the biological evaluation for the Noisy Face recreation analysis. The resulting “effect factor” (road and weighted trail density) was used in the final biological opinion issued by the Fish and Wildlife Service.

There are several ways in which the effects of travelways upon wildlife can be underestimated:

- 1 Not accounting for all roads and trails that actually exist and receive use.
- 2 Not factoring in the impact of trails when calculating “open-road density.”
- 3 Using an area so large that the density factor for the area of concern is understated.

As discussed in the accompanying article, the Flathead committed all of these errors in its 1987 Travel Plan.



The Perceptual Implications of Gaia

by David Abram

The Gaia hypothesis, if taken seriously, has logical implications that call into question the mechanical model of perception upon which most contemporary scientific discourse is based. These implications reach beyond the separate sciences and begin to influence our ordinary perceptual experience. To view Gaia as an entirely objective entity only trivializes the radical nature of the hypothesis.

The Gaia hypothesis, as formulated by geochemist James Lovelock, represents a unique moment in scientific thought: the first glimpse, from within the domain of pure and precise science, that this planet might best be described as a coherent, living entity. The hypothesis itself arose in an attempt to make sense of certain anomalous aspects of Earth's atmosphere. It suggests that the actual stability of the atmosphere, given a chemical composition very far from equilibrium, can best be understood by assuming that the atmosphere is actively and sensitively maintained by the oceans, the soils, the plants, and the creatures – indeed, by the whole of the biosphere. In Lovelock's own words, the hypothesis states that *the entire range of living matter on Earth, from whales to viruses, and from oaks to algae, could be regarded as constituting a single living entity, capable of manipulating the Earth's atmosphere to suit its overall needs and endowed with faculties and powers far beyond those of its constituent parts.*⁽¹⁾

It is gratifying to see that this hypothesis is slowly gaining a hearing in the scientific world while being further substantiated by biologist Lynn Margulis, whose meticulous research on microbial evolution has already shown the existence of certain Gaian regulatory systems.⁽²⁾ That the hypothesis will gain proponents only slowly is to be expected, for to accept it as valid is to throw into question many deeply ingrained scientific and cultural assumptions. In fact the recognition of Gaia has powerful implications for virtually every realm of scientific and philosophical endeavor, since it calls for a new way of perceiving our world. In this essay I will explore just a few implications that the Gaia hypothesis holds for our understanding of perception itself.

OUR IMMERSION IN GAIA

It is significant that the first evidence that this planet functions as a living entity should come from a study of the atmosphere, the very aspect of Earth that we most commonly forget. The air is so close to us that we tend to leave it out of our thinking entirely – much as we do not often attend to the experience of breathing, an act so essential to our existence that we take it for granted. The air that surrounds us is invisible to our eyes; doubtless this has something to do with why we usually speak as though there were nothing there. We refer to the *space* between two people; we do not speak of the *air* between us. We generally assume, unless we stop to think about it, that the space between us is roughly continuous with the space between planets. This is attested by our everyday language – we say that we dwell *on* the Earth, not that we live *within* the Earth. Yet if the Gaia hypothesis is correct, we shall have to admit that we exist *in* this planet rather than *on* it. In direct contradiction to the earlier scientific assumption that life on Earth's surface is surrounded by and adapts to an essentially random environment, Gaia indicates that the atmosphere in which we live is itself a dynamic extension of the planetary surface, a functioning organ of Earth.

The new emphasis it places on the atmosphere of this world may be the most radical aspect of the Gaia hypothesis. For it carries the implication that before we

as individuals can begin to recognize Earth as a self-sustaining organic presence, we must reacquire ourselves with the every medium within which we move. The air can no longer be confused with mere negative presence: Henceforth the air is itself a density – mysterious, indeed, for its invisibility – but a thick and tactile presence nonetheless. We are immersed in its depths as surely as fish are immersed in the sea. It is the Medium, the silent interlocutor of all our musings and moods.

In concert with the other animals, the plants, and the microbes themselves, we are an active part of the Earth's atmosphere, constantly circulating the breath of this planet through our bodies, exchanging certain vital gases for others, and thus monitoring and maintaining the delicate make-up of the medium. As Lovelock has indicated, the methane produced by the microorganisms that make their home in our digestive tracts – the gas we produce in our guts – may be one of our essential contributions to the dynamic stability of the atmosphere (less important, to be sure, than the methane contribution of ruminant animals, but essential nonetheless). Small wonder that we of literate culture continue to forget the air, this ubiquitous presence, for we prefer to think of ourselves serving a loftier "purpose," set apart from the rest of creation. Our creativity, we assume, resides not in the depths of our flesh but in some elevated realm of pure thoughts that stands somehow outside the organic.⁽³⁾

Yet it is only by remembering the air that we may recover a place in the world we inhabit. For the air is the invisible presence that materially involves us in the internal life of all that we see when we step out of doors. Let us return to this point later. For now it is enough to discern that the Gaia hypothesis implicates the enveloping atmosphere as a functioning part of the overall system. Thus, if we choose to view this planet as a self-sensing, auto-poietic entity, we shall have to admit that we are ourselves, circumscribed by this entity.

OUR PERCEPTION OF GAIA

The consequences for our understanding of perception and the function of the human senses are important and far reaching. Traditionally perception has been taken to be a strictly one-way process whereby value-free data from the surrounding environment is collected and organized by the human organism. Just as biologists had until recently assumed, for simplicity's sake, that life adapts to an essentially random environment,⁽⁴⁾ so psychologists have assumed that the senses are passive mechanisms adapted to an environment of random, chance events. The interior human "mind" or "subject" is kept apprised of these happenings in the exterior "objective" world by the sense organs, mechanical structures that register whatever discrete bits of sensory data – bits of light, sound, pressure – they come into contact with, and transfer these separate bits of information into the nervous system. Here these sensations are built, step by step, into a representation of the external world. It is this internal representation that is ultimately viewed and given meaning by the innermost "mind" of the perceiver.

Such is the classic model of perception propounded by Locke, Descartes and Berkeley in the 17th century, and later formalized by the founders of modern scientific psychology.⁽⁵⁾ Although it has undergone many revisions, this account still underlies most scientific discourse of our time. Within this account, "meaning" and "value" are assumed to be secondary, derivative phenomena resulting from the internal association of external facts that have no meaning in themselves. And the external world is tacitly assumed to be a collection of purely objective things entirely lacking in meaning until organized by the ineffable human mind. This assumption has deeply influenced today's "value-free" sciences. For each of the natural sciences completely depends, at some level, upon the exercise of human perception for the accumulation of its data – whether through a microscope, a telescope, or even the screen of a computer. Yet none of the sciences has ever come up with an alternative description of per-

ception that could supplant the traditional account. (Even quantum physicists, who have long recognized the untenability of this description of perception with regard to the sub-atomic domain, have proposed no substantial alternative.)

Each of the contemporary sciences, then, must still pay lip service to a model of perception constructed in accordance with 17th century notions of the mechanical nature of the physical world and the absolute separation of mind from matter. One important reason for our prolonged adherence to an obsolete model may be the fact that, although it does not describe perception as we actually experience it, this model does describe perception as we need to conceive it if we are to continue our cultural program of environmental manipulation and spoilage without hindrance of ethical restraint. The traditional account of perception as a uni-directional mechanical process is the only account possible if we still assert the convenient separation of psyche, subjectivity, or self-organization from the material world.

The Gaia hypothesis immediately suggests an alternative view of perception. For by explicitly showing that self-organization is a property of the surrounding biosphere, Gaia shifts the locus of creativity from the human intellect to the enveloping world itself. The creation of meaning and value is no longer accomplished by a ghostly subject hovering inside the human physiology. For value, purpose and meaning already abound in the surrounding landscape. The organic world is filled with its own meanings, its own syntheses and creative transformations. The cacophony of weeds growing in an "empty" lot is now recognized for its essential, almost intelligent role in the planetary homeostasis, and now even a mudflat has its own mysteries akin to those of the human organism.⁽⁶⁾ We begin to glimpse something of the uncanny coherence of enveloping nature, a secret meaningfulness too often obscured by our abstractions. This wild proliferation is not a random chaos but a coherent community of forms, an expressive universe that moves according to a diverse logic very different from that logic we attempt to impose. But if we can no longer define perception as the intake of disparate information from a mute environment, what then is perception?

The answer is surprisingly simple: Perception is communication. It is the constant, on-going communication between this organism that I am and the vast organic entity of which I am a part. In more classical terms, perception is the experience of communication between the individual microcosm and the planetary macrocosm.

If the whole of this environment constitutes a coherent living physiology "endowed with faculties and powers far beyond those of its constituent parts,"⁽⁷⁾ then everything I see, everything I hear is bringing me information regarding the internal state of another living entity – the planet itself. Or rather about an entity that is both other and not-other, for as we have seen, I am circumscribed by this entity, and am, indeed, one of its constituent parts. Perhaps it is misleading, then, to use the term 'communication' to describe a situation in which one of the communicants is entirely a part of the other. The word 'communication', so often associated with a purely linguistic interchange, has overtones of something more conscious and willful than what we are trying to describe. Here we are referring to an exchange far more primordial, and far more constant, than that verbal exchange we carry on among ourselves. What is important is that we describe it as an exchange, a reciprocal interaction between two living presences – my own body and the vast body of the biosphere. Perhaps the term 'communion' is more precise than 'communication'. For by 'communion' we refer to a deeper mode of communication, more corporeal than intellectual, a sort of sensuous immersion – a communication without words.

RECENT STUDIES OF PERCEPTION

Such a description of perception, as a reciprocal phenomenon organized as much by the surrounding world as by oneself, is not entirely new to contemporary psychology. Indeed, recent developments in the study of perception indicate that

it must be reconceptualized as an interactive phenomenon. For example, research on the evolutionary development of perceptual systems in various species suggests that these systems cannot be understood in isolation from the communication systems of those species.⁽⁸⁾ And at least two of the most important 20th century investigators working (independently of each other) on the psychology of human perception – Maurice Merleau-Ponty in France and James J. Gibson in the United States – had already begun, decades ago, to speak of the surrounding physical world as an *active* participant in our perceptual experience.

GIBSON AND "DIRECT PERCEPTION"

James Gibson published his text *The Perception of the Visual World* in 1950 and followed it with *The Senses Considered as Perceptual Systems* in 1966 and *The Ecological Approach to Visual Perception* in 1979.⁽⁹⁾ In these books Gibson challenged the traditional account of perception, which, as indicated above, describes perception as an internal process whereby initially meaningless sensory data (resulting, say, from the impingement of photons on the retinal nerve cells) are built up into an internal representation of the external world. This account, true to its Cartesian foundations, assumes a fundamental disjunction between the psychological (human) perceiver, described ultimately in mentalistic terms, and the purely passive environment, described in terms borrowed from physics. Gibson called this entire paradigm into question by asserting that perception must be studied as an attribute of an organism and its environment taken together. He showed that if we assume a natural compatibility between an animal and its environment – what he and his followers refer to as an "animal-environment synergy" – then perception is recognized as a direct exchange between the organism and its world.

Gibson felt that artificial laboratory situations had misled psychologists into conceptualizing perception as a physically passive, cerebral event. He believed that researchers studying perception should not construct artificially isolated and static experimental conditions – instead they should strive to approximate natural conditions. If they did so they would come to understand the senses as exploratory systems attuned to dynamic meanings already there in the environment. These dynamic meanings, or "affordances" as Gibson has called them, are the way specific regions of the environment directly address themselves to particular species or individuals. Thus, to a human a maple tree may afford "looking at" or "sitting under," while to a sparrow it affords "perching," and to the squirrel it affords "climbing." But these values are not found inside the minds of the animals. Rather they are addressive properties of the physical landscape itself.

In short, for Gibson and those who carry on his work (the 'direct perceptionists') perception is elucidated as a reciprocal interchange between the living intentions of any animal and the dynamic affordances of its world. The psyche, as studied by these psychologists, is a property of the ecosystem as a whole.

MERLEAU-PONTY AND "THE PRIMACY OF PERCEPTION"

Maurice Merleau-Ponty had already reached analogous conclusions in his major study, *The Phenomenology of Perception*, published in France in 1945.⁽¹⁰⁾ He did not seek to build a finished theory of perception but simply to attend closely to the experience of perception and to describe it afresh. In doing so, he steadfastly refuses to construct an explicit system which we might reify into yet another frozen concept, another "internal representation" to set between ourselves and our environment. Instead he seeks a language that will not sever our living bond with the world.

One of the major accomplishments of his *Phenomenology* was to show that the fluid creativity we commonly associate with the human intellect is, in actuality, an elaboration or recapitulation of a deep creativity at the most immediate level of bodily experience. For Merleau-Ponty, it is the body that perceives the world and,

David Abram is a magician and an instructor of natural philosophy. He recently was an invited speaker at the international conference on the Gaia hypothesis at which scientists from many fields debated the merits of Lovelock's hypothesis. The above article originally appeared in *The Ecologist*, which we recommend as perhaps the finest British environmental journal available (Worthyvale Manor, Camelford, Cornwall, UK).

ultimately, thinks the world – not some immaterial mind. Through an intricate and lucid analysis, Merleau-Ponty discloses perception as an almost magical activity in which what he calls the “lived-body” orients and responds to the solicitations of the sensory world, a sort of conversation carried on beneath all our speaking between the body and the gesturing, sounding landscape. In later essays, Merleau-Ponty disclosed this perceptual “pact” between body and world as the very foundation of truth in history, in political thought and action, in art, and in science.

In the book on which he was working at the time of his early death in 1962 – published posthumously, in unfinished form, as *The Visible and the Invisible* (11) – Merleau-Ponty carried his earlier analysis of perception a step further, seeking to describe experientially the actual world to which our senses give us entry, the common domain that we investigate with our reason and science. He found that the “invisible” in man – the region of thought and ideality – is inextricably intertwined with the shifting, metamorphic, intelligent nature of the enveloping world. If perception gives way in us to thought and reflective awareness, these are not properties closed within the human brain, but are the human body’s open reply to questions continually put to it by the subtle self-organizing character of the natural environment.

Merleau-Ponty’s thought is far too complex to summarize here. Yet it is possible to experience Merleau-Ponty’s radical undoing of the traditional “mind-body problem” simply by dropping the conviction that one’s mind is anything other than the body itself. If one is successful in this, then one may abruptly experience oneself in an entirely new manner – not as an immaterial intelligence in an alien mechanical body, but as a magic, self-sensing form – a body that is itself awake and aware, from its toes to its ears. (This corresponds, roughly, to the first stage in Merleau-Ponty’s investigation – the period of the *Phenomenology*.) If one maintains this new awareness for a duration of time, one will begin to experience a corresponding shift in the physical environment. Birds, trees, even rivers and stones begin to stand forth as living, communicative presences.

For when my intelligence starts to recognize its grounding in these senses and this flesh, then it can no longer hold itself apart from the natural world in which this body has its place. As soon as my awareness acknowledges its inherence in this physical form, then the whole of the physical world shudders and wakes. . . . This experience corresponds to the second, unfinished phase in Merleau-Ponty’s writing, when he refers less often to the body as the locus of perceptual experience and begins to write of the collective “Flesh,” his term for the animate, sensitive existence that encompasses us (of which we are but a part).

Thus Merleau-Ponty, who in his earlier work had disclosed the radically incarnate nature of awareness and intelligence, ends by elucidating the world itself from the point of view of the intelligent body – as a wild, self-creative macrocosmos. Perception is now understood as the “Chiasm,” the continuous intertwining between one’s own flesh and “the Flesh of the World.”

So both Gibson and Merleau-Ponty, pursuing two different styles of analysis inherited from their respective intellectual traditions, arrive at an alternative understanding of perception as a direct and reciprocal interchange between the organism and its world. While Gibson’s followers strive to map this interchange in precise, systematic theorems, Merleau-Ponty sought a new language which could ground the various disciplines in an awareness of perception as radical participation. In doing so he began to uncover, hidden behind our abstractions, a sense of the Earth as a vast enigmatic entity, the forgotten ground of all our thoughts and sensations.

These two steps toward a post-Cartesian epistemology are remarkably consonant with the Gaia hypothesis and the implication that perception is a communion between an organism and the biosphere.

RECONSIDERING PERCEPTION

Still, we must further clarify our Gaian definition of perception by answering two obvious objections. Some may object that

it is meaningless to speak of perception as a direct communion between oneself and the planetary macrocosm, since in many situations one’s senses are directly engaged only in relation to another individual organism – as when one is simply talking with another person. Furthermore, even when one is perceptually attuned to many different phenomena at once – when, for example, one is hiking through a forest – still one’s senses are then interwoven within a single region of the planet, a “bioregion” or ecosystem that has its own internal coherence distinct from the planet as a whole. Therefore, if perception is a communion it is at best a communion with relative wholes within Gaia.

But this is merely a provisional objection. We may certainly define specific regions within Gaia as long as we acknowledge Gaia’s enigmatic presence behind these. For if Lovelock’s hypothesis proves correct, then it is the overall planetary metabolism that lends organic coherence to the myriad systems or wholes within it. A forest ecosystem is one such whole. A human ecosystem or culture is another, and when conversing among ourselves we are directly involved in the whole linguistic culture that provides the language for our exchange.

A closer look at perception is also called for at this point. Traditional research on perception has considered each sense as a separate and exclusive modality. Merleau-Ponty, however, has shown that perception is a thoroughly *synaesthetic* phenomenon. In everyday life, in other words, the so-called “separate” senses are thoroughly intertwined, and only in abstract reflection, or in the psychologist’s laboratory, can we isolate the senses from one another. For example, when I perceive waves breaking on the shore, there is no separation of the *sound* of those waves from what I see of them. The swell of each wave as it rolls toward me, the crashing of those waters across the beach – these are experiences in which visual, aural, and visceral/tactile modalities all envelop and inform each other. A certain ocean smell, as well, permeates the whole exchange, lending it an unmistakable flavor.

Very little is known about the mysterious chemical senses of smell and of taste, which seem to resist objective measurement and analysis. Yet it is with these subtle senses that we perceive the state of the very medium in which we move. We both smell and “taste” the atmosphere in the course of our breathing, and these sensations are so constant, so necessary, and yet so unconscious (or unattended to) that we may truly say they provide the hidden context for all the rest of our perceiving. And as Lovelock’s work indicates, the atmosphere is a complex but thoroughly integrated phenomenon, perhaps the most global of all the Earth’s attributes. As I become more aware that I not only perceive things *through* the atmosphere but also perceive the atmosphere itself – that I smell, taste, and touch the atmosphere as well as hear it rustling in the leaves and see it billowing the clouds – I will realize the extent to which my senses keep me in intimate contact with the life of the biosphere as a whole.

A second important objection to our ecological view of ordinary perception as continuous communion with Earth will come from those who point out that much that we perceive is not of this planet – the other planets, the moon, the stars, and our own star, the sun. While obviously not unfounded, this objection rests on the assumption that we dwell *upon* the surface of an essentially inert planet. Yet if we recognize Gaia as a self-regulating entity, we must recognize the atmosphere as a part of that entity. All that we know of other worlds reaches us via the atmosphere of our own world, filtered through the living lens of Earth’s sky. Even when we consider the dependence of vision on the light of the sun, we must acknowledge that the sunlight we know is entirely conditioned by the air of the biosphere. While Gaia depends on the sun for its nourishment, we depend on Gaia. If we venture beyond its atmosphere, it is Earth that enables us to do so: We go in vehicles made of Earth and filled with Earth’s sky. This, I believe, is the deeper significance of James Lovelock’s ideas concerning what he calls the “terraformation” of other planets. (12) By contemplating how humanity might someday transfer the complex Gaian metabolism to other planets in

order to make them habitable by humans, Lovelock is underscoring the fact that no species we know can exist outside the complex Terran metabolism – if we wish to colonize other worlds, we shall have to bring this metabolism with us. Earth as a whole is the constant intermediary between ourselves and the rest of the universe.

Our senses never outstrip the conditions of this world, for they are the very embodiment of those conditions. Perception, we must realize, is more an attribute of the biosphere than a possession of any single species within it. The strange, echolocating sensory systems of bats and of whales, the subtle heat-sensors of snakes, the electroreception of certain fish and the magnetic field sensitivity of migratory birds are not random alternatives to our own range of senses – rather they are necessary adjuncts of our own sensitivity, born in response to variant aspects of a single harmonious whole.

Once perception is understood in this light, as interaction and communion, then several of the puzzles which haunt contemporary psychology will begin to resolve themselves. For instance, the notion of “extra-sensory perception,” itself a contradiction in terms, may be recognized as the necessary by-product of the contemporary assumption that ordinary perception is an entirely mechanical phenomenon. If we assume that the senses are merely passive mechanisms geared to an environment of random events, then any experience of direct, non-verbal communication with others will inevitably be construed as a bizarre event that takes place in some extraordinary dimension outside the material world. But what if the living body, when healthy, is in constant communication with the space around it? We have only to consider the amount of chemical information, regarding the shifting internal state of an organism, that is continually exhaled, expelled, and secreted into the ambient air – information that may be picked up, intentionally or unintentionally, by the chemical senses of any nearby organism – to realize the extent to which subtle communication may be carried on between our bodies at an entirely prereflective level. In a like manner our eyes and our ears are capable of discriminations far more subtle than those to which we normally attend. When these organs are taken together with the organs of taste, smell and touch, as interactive components of a single synaesthetic perceptual system, we may discern that the living body is a natural clairvoyant, and that extra-sensory perception is *not* extra-sensory at all.

PERCEPTION AS COMMUNION

The concept of a living Earth provides a condition for the resolution of numerous theoretical dilemmas. I have focused on the paradox engendered by the assumption that, within the physical world, awareness is an exclusively human attribute. If the external world exists only according to mechanical laws of determinacy and chance, what then is the point of contact between such a determinate world and human awareness – in other words, what is perception? I have suggested that in fact the external world is not devoid of awareness – that it is made up of numerous subjective experiences besides those of our single species – and furthermore that these myriad forms of biotic experience collectively constitute a global experience, or life, that is not without its own creativity and sentience.

If such is the case, as the evidence for Gaia attests, then perception is no longer a paradox, for there is not the total disjunction between “inside” and “outside” worlds that has been assumed. Just as the external world is subject to mathematical measurement and analysis, so the internal world is subject to similar methods of study – as the burgeoning field of neurology attests. The reverse is also true. Just as the interior world of our psychological experience has many ambiguous and indeterminate qualities, so the external world now discloses its own indeterminacy and subjectivity – its own interiority, so to speak.

