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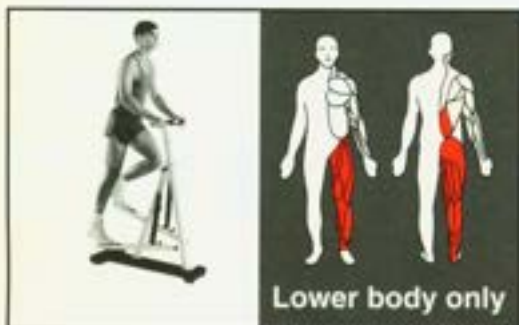
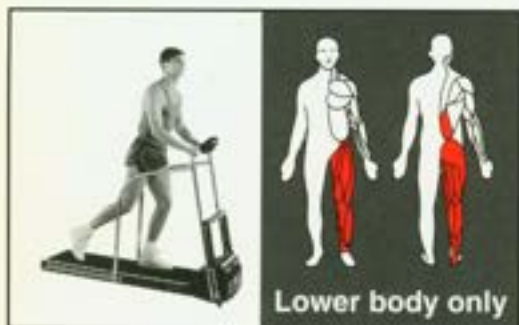
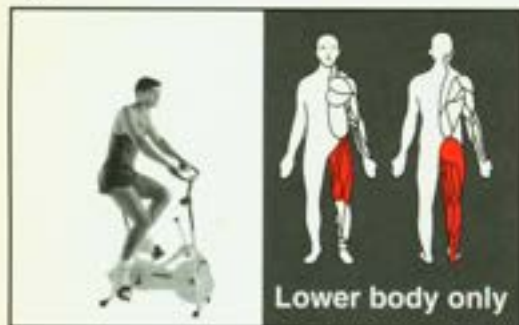
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Still Creek in Mt. Hood National Forest, Oregon
Photo by Steve Terrill

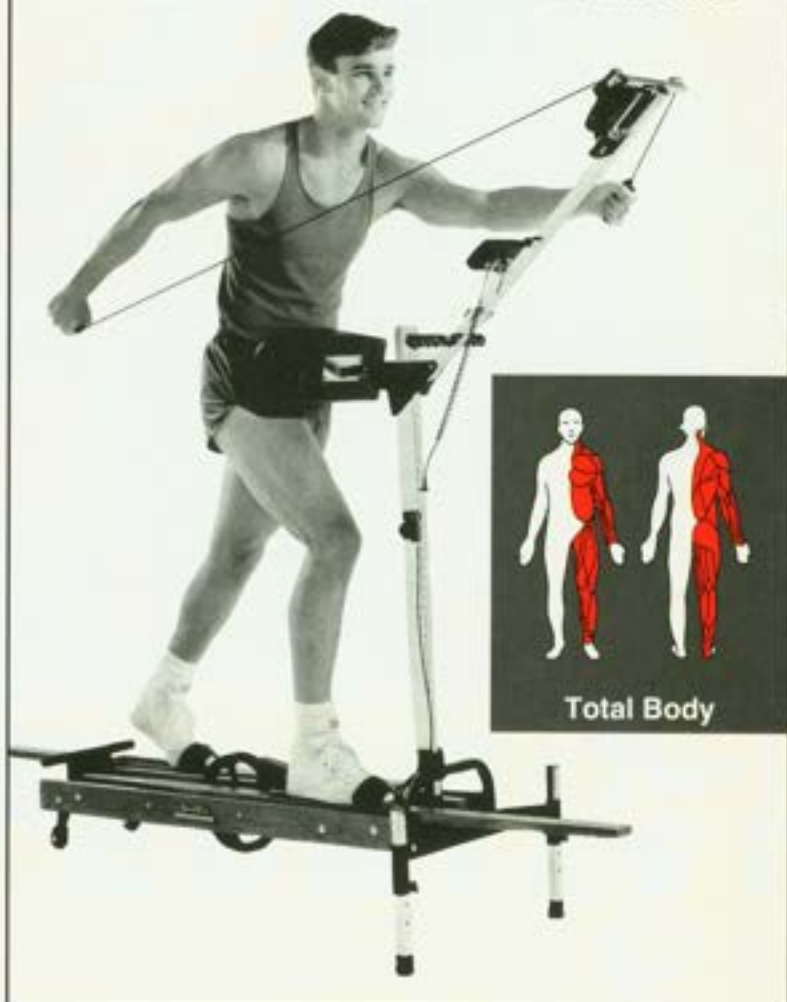


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THE 1992 SIERRA MAGAZINE PHOTO CONTEST

FOR CLOSE TO A CENTURY

the Sierra Club's work has been enhanced by images of those places we hope to save. In the tradition of recording Earth's remarkable landscapes, Sierra invites all photographers to enter its 13th annual photo contest. The winning images will be published in Sierra's September/October issue, then displayed at the Sierra Club's headquarters in San Francisco.

CATEGORIES

- ♦ Desert, Plain, and Prairie ♦ Foothills to Mountaintops
- ♦ Bodies of Water ♦ Abstracts and Patterns

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Detail of 1991 Sierra contest winner, First Place/Landscapes by Larry Olson

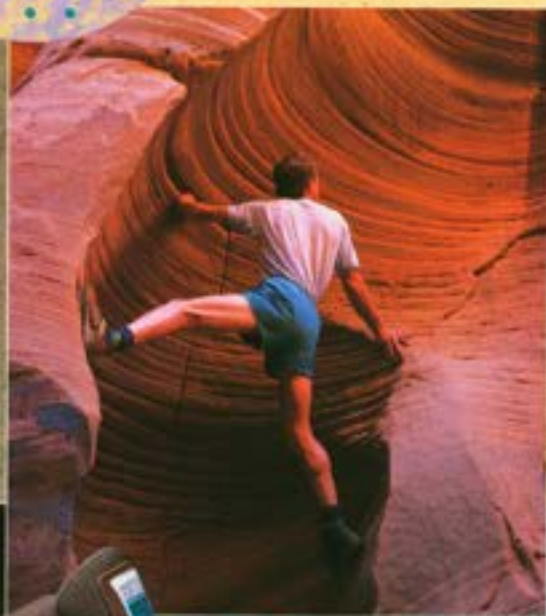
ELIGIBILITY

The contest is open to all amateur and professional photographers. Sierra Club staff, their immediate families, and suppliers to Sierra (including photographers whose work we have published since 1987) are not eligible. Previously published work, color prints, photos pending publication, or photos that have won other contests are ineligible. Contest void where prohibited.

HOW TO ENTER

All entries must be accompanied by Sierra magazine Photo Contest Submission Forms. To receive the forms, send \$5 (this serves as your entry fee as well) to Sierra Photo Contest, 730 Polk St., San Francisco, CA 94109. No phone calls, please. Entries submitted without the 1992 forms, or with photocopies of the forms, will not be considered. All submissions must be postmarked by midnight, June 1, 1992; we suggest mailing your request for submission materials by May 15, 1992.

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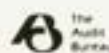
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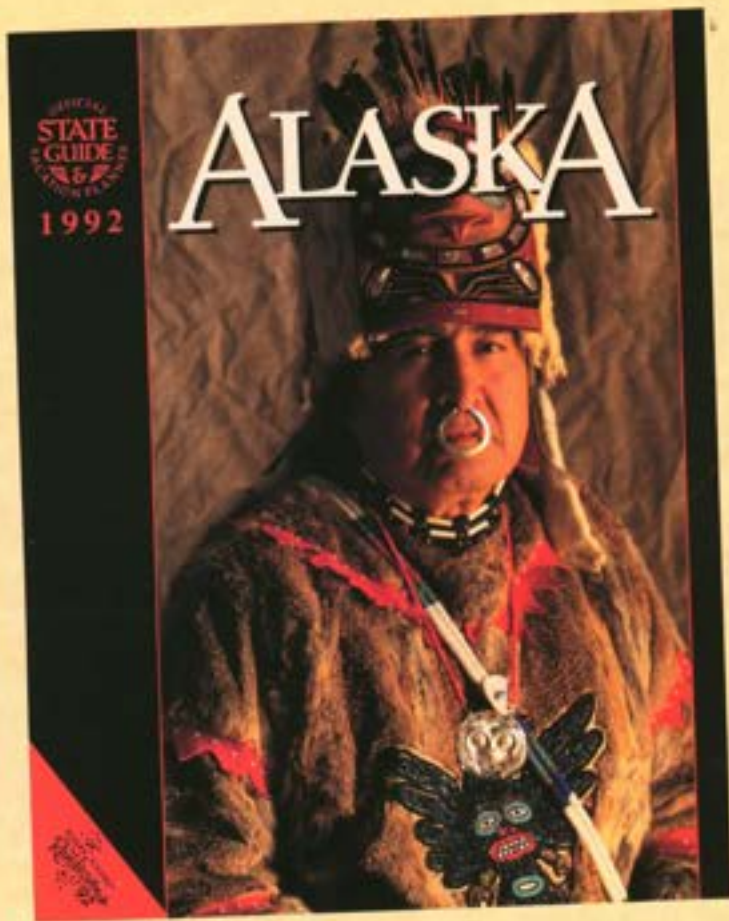
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Every Day We Write the Book

When the Sierra Club first took on the President's ill-conceived "national energy strategy" at the height of the Persian Gulf war, George Bush was basking in near-universal popularity, seemingly invulnerable to environmentalists' counterattacks. That's one reason we took pardonable pride in the assessment of Louisiana Senator Bennett Johnston (D) nine months later, on the occasion of the Senate rejection of a bill (sponsored by Johnston and Republican Malcolm Wallop of Wyoming) that embodied many of the President's worst ideas. Environmentalists, Johnston noted ruefully, "wrote the book on how to defeat a bill. My admiration goes to them for the political skill they exhibited."

In a sense, we *did* write the book: The Sierra Club used its tried-and-true formula—national lobbying expertise combined with grassroots activism—to convince the American people, and enough of their senators, that an energy policy based on the polluting technologies of the past is really no policy at all. In each of our communications we emphasized that the Johnston-Wallop bill meant not only a future with oil drilling in the Arctic National Wildlife Refuge and another generation of gas-guzzlers on the highways, but also a future of nuclear-power plants unaccountable to public oversight, unregulated hydroelectric development, oil drilling off our coasts, and power plants exempt from clean-air regulations.

Throughout the campaign against the Johnston-Wallop bill (the so-called National Energy Security Act of 1991), we developed a number of subordinate strategies, all of which changed rapidly—almost daily, it sometimes seemed—in response to the overall political climate and the demands of the campaign itself.

- In late February, a network of Sierra Club activists and staff responded quickly to President Bush's announcement of his national energy strategy by holding impromptu press conferences and media interviews. These efforts were rewarded by dozens of news stories across the country that covered the environmentalist perspective extensively, portraying the Bush plan as a policy with its head buried in Middle Eastern sands.

- In May, Sierra Club volunteers from states with senators on the pro-industry Energy and Natural Resources Committee descended upon

From phonebank to filibuster:

*A winning campaign charged
by activist energy*



Washington, D.C., for a flurry of lobbying against the Johnston-Wallop bill. Under the whip of Senator Johnston the committee passed the bill, but a tighter-than-expected 11-8 vote upholding the provision to allow drilling in the Arctic Refuge gave us a glimmer of hope. The Club immediately began working to persuade sympathetic senators to join a filibuster against the Arctic Refuge provision when the bill finally reached the Senate floor.

- Throughout the summer and into the fall, Sierra Club volunteers, often in collaboration with staff, held dozens of press conferences skewering various aspects of the bill. This enabled millions of Americans—including senators—to hear about the bill long before it came up for a vote.

- On a sunny September day in San Francisco, six Sierra Club activists gathered more than 2,000 signatures

for the Club's "Kick the Oil Habit" petition. Eventually, the more than 125,000 signatures collected nationwide were delivered to senators' offices on the eve of the November vote.

- As the floor vote approached, Sierra Club volunteers in key "swing" states set up phonebanks and letter-writing parties to ask Club members to phone their senators and urge them to join the filibuster. Meanwhile, Sierra Club staff lobbyists regularly capped off 12-hour workdays with nightly coalition meetings with lobbyists from other organizations. The filibuster list grew daily, as more and more senators felt the pressure from their constituents.

- Finally, after several weeks of delay, floor debate on the bill was set for October 31. On November 1, forty-four senators voted to allow the filibuster to proceed, effectively defeating the bill.

Like all campaigns, the fight against Johnston-Wallop took on a life of its own, gathering momentum from the efforts of thousands. And alas, like too many campaigns, this one is not really over. The Arctic National Wildlife Refuge will not be safe from the slick grasp of the oil industry until it wins wilderness designation, and energy efficiency and conservation measures are still waiting for their day in the sun.

Still, everyone who participated in the campaign to defeat the Johnston-Wallop bill can take a moment to marvel at the book they helped write—particularly because the potent PR machines of the oil, auto, and nuclear industries were working overtime to write a much different ending.

—Paul Larmer

PAUL LARMER is a media representative in the Sierra Club's Public Affairs Office in San Francisco.

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MOVING AND STRIKING

November/December 1991's *Sierra* is the second issue I've received, and again I'm struck by its beauty and diversity. I was especially moved by two articles. One was Loren McIntyre's remarkable portrait gallery, "The Ones Who Remain"—especially his photos of the beautiful people of Amazonia, as natural in their skins as birds in their plumage. The other was Mary Oliver's "Whereabouts" column about Cape Cod ("Among Wind and Time"). I agree with her: We need to become familiar with the world near at hand and discover (or re-discover) the wonderful in the ordinary.

Therese Arceneaux
Lafayette, Louisiana

TAKING ON THE TRIANGLE X

Paul Rauber's November/December article "Cowboy Junkies in Grand Teton," insofar as it concerns the Triangle X dude ranch and the Turner family in Grand Teton National Park, is unfair. You printed the indictment concerning the alleged Triangle X grazing abuse, but failed to report the verdict. True, Grand Teton officials accused the Triangle X of overgrazing, but a high-level Park Service review team came in to investigate, and it did not substantiate the charges of the local park officials.

The article attempts to convey the impression that the Turners are Johnny-come-latelies who have benefited from political favoritism. In fact, the family has operated this ranch for many, many years.

The article attacks a family that has been a friend of the Sierra Club and some of our issues. In the mid-1980s Harold Turner, one of the family members operating the Triangle X, testified before Congress to support designation of Wyoming's Gros Ventre Wilderness. Furthermore, John Turner, as director of the U.S. Fish and Wildlife Service, made the right and

tough decision on the spotted-owl controversy against enormous pressure from John Sununu and others of like nature in the Bush administration.

James S. Dockery, Jr.
Winston-Salem, North Carolina

Paul Rauber replies: *The "verdict" referred to by Mr. Dockery was hardly the exoneration he implies. The Park Service investigation of ranch operations—conducted at the request of the Turner family following a spate of negative publicity—substantiated most of the allegations made by former Park Superintendent Jack Stark. It found that the Triangle X, which is located on park property, operated a gravel pit without authorization; that it dumped old vehicles, mattresses, and lead car batteries in a shallow pit; that while John Turner was personally conducting the ranch's Snake River float-trip operation (i.e., prior to 1989) it was considered by park staff to be "by far the worst in the Park"; and that park trees were cut without permission. As for the allegations of overgrazing, the investigatory team was unable to confirm or deny them, largely because for the past two years the Turner family has cut back on grazing in the affected areas.*

Of particular interest, with the Triangle X concession contract up for renegotiation this year, is the team's finding that "Park staff expressed reluctance in certain circumstances to 'take on' the Concessioners because of their political prominence and the fact that over the years [Interior] Secretaries, Assistant Secretaries and [Park Service] Directors have visited the Ranch and have been personal friends of the Concessioners." Should the Sierra Club be similarly constrained from "taking on" the Turners because of their occasional collaboration with us on issues of mutual concern?

WHO KNEW WHAT PLACE?

Tom Turner's brief article on the Echo Park Dam controversy ("As It Happened," November/December) is a good example of the dangers of doing a little research. It was accurate until

Turner stated that Glen Canyon was "even less known than Dinosaur [National Monument]," perpetuating the hoary myth of Glen Canyon as "The Place No One Knew." That has a nice ring to it, but it just ain't so.

Of all the canyons of the Green and Colorado rivers, Glen was in fact the best-known, save for the lower 300 miles of the Colorado. There is evidence that white men floated Glen Canyon as early as the 1830s; the first photos of the canyon were taken on John Wesley Powell's second expedition, in 1871. Shortly thereafter, Cass Hite moved into Glen Canyon to look for gold in the bottoms on the advice of a Navajo chief, Hoskanini. This inaugurated an off-and-on gold boom that lasted for the next 40 years.

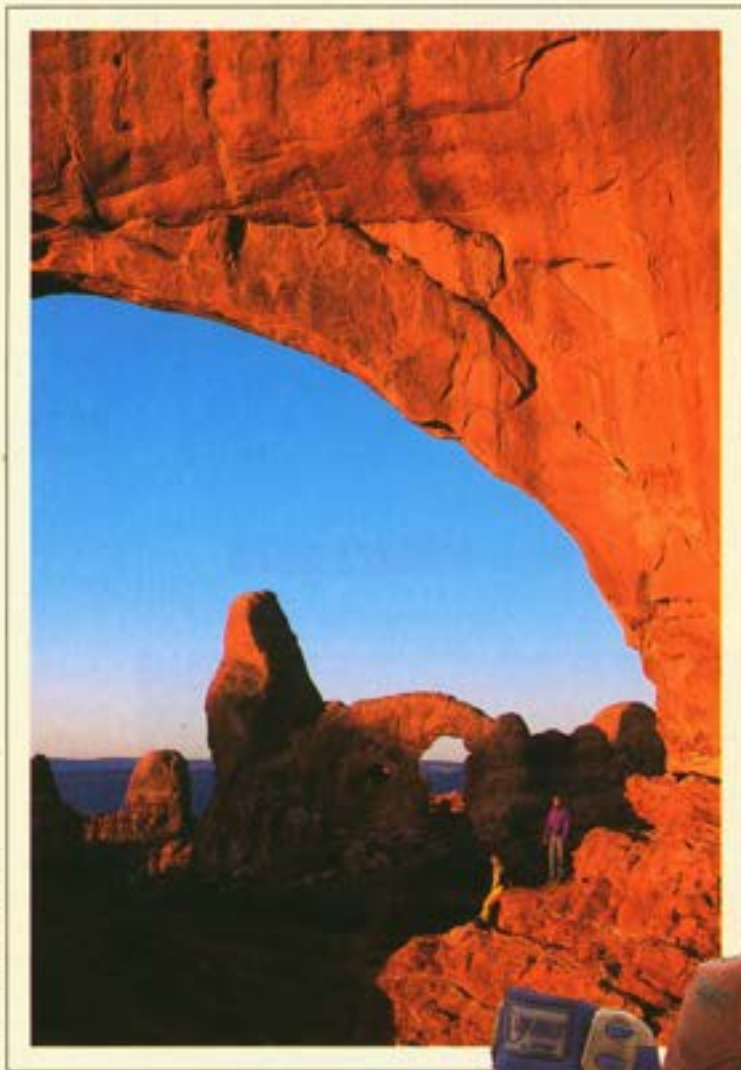
After the mining boom died out, tourists were quick to follow. Starting in 1936, Norman Nevills of Mexican Hat, Utah, began taking passengers down the San Juan and through Glen Canyon on a regular basis (seven to ten trips per year, each with an average of ten passengers and crew). His trips were featured in *Life*, *The Saturday Evening Post*, and *National Geographic*, as well as in a number of films, including *Danger River*, which won an Oscar in 1945 as best documentary.

Immediately after World War II, well before plans for a dam were announced, many others floated Glen Canyon, ranging from the Utah Boy Scout Council to a number of private individuals and church groups. It finally got to where, in the words of Otis "Dock" Marston, there was need of "traffic lights." None of this could be said of Dinosaur, where regular river travel didn't start until after the Echo Park Dam controversy of the 1950s.

I am among those who decry the flooding of Glen Canyon. It was a terrible loss, and one we should never allow to happen again. But you do us all a disservice by forcing the reader into unfortunate comparisons of the two places, thereby devaluing the natu-

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ral and scenic values of Dinosaur National Monument. And you do history a disservice by repeating the familiar but false description of Glen Canyon: Since it's David Brower's *mea culpa* that gave the description currency, better it should be called "The Place David Brower Never Knew."

Roy Webb
Salt Lake City, Utah

Tom Turner replies: *I thank Mr. Webb for correction and clarification, and certainly meant no slight to Dinosaur. The fact remains, however, that hardly a voice was raised in defense of Glen Canyon when the dam was approved in the 1950s. It was a tragic and unnecessary loss that might have been averted by a more sustained effort on the canyon's behalf.*

BARBLESS BABES

November/December's otherwise excellent "Outdoors" column on baby carriers is marred by the photo that accompanies it. I would not dare backpack a child or infant while fishing. A gust of wind, a bungled back-cast, or any one of a number of other mischances ends with a hook in the passenger. In larger sizes, even barbless hooks cause painful puncture wounds; conventional hooks cause extensive tissue damage. Both present the worst possible injury: the loss of an eye.

John B. Reubens
Livingston, Montana

THE HEARTHLESS HOME

Marc Lecard's "Hearth & Home" article on woodstoves ("Friendly Fire," November/December) was too friendly toward catalytic woodstove technology and may have downplayed the very real health threat posed by wood heat.

Catalytic combustors reduce toxic emissions from wood stoves only if they are operated properly and replaced regularly. The EPA's woodstove emission standards are more strict for catalytic woodstoves than for non-catalytic models because the catalyst must be replaced within one to five years, even with the newest models. These stoves are not simple to operate;

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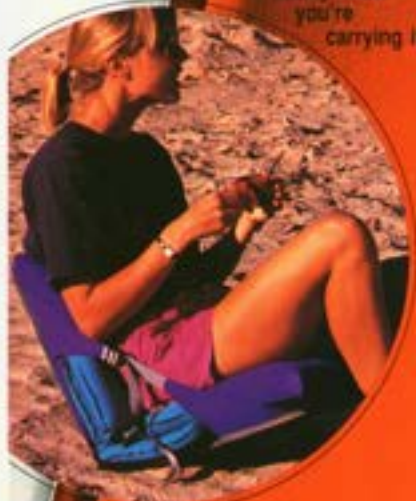
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if they are not operated properly, or if improper materials are burned in them, the catalyst becomes nonfunctional much sooner. It is expensive to replace the catalyst, and difficult to know when it should be replaced. Once the catalyst is worn out, the stove pollutes as much as older, more polluting models. The best in new woodstove technology is now found in noncatalytic cordwood stoves and pellet stoves; the emission performance of noncatalytic stoves holds up well over time.

All of this is relative: Wood remains the dirtiest form of heat, true even of the cleanest pellet or cordwood stoves of any variety. Any EPA-certified woodstove that has been properly installed can burn with no visible smoke, provided that dry wood is used—but an absence of visible smoke is not the same thing as an absence of toxic emissions. Carbon monoxide and other toxic and invisible gases and tiny particulates are released with "heat waves." A growing body of research links woodsmoke exposure to reductions in lung function and increased susceptibility to lower respiratory diseases.

