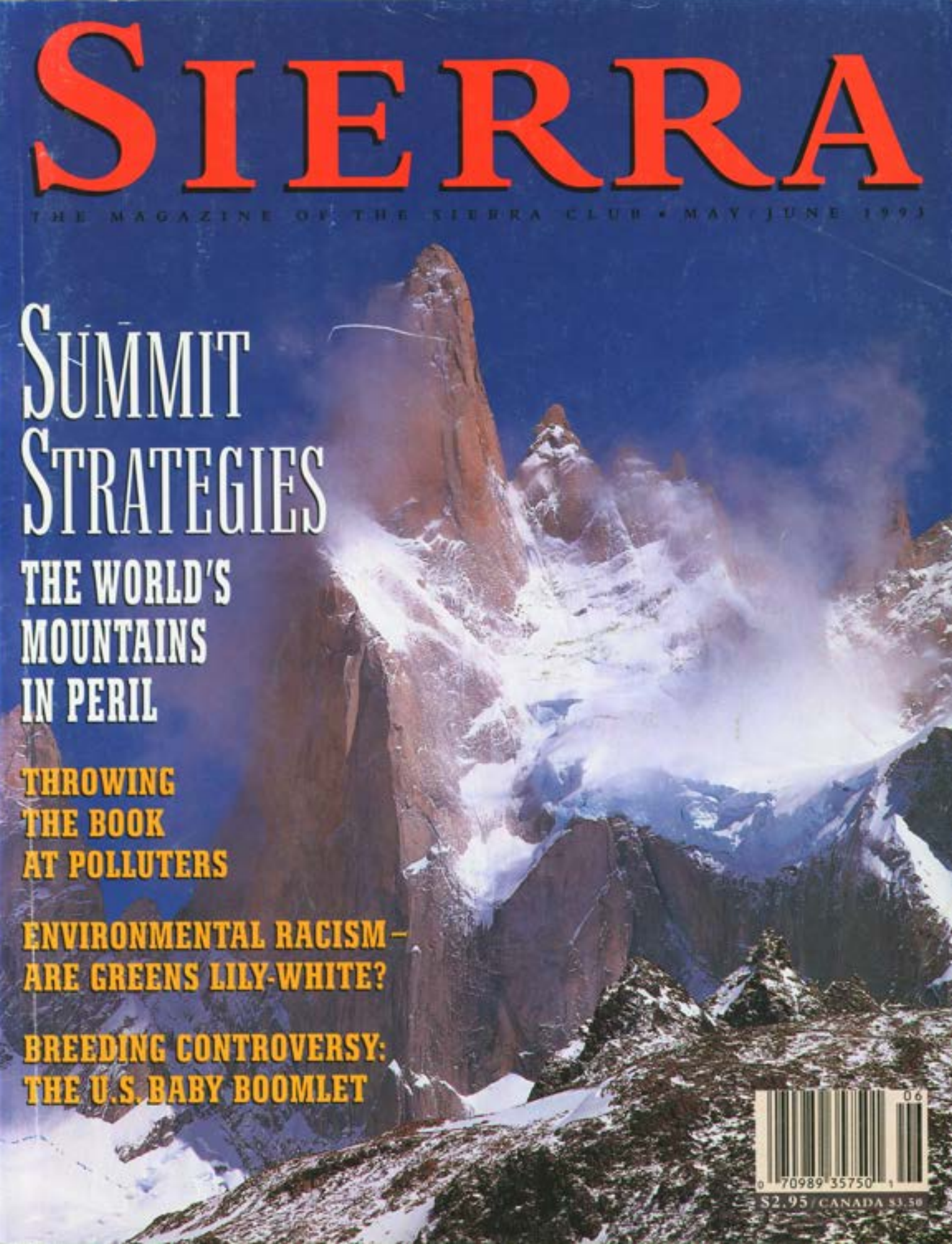
SIERRA

THE MAGAZINE OF THE SIERRA CLUB • MAY/JUNE 1993



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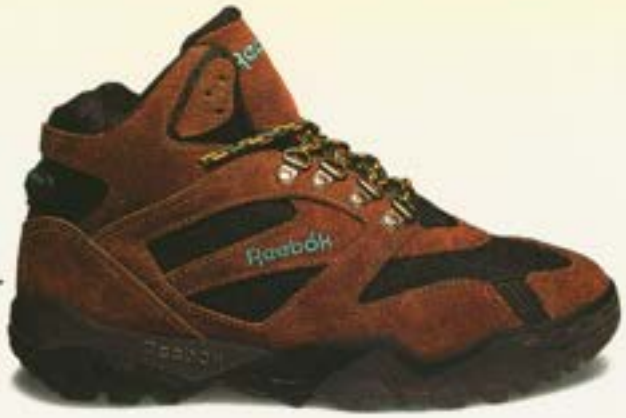

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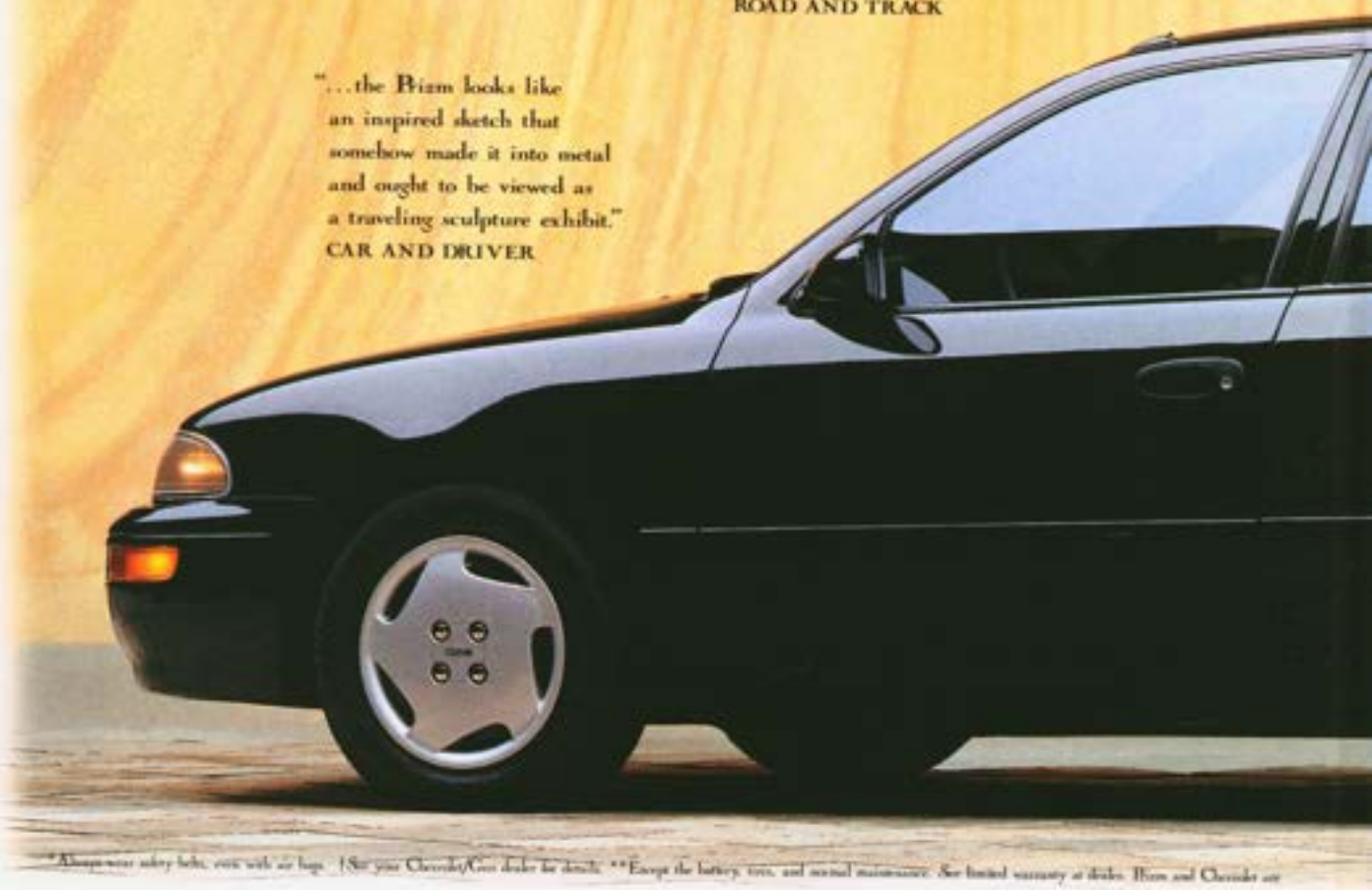

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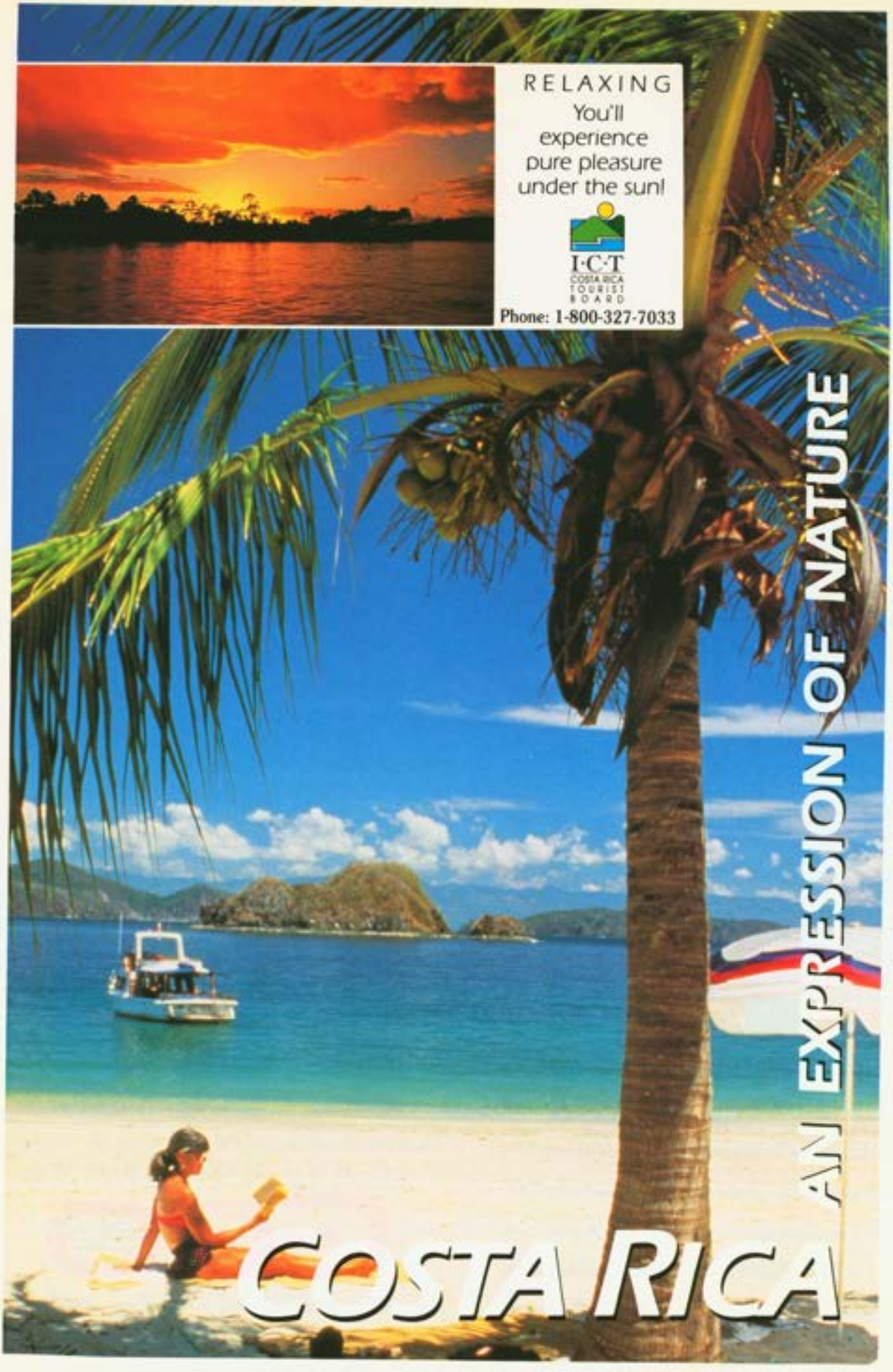
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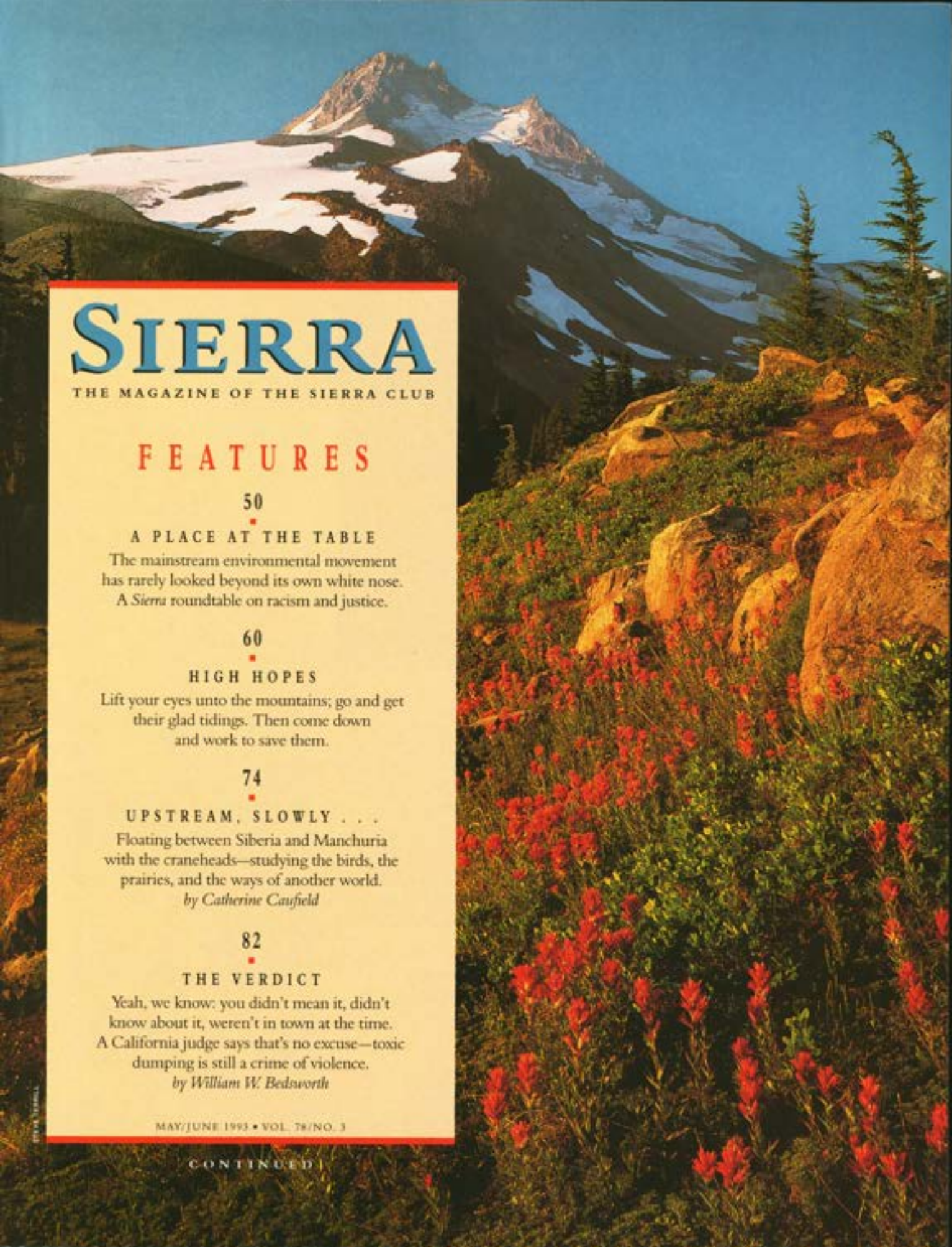


SIERRA

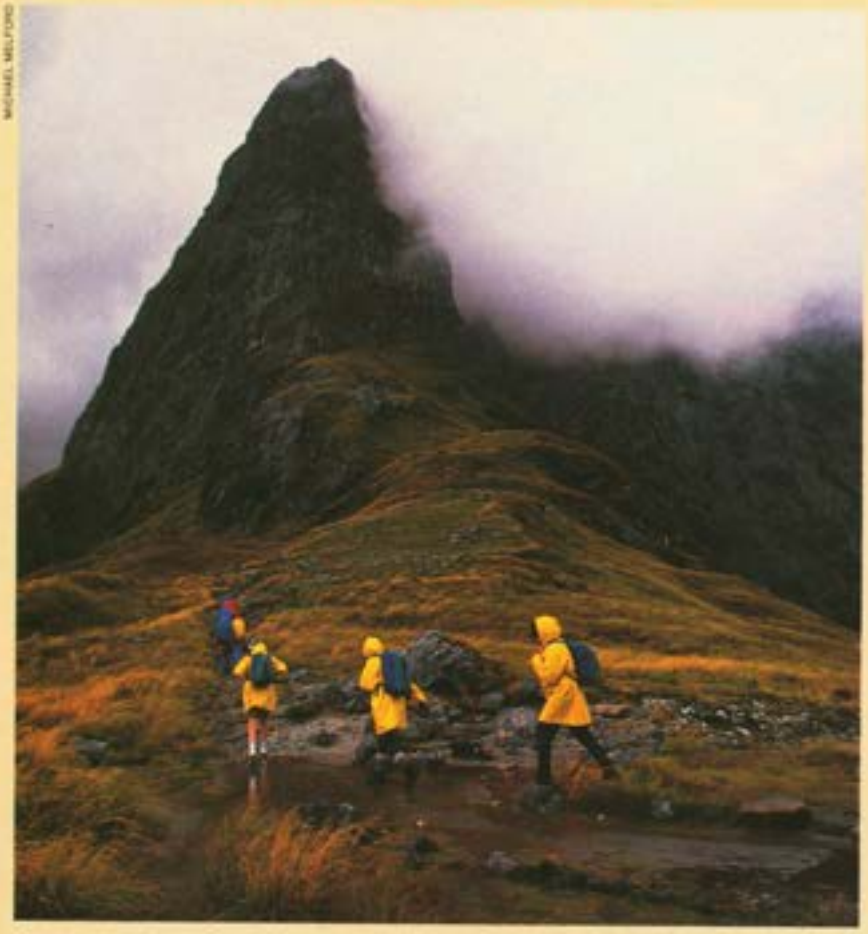
THE MAGAZINE OF THE SIERRA CLUB

FEATURES

MAY/JUNE 1993 • VOL. 78/NO. 3

CONTINUED

SIERRA



MICHAEL MELFORD

AFIELD

DEPARTMENTS

COVER
Morning in Parque Nacional Los Glaciares, Patagonia, Argentina.
Photo by Jeff Gnass

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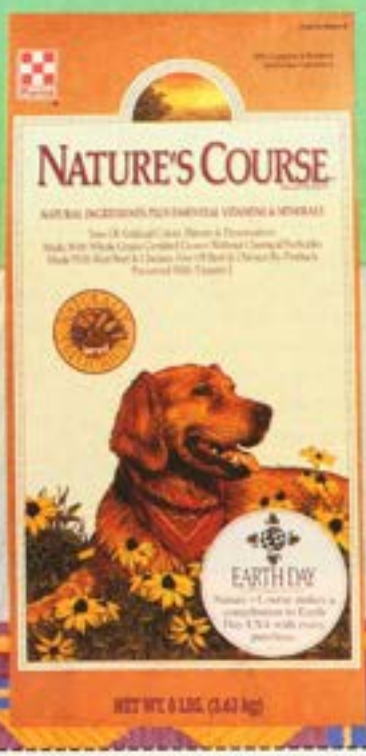

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"To explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives."

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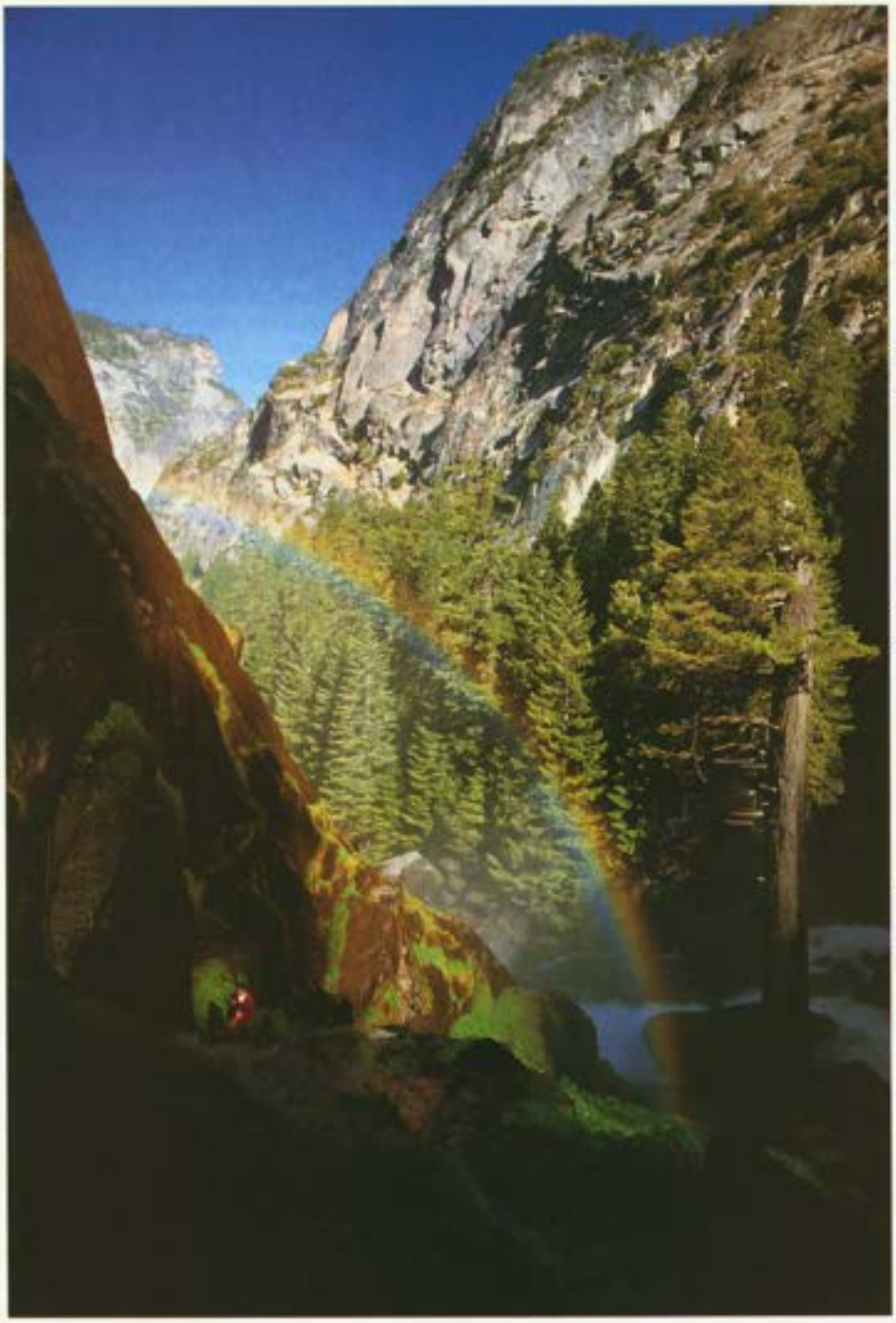

Photo: Galen Rowell, Rainbow on Mist Trail, Yosemite . Fine art photographs and posters of Galen Rowell's images are available from Mountain Light, Albany CA, 510-524-9143

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LETTERS

STUFF AND SIMPLICITY

Publication of Alan Thein Durning's "Long on Things, Short on Time" (January/February) is a hopeful sign that the environmental movement is starting to grapple with one of the least discussed and most serious threats to our world: overconsumption in North America.

There is not one environmental problem that isn't aggravated by our incessant demand for more, better, and different stuff. Many shy away from confronting this issue not because they are inherently greedy or stupid, but because they don't know what to do. They're aware that somehow their consumer choices contribute to ozone depletion, global warming, and pollution —but which choices are wrong? And how much do we need to change?

We must not only stabilize our population and re-examine our technologies; we must look at our whole relationship to money and the material world. It's tough—at first. But the benefits are soon apparent: people find (as Durning points out) that the pursuit of material pleasures usurps the time and attention that can be devoted to less tangible yet more enduring pleasures like family, friends, and the inner life.

Vicki Robin, President
New Road Map Foundation
Seattle, Washington

I noted that the conclusion of Alan Durning's article was surrounded with advertisements for jet-set outings to Alaska, the Alps, and a ritzy ski lodge in an exotic mountain setting. If the medium is the message, the message is certainly mixed.

Will Power
Arroyo Grande, California

Alan Durning's message has to get through to the smug, spoiled-rotten American slob in the street. And until environmentalists get the guts to tell it like it is and aim at population control (and its major enemy, churchery), we might as well forget the whole thing and consume ourselves into planetary oblivion.

Walton W. Windsor
Baltimore, Maryland

Until Sierra Club members are willing to pay the full cost of a *Sierra* less devoted to the many-faceted aspects of rampant consumerism, it is highly unlikely that we will take giant strides toward simplicity and a sustainable Earth.

Marcel Rodriguez
Springdale, Utah

GOOD NEWS FOR THE NORTH

Paul Rauber's "No River Wilder" (January/February) was a rattling good tale of adventure. A small party of Sierra Club leaders ran the Tatshenshini River in 1977 when it was comparatively unknown. We were so impressed that we sent word to our representatives in Washington urging that the U.S. portion of the Tatshenshini-Alsek watershed be added to adjacent Glacier Bay National Park and Preserve. As a result, some 57,000 acres were included in the Alaska National Interest Lands Conservation Act of 1980.

In 1990, at the triennial General Assembly of the International Union for the Conservation of Nature, the Sierra Club introduced a resolution against allowing mining development in the Tatshenshini-Alsek watershed; the resolution was passed unanimously—the beginning of widespread international support for keeping the Tat wild.

The Club also suggested that Glacier Bay National Park and the Tatshenshini-Alsek be added to the existing World Heritage Site of Wrangell–St. Elias National Park and Preserve in the U.S. and to Kluane National Park in Canada. This past December the World Heritage Commission accepted the nomination of Glacier Bay as a World Heritage Site. If British Columbia gives protected status to the Tatshenshini-Alsek, the result will be the largest, most spectacular World Heritage Site on any continent.

Edgar Wayburn, M.D.
Sierra Club Vice-President
San Francisco, California

I agree with Paul Rauber's premise that we don't need a Windy Craggy copper mine, but he offends the citizens of Whitehorse, Yukon Territory, with needless diversions that dilute the environmental points he tries to make. Characterizing Whitehorse as a "dreary" town with "not a lot to do" does nothing more than identify him as a "hip" urban Californian. Believe me, he doesn't know what a great "party town" Whitehorse can be.

Like any northern community, Whitehorse has its share of Babbitts, "greenies," and shades of intervening gray. Had Rauber spent any more time there, he would have discovered a diverse economy that serves as a center for retail and wholesale trade, the supply center for small and large mining opportunities, a guides' outfitting center, and a center for both federal and territorial government offices.

Frank Norris
Anchorage, Alaska

ARE BOYCOTTS US?

I take exception to *Sierra* accepting advertising from Colorado Tourism (March/April) in view of that state's adoption of a policy of discrimination against lesbian and gay people. Many are boycotting Colorado because of this state-sponsored bigotry. Can the Sierra Club ignore Colorado's affront to basic values of individual freedom and dignity? Please give serious consideration to this issue.

John T. Moran
Jackson Heights, New York

I've been a Sierra Club member since 1990, and I enjoy every issue of *Sierra*. But why accept advertising from Nikon? The Mitsubishi Corporation, which owns Nikon, is one of the largest

If You Want To Save The Earth, Start Small.

What planting trees and helping Kimi have in common.

The quality of Kimi's life depends a great deal on the quality of her environment. Less than 30 years ago, her Thailand village was surrounded by virgin forest. But the need for fuel and housing led to a serious depletion of timber...which led to soil erosion...which left Kimi and her family unable to grow food.

Save the Children helps break this relentless cycle of poverty — by helping people learn new farming and reforestation techniques. Called *kaset tang ask*, it means agriculture that provides "a way out."

Sloped agricultural farming is being introduced to Kimi's father and other farmers in the community.

Our sponsors have also helped the people of Nepal plant more than 200,000 trees as part of a land and soil conservation campaign.

And in Nicaragua, through Save the Children's assistance, villagers learned to build inexpensive stoves that use half the wood of other stoves.

Your gift combined with those from other Save the Children sponsors can provide clean water, teach irrigation techniques and implement basic sanitation.

In Mali, villagers work together with the help of Save the Children to build small dams for watering animals, improving rice production and growing home gardens.

"Treat the earth well. It was not given to you by your parents. It was loaned to you by your children." -
Kenyan proverb

When you help a child through Save the Children, you do so much more than quench the need of a thirsty child. Or keep her out of danger's way. Far from giving handouts, you'll be instrumental in making lasting improvements that affect the future of the child and the environment. Changes that not only help provide for one child today, but for future generations.

By sponsoring a child who needs you, you'll not only help save the earth — but also a precious girl or boy who urgently needs your love and concern.

Help protect our earth's most valuable resource. Call **1-800-453-3220** to become a Save the Children sponsor. Or mail the coupon below today. Plant the seed of hope that grows a tomorrow rich with promise.

Clean water — a life and death issue for Yoseph.

Yoseph walks miles each day to haul back clean water for his family. He doesn't care how long his journey takes. He has seen other children in his Gambian village suffer and die from diseases spread through contaminated drinking water. And he is thankful that he can help keep his baby brother alive.

Many of the world's children are without clean water and proper sanitation. Waste from open sewers flows into the streets, spreading sickness, especially among the children.

But you can help these children for just 65¢ a day.

Yes. I want to save the earth by helping a desperate child who needs me.

☐ My first monthly sponsorship contribution of $20 is enclosed.
I prefer to sponsor a ☐ girl ☐ boy ☐ either in the following area:
☐ Africa ☐ Asia ☐ Latin America ☐ Middle East ☐ U.S.A.
☐ Wherever the need is greatest

☐ Instead of becoming a sponsor, I prefer to make a contribution to Save the Children's environmental work:
$25___ $50___ $75___ Other $_____

☐ Please send me more information.

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SCB 5/2/3

destroyers of rainforests in the world. According to the Rainforest Action Network, Mitsubishi has big logging operations in Malaysia, Borneo, the Philippines, Indonesia, Chile, Canada, and Brazil. I would think the Sierra Club would join the boycott of Mitsubishi and its companies, which include Mitsubishi Electric, Bank of California, Mitsubishi Bank, Mitsubishi Motors, and Kirin Beer. What gives?

Kent Probst
Effingham, Illinois

The Sierra Club is occasionally urged to participate in consumer boycotts for reasons that our members perceive to be in harmony with its conservation goals, or that resonate with their deeply held personal beliefs. As a matter of strategy, the Club joins such boycotts on an extremely selective basis. When the Board of Directors does approve participation in a boycott, it is with the intention of asking a corporation or other entity to take a very specific remedial step, with the understanding that the Club will end its role in the boycott when that step is taken. For example, the Board recently authorized a boycott of American Express over its plans to develop a ski resort in an environmentally sensitive area in Colorado. Similarly, the Club participated in a boycott against Shell Oil to pressure the company to remedy certain violations of the Occupational Safety and Health Act.

