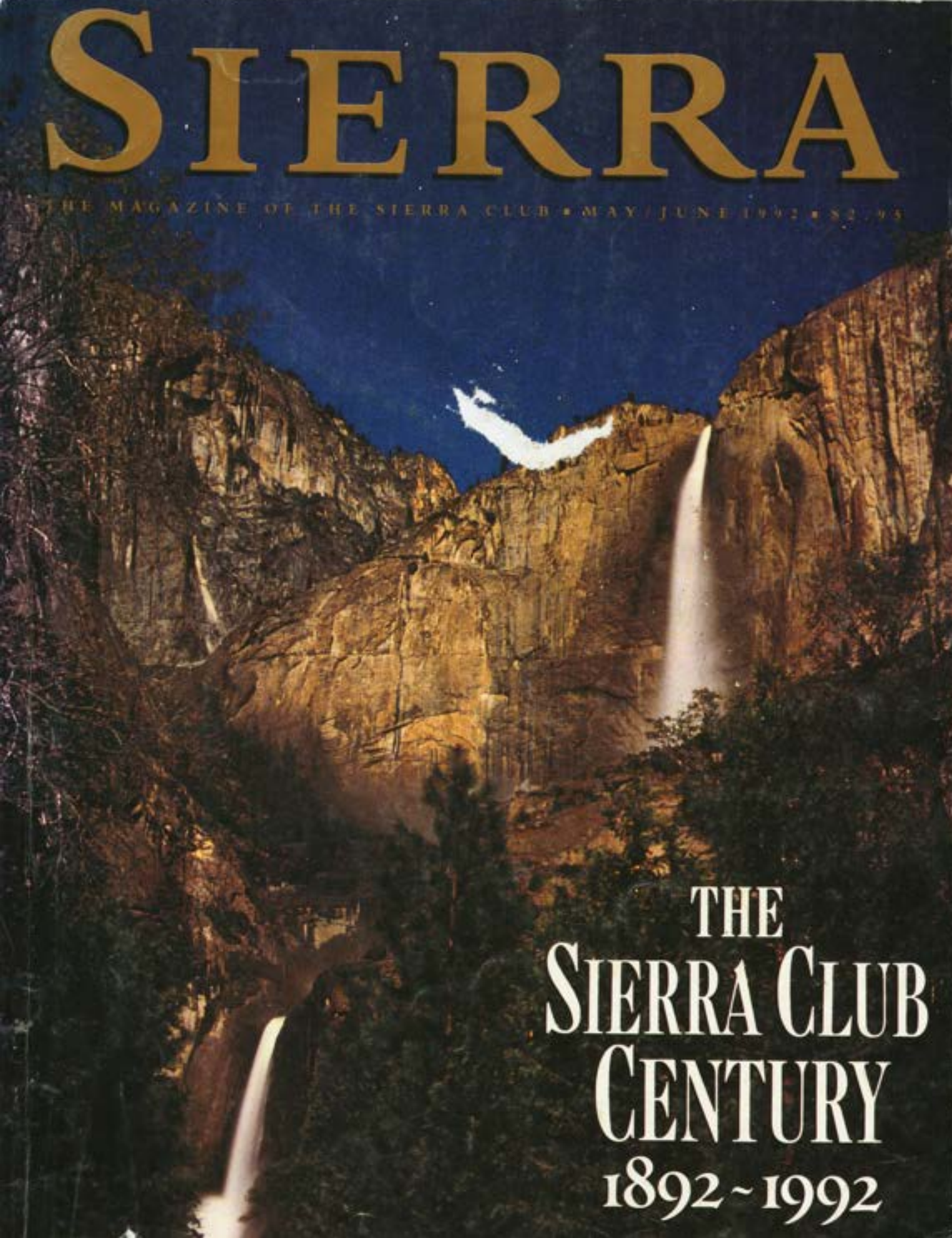
SIERRA

THE MAGAZINE OF THE SIERRA CLUB • MAY/JUNE 1992 • $2.95



THE SIERRA CLUB CENTURY

1892~1992

Think of what

Have you thought about the future? Honda engineers have spent some time pondering this question. And when they put pen to paper, a new kind of car was created. The Honda Civic VX.

The new Civic VX will amaze you. It's fun to drive. And very energy efficient. So you can step on the gas, and save on gas as well.

A car like the VX certainly demands a new engine. One so significant that it began to make news months before the first production model hit the streets.

It has a unique fuel-injected system that lets you pass with power. And pass more service stations along the way.

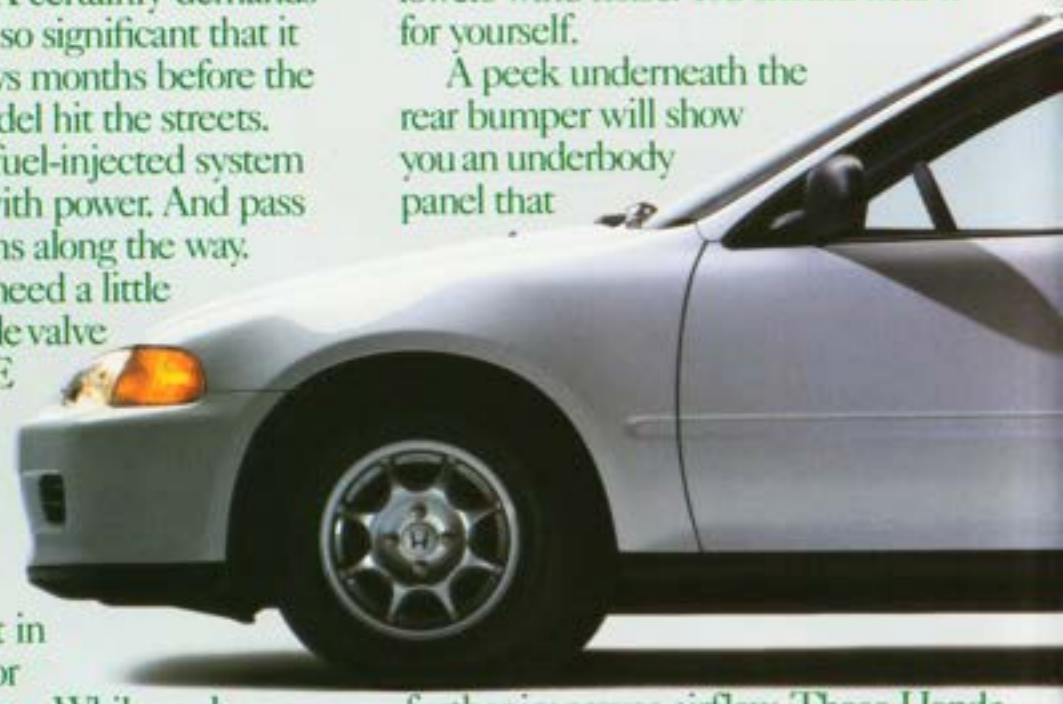
To do this, you need a little control. Like variable valve control, or VTEC-E to be exact. It tells the engine how to breathe effectively. As you accelerate, the intake valves in each cylinder let in more air and fuel for increased horsepower. While at slower speeds, one valve opening is reduced for improved fuel economy.

So how economical is this car? If you ask the EPA, they'll tell you 55 miles per gallon on the highway, 48 miles in the city.* These figures make the VX the best of any four-cylinder automobile.

It wasn't just the engine that helped earn these numbers. A car's efficiency is also determined by how smooth it is. The drag coefficient of the VX is the lowest of any Civic Hatchback ever.

The low hoodline, rounded nose, raked windshield and long roofline all blend together to form the sleek shape. Spoilers at the front and rear of the car lower air resistance. Side glass is nearly flush for the same reason. Something as aerodynamic as the Civic VX even lowers wind noise. You should hear it for yourself.

A peek underneath the rear bumper will show you an underbody panel that



further improves airflow. Those Honda engineers think of everything.

Other thoughts went into building a strong and rigid body. The engineers have succeeded. The solidness of the Civic VX is reassuring.

The doors and hood fit every body panel with real precision. An extensive 3-coat/3-bake painting method is used for the final finish.

While the overall craftsmanship is

you can save.

impressive, it's what you don't see that has to be appreciated.

Leftover steel from the construction stage is melted down and cast into other components. The bumpers are made of a plastic that can be recycled. Only a small group of automakers reuse their materials. And Honda is one of them. A special painting process cuts down on emissions from hydrocarbons.

We will give you a quick tour inside. The car feels roomy. Roomy enough for four adults. A long wheelbase does great wonders for legroom. The seats are comfortable. Large glass areas open up the Civic VX even more.

This is a Civic Hatchback after all, so go fill 'er up. There's plenty of room for your stuff. The split rear hatch has both a glass door and a tailgate. It is a convenient way to get to this space.

Take the seat behind the wheel and right before you is the newly designed dash. All the analog instruments and controls are placed just where your eye and hand would expect them.

A new smooth-shifting five-speed manual is waiting for you. It's the only transmission you'll find available. We told you this is fun to drive. Besides, it gets you better mileage. Which is also why it rides on lower rolling resistance tires and lightweight cast alloy wheels.

The re-engineered four-wheel double wishbone suspension gives the right experience for handling and ride. Comfortable and agile. The stability of rack-and-pinion steering provides you an unmistakable feel for the road.

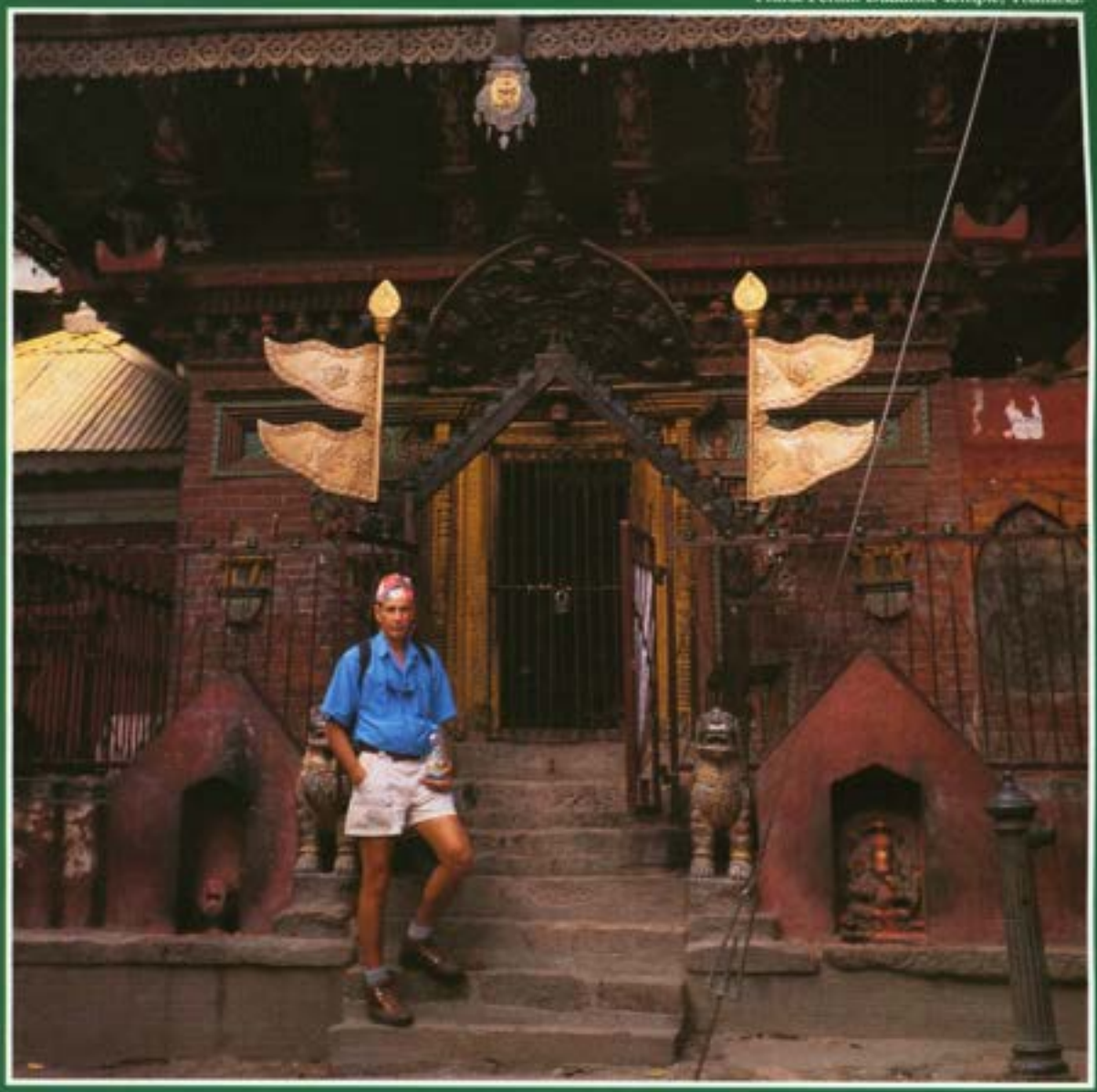
In case the situation requires one, a driver's side airbag is standard. Call us protective. Don't forget, you still need to buckle up your seat belt.

All things considered, this Civic may be the best place to put your money now, so you can put a little something away for later.

HONDA

The New Civic VX

Frank Penili. Buddhist Temple, Thailand.



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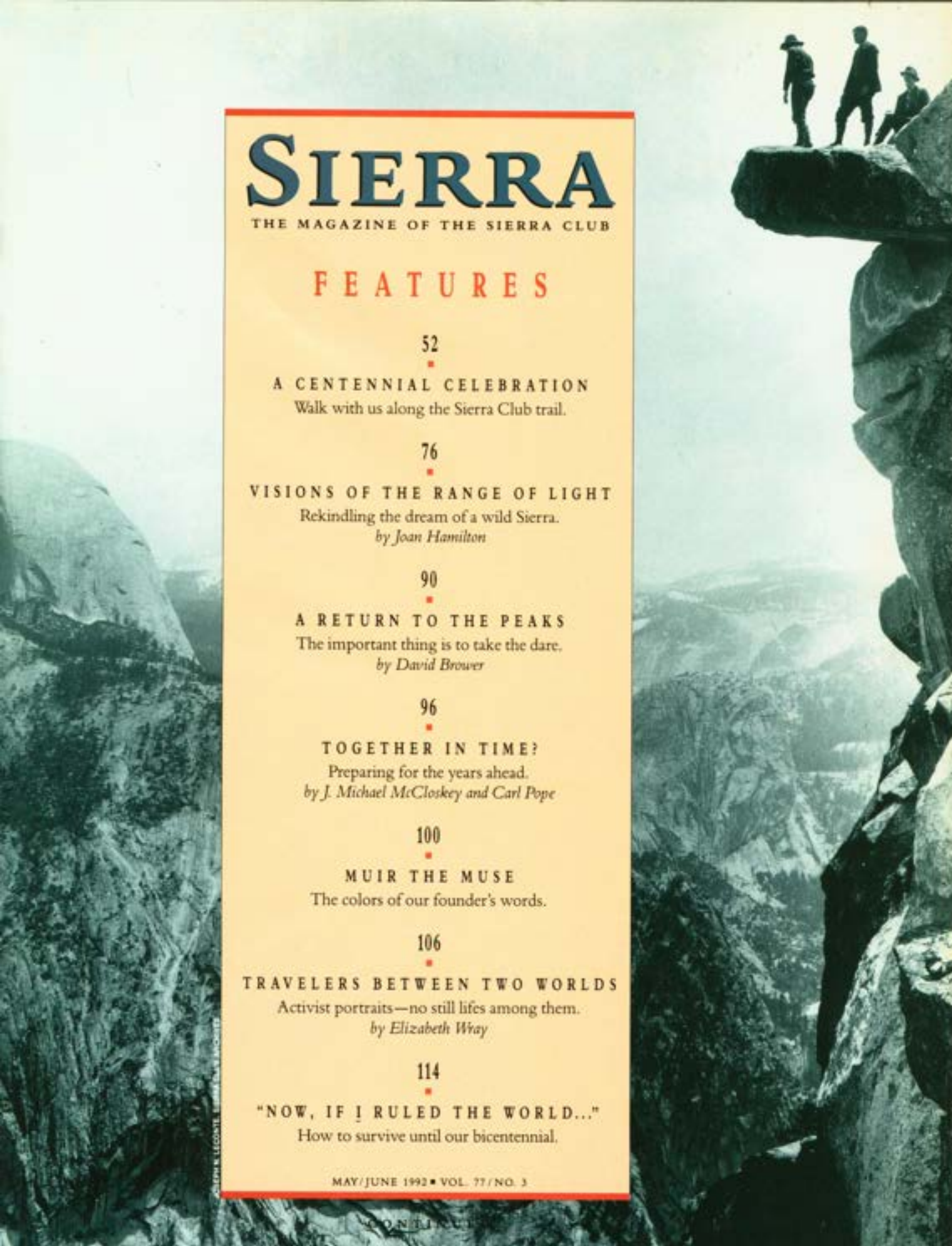


SIERRA

THE MAGAZINE OF THE SIERRA CLUB

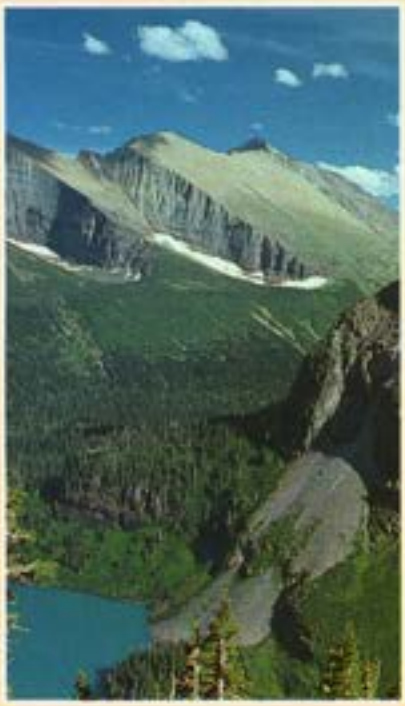
FEATURES

MAY/JUNE 1992 • VOL. 77/NO. 3

SIERRA

AFIELD

DEPARTMENTS



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The Nikon for people who care more about pictures than cameras.

The brand of camera carried by more journalists, scientists, artists, and astronauts is now available in a daring new model.

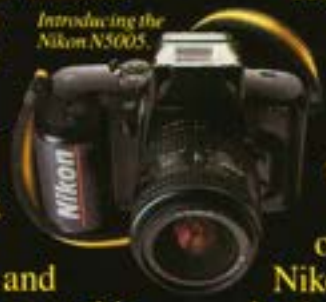
One for people who wish to document the birthday rituals of small humans.

Or discover national monuments aboard a minivan.

Or embark on landmark visits to the barbershop.

It's called the Nikon N5005,™ and right above you can see graphic evidence of the many miracles you can perform simply by setting everything on automatic and using the built-in flash. The 28-70mm autofocus zoom Nikkor lens was used for this shot. It's just one of a wide variety of legendary Nikkor lenses that you can choose from.

Introducing the Nikon N5005.



You, of course, furnish the little boy.

You see, the N5005 allows you to look for pictures instead of looking for the instruction booklet.

It's for people who want to know the time but not how to build the watch.

It's the camera for all those people out there who always wanted to get a Nikon but thought they, well, might not be *into it* enough to use one.

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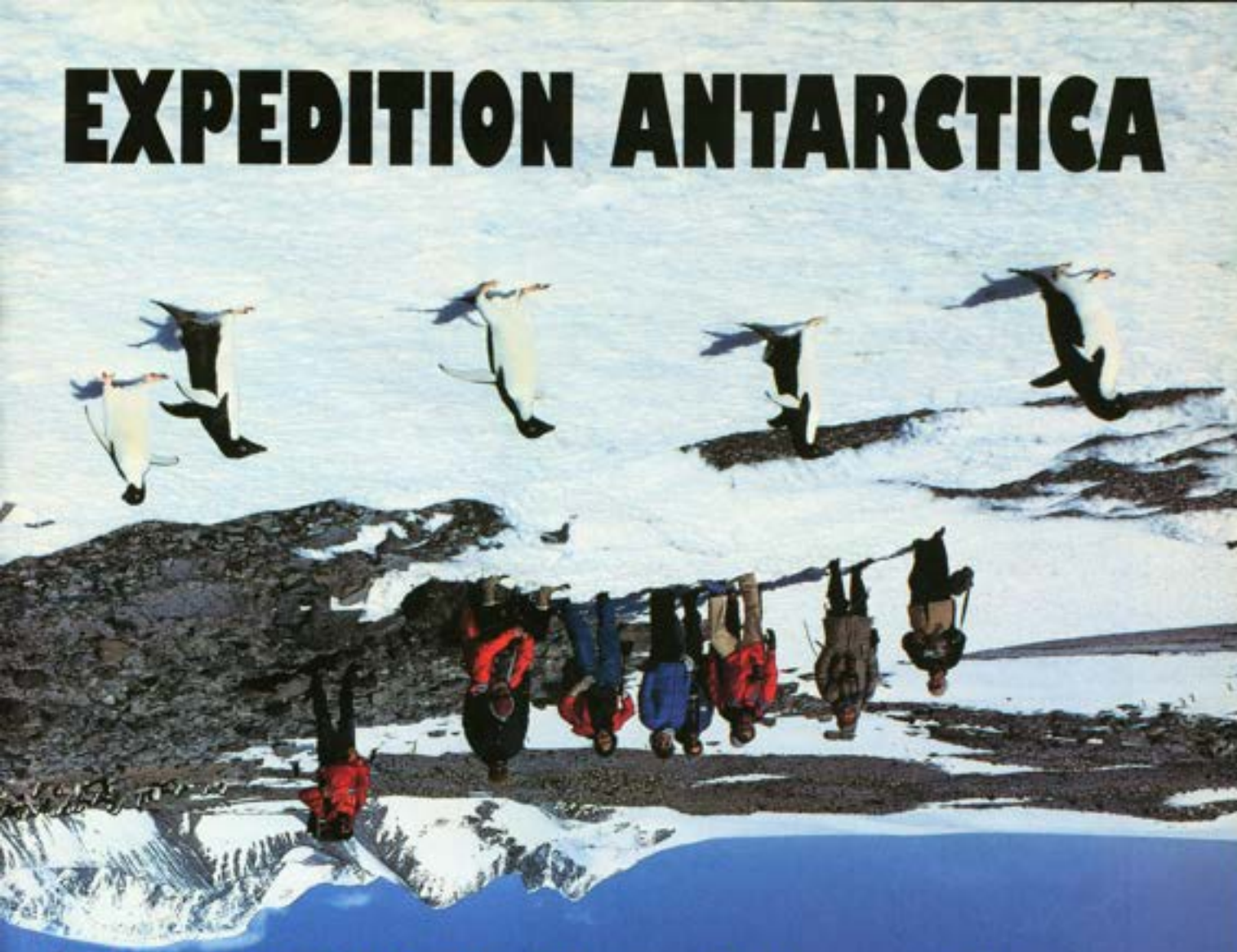

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While other children his age struggle with their ABC's, he struggles with hunger,

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with illness, with the heavy workday demands placed upon his frail child's body.

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Your $20 monthly contribution will help put nourishing food in little tummies, put schoolbooks in small hands, and put good medical care within reach.

That's because Save the Children knows how to get the most out of every penny. We don't give handouts. Rather, we combine your contribution with others, for programs that let communities nurture all their children.

Our brave young heroes will never get medals for their valor. But you can give one of them a bright gleam of hope.

Save the Children.

YES, I'd like to help a small hero by becoming a Save the Children sponsor. My first sponsorship contribution is enclosed. Please send me a complete sponsorship kit, with my sponsored child's photo and personal story, and information on how I can write to my child.

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SCB 5/2/2

What a Long High Trip It's Been

One hundred years ago—on May 28, 1892—a distinguished group gathered in a San Francisco law office to found the Sierra Club, whose accomplishments over the next century would surpass the dreams of the most visionary among them. In celebration of this anniversary, we've put our best effort into making this issue of *Sierra*—our largest ever—both a keepsake of the Sierra Club's centennial and a resource for activist involvement.

Aesthetics and activism are not often mentioned in the same breath; yet the one has done great service for the other. Though the issues the Club deals with today are often quite different from the ones on its founders' agenda, there is a striking similarity in the aesthetics we apply to their solution. We recognize (as did our 19th-century predecessors) the power of beautiful images to reinforce the impulse to preservation, and like them make generous use of photography and art to amplify our message.

We draw these images in words as well—for words have power too, describing landscapes of emotion and reason as well as of schist and sand. By combining these two vocabularies in the photo-and-text history of the Club that introduces this centennial issue's package of features (page 52), we attempt to sketch the story of the first Sierra Club century. This "history," we hasten to add, is barely deserving of the name—for such a complex chronicle resists being shoehorned into the pages of a magazine, however cunningly assembled. But if you're moved (especially to action) by an image or a story old or new, we've done our work as well as the *Sierra* and *Sierra Club Bulletin* editors who've come before us.

The Club's early focus, at work and at play, was on the Sierra Nevada—the Snowy Mountains of California that John Muir loved so well, and whose impending despoliation inspired him to imagine the Sierra Club. Though the range's peaks and other landmarks now enjoy a measure of protection, its forests, meadows, air, and water remain endangered by logging, mining, grazing, and the rippling effects of urban sprawl. But as senior editor Joan Hamilton reports in "Visions of the Range of Light" (page 76), Sierra Club activists are working to change that, once and for all.

In this they follow in a long and hallowed tradition, extending from Muir and the Founding Fathers (Solomons, LeConte, Colby) to the second generation (Farquhar, Leonard, Brower) and beyond. Ah, yes: David Brower—a man whose name and words still stir emotions 20 years and more since he last led the Sierra Club. In "A Return to the Peaks" (page 90), he honors our roots by reminding today's members of the gritty commitment that made yesterday's triumphs possible.

Faith, vinegar, and a sense of realism: the first century's lessons.

▲

Sometimes such resolve is nurtured by little else but faith and vinegar. But more than imagination is required to make environmental progress: Activists need a sense of realism, of what can practicably be accomplished in the political arena. In "Together in Time?" (page 96), two of today's chief Sierra Club policymakers, J. Michael McCloskey and Carl Pope, coolly examine the enormous challenges the world will face over the next 20 years, and consider the unique capacity of organizations like ours to address them.

That capacity is based, of course, on the thousands of active members who make the Sierra Club the most effective grassroots environmental organization in the world. The Club's most dedicated volunteers devote truly remarkable quanta of time and energy to its programs, as Elizabeth Wray reports in "Travelers Between Two Worlds" (page 106).

We've also looked beyond the Club for advice on how to tackle the next century. In "Now, If *I* Ruled the World . . ." (page 114), we share the responses of more than a dozen thinkers to the question: "How would you solve our environmental problems if you had absolute power to do so?"

Finally, we come back to John Muir, whose prose stirs the soul today as it did 100 years ago, when he took pen in hand to rail against the "temple-destroyers" in Yosemite, or to praise the awesome majesty of a waterfall. Our tribute to "John o' the Mountains" is expressed through the visions of six talented graphic artists who have lent their right brains to his words; "Muir the Muse" begins on page 100.

We thank the writers, designers, artists, photographers, and others who have contributed to this ambitious project. We also gratefully acknowledge the assistance of Bonnie Hardwick, Loren Lasleben, Lawrence Dinnean, and Mary Morganti of the University of California's Bancroft Library; Phoebe Adams of the Sierra Club's William E. Colby Memorial Library; chair Maxine McCloskey and the Sierra Club History Committee, and chair Kent Gill and the *Sierra* Advisory Committee. And for making this a century to remember, we thank the past and present members of the Sierra Club.—***the editors***

IF WE CAN'T FIND A WAY TO LIVE WITHOUT THE CAR, WE'D BETTER FIND A CAR WE CAN LIVE WITH.

NISSAN

We don't mean to sound simplistic. Solving the world's ecological woes is anything but simple. Our engineers will testify to that. And we don't want to imply that we've built a "green" car. We wish we had, but we haven't.

However, and this is a big qualifier, we are taking large steps in the right direction.

Like our plan to introduce an advanced-technology electric car, modeled after our recently unveiled FEV, Future Electric Vehicle, featuring a unique battery capable of a complete recharge in under 15 minutes.

We've also developed an exclusive paint-removal technique which will allow us to actually recycle certain non-metallic body parts. And we've reduced waste materials at our manufacturing plant in Smyrna, Tennessee by an impressive 60%.

Furthermore, we were the first automaker to begin phasing out CFCs, chlorofluorocarbons, an ozone depleting solvent used in our cleaning and production process. And we were the first to announce plans to utilize an environmentally safe, CFC-free, coolant for air conditioning units in every one of our cars and trucks.

Which explains why the U.S. Environmental Protection Agency recognized Nissan with the Stratospheric Ozone Protection Award.

Of course we're not about to rest on our laurels. In fact, we're doing anything and everything we can to build a car we can live with.

Because quite frankly, the alternative is something we can all live without.

BUILT FOR THE HUMAN RACE.

LETTERS

HOSTAGE CRISIS

The skepticism you express about the forthcoming United Nations Conference on Environment and Development (UNCED) in your March/April issue ("The Rocky Road to Rio") is well founded. However, you miss the essence of the issue in your bid to separate questions of environment from those of poverty and underdevelopment—for it is those two forces that hold the environment and the future of the planet hostage. To try patching up the environment without addressing poverty would be to treat the effect rather than the cause. It would be not only tragic but criminal to place the onus of redress on those who abuse their environment only out of necessity—those whose options are limited to the *possibility* of starvation tomorrow or the *certainty* of starvation today—rather than on those who force them into situations where such a course of action becomes necessary.

As a new era of eco-colonialism looms large over the world, it is easy to understand the motivation behind the position taken by the governments of the North. They, after all, have a stake in wanting to maintain the exploitative regimes that defined the preceding eras of imperial and cold-war (dependency) colonialisms. But it is a sad and scary feeling when respected public-interest groups like the Sierra Club, which are seen as the beacons of hope even in the South, begin pandering, willingly or unknowingly, to the same interests.

Adil Najam
Cambridge, Massachusetts

Our point was not that environmental issues exist apart from the problems of poverty and underdevelopment: It was rather that both North and South are acting as though they do. Far from placing "the onus of redress" on the South—for we recognize that most environmental problems have their roots in Northern-style overdevelopment and overconsumption—we clearly and repeatedly indicated that the main obstacle to an equitable accord in Rio has been the intransigence of the United States.

ADRIFT ON AISLE SEVEN

Characterizing the ruling on tuna imports handed down by a GATT panel last June as a conspiracy to "kill Flipper" ("Trading Away the Environment," January/February) ignores the purpose of the decision: to limit U.S. regulation of Third World economies. The GATT negotiations are a logical and important progression within the global economic community. This stumbling but necessary process should not be crippled by special interests calling for general reform.

The way to infuse an environmental ethic (or any ethic apart from the corporate ethic of the dollar) is not increased legislation. Legislation breeds only loopholes and legal fees, and distracts from ethical progress. What is necessary is to guarantee that enough information be given consumers that they may dollar-vote their conscience. Labels should tell consumers a product's contents and the methods by which those contents are processed; organizations like the Sierra Club should assess the environmental impact of purchasing these products.

The GATT decision is not a conspiracy against nature; it is a statement supporting free trade. If there is spiritual continuity between human and nonhuman nature, then the defense of wildlife is best facilitated by removal of barriers between spiritual will and consumer action. I can find my way through the deserts, the mountains, and the forests—help me find my way through the wilderness of unmarked goods and commercial claims in the grocery store.

Alan Elliott
Los Angeles, California

I agree with your conclusions about the GATT process, but would like to point out that the U.S. is far from blameless. When, as a result of massive consumer boycotts, and in response to evidence that hormones in meat could cause growth disturbances in young children, the EEC banned the sale of meat containing hormones in 1987, the United States retaliated by banning the importation of a number of European agricultural products. This silly tit for tat is still going on.

Edith Borie
Karlsruhe, Germany

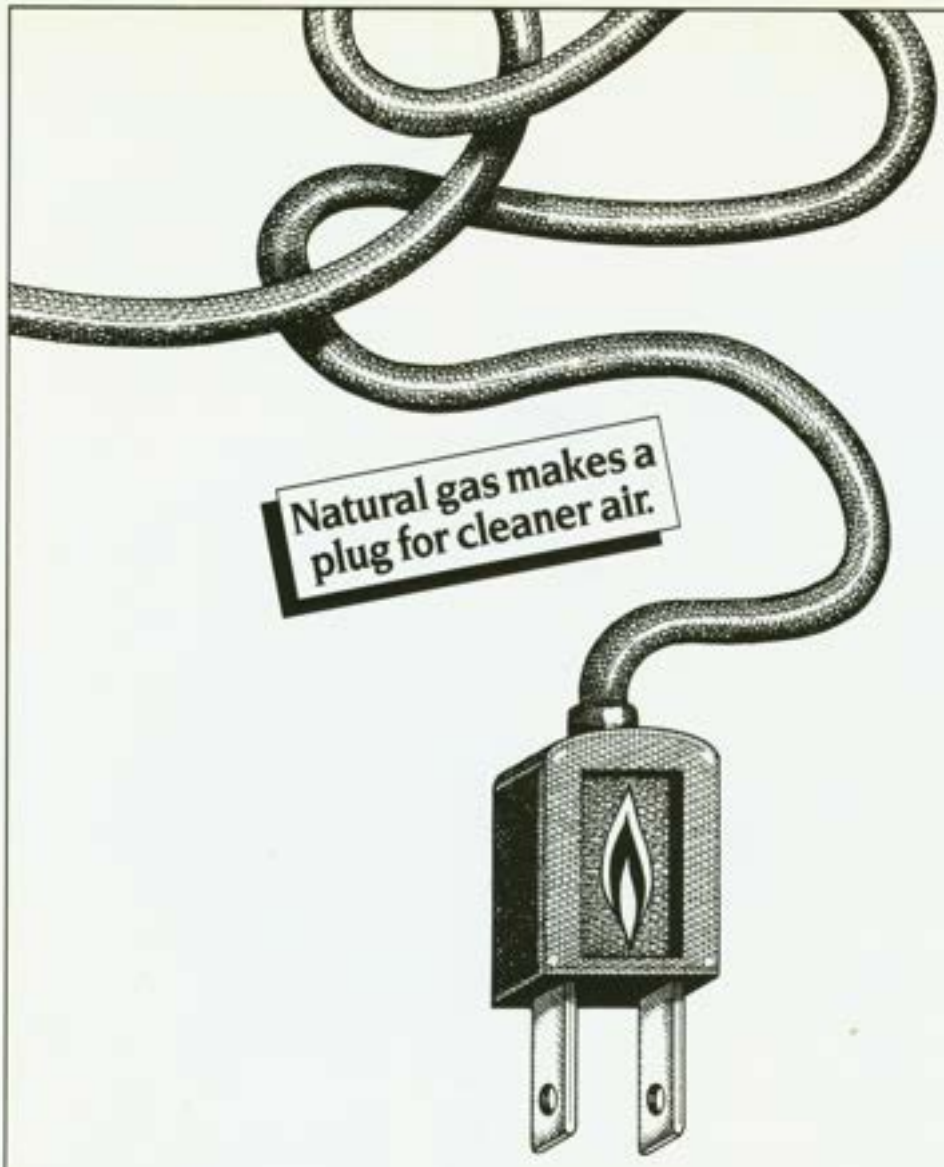
DON'T BASH THE BIG THREE

"Asleep in Detroit City" (January/February) presents a distorted view of the three American auto companies. The Big Three do not control the demand side of the market. Americans seem to want to buy larger cars. If we want more fuel efficiency, we have to encourage people to demand smaller cars, including the ones that we ourselves produce. Why doesn't the Bryan/Boxer bill [to mandate higher mileage ratings] include a steep hike in gasoline taxes and funding for alternative fuel sources?

The article also implies that the Japanese and European carmakers are more concerned about the environment than are General Motors, Chrysler, and Ford. This implication is false. What good does it do to bash American manufacturers at a time when we are struggling for our lives? Rest assured that if we went out of business, the chaos that would follow would not help the cause of the Sierra Club. Many of us who work in the auto industry are avid conservationists. We are working hard to improve our cars and we do not have a negative attitude. Please be fair with us.

Myron H. Bell
Highland, Michigan

The issue is not whether foreign automakers are more environmentally dedicated than their U.S. counterparts. Rather, it is the capacity of the auto companies to incorporate technology in their vehicles in ways



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that combine environmental quality with customer satisfaction.

As Bell suggests, it will also be necessary to provide consumers with incentives to buy such environmentally friendly vehicles. Unfortunately, efforts to provide such incentives in California—through a combined tax increase on dirty cars and tax credits for those who purchase less polluting, more efficient vehicles—were defeated because of the opposition of U.S. auto companies.

OUT OF GAS

Paul Rauber's article "Last Refuge" (January/February), about the conflict between petroleum exploration and environmental concerns in the Alaskan Arctic, contains the most hypocritical statement I've ever read. Rauber was describing in detail his flight to the Arctic National Wildlife Refuge: "We had been in the air for two hours, and were beginning to run low on fuel." Well, brace yourself for a little surprise, Paul: The whole country has been running a little low on fuel for some time now. This country fought a very costly war last year that took the lives of many to protect supplies of petroleum for you and me.

I own a company that explores for oil and gas in the marshes of South Louisiana, and consider myself an active environmentalist. We are a very small company, but we take painstaking and costly steps to protect the fragile environment in which we work. Most of these measures are required by laws (good laws), and quite a few are our own. We understand that our welcome is only as good as our behavior.

The population of this country has a right to know if a significant supply of energy exists under the Arctic National Wildlife Refuge. They also have the right to demand that those who wish to risk billions of dollars take painstaking measures to protect the area and leave it in better condition than they found it.

Conflicts will not be resolved by liberal hypocrites such as Paul Rauber, or by insensitive conservative executives of major oil corporations. Only reasonable, knowledgeable people from all walks of life will discover how to allow civilization to exist without endangering our planet.

Gary W. Blackie
Houston, Texas

I would like to thank Paul Rauber for an interesting and entertaining article on his backpacking trip through the Arctic National Wildlife Refuge. What I found most interesting about the article were the many misconceptions that Rauber has about the oil industry and its interest in drilling in ANWR. I also found it disturbing that as a "journalist" Rauber did not check the facts on his statements pertaining to the oil industry, the need for increasing domestic oil production, and the effect oil-drilling has had to date on the North Slope of Alaska.

I offer a few facts to combat the myths Rauber obviously believes and perpetuates:

Rauber jokes about the "BP golf course" and the "Exxon Bar," suggesting that the oil industry will spread itself needlessly across the plain. However, only approximately 23 square miles (about the size of Washington, D.C.'s Dulles Airport) would be needed to develop the oil reserves underlying ANWR. This is less than one percent of the coastal plain, and only 0.1 percent of the entire refuge.

Rauber implies that the estimated 3.2 billion barrels of recoverable oil from ANWR would supply the country for only six months. Such a scenario, however, would require that we quit importing oil and that we shut-in our entire domestic production. This is totally ludicrous.

Throughout the article the reader gets the idea that drilling in ANWR would have an adverse effect on the caribou population. However, numerous government and industry studies in the North Slope area have shown that since oil-company operations began in 1970, the Central Arctic caribou herd has increased sixfold, to 18,000 animals in 1990.

I'm sure that many people would think that I am trying to promote oil drilling in ANWR only for job security or financial gain because I work for an

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oil company. They would also like to believe that neither I nor anyone in the oil industry is truly concerned about the status of Earth's environment. I can only state that that is not the case! If you were to ask anyone in my company, from the CEO to a roustabout, what two things govern the way we do business, they would answer the safety of our employees and protection of the environment.

What I am trying to do is raise the consciousness of the American people about our growing dependence on foreign oil. A recent Energy Information Administration study predicts that oil demand will increase from the 17 million barrels per day consumed in 1990 to 19–22 million barrels per day by 2010. The report also states that falling domestic production will increase U.S. imports from the 7 million barrels per day imported in 1990 to 10–15 million barrels per day in 2010.

In order to curb this projected increase in imported oil, it is vitally important that we begin the exploration of remote areas of the United States as soon as possible. It is currently estimated that at least a ten-year lead time would be required before production could begin from ANWR. Even in established areas where major finds are still possible, such as the Gulf of Mexico, it is normal for six or seven years to transpire before a new field can be put in production. Thus the longer we wait, the more we increase our already staggering trade deficit.

I believe that the American public owes a great debt to the environmental movement of the past 20 to 30 years. But you must realize that the companies of today are not the companies of the past, and that we should not be judged by the sins of our forefathers. Environmentalists and big business should work together to ensure the protection of our environment while allowing the development of our natural resources. I firmly believe that this can be accomplished if the American public is given all the facts pertaining to an issue, not just a one-sided view based on a personal bias.