Joseph R. Williams
Air Quality Program Manager
Washington State Department of Ecology
Olympia, Washington

The vast majority of stove owners do not replace their catalytic combustors when they wear out. This can result in emissions that are worse than those from uncertified stoves. What's more, fuel logs get damp when stacked out behind the garage, and this too leads to higher emissions. Although these issues were noted in your article, you did not recognize that the potential for human error in operating and maintaining these stoves is what makes them so dangerous.

In Washington State the Sierra Club has lobbied successfully for laws that set the toughest standards for the manufacture of woodstoves (more stringent than EPA standards). We were also successful in passing legislation that bans the use of all stoves, EPA-certified or not, during periods of poor air quality.

Your conclusion that individuals can "avoid adding to atmospheric degradation" by using the "cleaner" generation of wood stoves is not only inaccurate but will, no doubt, encourage the use of one of the most polluting energy sources currently on the market, just before the start of the winter burning season.

Andrew Lewis, Chair
Bruce Wishart, Lobbyist
Sierra Club Cascade Chapter
Seattle, Washington

Marc Lecard replies: *While most of the issues raised above were indeed touched on in my article, the point about the merely relative cleanliness of the new woodstoves is well-taken. I meant only to encourage the use of EPA-certified woodstoves rather than the older models; it would appear that I failed to emphasize sufficiently the very real drawbacks of these romantic—but undeniably imperfect—devices.*

ERRATA

An editing error in Page Stegner's article on forest lands of the northeastern United States ("Let It Be Woods," September/October 1991) led readers to believe that a quotation from independent forester Rich Carbonetti was obtained by Stegner directly. The quotation was in fact obtained by freelance writer Patrick McCarthy and included in his article "When the Trees Fall," which appeared in the May 17, 1990, issue of Vanguard Press. Our apologies to Stegner and McCarthy for any confusion this error may have caused.

In the same article, a map depicting the northeastern U.S. (and vicinity) neglected to identify the Canadian province of New Brunswick; more to the point, in the words of provincial Premier Frank McKenna, our map "indicated the Province of New Brunswick is under the waters of the Atlantic Ocean." We thank the Hon. Mr. McKenna for the correction, and for the lovely provincial map and travel planner that accompanied his letter.

Finally, to completely establish our ongoing confusion in matters of Canadian geography, we misidentified Banff National Park (the subject of our January/February 1992 cover) as being in British Columbia; it is, of course, the pride of Alberta.

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Worn Again

MARC LECARD

In my poverty-stricken college days, Thursday night was the big night for garbage-raiding—on Friday mornings the sanitation department picked up “large items.” I furnished several apartments with goods hauled off the street a step ahead of the truck. The stuff—armchairs, tables, bookshelves, imitation oriental carpets, a wonderful Art Deco radio cabinet (minus the works but too lovely not to take home)—was later passed on to roommates, and for all I know may still be gracing student housing in western New York.

I was ahead of my time and didn't know it. Like everyone who has ever taken home a tossed-out but perfectly serviceable widget or thingamajig, or has ever saved rubber bands, plastic bags, or paperclips, I was practicing reuse.

People of an earlier time would have thought of reuse as “thrift,” and taken it for granted. But the notion that some-

thing might be worth saving and fixing up is contrary to all we're taught in today's throwaway culture, where disposability drives the economy. This being true, saving Post-its or repairing that three-legged whatsis you found in the neighbor's trash pile become subversive acts of a minor but significant order. Not only are you keeping things out of landfills, you're helping to take the pressure off limited resources by avoiding the “need” to make yet another whatsis.

Reusing may challenge your ingenuity, but once you begin looking at discards as stuff that just might come in handy some day, one good idea will lead to another. Empty egg cartons become seed starters or soundproofing or desk organizers; old clothes too funky to fix or give away make nice patches or dish-rags or paper-towel substitutes. You may end up saving everything.

If you run out of space or ideas, put your throwaways where someone else

Used once, used twice,
Sold! To the gentleman
in the lampshade hat

can find them: Give unwanted items away to rest homes, schools, churches, friends. Donate to thrift stores; set up a table at a flea market, or hold your own garage sale.

You don't have to confine yourself to reusing your own rejectamenta: Dive headfirst into the waste stream and shop second-hand. Vintage clothing and used furniture cost less than the same things new, and will usually provide better quality; consignment-only used-clothing stores often carry the latest fashions at considerable discounts. And adventurous reusers with a good pair of gloves might like to search for pre-owned treasure at curbside disposal sites and in dumpsters.

When your inventiveness is exhausted, recharge it by picking up a copy of *Reuse News*. This monthly newsletter groups its tips into Home & Shop, Garden, Crafts, and Kids categories, and offers new life to everything from chopsticks to pantyhose. Future issues will carry articles on reuse in the workplace, lists of reuser-friendly publications and events, and “lots of things to do with plastics.”

Reuse involves a reordering of attitudes and habits of mind—most of us will continue to find a shiny new gizmo more appealing than a ratty one patched up with cellophane tape. But while your consciousness makes the switch from the consumer to the conservation economy, you can be saving money, reducing your trash flow, and injecting adventure into simple shopping trips by giving garbage a second chance. ■

For more information, see “Resources,” p. 84.

Home Free

HANNAH HINCHMAN

Tonight, curled up on the couch while snow fills the fir branches outside, I sketch the interior of my cabin. It is a small domestic tableau: the pale light on a tabletop, the candle in the window, the shadows under the eaves. I look around, pleased at the warm glow of lamps and the tick of the fire. Later the cabin may close in and all these corners seem stale and cramped, but at the moment everything fits like a ground squirrel's burrow.

Earlier today, before the new snow began to fall, I set out into the Teton Wilderness. The trail was heavily trodden by horses and hunters, churned to slush and refrozen into ruts that forced me to keep my eyes on the ground. Elk and moose trails crossed at right angles, the animals' flight from the hunters evident in the long strides, splayed toe marks, and scattered snow. I came to a fork, and saw that no one had taken the dim, right-hand trail since the first winter storm.

As I traced the steps of an unhurried elk the sense of being in wild country returned, affirmed by tracks of many animals going about their business undisturbed. The tracks led to a clearing and an elk's bed, which I sat down in. Here was wildness as we talk of it; but sitting in the elk's body shape, seeing what it had seen as it stopped here, made me think of my cabin and its familiar interior. I can't say whether the elk is pleased by the look of the clearing, but it knows this place, it knows it is at home.

I walked further, then stopped again where bounding mouse tracks led to a snow tunnel that descended to a fallen

log. The passage, lit by a serene, diffuse blue light, opened out on an interior courtyard of moss and spruce needles, then disappeared into darkened wood-and-earth corridors. Deep quiet, no drafts, a stable temperature, body-shaped rooms: A mouse would return to this spot with relief.

The multitude of tracks revealed an abundance of dwellings; almost every log, bank, and thicket, it seemed, had been selected and renovated. When the tracks disappeared into a snow tunnel with a generous, polished, south-facing terrace, I wanted to enter too, stroll the corridors, settle down on a pile of

shredded grass, and sketch the shadows beneath the eaves. Under deep snow, every cleft and cranny looked even more inviting.

To be home. It's an ordinary, unexamined condition for us, set against the wildness we head out to find. This time, though, the wild hills seemed full of a devoted domesticity, of well-appointed rooms and comfortable beds. Working with native materials, learning the geography, the builders of these homes have been members of this neighborhood for countless generations.

The trail I followed back to my own home was easy to walk on: A hunter had dragged the heavy body of an elk along it, and the snow was flattened and streaked with fresh red blood. Approaching my cabin, in a little gathering of similar structures, I felt the way I sometimes do in the wilderness: This human domesticity seemed unknowable, unpredictable, a source of danger. It was several hours before I was again able to see my cabin as a snug, welcoming burrow. To the animals whose homes border our fences, the settlement is the wild place. ■

To promote the wild's
welfare and ensure
domestic tranquility



Elk trail to the clearing

The Fates of November

CARL POPE

Red-faced and furious, the senior senator from Idaho blasted his colleagues. "We should have some coherent plan where we can develop energy, streamline the licensing procedure for nuclear power," fumed Steve Symms. "But no. Congress does not want to address that. It is not good enough, or it does not suit the Sierra Club . . . so we cannot do those things."

The occasion for this outburst was the Senate's vote to block consideration of S. 1220, a bill introduced by Bennett Johnston (D-La.) and Malcolm Wallop (R-Wyo.) that would have (in addition to "those things") opened the Arctic National Wildlife Refuge to oil exploration. Standing by was a small group of happy victors, senators whom Johnston had dismissed just weeks before as too junior and too inexperienced to be taken seriously.

Junior they are. With the exception

of Max Baucus of Montana, none of the group—Richard Bryan of Nevada, Joseph Lieberman of Connecticut, Paul Wellstone of Minnesota, and Tim Wirth of Colorado—has served in the Senate for more than five years. And they share a political heritage: All were winners of close races in which environmental issues were paramount, and in which the Sierra Club's political program played a critical role.

The 1992 campaigns are under way, and the season promises to be storm-fraught: George Bush is seeking a second term, and several powerful senators face strong challengers. In a normal year, 30 or 40 races in the House and seven or eight in the Senate

What's an outdoors club like us doing in a place like this?

might be judged "too close to call"; analysts project three times as many neck-and-neck contests in 1992. The mood of the voters is charged: California, Oklahoma, and Colorado have adopted term limits, public trust in politicians is at an all-time low, and the pitiful economy has tempers flaring.

While the recession may well distract voters from environmental concerns, the 1992 elections are nevertheless critical to the health of the planet. During the next few years the United States will define the role it is to play in global crises ranging from the growing hole in the ozone layer to population stabilization. Our government could take the lead—or hang out backstage, getting in the way.

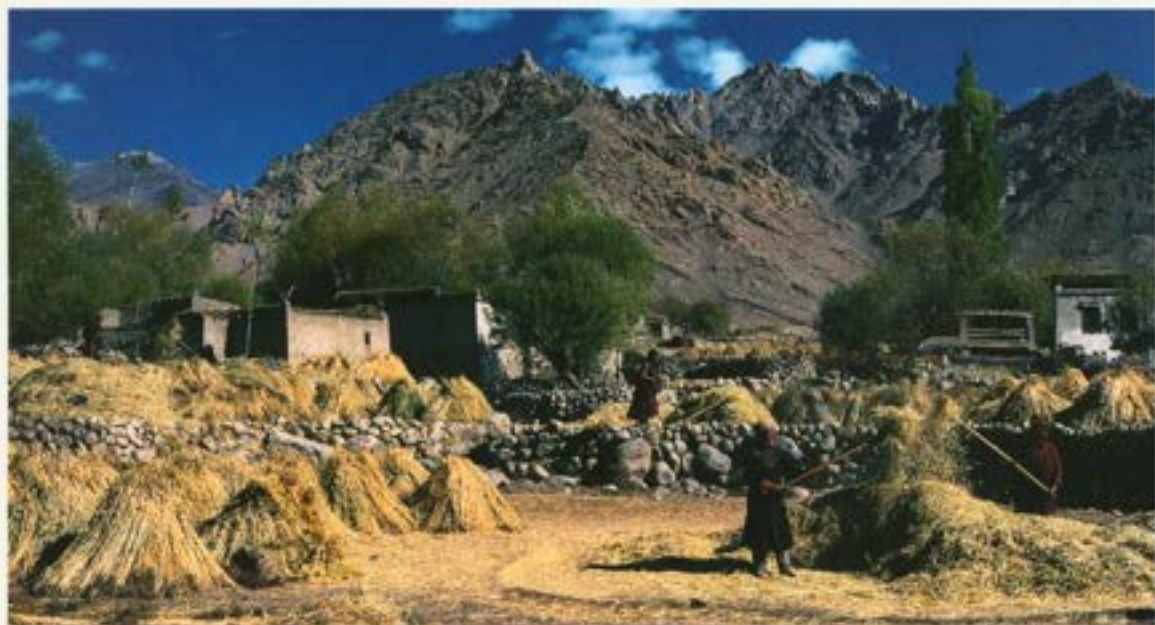
In short, November's victors will determine our collective environmental fate. Faced with this, the Sierra Club plans to double its previous number of endorsements, candidate profiles, candidate forums, and voters' guides.

Our involvement in electoral politics continues to be controversial; some Club members think we belong in the wilderness, not the voting booth. But as John Muir wrote about the redwoods in the 1890s, "God has saved [them] from drought, disease, . . . leveling tempests and floods; but he cannot save them from fools—only Uncle Sam can do that."

The Sierra Club's work in past elections, and its commitment to those being held this year, saved the Arctic by emboldening senators to stand up to Big Oil. We all look forward to the day when a vote for our children's environmental future will not be considered a stunning upset. To take back the planet from the special interests that have plundered it, we need first to take back our government. ■

For information on how to get involved in the Club's electoral work, contact the Sierra Club Political Committee, 730 Polk St., San Francisco, CA 94109.





Cultural Revival

MARK MARDON

If I hadn't woken up with a splitting headache in northern India one morning, I could now claim to have met the Queen of Ladakh. This royal personage occupies a mud-brick palace in the village of Stok, not far from the Indus River in Ladakh (*ladoo*), a stark, arid land that lies between the Himalayan and Karakoram ranges on the western edge of the Tibetan plateau. My traveling companions had arranged an audience, but I was suffering from mild altitude sickness and had to opt out.

I stayed in my hotel bed in Leh, the capital of Ladakh, and amused myself by reading a guidebook history of the region. I began wondering how her majesty must feel being the figurehead of a Tibetan Buddhist dynasty whose 400-year rule ended when the Hindu Maharajah of Jammu and Kashmir "acquired" Ladakh in the 1840s. With 25 servants, and an 80-room palace to

wander in, the queen couldn't feel too bad, though she might well harbor some lingering resentment: When the Maharajah's troops invaded, her royal ancestors had to flee the eight-story, 16th-century Leh Palace. From my window I could see the old, abandoned building, wrapped in an aura of grandeur and mystery.

But what did the Hindu invaders capture? As any visitor soon learns, Ladakh is a land of barren, gray mountains laced by glacier-fed rivers and dotted by monasteries and villages. Its most valuable natural resource may well be yak manure. If you walk downwind of a traditional Ladakhi home at

Revealing the
lotus-jewel in a
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mealtime or when the temperature drops (it can reach minus 40 degrees Fahrenheit in winter), the sweet scent of dung-burning stoves and heaters wafts your way like incense.

Just such an odor was drifting through my hotel-room window. Soon came the added smell of baking wheat bread, at which point the lure of Leh proved stronger than my will to lie down. I ventured out to find a breakfast of warm bread, jam, and local green tea churned with salt, soda, and butter before winding through a confusing maze of narrow streets toward the Ladakh Project, an environmental and cultural-survival institute headquartered in town.

En route, though, I was distracted by Muslim traders who wanted to haggle over the prices of bronze Buddhas and bracelets inscribed in Tibetan with the sacred mantra *om mani padme hum* ("Oh, thou jewel in the lotus"). Tranquil, red-robed lamas nodded in passing, and excited children shouted "Jullay!"—Ladakhi for "hello." From various rooftops, strings of prayer flags flapped like handkerchiefs hung out to dry.

The Ladakh Project's "ecology cen-

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ter" was easy to identify by its big sign advertising a restaurant, a library, and a solar-power demonstration. The project was the brainstorm of Swedish linguist Helena Norberg-Hodge, who came to Ladakh in 1975, shortly after the Indian government opened the region to foreigners. She soon noticed that the influx of Westerners—with their cameras, clothes, wads of cash, Walkmans, and notions of industrial progress—was rapidly altering Ladakhi culture. Ladakhis had formerly regarded themselves as rich; after comparing themselves to the newcomers, however, they began to feel ashamed of having no blue jeans or nylon backpacks (like mine) and of having to plow fields rather than push buttons on a computer keyboard.

Norberg-Hodge founded the Ladakh Project to teach local people how to counter large-scale development with locally controlled enterprises. Eventually a group of Ladakhis formed the wholly indigenous Ladakh Ecological Development Group, which runs the center. I saw their accomplishments as I toured the facility: One south-facing wall, painted black and fronted with a double layer of glass panes, heated the space year-round, and a workshop provided craftspeople with tools for designing gravity-driven water pumps and small-scale hydro-generators.

Helena Norberg-Hodge was away from Leh when I visited, but I spoke with her recently when she came to California to promote her new book, *Ancient Futures: Learning From Ladakh* (Sierra Club Books, 1991). She told me that about 100 tourists a day make their way to the Ladakh Project. They're welcomed with open arms, tips on how to respect traditional Ladakhi culture, and solar-baked muffins—which, by the way, my traveling companions did *not* get while chatting with Her Majesty the Queen. ■



Now Hear This

MICHAEL CASTLEMAN

Twenty-five years after playing rock 45s so loud that they rattled my bedroom windows, I can still hear my father shouting, "Turn it *down* or we'll all go *deaf*!" I didn't oblige him, of course, but the old man was right: Throughout our lifetimes, the loud noises we are subjected to (and those we inflict upon ourselves) chip slowly, imperceptibly away at our hearing. To make matters worse, the journey to hearing impairment is a one-way ride. Loud noises destroy the microscopic hairs in the inner ear that transmit sound to the auditory nerve; those hairs never recover and cannot be repaired. And hearing loss is insidious: Today's heavy-metal fans won't notice its effects for another 30 years.

Hearing damage begins with prolonged exposure to sounds louder than about 80 decibels (the unit of volume measurement). Normal conversation registers about 60 dB; vacuum cleaners, 80; motorcycles, 90; jackham-

mers, 100; rock concerts, 100 to 130; and gunshots, 140.

Damaging decibels are not confined to our immediate personal environments. During the past 20 years, the background din called "urban hum" has become so loud that noise is now considered a major pollutant in metropolitan areas. Background noise does more than exacerbate the ills caused by stereos at full volume: It raises blood pressure, ruins sleep, impairs learning, and contributes to ulcers and premature, low-weight babies.

To keep their residents from going over the brink, most communities have noise-abatement laws that require reasonable quiet—no construction, no live

Position the plugs:

Cacophony
surrounds us

rock bands—in residential neighborhoods from about 9 p.m. to 8 a.m. Unfortunately, freeways don't listen to such laws, and complaints about auto noise have spurred the construction of "sound walls" along many of the nation's highways. Sound walls work for those who live adjacent to the freeway (the goal is to keep the noise level below 67 dB within 300 feet of the road), but they've created an unforeseen problem: The high-frequency component of traffic noise bounces off the walls, and people who live as far as half a mile away, and who used to hear nothing but crickets, can suddenly hear zooming vehicles.

The aural assault also comes from the air, as those who live in the flight paths of the nation's increasingly busy airports can attest. One morning in 1987, thousands of New Jersey residents awoke to the unfamiliar sound of low-flying jets roaring overhead every 20 seconds. Without any public comment or environmental impact assessment, the Federal Aviation Administration had rerouted flights inland from the ocean and industrial areas to the skies over residential communities. According to activists, the FAA has turned an unsympathetic ear to their requests for less noisy aircraft and a return to ocean routing; last October the agency gave the airlines several additional years to switch to quieter planes. Nevertheless, the volume of the aircraft-noise issue is unlikely to decrease soon: The National Airport Watch Group has at least 100 local affiliates across the country.

Excessive noise may be a fact of modern life, but you can still be kind to your inner ear, if only by picking up some inexpensive foam earplugs on the way to your next rock concert. And if it's common carspace that's being violated, call your elected officials and give a yell. ■

For more information, see "Resources," p. 84.

Redwood Visions

TOM TURNER

By the early 1960s the coastal redwood forests of Northern California had been ransacked. Only about 5 percent of the original stands remained, and the redwoods that had not become houses, boats, or bridges were in private hands only too willing to shake those of the western timber barons.

The Sierra Club recognized that federal protection of the surviving trees was an ecological necessity. But it would be an economic as well as a political struggle: A national park in

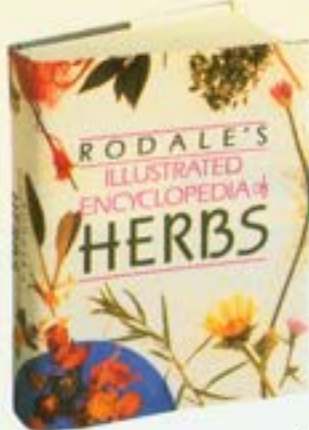
the redwoods would have to be purchased—and the price would be high.

Not only was acquisition a problem, but park proponents were seriously at odds among themselves regarding the best site. The Club favored a park at Redwood Creek in Humboldt County, where the largest tract of virgin redwoods could be preserved. The Save-the-Redwoods League, which had acquired and donated to the state several small, noncontiguous redwood groves, wanted to expand those sites and place them—and another grove near the Oregon border—under federal jurisdiction.

The Club went to work promoting its vision, publishing *The Last Redwoods*, a paean to the threatened trees that relied heavily on photos of devastating clearcuts. (The book was not a

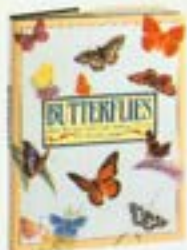
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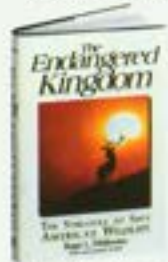
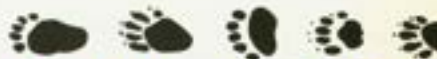
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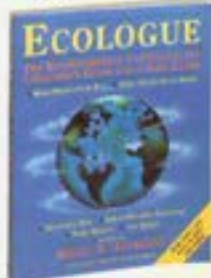
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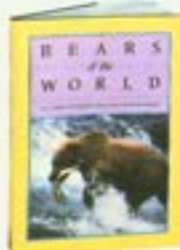
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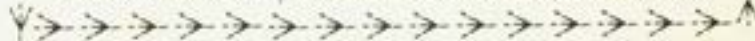
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big seller, perhaps because, as then-Executive Director David Brower put it, "people didn't want that much carnage on their coffee tables.") To build a base of popular support, the Club ran a full-page call to save the redwoods in newspapers across the country.

After years of battling, Congress in 1968 approved a fragmented park that meandered down the coast for 40 miles. The Redwood Creek segment included 22,500 acres near the mouth of the creek, plus a half-mile-wide strip—known as "the worm"—that slithered for 15 miles upstream.

Lyndon Johnson's signature on the Redwood National Park law was barely dry when the chainsaws of Georgia-Pacific, Simpson, and Arcata Redwood hit the virgin trees on the steep, fragile slopes above the worm. Knowing that Congress was unlikely to expand the park soon, the Club, through the newly founded Sierra Club Legal Defense Fund, filed suit against the National Park Service to force the agency to protect the park from the logging on its boundaries.

The court battle lasted more than four years. Even when the government finally acknowledged the encroaching destruction, it claimed it could not afford to expand the park. The court reluctantly dismissed the case. However, the lawsuit and the continuing Sierra Club redwood campaign had cast a bright light on the park, and in 1978 Congress appropriated funds to buy most of the unprotected sections of the Redwood Creek drainage.