Sierra *ordinarily rejects advertising from any entity that is the target of an authorized Club boycott. In the case of Nikon, no formal proposal to join in or initiate a consumer boycott of Mitsubishi has come before the Board of Directors. The same is true in the Colorado matter—though this is not to say that the Club is unmindful of member sensitivities to rights issues. The request of the Rocky Mountain Chapter that national-level organizational meetings slated for Colorado be rescheduled or transferred elsewhere until further notice was promptly complied with. To date, both the 1993 Biennial Inner City Outings Conference and a Regional Conservation Committee meeting originally scheduled for Colorado have been moved out of that state. In addition,* Sierra *will not be accepting advertising from the state's tourism arm once existing contractual obligations have expired.*

The Club, however, will not be canceling its 1993 national outings in Colorado, as some have suggested we do. It is central to our conservation mission that Club members travel to threatened natural areas, to acquire firsthand knowledge of those places and thereby the motivation to protect them.

BUT ALWAYS WITH LOVE IN OUR HEARTS!

None of the people who responded to your "Last Words" question about ways to counter the Wise Use movement (January/February) addressed the fact that the movement is targeting outspoken environmentalists for violence. Many of these right-wing organizations are aligned with neo-Nazis, survivalists, the KKK, and other groups that put violence first in dealing with us so-called eco-freaks.

Speaking out to save our air, water, and land from pollution should not get you killed. Each environmentalist must educate himself or herself about the Wise Use movement. Take a course in self-defense; purchase a weapon and

learn how to use it; monitor and report any harassment to law-enforcement officials; install alarms; set up telephone traps; organize with others to spy on the opposition and pass along information about their activities.

If we are afraid to fight these money-grubbing slugs, then they have won.
David Smallwood
Jefferson City, Missouri

BLOWIN' WITH THE WIND

A sort of exultation was derived from perusal of Bob Henson's "Storm Search" ("Afield," March/April). I'm sure your readership appreciated the poetic—almost rhapsodic—tenor of the piece. Indeed, the core of the essay seemed more poetry than prose: "The skies pass through countless grades of navy blue, slate gray, pitch black, and emerald green. Bolts of lightning singe the air. . . . I get a full-body twinge of fear, of electric uncertainty."

One can almost feel the freshening breeze ruffling through hair and clothes—that pleasing dread Lord Byron described, inspired by the elemental forces at work along his lonely seashore.

Flirting with tempest or tornado might betray an Icarian impetuousity. But it also presupposes that rash tenacity which elevates humankind above the cowering herds and flocks.
William Dauenhauer
Wickliffe, Ohio

YOU PAYS YOUR MONEY . . .

Having been a longtime Sierra Club member, I have seen many changes in *Sierra*. Since the debut of your latest redesign you have created what I consider to be the premier nature and conservation publication. I especially enjoy the "Afield" section, which contains sensitive, insightful writing. You have created a masterpiece; please do not change a thing!
Bill White
Arleta, California

When I subscribed to your magazine I had no idea it would let loose such a barrage of propaganda. I can't imagine who is idle enough to have time to read more than a very small fraction of it.
James Higgins
White Plains, New York

CORRECTIONS

In January/February, the map accompanying "No River Wilder" erred in placing Wrangell–St. Elias National Park adjacent to Glacier Bay National Park and Preserve; in fact, the parks are separated by Tongass National Forest. In March/April, our cartographic gremlins headed south, misspelling Bonneville Dam as "Booneville" in the map accompanying an article on the Pacific Northwest's endangered salmon runs, "Dance of Denial." (Or was it "Dance of Denali"?)

✍ Sierra *welcomes letters from readers in response to recently published articles. Letters may be edited due to limitations of space or in the interests of clarity. Write to us at 730 Polk Street, San Francisco, CA 94109.*

In the Redwood Groves

"The last time we went up to Redwood National Park was in 1989," says Edgar Wayburn as he guides his car onto the tarmac of a small airfield north of San Francisco. "During the battle, though, we used to go up a lot."

In less than two hours, the Sierra Club's vice-president and his wife, Peggy, are due at the park to take part in an event celebrating the Club's centennial. Fortunately, despite some coastal fog, the weather looks perfect for flying. Waiting for us beside a four-seater Cessna is Woodward "Woody" Payne, a volunteer pilot with Project Lighthawk, the environmentalist air force known as "the wings of conservation." We climb aboard, Woody passes out headsets, and the plane is soon en route to Arcata, California, not far from the park.

The "battle" Ed refers to was the fight during the 1960s and '70s between conservationists and timber interests over the establishment and later expansion of Redwood National Park. Ed became a leader in the fight, and the Wayburns threw themselves into the cause, scouting the most suitable areas to be accorded federal protection. Their ardor sometimes led them to tread surreptitiously across private timberland that they had been expressly forbidden to enter.

"We'd hear a lumber truck coming and would dive into the woods or hide among the logs," Ed recalls. Many of the loggers carried guns, the Wayburns knew, and didn't much like conservationists.

"This is where the Redwood Highway was put in the 1920s," Ed says through the static of the headphones as we pass over the valley of the South Fork Eel River. About 60 miles from Arcata we get a good view of the North Yolla Bolly Mountains and the southern flank of the Trinity Alps, with Mt. Shasta prominent on the northeastern horizon. As we skirt China Peak, Peggy points to a huge clearcut scar on a hillside. "It's been scalped," she says sadly.

A momentary retreat of the coastal fog lets us slip into the Arcata airport, where we meet park ranger Aida Parkinson, who shuttles us north in her van on U.S. 101 along the shore. Logging trucks bearing freshly cut redwood sections pass us, heading south to lumber mills. Each carries several small- to medium-size logs, but Ed says the trucks will often carry only one huge log each. "Not much anymore," Peggy corrects. "There aren't that many big trees left."

We pass three lagoons and a freshwater marsh before the highway turns inland, bringing us to the village of Orick beside the Redwood Creek estuary.

A tenacious bunch revisits the wildland they saved.

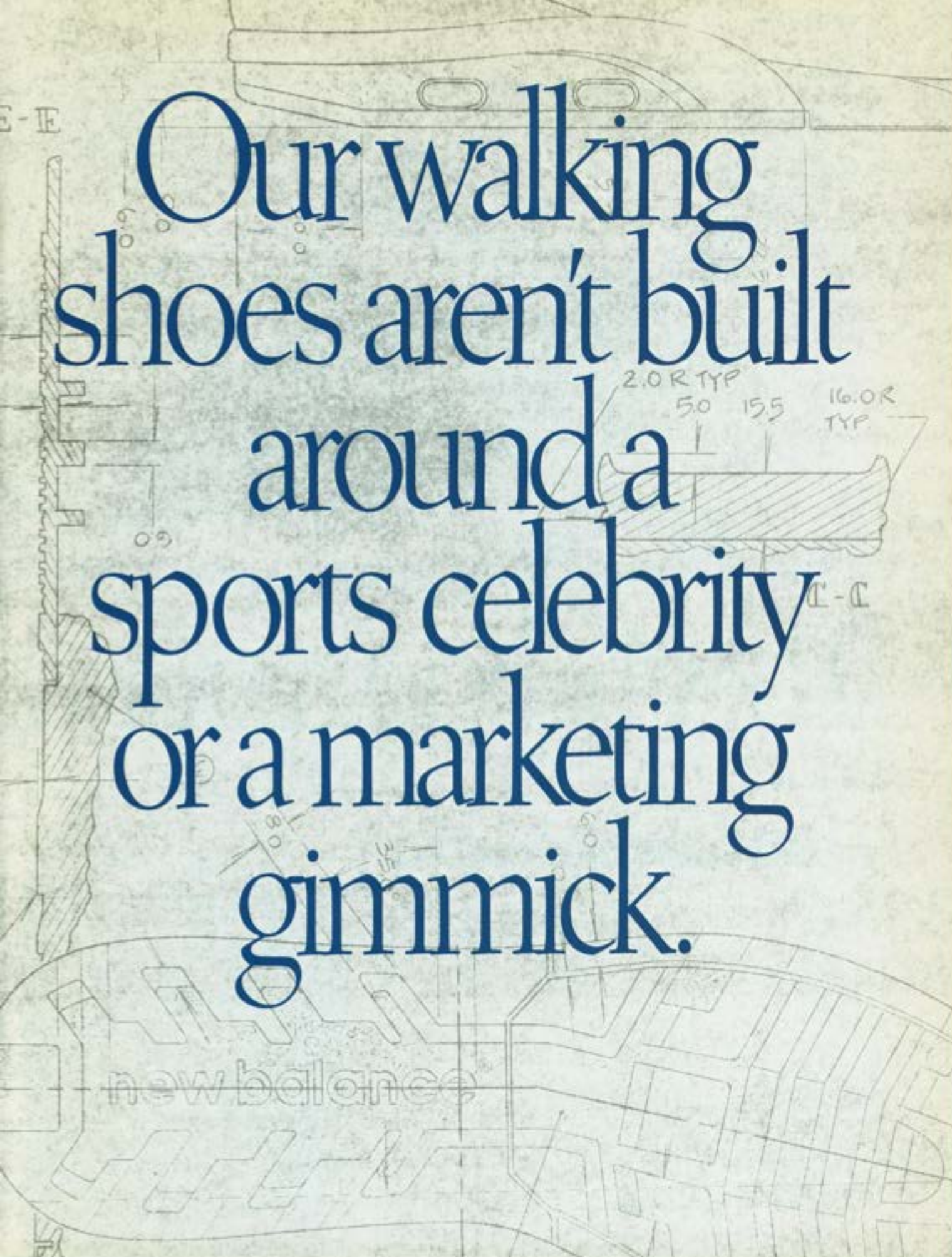
The hills beyond are part of the national park, and we head toward them. Today's ceremony will take place among redwood groves along Skunk Cabbage Creek and at Davison Ranch, properties recently purchased by the Save the Redwoods League and the California Department of Transportation and turned over to the national park. The cows were removed from the ranch, and elk have moved in.

First to greet the Wayburns upon our arrival at the ranch is Jean Hagood, a resident of Orick who has long kept her house open to Sierra Club activists. We join a group of about 30 others, including the Wayburns' daughter Laurie, and Marty Fluharty, chair of the Sierra Club Centennial Committee, who has arranged this event. Park Superintendent Bill Ehorn calls for all to follow him, and we head down a trail into the heart of grove R-10.

For a moment in the cool quiet of the trees, it's possible to forget that 95 percent of all coast redwoods have been logged and that only a small fraction of the original ecosystem remains intact. Certainly the redwoods around us look exactly as Ed described them for the *Sierra Club Bulletin* in 1973, after he wandered among "their deep brown and gray fluted trunks," which soared above and all around, "solid and straight and somehow reassuring" for having stood in their places for at least five centuries.

It's a distinguished lot that assembles around the edges of this steep, ferny glade: Doris Leonard, a longtime activist and wife of climbing great and former Club president Richard Leonard (absent today because of illness); one-time staff forester Gordon Robinson; two former Club presidents, Ed Wayburn and Richard Cellarius, and incumbent president Tony Ruckel; Redwood Chapter stalwart Lucille Vinyard; Club Chairman Michael McCloskey; and Michael Fischer, the Club's fourth executive director. Many of these people fought in the redwoods campaign for decades.

Also here is John Dewitt, president of the Save the Redwoods League, a venerable organization whose relationship with the Sierra Club has sometimes been contentious, despite close links between the two groups. The League historically cooperated with the timber industry to buy up small, museum-like parcels of forest for inclusion in the California state-park system. In contrast, the Club sought federal protection for extensive ecosystems. The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MK706		•	•	•	•
MK650		•	•	•	•
MK606	•	•	•	•	•
MK450			•	•	•
MH515			•		•

WOMEN	NARROW AA	B	D	WIDE EE
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WK706	•	•	•	
WK640	•	•	•	
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two groups locked horns in 1964, when the National Park Service first proposed the establishment of a redwoods park. The League and the Club differed over which watershed to protect—the relatively small but picturesque area of Mill Creek, or the much larger, more diverse expanse of the Redwood Creek watershed. In the long run, the Club's view prevailed.

Calling for everyone's attention, master of ceremonies McCloskey unveils five carved wooden plaques, each representing a virgin redwood grove along Skunk Cabbage Creek. These groves will be named in honor of the Wayburns, the Leonards, all Sierra Club presidents past and present, the Redwood Park volunteers, and Fred and Francis Speekman, two prominent contributors to the Sierra Club Foundation.

First to be recognized are Ed and Peggy. At the top of the slope, in front of a particularly massive old sentinel, Ed looks about at his fellow tree-huggers and clears his throat. He's supposed to make a speech on the redwood campaign's history, but has left his prepared comments back in San Francisco. Gamely, he launches into an extemporaneous reminiscence. "I've always been a sucker for redwoods," he says, going on to recount how, in 1955, he and Peggy were made heartsick by the destruction along Bull Creek, which had its upper slopes logged and was then ravaged by a flood that sent debris roaring through the creekbed, ripping out hundreds of the trees. That's when they resolved to devote themselves to preserving the remaining ancient forest. The effort was carried out locally, in Congress, at the Interior Department, and directly with President Lyndon Johnson. Their dream of a park was finally realized in 1968.

At 4:30 p.m., after all the speeches are made and lunch is concluded back at the ranch, we return to the plane with Woody. A strong headwind sweeps down the runway as we take off, and the Cessna lifts up quickly, banks, and soon is flying out of sight of the park, over Pacific Lumber Company clearcuts. —*Mark Mardon*

Calm water between rapids, Hells Canyon, Idaho.

JOEL SIMON

OPEN TRIPS

NOT YET MADE YOUR VACATION PLANS? There's still time to get on a Sierra Club outing. At press time, the following trips had space available. Note particularly our rafting trips, reintroduced in 1993 after a hiatus of six years. Refer to the 1993 Outings Catalog (January/February *Sierra*) for a complete list of trips and descriptions and an application form. Call us at (415)923-5630 for current information on any of our trips—vacancies on trips not listed here may occur at any time. Please read the reservation and cancellation policy in the catalog before applying. Use the coupon on page 22 to order detailed trip brochures or the catalog. 1993–94 International Trips will be announced in the July/August *Sierra*.

ALASKA & ARCTIC CANADA TRIPS (Prices do not include airfare to Alaska or Canada, or charter air costs.)

TRIP #	TRIP TITLE	DATES	LEADER(S)	PRICE
93103	Tatshenshini by Raft, St. Elias Mountains	June 21-30	Gary Dillon	$1,890
93104	Arctic Wildlife Refuge Pen & Photo Backpack	June 21-July 2	Ed Debevec	$1,095
93107B	Arctic Wildlife Refuge Backpack & Leisure Exploration	June 21-30	Lola Nelson-Mills	$995
93105	Glacier Bay Sea Kayak, Glacier Bay Park & Preserve	June 22-July 3	Kern Hildebrand	$1,495
93108	Alaska Range Photography & Nature Study Base Camp	July 1-12	Jerry Lobel	$995
93109	Hulahula Paddle Raft, Arctic Wildlife Refuge	July 3-14	Ken Dawdy	$1,750
93112	Backpacking the Brooks Range, Phillip Smith Mountains	July 9-21	Dennis Schmitt	$1,095
93113	Ride the Alaska Range	July 18-31	R. McManus/G. Williams	$1,295
93118	Ellesmere Island Backpack, Northwest Territories	July 25-Aug. 11	Dennis Schmitt	$1,905
93117	High Romanzof Revisited, Backpacking the Brooks Range	July 28-Aug. 10	Patrick Colgan	$1,095
93119	Gates of the Arctic to the North Slope by Backpack & Raft	Aug. 1-14	Gary Aguiar	$1,750
93120	Noatak Backpack, Gates of the Arctic Park	Aug. 7-18	Jana Torrence/Bill Gomez	$1,295
93123	South-Central Alaska Van Tour	Aug. 15-Sep. 2	Ellie Ricker/Lisa Hill	$1,895

BACKPACK TRIPS (See Alaska, Family, & Hawaii for other backpack trips. Rating key: L=Light; M=Moderate; S=Strenuous.)

TRIP #	TRIP TITLE	DATES	LEADER(S)	PRICE
93057B	Dark Canyon Wilderness, UT (M)	May 16-22	Mark McIver	$410
93130	The Black Forest Trail, Tiadaghton Forest, PA (M)	May 23-29	Gale Maleskey	$315
93131	Land of Enchantment, Gila Wilderness, NM (M)	May 29-June 6	Gary Swanson	$545
93135	Back Door to Humphreys Basin, Sierra Forest, Sierra (L-M)	June 17-26	Diane Cook	$405
93136	Leadership Training, Zion Park, UT (M-S)	June 20-26	Don McIver	$345
93138	Eagle Peak, South Warner Wilderness, CA (L)	June 21-30	Bob Berges	$360
93139	Escape to the Escalante, Glen Canyon Rec. Area, UT (S)	June 21-30	Michelle Line	$495
93142	Great Western Divide South, Sequoia Park, Sierra (M-S)	July 1-10	Matt Hahne	$360
93143	Lake-Hopping in the Sierra II, Emigrant Wldns., Sierra (L-M)	July 3-11	Laura & Sy Gelman	$400
93144	Circuit of Lakes Photography, Yosemite Park, Sierra (L-M)	July 6-16	Wes Reynolds	$480
93145	Birthplace of the Merced, Yosemite Park, Sierra (M)	July 8-17	Ricky Tate	$340
93146	Tahoe Crystal Range Loop, Desolation Wldns., Sierra (L-M)	July 10-18	Modesto Piazza	$385
93147	Ha-de-ron-dah Wilderness, Adirondack Park, NY (L-M)	July 11-16	Sally Daly	$285
93149	Clarks Fork of Yellowstone Canyon Adult-Teen, WY (L)	July 11-18	Dale & Craig Kemmerer	$325
93150	Silver Lake Beginner's Trip, Devils Postpile, Sierra (L)	July 11-18	Monava Tagashira	$315
93153	High Uintas Wilderness, UT (M-S)	July 13-21	Gene Goldberg	$460
93154	High Sierra Panorama, Ansel Adams Wilderness, Sierra (M-S)	July 13-22	Jim Watters	$345
93156	The High, Lonesome Wind River Range, WY (S)	July 17-25	Marie Cecchini	$640
93157	Lakes & Peaks Pilgrimage, Silver Divide, Sierra (M)	July 17-25	Sarah Bolles	$335
93159	Desolation Wilderness Wonderland, Sierra (L)	July 18-25	Bob Ruff	$285
93168	High Sierra Photography, John Muir Wilderness, Sierra (L-M)	July 22-29	Jim Gilbreath	$410
93161	High Granite Ramble II, John Muir Wilderness, Sierra (M)	July 23-31	Stuart Simon	$365
93163	Sonora Pass to Tuolumne Meadows, Yosemite, Sierra (M-S)	July 24-31	Carol McVeigh	$330
93166	The Other Side of Bells: Maroon Bells-Snowmass, CO (M-S)	July 25-31	Jim Urban	$270
93167	Mineral King Cross-Country Ramble, Sierra (M)	July 25-Aug. 1	Andy Johnson	$290
93169	Seven Gables & 13 Bear Lakes, Sierra (L-M)	July 26-Aug. 4	Patty Biasca	$395
93170	Silver Divide Loop, John Muir Wilderness, Sierra (L-M)	July 30-Aug. 7	Tom Hilton-Gray	$380
93173	Wildflowers of the San Juans, Weminuche Wldns., CO (M)	Aug. 1-7	Gerry Dunie	$495
93179	Hopkins Basin Traverse, Inyo Forest, Sierra (M)	Aug. 1-8	Monava & Bruce Tagashira	$340
93181B	Lakes, Rainforest, & Wilderness, Olympics, WA (M)	Aug. 1-8	Jim Kirkpatrick	$400
93186	Cirque Crest Circle, Kings Canyon Park, Sierra (S)	Aug. 8-15	Chuck Schmidt	$290
93187B	Heart of the Bob Marshall Wilderness, MT (S)	Aug. 8-16	Bill Carroll	$410
93188	Northern Yosemite, Hoover Wilderness, Sierra (L-M)	Aug. 8-17	Bill Clark	$405
93189	Land of Seven Gables, John Muir Wilderness, Sierra (M-S)	Aug. 10-17	Frances & David Reneau	$325
93190	Wild Yosemite Northwest, Sierra (M)	Aug. 11-21	Mari Calhoun	$465
93193	Big Bird Lake, Kings Canyon & Sequoia Parks, Sierra (M)	Aug. 15-22	Vicky Hoover	$285
93195	Yosemite & Sawtooth Ridge, Hoover Wilderness, Sierra (M)	Aug. 15-22	John Bird	$285
93196	Beartooth Sojourn, Absaroka-Beartooth Wilderness, MT (M-S)	Aug. 20-28	Roger Grissette	$470
93197	Trans-Sierra Juniors, John Muir Wilderness, Sierra (M-S)	Aug. 20-28	Patrick Colgan	$310
93198	Lake Chelan, Glacier Peak Wilderness, WA (S)	Aug. 21-29	Craig Miller	$505
93202	Scenic Meadow, Kings Canyon & Sequoia Parks, Sierra (M-S)	Aug. 26-Sep. 4	Gordon Peterson	$330
93203	Cirque Crest & the Muro Blanco, Kings Canyon, Sierra (M-S)	Aug. 27-Sep. 4	Louis Argyres	$340
93204	Kern Hot Springs, Sequoia Park, Sierra (M)	Aug. 28-Sep. 6	Donald H. Lackowski	$340
93205	LeConte Divide, John Muir Wilderness, Sierra (M)	Aug. 28-Sep. 6	Bill Flower	$405
93207	Pacific Crest Trail, Manning Park to Rainy Pass, Canada (S)	Sep. 2-11	Rob Jacobs	$570
93208	Tehipite Valley, Kings Canyon Park, Sierra (M-S)	Sep. 2-11	Joe Uzarski	$545
93209	Pacific Crest Trail, Stevens Pass to Snoqualmie, WA (S)	Sep. 4-12	Craig Miller	$365
93210	Red, White, and Blew Ramble, Sierra (L-M)	Sep. 5-14	Barry Bolden	$410
93211	Sunset Meadow Sampler, Jennie Lakes Wilderness, Sierra (M)	Sep. 7-10	Susan Lassiter	$170
93212	Fall Color, Lake Superior Pictured Rocks, MI (L-M)	Sep. 12-18	Jack Thompson	$385
93213	Fall Natural History, Continental Divide, CO (L-M)	Sep. 12-18	Suzanne Swedo	$385
93214	Presidential Range, White Mountain Forest, NH (S)	Sep. 12-18	Jeffrey Knoop	$435
93215	High Lakes, John Muir Wilderness, Sierra (L-M)	Sep. 13-24	Mac Downing	$550
93216	Rio Grande Pyramid, Weminuche Wilderness, CO (M-S)	Sep. 18-26	Brian K. Johnson	$390
93217	West Virginia Wilderness Walk (L-M)	Sep. 19-25	Kenneth S. Limmer	$395
93218	Kanab Canyon & Thunder River, Grand Canyon, AZ (S)	Sep. 25-Oct. 2	Gene Glenn	$355
93219	Summer's End in the Adirondacks, NY (M-S)	Sep. 26-Oct. 2	Jim Lynch	$455
93220	In Search of the Anasazi, Southeast Utah (M)	Oct. 3-9	Neil Stufflebeam	$380
93221	Kwagunt & Malgosa Canyons, Grand Canyon, AZ (S)	Oct. 3-9	Sid Hirsh	$375
93223	Canyons of the Maze, Canyonlands Park, UT (S)	Oct. 9-17	Mike Eaton	$475
93224	Bears & Wildcats, Zion Park, UT (M-S)	Oct. 10-16	Bob Cole	$375
93225	Canyons, Caves, & Cabins, Buffalo River, AR (M)	Oct. 10-16	Joan & John Molenaar	$415
93222	Rainbow Bridge & Navajo Mountain, AZ & UT (S)	Oct. 16-23	Judith Harper	$390

TRIP #	TRIP TITLE	DATES	LEADER(S)	PRICE
BASE CAMP TRIPS				
93066	Dolly Sods Wilderness, WV	May 16-22	Gina Flannery	$450
93231	Bryce Canyon Park, UT	June 5-12	Duane Ottens	$505
93237	Rambling Through the High Peaks, Adirondack Park, NY	July 17-24	Dick Terwilliger	$960
93238	Light/Landscape Photo Workshop, Clair Tappaan Lodge, Sierra	July 18-24	Harriet Hyams	$390
93239	Mountain Music & Meandering, Clair Tappaan Lodge, Sierra	July 25-31	Emily & Gus Benner	$370
93240	Summer in Canada's Coast Mountains, Tweedsmuir Park	Aug. 2-8	Dennis Kuch	$1,360
93242	Art, Hiking, & the Good Life, Clair Tappaan Lodge, Sierra	Aug. 15-21	Helen & Jim Maas	$390
93243	Hidden Valley Retreat, Sierra Forest, Sierra	Aug. 21-28	Bill Davies	$1,140
93244	Nature Writing Workshop, Clair Tappaan Lodge, Sierra	Sep. 12-18	Susan Heitman	$440
93245	Stehekin Valley, North Cascades, WA	Sep. 19-25	Carolyn Castleman	$850
93247	Great Smoky Mountains Park, TN & NC	October 10-17	Bob Goldberg	$400
BICYCLE TRIPS (See Alaska & International for other bicycle trips.)				
93250	Touring the Finger Lakes, NY	June 27-July 4	Michele Paradiso	$495
93251	Canadian Rockies, Jasper & Banff Parks, Alberta	July 11-17	Peter Bengtson	$645
93252	Mountain Biking in New York's Adirondacks	Aug. 1-6	John Borel	$630
93253	Mt. Desert Island & Acadia Park Adventure, ME	Aug. 8-14	Beth Barrow-Titus/Phil Titus	$475
93254	The Grand Tour of Down East, ME	Aug. 16-22	Frank J. Traficante	$440
93255	Touring Vermont	Aug. 29-Sep. 4	Margaret O'Neil	$365
93256	San Juan Islands, WA	Sep. 5-11	Lynne Brown	$530
93257	Echo Park by Mountain Bike, Dinosaur Monument, CO	Sep. 8-12	Joanie & Mike Hoffmann	$305
BURRO TRIPS (See Family for other burro trips.)				
93260	Vogelsang Pass Loop, Yosemite Park, Sierra	July 11-18	Don White	$550
93261	The Cathedral Range of Yosemite Park, Sierra	July 18-25	Rich Hamstra	$550
93262	Art in the Park, Yosemite Park & Inyo Forest, Sierra	July 25-Aug. 1	Marshall Hasbrouck	$550
93265	Tower Peak & the Sierra Crest, Toiyabe Forest, Sierra	Aug. 22-29	Ted Bradfield	$550
FAMILY TRIPS (Many raft trips also welcome children.)				ADULT PRICE / CHILD PRICE
93287	Exploring Maui, Hawaii	June 20-28	Karen & Stan Johnsen	$705 / $470
93269	Clair Tappaan Teen Week, Tahoe Forest, Sierra	June 27-July 3	Beth & Bob Flores	$440 / $295
93271	Lamarck & Wonder Lakes, John Muir Wilderness, Sierra	July 17-24	Carol & Tom Baker	$555 / $370
93274	Golden Lakes Loop Backpack, Okanogan Forest, WA	July 25-31	Marilyn & Bill Gifford	$380 / $255
93275B	Clark Lakes, Ansel Adams Wilderness, Sierra	July 31-Aug. 7	Donna Wells	$480 / $320
93276	Agnew Meadows, Ansel Adams Wilderness, Sierra	Aug. 1-5	Margaret & Vern Clevenger	$210 / $145
93277	Acadia Toddler Tromp II, ME	Aug. 1-7	Ginny Coombs	$570 / $380
93278	Clair Tappan Lodge Service Trip, Sierra	Aug. 1-7	Elaine & Timothy Stebler	$230 / $160
93279	Stehekin Valley, North Cascades, WA	Aug. 1-7	Jennifer & Ron Taddei	$695 / $465
93263	Heart of the Yosemite Wilderness Burro Trip, Sierra	Aug. 1-15	Anne Parker	$825 / $550
93280	Skyline to the Sea Adventure, Santa Cruz, CA	Aug. 2-8	Paris Lemos	$335 / $225
93264	I Don't Think We're in Kansas Burro Trip, Sierra	Aug. 15-22	Anneke Vonk	$555 / $370
93283	Stehekin Valley, North Cascades, WA	Aug. 16-22	Libby Dresel	$695 / $465
93285	Skyline to the Sea Backpack, Santa Cruz, CA	Aug. 22-28	Susanne George	$295 / $195
HIGHLIGHT TRIPS				
93290	California's Napa, Sonoma, & Mendocino Counties	June 9-19	Emily Strauss	$685
93291B	Fly-Fishing Blue Ribbon Trout Waters, Yellowstone, WY	June 26-July 2	David Morrison	$470
93294	Lake Michigan Odyssey, South Manitou Island, MI	Aug. 15-21	Jack Thompson	$395
93295	Grand Tetons Leisure Ramble, Targhee Forest, WY	Aug. 15-22	Laura & Sy Gelman	$975
93296	Sawtooth Wilderness, ID	Aug. 22-29	Diana Bunting/ Modesto Piazza	$985
93297	Crest of the San Juans, Weminuche Wilderness, CO	Sep. 5-12	Marlen Mertz/Eric Seike	$1,055

INTERNATIONAL TRIPS (All international trips are tier-priced depending on the number of participants. Prices do not include airfare.)

TRIP #	TRIP TITLE	DATES	LEADER(S)	LOW TIER	HIGH TIER
93760	Walking the Dingle Peninsula, Ireland	June 13-19	Lou Wilkinson	$1,465	$1,685
93770	Tanzania Wildlife Safari	June 19-July 3	Ruth Dyche	$3,880	$4,155
93775	Ecuador: Galápagos Islands & Amazon Rainforest	June 20-July 3	Carolyn Castleman	$3,550	$3,930
93780	Mustang: The Forbidden Kingdom, Nepal	June 20-July 16	David Horsley	$3,075	$3,350
93785	Bike and Hike in Ireland	June 21-July 4	Patrick Colgan	$2,600	$2,875
93790	Canoeing and Hiking in Brazil's Rainforests	June 22-28	J. Victor Monke	$1,715	$1,945
93795	Wilderness Adventuring in Historic Poland	June 28-July 17	Bob Madsen	$2,660	$2,935
93805	Victoria Falls & Okavango Delta, Zimbabwe & Botswana	July 24-Aug. 7	Mary O'Connor	$4,550	$4,825
93810	Hungary: A New Experience	Aug. 3-14	Bert E. Gibbs	$2,375	$2,650
93815	Hut Hopping in Austria's Alps & Italy's Dolomites	Aug. 7-22	Wayne Woodruff	$2,355	$2,625
93820	Hiking in the Land of the Midnight Sun: Finland & Russia	Aug. 22-Sep. 4	Jim Halverson	$2,630	$2,935
93830	Throne Room of the Thunder Dragon, Bhutan	Oct. 3-26	John & Jane Edginton	$5,090	$5,370
93835	River Rafting & Rainforest Adventure, Costa Rica	Oct. 19-28	Blaine LeCheminant	$2,150	$2,415
93840	Picturing Costa Rica	Nov. 7-16	Dolph Amster	$2,140	$2,405
93845	Rolwaling Himal, Nepal	Nov. 8-30	John DeCock	$2,110	$2,335
93860	Gorkha-Trisuli Holiday Trek, Nepal	Dec. 18-31	David Horsley	$1,680	$1,880
94500	Ecuador: Galápagos Islands & Amazon Rainforest	Dec. 19, 1993-Jan. 1, 1994	Mary O'Connor	$3,550	$3,930
93850	Holidays in Belize, Central America	Dec. 20-28	Sallee Lotz	$2,055	$2,320
93855	River Rafting & Rainforest Adventure, Costa Rica	Dec. 20-29	Harry A. Neal III	$2,150	$2,415
94520	Exploring New Zealand	Feb. 6-26, 1994	Ray Simpson	$3,015	$3,300
94515	Patagonia Trek, Chile	Feb. 19-March 5, 1994	John Garcia	$2,585	$2,865
94510	Hidden Kingdom on the Roof of the World, Nepal & Tibet	April 17-30, 1994	Patrick Colgan	$2,530	$2,805

SERVICE TRIPS (See Alaska & Family for other service outings.)