A recognition of the perceptual ramifications of the Gaia hypothesis is essential to any genuine appraisal of the hypothesis. Without an awareness of Gaia as this very visible, tangible, olfactory world we inhabit, we are apt to understand Lovelock’s discovery in exclusively bio-chemical terms, as yet another scien-

tific abstraction, suitable for manipulating to fit our purposes.

The theoretical discourse of our time has largely alienated us from the world of our everyday senses, while accustoming us to speak casually of the most far-flung realities. Thus other galaxies, “black holes,” the birth of the universe, all seem quite matter-of-fact phenomena easily encompassed by the human mind. But Gaia, as a reality that *encompasses us*, suggests the inconsistency of such blackboard abstractions. Gaia is no mere formula – it is our own body, the wind blowing past our ears and the hawks wheeling overhead. Understood thus with the senses, recognized from within, Gaia is far vaster, more mysterious and eternal than anything we may ever hope to fathom.

If our senses, and hence our whole manner of thinking have taken shape in coevolution and communion with a coherent biosphere, then in all probability it is our own Earth whose traces we discover in our most abstract investigations of quantum and astronomical spaces, the living Earth peering back at us through all our equations. For until we have recognized *perceptually* our organic embeddedness in the collective life of the biosphere, any perception of other worlds must remain hopelessly distorted.

I have suggested that the most radical element of the Gaia hypothesis; as presently formulated, may be the importance it places on the air, the renewed awareness of the atmosphere as a mysterious phenomenon no less influential for invisibility. In Native American cosmology, the air or the Wind is the most sacred of powers. It is the invisible principle that circulates both within and around us, animating the thoughts of all breathing things as it moves the trees and clouds. (13) And indeed, in countless human languages the words for spirit or psyche are derived from the same root as the words for wind and breath. Thus in English the word ‘spirit’ is related to the word ‘respiration’ through their common origin in the Latin word ‘spiritus’, meaning ‘breath’. Likewise our word ‘psyche’, with all its recent derivations, has its roots in the ancient Greek ‘psychein’, which means ‘to breathe’ or ‘to blow (like the wind)’.

If we were to consult some hypothetical future human about the meaning of the word ‘spirit’, he might reply as follows: *Spirit, as any post-industrial soul will tell you, is simply another word for the air, the wind or the breath. The atmosphere is the spirit, the subtle awareness of this planet. We all dwell within the spirit of the Earth and this spirit circulates within us. Our individual psyches, our separate subjectivities are all internal expressions of the invisible awareness, the air, the psyche of this world. And all our perceiving, the secret work of our eyes, nostrils, ears and skin, is our constant communication and communion with the life of the whole. Just as, in breathing, we contribute to the ongoing life of the atmosphere, so also in seeing, in listening, in touching and tasting we participate in the evolution of the living textures and colors that surround us, and thus lend our imaginations to the tasting and shaping of the Earth. Of course the spiders are doing this just as well. . . .*

NOTES

1. Lovelock, J.E. *Gaia: A New Look at Life on Earth*, Oxford U Press, 1982, p.9.
2. Brown & Margulis, “Contaminants and Desiccation Resistance: A Mechanism of Gaia” in *BioSystems*, 1985.
3. Lovelock & Margulis, “Gaia and Geognosy: Towards a Science of the Biosphere” in *Towards a Global Biology*, Boston: Jones and Bartlett Publishing.
4. Indeed it is likely that our forgetting of the air is at the root of the odd concept, so specific to our culture, of pure mind or mentality as an ideal sort of vacuum without physical attributes.
5. Lovelock & Margulis, “Gaia and Geognosy,” p.2.
6. E.B. Titchener, *An Outline of Psychology*, New York: Macmillan, 1896.
7. Lovelock, *Gaia*, Also Brown & Margulis.
8. Lovelock, *Gaia*, p.9.
9. See, e.g., Hopkins, Carl, “Sensory Mechanisms in Animal Communication” in Halliday & Slate, eds., *Animal Behavior 2: Communication* (NY: Freeman & Co, 1983), and articles by Gerhardt & Wiley in same text.
10. Gibson, James, *The Perception of the Visual World*, Boston: Houghton Mifflin, 1950.
11. *The Senses Considered as Perceptual Systems*, Houghton Mifflin, 1966.
12. *The Ecological Approach to Visual Perception*, Houghton Mifflin, 1979.
13. Merleau-Ponty, Maurice, *The Phenomenology of Perception*, translated by C Smith, Routledge & Kegan Paul Ltd, 1962.
14. Merleau-Ponty, *The Visible and the Invisible*, translated by A Lingis, Northwestern U Press, 1968.
15. Lovelock, *The Greening of Mars*, St.Martins/Marek, 1984.
16. See, e.g., McNeley, James, *Holy Wind in Navaho Philosophy*, U of Arizona Press, 1981, on Navaho concept of “Nileh.”

continued from page 21

Papua New Guinea, and that of the Vogelkop Peninsula (Kepala Burug) at the west end of Irian Jaya. For instance, each of these three districts has a different species of crowned pigeon (genus *Goura*), large mound-builder (*Talegalla*), and streaked lory (*Chalcopsitta*). Irian Jaya has very large lowland blocks reserved in the northern and southern lowlands, and smaller blocks on the Vogelkop Peninsula.

Area considerations

Besides specifying in what parts of New Guinea and in what habitats reserves should be located, biologists can also offer guidelines about how large a reserve needs to be. Reserve area determines whether particular species can maintain self-sustaining populations within the reserve, and how many species the reserve can maintain.

The minimum area requirement varies greatly with species. Common forest flycatchers and rats may be able to persist for decades in a woodlot of a fraction of a square mile in area, while eagles and tigers require hundreds and probably thousands of square miles.

The larger a reserve, the more species it will contain. As a rough rule of thumb, a tenfold increase in area doubles the number of species. Part of the reason is that as a reserve gets larger it can sustain populations of species with larger area requirements. Another reason is that larger reserves contain a greater variety of habitats, hence more species limited to habitats absent from smaller reserves.

The New Guinea biota includes many species requiring very large areas for self-sustaining populations. Among these species are ones with huge territories, such as the New Guinea harpy eagle (*Harpypopsis novaeguineae*); species confined to specialized habitats, such as the bird of paradise *Seleucidés melanoleuca*, a denizen of sago swamps; flocking species that wander widely in search of food, such as the parrot *Pseudeos fuscata*; and species whose different age classes live at different altitudes, including many of New Guinea's montane bowerbirds and birds of paradise. If such species, which include many of New Guinea's most distinctive endemics, are to survive in the wild, it is essential to have reserve areas concentrated in a moderate number of large blocks rather than in many small fragments. Indeed, the extinctions resulting from habitat fragmentation are one of the things that a reserve system must prevent.

EVOLUTION OF THE IRIAN JAYA RESERVE SYSTEM

The reserve system began in 1919, when the Dutch colonial administration gazetted a reserve that was later abolished. Efforts resumed under Indonesian sovereignty in 1975. At that time the Forestry Department made an initial proposal consisting of two reserves. More detailed proposals were made by van der Zon and Mulyani (1978) on an FAO-sponsored survey and Schultze-Westrum (1978) on a World Wildlife Fund-sponsored survey. In 1979 I made my first visit to Irian Jaya and made further suggestions for reserves. . . .

. . . Some reserves have already been gazetted, and their boundaries delineated. Proposals for the remaining anticipated reserves have been made and are awaiting

by Michael Frome

Of all the conservationists I know, I can't think of any more worthy of respect, admiration and love than Margaret "Mardy" Murie. She embodies, for one thing, the legacy of her late husband, Olaus, who was distinguished as a field-biologist and an activist champion of wild places and wild creatures. Mardy, on her own part, gives us hope, through belief in ourselves, individually and collectively, and through the instrument of environmental education. She's a prime mover behind the Teton Science School near her home in Jackson Hole, Wyoming.

"I've been showered with more honors than I can understand," she said when I visited with her in 1985. "Out of it all, I feel most strongly about my relationship with young people — being able to talk with them about parks and wilderness and wildlife and the green and growing things and what our attitude toward them should be.

"One day a group from the Teton Science School spent an afternoon here with me. As they were leaving, one of the young boys said, 'Well, I'm glad there are folks like you trying to take care of all those things.' I said, 'Now wait a minute, I'm not going to be here forever; you're going to do it.' And I think those kids will."

I hope she's right. But "those kids" will only do it if they're shown how: how to analyze and face the hard issues of

our time, how to be active in the process of decision-making, how to deal with life and people out of the classroom. That to me is the toughest challenge in environmental education.

Years ago I learned a lesson from Horace M. Albright, the pioneering leader of national parks and the preservation movement of our time. The act of establishing a national park, as he taught me, is not enough in itself to make it work. National parks, national forests, national wildlife refuges, state parks, state forests, county and city parks, nature centers and outdoor science schools — not one of them has its future assured with a label, or with a staff of professionals, or with environmental educators pointing out the beauty of nature. What is most needed, as Horace expressed it, is "wider support from more citizens who will take the trouble to inform themselves of new needs and weak spots in our conservation program."

Nature reserves cannot be uncoupled from the world around them. They cannot endure as valid ecological sources of inspiration and spiritual meaning in surroundings of worsening environmental decay. What we need today is a revolution of thought to challenge and revamp old institutions, all of them: medicine, religion, economics, education, science, politics, communications, and natural resource management. Today's conditions demand a critical examination of established ideas and ideals, of old national goals and traditional personal goals measured in terms of comfort and security, alongside new social standards based on sharing, caring and risk-taking.

Nuclear weapons will never force nations to join in recognizing the limitations of a fragile earth. But environmental educators are uniquely qualified to lead in pledging allegiance to a green and peaceful planet, based on the concept of husbanding and sharing resources, instead of allowing them to be cornered and squandered through super consumerism and waste.

Can environmental educators do it? I wonder. I appreciate the role of the many nature centers functioning across the country with their professional naturalists, yet I lament the studied avoidance of critical issues across the fence. Or, as the director of Palm Springs Desert Museum — a classy oasis filled with natural science exhibits, yet surrounded by a deteriorating environment — told me in 1978: "Our board doesn't want us to be involved."

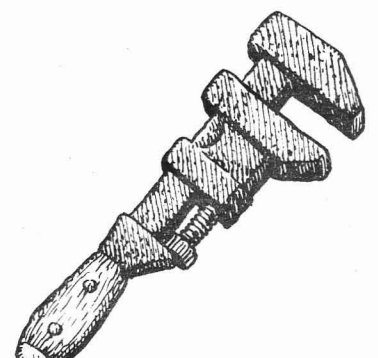
Maybe not, but another of my heroes, the late Justice William O. Douglas, was subject to more powerful pressures than any museum director or environmental educator. His detractors detested his activism, demanding he exercise "judicial restraint." He brushed

them off, unbending: "A man or woman who becomes a justice should try to stay alive; a lifetime diet of the law turns most judges into dull, dry husks."

In one of his celebrated opinions, Justice Douglas defended the rights of citizens who want to intervene legally in behalf of nature. He declared: "The river as plaintiff speaks for the ecological unit of life that is part of it. Those people who have a meaningful relation to that body of water — whether it be a fisherman, a canoeist, a zoologist, or a logger — must be able to speak for the values which the river represents and which are threatened with destruction."

The best of all teaching, I daresay, is by example. Environmental educators, by following the lead of the Muries, Horace Albright and William O. Douglas, can breed a cadre of believers and achievers, capable of taking the message to their own communities and breathing hope into reality.

Michael Frome previously published this piece in *Horizons*, Newsletter of the Sigurd Olson Environmental Institute, Northland College, Ashland, WI 54806.



THE IMMINENT WATERSHED

In the presidential election last fall, the choices were an anti-environment technical buffoon and an outright crook. Both paid a bit of lip service to the environment; neither had anything to brag about. The crook won, of course, not that it really matters. There is no real change in Washington. The forces that have been destroying wilderness for the last 150 years are still in place. Wilderness is not saved in Washington. Rather, Wilderness is saved despite the power structure in the nation's capital. The business of saving wilderness is conducted from our own back yards with our own hands.

So, did the election mean anything? Yes! For the first time in memory, there was an environmental mandate. The major candidates, predictably, ignored this mandate. Some progress was made in local and regional races, but the most important outcome of this waste of time and money is that the snoring masses are finally showing signs of life.

Like it or not, the Bush reign will be the watershed for wilderness in the US and probably elsewhere as well. Little remains. If the general malaise of Americans continues, by the time the backwoods duo (with names like Bush and Quail, their rain ought to benefit the planet!) prepare for reelection, we will have lost; humankind will have failed Mother Earth. On the other hand, if we see this as an opportunity to mold an environmental shape for a soft, spineless administration, then we will be in a position to let loose the greatest barrage of wilderness legislation that the Potomac has seen.

So, let's take the offensive in an all out battle for wilderness. In four years, the public will be shouting "more wilderness, now" and meaning it, or we will have lost.

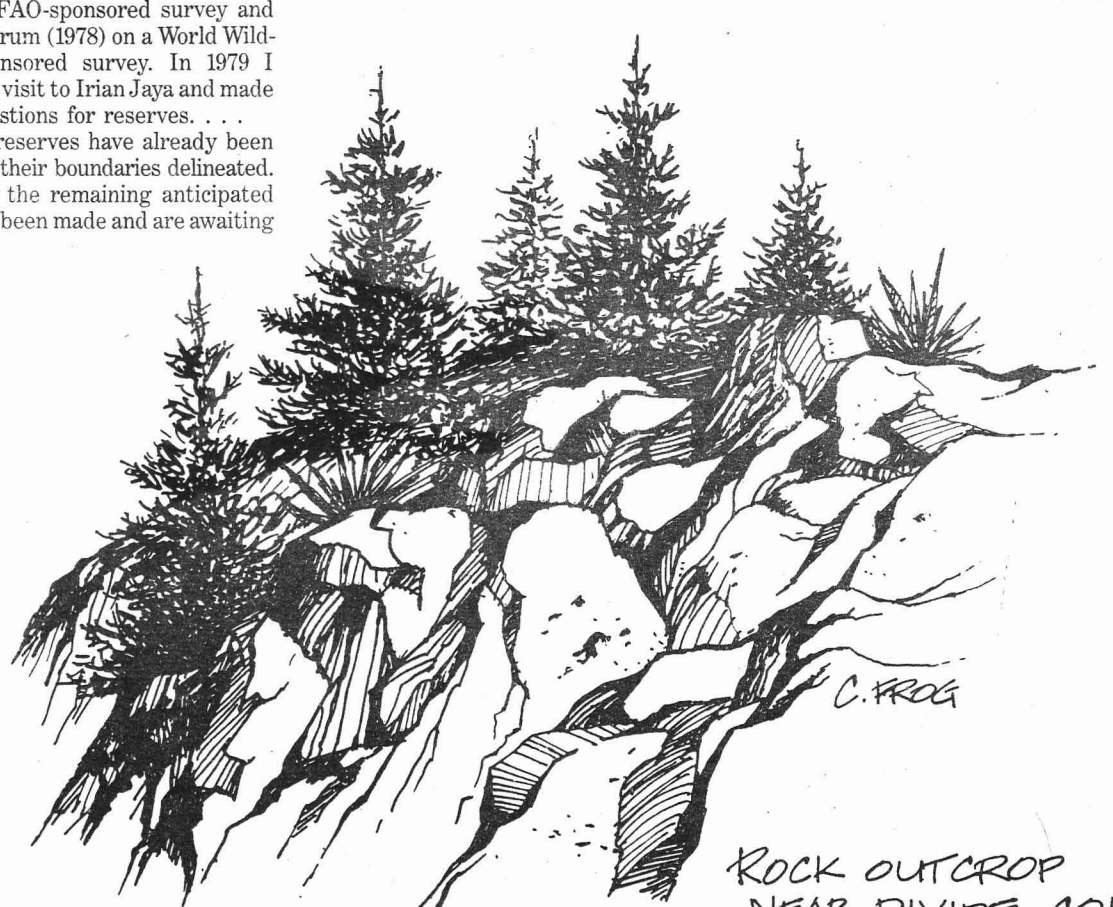
In the Midwest and the East, in those areas where only shards of wilderness remain, there will be the biggest tasks lie. There will we explore how to recreate what we have lost. There we will begin to make the social changes necessary to live with Mother Nature. There we will restore the prairies and the American Chestnut forests, as we start to make the transition from defending what remains to restoring what we have lost.

—Roger Featherstone

gazettement. A detailed management plan has been drawn up for one reserve, and others will soon be underway. . . .

. . . It is still too early to predict what degree of success the Irian Jaya reserve system will meet. The conservation movement does not yet enjoy deep roots or widespread popular understanding in Indonesia. There is not yet a functioning reserve staffed with ground personnel. The threats from settlers from other provinces, the international faunal trade, and economic development (especially logging) remain considerable. At the same time, the Indonesian government's commitment to the reserve system has evidenced itself in the cancellation of timber leases and transmigration projects that would conflict with reserves. If implemented as planned, the Irian Jaya reserve system will consist of one of the largest in the tropical world, occupying a large fraction of the province, with numerous large reserves, and providing coverage of almost all significant habitats and centers of endemism. I am optimistic that the reserve system will become a reality and will be a source of pride to Indonesia and an example to other countries. . . .

Jared Diamond teaches physiology at UCLA and studies birds in New Guinea.



ROCK OUTCROP NEAR DIVIDE, COLORADO

EARTH FIRST, SPACE SECOND

by Leslie Lyon

Ever since the days of Sputnik, the space race has been a source of hope and diversion for humankind. I'm sure I'm not the only person who has felt cheated to be born in an era when space travel is still beyond the reach of the average citizen. Afflicted with the chronic dissatisfaction of my kind, I had a hard time facing the fact that I might already be living on the most beautiful world in the cosmos.

At first glance, the world's space programs appear to be worthy ventures. Most of us remember the excitement of the first manned landing on the moon, and the distraction it provided from the problems of the late 60s. In a society beset by war and privation, the space launches of the last 30 years have allowed us to escape into an unspoiled higher realm, if only by way of a TV screen.

Few people have questioned these expensive flights from reality. Here in America, our national pride has become especially dependent on extraterrestrial hopes. The Challenger disaster plunged this country into the worst malaise since Watergate days. Now that the Discovery shuttle has completed its successful mission, we're being assured that America is standing tall again. This new space success may give George Bush the election boost he needs. Once again, the nation is looking to the skies for our faith in the future, and away from the planet that has created and sustained us.

In the face of all this escapism, I find myself growing uneasy about the merits of the space race. When someone recently asked me if "Earth First!" meant "Space Second," I had to admit that, for me, the answer was a resounding yes.

It's not that space travel is inherently bad. Given prevailing human ethics and motivations, however, I can only shudder at the prospect of an aggressive drive to colonize new planets. The age-old reasons for human migration — overcrowding and resource depletion — are now leading us to turn our eyes to the only frontier left — the cosmos.

Some idealists have promised that we won't repeat the mistakes we've made on Earth; that we'll take better care of whatever new worlds we find. This is wishful thinking of the deadliest kind. When most modern, "civilized" people are still unable to respect Earth, our mother, what reason is there to imagine that we'll treat some strange new world any better?

There are plenty of signs that we'll show this new frontier our traditional lack of respect. Already we're filling the skies with nuclear waste and talking about plundering Mars.

When Reagan recently boasted that we will colonize the galaxy, he did not mention that the galaxy might already be colonized, and if so, probably with beings who take better care of their homes than we ever would. The vicious conquering aliens imagined by paranoid science fiction writers are distortions of evil human behavior.

The militarization of space has gained top priority at NASA. Every shuttle flight includes secret Pentagon applications. Several missions have been totally military and clandestine in nature. The shuttle flight scheduled to follow the ill-fated Challenger was slated to carry a load of plutonium large enough to inflict lung cancer on every person on Earth, if distributed widely enough. That shipment is

now scheduled to go up in 1989, followed by a similar one in 1990.

A look at our national spending priorities will show where our leaders are putting their faith in the future. While spending levels for the escape from Earth have risen steadily in recent years, government funds for conservation and pollution control have plummeted. The NASA budget, not including its hefty Pentagon subsidies, has gone from less than \$5 billion in 1980 to almost \$7.5 billion in 1986. Government expenditures for pollution control and abatement in the same years fell from \$5.5 billion to \$4.8 billion. By 1985, the conservation and land "management" component of the budget had been slashed to less than half its 1980 level.

And just where, we should all ask, is the space race leading us? It looks increasingly

likely that the Star Wars grid will go into orbit in the next 20 years, wasting resources and creating an extensive new generation of space-borne nuclear reactors. Even if the Star Wars boondoggle is scrapped, there will be no lack of dangerous toys orbiting over our heads. This hazardous junk represents numerous disasters waiting to happen. NASA is touting a new \$23 billion space station as the next great human achievement. Apparently, no one remembers what happened to Skylab, our last space station.

Planet Earth is now encircled by a staggering amount of high speed garbage. Jacques Cousteau has observed that the increasing likelihood of lethal collisions with space junk may one day confine us to Earth's surface.

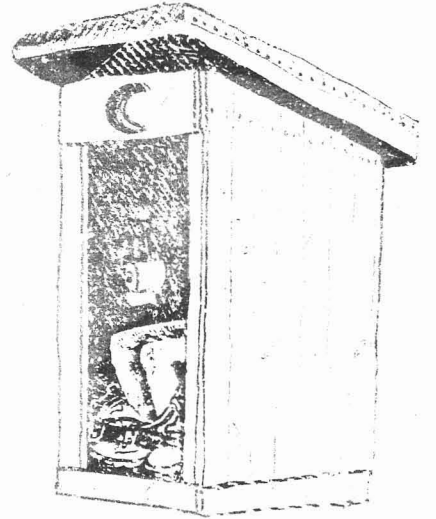
Worst of all, the idea of space conquest may foster the notion that once we've ruined this

planet, we can simply move to another. This notion gives us an excuse to forget the problems we're creating here. It's an extension of the throw-away society.

Presently, with the successful resumption of the shuttle program, the few objections to NASA's agenda center on its financial aspects. Environmentalists should question the wisdom of this new wave of human expansion, both for the sake of Earth and for the other worlds that may fall victim to an unrepentant mankind. If we don't get our own house in order before we venture across the galaxy, the result may be an empire of misery so vast that it will make our domination of Earth look like a Monopoly game.

Leslie Lyon is a Utah writer and environmentalist.

View from the Outhouse



HEARING THE HOWL

Eureka, Missouri: There is no moon tonight, just the ominous glow of suburban sprawl in the northern sky. Most of the stars are lost in the whitewash of the glow, but looking south toward the sparsely populated Ozarks, the stars return with nearly the same brilliance that Lewis and Clark must have seen as they camped beside the mighty Missouri so long ago. Tonight I am 25 miles southwest of St. Louis and much further from the great journey which Thomas Jefferson entrusted to Lewis and Clark. I am walking a dark road with 75 people, none speaking. There are many sounds that travel the night, but we have come to hear just one.