The new land was severely maimed, and restoration began at once. Today nearly all the logging roads in the park have been obliterated, logging debris has been removed from creek beds, and 750,000 redwoods and Douglas firs have been planted on the cutover lands. Though the battle for the remaining virgin forest outside the park continues to rage, someday Redwood Creek will be old growth once again. ■



A Crying Country

NANCY LORD

Summers, I live in a cabin on a rocky Alaskan beach, separated from the nearest accumulations of people by an inlet of fast-flowing water and tidal rips. Ostensibly, I live here to fish, to earn a living catching and selling salmon. The truth is, fishing is just an excuse.

I love the beach where I fish—the freshness of the shoreline after every tide, the volcanic peak that rises from the fog, the eagles winging past, the bears that walk the tideline at night, always the sound of the ocean moving in or out. I love the old, worn, ground-

down-by-ice log posts that appear only at the lowest tides, marking where people long before me anchored their fishing nets.

I also love to leave the beach and hike up the creek into forest and berry patch, around beaver ponds and across a lake by creaky rowboat. This is country where no one comes to stay. Trails are flattened by the drag of beaver tails. Spiders string webs, and moose leave catches of stiff hairs among the alders.

On a morning late in May, Ken and I hike up the creek and into the woods. Salmonberry bushes are already in



LEWIS JAY

Finding stories in a land of lost friends and family



then framed with short walls of posts and logs, surrounded with sod, a roof of overlapping sheets of birch bark or animal hides.

It was a long time ago, and it wasn't. It was before Captain Cook sailed by in 1778, before epidemics of smallpox and tuberculosis wiped out entire villages, but not so long ago that the land has forgotten. It holds the memory in ridges of earth, in deep holes, in the smell of softened pitch. A wall. A doorway. How many feet walked through? What stories were told?

I try to see this pit as a full barabara, in snow, smoke curling from the hole in the roof, snowshoe trails beaten around it. Behind it, I imagine a cache built off the ground, on peeled poles, filled with bales of dried salmon. I conjure up the smell of boiling meat, sounds of people talking, babies. Winter was a time of rest. January is known, in Dena'ina, as The Month We Sing.

Right now, King Salmon Month, this barabara would be silent, empty, new grass closing in around it. The people would be camped on the beach below, feasting on fresh salmon, splitting and hanging the fish to dry in the smoke of an alder fire.

Summers on the beach, Ken and I catch salmon to sell to Japan. We eat a few, hang some in our smokehouse. In The Month Leaves Turn Yellow we abandon the beach, not for this country above, but for a house in a city.

We walk around the pit, farther into the woods. I know there must have been more than one house to the village. Everywhere, I think I see unnatural depressions, but they are only dead trees fallen and rotted, covered

with moss. We pick our way through brush, over more deadfall. We step to the rim of another pit: deeper than the first, smaller, two rectangular rooms of different sizes connected, like the other, by a break in their common wall.

A mountain shoulder we can see from our cabin is known to the Dena'ina as Ridge Where We Cry. Shem Pete, one of the oldest living Dena'ina, once spoke about the ridge: "They would sit down there. Everything is in view. They can see their whole country. Everything is just right under them. They think about their brothers and their fathers and mothers. They remember that, and they just sit down there and cry. That's the place we cry all the time, 'cause everything just show up plain."

Ken and I, who moved to Alaska as adults, will never know what it is to truly live here, can never know the feeling of looking at this land and wanting to cry—not at how beautiful or mysterious we find this place, but for our brothers and fathers and mothers, for our country where everything just show up plain.

Bunchberry flowers, four-lobed sets of perfect white, stretch from the hollow of a decayed log. From somewhere in the trees floats the *sweet-sweet-sweet* of a sparrow. This is a land more wild today than it's been, probably, for most of the last millennium—since the Dena'ina first came through the mountains. Despite its natural beauty, I feel the loss, the absence, the missing continuum. I love it here, but I'm starting almost from scratch, trying to see not only what is wild but what belongs to people. I'm trying, with what I know and what I imagine, to begin again with story. ■

NANCY LORD lives in Homer, Alaska. Her most recent collection of short stories, *Survival*, was published by Coffee House Press last year.

bloom, pink petals wide and silk-smooth. We hike and row and hike some more, toward mountains draped with clouds.

We find, this day, what we've come to see. The pit is deep, a depression in the ground, perhaps four feet lower than the forest floor. It's not the depth that's so remarkable, but the exact rectangular shape, the outline of two rooms. One is perhaps 15 by 20 feet, the other a third that size. Rimmed with ridges of earth, they're joined by a break in the wall between them. Another break opens the larger room to the outside.

I've been here once before, but I'm still taken by surprise. *People lived here.* The pit is all that remains of a traditional Dena'ina Indian house—a *barabara*, as it was called by the Russians. A winter house, dug into the ground and

The Rocky Road to Rio

In the 1962 science-fiction film *The Day the Earth Caught Fire*, nuclear tests send the planet hurtling toward the sun. The resultant global warming puts a quick end to the Cold War as the nations of the world set aside their petty squabbles and unite in an attempt to avert the catastrophe.

The fantasy element here, of course, is the part about international cooperation in the face of imminent danger. This June, the global community is supposed to meet in Rio de Janeiro, Brazil, for the United Nations Conference on Environment and Development (UNCED), or "Earth Summit," the largest U.N. conference ever. Its original agenda included all the world's most pressing environmental problems, plus poverty and underdevelopment. The meeting was supposed to usher in a "new era of environmental diplomacy" between the industrialized "North" (the United States, Western Europe, and Japan) and the stuck-in-the-mud "South" (everyone else, with Eastern Europe as an honorary member). Summit organizers confidently predicted that the conference would result in new, binding international treaties on climate change, biological diversity, and forest preservation; an environmental bill of rights called the "Earth Charter"; a concrete plan of action for the next century called Agenda 21; and a solid commitment of funds to implement these



Earth-saving measures.

But with the conference only months away, optimists are in danger of extinction, their earlier assurance shaken by the failure of three preparatory committee meetings ("PrepComs" in U.N.-speak) to make headway on any of the major issues facing the conference. First to topple was hope for a global forestry convention. The United States refused to commit to stop cutting its own old-growth forests; Malaysia (where tropical rainforests are falling faster than anywhere else in the world) spoke of its "inalienable, sovereign right" to clearcut as it sees fit; Mexico said it is not about to "consecrate its forests." Other major environmental threats met similar small-minded responses: Japan objected to language critical of unregulated fishing and commercial whaling, and the United States nixed further discussion of the dis-

The "Earth Summit" in Brazil pits haves against have-nots: We want them to clean up, they want us to pay up.

■ ■ ■



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PRIORITIES

posal of radioactive materials and the banning of international transport of hazardous waste.

The U.S. delegation, in fact, has been a profound disappointment to the environmental community. Not only has it failed to show any leadership in the process, says Sierra Club Chairman J. Michael McCloskey (who attended PrepCom III in Geneva last August), but its unyielding position, particularly

on the matter of global warming, "has been an immense factor in poisoning the mood in UNCED." In energy matters, the U.S. delegation has mirrored the Bush administration's domestic policy, vetoing proposals to encourage car manufacturers to build less-polluting vehicles and refusing to call for a reduction in power consumption by the energy-profligate North.

The South—led by the Malaysian and Indian delegations—insists that the "sustainable development" every-

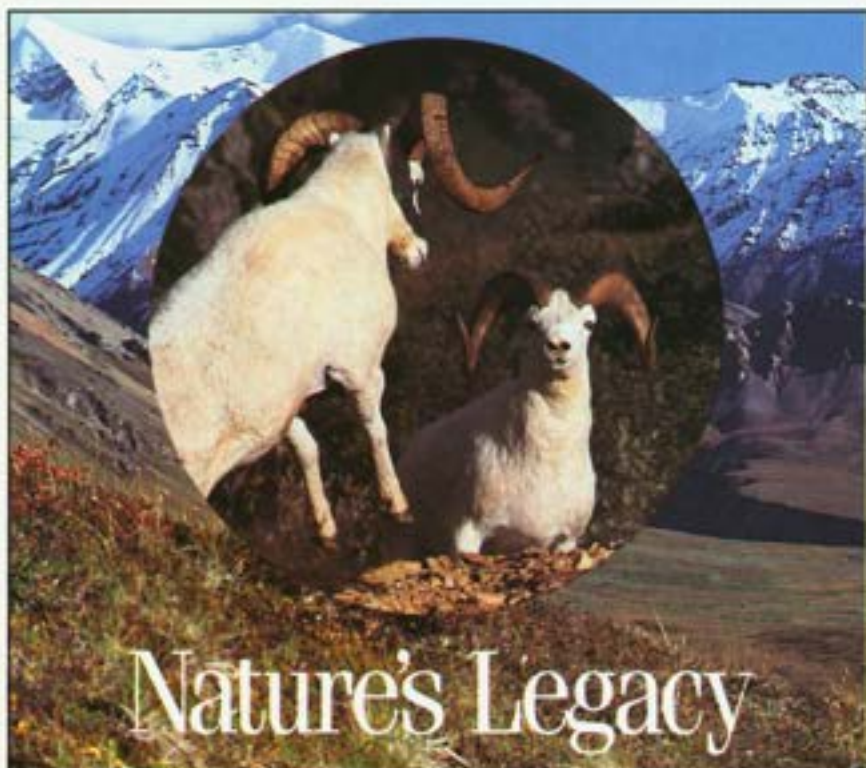
one professes to desire can be achieved only if the North agrees to share its technology and ante up a large amount of money. The North wants guarantees on how its money would be spent; the South says that's its own business. The discussion may be largely hypothetical: The White House has decreed in advance that the United States will not make any new funds available to programs coming out of the Rio conference.

The painful preparations for the U.N. Conference on Environment and Development illuminate the concerns of the post-Cold War world: the North is worried about the environment, the South wants development, and no one has figured out how to mesh the two. After PrepCom III, McCloskey reported gloomily that the conference was "deadlocked and riven by acrimonious arguments over redistribution of the world's wealth, who is to control it, and who is to blame for environmental abuse, poverty, debt, and a litany of other ills. Relief for the environment is being held hostage to solving almost all of the problems that divide North and South and define customary politics."

But global problems require global solutions, argues UNCED Secretary-General Maurice Strong. "It shouldn't be any surprise to anyone, least of all to the Sierra Club, that the issues are difficult," he says. "If we're going to deal in the old single-issue way, we'll be going backward."

All agree that the last chance to avoid a "golden pen" media event at Rio, with heads of state signing empty declarations for the benefit of TV cameras, is PrepCom IV, to be held in New York City in March. "The position of your country is critical," Strong told *Sierra*. "If the United States shows no movement at all, that will clearly threaten the whole process."

The Sierra Club, together with the U.S. Citizens Network on UNCED and other environmental organizations, is determined to pressure the Bush administration to rise to the occasion; legislation urging U.S. leadership in Rio has also been introduced



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in both houses of Congress. "Never will so many leaders be in one place where they are supposed to address the world's environmental ills," says McCloskey. "We need to make sure they do." —Paul Rauber

►For more information, see "Resources," p. 84.

Loose Lips Sink Careers

*Save a tortoise, go to jail?
Using government ethics codes
to silence whistleblowers.*

You don't survive as a species for millions of years by being too adventurous. A desert tortoise that sticks its neck out too far, for instance, is likely to have its eyes pecked out by ravens. A similarly harsh lesson is now being administered by the U.S. government to federal employees who make the mistake of supporting environmental causes opposed by their bosses.

Take William Sanjour, a long-time whistleblower at the Environmental Protection Agency in Washington, D.C. Recently, Sanjour was instrumental in helping North Carolina environmentalists block a proposed hazardous-waste incinerator, which led Governor James Martin to complain about him to EPA boss William Reilly. "If he has so much spare time that he can mischievously mislead the people of North Carolina," growled Martin, "perhaps you can assign him enough work to keep him busy."

Rather than set Sanjour to sorting paperclips, however, the EPA simply forbade its employees to accept travel expenses from any group they speak to about the environment—a move widely believed to be aimed specifically at Sanjour and fellow EPA whistleblower Hugh Kaufman, both of whom have spent most of their weekends and vacations for the past ten years addressing citizens' groups all over the country. "It is clear that the government is using the guise of ethics to control what the pub-

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PRIORITIES

lic can hear," says Sanjour. "After all, what is unethical about being reimbursed for travel expenses to carry on a perfectly legal activity?" Sanjour has filed suit against the agency, charging that his First Amendment rights have been violated.

Then there's geologist Howard Wilshire at the United States Geological Survey, a specialist in the effects of off-road vehicles. On his own time, Wil-

shire opposed a Forest Service plan to create a dirt-bike park in California's Eldorado National Forest; he visited the site in the company of a local activist, and later wrote a letter picking apart the Forest Service's environmental assessment of the project. The Smokeys complained to Wilshire's boss, USGS Director Dallas Peck, who officially rebuked Wilshire and threatened to suspend him, claiming that his walk in the woods was actually an illegal "survey" performed for a "private party." While

USGS studies are regularly made available to industry, Peck went on to prohibit giving them to environmental groups, singling out the Sierra Club for special mention. He later rescinded the order; the USGS now deals with ethical issues on a "case-by-case" basis. "They love to do that," says Wilshire. "It lets them make up the rules as they go along."

The Sierra Club was at issue as well in the case of Jeff van Ee, a highly rated engineer at an EPA lab in Las Vegas, Nevada. He is also, on his own time, acting conservation chair of the Club's Toiyabe Chapter, and something of an expert on the endangered desert tortoise (*Gopherus agassizii*), a native of his neighborhood. Van Ee got himself in trouble when he became involved in a dispute over how to "mitigate" the relocation of a Kerr-McGee rocket-fuel plant from the outskirts of Las Vegas to prime tortoise habitat in the far north-eastern corner of Clark County. The Interior Department wanted to conduct a study wherein 11 tortoises would be outfitted with little radio transmitters and followed around—at a cost of \$400,000. Van Ee thought this was silly and said as much in an informal meeting of interested parties at the Las Vegas airport on January 22, 1990. (He attended the meeting while on leave from the EPA, and not as an official representative of the Sierra Club.) He argued that the money would be better spent buying tortoise habitat, a position shared by the Sierra Club Legal Defense Fund, which eventually worked out an agreement with Kerr-McGee to do just that.

The Interior Department was unwilling to let go of its pet project, however, and sent University of Nevada biologist Ron Marlow to try to sway van Ee (who, Club representative or not, was seen as a key player in the dispute). "We spent nearly three very disagreeable hours on the phone," Marlow reported back to Interior. "I believe that Jeff van Ee has a personal grudge over the entire issue and he has been given inside information to use to punish the government. . . . My only

Continued on page 70

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W The Wise Delight in Water

What textbooks describe as a brook, run, branch, or creek, Dr. Luna B. Leopold, dean of American hydrology, calls a "crick." He has earned the right. In field notebooks dating back to the 1930s, Leopold has collected more information on the behavior of water in rivers and streams than any-

western terrace dates from the late 1800s, a time of both overgrazing and intense rainstorms.

Leopold chalks a series of curves on the blackboard: river meanders. "A river's course," he says, "is a sequence of curves that lessens its erosive force." He shows how the wavelengths of the meanders correspond to the width of the stream. Each bend—half a wavelength—has a radius five to seven times the width of the channel. He hands out aerial photos of the Green River and we measure and calculate, re-discovering the ratio.

Recounting his fieldwork, he seems, more than anything else, fiercely curious—not as a technologist, but like his father, Aldo, as a naturalist. As K'ung Fu-tzu (Confucius) said, "The wise delight in water." I can sense Leopold's chafing at the restraint of government and university while mastering their customs to serve his restless, lifelong inquiry. Like water and gravity, he persists.

"There is no ideal river," he says. Instead, each river draws character from the landscape it

traverses. Geology, climate, soil, and vegetation all determine its form, whether gravelly and braided or deep and meandering. Chance events are important—a fallen tree, a landslide, or a tributary flood—each creating a trout hole, a rapid, or a gravel bar. The combinations are endless, and they make each river unique. Yet the flowing water works to reduce these variations. The relationship between gravity and water tends along all possible paths toward a single balance: While no river is ideal, each tries to be.

one alive, and he seems to have it all at his blunt fingertips.

Today at a school in Grand Teton National Park he is teaching a group of Forest Service hydrologists to observe and measure stream flow. He talks about how climatic cycles change streams: During periods of higher rainfall, streams deposit sediments, while in drier times they cut down into them. Leopold explains that in the West climate changes can be read in the terraces of sand and gravel deposited by streams. The lowest and most recent

traverses. Geology, climate, soil, and vegetation all determine its form, whether gravelly and braided or deep and meandering. Chance events are important—a fallen tree, a landslide, or a tributary flood—each creating a trout hole, a rapid, or a gravel bar. The combinations are endless, and they make each river unique. Yet the flowing water works to reduce these variations. The relationship between gravity and water tends along all possible paths toward a single balance: While no river is ideal, each tries to be.



CAROL CLIFTON

*Old man river
Luna Leopold,
totally immersed*



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Leopold chides his fellow hydrologists for slavery to agency paperwork. "If you want to learn about streams, you need to spend time with them. Then, you need to measure them accurately." He lists the parameters: width, depth, velocity, discharge, slope, load, particle size, and roughness. "Then you need to relate these measurements to each other." Like a conjurer with multiple rabbits, he derives for us a set of equations that do this mathematically.

He inserts a few unkind words about the Army Corps of Engineers and their glory trail of dams and levees. An image comes to me: Confining a river is like nailing a snake to the earth.

We learn how river channels hold their courses through time and geologic uplift. Leopold describes an abandoned channel of the San Juan, dry for a million years, that has precisely the slope of the present channel. The Colorado north of Moab, Utah, has deeply incised the layers of sandstone that are rising along a fault at right angles to its path.

The patterns he's observed in rivers lead to a discussion of the structure of the universe itself. He touches on thermodynamics and dwells on entropy. Some of the hydrologists go glassy-eyed, but a few of us are transfixed.

He paces slowly as he talks, comfortable in boots, jeans, and a wide leather belt. His shirt is blue and green—water colors. On his belt are two leather pouches—one for pliers and knife on the right hand, while on the left, in a larger pouch with a handsome silver clasp, are a ruler, slide rule, field book, and measuring tape. He stirs his coffee with the handle of his pliers. His hair clings to the sides of his head, white at the temples, dark gray elsewhere. Under winged brows, he has an aquiline nose and measuring eyes. He looks like old portraits of Bodhidharma, who carried Buddhism from India to China, the patriarch the Japanese call Daruma and portray with fierce-eyed dolls, weighted at the base, that spring up as often as they are knocked back.

He fixes us, one by one, with a severe gaze. "Science today is domi-

nated by people who won't spend ten years doing *anything*. Promotion is based on the review of publication lists by committees who haven't read the publications. So there are a lot of one-paragraph papers, just to get into a bibliography."

In other words, publication often benefits careers more than science. "The most important scientific tool," he says, pointing a finger at heaven, "is the eraser."

"Now we'll go out and see the crick."

Wading Ditch Creek with notebook in hand, it occurs to me that Leopold has a blend of intellect and pragmatism. He can see a problem—erosion, for instance—in its broadest dimension and study it. When the specifics are nailed, he acts decisively.

Born in New Mexico, Leopold earned degrees in civil engineering, physics, and meteorology, and a Ph.D. in geology from Harvard. Starting with the U.S. Geological Survey as an engineer, he worked as chief hydrologist from 1956 to 1966. Then he conducted research for the agency until his "retirement" in 1972, when he began teaching at the University of California at Berkeley. He published benchmark books on the nature of water in the landscape, and scores of papers.

As I write this he's in Washington accepting the National Medal of Science, the nation's highest scientific honor. A few weeks ago, outside Faler's General Store in Pinedale, Wyoming, he told me he was equally happy about this year's Distinguished Career Award from the GSA.

What? The General Services Administration, purveyors of warped ax handles and left-handed monkey-wrenches?

"Geological Society of America," he replies. "Quaternary Geology and Geomorphology Division."

"Oh," I say. "That one."

Driving home from the course, Leopold describes his passion for finding out how rivers work. To control the variables, he built flumes, rivers in

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
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miniature. He laid out meanders in sand to study the effect of curvature on flow.

He talks about a lifelong fascination with meanders. Why did they form, and how? Did they depend on the kind of sediment the stream carried? He went to the glaciers of Wyoming's Wind River Range and found meanders in melt channels where there was no sand or gravel, only ice. Did meanders depend on the shape of the banks? He looked for bankless flow and found meanders in the Gulf Stream, far from any land mass. They seemed to be a kind of wave, the shape of energy, constant as the passage of light.

As we pass each stream he names it. Many of his studies are on the upper Green and its headwater tributaries. The streams I recall for their fishing holes are known, in scientific detail, across the world.

Leopold has a loyalty to the places he's studied. He's fired off bales of letters to regional foresters, park superintendents, and members of Congress, full of abrasive judgments backed by hard specifics. But he goes beyond criticism. He worked long hours to help the Forest Service protect in-stream flows in Colorado. While writing barbs on the lack of up-to-date scientific knowledge among Forest Service hydrologists, he also offered them training sessions.

I drive him to a modest wood house that merges into willow thicket, in sight of a stream. The sign on the pole gate is carved: "COTTONWOOD—Leopold." I peer around. "We're trying to get some cottonwoods to grow," he mutters.

As I carry the gear from the truck, a pet horse ambles up for a sniff. Leopold's wife, Barbara, who helped behind the scenes at the training session and drove home ahead of us, steps out to say that dinner plans are on track. Besides training hydrologists, the Leopolds feed them.

Later, after dinner and talk, I stop to open the gate. In my headlights, I see the inside of the sign is also carved. TODO EL MUNDO, it says—the whole world. ■

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Forests where natural processes reign supreme provide the ideal blueprint for New Forestry. After observing and analyzing the quiet cycles of sylvan growth, death, and rebirth—as well as disturbances such as fires—scientists have issued what they hope is a prescription for more benign logging. Their ideas sound good in theory, but are proving dangerous in the hands of federal foresters.