93093	West Rim and Telephone Canyon, Zion Park, UT	May 16-22	Linda Takala/Paul Hoernke	$225
93303	The Arizona Trail, Walnut Canyon, AZ	June 5-12	Judith Harper	$210
93305	Blue Range Trail Project, Apache Forest, AZ	June 12-19	Rod Ricker	$195
93307	Allagash Wilderness Waterway Restoration, ME	June 19-27	Mike Kaiser	$360
93309	Ukonom Lake Trail Maintenance, Marble Mountains, CA	June 20-30	John Sherman	$260
93312	Wind Rivers West Side, Bridger Wilderness, WY	July 1-11	Eric Bowman	$260
93313	Backcountry Site Rehabilitation, White Mountains, NH	July 4-10	Laurie J. Buck	$270
93315	Lizard Head Wilderness, CO	July 7-17	Doug Pilcher	$260
93317	Pike Forest, CO	July 8-18	Jon Nichols	$260
93318	Dark Divide & Mount St. Helens, WA	July 10-20	Ron Thomas	$260
93320	Huckleberry Lookout Restoration, Teton Wilderness, WY	July 11-21	Jan Ketelle	$260
93323	Granite Lake, Trinity Alps, CA	July 13-23	Pete Petersen	$260
93324	Lake Chelan-Sawtooth Wilderness, Wenatchee Forest, WA	July 14-23	Dennis Grzezinski	$325
93325	Ruby Mountain Wilderness Trail Repair, NV	July 15-25	David Simon	$260
93327	Twitchell Lake, Adirondack Park, NY	July 18-24	Mike Kernahan	$210
93328	Monument Lake, Salmon River Wilderness, CA	July 18-28	Cindy Miles	$220
93329	Rolling Creek, Lost Creek Wilderness, CO	July 22-Aug. 1	Bruce Horn	$260
93330	Miner Basin, Eagle Cap Wilderness, OR	July 25-Aug. 4	Paula vanHaagen	$260
93332	Cottonwood Lakes, Inyo Forest, Sierra	July 27-Aug. 6	Steven Hartwell	$260
93333	Trail Maintenance, Glacier Peak Wilderness, WA	July 28-Aug. 6	Jack Brautigam	$325
93334	Cloud Peak, Bighorn Forest, WY	July 28-Aug. 7	Wally Mah	$260
93335	Mott Lake Trail, John Muir Wilderness, Sierra	July 29-Aug. 8	Conrad Smith	$220
93336	Ball Lakes, Selkirk Mountains, Panhandle Forest, ID	July 31-Aug. 10	Peter Littman	$220
93337	Coastal Artistry, Lake Superior Park, Ontario, Canada	Aug. 1-7	Conrad Krinock	$305
93339	Wind River Range, Popo Agie Wilderness, WY	Aug. 2-12	Cynthia Griffin	$260
93342	Seven Devils Mountains, Hells Canyon Wilderness, ID	Aug. 3-13	Bill Glenn	$260
93343	Pine Creek, Inyo Forest, Sierra	Aug. 4-10	Bill Gibson	$260
93344	Capitol Peak, Maroon Bells-Snowmass Wilderness, CO	Aug. 6-16	Kathryn Hannay	$260
93345	Mahoosuc Range, White Mountain Forest, NH	Aug. 7-13	Steve Lachman	$260
93346	Flattop Mountain, Glacier Park, MT	Aug. 9-19	Jan Moraczewski	$325
93347	Targhee Teton, Jedediah Smith Wilderness, WY	Aug. 10-20	Gary Anderson	$260
93348	Wyoming Trail, Zirkel Wilderness, CO	Aug. 10-20	Homer Rudolf	$260
93349	Tuolumne Meadows, Yosemite Park, Sierra	Aug. 11-22	Tony Lambe	$325
93350	Conejos River Headwaters, South San Juan Wldns., CO	Aug. 14-21	Jim McPherson	$260

TRIP #	TRIP TITLE	DATES	LEADER(S)	PRICE
93352	Big Fisher Lake, Selkirk Mountains, Panhandle Forest, ID	Aug. 14-24	Jack Spalding	$220
93354	Gulf of Slides Trail, White Mountains Forest, NH	Aug. 15-21	Michael Blaschke	$190
93355	Mt. Rainier Park, WA	Aug. 16-26	Chuck Mazgaj	$260
93357	Haystack Mountain, Maroon Bells-Snowmass Wldns., CO	Aug. 18-28	Ralph Keating	$260
93358	Crater Lake, OR	Aug. 21-29	Jeff Wasserman	$260
93359	Virgin River Rim Trail, Dixie Forest, UT	Aug. 22-28	Pam & Jerry Meyer	$245
93360	High Uintas, Wasatch-Cache Forest, UT	Aug. 23-Sep. 2	Les Atkins	$260
93362	Morgenroth Lake Revegetation, Olympic Park, WA	Sep. 8-17	Jason Star	$265
93367	Chaco Canyon Archaeology III, Chaco Cultural Park, NM	Sep. 12-18	Barbara Gooch	$275
93368	North Country Scenic Trail, MI	Sep. 12-18	Joe Gottler	$235
93369	Chiricahua Wilderness, Coronado Forest, AZ	Sep. 12-23	Sherri Serna	$220
93370	Hawk Mountain Sanctuary, Appalachians, PA	Sep. 19-25	Betty Couts	$230
93371	Hovenweep: The Tower Ruins, Hovenweep Mnmt., CO	Sep. 19-25	Susan Estes	$260
93372	Autumnal Arches, Arches Park, UT	Sep. 26-Oct. 2	Mike Kobar	$255
93373	Chesapeake Bay Archaeology, MD	Sept. 27-Oct. 1	Bill Carroll	$220
93375	Forsythe Wildlife Refuge, Cedar Bonnet Island, NJ	Oct. 9-16	Sally Daly/Irwin Rosman	$220
93376	Archaeology, Swamps, & Beaches, Eastern Shore, MD	Oct. 10-16	Otto Spielbichler	$260
93377	Hurricanes & Huguenots, Francis Marion Forest, SC	Oct. 10-16	Ernie Bauer	$240
93378	Red River Gorge Trail Repair, Daniel Boone Forest, KY	Oct. 10-16	Russell Hall	$235
93379	Shawnee Forest, Illinois Trail Maintenance	Oct. 17-23	Sonia Heidinger	$235
93382	Deadman Mesa Trail #17, Mazatzal Wilderness, AZ	Oct. 23-30	Jim Vaaler	$210
93383	Ozark Autumn, Buffalo River, AR	Oct. 24-30	Joe Gottler	$235

WATER TRIPS (See Alaska & International for other water trips.)

CANOE

93386	Paddling & Hiking the Pine Barrens, Wharton Forest, NJ	May 16-22	Sally Daly/Irwin Rosman	$295
93387	West Grand Lakes, ME	June 27-July 3	Jo Claghorn	$400
93388	Off the Beaten Path, Boundary Waters Canoe Area Wldns., MN	July 8-16	Sharon Kaufman	$635
93389	Isle Royale Park, MI	Aug. 29-Sep. 4	Larry Ten Pas	$545
93390	Boundary Waters Canoe Area Fall Color, MN	Sep. 19-25	Bill Sheppard	$535
93391	Ozark Fall Float, Buffalo River, AR	Oct. 17-23	Sarah Reinke	$490

KAYAK

93392	Sea-Kayaking the Coast of Georgia	Nov. 1-5	Marjorie Richman	$695

DORY/RAFT

93393	Yampa River Raft, Dinosaur Monument, UT	May 26-30	R. Kurt Menning	$595
93394	Rogue River Rafting, OR	June 6-10	Bruce Macpherson	$755
93395	San Juan River, Canyon Country Raft Trip, UT	June 13-17	Bruce Macpherson	$755
93396	Grande Ronde River by Dory, Umatilla Forest, OR	June 20-24	Tony Strano	$715
93397	The River of No Return, Main Salmon Dory Trip, ID	July 23-29	Lynn Dyche	$1,310
93398	Lower Salmon River Gorge/Snake River Dory Trip, ID	July 29-Aug. 3	Mark Larson	$830
93399	Rogue River Rafting, OR	Aug. 3-7	Sallee Lotz	$755
93400	Hells Canyon, Snake River Dory Trip, ID & OR	Aug. 5-10	L. Wheaton Smith	$990

For More Details on Outings

These outings are described briefly in the 1993 Outings catalog, which appeared in the January/February issue of Sierra. Each outing is described in detail in individual trip brochures. Use this coupon to order the catalog and/or brochures. We highly recommend reading a detailed trip brochure before signing up for a trip. Trips vary in size, cost, and physical stamina and experience required. Don't sign up for the wrong one! Read the trip brochure, and save yourself the cost and inconvenience of changing or canceling a reservation. The first three brochures are free. Please enclose 50 cents apiece for extras.

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☐ I do not have the January/February *Sierra*. Please send a 1993 Outings catalog. $3 is enclosed.

☐ Please send me the following trip brochures. (Order by trip number. The first three are free; extras cost 50 cents each.)

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Long before there were chain saws and pulp mills, there was paper. Early craftsmen produced paper sheet by sheet from hemp, straw and other common plants.

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WAYS & MEANS

Lead and Learn

CARL POPE

For 12 years, with clangorous certainty under Ronald Reagan, and then in a muted muddle under George Bush, environmentalists have had one mission: to protect the planet from a hostile U.S. government. We opposed, we resisted, we attacked, we defended. Above all, we sought to deny these administrations any maneuvering room. Our tools were unsubtle: in the opposition, more is better, faster is better, louder is better. We became, it's fair to say, exceptionally good at playing defense.

Now times have changed. Bill Clinton and Al Gore offer environmentalists their best and perhaps last hope to help move the country from devastation to stewardship, from depletion to sustainability. For the first time in many years we have the opportunity to lead, but more, louder, and faster are not the best tools for leadership. We may miss the stinging sound bites that skewered James Watt and John Sununu, but now is the time for patience, understatement, and occasionally holding our fire.

The Sierra Club's new challenge is to stay ahead of the government without letting it off the hook. Our leadership role requires nurturing and emboldening the better instincts of Clinton and Gore, and it requires inspiring the public to demand vision and daring. We need to create room for Clinton to act on the rhetoric of his campaign, and we must smooth and illuminate his path. We must simultaneously demand more than we ever have before and forge a partnership supple enough to withstand the inevitable conflicts.

We'll miss all that griping, but we can get a lot more done

The President's proposed energy taxes, for example, are only a modest step toward ending the nation's oil addiction. But it is critical that we provide broad support for them so that the administration does not back away from the formidable task of transforming energy habits in the United States. Still, while we support Clinton's proposals, our primary focus will be on the next, more politically difficult steps: dramatic increases in auto fuel-efficiency, significant investment in mass transit, and changes in urban-development patterns.

Likewise, our vision of a restored public domain can sustain Interior Secretary Bruce Babbitt. When he waits longer than we would like to take action on an issue—which sooner or later will happen—we will maintain a continuous and amiable flow of newspaper editorials, congressional speeches, and grassroots letters urging him to take the necessary steps.

We have a lot to learn. Just before the State of the Union message, Clinton and Gore held their first White House meeting with representatives of the environmental community. The vice-president talked about how much needs to be done—"I leave here every night at nine-thirty and feel guilty for leaving"—and about how much can be done—"We have our hands on the levers that can really make the difference." Environmentalists must approach their new challenges, and this new opportunity, in the same spirit. We can do no less for our children, from whom, as Bill Clinton noted in his inaugural address, "we have borrowed our planet and to whom we bear sacred responsibility." ■

BODY POLITICS

Radiant Grub

MICHAEL CASTLEMAN

No one argues about the fact that bombarding food with gamma rays destroys the pests that infest many edibles, but that's where civility ends. Food irradiation, say its advocates, may save your life. No, say its detractors, it just might kill you. With contradictory claims like these flying around, it's time to look at the facts behind this blessing . . . or curse.

First, while irradiation does chemically alter food, it absolutely does not make that food radioactive. The exposure to cobalt 60 for up to an hour kills bacteria, insects, and molds. These bugs, most notably the bacteria *Salmonella* and *Campylobacter,* are responsible for at least 10 million cases of food poisoning and 9,000 deaths in the United States each year. Advocates of food irradiation say that the process would make food poisoning a thing of the past, without affecting food quality or endangering workers or the public. In addition, they assure us, irradiation would eliminate the need to apply pesticides after harvest.

Opponents answer that food irradiation solves one set of problems only to confront us with another. Nuking our burgers and beets is not the only way to guarantee food safety. Spices, which are often riddled with insects and microbes, can be treated with a chemical fumigant (which, irradiation boosters say, carries its own risks). And in Sweden, for example, *Salmonella* poisoning has been largely eliminated by decontaminating chicken feed, ratproofing chicken farms, and tightening up hygiene standards at chicken-processing plants.

Everyone agrees that irradiation destroys some nutrients, and everyone applies an appropriate spin. Critics call the nutritional loss degradation of the food supply; advocates say that plain old cooking has similar effects. (Cooking irradiated food, like cooking any processed food, would impose a double whammy.)

When it comes to potential problems for diners, each side presents data to support its case. Proponents of irradiation cite a British study in which 2,000 mice—and 40 generations of their offspring—were fed only irradiated food. The mice remained "normal in every respect," according to one researcher. But opponents point to a

Do you *really* want that tomato to last till Christmas?

U.S. Army/Department of Agriculture study showing that mice fed irradiated chicken had unexpectedly brief lives and were more likely to develop tumors.

The controversy extends to the irradiation facilities themselves. Advocates of the process point out that the United States already has 40 problem-free sites quite similar to irradiation plants, where about half of the nation's surgical instruments are sterilized. Critics note that blue-sky promises regarding the safety of irradiation sound painfully like the promises heard in the 1950s about the peaceful atom and clean nuclear power. Supporters insist that cobalt 60, the most commonly used radiation source, is largely recyclable and can be transported safely; opponents reply that promoters of nuclear power also dismissed concerns about nuclear waste, and now spent fuel is an enormous problem.

Some players in the drama have already taken a stand. Maine and New York have outlawed the sale of irradiated foods, and Quaker, McDonald's, and Perdue have said they will not carry them. But consumers will have the final say, and recent surveys show that only a small minority would "never" buy irradiated food. An Illinois market offers irradiated and untreated strawberries for the same price side by side, and the zapped fruit (labeled by law with a "radura" symbol) has won shoppers' hearts, hands down. "Initially novelty had a lot to do with it," says the store's owner, James Corrigan. "Now people find the shelf life useful."

The important thing to remember is that food irradiation is likely neither as wonderful as its backers claim, nor as heinous as its critics charge. Rather than let each side go on ad nauseam, we must push federal policymakers to answer the two most basic questions: Is food irradiation safe? And is it really necessary? ■

► *For more information see "Resources," p. 96.*

Gather No Moss?

■

MARC LECARD

The bale of peat moss my father used on our lawn always stood in a corner of the garden like a burlap refrigerator, holding a rich, dark substance smelling of the swamp. The sharp, vinegary reek of decaying vegetable matter seemed to me an essential part of gardening.

But as wetlands around the world have been drained and filled and cut away, some environmentally minded gardeners have begun to wonder if they are building up their lawns and flowerbeds at the expense of fragile ecosystems elsewhere.

Peat moss is the partially decomposed remains of sphagnum moss, a plant that defines the bogland ecosystems where it is found. As it grows, the lower parts of sphagnum die and are buried beneath the new growth; eventually, the dead moss is compacted and deprived of oxygen by the weight above it and forms peat, a dense vegetable mud. This mat of dead and living sphagnum literally supports the plant life of the bog. If sphagnum moss is not cut out completely, it will slowly grow back. But since it is the keystone of bog ecosystems, cutting it results in the destruction of many other plants as well as wildlife habitat.

In Ireland and Great Britain, peat bogs are in danger of disappearing. The problem is exacerbated by the relatively small acreage of peatlands, and by development, agricultural use, and the commercial harvesting of peat for fuel. Many conservationists, gardeners, and

■

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wetlands scientists in these countries have recommended a boycott of horticultural peat.

In the United States, peat moss is harvested in Indiana, Florida, Maine, Michigan, and Minnesota, but most of the peat Americans use comes from Canada, which boasts 270 million acres of peatlands. Canada harvests some 40,000 acres of sphagnum and exports 90 percent of it to the United States for lawn and garden use.

Producers in both Canada and the United States maintain that they never cut sphagnum faster than it grows, and leave behind enough peat to ensure regeneration. "Harvesting peat bogs actually helps preserve them," says Gerry Hood of the Canadian Sphagnum Peat Moss Association, who claims that peat-moss operations keep the bogs from being drained for development. Five to ten years after harvesting, Hood says, the bog will be a "functioning wetland" again. He admits that it will take up to 25 years for a bog to return to its preharvested state, but says that 90 percent of the original flora will eventually grow back.

Some wetlands scientists, however, point out that a managed bog bears little resemblance to a natural one. Like tree farms, these peatlands tend toward monoculture, lacking the biodiversity of an unharvested bog.

Though gardeners may have a nostalgic attachment to peat moss, there's no real need to use it. Fallen leaves and grass clippings make a better mulch; though it won't last as long as peat moss, compost from yard clippings is a suitable soil conditioner. Leaf mulch in particular will help soil hold water.

Lawns are big absorbers of peat moss and other resources as well: perhaps we should reconsider the whole concept of putting-green perfection and allow distant ecosystems—such as peat bogs—to flourish unmolested. ■

►*For more information, see "Resources," p. 96.*

HAND & EYE

Bahamian Dreams

■

HANNAH HINCHMAN

I leave Wyoming with a suitcase of projects, telling myself that I'll have time for them once I get to Eleuthera. But for the first week I wander the empty beaches in an idiotic idleness, watching curling waves and spiral-tailed lizards. The pile of projects sits in the corner, growing limper and more humid, as out of place as my woodsmoke-scented winter coat. The warmth of the island, the pure colors, and the rhythmical sea are a gentle eraser on my cluttered psyche, restoring clean white space.

Eleuthera is a limestone island, and many of its beaches have rocky stretches. On a morning walk I discover a baffling creature in the intertidal zone. Stuck fast to the rock as if it were a mineral growth, it looks something like a trilobite, with a leathery hem that helps it stay in place. I can see no provision for moving, eating, breathing, or excreting—no indication that it is alive, except that it probably wouldn't stay so firmly attached to the rock if it weren't.

One day we drive down the coast to Tarpum Bay to meet the fishing boats, which every afternoon pile their catch of grouper, porgy, hagfish, spiny lobster, and conch on the concrete pier for buyers to peruse. The mountain of conch is an especial treasure: mighty shells coated with seaweed, though their fluted openings remain dazzlingly polished, a perfect tropical hot pink. A young man with a bleached topknot of dreadlocks stands by the conch pile, whacking the shells with a small hatchet, then making a knife-cut through the opening. He draws the creatures out one by one and lays them in a slowly writhing heap. Far from being amorphous blobs, the conch animals are many-parted, with a distinct head and frog-like eyes. Each has a unique molding that clearly fits the contours of its elaborate shell, right down to a small fleshy spiral that must have reached back into its infant chambers. When I move my hand toward one's head, it flinches and shrinks away.

■

Pray when you

don't dance, dance

when you don't pray

Not so timid are Eleuthera's frogs, dozens of which descend the walls of our cottage every evening to sit meditatively by the porch lights. One night from inside the house I hear the frogs calling, and realize from the subterranean sound that they are in the cistern, our water source. Raising the wooden lid releases a deafening polyrhythmic frog chorus; frog eyes glow from the water and the walls. Zen frogs at the singles' reggae bar.

During my week of mental vacuum, I emerge from strangely colored, shape-shifting dreams, the kind artists relish. But one day I wake thinking about a library; I want to read about the life history of the conch. The clean, simple, inner void has begun to filigree itself again.

Still, some measure of loose-limbed heedlessness remains. A few members of my family, subdued by the cistern incident, begin using bottled water from Miami, but I continue to mix my evening cocktail with a little frog music. ■


Our evening wall frogs
(zen position
non-alert position)
ELEUTHERA, BAHAMAS
A creeping beach pea
These bold frogs walk around high up on the walls, occasionally miss in their leaps after moths, plummet 20 feet spread-eagled, land without apparent injury.
They probably find their way into our rainwater cistern via collection pipes on roof.
In zen position, they are utterly still but for tender throats pulsing.
On the beach find an aggressive lizard that, when it runs, stands tall on all fours, tail curled a la monkey or malamute. When it relaxes, the tail uncurls.
Below, the mystery intertidal creature. Conch man calls them "scurbs". He says, "scrape 'em off rocks, scoop out insides, make scurbs & whelks salad; good for sex." No word on scurbs in the Governor's Harbour library, but back home discover they are chitons, polyplacophorans.
Chitons have sense organs (sometimes with cornea, lens, iris, retina) called "aesthetes"
Older than trilobite, this being has persisted nearly unchanged for 500 million years. Its mantle is scaled like a reptile! Its teeth are tipped with MAGNETITE!
The conch man with his hatchet.
A.J. with his two fish — not for sale. Tarpum Bay
On Eleuthera

GOOD GOING

Just Add Weather

REED McMANUS

"A bloody lot of rain," muttered the yellow slicker to my left. I cocked my head in the turtle-like way one does when wearing a hooded jacket. Ah, it was Rex, the body-and-fender man from Auckland, his ruddy cheeks poking from his cowl like a nun's from her habit. In the thickening mist on a nearly sheer cliff just below 3,875-foot Mackinnon Pass, our heads lowered to keep out the wet, Rex's observation could have been anyone's.

Every member of our group of 40 hiking New Zealand's Milford Track had been issued a three-quarter-length beacon-yellow jacket, the kind usually reserved for those whose jobs require standing around in the pouring rain. No one wears this impermeable sweat-trapping stuff unless they have to. And the imperative is here: the western flanks of the South Island get more than 300 inches of precipitation a year, an average of two wet days out of three in early April (the Southern Hemisphere's autumn), which is when we hit the trail. When the staff distributed the slickers at our orientation meeting three days earlier, my mind fixed on the tourist brochure that sports a khaki-shorted couple soaking in a sun-drenched view of glacial valleys from atop Mackinnon.

Precipitous granite walls and exuberant waterfalls have earned the Milford Track the reputation as "the finest walk in the world." The 33-mile-long track lures 8,000 hikers each year; the result is that the trail is one of the most highly regulated backcountry attractions in the world.

Half of the 80 trekkers who start out each day from November to April have paid about $700 for the privilege of sleeping in heated, shower-equipped dormitories for three nights, being served hot, hearty meals, and carrying only a daypack. "Freedom walkers" pay a small nightly fee on top of their $40 permit and stay in rudimentary huts equipped with propane stoves. The buildings are staggered along the trail to keep the two groups from bumping into each other. In addition, everyone must walk the track in only one direction, must stay in his or her assigned abode each night, and must complete the route in the appointed four days, even if that means crossing Mackinnon Pass in a whiteout. What sounds like Marine Corps discipline keeps trekkers from bunching up: by starting early or lagging slightly behind, a hiker can find a surprising amount of solitude.

Our trip started innocently enough with a two-hour ride on a calm, sunny day across Lake Te Anau, aboard the same diesel-powered tub that has ferried people to the trailhead since 1898. The first full walking day began in a drizzle as we followed a trail through birch and tree-fern forest, emerging every so often to look up and down the Clinton River at the sheer walls that form the valley's sides.

Drizzle eventually turned to rain. Where earlier we had counted individual waterfalls pouring into the canyon, we now found an uninterrupted curtain. It seemed entirely possible that our bathtub-shaped valley would fill up and we would float helplessly away. The puddles we had hopped over in the morning we were now forced to march through. Eventually, chilly water poured mercilessly over the tops of our boots, and soon we were fording once-puny creeks that now reached our thighs.

"Is this right?" my partner Caron asked as we sidled across another torrent with locked arms. "Did we pay $700 for this?" "No worries, mate!" called out one of our guides as he passed us on his way back to check on the honeymooners from Osaka. (Just

Fasten your slicker, mate,

and we'll row over

that pass up there

THE 1993 SIERRA MAGAZINE PHOTO CONTEST

SIERRA INVITES ALL PHOTOGRAPHERS to enter its 14th annual photo contest. The winning images will appear in the September/October issue, which will celebrate *Sierra*'s first 100 years of publishing.

CATEGORIES

- Desert, Plain, and Prairie
- The Ways of Water
- Forests and Flora
- Abstracts and Patterns

Color images may be submitted in any or all of the above categories. One first and one second prize will be awarded for black-and-white photography, from images entered in all categories.

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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 1988) 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 1993 forms, or with photocopies of the forms, will not be considered. All submissions must be postmarked by midnight, June 1, 1993; we suggest mailing your request for submission materials by May 15.

Photo: Lori Keeluk, 1992 second-place winner, Desert, Plain, and Prairie.

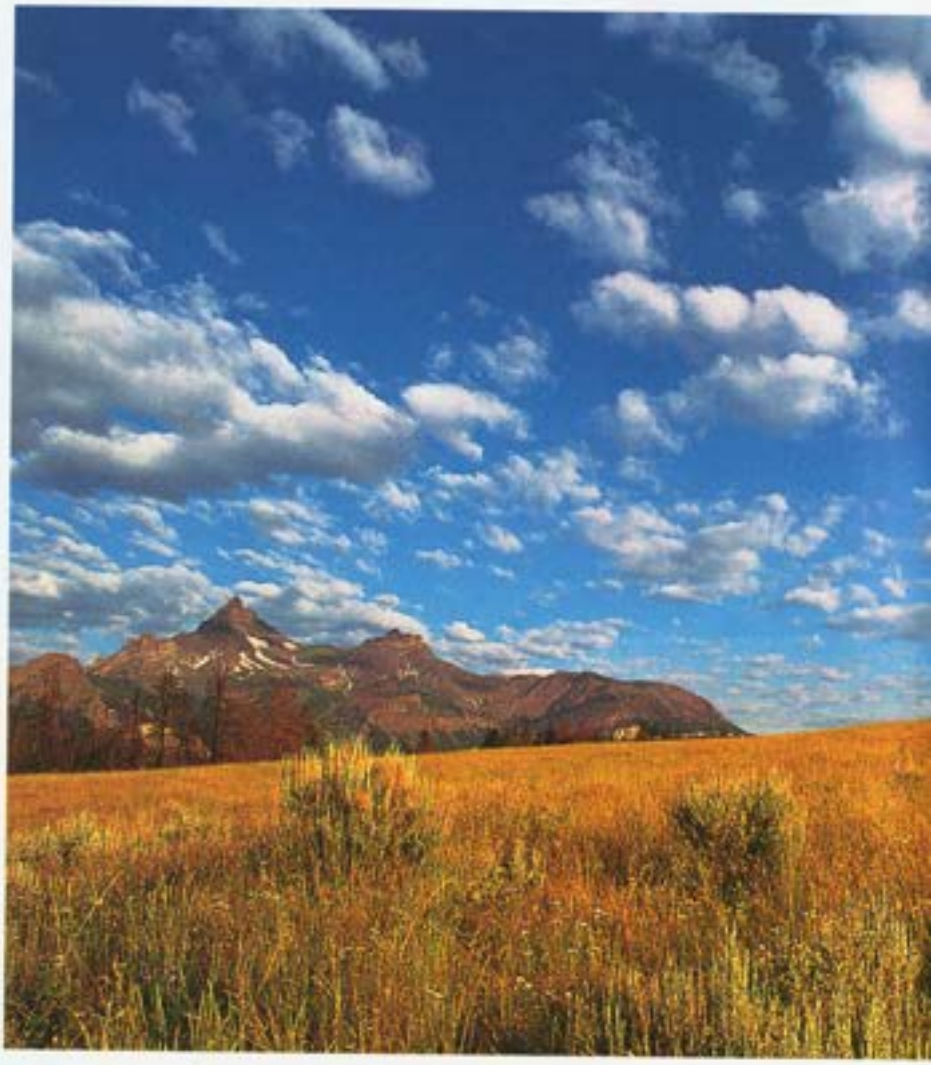
what were *they* thinking?) When the trail passed directly under a waterfall, pounding the tops of our heads with storm water fresh from the Tasman Sea, we began to smile; when we reached an exposed section of normally upland trail to find a moored rowboat and a 50-foot guideline, we burst out laughing.

The next day, fully prepared for rain, we got snow. Under a ceiling of gray, we switchbacked 3,000 feet up to Mackinnon Pass, heads down to keep out the chilly wind, one plodding foot in front of the other. What did that brochure say about opportunities to stop and take in the view? The cairn at the summit, near where my khaki-shorted role models had drunk in that chimerical summery day, was enshrouded in fog and blowing snow. We pushed through the whipping wind to a shelter, where staff ("No worries!") served up hot cocoa. Despite their efforts, "the finest walk in the world" had become a trudge. I acceded humbly ("Mountains do this," I thought), fumbling with the styrofoam cup pressed between my mittened hands. Too soon it was time to slide into the wet-gear and get down off the ridge.

Which is where the happy ending begins, even though the hike had a day and a half left to go. As we emerged from the shelter the storm suddenly lifted. Craggy peaks appeared where clouds had seemed permanently anchored. The valleys below us dropped deeper and deeper as their fog evaporated. The sun caromed off the snow into our eyes, making us wince as though we'd just emerged from weeks in a cave. Fields of Mount Cook lilies, each delicate white petal flecked with snowflakes, seemed to mock our difficulties reaching the summit. We looked at each other in happy bewilderment, and then began crunching our way through the snow toward the next river valley. ■

► *For more information, see "Resources," p. 96.*

WHEREABOUTS



The Unseen Mountain

LYNNE BAMA

I fell in love with Wyoming 26 years ago, on my first day in the state, right on this spot. Here among the ranks of mountains east of Yellowstone Park, I saw a range of hills capped by a sandstone outcrop where ancient limber pines clawed at the stillness. Out beyond it, to the south, the land opened into a great bowl on whose far side rose forested slopes through which the reddish tints of old lavas sullenly glowed. On that day, as now, this whole panorama was enclosed by a lid of overcast.

I had climbed the ridge intently, concentrating on my footing. Only when I got to the top did I turn around and discover that the clouds on the other side of the valley had blown away. What had seemed to be a complete landscape had miraculously enlarged, and I found myself staring at an

enormous volcanic rampart, its face streaked and marbled with veins of new-fallen snow.

I sat down on a rock, stunned by this unexpected, looming presence, by the eerie combination of nearness and deep space and silence. In that moment the shape of my life changed. Two years later I moved to Wyoming, and have since lived nowhere else.

One of the first things I learned here was that my preconceptions of "The West" didn't fit. Like many newcomers to the Equality State, I arrived on the broad interstate of cliché, expecting to find a country filled with Stetsoned figures on horseback. Such canned images—the stock-in-trade of

When the bucking bronc fades and the crazyweed takes its place

■

chambers of commerce and tourist commissions—have their uses, giving the casual visitor a ready-made package of concepts, a list of places to go and things to do. But after I had lived here awhile I began to see them for what they are—not responses to the terrain itself, but merely efficient methods of managing large numbers of people. Lately I've come to suspect that the endurance of the cowboy myth is based less on his personal qualities than on those of the scenery around him.

I noticed, too, that the stereotypes that have been nurtured in this country have demanded a certain amount of cut-and-fill. They have left a scar. The cowboy culture that so many of us romanticize was built on a tragic and foredoomed confrontation with nature, the struggle between man and wildness that is symbolized on Wyoming license plates by the cowboy on the bucking bronco. Although the High Noon glamour of its self-reliant heroes still draws the discontented and unfulfilled from every quarter, the mystique of the West has left a legacy of erosion, of overgrazed ranges and diminished wildlife.