Our guide stops the group, then walks alone for another 100 yards and stops. We cannot see her in the shadows of the night, but we know that she is poised to howl. And she does, solitary and long, beginning with the lower notes and quickly ascending. To the north, a diesel locomotive sends its insolent sound through the tiny valley where we stand. Interstate 44 rumbles to the south, omnipresent. We are far from wilderness. Our guide stops her howl and we search the darkness with our ears, waiting.

Our guide howls again, and we wait. From perhaps a quarter-mile away to the northeast comes an answer, rising clear through the autumn chill, the sound we have come to hear.

A Mexican Gray Wolf pours out its ancestral sound, about which we can only guess the meaning. It is for me a melancholy and poignant moment, hearing the sound I had never heard and may never hear again. But whether or not I hear their call again is of no concern to the wolves. They howl not to satisfy the greatest nemesis their species has ever known; that much we can be sure of.

Another wolf joins the lone howler, an incongruous sound with the highway and the train, so far from northern Minnesota and the last strong stand of *Canis lupus* in the contiguous United States. Then another and another, throwing their voices to the sky for reasons

identical to wolves of centuries past.

They howl for several minutes, and when they stop we walk closer to the source and the chain-link enclosures that contain them. These wolves are part of the Wild Canid Survival and Research Center, established in 1972 with the help of Marlin Perkins and operated by Washington University. It is one of only a few centers in the country that breed wolves under the guidance of the US Fish and Wildlife Service ("owners" of the wolves) for the purpose of reintroducing them to portions of their historic range. At this center are 25 wolves: Mexican, Red, and Iranian. The largest enclosures are one to two acres, a size limited not only by economics (fencing may cost \$25,000 per enclosure) but by the ability of researchers to handle and observe the wolves. The mainstay of the wolves' diet is high-protein dog food.

I cannot help but sympathize with the plight of captive wolves, particularly those not born in captivity. Anyone who has read R.D. Lawrence's *Cry Wild* will have trouble watching a once-wild wolf behind the mesh of chain link, the eyes, the gait, the broken spirit. It is a condition I have never known, to be stripped of all freedom and live as a total dependent in an alien world.

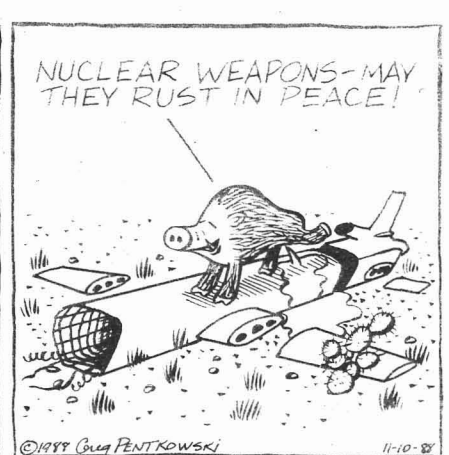
Is it right to tranquilize one of the last remaining female Mexican Gray Wolves in the remote mountains of central Mexico, carry her by horseback for many miles, then hundreds of miles by car and plane to a two-acre enclosure near St. Louis, for the possible salvation of the species? My answer in this case is a cautious yes, but only if we have accelerated the natural process of extinction (possibly not true with the California Condor, a bird many biologists believe has reached an evolutionary dead-end), only if we are working vigorously to protect all remaining habitat in a species' range, and only if we are serious about reintroduction. In the case of wolf reintroduction we appear to be serious, having finally released Red Wolves in North Carolina.

What happens to the probability for successful reintroduction using wolves several generations removed from the wild? How long can we tinker with the products of a sometimes unfathomable evolution, regardless of our motives? Our priority should be the more difficult and less glamorous job of saving *habitat*, habitat where evolution may continue its healthy ways.

The wolves have stopped howling. We humans emit a long and obviously human wolf howl in unison; 75 of us. I suspect that a howl like that would send them springing for the Ozarks, if they could. Instead, to humor us I suppose, they return our howl as I watch the artificial glow in the northern sky. That glow is doing to the stars what we have done to wolves for hundreds of years, with the only deadly difference being that when the last of our lights have faded away, the stars will remain but the wolves may not.

—Robert Streeter

Beyond the Slab



Play: Crossing the Artificial Boundary Between Human and Nature

ed note: With this issue we begin a new column by Dolores LaChapelle, influential exponent of deep ecology and author of three of the most provocative books fitting under that rubric: Earth Festivals, Earth Wisdom, and Sacred Land Sacred Sex (the latter two of which are available from EF! Books). Dolores will also share with us her wisdom at the 89 RRR. —JD

"Fragments of Earth Wisdom" will give you brief glimpses of how we can begin restoring normal human culture — in which humans have lived for 99% of the time we've been on earth. That means, of course, exploring ways of getting out of this temporary cultural anomaly — the Industrial Growth Society that is destroying both true humans and the earth itself. I'll be moving between three levels: 1) suggestions for day to day life; 2) historical background necessary to understand how we got into such a disastrous culture; and 3) information for going ever deeper into the ongoing flow of life.

In this first column I'm taking off from Christoph Manes' article in the Samhain issue because he raised the subject of how important play is for humans. Manes seemed to fall into the modern trap of implying that only now in modern times are we able to learn how to do it right and, in his words, "begin the bumbling, halting...journey to *Homo ludens*: the playful human."

Actually, without play we could never have become human. Play comes *before* humans — the human species developed out of the play of chimps. When scientists began to study early human development, "they steered clear of so frivolous a phenomenon as play." A highly respected researcher in 1947 published a paper that concluded categorically "that, since play could not even be properly defined, it could scarcely be a manageable topic for experimental research." However the growing field of primate ethology showed that conclusion to be nonsense. Indeed, when studied in its natural setting, play becomes "more and more central as one moves up the living primate series from Old World monkeys through the Great Apes, to Man."

Thus while early childhood development experts were wondering if play was a useful category to study, "primatologists were pondering its possible centrality in evolution."

While Manes only hints that ritual may help control that tiny but deadly part of the human brain that we label reason, thanks to the work of Roy Rappaport and Gregory Bateson we now know that ritual is *essential* for this purpose.

Furthermore, adult ritual comes out of freely playing in childhood. Such childhood play is the secret of fully mature adult humanity and creativity. According to Huizinga, the expert on the Middle Ages who wrote the book *Homo Ludens* in 1938: "First and foremost, all play is a voluntary activity. Play to order is no longer play; it could at best be but a forcible imitation of it." And this "forcible imitation" is all our children are allowed these days. If they are not in front of a television set they are out "playing" organized games; they are thus deprived not only of their humanity but also of any real relationship with the vast natural world of the non-human.

A few quotes will help show the

necessity of childhood play and adult ritual for returning to a normal human relationship with the earth, as humans enjoyed for the 40,000 years prior to modern times:

"The special places of childhood are not sacred, but the memory of them is necessary for attaching sacredness to place." Paul Shepard

"Primitive or archaic ritual is thus sacred play, indispensable for the well-being of the community, fecund of cosmic insight and social development...In this sphere of sacred play the child and the poet are at home with the savage." Huizinga

"Archaic man *plays* the order of nature as imprinted on his consciousness...the change of seasons, the rising and setting of the constellations...the course of the sun and moon. And now he plays this great processional order of existence as sacred play, in and through which he actualizes anew, or 'recreates,' the events...and thus helps to maintain the cosmic order... It's the starting point of all social order..." Frobenius (*Leo Frobenius: An Anthology* by Eike Haberland)

"Human play...is the symbolic action which puts us in the presence of the meaning of the world and of life." Eugen Fink ("The Ontology of Play," *Philosophy Today* 18, summer 74)

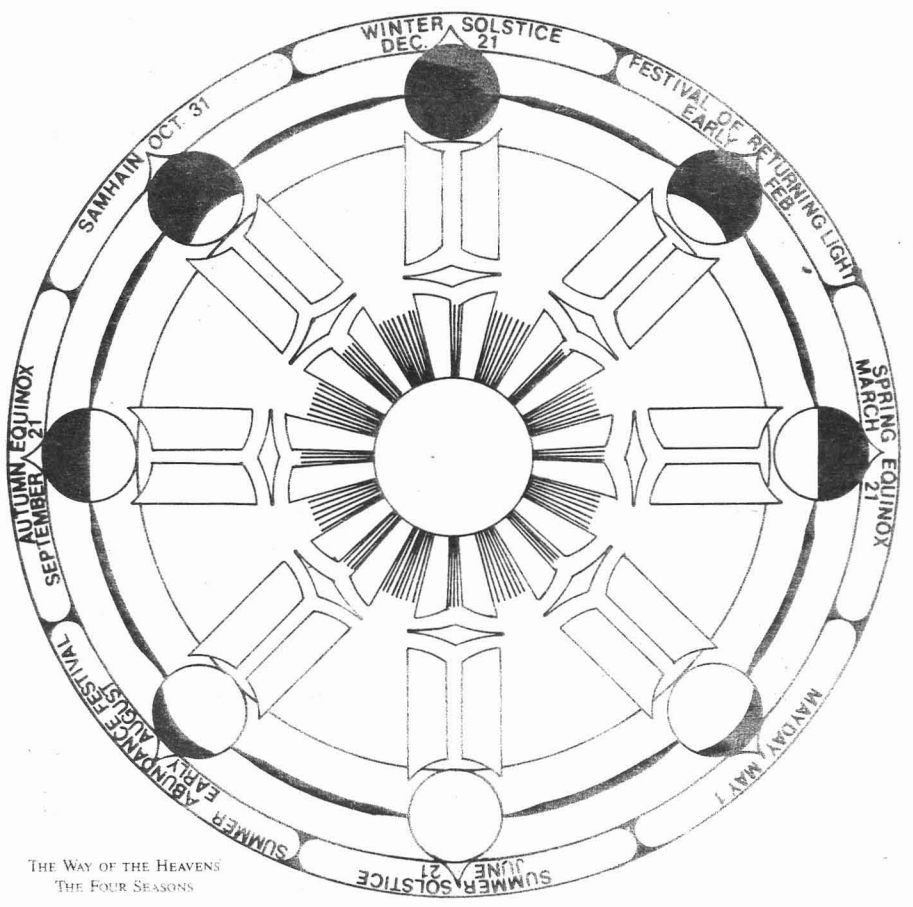
Indeed, Nietzsche said that play is the highest form of human activity. Yet, free, unorganized play is not even considered by the so-called experts on childhood. In fact, only one study has been done on children's daily play out where they actually live (as opposed to sterile playgrounds). In his two year study, Roger Hart found that the places children considered most important were all part of the natural world. (Roger Hart, *Children's Experience of Play*, 1979, NY Irvington Pub. Co.)

Importance of trees: "It was clear in the place preference data how much more valuable trees were to the children than any play equipment." The most popular play location was beneath the "large maple in front of the house." The main reasons given by the children for using this tree concerned the shade from the tree and the dirt beneath it. Children developed strong affection for particular trees. The next important natural feature after trees was dirt. It was "highly valued" from ages 3 to 12 for "building miniature landscapes, often to suit their toy cars and trucks." By the 6th or 7th grade, children seemed to quit playing in the dirt. If caught at it they would claim that it was boring but they had to be there to help the little kids. Actually, of course they enjoyed it as much as ever. Hart points out that "societal attitudes to imaginative play among youths result in a rather sudden and 'unnatural' erosion of this activity."

Hart states that "the most important qualities to the children of this town — sand, dirt, small shallow ponds or brooks of water, slight elevations of topography, low trees and bushes, and tall unmanicured grass — are systematically removed from all new residential areas, even the highly applauded 'new towns'."

If a child does not have the chance to play freely in nature — even under a tree or in a vacant lot — then his efforts to find his place in "the story" — who he is in relation to all the adults in the ongoing story around him — can become very threatening. In other words, the "not-I" is too much in relation to his own small self. But in the childhood nature mystic experience, the child *knows* that he is part of the whole and that the whole of nature accepts him as part of it. Any time in life, the healthy child or adult can draw on this understanding.

Between the ages of 7 and 11 or 12 is the time when play is of the utmost importance. The child must play outdoors as much as possible with essentially the same group of children so that a natural hierarchy can be established, painlessly. The best play places are similar to what humans have always preferred since we left the trees: places to safely hide and look out of, and among rocks, sticks, dirt, mud. At the same time, the child needs to



THE WAY OF THE HEAVENS THE FOUR SEASONS

experience non-human beings: animals, trees, mountains, rivers. Long walks with a child are the best parent/child interaction. Let the child set the pace and stop when she stops. Don't volunteer information but do answer questions.

Jung points out that in our culture we often demand that an adult "violently sunder" himself from his original childhood. What happens when this occurs is the repression of all that really matters to the person, with consequent psychological damage. Jung points out that "Religious observances, i.e., the retelling and ritual repetition of the mythical event, consequently serve the purpose of bringing the image of childhood, and everything connected with it, again and again before the eyes of the conscious mind so that the link with the original condition may not be broken."

Natural play in childhood consists of tension, movement, change, solemnity, rhythm and ultimately rapture. Each of these elements is also present in ceremony or festivals — which are called "deep play". Turning to ritual or adult "deep play," Roy Rappaport says: "It becomes apparent through consideration of ritual's form that ritual is not simply an alternative way to express certain things but that certain things can be expressed only in ritual... I take ritual to be the basic social act... morality, the concept of the sacred, the notion of the divine, and even a paradigm of creation are intrinsic to ritual's structure." Elsewhere Rappaport says that "rituals mend ever again worlds forever breaking apart under the blows of usage and the slashing distinctions of language."

Living in a sacred manner means living in accord with the flow between the "old ways" within our human body and the "old ways" without — the enduring processes in the natural environment. The more the energy circulates within this flow and the less the energy is "leaked off" — such as by TV and other mass media — to the Industrial Growth Society, the better it will be for humans and all of nature. The simple daily utensils of life can become a focus here. The sacred buffalo in the Plains Indians culture and the gourd in both South American and Southeast Asian cultures give us two examples of how even the seemingly trivial aspects of life — what you wear, or what you eat out of, or the buffalo horn or the gourd you drink out of — pertain to the overall sacredness of that life.

How do we begin? To devolve out of the IGS, throw away all your plastic utensils and use gourds, and stop paying attention to media for mindless recreation which addicts you to IGS products. Instead begin earth festivals so that you re-create your life in nature. And for this month of February, celebrate Brigid (for whom this issue of *Earth First!* is named).

And who was (is) Brigid? She is pre-Christian, of course, but for written sources we can look to early Celtic Christian times. In those times, in Scotland, the sacred fire of St. Brigid was carefully guarded and on the Eve of Candlemas a bed of corn and hay was surrounded with candles as a fertility rite,

the fire symbolizing the victorious emergence of the sun from the darkness of winter to warm the seeds and grow the next year's crops.

The Feast of Lights on February 1 was a highly developed Roman fire ceremonial with torches and parading through the streets, to welcome the return of the Goddess from the underworld and the rebirth of nature in the spring due to the growing energy of the great Sun. The Christians put the Feast of Candlemas on this day, an enlarged version of the Bible story about Simeon saying "behold the light of the world" when Mary brought the baby Jesus to the temple at Jerusalem for the purification. To this day, in Europe Candlemas is a major church day with people carrying candles in processions. February is named after *februa*, the strips of sheepskin carried by the young men who ran around the Palatine hill slapping young women to insure fertility from the returning Sun for both sheep and humans.

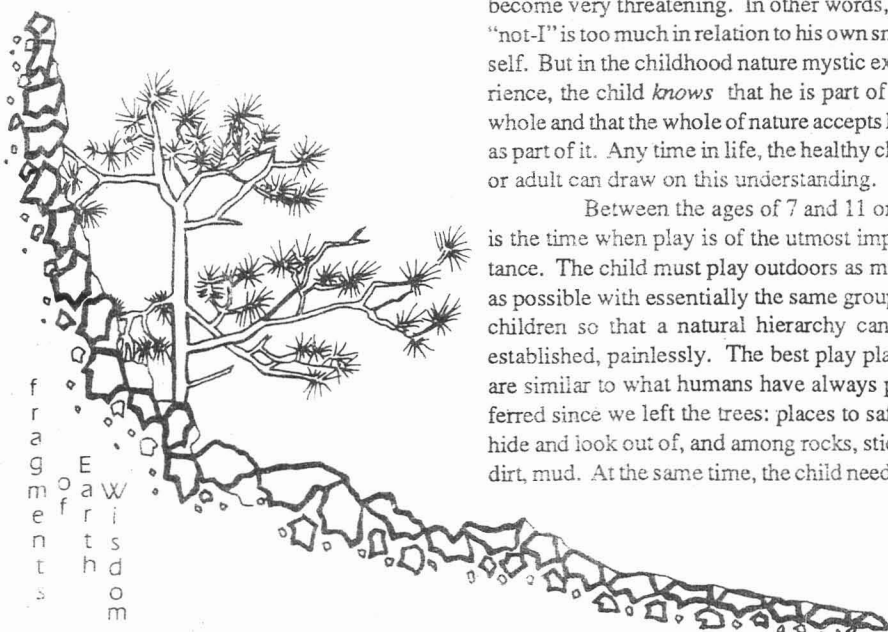
All these early spring rituals come under the designation, FESTIVALS OF RETURNING LIGHT. So you can right now gather friends together, form a procession after dark with lighted candles, and lead them, maze-style, around the yard — if you haven't an open space nearby — and into the house to a shrine featuring the signs of the returning Goddess from the underground. Depending on where you are, these signs may be opening pussy willows; first blades of green grass; and if far enough south, the first fruits of the earth, which may be merely dandelions — exotics in North America, but edible and nutritious greens. This is followed by chanting, drumming, and feasting with special emphasis on the local first gifts of the land, given to us out of the growing power of Father Sun and Mother Earth's response.

"Behold, the spring has come: the earth has received the embraces of the sun and we shall soon see the results of that love! Every seed has awakened and so has all animal life. It is through this mysterious power that we too have our being" Sitting Bull, Sioux warrior, 1877

And from ancient China: "Through rites Heaven and Earth join in harmony, the sun and moon shine, the four seasons proceed in order, the stars and constellations march, the rivers flow and all things flourish."

Sage rulers in China observed the patterns in the world without and sought to define WAYS in which humans could make these same patterns explicit in their own lives. By following these patterns shown to us through ritual activity, we begin to learn how to fit into that larger pattern of nature in our own place; thus we flourish as well.

For further reading see: 1) free newsletter of Way of the Mountain Center, Box 541, Silverton, CO 81433; 2) *Sacred Land, Sacred Sex* by Dolores LaChapelle (\$23.60 inc. postage) available from Way of the Mountain Center or Earth First!; 3) *Chuang Tzu: World Philosopher at Play* by Kuang-Ming Wu; 4) *Ecology, Meaning and Religion* by Roy Rappaport.



Direct Action Fund...

continued from page 19

reocracy and concentrating or centralizing decision making, and possible competition with other Earth First! entities for funding, many were skeptical in the beginning. We have tried very hard to address as many of those concerns as possible and still raise the needed funds for direct action. The results have convinced many of our critics, and attracted widespread support from the movement.

We have drafted guidelines outlining acceptable means for both soliciting and disbursing contributions. In addition, we have formed an advisory board made up entirely of activists to handle long-term planning and to hear any grievances. We are currently assessing our options with regard to long-term financial structure, so that we may raise and distribute funds in a manner that is both legal and expedient. Unlike the EF! Foundation, donations to the Direct Action Fund are not tax deductible and the money we raise can therefore be used for a wide range of activities, including the planning and staging of demonstrations and other non-violent actions. Many EF! projects receive help from both the Foundation and DAF, while raising other funds as well. Since the DAF began raising funds in September of 1987, we have distributed over \$40,000 to various grassroots EF! projects. We keep records of all expenditures and donations and are now preparing a year-end financial report, a copy of which will be available upon request.

As someone who would rather be on the road organizing and agitating with fellow Earth First!ers than dealing with deposit slips, the IRS, and data bases, being responsible for such a large operation has come as a quite a shock to me. But I believe that this kind of fundraising is necessary. A little money goes a long way out on the front lines. We operate with minimal overhead and without creating new bureaucracies within the movement. We have helped with dozens of actions on a wide range of issues. To that extent, this work has been rewarding. We have seen more than a few successes. Our direct action program has grown to become one of the most respected in the country, and it is helping to set a stronger agenda for the entire environmental movement.

Consider this: A recent poll taken in Northern California showed a surprising 70% of the people from Santa Rosa north to the Oregon border had heard of Earth First! More surprising still was that those who had heard of Earth First! were evenly divided on the question of approval, with most people either strongly approving or strongly disapproving of Earth First! A recent survey of its contributors by CO-EVOLUTION QUARTERLY found that Earth First! was mentioned more often than any other group during discussions on the future of activism.

We have raised the debate, now we must raise the stakes! Reforms being sought by the established environmental groups are shamefully inadequate to deal with the pressing global crisis. A groundswell of grassroots activism is where the environmental movement is now heading. As more and more people demand clean air, clean water, an end to wilderness destruction, and a reversal of the policies that are leading us into global warming and ozone depletion, the environmental politics of Earth First! are going to sound more and more acceptable. Many of the Washington-based environmental groups are increasingly being seen as part of the problem, and may soon be swept aside by a rising tide of angry citizens who want real answers, and are tired of being told to be reasonable.

Our work is cut out for us. We must continue to express our outrage at the destruction of our planet. We must continue to confront, resist, and expose those who would put profit and convenience before the integrity of the Earth's ecosystems. We must continue to organize those who believe there is no longer room left for compromise. We may not be able to organize the entire environmental movement, but Earth First! must continue to be a loud voice for the rights of wild nature, and against human arrogance. People are listening.

—Mike Roselle



THE GRIZZLY DEN

by Howie Wolke

Although I'd rather be skiing through the pines, firs, Doug-firs, spruces and larches of the Bitterroots, I feel compelled to instead address an article in the last Journal by my buddies in Wild Rockies EF! ("Melcher & Montana Wilderness Bill Bite the Dust").

The article leads the reader to believe that right-wing Republican Conrad Burns (an anti-wilderness type) thwarted Democrat John Melcher (a particularly clever and sleazy anti-wilderness type), in Melcher's bid for reelection to the US Senate, because of wilderness politics. According to the article, the Burns campaign successfully labeled Melcher as pro-wilderness and anti-jobs, and so Burns — in an economically depressed state with chronic unemployment — won a big upset. This scenario has been widely reported, but like many journalistic "truths," it is a crock of male bovine feces.