NEW FORESTRY

NEW HYPE

Forest Service ecologist Art McKee seems a little sheepish as we gaze across the canyon, where an ancient forest in the heart of the Oregon Cascades was clearcut more than a decade ago. The hillside resembles a Christmas-tree farm, its Douglas firs as uniform as a battalion of recruits. ■ Farther up this fork of Tidbits Creek is a more recent cut that shows how far the science of forestry has come. Clusters of live trees dot the site, cut logs are strewn on the ground, and several snags—dead trees—are still standing. The idea, McKee explains, is to offer varied habitats for wildlife: Birds nest in the snags, small mammals den under logs, and insects and fungi

BY SETH ZUCKERMAN

chow down on the dead wood. With his help, I imagine the live trees towering over the seedlings that will be planted next year. ■ This part of Willamette National Forest offers a showcase example of New Forestry—an approach to logging that aims to preserve ecological processes, plant and animal species, and soil productivity. Its techniques were developed in the Pacific Northwest, where dwindling primeval forests are home to more than 100 species of wildlife—including the osprey, the tailed frog, and the northern spotted owl—that depend on the groves. ■ New Forestry is the keystone of a larger initiative within the Forest Service called New Perspectives. “New Perspectives first focuses on providing for a

The drive to turn

trees into

two-by-fours

is sabotaging

scientists’

best-laid plans.

healthy, vibrant ecosystem, and then delivers sustainable products in the process of maintaining that healthy state,” says Charles “Chip” Cartwright, assistant director of the program. According to Cartwright, Forest Service Chief F. Dale Robertson adopted the new approach in 1990 after surveying the long list of conflicts the agency was facing—litigation, an increasingly militant public, and a Congress simultaneously demanding forest protection and timber. Where the agency attempted to balance logging with diligent protection of the rest of the forest’s resources, he noted, it encountered less hostility and was sued less often. ■ Working in the gray area between preservation and all-out logging, New Forestry was devised to satisfy demands both for healthy forests and for an adequate wood supply. That is precisely its seductive appeal—and its gravest threat. “New Forestry is dangerous because it tells politicians they can have their owls and their timber, too,” says Jeffrey St. Clair, former editor of *Forest Watch* magazine. “That’s a great message if it’s true, a risky one if it isn’t.” ■ New Forestry requires managers to think in terms of whole watersheds and landscapes—hundreds of thousands of acres, not just the dozens in a typical logging unit. Its goal is management that mimics nature, allowing enough time for the placid progression of growth, decay, and rebirth to occur, even as it simulates natural disturbances. In the Cascades, the most significant of these is fire. Although a chainsaw can never replicate the soils and landscape left by an erratic

thousand-degree blaze, it can leave the forest in a similar condition. The number of cut trees can approximate the amount that would have been burned, and live trees, downed logs, and snags can be left in post-fire proportions.

Across the creek from where McKee and I stand, a ragged carpet of trees covers a hill, evidence of fires that spread across the land in decades gone by, creeping through gullies, charging in fingers up hillsides, and roaring over ridgetops. As a result of these blazes, high places are brushy and young, large trees populate the stream bottoms, and the mid-slope is a mosaic of young and old.

McKee says that researchers have studied scars on tree rings to compile

road map of the way the forest should be managed.

McKee steers my attention back to a logging site up the creek. "This approximates what you'd find after a moderately severe fire," he says. Not all the trees would be killed by the blaze, and much wood would be left on the ground. The remnant trees and debris are "biological legacies," an inheritance that will allow the stand to resemble old growth within 60 or 70 years, instead of the 200 or more that would be required after a 1970s-era clearcut. The foresters have even considered how long the snags will last and whether enough old trees will be left to create new snags when the first ones topple.

New Forestry has run into its share of flak for trying to steer a middle course between environmentalists and the logging industry. "The industry says 'That's not a clearcut,' and the environmentalists say 'That's not a forest,'" observes Fred Swanson of the agency's Forest Sciences Laboratory in Corvallis, Oregon. According to some wags, New Forestry and the rest of the New Perspectives program, including New Technology and New Alliances, will likely be carried out with New Chainsaws, allowing loggers to buy New Pickup Trucks.

These widely diverging opinions aren't just a matter of blind men describing an elephant—they also reflect differences between the theory and the practice of New Forestry. While scientists earn praise for probing and mimicking the ecological processes of a native forest, there's many a

flaw 'twixt the thought and the saw. The Forest Service faces pressure from Capitol Hill, industry, and factions within its own ranks to extract unsustainable quantities of timber and other resources from public lands. In the past, even when tempered somewhat by environmentalists, these demands have wreaked havoc on national forests. They could easily negate the gains that New Forestry promises.

The gulf between words and deeds is nowhere deeper than in the Shasta Costa basin of Siskiyou National Forest in southwestern Oregon, where the Forest Service recruited local environmentalists as well as industry representatives to help create a model forestry plan for a mostly roadless 23,000-acre watershed. The activists responded favorably: "We wanted to put an end to the war in the woods," recalls Jim Britell of the Kalmiopsis Audubon Society. "No one was enthusiastic about logging in a roadless area, but Oregon was cutting record numbers of trees and would continue to do so until the laws were changed. We figured we'd better come up with a method that didn't trash the place."

The Forest Service wanted to "keep the decisions out of the courtrooms and in the forests where they belong," says silviculturalist Kurt Wiedenmann, leader of the Forest Service's Shasta Costa team through much of the planning process. It also hoped to regain credibility with environmental activists, who had come to distrust the agency after seeing too many devastating clearcuts on public land.

When planning for Shasta Costa began in 1987, cautious optimism, openness, and cooperation carried the day. In the past the agency might have heard comments on the scope of the proposed project, hibernated for a year, produced a thick tome for public comment, and then been surprised when people felt left out. This time, however, the agency involved the public throughout the process, actively soliciting ideas and keeping interested parties abreast of the project through newsletters, the media, and frequent meetings. When the draft environmental impact statement was issued, the full-court press continued with a lavish, 44-page, four-color brochure on Shasta Costa and the entire New Perspectives program.

What emerged was a highly restrained logging plan. Because Shasta Costa lies between two wilderness areas, the Wild Rogue and the Kalmiopsis, foresters mapped corridors to

DAVID CHARLES HALL/USDA U.S. FOREST SERVICE



Old-style forestry dictated burning or clearing away "waste material" such as the decaying log shown above. Advocates of New Forestry suggest leaving some of it behind to nurture new and old forest life.

an 800-year history of the frequency and intensity of fires on 150,000 acres in the Cascades. The patterns that emerged serve as guidelines for logging: If 10 percent of a valley used to burn every 50 years or so, an equivalent 10 percent might be loggable over the same period. The size of severely burned patches indicates how large an area to log. For New Forestry advocates, these natural patterns are a



A New Forestry experiment in Oregon's Willamette National Forest: Downed logs and towering trees in a cutover area make successful restoration more likely.

OLD FORESTRY

A visit to California's Collins Almanor Forest, a logging operation with a future.

The privately owned 91,000-acre Collins Almanor Forest in northeastern California has never known a clearcut, with only a few trees snaked out of the woods at a time. Wildlife, clear water, and recreational possibilities abound, even on land that has just been cut.

This is not a New Forestry experiment, but a system developed by Forest Service researchers in the 1930s. Although this way of logging has fallen into disuse on public land, it is maintained by the Collins Almanor Company and held up by many observers as an example of sound forest management. Unlike New Forestry, which attempts to mimic both major and minor natural jolts to the forest, this system recreates only the minor disturbance of light fires.

When timber mogul E. S. Collins came west from Minnesota in the early part of this century, he bought most of the lands that became the Collins Almanor Forest. By the time logging began in the 1940s, Collins had died and left a controlling interest in the land to the Methodist Church—which had no desire for quick profit—while bequeathing a sawmill to his offspring. In the timber industry, mill owners typically own forestland as well, so the mill's demand for lumber dictates how many trees are felled. Collins' unusual arrangement means that the mill owners can't decide how much wood to cut; instead, foresters tell the mill how much timber it may have. And the forest itself tells the foresters.

Barry Ford, his face gaunt and weather-lined from more than two decades in the woods, is only the fourth forester to be entrusted with the Collins land. He guides his pickup truck past groves of pine, fir, and cedar as he describes Collins' method of reaping the interest on the forest rather than depleting its principal: Take an inventory each decade, and cut at most the volume of timber that has grown during the previous ten years. Remove the slowest-growing trees, as these are the most likely to die before the next logging on that site. Let the vigorous trees keep growing until they slow down. "My charge is to practice sustainable, selective forestry," he explains. "It's that simple."

So far, it seems to be working. In 1941 Collins Almanor held 1.5 billion board-feet of timber, enough to build 150,000 homes. Loggers have since removed 1.7 billion board-feet, but the forest has nearly as much wood as it had when logging began, all of it still in mature forest that attracts bald eagles, ospreys, goshawks, and northern spotted owls.

The Collins method means more than just cutting the right

amount of timber. Roy Keene, a forest reformer who began his career working as a "deforester" in the logging industry, was hiking in the woods with Ford one day and noted the difference between his instincts and Ford's. Keene looked at trees and mentally ticked off the number of logs they would make and the quality of lumber they would yield. Meanwhile, he says, "Ford had his hands in the soil and his eyes in the canopy," checking the health of the trees by the shape of their crowns. Trees with pointy tops are growing fast; those with flat tops have slowed down. Trees with lots of live, green needles are vigorous; ones with sparse crowns are being shaded by their neighbors and will be crowded out.

A day with Ford confirms Keene's impression of him as a man with the ecosystem at heart. "I like to garden," Ford says, poking at a decaying log, "and anybody who gardens or farms likes to add organic matter to the soil. It's the same thing in a forest." A while later, we stand in a brushy clearing amid the trees, where the industrial-forestry prescription would be to spray herbicides to clear the land and plant pine seedlings. Ford demurs. "You've just got to be patient—

you'll get trees here eventually. A hundred years for this stand is nothing."

A few problems have arisen. On Ford's office wall is a 1924 photo of the forest before logging. Back then, frequent fires scorched out the fir and left stands dominated by pine; you could see for a quarter of a mile in any direction because the flames had consumed the underbrush. In the last 40 years, a resolute suppression of fire and a tendency to harvest the more commercially valuable pine has allowed fir to infiltrate the forest. Ford is nudging the forest back in its native direction; his remedy

is to remove young fir to stoke the mill's boilers, providing fuel as it restores the natural balance of species. He recently noticed that snags were scarce, so he passed word to his foresters to let more trees die in place to make new snags.

By being an observant generalist instead of hiring numerous specialists, Ford keeps his costs down. He manages his 91,000 acres (all open to the public) with a staff of four. When a group of Forest Service rangers toured Collins Almanor in 1990, one of them asked Ford what computer program he uses to manage the forest. Ford looked down, kicked the dirt with his boot, and admitted he doesn't use one.

How do you keep track of what's going on in the woods? the astonished ranger asked.

"We burn a lot of gas," Ford replied. —S.Z.



Pines once predominated in this California forest, but fire fighting and logging have given white fir an edge. Using a "feller-buncher" machine to cut the fir, Collins Almanor hopes to nudge the forest back in its native direction.

FRANK OJEN



Felled timber and a variety of trees were left on this New Forestry site. After the photo was taken, brush and small branches were piled up and burned to discourage forest fires.

allow animals such as the pine marten and pileated woodpecker to migrate between the two. The Forest Service admitted that "it was time to restore the old-growth resource to more natural levels," in the words of its brochure. It sought to avoid fragmenting the large blocks of ancient forest that already existed, and to preserve the interior habitat required by species such as the northern spotted owl.

The plan for Shasta Costa was nobody's favorite, but it was nothing like what Audubon's Britell calls "the log-your-brains-out alternative." The agency proposed to concentrate logging in younger stands so as to leave the old growth mostly untouched, to construct only two-and-a-half miles of new road, and to cut 25 percent less timber than had been called for under earlier schemes. Ancient forest slated for logging would be treated with New Forestry techniques to retain many of the old trees.

Environmentalists who took part in the process felt they could live with the plan, which was released in the summer of 1990. "If logging has to be done in a roadless area, this is how we would

like to see it done," wrote the local Audubon Society in its newsletter. "Shasta Costa gives us a model."

A year later, the coalition had fallen apart. Many of the environmentally benign timber sales turned out to be impractical when inspected on the ground because the trees were too small to be economically attractive. To make up the missing timber volume, Wiedenmann and his colleagues added more old growth to the cut, doubled the planned road construction to five miles, and upped the total harvest by about 20 percent.

These changes went a long way toward restoring the cynicism of the environmentalists. "Agencies are willing to give us an endless supply of elk-viewing areas, maps, rides in helicopters, new trails, and schmoozing," wrote Britell. "Anything and everything except trees."

Deepening activists' dismay was ambiguity about the proposed cuts. For more than a year after the agency released the draft plan, the question of how many trees per acre would be spared in the New Forestry timber sales was left open. "I'm interested in pro-

moting alternative forestry—as soon as I find out what it is," complained activist Julie Norman.

Forest Service personnel might have been able to allay these fears had they not been busy transferring to other districts. The planning phase outlasted three district rangers, three forest supervisors, and three team leaders. "They could replace me with a timber beast who would throw out all the relationships we've built with environmental groups," Wiedenmann told me last May. Two months later, he was transferred to a forest in eastern Oregon.

What most bothered local activists was the fact that Siskiyou National Forest's ten-year blueprint demands 32 million board-feet from Shasta Costa by 1998. Since the three-year Shasta Costa plan would provide only 14 million, another 18 million would have to be extracted in the rest of the decade. The ten-year plan even went so far as to map where further cutting could

Continued on page 67

What I really want to do is take the dog. We will head off into the woods by the lake; she will be my scout, my guide. She will chase rabbits and flush grouse. I will wade out into the water at noon and float on my back, shielding my eyes to look at her treading water like an otter, barking like a seal. Just after dusk we will sit in the lee of the fire, listening to the bullfrogs grumble, and the owls. When it gets cold I will let her into the tent. I will sleep in *her* lee.

♦ If only I weren't as weak as a new convert, unable to bend the rules. Taking a dog along on a solo camping trip—isn't that like a hermitage with a phone? John Burroughs' brief essay on solitude is not yet known to me. "If Thoreau had made friends with a dog to share his bed and board in his retreat by Walden Pond, one would have had more faith in his sincerity," says Burroughs. "The dog would have been the seal and authentication of his retreat." I take a copy of *Walden* and leave the dog at home. ♦ My husband sees me off. We are a mile down the eastern shore of a lake where our friends' Adirondack guide boat is beached. Hybrid canoe or hybrid rowboat depending on your orientation, a guide boat sits low to the water on a narrow keel. This one is no more than six feet bow to stern, with a wingspan, oars fully extended, that's maybe twice as long as that. I take yawning, rangy strokes, going south. In a minute I turn a bend and lose sight of the landing. I hear the cough and rattle of our old car as it heads out, and then I hear it no longer. It is an exquisite summer day. It's about 78 windless degrees. I am not the only one out on the lake in a boat, but I am the only one rowing. I glide past a tree stump, 200 yards out, before I see atop it the harbormaster, a great blue heron, who nods my way with a shiver of feathers. ♦ It

is a dogleg lake, three and a half miles top to bottom, and I am rowing to the spur, where there is a spit of land shielded by an arc of pines whose soft brown needles cover the ground. It takes 20 minutes plowing through the water to

reach it, and another 20 to set up the tent. Afterward I open up my raccoon-and-bear-proof cooler and scrounge around for lunch. Everything I packed not more than two hours ago now looks remarkably dull, or worse. Sardines in tomato sauce? Hard-boiled eggs? What was I thinking? I settle for apples and cheese and the opportunity to wield my Swiss Army knife like an authentic camper. I look at my watch. It's 12:17. The day stretches out before me. ♦ "Sometimes, in a summer morning, having taken my accustomed bath, I sat in my sunny doorway from sunrise till noon, rapt in a reverie, amidst the pines and hickories and sumachs, in undisturbed solitude and stillness, while the birds sang around or flitted noiseless through the house, until by the sun falling in my west window, or the noise of some traveller's wagon on the distant highway, I was reminded of the lapse of time," I read in *Walden*. I look at my watch. It is 12:19. ♦ Two fishermen in a Boston Whaler make the turn into this part of the lake, cut the motor, and drift. I have chosen this spot to be alone, but not so alone that someone would not eventually hear me if I yelled for help.

The edge of the wilderness is not the wilderness, though, and here come my fellow nature lovers to prove it. Propped against a tree, I am not visible, but my tent is, and so is my boat. They know I am here, so I *feel* they can see me, that they are watching. I don't want to be part of their consciousness, part of what they carry away from this scene. I don't want them to know I am here by myself. ♦ All week I have been following the trial of three teenagers who are part of a gang accused of beating and raping a woman who had been jogging through Central Park at night. What was she doing there, people asked each other—didn't she know better? This peculiar distaff knowledge—of the danger of untraveled roads, unpeopled train compartments, empty houses, open fields, and dark streets—follows women into the woods. Once,



CAMPING BY AN ADIRONDACK

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11,000 feet up the side of a mountain, my husband and I stopped to catch our breath at a Park Service hut and read in the visitor's log an entry from a woman who had to stay overnight in bad weather with four men, all strangers. "Spent a fitful night worrying about the one-eyed trouser snake," she wrote the next morning.

In the broad daylight I am not afraid of the fishermen, just annoyed. They have every right to be here, of course, but my annoyance is extrajudicial. "I have my horizon bounded by woods all to myself; a distant view of the railroad where it touches the pond on the one hand, and of the fence which skirts the woodland road on the other. But for the most part it is as solitary where I live as on the prairies," Thoreau writes. I look up and see two men in an outboard, their lines slack, reeling in. I see them cast, port and starboard. Their lures charge toward the water like meteors. I see the men reel in again, snagging a patch of water lilies. I am annoyed because I expected to see something else, some kind of nothing.

Another boat chugs into the bay. I pull myself up and walk deeper into the forest, bushwhacking in as straight a line as possible so as not to get lost, until the water is no longer visible, not even the glint of it. The outboards fade until they're smudges, not fingerprints. I share a log with a colony of termites and a red squirrel that clucks like a bird. "Why does a virtuous man delight in landscapes?" asks Kuo Hsi, an eleventh-century Chinese watercolor artist, in his *Essay on Landscape Painting*. Because "the din of the dusty world and the locked-in-ness of human habitations are what human nature habitually abhors; while, on the contrary, haze, mist, and the haunting spirits of the mountains are what human nature seeks, and yet can rarely find." A plane grinds overhead. It is true that affluence brings solitude and privacy in the form of, for instance, country cottages, cars, and personal aircraft. But only for a minute. Then rural property values increase, houses are built on smaller parcels more closely together, and the highways and airports clog with commuters heading for the hills together. No matter how far I go into the forest today, that plane will still be grinding overhead.

The fishermen retreat a little before five. I follow the throttle and whine of their engines, moving back toward camp as they dim. A wind comes up and passes through the trees on the opposite shore, which rustle in succession like baseball fans doing a wave cheer. The trees are teeming with thrushes. Their voices fill the basin, yet the birds themselves are nowhere seen. So many of our perceptions are learned, not intuitive. I mean, why don't I think the trees are singing?

I shed my shoes and walk into the water, pulling the boat behind me. I know this lake better than I know any other body of water, better than I know the pool of land surrounding my house. I have taken its temperature and measured its pH; I have swum it side to side, skied its circumference, paddled and rowed it end to end. I have climbed the mountains that grow a few thousand feet above its shore. I have done these things in the gray of winter and at the start of

June when the hardwoods hang their damp new leaves out to dry. I have been here at midnight with the beavers, and at dawn with the perch. It is easy to get carried away. "A lake is the landscape's most beautiful and expressive feature. It is earth's eye; looking into which the beholder measures the depth of his own nature. The fluvial trees next the shore are the slender eyelashes which fringe it, and the wooded hills and cliffs around are its overhanging brows," Thoreau tells us. So easy to get carried away.

Rowing forward, I nose between the remains of what was once the beavers' dinner, many nights running, and is now their leftovers. The lake is so shallow here I can palm the bottom. The warm water rings my wrist like a bracelet. Red-winged blackbirds spy on me and tell the other birds what they see. I am happy—relieved—to be out in the open again. I feel, I think, like a deer at dusk on the last day of hunting season.

PEOPLE TALK ABOUT the silence of nature, but of course there is no such thing. What they mean is that *our* voices are still, *our* noises absent. Tonight when my fire failed, I sat on a rock and followed the course of a cloud that looked like a trillium, watching as its whorl broke apart. The frogs were honking like ducks; the ducks were laughing like women. I could barely make them out, but just before the light faded they rose from the lake, and for a moment their white breasts hung above the water like moons.

In the dark, in the tent, every sound is amplified. Individual mosquitoes demand to be let in. Pine needles fall one by one. A beaver sharpens his teeth on an aspen nearby. Bears on either side of the lake hoot lustily; it is time to mate. I feel safe inside this thin nylon skin, for no apparent reason. So safe, in fact, that once I have drawn in my world between its walls, I grow fearful of what's on the other side. A porcupine screams in the distance. Coyotes bray. The world of night is primal. I am frightened because fear is one of the few instincts that has not been bred out of me. But the world of night is vast, too. It ignores me. After a few restless hours I fall asleep.

A MAN WAKES ME UP. He is standing in an aluminum boat 40 feet from my bed, baiting a hook. The sun is aloft, barely. He waves to me when I emerge from the tent with the bonhomie of one who has been awake since before dawn. If he wants to chat, I give him no opportunity, abandoning my camp for the shore due west where the beavers have carved a rogue obstacle course. Sitting on one of their benches, I notice millions of cobwebs strung from the trees to the water. When the sun shines on them they look like lines of fish wire being pulled in at once. The man in the aluminum boat leaves the neighborhood pursued by a cloud of greasy blue smoke, and I am alone again, and not sure what to do.

If the forest were a room with a door, I'd probably be inside, reading. But the open wood demands something else. A hike up the ridge, an hour with the chickadees—

something like that. Solitude would appear to be defined by place as well as dependent upon it. What passes for being alone at home, say, wouldn't pass here. You don't pitch a tent to curl up with a novel.

But this is just an aesthetic. Place is of consequence only to the extent that it encourages or demands the confrontation of the self by the self, which is solitude's true vocation. There is the solitude of experience and the solitude of despair, which can happen anywhere. There is the solitude of the jail cell and of the sickbed and of the hermitage, which differ by degrees of isolation. And there is the solitude of darkness, my grandfather's solitude, which was absolute.

He was 59 when he went blind. Actually, he didn't lose his sight so much as his sight left him, the way a lover might, first in spirit, then in fact. When it was gone for good, friends encouraged him to go to a social service agency, to learn how to be blind. He resisted, memorized the number of footsteps from his apartment to the elevator, from the elevator to the courtyard, from the courtyard to the bus stop. Then, having nowhere to go, he gave in. He was told to report to the Lighthouse for the Blind for aptitude testing.

"My first day there, my wife brought me down, packing a two-sandwich lunch as the cafeteria was under construction," he wrote later, in an essay titled "I Hate Institutions." "After inquiring, we were told where to report, and I found myself in a large noisy room that contained a carpenter's shop, noisy with power machines and noisier semi-blind adolescents, and a basket-weaving shop with blind men and women speaking in many different tongues, that to a neophyte like me sounded like the Tower of Babel. The instructor sat me at a bench between a retarded 5-year-old blind boy and a man of about 25 who did not speak English, while I did not speak his language, so our conversations were held to a minimum.

"Then it was time for lunch. I gathered up my sandwiches, which were lying on the bench all morning, and was ushered down to the cafeteria and was left on my own, stumbling, ailing, until I found an empty seat, unwrapped my lunch, and ate the sandwiches in silence, all the time feeling tears welling up in my eyes. I recall having seen such scenes in the movies, and now I was the leading actor and I did not relish the part. Since it only took me 15 minutes to finish lunch, and having no one to talk to, I wandered out into the vestibule and asked someone to direct me to a phone booth. I called my wife, and as she was asking me about my activities, I broke down and cried. To think that at 59 years of age, having worked all my life, now to face a most difficult future at best. My wife, sensing my disappointment, wanted to come down and take me home, but I

warned her off and told her it was a challenge and I was determined to go through with it. This testing went on for five weeks. I kept protesting until I was sent to typing class."