Steven J. Vierkandt
Chevron U.S.A. Production Company
New Orleans, Louisiana

Paul Rauber replies: *The flowering of environmentalist sentiment in the oil industry, as reported by Blackie and Vierkandt, would be more encouraging were there any evidence for it beyond their say-so. Blackie, for example, implies that after draining the Arctic Refuge, the oil companies could "leave it in better condition than they found it." What might that be? and where has it ever happened before? Not on the North Slope, surely, where more than 4 million gallons of oil and hazardous waste have been spilled in the past 20 years. As for the increase in the numbers of the Central Arctic caribou herd noted by Vierkandt, it is more likely due to decades of hunting of wolves and bears by oil workers (no doubt all good environmentalists at heart) than to any aphrodisiacal effects of oil production.*

Vierkandt does not dispute that the Arctic Refuge holds only six months of oil (there is a 95-percent chance that it holds four-and-a-half weeks' worth); what he

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   4❑ Deluxe hotels & resorts
   5❑ Condo vacations
   6❑ Adventure
   7❑ Fly/drive
3. I'm planning to visit Australia:
   1❑ Feb - June 1992
   2❑ July - Sept 1992
   3❑ Oct - Dec 1992
   4❑ During 1993
   5❑ After 1993
   6❑ Haven't decided
4. I'll probably make my international airline reservations _____ prior to departure:
   1❑ Less than 2 weeks
   2❑ 2 weeks - 1 month
   3❑ 1-3 months
   4❑ 3-6 months
5. I sometimes travel to Australia or the South Pacific on business.
   1❑ Yes
   2❑ No
6. I plan to stay:
   1❑ Less than 2 weeks
   2❑ Two weeks
   3❑ Three weeks
   4❑ More than three weeks
7. My age is:
   1❑ Under 25
   2❑ 25-34
   3❑ 35-44
   4❑ 45-54
   5❑ 55-64
   6❑ 65+
8. My current household income is:
   1❑ Less than $40,000
   2❑ $40,000-59,000
   3❑ $60,000-79,000
   4❑ $80,000-99,000
   5❑ $100,000-149,000
   6❑ $150,000 +
9. My level of education is:
   1❑ High school graduate
   2❑ Some college
   3❑ College graduate
   4❑ Attended graduate school

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Fair Dinkum* Australia.






***fair dinkum**/ —*Colloq.* —*adj.* 1: true, genuine, dinkum ‹are you fair dinkum?› —*interj.* 2: assertion of truth or genuineness ‹it's true, mate, fair dinkum› 3: Come have a fair dinkum great time in Australia.

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finds "ludicrous" is the standard of comparison. I neither implied nor suggested that development of the Arctic Refuge would shut off other sources of oil. On the contrary, I think it is quite apparent that, should oil-drilling in the Arctic Refuge be allowed, it would continue to degrade the coastal plain for many, many years.

If measuring oil supply in terms of time is ludicrous, so too is Vierkandt's own assertion that oil development on the plain would take up only an area the size of Dulles Airport. This comparison is useful only if one imagines Dulles Airport spread in bits and pieces all over the plain, linked across the tundra by a system of roads and pipelines. Even the Interior Department's own happy-talk "Coastal Plain Resource Assessment" concludes that this development would cause "major effects" on the 200,000 caribou of the Porcupine herd, as well as on muskoxen, wolverines, and polar bears. That is, it would kill large numbers of them.

Finally, if it is true, as Blackie suggests, that "the whole country has been running a little low on fuel," why is the gasoline I buy at the pump cheaper than the water I buy at the store? Why is there a worldwide oil glut, with half of the OPEC countries desperately trying to get the other half to stop overproducing? If there is a scarcity, why don't the oil companies join the Sierra Club in helping us conserve it? After all, the Bryan bill would save 2.5 million barrels a day—more than our pre-war imports from Kuwait and Iraq combined, and eight times as much as the precious Arctic Refuge could ever produce.

THE PROOF AND THE TRUTH

I was amazed to learn about Tennessee's Highlander Center in Carol Polsgrove's "Unbroken Circle" (January/February). I went to a high school where the teachers were Jesuit priests; there I learned a lot about putting Christ's message to work in the world. However, like everyone else, the priests came from every part of the political spectrum, and one was a John Bircher. He would bring all sorts of "proof" to class, including the photograph you published of a billboard claiming to show "Martin Luther King at Communist Training School." We kids laughed it off, but how could we actually prove otherwise?

Now, 20 years later, I found the truth in this inspiring and informative article. The sad thing is that to this type of person we are all "Communists," and that what happened to some of that priest's younger comrades in El Salvador—and to King himself—is justified in their eyes by these kinds of lies. As we struggle against political and corporate antagonists, it doesn't hurt to look back a hundred years—to a democracy dominated by racism and imperialism, by exploitive mining, railroad, and other corporate interests, in which safety in food, work, products, and living conditions was uncertain. We owe a debt of gratitude to those who fought and even died before us. Thanks for this bit of history, and the update.

Douglas B. Simon
Albuquerque, New Mexico

Let the Records Show

In 1930 a Sierra Club committee was formed to aid in rescuing Club memorabilia and other historical materials from their "obscure and precarious existence in the attics and trunks of our widely scattered membership." Today the Sierra Club Archives reside within the Bancroft Library, on the campus of the University of California at Berkeley. If this centennial issue of *Sierra* should pique your interest, it's there that you can most readily trace the Club's 100-year-long paper trail.

Be advised, though, that the Bancroft's Heller Reading Room is no place for casual browsing. Before entering, you must leave your coat, briefcase, and other extraneous items in an adjacent locker room, show the doorkeeper your I.D., and hand over your pens (only pencils or typewriters are permitted for notetaking). Finally, you will be waved through the plate-glass doors.

As in most libraries, you enter a hushed world—but here the documents you request require at least 24 hours to be brought from their temperature-controlled, fireproof storage vault. Around you, scholars pore over 4,000-year-old papyri, medieval manuscripts, the notebooks of Mark Twain, or leaflets from decades of social protest in California. Undergraduates and tenured professors alike cull obscure files, handling items delicately and solicitously, protective of the history they touch.

Of the Bancroft's 17,000 special collections, the Sierra Club Archives ranks among the largest—a veritable mountain of papers and photographs. It's also one of the best resources anywhere for investigating the environmental movement's history, according to Susan Schrepfer, author of *The Fight to Save the Redwoods* and a specialist in Sierra Club materials.

Schrepfer has been delving into the archives' holdings for some 20 years, since joining the Sierra Club History Committee, a volunteer panel of professional and amateur historians. One of her first projects was to visit the homes of long-time members to urge them to donate their worthy papers and old photos to the Bancroft. In the process she met people like James Rother of Berkeley, then, at 90, a Sierra Club member for 63 years. He and his wife had met Sierra Club founder John Muir on a Club outing in Yosemite in 1909, and Rother had a photograph of Muir regaling a group of members in Hetch Hetchy Valley (later inundated behind O'Shaughnessy Dam to provide San Francisco with drinking water).

That image now shares space with 44,500 others in the Sierra Club Archives. If you're looking for vintage shots of mountaineering women in bloomers, or of pack trains, blacksmiths, cliff dwellings, or mountain scenery, this is the place to come. The works of such eminent turn-of-the-century photographers as Joseph N. LeConte and Edward T. Parsons are here, as are later images by masters such as Ansel Adams (who recorded numerous Sierra Club outings beginning in the 1920s), Cedric Wright, and Philip Hyde. Less technically perfect but no less engaging are the lovingly assembled "High Trip" albums compiled by anonymous participants in the Club's annual outings between 1901 and the mid-1950s.

While the Club's photographic collection is impressive, it is dwarfed by the mass of written material (1,100 cartons' worth) that has poured into the Bancroft over the years. This agglomeration of paper recently underwent a meticulous appraisal, sorting, rearranging, and indexing—an effort spearheaded by the Bancroft's manuscripts division. The result is an orderly array of the memoranda, letters, membership lists, accounting logs, journals, oral histories, summit regis-

Should you wish to take
a backward glance,
this is where to come.

■

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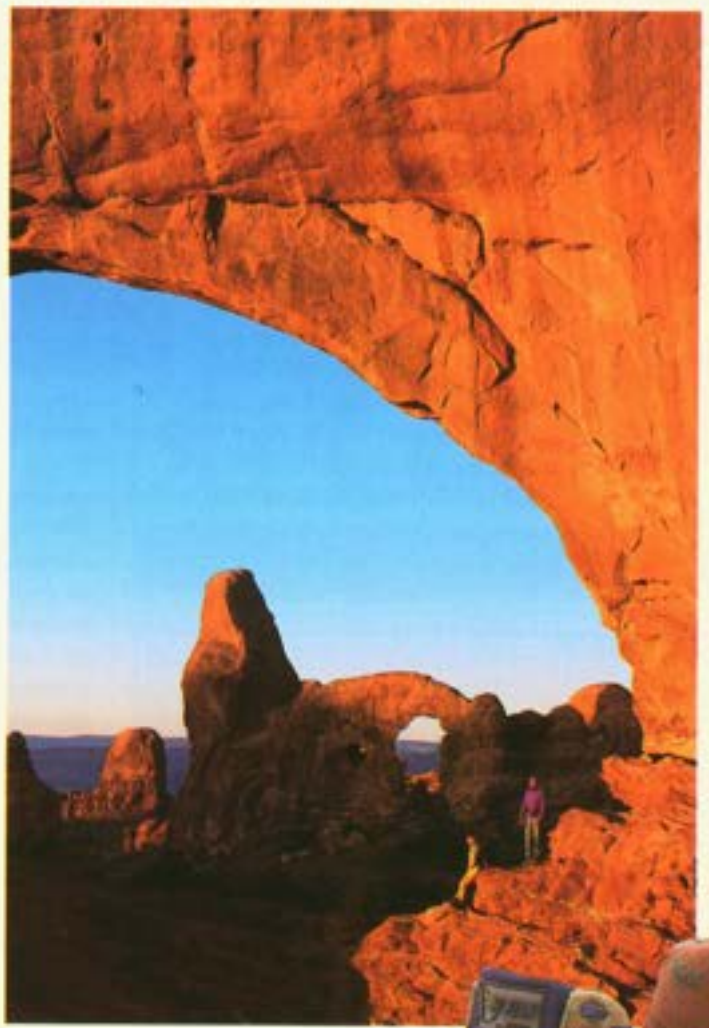

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ters, outings announcements, election ballots, books, postcards, posters, and maps produced or accumulated by Club members since 1892.

Those materials are now so voluminous that tracking down individual items demands recourse to several bound index volumes keyed to particular aspects of the collection (and a good deal of patience). Still, if you've got time to spend, you can indulge a while in the pleasures of serendipity.

You might, for instance, turn up the first visitors' register from the Club's LeConte Memorial Lodge in Yosemite Valley, in which the earliest signatures—inscribed with fountain-pen flair—date from June 1905. Or you might elect to have brought to you the official Sierra Club songbook of 1916, a little gem that sparkles with silly wit, including a verse about the Club's popular High Trip leaders, William Colby and Clair Tappaan: "Bill Colby was a hiker / who climbed the mountains high, / and when they went straight up and down, / he'd crawl up like a fly. / Oh, Tappaan was a jolly man / who wouldn't tell a lie. / At least, that's what he said, / but he certainly could try."

As in any archival collection, many such documents of less than Sierra-shattering import are found. Consider this 1945 letter from Ansel Adams to fellow Sierra Club director Charlotte E. Mauk: "Quite some excitement! I hit a black bull just outside Mariposa! No damage to yours truly, and no important structural damage to the car—but there is one awful dead bull . . . (800 pound bull; speed 35 mph; weight of car nearly 5,000 pounds) Yeaouch!"

But Adams and Mauk also had more serious business to attend to that year, as evident from one draft of a letter they were preparing to send to two congressmen who had just returned to Capitol Hill after visiting Yosemite Valley: "As you must have seen clearly enough for yourselves, hotel (and related) concessions in Yosemite tend to create a cheap 'resort' atmosphere. . . . The operation of bars, dance halls, vaudeville programs, 'curio' shops full of frightful junk—and activities entirely unrelated to the significance of the Valley—has nothing to do with enabling the public to visit and enjoy and learn about *Yosemite*." A reader in 1992 might be overheard to murmur, "*Plus ça change . . .*"

CEDRIC WRIGHT, SIERRA CLUB ARCHIVES

One master photographer shoots another: Ansel Adams by Cedric Wright.

As you approach the modern era of Sierra Club history, the name of David Brower inevitably occurs, and recurs. As Ansel Adams pointed out to his fellow Club directors in 1968: "To examine the affairs of the Sierra Club without reference to David Brower would be like discussing French politics without mentioning DeGaulle." Well known (some would say notorious) for his strong-willed, often unilateral actions, Brower was frequently thought extreme by old-line Board members more accustomed to accommodation than confrontation. Yet he could show a conservative streak as well—as when, in 1959, a member wrote to him, urging the Club to step away from its "ivory tower" concern over national parks and to tackle the unglamorous issue of water pollution. "The Sierra Club has a passing interest

in this," Brower replied, "but we still have to be awfully careful about how many new subjects we try to take on until we've digested the old ones."

The Club eventually *did* take on water-pollution issues, the records make clear—along with a wide range of other "new subjects," from population to energy planning. Such actions occasionally generated friction within the ranks, with some old-timers insisting that the organization stick to leading hikes and lobbying for wilderness . . . or, in some cases, fearing that the Club might be treading on dangerous ground.

After the Club followed *Silent Spring* author Rachel Carson's lead and joined the fight against pesticides, Club President Phillip Berry received a sharp rebuke from Atlantic Chapter founder Thomas Jukes. "I regard *Silent Spring* as a major intellectual calamity," Jukes wrote, "because it has set the pattern for a nonscientific and emotional approach to a scientific subject." Jukes—a biochemist who worked for American Cyanamid—believed that the benefits of DDT far outweighed its dangers, and shared the disdain of many other scientists active in the Club for what they considered to be Carson's oversimplified handling of the topic. That many Club leaders were swayed by Carson's "nonscientific" book dismayed them, leading several to resign. As Jukes' letter in the archives suggests, there was a strong belief in some quarters that the Club simply wasn't technically qualified to make judgments about scientific topics, and ought to refrain from doing so.

That debate has long since been resolved. Its lineaments—along with those of the arguments, agreements, and epiphanies that have shaped Sierra Club policy over the past 100 years—may be discovered by anyone who cares to venture into the Club's archives. Just make your way to Berkeley, present yourself to the Bancroft's gatekeeper, shed your jacket, surrender your pen, stow your belongings, take pencil in hand, and dig in.

—Mark Mardon

►*For more information, see "Resources," p. 156.*

WHEREABOUTS

The Watershed

GARY SNYDER

Twenty-five years ago I found myself crawling with a compass through a manzanita thicket on a forested slope in the northern Sierra Nevada. I was trying to locate at least two of the boundaries to a parcel of land that some friends wanted me to buy in on; eventually I found the brass cap that established a corner. I had never been in that part of the Sierra before, but I recognized the community: ponderosa pine, incense cedar, black oak, Douglas fir, madrone, the occasional sugar pine. Lots of manzanita. A wild meadow full of native bunchgrass. Knowing these characters and their ways from other regions, and remembering that I liked them, I said yes.

Two grown sons, two stepdaughters, three cars, two trucks, four buildings, one pond, two well-pumps, close to a hundred chickens, 17 fruit trees, and about 90 cords of firewood later, I'm totally a part of this plain Sierra forest world. And I'm still a cheerful beginner and learner, noticing things every year that somehow hung back earlier. (There is one boundary down in the chaparral that I still haven't located.) This area hasn't changed that much in a quarter century—though the developments are getting closer—but my sense of where I am sure has.

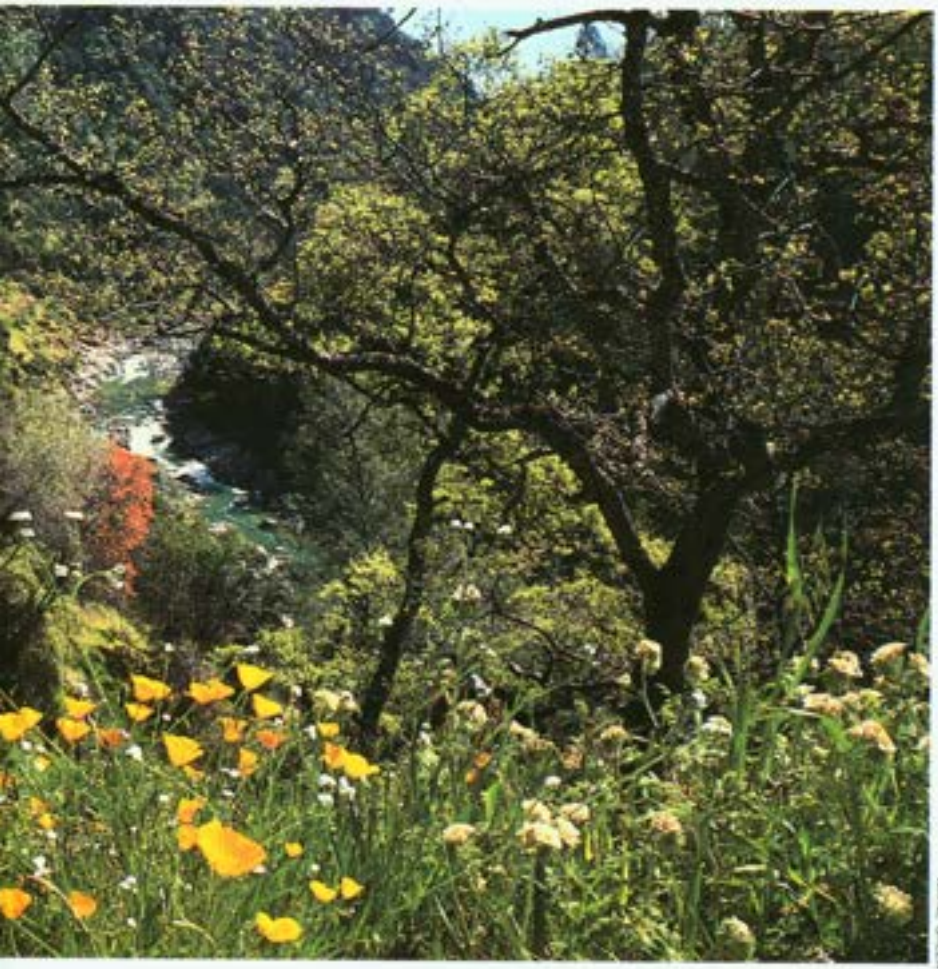
We are on a gentle ridge at the 3,000-foot elevation, with the gorge of the South Yuba River to the south. The drainage of Shady Creek and some old hydraulic gold-mining diggings are to the north, and beyond that the Middle and North Yuba rivers. The ridge is part of the three-pronged Yuba River watershed, between the Feather and American rivers. Some of the watershed is in Nevada County. It goes from near sea level to more than 9,000 feet. Our place is on the part called San Juan Ridge.

The ridge is all forested, but it's not a pristine wilderness. Talks with local ranchers and lumbermen indicate that it was logged at least once in this century, and has gone through at least one major fire and countless small ones. But population is spread thin, and the wild is at work all around us. Pines grow surprisingly tall in 70 years, the deer herds are resilient, cougar have come back, black bear leave pawprints on woodshed refrigerators, and bobcats, coyotes, and foxes sometimes stroll in broad daylight. Even the diggings, which were 2,000 acres of pure gravel desert a century ago—stripped of soil by giant nozzles washing out the scattered gold—are colonized by hardy manzanita, *bonsai*-looking pine, and some other highly adapted plants. Wild nature is tough.

The first major environmental conflict in California was between Sacramento Valley farmers and the hydraulic gold miners of the Yuba. Judge Lorenzo Sawyer's 1884 decision banned absolutely all release of mining debris into the watershed—it was the end of hydraulic mining here. We know now that the amount of material transported out of the Sierra into the valley river systems and onto good farmlands was eight times the amount of dirt removed for the Panama Canal.

Keeping watch,
keeping the wild
in the people's lands

The county's boosters still seem to take more pleasure in the romance of the gold era than in the subsequent processes of restoration. The Sierra foothills are still described as "Gold Country," the highway is "49," the businesses are called "Nugget" and "Bonanza." I have nothing against gold—I wear it in my teeth and in my ear—but the real wealth here is the great Sierra forest. That is a source of controversy too, and my neighbors and I have sat in on many long-range-manage-



WAYNE GRETH

ment-plan hearings and had lengthy and complicated arguments with silviculturalists, district rangers, and all sorts of experts from the local national forest. The vast stretches of forested ridges we can see from the nearest high point are all bureaucratically accounted for. They are all surveyed and broken into mosaics of public and private ownership: Tahoe National Forest, Sierra Pacific Land Company, Bureau of Land Management, and various private holdings. For the time, those designations grant various "rights." With just "rights" and no land ethic, these summer-dry forests could be irreversibly degraded into chaparral over the coming centuries.

County-mandated codes, state-mandated fire regulations, suburban-styled building codes, Forest Service management plans—there is plenty of government. The thinly populated, healthy Sierra foothill forestlands are valued for watershed, for timber production, as wildlife habitat and back-to-nature haven; but above all they are treated as real estate. Development, not gold or lumber, is the business of the foothill counties. Being a committed inhabitant of a place like this calls for perpetual vigilance as one gets caught between the developers, the county, and the logging sales. But I'd choose no place else. And there is no place else, no matter how remote, where the same dialectic of exploitation and conservation is not at play.

We dream of cultural as well as ecological restoration. I recite the words from the lost Nisenan language for deer (*k'uti*), cougar (*pekun*), and pine (*'inimim*), hoping to honor a little of the ancient history that was here before the rush for gold. My family and I venture out any week of the year to scramble off the roads and trails through canyons and ridges, always learning new plants, new birds, and occasionally finding a "corner," the survey pipes that are also part of our game. The diggings, those horrible scars from mining, we have come to see as complex, vital landscapes with canyons, hidden creeks, and bogs—largely wetlands, in fact. The public lands are the people's lands, if we make them so.

No matter how many grids of ownership are projected, no matter how many "uses" are permitted, there is always that opening which is wildness, impermanence, unpredictability, contingency, freedom. Screech owls in the spring night, flickers swooping off between oaks, coyotes, nuthatches, band-tailed pigeons—there is a year-round rising of little calls and yowls that is dampened only by storms. On a day of really clear air, the view from an open place on Bald Mountain sweeps east from the Sierra crest all around west across the Sacramento Valley to the skyline of the Coast Range.

None of this vivid natural performance is exceptional; it is normal, and universal. And so is the political vigilance it takes to be a member of this place. In one sense it is all just more layers of text on the rich old narrative of wild nature. ■

GARY SNYDER *is the author of eight books of poetry and six collections of essays, the most recent of which is* The Practice of the Wild *(North Point Press, 1990).*

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MARC LECARD

You've got visitors. The pantry is swarming with itch mites and weevils; firebrats and silverfish romp in the bookshelves. There are moths in the closet, ants in the trashcan, and cockroaches just about everywhere.

Time was you'd break out the spray gun at the first sign of insect activity. Now we know that many pesticides are not only dangerous to humans, but ineffective over the long term, since "superbugs" develop resistance and breed hordes of little crawling things chemicals can no longer kill.

Several useful books on deleting insects, weeds, small rodents, various fungi, and other pests from home and garden without using toxics have been published recently. One of the best is *Common-Sense Pest Control* by William Olkowski, Sheila Daar, and Helga Olkowski. The authors are advocates of integrated pest management (IPM), a method increasingly used by farmers and gardeners worried about the costs and long-term effects of synthetic pesticides; fortunately for those of us with insect houseguests, IPM is applicable indoors as well.

More than the sum of its techniques (some of which have been around for centuries), IPM requires a systematic understanding of domestic ecology so that you can identify and address the causes of a pest attack. "You must know about the life cycle of the particular organism," say Olkowski *et al.*, "the role it plays in the larger scheme of things, and the role you or other humans play in creating or supporting the problem."

Monitoring your pest invasion is important; once you know what, where, why, and how many, you can choose the most effective strategy for getting rid of them. Integrated pest management offers a full menu of controls: physical (traps, barriers, "redesigning the environment" to make it less attractive to pests), biological (encouraging natural enemies, using hormones to regulate population growth), and, as a last resort, chemical (using "least-toxic" pesticides).

There are many natural repellants and poisons that won't harm your household. Ants can be killed by spraying them with a solution of water and dish soap, for example. Cockroaches can be permanently deterred by dusting around baseboards, cracks, and crevices with diatomaceous earth (ground-up fossilized plankton), which makes roaches dry up and die; it's useful against many other pests as well. Boric acid comes in handy for roach and ant control; it's mildly toxic, though, and should be kept away from pets and children.

Avoiding pest infestations in the first place is central to IPM. Suggested techniques amount to an orchestration of the obvious: wash the dishes every night; sweep and vacuum frequently; put up screens; keep grains and bulk foods in sealable containers; shake out stored clothing frequently to rid it of moth eggs; plug up cracks and holes where insects may enter or lurk; put a tight-fitting lid on the garbage can. The idea is to make your home a place where bugs won't want to visit, much less set up housekeeping. ■

►*For more information, see "Resources," p. 156.*

No one's saying you have to love *all* creatures . . .

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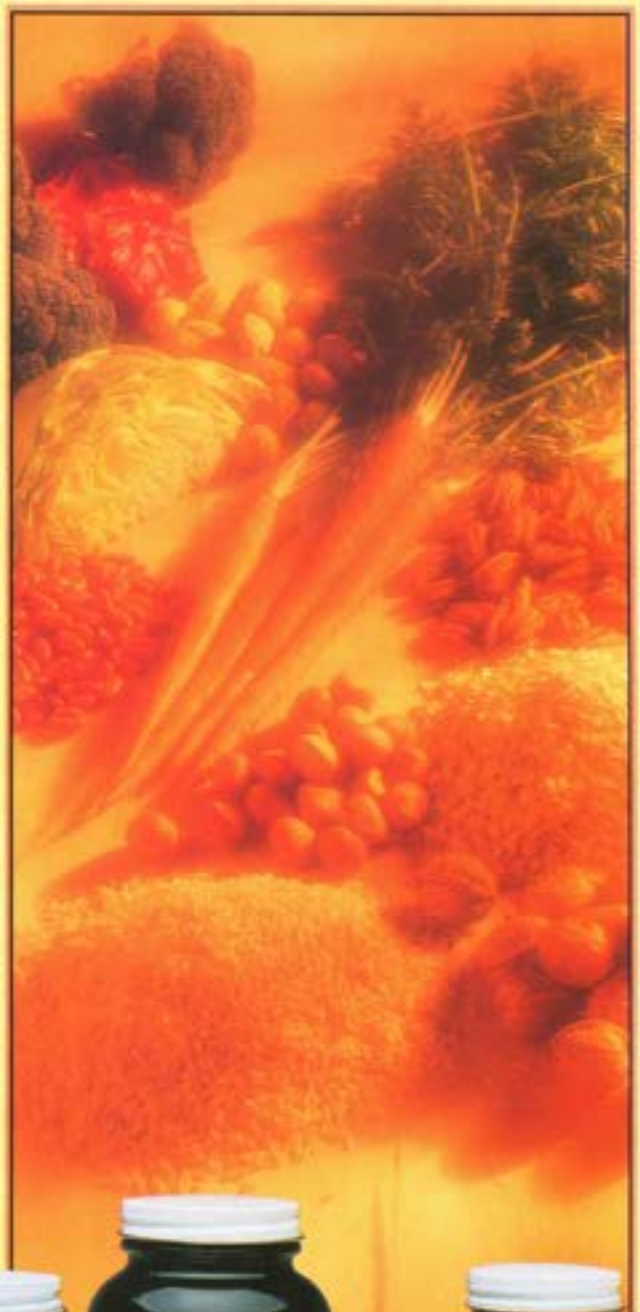

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Yell "smog alert!" and most people will seek the safety of four walls. But things might be no better inside. The air in many office buildings is often more polluted than the air outside, noxious enough to cause symptoms associated with jogging through downtown Los Angeles: coughing, rashes, dizziness, headache, eye irritation, chest tightness, and difficulty concentrating. Indoor pollution can also contribute to severe illnesses such as pneumonia and tuberculosis.

While the air inside many older buildings can be suspect, the problem was exacerbated by architects' response to the oil crisis of the early 1970s. The embargo triggered energy-conserving innovations in office design, notably "sealed" buildings with central heating and air conditioning—and windows that didn't open. Sealed buildings helped cut oil demand, but their energy savings came at a price unforeseen at the time: They left air pollutants no means of escape. Among these trapped irritants are carbon dioxide and cigarette smoke; fumes from paints, floor finishes, cleaning substances, and photocopier chemicals; and vapors emitted by formaldehyde, which is used in the manufacture of carpets, drapes, and office furniture (it's the source of that "new" smell).

By the mid-1970s, workers in many sealed offices were reporting strange symptoms: They felt ill at work, but much better over weekends and while on vacation. (Go ahead, laugh.) At first, few suspected that something might be wrong with their offices; most assumed the symptoms were manifestations of occupational stress—and therefore a personal problem.

Why do you feel so low when you just got a raise?

Then, in 1976, 221 people attending an American Legion convention at a Philadelphia hotel developed an aggressive, previously unknown form of pneumonia. Thirty-four died from what became known as Legionnaire's disease. Epidemiologists were baffled—until they examined the hotel's ventilation system, which, they discovered, had incubated and spread the lethal bacteria. Legionnaire's disease focused attention on a variety of ailments associated with building design, and by the early 1980s a small group of occupational-medicine specialists had coined the term "sick building syndrome" to describe the illnesses that develop from extended exposure to air pollutants trapped inside sealed structures with inadequate or faulty ventilation systems.

In theory, heating and air-conditioning systems are simple. An intake vent draws fresh air into the building; once the air is filtered and conditioned (heated or cooled, humidified or dehumidified), fans distribute it through

large ducts. Stale air is sucked into a similar duct system and eliminated through an exhaust vent.

In practice, however, intake and exhaust vents are sometimes left closed to control costs, and the system recirculates increasingly stale air. If the intake vent is located on the street, incoming air may be pre-polluted by auto and truck exhaust; if the intake is on the roof, it may be too close to an adjacent building's exhaust vent. If humidity is not controlled properly, molds and bacteria can grow inside the ducts, raising the possibility of Legionnaire's disease, which just last September struck a federal office building in Richmond, California. In many buildings erected between the mid-1970s and the mid-'80s, ventilation systems are grossly inadequate, supplying only five cubic feet of air per person per minute—one-quarter the amount recommended by the American Society of Heating, Refrigeration, and Air Conditioning Engineers.

If you experience any sick-building symptoms, do a little detective work. Ask your co-workers if they're feeling inexplicably ill, too. Scout around for strong odors, and look to see if management has installed new carpeting, furniture, or machinery—or even new staff members, since more people require more air. Finally, check out the ventilation system: Locate the vents and see if one blows air into your work area while another sucks it out. If not, or if the flow feels weak, you may have a problem.

If you suspect that your workplace might be sick, tell your employer immediately; if you have symptoms yourself, consult an occupational-health physician. And to breathe more easily at work, fling wide some windows—assuming, of course, that you work in a historic landmark with windows that actually open. ■

►*For more information, see "Resources," p. 156.*

HAND & EYE

Connecting the Keys

HANNAH HINCHMAN

The hardest part about drawing this shell, which at first seemed so simple a task, is getting the curves of the diminishing upward spirals: not only their size relative to each other, but the angle of the slant they're built on. I've made several false starts; each time I try, I make a new set of mistakes. An error in the initial curve generates errors throughout the drawing.

For people learning to draw these days, teachers emphasize relaxation and play—the sensuous parts, the intuitive flow—rather than the technical problems presented by a complex form. I agree with them to a point; I'd rather see a vibrant, exploratory, and inaccurate drawing than an arid, overcautious, and precise one. Not to say that one's work can't be vibrant and accurate at the same time—that's the goal. Still, it's dishonest to pretend that drawing is purely fun and easy, that the person who struggles with proportion and precision is somehow creatively dysfunctional.

Every drawing is a reckoning, a trial. It asks me to be receptive and to pay attention. It demands that the marks I make come from a pure source. Still, an honest response can look different each time: If I draw the shell every day for a week, I may end up with seven unique, equally faithful renderings.

■

The pleasures of being faithful, the dangers of changing the rules

The real effort comes in sustaining alertness and honesty over the course of a whole drawing. As I work on the shell, making it transparent to try to understand its structure, diagramming and comparing its curves, I feel a strain. It has to do with passivity: I am being asked to wait and watch, to patiently record my revelations in increments as they become apparent. I know I would break the trust of the drawing were I to change the rules; the communication would stop if I resorted to stress-relieving scribbles, authoritative slashes, or cosmetically attractive decoration. The English language doesn't have an appropriate word for the kind of passivity a drawing requires, which indicates that we haven't cultivated the quality.

On the way to join my family in the Florida Keys, I read Tony Hiss' book *The Experience of Place*, and found a good description of that passive quality, which Hiss calls "simultaneous perception." He's referring to the way we gather information about a place, the total impression of space, sound, and movement; of touch, smell, and light, whether we're walking through Grand Central Station or entering the woods from a clearing. A person using simultaneous perception will be "relaxed and alert at the same time," and Hiss distinguishes its "broad-band focus" from the more concentrated beam of purposeful thinking.

ILLUSTRATIONS BY HANNAH HINCHMAN

Hiss believes that the subtle wisdom of simultaneous perception must be consulted whenever we propose to alter an environment, or else we're likely to end up degrading it. Simultaneous perception engenders "connectedness." The same qualities are at work when the person drawing is willing to wait and watch, gathering information, instead of losing patience and breaking faith with the drawing, thereby corrupting it.

From my perch on the concrete edge of a canal, what I see of the Keys around me looks like a bad drawing. The grid of streets and waterways imposed on the shallow, undulating coastline shows that the designers were unable to pay attention and respond to the place with artifacts appropriate to it. The proportions are wrong: houses too big on lots too small. The landscapers missed the elegance of the native palmettos and pines, overlooked the small, odd, native vines and flowers, fell back on the cliches of coconut palms and decorative white gravel. Too impatient to follow the natural, subtle curves and angles, they took something complex and changed the rules, leaving out the tidal flats, the mangroves, the Key deer. The line they drew to connect the Keys, U.S. Highway 1, is an authoritative slash that makes one island indistinguishable from another.

To my relief, I found the old section of Key West a beautiful piece of work that I could enter and move through with pleasure. "Connectedness" inspired the makers many years ago to build handsome houses, small but joined by deep porches and balconies to tiny gardens, canopied with groves of live oak and banyan. They recognized the value of the place, and protected it. The problems of a complex form, in this case an old neighborhood whose structures need much care and attention, have not been evaded. The area has its own accuracy—these are the real buildings, not Disney replicas. It even has several layers of wildness—in the vegetation that's been allowed to flourish, in the working waterfront, and in the mix of people: the shadow and the ramshackle haven't yet been rooted out. The drawing these artistic designers have left us is honest, vibrant, and beautifully proportioned.

Too bad it's not as easy to toss out the bad work of the upper Keys as it is to discard an impatient rendering of this shell. I have to reject those unconnected versions, out of respect for those who might see my drawing—but primarily out of respect for the shell. ■

NATURAL SELECTIONS

A Restoried Land

GARY PAUL NABHAN

Find me the first vermilion flycatcher sallying out from newly leafed cottonwoods and willows, picking off recently hatched insects, and I will warble with delight: Spring has come once again to the Sonoran Desert. *Tiet-tut tiddly-zing*, and it flutters out like a butterfly from a catkin-laden branch. The flycatcher dives to spear its prey, then whips back to the same branch.

Such a sight cannot be seen everywhere across the desert floor. It is restricted to the ribbon-like riparian corridors that roll out of the volcanic and granitic ranges to meander across otherwise dry basins. Here the lushness of greenery is splotched with the reds, yellows, and oranges of warblers, orioles, tanagers, and flycatchers. This mosaic of color enlivens eyes grown weary of the grays and the drab, subdued greens of a desert winter.

Down in the Mexican part of the Sonoran Desert, the first flush of foliage on cottonwoods and willows has added significance. It means, to a Sonoran floodplain farmer, that the new cuttings for his living hedgerow have taken root. Following the torrential floods brought by the summer monsoons and the late-fall downpours, the untamed river has shifted course and wandered across the edges of his land. It has dumped not only fertile silt, but tree trunks, gravel, and leaf debris, leaving his fields a mess.

Reading the words the floods wrote on the dry desert plain

A few years before, he had planted a hedgerow along the riverbank, weaving brush between the saplings to slow the force of any water that spilled over. Last year's flood did surge high, and uprooted a few of the willows in his line of defense. In January he trimmed branches off the survivors and planted them above the newly formed bank. By late February they had rooted, and leafed out soon after. Now, in mid-March, the farmer sees the birds perching in the new growth. They forage over his field for bugs (which he sees as pests), and return to the brilliant green canopies to gobble down their insect harvest. These floodplain cottonwoods give southwestern riparian habitats the highest densities of breeding birds ever recorded in North America. The farmer's work has been well-placed.

If you walk with an elderly Sonoran farmer along the floodplain near his village, each curving hedgerow will prompt a story. The farmer will rattle off the years of the great floods that have come within his own lifespan and, sometimes, that of his father: 1887, 1890, 1905, 1915, 1961, 1977, and 1983. He can point to trees that were planted after each inundation, reading the growth on the floodplain as if it were a history book. Learning to read those rows of cottonwoods and willows is what makes a Sonoran farmboy literate.

Years ago I heard of an Apache work crew that was told by its Anglo boss to cut down all the water-guzzling cottonwoods on the floodplain near the crew's village. When the foreman went to

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check on the crew a few hours later, he was disconcerted to find the men smoking and chatting in the shade of the trees, not a single one cut. Angered, he demanded an explanation. "Apaches can't cut down all the cottonwoods by this river," one of the workers finally replied. "Something bad would happen to us."

The land stays with the Apaches; they cannot pass a particular place without remembering the parable that goes with it. "You won't forget that story," Apache elder Nick Thompson once said. "You're going to see the place where it happened, maybe every day if it's nearby. Even if we go away from here to some big city, places around here keep stalking us. If you live wrong, you will hear the names and see the places in your mind."

What links the sensibility of the Sonorans with that of the Apaches are the stories that connect each culture with its homeland. Their landscapes are inhabited not just by other creatures, but by parables and myth as well. Stories are the way we encode values in our culture; ritual is the way we enact them.

We plant the cottonwood poles in winter; we share the sight of vermilion flycatchers in spring. When we restore a degraded habitat, we re-story the landscape; indeed, habitat restoration may be among the most vital rituals in which we can participate today. When we heal the damage—man-made or otherwise—we become part of the regenerative process. And then, as Nick Thompson puts it, "You remember how to live right, so you want to replace yourself again." ■

GARY PAUL NABHAN, *a researcher at Native Seeds-SEARCH and Conservation International, is the author of* Enduring Seeds: Native American Agriculture and Wild Plants *(North Point Press, 1989) and* Gathering the Desert *(University of Arizona, 1985).*

DR. GERRY MACCARI

Illusions of Wilderness

PAUL RAUBER

There was no question that the guys in the airport lounge were heading for Montana too, what with their cowboy hats, camouflage suits, and camouflage backpacks. (One was even wearing camouflage sunglasses.) Every other male in Montana—and one of five females—is a hunter; every year they are joined by 54,000 out-of-staters, all come to harvest a carefully husbanded bonanza of deer, elk, and antelope.

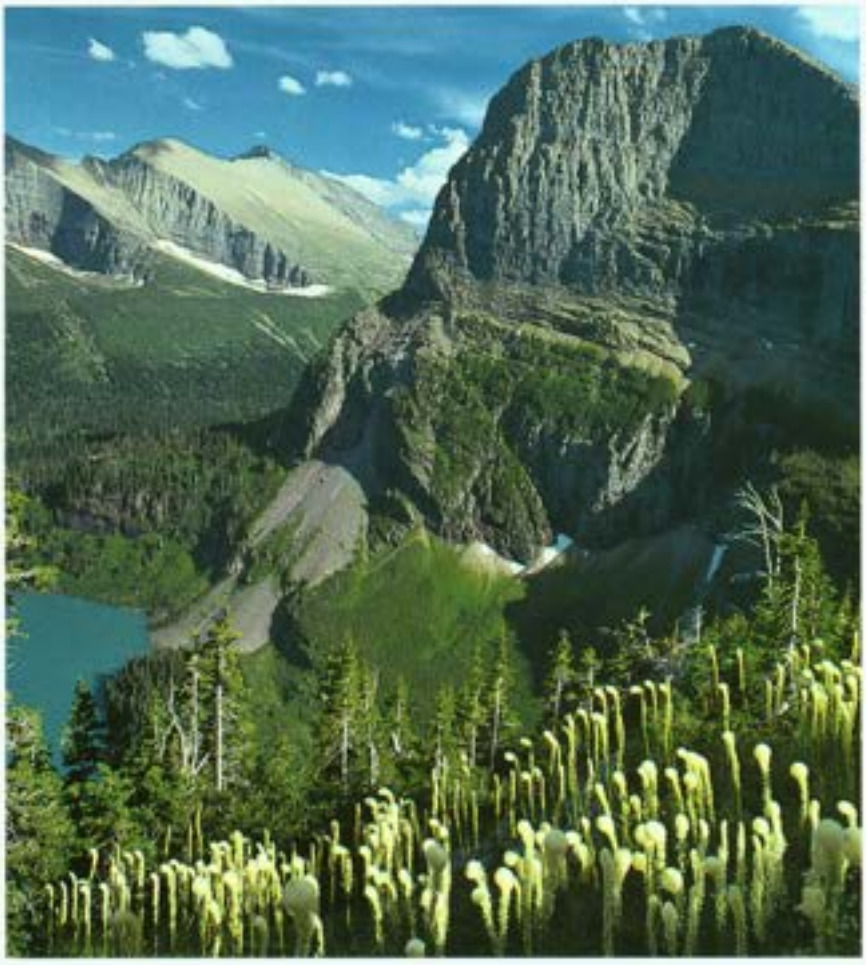
This wildlife bounty attracts predators from Canada as well, not all of them on two legs. It was hunting these hunters that brought us to a clearing on the western edge of Glacier National Park in the broad valley of the North Fork of the Flathead River. Anyone—or anything—watching from the woods would have found us a queer sight: lanky University of Montana biologist Mike Fairchild, swinging an unwieldy antenna from side to side like some backwoods video pirate trying to capture MTV for his cableless cabin, surrounded by six amateur but eager assistants.