As I wait for the clouds to blow off the mountain and bring back that moment from years ago, I find that the gulf that impresses me today is not in the land in front of me, but in myself, in the difference between what I knew then and what I know now. To arrive at a real understanding of this region I had to leave the highways, and even the dirt roads, and find some footpath to a spot like this.

On that first day here I knew so little. I might have recognized Indian paintbrush, but crazyweed, pussytoe, squawbush, Rocky Mountain juniper, and limber pine were strangers. I did not see how these hills had been shaped by a century of livestock grazing. Nor did I know the native plants that had died out as a result, to be replaced with new ones come, like myself, to put down their alien roots into this thin and stony soil. All I could see at first was abundance—the bighorn sheep and pronghorn antelope, the great herds of deer on the meadows at dawn, the tracks of black bear in the forest. I did not feel the absence of the wolves and bison that had vanished, could not miss what I had never known.

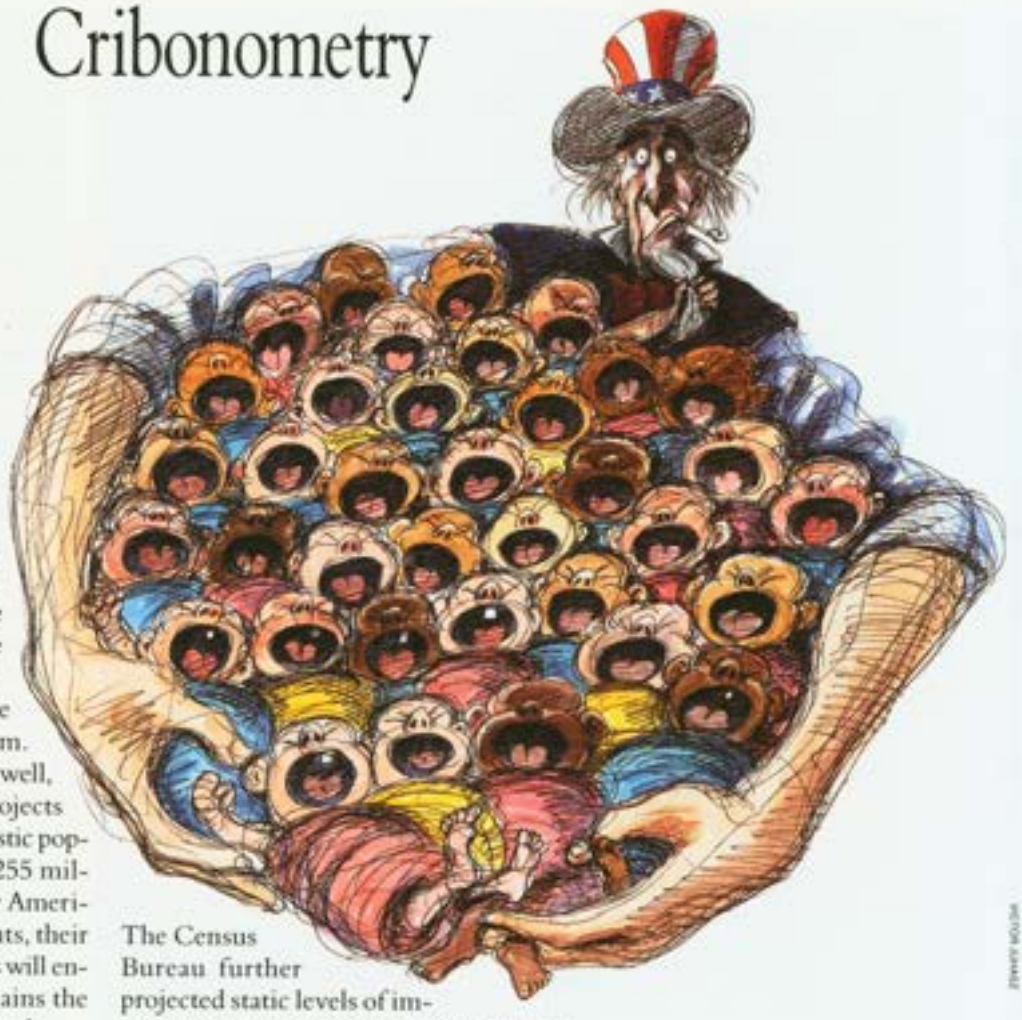
The pine trees around me reach maturity after two or three hundred years. They were surely standing on this spot when the first whites came into the country with their traps and guns, their cattle and wagons. Those trunks that have fallen, their scabby, furrowed bark preserved by the dry air, must once have cast their shade on the original peoples, tribes forgotten by history, who lived on pine nuts and grass seeds and bighorn mutton. Once when I was walking on a footpath near my house I found a tiny arrowhead made of red chert poking out of the soil. An archaeologist friend told me it had been broken and mended, too precious to discard. I still have it on my desk, to remind me that those who lasted longest here left the least evidence. Sometimes I wonder what mark I will leave here myself—the grasses I have let grow around the house, a few crumbling foundation walls in the sage. Or will my legacy be an absence—a vanished flower or silenced bird?

I've been up here on the ridgetop for several hours now, and the clouds are still in place. The mountain, I see, is not going to repeat its magic act of years ago. But it doesn't have to, for now I know it's there. ■

LYNNE BAMA *is at work on a book about the original people of Yellowstone.*

Edited by Reed McManus

Cribonometry



Like a mewling babe, the issue of population growth in the United States squalls on the doorstep, increasingly difficult to ignore. After a long period of decline, the U.S. birthrate is once again on the rise. Four million babies were delivered in 1992, the most since the apogee of the 1950s Baby Boom. With immigration flourishing as well, the U.S. Census Bureau now projects a 50-percent increase in the domestic population by the year 2050, from 255 million to 383 million. If these new Americans are anything like their parents, their profligate use of natural resources will ensure that the United States remains the most overpopulated nation on earth.

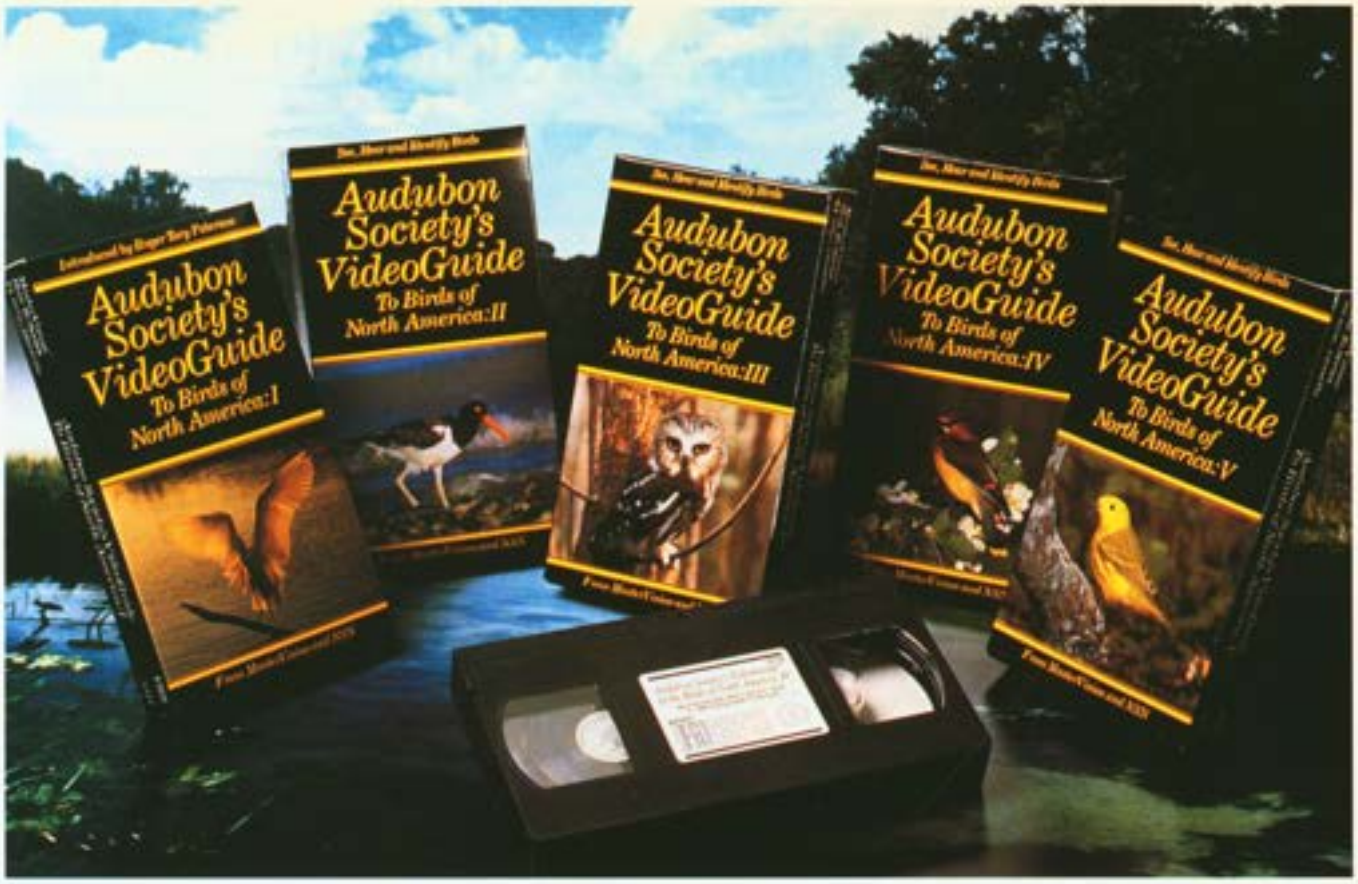
Yet while overpopulation exacerbates every environmental problem, it is perhaps the least-discussed of environmental issues. Because of its connection to abortion, immigration, and sex education, population joins politics and religion as an impolite subject of dinnertime conversation. In addition, census figures during the post-Boom 1970s and '80s seemed to show that substantial progress was being made, with a decline in U.S. fertility rates to a record low of 1.8 children per woman, well below the "replacement" level of 2.1. (The extra tenth takes into account infant and child mortality.) With more women entering the paid labor force and marrying later in life, demographers blithely assumed that 25 to 30 percent of the population would remain childless. The Census Bureau further projected static levels of immigration, and declining family sizes for all economic, educational, ethnic, and religious groups. The U.S. population explosion, the statisticians concluded, had been contained.

But the onset of the "Baby Boomlet" in the late 1980s popped those comfortable assumptions. Women who did not have children in their 20s turned out not to have forsworn parenthood, but only to have postponed it until their 30s or 40s. By last year the fertility rate had climbed back to 2.1, the highest in the industrialized world. Even at replacement level, the huge number of women of childbearing age—higher now than ever before—provides a "population momentum" that will not subside for at least 40 years.

Population stability is not achieved until there is a balance of births and

Demographers play catch-up as American babies boom again.

■ ■ ■



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deaths, immigration and emigration. The 1990 Immigration Act, instead of applying the brakes as expected, actually *increased* immigration, which now accounts for between 30 and 50 percent of the nation's population growth (depending upon one's guess at the level of illegal entry, and on whether the immigrants' subsequent offspring are included in the total). Immigrants also have statistically higher fertility rates, partly because they tend to delay childbirth until arriving in their new home.

When the sidewalks suddenly filled with strollers, Census Bureau demographers scurried to their calculators and came up with "significantly higher" projections for the future. Part of their new calculation was an abandonment of their fondly held belief that the fertility rates of all demographic groups would eventually converge at a common low level. What caused the change in position? According to Bureau fertility specialist Martin O'Connell, "Maybe it was the 59th consecutive year of no evidence."

The demographic lesson here is that people really do have at least as many children as they say they want to have. "From the late 1970s through the '80s, increasing numbers of childless women said they expected to give birth in the future," says O'Connell. "And lo and behold, beginning in the late 1980s, those expectations began to come true."

Yet the Boomlet was more than a matter of demographic inevitability. The savaging of family-planning programs by the Reagan and Bush administrations was a contributing factor (although how much so the Census Bureau is judiciously unprepared to say). Of the 6 million U.S. pregnancies each year, half are unintended, and half of those end in abortion. During the last 12 years of Republican rule, spending on Title X, the nation's primary funding mechanism for family-planning efforts, declined by almost two-thirds. Access to abortion was restricted to the point where only one

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out of five U.S. counties now has doctors available to perform the procedure. Only in the last 18 months has the available range of birth-control options, expanding in the rest of the world, grown at all, and the number of pharmaceutical companies researching new birth-control methods has shrunk from nine to one. (A possible result is the increased popularity of sterilization, now the most common contraceptive option in the United States, three times more so than in the rest of the developed world.) Meanwhile, sex education for adolescents comes too little, too late. For example, the average age of first sexual intercourse for American boys is 16—a point at which fewer than a third of them will have received any sex education in school.

Predictably, the rate of unplanned childbearing among teenagers, the poor, and the less educated—those who rely most on family-planning clinics—has soared. Three out of four unintended teenage pregnancies occur among couples who use no form of contraception. Total teen pregnancies number 1 million a year; the United States, in fact, holds the dubious distinction of having the highest adolescent pregnancy, abortion, and birth rates in the developed world.

Family planners hope that with a friendly administration in Washington, they can finally pick up where they left off 12 years ago, and at least catch up to the rest of the industrialized nations. The early indications are encouraging. President Clinton's very first executive order was to end restrictions on U.S. funding of international population programs: "Many believe that this is one of the most important environmental steps we can take," Clinton said. He also lifted the "gag rule" on abortion counseling at family-planning clinics, ended restrictions on privately funded abortions in military hospitals, and signaled official openness to importation of the French "morning after" pill, RU-486. "In one afternoon ceremony at the

White House," says David Andrews, president of Planned Parenthood. "Clinton reversed 12 years of egregious actions by Reagan and Bush."

But that doesn't mean we can bury our heads in the sand again. Family planning will not bring about population stability if families continue to plan for more than two children, and even a stabilized population doesn't mean much if it comes at a level above the capacity of the environment to sustain it. The first step is to recognize that population is the mother of all environmental issues. *—Paul Rauber*

► For more information, see "Resources," p. 96.

Paying at the Pump

Gas taxes get us only part way down the road

The Big Three automakers rarely see eye to eye with environmentalists, but on one issue, at least, they agree: gasoline in the United States is much too cheap.

Ford, Chrysler, and General Motors have their own bottom-line reasons for promoting this notion, of course, and have been making regular visits to President Clinton to push for a gas tax. Publicly though, they emphasize the environmental rationale: "We have the cheapest gas in the world," says Chrysler spokesman Jason Vines. "You aren't going to get Americans to start buying more efficient cars when a gallon of gas costs less than a two-liter bottle of Coca-Cola."

The rhetoric is welcome. Adjusted for inflation, gas prices are the lowest they've been in 30 years. With a swollen federal deficit, the government could certainly use the revenue generated by a gas tax (a billion dollars for the U.S. treasury for every penny-per-gallon hike). And the nation could use the reductions in pollution, congestion, global warming, and oil imports that such a measure could bring, even as it eased pressure to drill in sensitive

areas like Alaska's Arctic National *Wildlife Refuge. While the levy would* hit poor Americans the hardest, the inequity could be adjusted by changes in welfare benefits and the income-tax code.

In February Clinton did suggest a modest rise in gas prices, through a tax on all forms of nonrenewable energy. During his campaign, however, he called for more—a 40-percent increase in new-car efficiency—but without specifying how he might reach it. So the Big Three's support for the gas tax is a diversionary tactic, a way of avoiding stronger medicine—higher Corporate Average Fuel Efficiency standards. General Motors spokesman Bill Noack said it plainly: "If the government is going to regulate energy, we prefer that it be done through a market mechanism, as opposed to command-and-control CAFE standards." He added that GM would yank its support of a gas tax if Clinton decided to raise CAFE.

Congress is wary of regulating industry these days; it's more fashionable to send a "signal" (read: tax hike) to consumers to discourage wasteful consumption. Yet CAFE regulation has paid off handsomely in the past. Since 1975, when the first such standards were established, the nation's new auto fleets have doubled in efficiency, moving from 13.8 to more than 27.5 miles per gallon. Progress was undoubtedly hastened by a gas-price rise in the late 1970s. But prices plummeted after 1981, and CAFE has kept fuel efficiency up. As a result of today's improved vehicles, gas use per mile in the United States has shrunk by 30 percent. Oil consumption is 2.5 million barrels per day less than it would have been. At the same time, cars hug the road better, accelerate faster, brake more smoothly, and are 50 percent safer than those made before 1975.

In addition, the 27.5-mpg CAFE standard brought us more automobiles with front-wheel drive (which made them lighter), and microprocessor-controlled fuel systems and transmis-

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sions (which use fuel more efficiently). Opportunities for similar improvements are still out there, and not just in what critics disparagingly call "econoboxes." For example, the mid-size Ford Taurus, the number-one-selling car in America, gets 27.5 mpg today. Yet, according to Ralph Nader's Center for Auto Safety, the Taurus could improve to 42 mpg with the addition of a few proven design features, such as more-efficient transmissions, efficient multi-valve engines, and variable valve-timing—changes that entail no sacrifice in size, comfort, safety, or performance.

In smaller cars, the possibilities are even greater. The 1992 Honda Civic VX hatchback is rated at 55 mpg—up from a 1991 Civic hatchback's 37 mpg, with no compromises. As the Union of Concerned Scientists concluded after studying this Honda model, "There are no real technical hurdles to achieving high fuel-economy standards."

Ideally, according to Sierra Club energy lobbyist Dan Becker, higher gas taxes and CAFE standards would work together to improve the nation's fuel economy. The former would encourage consumers to make wiser choices; the latter would ensure that auto manufacturers invest in the technologies that make those choices possible.

Car buyers need to be part of a reform package as well. People who buy a powerful but inefficient car win instant gratification when they drive out of the showroom. The bad news—big bills at the pump—mounts up slowly and almost imperceptibly. A "gas-guzzler" sales tax on cars that get less than 27.5 mpg (5 mpg more than under current law) would send car buyers an important signal by highlighting upfront the difference between efficient vehicles and wasteful ones.

The Sierra Club's Becker argues that the increased revenues from guzzler taxes could help make the CAFE pill less bitter for Detroit. The money generated could be placed in a loan fund to help the auto industry retool fac-

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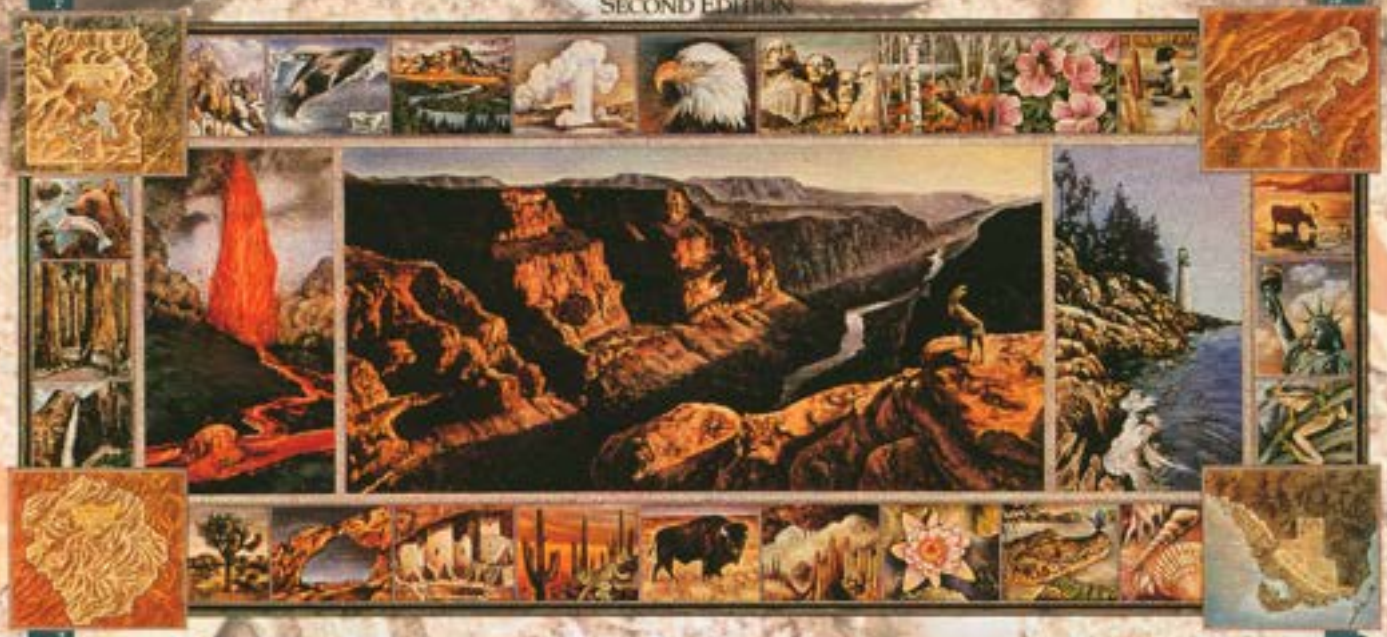

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tories to meet the higher standards. Automakers who met the new standards could have their loans forgiven.

Whether or not all of these ideas appeal to the automakers, the nation needs to go beyond a taxes-only proposal. Gasoline is too precious and polluting a commodity to waste by placing all of our signals at the pump.

—Joan Hamilton

► *For more information, see "Resources," p. 96.*

What Price a Walk in the Woods?

Free-market forestry says: If you want to play, you've got to pay

If America's nature lovers want to save the country's natural resources from the ax, suggests Oregon-based forest economist Randal O'Toole, there's a sensible way to do it: open your wallets.

In a proposal that has divided the environmental community—but that has been partially adopted by the Clinton administration— O'Toole suggests that anyone who hikes, skis, or boats on public lands should pay "fair market value" for their fun—an amount calculated by U.S. Forest Service economists at between $3 and $60 a day. Of course, many would be irked by paying for what is now free—including the Sierra Club, which generally opposes new or increased recreation fees on public lands. O'Toole argues, however, that pay-for-play is the best way to stop the Forest Service from giving away our ancient forests to the clearcutters.

"Forest managers don't sell trees because they like clearcuts, because they are in the pockets of the timber industry, or even because Congress tells them to," he says. "The reason is that they get budgetary rewards for losing money on timber sales. They'll change the way they think when we change the way they get their funds."

Although reforms proposed by the Clinton administration would address some of the worst excesses, at present the national forests are a bonanza for everyone except the taxpayer. A hike in the woods doesn't cost a thing, grazing fees are set at a fraction of market value, and more than half of all national forest timber is sold below the cost of managing it, with Congress picking up the tab for road construction and other groundwork. Timber revenue, however, stays with the local Forest Service, except for a 25-percent share that goes to rural counties to pay for roads and schools. No matter how much money those timber sales lose, or how environmentally destructive they may be, they still provide the bulk of many Forest Service budgets, which local managers are then free to apply to programs skimpily funded by Congress, like recreation or wildlife.

O'Toole cites the system's ludicrous results: in Big Horn National Forest in Wyoming, timber receipts paid for a study of a historic site that was subsequently destroyed in a timber sale; Caribou National Forest in Idaho used timber money to fund a "recreation interpreter" to explain to visitors why clearcuts were not such a bad thing; Gallatin National Forest in Montana sold timber in prime grizzly habitat in order to finance road closures to protect the grizzly.

"Forest managers are not a bunch of stupid or biased people," says O'Toole, "but all the incentives are to be a timber management agency. The whole idea is to change their incentives."

Imagine, he says, that the Forest Service charged visitors a modest $5 a day for wilderness use, or $3 for ordinary camping and hiking or just driving through a national forest. Multiply that by the 300 million "recreational visitor days" Americans spend in their woods each year, and you're talking real money—twice as much as the timber industry contributes. If New Mexico's Santa Fe National Forest charged $3 a visit, for example, it would take in $8 million from recreation fees, compared with less than $1 million from timber. The Forest Service, in fact, has

calculated that by 1995 the recreating public would be willing to pay $6.7 billion—more than four times as much as timber and grazing combined.

The way O'Toole figures it, if hikers and campers were paying the bills, today's timber beasts would become tomorrow's gentle interpretive specialists, managing forests for recreation values rather than maximum board feet. Logging and grazing would be further reduced by requiring these industries to pay for themselves—a terrifying prospect to many loggers and ranchers who now stay in business only by grace of the government's low use-fees. And if rural counties got their 25-percent cut from recreation instead of timber, they would lose much of their current incentive to act as cheerleaders for the timber industry.

Although O'Toole's proposal is not yet on the Forest Service agenda, it is already being embraced by managers like Jim Webb, supervisor of Colorado's Rio Grande National Forest. "Right now there are very few profit generators within the Forest Service," he says—only oil-and-gas development and some timber sales. "We just want to make sure that every user of national forest land pays their fair share." That would mean substantially increased grazing fees, administrative costs charged to would-be miners, and special charges for hunting and fishing. "These ideas have been discussed in the past, but for any number of reasons they haven't been politically viable," says Webb. "This may be the time when they are—if we're really serious about dealing with the deficit."

Some environmental groups are also lining up in favor of recreation fees, including the Oregon Natural Resources Council and the increasingly market-oriented Environmental Defense Fund, whose senior economist Peter Emerson finds charging such fees "a very constructive and positive idea."

Other groups, such as the Sierra Club and The Wilderness Society, remain skeptical. Their objections are partly philosophical. "These lands are

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the birthright of all of us," says the Club's acting conservation director, Bruce Hamilton. "If the Forest Service wants to charge higher recreation fees to deal with the problems created by recreational use, that's appropriate. But what does it cost the federal government for me to go cross-country skiing? Not a thing. And why should recreation fees go to reduce the deficit, when the deficit was caused by their undercharging all those other guys in the first place?"

Accepting the premises of "free-market environmentalism" has its perils. While recreation dollars may outweigh logging fees in popular forests close to urban centers, what about remote areas that don't get many visitors? If environmentalists decide to leave everything up to the market, they won't very well be able to complain when they're outbid. "How do you value biodiversity on the floor under an ancient forest?" asks the Sierra Club's Hamilton. "No one's going to pay for those microbes, but a logging company would pay a great deal for the trees. There are some things that society as a whole ought to pay for."

There are also easier ways to kill a cat than by drowning it in butter. "Randal is a free-market economist, but this isn't a free-enterprise system," says Bill Arthur, the Sierra Club's Northwest regional representative. "Below-market-value timber, grazing, and mining rights are subsidies granted by law. Let's eliminate those unfair subsidies, and we'll eliminate most of the problem."

President Clinton seems to agree, although for his own reasons. His deficit-reduction package anticipates saving $274 million by ending below-cost timber sales; gaining $76 million through higher grazing fees; and collecting $791 million by reforming the infamous 1872 Mining Law. But he also eyes recreation, proposing to take in $72 million through increased camping fees, and $193 million through new or augmented entrance fees to public lands. If Congress agrees, the free lunch is over—for everyone.

—P.R.

► *For more information, see "Resources," p. 96.*


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A Place at the Table

A Sierra Roundtable on RACE, JUSTICE, AND THE ENVIRONMENT

THE ERA OF AN AMERICAN ENVIRONMENTAL MOVEMENT DOMINATED by the interests of white people is over. The beginning of the end came in September 1982, in Warren County, North Carolina, when more than 500 predominantly African-American residents were arrested for blocking the path of trucks carrying toxic PCBs to a newly designated hazardous-waste landfill. Among those taken into custody was the Reverend Benjamin Chavis, executive director of the United Church of Christ Commission for Racial Justice (CRJ). His suspicions as to why North Carolina would choose a black community as a dump for its poison were confirmed in a milestone report by the CRJ in 1987, which demonstrated that the single most significant factor in the siting of hazardous-waste facilities nationwide was race. A subsequent report, by the *National Law Journal*, found that the EPA took 20 percent longer to identify Superfund sites in minority communities, and that polluters of those neighborhoods were fined only half as much as polluters of white ones.

Armed with proof of what has become known as "environmental racism," a loose alliance of church, labor, civil rights, and community groups led by people of color arose to demand environmental justice. Part of doing so meant confronting the so-called "Group of Ten," the nation's largest—and largely white—environmental groups, and bluntly accusing them of racism.

The charges came in early 1990 in a jolting series of letters from Louisiana's Gulf Coast Tenant Leadership Development Project and the Southwest Organizing Project in Albuquerque (see "The Letter That Shook a Movement," page 54). Abashed, many of the mainstream groups vowed reformation, if not transformation. Last May, in a speech celebrating the Sierra Club's centennial at Harpers Ferry, West Virginia, then–Executive Director Michael Fischer called for "a friendly takeover of the Sierra Club by people of color." The alternative, he said, was for the Club to "remain a middle-class group of backpackers, overwhelmingly white in membership, program, and agenda—and thus condemn[ed] to losing influence in an increasingly multicultural country. . . . The struggle for environmental justice in this country and around the globe must be the primary goal of the Sierra Club during its second century."

Recently *Sierra* invited some of the leading proponents of the environ-

Illustration by Richard Stotting

mental justice movement to San Francisco to explore how we might arrive at that multicultural future. Attending were the Reverend Chavis; Richard Moore, co-chair of the Southwest Network for Environmental and Economic Justice in Albuquerque and longtime community organizer; Vivien Li, chair of the Sierra Club's Ethnic Diversity Task Force and director of the Boston Harbor Association; Scott Douglas, then community organizer with the Sierra Club's Southeast Office (he has since been named director of Greater Birmingham Ministries); and Winona LaDuke, director of the White Earth Recovery Project in Minnesota. The discussion was moderated by Carl Anthony, president of Earth Island Institute in San Francisco and founder of its Urban Habitat Program.

Carl Anthony: We've all been involved in the struggle for environmental justice for a very long time, even if we didn't always call it that. Reverend Chavis, you invented the term "environmental racism," didn't you?

Benjamin Chavis: We coined it, but the reality was out there—we just gave language to it. This movement for environmental justice is a definitive movement: we're redefining our realities. Our guiding principle is that our work must be done from a grassroots perspective, and it must be multiracial and multicultural. We are learning how to do that. There's no blueprint, but there are guiding principles that emerge, and that's what we want to share with you.

The good news is, we're being inclusive, not exclusive. We're not saying to take the incinerators and the toxic-waste dumps out of our communities and put them in white communities—we're saying they should not be in *anybody's* community. When the movement first got going, I think some whites actually became afraid, because they thought it was a movement of retribution. It is not a movement of retribution—it is a movement for justice. You can't get justice by doing an injustice on somebody else. When you have lived through suffering and hardship, you want to remove them, not only from your own people but from all peoples.

By the way, I'm a history buff, and I would like to note that the Sierra Club is the first one of the Group of Ten to actually invite members of the environmental justice movement to its national headquarters. I've come to the environmental justice movement from a 30-year-long career in the civil rights movement, in the fight for racial justice. I find that the environmental justice movement is emerging as the bridge movement, bringing diverse racial and ethnic communities together in a profound way, a way no other issue even has the potential to do.

Richard Moore: It's certainly the first meeting that I've attended where we've been asked to come together and have this kind of dialogue. We appreciate that—that's what the letters and all that was about in the first place.

Anthony: Richard, you've written quite a few letters, and they all made a lot of waves. Could you tell us about the one that you wrote to the big environmental groups?

Moore: Back in 1990 we had classes at the Southwest Network in how to write. A lot of our people don't know how, and we figured if we were going to offer literacy classes, we should at least do something productive. It was very difficult for us; we spent a lot of time talking about it, because we knew that there would be ramifications. It meant a lot to people because it was the first time that we've had the opportunity, as poor people, as working-class people, as people of color, to sit down and talk about how we feel about things and then transfer that to paper.

Basically, we raised three issues. One, the issue of some—

VIVIEN LI • Sierra Club Ethnic Diversity Task Force; Director, Boston Harbor Association, Boston, Massachusetts

"We have to be careful we do not allow ourselves to be pitted against each other, divided and conquered."

not all—of the mainstream environmental organizations accepting money from the same corporations that are killing our people.