The essay, which was sent to me by a relative who found it when she was cleaning out her desk, is typed.

I RETURN TO WHAT I have begun to think of as my front yard and defiantly open Thoreau. "We need the tonic of wildness," I read, "to wade sometimes in marshes where the bittern and meadow hen lurk, and hear the booming of the snipe." Chastised, I put down the book and survey the great outdoors. An ample, flat-bottomed boat with a blue-and-white-striped awning is steaming into view. Three people lounge on its deck chairs, one wearing a hot pink sweat suit, one in orange-and-blue shorts, the other wrapped head to toe in lemon-knit sportswear. This is wildness of a different order. Shortly, a motorized canoe rasps into the inlet behind them, and then come two more canoes, powered by five actual canoeists, who look to be in their sixties. The three women wear fluted bathing suits and have zinc oxide on their noses and shoulders. One of the men wears a Red Sox cap.

My grandfather hated the Red Sox, like any loyal Yankees fan. He adored the Yankees. Even when he couldn't see a thing, he would go to Yankee Stadium and sit there with a transistor radio plugged into his ear, just to cheer. During baseball season, when he came to visit us in Connecticut, he would lie outside in the hot sun, hatless and shirtless, listening to that radio from the first pitch to the last. His scalp would redden, and the sweat would dam on his eyebrows and run into his ears. My mother, his daughter, would try to get him to come inside, or to move under a tree, as if he didn't know exactly what he was doing or where he was. But he knew. Sometimes he would ask me—I was about six—to hold a newspaper in front of his face, and then to take it away, so he could see the light.

"ARE YOU GOING TO Denver and then to San Francisco, or are you going through Sacramento?" a woman in one of the canoes asks a man in the other. I don't wait to find out. Vowing to return in a different season, I collapse the tent and stow my gear in the hull of the guide boat, which I pilot past all canoes, paddled and powered, and the floating porch too, rowing home.

SUE HALPERN lives in the Adirondack Mountains of New York State. Her new book, *Migrations to Solitude*, from which "Solo" is excerpted, looks at the experience of being alone—in the woods, in cities, in families, in communities. She has also written for *Rolling Stone*, *The New York Times*, *Ms.*, and *Sports Illustrated*.





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IN LAND

With developers approaching from all directions, it's time to join your neighbors and kiss that mall goodbye.

WE TRUST

The Ausbon Sargent Land Preservation Trust is housed in a refurbished garage in downtown New London, New Hampshire. At one time New Londoners could get their oil changed and pay their taxes in a single stop here; Bill Kidder, the garage's owner, doubled as town clerk. The trust office, located upstairs where the distributors and oil filters were once kept, is decorated in Nonprofit Minimalist: metal desk with chair, filing cabinet, photocopier. From the wall two aerial photographs of 1930s New London, ample reminder of how different the town was six decades ago, stare down at Debbie Stanley while she works. As executive director of the four-year-old land trust, changes to New London's landscape are Stanley's never-ending preoccupation.

New London has long been proud of the way it looks. The town of about 3,000 people is centered on a classic New England main street, framed by giant maples and punctuated by a white-steepled Baptist church. Its outlying byways wander uphill and down, through shadowy woods and occasional fields, past neat stone walls and gargantuan colonial farmhouses. Low, dark shapes rise on the edge of

BY WILLIAM POOLE



SARGENT COMMON, NEW LONDON, NEW HAMPSHIRE



A NANCY OGDEN

town: Mt. Kearsarge, Ragged Mountain, Mt. Sunapee. New London offers a ski trail, a golf course, a summer theater, three lakes, a half-dozen inns and resorts, and Colby-Sawyer College, whose campus of brick buildings fronts Main Street.

It is the kind of town where family tenancies often are measured by the century; where even the smallest house may be awarded a name (Woodcrest, High Mead, Apple Tree Cottage); where the local garden club beautifies the traffic islands; where a downtown-sign ordinance outlaws neon; where public generosity supports a library, a volunteer fire department, and now a land trust.

New London has historically added new residential and commercial cells in a manner largely consistent with the whole. But in the 1980s growth seemed to slip out of control, fueled largely by speculation in the second-home market. (The town's lakes and leisure are within a two-hour drive of Boston.)

"New London was discovered," Stanley says. "Open fields were turning into subdivisions." The boom forced

land values to levels unimaginable even a few years before: One 55-acre parcel near the center of town was appraised at \$44,700 in 1974; by 1988 it had leaped to almost \$427,000.

For many residents the real-estate crisis came to a head in 1985, when Colby-Sawyer College placed on the market a three-acre-plus property in the heart of New London. "Many people didn't even realize the college owned the land until it came up for sale," Stanley says. "It was our town green. Every year the hospital has its Hospital Day there, and the garden club its antique show." But officially the property was zoned for commerce. Given the current climate, a mini-mall seemed the most likely prospect.

New Londoners fretted about the sale for weeks. Then came a surprise announcement: The land had been purchased for \$150,000 and donated to the town by Ausbon Sargent, a 94-year-old retired handyman and lifelong New London resident. Sargent's picture ran in *New England Monthly* magazine, and Tom Brokaw showed up with an NBC camera crew.

But perhaps the real honor came two years later, when the people of New London named their newborn land trust for their benefactor. Ausbon Sargent himself mailed in \$100, one of about 500 locals to sign on to the new venture. A board of directors was recruited, an executive director hired, an office rented, and a logo—featuring a bushy-tailed squirrel holding an acorn—designed. Debbie Stanley was soon explaining to anyone who would listen that a land trust is a nonprofit corporation set up to own land—or the rights to it—and that the Ausbon Sargent Land Preservation Trust was not out to stop New London's growth, but to guide it. "We only want to protect the quality of life," Stanley told New Londoners, "which is the real reason many of us live here."

The land-trust concept is just over a century old. The Trustees of Reservations was set up in 1891 by Boston nature lovers as an analogue to that city's Museum of Fine Arts: Like precious paintings, the founders held,

T R U S T E E D
L A N D S

Marin County, California

Founded in 1980, the Marin Agricultural Land Trust was the first to focus exclusively on the nation's dwindling farmlands. The trust purchases easements that close properties to development and provide cash for farmers at approximately 40 percent of their land's fair market value. To date, MALT's 1,700 members have helped protect more than 14,000 acres of Northern California's coastal farmland.

STEPHEN BARCELIS

Boston, Massachusetts

Organized in 1987 by local residents and gardening groups with the help of the Trust for Public Land, the South End/Lower Roxbury Open Space Land Trust owns several pieces of property in one of Boston's poorest, most congested neighborhoods. The vacant lots, transferred to the trust by the Boston Redevelopment Authority, have been transformed into community gardens and parks.



SUSAN LAPPIN

precious lands should be preserved. The Society for the Protection of New Hampshire Forests came along in 1901, at about the same time the Sempervirens Club was established in California to secure redwood acreage. For decades the movement was dominated by statewide and regional trusts, which often protected large, choice properties over a broad area. By the mid-1960s about 100 land trusts were at work across the United States.

But in the last few years, local trusts have sprung up like birds on a freshly seeded lawn; fully half of the nation's 900 land trusts have been established since 1982. More than 800,000 trust members have helped protect more than 2.7 million acres nationwide.

The movement's potency stems from a growing environmental consciousness, according to Jean Hocker, who in 1980 helped organize Wyoming's Jackson Hole Land Trust. Hocker now directs the Land Trust Alliance, a national organization that offers advice, support, and resources to both new and established land

trusts. "Individuals sense that this is a way they can make a difference," Hocker says. "By acting locally they can see results. They know who they're giving their money to, and what their money is doing."

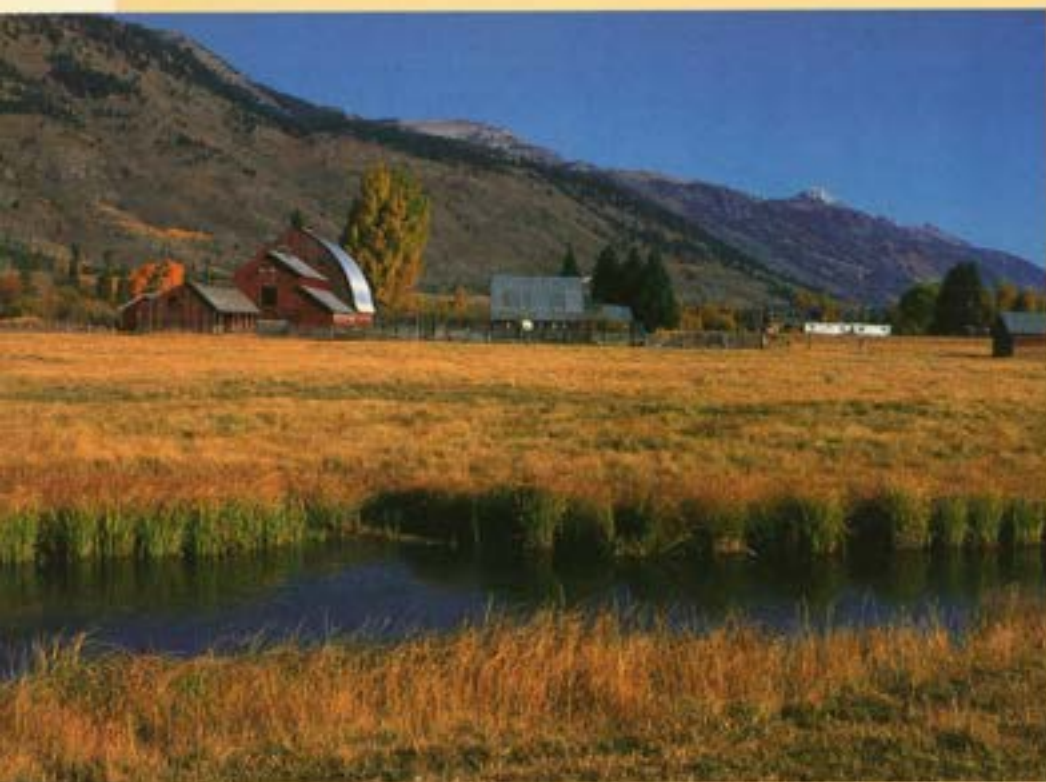
The development juggernaut of the 1980s descended even as federal funding for new open-space acquisition was plummeting, from around \$800 million in 1979 to approximately \$200 million a decade later. (These monies have increased somewhat since.) More and more, people turned to land trusts as a private, nonprofit option for controlling growth and preserving the character of their communities.

A map of the nation's land trusts shows them thickest where development pressures are most acute: in the Northeast, in the mid-Atlantic megalopolis, along the California coast, in Florida, the Pacific Northwest, and around midwestern cities. Some trusts protect only an acre or two and can gather their members around a dining-room table; about half operate on annual budgets of less than \$10,000.

Other trusts safeguard tens of thousands of acres and employ dozens of full-time staff.

Specialized national land trusts work to protect particular kinds of land, often through legislative advocacy, or through the education and support of local trusts. The Rails-to-Trails Conservancy labors to convert former railroad corridors into public footpaths; The Nature Conservancy protects and manages unique ecosystems. Agricultural land is the bailiwick of the American Farmland Trust, while the Trust for Public Land helps governments and local land trusts preserve playgrounds, parks, greenways, and other lands for public use.

Land trusts often achieve their goals not by buying land, but by protecting it by means of conservation easements: the legal conveyance of specific rights to another party, in this instance a land trust. The property remains in the hands of the owner, but from that day forward it can be developed, or timbered, or mined, only to the exact extent stipulated in the easement,



T R U S T E D
L A N D S

Jackson Hole, Wyoming

The privately owned valleys of Jackson Hole have long served as winter range for wildlife from Grand Teton National Park and neighboring national forests. The Jackson Hole Land Trust was organized in 1980 to help preserve this habitat, as well as other scenic properties and agricultural lands. Several thousand contributors now support the trust, which so far has protected more than 6,800 acres.

KOJIMA/TIM

which remains in effect even after the land is sold.

State and local governments have also stepped in as federal funding for land acquisition has dissipated. The trend was started by the California State Coastal Conservancy, which since 1979 has granted more than \$38 million to land trusts and other non-profits protecting the coast. Vermont, Maryland, New Jersey, Wisconsin, and New Hampshire are among the other states with such programs.

Little wonder, then, that the land-trust community feels it is riding a whirlwind. The more trusts there are, the more the word gets out. On average, a new land trust is founded in this country every week.

On an early autumn day Debbie Stanley drives me around New London: out Burpee Hill Road, where the Sargent Trust wrote its first easement in 1988; north on County Road, where a newer agreement safeguards views across Pleasant Lake to Mt. Kear-

sarge; and along Newport Road, where a series of easements now encompasses both the wooded main entry road into town and more than a mile of shoreline along Little Sunapee Lake. To date, the Sargent Trust has protected nearly 600 acres in 18 separate projects.

The trust chooses its causes carefully, using a formal checklist of criteria to evaluate potential candidates. "Property that protects a scenic view or is part of a scenic vista" is toward the top of that list. Other land that wins attention includes property appropriate for agriculture and selective forestry; that protects watersheds or wildlife habitat; that offers recreational opportunities; that is in danger of inappropriate development; that is adjacent to other protected land; and that is listed for protection on New London's master plan.

Near the center of town, Stanley and I turn off Main Street at a farm stand anchored in a bright sea of pumpkins and potted chrysanthemums. We have come to Spring Ledge Farm to visit Sue and John Clough, both of whom are on

the Sargent Trust's board of directors. In 1987 Sue served on a committee appointed by the town's selectmen to study the open-space problem. "Our original thought was to see whether land preservation would be possible through the town budget process," she says. "But it became very clear very quickly that we didn't have the taxation to purchase development rights to any significant amount of land." Believing that citizens would be more willing to protect their land through a private group than to sell or donate rights directly to the town, the committee founded the land trust.

Five years later the Cloughs are placing an easement on 52 acres of their own property. The document has been carefully crafted to allow more greenhouses, sheds, and other farm buildings. "We once thought that if the place went to hell we could always sell it," John says. "But as we began farming more, building the house, getting a lot of regular customers, it became clear that it would kill us to watch somebody put up a development. That

would be a very sad thing, nothing we'd want to live through."

It would be nothing that the town would want to live through either. Spring Ledge is the only working farm on Main Street—the only downtown remnant of New London's agrarian past—and a favorite place for tourists and townspeople to pick up the freshest vegetables and the latest news. By state appraisal, the property was worth \$668,000 if sold for development (it could have sprouted 50 houses), and for years it had been listed for protection in New London's master plan. After several public hearings, the town decided to help purchase the easement.

As the only professional land conservationist in New London, Debbie Stanley has done most of the spadework on the transaction. More than three-quarters of the money to purchase the \$214,500 easement came from the New Hampshire Land Conservation Investment Program, with the town supplying the rest. To secure the state funds, the town agreed to see that certain additional open lands in the area were protected; these new easements

were also negotiated by the Sargent Trust.

The result: Fifty-two acres on Main Street will never be of any commercial use except as a farm. The Cloughs (who were excused from the land trust's deliberations on the project to avoid a conflict of interest) will continue to grow tomatoes and lettuce and pumpkins and chrysanthemums. And there is every likelihood that the next owner, and the next, will farm here. But the land will never grow a Spring Ledge Mall, or Spring Ledge Estates, or Spring Ledge Condominiums, as long as the easement stays in force.

Enforcement," one land-trust official told me, "is the soft underbelly of the land-trust movement."

I was sitting in a bar in Waterville Valley, New Hampshire, during a recent National Land Rally, as the Land Trust Alliance calls its periodic conferences. In the dozens of sessions scheduled for the more than 700 participants, I had begun to notice a healthy preoccupation with the enormous obligations land

trusts are assuming. In accepting an easement, a land trust agrees to enforce it "in perpetuity"—which, as one conference speaker pointed out, "can be a very long time."

"In order to preserve their work, all these land trusts have to survive, or they have to make provisions for handing off their responsibilities to other groups," says Wes Ward of Massachusetts' Trustees of Reservations. "This wasn't as important when land trusts simply owned land."

It's one thing for a land trust to accept an easement from a smiling, conservation-minded landowner, and quite another to enforce that bargain with the subsequent titleholders. Stephen Small, a Boston lawyer who works frequently on land-protection projects, urges every land trust to review proposed provisions from the point of view of the future landowner's attorney. Too often, he says, the easements are so loosely written that "you will be able to drive trucks where there weren't supposed to be any roads."

When an agreement is being formulated, a land trust gathers baseline data:

TRUSTED LANDS

Harpers Ferry, West Virginia

The Trust for Appalachian Trail Lands, a program of the non-profit Appalachian Trail Conference, was established in 1982 to help acquire land along the 2,150-mile-long Appalachian Trail. The trust has assisted government agencies in protecting 10,754 acres in 52 separate projects, mostly within the trail's 1,000-foot-wide corridor; a long-term goal is to incorporate the viewshed as well.



photos, maps, surveys, and deeds that document the land's condition. Some large land trusts fly over their easements annually in search of violations. Smaller trusts—the Sargent Trust among them—walk each of the properties in their care in the company of the landowner. Written reports of these yearly visits prove that the land is being monitored.

To bear the cost of this work, and to build a war chest for possible lawsuits, many land trusts request of easement donors a one-time fee that may run to several hundred or even thousands of dollars. ("You're not only making us a gift; you're asking us to accept a responsibility," Debbie Stanley tells her donors. "We need your help with that.") Without such a monitoring and enforcement fund, a small land trust might be bankrupted by a landowner determined to break an agreement in court.

Amid its current furious growth, no one really knows what the land-trust movement will look like, say, 50 years hence. It seems inevitable that some of the new land trusts will become stag-

nant after protecting an acre here and an acre there, or will simply expire from lack of interest.

But this seems unlikely in New London, where Debbie Stanley never lacks for projects. In partnership with the Society for the Protection of New Hampshire Forests, the Sargent Trust is now working to establish a greenbelt corridor between the region's lakes and mountains, and has joined the town Conservation Commission and the New London Outing Club to secure a 46-acre nature preserve nearby. Stanley has easements to monitor, money to raise, deals to close . . . and parties to plan.

On June 11, 1991, the Ausbon Sargent Land Preservation Trust held a hundredth-birthday celebration for its patron saint. The church bell-choir performed, kids recited poetry, and the school glee club sang a "Song for Ausbon Sargent Day" to the tune of "You're a Grand Old Flag." The townspeople gathered, of course, on Sargent Common, now graced with a brand-new bandstand.

The guest of honor was unfortu-

nately absent, having died two years before. But his long underwear showed up; Bill Kidder, one-time garage owner and town clerk, presented the red long-johns to the assembled children. "See how patched they are," Kidder pointed out. "See how Ausbon Sargent made do and saved his pennies."

The Sargent Trust squirrel, a somewhat furrer symbol of frugality, was also much in evidence; indeed, the trust's logo is omnipresent around New London these days. The squirrel stands in profile on its hind legs, ready to secure an acorn against some future need, its bushy tail flashing from T-shirts, tote bags, and the rear windows of what seems like half the cars in town. ■

WILLIAM POOLE is a San Francisco-based journalist who writes frequently about public-land issues. His work has appeared in Geo, Woman's Day, Motorland, San Francisco Focus, In Health, and San Francisco newspapers.

►For more information, see "Resources," p. 84.



TRUSTED LANDS

Chattanooga, Tennessee

In the 1930s the Tennessee Valley Authority tried to buy out or condemn thousands of acres in the Tennessee River Gorge, a 26-mile-long slash through the hills north of Chattanooga. Resolved to avoid a repeat performance, a group of landowners formed the Tennessee River Gorge Trust in 1986. The trust has protected 12,000 acres, and recently raised \$3.2 million to acquire two key properties in the gorge.

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SECONDS UNSE

Forty years of
Soviet nuclear
testing come
to an end,
and the people
bear witness
to a cold,
cruel war

Between China and the Caspian Sea stretch the mountains and plains of Kazakhstan, a southwestern republic of what was known until recently as the Soviet Union. For thousands of years the nomadic Kazakhs thrived in this semiarid territory, but throughout the last millennium they have been visited by history's cruelest forces. Overrun by Genghis Khan in the 1200s, then dominated by the Russian Empire in the 18th and 19th centuries, the Kazakhs were involuntarily resettled onto collective farms by Stalin in the 1930s, a process during which some 2 million traditional herders died of starvation. In recent decades millions of Russians and people of almost 100 other ethnic groups were relocated to Kazakhstan, while many natives were transported to Siberia. At present, only 40 percent of the state's population is ethnic Kazakh.

The people of the steppes awoke to another nightmare shortly after World War II, when Stalin chose the Semipalatinsk region of Kazakhstan as the embarkation point for the Soviet Union's journey into the atomic age. Beginning in the late 1940s, hundreds of scientists and technicians were moved to the Semipalatinsk Polygon, as the test site was called, where they would spend the next decades designing, constructing, and detonating nuclear weapons. Between 1949 and 1962 almost 200 atomic and hydrogen bombs were exploded above the

Semipalatinsk Polygon; nearly twice as many underground tests have been conducted since 1963. These tests did not take place in a wasteland: Farms and ranching stations ring the Polygon, and hundreds of thousands of people live within a 50-mile radius of the test site. The residents of eastern Kazakhstan may have received more radiation, over a longer period of time, than any other people on Earth.