You never know what's howling at the full and glowing moon

Presently Fairchild caught a faint *beep, beep, beep* from down along the river. (In Montana human hunters have to buy licenses; animal hunters have to wear radio collars.) The electronic tone told us that a mile and a half away was Wolf 86-53 of the North Camas Pack. (Wolves have been designated by number since 1984, when the University of Montana decided that the Wolf Ecology Project's practice of giving them names like Sage, Aspen, and Phyllis was "unprofessional.")

While it fell somewhat short of the shiver brought on by a howl in the night, the proximity of the ancestral bogey still produced an adrenaline kick. We took off in pursuit up a little-used trail.

Overhead, downy woodpeckers prospected snags for dinner. Underfoot, the trail was littered with wolf scat. (Since a wolf is as apt as any trav-



BRUCE SWANSON, TOM STACK & ASSOCIATES

cler to take the easy route, Montana's trails, dirt roads, and railway tracks increasingly double as canid highways.) This was as close to a wolf as we were likely to get, and the photographer from the Spokane daily who had joined our party insisted that Fairchild pose next to a pile and probe it thoughtfully with a stick. "That's a $200 picture!" he exclaimed excitedly. The scene was repeated at every turd we found, to the point where those leading the way started kicking them discreetly into the beargrass.

While hunters and ranchers rue its return (see "Still a Long Way From Home," September/October 1991), the wolf is being greeted with open arms by the Montana tourist industry. Tourism is now more important to the state's economy than timber, and the old hook-and-bullet crowd is becoming increasingly irrelevant; 96 percent of the visitors to the state come to look at the critters, not to kill them.

"Montana tourism promotion had to realize that we have a product," says Steve Shimek of the Glacier Country Regional Tourism Commission. "That product is the illusion of wilderness. Let's face it—a lot of the people who come to Montana in Winnebagos may never set foot in a 'big W' Wilderness, but it's the illusion that brings them here." Glacier Park naturalists now get more questions about wolves than about any other subject, and the tourist shops of Kalispell and Whitefish are stuffed with lupinalia.

Glacier has more than a million acres of "big W" Wilderness (which the vast majority of its visitors see only from the road). Here one can encounter bald eagles, grizzlies, and wolves all in one place, a "wilderness experience" human visitors intrepid enough to visit the backcountry will find nowhere else in the Lower 48.

But Glacier isn't enough. "Wolves and grizzlies are being used to create an aura of wildlife to promote tourism, but there's just not enough wilderness habitat left to preserve them as viable species," warns Fairchild. "If we relegate wolves to wilderness, then we won't have any wolves."

Wild animals have no illusions of wilderness; for them there is just the world. "Wolves are effective predators," warns a pamphlet issued by the Glacier Natural History Association. "Their methods of killing for food are repugnant to people who like to believe that nature is gentle and bucolic." Inevitably, wolves lacking the good manners to remain within designated wilderness areas will wander outside, past the summer homes of soap-opera stars and the 20-acre "ranchettes" of retirees lured to Big Sky Country by the promise of a toothless wild. Wolves from the park are killing dogs and cattle, the penalty for which is often summary execution. Montana is still wrestling with how to live with wolves in the "big W" World.

Tracking our elusive prey in the Flathead Valley, we eventually came to a popular wolf rendezvous in a broad meadow punctuated by a lone 600-year-old Doug fir. To the west, the Beaver Corps of Engineers had constructed a major dam on the river; surrounding aspen trees were marked by the claws of climbing black bears. The wolves having moved on, we appropriated their bucolic spot, lolling in the afternoon sun like lazy dogs—content for the moment with our illusions. ■

►*For more information, see "Resources," p. 156.*

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Edited by Reed McManus

Golly, Wally!

Remember the good old days—back before environmental impact reports, endangered species acts, and global-warming whiners? Back when visionary guys with ideas big enough to tame the brawny wilderness weren't held back by nit-picking bureaucrats?

Alaska Governor Wally Hickel remembers those days with fondness. In fact, he seems to think he's still living in them.

Last summer Hickel tried to punch an 82-mile road along an abandoned railroad on the sheer cliffs of the Copper River to the isolated coastal town of Cordova—without benefit of tedious formalities like environmental assessments or permits. The state had attempted the project 20 years ago, but was stopped by a Sierra Club lawsuit. This time the Club's worst fears were realized when state bulldozers plowed near Native burial grounds and dumped gravel and debris into the Copper River and its tributaries, fouling important salmon habitat and violating the Clean Water Act. Hickel defied a cease-and-desist order from the Army Corps of Engineers, and work stopped only when the "highway maintenance" funds he had appropriated for the project ran out. While he later admitted that "mistakes were made," Hickel vows to resume the roadwork this summer, using National Guard troops if necessary.

On the Paul Bunyan scale of "Wally World," as wags call his administration, the Copper River Highway is strictly small potatoes. "Big projects define a civilization," the governor is fond of saying, and he has an inexhaustible supply of them. Last August found him in Los Angeles, pushing his pipe dream of a 2,000-mile, $110-billion undersea aqueduct to bring fresh water from Alaska to thirsty Southern California. He also talks of a road over the North Pole to Norway, and has been pushing a *second* Alaska Pipeline, this one to carry natural gas from the North Slope to the port of Valdez.

The latter bubble burst when independent environmental activist Chip Thoma pointed out that it involved Hickel in a blatant conflict of interest: The governor owned a 12-percent share of Yukon Pacific, the corporation angling to build the pipeline. A subsequent state ethics investi-

Alaska's governor thinks big—but a wild and pristine state is the last thing on his mind.

■ ■ ■

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gation confirmed the charge, and Hickel was forced to donate his stock to a charity for the homeless. (They could use some help, as the governor recently slashed funding for social services in order to bankroll his pet megalo-measures. Not a penny will be realized from the stock, of course, unless the pipeline is actually built.) Unfazed, Hickel is still pushing what he calls the state's "most important" development priority.

Wally Hickel is what's known in Alaska as a "boomer," a True Believer in the redemptive power of unbridled natural-resource development. He long ago sloughed off the reputation as an environmental populist he gained after Richard Nixon plucked him out of the governor's office in 1969 and made him Interior Secretary. A year later he was fired for questioning the attack on antiwar students at Kent State. Returning to Alaska, he made multimillions in real-estate development, but was frustrated in three attempts to return to the statehouse.

Hickel appeared to be sitting out the 1990 race until minutes before the registration deadline, when he unexpectedly filed as a candidate for the fringe Alaska Independence Party (AIP). With his own fortune funding the campaign and the electorate split three ways (four, counting the fledgling Green Party), Hickel won, with only 39 percent of the vote.

The traditional centerpiece of the AIP's platform is a demand that Alaska secede from the Union, the better to exploit its natural resources. While Hickel disavowed this aim in his campaign, the federal government (which owns 60 percent of the state) remains the Great Satan of his administration. Congressional refusal to allow drilling in the Arctic National Wildlife Refuge he calls "a crime against Christianity." He doesn't think Alaska should be required to ship all its North Slope oil to the Lower 48, and says he will sue to gain the right to sell oil directly to Japan and other foreign countries. "What the United States has done to

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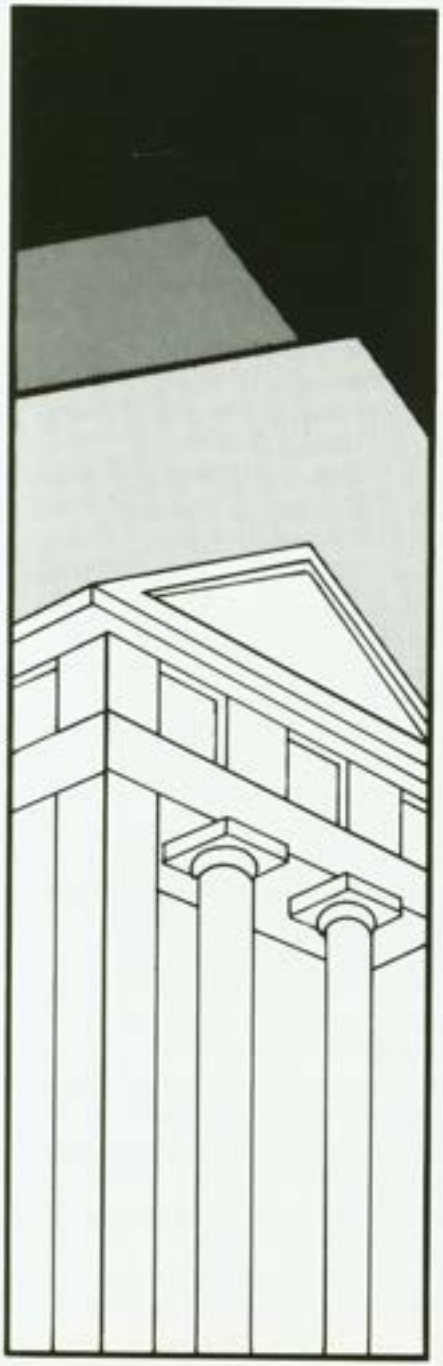

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Alaska is a scandal," he said in his January State of the State address. "If a Third World country were similarly abused, the United Nations would step in."

While Hickel is not supporting secession per se, his agenda might not look much different if he were. Allen Smith, Alaska regional director of The Wilderness Society, sees in Hickel's actions a concerted plan to crack open the Alaska National Interest Lands Conservation Act of 1980, which preserved more than 100 million acres of wild Alaska in 13 national parks and 16 national wildlife refuges.

"Hickel's revenge for ANILCA," as Smith calls it, starts with his assertion of state ownership of the beds of all "navigable" Alaskan rivers, which he construes as anything on the map with "river" in its name, whether you can float a boat on it or not. Since this claim includes rivers flowing through federal lands, it could serve as a wedge for the industrial development of currently protected areas. Early test cases, says Smith, may be a placer mine at Moose Creek in Denali National Park, and oil and gas exploration on the Jago River in the Arctic Refuge.

Hickel also imagines a latticework of railroads and highways opening up the interior. He has directed his Department of Natural Resources to assert the state's right-of-way over 1,400 tracks, trails, and dog-sled paths across federal lands, which Alaska could then seek to develop *à la* the Copper River Highway, leading to state roads crisscrossing Denali, the Arctic Refuge, and other wilderness areas. The result, Smith predicts, will be "a major confrontation over who really owns and manages Alaska's federal lands."

Given this backdrop, it's easy to understand why many Alaska environmentalists eagerly signed on to the campaign to recall the governor. Begun by members of the Alaska Independence Party disgruntled over Hickel's failure to cut taxes, the effort has been endorsed by the Alaska Chapter of the Sierra Club, the largest organization in Alaska to do so. "Hickel's a lot like Ronald Reagan," says the Club's Associate Alaska Representative, Pamela Brodie. "He's been giving the same speech for years, and then he got elected. He has a radical development agenda, and if he can't get his way through normal democratic procedures, he goes around them."

Joe Vogler, AIP party chair, is blaming the "damned, dirty, filthy hands" of the CIA for the recall, the motive supposedly being the governor's opposition to federal policy. Hickel is choosing to blame "elitist" organizations like the Sierra Club. "What has the Sierra Club ever done for the hungry, homeless, the unemployed?" he asks.

Environmental activists in Alaska spent the spring standing in the snow, collecting signatures for their recall petitions. "Hickel seems to be conducting the recall for us," grins Chip Thoma, now a recall-campaign coordinator. "The multitude of scandals in the last 14 months have convinced a lot of people that this is not the government we want for the next three years." At presstime, recall organizers were close to the 20,000 signatures it takes to certify the recall petition. If they reach that mark, they will still need to gather a further 50,000 signatures to give Alaska voters a chance to bring Wally World back to earth.

—Paul Rauber

►For more information, see "Resources," p. 156.

an '43, founder, National Coalition

Pigs in the Parlor

In re Supreme Court vs. the Environment

Now that the final conflict is over, capitalism triumphant is getting down to business here at home. In the next few months, the United States Supreme Court will decide whether the sanctity of private property outweighs the government's authority to protect the environment. Of course, property-rights advocates wouldn't put it that way: Sure, they say, the government can continue to enact laws protecting fragile wetlands, endangered species, imperiled coastal areas, whatever it wants—it just has to be prepared to pay landowners top dollar not to despoil their properties.

Even before the high court rules, lower courts are already putting property first. A New Jersey company was awarded $2.68 million because it was refused permission to build houses on 12 acres of wetlands. A mining firm in Florida received $1 million compensation for not polluting groundwater. And when the Interior Department refused to allow a strip mine in Wyoming, it was ordered to pay the company $150 million.

"There is a revolution going on that almost no one knows about," warns Stanford law professor Robert Girard, "one that is going to cripple the environmental movement." The manifesto of these revolutionaries—conservative legal scholars, right-wing think tanks, and "wise use" anti-environmental activists—is the "takings clause" of the Fifth Amendment: "Nor shall private property be taken for public use, without just compensation."

For the past 200 years this clause has been employed largely in cases where government bodies have physically taken private land in order to build highways, parks, or other public works. (It was also invoked—unsuccessfully—in an attempt to gain compensation for plantation owners and industrialists who claimed that slavery and child labor were "taken" from them.) Now, asserts the new legal theory, "takings" may occur through land-use regulation alone. If the government forbids the owner of a wetland from filling it in and building a mall on it, the theory goes, the property has effectively been "taken," and the state must buy it from the owner at market rate.

Only a few short years ago, adherence to such an extreme view of property rights was considered wacky enough to disqualify candidates for the federal bench. Now, after 12 years of conservative judicial appointments by Ronald Reagan and George Bush, property rights threaten to replace civil rights as the main focus of the Su-

preme Court. Both Chief Justice William Rehnquist and Associate Justice Antonin Scalia are ardent proponents of expanded property rights, as is, apparently, Clarence Thomas. Sadly lost amid the later hubbub of sexual harassment charges against Thomas last November was what Senate Judiciary Committee Chair Joseph Biden called "the single most important question you can be asked in this entire hearing"—whether the nominee stood by his earlier statements praising the "judicial activism" of courts that promoted this new view of private-property rights.

While Thomas refused to answer Biden's question in detail, his views on the matter will be known soon enough when the court rules on the case of South Carolina developer David Lucas. In 1986, Lucas bought two beachfront lots on the Isle of Palms, a barrier island off the coast of South Carolina, for $975,000. Two years later, in an effort to preserve "critically eroding" beach and dune systems, South Carolina forbade further construction so close to the shore. Lucas' lots, it said, were in an "unstabilized inlet zone," a sandy area subject to severe erosion and in danger from hurricanes and flooding. (Lucas' land, in fact, has been either entirely or partly under water for about half of the last 40 years.) Lucas claims he doesn't have any beef with the law; he just wants the state to pay him $1.2 million in compensation for his property.

Like the Pennsylvania abortion case the Supreme Court has also accepted for review, *Lucas vs. South Carolina Coastal Council* provides the new libertarian-conservative majority on the court with a major opportunity to redefine constitutional liberties. At stake is a presumption underlying huge areas of environmental legislation—that government has the authority to make laws and regulations both to protect the public from harm and to secure public benefits. This can sometimes be a case, as the court stated in 1926, of precluding "a right thing in the wrong place—such as a pig in a parlor"—and is the basis for most local zoning laws.

Through *Lucas* and other takings cases in the judicial pipeline, the authority of state and federal lawmakers may be limited to preventing "noxious uses" of private property. Regulations to secure public benefits would have to be paid for. "If the benefit is for the society at large," argues Rob Rivett of the rightist Pacific Legal Foundation, "it should be paid for by society at large. Why should one little property owner pay?" Should the Supreme Court agree with this interpretation, it will clearcut not only environmental law, but zoning and landmark preservation as well.

Harm and benefit, of course, are two sides of the same coin. Regulations prohibiting building on fragile shorelines can be seen either as preventing the harm of erosion or as benefitting the public with a nice, natural beach. One can imagine the Justice Department arguing that the public is harmed by islands without beaches, waterfronts without wetlands, wilder-

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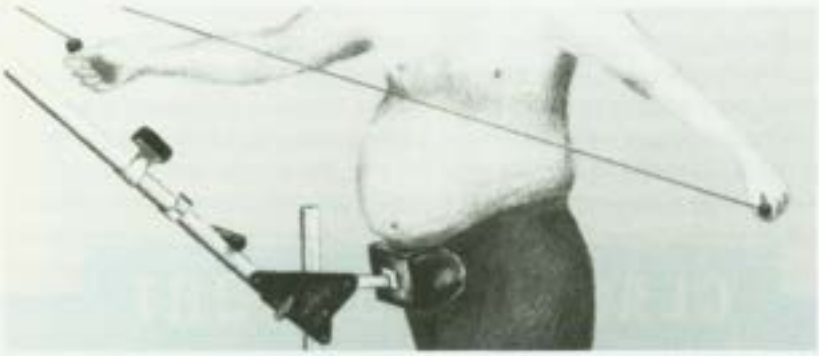

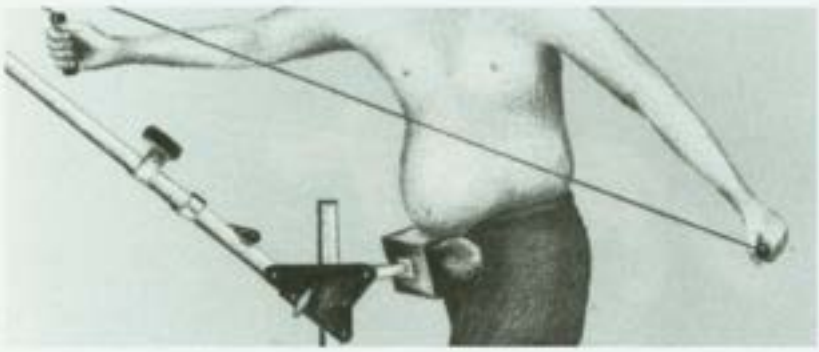

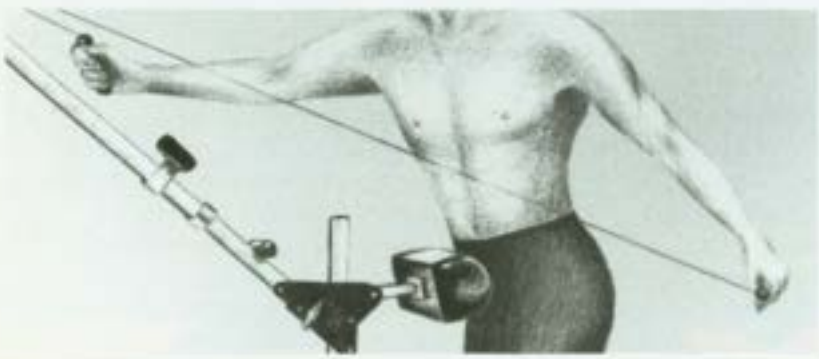

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ness areas without wildlife. Justice under Bush, however, has basically sided with Lucas, suggesting that the burden should be on South Carolina to show exactly how homes on the developer's lots would harm his neighbors. The Sierra Club has filed an *amicus* brief in the case in support of South Carolina: "Construction of a house on the beach or dune," it says, "would place another pig in the parlor."

An indication of how far the "takings" rage could go can be glimpsed in some of the many similar cases crowding the courts. Nevada rancher Wayne Hage, for example, is aggrieved because the Forest Service, concerned about overgrazing, restricted his grazing rights in Toiyabe National Forest and confiscated his cattle when he refused to remove them. (Hage also complains that elk are allowed to eat the forage that might otherwise go to fatten his stock.) Claiming that the government has "taken" his right to use public lands, Hage is demanding $28.5 million. In California, where the federal government is finally reducing its 93-cents-on-the-dollar agricultural water subsidy, farmers are claiming that the reduction of the handout constitutes a taking. The scary thing is that neither case is being laughed out of court. —*P.R.*

Greenhorns

An upstart party pitches camp on the Demos' front lawn.

For the past 30 years, environmentalist voters have had little choice but to hitch their fortunes to the Democratic Party. This year, in California and Alaska—and maybe soon in Arizona, Hawaii, and 16 other states—they will have another option: the Green Party.

While they've been on the ballot in Europe for a decade, Greens in this country are only now moving into electoral politics. In the 1990 gubernatorial election in Alaska, write-in candidate Jim Sykes qualified the Green Party for the ballot by getting 3 percent of the vote, and Green candidate Kelly Weaverling was elected mayor of Cordova. But it was not until early this year that the party burst full-grown onto the political scene—after a lengthy gestation—by signing up enough new members to get on the California ballot.

At a time when registration for the two major parties is declining, Green volunteers working shopping malls, health-food stores, and Grateful Dead concerts inducted more than 80,000 voters into the new party. Like their sibling groups in 55 other countries, Greens in the United States are committed to "ecological wisdom," participatory democracy, anti-militarism, nonviolence, internationalism, and "post-patriarchal values." The latter is particularly appropriate, given that two-thirds of the California Greens are women.

PRIORITIES

man's

California Democrats have not taken kindly to this rival for the attentions of environmental voters. "The Greens are our enemies," declared state Democratic Party political director Bob Mulholland last October. "They're no different from the Republicans." In San Francisco, the Democrats sent out paid registration teams to dog Green Party volunteers and discourage would-be members. Mulholland attempted to hire away one of the Greens' top organizers and wrote to thousands of newly registered Green Party members urging them to reconsider.

California Republicans largely agree with Mulholland that the Greens are likely to draw away Democratic votes —to the point where they offered to help fund the upstarts' registration drive. (The proposal was quickly rebuffed.) "I kind of like it," ultraconservative Representative Bob Dornan told the *Orange County Register*. "I hope they form an Abortion Party, a Green Party, a Funding-for-Pornographic-Art Party, and a Welfare Party. Let all of these strange, demanding special-interest groups have their own little separate parties, and maybe we can turn Congress around and get some fiscal sanity." Other Republicans see the newcomers as a resurgent Comintern; as Southern California Representative (and senatorial candidate) William Dannemeyer puts it, the party is "green on the outside and red on the inside."

Democratic political consultant Paul Shinoff claims that the radical nature of the Greens will actually slow environmental progress. The party, he warns, "will be so far to the left that it will cast environmental issues as ideological. It will make otherwise universal problems look political and partisan." Since Democratic candidates can't be elected in California without the support of moderate voters, he says, "If the Greens pull the Democratic Party to the left, the Democrats will lose."

As soon as the Greens gained ballot status, however, California Democrats abruptly changed their adversarial stance. "We have sent the olive branch Republicans or helping to defeat the Republicans. It's up to them." Fresh in everyone's mind is the defeat of Representative Doug Bosco, a four-term Democrat from California's North Coast who alienated his environmentalist constituents with his wimpy stands on offshore oil-drilling and the protection of ancient redwood forests. In 1990, a strong environmentalist challenger from the Peace and Freedom Party won 15 percent of the vote, throwing the race to moderate Republican Frank Riggs. Republicans see the episode as proof of the useful divisiveness of third parties; Democrats as proof of their iniquity; and the third parties themselves as a sign of their power.

Still, insists Green Party strategist Steve Bloom, "This party exists to be more than a spoiler. Our goal is to hurt the Democrats *and* the Republicans."

"It's the two major parties who are the spoilers," says David Brower, Sierra Club icon and Green supporter, "spoiling our state and our Earth." Flushed with their victory in getting on the ballot in the most populous state in the Union, some Green theorists are rhapsodizing about the possibility of supplanting one of the major parties in the not-too-distant future. After all, they point out, it was only six years from the founding of the Republican Party to Abraham Lincoln's election—and when's the last time you met a Whig?

American winner-take-all politics, however, is notably unaccommodating to third parties; it's not called the two-party system for nothing. In California the Greens are actually a sixth party, in line after Peace and Freedom, Libertarians, and American Independents, all of whom—except on very rare occasions—are totally irrelevant to the political process.

The congenitally decentralized Greens believe they can escape marginalization through the ironic stratagem of party discipline. Green candidates may run only in races the party has declared "open," and only

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when they have beat out "None-of-the-Above" on the party's primary ballot. By running only in carefully chosen races with candidates who have proven support, Greens hope for results in the 10- to 20-percent range. "If not victory," says Bloom, "it's at least credibility."

"As it stands now," says Brower, "each time a progressive candidate or cause loses at the polls, some good people lose faith in the political process and drop out. The conservatives, however, keep voting. Our position is eroding, election to election. We can stop this. We can provide environmentalists and other progressives with a political home."—***P.R.***

►*For more information, see "Resources," p. 156.*

Swim Free or Die

Can a dam-crazy agency be rehabilitated?

For the past 80 years, spawning salmon trying to swim up the Elwha River in northwestern Washington have beaten themselves to death against 110-foot-high Elwha Dam. Soon, with the help of four federal agencies, the Sierra Club, and a host of other environmental organizations, they may finally succeed in battering it down.

The Elwha, tumbling for 45 miles from the rainforest and rock canyons of Olympic National Park, was once fat with fish: All five species of Pacific salmon, including 100-pound chinook, swam its waters. But the glory days ended abruptly in 1911 when Elwha Dam was built; 15 years later, 210-foot-high Glines Canyon Dam was added seven miles upstream. With its spawning area confined to the five miles below Elwha Dam, the salmon population plunged by 90 percent.

In the late 1980s, Olympic National Park biologists began studying ways to restore the Elwha's fish runs. According to park spokesperson Cat Hoffman, they concluded that even

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"state-of-the-art fish passage technology" would not work in the river's steep canyons, and that the two privately owned dams should come down. In a 1990 report, the General Accounting Office concurred—as did the National Marine Fisheries Service, the U.S. Fish and Wildlife Service, the Bureau of Indian Affairs, and ultimately the Department of the Interior itself.

Unfortunately for the fish, however, none of these agencies has the authority to remove the dams. That power rests with the Federal Energy Regulatory Commission (FERC), an independent, five-member body established in 1920 to regulate gas and electric power and to oversee the nation's private hydropower dams. Until quite recently, FERC's only consideration in granting dams 50-year operating licenses was the need for electric power. On the Elwha, the commission has granted annual permits for Glines Canyon Dam ever since the original license expired 16 years ago; it never got around to licensing Elwha in the first place. Although the agency has the authority to revoke licenses and order dams removed, it has never done so. It is often said of FERC that it never met a dam it didn't like.

In 1986, Congress sought to temper FERC's monomaniacal zeal for electricity by calling on it to give equal consideration to fish, wildlife, and other natural resources. The commission now insists that it has seen the light; press officer Sharon Murphy says FERC is "taking a closer look at environmental considerations than we did 50 years ago"—not a very difficult task, considering its record.

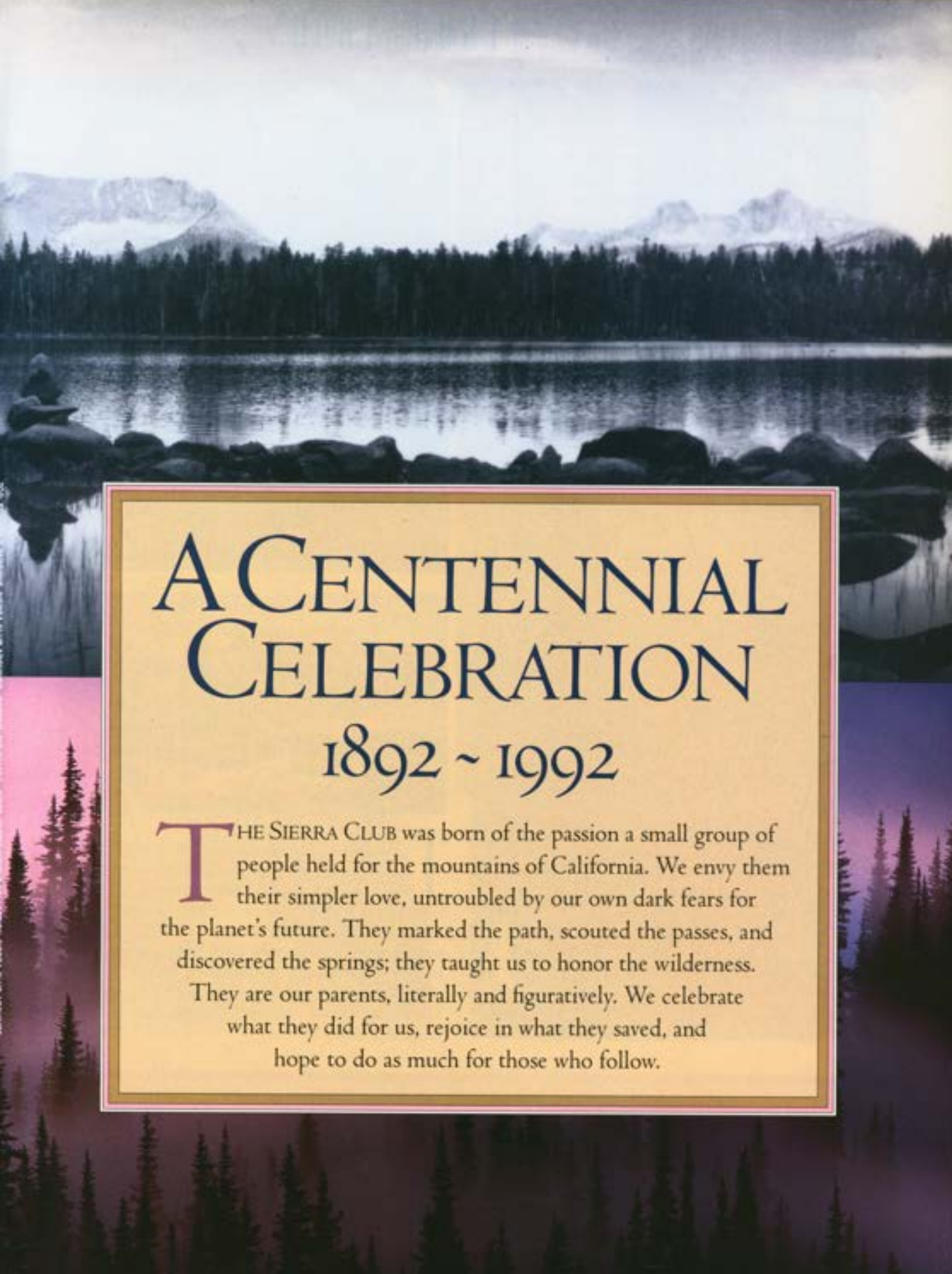
The fresh green consciousness of FERC is now being tested, as 237 dams come up for relicensing in the next year. Sadly, FERC's new commitment to ecological correctness does not appear to run very deep. "Today there's a heavy emphasis on protecting environmental values," says an agency newsletter. "Twenty years from now the picture may be different."

"FERC views its mission as protect-

ing the hydropower industry," says Lorraine Bodi, attorney for American Rivers, a nationwide river-conservation group. "It's hard to think of another federal agency more inaccessible to the public." The commission's highly technical, legalistic, and notoriously slow licensing process thwarts popular participation as efficiently as its dams impede spawning fish. The public cannot appeal directly to the commissioners, but must instead submit comments to their staff for predigestion before the information is passed up the ladder.

Convinced that FERC could sit on the Elwha matter well into the next millennium, the Sierra Club and other Northwest dambusters have decided to try to leap over it, claiming in court that the Interior Department, not FERC, is responsible for dams in national parks; and supporting a bill by senators Brock Adams (D-Wash.) and Bill Bradley (D-N.J.) that would allow the federal government to tear down the dams. In exchange, a pulp mill that uses cheap electricity from the Elwha would get subsidized replacement power from the Bonneville Power Administration (most of which comes, of course, from the huge federal hydroprojects on the Columbia River).

While prospects for restoring the Elwha River are promising, the deal is unlikely to spur the removal of large numbers of private dams. Taking down Elwha and Glines Canyon could cost from $60 million to $124 million (depending on how thoroughly 80 years' worth of sediment in the reservoirs is cleaned up), a price that will be borne by the public and not the private owners of the dams. Even so, some environmentalists, like Friends of the Earth spokesperson Shawn Cantrell, hope that the deal to tear down the Elwha dams may serve as a much-needed wake-up call for FERC. While the commission slumbers, he warns, a heavy ecological price is being paid. "Some salmon runs are already at the brink of extinction, and their gene pools are diminishing. The longer we wait, the harder and more expensive it will be to restore them."—*Jim Stiak*

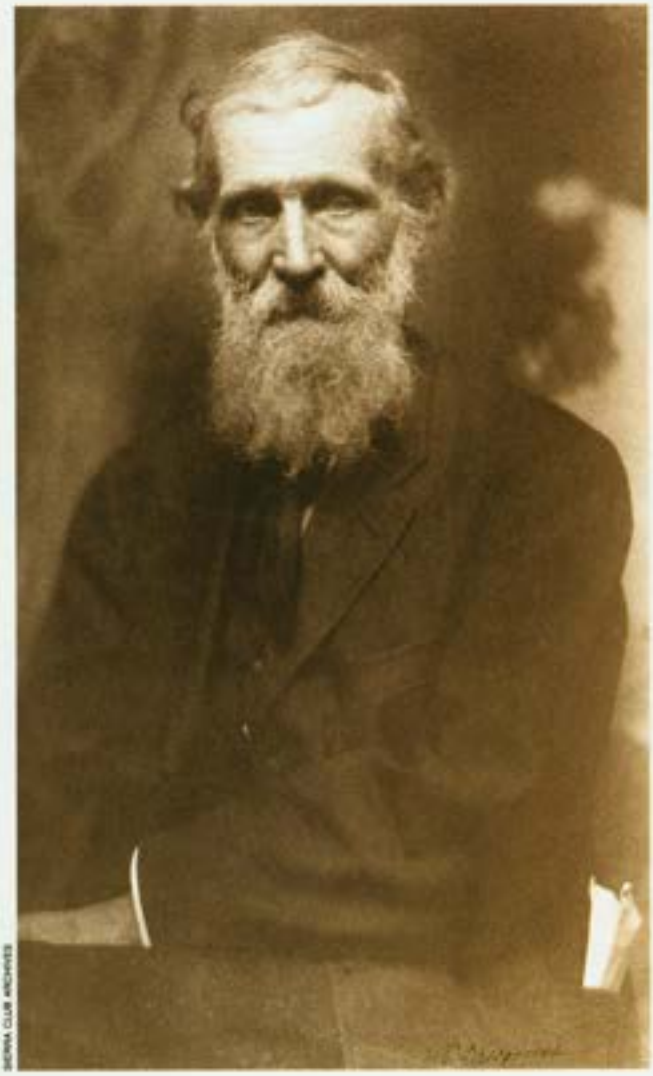


A Centennial Celebration

1892 ~ 1992

The Sierra Club was born of the passion a small group of people held for the mountains of California. We envy them their simpler love, untroubled by our own dark fears for the planet's future. They marked the path, scouted the passes, and discovered the springs; they taught us to honor the wilderness. They are our parents, literally and figuratively. We celebrate what they did for us, rejoice in what they saved, and hope to do as much for those who follow.

Through his widely read magazine articles, naturalist John Muir became the nation's best-known advocate for the Sierra Nevada. In the spring of 1892, he and a number of prominent Californians founded the Sierra Club, a corporation with the following purposes: "To explore, enjoy, and render accessible the mountain regions of the Pacific Coast; to publish authentic information concerning them; to enlist the support and cooperation of the people and government in preserving the forest and other natural features of the Sierra Nevada Mountains."



SIERRA CLUB ARCHIVES

JEFF GNASS

The infant Club supported the establishment of forest reserves and parks that would protect scenic resources throughout much of the Sierra Nevada; conducted surveys of potential long-distance trail routes; appropriated money for trail improvement and marking; produced a periodic journal (the *Sierra Club Bulletin*); and published maps of Yosemite and the Kings River region. Club members also pioneered mountaineering routes throughout the Sierra, inaugurating a climbing tradition that would endure for generations.

1890
Yosemite, Sequoia, General Grant national parks established.

1891
Federal Forest Reserve System set up.

1892
Sierra Club founded in May; John Muir named president.

1893
***Sierra Club Bulletin* Vol. I, No. 1 published.**

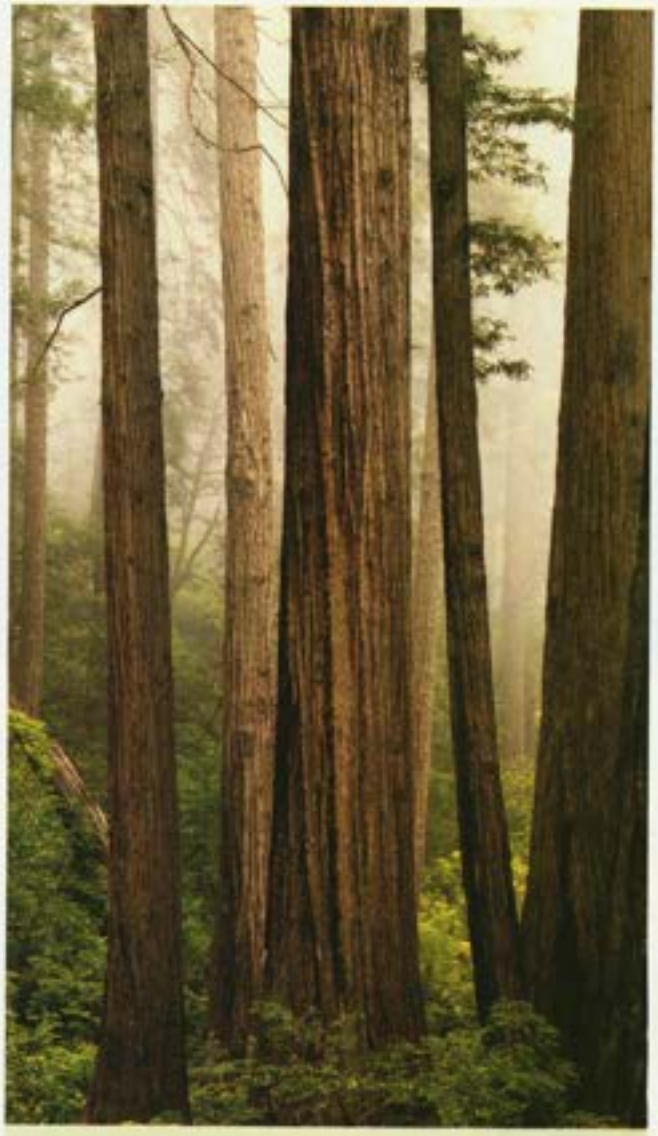
1894
John Muir publishes *The Mountains of California*.

JOSEPH N. LECONTE, SIERRA CLUB ARCHIVES

Yosemite National Park, established in 1890, did not include Yosemite Valley, which remained under the control of the state of California (where it had languished since 1864). In 1895 Sierra Club President John Muir first urged that the state return the valley to federal management, a theme he would pursue for a decade.

In 1898 the Sierra Club established a "headquarters" in Yosemite Valley—a rustic counterpart to the Club offices at San Francisco's Academy of Sciences. The Yosemite building had a live-in attendant—a young man named William E. Colby, who would play a central role in Club affairs for the next half century, eventually serving 47 years as secretary of the Board of Directors.

JOSEPH N. LECONTE, SIERRA CLUB ARCHIVES



ANSEL ADAMS

The Club incorporated the image of the great Sierra sequoia (*Sequoiadendron giganteum*) into its official seal (where it remains today). But the Club also concerned itself with California's other titanic tree species: In 1898 it urged that parks be established to preserve the majestic coast redwood (*Sequoia sempervirens*). Thus began an 80-year campaign that culminated in the designation of Redwood National Park in 1968 and its 48,000-acre enlargement in 1978.

1895
First Sierra Club annual meeting.

1896
Club publishes map of Yosemite Valley.

1897
Membership reaches 350.

1898
Joseph N. LeConte begins 42 years of service on Sierra Club Board.

1899
Century's-end balance in Club treasury: $46.05.

The first large-scale Sierra Club outing to the Sierra Nevada was conducted in 1901. The several-week-long "High Trip" was for generations a fixture in Club life, introducing thousands to the glories of the range over the next seven decades. In proposing the initial excursion, Will Colby predicted that "if properly conducted [it] will do an infinite amount of good toward awakening the proper kind of interest in the forest and other natural features of our mountains, and will also tend to create a spirit of good fellowship among our members." The trip was judged a great success—Colby estimated that at least 50 new members were acquired thereby.

SIERRA CLUB ARCHIVES, BANCROFT LIBRARY

EDWARD T. PARSONS, SIERRA CLUB ARCHIVES

In 1903 President Theodore Roosevelt and California Governor James Pardee visited Yosemite and the Mariposa Grove of Sierra redwoods in the company of John Muir (right) and Will Colby, who took the opportunity to call again for return of Yosemite Valley to the federal government. Roosevelt, impressed by the valley's scenic glory, agreed to support the Club's lobbying effort. The state and federal governments got in line shortly thereafter (though Congress did take the opportunity to reduce the park's area by 12,000 acres), and in 1905 the "magnificent valley" was restored to federal control.