Secondly, we had concerns about the staffing of mainstream environmental organizations and the composition of their boards. If you put one black person or brown person or red person or yellow person on the board and think, "OK, everything's going to be cool," that's not what we're talking about. We have not seen the kind of forward movement that we would have hoped to see. We knew nothing was going to change overnight, but at the same time we have not seen that movement.

The third one is more basic. Who is it you are advocating for? In New Mexico, where I've lived 25 years now, there has been a history of problems and conflict between our communities and environmental organizations. We're talking about land issues, water issues, regulations that environmental organizations have been pushing forward—for the protection of who? For what? If it's for the protection of us, then how come we haven't been involved in it? Why do we have to hear something third down the line, sixth down the line, or never down the line? If it is to protect our interests, then bring us to the table, because we do very fine at protecting our own interests.

CARL ANTHONY • President, Earth Island Institute; Founder, Urban Habitat Program, San Francisco, California

"The traditional movement distances itself from cities, denying that they are even part of the environment."

Anthony: A good example of the attitudes of the more established groups toward communities of color is *Blueprint for the Environment*, which was submitted to George Bush when he took office. It contained 750 detailed recommendations from 18 established environmental groups, including proposals for every Cabinet department except two: the Department of Housing and Urban Development and the Department of Labor. The groups could have made recommendations about lead poisoning, energy conservation in public housing, siting of affordable housing near transportation corridors, occupational health-and-safety issues in the workplace. But they didn't. In retrospect, it is clear that ignoring these two departments clearly reflected the movement's racial and class biases.

Your letters made public what a lot of us in social justice movements were feeling. At first, many of the environmental groups denied charges of racism. But then, gradually, they realized that the charges were serious. It was a kind of wake-up call. Vivien, how did the Sierra Club respond?

Vivien Li: The Sierra Club started looking at the issue of environmental justice in the 1970s. We cosponsored, with two other environmental groups and the National Urban League, a conference in 1978 in Detroit that brought together 700 people from around the country, people of color as well as more traditional environmentalists, to look at how the civil rights movement could work together with the environmental movement.

Unfortunately, once the Reagan/Bush administration came in, people went back to protecting their own turf. Had there been a continuation of that kind of coalition effort at the grassroots level, I think we would be a lot further ahead today. I think your letters were important, because they focused people's attention on working together again.

As to the funding issue, I've served for three years on a three-person committee that reviews every corporate gift to the Sierra Club over $1,000. We do not take money from the oil industry, from the paper industry, from chemical companies, tobacco companies, or major polluters. If there is ever any doubt about a corporation's environmental record, we don't take money from them.

The diversity of our staff and board is an issue that concerns the Club. We don't have an easy fix for it, but we're committed to trying to change, starting at the grassroots and

The Letter That Shook a Movement

THE ENVIRONMENTAL JUSTICE movement, a loose coalition of hundreds of grassroots groups led by people of color, was born out of a challenge to the country's largest environmental organizations. Below are excerpts from a letter sent by the Southwest Organizing Project on March 15, 1990, to what's known as the "Group of Ten": the Sierra Club, Sierra Club Legal Defense Fund, Friends of the Earth, The Wilderness Society, National Audubon Society, Natural Resources Defense Council, Environmental Defense Fund, National Wildlife Federation, Izaak Walton League, and National Parks and Conservation Association.

We are writing this letter in the belief that through dialogue and mutual strategizing we can create a global environmental movement that protects us all. . . .

For centuries, people of color in our region have been subjected to racist and genocidal practices, including the theft of lands and water, the murder of innocent people, and the degradation of our environment. Mining companies extract minerals, leaving economically depressed communities and poisoned soil and water. The U.S. military takes lands for weapons production, testing, and storage, contaminating surrounding communities and placing minority workers in the most highly radioactive and toxic work sites. Industrial and municipal dumps are intentionally placed in communities of color, disrupting our cultural lifestyle and threatening our communities' futures. Workers in the fields are dying and babies are born disfigured as a result of pesticide spraying.

Although environmental organizations calling themselves the "Group of Ten" often claim to represent our interests, in observing your activities it has become clear to us that your organizations play an equal role in the disruption of our communities. *There is a clear lack of accountability by the Group of Ten environmental organizations towards Third World communities in the Southwest, in the United States as a whole, and internationally.*

Your organizations continue to support and promote policies that emphasize the cleanup and preservation of the environment on the backs of working people in general and people of color in particular. In the name of eliminating environmental hazards at any cost, across the country industrial and other economic activities which employ us are being shut down, curtailed, or prevented while our survival needs and cultures are ignored. We suffer from the end results of these actions, but are never full participants in the decision-making which leads to them. . . .

We . . . call upon you to cease operation in communities of color within 60 days, until you have hired leaders from those communities to the extent that they make up between 35 and 40 percent of your entire staff. We are asking that Third World leaders be hired at all levels of your operations. . . . Also provide a list of communities of color to whom you furnish services, or Third World communities in which you have organizing drives or campaigns, and contacts in those communities. . . .

It is our sincere hope that we can have a frank and open dialogue with your organization and other national environmental organizations. It is our opinion that people of color in the United States and throughout the world are clearly an endangered species. Issues of environmental destruction are issues of our immediate and long-term survival. We hope that we can soon work with your organization in helping to assure the safety and well-being of all peoples.

working all the way up. It should never be a question of a token minority on the Board of Directors. One of the things that we're trying to do is to ensure that diversity is an issue throughout the Sierra Club, for both staff and volunteers.

This past year, we funded 12 grassroots organizing projects proposed by Sierra Club activists. These ranged from a lead-poisoning prevention effort in San Francisco's Chinatown to a campaign against toxic dumping on the Rosebud Reservation in South Dakota. We're trying to connect traditional Sierra Club work with community-based efforts.

The type of change we're talking about is very fundamental, and it will not happen in one or two or even five years. The Sierra Club is a hundred years old, and some of the baggage that we carry, frankly, goes back a long time. I think we've made significant progress, but clearly we're not totally there yet.

Chavis: I was very happy when I heard that the Sierra Club had hired Scott Douglas; I think that was an indication of the Club's seriousness.

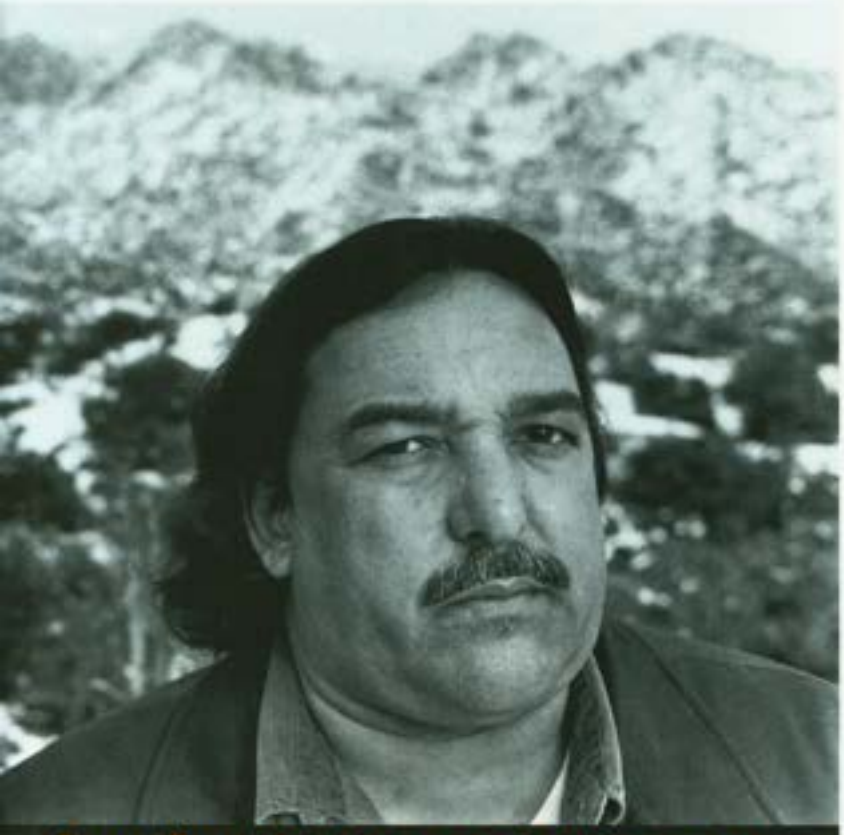
Scott Douglas: You know, I think my position as grassroots organizer owes its existence to those letters. The writing project worked, Richard, at least that aspect of it.

My commitment, coming out of the civil rights movement and the peace movement, is to renegotiate the relationship between peoples, and between peoples and the earth. Some of the best models for that process are from Native American traditions. They teach us that part of that renegotiation is mutuality and respect for people's cultures, respect for the lessons that they have learned. We're erasing peoples at a hellish pace, and with them goes their body of knowledge. We erase indigenous peoples, and then give some university a $10-million grant to discover one-tenth of what those people had accumulated over eons. That's not very efficient.

Anthony: We often forget that there are 60 million people of color in the United States; soon we aren't going to be "minorities" any more. Already more than a third of the actual physical territory of the North American continent has in-

digenous people as its majority population. Winona LaDuke, are Native Americans ready to be part of the "mainstream"?

Winona LaDuke: We are not part of and do not wish to be part of the mainstream of America. We are different. America has to come to terms with our difference, and to recognize our need for territorial integrity and self-determination.



Richard Moore • Co-chair, Southwest Network for Environmental and Economic Justice, Albuquerque, New Mexico

"After a bill is already developed, someone says, 'This affects Indian people—we better find an Indian and see how they feel about it.'"

My reservation is in northern Minnesota, 36 miles by 36 miles, located between Bemidji and Fargo, one of seven Ojibwa reservations in the North. We were ceded a huge area under a treaty of 1867, a land we call the White Earth. It's a wealthy land full of lakes, pinelands, farmlands, prairie, and most of the medicines our people have used for centuries. That's why we don't have it today. By 1920, 90 percent of our reservation was in non-Indian hands, seized by a bunch of illegal land transactions. Most of our people were forced off the reservation and into poverty. Three-quarters of them are refugees. Most Native Americans, in fact, are refugees.

Our work is about trying to reclaim our land base. We've tried every legal recourse, but have had no success in the court system. So we are trying to reclaim that land through other processes, including negotiations with large absentee landholders like the Potlatch timber company or the Boy Scouts of America, who own thousands of acres there.

We've also had federal legislation introduced for the return of 50,000 acres—the Tamarac National Wildlife Refuge. Right now the refuge is pretty much used as a hunting ground for sport hunters from Minneapolis; nine times as many deer are taken by non-Indians as by Indians there, and only 40 percent of the lakes are closed to duck hunting. We hunt, but only for subsistence. We hunt because we're poor, because we need that food, because that's what we've always done.

I have to say that historically, environmental organizations, including the Sierra Club, have sometimes opposed land transfers back to Indians. We're hoping that that doesn't occur in our case. So far it's been pretty good.

Chavis: I would like to pay deference here to our Native American sisters and brothers, who have been trying to focus the attention of the environmental justice movement on the sacredness of the air, the water, the land, the sacredness of the Creation. Social justice movements often leave spirituality out, but the environmental justice movement holds spirituality as a very key element.

LaDuke: In my language, most nouns are animate. A rock, *asin,* is animate, and *mandamin,* corn, is animate. They have standing on their own, they have spirit. They are not recognized as objects or resources; they are instead recognized as vital living things that we have to respect and have a relationship to.

Native people consider themselves a part of nature. There's no separation, like the one that necessarily exists in the industrial mind. Unfortunately, most environmentalism comes out of that mind, not out of the indigenous mind. The challenge faced by environmentalists is to decolonize their industrial minds.

Anthony: It's interesting the way language and culture work. I would say most African-Americans and Latinos have long been aware that our neighborhoods were dumping grounds for locally unwanted land uses, but not until Ben Chavis invented the term "environmental racism" did we have a name for it. When the United Church of Christ Commission on Racial Justice published *Toxic Waste and Race,* which docu-

mented the disproportionate siting of hazardous-waste facilities in our communities, everyone knew right away what they were talking about.

Li: For Native Americans subjected to toxic- and hazardous-waste facilities, we're talking about very detrimental health effects. For example, Native American infants suffer from the highest rates of sudden-infant-death syndrome—also known as crib death—in the country. Doctors don't know why Native Americans are afflicted more than any other group, but exposure to environmental poisons can't help.

LaDuke: There have been a hundred separate proposals to dump toxic wastes on Native communities. [See "Their Mother's Keepers," March/April.] Fifteen of the 18 federal research grants for Monitored Retrievable Storage Facilities [for nuclear wastes] went to Indian reservations. One-third of all low-sulfur coal and two-thirds of the uranium mined in this country are on Indian reservations. We have nuclear radiation all over our land, but no major environmental group in this country has a uranium campaign. No major environmental group in this country has dealt consciously with the issues of Native people. Our communities are bearing the brunt of America's energy policy,

THE REVEREND BENJAMIN CHAVIS • Executive Director, United Church of Christ Commission for Racial Justice, Cleveland, Ohio

"The destroyers of the environment are also the destroyers of our neighborhoods and communities."

yet no one has seen fit to address our concerns in their policy-making.

Anthony: Few people realize how much communities of color suffer from bad energy policies, from inappropriate hydroelectric dams and nuclear power projects to over-reliance on fossil fuels. Navajo teenagers still suffer from radiation exposure from uranium mining. Several years back, the Center for Third World Organizing in Oakland found that these exposures were causing cancer at a rate 17 times the national average.

It's not just nuclear energy; dependence on fossil fuels also places burdens on our communities. From the extraction of fossil fuels to their distribution, use, and waste, our communities get fewer benefits and pay a greater price. Stripmining in the Four Corners region for energy users hundreds of miles away creates a national sacrifice zone on sacred Native lands, without even providing for local energy needs. Poor people of color in the cities use up to 35 percent of their income to purchase energy; renters get none of the incentives to weatherize their homes, but they are stuck with big heating bills. And even though people of color drive fewer vehicle miles per year than other city dwellers, freeways often cut their communities in half, destroying their economic and social lives in addition to exposing them to a disproportionate amount of air pollution.

My own work in the Urban Habitat Program focuses on these issues, trying to build a multicultural urban environmental leadership. I'm sorry that we haven't heard much yet today about the cities. Historically, people of color have been concentrated in barrios and ghettos without adequate neighborhood services, schools, or open space. This concentration is the result of a long history of discrimination.

Li: Think back to how Chinatowns were started. They were the only place that Chinese people could work and congregate and have an identity. Up until the early 1960s, Chinese immigration was greatly restricted, and Chinese tended to settle along the two coasts where they had gained entry. Since they were considered inferior to Caucasians, no one wanted to work with them, so they developed their laundries and their restaurants, frankly for economic survival.

It's been different since the 1960s and '70s. Now there are Vietnamese, Cambodians, and Laotians who have come not just to seek a better future but because they have been subjected to political persecution in their native lands. Many of them tend to be poor and less well-educated; they have more

difficulty identifying a cultural niche for themselves. Here in San Francisco, the Chinese are very well-organized politically, as is the Japanese community, but amongst Laotians and Cambodians it has been much more difficult. In order for them to get attention paid to urban environmental issues like rodent control and lead poisoning, they must first develop that political power.

Anthony: I think it's very important for us to understand and connect to our history. When we talk about history, of course, we're really talking about peeling an onion, because we begin to see connections that we didn't see before. I'm thinking about Thoreau, who was imprisoned for protesting the Mexican-American War, which relates to the Treaty of Guadalupe Hidalgo; or Martin Luther King, who was shot in Memphis protecting garbage workers. The connections between the civil rights movement and the environmental movement are really quite rich.

LaDuke: In our case, unfortunately, the trouble is that environmental groups have, historically, come from a Eurocentric perspective. That is not an inclusive perspective, and it's not something we can relate to. Many times, in fact, environmental groups make decisions that affect other communities without the input of those communities. One of them even purchased land on our reservation without ever talking to us about it, and restricted our use of an area that had medicinal plants.

Douglas: In Alabama, we have the largest hazardous-waste dump in the country, at a place called Emelle. It got put in Alabama because white environmentalists negotiated the site with Chemical Waste Management without talking to the black community, which was getting the message that there was going to be a brick factory there. These guys had the audacity to negotiate that county's future—and still think they were doing it in our interest!

Moore: After our letter went out, we got calls from communities all over northern New Mexico thanking us. "For the first time," they said, "legislators called us and said, 'We're developing a bill. Do you want to come to the meeting and help us?' " Because what usually happens is that after the bill is already developed, someone says, "This bill affects some Indian people—we better find an Indian person and see how they feel about it." You know how it goes—it comes on down through the fax machine, and you have 15 minutes to decide: "We'd like to give you more time but we're in a hurry, 'cuz it's got to go to Senator So-and-So . . ."

We are talking about providing grassroots organizations the possibility of bringing issues to the table. That's what it's all about. It's about us speaking for ourselves. It's not about what's taking place under the table, it's about what's taking place on top.

LaDuke: I've been working for 16 years on Native environmental issues: with groups that have five members in the middle of the Navajo Reservation to Innu from northern Labrador who have been fighting the siting of a military base and a bunch of dams up there. Those groups are frontline environmental groups, but they are seen instead as *Native* groups, because the big environmental movement wants to position itself clearly as *the* environmental movement. We need to broaden the definition and to recognize these grassroots groups that have been struggling over these issues for all these years. What we need is a place at the table.

WINONA LADUKE • Director, White Earth Recovery Project, White Earth, Minnesota

"Unfortunately, most environmentalism comes out of the industrial mind, not the indigenous mind."

Anthony: With its focus on wilderness, the traditional environmental movement on the one hand pretends there were no indigenous people in the North American plains and forests. On the other, it distances itself from the cities, denying that they are part of the environment. It's interesting what we talk about and what we avoid talking about. For example, in this roundtable at the headquarters of the Sierra Club, it occurs to me that we, as people of color, have had

Scott Douglas • Director, Greater Birmingham Ministries, Birmingham, Alabama

very little to say about nature. Some people may think that people of color are insensitive to plants and animals, that we don't care about the biosphere . . .

Chavis: I agree it's important to be able to see through a lens that doesn't filter nature out of this discussion. One of the things that has emerged is the bifurcation between wanting to protect animal species and protecting the human species. That is a false bifurcation. The notion that you can protect the ozone layer from further deterioration without seeing the degradation in the neighborhoods, the barrios, and the ghettos is a false notion.

Douglas: My job assignment in Birmingham is to assist grassroots groups working against the imposition of injustice in the environmental field. As I went to those communities, I noticed that they didn't separate the hazardous-waste incinerator from the fact that lead poisoning is not being dealt with in their schools, from the fact that their schools have been underfunded, that they have no day care, no jobs, no access to jobs. They don't separate it, because their quality of life as a whole is going down. So who was I when I came to visit their community organizations? Was I Scott Douglas the environmentalist, or Scott Douglas the get-out-the-vote guy? These problems are all wrapped up together, and it teaches us a very important lesson: oppressed people do not have compartmentalized problems. Very seldom do you go to a low-income black community, and the only problem is the incinerator: "Man, if we got rid of the incinerator, we'd be fine!" The incinerator is merely the external reflection of a whole host of problems.

Anthony: The people that I work with, young people, don't make artificial divisions between homicide in the inner city, gang violence, toxics that come from incinerators, and the slaughter of dolphins. They don't make all these distinctions that other people do when they have budgets to submit to foundations.

Moore: Sometimes the big environmental groups seem to think that we're imagining things. If you choose, you *can* come to the conclusion that we're just a bunch of crazy people who are trying to raise some hell and get our names in the paper. And you would be making a very serious mistake.

Li: Richard, I've yet to hear anybody here in the Sierra Club differ with you on the issues. I think you could probably cite some examples, but overall the kinds of things that you're talking about are exactly the same types of things that Sierra Club activists at all levels have been talking about. No one wants more lead paint. We're not pushing for more landfill dumps. We're not pushing for incineration. We were the ones who got $10 million for job retraining into the Clean Air Act . . .

"Seldom do you go to a low-income black community where the only problem is the incinerator."

Moore: Let's not act as though what we're saying is not a reality. The Sierra Club has been responsible, has been a co-conspirator in attempting to take away resources from our communities. Like we said in our letter: your organizations are supporting policies that emphasize the cleanup and preservation of the environment on the backs of working people, and people of color in particular. When you come into our communities talking about closing down the plant, who's working in the plant? We've had to close down plants, let me tell you that. In the final analysis that plant may have to go: it's killed people inside, and has also poisoned our groundwater and our air and our children outside. But we went through a process first, attempting to bring workers into the decision.

Li: I think we have to be careful we do not allow ourselves to be pitted against each other—people of color should not be divided and conquered. All of us care about jobs, be it Sierra Club people, people in the community, whoever. But what is happening, frankly, is that you believe that there is a split between jobs and the environment. And if you believe

Continued on page 90

Who Says Environmental Protection Makes Economic Sense?

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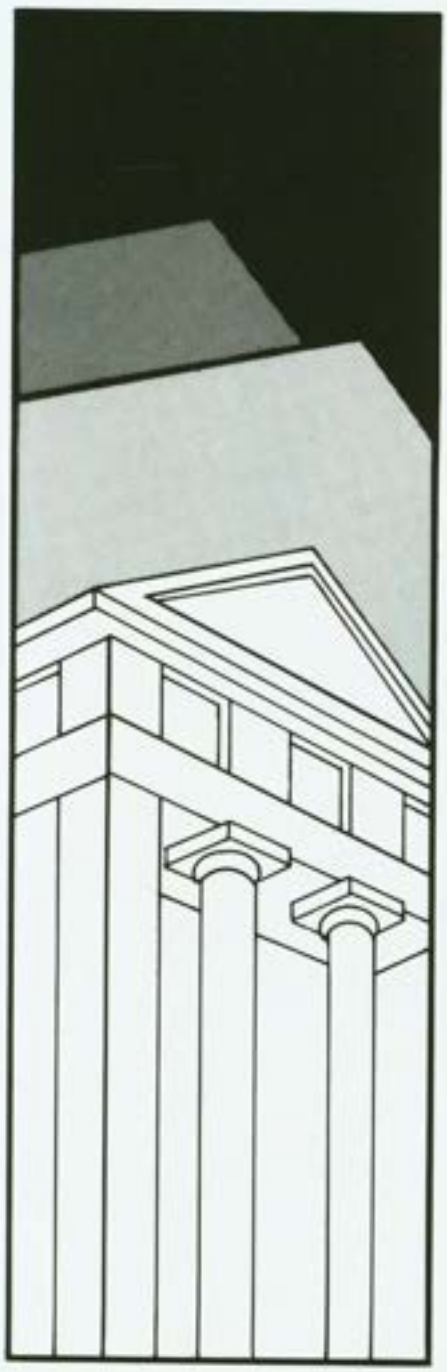

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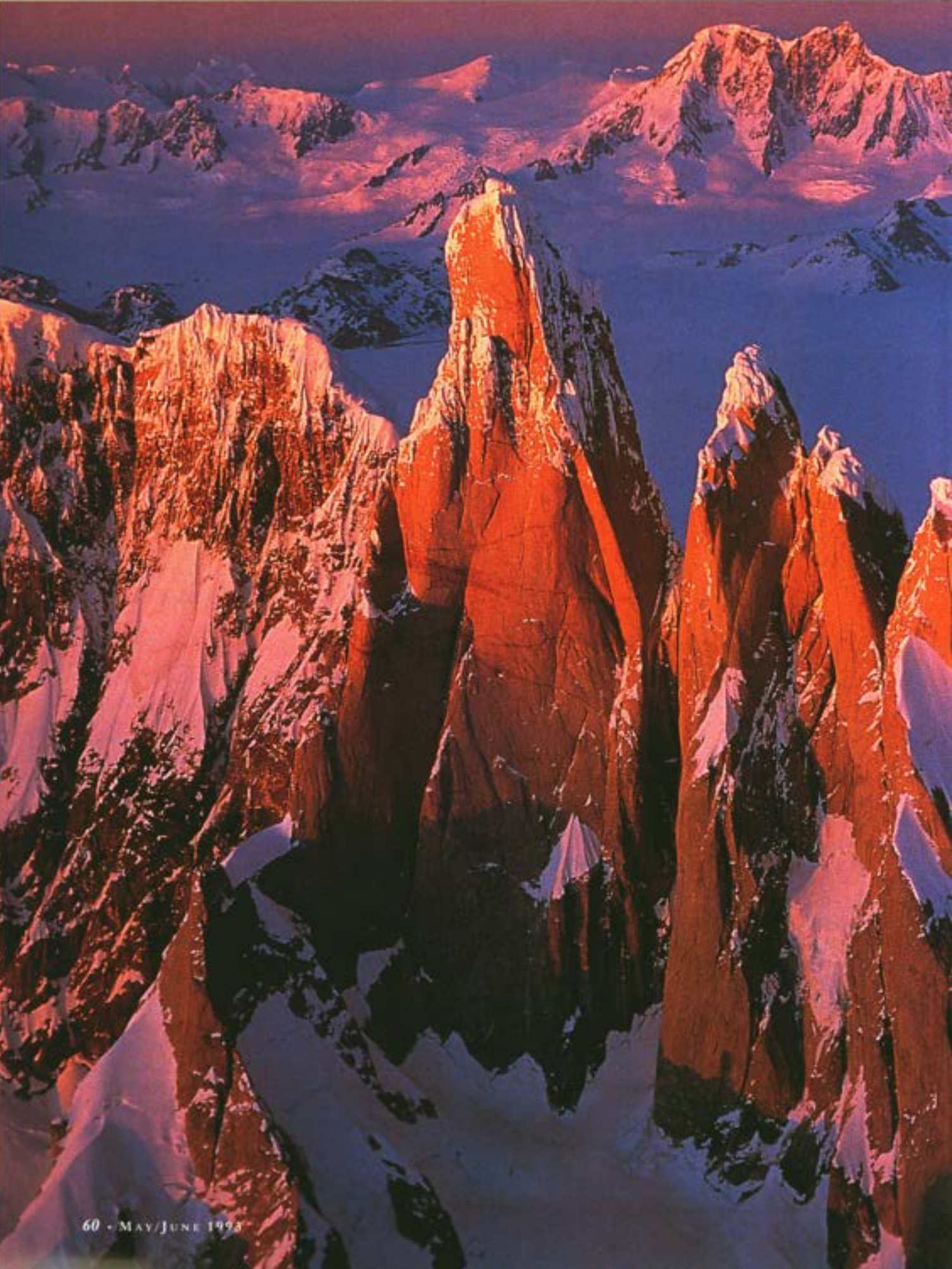


HIGH HOPES

FEW OF EARTH'S FEATURES APPEAR MORE ENDURING AND IMMUTABLE THAN ITS MOUNTAINS. A relief map of Asia conveys how solidly they define the world: the Caucasus and the Urals form borders between Asia and Europe; the Himalaya isolate Tibet from India; the Tian Shan divide China from Kirghizia; the Altai stand guard at the intersection of Russia, Mongolia, and China. From adventure-travel accounts one gains the impression that the Andes, the Rockies, and other great ranges are fortresses all but impervious to assault. Unlike lowlands, where rainforests, rivers, marshes, and grasslands can be easily reached and destroyed, highlands seem aloof, secure in their immensity and sacrosanct in their beauty, mystery, and power.

A World of Mountains Worth Saving

But the Sierra Club's long experience in defending the Sierra Nevada and other North American mountain ranges against the onslaught of developers has taught us that the uplands are indeed vulnerable. While our species once feared and revered the Olympian heights, today we arrogantly and ignorantly reshape the gods' former abodes. The "conquest of mountains" no longer signifies men and women striving to reach difficult summits. It now connotes the reckless human bent for blasting and molding mountainsides to accommodate resorts and egos; for removing a mountain's insides and leaving tailings to poison streams; for stripping forested slopes of their trees and their dignity.

Though what's happening to mountains under the crush of expanding populations is alarming, the damage isn't irreversible. Hopeful voices were raised last year at the Earth Summit in Rio de Janeiro, where scientists from the International Mountain Society put forth a plan to save the highlands: they called for intensive alpine research and a vast array of conservation projects, and convinced all 178 governments in attendance to sign on to the program.

For the plan to succeed, the world's mountains will need a large and dedicated constituency. Brilliant dreamers and zealous defenders must give the peaks a voice. To that end we present a portfolio of words and images, some portraying enduring grandeur, others depicting tragic decline. Our hope is to inspire not just sighs (whether of admiration or despair), but commitment.

A lone backpacker crosses a 17,700-foot pass on Thorung La in Nepal (above). All too often, the mountains pay for the appeal they exert: trash left by expeditioners spoils scenery in Tibet (right). Closer to urban areas, recreation development brings roads and crowds to fragile landscapes (opposite, the Dolomites of Italy).

PROSPERITY'S BLIGHT

THEY ARRIVE FROM ALL OVER THE WORLD – VACATIONERS IN ever-increasing numbers on pilgrimages to the mountains. Often in search of respite from urban ills, these sojourners are finding more and more that the troubles they hoped to leave behind shadow them up the slopes.

Mass tourism boomed after World War II as industrial economies recovered their strength and low-cost, long-distance international travel became readily available. Mountain areas closest to population centers have borne the brunt of this onslaught. Perhaps hardest hit have been the European Alps, where a persistent rash of ski resorts has spread across the slopes.

Nor are the highlands of developing nations immune to such infections, brought on by international-lending banks and aid agencies that cheerily help convert rural economies into ones that depend on cash from tourists. The resulting shift often disrupts the cultural habits of centuries. Populations may boom, and the people may abandon their traditional stewardship of forests, water supplies, and wildlife to chase after vacationers' dollars, marks, and yen.

Unfortunately, thoughtless trekkers from well-heeled countries too often generate not only currency but crises. They discard trash, encourage their guides to burn scarce firewood, and overwhelm local cultures, particularly at the height of the tourist season. At those times, the First World meets the Third in an all-too-obvious clash of lifestyles.