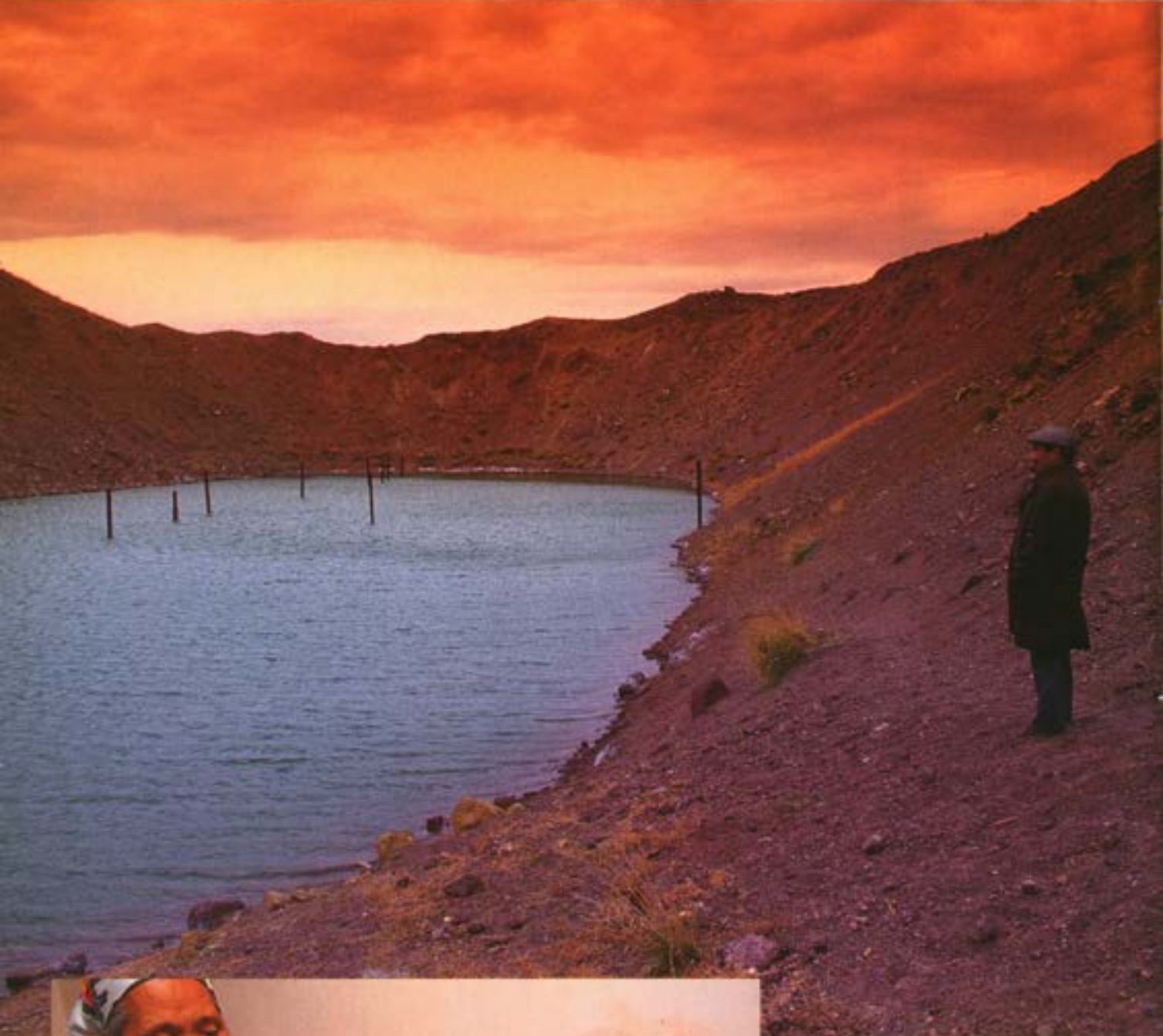
Text and
Photographs
by James
Lerager

T



Border victims:
Villagers near the test site (a woman and her parents, far left; a mother and her daughter, left) live the legacy of the atomic age. Traditional Kazakhs still graze their herds on the grasslands of the Polygon (above).





The personal tragedies of those who lived and grew up near the Polygon differ in detail, but overall the stories are similar. Farmers and villagers remember the years of atmospheric testing when, without warning, a huge fireball would rise in the sky. These "second suns," as people called them, were followed by towering mushroom clouds, deafening roars, and earthquake-like tremors.

Occasionally, some of the largest towns directly bordering the Polygon would be hurriedly evacuated

by military personnel before a test. Even then, however, 30 to 40 young adults would be ordered to remain behind and take cover in houses and barns. Those who were evacuated returned weeks later to an apocalyptic landscape strewn with damaged homes and dead animals; those who had been forced to stay were dazed, weak, and feverish, and soon exhibited signs of acute radiation sickness. Most have since died.

Health care was scarce—a few understaffed and ill-equipped clinics served hundreds of thousands of people—but military medical teams did visit certain villages regularly, giving extensive examinations to those who had not been evacuated before the tests. These subjects, however, were offered no diagnosis or treatment, and the research data remain classified.

But the effects of the tests are painfully evident in the surrounding villages, which since 1950 have been plagued by relentless health problems. An epidemic of babies born with severe neurological and physical defects continues, leukemia and other blood disorders are common, and many people suffer rare multiple ailments. Doctors say that the rate of chromosomal abnormalities in the third generation following exposure could be even higher than that in the first two.

While civilian medical personnel throughout the area provided the best care their limited resources allowed, until 1989 they were forbidden to record illnesses that might have been caused by exposure to radioactive fallout. The director of the Oncology Hospital in Semipalatinsk estimates that at least 60,000 people in the region have died from radiation-induced cancers; "officially," the area has the lowest cancer rate in Kazakhstan.

Large craters from underground nuclear explosions have filled with water, creating "nuclear lakes" (left) where people swim and fish. Hospitals throughout the region treat a variety of childhood cancers and deformities that physicians attribute to radiation exposure.





The public uprising against the Semipalatinsk Polygon began in early 1989 (facing page, bottom); demonstrations continued throughout Kazakhstan until testing was halted last year.

Twenty-four-year-old Karipbek Kuyukov (left and top right), whose parents sometimes watched atmospheric tests from the hills that surrounded their village, was born without arms. He has become a professional artist, painting by holding a brush between his teeth, and has traveled throughout Kazakhstan and Japan advocating an end to nuclear weapons.



In mid-February 1989, an underground nuclear explosion at the Polygon released dangerous amounts of radioactive material into the atmosphere. Scientists monitoring radiation levels reported the venting to Olzhas Suleimenov, a Kazakh writer and geologist running for election to the Congress of People's Deputies of the Soviet Union. In a televised campaign speech soon thereafter, Suleimenov, departing from his planned text, revealed the history and consequences of nuclear testing in Kazakhstan. He called for the closure of the Polygon and announced a public meeting to address the catastrophe that had been hidden for 40 years.

More than 5,000 people attended, and the Nevada-Semipalatinsk Movement (named for the principal U.S. and Soviet testing grounds) was born. In the following months, represen-

tatives from the NSM traveled across Kazakhstan, informing people of what had gone on at the test site. Citizens throughout the republic staged mass demonstrations against further testing; started Polygon officials cancelled several scheduled detonations.

Defying the public mood, authorities conducted what would prove to be the final nuclear test at the Polygon on October 19, 1989. Kazakhstan erupted in demonstrations once again.

In the summer of 1991 the Soviet government offered the republic 5.1 billion rubles to permit two small explosions; although strapped for funds, the Kazakh Parliament rejected the proposal. In late August, Kazakh President Nursultan Nazarbayev declared the Polygon closed, and soon thereafter Boris Yeltsin announced a ban on nuclear explosions in the Russian arctic, where the other Soviet test site was located. When the Soviet Union

dissolved in December, the future of the test sites was left to the newly independent states.

Kazakh officials are now considering plans to convert the Semipalatinsk Polygon to a civilian research center. The test grounds, it has been proposed, could serve as an international memorial, an embodiment of Albert Einstein's beliefs that the atom can be controlled only "through the aroused understanding and insistence of the peoples of the world," and that "an informed citizenry will act for life and not death." ■

JAMES LERAGER is a San Francisco Bay Area photographer and writer. He is the author of *In the Shadow of the Cloud: Photographs and Histories of America's Atomic Veterans* (Fulcrum Press, 1988).

►For more information, see "Resources," p. 84.



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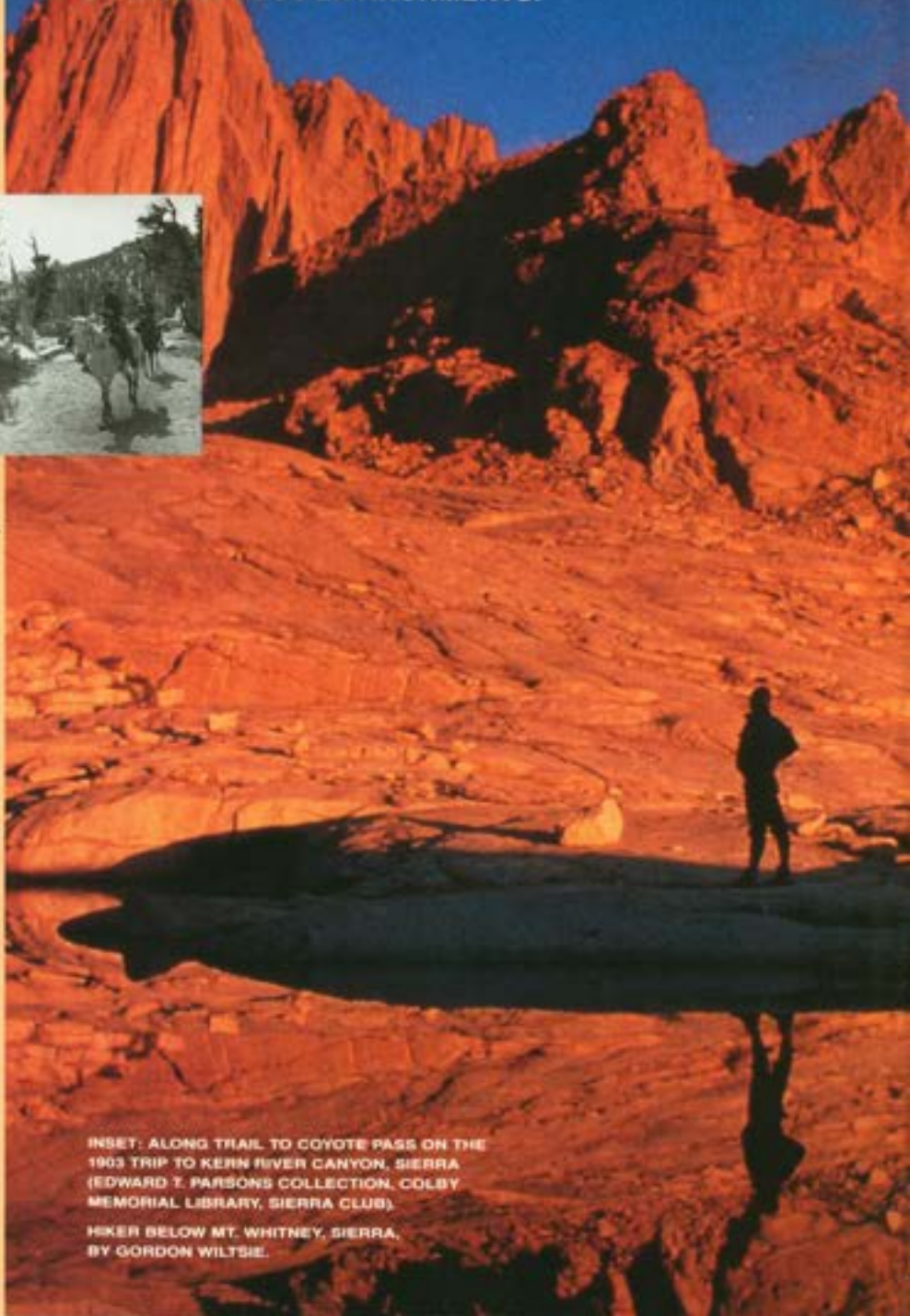
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NEW FORESTRY

Continued from page 45

take place. This enraged environmentalists, who saw the carefully protected heart of Shasta Costa ripped out by future timber sales.

Britell and others propose a straightforward solution: lower the cut. But right now—especially in light of recent directives from Washington (see "The August Coup," January/February)—there is strong pressure on all national forests to "get the cut out."

"As you go further out in time, you can't hang onto goals like avoiding fragmentation," new team leader Rod Stewart admits. When pressed, he acknowledges that the main advantage of a New Forestry plan for Shasta Costa is that it buys three more years before the remaining old growth is split apart. The moral is clear: Unless New Forestry is paired with a slash in logging, it offers no long-term benefit.

New Forestry also makes little sense unless it is combined with sound management of a forest's other resources. In Lewis and Clark National Forest in Montana, a New Forestry plan calls for cutting small patches of trees that shade and stunt the growth of buffalo berries—a prized grizzly food source. "We no longer harvest timber for timber's sake," says Forest Service wildlife biologist Seth Diamond. "This project is driven by grizzlies."

That sounds like good news indeed, but there's a hitch never mentioned in Forest Service press releases. This particular national forest doesn't have much merchantable timber. What it has instead is oil-and-gas potential, and Lewis and Clark administrators have leased huge swaths of prime grizzly habitat for energy development. Here, the forest and its associated wildlife are bound to lose in the end, with or without benefit of New Forestry.

These new techniques seem to have been tortured beyond recognition in the "alternatives to clearcutting" being tried in Arkansas' Ouachita National Forest. "It's just the same old clearcutting with a little gloss," says Beth

Johnson, the Sierra Club's Southern Plains representative. "New Perspectives? We call it new PR."

ONE GREAT FEAR is that New Forestry will be used as an excuse to cut old growth in roadless areas. With 95 percent of the nation's woodlands already logged, critics say, the remaining virgin forests should be protected, not vivisectioned. Old growth is the only reliable "greenprint" of how a healthy forest functions.

Former Shasta Costa team leader Wiedenmann responds to such concerns by saying, "People forget how resilient these ecosystems are."

"But where does that resilience end?" I ask him, as we stand in the forest he proposes to manage with New Forestry techniques. "Is it impaired when just 9 percent of the old growth is left? Three percent? One percent?"

"We don't know," he admits.

Because New Forestry is still in the experimental stages, the issue of whether to use it in old-growth forests comes down to a choice between humility and hubris. Are we feeling lucky this year? At a recent conference, Forest Service ecologist Michael Amaranthus joked, "You know what strikes the most fear in me? It's when my five-year-old walks toward my computer with a toolbox. That's what we've been like in the forest for 30 years."

But even those who are optimistic about the technical promise of New Forestry have to face that other, even thornier question: Will New Forestry continue to be warped in the name of political expediency? Even the best-laid plans to promote ecological health will go awry if extravagant demands for raw materials are placed on the public forests. Until the current pressure is reduced, giving these lands and their caretakers a bit of breathing room, neither enlightened science nor good intentions can offer much hope. ■

SETH ZUCKERMAN lives on the north coast of California. He authored *Saving Our Ancient Forests* (*Living Planet*, 1991).

► For more information, see "Resources," p. 84.

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PLACE SETTING

Text by Reed McMann • Illustration by Marty Braun



People in search of the good life have long been attracted to Florida. The Spanish explorer Juan Ponce de Leon slogged through its swamps looking for the Fountain of Youth; 400 years later, retired Northerners flock there seeking warm weather, sandy beaches, and low taxes. Where the early explorers found "bears fattened on crabs and turtle eggs," condos now line the Atlantic and Gulf coasts. As the state's complex natural systems crumble under the weight of an ever-increasing population, many Floridians have come to realize that the tropical paradise they sought is slipping away.

Florida's modern history is written on a "For Sale" sign. In 1950, Florida was the nation's 20th most-populous state; now it is fourth, with 13 million residents. Every day 900 sun-seeking newcomers arrive; nine of the country's 12 fastest-growing metropolitan areas are in Florida. Meanwhile, the state's conservationists are trying to stay one step ahead of the bulldozers. Over the years, they've helped set aside 21 million acres of parkland. In 1986, Florida passed a formidable growth-management law that requires extensive planning by state, county, and municipal governments. In 1990 it enacted Preservation 2000, the most ambitious land-acquisition program in the United States. (In addition, 16 counties have spent \$600 million to purchase environmentally sensitive land.)

Florida's urban development has occurred primarily along the coasts. As subdivisions vie with sea turtles for space, conservationists have responded by working for the prohibition of seawalls and other beach "improvements." Oil development threatens to mar the 8,400-mile coastline, which is second in length among U.S. states only to Alaska's. More than a million acres off the Atlantic and Gulf shores are still being considered for leasing by the federal Minerals Management Service, despite a 1990 promise by George Bush to ban oil leasing and drilling off Florida's coast for ten years.



Florida has the dubious honor of hosting 54 endangered or threatened animal species and 118 endangered plant species. Among the former are the West Indian manatee, a slow-moving marine mammal that can grow to 3,500 pounds and 13 feet long, whose primary cause of accidental death is pummeling by boat hulls and propellers. Only 30 to 50 Florida panthers, the largest surviving predator in the Southeast, roam their much-diminished territory in south Florida. They face poaching, poisoning (mercury recently killed at least two in Everglades National Park), and traffic (wildlife must run the gauntlet of "Alligator Alley," a highway across the northern tip of Big Cypress National Preserve). Other imperiled species include the red-cockaded woodpecker (a casualty of clearcutting in Apalachicola National Forest in the state's panhandle), the Southern black bear (which can be hunted legally even though only 1,000 of them roam wild), and the Florida crocodile, which once nested in the mangrove swamps later filled to create Miami Beach.

Florida does have its wildlife comeback stories: The American alligator slithered off the endangered species list in 1988 after 21 years; eagles, ibis, egrets, spoonbills, pelicans, and loggerhead turtles have also returned from the brink. The first federally designated refuge for endangered plants, an 8,000-acre habitat for 40 species that are found nowhere else, has been proposed for the sandy flats of central Florida, a prime urban development area near Orlando.

Waterlogged Floridians distinguish among many types of wetlands: cypress ponds, strands, and prairies; river swamps and floodplains; freshwater marshes, wet prairies, salt marshes, and mangrove swamps. Over the years, more than 9 million acres of wetlands (60 percent of the state's total) vanished as 1,400 miles of locks, canals, and levees were constructed. Along the way residents discovered that their water supply depends on the survival of these boggy places. Wetlands act like giant sponges, allowing rainwater to percolate down to the vast limestone caverns of the Floridian Aquifer, which provides 70 percent of the state's water supply. Because the aquifer is close to the surface, it is threatened by pollution from residential and agricultural development.

Nearly 70 percent of Florida's lakes and reservoirs are polluted, including 730-square-mile Lake Okeechobee. In November, agribusiness conglomerate Lykes Brothers was fined \$680,000 (plus restoration costs) for attempting to drain 22,000 acres on the shores of the lake, the most egregious violation of Florida wetlands laws to date.



FLORIDA

OF MANATEES & RETIREES



"There are no other Everglades in the world," wrote Marjory Stoneman Douglas in her 1947 environmental classic, *The Everglades: River of Grass*. A vast, shallow sea that once could swell to as much as 50 miles wide after rains, the Everglades have always been paradise to wildlife and an impediment to developers. About half of its original 2 million acres remain, with only 10 percent of that in Everglades National Park. Attempts are being made to protect the immense ecosystem: Plans are afoot to restore the channelized Kissimmee River, which feeds Lake Okeechobee and the Everglades, to its original meanders (see page 71). Last year the state agreed to purchase 37,000 acres of farmland adjacent to the Everglades, which will be turned into artificial marshland to filter runoff before it ends up in the national park and the nearby Loxahatchee National Wildlife Refuge. It's no surprise that the Bush administration's 1991 abandonment of its "no net loss" wetlands pledge has Florida's environmentalists up in arms. Under the new definitions, half of the Everglades will no longer be considered wetlands, and hundreds of thousands of acres throughout Florida could lose environmental protection. As if that's not enough for one ecosystem, Shell Oil has plans to drill for oil in the Everglades.



The Florida Keys make up the third-largest barrier reef in the world and the only one in the continental United States. They form perhaps the most accessible reef system anywhere, linked to the mainland by 47 highway bridges. As a result, the island chain suffers from overfishing, overcollecting of ornamental species, damage by boat hulls and anchors, and runoff from septic systems and agricultural land. Algae chokes corals close to shore, and diseases attack reefs farther out. In 1990, after a series of freighter groundings, Congress established Florida Keys National Marine Sanctuary, the world's second-largest ocean refuge, it covers 2,600 square nautical miles and stretches from south of Miami 200 miles into the Gulf of Mexico. Federal officials have until 1993 to develop a comprehensive management plan for the sanctuary.



Sierra Club members from 16 groups around the state labor to protect Florida's environment. While Club activists lost two important battles in 1991—a fight for the state's first biodiversity bill, and legislation to increase fines for the poaching of endangered species—they successfully rallied support for a trust fund for declining nongame species (critical animal populations that aren't supported by fees from hunting and fishing licenses, and aren't yet legally endangered), and are working to find permanent funding for the state's land-acquisition program, which relies on the annual sale of revenue bonds. Florida environmentalists also face issues that confront other urbanized areas in the country, primarily transportation (the state has more cars than people), nuclear power (the aptly named Turkey Point facility near Miami operates the nation's most-fined nuclear reactors), and solid waste (a bottle bill has stalled for several years, and urban counties have rushed headlong into the construction of incinerators despite their suspected role in the state's growing mercury-pollution problem.) In a state fueled by population growth and low taxes, Florida's conservationists have the task of convincing fellow residents new and old that they can't just enjoy paradise—they've got to protect it, too. ■

► For more information, see "Resources," p. 84.



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PRIORITIES

Continued from page 34

advice is to stand tough. Someone in the federal government with management authority should exercise appropriate supervision over these public servants."

The government took Marlow's advice. The EPA tried to get the local U.S. Attorney to prosecute van Ec for felony conflict of interest, citing a statute prohibiting any federal employee from serving as an agent of any organization in an action against the federal government. (Van Ec was alleged to be an agent of the Sierra Club.) When the U.S. Attorney declined to prosecute, the EPA officially reprimanded van Ec, stating that his participation in the meeting had been a conflict of interest and warning that he could be fired for any further "ethical violation."

"They're using this to silence me in the community for my long history of environmental activism and for my involvement with the desert tortoise," says van Ec. "This sends a very bad signal to federal workers who want to be active in the Sierra Club or any environmental cause."

Van Ec is challenging his reprimand with the help of the Government Accountability Project (GAP), a whistleblower-protection group in Washington. "The EPA's action leaves Mr. van Ec in the dark about what he did that was wrong," GAP says in a brief filed in his defense. "Was it the questions he asked? Was it because he is a member of the Sierra Club and/or other environmental groups?"

The van Ec case is seen by GAP as a dangerous precedent eroding the rights of federal workers. In the past, says attorney Richard Condit, conflict-of-interest statutes have been used only in cases where there was a question of personal gain. Now, he says, a new standard is being set: "If you're an employee of the government, you don't do things that will challenge the government." In other words, stay in your shell, move as slowly as possible, and don't stick your neck out. —P.R.

► For more information, see "Resources," p. 84.

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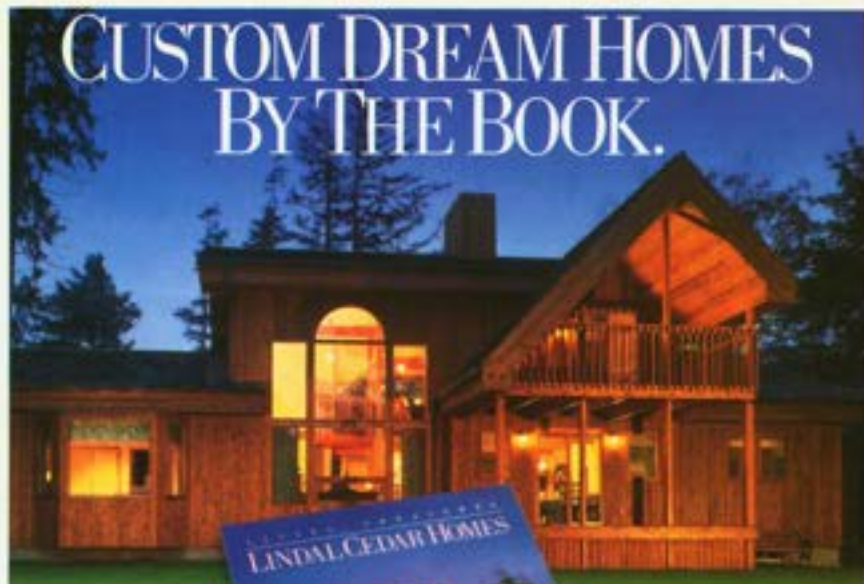
*Can the Army's engineers
march to nature's drummer?*

In the 1960s the U.S. Army Corps of Engineers diverted the flow of the sinuous Kissimmee River into a huge concrete ditch. Once a bearer of pure water to Lake Okeechobee and the Everglades, the river and its hundred miles of meanders stagnated, and Canal 38 was born—a 50-mile-long straight shot through the heart of central Florida.