SIERRA CLUB ARCHIVES

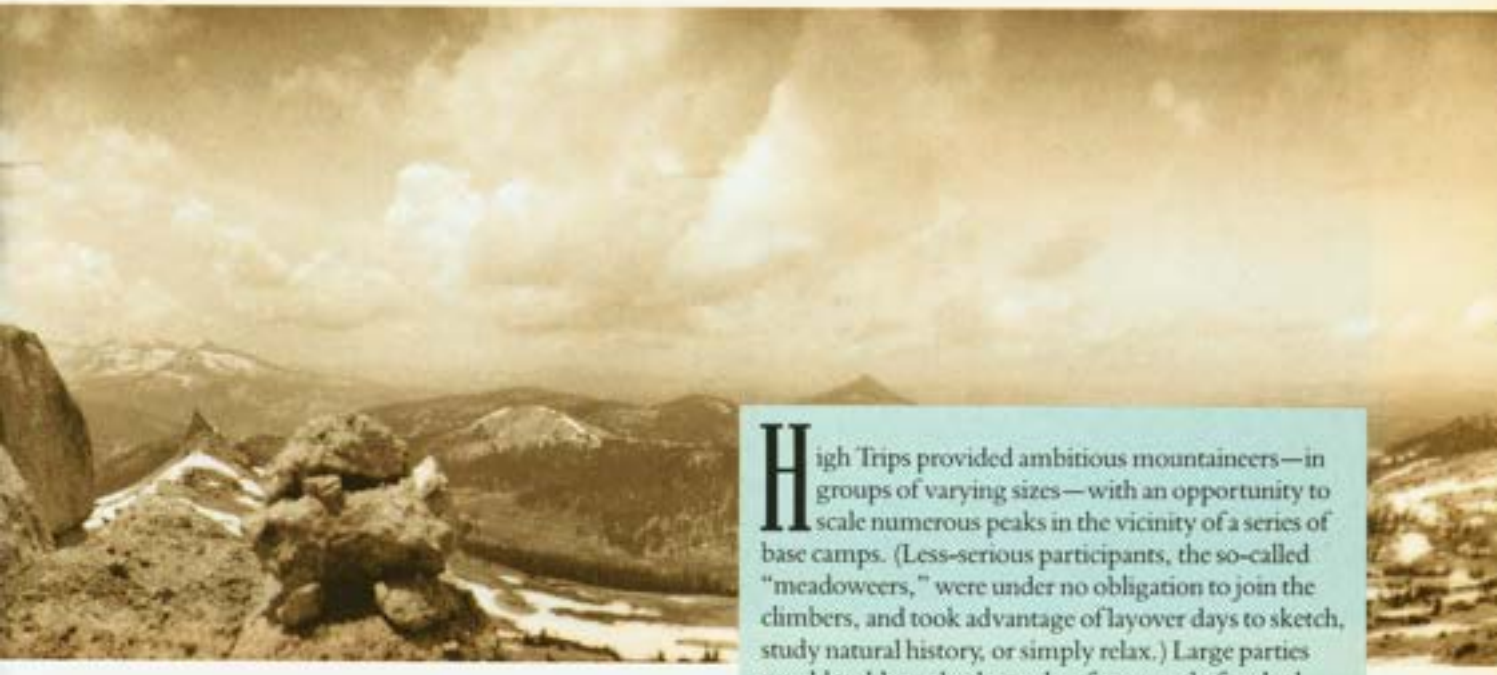
1900
Stanford University president David Starr Jordan assumes editorship of *Sierra Club Bulletin*.

1901
The *Bulletin* begins to accept advertising to defray expenses.

1902
The second High Trip explores the Kings River region.

1903
Club constructs LeConte Memorial Lodge in Yosemite Valley.

1904
Local walks program begun in the San Francisco area.



High Trips provided ambitious mountaineers—in groups of varying sizes—with an opportunity to scale numerous peaks in the vicinity of a series of base camps. (Less-serious participants, the so-called "meadoweers," were under no obligation to join the climbers, and took advantage of layover days to sketch, study natural history, or simply relax.) Large parties would tackle peaks that only a few years before had been the object of individual or small-group efforts. In the summer of 1903, for example, two Sierra Club parties reached the summit of Mt. Whitney. The first was limited to 40 climbers, but the second, led by Will Colby himself, numbered 103 hardy souls.

The first High Trip outside California took place in 1905—an excursion to the Pacific Northwest that took in Mts. Rainier and Hood, among others. A party of 56 Sierrans reached the summit of Rainier, which had been protected within a national park in 1899. The Club party that day included Stephen P. Mather, who a decade later was named the first director of the National Park Service.

In 1908 three Club members completed the first high-mountain route between Yosemite and Kings Canyon, realizing a goal originally envisioned by pioneering pathfinder and geographer Theodore Solomons 15 years earlier. They covered 278 mostly trailless miles in 27 days, traversing a route that later became the basis for the John Muir Trail, which was completed in 1931.

1905
Club bylaws amended to allow formation of sections (now called chapters).

1906
Club offices, library, and records destroyed in San Francisco earthquake and fire.

1907
High Trip visits Yosemite Valley, Tuolumne Meadows, and Hetch Hetchy Valley.

1908
Sierra Club membership reaches 1,000.

1909
High Trip to Yosemite; 220 participate—a record.

SIERRA CLUB ARCHIVES, BANCROFT LIBRARY

From the moment that the growing city of San Francisco first proposed damming Yosemite's Hetch Hetchy Valley to provide a permanent water supply, John Muir and the Sierra Club fought back with every available resource, including legislative lobbying and a national campaign to turn public opinion toward preservation. Hetch Hetchy was considered nearly the scenic equal of Yosemite Valley itself, and its flooding, the Club maintained, would render meaningless the notion of protecting landscapes for all time within a sacrosanct national-park system. The long battle ended disastrously in 1913 when Congress passed the Raker Act, authorizing a dam on the Tuolumne River at Hetch Hetchy's lower end. It was the tragic denouement to John Muir's career; he died, brokenhearted, the following year.

SIERRA CLUB ARCHIVES, BANCROFT LIBRARY

1910
Club aids in establishment of Glacier National Park, Montana.

1911
Southern California (now Angeles) Chapter organized.

1912
Club urges establishment of a national park service.

1913
Southern California Chapter completes Muir Lodge in Big Santa Anita Canyon.

1914
High Trip visits Hetch Hetchy Valley for the last time.

The High Trip matured into a tradition during the Club's third decade, as dozens of members each summer combined exploration and mountaineering with socializing and relaxation on multi-week excursions to various scenic wonderlands. The group at left is seen on an early-season trek to Mt. Lyell, near Tuolumne Meadows, in 1913. On other occasions High Trippers became intimately familiar with the terrain around the Kings-Kern Divide and within recently established Sequoia National Park. It was during this decade that the Club began pressing for expansion of Sequoia to include the Divide, a campaign that finally bore fruit in 1926. But the Club's commitment to comprehensive protection for the Kings River region would not be rewarded by national-park designation until 1940.

Marion Randall Parsons (far right) succeeded her husband on the Sierra Club's Board upon Edward Taylor Parsons' death in 1914, continuing to serve there for 36 years. The Club's first female director holds the further distinction of being its first Washington, D.C., lobbyist, having made her way east in 1920 to argue for the designation of a Kings Canyon National Park. Parsons was also a frequent contributor to the *Sierra Club Bulletin*, as well as editor of John Muir's posthumous classic, *Travels in Alaska*.

JOSEPH N. LECONTE, SIERRA CLUB ARCHIVES

In 1913 the Club sponsored its first snow trip, to the northern Sierra. The following year's trip was written up by Hazel Wolf for the *Sierra Club Bulletin*: "Put on your skis and go up to the mountain top. There pause; gather yourself in a crouching position, just as a bird does before it leaps into the air; then straighten out . . . with life and freedom tingling from your toes . . . [and] you will fly over that white world. . . ." Seven years later Harold Bradley completed a trans-Sierra expedition that ushered in a brilliant era of ski-mountaineering for the Sierra Club. That experience paid off in World War II, when Club skiers helped develop training regimens for U.S. mountain troops in Europe.

SIERRA CLUB ARCHIVES

1915
Parsons Memorial Lodge in Tuolumne Meadows built.

1916
With Club support, National Park Service Act passed by Congress.

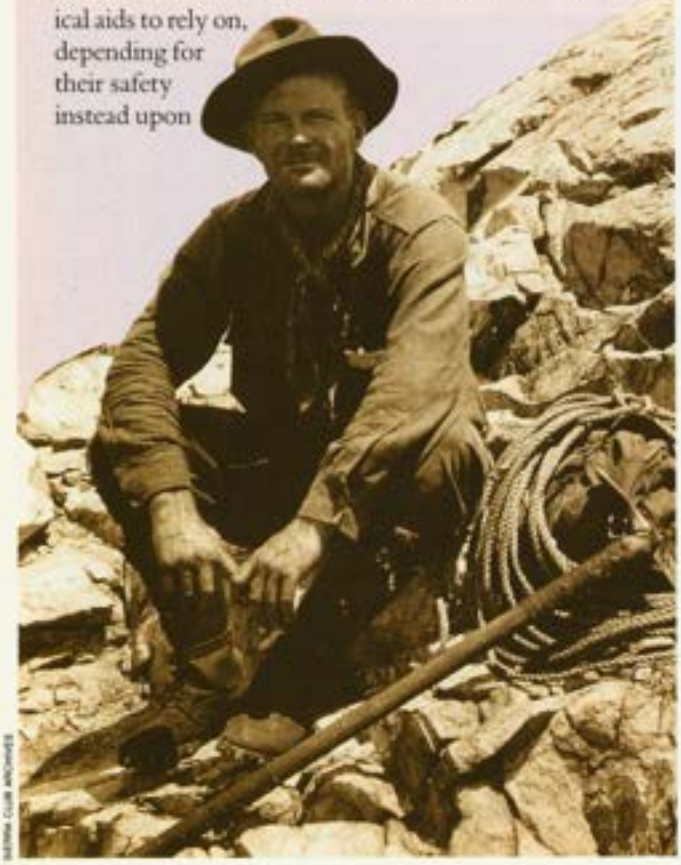
1917
Club protests wartime livestock grazing in national parks.

1918
One hundred forty members are in military service in WWI.

1919
Stairway to summit of Half Dome completed under Sierra Club auspices.

Sierra Club mountaineers continued to log first ascents of increasingly challenging peaks. In 1921 the 14,049-foot Middle Palisade—one of the high points on a ridgecrest in the eastern Sierra—was scaled by two Club climbers who, typically for the period, climbed unroped. They had little else in the way of technical skills or mechanical aids to rely on, depending for their safety instead upon fine weather, good hand- and footholds, unerring judgment, and not a little luck. Seven years later neighboring North Palisade (left) was climbed via a difficult east-side route by a roped Sierra Club party led by Norman Clyde (below), a legendary mountaineer whose annual inventory of peaks scaled was a regular feature of the *Sierra Club Bulletin*.

ED COOPER



SIERRA CLUB ARCHIVES

The High Trip detoured from the Sierra Nevada on several occasions in the 1920s. In 1924, dozens of members rode in style in a special railroad car to Glacier National Park. Two years later, a trip to Wyoming took in the Tetons and Yellowstone National Park—the latter having been the focus of a Sierra Club lobbying campaign in 1920, when a proposal to build dams in the park brought back painful memories of Hetch Hetchy. Though the mountains of California remained the Club's primary concern (and its primary playground) throughout this period, such "exotic" excursions as these and the 1928 season's trips to Baja California and Jasper and Robson parks in Canada (above) familiarized members with scenic treasures around the continent—many of them as threatened as the Sierra.

1920
Ads appear in *Bulletin* for Kodak cameras, Horst's evaporated vegetables, Del Monte canned beans, and accident insurance.

1921
Club-supported trail between Yosemite Valley and the park's northern wilderness partially completed.

1922
Club constructs alpine lodge on Mt. Shasta in Northern California.

1923
Sierra Club float appears in the Rose Parade.

1924
San Francisco Bay Chapter organized.

SIERRA CLUB ARCHIVES, BANCROFT LIBRARY

The Sierra Club's first female president was Aurelia Harwood, who occupied that post for the 1927–28 term. For more than half a century no other woman was elected to the position until Michele Perrault of California (1984–86) and Susan Merrow of Connecticut (1990–91) served terms as the Club's top leader, chosen by their peers on the Board of Directors.

In the 1920s, William Colby was only halfway through a long and distinguished Sierra Club career—though many members considered it the end of an era when he led his last High Trip in 1929. His name lives on in the Sierra Nevada, appended to a peak, a pass, and a grand meadow.

A man of many facets, Colby was an attorney who specialized in mining and water law; his other passions included gardening and Chinese art. Ansel Adams wrote of him: "You knew who he was without inquiry—he carries with him a deep humanity, and the mood of rivers and forests and clean white stone." He also served as the first chairman of the California State Parks Commission, established in 1927; in that role he oversaw the designation of Mt. Tamalpais State Park, which protected the Coast Range peak (left) just across the Golden Gate from San Francisco—then as now a favorite hiking spot of Bay Area Sierra Club members.

RIGHT: SIERRA CLUB ARCHIVES, BANCROFT LIBRARY
LEFT: JED MANWARING

1925
Club begins building a collection of mountain photographs to loan for exhibition.

1926
Appalachian Mountain Club and Sierra Club members team up on outing in Sierra Nevada.

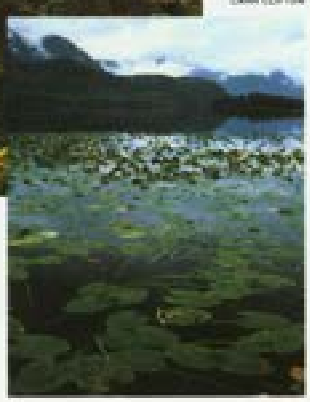
1927
Ansel Adams publishes first photo portfolio, *The High Sierras*.

1928
Felix Salten's *Bambi* reviewed (favorably) in *Sierra Club Bulletin*.

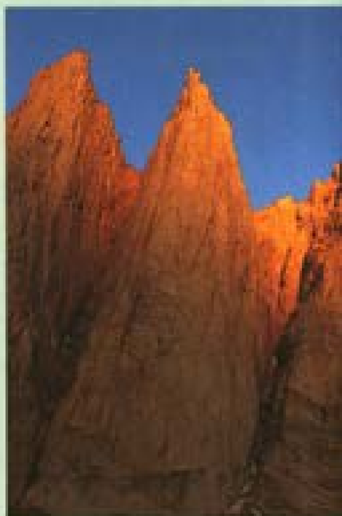
1929
Financial report shows year-end balance of $7,007.45 in Club account.

One of the greatest Sierra Club mountaineers was Walter A. Starr, Jr., whose *Guide to the John Muir Trail and the High Sierra Region*, published by the Club in 1934, remains in print. Even among his peers his feats of endurance were legend: In 1930, for example, he covered 143 miles of Sierra trails and passes between 12 noon on September 6 and dawn on September 10. His route, as reported in the *Sierra Club Bulletin*, took him "via Merced Lake over Isberg Pass to the Middle Fork San Joaquin, thence to the Devils Postpile under Mammoth Pass. He came back via Thousand Island Lake, Island Pass, Donohue Pass, Tuolumne Meadows, and Lake Tenaya to Yosemite. The return from the Devils Postpile to below Tenaya, forty-eight miles, was made between 1:30 a.m. and 8:00 p.m. of the same day. The finish of ten miles to Yosemite was made by 6:00 a.m. the following morning." Starr fell to his death in 1933 while on a solo climb in the Minarets (above).

CARR CLIFTON



The Club, though still primarily concerned with the fight for an expanded central-Sierra park that would protect the Kings River region, continued to advocate preservation of natural areas across the continent as well. In 1932 the Club urged the National Park Service to investigate the designation of Alaska's Admiralty Island (inset) as a park whose primary purpose would be wildlife preservation; three years later it supported designation of Washington's Olympic National Park (right), which was finally established in 1938. During this period the Club also weighed in against two ambitious development schemes that would have violated existing parks: a water-diversion tunnel under Rocky Mountain National Park, and a dam on Yellowstone Lake.



1930
Muir Pass stone shelter constructed in the Sierra.

1931
Two Club parties swim through Yosemite's Muir Gorge.

1932
Riverside Chapter in Southern California organized.

1933
Loma Prieta Chapter organized on the San Francisco peninsula.

1934
Clair Tappaan Lodge, at Donner Summit, constructed and dedicated.

TOP: GEORGE WRIGHT SIERRA CLUB ARCHIVES; INSET: DAVID BROWER COLLECTION, BOTTOM: GALEN ROWELL

In the summer of 1931 Robert Underhill, a philosopher and mathematician who had learned Alpine climbing techniques in Europe, accompanied the Sierra Club on its High Trip to the Sierra Nevada. He was one of four climbers to scale Mt. Whitney from its sheer east side (bottom left) for the first time; he also guided Club members on climbs of Mts. Ritter and Banner that year.

These technical advances made possible first ascents of previously unscalable walls in Yosemite Valley, mostly by Sierra Club climbers from the San Francisco area, who practiced on outcrops in the Berkeley Hills when not in the mountains. A leader among them was Richard M. Leonard (in center of photo at left), an attorney who was one of three climbers to make the first ascent of Higher Cathedral Spire in 1934, using the dynamic belay and other advanced techniques (including, on this climb, the first use of pitons in the Sierra Nevada). It was Leonard—today the Sierra Club's honorary president—who organized local rock-climbing practice under Club auspices in 1932, a tradition that would continue (top) for more than half a century until rising insurance premiums forced the Club to suspend its technical-climbing instruction and activities.

CHRONICLE ARCHIVE

Sierra Club chapters (or sections, as they were originally called) spread throughout California during the 1930s. Toward the end of the decade, the first chapter newsletter appeared: The San Francisco Bay Chapter's *Yodeler*. This and other chapter (and, later, group) newsletters fulfilled functions that the *Bulletin* could not: they appeared more frequently, and could better serve the needs of an increasingly dispersed membership. They provided a forum for announcements of hikes and other activities, as well as alerting Sierrans to conservation issues of local concern. They continue to serve these twin purposes today, with 57 chapter and some 300 group newsletters now in regular production across the continent. The *Yodeler* itself is still going strong, reaching 42,500 Bay Chapter members each month. It recently survived a campaign by some chapter members to change its name, which they thought undignified.

1935
Mt. San Antonio ski hut constructed in Southern California.

1936
Ansel Adams lobbies Congress on behalf of Kings Canyon National Park.

1937
Club party makes first ascent of East Temple in Zion National Park.

1938
Knapsack Trips added to outings program.

1939
Mother Lode Chapter organized, serving 50 members in Stockton/Sacramento area.

As war clouds gathered, the 1940 Sierra Club High Trip to Kings Canyon (which was finally granted park status that year) was a reflective affair. "In these days," wrote participant Weldon Heald, "we cannot help feeling that the energies of men are turned towards hatred and destruction. But our faith in human nature is restored when we find that a group of people, isolated from the world and held together only by a common love for the mountains, is composed of kindly, helpful, good-natured beings, each willing to contribute his share in a true and voluntary democracy."

In 1948, Francis Farquhar—who had served as Sierra Club President from 1933 to 1935—was elected to a second term. Farquhar was a link to the Club's early days; he had joined the organization in 1911, while John Muir still lived, and participated in that year's High Trip to Tuolumne Meadows. It was the Harvard graduate's first encounter with California, and it made a great impression on him: As he wrote 60 years later, "Not only the character of the country itself, but the people associated with it, convinced me that this was the place I wanted to live for the rest of my life, which I have done."

Farquhar was a sterling mountaineer—one of two Club climbers to make the first ascent of the Middle Palisade in 1921—as well as a noted geographer; his *Place Names of the Sierra Nevada* was published by the Club in 1926. In that same year he became editor of the *Sierra Club Bulletin*, continuing in that capacity until 1946.

Farquhar and his wife, Marjorie (right), are among several married couples who have sat on the Club's Board of Directors. In addition to Edward Taylor and Marion Randall Parsons (who never served together), that category includes Ansel and Virginia Adams and, in 1992, two former presidents, Phillip Berry and Michele Perrault.

CEDRIC WRIGHT, SIERRA CLUB ARCHIVES

1940
Club opposes bill that would open national monuments to mining.

1941
Bulletin rates the Sierra's passes: Cartridge the roughest, Copper the most spectacular, Glen the "all-'round champion."

1942
Sierra Club's Golden Anniversary.

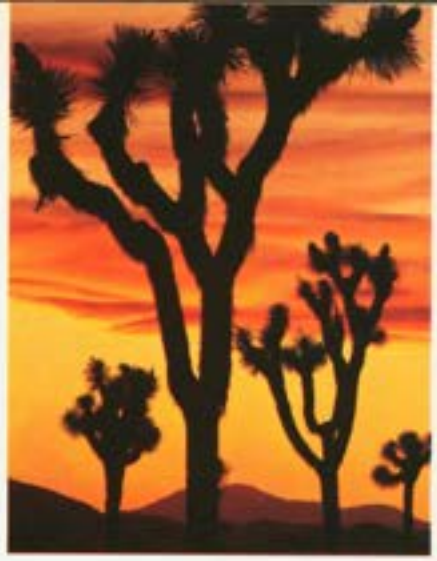
1943
Club has 600 members on active duty in WWII. ◆ Outing program suspended for the duration.

1944
Club successfully opposes construction of Kearsarge Pass road in Sierra Nevada.

CEDRIC WRIGHT, SIERRA CLUB ARCHIVES

These years marked a period of deep involvement in Sierra Club affairs for David R. Brower, a member since 1933. One of the Club's leading climbers (his first ascent of New Mexico's Shiprock in 1939 helped introduce the use of expansion bolts on otherwise unclimbable faces), he edited 1942's *Manual of Ski-Mountaineering*, intended to serve as an aid in the training of mountain troops. The designation of Kings Canyon National Park was due in some measure to 1939's *Sky-land Trails of the Kings*, a movie that Brower and Richard Leonard edited from thousands of feet of film they had shot on that year's High Trip. (It was followed in 1942 by *Skis to the Sky-land*, a paean to civilian ski-mountaineering.)

After the war, in 1946, Brower assumed the editorship of the *Sierra Club Bulletin*, a job he held until 1953, when he resigned from the Board to become the Club's first executive director. He never lost his belief in the combined power of the image and the printed word, helping to create such innovations as the Exhibit Format book and the Sierra Club calendar. To this day he continues to write widely and agitate forcefully on behalf of the global environment.



DAVID MUENCH

In 1946 the Sierra Club urged designation of Joshua Tree National Monument, today a mecca for lovers of the California Desert as well as rock-climbers from around the world. The Club continues to lobby Congress on behalf of this fragile region, supporting establishment of an East Mojave National Park, the upgrading of Death Valley and Joshua Tree national monuments to national parks, and designation of more than 4 million acres as wilderness.

RON DAHLQUIST

The Club conducted the first of 14 biennial wilderness conferences in 1949, under the supervision of Charlotte Mauk; its themes included the impact of wilderness travel on meadows and trails and—on a related note—"keeping the wilderness wild." Two years later conference attendees witnessed a historic moment, as The Wilderness Society's Howard Zahniser called on Congress to establish a national wilderness preservation system. (Thirteen years would pass before Zahniser's visionary proposal was realized.)

Less dramatically, but of great future import to the Sierra Club, early attention was paid in 1953 to the need for protection of Alaska's Arctic (above). Subsequent conferences explored the wilderness theme from innumerable angles, among them "Wildlands in Our Civilization," "The Meaning of Wilderness to Science," and "The American Heritage of Wilderness."

1945

Club establishes a Conservation Committee of local activists to advise the Board on policy matters.

1946

Club purchases two Sierra lakes near Donner Pass for $5,000. ◆ *Southern Sierran* chapter newsletter appears.

1947

***The Sierra Club: A Handbook* published.**

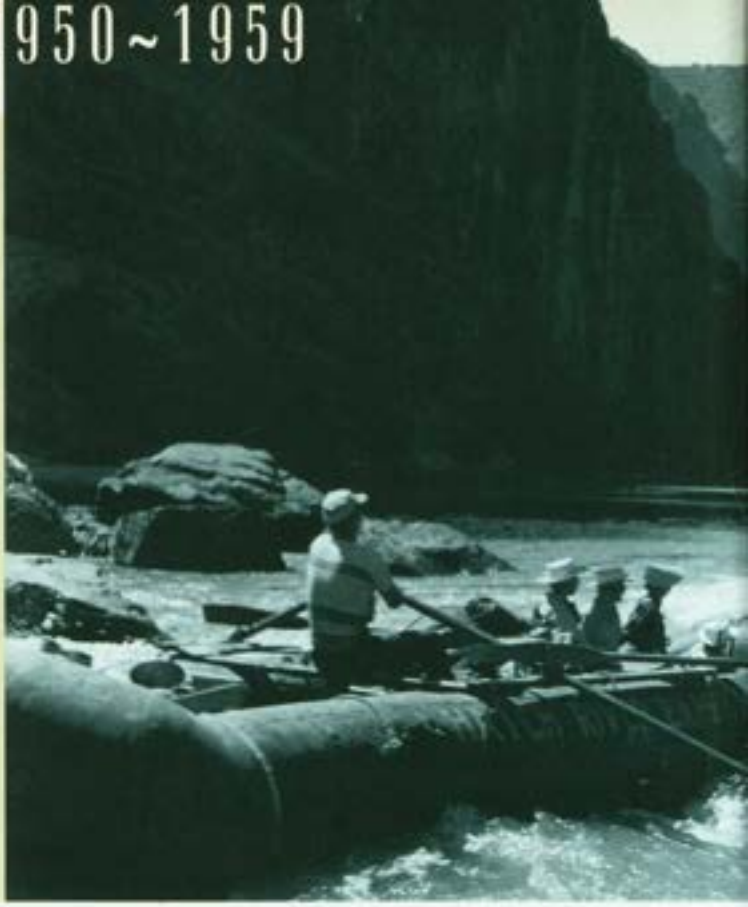
1948

San Diego Chapter established, with 53 members.

1949

Preliminary edition of *A Climber's Guide to the High Sierra* published.

The Sierra Club's commitment to the integrity of the national-park system was tested in the 1950s by a proposal to construct two dams within Utah's little-known Dinosaur National Monument. Determined to prevent another Hetch Hetchy, the Club threw everything it had into the Dinosaur campaign, including a special issue of the *Sierra Club Bulletin* and two movies (*Wilderness River Trail* and *Two Yosemites*). It also organized raft trips for members, hundreds of whom floated the Green and Yampa rivers (right) to experience Dinosaur's scenic glories first-hand. The controversy was resolved in conservationists' favor in 1956, but the victory was hardly decisive: Focused exclusively on Dinosaur, the Club had offered no opposition to the intentions of federal engineers to build a huge dam at Glen Canyon on the Colorado River—a redrock labyrinth even more obscure than Dinosaur, and protected by no national park. In a consummate irony, Glen Canyon ("the place no one knew") has come over time to be viewed in the same light as Hetch Hetchy—a sacrifice to industrial development that might have been avoided had enough people known about and fought for it.



PHILIP HYDE

Dinosaur was not the Club's only public-lands battle of this era. In the late 1940s it had successfully opposed construction of a dam in Glacier National Park that would have flooded 20,000 acres. In 1950 the Club's multi-year defense of Wyoming's Jackson Hole National Monument was rewarded when Grand Teton National Park was expanded to include it. Four years later a tramway planned for Mt. Rainier National Park was defeated.

Another intense struggle also centered on the Pacific Northwest. The 12-year campaign that ended with the establishment of North Cascades National Park (left) began in 1956, when the Club led its first outings in the area. The following year a series of studies of the range's public values was undertaken, and the Club completed filming of a major conservation movie, *Wilderness Alps of Stehekin*. But Club leaders were by no means unified on their approach to the Cascades: Though many believed that only park designation would fully protect the region from the shortcomings of "multiple use" management, others feared that their work on behalf of a comprehensive national wilderness bill might be subverted if the Club were perceived as moving aggressively onto Forest Service turf. Unlike the Dinosaur campaign, where everyone agreed that the principle of park inviolability admitted no real compromise, the fight for the North Cascades threw into sharp relief the growing tensions within the Club between the traditional strategy of conciliation with government and an opposing sentiment in support of criticism and confrontation.

1950
Atlantic Chapter established—the first outside California. By 1958 it has 430 members in 17 states.

1951
Club reprints Volumes I to V of the *Sierra Club Bulletin* and publishes a 57-year index.

1952
Los Padres (Santa Barbara) and Kern-Kaweah (Fresno/Bakersfield) chapters established.

1953
Tehipite Chapter (central San Joaquin Valley) established.

1954
Pacific Northwest Chapter formed, as nationwide membership reaches 8,000.

PHILIP HYDE

The Club's most vocal critic of federal wildland management was its increasingly controversial executive director, David Brower. His oversight of the *Sierra Club Bulletin* was becoming controversial too. Though the introduction of a larger format to make better use of color photography was well received, many old-timers wondered why topics they viewed as tangential to the Club's core concerns (such as the growing population crisis) were being covered in its pages. They also feared that Brower's no-holds-barred criticism of government resource agencies could jeopardize not only the Club's political alliances but its tax-exempt status as well. In 1959 the Board passed a "gag rule" that forbade Club representatives to "expressly . . . criticize the motive, integrity, or competence of an official or bureau"—the first of many attempts over the course of the next decade to rein Brower in.

CHRISTINE ALTEN

In 1951 Stewart Kimball began a 21-year stint as the Sierra Club's outing chairman—the longest service of any, save for Will Colby himself. The program had already expanded, under Dick Leonard's leadership, beyond the annual High Trip to include a six-week-long Base Camp excursion, four annual burro trips, several knapsack trips, and a saddle-horse trip. Other innovations included a 1956 High Trip to Colorado's San Juan Mountains that experimented with lightweight gear and freeze-dried foods, and a 1959 Wilderness Threshold outing that provided families with children an opportunity to enjoy Base Camp trips.

The 1950s saw the introduction of another type of outing that would become increasingly popular: the Work Party (now Service) trip, dedicated to trail maintenance, campsite cleanup, and other activities intended to lessen the impact of increasing numbers of enthusiasts on the nation's wilderness areas.

1955

This Is the American Earth **goes on exhibition in San Francisco and Yosemite; Wallace Stegner's *This Is Dinosaur* published by Knopf.**

1956

Sierra Club Council created by vote of the membership to deal with internal affairs.

1957

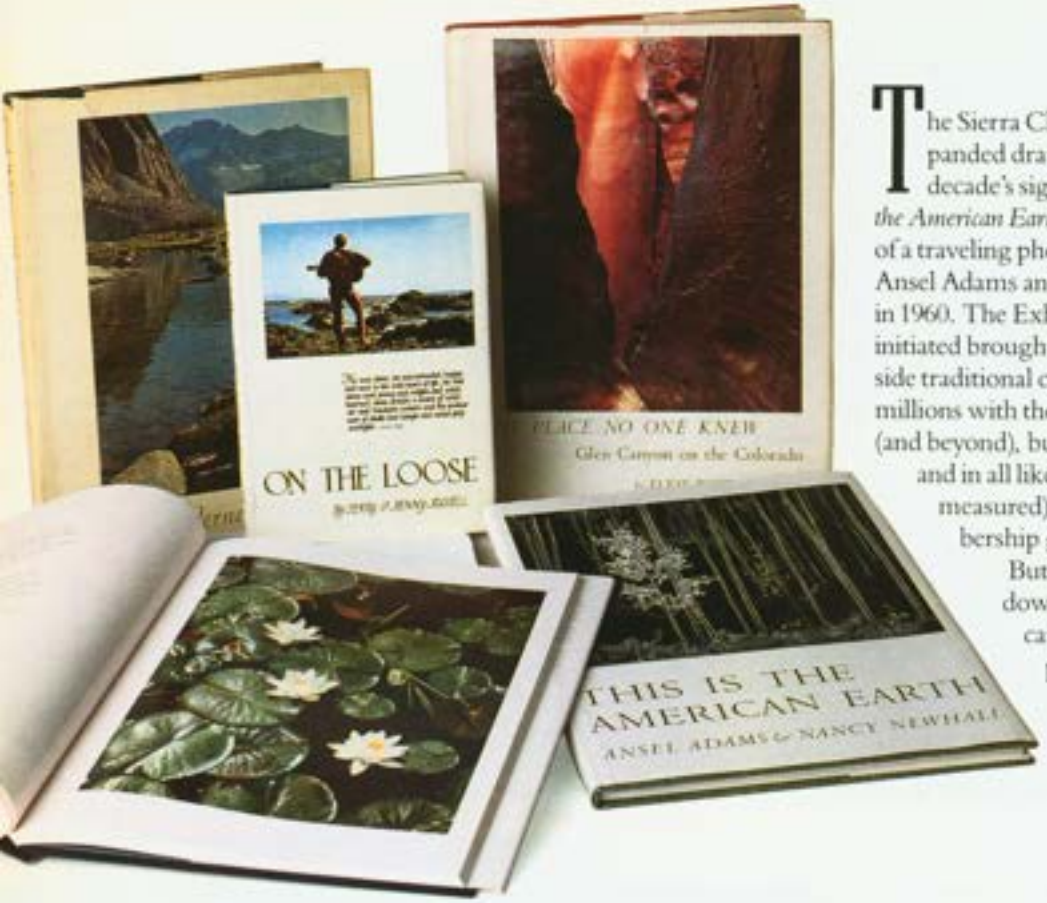
Toiyabe Chapter (Reno/Carson City) formed.

1958

Redwood Chapter formed. ◆ Club fails to prevent re-routing of Tioga Road through Tenaya Lake area in Yosemite backcountry.

1959

Great Lakes Chapter formed, serving 200 members in eight states.



The Sierra Club's publications program expanded dramatically during the 1960s. The decade's signature project was its first: *This Is the American Earth*, lavishly produced on the basis of a traveling photo-and-text exhibit created by Ansel Adams and Nancy Newhall, and published in 1960. The Exhibit Format series of books that it initiated brought the Club increased exposure outside traditional conservation circles, acquainting millions with the scenic splendors of the continent (and beyond), building conservation sentiment, and in all likelihood (though this can never be measured) contributing to the Club's membership growth.

But the publishing program also had a downside—for within a few years it came to dominate the Club's budget, providing a focus for growing dissatisfaction with the non-collaborative (and fiscally risky) managerial style of its patron, Executive Director Brower.

Determined that the twin tragedies of Hetch Hetchy and Glen Canyon not be repeated, the Sierra Club spearheaded an aggressive campaign against two dams proposed for the Grand Canyon as part of the huge Central Arizona Project. A high point was the publication of a series of full-page ads in the *New York Times* and *Washington Post*—the refinement of a technique employed to good effect during the Dinosaur and Redwood National Park battles. The most famous such ad was headlined "SHOULD WE FLOOD THE SISTINE CHAPEL SO TOURISTS CAN GET NEARER THE CEILING?"

The newspaper ads, with their clip-out coupons addressed to legislators and President Lyndon Johnson, had several effects. First, they cost the Club its tax-deductible status—though that blow, long anticipated, had been offset by creation of the Sierra Club Foundation in 1960. But they also led to a sharp increase in membership, from 39,000 to 67,000 in little over a year, then doubling to more than 135,000 by 1969. And ultimately they proved effective—as citizens outraged by the dam proposals flooded the capital with coupons and letters. In 1968 Congress prohibited dams anywhere in the Grand Canyon between Glen Canyon and Hoover Dam.

1960
Sierra Club membership hits 15,000.

1961
First annual John Muir Award presented to William E. Colby.

1962
Annual Club dues raised from $7 to $9.

1963
John Muir (Wisconsin), Rio Grande, and Ventana (central California coast) chapters formed. ♦ Club opens office in Washington, D.C.

1964
First South American outing, to Peru, Chile, Argentina.

A nine-year campaign in support of a federal wilderness-preservation system came to a close in 1964 when President Johnson signed the Wilderness Act. Congress passed the act after a tumultuous campaign, as Sierra Club members and others, suspicious of a "multiple-use" wildland-management policy that seemed always to favor extractive industries over wildlife and recreation, expressed their displeasure with the status quo.

The Wilderness Act was acknowledged from the start as the product of compromise. While it set up a system that protected more than 9 million acres outright, and provided for the review of another 5.4 million over the coming decade, it also grandfathered in grazing and permitted mining activities to continue until 1983. Indeed, the act (in David Brower's words) was "not the end of a series of problems, but a beginning." Though millions of acres of additional wilderness have been designated in the years since 1964, Sierra Club activists continue to fight on behalf of pristine areas in Montana, Colorado, Idaho, southern Utah (above), the California Desert, and elsewhere.

SCOTT T. SMITH

The full-page newspaper ad was Dave Brower's brainstorm, and it ultimately cost him his job. In 1969 he spent $10,500 on a *New York Times* ad announcing a new campaign for an "Earth National Park." The Sierra Club Board, already in an uproar over the interrelated issues of staff autonomy and fiscal management (with special concern focused on the mushrooming publications program), had had enough. In January, President Edgar Wayburn suspended the executive director's authority to make financial commitments for the Club, and the following month the full Board decided that Brower should take a leave of absence. Brower was soon thereafter nominated to run for a seat on the Board in that year's membership election—an acrimonious competition between pro- and anti-Brower factions. The latter won decisively in April, and Brower formally resigned in May. He was replaced as chief of staff by J. Michael McCloskey, the Club's conservation director, while Wayburn was succeeded as president by Phillip Berry, an erstwhile Brower acolyte ultimately dismayed by his mentor's indiscretions.

McCloskey and Brower (both facing right at center rear) listen as Wayburn (standing) presides over an early-'60s Board of Directors' meeting.

SIERRA CLUB ARCHIVES

These figures retain their Sierra Club ties today. Dave Brower was elected to the Board of Directors in 1988; though he later resigned, he remains an honorary vice-president. Phil Berry has just completed a one-year term as Club president, while his vice-president, Ed Wayburn, now 85, continues as a director. And Mike McCloskey, after 17 years as executive director, was named the Club's first chairman in 1985. In that capacity he's heading to Brazil in June to represent the Club at the U.N.-sponsored Earth Summit. Also in Rio, on behalf of his Earth Island Institute, will be Dave Brower—though he hasn't told anyone if there's another proposal for Earth National Park up his sleeve.

1965

Rocky Mountain, Lone Star, and Grand Canyon chapters formed. ♦ Membership passes 30,000.

1966

Club loses tax-deductible status over Grand Canyon ads. ♦ Publications program runs deficit of $119,144.

1967

Membership passes 57,000. ♦ First Sierra Club calendar published. ♦ Mackinac (Michigan) Chapter formed.

1968

North Cascades and Redwood national parks, federal Wild and Scenic Rivers System established.

1969

First Inner City Outing for urban youth conducted. ♦ Activist news digest *National News Report* debuts.

The Sierra Club celebrated Earth Day 1970 along with some 20 million other Americans (left and right). The Club greeted that year's outpouring of recruits to its cause by publishing *Ecotactics: The Sierra Club Handbook for Environmental Activists*, which called on readers to go beyond parades and protests in their support of "political action to change public policy."

It was a good year for such an exhortation. The National Environmental Policy Act made environmental protection an explicit goal, requiring government agencies to prepare "environmental impact statements" on a variety of proposed projects, from rangeland fencing to nuclear power plants. Activists were henceforth happily buried in paper, with access to the information they needed to dog federal decisionmakers. December saw the establishment of the Environmental Protection Agency, which initially lured a number of idealistic young professionals to its staff. As 1970 drew to a close, activists felt better equipped, both inside and outside government, to take on the dauntingly complex task of defending the environment.

Nineteen seventy-three will be remembered as the year of lengthy, expensive, and resentment-filled journeys to the nearest open gas station. The OPEC oil embargo (directed at the U.S. in part for its support of Israel) spawned public interest in energy efficiency and renewable resources. Though some progressive programs were instituted, the new consciousness did not become deeply enough entrenched to withstand the combined disincentives of declining oil prices and, in the 1980s, the hostility of Ronald Reagan.

In 1972 the Sierra Club presciently called for adoption of a national energy strategy based on efficiency and conservation—a goal it has doggedly pursued through five federal administrations, with limited success.

1970
Club chapters represent members in every U.S. state.

1971
Club wages successful campaign against the supersonic transport (SST).

1972
Western Canada Chapter formed. ◆ The last High Trip, to Kings Canyon.

1973
Laurence I. Moss the first non-Californian elected Club president.

1974
Board of Directors issues resolution on tropical-forest preservation.

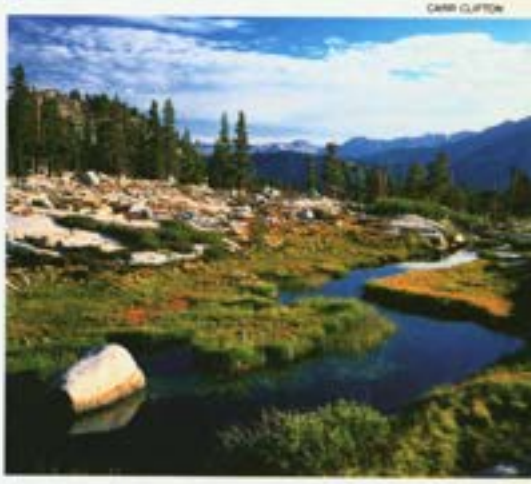
The Federal Land Policy and Management Act, passed by Congress in 1976, belatedly decreed that the Bureau of Land Management's job is to *care for* its more than 300 million acres of public land, not to give them away to miners and homesteaders. It also asked the BLM to decide how much of its land belonged in the national wilderness system—a task it took up with great reluctance, and has yet to complete.