According to a recent poll by Western District Democrat Congressman Pat Williams (on wilderness, a middle of the road type), 57% of Montana voters want all or most of the state's 6.5 million acres of National Forest roadless lands protected as Wilderness. Thus, a majority of Montanans want more wilder-

ness protected than what Williams proposed last Congress. They want *far* more Wilderness than Melcher ever wanted. Hell, a majority of Montanans even want more than the Montana Wilderness (Release) Association officially wants. (MWA's "Alternative W" proposal is for 2.8 million acres, substantially less than half of the state's National Forest roadless lands.)

No, Burns won because when their bank accounts are down, people vote for change. Burns won because Melcher didn't campaign very hard. Burns won because Melcher is a puke, and people finally found out. Burns won because the citizens have not yet had time to learn that he, too, is a puke. Wilderness had little to do with Melcher's defeat.

The Republican sabotage of the Montana wilderness bill can, indeed, turn out for the best, but I don't yet share the optimism of the Wild Rockies EF! article, which states: "And now, Montana wilderness is on the national agenda." Montana wilderness, as well as that of neighboring Idaho, certainly *should* be on the national agenda. We all agree that leaving it up to state Congressional delegations is the ticket that will buy loggers, miners and other

exploiters the bulk of the ever-shrinking wilderness pie. But the future of the Wild Rockies will only be protected if a major national campaign emerges from the ashes of the recently vetoed so-called Montana Wilderness Bill. The newly-formed Alliance for the Wild Rockies is an exciting step in the right direction. But let's not kid ourselves. For the campaign to become national, the mainstream groups will have to jump on the bandwagon, too, much like they did during the Alaska campaign. For that to happen, we residents of the Wild Rockies region (northwest Wyoming, Idaho, Montana, and the Canadian Rockies) must make a lot of noise.

So, to activists of our region, my advice is to forget Montana and Idaho politics and write letters to Congress, and letters to editors all over the US. Agitate, impede (file appeals, lawsuits, etc), and educate. Demonstrate at Forest Service offices, since they are, after all, the slime from which we're trying to save the Wild Rockies. But there's something else, too. The pen may be mightier than the sword, but the mallet and spike may be the mightiest of all. That's right, I'm advocating widespread monkeywrenching in the Wild Rockies. I mean illegal but morally imperative physical resistance to the assault on our wilderness, the last remaining refuge for 3.5 billion years of evolution. Yes, the Wild Rockies *must* be made a national issue. But unless we save the rich filling of our wilderness pie, now, everything but the crust may be gobbled up by the Forest Service and their obese partners by the time the national campaign achieves any results. Save the Wild Rockies! Now!

—Howie Wolke



Sleaze from the Slickrock

by the head of Joaquin.

by the new head of Joaquin

I am the new head of Joaquin. The old head of Joaquin is gone. He got disgusted and moved to New Zealand where he raises kiwis. Git along little kiwis.

As the new head of Joaquin, let me say first that I am not writing out of any love for all this silliness. I am being *coerced*. Extorted. Someone named "Dale T." is forcing me to write this column. The gall of the guy; Foreman was bad enough.

Before I start describing the treachery, the madness, the debauchery that continues to pervade our slickrocks, let me address myself to the hundreds upon hundreds of confrontational environmentalists who every day risk life and limb climbing trees, hanging from George Washington's nose and dressing up like furry little animals chanting Earth Mother slogans.

Get a life. Start collecting stamps. I mean, really you people. I don't think I can handle another of these melodramatic first person narratives: "The sun was just rising above the pines when the big D9 cat crested the ridge. Me and big breasted Bonnie stood firmly in front of the wicked trespasser, knowing full well that Earth Mother was by our side." Who is this Earth Mother anyway? Did she actually give birth to a planet? It had to be a C-section, that's all I know. The day I saw Spurs Jackson on Salt Lake City TV dressed up like Uranium King (he and his compatriots wore these bizarre beehive helmets and dumped "yellow cake" all over the podium of a DOE meeting), I knew things were getting strange.

Well, I'm rambling. My head hurts. Somewhere out there, I'll bet my stomach hurts too. Who can say? Anyway, I will tell you what is happening on the Colorado Plateau. It is a mixed bag at best.

THE BURR TRIAL

We're getting our butts kicked. Garfield County and its wretched politicians

have apparently won their miserable battle to rape the land and probably eventually pave the whole damn road. The county fought this battle for one reason: To prove a point. To win the battle. So now there will be two new paved roads from Lake Powell to Escalante. And by taking the Burr Trail, you can bypass Hanksville and Caineville and Torrey and Loa, the towns along the other route that depend on tourism for their very survival, and get to Escalante about 10 minutes faster. Good plan, guys. And only at a cost of tens of millions of dollars according to their engineers, the firm of Creamer and Noble. These guys did the engineering work on the Quail Creek dam near St. George. Last week, the dam collapsed, causing about \$10 million in property damage. . . . Heh, maybe these guys *are* on our side.

THE BURR TRIAL

Grant Johnson was finally acquitted last week of criminal charges filed against him in connection with the alleged vandalism of several bulldozers used to rape the Burr Trail. However, while this is currently only at a rumor stage, the new head has heard (I like that — "head has heard" — pleasant alliteration, don't you think?) that Garfield County may now file a civil suit against Grant Johnson. Don't these bullet-heads ever give up?

DEER SLAUGHTER IN SAN JUAN COUNTY

A bunch of moronic, brain-damaged teenagers from Monticello and Blanding went on a shooting spree several weeks ago to see how many deer they could kill. At least 19 deer, wintering at Harts Point and east of Monticello, were slaughtered for "fun," though some of the more enterprising members of the atrocity brigade arranged a deal with a local taxidermist. The teenagers, aged 15 to 18, are accused of "unlawful possession of protected wildlife takes out of season." However, many of them are charged with the crime of "wasting" the kill. Whole carcasses

were left in most cases. Often, blood trails of animals were visible, indicating that the animals ran for some distance after being shot before they collapsed.

Rudy Musclow, the conservation officer for the State Division of Wildlife Resources, said that six of the teenagers will be charged in juvenile court; the 18 year old will stand trial as an adult. It is a pity that they will not face a jury of seven does and five bucks. **A BRIGHT SPOT IN GRAND COUNTY**

There is one glimmer of light. Last November, the voters of Grand County voted overwhelmingly to stop the proposed construction of a toxic waste incinerator near Cisco, 30 miles upstream from Moab. In the process, they threw out the incumbent county commissioners, ardent supporters of the incinerator. In their place, the voters elected two Democrats who actually refer to themselves as environmentalists in public places. While you could hardly call them liberals, it is a remarkable first step in the right direction. **BUT THEN AGAIN . . .**

To close on a traditional dismal note, the BLM in Moab has proposed another of those stupid loop roads in Grand and San Juan Counties. It would connect an existing road to Hatch Point with the Kane Springs Road. At a conservatively estimated cost of \$7.3 million, the two roads would be joined by blasting 5 miles of new road up Trough Springs Canyon, a lovely little place that could fall victim to D9s and explosives. In addition, the existing low-speed dirt and gravel roads would be realigned, drastically "improved" and paved. The new county commission of Grand County and the Moab City Council have given their blessings to the project, so opposition must come from elsewhere.

Well, that is all I have to say. I wish the old head of Joaquin would come back but his affinity for kiwis almost makes that an impossibility. Until I am extorted again . . . farewell.



THE REDESIGNED FOREST, R. & E. Miles (POB 1916, San Pedro, CA 90733), 235pp., bibliography, appendices, index, 47 photos, \$18.95 cloth, \$9.95 paper.

Environmentalists face a paradox. The more we try to save wilderness and natural diversity, the more we fail to save them. The more we engage in the political decision making process, the more we speak the language of oppression. In the American political system, there are winners and losers. No group wants to lose, so there is a tendency to play "dirty tricks" if that's what it takes to win. Courts, legislatures and the press maintain an adversarial process. "We" must fight "them." Scientific studies and expert testimony are used as weapons against the enemy.

Earth First!ers are labeled "macho," "terrorists," "green hippies," and a variety of other unsavory caricatures. When people are labeled, they can be categorized. Individuation is lost in statements such as "you're just an ecoterrorist."

Into this conflict Chris Maser brings a new (but very old, wise) message. Maser presents the ecology of the forest, especially ancient forests of the Pacific Northwest, in an engaging fashion, without jargon and without patronizing his reader. And he presents the ecology of the forest in the context of a larger, deeper perspective on science and contemporary society. Instead of winners and losers, Maser sees people who have similar objectives (be they timber corporations or hippie EF!ers). In the introduction to *The Redesigning Forest* Maser says he wants his readers to remember "... as we strive to maintain sustainable forests, that we are faced with the constant struggle of accepting change and its accompanying uncertainties and this often gives rise to fear of the future. We must therefore be gentle with one another ... because there are no enemies out there, only frightened people."

Instead of seeing wood fiber as the only product of forests, Maser argues that we should see human dignity as the product of good forest management. "With a renewed focus on human dignity as a 'product' of the resource decision-making process, we can broaden the philosophical basis of management to include forests and grasslands, oceans and societies rather than only a few selected commodities that they produce. Emphasis on human dignity in management will help foster teamwork that, in turn, nurtures mutual trust and respect rather than the 'us against them' syndrome."

In part one of *The Redesigning Forest* Maser compares nature's design of a forest to human design of a forest. He begins with the premise that nature functions perfectly. "Our perception of how Nature functions is imperfect." Maser wants to encourage a "new paradigm" for forestry based relationships. He sees the forest as an expression of the soil. Sustainable forests are based on sustainable soils. Commenting on current forest practices, Maser concludes "we are blind to the gift Nature gives us. And in our blindness we redesign the forest with an instability that cannot be repaired with fertilizers, herbicides or pesticides. Our forests can only be healed with humility, love, understanding, and patience."

In part two, Maser looks at the history of ideas in Europe and America concerning forests. When decisions are based on short-term economic expediency in modern society, we increase biological simplification in the world's ecosystem.

In part three, he draws upon Buddhism, Gandhi, Elisabeth Kubler-Ross and others to articulate his philosophy of interpersonal relations. Unlike many scientists, Maser does not deny the importance of emotion. Indeed, he

asks all of us to bring out our emotions in discussions with Forest Service personnel or industry personnel, but in a certain way. "If we listen — really listen — to one another and validate each other's feelings (emotions) even if we don't agree, we can begin to manage our forests without the violence and pain of not being heard."

Part four includes a justification for ancient forests as part of sustainable forests, and some guidelines for restoration forestry. Maser argues that we cannot have sustainable forest industries without sustainable forests. "If we liquidate the old-growth forests — our living laboratories — and our plantations fail, as plantations are failing over much of the world, industry will be the bath water thrown out with the baby."

For Maser, the Forest Service is more like a dysfunctional family than a monolithic bureaucracy. Maser frequently uses the language of family therapy, developed to deal with unresolved relationships in families of alcoholics or families which have experienced child abuse, to describe interactions within federal land management agencies.

After working as a researcher with the Bureau of Land Management for many years, Maser resigned so that he could speak out freely. He now calls himself a consultant on sustainable forestry and speaks wherever invited in North America. Early in 1989, the Forest Service and the BLM will jointly publish Maser's book on "the forest and the sea" which traces the story of downed logs as they travel to the ocean and the functions of these "dead trees" for the aquatic ecosystem. Another book by Maser on ancient forests will be published by Sierra Club Books early in 1989.

Maser's approach to the forest is firmly grounded in the tradition of Aldo Leopold and in contemporary theories of forest ecology. Although Maser does not use the term 'deep ecology', he is working to his own kind of deeper ecology by asking questions regarding our philosophy of management and our psychology. Some of these questions, and the tentative answers presented by Maser, make persons working in the Forest Service and many Earth First!ers uncomfortable. As we engage the process of becoming more mature persons, we must face those uncomfortable questions and comfort each other.

Reviewed by Bill Devall.

1999: VICTORY WITHOUT WAR, Richard Nixon, Simon & Schuster, 1988, 336pp., \$19.95.

While taking a walk in Boston along the most polluted harbor in the world recently, I found a copy of Nixon's latest book, left on a bench. I sat down and speed read all 336 pages. This is a book by a former US president, which discusses US strategy in dealing with the Superpowers, those who would like to be Superpowers, and those who cannot be Superpowers. Nixon discusses nuclear weapons, world economy, technology, scientific breakthrough, and has something to say about nearly every part of the globe. He only forgot one thing: the environment. There is no mention of it in the book.

Reviewed by Craig Stehr.

OWNING IT ALL, William Kittredge, 1987, Graywolf Press (POB 75006, St Paul, MN 55175), \$8, softcover, 182pp.

William Kittredge is one of the more interesting and important writers to emerge out of the contemporary Western US literary scene. An Oregonian by birth and a Montanan by choice, Kittredge has come to know the West intimately. His book *Owning It All* reflects his keen sense of place derived from first-hand experience combined with a rare gift of astute observation. It is a fine volume of

essays that belongs on the shelf next to works such as Ed Abbey's *The Journey Home* and Charles Bowden's *Blue Desert*.

The topics Kittredge discusses in this book are as multifaceted as the Western landscape. He writes about buckaroos, rednecks, Grizzlies, the oilfields of Wyoming, the magic of Yellowstone in winter, the rich Native American art of the Northwest Coast, and the diverse literature of the American West. This vast array of subjects notwithstanding, one central message prevails throughout the book: The West is losing its integrity, its character, its unique qualities due to our obliviousness to reality. Americans tenaciously cling to a mythology that defines the West as free land to be exploited:

The teaching mythology we grew up with in the American West is a pastoral story of agricultural ownership. The story begins with a vast, innocent continent, natural and almost magically alive, capable of inspiring us to reverence and awe, and yet savage, a wilderness. A good rural people come from the East, and they take the land from its native inhabitants, and tame it for agricultural purposes, bringing civilization: a notion of how to live embodied in law. The story is as old as invading armies, and at heart it is a racist, sexist, imperialist mythology of conquest; a rationale for violence — against other people and against nature ... And our mythology tells us we own the West, absolutely and morally ... Our efforts have surely earned us the right to absolute control over the thing we created. (p.63)

The author's message is obvious. Unless we strive to revise this dominant, anthropocentric mythology, unless we are willing to divest ourselves of the fatal notion that we are "owning it all," there will be no way to save the West. In the chapter "Yellowstone In Winter," Kittredge reveals to the reader his deeply ecological attitude toward wilderness: *Yellowstone is a sacred place ... it is sacred for reasons beyond landscape and Old Faithful and even the great waterfall on the Yellowstone River ... It is sacred because of the ecosystem that survives there.* (p.139)

Owning It All is essential reading for anyone wishing to come closer to really understanding the American West. It is to be hoped that William Kittredge will gain a much wider audience.

Reviewed by Friedrich Hecker.

SHANDOKA, Jeri McAndrews & Catherine Alelyunas, editors; quarterly, \$12/yr, Box 1103, Telluride, CO 81435.

Ol' Grizzly Wolke has a point. Excess baggage only weighs down the movement. And yet, like John, one has to recognize that the more you have with you, the more you have to share.

I for one applaud the blossoming of diversity in the *EF! Journal*, from Chim Blea to Christoph Manes. Theory tickles my feet as much as updates from canopy platforms. And as a baptized Christian converted to paganism (from the Latin 'paganus' meaning "rural, country folk") honoring Yule is a lovely antidote to the commercialization of Christmas in this country. Keeping the "pagan" names for each *EF! Journal* issue is as important as keeping "Dear Shit Fer Brains" for letters, if only for the shock value. It's time everyone awoke to what's really obscene in this culture, and how many kinds of true religions really exist.

Still, Howie is right. We can't let visible differences of diet, politics or lifestyle keep us apart as warriors on behalf of the Mother. But perhaps the word 'tolerance' only gets part of it. What we must cultivate is *respect* for the Other — be it animal, vegetable, or mineral. If we can respect each other enough to listen and provide an outlet for all our diverse views while still focusing on the central goal (which I feel is bigger than saving the wild and dives down to the roots of a culture that truly, as Dolores LaChapelle suggests, celebrates life), then maybe we could do more than simply tolerate each other, and learn to *appreciate* the full spectrum of differences.

One way out of the Grizzly Den dilemma is to read more, especially regional publications with related, if not twin concerns. Here in the Four Corners area we are especially lucky to have a "bioregional anthology of literature and art" and "a forum for ecological affirmation" co-edited by EF! poet/dancer Jeri McAndrews. A dynamic performer, McAndrews can get

300 people up and boogieing within a wink. Her words carry a bite, but like Kali she can twist her body into Kessler silk the very next minute.

Changing Woman is her Indian name. Hopi, Dine, Anasazi — she listens to them all. The magazine itself is named after the Ute word for the most impressive of the triad Fourteeners in the San Miguel Range southwest of Telluride, "Storm Maker/Storm Collector," Wilson Peak.

The range of work in *Shandoka* is surprisingly diverse: from an excerpt of the highly-acclaimed collection of sci-fi stories of Pamela Lifton-Zoline (who spoke at the Uncompahgre Plateau RRR) to the Shalako (Zuni Pueblo celebration) Diary of Denver writer DeMers. Recent features have included an essay on the wild herb osha, author Rob Schulteis on driving the Great Basin, and interviews with Navajo activist Wolf Binalli, Rainbow Family healer Dr. David Smith, midwife assistant Luna Bontempo, and four AIDS patients.

Weighty stuff. It will burden you, and it will be a delight. Add a little of this Southwestern spice to your activist diet. Learn a new facet of some of your allies in the struggle to save the planet. And cultivate respect.

Shandoka can help you do it.

Reviewed by Art Goodtimes.

PERMACULTURE: A DESIGNERS' MANUAL; Bill Mollison; illustrations by Andrew Jeeves; Tagari Publications, Tyalgum, NSW, Australia; 1988; 575pp; \$59.95 hardcover. Available from the Sonoran Permaculture Association-P, POB 27371, Tucson, AZ 85726-7371, \$62.65ppd or 67.70 UPS 2nd day air.

Is human civilization destined to destroy its Earth-home and itself, or ought we be setting about the laborious task of restoring the planet by stopping deforestation, reforestation, and living in a sustainable fashion in harmony with wild species?

What we have done, we can undo. There is no longer time to waste nor any need to accumulate more evidence of disasters; the time for action is here.

Those in the tribe working at restoring damaged lands or interested in living in ways that don't contribute to Earth's death can gain much from this impressive book. Loaded with strategies and exquisitely illustrated, it is the culmination of Australian Bill Mollison's work in "permaculture," a word he coined for "permanent agriculture": the design of human systems — food production, energy, water, housing, community, etc. — for environmental sustainability, while preserving and extending natural systems.

As defenders of the Earth, what does Bill Mollison offer us?

Affirmation: He confirms the need to recreate the wilds that have been displaced. Without further hesitation, we need to confidently act using proven tactics to heal this planet-home.

In wilderness, we are visitors or strangers. We have neither need nor right to interfere or dominate. We should not settle there, and thus leave wastelands at our back. In wilderness we may learn lessons basic to good design, but we cannot improve on the information already available there. In wilderness, we learn of our little part in the scheme of all things.

Hope: In devastation, Mollison sees opportunity and solutions. In drylands salted via irrigation, or overgrazed, there is the opportunity to revegetate. Millions of dollars sitting in ethical investment funds lack ethically responsible applicants, and Mollison maintains that permaculture designers ought to be proposing restorative programs.

Observations: Since permaculture ecosystems are designed to mimic natural ecosystems' harmonious diversity and stability, we look to the natural model when developing our own self-sufficient habitation. Mollison packs this manual with wily tips learned from his life in the bush.

Time: A fully developed permaculture system should run itself, leaving us time to harvest and follow other pursuits.

Responsibility: Mollison believes we have two main responsibilities:

... Primarily, it is to get our house and garden, our place of living, in order, so that it supports us. Secondarily, it is to limit our population on earth, or we ourselves become the final plague.

Both of these duties are intimately connected, as stable regions create stable populations. If we do not get our cities, homes, and gardens in order, so that they feed and shelter us, we must lay waste to all other natural systems. Thus, truly responsible conservationists have gardens which support their food needs, and are working to reduce their own energy needs. . . . It is hypocrisy to pretend to save forests, yet to buy daily newspapers and packaged food; to preserve native plants, yet rely on agrochemical production for food; and to adopt a diet which calls for broadscale food production.

Empowerment: This is an exhaustive compendium of tools and techniques for putting the Earth-home in order. Whether a person seeks information on purifying polluted water or constructing swales for water conservation and harvesting, on desalting soils in desertified areas or establishing recycling in a community, on earth-berming a dwelling for energy efficiency or creating a non-profit trust, it's all found here.

Some of Mollison's ideas may seem environmentally risky. The use of non-native species in revegetation efforts may concern some ecologists. In workshops, Mollison lists plant species that can be used to confront specific problems, native or not, but states that within bioregions, designers need to study native plant and animal guilds and use the resultant knowledge in reforestation efforts. In the manual, Mollison writes, *We are fast approaching the point where we need refuges for all global life forms, as well as regional, national, or state parks for indigenous forms of plants and animals. While we see our local flora and fauna as "native", we may also logically see all life as "native to Earth". While we try to preserve systems that are still local and diverse, we should also build new or recombinant ecologies from global resources, especially in order to stabilize degraded lands.*

Startling to me was Mollison's reliance on earth moving machinery as appropriate technology in the chapter on Earthworking. The very machines that some would prefer to see immobilized here become tools for Earthcare. As a writer with a deep disdain for big yellow machines, maintaining that work which can't be done using hand tools is likely damaging something, I had difficulty with this section. His rationale is no doubt that achieving the reforestation of degraded land justifies a process using heavy machinery.

Perhaps the most subversive information is contained in the last chapter, *The Strategies Of An Alternative Global Nation*. After 13 chapters of specific tactics, Mollison presents strategies for social and economic change in society.

For this reviewer, this book is both practical and radical. Using concepts and techniques described in *Permaculture I* and *II*, Mollison's previous works, my family has progressed a modest distance along that long road toward self-reliance. The beauty of this new work is that whether small scale or large, whether vegetating a naked city lot or revegetating an overgrazed section, it documents strategies for restoring healthy ecosystems. What could be more satisfying to an Earth lover than freeing oneself from consumptive practices and earning a gainful living restoring hurting lands to a wild condition?

... the end result of the adoption of permaculture strategies in any country or region will be to dramatically reduce the area of agricultural environment needed by the households and the settlements of people, and to release much of the landscape for the sole use of wildlife and for re-occupation by endemic flora. Respect for all life forms is a basic, and in fact essential, ethic for all people.

Reviewed by John Patterson, Tucson, AZ.