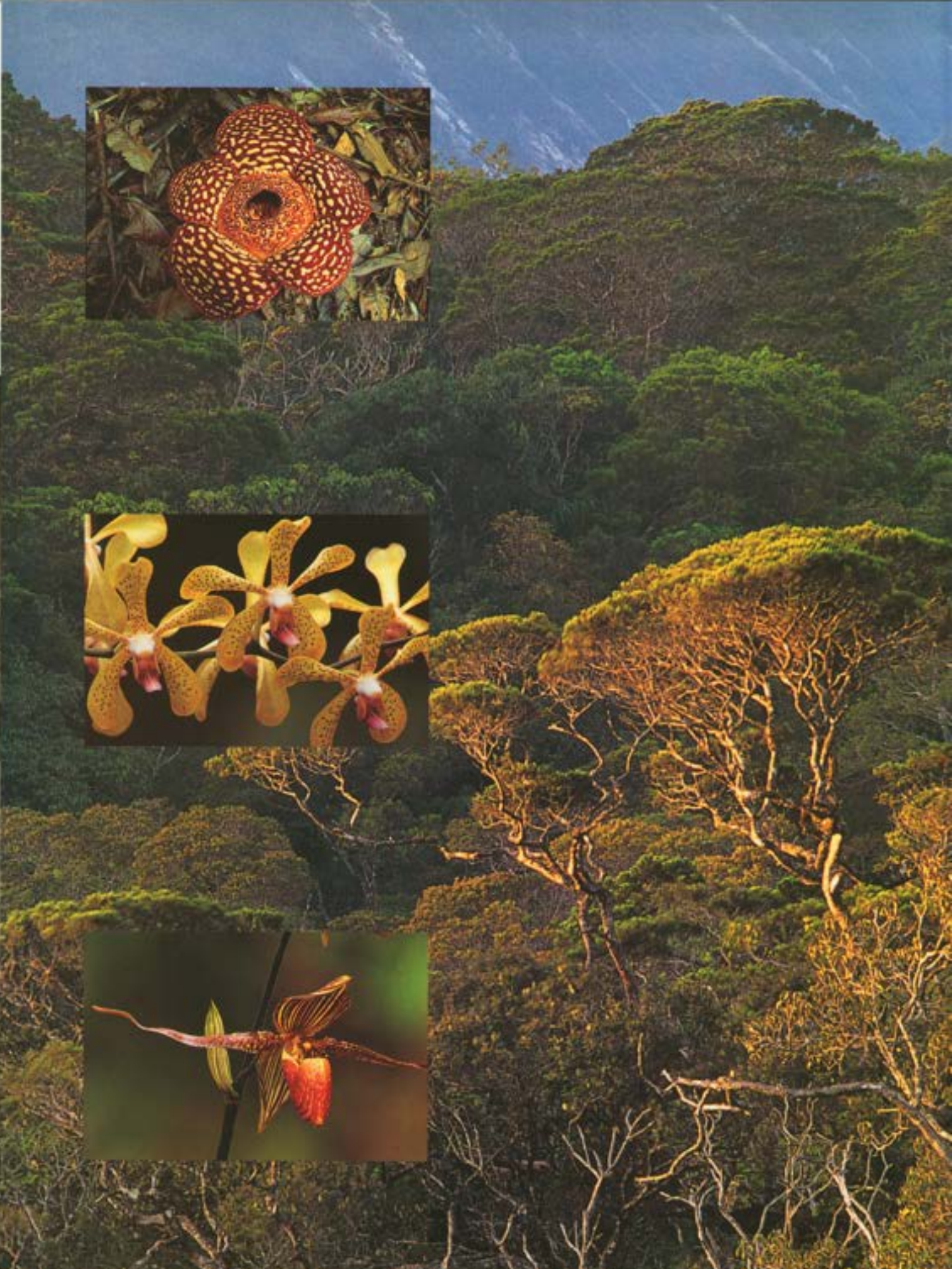
THE WELLSPRINGS OF LIFE

THE WATER THAT MOUNTAINS CAPTURE, STORE, AND DELIVER TO THE LOWLANDS has historically been the lifeblood of much of humanity. The first tribes migrating to North America flourished in Rocky Mountain valleys, supported by abundant streams and lakes. In the Old World, cultures thrived for millennia along Egypt's Nile River Delta, depending on water that originally fell as rain in mountains as far away as present-day Ethiopia and Burundi. Mediterranean civilizations developed rapidly where the Apennine, Atlas, Pindus, Taurus, and other ranges collected ample moisture.

Yet communities and whole regions can quickly come to harm when timber-cutting and grazing denude the highlands, as has happened with disastrous results in Madagascar, Haiti, the Philippines, and other countries where populations have burgeoned. Rain pelting barren hills is shed quickly, gathering force and generating floods with greater destructiveness than natural circumstances would provoke. Topsoil may erode and wash out to sea. Silt may clog irrigation systems and foul drinking-water supplies. In dry seasons the lack of vegetation can aggravate water shortages, and streams and wells may run dry.

By capturing and holding moisture–as in the Canadian Rockies (opposite)–mountain ranges serve as natural water towers, dispensing life's elixir to habitats and communities downstream. Where water is mismanaged, farmers may be forced to cultivate nearly barren soil, as in parts of the Tibetan Himalaya (above).

In the Himalaya and other ranges in the developing world, the main threat to watersheds is not from those living traditional lifestyles at subsistence level. Rather, it is from megaprojects pushed by the World Bank, or various regional development agencies, or both. Schemes involving heavy earth-moving equipment—roads, commercial logging, and mining—can exacerbate erosion and other disturbances, sometimes disrupting entire watersheds. Dams can drown rivers. The toll of human misery these projects exact can be equally severe as they force villagers from their valley homelands, in some cases driving them to till unproductive lands high on the slopes.



ABUNDANT LOSSES

BY VIRTUE OF THEIR HEIGHT AND EXPOSURE TO THE ELEMENTS, mountains support many life zones that harbor remarkably diverse flora and fauna. The dramatic mix of habitats on many tropical mountains varies from pastureland and deciduous forest to rainforest, coniferous forest, tundra, and icefields. A single mountain in Borneo—Kinabalu—is home to as many as 4,500 plant species, nearly a quarter of the number found in all of the United States.

While lowland tropical forests rank as the most biologically diverse places on the planet, all mountain habitats are valuable for the variety of endemic plants and animals they embrace. Countless montane species may be lost before scientists fully investigate their genetic material or determine how they might be used for producing new drugs or foods. In some areas, the intricate interweaving of plants, animals, soils, and climate may unravel altogether.

Mass extinctions are sweeping across mountain ranges worldwide like Biblical plagues. Among the most threatened habitats are those of Madagascar, eastern Tanzania, Sri Lanka, and the Philippines, along with the forests of India's Western Ghats, the eastern Himalaya, and the lower Andean slopes of western Amazonia. In North America, the ugly swaths being cut through wildlife habitat by irresponsible logging practices have left many species with no place to call home.

The rainforest of Mt. Kinabalu (background, opposite) in the Crocker Range of northern Borneo supports impressive biodiversity, including (insets, top to bottom) rafflesia flower, freckled orchid, and Rothchild's slipper orchid. In Washington's Gifford Pinchot National Forest (above), native plants and animals are being lost to clearcutting.

THE SACRED PROFANED

A VEIL OF MYTH AND LEGEND HAS LONG BEEN WRAPPED AROUND MANY of the world's mountains, adding mystery to their features while obscuring them from trespassers. Centuries ago on New Zealand's North Island, Maori warriors crossing the high plateau at the base of Mt. Tongariro would not look directly at the volcanic cone. They feared insulting the peak's spirit and being punished with a blinding snowstorm.

For many devout millions, mountains continue to be far more than agglomerations of stone or mere recreation sites. They are the dwelling places of supernatural beings either benevolent or malign, or are gods themselves. The traditional Quechua people of the Andes commune daily with mysterious *apus* who reside in even the smallest hillocks. The larger an apu's domain, the more formidable its power. Many of the world's 600 million Hindus regard an entire, mighty range as one god: Himalaya, father of Parvati, the wife of Shiva. In the Xishuangbanna Mountains of Yunnan, China, the forests are considered holy, and are protected from disturbance.

These traditions are now crumbling, as industrial society fosters a technocratic attitude toward mountains that is far from reverential. It is difficult to imagine any mining engineer invoking the gods, or asking for forgiveness before blasting away a hillside.

New Zealand's traditional Maori venerate the three volcanic cones of Tongariro National Park, including 7,516-foot Mt. Ngauruhoe (above). In Montana, miners excavating the Little Rocky Mountains near Fort Belknap Indian Reservation (opposite) revere only gold.

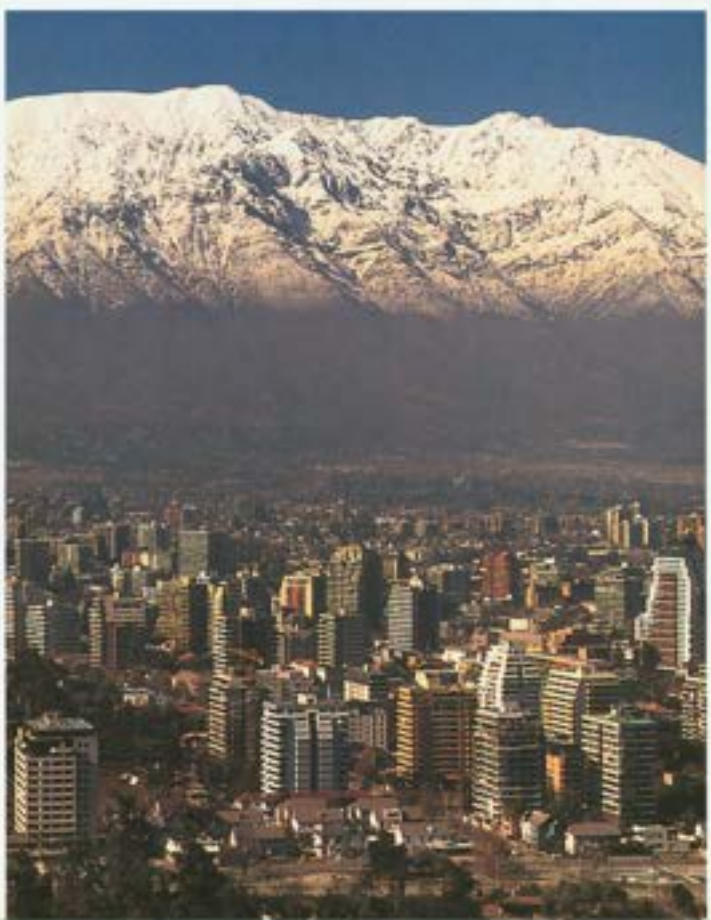
THE DISPOSSESSED

MOST TRADITIONAL MOUNTAIN CULTURES REGARD AS ALIEN THE modern Western concept of nature as something apart from and subservient to humans. They see the natural world as encompassing and supporting them while demanding their respect. Given the freedom to live as they have for many hundreds or even thousands of years, highland societies typically exact only minimal toll from the land, farming on terraces to minimize erosion, practicing shifting cultivation to preserve soil fertility, collecting medicinal plants, cutting trees selectively, and utilizing animal dung for fuel.

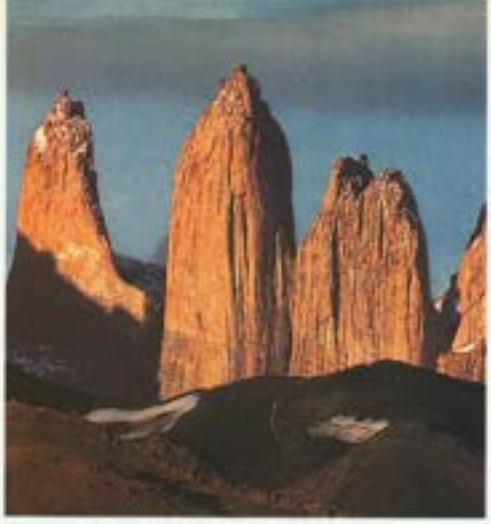
Topography often combines with traditional feelings of kinship with the land to promote conservation practices. Before the Spanish conquest of western South America in the 1500s, natives of the Andes had successfully adapted to their vertical world by developing a highly specialized form of agriculture in which varied crops—including the first potatoes—were grown on small parcels of land spaced out up the slopes like patches on a quilt.

Today the vast majority of native Andean people—like indigenous mountain people in developing countries around the world—live in abject poverty. They have little choice (if they have any choices at all) but to work on large plantations given over to cash crops. The imposition of foreign land-tenure and farming systems has proved disastrous for the Andean environment. Indian families produce as many as a dozen children each in desperate hope of extra hands to provide for the table. The population crush has forced a mass migration of campesinos from the highlands to such sprawling coastal cities as Lima and Santiago. There millions live in squalid shantytowns, breathing the fouled air that piles up against the mountainsides like trash against a curb.

Patchwork fields in the Andes (opposite) recall pre-Columbian agricultural techniques. A Quechua girl (inset) carries some of the land's produce to market in Chincheros, Peru. With most Andean farmland controlled by a few wealthy owners, growing numbers of unemployed mountain dwellers escape to crowded, polluted cities such as Santiago, Chile (below).



LEFT: KAY WOLFE. RIGHT: WOLFGANG KAEHLER. RIGHT: LUIS PADILLA / IMAGE BANK



TOWERING MONUMENTS

IN 1972, MOST COUNTRIES ATTENDING A UNITED NATIONS conference in Paris agreed to identify their outstanding geographical areas and nominate them for consideration as World Heritage Sites. Once approved by an international committee, the delegates decreed, the places so designated would be safeguarded in perpetuity through the cooperative efforts of the world community.

To date, 25 mountain areas in 15 countries have been inscribed on the World Heritage List. Such designation has helped to modify road proposals for Mt. Huascaran in Peru, discourage mining on Mt. Nimba on the border between Guinea and the Ivory Coast, and limit ski-resort development on Bulgaria's Mt. Pirin.

Many spectacular areas nominated for the list still await approval; of even greater concern are those areas not yet nominated but eminently deserving of protection, such as the high country around the confluence of the Tatshenshini and Alsek rivers in British Columbia's northwest corner. Though an urgent case can be made for protecting all mountains—even those celebrated only by the people who dwell in their shadows—it is heartening that the nations of the world have concluded that some peaks and ranges, at least, are so distinctive that preserving them is clearly in the interest of all.

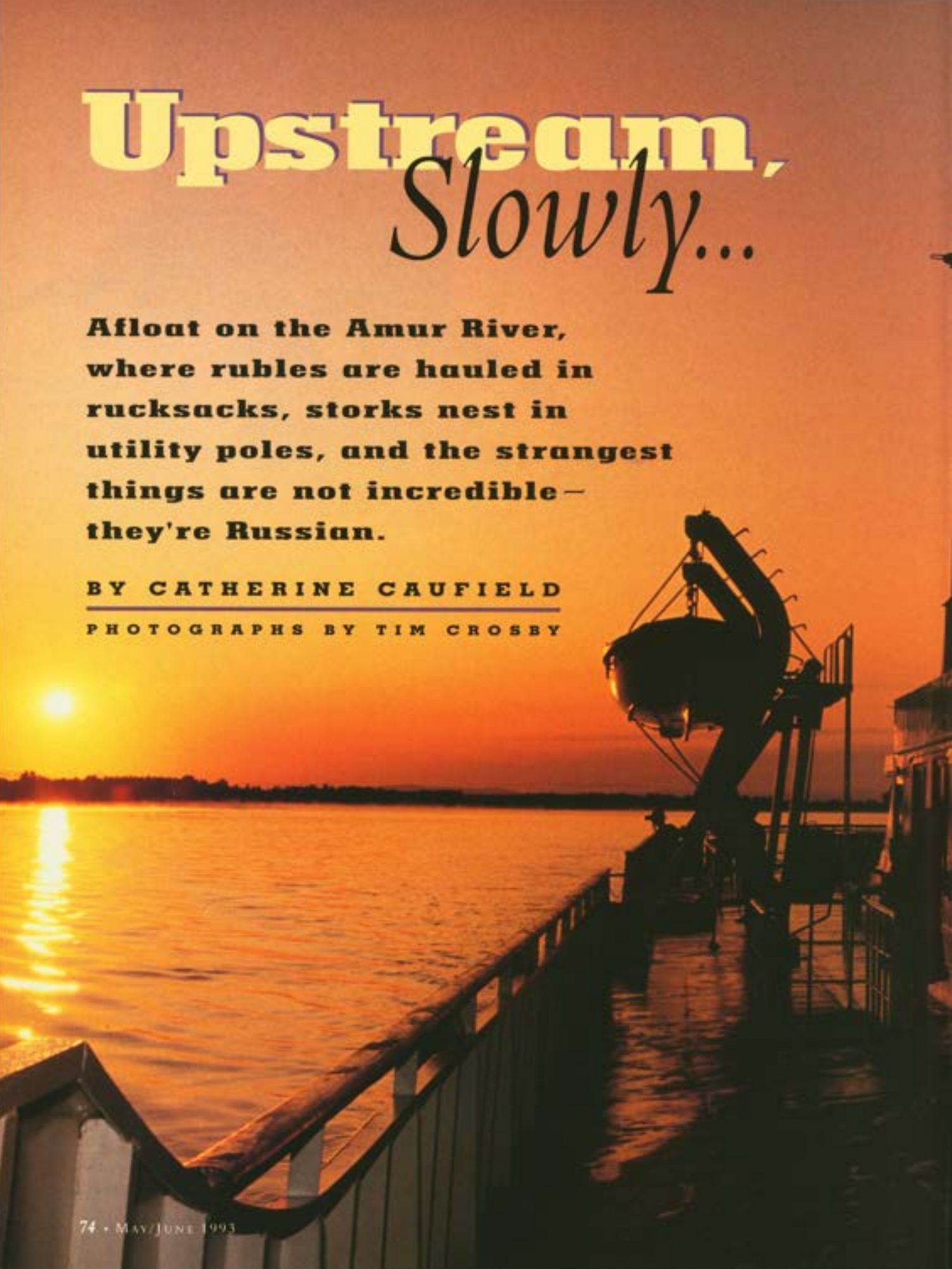
The dramatic peaks and ice of the St. Elias Mountains characterize the World Heritage Site of Glacier Bay National Park and Preserve in Alaska (above). Chile's Torres del Paine (opposite), whose centerpiece is a set of otherworldly spires, have been nominated for World Heritage designation.

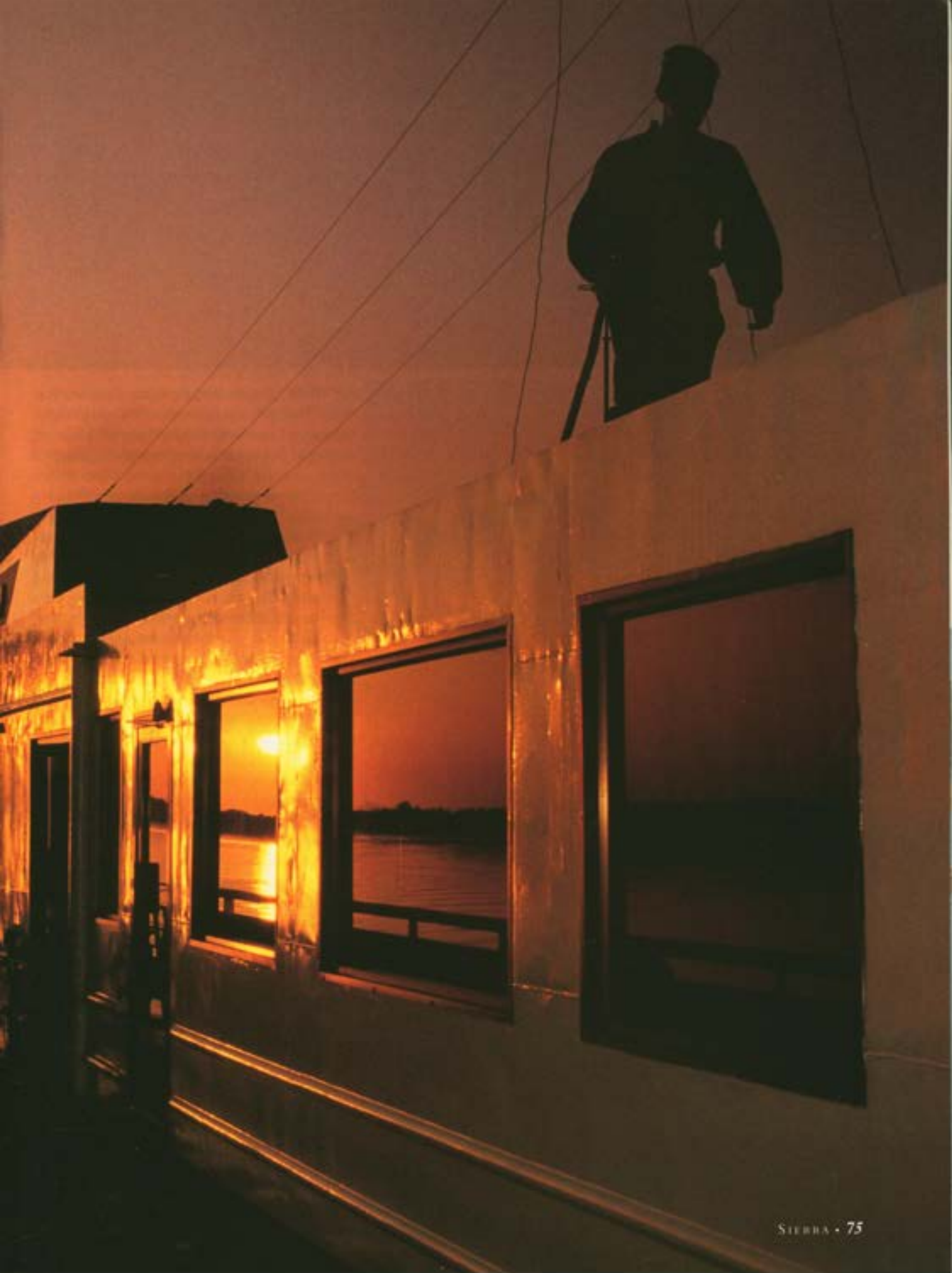
Upstream, *Slowly...*

Afloat on the Amur River, where rubles are hauled in rucksacks, storks nest in utility poles, and the strangest things are not incredible—they're Russian.

BY CATHERINE CAUFIELD

PHOTOGRAPHS BY TIM CROSBY





I am elated with my first steps on the prairie. The ground is hummocky, uneven, and still quite wet from the previous year's floods. Bands of soft purple from the ripening grass merge into swaths of blue vetch; masses of lofty white meadowsweet wave over a wash of golden sedge. Half-hidden deeper in the thigh-high grass are blue cranesbill, fire-orange brilliant campion, and several colonies of white bog orchid. One of the most common flowers here is a Siberian iris, its black-purple petals touched deep inside with a brilliant gold. It is surrounded by the Siberian versions of such familiar delights as ladies' bedstraw, cotton grass, bellflower, and such exceptional ones as a carnelian-colored day lily, a fat orange globeflower, and the wonderfully named gooseneck loosestrife. Willows line the streams, groves of paper birch are scattered across the landscape, and Mongolian oaks spread their great branches in noble solitude.

It is the prairie, above all, that has drawn me to this isolated part of Russia. My longing began last year, when Sergei Smirenski, an ornithologist at Moscow University who has studied rare cranes in the Amur River Basin for 18 years, showed me a few pictures of the grasslands where the cranes nest. I was entranced; I yearned to see these places of orchids and lilies and irises before they were destroyed—as I gloomily assumed they soon would be—by dams and mines and logging. But ever since the bloody Sino-Soviet border clashes of the early 1970s, the Amur—which forms the border between Siberia and Manchuria—has been off-limits to foreign visitors.

Considering that it is the eighth-longest river in the world, the primary route through Siberia to the Pacific, the historically contested border between two of the world's great empires, and a major salmon spawning ground, it's surprising how few people outside Russia and China have ever heard of the Amur River. In those two countries, however, the Amur is more than a river: it's an icon, the Mississippi and Colorado rolled into one. To the Chinese it is Heilong Jiang, the "Black Dragon River"; to the Russians it is Amur-Batyushka, "Father Amur," partner to "Mother Volga."

A few months after I saw Sergei's photographs, I learned that he had managed to get permission to take a group of foreigners on the river for 12 days, in connection with a conference that he was organizing on the cranes of the region. The plan was to take the gathering of Russian, Chinese, Japanese, and American crane specialists 700 miles upriver to see various nature reserves and nesting sites. Between stops, the participants would present papers on cranes and discuss strategies for protecting this endangered family whose members are so striking in appearance, dramatic in behavior and, in many ways, mysterious to science. I'm not a bird person, but still, this was a trip to the Amur prairie. I signed up.

The size of the group surprises me: it seems as if every crane expert in the world is here. In addition to the nearly 50 scientists, there are several translators, some local officials (with their families) invited to smooth our passage down the river, a few journalists and photographers, and a Japanese television crew. With almost 80 people to accommodate, Sergei has hired the biggest ship on the river, and very nice it is too: the *Poyarkov*, a 250-foot-long vessel owned by the Sputnik Youth Organization.

We set out from Khabarovsk, almost 600 miles from the mouth of the Amur. As we head west, the cooling towers and smokestacks of the city give way to white-sand beaches full of people swimming and toasting themselves under the blazing Siberian sun. Before long, we have left all evidence of urban life behind and entered an enormous tree-spotted plain, half-hidden by a riparian fringe of willow.

All this was once a vast wet prairie, under water for several months every autumn when the river swelled with rain. Now less than 5 percent of the Amur prairie survives in its virgin state. Some has been drained and planted; this arable

land is—or aspires to be—as sterile and boring as any intensively farmed land in California's Central Valley, though a good number of field weeds flourish, tall and colorful, among the young crops. But many millions of acres have simply been set aside for cattle-grazing, and some of the land is still surprisingly rich in wildlife. Storks and cranes nest here, brown bears hunt honey, kestrels and herons fly overhead, and pheasants hide among high grasses and countless wildflowers.

In the afternoon we pass a Russian gunboat whose job, apparently, is to make sure that no Chinese vessel crosses into the Russian shipping lanes. Patrol boats and watchtowers are common all along the river on both sides, though thanks to improved relations between the two countries, many of the towers are unattended. The river is wide in this stretch, a mile or so across, and even with its many islands there is plenty of room for separate Russian and Chinese traffic in each direction. The problem, as we will learn, is not width but depth. Eighty percent of the rain that feeds the Amur falls between mid-July and mid-September. It is now early July, which means the cranes are breeding, but the river is at its most shallow.

The low water poses no problem for the hundreds of small fishing boats we pass. All along the river, families are casting out fine nets and hauling in loads of fish. But this is also the spawning season for most Amur species, when, supposedly, fishing is banned by both China and Russia. Near one Chinese village, however, I see many nets hung out to dry. I ask Sergei about the illegal fishing and find I've touched a raw nerve. "It's forbidden—and you see, we are not allowed to fish now, but it's not enforced by the Chinese," he says. "Last year at this time we saw 2,500 Chinese fishing boats along one stretch of river. I tried to get the foreign ministry to object, but they refused." When I ask why the Russian government would put up with such a situation, he gives me a look that combines resignation and suppressed anger with a certain pride in the unfathomability of his homeland. "It's Russia," he shrugs.

It's dawning on me that this trip is taking me into two new realms, the river and Russian life, or at least that part of Russian life that reveals itself in our floating world. My Russian companions talk about the horrors and absurdities of their situation with mixed rage, embarrassment, and amusement. I learn, for example, that because there are no checking accounts for private citizens and since money wired from one bank to another has a way of disappearing, someone had to haul a rucksack bulging with a million rubles from Moscow to Khabarovsk to pay for our transport and supplies. Toward the end of our trip, we discover that Sergei has been overcharged for the ship, but that the management refuses to refund the difference. Instead, we are to have free access to the bar for our remaining nights, an arrangement announced with a pained smile by Sergei's wife, Elena, a committed teetotaler.

The riparian prairie. The Amur's surviving marshlands offer refuge to Oriental white storks (above) and wild lilies (left).

Life among the craneheads is good—not that I pay close attention to the actual meetings, at which a great deal of highly technical information is presented. But I am not alone in this. There is never a lack of company, if company is desired, with whom to lean against the railing and contemplate the passing shore. Outside the meeting rooms, the main topic of conversation is not cranes or storks, but the river. Only one or two of the Russians and Chinese on board have ever been on the Amur, so we are all fascinated by it, and spend hours daily out on the deck watching, trying to read the landscape.

We also get some political and social commentary, mostly from the Russians, as the Chinese seem reluctant to explain life in their country; perhaps they are simply frustrated by the language barrier. On deck one afternoon I have an endearing encounter with the chairman of the Municipal Committee on Ecology and Nature Development for Amursk, a city downriver from Khabarovsk whose air and water are polluted by a huge paper mill. "My job," he tells me, "is to make life difficult for the mill." When I ask if it is possible to drink the water in Amursk, he says, "Oh, yes—but only after boiling it," and then bursts out laughing.

Though I am here to botanize, I am surrounded by people who generously and enthusiastically call my attention to a succession of gray herons, cormorants, black kites, and bitterns, and I become a birder by default. Soon I am eagerly fumbling with my binoculars, trying and usually failing to focus on a faraway moving dot before it disappears. Early one morning such a dot, swooping and diving for insects, stays with the ship for so long that I am able to identify it as an Amur falcon. A major accomplishment.

The landscape along the first stretch of river is placid but never static. For one thing, it seems that the two banks, the Chinese and the Russian, are always differently formed. If the Russian side has wide sandy beaches, the Chinese has severely eroded cliffs; tree-edged farm fields on one side mean giant-reedgrass marshes on the other; open prairies are answered by low, forested hills. One consistent difference between the two riverbanks is that there are fewer settlements on the Russian side. The main reason for this is the several-thousand-mile-long electrified barbed-wire fence erected by the Soviet government 20 years ago along most of its border with China.

The fence, which runs next to the river in some places and as far as several miles back from the shore in others, for many years effectively put the Amur off-limits to the Russian people. Only in the last two years have locals received permission to cross the fence and use the land and the river. "This fence was a typical Soviet operation," says Sergei. "It kept us from the Amur, and allowed the Chinese free access. And it's been replaced three or four times at a cost of a million rubles per kilometer. They would prefer no one to know this." When I express incredulity, he replies with his favorite phrase: "It's not incredible; it's Russia."

Our first stop is Amurzet, which has the strange configuration of many Russian settlements: crumbling wooden shacks are scattered throughout what passes for the business district; the main streets switch from dirt to paved and back again; run-down modern blocks of flats stand opposite little fairy-tale houses painted in soft pastel colors and decorated with painted figures and cut-outs of stars, garlands, and flowers.

Amurzet is in the Jewish Autonomous Region, declared a "homeland" for Soviet Jews in 1928 by Stalin in an effort to populate this harsh and unsettled land. Tens of thousands of city families who knew nothing of farming were shipped out here, and many froze or starved to death in the first cruel winter. The children and grandchildren of those who survived now work for the local collective farm, whose huge tractors lumber down dirt roads between vast fields of potatoes, corn, and beets, and thousands of acres of grazing land.

On an abandoned part of the farm a pair of rare Oriental white storks nest on an old wooden survey tower. Extinct now in Japan and Korea, the entire remaining population of these birds (approximately 800) breed here along the Amur and its tributary, the Ussuri. Sergei wants to band the young storks so that researchers can track their migration to their wintering grounds in central China. The idea in stork and crane banding is to wait until the young birds are near enough to adult size that the bands won't damage their growing legs, but still too young to fly away. With 30 ornithologists watching him, Sergei climbs the aging, 40-foot-high tower, a chain of numbered yellow bands dangling from his belt. He tests each crosspiece before hoisting himself onto it, sending small bits of wood raining down on his uneasy audience. The huge stork's nest at the top is eight feet across and three feet high, and it overhangs the tower on all sides. As he nears the nest, I cringe at the thought of his trying to scale this insecure mass of twigs—woven together to support a family of storks but certainly not a well-built man more than six feet tall.

Sergei gingerly extends an arm to the top of the nest, and just as I'm about to avert my eyes from the horrible sight of him toppling backwards, a huge stork rises up and sails away. "Follow him!" Sergei shouts, dropping his bands to the ground, and suddenly three more great birds fly off. A fine spray of birdshit demonstrates the storks' shock at being disturbed. All is confusion, with several in our party running after the birds that are sailing toward the ground, and the birds themselves just managing, with many awkward flutters and flaps of their wings, to stay in the air and evade capture. One of our party estimates that these giant chicks are only 55 or 60 days old—old enough, it turns out, for them to have had perhaps a week too much flying time under their belts for our purposes. It's a disappointed troop of birders that turns to go back.

Southern Siberia's short growing season yields primarily potatoes and cabbages (left). While some Oriental white storks find nesting trees (above left), others must be more creative (above).

Past Amurzet the river narrows, and we enter a beautiful, 100-mile-long gorge through the Little Khingan Mountains. Suddenly the landscape spans the river, covering both banks in the same deep green. From either side, a series of forested ridges overlap, enfolding the Amur and obscuring its tortuous course through the mountains ahead. The wind picks up and rain feels imminent—a good thing, since the captain doubts that we'll make our next stop with the water this low. From the ship we can see the diversity of trees that make up these thick forests: birches, Mongolian oaks, poplars, Amur lindens (whose fragrant flowers make the sweetest honey I've ever tasted), elms, and larches. Grapevines and white-flowered Manchurian clematis festoon their trunks, and ferns, shrubs, and herbs form a thick understory.