Through the National Forest Management Act, Congress that same year instructed the Forest Service to consider the wishes of a public broader than just timber executives: to cut only as much wood as it grows, to protect biodiversity, and to prepare long-range forest plans that consider the importance of water, aesthetics, wildlife, forage, minerals, and recreation as well as of wood. Both these laws raised conservationists' expectations—which were dashed four years later with the election of Ronald Reagan.

On March 28, 1979, a cooling-system valve failed to close in Unit II at the Three Mile Island nuclear-power plant near Harrisburg, Pennsylvania, setting in motion the worst commercial atomic-power accident in U.S. history. A pall still hangs over the industry: Ballooning costs, intractable waste-disposal problems, and persistent fears about safety have led U.S. utilities to order no new plants since 1978.

The Sierra Club, which in 1974 had opposed further construction of nuclear-power plants, strengthened its position after the TMI accident by calling for a phased closure and decommissioning of existing reactors. It was a radical departure from its stance of the previous decade, when the Board of Directors, concerned only that reactors not be built in environmentally sensitive areas, endorsed the siting of a nuclear facility at Diablo Canyon on the California coast in order to preserve the scenic Nipomo Dunes.

The 1970s saw environmentalists increasingly willing—and able—to seek redress in the courts. This process was highlighted by two late-'60s cases, over Storm King in New York and Mineral King (right) in California, in which organizations such as the Sierra Club sought standing to oppose management agencies' actions both administratively and in federal court. Legal maneuvering became an effective activist tool, and in 1971 the Sierra Club Legal Defense Fund was established to litigate not only for the Club (it was and remains an independent organization), but for others.



CARR CLIFTON

Environmentalists went on to tackle a wide range of ills, from air and water pollution to pesticides, hazardous wastes, and threats to endangered species. During this era federal legislators responded to post-Earth Day public opinion with a barrage of environmental laws and regulations. But passage of legislation by Congress and its diligent enforcement by the agencies charged with that responsibility proved to be two different things—leading the Sierra Club and other groups to spend much of the past two decades using their hard-won legal leverage to compel the government to comply with its own directives.

1975
Club sponsors International Earthcare Conference in New York City. ◆ Membership reaches 154,000.

1976
Sierra Club political-action committee organized.

1977
Sierra Club Bulletin changes name to *Sierra*.

1978
Sierra Club wins National Book Award for children's literature for *The View From the Oak*.

1979
Urban-environment conference co-sponsored by Sierra Club and National Urban League.

Longtime Sierra Club director Edgar Wayburn convinced the organization to make preservation of Alaska's wildlands a priority in 1967, a notion he and his allies steadfastly promoted for the next 13 years. In 1980 their Alaska Coalition got its reward: passage of the Alaska National Interest Lands Conservation Act, a law granting permanent protection to some 103 million acres. ANILCA was the largest land-preservation act in U.S. history—"a conservationist's Louisiana Purchase," some called it. The landmark bill instantly doubled the size of the nation's park and wildlife-refuge systems.

The change in emphasis from a classic "conservation" agenda to the panoply of issues known today as "environmentalism," begun in the 1950s, meant that by its tenth decade the Sierra Club was deeply involved in solving new and challenging problems. Air quality in many U.S. cities was causing lung disease, industries poured wastes into the nation's waterways with impunity, and nearly every day someone discovered children playing on an abandoned toxic-waste dump. Throughout the Reagan era, pollution politics were in the forefront of environmental concern; during those long years the Club's volunteers and lobbyists worked tirelessly to help pass the Superfund law as well as amendments to the Clean Air and Clean Water acts.

The Sierra Club's debut in the federal electoral realm in 1982 was a smashing success: 132 of the 168 congressional candidates it endorsed won at the polls. In 1984 Walter Mondale received the first (and to date only) Sierra Club presidential endorsement, a controversial move among the Club's bipartisan membership despite the abysmal record of the first Reagan administration. (A great many Club-supported candidates did better in November than the unfortunate Minnesotan.) In 1992 the Club expects to endorse a record number of candidates on the local, state, and federal levels.

Sierra Club political activists present a check to a congressional candidate.

1980
Sierra photo contest introduced.

1981
Membership passes 200,000 in April, 260,000 by year-end.

1982
Club adopts urban transportation as one of its 11 national priorities.

1983
More than 1,000 attend Sierra Club International Assembly in Snowmass, Colo.

1984
Sierra Club membership tops 353,000.

1985
Douglas Wheeler appointed executive director; Michael McCloskey becomes Club's first chairman.

1986
Sierra Club Board declares ending the arms race and preventing nuclear war a national priority.

Ronald Reagan's Interior Secretary, James Watt, shared his superior's visceral dislike for governmental regulation, and approached the dismantling of environmental-protection programs with missionary zeal. Watt became the darling of the "Sagebrush Rebellion," a movement led by Western loggers, miners, and ranchers who hoped to see the public lands sold off to private interests.

Environmentalists, appalled by Watt's excesses, were eventually joined in their calls for his removal by members of Congress from both parties. (GOP defeats in the 1982 elections did much to build that bipartisan support.) The Sierra Club, whose membership rose dramatically in the early 1980s, led a nationwide "Dump Watt" petition drive (left) that gathered upward of a million eager signatures. This outpouring—and Watt's unrelenting churlishness—led to his resignation in 1983.

In the 1980s, news of a widening hole in the ozone layer over Antarctica and a steady increase in average global temperatures began to command public attention. The cause of the ozone hole was identified as the use of chlorofluorocarbons (CFCs) by industry and consumers, while global warming is believed linked to the increase of atmospheric carbon dioxide associated with the burning of fossil fuels.

The United States recently joined many other industrialized nations in signing an international protocol, pledging to phase out and find substitutes for CFCs by the year 2000. Even so, the ozone hole will continue to expand—and as it does, the incidence of skin cancers and other maladies is expected to increase.

The global-warming problem will be tougher to solve—whether or not appropriate steps are taken now—because any solution will require fundamental changes not only in our industrial economy but in our daily lives. The Sierra Club rose early to the challenge, but has been unable to compel the federal government to take meaningful action (such as a commitment to energy conservation and renewables) despite the fact that a solid majority of Americans wants the U.S. to show leadership in this area. The Bush White House has even been hostile to initiatives from within its own administration, such as one for an international conference on global warming proposed by EPA Administrator William Reilly, but opposed by top budget and staff officials.

The North American public has learned that virtually no ecological crisis is contained neatly within one set of national borders. The staff and volunteers associated with the Sierra Club's Washington, D.C.–based International Program focus on issues ranging from population stabilization and rainforest protection to development-lending abuses and global climate change.

The Sierra Club's first century comes to a close with our view having widened from the mountains of California to all seven continents, and on into the highest reaches of the atmosphere. Our second century may well see that gaze embrace still broader horizons, as all that we learn about the environment—and humanity's niche within it—provides further proof of John Muir's maxim: "When we try to pick out anything by itself, we find it hitched to everything else in the universe." ■

1987
Michael L. Fischer appointed executive director.

1988
Club awards "clean-air medals" to 270 members of Congress. ◆ John Muir's 150th birthday.

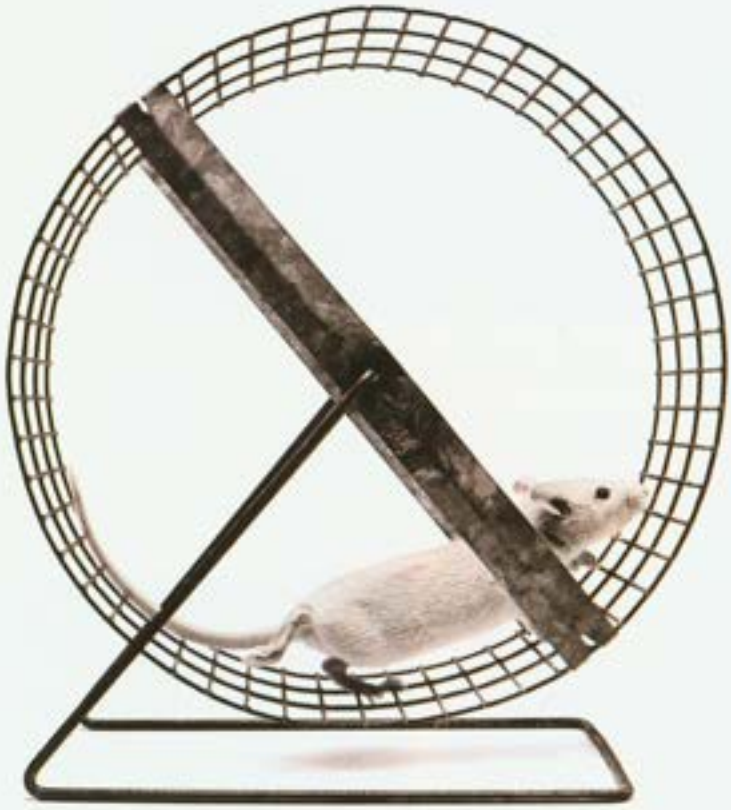
1989
The Sierra Club: A Guide (latest edition of member handbook) published.

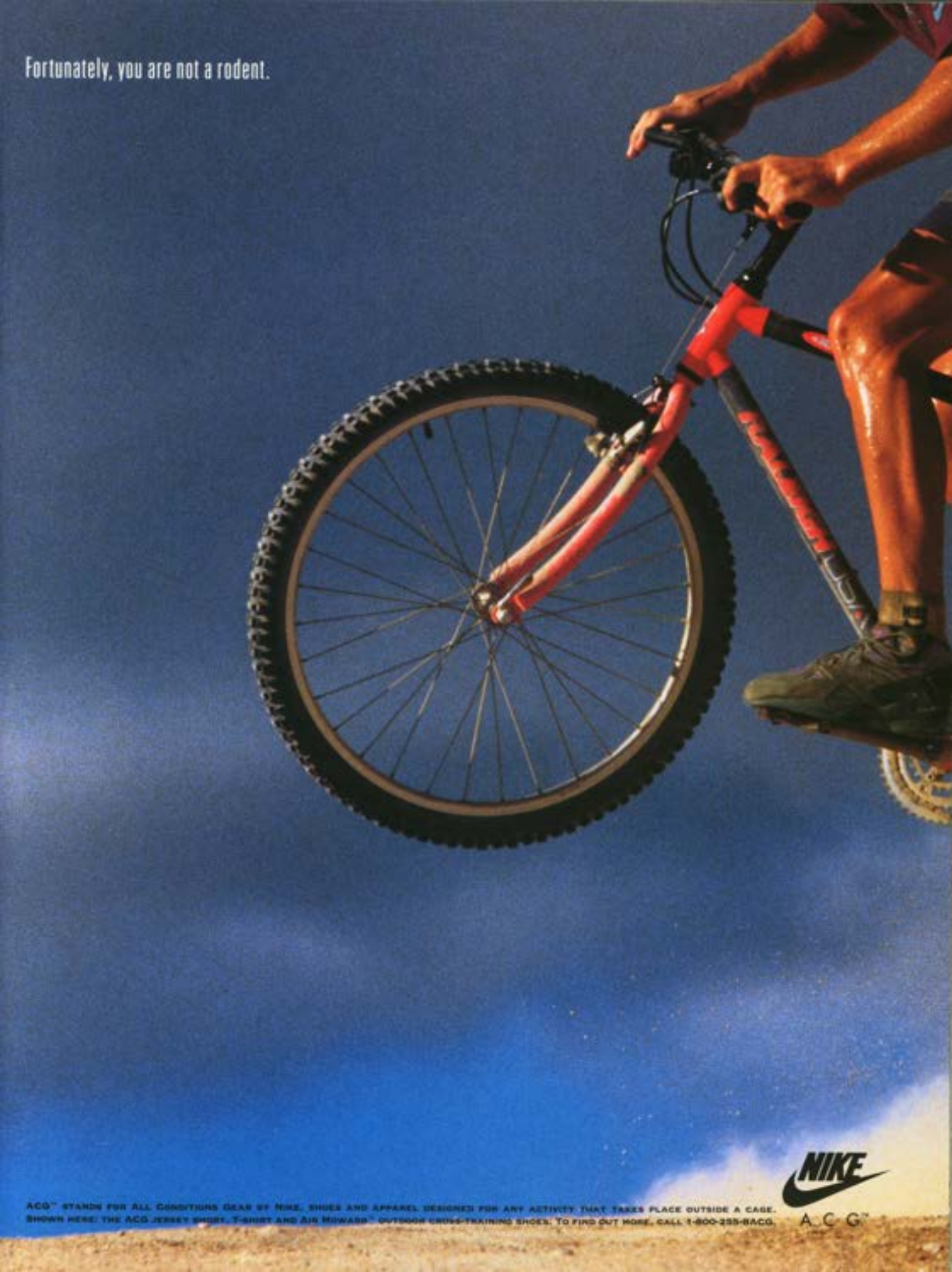
1990
Club-supported bill to limit logging in Alaska's Tongass National Forest passes.

1991
Club helps defeat Johnston-Wallop energy bill, protects Arctic National Wildlife Refuge.

1992
Sierra Club Centennial.

This is a rodent. It runs but never gets anywhere. It will never know the joy of darting through woods and meadows while fast-moving clouds race across a blue sky. It will live its entire life in a box. It doesn't have a choice.




Fortunately, you are not a rodent.
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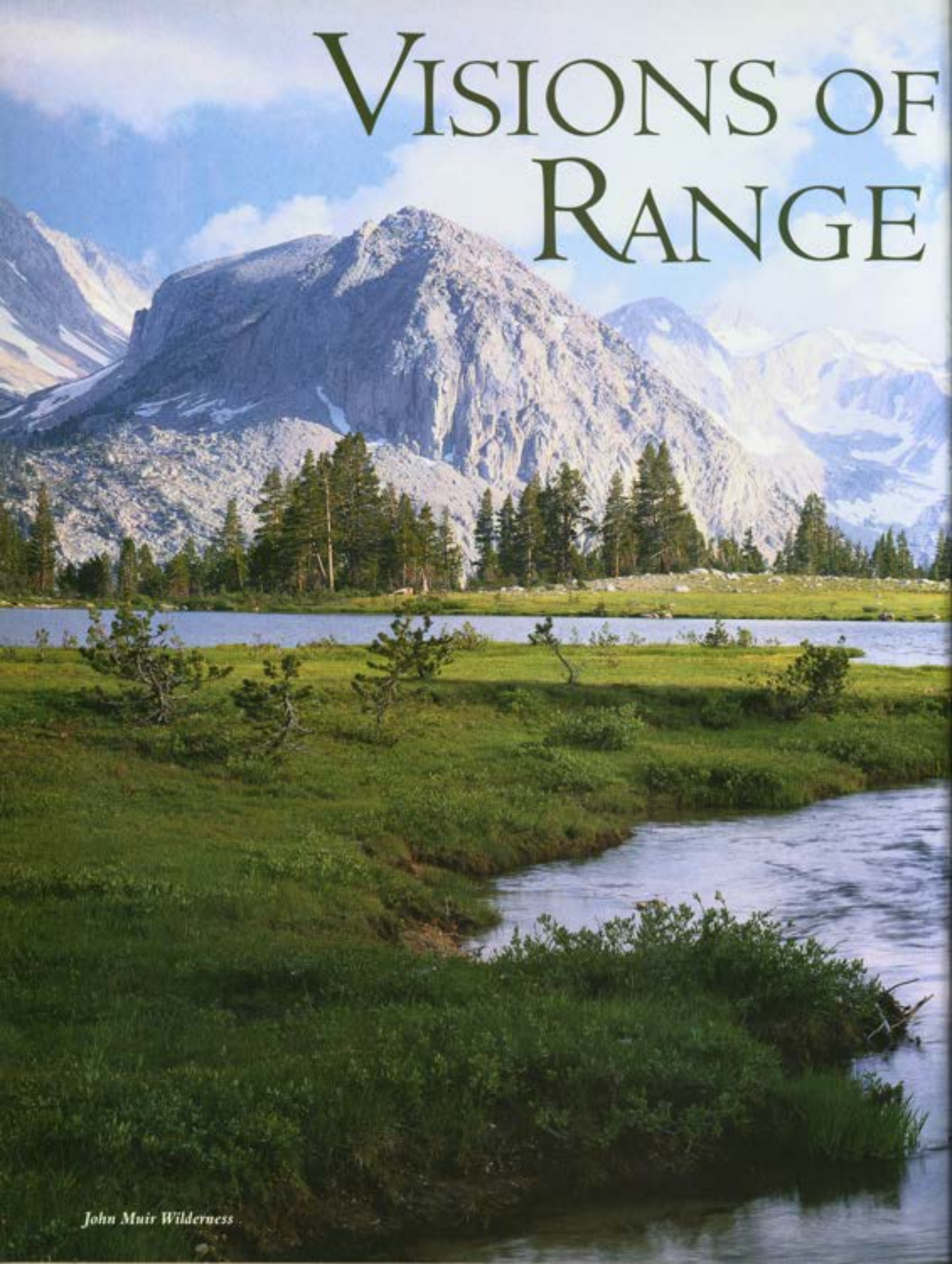
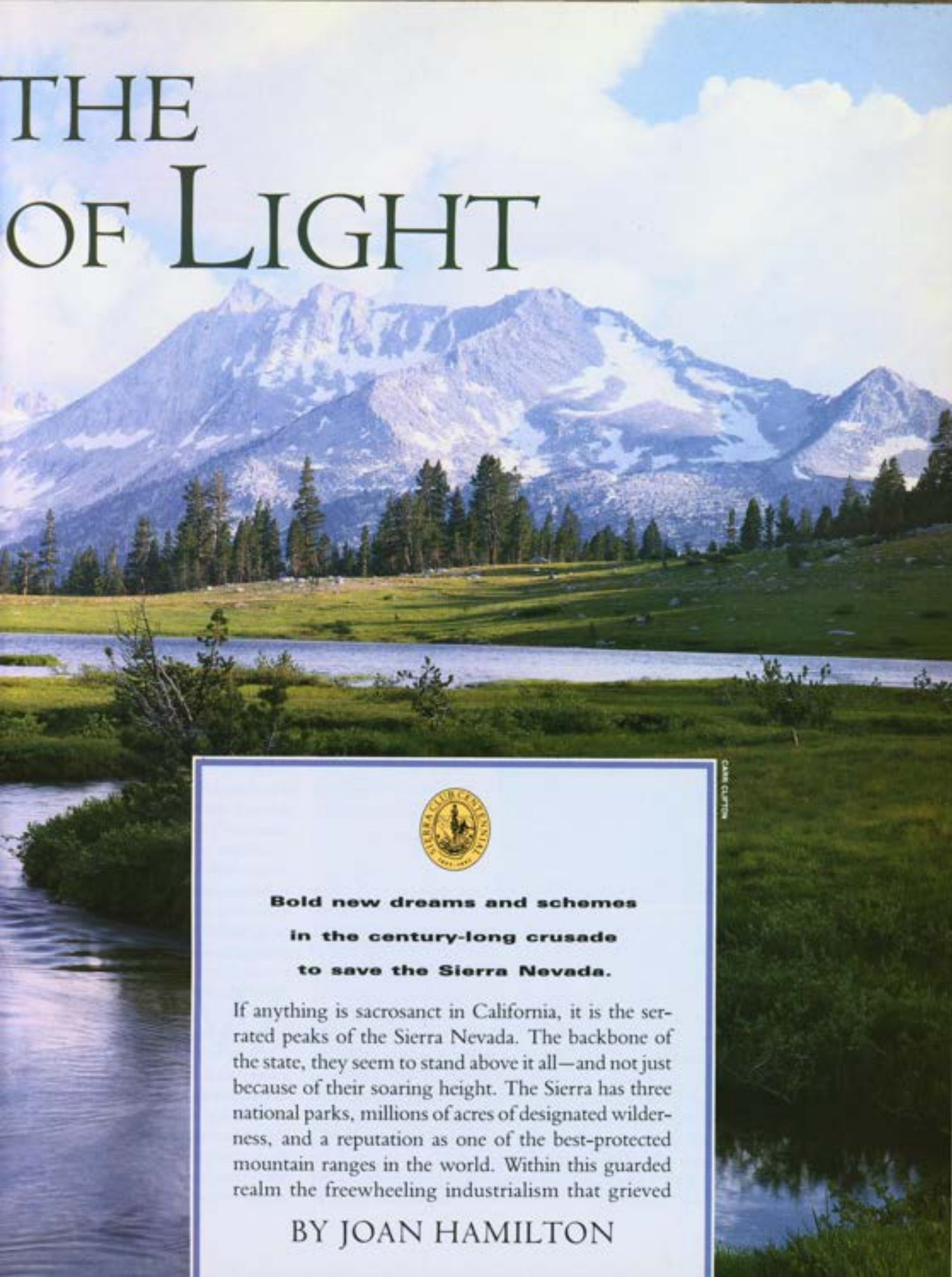


John Muir Wilderness

THE OF LIGHT



CARR CLIFTON

Bold new dreams and schemes in the century-long crusade to save the Sierra Nevada.

If anything is sacrosanct in California, it is the serrated peaks of the Sierra Nevada. The backbone of the state, they seem to stand above it all—and not just because of their soaring height. The Sierra has three national parks, millions of acres of designated wilderness, and a reputation as one of the best-protected mountain ranges in the world. Within this guarded realm the freewheeling industrialism that grieved

BY JOAN HAMILTON

A Wave of Extinctions

The common loon and harlequin duck no longer nest in the Sierra Nevada. The wolverine is so rare that few people ever see one. The great gray owl is hanging on—but barely. And the foothill yellow-legged frog is already gone.

Throughout the range, human activities are exacting a heavy toll on wildlife. "If we do not take remedial actions," said a 1990 report on California's biodiversity jointly prepared by the state and the University of California, "it is likely that within decades—not centuries—the habitat destruction we are causing will lead to a massive wave of extinctions."

Even the familiar mule deer is suffering heavy losses. In fast-growing Fresno County in the central Sierra, for example, subdividers have helped reduce mule deer numbers along the north fork of the Kings River from 17,000 in 1950 to around 1,900 today.

Often government itself is the enemy. Counties pay more attention to the needs of developers than of wildlife. The Forest Service focuses on cutting trees. According to a March 1991 General Accounting Office report, wildlife programs have received between 3 and 7 percent of nationwide Forest Service funding in recent years, compared with about 35 percent for timber programs.

Useful data about wildlife—especially nongame species—are often scarce. "We currently know the organochlorine levels in the kidney fat of western kestrels and other life-history data, ad infinitum," says retired Forest Service biologist Dean Carrier. What we don't have, he says, is information that will help wildlife survive. —***Tom Knudson***

JOHN SHAW / TOM STACK & ASSOCIATES

A member of the weasel clan, the pine marten is one of 189 vertebrate species that dwell in the Sierra's rapidly vanishing ancient forests.

The "State of the Sierra" articles on pages 78–86 are adapted from Tom Knudson's widely acclaimed series "The Sierra in Peril," which appeared in five installments in the Sacramento Bee *during June 1991.*

Policies to Pursue: Wildlife

- preservation and restoration of wildlife habitat in all Sierra ecosystems, including coniferous forests, oak woodlands, and streamside areas.
- guaranteed funding for the California Department of Fish and Game to protect and preserve all native species and their habitats.
- protection of critical plant and wildlife habitat on private land.
- growth management in foothill communities.
- increased funding for threatened and endangered species.

John Muir seems a thing of the past.

If you stick to the high country, you can still enjoy a long and blissful ramble in Muir's "Range of Light" believing every word of this conventional wisdom. You can still rejoice, as the mountains' greatest chronicler did, in "the noon-day radiance on the crystal rocks, the flush of the alpenglow, and the irised spray of countless waterfalls" —but only if you ignore tainted water, trampled campsites, and high-test smog, even in some of the Sierra's national parks.

Outside these coddled confines, in the Sierra's eight national forests, the situation is even worse. Commercial interests still dominate. Urban-style people problems are multiplying. And the bureaucrats in charge seem more concerned with timber revenues than with their ecological duties.

The Sierra Nevada has no shortage of admirers. Weekenders from Los Angeles shoot through the Owens Valley up to Bishop, a base for jumpoffs to eastern Sierra attractions: Mammoth Lakes (a hyperdeveloped ski community), the Palisades of mountaineering fame, and high, lake-studded granite basins. People from the San Francisco Bay Area and Reno head for the cloudy-blue waters and lavish floor shows of Lake Tahoe. The 4.5 million residents of the once-sleepy Central Valley flock to west-slope meccas such as Giant Forest and Yosemite Valley.

All told, some 30 million people live within half a day's drive of the 400-mile-long, 50-mile-wide Sierra Nevada. No longer California's quiet outback, the Sierra is a shrinking island of wilderness encircled by a human sea.

Wild-eyed Scotsman John Muir inspired most of the early conservation victories in the Sierra. After years of solo exploration, he urged that those who shared his bottomless love for the range "do something for wildness and make the mountains glad." Soon after, in 1892, the Sierra Club was founded. Though at the end of his life Muir failed to

CARR CLIFTON

In the fall, black oaks illuminate the mid-elevation forests.

thwart the "devotees of ravaging commercialism" who desecrated Yosemite's Hetch Hetchy Valley with a dam, he succeeded in helping establish and expand the park. Moreover, through his writings and actions he set the course for a cadre of wilderness defenders that remains vigilant today.

The Sierra Club kept its sights almost exclusively on its namesake range for many years. Its strategy of bringing members to the mountains in order to strengthen their commitment through the alchemy of water, rock, and wildflower proved potent. In its first decades a growing and increasingly vocal Club agitated for the establishment or expansion—and the ongoing protection—of three great national parks: Sequoia, Kings Canyon, and Yosemite. In later years it poured energy into protecting wilderness in both the parks and the surrounding national-forest system. Today about one-fifth (3.5 million acres) of the range lies either in parks or in Forest Service wilderness areas, the latter safely off-limits not only to logging but to the roads, hair salons, and pizza parlors found in some parts of the comfort-conscious parks. It's a historic achievement: In a century during which much of California has been freewayed and franchised, conservationists have kept the High Sierra gloriously untrammeled.

But the venerable methods that have saved the high country of the Sierra have largely failed to protect its air, water, wildlife, and ancient forests. At computer terminals and out in the field, activists are scouting new territory, fighting for dusty chaparral as well as glittering alpine lakes, for low country as well as high, for the biological *whole* of the Sierra Nevada as well as its most spectacular parts.

A lifelong activist who served on the Sierra Club's Board of Directors in the 1960s and '70s, Martin Litton has been a key figure in the parks-and-wilderness phase of the conservation movement. He lent his vigor and idealism to campaigns—and historic victories—at Dinosaur, Grand Canyon, and in the California redwoods, as well as in the Sierra. At UCLA in the 1930s he formed an activist student group called California Trails. In middle age he helped scuttle a mega-resort planned by Walt Disney for the Mineral King Valley. In defense of this grand alpine amphitheater he gave speeches, cajoled politicians, and staged hike-ins, uprooting survey stakes long before Earth First! made it fashionable. ("It wasn't an act of vandalism," he insists. "I was just cleaning up litter.") In 1978

Fall of the Forests

Throughout the Sierra Nevada, drought, bark beetles, air pollution, and other forces have killed or are killing a record number of trees—in industry terms, 6 billion board-feet of timber. Yet the chainsaws continue to whine; in recent years the amount of clearcutting has jumped dramatically. In Tahoe National Forest, for example, about 700 acres were harvested through clearcutting and similar methods in 1978. During the 1980s, the amount jumped to nearly 4,000 acres a year.

As the trees fall, the Sierra is changing—forever. In Sequoia National Forest, a 1986–88 survey found, more than half of the seedlings planted by the Forest Service had died. What grows back instead is brush—formidable competition for young trees.

The seedlings that do make it are often no friends of the Sierra, either. Grown in nurseries, planted in rows, they turn the forests into tree farms—cornfields of pine.

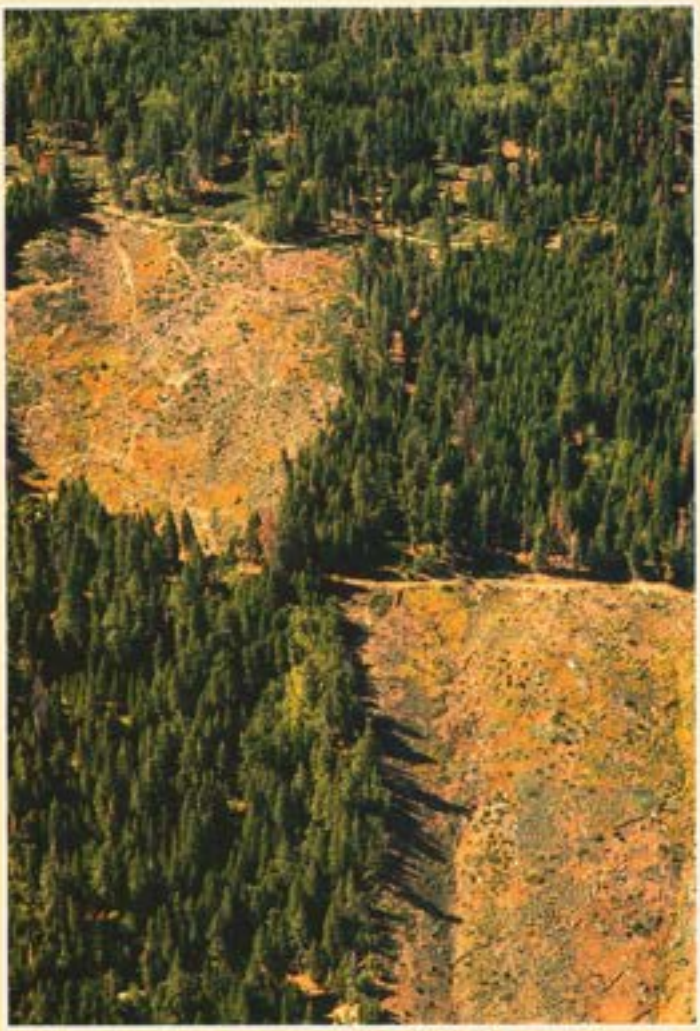
Still the Forest Service keeps cutting, in a way that many feel is a prescription for disaster. "Timber-harvest activities have pushed further into areas with steeper slopes and highly erodible and unstable soils," stated a 1988 EPA policy paper. "The long-term effects will impoverish the soil, ruin fisheries and reservoirs, and ultimately ruin many productive forest and water resources in California."

Where the forest is dying of other causes, salvage logging is taking hold. In a salvage sale, a logging company goes in and, theoretically, clears out only the dead trees—but such sales often cause serious erosion and watershed damage. Sometimes live trees are taken: In one salvage sale in Stanislaus National Forest, for instance, 31,000 board-feet of timber from live trees came crashing to the ground—a mistake by the logging contractor, the Forest Service said.

The agency claims it is trying to change. Under intense pressure, it has promised to back away from clearcutting. But turning Sierra trees into lumber—and dollars—is big business. In 1989 the Forest Service received about $109 million for wood cut from the Sierra—a quarter of which was funneled back to county governments. The remainder represents the agency's largest single source of income (about 85 percent of its Sierra revenues).

Even Forest Service employees wonder if the agency can change its ways. "I hear a lot of good verbiage," says Ron Medel, a fisheries biologist with Tahoe National Forest. "But is it translating to change down on the land? No."

—*T.K.*



JAY MATHER / SACRAMENTO BEE

Wide-ranging wildlife needs large expanses of forest—not the patchwork pattern shown here in Sequoia National Forest.

Policies to Pursue: Forests

- a ban on logging and new roadbuilding in ancient forests, as well as in adjoining disturbed forests essential to the health of the ancient-forest ecosystem; protection of wildlife corridors between these areas.
- a ban on clearcutting and similar techniques.
- cutting no more wood than is produced.
- cutting only in areas already roaded.
- a ban on herbicide use.
- use of prescribed burning to help clear out fuel built up after years of fire suppression.

LARRY ULRICH

The big but beleaguered Sierra sequoia.

the Mineral King Valley was added to Sequoia National Park.

At 75, Litton is proud of these victories, but still not satisfied. With a poster-size photo of a giant sequoia behind him, he towers over a small group of Sierra activists in the Central Valley university town of Davis, urging them not to give up—or give in—too easily. "We should not tell the Forest Service what it *ought* to do. We should tell it what it *will* do," he declares. "We need to shout! We need to wave the flaming sword!"

Litton's message to anyone who will listen is that there's more to the Sierra than its spectacular granite spine. The range's flora, fauna, and watersheds are all inextricably linked to its lower-elevation country—the coniferous forests, oak woodlands, manzanita stands, and streamsides that most people ignore in their hurry to get to the top.

The realization that the best efforts of conservationists have failed to protect the whole Sierra hit Litton hard in the mid-1980s, when he was working as a river guide leading vacationers down frothy western waterways. Flying his single-engine plane to and from these trips, he began to notice more and more clearcuts at the southern end of the Sierra. "Must be private land," he thought. "They wouldn't do that to the national forests."

But local conservationist Charlene Little told him otherwise. The clearcuts were in Sequoia National Forest, named for one of the rarest and most majestic trees in the world, *Sequoiadendron giganteum*, the giant sequoia (not the well-known coast redwood, but an inland cousin). Giant sequoias have been planted in many places around the world, but haven't been able to generate young trees anywhere but in the Sierra. Nearly two-thirds of the reproducing giant sequoias in the world are unprotected, mostly in this forest; the rest are in logging-free national parks.

Litton found that the Forest Service wasn't cutting mature sequoias. But it was busy razing the sugar pines, fir, and other species around them, leaving a few red sentinels surrounded by bare dirt and stumps.

In response to howls from Litton and other conservationists—and a Sierra

The granite walls of the Palisade Crest rise abruptly from the Owens Valley.


ED COOPER

Fair Is Foul in the Heights

The Sierran air Mark Twain once described as "the same the angels breathe" is fouled by a not-so-heavenly cloud of contaminants—ozone, sulfur dioxide, polycyclic aromatic hydrocarbons, carbon monoxide, nitrogen oxide, particulates, and more.

During the summer, west-facing foothills and mountain canyons are immersed in great ashen clouds of pollution that blow in from the Central Valley and the San Francisco Bay Area. In the winter, once-sparkling skies are smudged with yellow, brown, and gray—the signature of too many woodstoves, automobiles, and people in the mountains.

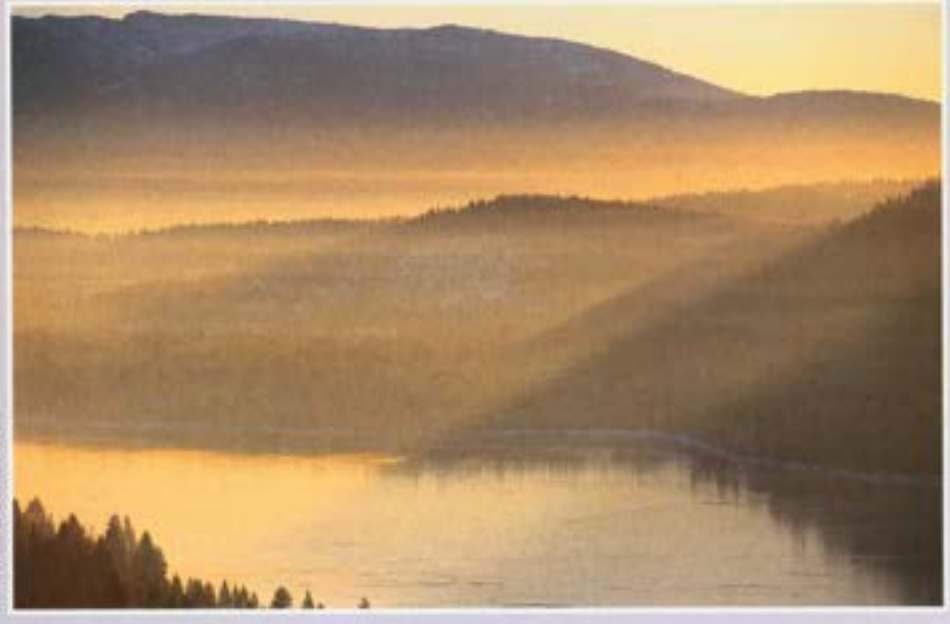
Ozone, a city-born compound formed when automobile exhaust reacts with sunlight, is perhaps the most serious threat. Much of the Sierra's ozone comes from the Central Valley, one of the state's fastest-growing regions. Every summer morning, cars, trucks, power plants, tractors, and industries from Sacramento south to Bakersfield all do their part, filling the sky with a pollution layer so thick it dims the sun. The valley also acts as a sump for tainted air blown in from the San Francisco Bay Area. Hemmed in by mountains, this cloud of poisons swirls slowly about, growing dirtier as it bakes in the torrid valley sun. Then the cloud rises, creeping eastward up the Sierra slopes. Hour by hour the pollution thickens, fumigating a 250-mile-long band of forest.

When the sun goes down, ozone does not diminish here as it does in cities, where the same compounds that create ozone during the day, primarily nitrogen oxides, destroy it at night. Daytime levels at 6,000-foot-high Giant Forest in Sequoia National Park are almost exactly what they are at Visalia on the valley floor. But at night ozone levels are much higher in the park.

On winter days ozone stays closer to home, but filthy air can still be found in communities such as Mammoth Lakes and Truckee, where pollution from woodsmoke routinely exceeds state standards. "It's striking," says regional air-control officer Russell Roberts, whose job involves sampling the air in such places. "I start with this brilliant white filter, and at the end of 24 hours it's black and smells like woodsmoke. People are breathing everything on that filter into their lungs."—***T.K.***

Policies to Pursue: Air Quality

- adoption of regionwide air-quality control measures to reduce emissions of chemical pollutants in the Central Valley and the Bay Area.
- enactment of new state and federal legislation to buy and recycle old vehicles and encourage use of public transportation.
- strict enforcement of state and federal air-quality provisions designed to restore pristine air in parks and wilderness areas.
- regulation of woodstoves and fireplaces, or a ban where appropriate.
- restriction of water diversions from eastside streams to prevent dust storms in the Owens Valley (on the Sierra's eastern border).
- rangewide scientific studies of pollution, drought, and insect damage.



JAY MATHER / SACRAMENTO BEE

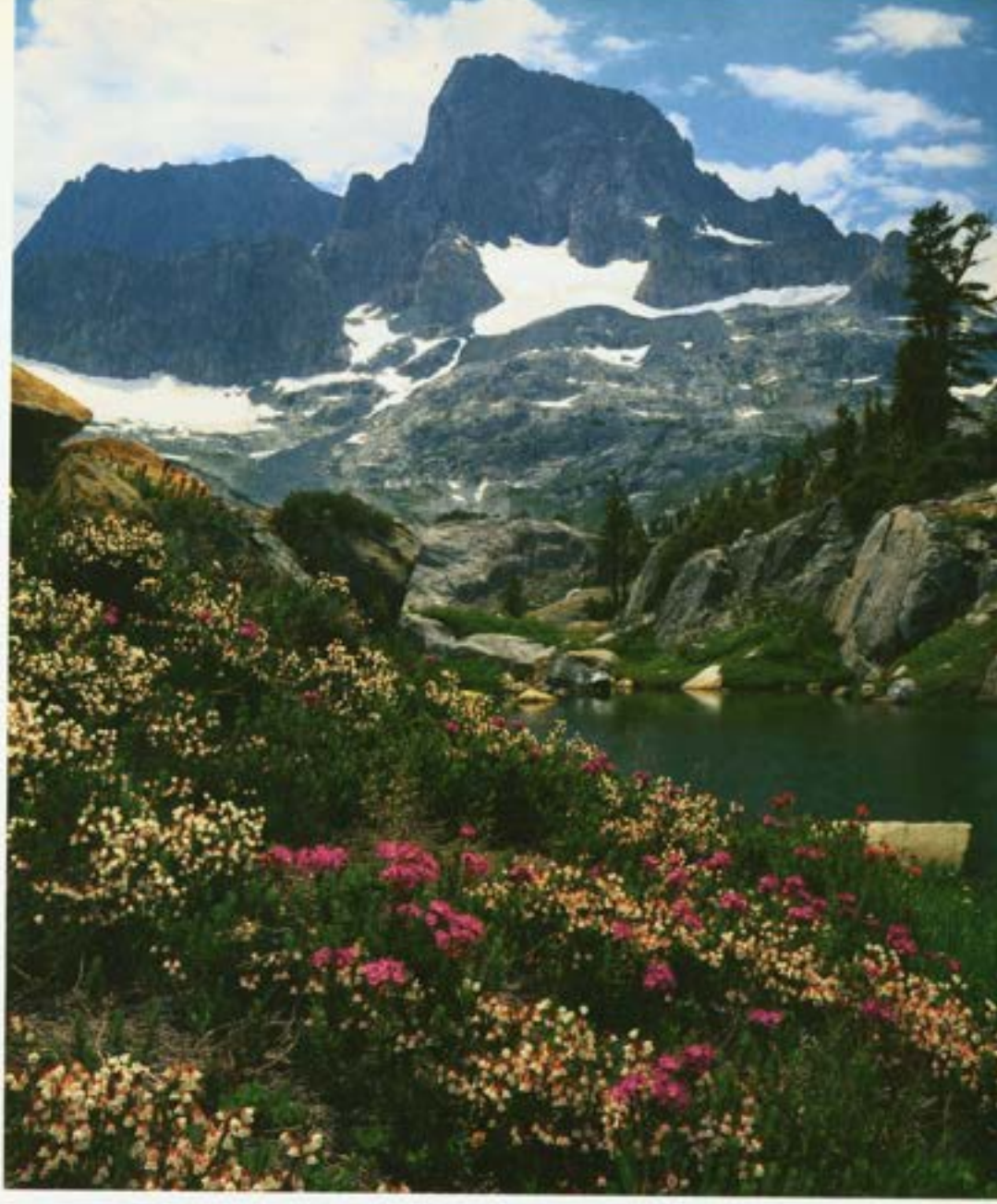
At the north end of the Sierra, Donner Lake is enshrouded in woodsmoke and auto exhaust from the booming town of Truckee. Conservationists are calling for stronger controls on woodstoves and fireplaces in such high-altitude basins.