THE FOOL'S PROGRESS, Henry Holt & Co., 1988, 485pp., \$19.95 hardbound.

Larry McMurtry has called him "the Thoreau of the American West." *The New York Times Magazine* speaks of his "outrageous comedy" and "freewheeling willingness to be brash, irresponsibly satiric, happily excessive." "The man," proclaimed *The Bloomsbury Review*, "quite simply is a master."

"The man" himself says he writes to provide "an antidote to despair." He is Edward Abbey. Cactus Ed.

Abbey is more than just a popular novelist and essayist, a sought-after

speaker on the university lecture circuit, a thorn in the collective side of despoilers of wild lands, wildlife and human freedom and dignity; he is a thinking reader's writer, a pathfinder, a master of descriptive prose who writes with symphonic eloquence of the West and its denizens. From his nonfiction masterwork, *Desert Solitaire*:

June in the desert. The sun roars down from its track in space with a savage and holy light, a fantastic music in the mind.

From the novel *Black Sun*:

Each day begins like any other. Gently. Cautiously. The way he likes it. A dawn wind through the forest, the questioning calls of obscure birds. He hears the flute-like song, cool as silver, of a hermit thrush.

While Ed Abbey in person is not the boisterous character he projects in print, but a quiet, modest man who prefers listening to talking, he is nonetheless unique. A character. An iconoclast. The acknowledged wild card of Western literature. A "gadfly with a stinger like a scorpion" (Wallace Stegner). "The original fly in the ointment" (Thomas McGuane). A man still "with the bark on" (Edward Hoagland). As often as his writing is sensitive and eloquent, it is raw, bawdy, unholy.

Of his seven novels and baker's dozen nonfiction volumes, the most widely acclaimed are the canyon-country classic *Desert Solitaire*, an autobiographical account of Abbey's sojourn as a reluctant ranger in Utah's Arches National Monument (now Park); and *The Monkey Wrench Gang*, a rollicking "caper" novel of anarchical ecological retribution. Both of these seem destined for eternity.

Born in 1927 on a "sidehill farm" near Home, Pennsylvania, Abbey graduated high school in 1944, then took to the road on thumb power for a summer of solo vagabonding through the American Southwest. He was just beginning to feel at home in the deserts, mountains and slickrock canyons of the Four Corners states when the tail end of World War II de-toured him to Italy.

On his release from the army, Abbey again came West, this time to attend the University of New Mexico. There he earned a bachelor's degree, then - after spending a year in Edinburgh, Scotland as a Fulbright Fellow and writing a thesis entitled "Anarchism and the Morality of Violence" - won a master's degree in philosophy.

At the moment, Ed, his wife Clarke and their children live on the outskirts of Tucson, where he is a tenured professor of creative writing at the University of Arizona. Soon, however, they'll relocate to near Moab, Utah, where they're building a log cabin. Today, Abbey is a successful, reasonably content man.

But it hasn't always been so. In his 61 years of self-directed living, Cactus Ed has gotten - and given - more than a few bumps: married and divorced, married and widowed, jailed, hailed, and railed against.

And now, with the release of *The Fool's Progress*, Abbey retraces many of his past's rocky trails in a semi-pseudo-autobiographical novel that is, in this reader's opinion, his greatest work of fiction to date. The book's protagonist, one Henry Holyoak Lightcap, late of Stump Creek, West Virginia, Albuquerque, Moab and Tucson, will seem immediately familiar to veteran Abbey readers. But while it's fun attempting to sleuth out the hidden bits of personal fact in the weighty tome, the reader should remain aware that *The Fool's Progress* is, in fact, fiction.

And such a tale!

The Fool's Progress is as fat as a Bible. As unholy as a millionaire televangelist. It's a freewheeling, time-traveling road book. A *Catcher in the Rye* all grown up. And it is hilarious.

But *Fool* is more than comedy (both high and low): Its far-flung landscapes are brushed with all the glorious Technicolor vibrancy of *Desert Solitaire*. The closing scenes of Claire's story evoke all the same feelings of helplessness, hopelessness, and pain that a younger Abbey painted so compellingly in *Black Sun*.

And the closing pages, near the purported end of Henry Lightcap's long trail of wanderings - *The Fool's* denouement - are so evocative of the saddest and most joyful possibilities of life, that this hardcase old critic - a cynical reader of fiction who's willing to suspend disbelief only rarely and always grudgingly - broke down and wept.

"My primary goal as a writer," Abbey

has said, "has always been to create something funny enough and beautiful enough to move people to laughter and to tears. For all time. Or at least for the next 35 to 40 years. That's my notion of literary immortality."

Well, Ed, with *The Fool's Progress*, you've done it. Again.

While some readers and critics, timid or moralistic in their reading preferences, will find Henry Lightcap's driving sexuality and raw vulgarity offensive, *Fool* is nonetheless a masterpiece. Moreover, as its subtitle proclaims, it is, indeed, "an honest novel."

-Reviewed by David Petersen, Western editor for Mother Earth News; editor of Big Sky, Fair Land: The Environmental Essays of A.B. Guthrie, Jr., and author of *Among the Elk* (both from Northland Publishing, 1988).

(c) 1988 by David L. Petersen

THE CASSANDRA CONFERENCE; Resources and the Human Environment; ed by Paul Ehrlich and John Holdren; 1988; Texas A & M U Press, Drawer C, College Station, TX 77843; \$14.95 paper; 330pp.

The Cassandra Conference is an impressive collection of papers delivered by some of this country's most important ecologists and futurists. It is named after a prophetess of Greek mythology. Cassandra's gift of foretelling was unerring but tainted in a peculiar way: Due to a curse laid upon her by the god Apollo, her warnings were ever ignored. Had they been heeded, Troy would not have fallen to the Greeks. Similarly, if the warnings of these scientists are heeded, humanity may not self-destruct.

Among the most fascinating papers in this collection are the following: Garrett Hardin discusses human overpopulation, and laments the failure of demographers to adequately warn the world about the crisis. David Pimentel explains the inefficiency of fossil fuel agriculture. Analyzing the energy input to output ratio for corn production in the US, Pimentel notes that human labor (as was common in the 18th century) yielded 11 kilocalories of corn per kilocalorie of input; with draft animals, the efficiency ratio decreased to 6:1; with the highly mechanized system typical of the 1980s, the yield is negative: 2 kcal produced for 4 kcal consumed. Anne Ehrlich explains how the imposition of temperate zone agriculture in the wet tropics and in arid regions has wreaked havoc on ecosystems and peoples in the Third World. Peter Raven discusses the biological wealth of tropical rainforests and how this relates to rainforests' strong altitudinal zonation. John Harte reveals little-known dangers associated with acid rain, such as the particular vulnerability of salamanders and other amphibians to acidity, and the low pH of rain falling on the low alkalinity lakes of the western Colorado Rockies. Donella Meadows urges environmentally conscious scientists to think of themselves not as Cassandras, predicting doom, but as modern Socrates, bringing clarity to a muddled "information sphere." Doom predictions, Meadows suggests, act as self-fulfilling truths.

Reviewed by Australopithecus.

DIET FOR A NEW AMERICA, John Robbins, 1987, available from Earthsave Foundation, POB 949, Felton, CA 95018-0949, \$11.95 plus \$1.50 postage (add \$.66 when CA state tax applicable), checks payable to John Robbins.

It seems strange to review a book of which I've only read the last chapter, but I'm doing this very deliberately. The book is *Diet for a New America* and the chapter ("All Things Are Connected") is about the environmental effects of the livestock industry in North America.

The rest of the book looks at issues such as: the suffering of animals raised for food in feedlots and factories; the chemical contamination of their bodies, and the ill health that eating them brings to humans; the fact that only a small reduction in the amount of meat consumed in North America would free enough grain to feed the 60 million people who will starve to death this year (in starving, they strip their environment of whatever fertility it might still have - letting them starve is no solution to environmental crisis), and so on. I understand from people who have read the whole book that John Robbins writes eloquently and persuasively throughout. However, I intentionally

avoid reading these other chapters so as to focus my undivided attention on a most neglected area: the environmental devastation caused by the livestock industry.

As a rainforest conservationist, I had been aware that cattle were one of the main factors in the destruction of rainforests in Central America and elsewhere: More than a third of Central America's rainforests have been cleared for cattle pasture; 200 million pounds of meat are imported annually into the United States from pasture in Central America alone. I had celebrated an important victory last year when concerted action by US Rainforest Action Groups and Earth First! forced Burger King out of Costa Rica, and BK agreed to use only domestic beef.

But I'd not considered the following: *Livestock consume 80% of the corn, 95% of the oats, and 80% of the soybeans grown in the US. If people ate the grains instead of feeding them to livestock, only 5% of this grain would be required. This would result in enormous savings in land - which could revert to the wild - water and energy.

*Half of all water used for any human purpose in the US is used by the livestock industry - to irrigate grains later fed to livestock, to wash the untreated sewage from the feedlots and factories into rivers, etc. It takes 2500 gallons (10 tons!) of water to grow one pound of hamburger in the US. This water is heavily subsidized. If the subsidies were removed, this pound of hamburger would cost more than \$35.

*If this water were not removed from the aquifers, we would not need to mine them; they could remain a renewable resource.

*If electricity and fossil fuels were no longer consumed to create and transport the agricultural chemicals used to grow the grains fed to the livestock, to pump the water, to operate the factory farms. . . then we could shut down every nuclear power plant in the US.

*Three-fourths of the topsoil of the US has been lost in the last 200 years. It is presently eroding at a rate of several tons per year per human inhabitant; 85% of the topsoil loss is due to livestock.

*More than 3 times as much meat is derived from formerly forested land as is derived from range land and this ratio is climbing every year: As grazing lands are destroyed by cattle, more and more forests are cut to replace them. So far, 260,000,000 acres of US forest have been cleared to create cropland to produce a meat-centered diet. At current rates, there will be no forest left in the US in 50 years. For every person who switches to a pure vegetarian diet, an acre of trees is spared each year.

The sense I got from this chapter was, first, that the livestock industry may be the single most important factor in the destruction of the environment in the US. If we were to change our diets to vegetarianism (or only consume ecologically grown animal products, in which case animal products would become expensive condiments), we would buy the time we need to deal with some of the incredible environmental problems that we must solve in no time just to survive.

Second, it made me aware of the tremendous overlap between the concerns of two of the most radical and progressive groups in the US: the environmental movement and the animal rights movement. Previously I had seen very little in common between them. Indeed there has been more than a little hostility between the two, especially where issues pitted the survival of wild populations against the welfare of individuals (e.g., what to do about feral animals destroying wild ecology). Now I realize that the cause of probably 80 or 90% of the suffering of individual animals in the US (factory farms and feedlots) is simultaneously one of the most massive forces of environmental destruction.

If this is so, then tremendous grounds for cooperation, for coalition building, exist between these groups. I am an environmentalist. I am not an animal rightist. But let's work together to shut down the livestock industry, taking care of the bulk of our problems, and then perhaps discuss other issues where we don't see eye to eye. Working together on this issue may help us to understand each other's perspective and solve other problems besides.

Finally, the chapter gave a new sense to the old adage of thinking globally and

continued on page 32

Reviews...

continued from page 31

acting locally. What could be more local than diet!?

Here am I spending my life trying to stop forces *outside myself* from destroying the world and now I discover that it is my habits of breeding and feeding that are the main culprits.

It's not just the habits of the timber barons and industrialists that must change, but our own too. And if we environmentalists - the ones who know and care - can't change, then how the hell can we expect change from the rest? If we can't become the cutting edge of a real awakening, we might as well shut up and stay home.

But please, don't shut up and stay home. Find the energy to deal with our crisis where it needs to be dealt with - everywhere simultaneously. Don't project the problems "out there." We have to deal with them in here too. It is our addictions that are, in the end, consuming the fossil fuels and trees, and thus destroying the ozone layer and creating the greenhouse effect; that are causing us to crowd and poison our sister species at a rate such that at least another *one million* species will be extinct by the turn of the century - as many as have become extinct in the last 20 million years.

For 15 years I had been the kind of vegetarian who eats milk, cheese, eggs, etc., but no flesh. The power of the last chapter of *Diet for a New America* was such that as I read it, all animal products fell from my diet. Painlessly.

One of the most important realisations I gained from this chapter was of what Mahatma Gandhi called "Satyagraha," Truth Force. It is *not* a matter of making more sacrifices, being more dutiful, making enormous effort. It is a matter of inviting the Truth to work within us, of not resisting the Truth for fear of the enormous changes that it will necessitate in our lives.

Read this book.
-Reviewed by John Seed, *Earth First!*
Australia contact.

SECRETS OF THE OLD GROWTH FOREST, David Kelly, photographs by Gary Braasch, 1988, Peregrine Smith Books (POB 667, Layton, UT 84041), 128pp, 94 photographs, \$29.95 cloth.

Perhaps the most picturesque introduction to the old growth forests of the Pacific Northwest, for those who can't actually visit them, is David Kelly's and Gary Braasch's book *Secrets of the Old Growth Forest*. The book is an enchanting photographic and literary journey into the 2000-mile-long narrow band of predominantly coniferous forest which once stretched unbroken from Icy Strait in Southeast Alaska south nearly to what is now San Francisco, and which included many trees exceeding 300 feet in height. Kelly and Braasch produced this book in hopes of awakening people to protect the remaining 10% of the original forest. As the authors explain, the remnant primeval forest patches will be gone in less than 50 years - after having evolved undisturbed for 11,000 years following the last Ice Age - if Americans and Canadians do not quickly force the United States Forest Service, British Columbia Forest Ministry, and their allies in the timber industry to mend their ways.

In the last two decades, forest ecologists - in particular two agency renegades, Jerry Franklin, of the Forest Service, and Chris Maser, formerly of the Bureau of Land Management (his studies led to his departure) - have researched and disclosed many of the complex interconnections of the Pacific Northwest old growth ecosystems. Yet, as Kelly and Braasch note, most Americans still have not even heard of old growth - hence the appropriateness of their book's title. Here are a few of the arboreal secrets which they skillfully present:

Red Tree Voles spend all their lives in the canopy of old growth Douglas-firs, excepting on those rare occasions when predators threaten them - whereupon the tiny mammals are apt to leap to the ground, landing unharmed and scurrying away after 50 feet or more of free-falling. The voles depend on Doug-fir needles both for food and for nest material. California Red-backed Voles, in contrast, find their food on the ground and on fallen

logs, in the form of mushrooms that are the fruiting bodies of mycorrhizal fungi.

Many of us have read of how fallen trees store water, stabilize and nourish soils, and provide den sites for wildlife, but few of us can comprehend how teeming with life is a downed tree. Consider what befalls a giant on the forest floor:

Maser and Trappe list a "grossly simplified" series of animal-plant-nutrient minisystems that occur, one after the other, within the log over hundreds of years. First come animals that eat the fallen tree and open it to the outside world so that nutrients can begin to move around: wood-boring beetles, carpenter ants, termites and wood-tunneling mites. They open pathways for microorganisms that grow on the fallen tree: bacteria, yeasts and ambrosia fungi. Next come animals that eat such microorganisms: springtails, mites, and ambrosia beetles. Live plants, such as western hemlock and huckleberry, that form specific symbiotic relationships with fungi, come next; both the plants and the fungi root in the wood as it is opened up and begins to fragment. Animals that eat animals - predators - enter the log's system whenever they find a food supply and the right access: mites, spiders, pseudoscorpions, centipedes and salamanders roam and hunt in galleries prepared by other insects. Last come animals that eat dead plant and animal material and animal feces: earth worms, mites, millipedes, isopods, earwigs.

All of these teeming populations become food for vertebrate predators - birds, small mammals, even bears.

All these activities release nutrients that have been stored within the tree during its life... (pp.43-4)

Nor is a log in a stream without its myriads of guests:

Midges are among the early colonists in such logs. They tunnel into the outer layers and create entry for algae and microbes which, in turn, feed grazing insects. Shredders, such as caddis flies and stone flies, familiar to trout fishermen, ingest wood that has been softened by fungi. Scrapers, such as the mayfly, and rasps, such as snails, eat not only the soft wood but also the assemblage of minute organisms, called the periphyton,

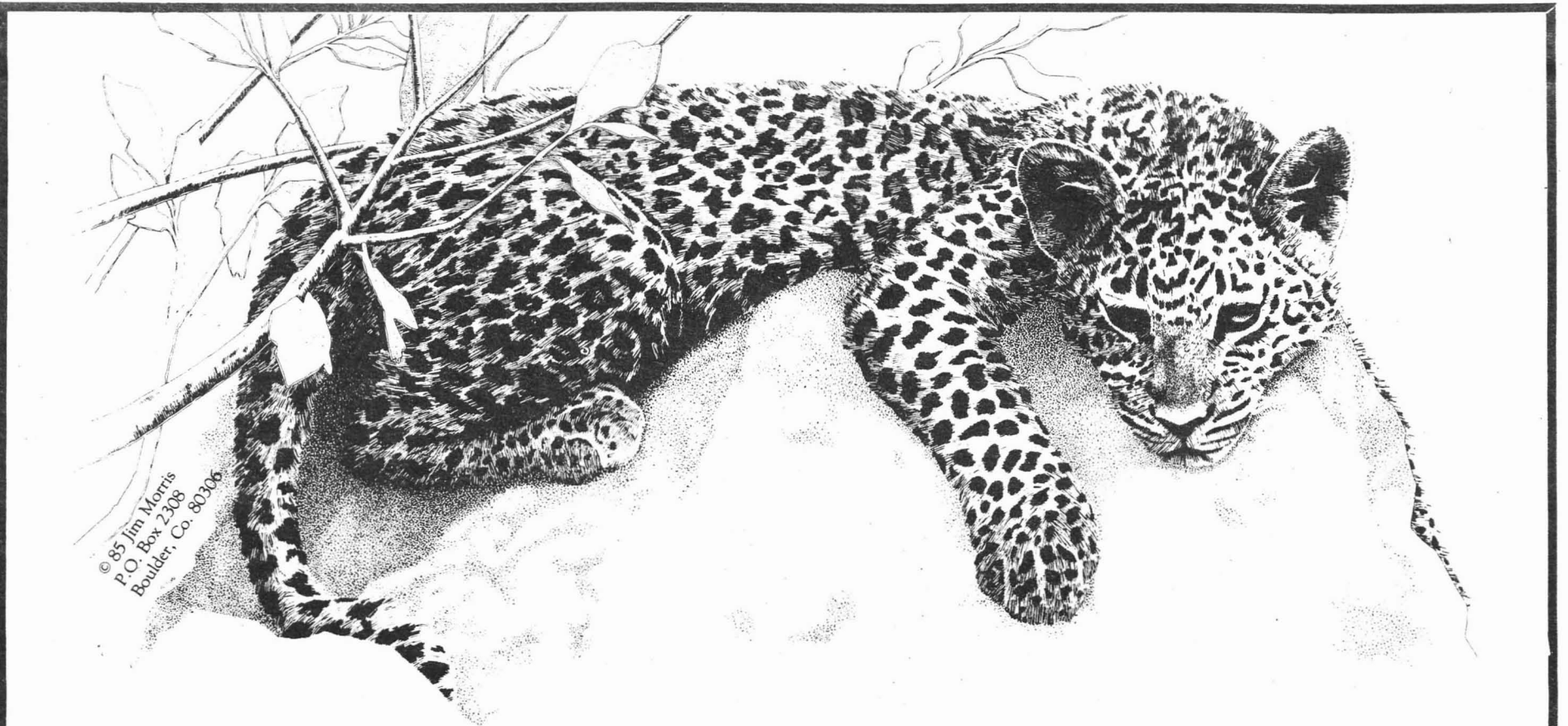
that grow on its surface. Over decades of colonization by fungi, oxygen slowly invades the softened wood; finally earthworms penetrate.

Many more insects use the roughened wood for shelter than consume it, including boring semi-aquatic beetles and fly larvae. The galleries they open up are used again and again by insects that do not bore, such as the crane fly. Net-spinning caddis flies, who filter food from the water, find such textured wood surfaces ideal for attaching their nets.

Fish not only consume these insects and their predators, but rely on the pool-forming ability of the forest for shelter from storm run-off and for temperature control... (p.45)

These are but a few of the manifold and diverse interrelationships which characterize the heaviest forests in the world (typically over twice the biomass per hectare as that of tropical rainforests!). With its clear text and stunning photos, *Secrets of the Old Growth Forest* should prove to be an ideal tool, especially in libraries and classrooms, for edifying lay persons and arousing concern for old growth.

Reviewed by John Davis.



© 85 Jim Morris
P.O. Box 2308
Boulder, Co. 80306

WILDLIFE T-SHIRTS

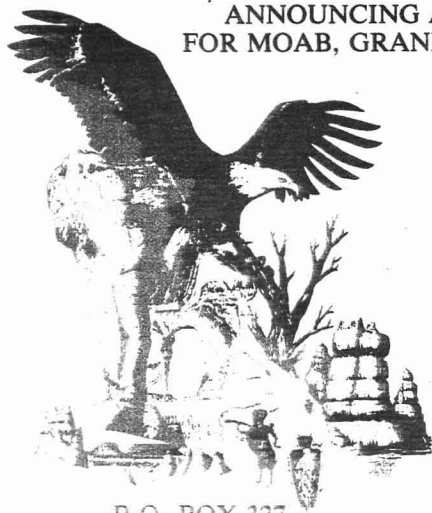
Support wildlife by wearing environmental t-shirts. (10% of profits go to environmental groups.) Many designs. \$9.95 each. Heavyweight 100% cotton t-shirts in S, M, L, XL, in white, blue, silver, yellow. Sweats also, \$21.45 each.

FREE CATALOG.

JIM MORRIS
PO Box 831 DEPT E29
Boulder, CO 80306
(303-444-6430)

Satisfaction guaranteed.
Share the Earth!

ANNOUNCING A NEW MONTHLY NEWSPAPER
FOR MOAB, GRAND COUNTY AND SOUTHERN UTAH



THE CANYON COUNTRY ZEPHYR

The Zephyr is a monthly publication of news, opinion, information and entertainment for everyone with an interest in Moab and the magnificent Canyonlands that surround it. Each issue contains stories, interviews, opinions, cartoons, and features about the people, places, political melodramas, and raging controversies that have led many to say, "It's never dull in Moab." Subscribe to *The Zephyr*, edited and published by Jim Stiles.

P.O. BOX 327
MOAB, UTAH 84532
(801) 259-7773

(First Issue: March 16)

Annual subscription: eleven issues including a double summer issue: \$12.00. (Until May 1 as an introductory offer, \$10.00.)