The forests of the Amur and the Ussuri reflect an unlikely mingling of two hemispheres. Climate and geology have created a refuge where plants and animals of the Arctic coexist with those from subtropical areas. Reindeer, sable, and Himalayan black bear live here, and so do Sika deer, the world's remaining 350 (or fewer) Siberian tigers, and the very rare Amur leopard. More than 100

Aspens on the outskirts of Khabarovsk. The Amur's seasonal fishing ban is unheeded by the Chinese (right).

species of wildflowers are native to the area, including strains of lilac, columbine, and cuckoo-pint. These are not the scrawny northern conifer forests I had imagined, but rich, fantastically populated woods.

Loggers have been in these forests since the 19th century, but until recently the intensity of cutting was low enough to allow natural regeneration. These remaining ancient forests, especially in the Sikhote Alin Mountains north of Vladivostok, have attracted foreign logging companies. South Korea's Hyundai Corporation is logging at least 200,000 acres here, and Weyerhaeuser has applied to cut 2.4 million more.

No clearings are visible on the Russian side of the gorge, but on the Chinese side we see large clearcut areas, some being farmed, some replaced with conifer plantations, and some simply abandoned. Though it is evident from the river that China has logged, farmed, and settled this area quite intensively, the Chinese in our party say that in fact this land just along the bank is relatively undeveloped compared to half a mile inland, where almost every tree has been cut.

Just before sunset it rains, cheering the captain a little, and clearing the air. We ply westward into a pale pink sky.

I awaken early the next morning to watch the sunrise. As we emerge from the gorge with the sun still beneath the horizon, I try to imagine it as the Russian and Chinese authorities hope it soon will be: under 150 feet of water backed up behind a hydroelectric dam. Thanks largely to several decades of border tensions, the Amur has until now managed to remain free-flowing, one of the very few of the world's great rivers that has. The Khingansky Dam, named for the gorge it will destroy, is one of 12 dams proposed for the Amur and its Russian tributaries. Under an agreement between the two countries, Russia and China will build the dam and share the electricity it produces. China needs that electricity to power the ambitious development plans for its side of the Amur, plans that include designating seven new economic-development zones, stepping up logging and coal mining, and intensifying agriculture to create what they call "The Great Northern Food Basket." Though ecologists say this gorge is about the worst place on the river for a dam, engineers have determined that it is the place where water can be turned most efficiently into power.

The Khingansky Dam will certainly be efficient in one

The Endangered Species Story. Because We Still Haven't Done Enough.

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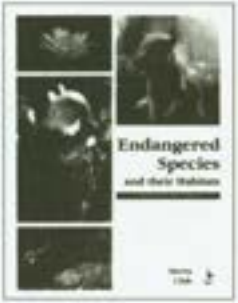

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sense: by itself it will destroy hundreds of square miles of forest, prairie, and river. Many endangered species, including the red-crowned and white-naped cranes, the Oriental white stork, and the soft-shelled turtle, will perish when the habitat they depend on, the flooded prairie, disappears. The great Siberian sturgeon will lose 80 percent of its spawning grounds, and scores of other species will be unable to migrate in the blocked-off river. Rare birds that depend on salmon—the fish owl, the Chinese merganser, and the white-tailed eagle—will suffer in turn.

Sergei hopes that the Chinese will join with the other scientists at the conference to issue a statement objecting to the Khingansky Dam, but it is not easy for them to criticize their government. Only four of the 21-member Chinese contingent come to a meeting to discuss the dam. One is Piao Xiwan, a young, well-dressed man to whom all the other Chinese defer, though he is not officially their delegation's leader. Piao sits silently at the back of the room, an intimidating presence. After listening to Sergei and some American wildlife experts, one Chinese scientist agrees that the dam will have these negative impacts, but argues that it should be built anyway since "the engineers have their own reasons." When Sergei uses the word "hydro-mafia" to describe the engineers and bureaucrats who promote dams, Piao interrupts him, saying firmly, "The situation is different in China. There is no hydro-mafia in China." There are awkward looks all around, and the meeting breaks up shortly afterward. Later Sergei says darkly, "Here, even in the old times, it was possible to object. But in China, it is forbidden." On the last evening, after much diplomacy and many urgent secret meetings, all groups agree to a mild statement advocating more studies and rational development policies.

Despite their common cause—saving the storks and cranes that cross their borders—it seems that even these Russian and Chinese scientists are not free of neighborly prejudices about one another's countries. The Russians disdain what they see as Chinese materialism and their authoritarian government, while the Chinese, many of whom have brought clothes and other things to sell to the local populace (an activity that keeps many of them from joining our field trips), seem rather contemptuous of the Siberians, most of whom cannot afford the fake Adidas sweatsuits being offered them.

Though the river beckons, I nevertheless manage to pick up something about cranes. Ten years ago they were still being hunted for food in China, and so little field work had been done on them that many of their nesting areas were unknown. Despite the cranes' importance as cultural icons in many countries throughout Asia, it has only been in the last decade or so that a serious effort has been made to protect their habitat.

Perhaps in retribution for my inattentiveness at the lectures, my crane experiences in the field are few and uncomfortable. Flying by helicopter (commandeered from the local authorities in another triumph of Sergei's persuasiveness) into the Khingansky Nature Reserve, 1,000 square miles of bog, prairie, lakes, rivers, and forested hills adjacent to the reservoir site, I have my first sighting of wild cranes. But it is a guilty one: the noise of the helicopter frightens two juvenile white-naped birds from their nests, and they waddle off through the tall grass, ineffectually flapping their superb, ungainly wings. Later, at the reserve, a young captive-bred red-crowned crane warns me off his territory with an intimidating dance, hissing fiercely, coming toward me with his long neck pushed out, opening his wings to their full eight-foot span and beating them back and forth, clicking his beak ferociously, and giving a piercing call with his head thrown back.

Later still, I creep away from the main group and, with a shipboard colleague, watch two young red-crowned cranes strutting about in the center of a lakeside marsh. Fewer than 1,600 individuals of this species remain in the wild; excited by this intimate view, we stand silently in the watery sedges gazing at them for some time. When we breathlessly report our discovery to the others, we learn what we had half suspected—it was too good to be true: "our" birds are "semi-wild" products of the reserve's captive-breeding center. However, the pair

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IT'S DANGEROUS BUSINESS TO BE A POLLUTER IN CALIFORNIA—WHERE THE COURTS VIGOROUSLY ENFORCE THE NATION'S TOUGHEST TOXICS LAWS.

THE Verdict

ON JULY 17, 1992, I SENTENCED MARION BRUCE HALE TO STATE PRISON. As a superior-court judge, I send people to prison every day. But this case was different.

Hale was not representative of the felons who usually appear before me. He was a successful 45-year-old businessman, with a wife and two daughters. He was a Vietnam vet. He was active in church and community affairs. Even his crime was unusual: he had repeatedly directed his employees to dump highly toxic paint solvents into a landfill.

California is tough on toxic polluters, however. Hazardous-waste dumping is a felony here, a crime that carries the same punishment as possession of heroin, assault on a peace officer, or grand theft. And the state has grown aggressive about enforcing those laws: county

BY WILLIAM W. BEDSWORTH

ILLUSTRATION BY HENRIK DRESCHER

by county it has more prosecutors attacking more toxics problems than any other state. While Hale was the first polluter sentenced to state prison in California, the law has been moving inexorably in that direction for some time.

California passed the nation's first legislation governing toxic waste in 1972, but it didn't result in polluters doing hard time. More laws followed, but they lay largely dormant while prosecutors concentrated on more familiar issues.

> CALIFORNIA PROSECUTORS FIND THEMSELVES REPRESENTING NOT JUST PEOPLE BUT ANIMALS, WATER, AND LAND.

Then a case arose that changed the face of California law.

In 1980 Chevron Chemical Company discharged 3.5 million gallons of fertilizer wastes and storm-water runoff into a tributary of San Francisco Bay. At first it looked as though business-as-usual would prevail. The corporation paid California water regulators $25,000 "in full settlement of all monetary claims arising from the discharge." It was the type of agreement prosecutors and environmentalists hate, an after-the-fact purchase of a license to pollute.

But this time a Fish and Game Department warden, Tom Kasnick, dared complain to the county district attorney, and found a sympathetic ear. A month after Chevron's settlement, Contra Costa County filed a criminal complaint against the company, alleging violation of California Fish and Game Code Section 5650: depositing substances deleterious to fish, plant, or bird life into state waters.

The maximum punishment for a corporate violation of Section 5650, a misdemeanor, is a $500 fine. Chevron had already paid $25,000—another $500 was obviously chump change. But Section 5650 is a criminal statute, carrying possible six-month jail terms for individual violators.

The impact of such a penalty was not lost on the Chevron people. They enlisted the services of one of the oldest, biggest, and most respected law firms in the state: Pillsbury Madison & Sutro. A $500 misdemeanor charge had drawn out the *Bismarck*.

True to its formidable reputation, the law firm launched a preemptive strike, challenging the case and getting it thrown out of court. Both the trial-court judge and, later, three appellate judges ruled that Section 5650 required either an intent to commit the dumping or some sort of negligence. The county was prepared to prove neither.

Nor was it ready to give up. When the case moved to appeals court in San Francisco, the state argued on behalf of the county that Section 5650 was a "strict liability" offense: violators could be punished *regardless* of whether they intended any harm or were negligent.

This was heady stuff among criminal lawyers. Anglo-American law traditionally requires what's known as *mens rea* for criminal liability: literally "the mind of the thing," *mens rea* reflects our fundamental belief that you don't put people in jail for accidents or misfortunes—only if they have a "guilty mind," that is, if they intentionally or at least negligently violate the law. "So basic is this requirement," the State Supreme Court said, "that it is an *invariable* element of every crime unless excluded expressly or by necessary implication." If this had been a football game, the state would have been a two-touchdown underdog, and the smart money would have been on Chevron.

But the state and the county found a 150-year-old exception to the Supreme Court's rule—not in U.S. law, but in closely related jurisprudence. They cited an 1834 British case in which the directors of a gas company were held strictly liable for polluting the Thames River and hurting the fishing industry. On the basis of this case, the state and the county urged that strict liability—liability without intent or negligence—is appropriate where the public welfare is at stake and where an action would be so destructive that it would have to be prevented regardless of the mental state of the perpetrator.

Though not bound by British precedent, the appeals court found the argument convincing. In May 1983 it ruled that protecting California's fish, plants, and birds fit within this exception, and held Chevron criminally liable for polluting the bay whether it had intended to or not.

Polluting had suddenly become a much riskier enterprise. Accident or lack of knowledge would not be accepted as defenses, and the individuals who authorized a polluting act might end up facing criminal consequences along with their company. Thus did a disgruntled Fish and Game warden and a county prosecutor help build a solid foundation for much of California's environmental regulation.

Subsequent cases have shown what a watershed the Chevron case was. Although individuals emerged unscathed in this particular case, in other instances corporate executives have been held liable and their personal assets have been tapped. In January 1991 a California appeals court upheld a $250,000 fine against a fertilizer-company president, payable from his own bank account.

The culprit in this case was a chemical engineer who pretty much ran the fertilizer company as a one-man show, so perhaps his being judged personally liable for his company's failures could have been anticipated. But what about

Diceon Electronics President Roland G. Matthews? Although his firm pled "no contest" to three waste-storage violations, Matthews claimed he was blameless. After all, he had no technical training, was four managerial levels removed, and worked in a headquarters 100 miles away from the facility where the violations occurred.

The court responded that Matthews' lack of personal control was "of no consequence" and that he could be convicted unless he had "undertaken all objectively possible means to discover, prevent, and remedy any and all violations of such laws." That's a remarkable standard—almost certainly the toughest in the country.

Bolstering these landmark environmental victories was the court's 1989 decision in *People of the State of California* v. *Martin*, establishing California's right to have tougher toxics laws than the federal government's. The crux of the case, ironically, involved empty barrels. Ray Martin, a Ventura-based Chem-O-Lene Company executive charged with illegal disposal of hazardous waste, claimed that many of the 55-gallon drums he had allegedly mishandled were empty. The prosecution couldn't prove what was in them, but under California law it doesn't matter: the state regulates disposal even of empty toxic-waste barrels. Federal law, on the other hand, governs only barrels with at least an inch of waste inside. Martin argued that California couldn't adopt statutes that conflicted with federal law.

"Yes, it can," the appeals court replied. Californians couldn't give their environment less protection than Congress offered, the court said, but they could give it more.

And they have. Freed by this decision from the limits of the federal Resource Conservation and Recovery Act, the California legislature has passed laws that go well beyond those approved by Congress. The push came from the public, but also from state and county prosecutors.

> HAZARDOUS-WASTE DUMPING CARRIES THE SAME PUNISHMENT IN CALIFORNIA AS HEROIN POSSESSION OR GRAND THEFT.

There's a certain irony to this. Prosecutors as a group tend to be conservative: they deal with facts and law and are generally uncomfortable with moral questions. The profession requires a certain hardheaded pragmatism that seems at odds with the idealism of traditional environmentalists.

But the law is the law, and prosecutors now find themselves representing not just California's people, but at times its animals, waters, and land. They have responded with energy and imagination. Shocked by the seriousness of the violations brought to them, in 1985 California prosecutors pushed for and won adoption of the state's first statutes making environmental crimes felonies. Orange County Deputy District Attorney Jerry Johnston has pioneered the inspection and regulation of underground storage tanks at gas stations, a ubiquitous and potentially lethal problem. Mark Pollock of Solano County earned himself a maverick's reputation by securing the indictment not only of a company that had illegally stored waste, but of its lawyers as well. Steve Castleman of San Francisco spent six years on the Triple A Machine Shop case, the most protracted hazardous-waste litigation in California history. As a result of his efforts, in 1992 the firm was found guilty of dumping toxic waste at a shipyard in San Francisco and fined $9.3 million, the largest environmental fine ever imposed in California.

"These are crimes of violence," Johnston likes to tell juries. "Poison in the groundwater is slower than poison in a glass of wine, but it is just as deadly, and it claims more victims."

Some—not all—businesses see themselves as the victims in this get-tough state. But consider the case of George Derby, co-owner of a 120-employee metal-finishing company that last year spent one-tenth of its gross revenues—more than half a million dollars—on compliance with toxic-waste-handling requirements.

No businessperson could be happy with those numbers, but Derby's response is at least partly positive. He's working with environmentalists and government officials to shape an inspection program, hoping to set up an organization that can offer a seal of approval to platers who work by the rules. His aim is to encourage larger firms—aerospace, computer, and automotive companies—to hire law-abiding finishers, ensuring that "those of us who obey the law won't be run out of business by those who don't."

Of all the spin-offs of California's toughening stance on toxic pollution, Derby's plan, motivated by enlightened self-interest, offers the most hope. Environmentalists can celebrate the fact that citizens have gotten the toxic-waste laws they wanted and that legal precedents developed in California can be—and are—used as blueprints by other states. But I'm hoping for an even grander evolution, in which entrepreneurs like Derby succeed on a broad scale. Then prosecutors can return to more traditional crimes. And I won't have to sentence any more unlikely felons such as Marion Bruce Hale. ■

WILLIAM W. BEDSWORTH *is a superior-court judge in Santa Ana, California.*

Amur River

Continued from page 81

of great-crested grebes performing their splendid mating dance on the lake are definitely the real thing.

A few of us spend the night at the reserve, discovering once again that, despite food shortages and poverty, Russians always put on a feast for visitors, which they conduct with an engaging combination of formality and good humor. Sitting around a fire later, I realize that not only do most Russians have excellent voices, they also have a huge selection of songs appropriate to all occasions. Our small party of Americans is put to shame when, failing to come up with a single good fireside song (suggestions range from Cole Porter to a recent hit by a heavy-metal group), we hear Yuri Darman, a Russian biologist, launch into "Home on the Range"—in English.

In the morning I head into the prairie with Natalia Tatarenkova, an amateur botanist who works for the Russian Ministry of Ecology. Skirting a small birch forest, we come upon a forest of another kind, made up of hundreds of five-foot-tall meadowsweet plants rising through the purple ripening grasses, each delicate stalk bearing masses of tiny white flowers whose pale pink stamens and pedicels infuse the whole scene with a soft rosiness. The morning dew soaks my jeans as I brush through ferns and half-familiar relatives of plants I know at home: another white orchid, shorter and with more rounded leaves than the one I had seen near Amurzet, wild clematis, and yet more irises, lilies, and cranesbills.

Natasha mentions the medical uses of many of the plants she points out, knowledge she says she got from her parents. When I ask if she uses these medicines, she looks at me strangely and says, "Yes. Of course." Passing through a grove of Mongolian oaks, we find a new, smaller iris and, to Natasha's delight, half-hidden among the ground cover, a broomrape, an unprepossessing parasitic plant with a short spike of brownish flowers. "I thought I would find such a plant!" she exclaims. "I asked a man who has been here for 30 years, a botanist, if there were any here, and he said he'd never seen one. But, you see, this is just the sort of place they grow!"

We follow a deer track to a stand of birch trees whose scorched trunks show that they, like most of the other trees we've seen today, are survivors of a fire set by farmers many miles away to encourage the regeneration of pasture grasses, and that was whipped out of control by stiff winds and dry grass. The ground here is littered with toppled trees, their roots destroyed by fire or their trunks having finally succumbed to years of repeated burnings. Every year such fires destroy thousands of square miles of fields and forests in the Amur Basin. This May, Natasha says, four fires swept through the Khingansky Reserve; one burned 100,000 acres, 40 percent of the reserve. Most of the damage is unintended, a byproduct of traditional, if careless, farming practices. But according to Natasha, some of this burning of the reserve is deliberate. "It's a psychological problem," she says. "Many people who live around here don't like the nature reserve because it was their hunting territory, their 'native land.' And so they burn it." Along with drainage and logging, out-of-control pasture fires are the greatest threat to the prairies and forests of the Amur. By some bad alignment of the stars, the burning season occurs while cranes are breeding; because cranes build their nests on the ground, each year an unknown number of young ones perish in the flames.

On our return to the boat we learn that in order to keep going, we need permission from the Chinese to travel in their deeper channel. This involves radioing the ship's owners in Khabarovsk to ask them to negotiate this privilege. In the meantime, Sergei approaches. "I have some more bad news for you," he says. "I've just heard that the engineers are lowering the Zeya reservoir to check for leaks. They

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are worried that the earthquake last year may have cracked the dam."

To Sergei this problem on a nearby river is further evidence of the poor planning and execution that will ensure that the Khingansky Dam will be a disaster. I try to make the case that, for a dam-fighter, this is a form of good news, a confirmation that his and other critics' warnings about the hazards of large dams should be taken more seriously. But, though he has a wonderfully sardonic sense of humor, Sergei has a lot on his mind and isn't going to be so easily cheered. I like this very intense, able man who, in the face of enormous obstacles, has already done much to increase appreciation and protection of these fragile lands. His efforts include getting 49,000 acres added to the Khingansky Nature Reserve in 1977; almost singlehandedly bringing Russian and international scientific attention to the five species of crane that nest in the Amur Basin; mobilizing local authorities against plans to dam the Amur and to log its forests; and working closely with the indigenous Siberians who have recently taken their fight against Hyundai's efforts to log their traditional lands to the Supreme Court of Russia.

In the evening, apparently having received the requisite permissions, we finally set off again, moving slowly upstream to our last port of call, the Muraviovka Nature Park, an area with the highest concentration of nesting cranes in Russia. The 75,000-acre refuge is part of the local collective farm, which, earlier this year, decided to sell it off. Hearing of this from Sergei, Noritaka Ichida, the director of the Wild Bird Society of Japan, raised $80,000 from a dress-manufacturing company. The Japanese money will go to a Russian nonprofit group, the Socio-Ecological Union, that is negotiating to take over the reserve. Many meetings later, the collective farm has agreed to give the SEU a 50-year lease on 12,000 acres to be managed as a wildlife preserve—or so Sergei hopes. When we arrive, there will be a formal vote and, if all goes well, the contract will be signed with full ceremony.

The next day, early in the morning, the ship hits a sandbank. Half-asleep, I feel us backing up, pulling into shore, and stopping. When I emerge, I learn that the captain has decided that there's no point in trying to go forward—the water is simply too low. After much scurrying, Sergei finds a van to make the 150-mile journey to Muraviovka by road, but only a small party can fit in—Sergei, Mr. Ichida, and George Archibald, head of the International Crane Foundation, which is cosponsoring the conference. No point in moaning, however, especially as no one wants to upset Sergei, whose distress about letting us down is evident. Even the Japanese television crew, robbed of the climactic moment of its program, puts on a brave face.

As it happens, we have stopped at the ugliest spot on the middle stretch of the river, a coal port called Poyarkovo. Like our ship, the town is named after Vasily Poyarkov, the first Russian to descend the Amur, a horrible character who more or less drove the natives of the region into the arms of the Chinese overlords, who seemed gentle by comparison. On his return to Yakutsk in 1646, Poyarkov was accused by his own men of murder and cannibalism (charges he did not deny), was shipped to Moscow for trial, and was never heard from again. It is somehow fitting that he should be memorialized by a place that violates the river and the people who live on it with noise and grime.

By Friday evening the emissaries return, jubilantly bearing a contract for Russia's first privately run nature reserve. The captain turns us downriver and we head at great speed for Khabarovsk. At dinner we celebrate, toasting the new crane reserve and taking turns at singing. Our hilarity covers a certain melancholy, however, and I spend much of the rest of the trip at the stern, looking back up this river that I hate to leave. ■

CATHERINE CAUFIELD *is the author of* In the Rainforest *(University of Chicago Press, 1986) and* Multiple Exposures *(University of Chicago Press, 1990).*

A Place at the Table

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that, then mainstream America has succeeded in dividing the civil rights movement and the environmental movement.

Douglas: This is important: people, if given a choice, will choose safe, clean water, land, and air over "economics"—but only if they're given a choice. They're not given a choice in places like Sumter County, Alabama, where you can lose your livelihood—and sometimes your life—if you speak out against the biggest polluters. People aren't choosing between jobs and the environment; they're choosing between death—their jobs are killing them—and unemployment. It's a sick choice. The workers are choosing early death so their families can eat. They know they're going to die.

This is the sickness we're up against. This is the same sickness as racism. Until we're able to address it, we won't be able to protect ourselves against it. Unless we can immunize ourselves against it, there's always a tool that can be used against us.

Racism is what makes foreigners of people in their own lands. We have a society that makes foreigners out of Native Americans. We're very selective about who we make foreigners of now, with our immigration policy. Until we begin to address the use of that fear to get people to act like lemmings, they will stampede off the cliff, killing themselves, their families, their inheritance, and their legacy, because they've been successfully panicked.

Chavis: The denial of racism in this country perpetuates it. One of the things that we are demanding in the environmental justice movement is a coming to grips with the phenomenon of environmental racism, and coming to grips with the broader phenomenon of racism in general. You have to understand that racism is not natural. There's a purpose for racism: it serves the economic interests of those who would exploit. That is the history of racism in the world, not only in the United States. Apartheid in South Africa exists not just because some whites in South Africa don't like black people; it's because some whites in South Africa want to live in a privileged position, and take the diamonds and the gold and the natural resources of the people. Racism has always been used to justify the rape of the environment and the rape of people, and to deprive them of economic rights.

One of the things I've come to appreciate in dealing with the environmental justice movement is patience. We should be impatient with injustice; we have to confront it, we have to challenge it, but we have to be patient with the victims of injustice. There will not be an overnight cure.

Li: It's very important that the environmental agenda we develop is one that is developed *with* communities of color. Not imposed on them, but rather forged together in the spirit of mutual respect and trust. That's a very hard

thing to do, be it in this room here or anyplace else. It's hard not to try to dominate, hard not to tell people "This is how it should be done."

Douglas: One of the problems I face in trying to increase the troops working on environmental justice issues within the Sierra Club is that we don't have enough activists to go around. When I got the Sierra Club job, two friends of mine, both of them European-Americans, walked up to me in Birmingham and said, "I'm glad you got the job. I'm a member of the Sierra Club." I said, "You are? I never knew that." The first one was a woman who is very active in low-income housing; she's a technical assistant, she teaches people to read through HUD regulations so they can access some of these crazy grants. The other one is a church-related person who works with families about to be evicted, providing emergency food, housing, and utilities. Unless this is a very rare coincidence, I bet there are some other folks in the present membership who have daily connections with people in the struggle. They don't bring it to the Sierra Club because that's not the agenda.

When was the last time the Sierra Club did a survey to determine what the members are active in when they're not doing the traditional conservation issues? If you could find that out, you'd also find out your points of connection with the rest of the community. We have the skills in-house, but they just haven't been pulled together yet.

LaDuke: We have totally common issues, but environmental groups have to embrace a broader position. Last year the Greenpeace board of directors adopted a position in support of the sovereignty of Native people. The Sierra Club should adopt a similar policy. Environmental groups need to not feel threatened by the taking of land out of the so-called public domain and returning it to Native people; instead, they need to recognize that our traditional stewardship of land has been very sound to the extent that we are able to restore our traditional values and continue our traditional spiritual practices. Sure we've got problems, like tribal councils that are trying to site toxic-waste dumps. But what environmental groups need to do is shore up their relations with traditional people, because traditional people don't subscribe to the ethics of pollution.

Chavis: I said to The Nature Conservancy a little while ago: if you really want to conserve the earth, then join the environmental justice movement, because this is the movement that is going to constrain the destroyers of the earth, because the destroyers of the environment are the destroyers of our neighborhoods and our communities.

I'm very optimistic about the extent to which we can continue to build the environmental justice movement from the grassroots up. This is not a fad, this is not a momentary blip on the social-justice graph of this nation, but an effort that will have very long-term implications for the future of our nation and the future of our world. ■

► *For more information, see "Resources," p. 96.*

REVIEWS

PETER WILD

The Final Forest: The Battle for the Last Great Trees of the Pacific Northwest
by William Dietrich
Simon and Schuster; $21

To Pulitzer prize–winning reporter William Dietrich, Washington's Olympic Mountains resemble a moated castle, or perhaps the hole in a donut. He uses both similes to describe how these massifs in the center of the Olympic Peninsula are set off from their surroundings, ringed by concentric circles of national forest, wilderness, state and private forests, and clearcuts.

It's along these fringes of Olympic National Park that Dietrich tromps, dropping in on the owner of a chainsaw shop in tiny but proud Forks—self-styled "Logging Capital of the World"—and hobnobbing with "timber beasts" as well as the defiant tree-squatters who risk their lives to stop them. In itself, this makes a charming portfolio of sometimes eccentric characters. Of greater consequence, Dietrich lays bare the realities of change behind the furor over the fate of the northern spotted owl and the remaining ancient forests. He empathizes with the hardworking local people whose jobs are on the line, but recognizes that their livelihoods are threatened far more by mechanization and log exporting than by the conservationists they detest. He also hints that the latter, in their zeal to establish national parks and wilderness areas on the peninsula, have aggravated the conflict, since "the more land that was set aside, the more frantically the timber industry cut." He does, however, balance this criticism by noting that most of the region has long been in the hands of a few timber companies intent on maximizing their profits regardless of any cost to the forest.

Sky's Witness
by C. L. Rawlins
Henry Holt; $21.95

Until recently, C. L. Rawlins had an enviable job: collecting snow samples from the high country of Wyoming's Wind River Range to monitor air pollution for the U.S. Forest Service. Because the area's wilderness status barred snowmobiles and helicopters, Rawlins was, happily, forced to ski over the wild country of lakes and glaciers. On deep-winter nights he would snuggle in a tent, or in a cabin just outside the wilderness area, and reflect on natural history, Indian lore, bear stories, and his relationship to pretty much the whole universe.

As a ski bum (albeit an employed one), Rawlins counted himself among the "anarchists and coyote angels" of the outdoors. He was infatuated with a job so unusual, since "to be in step with the majority may not be the highest good." Such determined nonconformity in another writer might seem arrogant, but Rawlins nimbly balances it with good-humored bravado and prose that soars beyond the typical labored efforts in this genre of nature writing.

The Myth of Wild Africa
by Jonathan S. Adams and Thomas O. McShane
Norton; $21.95

How comforting on Saturday mornings to watch those nature specials featuring zillions of wildebeest trotting off toward infinity across the Serengeti Plain. But television images of African wildlife Edens only serve to reinforce destructive colonialist ideas, aver the authors, who became familiar with the continent as staffers for the World Wildlife Fund. They've seen it all, and deplore the fact that many Europeans and Americans rarely consider the impoverished people who live around the big game preserves—unless, of course, we self-righteously see them as poachers to be subdued and handcuffed.

The whole notion of conservation in Africa is misconceived, according to Adams and McShane. The people who were thrown off their lands to create parks for tourists lived for thousands of years without destroying the surrounding animal populations or their ecosystems. Europeans with notions of peopleless parks blindly disrupted the age-old balance. The real path to long-term preservation of African wildlife, the authors argue, lies in restoring the valid, human-to-animal relationships of the past.

Adams and McShane may have a point when they accuse Western conservationists of "ecological imperialism." But by repeating their gripe as often and as vehemently as they do, they seem burdened by outsize chips on their shoulders. All bickering aside, however, *The Myth of Wild Africa* is worth reading precisely because it questions the imposition of Western values in a land where Westerners should never have meddled in the first place.

Dangerous Birds
by Janet Lembke
Lyons and Burford; $21.95

According to the stereotype, birdwatchers are supposed to be a bit loopy, and on first encounter in *Dangerous Birds,* Janet Lembke fits the description: on a frigid morning, she sits bundled up at the base of a pine tree, surrounded by litter and debris left by hunters and loggers, and muses on the place of birds in Western lore and literature. But as we come to know her, she proves to be levelheaded while

others seem slightly askew. For example, when startled by the zing of a projectile zooming past, she marches over to the trailer of beefy, pugnacious neighbor Elgie, who has developed an avicidal contempt for blue jays. She dresses down the maniac even as he sits clutching his smoking .22.

A classical scholar as well as a bird lover, Lembke balances appearances by Homer and Aristotle with the likes of Shakespeare, Wallace Stevens, and Alfred Hitchcock, all of whom step forth to shed light on the origins of our bird lore. The classics tell her that, among other things, the syrinx is not merely the vocal organ that allows a Carolina wren to sing two different songs at once. It's a term that tumbled down from Greek mythology through Ovid, having its origin in Pan's lusty pipes and his rebuff by a nymph.