Club administrative appeal—the Forest Service has stopped cutting in and around most sequoias. Now Litton and others are promoting a larger and more permanent circle of protection that would link the remaining sequoias with the rest of the forest, as well as with the meadows, streamside areas, and other habitats needed by wildlife. They have asked Congress to forbid logging and new roads on some 441,000 acres of the forest, giving them special status as a national preserve or monument.

To push the plan, Litton has walked empty corridors waiting for the chance to present his sequoia photos, maps, and facts. He has taken congressmen, conservationists, and reporters up in his aged Cessna to see the devastation firsthand. "You'd be amazed at how much is gone," he says. "You don't see it from the roads." To give potential allies a closer look, he drives them around in his battered van, indignantly prying locks off Forest Service gates he says are there to prevent the public from seeing the mutilated forests. "How dare they lock up *our* land?" he snorts.

Today Congress is considering protection for the sequoias, though its preferred method is not yet clear: a separate sequoia bill? a broader ancient-forest bill giving sequoias special status? Litton would like to see both approaches make the legislative rounds this year, but at presstime only an ancient-forest bill being drafted by House Interior Committee Chair George Miller (D-Calif.) seemed likely to address the big trees' plight.

If and when the stately sequoias are secure, Litton will celebrate—but not with the gusto of the old days, when conservationists had the luxury of taking on one battle at a time. "There are too many fronts," he grumbles. "It's not one simple problem anymore."



Colorful heathers carpet an approach to Banner Peak and Mt. Ritter.

LARRY ULRICH

Just about the time Martin Litton was spying stumps in Sequoia National Forest, Steve and Eric Beckwitt were doing their own sleuthing in Tahoe National Forest 250 miles to the north. Though no sequoias were involved, the Beckwitts' findings were similar: The U.S. government was allowing loggers to systematically obliterate the Tahoe's oldest, most irreplaceable forests.

Newly minted Sierra Club volunteers at the time, the Beckwitts were a father-son team. Steve, the elder, was a bearded, soft-spoken man with thick, wire-rimmed glasses and unruly brown hair. He had studied biophysics at the University of California in the 1960s before deciding to raise a family in the rugged Sierra foothills. His son Eric, just coming of age when they began examining the Tahoe in earnest, was a tall, smiling naturalist who ambushed adversaries with tough questions and well-articulated opinions.

Starting in 1985, the Beckwitts mounted a vigorous challenge to the ecological crimes they had witnessed in the Tahoe. Rallying their friends and neighbors, they tried all the traditional lobbying techniques—holding meetings, publishing leaflets, writing let-

ters, and filing appeals. By the end of the decade, the Beckwitts and others had accomplished more than many veteran conservationists had imagined possible: Almost all clearcutting in the Tahoe was halted.

But the Beckwitts didn't stop there. They could see that the Forest Service was still lurching from timber sale to timber sale, heedless of cumulative effects. Though the agency was learning that diverse old-growth ecosystems are vital for both wildlife and watersheds, it had no idea how much of its own ancient forest was left.

So the Beckwitts began piecing together the big picture the Forest Service lacked. They mapped the clearcuts and ancient forests of the Tahoe, first by hand, then by computer. Next they expanded their efforts to include the entire Sierra Nevada. Today the Beckwitts run a home-based nonprofit research organization, Sierran Biodiversity Institute, whose most urgent goal is mapping all of the range's remaining ancient forests.

The task is almost as sprawling and complex as the Sierra itself, requiring satellite photos, the Beckwitts' own fieldwork, and agency and academic data. In the initial phases, Eric takes simulated satellite rides via computerized Landsat photos: Staring into his video screen, he can look from the Pacific Ocean across the Central Valley to the vast, jagged sweep of the Sierra Nevada. Then, with a few taps on the keyboard, he can swoop down over the range like a condor, enjoying a bird's-eye view of a piece of ground as small as 80 feet square.

His practiced eye can distinguish dozens of vegetation types. Areas likely to contain ancient forest show up as a deep red, Eric says, because they reflect so little of the sun's warmth. Clearcuts are lighter; they reflect more heat. He is both amused and appalled by how easy it is to spot these pale pink blotches. "It's no problem," he deadpans. "The Forest Service is clearing holes you can see from space."

Eric loves the ease with which computers can manipulate mountains of data. "They make us ferocious," he says. But they also give him "heartburn," because they still can't mirror all the complexities of nature. "Computers create a kind of reality," he says, "but out in the field you learn that nature is continuously variable. The real world is a shifting mosaic." So father and son regularly tromp into the field to check and maintain the accuracy of their computer maps.

What makes the painstaking effort worthwhile, the Beckwitts say, are the new insights the big picture yields. While one clearcut may seem innocuous enough, the patchwork pattern on the Beckwitts' computer screen warns of a biological system that's dangerously fragmented—a situation that

Of Wood and Water

The magic begins every spring with a familiar sound—the *tap-tap-tap* of water dripping from the snowy eaves of the Sierra Nevada. The drops turn to trickles, the trickles to torrents, and the Sierra thunders with the sound of rushing water. Not just any water—but cold, clear mountain water, elixir of an empire. Six of every ten gallons used in California—the most populous state in the Union—come tumbling from the Sierra.

Today logging, roadbuilding, mining, and grazing are ripping up the soil and vegetation so crucial to maintaining a clean, abundant water supply. At the northern end of the range in Plumas National Forest, for instance, 30 percent of the water is so fouled by erosion that it no longer meets state water-quality standards. Almost every stream has been degraded.

The Forest Service says it recognizes that a healthy forest is a river's best friend—a natural system that soaks in water like a sponge, filters it, stores it underground, and gradually releases it. The agency claims to be trying to restore the harmony of wood and water, but with a budget tied to logging, progress is slow. —***T.K.***

Policies to Pursue: Water Quality

- a ban on new roadbuilding and clearcutting on all public lands; minimization of erosion from existing logging roads.
- restrictions on development near waterways; stronger fines and penalties for violations of water-quality standards.
- restriction of off-road vehicles to established roads and other acceptable routes to prevent erosion.
- a ban on highly destructive cyanide "heap-leach" mining; revision of the 1872 Mining Act to ensure protection and restoration in mined areas.

JAY MATHER, SACRAMENTO BEE

At Last Chance Creek in Plumas National Forest, fire, timber cutting, and heavy rains combined to wash tons of soil into local streams.

can be lethal to wide-ranging wildlife. Overcutting has also stripped the Sierra of soil, destroying watersheds, muddying streams, and making successful reforestation difficult. "In the middle of a forest," Steve says, "we are witnessing a process called desertification."

A glance at the Beckwitts' maps shows that Congress has seldom included ancient forests—especially those with valuable timber—in the Sierra's national parks and wildernesses. As a result, ancient forests have been disappearing rapidly—only 10 to 15 percent as much mature, old-growth forest remains in the Sierra today as grew a century ago. At current cutting rates, most of the surviving stands will be axed in 25 years or less.

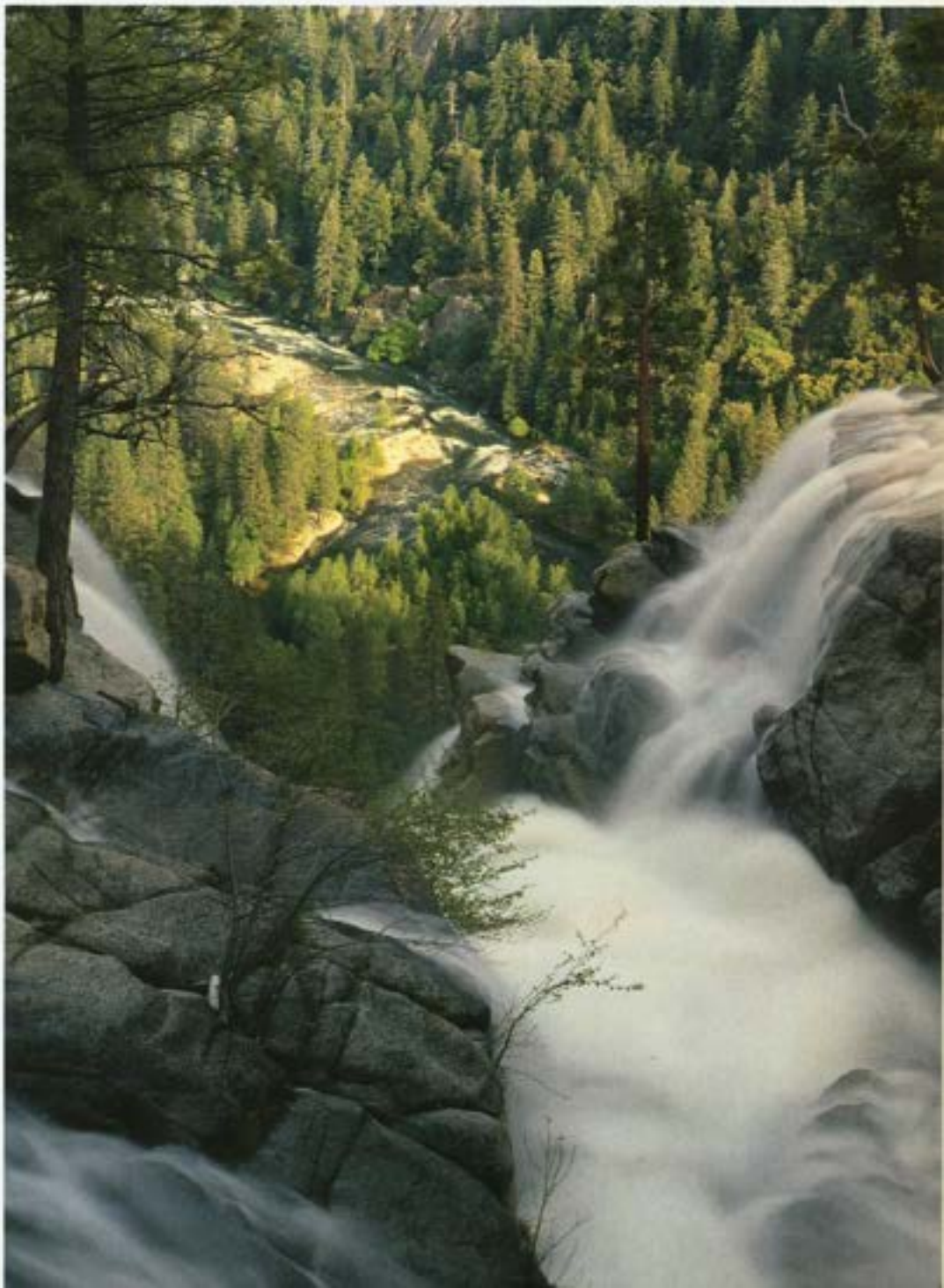
So an entire lifezone, the coniferous heart of the Sierra Nevada, will vanish before our eyes—unless Congress calls a halt. With the Beckwitts' research in hand, activists have set their sights on passing national legislation that would shield not only ancient forests in the Sierra and other regions of California, but also those in Oregon and Washington. In each of these states, conservationists have proposed an extensive system of "ancient-forest reserves" in which logging and new road-building would be forbidden. Certain surrounding lands would receive protection, too, to link and buffer the vital stands of old growth.

Using data gathered by the Beckwitts and others, the Sierra Club has determined that at least 2 million acres of the Sierra's unprotected forests should be placed in such reserves. It's a visionary proposal, covering more ground than the range's three national parks combined. But business as usual—protecting only areas that don't have the allure of lumber—jeopardizes the health of the entire Sierra.

These recent cries for ancient-forest legislation are an acknowledgment that certain lands should be protected primarily for biological reasons, regardless of their aesthetic or recreational merits. Passage of such a law could mark a turning point as significant for the conservation movement, and for the nation's public lands, as the creation of the national-park system in 1916 and the wilderness system in 1964. It offers more comprehensive protection than John Muir ever dreamed possible.

To Eric Beckwitt, old lobbying techniques aimed at influencing the Forest Service seem like "sledgehammer" approaches today. He sees ancient-forest legislation as a sharper tool: "We are going directly to Congress with a new design for the Sierra Nevada."

Tamarack and Cascade creeks tumble into the Merced River.



WILLIAM NEILL

As the Beckwitts pore over satellite photos, conservationist Joe Fontaine is compiling the practical wisdom of activists working on local problems. Fontaine himself is a font of such grassroots savvy. He's everywhere, it seems: helping Kern County devise ways to reduce air pollution that wafts up to the Sierra; defending a delicate Inyo County meadow from off-road vehicles; watchdogging the sequoia groves.

But his most recent commitment—the one he's most anxious to talk about—is to help the Sierra Club mold a coordinated campaign aimed at saving not just these parts of the Sierra Nevada, but the whole beleaguered range.

A plainspoken high-school science teacher from the southern Sierra town of Tehachapi, Fontaine stumbled onto his first clearcut while leading a Boy Scout hike in 1962. Enraged, he joined the Sierra Club as soon as he got home—and has worked to protect the mountains ever since. Today the former Sierra Club president (1980–82) can walk through the 300,000-acre Golden Trout Wilderness and point out trees marked for logging that were spared by his personal efforts. "It feels good to know that," he says.

Fontaine is acquainted with dozens of activists defending the Sierra. For the most part, they've been working as individuals or in small groups. He'd like to draw more people into the fray (from a pool of more than 200,000 Club members in California alone), and help them magnify their powers by working together. As they work to save endangered species one by one, they will also concentrate on protecting ecosystems and preventing future species crises. They will look for rangewide solutions to some of the Sierra's most intractable problems, such as creeping air pollution and urban sprawl. "We have tended to concentrate on one timber sale, one forest at a time," Fontaine says. "We really ought to look at the overall picture."

At the meeting in Davis, held last January, Fontaine and some 20 colleagues brainstormed about what they'd like to see in the Sierra of the future. A sequoia preserve was mentioned, as were ancient-forest legislation and a score of other items, some essential for wildlife ("better protection for oak woodlands, native grasslands, and streamside areas"), some vital for *all* life, ("clean air, pure water"), and some visionary ("Reintroduce grizzlies and wolves. Why not!"). Spirits rose as the group piled hope on hope, painting a picture of a Sierra once again wild. "Now that we've started working on the range as a whole," an elated Fontaine said afterward, "I don't know why we haven't done it this way before."

It's been a heady year for Litton, Fontaine, the Beckwitts, and other seasoned Sierra defenders as they've watched others wake up to problems they've been laboring so long to solve. First, in June 1991, came a five-part series in the *Sacramento Bee* about the mountains' ailing health, followed by dozens of tag-along newspaper and TV reports. In October, state Resources Secretary (and former Sierra Club executive director) Douglas Wheeler convened a Sierra Summit near Lake Tahoe, bringing together 150 academics, conservationists, industrialists, and government officials for a discussion of the range's problems. At another conference in August, conservationists hope to wrestle with solutions to those problems. Even the Forest Service has jumped on the bandwagon, initiating a sequoia symposium to be held in June.

Wheeler has elicited a pledge from state and federal government officials to "protect, in a coordinated fashion" all of the Sierra's resources—"endangered species, critical habitat, fish and wildlife, and water quality." With eight national forests, three national parks, and several state and federal regulatory agencies all operating in the range, it's a sensible though challenging goal.

The state of California is also setting up a "biodiversity council" to advise decision-makers about the issues at stake in the Sierra. The council's composition will be broad—loggers, conservationists, county commissioners, bureaucrats, business people, and others with an interest in the range—ensuring lively discussions but, most likely, little agreement.

Conservationists are under no illusions about what all this means. "It's just a lot of handwringing so far," says Steve Beckwitt. But handwringing is better than the indifference or outright hostility conservationists have endured in less enlightened times. "I'm sorry things had to get so desperate before this could happen," says Joe Fontaine, "but people *are* more willing to help now."

Not everyone applauds the state's recent conservation initiatives. A group called Sierra Families in Peril stood outside at the Sierra Summit handing out flyers that equated the state's biodiversity pledge with neocommunism: "Lock up your homes! Hide your children! This is sure to scare the property rights right out from under you."

Inside at the invitation-only summit were several state legislators who represented forces that, in John Muir's words, "instead of lifting their eyes to the God of the mountains, lift them to the Almighty Dollar." State Senator Pat Johnson (R) ridiculed the state's biodiversity goals, saying, "The population's common denominator is our pursuit of money. We can't scoff at it. We must respect it."

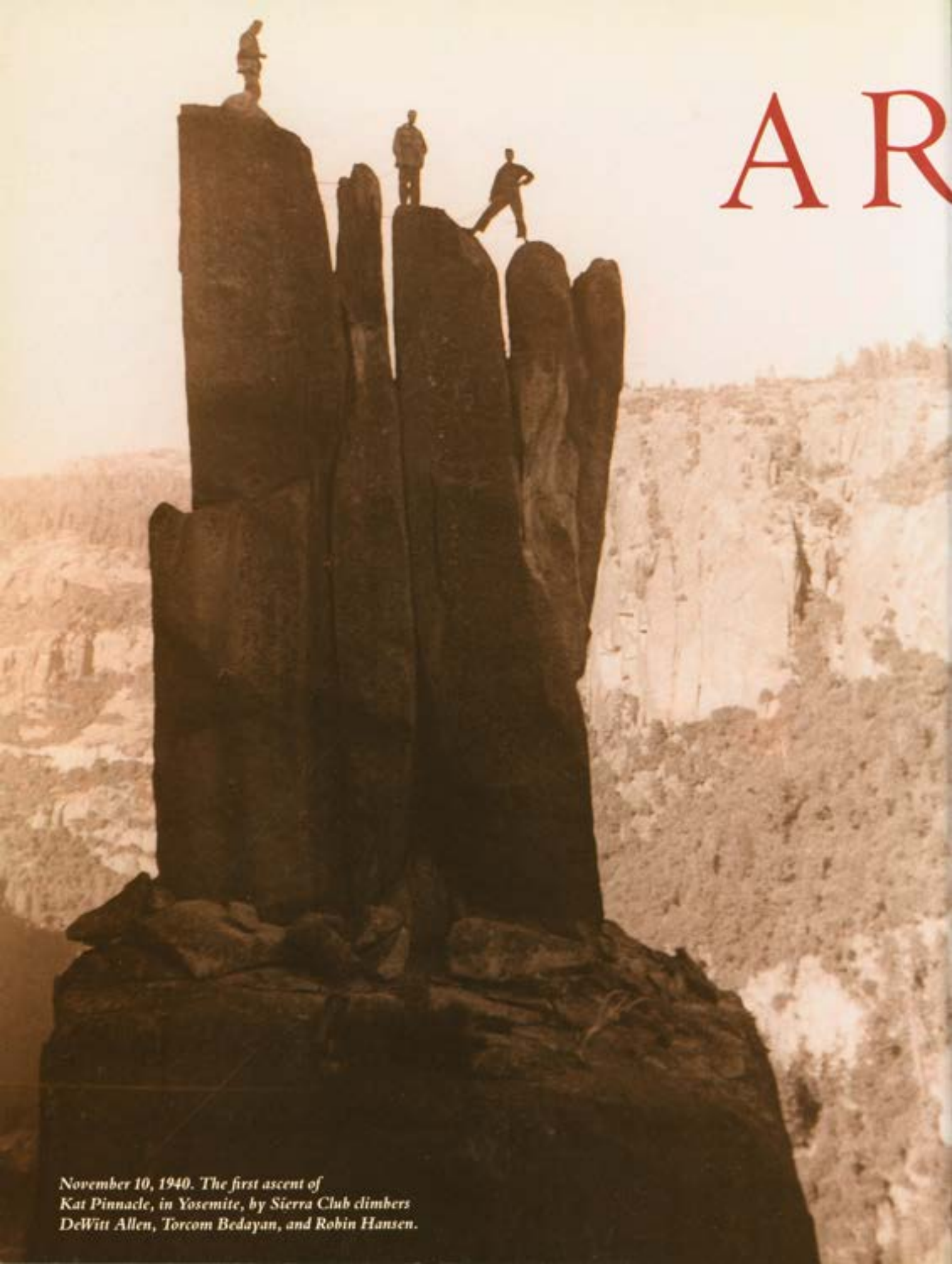
The tension between money and majesty, use and protection, is at least as old as the Sierra Club's founding goal of "preserving the forests and other natural features of the Sierra Nevada." John Muir knew it wasn't going to be easy. "The battle we have fought, and are still fighting, for the forests is a part of the eternal conflict between right and wrong," he said in 1895 at the Club's first annual meeting. "I trust, however, that our Club will not weary in this forest well-doing. The fight for the Yosemite Park and other forest parks and reserves is by no means over." ■

JOAN HAMILTON *is a senior editor of* Sierra.

GALEN ROWELL

Sunrise on the Sierra crest.

AR



November 10, 1940. The first ascent of Kat Pinnacle, in Yosemite, by Sierra Club climbers DeWitt Allen, Torcom Bedayan, and Robin Hansen.

RETURN TO THE PEAKS

A Sierra Club stalwart encourages today's activists to take greater risks . . . and reap the rewards.

Whatever you can do, or dream you can, begin it.
Boldness has genius, power, and magic in it. – Goethe

TODAY, IN MY EIGHTIETH YEAR and the Sierra Club's hundredth, I find myself once again thinking about the Sierra Nevada, the Sierra Club, and what they have done for and to each other. I have been recalling people who followed along John Muir's trail, and speculating about those who are still at it.

I wonder if the Club's present leaders are as bold as their mountaineering, wilderness-adventuring predecessors. I suspect that Muir, were he alive to consider the Club's centennial, would want to know what happened to the vigor he brought to the founding of the Club. I made this point publicly not long ago when I reprimanded the Club's leaders for too often compromising on important issues. If the Club had stood firm in 1941, there would not now be a highway to Copper Creek in Kings Canyon National Park, a park the Club worked hard to establish in the 1930s. Because the Club temporized on the routing of an "improved" Tioga Road, massive vandalism perpetrated by the National Park Service in the early 1950s now scars the polished-granite apron around Lake Tenaya in Yosemite National Park.

I wish the mistakes had ended there. They didn't. As the Sierra Club's executive director in the mid-1950s, I once compromised, and Glen Canyon was lost, drowned behind a dam on the Colorado River. That still didn't teach us a lesson. Had the Club not backed out of a crucial lawsuit in order to avoid antagonizing Alaska politicians with whom it was working to gain state parks, the Alaska pipeline might not exist, and the *Exxon Valdez* spill might have been averted. And in 1989, in a show of ambivalence that would have saddened John Muir, the Board of Directors hesitated to support a proposal to tear down O'Shaughnessy Dam and restore Muir's beloved Hetch Hetchy Valley to its rightful state in Yosemite National Park.

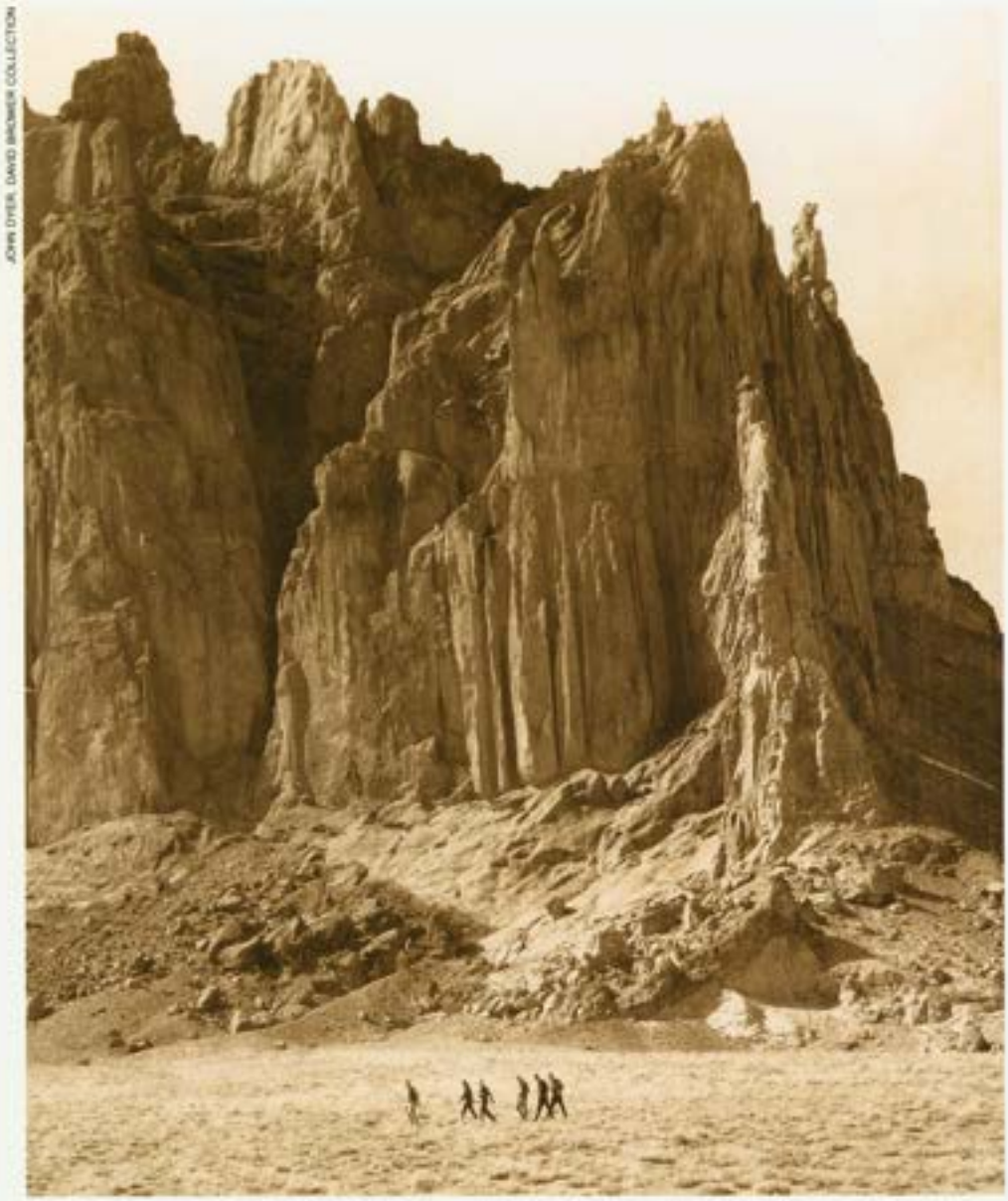
In 1991, during the continuing battle over the Pacific Northwest's ancient forests, the Club was so eager to appear reasonable that it went soft. The timber interests, perceiving the Club's willingness to compromise, devised a scheme that hardly delayed the rate of old-growth cutting,

BY DAVID BROWER

while eviscerating our side's ability to file suit. Fortunately, this year in California the Club got it right, and refused to accept the so-called Grand Accord—timber-harvesting legislation that would have permitted the logging of 68 percent of the remaining ancient redwoods in the next 20 years. I hope the Club's directors will now take an equally tough stand on the national level.

Yes, the Sierra Club has saved millions of acres of wilderness around the United States, thousands of acres of ancient forests, and thousands of acres of desert—saved them for future generations to keep on saving. But for every acre preserved, another has been traded away. Compromise is often necessary, but it ought not to originate with the Sierra Club. Our role is to hold fast to what we believe is right, to fight for it, to find allies, and to adduce all possible arguments for our cause. If we cannot find enough vigor in us or our friends to win, then let someone else propose the compromise—which we must then work hard to coax our way. We thus become a nucleus around which activists can build and function. The Sierra Club must discard its hubris, learn anew how to listen, abandon its obsolete conventional wisdom (a redundant term), find strong leaders, and get a move on. Nice Nelly won't get the job done.

I have seen tough-minded stands work for the Sierra Club. When the Forest Service and the ski industry wanted to develop the San Gorgonio Wilderness in Southern California, the Club directors were prepared to accede. I wasn't, and spent most of one winter night urging the directors to stiffen their backs. The wilderness is still there. When Walt Disney proposed a ski resort for Mineral King Valley in the Sierra Nevada, the Sierra Club was ready to fold. In this case, so was I, but Club Director Martin Litton wasn't, and he saved the day. When the federal government proposed dams for the Grand Canyon, we said we'd accept no dams. People knew what we stood for and gathered around. We defeated the proposals. If we had said (or thought) that we'd accept one dam but not two, clarity would have vanished from our deeds and faces. People would have seen that we were just arguing about how much defilement is acceptable, not opposing it entirely. They would have gathered elsewhere, if they gathered at all.



JOHN DYER, DAVID BROWER COLLECTION

October 8, 1939. Shiprock looms over Sierra Club climbers on the Navajo Reservation.

What has happened to this kind of boldness? For all the splendid increase in membership in the Sierra Club and other environmental organizations, wilderness and indeed the ecological life-support system itself are increasingly going down the tubes. Could this be because, as Bella Abzug recently observed, the Sierra Club and other large environmental groups are acting like government bureaucracies?

JOHN DYER, DAVID BROWER COLLECTION

October 12, 1939. Perched on the mainmast of Shiprock, David Brower builds a cairn as Raffi Bedayan and Bestor Robinson look on.

Consider what Justice William O. Douglas once told President Roosevelt: Any government bureau more than ten years old should be abolished, because after that it becomes more concerned with its image than with its mission. That's a fair warning as the Club enters its second hundred years.

A NEW FACT has recently become clear to me: It is not variety that is the spice of life. Variety is the meat and potatoes. *Risk* is the spice of life. As a Sierra Club climber in the 1930s, I took my share of risks. I possessed a certain amount of boldness, a key trait for leaders, and one that served the Club well in the early decades when nearly all who guided the organization's affairs were accomplished mountaineers.

In 1939, a group of us from the Sierra Club demonstrated what boldness can do. At that time, the impregnability of Shiprock, in the New Mexico quadrant of the Four Corners, was notorious. Party after party of climbers had attempted the crumbling volcanic walls rising from the level desert, failed, and concluded that the formation couldn't be climbed. Each failure only increased the challenge. Bestor Robinson, Raffi Bedayan, John Dyer, and I decided we'd try it, too, but with a slight technological innovation: expansion bolts, anchoring devices that, so far as we knew, had never before been used to secure belays in mountaineering.

It took us just four anchor bolts—but dozens of pitons—to reach the top, and patience enough to spend half an hour drilling a hole for each bolt, plus four exhausting days, some ingenious engineering, several group consultations on lofty ledges, good balance, traversing of a 60-degree slope on crepe-soled basketball shoes, a lot of caution, many shivering hours, backtracking all the way to the base on the first two days, unwarranted confidence in our prewar equipment, a superhuman effort or two by John Dyer on the toughest overhangs, and, just before gaining the summit, one frugal bivouac supper and one restless night. I was finally yodeling victoriously from the narrow topmast that only the circling crows had landed on before.

The weather at the top was calm. The view was perfect. It had been a far better climb than any of us had ever made. Yet something was missing. Why didn't I experience the elation that had previously marked my arrival on untrodden summits? Somehow, four days of concentration on a single, lofty objective had stolen the surprise at its attainment. Then I realized that the exhilaration of climbing itself had been the climax.

I wish that every person who seeks to lead the environmental cause could experience the peak moments of a climb. Unfortunately, mountaineers no longer venture forth under the Sierra Club banner, and that causes me to reflect sadly on one of my most timid days, when as a Club director in 1988 I voted with my colleagues to sacrifice Club-sponsored mountain training and technical climbing in order to spare the organization an extra $500,000 per year in payments for

liability insurance. We thought we had no choice. Our insurers—who apparently knew little about mountaineering, but who did view the Club as ripe for accident claims—announced an abrupt and precipitous increase in the premium for "risky" outings involving the use of ropes or ice axes. So we axed our climbing sections.

Sure, only about 4,000 of our then half-million members were participating in outings where technical-climbing knowledge was required, and there were many other wonderful ways to spend the premium money. But I was gloriously wrong in my decision to cut our climbers loose, and so was the Board. We should have put the half-million dollars in the Club's budget, sought financial and battle support from our allies, then fought like hell to straighten out the insurance business. With such a concerted effort—which I now urge—the Club would have assured continuity in the building of bold environmental leaders, so many of whom have come down from the mountains to save them. The world now needs these leaders as it has never needed them before.

John Muir's readers are well aware of his boldness as a mountaineer and wilderness adventurer, whether from his accounts of his ascent of Mt. Ritter, his traverse on the narrow ledge under Upper Yosemite Fall, his climb to the top of a storm-tossed tree, or his perils in Alaska with the dog Stickeen. Muir was also a bold leader of the Sierra Club. Indeed, all early leaders of the Club gained daring from their exploration of Sierra Nevada summits and routes. Of the Club's 38 presidents, only two, Clair and Francis Tappaan, were All-Americans in football, but at least 30 were All-Sierrans as mountaineers—and some of them still are. Seven have had Sierra summits named after them: Muir, LeConte, Colby, Leonard, Starr, McDuffie, and Farquhar. None of them hired guides to lead them. They learned from each other and from the mountains themselves.

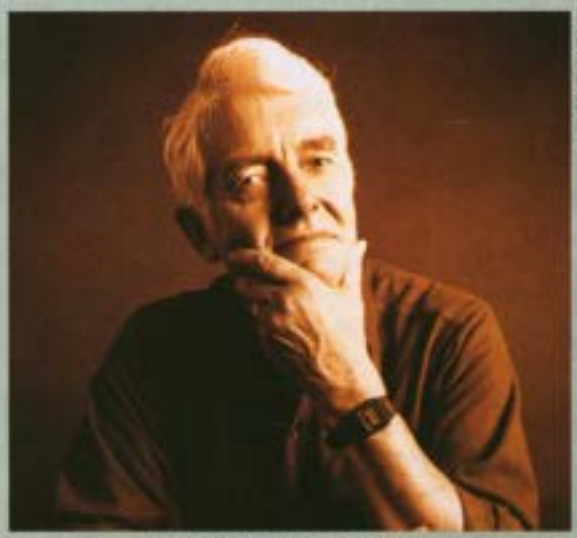
What did they learn?

Judgment, for one thing. Climbers with poor judgment can expect to be weeded out early. Whether you climb a mountain for exercise, for challenge, for perspective, "because it's there," or because it's up and you like to keep on top of things, you start out by making judgments.

You want to get to the top, and you need to decide how to avoid barriers along the way. You take along enough human support and technical protection to give you a chance to fall more than once. You select the best possible route from far enough away so you know where the dead ends are and where you don't want to be if rock or ice decide to fall. You take with you enough training to know your physical limits. You don't expose yourself to more weather than you can handle, and dress for the worst you can reasonably expect. In the back of your mind you remember that the mountain will be there tomorrow if today refuses to cooperate. And if your sport is roped climbing, you know that a special kind of love travels both ways along that rope.

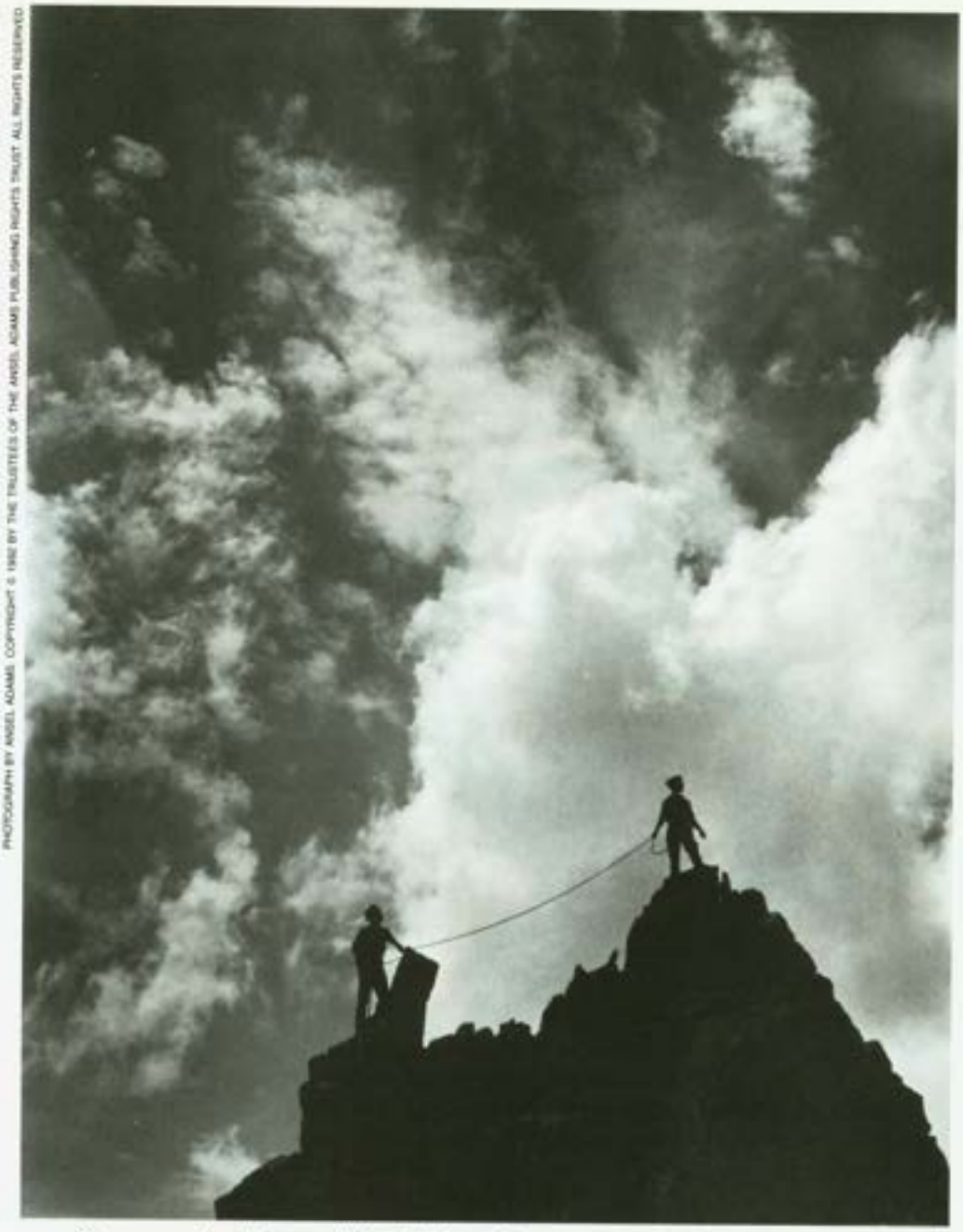
"ADVENTURE IS NOT in the guidebook, beauty is not on the map. Seek and ye shall find." Some of you may remember those words, written by Terry Russell in *On the Loose*, a book about wilderness put together by Terry and his younger brother, Renny. Terry brought the manuscript to my home in the spring of 1965 and urged me to persuade the Sierra Club to publish it. I knew that doing so wouldn't be easy, because the Publications Committee was sure to balk at investing in so strange a package: pages of artfully arranged calligraphic text, grainy, drugstore-processed color snapshots, assorted quotations, and original verses.

From having rafted with the brothers through Glen Canyon in the early 1960s, I knew Terry had a rare quality that would come through in the book. His determination to get others to see the beauty and worth of unspoiled nature inspired me, and eventually we prevailed: The Club published *On the Loose* in 1967, and it became one of the decade's underground classics. Unfortunately, Terry's last adventure took place the summer after he brought me his manuscript, well before the book went to press. On a rafting trip on the Green River, he and Renny rounded a bend, whereupon a



DAVID BROWER

Sometimes luck is with you, and sometimes not, but the important thing is to take the dare. Those who climb mountains or raft rivers understand this.



Circa 1935. David Brower (left) and Morgan Harris atop one of the Minarets, Sierra Nevada.

rapid surprised them and tossed their craft. Terry was lost. Fortunately, his collection of writings and images remained behind. He had captured the beauty he so valiantly sought to preserve.

Thus, like Terry, you search. You take risks. Sometimes luck is with you, and sometimes not, but the important thing is to take the dare. Those who climb mountains or raft rivers understand this.

Scottish mountaineer William H. Murray certainly did: *Until one is committed there is hesitancy, the chance to draw back, always ineffectiveness. Concerning all acts of initiative (and creation), there is one elementary truth, the ignorance of which kills countless ideas and splendid plans: that the moment one definitely commits oneself, then Providence moves too. All sorts of things occur to help one that would never otherwise have occurred. A whole stream of events issues from the decision, raising in one's favour all manner of unforeseen incidents and meetings and material assistance, which no man could have dreamt would have come his way.*

In the not-so-distant Sierra Club past, I saw Murray's remark on commitment serve almost as a religion for the people, including me, who helped keep dams out of Dinosaur National Monument, the Yukon, and the Grand Canyon; who helped keep loggers with itchy axes out of Olympic National Park; who helped ban DDT; who helped establish the National Wilderness Preservation System and new units of the National Park System in the North Cascades, Kings Canyon, the Redwoods, at Point Reyes, the Golden Gate, Cape Cod, and Fire Island. We did all this with a Club membership less than one-tenth its present size. Even our success in gaining passage of the Alaska National Interest Lands Conservation Act of 1980 was accomplished with a far smaller Club than now exists.