NOTE CARDS · POSTCARDS · STATIONERY
PRINTED ON RECYCLED PAPER

EARTH GRAPHICS

GRAPHIC DESIGN FOR A HEALTHY PLANET

FOR FREE CATALOG AND SAMPLE, SEND
SASE TO: BOX 459, ASHFIELD, MA. 01330.

SAVE THE WORLD
A co-operative environmental boardgame
Ages 13 — 130

• EDUCATIONAL • INSPIRATIONAL •

It's three minutes to midnight. The world is in danger. The Ecomafia is poisoning the land, the water, the air. They're killing the krill, swiping the ice, slashing and burning the jungles, ripping out the ozone and burying unspent death in leaky chambers beneath your feet. They're turning up the heat and playing Dr. Frankenstein with DNA. They're ready to drop the Big One.

But they haven't reckoned with you — or your fellow ecomagicians. You and your crew have a bag of tricks up your sleeve — everything from backyard compost piles to hydrogen-powered jet packs and smog blowers to fill the holes in the ozone layer. A song is your message, but you're no stranger to the blade. Gaia's not going down without a fight, as long as you and your team are around.

The clock ticks forward. Will the good guys win? Or will the cuckoo toll the chimes of Armageddon? It's up to you.

20% OFF to EF! readers! Send \$18 (\$16 + \$2 shipping) to:
BONGERS, P.O. Box 84366, Los Angeles, CA 90073
For further information, send SASE.

Use Recycled Paper

Send for our **FREE CATALOG** of:

- note cards
- stationery
- typing paper
- copy paper
- computer paper
- printing paper

In the U.S., we throw away 1/2 of the entire world production of paper. That's 100 billion pounds a year going to the dump. Earth Care gives you the opportunity to choose recycled paper. Our paper is equal in quality to non-recycled paper, plus it requires less energy to produce, stops waste, and saves trees. Our **free catalog** includes paper samples and color prints of our notecards and stationery. Help us change the American waste ethic.

Earth Care Paper Co.
100 S. Baldwin, Dept. 301 Madison, WI 53703 (608) 256-5522

THE WOLF SPIRIT OF WILD ALASKA



THE ALASKA WILDLIFE ALLIANCE

Help protect Alaska's wolves, wild predators and unique wildlife. Stop aerial wolf hunts, predator control and other exploitation of wildlife in Alaska.

Join THE ALASKA WILDLIFE ALLIANCE

\$25 annual membership
donation (tax deductible).

For merchandise, membership
information or sample newsletter
contact:

THE ALASKA WILDLIFE
ALLIANCE
P.O. BOX 190953
ANCHORAGE, AK 99519
907-277-0897

(a non-profit organization)

"Spirit of Wild Alaska" T-shirts \$10
ppd. in Silver, Red, Aqua, Burgundy,
Light Blue, Medium Blue, Turquoise,
Lavender, Pink, Yellow, White. Crew
neck sweatshirts \$20 ppd. in Red,
Heather Gray, Island Blue and
Raspberry. Hooded sweatshirts with
handwarmer pockets \$25 ppd. in
Red, Heather Gray, Island Blue and
Pink. Sizes: Adult S,M,L,XL

Necky Sea Kayak For Sale
Arluk III with accessories. Like new,
must sell. \$1400 or best offer. Call
203-628-6627 in CT.

**TRANSFORM YOUR
CONSCIOUSNESS**
For free information, write to
Westgate House, 56 Westgate, San
Francisco, CA 94127

**MAKE PROTECTING THE
ENVIRONMENT YOUR JOB**

The Job Seeker specializes in environmental
and natural resource vacancies nationwide.
Two issues per month list employment
opportunities from private, local, state, and
federal employers. A three month trial
subscription is only \$15.00. **Subscribe today!**
Send check or money order to:

The Job Seeker
Dept A, Rt 2 Box 16, Warrens, WI 54666

**KAYAK, PADDLE, OR RAFT
THE GRAND CANYON**
(or other rivers)

AND HELP SAVE THE COLORADO!

Write:
FOR—Southwest
Box 1115
Flagstaff, AZ 86002

Commercially-operated and licensed
raft/paddle trips and Kayak support
on Grand Canyon, Cataract, Green,
San Juan, Dolores, AT SPECIAL
LOW PRICES, AS BENEFIT to
FRIENDS OF THE RIVER,
in its effort to protect the Colorado,
from "peaking power" and other
energy development.

**ADVERTISE IN
EARTH FIRST!**

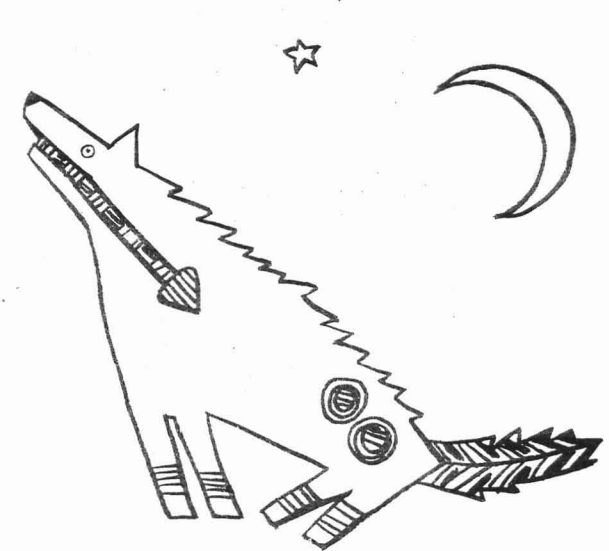
Reach thousands of refined minds with
your slick Madison Avenue message in
our high-toned, sophisticated publica-
tion. Rates are as follows:

Half Page \$300
Quarter Page \$150
Eighth Page \$80
Column inch \$10

Columns are 2 1/4 inches wide. There
will be a minimum \$25 extra charge
for any ads that are not camera-ready.
Ads that are not the proper width will
be returned or they can be PMTed to
fit for an additional \$10 charge. Class-
ified ads are available for 40 cents a
word (\$5 minimum). Send your ads to
EF! POB 5871, Tucson, AZ 85703.

**MEET OTHER ECOLOGY-
MINDED SINGLES** through
the Concerned Singles News-
letter. Nationwide. Since
1984. Free sample: Box 555-B,
Stockbridge, MA 01262.

friends of the wolf



north america 1989

BUY A T-SHIRT!

help send the b.c. wolf action group
to canada this winter to protest the
government-sponsored wolf kill.

Order from:
friends of the wolf
p.o. box 9286
missoula, MT 59807

PLEASE SPECIFY:
Short sleeve (\$10.00) or long sleeve (\$13.00)
color: black or royal blue w/ white logo
or tan, silver, or turquoise w/ red
logo.
SIZES: small, medium, large, extra large

DEAR NED LUDD

DEAR NED LUDD is a regular feature in *Earth First!* for discussion of creative means of effective defense against the forces of industrial totalitarianism. Neither the *Earth First!* movement nor the staff of *Earth First!* necessarily encourage anyone to do any of the things discussed in DEAR NED LUDD.

Dear Ned

I stumbled across a Forest Service worker taking core samples of trees with a large gimlet (they do this to determine age and hence suitability for cutting). The gimlet impressed me as being perfect for tree pinning and perhaps superior to the bit and brace method for the following reasons: 1) It produces a core which can be partially reinserted after pinning to cover up the devilry; 2) It's absolutely quiet and seems as efficient as a bit and brace; 3) It has a "legitimate" purpose which might be useful in a pinch as an alibi ("I'm doing a science project, Mr. Pot Commando, and need core samples from this stand.").

I didn't want to ask the Freddie too many questions lest he become suspicious. Do you know where such a gimlet can be purchased? — Bored Stiff

Dear Bored

Seems you stumbled on the same technique suggested by Vecchio Silva in the last installment. Check his letter. The **ECODEFENSE SUPPLEMENT** will have additional details on using the increment borer for tree pinning. Any readers with information on the use of the increment borer, or expert opinions on its value in immunizing trees from saws, please write Ned Ludd at my new address—PO Box 5141, Tucson, AZ 85703.

—Ned

Dear Ned

Do you really want to destroy a dam? It is easy to do. The government did considerable research in WW2 and developed a very effective way. Put dynamite or TNT in a waterproof and weighted container. The amount of explosive would depend on several factors — size and thickness of concrete dam wall, depth of water at base, etc. But 500 pounds would do most dams. Set your timer, light your measured fuse or whatever. Drop the package into the water against the inside (reservoir) face of the dam and let it sink and detonate. Bye bye dam.

—Frog

Does anyone out there have expert comments on this technique?

—Ned

Dear Ned

Monkeywrenchers should be on the alert for "dirt detectors" found in some newer big yellow machines. Apparently they detect the presence of dirt in the oil, gear and hydraulic systems. At first glance, they don't appear to be filters, but they are. One filter for each lubricant. On top is a gauge which reads: CHANGE, OK, or BYPASS. They are easily observable from the cab and are probably checked often. Take the time to remove the filter, which entails unscrewing at least four nuts and pulling off the metal casing. Toss filter far away and replace casing.

—Gremlin

Dear Ned

We have been going to department stores which sell fur coats and taking a big stack of postage paid charge account applications. We write inside "Stop selling fur coats" and sometimes enclose anti-fur flyers. They pay postage. We do this once a week.

—Animal Liberation Front

ECODEFENSE SUPPLEMENT DELAYED

Because of the demands of other work at Ned Ludd Books, production of the **ECODEFENSE SUPPLEMENT** has been delayed until spring, 1989. This gives ecodefenders more time to send in field-tested techniques and untested wild ideas alike for inclusion in this important book. Please send your revisions, improvements, corrections, additions, etc. to the techniques and security tips contained in **ECODEFENSE** to Ned Ludd Books, POB 5141, Tucson, AZ 85703. Material received by April 1, 1989, will be in time for inclusion in the **SUPPLEMENT**.

Page 34 *Earth First!* February 2, 1989

Dear Ned

When you want to create a stoppage in a culvert, measure the diameter and cut 4 pieces of two by four to three quarters of the opening size, or slightly larger. Now form a picture frame and pin three corners with one bolt each. Obtain a 4" clamp to adjust the fourth corner during installation. You now have a jam frame across which you can hang net or nail up cross pieces.

—Sand Man

Dear Ned Ludd

So, you want to inoculate a tree, huh? Well, we do it nice and clean. First, take the spokes off your old beach umbrella and cut them into 10" pieces with a high quality hacksaw blade. Next obtain about 2' of half inch pipe and a box of washers that press fit the spokes and also fit the inside the pipe. Now, sharpen one end of the darts and press 2 washers on the other end about 2" apart. You will now need a pipe reducer coupling (1/2" x 1/8") and you will need to borrow a small CO2 fire extinguisher. Unscrew the fogger nozzle and attach the barrel to the valve assembly on the tank. Insert a dart and happy landings.

—Verner

Dear Ned

Although the big political year is past, now is the time to make plans for the next time the Republicrats clutter up the landscape with signs. Political signage is of necessity flimsy, made of cheap materials and short-lived dyes. The conscientious political commentator can speed up natural processes with the application of common household bleach. Not only does this remove the offending verbiage, but, when dry, leaves a pristine white surface for more appropriate elucidation. Applied locally, bleach can be used as an effective editing tool, preparing the fertile surface for the germination of seeds of the imagination. A sponge on a stick can be used effectively to reach otherwise inaccessible advertising, to be replaced by editorial comment delivered by means of a remote controlled spray can. Best of all, should you be temporarily detained by the local constabulary, a bottle of Clorox leaves no incriminating ring around the collar.

—Concerned Customer

Dear Ned Ludd

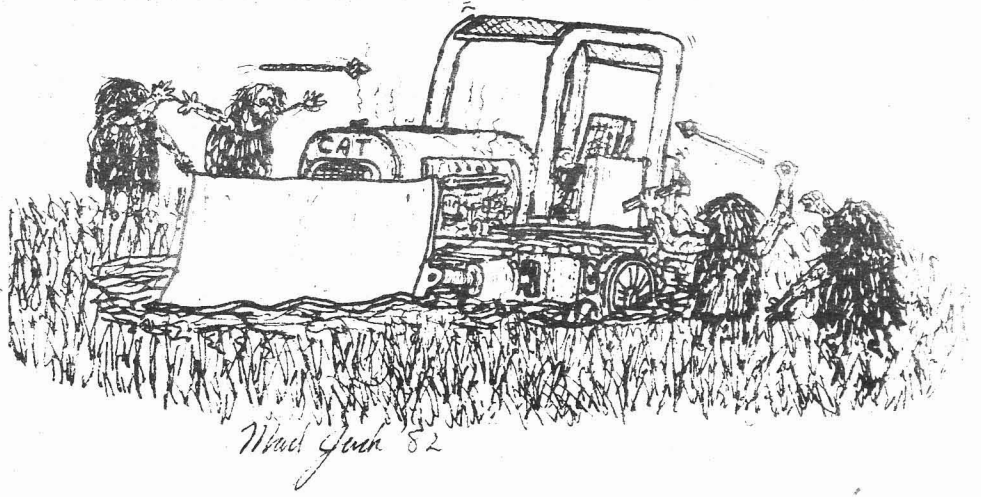
At the end of WWII, my college opened a research facility to study terminal effects (destroying things). Gradually, this facility has become completely isolated from the campus and has become a multi-million dollar affair dominated by the Navy and private defense corporations. The facility occupies a large piece of lower to upper Sonoran/Chihuahuan Desert. The once beautiful landscape is now decorated with the remains of fighter planes, tanks, jeeps, and twisted pieces of metal. Besides being an eyesore, many areas of the site have been contaminated with extremely high levels of radiation. The facility receives huge sums of money to conduct its business, none of which benefit the school. It has been rumored that the budget for one local auto parts company is \$150,000 per month! From my observations, I believe that many regulations are being violated at this facility. I would like advice on how to squeeze this facility like a zit from the face of the earth.

What laws should I cite to obtain records in order to reveal specific instances of improper use of funds? How can I force the facility to clean up the wasteland they are creating? If I knew what the regulations are, I could point out violations to the school authorities.

—EP

Dear EP

I suggest you contact *Citizens' Clearinghouse for Hazardous Wastes* (POB 926, Arlington, VA 22216 703-276-7070), *Environmental Action* (1346 Connecticut Ave, NW, Suite 731, Washington, DC 20036 202-833-1845), *Environmental Policy Center* (218 D St. SE, Washington, DC 20003 202-544-2600)



or *Natural Resources Defense Council* (122 East 42nd St, 45th Floor, NY, NY 10168 212-949-0049) for advice. If the *Environmental Protection Agency* is back on the job with a new head, they might even be willing to do something.

—Ned

Dear Ned

Recently I found out that one can be identified by a technique of reading pressure releases in their footprint. Everyone, including our four-footed friends, leaves a minimum of 65 pressure releases that can be used like fingerprints to identify an individual. Right now there is only one expert at this, but for purposes of fighting evil he is teaching the program to the FBI. We can hope this technique is never used against ecodefenders, but it may not hurt to explore the possibility and its solution.

—K Kog

Do any of you readers know anything about this?

—Ned

Dear Ned

You requested info on numbers of loggers killed in commercial timber cutting. The *Fallers' and Buckers' Handbook of the Workers Compensation Board of British Columbia* reports that for 1971-80 there were 175 fatalities, an annual average of 17 for field logging. This does not include mill accidents. In 1980 alone, there were 41 fatalities. Tree spiking is clearly a safer occupation than tree cutting.

—Lorax

Dear Ned

Last year in Washington state, 28 men died while working in logging operations. In most cases, employers have been cited. Union representatives blame deaths on company demands for increased production in a shorter time. A news report from Forks, Washington (the "Logging Capital of the World"), says that one logger in six will have his career ended with a fatal or crippling injury. The loggers ought to be complaining about the companies who own them, more than about tree spikers.

—Gimlet

Monkeywrenching News From Around The World

EMETIC HITS SNOW BOWL - The Evan Mecham Eco Terrorist International Conspiracy (EMETIC) used acetylene torches to cut ski-lift poles at the controversial Fairfield Snowbowl ski area on the San Francisco Peaks near Flagstaff, Arizona, late in October 1988. The Peaks are sacred to both Hopi and Navajo nations in northern Arizona. Expansion of the facilities has been hotly opposed by members of the tribes and by environmentalists. Authorities said that the monkeywrenchers had hiked in over the mountain to attack the ski area, thereby eluding security people stationed to protect the chair lift. Other damage to the ski area also occurred.

At a November 1, 1988, press conference, Fairfield Snowbowl general manager Norm Johnson offered a \$25,000 reward for the EMETIC saboteurs. He said, "I feel like I'm in Nicaragua or somewhere."

EMETIC (which does not appear to be controlled by former Arizona Governor Evan Mecham) previously damaged ski lift poles in

October 1987 and felled power lines to controversial uranium mines on the south and north rims of the Grand Canyon earlier this fall.

SUPERIOR NF SPIKED - Minnesota ecodefenders spiked numerous trees and decommissioned two road graders in early November 1988. The Superior National Forest is undertaking massive clearcutting and roadbuilding plans on the best Gray Wolf habitat in the lower 48 states.

SMOKEY MISUSED IN WYOMING - The Greys River District Ranger, John Newcom, in late October 1988 denounced a Smokey the Bear poster displayed around the Bridger-Teton NF. The fire prevention message on an "official" Smokey poster had been replaced with a different message — one presenting the real Forest Service. Freddie Newcom didn't like it and warned that whoever did it "may find themselves at legal odds with the federal government." Monkeywrenchers reportedly fled the state in droves after the tough talk.

OZ LOGGERS WORRY ABOUT FIRE CONTROL - Last year, loggers in the Australian state of Victoria claimed that monkeywrenching of logging equipment was a threat to Victoria's ability to fight forest fires. They also said that tree spiking was "getting to the point now where you could almost describe it as commonplace."

BOUGAINVILLE POWER TOWER BOMBED - Native landowners bombed an electricity transmission tower to shut down operations of the huge Panguna copper mine on the island of Bougainville, part of the nation of Papua New Guinea, in March 1988. The attack caused a major sell-off of shares for Bougainville Copper on the Australian stock exchange and an emergency session of the Papua New Guinea Cabinet.

SPIKING HITS ONTARIO - Some 300 trees in Thornton Bales Conservation Area immediately north of Toronto were spiked in December, 1988. The Lake Simcoe Conservation Authority, ignoring the protests of local conservationists, had approved cutting about 30% of the trees in the area, partly to prevent trees from falling across trails and injuring hikers. The spikers identified themselves as "Earth First."

SPIKING BLAMED FOR FEWER MARIJUANA BUSTS - Ed Few, a Forest Service law enforcement specialist for Oregon and Washington, blamed tree spiking for a lower seizure rate of pot plants in 1988. Few said in December, 1988, that "Had we not been having to deal with environmental activists and tree spiking we would have been able to do a better job in dope eradication." He said that Freddie Pot Cops were spending considerable time investigating tree spiking.

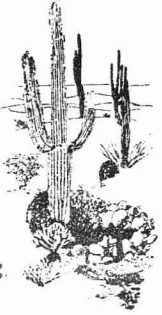
NAILS IN WISCONSIN TREES CAUSE FOR COMPLAINT - *The Daily Press* in Ashland, Wisconsin, reported in November of 1988 about a logger's efforts to get bowhunters not to drive nails into trees to support their deer hunting stands. Not only do nails in trees present a danger to saw mills, but they ruin the value of fine veneer lumber, logger Tom Welch claims.

Editor's note: Please send any news clippings discussing monkeywrenching or related topics to Ned Ludd, POB 5141, Tucson, AZ 85703.

Armed with Visions

clear as cut glass,
& just as dangerous

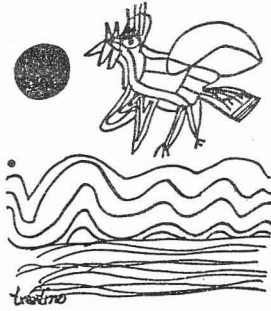
ALL RIGHTS RESERVED TO THE AUTHORS



ON THE ROAD TO CADILLAC

-from *The Bar Harbor Suite* (1987)

perched atop
pink granite
i'm caught
two peregrines
playing in wind
the tiercel skies
wings like scythes
parting the air
he waits
on his mate
wings over
in a fierce
swoop
raspy cackles
as they clasp
talons
roll about
& break away
again
slate & ice
reckless alchemy
of arctic air
quick in their
bearing
straight
to the south
i stare
after them
stare
until
only air
remains
air &
the after-
image
of their
passage
in
the sea
of my
being
a wake
in my
heart

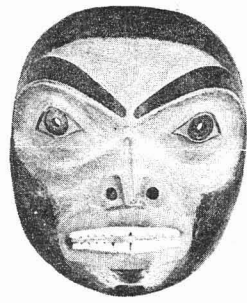


THE REVOLUTION AT THE ZOO

Trained to bark, the seal sings
Falsetto near the closing time.
The penguin sprouts most comely wings.
The gator carpets over the slime.
Sing long and loud, sing every way,
"Long live the revolution!"
The leopard casts a bust in clay.
The chimp perfects his elocution.
Gregory McNamee
Tucson

BETWEEN EVERY PINE TREE

a door opens
Brewer's blackbirds
fly in
with Clark's nutcrackers
black and white
the sky over
glacier point
sparks pinsparks
stars moving
in an arc
across the dark
the match in your hand
lights your pipe
moon soft light
full
sky tune
my life is a wide song



The crow, we see his likeness
moving inside the circle of dancers.
Pawnee

Peter Kilgore
Maine

DON WALSH
Alexandria



ENVOY

old buzzard, old turkey vulture of my spirit
eat up that which dwelling on pain brings
eat up the dross
eat up the dead
eat up the useless
eat up the wasteful
eat up the cancer
eat up the anti-life
eat it up mercilessly
Oh scavenger of joy
discover the food the too proud would leave behind
that we may grow stronger
circling again
flying higher
Kirk Lumpkin
Oakland

HAWK'S EYES

slide down
sides of trees
feather chill June
mountainsides
dotted with snow
tracks leading to
holes, edges
hawk tilts and
drops 200 feet
a mink makes for
the shoreline's
melting ice
Tom Zelman
Stevens Point



SATYAGRAHA

I think you can tell saints,
not by their miracles and thin faces,
but by their smiles.
St. Francis, I think, grinned
from ear to ear
at a sunbeam or a tree-frog,
at a child or a pope.
The Buddha smiled and is smiling still
from Katmandu to Riverside Drive.
The whales smile
beaming serenity in man-made-charnel seas,
diving and dancing around our bloody factory ships,
singing their mantras
while we dissect their kidnapped children,
living and loving gently
through our poisons and wastes and wars;
imprisoned, patiently playing our games;
never repaying us in kind.
They are finally winning us over.
Gandhiji would have loved it.