"The Ditch," as environmentalists derisively dubbed it, was scarcely complete before it started to look like an engineering Jekyll and Hyde. It worked well enough for flood control—the project's *naison d'être*—but its effects on the area's once-abundant waterfowl and fish were monstrous. By the mid-1970s the Kissimmee's ibis and eagles were almost gone. Also belly-up were 6 billion freshwater shrimp and six species of fish. The 200,000 acres of marshland the river once fed were replaced by dairy herds and dust. Its flows were polluted by farm runoff; they also became erratic—too high in the rainy season and too low in the dry.

The state's governor and its congressional delegation came to view Canal 38 as a costly mistake that jeopardized not only wildlife and parks but also the water needed to sustain Florida's growing human population. Starting in the early 1970s the state went back to the Corps at regular intervals, asking for a reversal of its magic. The Army engineers balked: Why should they tear down what had taken ten years and \$30 million to build?

The Corps had other philosophical qualms as well. For years this public-works branch of the Army has battled steadfastly *against* nature, not for it. Founded in 1802, the Corps took on



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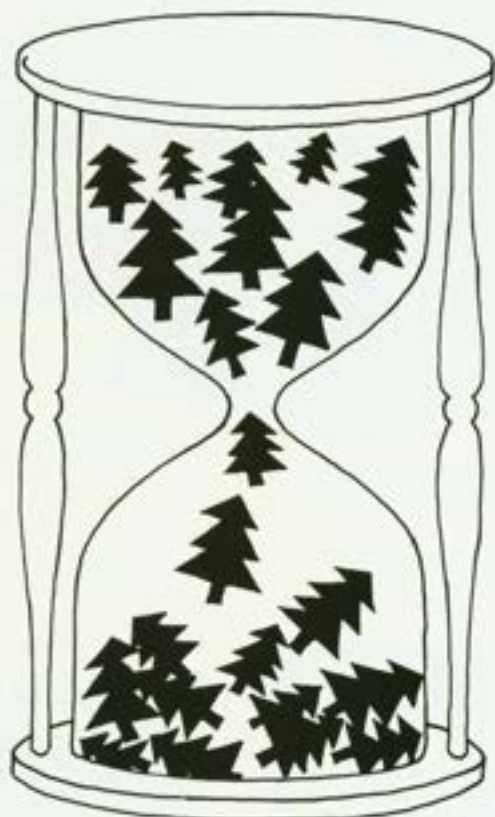
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civilian duties in addition to its military work in 1824, building the dams, levees, bridges, and channels that the developing nation demanded. In its heyday, the Corps was regarded as almost heroic, the ultimate in can-do efficiency, with everything from small-town reservoirs to the Washington Monument, the Panama Canal, and the Manhattan Project in its mission-accomplished file.

By the 1960s, however, the cheers were muffled by jeers from people concerned about the dark side of the Corps' triumphs: rivers imprisoned, wetlands lost, canyons flooded. (Supreme Court Justice William O. Douglas once went so far as to call the Corps "public enemy number one.") In 1970 the Corps bowed to criticism, promising in new guidelines to "give environmental values the full consideration that is their due."

The Corps' green pronouncements continued throughout the 1970s and '80s, but the agency still seemed unclear on the Kissimmee concept. In 1985 the Corps recommended that the river not be restored, citing a lack of economic benefits. Congress came back with legislation in 1986 that specifically instructed the Corps to undertake such restoration projects—in effect telling the Army to ignore the fact that it couldn't precisely calculate the dollar value of a wild duck or a meandering stream.

Meanwhile, Florida was eager to begin what would be the world's largest river-restoration effort. "Our wetlands purify and store our groundwater, protect our shorelines and river banks from erosion, and provide countless opportunities for recreation," said then-Governor (now Senator) Bob Graham in 1984. "We must protect this vital resource for our own good." Governor Lawton Chiles said essentially the same thing in 1991, albeit more impatiently. "I cannot overemphasize the importance of this effort," he told the Corps in a curt letter.

By late 1991 the Corps finally seemed ready to take the Kissimmee

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plunge, conceding in a draft report in December that the restoration is technically feasible. Faced with a barrage of scientific evidence from the state, the Corps could hardly have ruled otherwise. While Army engineers floundered, Florida successfully completed a demonstration project restoring some 12 miles of the Kissimmee's meanders; it had also funded construction of a model of the river system to guide broader efforts.

But in the Corps' offices in Washington, D.C., where such wondrous possibilities are inevitably reduced to dollars, the return of the river is not yet assured. Cost estimates for the project keep rising, a phenomenon that environmentalists suspect may be a form of federal subterfuge. Already a substantial \$280 million in 1990, the Kissimmee's construction pricetag leaped to \$422 million in the fall of 1991. Also worrisome is the Corps' decision to split the bill evenly with the financially strapped state, instead of shouldering 80 percent of the burden itself, as it did when it built Canal 38. This fiscal maneuvering has given environmentalists the jitters. "The Corps is looking for a reason to pull the plug on this project," says Estus Whitfield, environmental advisor to the governor.

But while the Corps can try to influence lawmakers, it can't unilaterally halt the project. Congress has already provided \$17.3 million for the Kissimmee restoration. The Florida congressional delegation hopes to win authorization of a large additional sum in the 1992 Water Resources Development Act, the Corps' marching orders for the upcoming year.

For the Army's engineers, it's a watershed issue in more ways than one. Restoring the Kissimmee River represents a wrenching reversal for staffers with a parental attitude toward the Ditch. Yet it could also offer proof on a grand scale that the agency is now, as it advertises itself, "The New, Environmentally Sensitive Corps."

—Joan Hamilton

► For more information, see "Resources," p. 84.

Continued on page 76



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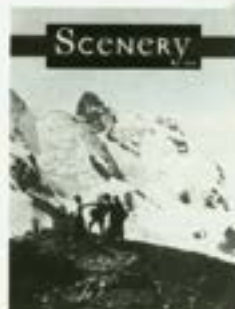


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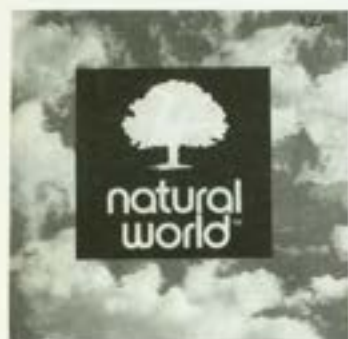
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PRIORITIES

The Man Who Knew Too Much

*Alyeska plugs a leaky
pipeline with
its own private FBI*

Oil-industry gadfly Charles Hamel was sitting in Fletcher's Bar in Anchorage late one night when a "lovely young lady" attracted his attention. As he later told *60 Minutes*, she was "pretty, blonde, tanned, and if I recall, I think her blouse was rather transparent." This struck him as odd attire for Anchorage in March; still, he was charmed when, a few days later, she turned up in the seat next to his on a flight out of town. The woman told Hamel she worked for a well-funded environmental legal group called EcoLit—which just happened to be in a position to help him out in his long-running battle with Alyeska, the consortium formed by Exxon, Arco, and British Petroleum to build and operate the Alaska pipeline. Broke and beleaguered, Hamel failed to recognize a situation too good to be true, and accepted EcoLit's offer of help. The trap snapped shut.

EcoLit was a sham, a phony organization set up by the Wackenhut Corporation, a Florida-based security firm; the woman in the see-through blouse was a Wackenhut agent. The company was under contract to Alyeska to snoop on Hamel, a former oil broker who was making life for the consortium both miserable and very, very expensive.

Hamel has been Alyeska's *bête noire* since 1980, when the company allegedly cheated him by selling him water-contaminated oil. Eager for revenge, he became a conduit for whistleblowers, and the information funneled through him cost Alyeska a fortune in fines. (One case alone, regarding air pollution at Alyeska's Valdez terminal, resulted in

\$30 million in penalties.) Hamel was also a major source for last August's alarming General Accounting Office report on the likelihood of a catastrophic oil leak along the pipeline. Alyeska was desperate to plug its leaks—not in the pipeline, but to Hamel. In February 1990, Alyeska President James Hermler hired Wackenhut to do the job.

Wayne Black, Wackenhut's director of special investigations, described the company to the *Washington Times* last year as "similar to a private FBI." Founder and president George Wackenhut once boasted that his agents were ready to "investigate everyone and anyone who needs investigating." Wackenhut provides security services to private industry and the government—especially the Department of Energy, for which it guards the U.S. Nuclear Test Site in Nevada, the Strategic Petroleum Reserve, and a host of nuclear-power plants. Wackenhut's board is well-larded with former high-ranking CIA and FBI officials; in 1980, its legal counsel was soon-to-be CIA chief William Casey.

Wayne Black himself headed the Alyeska investigation, posing as "Dr. Wayne Jenkins," the head of EcoLit. Under the pretext of helping Hamel prepare lawsuits against the oil industry, "Jenkins" met frequently with him in the office EcoLit had conveniently established near Hamel's home in Alexandria, Virginia, always trying to discover the names of his sources. In the months that followed, Hamel was secretly filmed and wiretapped; unopened letters were stolen from his home; even his trash was scrutinized. Exactly how much was learned is still not known; in one case, however, Wackenhut was able to use illegally obtained telephone records to identify Alyeska employee George Scott of Valdez as one of Hamel's sources. The 64-year-old Scott, seven months from retirement, was fired (ostensibly for reasons unrelated to the probe), and subsequently suffered a heart attack.

While Hamel was the main object of the investigation, he was not its only one. At one point Wackenhut seriously

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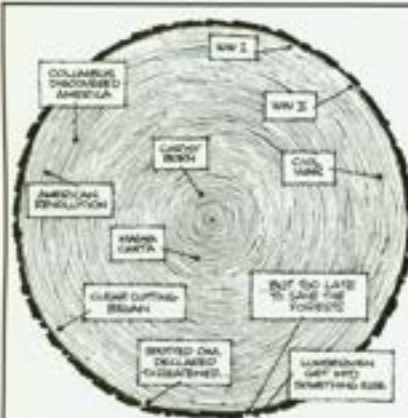


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considered a complicated scheme to try to catch Representative George Miller (D-Calif.), the powerful chair of the House Interior Committee, receiving "stolen documents" from Hamel. Such a project, a Wackenhut lawyer warned, "would require a carefully planned and well-executed effort." The company also targeted Alaska environmentalists Dan Lawn and Riki Ott (the latter singled out as "a real pain in the ass"), and even a Valdez bartender.

In September 1990, unimpressed by the results of the probe, Alyeska's directors decided to "call off the dogs," as they put it, and halt the \$1-million investigation. It was not until the following July that Hamel learned of the plot, tipped off by a former Wackenhut employee. (Before it was over, five more Wackenhutters quit to provide evidence on the operation.) Hamel informed George Miller, whose Interior Committee heard three days of dramatic testimony on the matter in November. So popular was the inquiry, reported the *Anchorage Daily News*, that Exxon and Alyeska hired "more than two dozen scruffy men" at \$10 an hour to save seats in the back of the hearing room for company officials.

The oil-industry execs might have been happier had they stayed away, since the revelations at Miller's hearing were an unqualified disaster for both Alyeska and Wackenhut. The state of Virginia is investigating Wackenhut for possible criminal violations; Wayne Black was forced to resign, and the company is now considering shutting down its special-investigations unit entirely. Moreover, the scandal's backfire effectively nixed any possibility that the House might pass legislation to drill in Alaska's Arctic National Wildlife Refuge. Spying on the head of the Interior Committee is definitely not smart politics.

As for Charles Hamel, he's continuing to dog Alyeska. "The more the oil companies complain about me, the more their employees come to me," he says. "Except that now some of them come all the way to Alexandria to avoid using the phone." —PR.

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REVIEWS

KATHLEEN COURRIER

Last Stand: Logging, Journalism, and the Case for Humilityby Richard Manning
Gibbs Smith; \$19.95

Richard Manning became an investigative journalist so that he could slay giants. He left the profession when he saw its principles sacrificed like the forests he was covering on the environmental beat of the Montana *Missoulian*.

The year was 1988, and Manning's big story was about two timber corporations whose fear of stiffening competition and hostile takeovers led them to begin clearcutting vast stretches of pine and larch to convert their long-term assets into quick cash. This was

no economic suicide mission for the companies: They were counting on the U.S. Forest Service to open up adjacent public lands to logging once the private forests had been razed. The result, as Manning shows with photographic clarity, was an ecological tragedy.

Meanwhile, another kind of disaster was unfolding in the newsroom. Manning's once-supportive editor buckled under pressure from the *Missoulian's* owner to lighten the paper's fare and avoid controversy. Manning's exposé of the timber industry was put on ice for months, and he was taken off his beat—two invitations to quit that he ultimately accepted.

Autobiographical passages in this book give Manning some trouble; he can't seem to structure the what/where/when/why of divorce and unemployment. But temporary lapses into confusion don't spoil this story of a principled hothead who rails courageously against the "corporatization" of both nature and the news.

Through the Arc of the Rain Forestby Karen Tei Yamashita
Coffee House Press; \$9.95, paper

In a stretch of burned-out Amazonian rainforest that has mysteriously hardened into plastic, a motley cast of characters acts out archetypal strike-it-rich fantasies, only to have their sur-

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real world come tumbling down before their eyes. The players in this novel—a boyish Japanese philanthropist with a mini-satellite hovering perpetually in front of his face, a three-armed American entrepreneur, a local religious pilgrim, a pair of lovebirds turned pigeon fanciers, a tribal shaman—make and then destroy each other's fortunes episodically.

Modeled on the soap operas that have become a national passion in Brazil, *Through the Arc* parodies misguided

development the way *Catch-22* did senseless wars. Yamashita's black-humored probe of the environmental destruction caused by grandiose economic development schemes in the Third World—a subject usually approached with either great piety, an armload of statistics, or both—makes us laugh and cry. The question posed here is not, "Are these characters and events real?" (of course they aren't) but rather, "How far from the painful truth is all this nonsense?" (not very).

**Second Nature:
A Gardener's Education**

by Michael Pollan
Atlantic Monthly Press; \$21.95

In this coming-of-middle-age story, Michael Pollan, executive editor of *Harper's*, recounts how he inherited his grandfather's love of well-tended gardens and his father's hatred of conventional, neatly mowed suburban yards. He tells of being an urban refugee in Connecticut who taps into both legacies by transforming a run-down dairy farm into a place where the cultivated can meet the wild head on. In the process, he immerses himself in the history and lore of gardening.

To Pollan, "real gardening begins with . . . one's secession from the national lawn." From there it leads to a potentially life-changing process of getting to know a piece of land and a climate zone intimately, and then developing an aesthetic sense true to both.

Human meddling has become Earth's fate, Pollan contends, and he's far more worried about the wretched state of the 92 percent of the land that is not protected than about the 8 percent that is. If gardening informed our land ethic, he claims, we would be far better stewards than we are now. Even if he doesn't have the last word on wilderness, his garden ranks with Thoreau's beanfield as a quiet place where an inquiring mind has taken on the perennial question of how to live.

The Moon by Whale Light

by Diane Ackerman
Random House; \$20

She hasn't yet danced with wolves, but journalist Ackerman has swum with whales, cradled penguins in her arms, slipped nooses around crocodile jaws, and thrilled to the commotion of 20 million bats swarming out of a single cave. Hers is a life of calculated risks, recently spent trailing field biologists who are themselves trailing some of the most mysterious and misunderstood creatures on Earth.

For Ackerman, on-site reporting and careful research provide the opportunity for flashes of insight. "How can time be so rigid in rock and so molten

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as we live it?" she asks while traversing the multilayered sandstone cliffs at Texas' Big Bend in search of bats. Elsewhere, pondering how matter acquired mind: "How do you begin with hydrogen and end up with prom dresses, jealousy, chamber music?"

Describing the animals, the scientists, and her responses to both makes for a narrative formula as difficult to execute as it is simple to state. Ackerman sometimes jostles the delicate balance of this triple storyline by calling attention to herself unnecessarily. These lapses, only human, merely throw near-perfection into relief.

Rethinking Ecofeminist Politics

by Janet Biehl

South End Press; \$10, paper

If social critic Janet Biehl is right, ecofeminism as commonly articulated in academia and on the lecture circuit is nothing more than a bundle of contradictory ideas that falls apart under scrutiny.

According to Biehl, leading eco-

feminists have set multiple traps for themselves. Trying to revive goddess worship, they don't ask how it is that some of the most rigid patriarchies have idolized female deities. Blaming males for all racism and political oppression, they have let such important historical forces as ethnic chauvinism off the hook. Overemphasizing nature's irrevocable cycles, they have doused hopes that people can mend their destructive ways, however much rooted in biology. And, says Biehl, by insisting that everything on Earth is alive and connected, they have rejected rationality at a time when science has at last befriended environmentalism.

Unfortunately, Biehl doesn't ask whether rank-and-file ecofeminists pay any heed to the movement's theorists or their mistakes. But she proposes "social ecology" as an alternative ideology just the same: "an anti-hierarchical, coherent, rational, and democratic body of ideas" that "speaks for a general interest of human beings as a whole," not just women.

The Desert Reader

Edited by Peter Wild

University of Utah Press; \$17.95, paper

No single writer has yet put American deserts on the literary map the way that the adventurer T. E. Lawrence did those of the Arabian Peninsula. Nonetheless, there exists a centuries-spanning literature of the arid West, and Peter Wild has taken its measure. Here he excerpts some of the best of these writings, and tracks the evolution of ideas about the West's most inhospitable and haunting landscapes.

Starting with Papago creation myths, the journals of European explorers, and the accounts of trappers and outpost commanders, Wild ferrets out the various myths by which desert peoples have lived. His selections show how the ecologically benign cosmology of Native Americans gave way to the environmentally destructive myth of abundance, and how *New York Tribune* editor Horace Greeley came to see the desert for the hard bargainer it is while his bizarrely wish-

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ful contemporary William Gilpin insisted that a new, irrigated Eden would spring from dust and brush. Then, early in this century, a romance with the desert began, gripping such writers as Mary Austin and D. H. Lawrence. More recent writers, including Joseph Wood Krutch and Wallace Stegner, tried to reconcile passion with the practical. Only the post-romantic Edward Abbey, with his classic, sassy riff on why national parks should not be drive-throughs, laughs off politics.

In some of the introductions to the 19 excerpts, Wild strains for effect, flaunting quaint words and circling back over ground already covered. But his extraordinary editorial judgment and impressive scholarship more than compensate.

BRIEFLY NOTED

For public-lands activist Lynn Jacobs, the only good cow on federal turf is one painted on a sign, with a fat red circle around it and a

diagonal bar slashing it in half. To help get cows off the public lands and keep them off, Jacobs has self-published *Waste of the West* (P.O. Box 5784, Tucson, AZ 85703; \$28, paper). With 602 pages of spirited writing and more than 1,000 photographs, the book is an encyclopedic look at the environmental damage caused by livestock grazing.

Getting unwanted bovines off our land requires political skill, such as the ability to persuade Bureau of Land Management officials to stop coddling the beef industry and instead do what's best for the environment. To guide activists through the sometimes dizzying maze of BLM bureaucracy, several conservation groups have produced *How Not to Be Cowed* (available from Sierra Club, Dept. SA, P.O. Box 7959, San Francisco, CA 94120; \$3 each, plus \$1.75 postage and handling per order). In this 70-page booklet, Sierra Club activist leaders and others make it clear that BLM reform is crucial, since the agency acts as the steward of one-quarter of the total acreage in 11 west-

ern states—land where grazing is the most extensive commercial activity.

But enough of cows. In most places it's getting to be spring, when a person's thoughts turn to hiking and climbing. Not a few publishers want to tickle your fancy and lure you into the great outdoors with their guidebooks. Our own Sierra Club Books is famous for its trail and mountain guides; for a full list of titles in print, request a copy of the Sierra Club Mail-Order Service Guide (item #821) from Sierra Club, Dept. SA, P.O. Box 7959, San Francisco, CA 94120. Also check the notice of new releases at the end of this column.

The Club's venerable sibling organization in Seattle, The Mountaineers, has been issuing impressive guidebooks since 1961. Among its latest releases are *Mountaineering: The Freedom of the Hills* (5th edition), a thoroughly updated, illustrated primer on the principles and techniques of climbing (\$32, cloth; \$22.95, paper); *The High Sierra: Peaks, Passes & Trails* by R. J. Secor, which describes

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approaches to and climbing routes on some 573 peaks (\$19.95, vinyl cover); and *Hiking the Great Northwest* by Ira Spring, Harvey Manning, and Vicky Spring, which details 55 trails in the United States and Canada (\$12.95, paper). For a complete catalog, write to The Mountaineers, 1011 S.W. Klickitat Way, Suite 107, Seattle, WA 98134. . . . Wilderness Press got started in the trail-guide business in 1967. Its backlist includes *Emigrant Wilderness and Northwestern Yosemite* by Ben Schifrin (\$16.95, paper) and *Hiking the Big Sur Country: The Ventana Wilderness* by Jeffrey P. Schaffer (\$16.95, paper). Most recently the press has produced *Afoot and Afield in Los Angeles County* by Jerry Schad (\$16.95, paper), and *Kauai Trails: Walks, Strolls and Treks on the Garden Island* by Kathy Morey (\$12.95, paper). For a Wilderness Press catalog, write to 2440 Bancroft Way, Berkeley, CA 94704. —Mark Mardon

NEW FROM SIERRA CLUB BOOKS

- *Adventuring in British Columbia* by Isabel Nanton and Mary Simpson. Western Canada still has wilderness aplenty for those who seek adventure and solitude (\$15, paper).
- *The Wilderness Condition: Essays on Environment and Civilization*, edited by Max Oelschlaeger. Reminders that for civilization to endure, people must preserve wild nature (\$30).
- *The Sacred Hoop: A Cycle of Earth Tales* by Bill Broder. Myth, history, archaeology, and literature are combined in stories that examine pivotal moments and ideas in Western civilization (\$12, paper).
- *International Banks and the Environment: From Growth to Sustainability—An Unfinished Agenda* by Raymond F. Mikesell and Lawrence F. Williams. How First World lending to the Third World is failing to safeguard precious habitats (\$30).

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Join Sierra Club activists working on issues that concern you. For information, contact the Campaign Desk, Sierra Club, 730 Polk St., San Francisco, CA 94109; phone (415) 776-2211.

A FIELD

"Hearth & Home," page 20

Garage Sale Mania! How to Hold a Profitable Garage, Yard, or Tag Sale by Chris Harold Stevenson (Betterway Publications, P.O. Box 219, Crozet, VA 22932; 1988).

Heloise: Hints for a Healthy Planet (Perigee Books, 1990). A useful and timely resource.

Rouse News, c/o Sherlock Enterprises, Inc., 609 Hobart Road, Hanover, PA 17331. One year (12 issues) for \$15.

"Good Going," page 23

Contact the Ladakh Project through its parent organization, the International Society for Ecology and Culture, P.O. Box 9475, Berkeley, CA 94709; phone (510) 841-6758.