Back then the Sierra Club made all this possible by boldly asserting itself. "Climb the mountains and get their good tidings," John Muir once said. Okay, John. We're raising our glasses. Here's to that boldness! ■

DAVID R. BROWER, *an honorary vice-president of the Sierra Club, joined the Club in 1933. He has served in a number of volunteer and staff capacities, including 8 years as editor of the* Sierra Club Bulletin, *17 years as executive director, and 18 years as a member of the Board of Directors. In 1977 he received the Club's highest honor, the John Muir Award. He is currently chairman of Earth Island Institute, which he founded in 1982.*

TOGETHER IN

The stakes are high, the odds unnerving: If you thought the last hundred years were tough, get ready for the next twenty.

LOOKING BEHIND US from this centennial peak, we see that the terrain we have traversed is, for the most part, one of steady and successful environmental reform. In the last two decades, however, the landscape has proven more precipitous, the equivalent of the final pitches of a challenging ascent.

We have tackled this steep portion of our climb with tenacity and gusto. More has been done to reverse environmentally destructive public policy in one generation than ever before. Even during the conservative counterrevolution of Ronald Reagan, James Watt, and John Sununu, environmentalists made impressive gains in land preservation and pollution control. We can take pride in two decades of turning obstacles into opportunities.

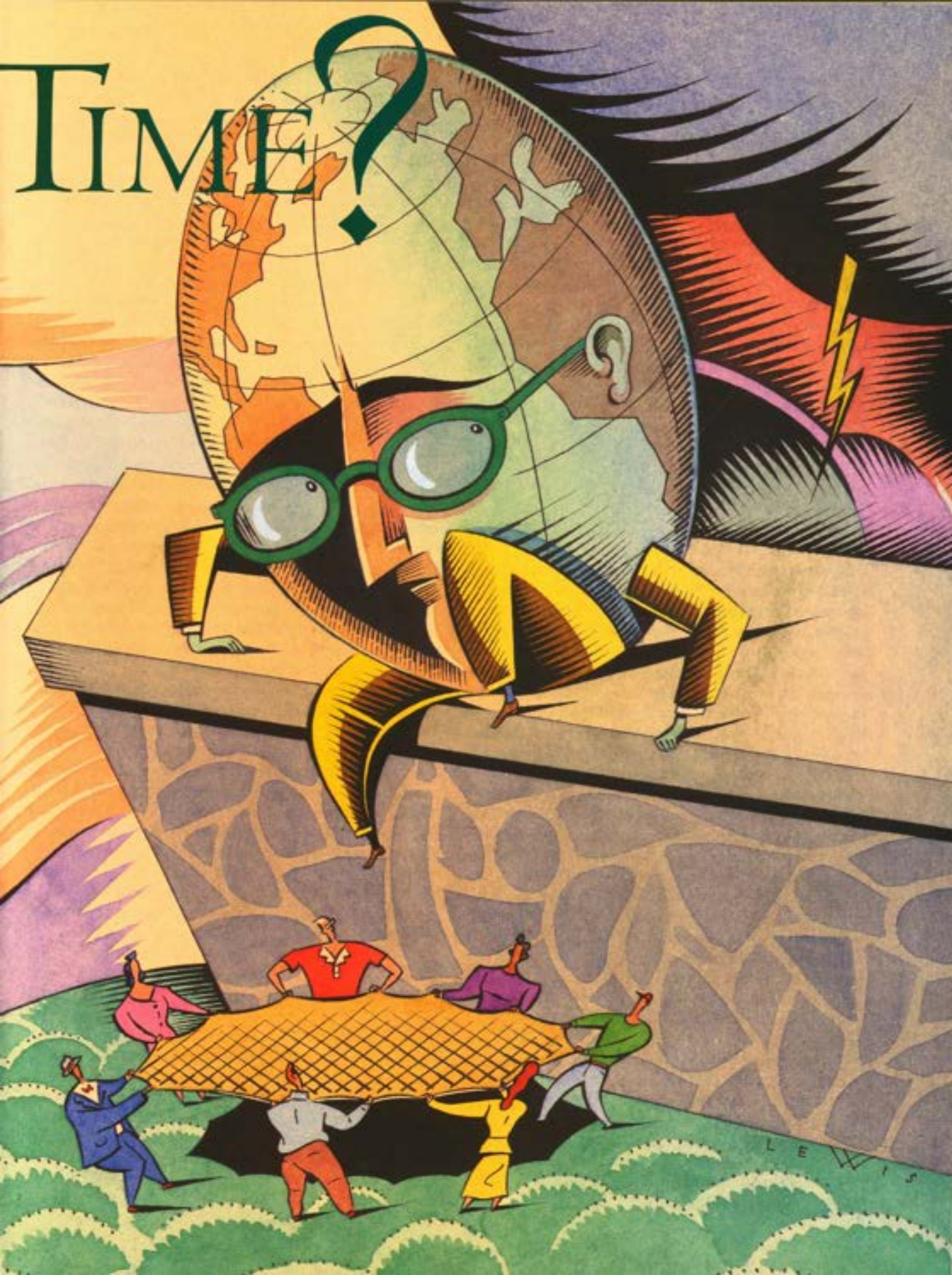
But the news from the halls of science gives no cause for celebration. Even as environmentalists have labored diligently to heal Earth's many ills, researchers have been studying, measuring, and assessing the speed and scope of environmental destruction. Time, their unblinking instruments tell us, is running out.

The forecast is by now as familiar to the readers of daily newspapers as it is to environmentalists. Tropical rainforests, home to at least 50 percent of Earth's plant and animal species, are vanishing at a rate that will eliminate them all within 30 years. In the United States, satellite and aerial surveys show that only a tiny fraction of old-growth forests remains. And in spite of federal promises to protect its wetlands, the U.S. continues to lose 290,000 acres a year to development.

The skies offer no haven. Instruments atop Mauna Loa in Hawaii reveal that the unchecked worldwide experiment of spewing carbon dioxide, methane, and other "greenhouse" gases into the atmosphere is on the verge of causing irreversible climatic change. Satellite data from the Arctic and Antarctica offer grimmer findings still: The chlorofluorocarbons used in refrigeration, foam blowing, and electronics are eroding the layer of stratospheric ozone that blocks deadly levels of ultraviolet radiation from reaching Earth's surface. Most recently, scientists discovered that the ozone layer that shields the Northern Hemisphere is degrading far

BY J. MICHAEL MCCLOSKEY AND CARL POPE

ILLUSTRATIONS BY TIM LEWIS


TIME?
LEWIS

faster than they had predicted only last year.

Finally, confounding any attempt at narrowly focused solutions are the inexorable mathematics of population growth. Between Earth Day 1970 and its 20th anniversary, global population jumped by almost 2 billion—to 5.4 billion people, bringing us far beyond Earth's estimated carrying capacity of 3 billion. Poverty, famine, and ecological degradation make daily life increasingly desperate for many of the world's people.

The numbers crunch to a sobering conclusion: We have no more than 20 years left to complete the job of redirecting our planet onto a sustainable course. Environmentalists have made significant progress over the past two decades, but what came before was, unfortunately, the easy part.

Despite recent media pronouncements that the public's interest in environmental protection has faded, the danger is not that we will give up our dream of a healed planet. Concern for the future of our Earth and our children has roots deep in human consciousness. A recent poll by The Nature Conservancy showed that even in these hard economic times, the U.S. public favors protecting wildlife over jobs *two to one*. The sentiment is strongest among younger voters, those who came of age in the Earth Day era.

THE PRESSING QUESTION, then, is not whether we want environmental reform, but whether it can be carried out in the time that remains. That will depend largely on the responsiveness—or resistance—of the two great institutional legacies of 19th-century industrialism: the corporation and the nation-state. These forces created the modern environmental crisis; they must also be the agents of its resolution.

The corporation is environmentalism's inveterate adversary. Generally the first—and always the most profound—mobilizers of new industrial technologies, corporations put production above all other concerns—largely because the society that spawned them also put production first. From the beginning, reformist and preservationist groups such as the Sierra Club took on timber, mining, oil, and coal companies; more recently we've stood up against the chemical industry, public utilities, and land developers. In every instance we faced a foe whose concern for public health and planetary well-being, if it existed at all, was overwhelmed by the lust for profit.

A corporation is a "person" under U.S. law, but it is a short-sighted, self-centered one, shifting the costs of its activities to others whenever possible. This limited sense of responsibility (still captured in the British "Ltd.," the equivalent of the American "Inc.") dominates many companies, particularly those that convert large volumes of natural resources into commodities. Worst are the timber companies, most of which have concluded that the growth rate of money is faster than the growth rate of trees, and that trees should therefore be pulped and processed into investment dollars as fast as possible. Oil companies, whose fundamental business is the conversion of stored carbon into carbon dioxide, are not much better, and can hardly be expected to embrace a global crusade to keep that CO_2 locked up underneath Dhahran and the Arctic National Wildlife Refuge.

But as American society continues to embrace environmental values, corporations are gradually, grudgingly, starting to reflect those ideals. Yes, their concept of responsibility is still limited, and their habit of passing costs on to others deeply engrained, but there may be a point of congruence between the economic theories of free-marketeers (who accept—at least in principle—the idea that prices should reflect full costs) and the growing insistence of customers on environmental responsibility.

The other potential engine for enlightened change is the nation-state. For decades environmental organizations—especially the Sierra Club—have turned to government as the agent that would coerce corporate accountability. From the earliest battles over Yosemite and Hetch Hetchy, the Sierra Club has understood the power inherent in democratic government to preserve—or plunder—our natural heritage. In its second century, however, the environmental movement may find its relations with individual nations mirroring those it has had with corporations.

The nation-state, too, has its blinders. Borders, for one. National boundaries allow environmental problems to be shunted out of sight and out of mind, to vanish from the balance sheet as neatly as toxic waste freightered from a Louisiana chemical factory to a Caribbean beach. Nations are just as unmindful when it comes to "national security." The United States waged the Cold War at the cost of its environment; the greatest source of toxic contamination in this country may turn out to be the detritus of the military-industrial complex.

Researchers have been studying, measuring, and assessing the speed and scope of environmental destruction. Time, their unblinking instruments say, is running out.

Bureaucracy also has its own bottom line. Where corporations seek profits, bureaucracies seek patrons. The U.S. Forest Service, created to guard this country's forests, has instead devastated them in a 40-year spasm, wasting billions of taxpayer dollars in the process. The agency has mortgaged its soul to a handful of politicians tied to the timber industry, and has reached the point where its managers and scientists are forced out of their jobs for complying with the law. And just as corporations avoid

governmental efforts to protect the environment, nation-states themselves struggle to escape citizens' efforts to make their governments environmentally accountable.

The nation-state's aspirations to immunity are aided by the fact that more and more of the world's consumer goods are produced by companies operating globally. These massive enterprises demand freedom from the vexing democratic desires of local electorates—and governments are acquiescing, national autonomy being easily subordinated to greater economic production. Through the international trade mechanisms known as GATT (the General Agreement on Trades and Tariffs) and the North American Free Trade Agreement, global corporations and their political allies are pushing to bring the environmental regulations of all nations into "alignment" with one another.

In some poor countries, the standards that GATT proposes will, in fact, improve the health of workers and consumers. But GATT also introduces many fractious new issues. Will these new international health and environmental standards be a floor, a minimum that all trading nations must observe, or a ceiling, a limit on a nation's ability to hold global corporations environmentally accountable? Will standards invoked in the name of free trade bulldoze those arising from environmental treaties, such as ozone protection and preservation of endangered species?

Just as the lowering of trade barriers in the Common Market is leading toward a European mega-state, trade agreements may well constitute the first step toward a world government shaped not by idealism but by the imperatives of international commerce. Already, GATT has told the U.S. government that it cannot ban imports of tuna just because that tuna is caught by setting nets around dolphins. This, GATT says, is an extraterritorial and unilateral extension of the environmental policies of the U.S. government. Ominously, GATT concludes that no one nation has the right to protect a global commons such as the ocean.

More such pronouncements will follow. As economic power-brokers find new allies in the trade bureaucracies, the accountability of the nation-states, even in an era of growing global democracy, may prove as problematic for the Sierra Club and other environmental organizations as the historic lack of corporate accountability to which we have become accustomed, if not inured.

THE CLOCK THAT ONCE ticked toward nuclear doomsday now marks the hours left to save the environment. Several questions clamor for answers: How can environmentalists deal with the continued recalcitrance of corporations and nation-states? How can we adjust to the globalization of the economy and the accompanying trade agreements? How can we address issues that transcend national boundaries? To answer these questions we must draw on everything we know. Current events, science, and our own traditions all provide signposts to guide our steps.

First, we must respect diversity in every realm. Ecosystems need a variety of species in order to survive, and many individual species require a diversity of habitats. Likewise, the strength and resilience of the environmental movement stem from its diversity. While we sometimes squabble, each environmental organization has its niche, and we must avoid splits between those that opt for local action and those that believe global systems need protection at the international level. The preservation of cultures, already at issue in the Amazon and the Arctic, must be understood to be just as crucial as the preservation of species. The traditionally homogeneous environmental movement can only benefit from recognizing and embracing the ethnic diversity of the globe.

Second, we must work to see that power is distributed equitably. The concentration of power in the hands of a few well-placed elites—be they logging companies, agribusinesses, or corrupt local profiteers—has led directly to the environmental scandals of our day. The denuding of British Columbia, the devastation of Siberia's Lake Baikal, farmworker pesticide poisoning in California, and the pillaging of the rainforests of Sarawak all stem from overcentralization of power.

Only the democratization of corporations and nations, and the sharing of economic decisions with the various global publics, can safeguard the planet. It is imperative that the backdoor process of delivering world governance into the hands of trade bureaucracies be rejected. Environmentalists must instead champion broad democratic rights, localism, and bioregionalism.

Third, we should nurture our pragmatic idealism, a trait that has served the Sierra Club well in the past. Things get

Continued on page 124

MUIR THE MUSE

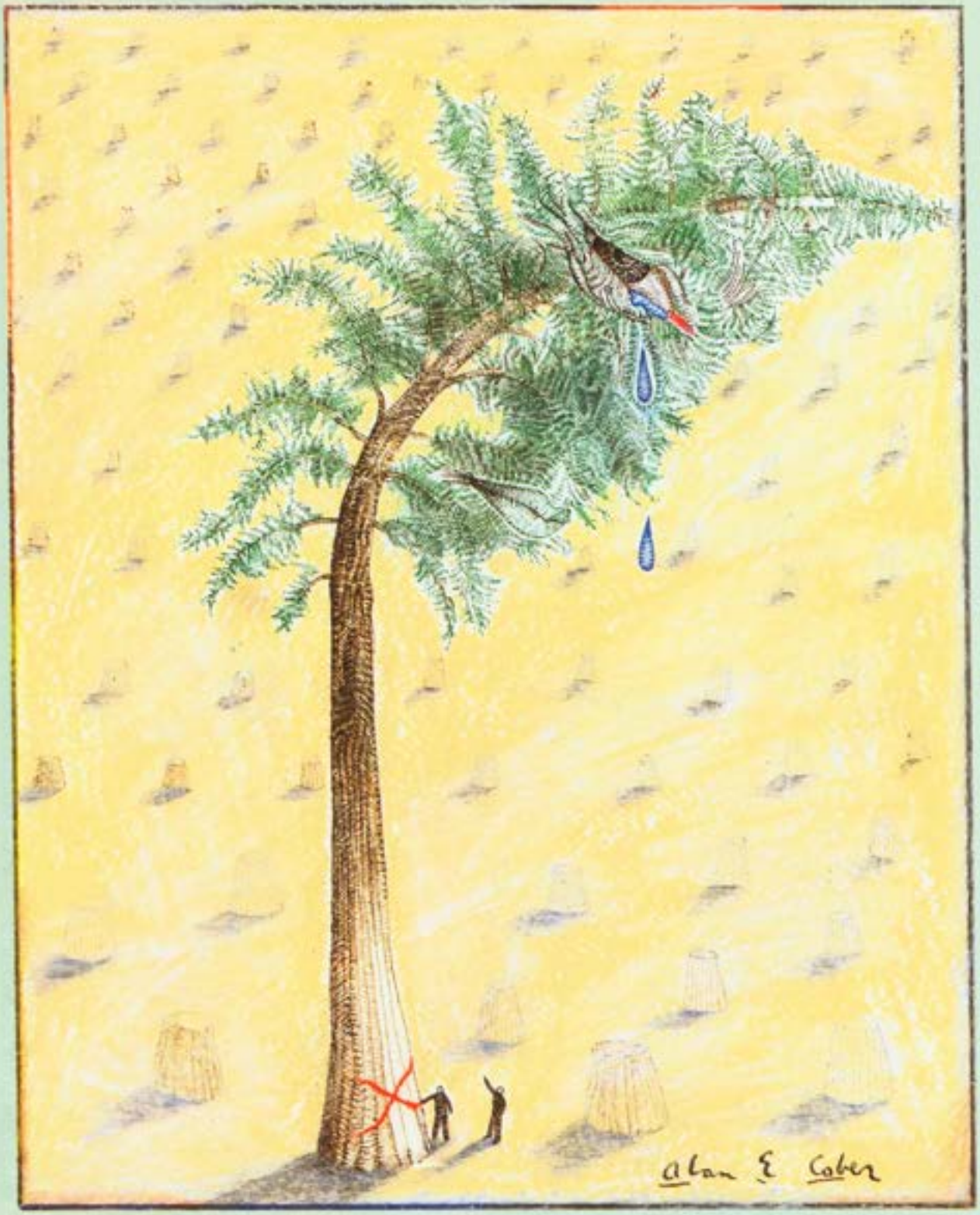
THE LYRICISM OF THE SIERRA CLUB'S FOUNDER IS LEGENDARY: on paper and in person John Muir could evoke heaven in a mountain lily and hell in a concrete dam. In tribute to his eloquence, we asked several artists to contemplate a Muir quotation and embody it in a single image. ♦ Muir's own preference in paintings, a friend once noted, was for "a naturalistic portrayal rather than an impressionistic interpretation." We trust that he would grant us, however, the artistic liberty we have taken with his words, and might even be pleased by these visual renderings of his wisdom.

Illustration by Nola Lopez

ILLUSTRATION BY GARY KELLEY

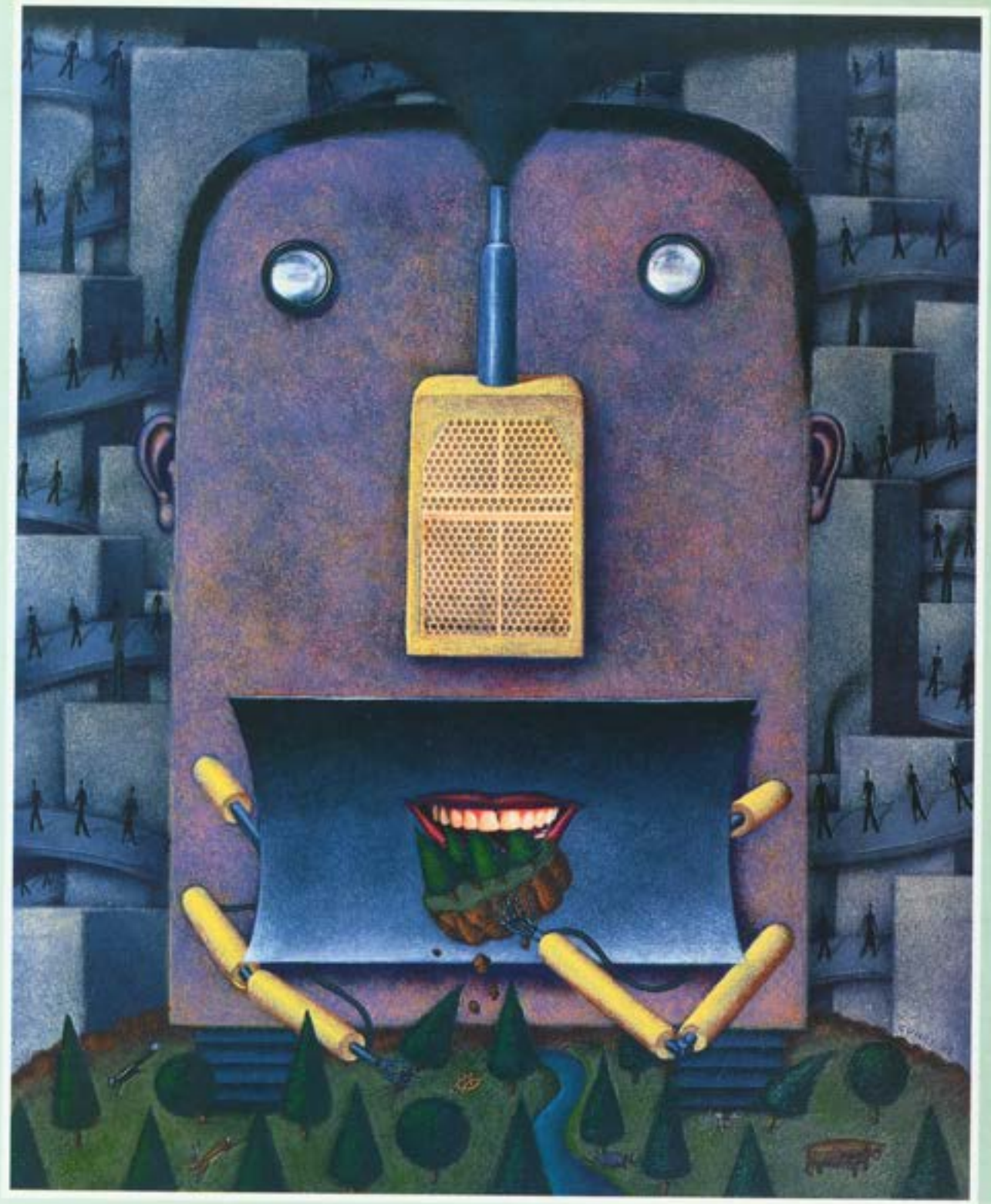
We all dwell in a house of one room—the world with the firmament for its roof—and are sailing the celestial spaces without leaving any track.

ILLUSTRATION BY ALAN E. COBER



Any fool can destroy trees. They cannot run away; and if they could, they would still be destroyed—chased and hunted down as long as fun or a dollar could be got out of their bark hides, branching horns, or magnificent bole backbones.

ILLUSTRATION BY TOM CURRY



The great wilds of our country once held to be boundless and inexhaustible are being rapidly invaded and overrun in every direction, and everything destructible in them is being destroyed. . . . Every landscape low and high seems doomed to be trampled and harried.

ILLUSTRATION BY KINUKO Y. CRAFT

No one can tell how far our star may finally be subdued to man's will.

ILLUSTRATION BY MARK PENBERTHY

Only by going alone in silence, without baggage, can one truly get into the heart of the wilderness. All other travel is mere dust and hotels and baggage and chatter.

TRAVELERS BETWEEN TWO WORLDS

BEFORE BEGINNING MY JOURNEY into the lives of five Sierra Club activists, I pull out a map. I want to place them all in their own landscapes: the Mojave Desert, the west coast of Kauai, a Mississippi pine forest, the Florida uplands, the taiga of northern Quebec.

But the map proves an inadequate guide. It makes the wildest country look approachable and ordinary. It shows altitude, but not inspiration; roads, but not pain. Talking to these people, I came to see them as living in two worlds. One is the wilderness, where the land speaks directly to them, and which informs their actions in the other world, the world of meetings and hearings and ringing telephones. They shuttle from one world to the other, and their stories are told on the road between the two.

OUT THERE

"There's feathers in the back," he says. I feel in the dark behind me for a down jacket and pull it gratefully over my light city coat. Outside it's pouring rain and not much above freezing. I've never seen Los Angeles this cold and wet before; I'm already out of my element. Luckily, the back of the jeep is filled with an untold mess of gear.

Elden Hughes pulls out onto the San Diego Freeway heading north. "Is this *the* car . . . ?" I ask. "Yep," he answers. "Cranston and Seymour both had their first view of the East Mojave from this car." As one of the most dogged advocates of Senator Cranston's California Desert Protection Act, Hughes has done some of his best lobbying while on the road, taking lawmakers (like the two California senators) out to witness both the subtle beauty of the desert and the obvious threats to it. I can see how he would get his point across; even by first light in an oversized vehicle, Hughes is an imposing figure. He bears a notable resemblance to Burl Ives, but rougher around the edges, with a resonant bass voice.

As we drive into the San Gabriel Mountains, Hughes speaks of growing up in the 1930s on a ranch near Whittier. It was just a cow town then, in the days before mini-malls and freeways took over. One of his first

To contend with the conflicts out there, they draw strength from the wild within.

BY ELIZABETH WRAY

Elden Hughes

MARK SCHMID

memories is of camping with his family in Death Valley in 1938. He points to a canyon of tumbled sandstone. "Recognize 'em? Those are the Vasquez Rocks. That's where a lot of old westerns were shot." We are not just traveling through the country of Hughes' childhood, then; this is mythical territory common to all Americans. Unfortunately, however, it is the only desert that most Americans ever see.

When we leave behind the grassland and chaparral, the country turns barer, older-looking. "This is where the bones of the earth stick through," Hughes says. Later, when I learn that he has studied geology, I'm not surprised; every geologist I've ever met has had a bit of the poet in him, buried beneath a few crusty layers.

"See, a storm comes in and drops two-thirds of its rain on the ocean side, and on this side . . . well, you can see for yourself." There's not a lot to look at; some spiny bushes, and, here and there a Joshua tree. "I've seen covered-wagon tracks out there. Soil's stable; there's not the vegetation to obliterate them." Out there. The way he says it makes it sound like another country.

Yet we're still within the urban net, even as we approach Palmdale with its legions of brand-new townhouses and billboards everywhere announcing Homes, Homes, Homes. "Palmdale is one of the fastest-growing towns in the state. You can't blame people. Housing's cheaper in the desert, and they've got buses that take commuters into L. A. But you can see why we've got to get the planning done now before the sprawl gets out of hand. We've got to take some big areas out of the running." Cranston's legislation would designate more than 4 million acres as Bureau of Land Management (BLM) wilderness, and establish three new national parks totaling 5.5 million acres. It would preserve more land in the lower 48 states than any other bill in history.

On the other side of Palmdale, I spot my first off-road vehicle, a dirt bike in the back of a pickup. "Even in the rain," Hughes sighs. Every weekend thousands of dirt bikes

and dune buggies make their way up Highway 14 to designated desert "play areas." Off-road vehicle "play" is a sport that has grown enormously over the last 20 years to become one of the chief threats to the desert's fragile ecosystem. Dune grass, desert candle, ambrosia, kangaroo rat, desert tortoise—all are ground beneath the treads.

The rain lets up a little, and we climb out of the jeep to look at a Joshua tree. It appears ancient, tough, a gnarled yucca clad in bark. "They're just beginning to grow back in areas cleared in 1910. Even the creosote hasn't come back in the tank tracks—out there where General Patton trained."

> "Give me 20 minutes at a sit-down dinner, and I'll get one and a half letters out of every person there."
>
> ELDEN HUGHES

The creosote bush looks tough enough to withstand a direct missile attack. It grows in a circle, out from common roots. Hughes shows me how to determine its age by measuring the distance across the circle. Every three feet adds up to 500 years. We're looking at one just about that age. This is a young bush, he says; one creosote has been carbon-dated at 11,700 years old, making it, by far, the oldest living plant on Earth. "I've heard there are some even older creosotes not far from where we're headed. They say you can see 'em from the road, up on the side of a hill, but I don't know . . . I've been looking for them for years."

I think of the redwoods, grandly flaunting their antiquity, protected by public law and legions of admirers. What is there to shield these clumps of spidery black branches stubbled with sticky green tufts but their own humility and the inhospitality of the territory? Creosote is understated, unadorned—like the land, like Hughes himself.

On the road again, the conversation turns back to the desert's enemies. Although mining, grazing, and ORV groups all oppose the desert bill, Hughes says, its primary foe is the BLM. ("It's simple. They stand to lose turf.") Since 1946 the BLM has overseen 340 million acres of federal land nationwide, including most of the California Desert. From the start the agency leased millions of acres to ranchers and miners; the desert was seen as a "multiple use" area, open for commercial exploitation. Activists such as Hughes date their organized opposition to the BLM from 1982, when the agency bowed to ranching and mining interests by withdrawing 400,000 acres from consideration as wilderness. Now it might indeed lose ground: The desert bill would transfer 3 million acres of BLM land to the care of the National Park Service.

Three years ago Hughes and his wife, Patty, logged 100 days of weekends and holidays in the desert, so much time that he knows the highway patrol officers we pass by their first names. Their mission was to gather photographs of each of the desert's 116 proposed wilderness areas for inclusion in a three-volume book Hughes prepared for members of Congress—most of whom had never even seen a desert.

I'd seen photographs of ORV erosion before, but none of them prepared me for Jawbone Canyon, where deep scars erase the rose, mauve, and pale green of the volcanic rock. A paper-plate sign tacked to a fence post reads: "Jim Don—we are behind the black mountain." I feel as though I'm an extra in a *Road Warrior* movie, set somewhere in the desert in the not-too-distant future.

Campers and dirt bikes are parked next to a handful of campsites. "It's a family thing," Hughes explains. "They see it as good clean fun. They come here to enjoy the out-of-doors. They don't see it as destroying the land at all." He waves to a passing ORV family. "Most of them are good people." The complexities of life are not wasted on Hughes. He's a realist. He's willing to share the desert—just as long as enough of it is guaranteed protection.

In 1990 Elden and Patty set out again, this time taking a year off from their jobs to travel 25,000 miles around the country with five baby desert tortoises. They gave talks at schools and held forth for the media. "A desert tortoise is news if it's a slow day," Hughes laughs. They showed their slides and encouraged people to write letters to Congress. "Give me 20 minutes at a sit-down dinner, and I'll get one and a half letters out of every person there," he boasts.

We pull into Red Rock Canyon State Park, where we've been headed all morning. We stand, silent and small, next to pillars of rose sandstone rising 300 feet above the canyon floor, great weathered friezes like holy cities carved in stone. The rock formations are aptly named: Mirage Cliffs, Shrine of Solitude, Magic Silent City, Nightmare Gulch.

The park ranger's office is a nondescript trailer, with the requisite stuffed coyote and display of Indian artifacts. Its familiarity makes it a cozy refuge from the downpour. We walk into the middle of an argument between a BLM agent and two park rangers. Hughes flashes me a smile that says this is just what we wanted to find.

The BLM guy says that the purpose of his agency, multiple use, is basically impossible because the scumballs in Congress won't provide enough money to pay enough rangers to manage all the lands. He wouldn't go backpacking for anything, and he can't wait to give some of the godforsaken land away. The rangers are anxious to get it and start restoring the damaged areas. But everyone agrees that the desert is a hardship post. They're all from wetter climes, all burned out by the desert. All but Hughes. Earlier in the day, Hughes had told me that he won't be able to stop fighting for the desert, even after the bill passes. "The desert needs friends the most," he said.

We make our way, with the help of a map, over a series of bumpy dirt roads and torrential gullies to the edge of Last Chance Canyon, an area to be added to the state park under the desert bill. Below us, the vast chasm is layered in mist, still, untouched. I imagine walking down into it, beyond the press of time. This must be "out there," the place Hughes is headed each time he crosses the desert.

"There's one other place we have to go before we start back," he says. One of the rangers had told him the general vicinity of the elusive hillside that may be home to the oldest living thing on the planet. Twenty miles farther north, we begin to scour each hill we pass for creosote circles.

At last Hughes pulls off the road and grabs his binoculars. Half a mile beyond us are three rings halfway up a steep slope. "Oh my," he says. "You have no idea how long I've been looking for this." He passes me the binoculars. "Must be 80 feet across." I do the sums in my head, coming up with something over 13,000 years. The oldest redwood is 3,500 years old. We sit quietly for a long while.

The rain turns to snow, and we head back to the time-bound world. Hughes talks about his history with the Sierra Club, which he joined in 1977 for "social reasons" following a divorce. Always a hiker, he soon became an Outings leader: "I like taking people out and showing them something they never even thought about before." He went on to chair the Club's Angeles Chapter, to work on the Caves Resources Protection Act, and to help win wild-and-scenic designations for the Kern, Merced, and Kings rivers. "I had never been a political activist. Oh, I was concerned, but I felt basically helpless. The great thing about the Sierra Club is that it empowers people."

Since his year of lobbying for the desert bill in 1990, he has quit his job and lives off a little computer-consulting work and, he explains with a respectful grin, "the sweat of my frau." Otherwise he devotes himself to the desert. I ask him if all his environmental work has exacted personal sacrifices. "Well, since I need my weekends I can't sing in the church choir any more," he laughs. "But I do get to sing with drunks around campfires."

We've talked about campfires more than once today; they light up stories about backpackers, activists, family, and friends. They're a place to stop on the road between worlds. Past sundown, back in Los Angeles, we stop at an anonymous coffee shop. Today, he tells me, we violated the three cardinal rules of vehicular lobbying: stay warm, don't get hungry, and don't stay in the car for more than two hours at a time. Waiting in an overstuffed booth for our burgers, I feel that we are sitting at a sort of campfire ourselves, facing the warmth of the peopled world. Behind us are the wilder, colder stretches, the unknown places out there.

CHAZ JETTY

SUZANNE MARINELLI

"I was the least political person in the world before I came here."

Walking the Island

"It has never occurred to me that anything is impossible," says Star Wars opponent Suzanne Marinelli. She tells a story about faith: Deep in the Appalachians where she grew up, her Southern Baptist preacher granddaddy took her into the backyard one fall day, picked up a dying plant, and shook its tiny seeds into her hand. Choosing one barely visible seed he said, "The Bible says that if you have faith as a grain of mustard seed, nothing will be impossible unto you. There, Suzi, that's how much faith you need."

"The hardest thing about our Star Wars work has been people's lack of belief. Nobody sues the Army, they say. But they don't realize that work can create miracles."

In 1990 the U.S. Army announced plans to use a small missile range on the Hawaiian island of Kauai as a Strategic Defense Initiative launching facility. Concerned about safety issues, Marinelli, chair of the Hawaii Chapter's Kauai Group, and a handful of local citizens set to work to learn all they could about rocketry. The 25-year-old Polaris launch rockets that would be used in the tests, they discovered, had developed hairline cracks in their hulls, making them vul-

nerable to explosion and necessitating a 600-square-mile danger zone around the test site. The entire island of Kauai is only 553 square miles. Other issues emerged, from the hazards of transporting toxic rocket fuels, to the threat to humpbacked whale mating grounds, to Hawaiian native rights. In October 1990, the Sierra Club filed suit against the Army.

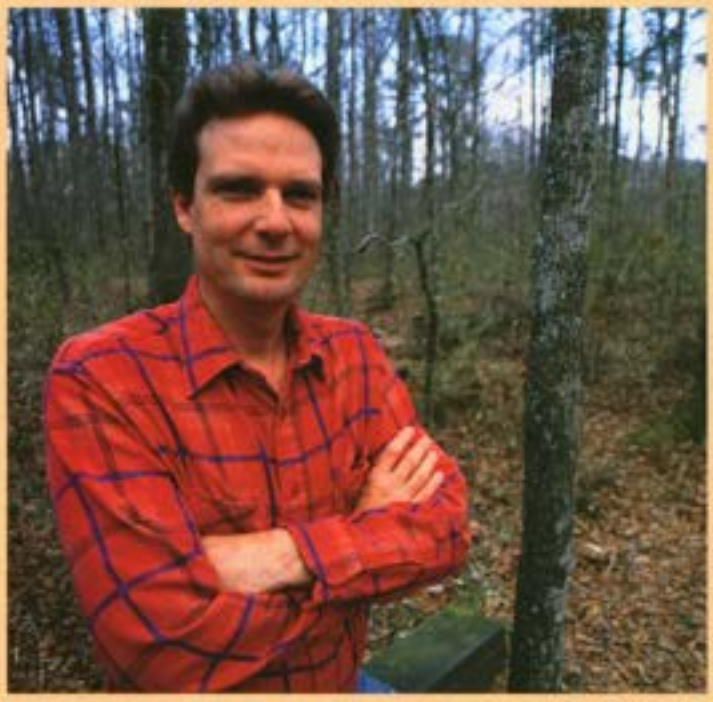
Last summer, after 15 months of trans-Pacific lobbying, Marinelli and her group, the Star Gazers, won the cooperation of Hawaii Senator Daniel Inouye (D), chair of the Senate Defense Appropriations Committee, who told the Army that he would eliminate funding for the project if it did not comply with the Club's request for a comprehensive environmental impact statement. This bought Marinelli another year and a half to lobby against funding for all space-based weaponry. "We'll explore every legal avenue we have and use every one of them. And if all legal means are exhausted, we'll use civil disobedience and show up on the launch site."

Marinelli has never balked at going against the grain. In 1984, after years of living in rural Virginia and the Caribbean, she pulled up roots and moved with her teenage daughter to Kauai. "I was looking for paradise. I guess I was naive not to realize a lot of other people were too. I saw from the beginning that my very presence on the island was a drain on its well-being. And I resolved to become part of the solution, not the problem."

Like Elden Hughes, she started out in the Sierra Club as a hiker, but soon found herself group chair. A few months later the *Exxon Valdez* ran aground in Alaska, and Marinelli organized a month-long service project in which five Club members and a video documentarian traveled to Seward to help clean up oiled otters. To make the trek, Marinelli quit her job and took a cash advance on her credit card. Environmental work doesn't always make for financial comfort, she admits, but that doesn't bother her too much. "I guess it helped to grow up with nothing."

Marinelli likes to walk Kauai's backcountry alone. When I first tried to reach her, she was on a week-long camping trip. "I go there to sit, to walk and sit. I love mountainous tropical islands best of all," she says, with the fervor of a foster child who has found her true home. "Mountains because I grew up in them, and islands because people need each other."

I imagine Marinelli walking out of the benign Hawaiian wilderness, restored and ready to take on the mantle of her grandfather. We are all stewards of the earth, he had told her. "I was the world's least political person before I came here," she says. "Now look at me."


BRIAN ALBERT BROOM

LOUIE MILLER

"This state's dependent on a lot of military money. But the people don't wanna be fooled with."

Talking for a Living

Louie Miller's answering machine identifies him as a dirt farmer and upstream agitator, and that just about sums him up. There's the blueberry farmer with his hands in the earth: "When one April freeze you see your whole income go to hell in a handbasket . . . well, it keeps you humble." Then there's the political rabble-rouser, the Sierra Club's Mississippi lobbyist who spends from January through March every year down in the state capital of Jackson, fighting giants. "It's kinda like a brush fire. You stomp out one issue over here, and then it springs up again, right behind you."

Like many Southerners, Miller loves to talk. And the more he talks, the more you see his life as a struggle between farmer and activist. After growing up in Jackson, he began farming because, he insists, he always enjoyed dogs and cows more than people. Besides, nobody had introduced the blueberry into Mississippi yet. A year later he learned that a dam was going to be built just a quarter-mile from his farm. The dam would protect the city of Jackson from floods by sacrificing the land upstream. His land.

"I had a baptism of fire," Miller says. He spent the next two years in the chambers of the state legislature, fighting the dam and learning the ropes as a citizen lobbyist. The dam was stopped, but still everything changed. Miller

would never be just a farmer again.

He was drafted to be the Mississippi Chapter's conservation chair—"that's the one who does all the work"—a position he still holds. Last year he also became the Club's paid state lobbyist. His first battle was with the two largest international waste companies, who "wanted to turn Mississippi into the garbage can of the U.S." This year he's taking on the National Guard, which is trying to appropriate 39,000 acres of DeSoto National Forest for tank and artillery training. This would make the largest National Guard training site in the world even larger, while further diminishing Mississippi's scarce public lands. Miller is convinced he can hold the Guard to 5,000 acres, largely thanks to a secret land swap the Sierra Club brought to light, in which the Army offered to trade some land in Colorado to the Forest Service for twice as much acreage in DeSoto. "This state's dependent on a lot of military money," Miller says. "But the people don't wanna be fooled with."

When Miller talks of lobbying, the idealist and the cynic vie for time. He's always questioned authority, and likes bringing people in a community together over an issue. On the other hand, he's burning out doing the Club's drudge work, his farm is suffering from neglect, and, despite his statehouse successes, he was trounced last year in a bid for Congress—by a fellow lobbyist financed by the powers that be.

Even the refuge he calls his farm is grounded in gritty reality. "We got honeysuckle here that'll choke you down if you stand in one place for more than an hour," he says. And it's still not breaking even. Like Patty Hughes, Miller's wife, Debbie, brings in the income needed to subsidize their activism.

A seasoned farmer, Miller rolls with bad crop years and good. His life, like the weather, is full of changes; that's both its frustration and its beauty. Next year he'll spend more time with the blueberry growers' association, drop the conservation-chair post and focus on lobbying. Our conversation rambles all over the map of Mississippi. "I know I get out in the weeds a little," he apologizes, but I see that's just where he's supposed to be.