Paulette Callen
Nulley



CHINESE LOVE LETTERS WRITTEN IN THE BEACH SAND WERE MERELY FOOT TRACKS LEFT FORGOTTEN BY A RECENT SEA GULL PARTY

Lorenzo
Sonora



CONDOR

Freedom
These days one must chain oneself to freedom
Linked to the caravelles of cities
Carousels of suburbs middle-distant
Along the pinyon
Of one, sole moment
Wheeling
In search of death
So alive
Only the taste of death can keep it near the Earth
Break open the bonds to atom-shouted factories
Broken through the chains to nuclear needles
Threatening space
To be free
Must be bound to the bondage of the Mother
Earth her body we are poised in milk-soil
Shooting herbs up through Her hair-pores
Beyond scheming science to a single formula
Etched on the soil by carrion ripe with
Dream worlds, myths in death - the sunrise
Unexpected in the middle of endless
Death now bright red, white underwing, condor
Pinions breaking chains in the ruby sunrise
Past the badlands of evolution gone macabre
Thoroughly beyond the greatest human intellect
Flies one condor free! Mother, make us all free!
Peter Bralver
Sherman Oaks



Annotated and Introduced by Dave Foreman

In our last two issues we ran descriptions of all of the books we offer for sale. Please refer to that list until we run a complete listing again. Note in the title listing below those books marked with an asterisk (*). They will no longer be sold by us after we sell those copies we have on hand. If you want to order any of these titles, please do so while we still have them. First come, first served. Although all of these to-be-dropped books are important and well worth reading, we need to pare back our list in the interest of economy and space, and also to make room for new books which we wish to offer for sale during the coming year.

All prices below are postpaid. Order directly from Earth First!, POB 2358, Lewiston, ME 04241. Good reading!

NEW BOOK

DIE UNIVERSAL-SCHRAUBEN SCHLÜSSEL-BANDE by Edward Abbey. The German translation of the original Öko-Thriller, The Monkeywrench Gang, for those who can't get enough. Ed says it's a real bargain: "It's a lot longer in German." Signed by the author. 440 pages, paperback, \$12 postpaid (\$12.50 postpaid for foreign orders).

NED LUDD BOOKS RELEASES

(Published by Ned Ludd Books and available from Earth First!.)

THE EARTH FIRST! LP/L GREEN SONGBOOK

78 terrific Earth First! songs by Johnny Sagebrush, Cecelia Ostrow, Bill Oliver, Greg Keeler, Walkin' Jim Stoltz and others from Australia and America. Guitar chords are included with most songs. An absolute must for every true-green EF!er to sing along with our minstrels or to play the songs yourself. Dealer inquiries welcome. \$6 postpaid, \$4 postpaid special to Earth First! subscribers only! (\$3 plus shipping for prepaid wholesale orders of 5 or more).

ECODEFENSE

"A Field Guide to Monkeywrenching — 2nd Edition" edited by Dave Foreman and Bill Haywood with a Forward! by Edward Abbey. Greatly expanded and revised to 308 pages of detailed, field-tested hints from experts on Tree-spiking, Stopping ORVs, Destroying Roads, Decommissioning Heavy Equipment, Pulling Survey Stakes, Stopping Trapping, Trashing Billboards, Hassling Overgrazers, Leaving No Evidence, Security . . . and much more. Heavily illustrated with photographs, diagrams, and cartoons. \$13.50 postpaid. (Important Note: Ned Ludd Books and the Earth First! Journal are now separate entities. While the EF! Journal will continue to sell Ecodefense to readers and wholesale it to local EF! groups, all commercial wholesale orders must go directly to Ned Ludd Books, POB 5141, Tucson, AZ 85703.)

THE FOOLS PROGRESS "An Honest Novel" by Edward Abbey. Signed by the author. Hardcover, 485 pages, \$22.

THE MONKEY WRENCH GANG By Edward Abbey. \$6.

DESERT SOLITAIRE By Edward Abbey. Signed for Earth First! by Cactus Ed, himself. 255 pages, hardcover, \$28.

DESERT SOLITAIRE By Edward Abbey. Paperback, \$4.50

FREEDOM AND WILDERNESS "Edward Abbey Reads From His Work" 2 cassettes (2hrs. 52 minutes). \$18.50 postpaid first class.

BEYOND THE WALL "Essays From The Outside" by Edward Abbey. \$9

THE JOURNEY HOME "Some Words in Defense of the American West" by Edward Abbey. Illustrated by Jim Stiles. \$10

ONE LIFE AT A TIME, PLEASE By Edward Abbey. \$9

LAND OF LITTLE RAIN By Mary Austin with an introduction by Edward Abbey. \$8

***FROG MOUNTAIN BLUES** By Charles Bowden with photographs by Pulitzer Prize winning photographer Jack Dykinga. Hardcover. \$22.50

THE GRIZZLY IN THE SOUTHWEST "Documentary of an Extinction" by David E. Brown, with a foreword by Frank C. Craighead, Jr. Hardcover. \$22.

THE WOLF IN THE SOUTHWEST "The Making of an Endangered Species" David E. Brown, editor. \$11

TOPSOIL AND CIVILIZATION Revised edition, by Vernon Gill Carter and Tom Dale. \$13.

OVERSHOOT "The Ecological Basis of Revolutionary Change" by William R. Catton, Jr. Index, glossary, references, 298 pages. \$12

THE PATHLESS WAY By Michael Cohen. \$14.50

HOW NATURE WORKS "Regenerating Kinship with Planet Earth" by Michael J. Cohen (a different Mike Cohen than the author of "The Pathless Way"). 263 pages. \$12.50.

ECOLOGICAL IMPERIALISM "The Biological Expansion of Europe, 900 - 1900" by Alfred W. Crosby. Index, references, maps, illustrations, 368 pages. \$13

SIMPLE IN MEANS, RICH IN ENDS "Practicing Deep Ecology" by Bill Devall. 224 pages, bibliography. \$12.50.

DEEP ECOLOGY "Living As If Nature Mattered" by Bill Devall and George Sessions. 263 pages. \$11.50

THE NATURAL ALIEN "Humankind and Environment" by Neil Evernden. \$14

THE ARROGANCE OF HUMANISM By David Ehrenfeld. Index, references, 286 pages. \$12.50

TROPICAL NATURE "Life and Death in the Rain Forests of Central and South America" by Adrian Forsyth and Ken Miyata. \$9

THE AMERICAN CONSERVATION MOVEMENT "John Muir and His Legacy" by Stephen Fox. \$16.50

STERILE FOREST "The Case Against Clearcutting" by Edward C. Fritz. Special discounted price of \$6.50

TAME WILDERNESS By Dennis Fritzing. \$6.

PROMISED LAND "Adventures and Encounters in Wild America" by Michael Frome. Originally priced at \$18.95. Signed by Mike Frome. Hardcover. \$12 as a special for EF!ers.

WHOSE WOODS THESE ARE "The Story of the National Forests" by Michael Frome. \$10

CRY WOLF! By Robert Hunter and Paul Watson. \$9

***THE GIFTING BIRDS** "Toward An Art Of Having Place And Being Animal" by Charles Jones. \$18.50

FEAR AT WORK "Job Blackmail, Labor and the Environment" by Richard Kazis and Richard L. Grossman. Special discounted price of \$9.50

***EARTH FIRST** "The Struggle to Save Australia's Rainforest" by Jeni Kendell and Eddie Suivids. 167 pages, color photos, hardcover, \$25

SACRED LAND SACRED SEX "Rapture of the Deep" by Dolores LaChapelle. 382 pages, index, footnotes, bibliography, oversized. \$24.50.

EARTH WISDOM By Dolores LaChapelle. \$15.50

BEAR MAGIC A chapbook by the National Grizzly Growers. \$3.50

A SAND COUNTY ALMANAC By Aldo Leopold. \$9

COMPANION TO A SAND COUNTY ALMANAC "Interpretive & Critical Essays" edited by J. Baird Callicott. \$14.50

***ARCTIC DREAMS** By Barry Lopez. \$6

***OF WOLVES AND MEN** By Barry Lopez. \$16.50

***THE SNOW LEOPARD** By Peter Matthiessen. \$5

***NEVER CRY WOLF** By Farley Mowat. \$4.50

***SEA OF SLAUGHTER** By Farley Mowat. 437 pages. \$11.50

***A WHALE FOR THE KILLING** By Farley Mowat. \$5.00

***THE DESERT SMELLS LIKE RAIN** "A Naturalist in Papago Indian Country" by Gary Paul Nabhan. \$10

WILDERNESS AND THE AMERICAN MIND By Roderick Nash. \$13.50

***REFORMING THE FOREST SERVICE** By Randal O'Toole. 250 pages, graphs, tables, notes. \$18.50.

ENDANGERED RIVERS "And the Conservation Movement" by Tim Palmer. 40 full-color photographs by the author. 316 pages, index, references, appendices. \$15.

DOLPHIN LEAPING IN THE MILKY WAY By Jeff Poniewaz. \$8

***JAGUAR** "One Man's Struggle to Establish the World's First Jaguar Preserve" by Alan Rabinowitz. \$22.50

CADILLAC DESERT "The American West and Its Disappearing Water" by Marc Reisner. \$11

***FOREST RESOURCE CRISIS IN THE THIRD WORLD** From Sahabat Alam Malaysia (Friends of the Earth Malaysia). Illustrated, 510 pages. Proceeds to SAM, the leading conservation group in the Third World. \$20.

MOUNTAINS WITHOUT HANDRAILS "Reflections on the National Parks" by Joseph L. Sax. \$9.50

***OUT OF WEAKNESS** "Healing the Wounds That Drive Us to War" by Andrew Bard Schmockler. 320 pages. \$13.

***PARABLE OF THE TRIBES** By Andrew Bard Schmockler. \$11.50

DESERTS ON THE MARCH Fourth edition by Paul B. Sears. Hardcover. \$20.

THINKING LIKE A MOUNTAIN "Towards a Council of All Beings" by John Seed, Joanna Macy, Pat Fleming and Arne Naess. Illustrated by Dailan Pugh. 128 pages, references. \$9.50

CONSERVATION BIOLOGY "An Evolutionary-Ecological Perspective" edited by Michael E. Soule and Bruce A. Wilcox. 395 pages, index, bibliography. \$26.50

CONSERVATION BIOLOGY "The Science of Scarcity and Diversity" edited by Michael E. Soule. 584 pages, index, bibliography. \$29.50

THE OLD WAYS By Gary Snyder. \$5.50

***THE SPIRAL DANCE** By Starhawk. \$12

***THIS IS DINOSAUR** "Echo Park Country and Its Magic Rivers" edited by Wallace Stegner. \$10

ZODIAC "The Eco-Thriller" by Neal Stephenson. Paperback, 283 pages. \$9

THE WHISPER BEHIND THE WIND By Walkin' Jim Stoltz. 44 pages. \$7.50

WALDEN By Henry David Thoreau with a major introductory essay by Edward Abbey — "Down The River With Henry Thoreau." 303 pages. \$7.50

THE EARTH SPEAKS "An Acclimatization Journal" edited by Steve Van Metre and Bill Weiler. 187 pages. \$10.50.

WILDERNESS VISIONARIES By Jim Dale Vickery. \$12.

ON THE BRINK OF EXTINCTION "Conserving the Diversity of Life" by Edward C. Wolf. 54 pages, index. \$4.

MAPS

We are offering several fine US Geological Survey maps—all suitable for wall mounting, as well as being necessary reference tools for wilderness activists. Prices listed are postpaid. Maps are mailed folded (although they can be sent rolled for an extra \$2 per order, except for the Wilderness System map).

NATIONAL WILDERNESS PRESERVATION SYSTEM This full color, large map (40" x 25") shows all designated Wilderness Areas by agency in the US (including Alaska and Hawaii), plus a list of all the Wilderness Areas by state with their acreages. Scale is 1:5,000,000. Information is current to January 1987. Rivers, state boundaries, and major cities are also shown. Comes folded -- rolled copies are not available. \$3.25.

US POTENTIAL NATURAL VEGETATION A beautiful multi-color map showing 106 different vegetative types in the US. This is the Kuchler Ecosystem Map the Forest Service used in RARE II. The reverse side shows Alaska and Hawaii and offers a fairly detailed essay about the map and potential natural vegetation. A National Atlas Separate; scale is 1:7,500,000 (28" x 19") \$3.25.

MAJOR FOREST TYPES A multi-color map showing the 25 major forest types in the United States including Alaska and Hawaii. A National Atlas Separate. 1:7,500,000 (28" x 19"). \$3.25.

FEDERAL LANDS A National Atlas Separate, 1:7,500,000 (28" x 19"), showing National Forests, Grasslands, Parks, Monuments, Wildlife Refuges, BLM lands, military, Indian Reservations, Bureau of Reclamation, etc. in different colors for all 50 states. \$3.25.

ALASKA NATIONAL INTEREST LANDS A splendid color map of Alaska with shaded relief, rivers, lakes, elevation points, communities and roads. The National Parks, Preserves, Monuments, Wildlife Refuges, Wild & Scenic Rivers and Wilderness Areas designated by the December 2, 1980, Alaska National Interest Lands Conservation Act are shown, as are the Tongass and Chugach National Forests. 24" x 18". \$3.25.



THE BIG OUTSIDE Nears Publication

Dave Foreman and Howie Wolke have completed work on their book, **The Big Outside**, and it has gone to press. It will be available mailorder through the Earth First! Journal in the March issue. This landmark book is a descriptive inventory of the large remaining roadless areas in the lower 48 states. Over 360 areas are included — every roadless area over 100,000 acres in the West and 50,000 acres in the East, regardless of land ownership. Also featured are chapters on the need for large size in ecological preserves and discussing the factors that threaten wilderness in America. The book will be illustrated with location maps and black & white photographs.

Austin Lounge Lizards
"Creatures From the Black Saloon"

Marvelous country satire, superbly produced. Includes smash songs such as: Saguaro; Pflugerville; Anahuac (with Jerry Jeff Walker); Kool-Whip; Chester Woolah; Hot Tubs of Tears; Old & Fat & Drunk; The Car Hank Died In; and much more. \$9 postpaid.

Austin Lounge Lizards
"Highway Cafe of the Damned"

The Lizards drop to new depths with their second tape featuring the title song; Cornhusker Refugee; Industrial Strength Tranquilizer; Wendell The Uncola Man; Acid Rain; I'll Just Have One Beer; Dallas, Texas; The Ballad of Ronald Reagan; When Drunks Go Bad; Jalapeno Maria; Get A Haircut, Dad; The Chester Nimitz Oriental Garden Waltz. \$9 postpaid.

Darryl Cherney

"I Had To Be Born This Century"

Darryl is a singin' fool and organizing dynamo who has taken the North California Coast by storm and earned the eternal enmity of Charlie Hurwitz and MAXXAM. His first smash album includes: Earth First!; Where Are We Gonna Work When The Trees Are Gone?; Chernoble Blues; My Stereo Comes From Japan; It's CAMP; Eel River Flood Of '86; Give 'Em Hell, Sally Bell; Big Mountain Will Not Fall; Dave Foreman Called On The Ice Age This Year; Mosquito Party; and more! Liner notes with words included. \$9 postpaid.

Lone Wolf Circles "Full Circle"

A poetic journey into the artist's magical worldview, set to the music of man and the music of nature. A return to awareness and sensitivity, to our wild and true selves, alive and free. Gary Snyder says "Full Circle is a surprising experience; archaic, fresh, future; wild, refined, all at once. Which should be no surprise — that's how the real world is — my respects to Lone Wolf Circles." 27 poems. \$10 postpaid.

Lone Wolf Circles "Tierra Primera"

Live recordings of the Deep Ecology Medicine Show featuring Wolf's primal poetry backed by a variety of musicians. Well engineered, this tape captures the spirit of a road show and makes you want to go out and do something. \$10 postpaid.

Dakota Sid "... For The Birds"

You've enjoyed the heart-stirring songs of Dakota Sid at the Round River Rendezvous. Now you can purchase his cassette featuring For the Birds, Eagle Song, High Flyin' Tune, Endangered Stranger, The Condor at the Western Gate, Runnin' with the Moon (Owl Song), and Hawks & Eagles. This one's for the birds — and all you bird lovers, too. \$10 postpaid.

Dakota Sid "No Mercy"

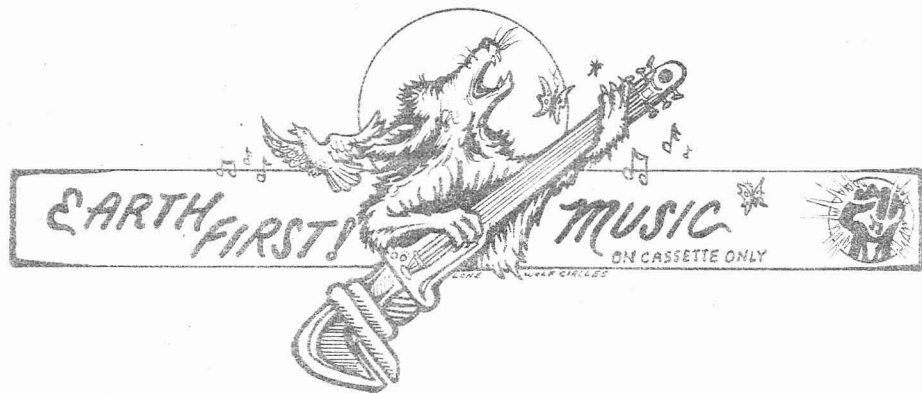
Dakota Sid's latest (and best!) album features the powerful song, "Greenfire" created on EF! roadshows along with the hit of the '87 Round River Rendezvous "It's All Bullshit!" Also includes Their Brains Were Small And They Died, It's All Right Kid, Expanding Universe, Redwood, 2187, The Seed, Smoke, No Mercy, Trouble Deep, and Nirvana City Blues. \$10 postpaid.

Mark Graham "Natural Selections"

Intelligent, funny, misanthropic music with a twisted bluegrass flavor. Some great picking on songs like: I Can See Your Aura (And It's Ugly), I'm Working On The Food Chain, Have a Nice Day, Life Is Hard When You're Dumb, Their Brains Were Small and They Died (he wrote it), and more. \$9 postpaid.

Greg Keeler "Songs of Fishing, Sheep and Guns in Montana"

Greg Keeler's marvelously satiric first album pokes fun at everything worth poking fun at in the West. Includes: Ballad of Billy Montana, I Don't Waltz (And She Don't Rock'n'Roll), Drinkin' My Blues Away, Miles City Buckin' Horse Sale, Latter Day Worm Fisherman, Fossil Fuel Cowboy, Montana Cowboy, Cold Dead Fingers, Last Great American Cookout,



I Call My Mama Papa, Good Morning Sailor, Make Bucks Get Rich, Roll On Missouri. \$9 postpaid.

Greg Keeler "Talking Sweet Bye & Bye"
Greg's encore and just as biting. Includes Little Bitty Bugs, There'll Come A Revolution Talking Sweet Bye & Bye, Facilitators From The Sky, Talking Interface Blues, Old Friends And Lovers, Big Budget Woman, Church Bells, Ski Yellowstone, Idaho, Death Valley Days, Dark Clouds. \$9 postpaid.

Greg Keeler "Bad Science Fiction"
Keeler returns with an all new album: Bad Science Fiction, Cow College Calypso, Do Not Ask, Montana Banana Belt Cowboy, Nuclear Waste Blues, Is The Ouzle Stupid?, If Bears Could Whistle, Nuclear Dioxin Queen, What's Left Of The West, Ode To Rough Fish, Take Me Back, Duct Tape Psalm, Modern Problems Dancing. \$9 postpaid.

Greg Keeler "Post-Modern Blues"
Ohmigod, he's back. Includes: P-U-B-L-I-C L-A-N-D-S, Post-Modern Romance, Swiss Army Beatitudes, Rain, Forest Rider, Give Us Fiber, Ryegate Montana Testicle Festival, Lament of the Laundromat, Lady Please Drive Me Back To Oklahoma 'Fore I'm Driven To Tears, and others. \$9 postpaid.

Famed folksinger Burl Ives has said, "The best cowboy singer I know is a girl, Katie Lee." Katie Lee is a superb folk song historian and interpreter, a fine musician, a former actress, a pioneer river runner (the 3rd woman to run all of Grand Canyon), a fighting conservationist (she was one of the few fighting the construction of Glen Canyon Dam), and one of the few of whom it can be honestly said — a legend in her own time. We're proud to offer four of Katie's fine folk cassettes.

Katie Lee "Colorado River Songs"
Katie writes, "In the late '50s and early '60s, protesting anything the Wreck-the-Nation-Bureau did to our rivers was like putting out a forest fire with an eyedropper. Nobody was listening. The fact that NOW the Barry Goldwater and Stewart Udall types are 'sorry' doesn't make me feel one bit better — their gross mistake is still my sorrow. GLEN CANYON IS GONE and will stay gone until

someone blows up that heinous dam or the great old Colorado gets mad enough to kick its ass downstream. Most of these songs were written before, and in protest of, those life-killing plugs and have survived to be added to, re-arranged and parodied by river runners. A few are new. They are LOVE SONGS to a truncated Grand and to those glorious canyons over whose bones the unenlightened multitudes race on a freeway of stagnant water." \$12 postpaid.

Katie Lee "Fenced!"

Twelve new songs about the old West, written in the folk tradition. These songs remind us of some of the things we should try to keep from slipping away. Includes: Wreck-The-Nation Bureau Song; Bert Loper; Ridin' Down The Canyon; Fenced; and others. 60 minute cassette. \$12 postpaid.

Katie Lee "Ten Thousand Goddam Cattle"

28 spirited songs about an older and disappearing West. Includes: A Cowboy's Prayer; Old Dolores; The Last Wagon; Dobe Bill; Jose Cuervo; Empty Cot in the Bunkhouse; The Ballad of Alferd Packer; and more. 90 minute cassette. \$14 postpaid.

Katie Lee "Love's Little Sisters"

17 heart-tugging, poignant, yet tasteful ballads about the souls, lives and loves of women who made The West and its men! Includes: House of the Rising Sun; The Sisters of the Cross of Shame; The Hooker (written by Tom Paxton); Casey's Last Ride (written by Kris Kristofferson); The Flower of Virginia City Fire Company; and more. \$12 postpaid.

Dana Lyons "Our State is a Dumpsite"

A short but powerful cassette by Washington State environmental singer/songwriter Dana Lyons. Includes title song, The Company's Been Good to Me, The Stars Will Always Move, and Drying Tears. \$6 postpaid.