Ancient Futures: Learning From Ladakh by Helena Norberg-Hodge (Sierra Club Books, 1991; available from Sierra Club Store, Order Dept. J, 730 Polk St., San Francisco, CA 94109; \$22.50 for Sierra Club members, \$25 for nonmembers, plus \$5 shipping each and applicable state sales tax).

Kashmir, Ladakh, & Zaskar: A Travel Survival Kit by Margret and Rolf Schettler (Lonely Planet, 1989). A good general-purpose tourist guide.

Trekking in the Indian Himalaya by Garry Wear (Lonely Planet, 1991). Contains useful advice for those wanting to head into the mountains.

"Body Politics," page 25

Dial-A-Hearing Screening Test, 1-800-222-EARS (an operator will refer you to a phone number in your area). The test checks ability to hear four faint tones; if you can't hear all four, a recording provides more information. If you can't hear the recording . . .

Hearing Education & Awareness for Rockers (HEAR), P.O. Box 460847, San Francisco, CA 94146; phone (415) 826-LOUD. Educates young people about the hazards of noise, particularly loud rock music.

National Airport Watch Group, 267 Humboldt Ave. North, Minneapolis, MN 55405; phone (612) 374-2604. Provides referrals to local groups concerned about airport noise and helps launch new groups.

"Whistleblower," page 33

Two organizations in Washington champion the cause of whistleblowers: the Government Accountability Project (25 E St., N.W., Suite 700, Washington, DC 20001; phone 202-408-0034) and the Environmental Whistleblower Project of the National Whistleblower Center (517 Florida Ave., N.W., Washington, DC 20001-1850; phone 202-667-7515).

For information on how you can help the desert tortoise (residents of Nevada can even harbor one for safekeeping), contact Betty Burge, Tort-Group, 5157 Poncho Circle, Las Vegas, NV 89119; phone (702) 739-7113.

"Kissimmee River," page 71

To support restoration of the Kissimmee, write Teresa Gorman, Special Assistant to the President for Policy Development, the White House, Washington, DC 20500. A key point to emphasize: The project provides the Corps with an excellent opportunity to prove that they are, as they claim to be, "The Engineers of the Future."

A 20-page brochure describing the Kissimmee River restoration project is available free from the South Florida Water Management District, P.O. Box 24680, West Palm Beach, FL 33416; phone (407) 687-6303.

PLACE SETTING

"Florida," page 68

Sierra Club Southeast Field Office, Florida branch, 1201 No. Federal Highway, Room 250H, North Palm Beach, FL 33408; phone (407) 775-3846.

Adventuring in Florida: The Sierra Club Travel Guide to the Sunshine State, by Allen de Hart (Sierra Club Books, 1991; available from Sierra Club Store, Order Dept. J, 730 Polk St., San Francisco, CA 94109; \$12.60 for Sierra Club members, \$14 for nonmembers, plus \$3 shipping each and applicable state sales tax).

FEATURES

"New Forestry," page 40

For information about the Shasta Costa project in the Gold Beach and Galice ranger districts of the Siskiyou National

DEPARTMENTS

PRIORITIES

"Earth Summit," page 30

Regular updates on preparations for the Rio conference are available from the U.S. Citizens Network on UNCED, 300 Broadway #39, San Francisco, CA 94133; phone (415) 956-6162.

Urge President Bush (the White House, Washington, DC 20500) to make funds available for environmental programs in the Third World and to take a leadership role at the Earth Summit.

Place your name on the Sierra Club International Program activist list by writing to the Campaign Desk address listed above.

Earth Summit: Conversations With Architects of an Ecologically Sustainable Future by Steve Lerner (Commonweal, Box 316, Bolinas, CA 94924; \$9.95 plus \$2 postage; California residents add 72¢ for sales tax). Provocative background material.

Compact for a New World, free from the World Resources Institute, 1709 New York Ave., N.W., Washington, DC 20006; phone (202) 638-6300. If environmentalists instead of politicians were running the Rio conference, the global agenda they'd come up with might look something like the one detailed in this pamphlet.

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Forest, write U.S. Forest Service, Box 7, Gold Beach, OR 97444, or call (503) 247-6651.

The Collins Almanor Forest is open to the public for viewing and primitive camping (no facilities provided). For more information write to the Collins Almanor Company at P.O. Box 796, Chester, CA 96020; phone (916) 258-2111.

Inner Voice, newsletter of the Association of Forest Service Employees for Environmental Ethics (AFSEEE), P.O. Box 11615, Eugene, OR 97440 (\$20 for four issues).

Sierra Club Public Lands Activist, a quarterly newsletter available free to Club members on request from John Hopkins, 409 Jardin Pl., Davis, CA 95616; phone (916) 756-6455.

Saving Our Ancient Forests by Seth Zuckerman (Living Planet Press, 1991; \$5.95, paper). A lively, 116-page activists' manual.

The Forest and the Trees: A Guide to Excellent Forestry by Gordon Robinson (Island Press, 1988). A good introduction to the history of national forests, as well as a primer on forestry for the long term.

Land Trusts, page 52

Help with general land-trust questions and with such practical chores as legal incorporation and application for non-profit status is available from the Land Trust Alliance, 900 17th St., N.W., Suite 410, Washington, DC 20006-2501; phone (202) 785-1410. The alliance publishes newsletters, pamphlets, and books—including the comprehensive *Starting a Land Trust* (\$12)—and can direct you to local and regional land trusts in your area.

The Trust for Public Land, 116 New Montgomery St., 4th Floor, San Francisco, CA 94105; phone (415) 495-4014, offers advice for new land trusts, help with incorporation, and advanced training in land-transaction skills.

Soviet Test Site, page 60

For information and E-mail communication with the Nevada-Semipalatinsk Movement, contact American Peace Test, P.O. Box 26725, Las Vegas, NV 89126; phone (702) 386-9834.

Victims of U.S., Soviet, and French atmospheric and underground nuclear testing tell their stories in *Bound by the Wind*, a 40-minute film available for sale or rent from The Video Project, 5332 College Avenue, Suite 101, Oakland, CA 94618; phone 1-800-4-PLANET. ■

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Elsewhere in this issue you've read that 1992 is a critical year for environmental politics. You have another important vote to cast as well—in the Sierra Club national election. This year five seats on the Club's 15-member Board of Directors will be filled from among eight candidates—seven of whom have been selected to run by the Club's Nominating Committee, and another who qualified for the ballot by petition. (Spaces for write-in candidates are also provided.) Your ballot—containing each candidate's position statement and record of Club involvement—also includes a proposed bylaw amendment that would, if approved, clarify and expand the power of the Board to oversee the actions of Club entities. All completed ballots must be received by April 11.

The Bureau of Land Management System is the latest Sierra Club guide to the public lands of the United States. This eight-page booklet offers a concise description of the 250 million acres of land within the BLM's purview. Regional maps, along with the addresses and telephone numbers of local and regional BLM offices, enable readers to locate a wide variety of recreational areas.

Copies of this booklet or any other in the series—*The National Forest System*, *The National Park System*, *The National Trails System*, *The National Wildlife Refuge System*, *The National Wild and Scenic Rivers System*, and *The National Wilderness Preservation System*—are \$1.50 each for Sierra Club members, \$2 for nonmembers, from Sierra Club, Dept. SA, P.O. Box 7959, San Francisco, CA 94120. For all seven booklets, send only \$9 (\$12 for nonmembers). Please include \$1.75 for postage and handling with each order.

The Cousteau Society is seeking signatures worldwide for a petition outlining a "Bill of Rights for Future Generations." The society will present

the petition to the United Nations in 1993 and ask that specific language be incorporated into the U.N. Charter. Noting that overpopulation and the excesses of human activities pose "a terrible threat to our descendants," the document calls for the U.N. to declare that "future generations have a right to an uncontaminated and undamaged Earth," and to take all appropriate measures to guarantee these rights.

More than 1 million people in Europe have signed copies of the petition, and the Cousteau Society is now taking its signature drive to all other continents. Petitions are available at no cost from The Cousteau Society, 930 West 21st St., Norfolk, VA 23517; phone (804) 627-1144.

Forest Watch: The Citizens' Forestry Magazine reports on planned timber sales, Forest Service activities, and other matters of interest to forest conservationists. The monthly journal is published by Cascade Holistic Economic Consultants (CHEC), a non-profit forestry-consulting firm in Oregon. It includes a regular column by economist and muckraking Forest Service critic Randal O'Toole, who advocates allowing the agency to charge fair-market prices for all forest uses, including grazing, recreation, and timber extraction. A one-year subscription to *Forest Watch* is \$21.95 from CHEC, 14417 S.E. Laurie, Oak Grove, OR 97267; phone (503) 652-7049.

Diet for a New America: Your Health, Your Planet, a documentary hosted by Baskin-Robbins ice-cream scion John Robbins (who rejected his family's wealth), calls the United States' meat-eating habits "an obsession," one that contributes to the depletion and poisoning of natural resources. The program also contends that cattle, pigs, and poultry are too often raised under cruel conditions. Copies of this video are \$19.95 each; for ordering information, dial 1-800-765-7890. ■

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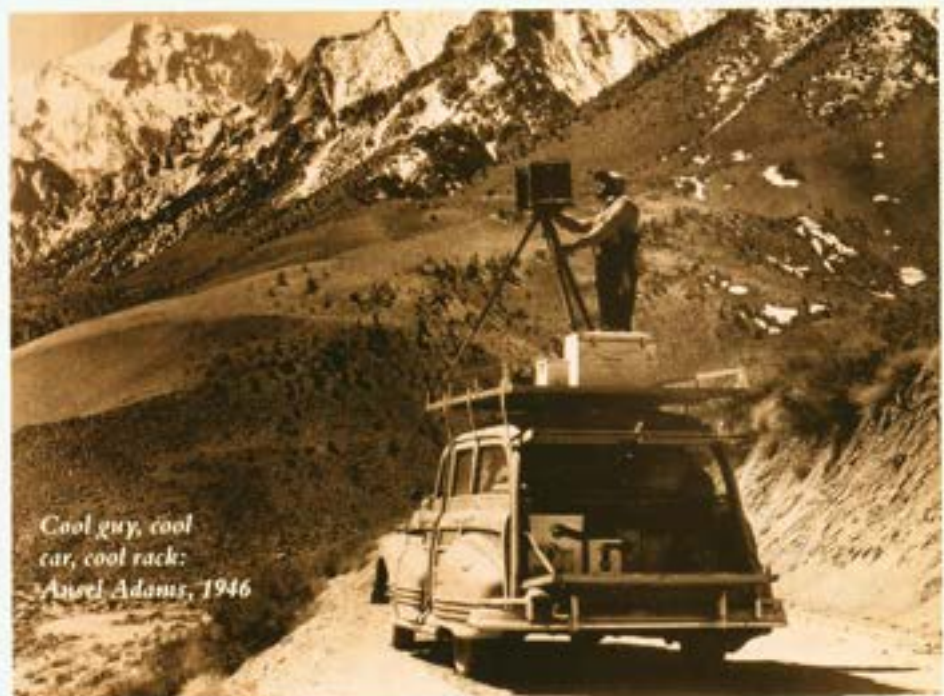
Dennis Coello

A Packrack Primer

One are the days when you could toss your bikes, skis, or mounds of camping and climbing gear over the tailgate of an immense American Roadmonster and point the hood ornament toward the hills. Today the politically compact drive fuel-efficient cars whose interior and trunk spaces can rarely swallow all the equipment an outdoor expedition requires.

The obvious solution—loading your gear *on* the car, not *in* it—isn't new. But never before have so many engineers put their pointy pencils to work to make the job easier. They've transformed the basic car rack into a high-tech "rack system" that holds more than the old carriers, will remain in place no matter the weather, wind, load, or road conditions, and won't mark up your car's finish. There's only one catch: Substantial racks cost substantial dollars.

Begin by considering what you intend to carry. If it's only bikes, or only skis, or just one kind of anything, "sport specific" racks are plentiful and relatively inexpensive. High-quality bike racks include the Trek Transport (\$65), Rhode Gear Cycle Shuttle (\$70), and Yakima FastBack (\$145), all of which hang from your car's rear bumper or trunk. Padded contact points reduce rack-to-car and rack-to-bike abrasion, and the racks can be removed quickly and folded away for storage. (Just don't get rear-ended while using one of them, don't count on being



Cool guy, cool car, cool rack:
Ansel Adams, 1946

able to open your trunk or hatchback, and be sure that the bikes' tires aren't next to the hot tailpipe and the wheels don't hang so low that they hit the road when your car meets a steep hill or driveway.) Picking a ski rack is similarly straightforward: Simply choose one that will keep your skis from scratching the rooftop, and make sure the model you want comes with good locks that operate with a single key.

Many people, however, opt for "multi-sport" rooftop racks, which accept a multitude of optional gear-specific mounts atop a crossbar-and-bracket frame. You can add mounts as you add sports, and you can carry a combination of equipment on one rack. The most common attachments hold skis, bikes, canoes, sailboards, and kayaks, but with the right accessories you can also transport more mundane loads, like lumber and luggage: Cargo fasteners, open "baskets" with hold-down netting, and pricey (\$400 and up) fiberglass boxes turn airspace into storage space. A basic rooftop system

*How to load your car
with outdoor gear
and still leave room
for yourself.*

▲ ▲ ▲

costs at least \$200, and as you add new mounts (generally \$75 to \$100 apiece), the price can skyrocket.

While versatile, roof racks can be inconvenient: On vans and utility vehicles, they are often beyond comfortable reach. Even with a car, you must be agile (and tall) enough to lift a bicycle nearly over your head and strap it into its wheel tray. Remember, too, that you're driving a top-hat load, so low garage openings take on new meaning. Roof racks also reduce gas mileage, though just how much varies with the shape and weight of the load and with your driving style. Some manufacturers of trunk systems claim the figure is as high as 20 percent. And while roof racks look like they can hold anything, they can't: Always heed the weight-limit requirements of both rack and vehicle.

Two companies, Thule and Yakima, dominate the roof-rack field; other makers include Graber and Barre-crafters. They are constantly churning out hardware to provide a (nearly) custom fit between roof and rack for every possible vehicle. While manufacturers square off against each other, claiming that *their* racks will fit your car better, none of the retailers Sierra contacted had experienced difficulties installing any of the name-brand systems. The one problem with custom-fit racks is that you may not be able to move yours to another vehicle. If your rack is designed for a car without rain gutters, at a minimum you'll probably have to buy a new set of mounting brackets for the second vehicle.

While racks are handy enough that you may want to leave them on the car all the time, follow maintenance recommendations scrupulously. Remove the rack several times a year and clean all contact points (to keep grit from marring the car's paint), and lubricate all moving parts to prevent rust. It's a minimal amount of work to protect a hefty investment in getting you and your gear to the outdoors safely and comfortably. ■

DENNIS COELLO is a freelance writer in Salt Lake City.

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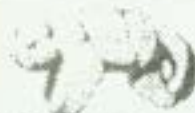
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"Accept?" Such so-called contributions should be mandatory. Not only should polluters and developers be obliged to remedy financially the havoc they have wrought, they should also be required to stand beside the rivers they've polluted, the forests they've razed, etc., holding candles and repeating, "I am a beast," until the waters are no longer foul, the forests are no longer leveled, and/or Saki rises from the dead, whichever comes first.

Pamela Drechsel, San Diego, Calif.

Are you kidding? Should the government accept contributions from the Mafia for drug control? Should the American Cancer Society accept donations from R.J. Reynolds to fight lung disease? The ends do not justify the means. Dirty money, however well spent, is still dirty money.

Nan Dubin, Sharon, Vt.

Polluter contributions buy influence within an environmental group by paying, directly or indirectly, the wages of its employees. The polluter's threat: "Compromise your convictions or lose your cool environmental job." Guess who wins.

Ken Cook, San Diego, Calif.

A straight contribution with no ties, sure: more for us, less for them. As a means for them to pay for blatant lies? No!

John E. Van Syc, Grants Pass, Ore.

Environmentalists aren't naive as to where the money is coming from, and I really can't imagine the most offensive developers or chronic polluters contributing anyway, unless they are forced to as part of a damages settlement. They sure don't want to support "the enemy!"

Maryanne Lovell, Washougal, Wash.

Inasmuch as every human being is a polluter and developer, I do not see any way environmental groups can survive, let alone be effective, without our contributions. To suggest that only certain individuals or groups are "polluters and developers" denies my share of responsibility for these situations.

Carolyn Heidemann, Lake Mills, Wis.

Environmental groups should not allow corporations to buy their environmentalist credentials too easily. Polluters and

SHOULD ENVIRONMENTAL GROUPS ACCEPT CONTRIBUTIONS FROM POLLUTERS AND DEVELOPERS?

developers are good at writing checks. It is easy for them, and we shouldn't be too impressed. If corporations want the approval of environmentalists, they should use their money to investigate products and production technologies that do not degrade the environment. Environmental groups should tell polluters what to do with their money—and then watch to see if they do it.

Marcia Carpenter, Ann Arbor, Mich.

While the environmentalists' long-term goal has to be reduced development and elimination of pollution, on the way there we have to win over those with economic power who do not share our concerns. Contact between business and environmentalists based on respect for each others' efforts and concerns can help lay the groundwork for future progress.

Mark B. Tanager, Norman, Okla.

These people don't have the welfare of anyone outside themselves in mind. If they make a contribution, they look at it as purchasing something, in this case (a) silence . . . about a harmful process or project, or (b) a name to put on their list of "supporters." An old American proverb states that "you never get something for nothing." Remember, Judas accepted a 30-piece silver donation for his services.

Dove Hollenbeck, Ponay, Calif.

There is a perception in this society that environmentalists are soft-hearted, soft-headed types whose ideals and actions are motivated by sentimentality. It is possible

that financial support from an environmentally insensitive entity would be predicated on the expectation that we emotional types (I am one, and proud of it) would thereby be flooded with involuntary feelings of gratitude and generosity toward the donor, and in return practice leniency toward his transgressions. I hope this would not be the case. I could think of no more poetic justice than, for example, the prosecution of Exxon with Exxon's own funds.

Robert S. Newman, Glendale, Calif.

We need to avoid any appearance of endorsing companies who do not make a sincere—and significant—effort to save the planet. Furthermore, contributions from polluters might be construed by some as kickbacks.

K. O'Brien Shannon, Greensboro, N.C.

The moral issue of accepting or rejecting aid from an adversary on the notion that it might attenuate your position presupposes a fair fight. This is war. Take everything they give and use it to crush them.

Scott Kingham, Santa Monica, Calif.

I really don't think that it's in the environment's best interest to have the Sierra Club and others accepting bribes from polluters and developers.

Jerry Maulove, Fargo, N.D.

We should take all the money we can get. But we should be willing to acknowledge publicly that we take it. Otherwise, we are the same as Hank Reardon's coward brother in *Atlas Shrugged*.

Dennis Brossman, Laurel, Wyo.

Do you drive a car? Live in a house? Excrete wastes? Then be careful where you draw the line on godless, immoral "polluters and developers." Except in cases of a blatant buy-off, I say take the money—but control how it's spent and how you allow the donor to use your name.

Diana Christopoulos, Dallas, Texas

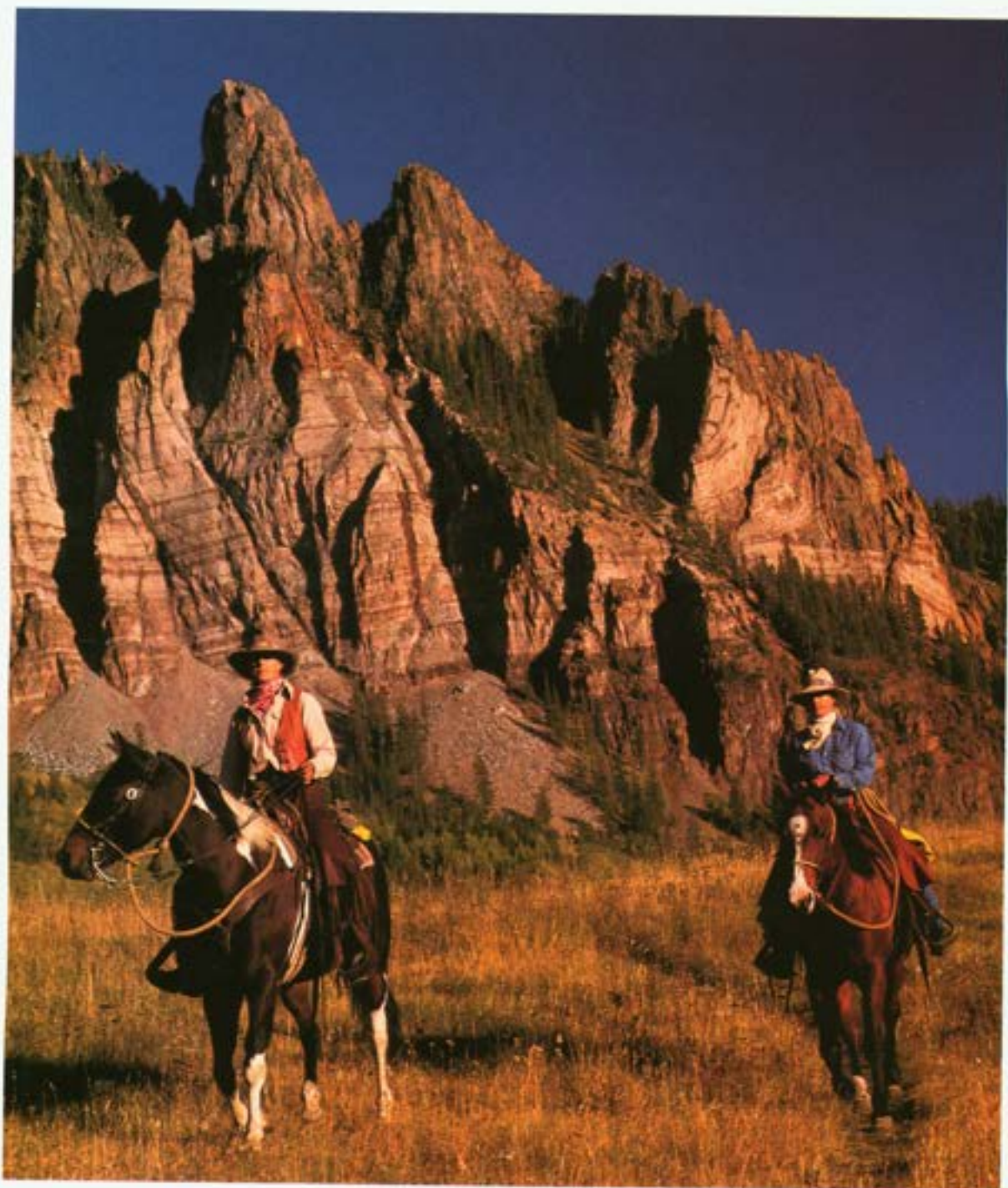
"Money talks." The recipient cannot accept a contribution without some feeling of gratitude nor will the benefactor donate without the expectation of some return. If you accept any gift from "the enemy," you are in some manner beholden to him.

Margaret Freed, North Hiles, Pa.

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