BRIEFLY NOTED

In ***Faith in a Seed*** (Island Press; $25), editor Bradley P. Dean has meticulously assembled some of Henry David Thoreau's late natural-history writings, which had long been hidden among voluminous field notes believed to have little or no significance. The book is a literary milestone: the first new title by Thoreau to appear in 125 years. . . . As a veteran planner with the National Park Service in Alaska, John M. Kaufmann became well acquainted with that state's ecologically fragile northernmost landscape. He recounts his experiences there and tells the history of the land in ***Alaska's Brooks Range: The Ultimate Mountains*** (The Mountaineers, $24.95, cloth; $14.95, paper) . . . . An enormous array of beverages, fruits, starches, oils, resins, spices, and nuts originated in the world's rainforests, and new plants to domesticate are constantly being discovered there. ***Tropical Forests and Their Crops*** (Cornell University Press; $69.95, cloth; $27.95, paper) is a technical but well-organized and at times fascinating guide to the jungle cornucopia. The authors discuss techniques for conserving genetic resources, including seed gene-banks, tissue-culture collections,

The Art of Nature:
Reflections on the Grand Design
Photography by Bruce W. Heinemann
Essays by Tim McNulty
Prior Publishing (6712 Mary Ave. N.W., Seattle, WA 98117); $49.95

"What is it," wonders Tim McNulty, "that makes the familiar and day-to-day world become suddenly charged with beauty?" That is the question that photographers of natural scenes ponder with each click of the shutter, and that—when they are as skilled and frequently inspired as Bruce Heinemann—they can sometimes answer for the rest of us. In these 95 images, most of them from well-traveled corners of Washington state, we see "a stunning world awaiting only our time and attention . . ." Here, lily pads at Larsen Lake, in Bellevue, seem not so much to float on water as to sail across a cobalt sky.

and on-site preserves. . . . ***State of the World 1993*** (Norton; $19.95, cloth; $9.95, paper) is a farsighted report on environmental trends. Contributors examine such issues as the ecological benefits of rail travel, the consequences of free trade, the need to support indigenous people, and efforts to revive coral reefs. Worldwatch Institute president Lester Brown looks toward a time when economics will finally address today's environmental realities. . . . Those who aren't intimidated by the term "biotic zonation" and don't mind dry, detailed descriptions of ecosystems will find Allan A. Schoenherr's ***A Natural History of California*** (University of California Press; $38) an impressive compendium of the state's landforms, habitats, species, and conservation issues. . . . The ceaseless pursuit of money that modern society encourages "begets a mindless materialism," says Ferenc Maté in ***Reasonable Life*** (Norton, $17.95). The author, who says he is not so much anti-capitalist as anti-mindlessness, describes what a simpler, more self-sufficient (and hence economically secure) future for all of us might look like. It is essentially a revitalized rural life that eschews the warped values and dangerous ways of the city. . . . The manifold charms of the Ouchita Mountains of Oklahoma and Arkansas are much appreciated by recreationists, for whose benefit geographers Milton D. Rafferty and John C. Catau have included campground, trail, fishing, hunting, rockhounding, and auto-tour information in ***The Ouchita Mountains*** (University of Oklahoma Press, $35, cloth; $18.95, paper). . . . Forests and tidepools, marshes and beaches, bobcats and whales—such diversity would be remarkable anywhere, but it's utterly astounding a short drive from a teeming metroplex. Yet just an hour north of San Francisco, the visitor can see all that and more (including an active earthquake fault!) in a day's visit. Don and Kay Martin pace off 34

dayhikes of varying lengths in ***Point Reyes National Seashore,*** their new hiking and nature guide to the area; each description is accompanied by a computer-generated shaded-relief map (Martin Press, P.O. Box 2109, San Anselmo, CA 94979; $9.95 plus $2.50 shipping and tax). . . . Taking as the subject of his exhaustive research the largely private, heavily cut woodlands of Maine, Mitch Lansky paints a stark picture of a wild forest virtually devastated by uncontrolled logging, herbicide and pesticide use, and mechanization. In ***Beyond the Beauty Strip*** (Tilbury House, 132 Water Street, Gardiner, ME 04345; $35, cloth; $19.95, paper) he not only details the multifarious horrors of industrial forestry, but chides some local conservation groups for their ineffective responses to the crisis. He also makes a convincing case that the next great timber battle facing activists will be in the second-growth forests of Maine. . . . Compost, as the old saying has it, happens—but it doesn't hurt to give the process a push. H. Clark Gregory, an Atlantan who supervises composting projects for Fulton County's soil and water conservation district, has written a handy little guide for those who wish to recycle their yard clippings (not "yard waste," please!) into something that will save both money and energy while providing fruits and veggies with nature's best fertilizer. ***Backyard Composting*** is available for $6.95 from Harmonious Press, P.O. Box 1865, Ojai, CA 93023. . . . Are you willing to accept that there's a "corporate environmental revolution" happening out there, spearheaded by the likes of Dow Chemical, Eastman Kodak, Lockheed, and Pacific Gas & Electric? Skeptics and wanna-be believers alike can judge for themselves by reading Joel Makower's ***The E Factor*** (Random House, $23), in which the business author and editor argues that consumer demand for environmentally friendly products and services is driving these corporate giants to clean up their acts. Makower further emphasizes that, sincere eco-conversions by corporate CEOs notwithstanding, avoiding the costs of complying with environ-

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

To receive semimonthly updates on the Club's conservation campaigns, subscribe to the *National News Report.* Request a free sample copy and subscription information from the Campaign Desk.

AFIELD

"Body Politics," page 27

For a critical view of food irradiation, see "Food Irradiation: Zapping Our Troubles Away?" by Michael Jacobson and Stephen Schmidt in *Nutrition Action Healthletter* (April 1992) from the Center for Science in the Public Interest, 1875 Connecticut Ave., N.W., Suite 300, Washington, DC 20000-5728. Larry Katzenstein's "Food Irradiation: The Story Behind the Scare" in *American Health* (December 1992; 28 West 23rd St., New York, NY 10010) takes a positive look.

One group fighting food irradiation is Food and Water, Inc., RR 1, Box 30, Old School House Common, Marshfield, VT 05658; (800) EAT-SAFE.

"Hearth & Home," page 28

The Rodale Book of Composting, edited by Grace Gershony and Deborah Martin (Rodale Press, 1992), will help you keep your soil input purely local.

The Canadian Sphagnum Peat Moss Association cooperates with conservation organizations in identifying peatlands that need preservation. Contact them at 4 Wycliff Place, St. Albert, Alberta, Canada T8N 3Y8; (403) 460-8280.

"Good Going," page 32

For information on the Milford Track, contact the New Zealand Tourism Board, 501 Santa Monica Blvd., Suite 300, Santa Monica, CA 90401; (800) 388-5494.

DEPARTMENTS

PRIORITIES

U.S. Birth Rates, page 36

For more information, contact the Sierra Club's Population Coordinator, 408 C St., N.E., Washington, DC 20002; (202) 675-7901.

Gas Taxes, page 41

Urge your senators and representative to support the 1993 fuel-economy bill, and let the Sierra Club's Campaign Desk (see above) know of your interest.

The Biggest Single Step, a brochure detailing the benefits of higher fuel-efficiency standards, is available for $1 from Sierra Club Public Affairs, 730 Polk St., San Francisco, CA 94109.

Recreation Fees, page 46

The Sierra Club's policy on recreational user fees is available from the Public Affairs Office at the above address.

Randal O'Toole writes regularly for the monthly newsletter *Forest Watch.* Subscriptions are $17.95 for students, $21.95 for individuals and nonprofits, and $27.50 for others. O'Toole's book, *Reforming the Forest Service,* is $16.95. Write to Cascade Holistic Economic Consultants at 3758 S.E. Milwaukie, Portland, OR 97202, or call (503) 234-4345.

OUTDOORS

Off-Trail Hiking, page 102

Land Navigation Handbook by W. S. Kals (Sierra Club Books, 1983) will help you learn the ins and outs of routefinding.

FEATURES

Environmental Justice, page 50

The Sierra Club's April *Membergram* details the Club's environmental-justice efforts. To receive it, contact the Field Membership Coordinator, 730 Polk St., San Francisco, CA 94109.

For information on the Club's Ethnic and Cultural Diversity Taskforce, call Vivien Li at (617) 482-1722.

The landmark report *Toxic Waste and Race in the U.S.* is available for $20 from the United Church of Christ Commission for Racial Justice, 700 Prospect Ave., Cleveland, OH 44115.

An excellent quarterly newsletter, *Race, Poverty, and the Environment,* is published by the Urban Habitat Program of Earth Island Institute, 300 Broadway, Suite 28, San Francisco, CA 94133-3312. Free to community groups and low-income individuals, subscriptions are $8 a year, $15 for institutions.

For information on the White Earth Land Recovery Project write to P.O. Box 327, White Earth, MN 56591, or call (218) 473-3110.

The Southwest Network for Environmental and Economic Justice publishes a booklet describing their numerous projects; send $5 to P.O. Box 7399, Albuquerque, NM 87194.

Mountains, page 60

Contact the Sierra Club Campaign Desk (see above) for a description of the Club's International Mountain Conservation Program. You'll receive a summary of the program's efforts to date, and be placed on a mailing list for subsequent bulletins.

Mountain Research and Development is a journal produced quarterly by the International Mountain Society and United Nations University. A one-year subscription is $34 ($21 for students) from Journal, Mountain Research and Development, University of California Press, 2120 Berkeley Way, Berkeley, CA 94720. Subscribers outside the U.S. should include $7 for postage and handling.

Sacred Mountains of the World, by Edwin Bernbaum (Sierra Club Books, 1990), is a lavishly illustrated work exploring the mystery and cultural significance of mountains. Copies are $50 plus $5 shipping each, hardbound, or $25 plus $3 shipping, paper, from Sierra Club Store, 730 Polk St., San Francisco, CA 94109. ■

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mental regulations and reacting to stepped-up pressure from greener competitors are equally effective spurs to improved performance in the environmental arena. —***Mark Mardon***

New From Sierra Club Books

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- ***The Cruise of the Corwin*** by John Muir, with a foreword by Roderick Nash. Dispatches from a 19th-century newspaper reporter ($10, paper).
- ***The Temple of the Jaguar: Travels in the Yucatan*** by Donald G. Schueler. A quest for meaning in an exotic land ($25).
- ***The Breathing Cathedral: Feeling Our Way into a Living Cosmos*** by Martha Heyneman. A unifying vision of science, psychology, and Eastern mysticism ($25).
- ***How to Save Your Neighborhood, City, or Town: The Sierra Club Guide to Community Organizing*** by Maritza Pick. Think locally, act vocally ($12).
- ***Hiking the Grand Canyon*** by John Annerino. New edition, including fold-out trail map ($15, paper).
- ***Adventuring Along the Southeast Coast: The Sierra Club Travel Guide to the Low Country, Beaches, and Barrier Islands of North Carolina, South Carolina, and Georgia*** by John Bowen. A most hospitable region ($15, paper).
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- ***Reef: A Safari Through the Coral World*** by Jeremy Stafford-Dietsch. A photojournal, now in paperback ($20).

READINGS

From ***The Four-Cornered Falcon: Essays on the Interior West and the Natural Scene*** *by Reg Saner (The Johns Hopkins University Press, 1993). Reprinted with permission.*

From Horseshoe Mesa, I look eighteen hundred feet down to see the same Colorado River I followed through so many of its altitudes now running unmuddied, cleared almost to blue-green. Its roar, on the hot wind, is whispers. Its rapids, white flecks.

All around me are distances that allure; they create the impulse to go toward, to cancel their separation by entering them. Many of their buttes and spires have never been climbed; plateaus where no one we know of has ever set foot. So space here often seems a mask hiding what it reveals: red pedestals and pagoda forms that speak, but not to answer.

Names given these forms mean to emphasize mystery, but undercut

themselves by nineteenth-century addiction to the highfalutin. Within a dozen or so of its two hundred miles the canyon includes Zoroaster Temple, Brahma Temple, Horus Temple, Osiris Temple, Buddha Temple, Buddha Cloister, and Confucius Temple—an overkill of inscrutabilities. These contrast ludicrously with my knowing that toward the bottom of Tanner Trail a ritual pilgrimage, quietly undertaken each year by Hopi priests, still gathers and returns to their reservation the Hopi ceremonial salt.

Well, sacred places often disguise their powers. About me I see nothing deific, just grey-green alluvial fans dustier than elephant toes. Chaos created by ugly, alien, arid laws; by the laws of cactus-bitten, yucca-blotched, scorpion-spiked, lizard-flicked rubble. Like a cloud shape, the "sacral" alters to sheer rock-tinted distance gone mindless. Not even malign.

Despite the quiet that fills it, despite its 2,500 years of almost continual habitation, despite Hopi ritual, I know the Inner Canyon's mystery is the chance intersection of one natural force by another. Temples? Horizontal layers of limestone and shale have been granulated by the verticality of rain, by gravity's plunging and tumbling cliff-bits. Erosion. Reality. An aimless building up to throw down—where a misstep can turn any animal's guts inside out, allowing desert glare to slowly pry open the skull.

Perhaps that's what Grand Canyon sightseers leaning forward from the South Rim feel their lives mixed with. The banded layers speak, but of a sort of marvelous annihilation that the very grandeur won't let tourists turn away from. Oh, it mesmerizes all right. It tricks a man from Eau Claire, Wisconsin, to staring five thousand feet down inside his past futures.

How many sunsets and moonrises inhabit the vacuum inside one billion years? I pick up a schist fragment that old, and in hefting its blackness I lift all those dumb suns. The gone moons, too, are inside it, as am I. Down here I've already happened. ■

SIERRA NOTES

The Sierra Club's third Chico Mendes Award was presented to Dr. Biruté Galdikas of Borneo on January 26 for her work in protecting the orangutans of Indonesia and their rainforest habitat. Galdikas fought to uphold and strengthen Indonesian environmental laws, working with the government while building grassroots and international support. Her many achievements include initiating a program to reintroduce captive orangutans to the rainforest in Borneo's Tanjung Puting National Park, facilitating the expansion of ecologically oriented tourism, and establishing the Orangutan Foundation International.

Named after Francisco "Chico" Mendes, the Brazilian rubber-tapper, union organizer, and environmentalist who was assassinated in 1988, the award honors "individuals or non-governmental organizations outside the United States who have exhibited extraordinary courage and leadership in their efforts to protect the environment."

The Center for Environmental Innovation, a clearinghouse for ideas and information, is being established by the Sierra Club as a resource for Club volunteers. The center will bring together experts in many fields, from both inside and outside the Club, to develop environmental-policy objectives and provide information and advice to activists. The direction of the center's activities will come from the needs of grassroots volunteers, the primary goal being real-world solutions to environmental problems.

Visiting analysts, fellows, interns, and staff will concentrate on the five global challenges the Sierra Club has identified as defining its work for the 21st century: preserving the wild planet, protecting the global commons, ending the toxic threat, stabilizing world population, and building an environmentally sustainable economy. By supporting volunteers with long-range strategic planning and interdisciplinary creativity, the center will make an indispensable contribution to the Club's future conservation efforts.

For more information about the Center for Environmental Innovation, contact Mark Gordon at (307) 684-7139.

Grand Canyon: The Price of Power, a video narrated by Bruce Babbitt (now U.S. Secretary of the Interior), examines how fluctuating water releases from Glen Canyon Dam are destroying the Grand Canyon. The shores of the Colorado River in the canyon, which provide recreational areas and wildlife habitat, and hold ancient cultural and sacred sites, are threatened by massive releases for "peak power" generation at the dam.

For more information or for copies of the video, contact the Sierra Club Southwest Office, 516 E. Portland St., Phoenix, AZ 85004-1843; phone (602) 254-9330. The videocassette costs $10, including postage; make checks payable to "Sierra Club Foundation Grand Canyon Video."

To celebrate its new *Earthkeeping* television series, public-television station WGBH in Boston, Massachusetts, is sponsoring the Take a Step Video contest, open to all ages. The winning entries will be aired on the final segment of the series.

Earthkeeping, which premiered on Earth Day 1993, is a four-part program about ordinary people who are working to save the environment, the difficulties they face, and how they overcome them. The remaining programs will be shown quarterly; check local listings for times.

To enter the contest, individuals or groups (which can be school classes, businesses, or organizations) must make a one- to three-minute video about a project, person, or program helping to protect or restore the environment. Entries will be judged on content, creativity, originality, and by how easily the project can be dupli-

cated. All entries must be accompanied by an official entry form; deadline is December 1, 1993. For a free *Earthkeeping* Take a Step Contest Guide containing the entry form, contest rules, video production tips, and environmental action ideas, write: *Earthkeeping* Take a Step Contest, Educational Print and Outreach, WGBH, 125 Western Avenue, Boston, MA 02134.

Cultural Survival Inc., an organization devoted to "helping indigenous people and ethnic minorities deal as equals in their encounters with industrial society," has published the valuable journal *Cultural Survival Quarterly* for 16 years. Now it has brought out *At the Threshold: An Action Guide for Cultural Survival,* an 80-page resource for activists working to protect the rights of native peoples, and *Action for Cultural Survival,* a monthly newsletter that highlights current threats to indigenous peoples and the environment.

Contributors of $25 or more to Cultural Survival will receive the monthly bulletin, and for $45 or more ($25 for students), a year's subscription to *Cultural Survival Quarterly.* Copies of *At the Threshold* are $5 each. Write to Cultural Survival Inc., 215 First St., Cambridge, MA 02142; phone (617) 621-3818.

If you'd like to bring your commitment to recycling into work with you, *Reduce, Reuse, Recycle: Three Rs for the Office,* a new videotape narrated by *Northern Exposure* star Barry Corbin, can show you how. The 15-minute video, developed by the Metropolitan Service District in Portland, Oregon, and produced by Pacific Standard Television, examines the need for office waste-paper management and details the financial rewards both large and small businesses can reap when they begin reusing and recycling their daily bales of scrap, waste, and bumf instead of dumping them in the trash.

To order, send check or money order for $19.95 plus $2 for shipping and handling to: Recycle, P.O. Box 339, Portland, OR 97207; for VISA or Mastercard orders, call 1-800-776-1610. ■

Immigration Fuels U.S. Population Growth

We at Negative Population Growth, Inc. (NPG) believe that our country is already vastly overpopulated in terms of the long range carrying capacity of its resources and environment.

We believe, therefore, that U.S. population growth should be halted as soon as possible, and eventually reversed.

But, unless our present massive immigration is drastically reduced, we will never be able to stabilize our population at a sustainable level.

In the decade of the 80s we grew by some 25 million. Immigration, both legal and illegal, accounted for about 40 percent of that huge increase in our numbers. Projections are that we will grow by at least as much in the 90s.

If present rates of fertility and immigration continue, our population, now over 256 million, will pass 400 million shortly after 2050, with no end to growth in sight! Such growth would be catastrophic both for our environment, and for our standard of living.

We need to reduce immigration to the level of emigration (out-migration) so that immigration will no longer contribute to our population growth. That would require halting **illegal** immigration, and reducing **legal** immigration to a comprehensive ceiling of 200,000 a year, including all relatives and refugees. Then, immigration would be roughly balanced with emigration.

We now allow roughly 700,000 legal immigrants to come here each year. Their numbers are swelled by perhaps 300,000 **illegal** immigrants.

Advocates of Massive Immigration Are Wrong!

There are powerful forces that fight tooth and nail not only to keep immigration at the present high level, but to increase it. Among them are employers who want low-wage labor, ethnic groups whose leaders seek greater political power, and humanitarians who believe in virtually open borders.

They also include pro-growth advocates who believe that an ever-growing labor force, fueled by immigration, is necessary to achieve their goal of an ever-increasing GNP. That goal, in the real world of environmental and resource limits, is a recipe for disaster.

How Can We Best Help Others?

Beyond any question, the United States must maintain the humane policies toward immigrants and refugees that have characterized its past.

But we need to express our compassion in an intelligent way. Our guiding principle should be to do the most good for the greatest number. Our priority should be to improve living conditions in the developing countries, rather than to allow vast numbers of their citizens to settle here.

World population is growing by some 90 million a year, and almost all of that growth occurs in the developing countries. We cannot possibly allow more than a tiny fraction of those millions to come here. What can we do to help all those who have no choice but to remain at home?

One thing is crystal clear. The problems of the underdeveloped countries are beyond solution by emigration. To pretend otherwise is simply self-delusion.

Nothing can permanently improve living conditions in these countries unless they first halt their population growth, the root cause of their poverty and environmental degradation.

Those who assert that eradicating poverty is a prerequisite for halting population growth have the process just backwards. Only after halting their population growth can developing countries even begin to bring their standard of living up to an adequate level.

If we are genuinely concerned with their welfare, we should spare no effort or expense to help those nations that are prepared to make a determined effort to halt, and eventually to reverse, their population growth.

We Need A Sensible U.S. Immigration Policy

We cannot continue to allow our national immigration policy to be dictated by special interest groups who pursue their own agendas without regard for the broad national interest.

Our immigration policy should be an integral part of a national population policy aimed at halting, and then reversing, our population growth, so that U.S. population can eventually be stabilized at a lower, more sustainable level.

As Americans, our first obligation, to ourselves and to our children and grandchildren, is to restore and preserve the land we have inherited. In shaping our immigration policy, our top priority must be our own national interest, and the welfare of present and future generations of Americans.

If you agree that we need to drastically reduce legal immigration, and halt illegal immigration once and for all, we need your support. NPG is a nonprofit, public interest organization founded in 1972. To become a member, please send us your check today.

YES! I want to become a member of NPG, and help reduce U.S. immigration to a level compatible with our national interest. I am enclosing my check for annual membership dues.

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S-5

Cindy Ross

Stepping Out

Standing atop redheaded South Sister in the Oregon Cascades, my husband and I knew why we had ventured off the Pacific Crest Trail and scrambled across rugged terrain: from our aerie we could see Mts. Jefferson and Hood marching up the range, their snow-covered peaks poking above the landscape like ice-cream cones. All that led us here were a topographic map, a compass, and a little dead reckoning.

There are plenty of reasons to abandon the comfort and security of an established trail: to search for a secluded campsite, to increase your chance of seeing wildlife, or simply to come in closer contact with the land you're traversing, possibly traveling where no hiker has passed before.

But off-trail travel requires its own skills and ways of thinking. You will need lots of time. You'll quickly toss out any miles-per-hour formula you've established on typical hiking trails; don't count on covering more than a mile per hour over untracked terrain. Sometimes you'll even *lose* ground from backtracking around unforeseen obstacles.

Cross-country walking forces you to use your topographic map and compass, two of the prudent hiker's "essential" items that often remain buried in a pack when you keep to hiker highways. For that matter, carrying a complete set of emergency gear becomes more important the farther you leave the trail behind.

At first, choose a destination that requires minimal compass skills. Any trip longer than a dayhike or an overnighter calls for skills best learned by investing in a good compass how-to book or taking an orienteering course.

As long as the weather's clear, you can rely on visual "handrails": follow a prominent ridge, climb alongside a stream to a hanging lake, or drop down a valley to a meadow. Select terrain that has few obstructions—such as above the timberline, or a mature forest with little undergrowth. Avoid brushy areas entirely: what looks from afar like a smooth carpet of tundra may be an engulfing thicket up close.

Keep tabs on your progress at regular intervals. Align the north-seeking needle of your compass with your map's "declination diagram," which shows magnetic north. By comparing the terrain in front of you with the map, you can learn to see the map's features in three dimensions. Line up peaks, ridges, and lakes, and scrutinize contour lines, which show elevation

Sometimes true wilderness begins only when you leave the trail behind.

▲ ▲ ▲

above sea level. These lines will be closer together the steeper the terrain. With practice, you'll be able to anticipate almost any geographical feature.

Make notes of the terrain you're passing through; turn around and imagine what the area will look like if you end up retracing your steps. And as I once learned the hard way on Mt. Washington, if you find markers left by other hikers, don't assume they had any clue where they were going.

When traveling off-trail, you'll cross a variety of terrains. Avoid gullies or chutes that lead up mountainsides: they're the obvious routes of avalanches and rockslides. When you encounter talus slopes (large accumulations of rocks near the bases of peaks and cliffs), don't cross them if you're above or below other hikers. A rolling rock no larger than your head can be fatal. Move quickly from step to step, never placing your full weight on one foot. Scree slopes, composed of smaller rocks that can be as loose as sand, are nearly impossible to climb but great fun to descend: keep your back straight and your knees bent, and shuffle your feet to keep from sinking into the stuff.

Sometimes rock-climbing techniques are useful while cross-country hiking. Though it can be easy to scramble up a steep hillside or a cliff, the same route can be murder coming down. Keep your body erect and your weight directly over your feet. Use your hands to support yourself in case a foot slips, not to pull up your body. Plant each foot firmly and use three points (two feet and one hand or two hands and one foot) to support yourself on even moderately steep slopes.

When you find your private paradise, follow the same basic camping guidelines for trafficked areas, such as pitching your tent a minimum of 200 feet from lakes and streams and creating no fire rings. The undisturbed site you've worked so hard to reach should stay that way. ■

CINDY ROSS *is coauthor of* A Hiker's Companion *(The Mountaineers, 1993).*

►*For more information, see "Resources," p. 96.*

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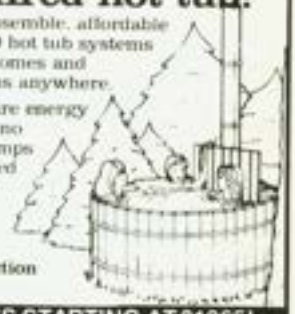

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HAS ORGANIZED RELIGION BENEFITED OR HARMED THE PLANET?

To the extent that man fulfills the command to be fruitful and multiply, his assault on this planet will continue. Religions assume that whatever sacrifices may be necessary to accommodate more of humanity should be made by species other than us.
Anita G. Brown
Colorado Springs, Colorado

If organized religion does not set life-affirming examples for all to follow as it reinterprets some old stories and creates new ones, the planet may lose not only its morality, but its inhabitants as well.
David McFall
Roselle, New Jersey

While organized religion has its merits, it seems to restrict spirituality to a building or a gathering of people. Maybe if we as individuals spent more time listening to the earth, we could widen our focus to understand and love all of Creation, not just the human aspect.
Sharon L. Gilbert
Carlisle, Pennsylvania

Having created God in man's own image, Western religion has adopted an anthropocentric mythology that separates God from Creation, soul from body, and man from Earth. It is this dualism that prevents us from relating not only to the natural world, but to ourselves. It is ironic that Christian missionaries have spent the last 2,000 years converting "pagan" indigenous peoples, whose traditional beliefs, for the most part, encompassed a holistic, naturalistic mythology that taught respect for Earth and for all life.
Michael J. Kalny
Kansas City, Kansas

Contrary to the common assertion that "Christianity is the most anthropocentric religion the world has seen," it is modern secular humanism, the worldview that our society currently upholds, that bases all values upon man (literally) himself. Our idolatrous quest for technological progress has alienated the human soul from God and ourselves as well as from nature.
Kenneth Liu
Charlottesville, Virginia

Reverence for all living things; an abiding belief in the interconnectedness of everything; an emphasis on simplicity and restraint in living and in consumption; a belief in personal responsibility: these have been fundamental to Buddhist teachings for 2,550 years. I'm not sure, however, that Buddhism would meet most Westerners' definition of "organized"—which may be no bad thing.
Richard Smith
Troy, Michigan

As a Catholic, I know well that the Catholic Church condemns materialism and consumerism and over the last 100 years has frequently pointed out the evils of laissez-faire capitalism. Further, the Catholic Church urges us to practice the cardinal virtues of justice, prudence, moderation, and courage; reminds us that we will be accountable to God for our actions at the end of our lives; and teaches that God is the creator of the natural world and loves it. It is the failure of most Catholics to live by these and related teachings that has made Catholics significant contributors to the host of serious environmental problems now facing us.
Marie Terlizzi
Monroeton, Pennsylvania

I cannot comment about all organized religions, but being a Catholic, I can describe the horror I feel about Pope John Paul's complicity in the problem of explosive population growth in Third World countries. By not casting aside antiquated dogma about natural law and speaking to South American and African Catholics about the acceptability of contraception, he is condemning millions of yet unborn children to lives of abject squalor, poverty, and starvation. By re-examining old assumptions, the Catholic Church has a great opportunity to benefit this planet. I pray that the Church does. Soon.
Steven J. Goetz
Irvine, California

The sky-god religions—Judaism, Christianity, and Islam—are the most corrosive forces on this planet. Monuments to irrationality under the guise of faith and spirituality, they focus people's hatred and distrust of one another as time runs out on the possibility that mutual respect and cooperation can save Earth from suicide.
A. Schreiber
British Columbia

Given the environmental and moral disasters created in Eastern Europe and the former Soviet Union, one could say that organized *atheism* has caused the greater harm to the planet and to the human spirit.
Victor P. Bradford
San Antonio, Texas

The creator and the creation are so intimately entwined; how foolish we were to look beyond the Garden for divinity.
Jo Dufton
Goshen, Kentucky

Religious "organizations" have had to adapt to the world-eating economy in order to maintain physical and power structures, and so have played a part in harming our planet. Communities of individuals within these organizations still believe in stewardship and God's pleasure in His creation. They keep alive the traditional ethics that are the foundation of environmentalism. They are the seeds of hope buried within the structure of organized religion. They can untwist the twisted religious traditions that were once meant to keep humankind humble, reverent, and in awe of creation.
Ed Craft
Bowling Green, Kentucky

Organized religion has encouraged mindless runaway population expansion. Aside from industrialism, organized religion has been the major proponent of the notion that the planet and its resources have no function beyond service to humans.
Richard Barrett II
Fayetteville, Arkansas

Organized religion has benefited the planet by eradicating millions of human lives in wars of hate and racial cleansing.
Earl Wettstein
Tucson, Arizona

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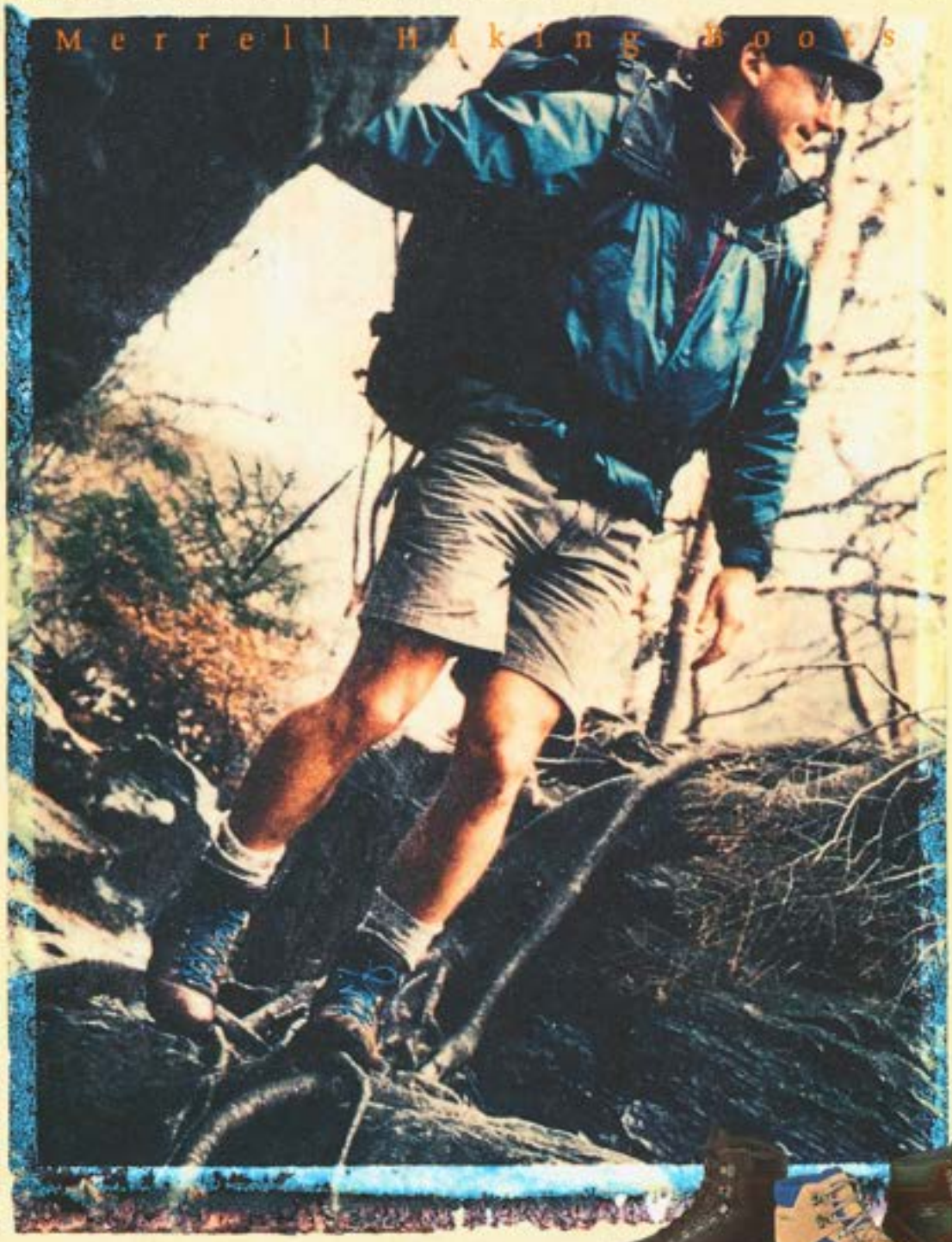

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