Dana Lyons "Animal"

Dana's long-awaited second tape is finally out. For anyone who has heard him at a RRR, you know he's one of the finest musicians and songwriters in the country. For those of you who haven't heard him yet, you'll just have to buy this tape. Includes: RV, Building One In

My City, I Am An Animal, I Saw His Body, Music Off The Moonlight, Timebomb, The Tree, OEO When Will The Work Be Done, and others. \$11 postpaid.

Mokal "Clearcut Case Of The Blues"

Mokal is an original EF! tree-climber and accomplished blues guitar picker. His first album includes: California Condor; Goin' To The Wilds; Wild Places; Springhead Blues; Pollution Blues; Clearcut Case Of The Blues; Goddamn The Forest Service; Earth First! Now (What Did I Say?). \$9 postpaid.

Bill Oliver "Texas Oasis"

Bill Oliver's first inspiring, witty and rollicking album. Includes: Texas Oasis; Pretty Paper, Pretty Trees, It Cans Were Nickels; Shopping Maul; Village Creek; Hoies; Snail Darter March; River Libber; Have to Have a Habitat; and lots more! \$9 postpaid.

Bill Oliver & Friends

"Better Things To Do"

Bill Oliver has rearranged his fine "Better Things To Do" cassette with the addition of several new songs including Turtle Island; Champ! (with the Austin Lounge Lizards); and Rio Grande Valley. Also includes Muir Power To You; Better Things To Do; Get Along Litter Dogies (with Jerry Jeff Walker); Pine Away Pine Bark Beetle; Grand Canyon Rendezvous (by Glen Waldeck); When I Look Into The Sky; and more. \$9 postpaid.

Cecelia Ostrow "All Life Is Equal"

Cecelia has one of the most beautiful voices in music today. The lyrics and music to her songs are haunting and profound. Includes: Sweet Oregon Home; Water; Wild Things; Forest Song; I Feel the Forest; Time in the Forest; and more. \$8.50 postpaid.

John Seed, Bahloo & Friends

"Earth First!"

From Australia, John has done more to launch the global rainforest movement than has any other single person and has become one of the leading developers of the Deep Ecology philosophy. His first album of Aussie music includes: Extinction, Handful Of Timber, Ballad Of Mt. Nardi, The Water Song, Tonka Toys, Solomon Island, Killing Of The Trees, The Future Is In Our Hands, and more. \$9 postpaid.

Rainforest Information Centre

"Nightcap"

An outstanding one hour long documentary of the successful defense of the Nightcap Rainforest in Australia in 1979. One half music including "Take Your Bulldozers Away," "Tonka Toys," and other great Australian environmental songs. The rest of the tape is live action recording from the blockade. \$10 postpaid.

Jon Sirkis "A Few Less Colors"

Lone Wolf Circles reviewed Jon Sirkis' debut album in EF!, writing, "It is popular for its funny political ramblings, tunes that seem to have hitchhiked here from the sixties, the soles of their feet black from walking city sidewalks and kicking idealistic coals back into the philosophical fire." \$9 postpaid.

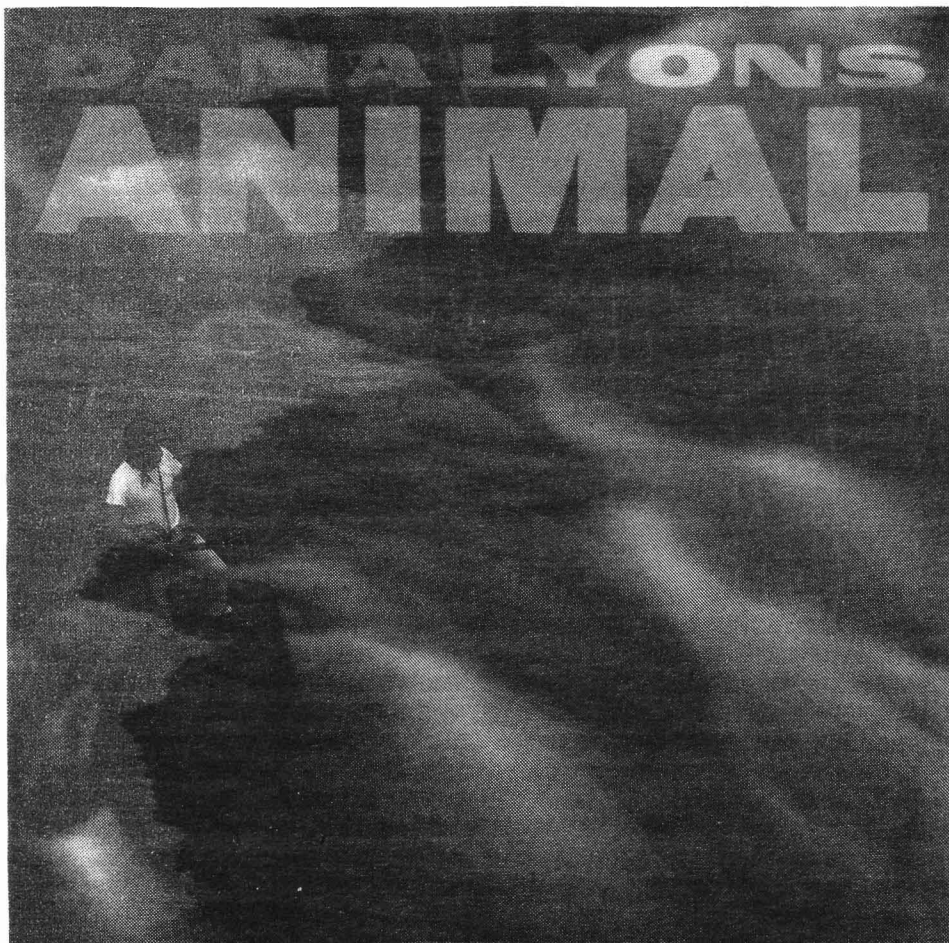
Walkin' Jim Stoltz

"Spirit Is Still On The Run"

Walkin' Jim's deep voice and wilderness-inspired lyrics will send shivers up your spine and launch a howl in your heart. Includes: All Along the Great Divide; Lone Lion Runs; Followin' the Rainbow Trail; Yellowstone Tales; Sweetwater; and more. \$11 postpaid.

Walkin' Jim Stoltz "Forever Wild"

Walkin' Jim Stoltz has walked 15,000 miles across the wilds of the West. These songs were written in the wilderness and are sung with his incredibly deep and resonant voice. Jim's second album includes: The Brand New Grand Canyon Suite, The River Song, Just A Part of the Sky, Let Me Listen To The Wind, Wolf Song, Old Cisco, Follow Your Heart, I Walk With The Old Ones, Green and Growing, Forever Wild. Includes liner notes. \$11 postpaid.



Wilderness books from American Geographic Publishing

American Geographic Publishing puts out some of the finest wilderness photo books available, many by frequent *EF! Journal* contributor George Wuerthner. Now their Publisher, Rick Graetz, has made a special offer to benefit *Earth First!* Order (through us) any of the books listed below and 40% of the price will go to further the work of the *Journal*.

Adirondacks, Forever Wild by George Wuerthner

Both a guidebook for visitors and a book to savor at home, this is an enthusiastic introduction to the Adirondack Park, the nation's largest state park. With a map, historical photos, 122 full-color photos, and nontechnical prose, Wuerthner describes all aspects of this "land of superlatives." 104 pages. \$15.95

Alaska Mountain Ranges by George Wuerthner

The definitive photo book on Alaska's mountains. It captures the landscape of the unique ranges across the biggest state, along with the plants, animals and people that inhabit them. 104 pages, with over 100 color photos. \$15.95

Beartooth Country by Bob Anderson

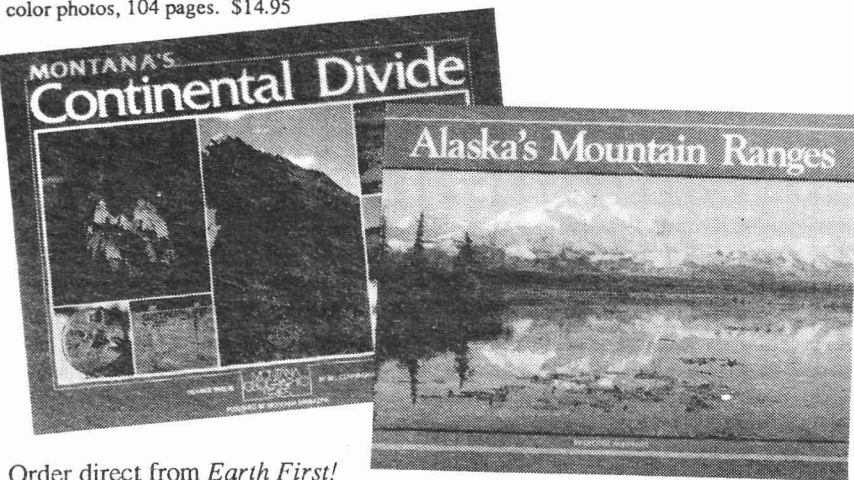
An exploration of the "Roof of Montana" — the Absaroka and Beartooth Mountains, where 24 peaks tower above 12,000 feet. Read of early-day explorations and climbs, grasshoppers frozen in glaciers, pink snow and the renowned outlaw hideouts. 112 pages, 160 photos. \$13.95

Greater Yellowstone by Rick Reese

The first comprehensive look at Yellowstone National Park as the center of an enormous ecosystem stretching across 10,000 square miles and encompassing Yellowstone and Grand Teton National Parks. 104 pages, 160 photos. \$13.95

Idaho Mountain Ranges by George Wuerthner

A comprehensive overview of Idaho's mountain ranges, from the most renowned to the hard-to-reach. Geological formation, flora and wildlife are put into the perspective of Indian and white use of the land, past and present. The text divides the state into eight regions and details the ranges in each. 150 color photos, 104 pages. \$14.95



Order direct from *Earth First!*



Montana's Bob Marshall Country by Rick Graetz

More than 125 color photos and many black and white prints help illustrate the story of the most magnificent expanse of wildlands in America. 208 pages provide a detailed guide to this inspiring country. \$10.95

Montana's Continental Divide by Bill Cunningham

This beautiful volume takes you on a spectacular 600-mile journey along Montana's Great Divide. It starts with the ridges of Glacier National Park, moving into the Bob Marshall area, through mining country around Butte and winding through most of southwestern Montana. Maps are included. 170 color photos, 112 pages. \$13.95

Montana Mountain Ranges by Rick Reese

A beautiful guide to where the major ranges are, how they influence the state's geography, mountain wildlife, geology and vegetation, and a range-by-range description. More than 150 color photos. 104 pages. \$13.95

Oregon Mountain Ranges by George Wuerthner

With 140 color photos and individual chapters on Oregon's five major ranges, this book shows the diversity of the state. Other chapters cover the mountains' geology, weather, vegetation and wildlife. 104 pages. \$14.95

Washington Mountain Ranges by Robert Steelquist

The natural and human history of Washington's mountains, with 120 color photos to show their spectacular beauty. It offers a clear, non-technical description of the ranges' geology, natural resources and human history. 104 pages. \$14.95

Wyoming Mountain Ranges by Lorraine Bonney

Light, easy-to-read text and incredible photography reveal the geology, vegetation, and wildlife of Wyoming. 160 striking color photos cover the state's vast open spaces. 104 pages. \$14.95

Wyoming's Wind River Range by Joe Kelsey

The best of the best mountain country in the Rockies. The Wind River Range includes 23 peaks rising above 13,000 feet, most within nine miles of each other. Over 100 color photos, along with the natural and human history of the region. 104 pages. \$14.95

Vietnam: Opening Doors To The World by Rick Graetz

Different from the other books presented here, but still a collection of amazing natural beauty. This is the first book to pictorially explore the enduring land that is Vietnam. More than 270 stunning color photos create a guided tour of a tropical country that has been all but closed to travelers from the West. 160 pages. \$17.95

OVERGRAZING SLIDE SHOW

A new slide show, "The Eating of the West", graphically displays the devastation of Western public lands at the hands (and hooves) of the livestock industry. The show consists of over 100 high-quality slides from National Forests, National Wildlife Refuges, and BLM lands which portray the shocking magnitude of the problems caused by grazing. The slide show comes with a written script and is rented at cost, \$10. Free copies of a 48-page tabloid on grazing are also available. Please include with your order the name and phone number of a contact person, and the date you need the show along with alternate dates. Orders must include street address for UPS delivery. "The Eating of the West" was funded by donations to Lynn Jacobs and the *Earth First!* Foundation.

CRACKING OF GLEN CANYON DAMN MOVIE

The excellent 10 minute, color-sound 16mm movie of *Earth First!* cracking Glen Canyon Dam in 1981 starring Ed Abbey and Johnny Sagebrush. An inspiring and humorous introduction to the *Earth First!* movement. Rental fee of \$30 for showing to groups (includes shipping fee); \$5 (shipping only) for *EF!* groups. Note: rental only; not for sale. Orders must include street address for UPS delivery.

CAMO CAPS

We've got a variety of camouflage baseball caps. They come in either woodland or desert camo, 100% cotton or mesh backs. They all have adjustable tabs so one size fits all. The *EF!* fist logo and the words "EARTH FIRST!" are printed in black. Be sure to specify what style you want or we'll send you what we have most of. \$8 postpaid.

For you non-militaristic types out there, we now have a non-camouflage cap — the fist and "Earth First!" in black ink on a tan cotton cap with either cloth or mesh back. One size fits all. \$8 postpaid

EARTH FIRST! EMBROIDERED PATCHES

This embroidered patch features the green fist and the words "EARTH FIRST!" and "No Compromise." Green and black on a white 3" diameter round patch. \$3.50 postpaid.

HAYDUKE LIVES EMBROIDERED PATCHES

These are black 3 inch diameter round embroidered patches with a red monkey-wrench and the words HAYDUKE LIVES in red. \$3.50 postpaid.

SUBSCRIBE TO EARTH FIRST!

Earth First! The Radical Environmental Journal — is an independent entity within the broad *Earth First!* movement and serves as a forum for no-compromise environmental thought and action. Subscriptions go to publish this newspaper and to fund a variety of *Earth First!* actions. Please subscribe or resubscribe today!

Keep us informed of ADDRESS CHANGES! The Post Office will charge us 30¢ for an address correction and won't forward your paper.

GIFT SUBSCRIPTIONS — Introduce others to *Earth First!* and receive the *EF!* bumpersticker of your choice or 30 silent agitators for each gift subscription you make. Indicate your address and what you would like on the subscription form.

LIFE SUBSCRIPTIONS — Tired of that little red check mark every year? Want to really help *Earth First!* and insure that you'll get *Earth First! The Radical Environmental Journal* for life (yours or ours, whichever is shorter)? Then become a life subscriber. Send us \$400 and you've got it.

Clip and send to: *Earth First!*, POB 2358, Lewiston, ME 04241

___ Here's \$20 or more for a one year subscription to *Earth First!*

___ Here's \$20 to resubscribe to *Earth First!*

___ Here's an extra \$15. Send *Earth First!* First Class.

___ Here's \$30 (US funds only). Send *Earth First!* to me First Class in Canada or Mexico or surface mail outside the USA.

___ Here's \$45 (US funds only). Send me *Earth First!* Air Mail outside the USA.

___ We are a government agency or exploitative corporation. Here's \$75 for a subscription (\$100 for First Class mail).

___ Here's \$400 or more for a life subscription to *Earth First!*.

___ Please send a gift subscription to the person below. Here's \$20 or more.

___ I'm broke. Please send me a subscription for \$

___ Please change my address. My old zip code was:

Name _____

Address _____

City _____ State _____ Zip _____

The *EF!* subscription list is kept entirely confidential. You are welcome to use an alias. Make sure the mailperson knows that James What (or whoever) is getting mail at your address.

EARTH FIRST! TRINKETS & SNAKE OIL

1989 CALENDARS FROM DREAM GARDEN PRESS

The wilderness calendars from Dream Garden Press are rightfully considered to be the finest nature calendars produced in the world today; moreover, Dream Garden is owned and operated by Spurs Jackson, a long-time supporter of Earth First!. Buy your 1989 calendars (for yourself and for gifts) from Earth First! so the beauty portrayed on your wall can be defended with the money from your purchase.

Grand Canyon National Park
Shenandoah National Park

All calendars are \$10.50 postpaid



BUMPERSTICKERS

Unless otherwise indicated, our bumperstickers are green lettering on long lasting white vinyl and are \$1 postpaid. *Starred bumperstickers are multi-colored with designs and are \$1.25 postpaid.

AMERICAN WILDERNESS*
LOVE IT OR LEAVE IT ALONE
(with red, white & blue US flag)

ANOTHER MORMON ON DRUGS

BACK TO THE PLEISTOCENE
(With "Ned Ludd" logo)

BOYCOTT COORS "BEER"

DARWIN*
(Matters to concerned fish with tents)

DESERT RAPER
(Bright red lettering - a sticker with many uses)

DEVELOPERS GO BUILD IN HELL!
(Black and red lettering, 12 for \$5)

DREAM BACK THE BISON
SING BACK THE SWAN

EARTH FIRST!

ESCHEW SURPLUSAGE

HAYDUKE LIVES

HUNT COWS - NOT BEARS

HUNTERS:
Did a cow get your elk?

I'D RATHER BE MONKEYWRENCHING
(with Monkeywrench/War Club logo)

**IF YOUR PECKER WAS AS SMALL AS MINE,
YOU'D NEED A MUSCLE WAGON, TOO!**
(Important note: This bumpersticker is - hopefully! - not for your own vehicle, but to surreptitiously paste on a jacked-up muscle wagon you find in the local shopping center parking lot. Don't get caught! These stickers are constructed out of cheap paper with permanent adhesive to maximize the difficulty of removing them. Special price: 12 for \$5!)

MALTHUS WAS RIGHT

MUIR POWER TO YOU*
(white and black on brown with face of Muir)

NATIVE*
(blue words with blue, green & white globe)

NATURE BATS LAST

NEANDERTHAL AND PROUD
(With "Ned Ludd" logo)

OIL AND BEARS DON'T MIX
(with bear logo)

**BY YOUR RENT
WORK FOR THE EARTH**

**PROTECT OUR ENVIRONMENT
STOP PUBLIC LANDS LIVESTOCK GRAZING**

REDNECKS FOR WILDERNESS

RESCUE THE RAINFOREST

RESIST MUCH. OBEY LITTLE

SAVE THE YELLOWSTONE GRIZZLY
(red & brown with bear & no ski area design)

SAVE THE WILD

**STOP THE FOREST SERVICE
SAVE OUR WILD COUNTRY**

STOP CLEARCUTTING

SUBVERT THE DOMINANT PARADIGM

THINK GLOBALLY - ACT LOCALLY

WAKE GREEN

WELFARE RANCHING - NOT COWS



Almost FREE BUMPERSTICKERS!

The following bumperstickers are printed on cheap paper (very difficult to remove) and look great on certain signs throughout the West. We have a large quantity available, and will happily send you some if you'll cover the postage. Send a 25 cent SASE for two stickers, 45 cent SASE for six, or write to inquire about larger volumes.

**GET LIVESTOCK OFF
OUR PUBLIC LANDS**

**PUBLIC LANDS GRAZING =
WELFARE RANCHING**



T-SHIRTS

MOTHER GRIZZLY AND CUB

A pretty EF! shirt! A lovely full-color mother grizzly and cub against the rising sun on a light blue shirt. 100% cotton available in short (\$13 postpaid) or long sleeve (\$16 postpaid) or 50-50 french cut (\$12 postpaid). "American Wilderness - Love It Or Leave It Alone" slogan. Art by Susan Van Rooy.

AMERICAN CANYON FROG

Roger Candee's popular American Canyon Frog (*Croakus abyssus pistoffus*) with the message "AMERICAN WILDERNESS LOVE IT OR LEAVE IT ALONE." A very colorful 4-color design on a grey 100% cotton Beefy-T. \$12 postpaid.

THE CRACKING OF GLEN CANYON DAMN

Jim Stiles' infamous masterpiece. Keep on praying for that one little precision earthquake! Black design on blue heather 75/25 cotton/poly blend. \$10 postpaid.

DEFEND THE WILDERNESS

The monkeywrencher's shirt. Art by Bill Turk. Silver design on black 100% cotton Beefy-T for night work. \$10 postpaid. Also available in black long sleeved Beefy-T (\$13 postpaid) or black french-cut 50/50 blend (\$10 postpaid).

EARTH FIRST!

Fist logo with words "EARTH FIRST! No Compromise in Defense of Mother Earth!" in black on green or red 100% cotton Beefy-T or french cut 50/50 blend. \$10 postpaid. In kid's sizes, too! Only color is green, 50/50 blend, sizes XS - L. \$7 postpaid. Be sure to specify kid's when you order.

TOOLS

John Zaelit's powerful impression of wilderness defense both old and new — the monkeywrench and stone club crossed. Black design on tan or blue 100% cotton Beefy-T (blue only in S & M sizes). \$10 postpaid.

The Ned Ludd Books logo of the **NED LUDD BOOKS** words "Back to the Pleistocene" and "Ned Ludd Books." Black ink on a tan 100% cotton Beefy-T shirt. \$10 postpaid.

FREE THE EARTH

A woman of power in an image by Gila Trout. Purple and silver ink on teal or fuschia 100% cotton Beefy-Ts. \$12 postpaid.

DON'T TREAD ON ME

Monkeywrenching rattler on front with the words "Earth First!". Back side has off-road tire track and "Don't Tread On Me". Amazing full color snake seems ready to lunge off of watermelon (pinkish) shirt. 100% cotton Beefy-Ts. \$15 postpaid.

EARTH FIRST! TRINKETS ORDER FORM

Make checks out to "Earth First!" or send cash. Mail to Earth First!, POB 2358, Lewiston, ME 04241. Please allow three to five weeks for delivery (contact us if it has not been received in that time). If possible, please use a street address so we can ship by UPS. First Class delivery can be arranged. Enter size, color, style, etc. We are sometimes temporarily out of certain items while waiting for stock to arrive. We'll send you the rest of your order immediately and the missing item as soon as we receive it. If you are in a hurry, give us a second choice of colors and when you need it by. Orders from outside of the United States must be in U.S. currency and include extra for shipping.

How many	Trinket Description	Color	Size	Amount

Name _____ Sub-total _____
 Address _____ Add 5% sales tax _____
 City, State _____ Zip _____ OKAY, HERE'S _____
 if ME delivery.



POB 2358
Lewiston, ME 04241

ADDRESS CORRECTION
REQUESTED

Bulk Rate
U.S. Postage
PAID
Tucson, Arizona
PERMIT NO. 488

2 Feb 89



NOTE: A Red Check Mark
on your Address Label
Means your Subscription
is Expired. Please Renew!

HB