LAURIE MACDONALD

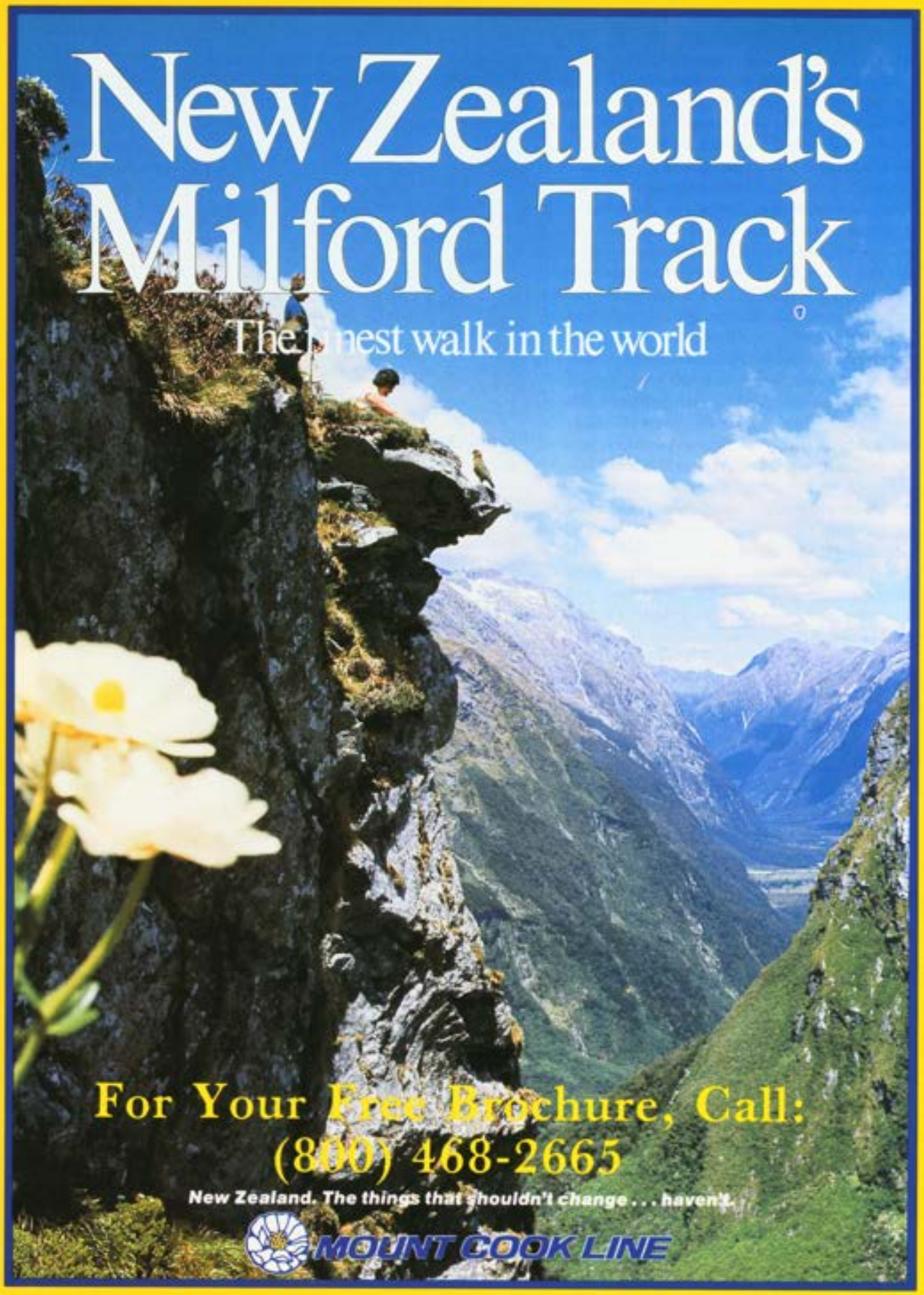
"My friends think I'm crazy, out there with the rattlesnakes and grapevines full of wasps."

A Simple Life

There's a lot more to Laurie Macdonald than gopher tortoises, but since she has been that species' main advocate for the last ten years, comparisons are hard to resist. When she tells me that a tortoise's burrow may shelter some 360 other animal species, including the Florida mouse and indigo snake, I can't help thinking of the scores of environmental projects she fosters in the Florida Chapter, and as chair of the Club's biological diversity campaign and national wildlife committee. Any day might find her sitting on a task force on wetlands mitigation banking, in a rulemaking meeting with the Bureau of Mine Reclamation, or lobbying in Tallahassee . . . all for no pay.

"But by afternoon," she says, "I'm usually on the job, tromping around in some field in my boots and shorts." As perhaps the country's only freelance wildlife zoologist specializing in the protected Florida gopher tortoise, Macdonald is paid (largely by developers) to assess tortoise populations and recommend ways to protect them. Sometimes this means moving the tortoises, although she tries, whenever possible, to keep them in their natural habitat.

"I love my work. I love crawling around in the cat briar and saw palmetto, getting all sweaty and scraped and sunburned. My friends think I'm crazy, out there with the rattlesnakes and grapevines full of wasps. But the only thing that's hard on me is living with the thought that this whole upland area is planned for development. That's the only reason I'm here." Central Florida is one of the most rapidly developing areas in the country, and its prime real estate is also prime habitat for vanishing species. Cypress Creek, Panther Run: read the names of the developments and you know what has been lost.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New Zealand. The things that shouldn't change . . . haven't.
MOUNT COOK LINE

Macdonald keeps the wider vision in mind. "It's important that we help establish a network of interconnected wildlife habitats that will be preserved forever. At the same time, we can't forget that people are part of the ecosystem. We've got to work with people in business and government to make it happen."

To the outside eye, Macdonald's professional, volunteer, and personal lives seem harmoniously interconnected. Like Suzanne Marinelli, she chooses not to work full-time. This allows her more hours for environmental projects and travel, which may mean mapping sequoias in the Sierra Nevada or studying ecosystems in Australia. She travels simply, camping or staying in hostels. At home, too, life is spare and concentrated. Taking long, hot showers and leaving lights on because she lives alone seem excessive to her, major indulgences she'll never quite accept.

A simple, productive life does not come without its sacrifices. "I worry I'm not a well-rounded person. I don't have time to read or play music any more. I don't have enough time for my friends." When I ask her about her significant other, she laughs and says, "When you called I was shuffling through some Gopher Tortoise Council papers, and he was sitting at the computer working on a lawsuit to protect a wetland area." Two driven people, a contemporary relationship.

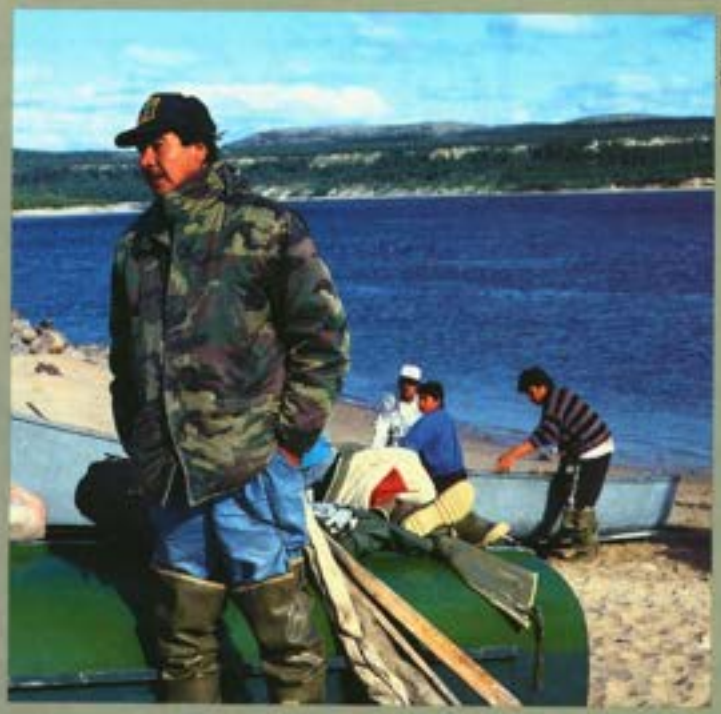
We talk about the dilemma of always living in the future rather than in the present. Her voice quickens with a recollection: "I was in New Zealand, biking fast against a headwind to get to the bridge on time. When I got there, I stopped just long enough for a bunch of strangers to tie the bungee cord around my feet. Then I jumped into the gorge. I remember the blue-green color of the water; I remember myself laughing."

If there's one thing you can count on, it's that other people will take your breath away from time to time. I remember something Macdonald had told me about the gopher tortoise, how, deep in its burrow, it must sometimes walk around a rattlesnake to reach the light of day.

The Old Ways

"When outsiders visit Great Whale River," Matthew Mukash says, "they see our televisions and our fax machines and they say this is just like the south. What they don't see is that 100 percent of Cree men are hunters. Many women too. Just because there's a truck parked in front of the house doesn't mean anyone is there. Every day we go hunting to feed our families."

When Mukash says south, he means Montreal, the United States, anything below the 50th parallel. In the town of Great Whale River on James Bay in the upper reaches of Quebec, it's all north. This is the ancestral homeland of the Cree, who have hunted and fished here for caribou and otter and snow goose and lake trout for the last 5,000 years.



CHRIS ROE

MATTHEW MUKASH

"One hundred percent of Cree men are hunters. Many women too. Every day we go hunting to feed our families."

Mukash knows both worlds. As public liaison for the Grand Council of the Cree, he works to further his people's 20-year struggle with the public utility Hydro-Quebec to prevent one of the world's largest hydroelectric projects from cutting any deeper into their traditional way of life. Phase one of the James Bay Project has already been completed, and a third of the Cree's hunting territory is under water. But the tide appears to be turning. Environmentalists have joined the fight, protesting the mass destruction of wildlife habitats and the release of mercury from decaying underwater vegetation into the food chain. Recently, New York State delayed for one year a decision on whether to buy a million kilowatts of hydroelectricity from Hydro-Quebec. Buying time is invaluable to the Cree, as world public opinion continues to gather behind them.

"We've won the public-relations war," says Mukash, who last year organized a canoe trip down the Hudson. Setting off in January, 60 Cree paddled all the way to Battery Park in New York City. They arrived in April in time to open Earth

Continued on page 127

"NOW, IF I RULE

You have absolute power — now tell us what you'd do to ensure our planet's survival for the next 100 years. That's the proposal we put before an array of activists, writers, policymakers, and politicians; a selection of their responses follows. ♦ As we expected, not everyone played by our rules, and you will find here scenarios of an ideal world as well as nuts-and-bolts prescriptions for how to attain it. Nevertheless, amid all the suggestions, expansive and humble, wise and otherwise, are the seeds of hope for a livable 21st century.

WALLACE STEGNER *is the author of many works of fiction and nonfiction, including* Angle of Repose, Crossing to Safety, *and* The American West as Living Space. *He served as a Sierra Club director from 1964 to 1966, and was presented with the Sierra Club's John Muir Award in 1982.*

I am sorry to tell you that I cannot accept your invitation to be environmental dictator of the world. I fear any dictator, even an environmental one, and even when the dictator is myself. The health of the planet's land, air, and water depends on the development of an environmental conscience in a majority of people, and I doubt that a conscience is ever created by decree.

But if the job of Environmental President of the United States is open, and I see no evidence that it is not, then I would accept appointment to that post. It could be

O THE WORLD..."

temporary: The essential requirements of the job could be demonstrated within weeks or months by a few policy decisions, reversals of direction, and strategic appointments.

The policy decisions would have to be real ones, not the public-relations capers we have grown used to. When a Clean Air Act is in the works, we won't attempt to stall it with more "studies." When international groups meet to deal with global warming, or pollution of the oceans, or a long-term policy for Antarctica, we will be out in front, setting an example, not dragging our heels and coming aboard, if at all, as the last reluctant, unconvinced member. When some scheme to exploit some resource in the public domain comes up, we will say, "If it comes at the expense of the health, the sustainable health, of the environment, we don't want it."

Sooner or later, with or without an Environmental President, the United States will have to phase out chlorofluorocarbons and reduce automobile emissions and close down polluting smokestack industries. I will, as president, encourage every move in that direction, and not let a public-speaking or photo opportunity go by without a specific lesson. But I will not break my neck trying to get it all done overnight.

Other things I will be more prompt about: I will urge Congress to declare the Arctic National Wildlife Refuge a wilderness area, and if Congress won't, I will declare it a national monument under the Antiquities Act, so that our greatest remaining wildlife wilderness will not be destroyed for a week or two of oil. I will lean on Congress to repeal the outdated 1872 Mining Law.

I will appoint a Secretary of the Interior who believes that the earth is, in Aldo Leopold's words, a community to which we belong, not a commodity it is our privilege to exploit. That will mean subordinate appointments in the National Park Service, Fish and Wildlife Service, and Bureau of Land Management that will ensure enforcement of existing protective laws and the imposition of adequate fees for grazing (the present $1.35 per animal-unit-month is about a fifth of what graziers must pay for privately held land). And if cattlemen in the West can't make a living without all the federal subsidies that they have enjoyed for decades, that may be the market economy telling us that cattle are not a viable industry in that

ILLUSTRATIONS BY WARD SCHUMAKER

erodible and fragile and depleted region.

I will appoint a Secretary of Agriculture who understands the need to reduce our dependence on poisons and who knows that a forest is not just a bunch of trees, who can think in terms larger than board-feet and getting out the cut. I would stop, by any means I could find, all cutting in the ancient forests of the Northwest—what remains of them. I would give every aid to timber-dependent communities, even those that hate environmentalists as the supposed cause of their loss of jobs. I would stop all shipments of round logs and even of rough-sawn lumber out of the country, and give liberal aid to the establishment of mills and wood-products factories within the former logging regions. I would encourage timber companies to develop and maintain sustainable cutting programs where harvest and growth are in balance.

There will be logging and ranching, but on a smaller and more careful scale. Logging and ranching communities face a difficult transition, and deserve every assistance while they make it. But we do not need to sacrifice our few remnant ancient forests, or further erode our grasslands, to save jobs in industries that have had their day.

All this will, I am sure, make me enemies, and concentrate political opposition to my reelection. But I don't care about my reelection, and I am persuaded that my actions will bring me more friends than enemies. For Americans are already more than halfway toward an environmental conscience—and about time, too. The majority understand, and so will the timber-dependent and grass-dependent communities eventually, that some jobs once valid and accepted can come to the point where they are socially undesirable.

WENDELL BERRY *asked us to describe him as "a farmer, and a member of the Sierra Club." He is also the author of, among many other books,* The Unsettling of America *(Sierra Club Books, 1986).*

This game of "How to survive for the next 100 years" is useless. Nobody knows what is going to happen in the next 100 years. The next 100 years will be mostly surprising, as were the last 100 years.

It is the present that ought to concern us, and for the present we have had good instructions, from several traditions, for a long time. We must quit being selfish, greedy, and violent. We must respect the works of God, and do good work ourselves. We must help our neighbors (including our enemies). We must care for the old, the poor, the infirm, and the homeless. We must keep our promises. We must preserve our communities, and teach the young. Whatever we use, we must preserve.

If we do these things in the present, we need not worry about the future. If we don't do them in the present, the future will not be much improved by making plans.

BRENT BLACKWELDER *is Vice President for Policy at Friends of the Earth in Washington, D.C.*

Some decisive, authoritative actions are needed to enable humanity to move toward environmentally sustainable democratic societies in the 21st century. Start with politicians around the world: I'd institute a quota system to ensure that at least 75 percent of elected officials at all levels are women. Men have proven themselves on the whole too fond of war and too tolerant of environmental deterioration.

Next I'd change three basic features of international commerce. First, I'd replace the Gross National Product as a measure of a nation's well-being with a new index called Sustainable Productivity, which would count pollution as a cost and treat the depletion of natural resources as a loss analogous to depreciation of man-made capital.

Second, I would replace the cherished concept of free trade with the standard of environmentally and socially beneficial trade. Trade agreements would be judged by whether they leave the environment of a country and its least-advantaged citizens better or worse off.

Third, I'd establish a new, noninflationary, and stable international currency that would help get developing nations off the debt treadmill of buying dear and selling cheap. Restructuring the international monetary system is essential if we are to address the vast and unjustifiable differences in wages around the world.

Protection of the planet is inextricably linked with the evolution of just societies. To nurture emerging democracies, I would put in place laws that would encourage public participation and help to ensure open decision-making. Dictatorships in places like China, the Middle East, and Africa must give way to freely elected governments. I'd replace do-nothing bureaucrats at the United Nations with visionary leaders in charge of a new peacekeeping force, one of whose prime long-term tasks would be the supervision of democratic elections everywhere.

Other short-range emergency actions (such as bans on highly dangerous or destructive activities) are needed to preserve as many options as possible for the people of the next century. In each case the bans would be supplemented with funding for sustainable alternatives. Bans should be placed, for example, on the production of ozone-depleting chemicals, the cutting of virgin forests throughout the world, and the destruction of wetlands. These prohibitions would be coupled with bold new initiatives on reforestation with diverse species, restoration of degraded farmland, and innovative methods of local food self-sufficiency. The World Bank and other multilateral development banks would be headed by dynamic environmental managers who embrace the preceding initiatives.

I'd rewrite the world's tax codes so that energy-intensive and polluting activities are heavily taxed, while sustainable activities are rewarded. For starters, this would mean a

carbon tax and a gas-guzzler tax on big cars and trucks, while tax credits would be provided for bicyclists and riders of public transit. In agriculture we could get more people back on the farm and enjoy healthier soil and produce by heavily taxing pesticides and herbicides, while offering significant tax credits to farmers shifting to organic or low-input agriculture. Population problems could also be addressed through the tax code: Families that limit themselves to two or fewer children would receive tax credits.

I'd shift massive amounts of money from weapons and troops into such urgently needed activities as reforestation, restoration of degraded ecosystems, environmental education, pollution-prevention programs, cleanup of toxic and nuclear wastes, family-planning services for whoever wants them, and vital research (scrap the Supercollider and exotic space missions, for example, and sink this kind of money into saving tropical rainforests). At least a third of the world's budget ought to go for the environment. (By contrast, the United States currently spends less than 2 cents on the dollar on the environment.)

One of the most difficult challenges will be to break the stranglehold of multinational corporations on the global economy. Many of the changes suggested earlier would accomplish part of the job, but I'd also focus on ending corporate domination of the airwaves. Why not have stringent "equal time" requirements for television and radio so that alternative views could be expressed at a modest cost? The executives of corporations that violate environmental laws would get jail terms, not just nominal fines, and their companies would be excluded from government contracts.

Teachers would be the most honored and publicized citizens. The education budget would reflect its priority as the driving force for a better world. Essential items for the school reading list would include: Leopold's *A Sand County Almanac*, Thoreau's *Walden*, the Sermon on the Mount, Worldwatch Institute's *State of the World*, and Lovins' *Soft Energy Paths*. Dynamic environmental education taught by great teachers would undergird the effort to obtain an environmentally sustainable world. Such education would impart a thorough understanding of how our actions affect the planet and would engender in students long-range perspectives, appreciation of less-materialistic life styles, a desire to protect biological and cultural diversity, and a deep concern for future generations.

RICHARD BANGS *is the author of* Islands of Fire, Islands of Spice *(Sierra Club Books, 1985) and* Rivergods *(Sierra Club Books, 1989). His latest book is* Islandgods. *He is a cofounder of Mountain Travel-Sobek, an adventure-travel company.*

To achieve environmental serenity and security, I would eliminate the Constitution, all laws, all courts, all judicial bodies, and drown all lawyers. I'd do this because our historical, adversarial method of conflict resolution tends to polarize personalities, cloud the commonalities of a problem, invite short-term (and shortsighted) solutions, and encourage heel-digging and saber-rattling rather than walking in step and sword-burying.

It has not gone unnoticed in this quarter that a natural way to settle disputes is to put the opposing camps on a raft and send them downstream. Huck Finn peeled back the lie of racism by floating with Jim; Humphrey Bogart's Charlie Allnut ran the rapids with Katherine Hepburn's Rosie Sayer and their ideological differences washed away; Secretary of State James Baker and Soviet Foreign Minister Eduard Shevardnadze rafted the Snake River and soon afterward Eastern Europe was liberated, the Berlin Wall came down, and the Soviets disunioned.

I've seen it happen time and again: People of vastly disparate backgrounds and beliefs, with Grand Canyons separating their cosmologies, come together on a raft. They paddle and they bond—or resolve at least to remain civil until the trip is over. They're shareholders in the same fund. They're faced with common challenges: getting through the next rapid, avoiding the hole, collecting the firewood, cooling the beer. All creation is reduced to a crashing wave, and the team has to paddle together, in concert, to get through. An adversary on land becomes an ally on a boat, and very often a friend.

So, the future lies in wild rivers. Whenever there is an environmental dispute, the strategies we employ to resolve them will, by my fiat, include no more bureaucratic inertia, no more PACs, no more NGOs, no more zillion-page depositions. Rather, the opposing sides must pick their paddles, climb on a raft, and not get off until they've reached a resolution, and an understanding. The tougher the issue, the tougher the river, and if it's a really leathery piece of interest-conflict, we'll throw in elevation and weather.

For those who refuse this process: banishment to Biosphere III, an enclosed capsule in the Nevada desert that replicates a world 100 years from now in which there is no resource stewardship, where all the rivers are toxic, the winters nuclear, the rain acid, and where, as far as the eye can see (which isn't far), there stretches nothing but pocked asphalt, twisted steel, and blackened concrete. It is a mausoleum for a tomorrow without the wisdom and comradeship that comes from a simple spin with another being down the river, where there is the knowledge to be had that the clearest way into the universe is downstream.

FREDERIK POHL *'s science-fiction works have been translated into some 40 languages worldwide and have earned numerous literary awards. Pohl's most recent books include the novel* Chernobyl *and a nonfiction study of environmental issues,* Our Angry Earth, *written with Isaac Asimov. He is a fellow of the American Association for the Advancement of Science.*

My first step, which I would take about ten minutes after I finished my inaugural address, would be to slap a new tax on gasoline—at least a dollar a gallon, anyway—to reduce pollution and cut down on carbon-dioxide emissions. For the same reasons, I'd impose similar taxes on fuel oil and coal, and a somewhat lighter one on natural gas. At the same time I'd prohibit the manufacture, sale, or use of all CFCs, while heavily taxing the HCFCs and other slightly less-hazardous-to-the-ozone-layer substitutes.

Then I'd have a light lunch before getting down to the harder problems, like war. If there is one thing that's *really* bad for the environment, it's war. The way to start dealing with that is to reduce the means of waging war, so I'd start with a progressive program of demobilizing all armies. At that point we wouldn't need any new weapons, so I would prohibit their manufacture, thus closing down the worldwide armaments industry.

Next I'd take on the problem of population control. The first step would be to provide effective, free contraceptive information to every woman alive, followed by setting up RU-486 plants all over the world, supplying the drug free on demand to whoever wants it.

Finally—it would be getting toward bedtime by now, and I'd be getting a little tired—I would finish the day by prohibiting any change in land use. There would be no more converting farmland to housing developments and shopping malls, and no more clearing wilderness for farmland.

The next morning, after several cups of coffee, I would tackle the new problems those solutions brought. The fossil-fuel tax would need some fine tuning. For people who have no other way of getting to work than by car, or for those who need to use cars or trucks in their work, I would decree a system of partial rebates, perhaps through tax deductions, to be phased out over a period of a year or two.

Then there are such problems as what to do with all those demobilized soldiers and laid-off armaments people. Those in the military services could be offered the chance to stay in, but with their mission redefined: They'd be put to work planting trees or clearing waste in something like the New Deal's Civilian Conservation Corps.

Some of the technicians from all the weapons laboratories and factories could find jobs very like the ones they had been doing. We'd put these surplus scientists and engineers to work in a new, drastically expanded space program, or designing and building all the Big Science particle accelerators like the SSC and other high-tech, high-budget items scientists have been begging for.

All those leftover highly trained minds would go back to school to learn to be teachers. The former armaments scientists would probably be best at teaching science or math, but they wouldn't be limited to that. Many would quickly learn to teach other subjects, and often be glad of the chance. I know a lot of scientists and engineers, but I know hardly any who do not have a considerable extracurricular interest in other subjects, such as music, art, literature, or history—or, for that matter, in home-handyman shop practice, or physical fitness, or folk dancing. They could easily teach those as well.

And, with a little luck, that bonus of new teachers could help solve another problem. Even if I ruled the world, I probably would not have the gift of immortality. Sooner or later, I would have to let the human race rule itself through democratic means.

Democracy is, after all, the very best system we've ever had. It doesn't work perfectly, but no one has come up with a better method of governance. The most important thing needed to make it more trustworthy is a better educated and informed population. Perhaps that wouldn't work either—but if it doesn't, we have no identifiable hope at all.

ANNE AND PAUL EHRLICH *are Senior Research Associate and Bing Professor of Population Studies, respectively, at the Center for Conservation Biology, Department of Biological Sciences, Stanford University. They have co-authored several books, the latest of which is* Healing the Planet.

We would move the central problem of our predicament—overgrowth of the *scale* of human activities—to the top of the agenda. That will require halting population growth and beginning a gradual population decline, reducing wasteful consumption, and deploying environmentally sound technologies.

Making the rich nations more efficient in their use of energy and materials and making the poor ones more affluent (by helping them with ecologically benign, efficient development) would close the rich-poor gap. To initiate this process, we would employ market mechanisms primarily, such as carbon taxes and credits to induce rich nations to use

resources more efficiently. We would also press them to deploy new energy technologies, especially solar-hydrogen, on a large scale, and then help poor nations follow their example. The Holdren Scenario would be our goal—reducing per-capita energy use of the rich from 7.5 kW to 3 kW over the next century, and increasing per-capita energy use of the poor from 1 kW to 3 kW in the same period.

To tackle the global population problem (we consider a sustainable level to be 2 to 3 billion people), we would, among other things, do everything possible to empower women: All women everywhere should enjoy equal political, educational, and economic rights, full control over their reproduction, and good health care for their families. To feed a burgeoning population, a high priority would be given to environmentally sound agricultural development, improvement of food storage, more equitable food distribution, and public education about agriculture.

Above all, we would start a worldwide dialogue on "What are people for?" This and many other questions need to be answered before we can determine an optimum population size. Would it be better to have a large population living at a subsistence level, or a much smaller one in which everyone lived a "good" life? What *is* a "good" life? Is superconsuming the ultimate human goal? How can the rich best help the poor—and vice versa? What are a person's obligations to members of his or her own culture, or to other cultures, or to future generations? Could a world be designed so that both those who seek the amenities of large cities and those who wish to live as isolated hermits could be satisfied? How much effort should societies expend to insure against environmental catastrophes such as rapid climate change resulting from global warming? In other words, how far should the scale of our activities be reduced—just enough to make society barely sustainable if there are no future surprises like ozone depletion? Somewhat lower to provide at least minimal buffering against such unanticipated disasters?

We would do everything in our power to make certain that everyone understood the stakes and to encourage the development of leaders to help guide the debates. But ultimately it is the people of the world who must decide to put aside their hatreds and prejudices and create a sustainable global society.

T. H. WATKINS *is the editor of* Wilderness, *the magazine of The Wilderness Society, and the author of numerous articles and 19 books on the subjects of conservation and American history—among them* Time's Island: The California Desert *and* Righteous Pilgrim: The Life and Times of Harold L. Ickes.

If the genie of Fate were to touch me with this particular magic, I trust that I would not have the arrogance to pretend that any solution I might offer could repair the wreckage of millennia. When the first human jammed the first dibble stick into the first patch of earth, forces were set in motion that can now be discerned in the stink of city air, the shine of corrupted rivers, the degradation of land, the silent deaths of species. That is a history beyond my capacity to change. Often as not, it is a history beyond my capacity to understand.

Nevertheless, the process of change has to begin somewhere, and if the power were given me, then this is what I would do:

I would mandate that each newborn child be exposed to the wonder of the living earth from the first moments of its life—that among its first sights, sounds, smells, and touching should be the cries and odors and warmth of animals, the rustle of leaves, the majesty of trees, the feel of wind, the embrace of heat and the grip of cold, the spice of salt air, the sound of owls calling in the night. I would have wings in the air all about the child. I would have the child brought to sit before flowers.

As this child grows, long before it is taught the practical matters of life, I would have it learn first the names of the wild creatures and the other things with which its life has been joined: grasses and insects, birds and squirrels, clouds and rain, stones and stars. I would have the child taught that each of these deserves a reverence no less profound than that which should be given to the child itself.

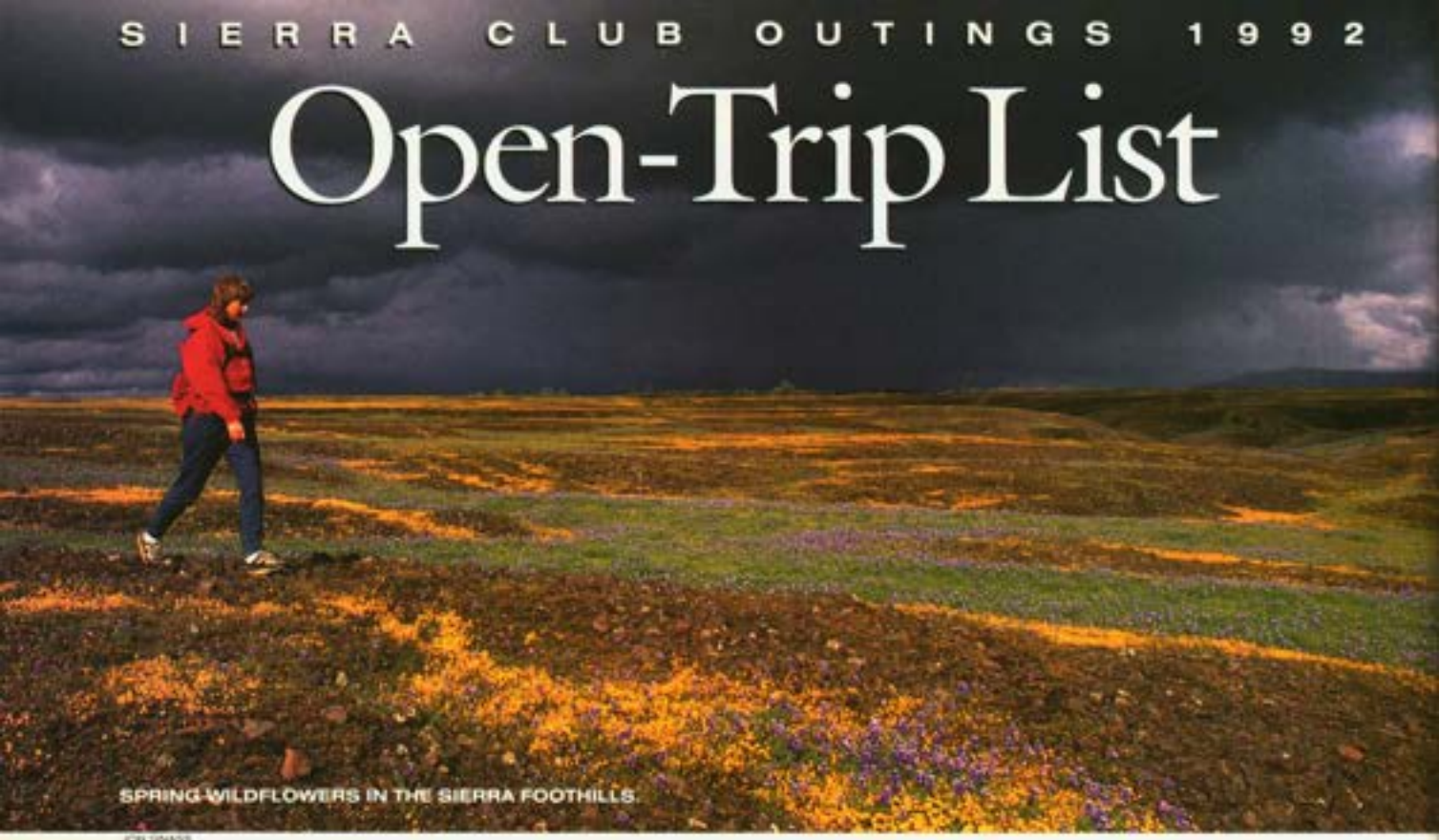
At the earliest age possible, I would have the child brought before teachers who would explain how the community of life is a structure of interdependence, one life giving nurture to another, each supporting the whole—and that to abuse the privilege of residing here by threatening the future of any individual species in this fragile network is to place at risk all others.

From these same teachers, I would have the child learn

Continued on page 130

SIERRA CLUB OUTINGS 1992

Open-Trip List



SPRING WILDFLOWERS IN THE SIERRA FOOTHILLS.

JON GNASS

Space is still available on a number of 1992 Sierra Club Outings. If you act promptly, you can probably find a spot on one of the trips listed below. Refer to the 1992 Outings Catalog (January/February *Sierra*) for a complete list of 1992 trips and trip descriptions. Check with the Outing Department for trips not listed below—vacancies may occur. Please see the catalog for our reservation and cancellation policy and a trip application form. Read the policy carefully before applying. To order more information on any of the 1992 outings, send for the trip brochure using the coupon on page 123. A listing of 1993 International Trips will be published in the July/August *Sierra*.

Trip Number		Dates	Trip Fee (including deposit)	Deposit Per Person	Leader
ALASKA TRIPS *(Prices do not include airfare to Alaska or charter air costs.)*					
92109	Tatshenshini by Raft, Glacier Bay Park and Preserve	June 22–July 1	1895	200	Jenny Holliday
92111	Misty Fjords Monument by Sea Kayak	June 25–July 4	1395	200	Gregg Williams
92119	Admiralty Island Sea Kayak	July 28–Aug. 7	1295	200	Don Lackowski
92120	A Leisurely Tour of Southeast Alaska	July 30–Aug. 15	2195	200	Carol Dienger
92121	Canoe the Wild and Scenic Noatak River	Aug. 2–14	1495	200	Jack McCarron
BACKPACK TRIPS *(See Hawaii trips for another Backpack outing.)*					
92134	Paria Canyon, Vermilion Cliffs Wilderness, UT	June 15–20	310	50	Charles Bame
92136	Le Conte Divide, John Muir Wilderness, Sierra	June 18–27	350	50	Diane Cook
92142	Mineral King to Kaweah Gap, Sequoia Park, Sierra	June 28–July 5	275	50	Chuck Schmidt
92147	Ten Lakes Basin, Yosemite Park, Sierra	July 7–13	290	50	Wes Reynolds
92149	Prince Creek, North Cascades Park, WA	July 11–19	535	100	R. L. Faulkner
92153	Bound for Blackcap, John Muir Wilderness, Sierra	July 18–26	320	50	Gary Swanson
92156	Gemini Circle, John Muir Wilderness, Sierra	July 23–Aug. 1	340	50	Jim Watters
92159	Peakbagger's Paradise: Sangre de Cristo Mountains, CO	July 25–Aug. 2	595	100	Steven Kelton
92162	The Emigrant Trail, Emigrant Wilderness, Sierra	July 26–Aug. 2	310	50	Jerry Shluker
92163	Kings Canyon and Sequoia Parks Natural History, Sierra	July 27–Aug. 5	365	50	C. & L. French
92165	High Granite Ramble, John Muir Wilderness, Sierra	July 28–Aug. 8	475	50	Stuart Simon

Trip Number		Dates	Trip Fee (including deposit)	Deposit Per Person	Leader
92167	Wind River Lakes, Bridger Wilderness, WY	Aug. 1–8	455	50	Jack Zirker
92168	Red Mountain Basin Meander, Kings Canyon Park, Sierra	Aug. 1–9	375	50	Sy Gelman
92169	Lure of the Ritter Range, Ansel Adams Wilderness, Sierra	Aug. 2–7	215	50	Hilary Bray
92173	Trout Odyssey, Sawtooth Wilderness, ID	Aug. 5–13	555	100	David Morrison
92175	Le Conte Divide, John Muir Wilderness, Sierra	Aug. 6–14	335	50	Bob Anderson
92176	Kaweah Sanctuary, Sequoia Park, Sierra	Aug. 8–18	355	50	Mari Calhoun
92177	A Thousand Island Odyssey, Yosemite Park, Sierra	Aug. 9–15	265	50	Karen Backer
92180	Gabbot Pass Loop, John Muir Wilderness, Sierra	Aug. 10–18	345	50	Patty Biasca
92181	Creeks, Canyons, and Meadows, Sequoia Park, Sierra	Aug. 11–20	370	50	Carol Murdock
92189	Northeast Yosemite Natural History, Yosemite Park, Sierra	Aug. 16–22	265	50	Suzanne Swedo
92191	Middle Fork of the Kings River, Kings Canyon Park, Sierra	Aug. 20–29	330	50	Gordon Peterson
92193	Emigrant Trail and Tower Lake, Toiyabe Forest, Sierra	Aug. 23–29	300	50	Lee Sayers
92196	Ionian Idyll, Kings Canyon Park, Sierra	Aug. 29–Sept. 6	315	50	Cahit Kitaplioglu
92198	From Mt. Whitney to Ancient Giants, Sequoia Park, Sierra	Sept. 1–10	350	50	Al Lyon
92199	Silver Divide Lakes, John Muir Wilderness, Sierra	Sept. 9–16	310	50	Bill Engs
92201	Long Trail Explorer, VT	Sept. 13–19	320	50	Frank J. Traficante
92202	Rio Chama Headwaters, Rio Grande Forest, NM	Sept. 19–27	360	50	Brian Johnson
92203	Fall Color, Pictured Rocks Lakeshore, Upper Peninsula, MI	Sept. 20–26	355	50	Jack Thompson
92204	Summer's End in the Adirondacks, Adirondack Park, NY	Sept. 20–26	405	50	Jim Lynch
92206	The Parunuweap, Zion Park, UT	Sept. 26–Oct. 3	410	50	Howard Newmark
92207	Dark Canyon Wilderness, UT	Sept. 27–Oct. 3	425	50	Steve Moore
92208	Powell Plateau, North Rim, Grand Canyon Park, AZ	Sept. 27–Oct. 9	630	100	Bert Fingerhut
92209	Escalante Canyons, Glen Canyon Recreation Area, UT	Oct. 4–10	400	50	Jim Lynch
92213	Temples of Grand Canyon Park, AZ	Oct. 11–17	380	50	Gary Beckstrom
92214	Appalachian Autumn, Joyce Kilmer Wilderness, NC and TN	Oct. 17–24	345	50	Bill Porter
92215	Verde River, Prescott Forest, AZ	Oct. 26–30	305	50	Bob Cole
92216	Clear Creek Winter Solstice, Grand Canyon Park, AZ	Dec. 17–22	360	50	Bob Madsen
93420	New Year in the Superstitions, Tonto Forest, AZ	Dec. 28–Jan. 2, '93	300	50	Bob Cole

BASE CAMP AND FAMILY TRIPS

92058	Spring in Canada's Tweedsmuir Park, British Columbia	May 25–31	1345	200	Katie Hayhurst
92222	Wet Canyons of the Mogollon Rim, Coconino Forest, AZ	May 31–June 6	570	100	Joe Sinclair
92223	Donner Pass Nature Study Special, Tahoe Forest, Sierra	June 7–13	370	50	Sy Gelman
92224	Sketching for an Urban Journal, Washington, D.C.	June 14–20	535	100	Sarah Stout
92229	Hidden Valley, Sierra Forest, Sierra	July 3–11	1135	200	Modesto Piazza
92233	Stehekin Valley, North Cascades, WA	July 19–25	825	100	Carolyn Castleman
92234	Hiking and History, Tahoe Forest, Sierra	July 26–Aug. 1	330	50	Ernie Jackson
92236	Cloud Peak Wilderness, Bighorn Forest, WY	Aug. 2–8	585	100	Jerry Clegg
92237	Stehekin Valley, North Cascades, WA	Aug. 16–22	825	100	Bill Gifford
92276B	Donner Pass Discovery Family Trip, Tahoe Forest, Sierra	Aug. 23–29	Adult/Child 295/195	100 per family	Ann Carlyle
92238	White Mountain Forest, NH	Aug. 30–Sept. 6	435	50	Bob Goldberg
92239	Stehekin Valley High, North Cascades, WA	Sept. 6–12	1095	200	Karen Davis
92240	North Cascades Ridge Walks, Stehekin Valley, WA	Sept. 13–19	825	100	Alix Foster
92242	Trails of Canyon de Chelly, AZ	Oct. 11–17	590	100	Bob Hartman

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TUOLUMNE MEADOWS, YOSEMITE NATIONAL PARK, SIERRA, 1914 HIGH TRIP.

Trip Number		Dates	Trip Fee (including deposit)	Deposit Per Person	Leader
BICYCLE TRIPS					
92248	Touring Vermont	June 28–July 4	475	50	Michael Barna
92249	Northern Oregon Coast	July 12–18	495	50	Peter Bengtson
92250	Cycling the Highlands, Cape Breton Island, Nova Scotia	July 18–25	615	100	Wayne Sakarias
92251	Finger Lakes Tour, NY	July 26–Aug. 2	405	50	Phil Titus
92252	Mountain Biking in New York's Adirondack Park	Aug. 2–7	610	100	John Borel
92253	Canadian Rockies, Alberta	Aug. 9–15	590	100	Peter Bengtson
92254	Exploring Acadia Park and Mt. Desert Island, ME	Aug. 9–15	445	50	Craig Caldwell
92255	Lake Placid Circuit, Adirondack Park, NY	Aug. 16–22	565	100	Maurice R. Rivard
92256	San Juan Islands, WA	Sept. 6–12	445	50	Peter Bengtson
92257	Exploring Cape Cod and Martha's Vineyard, MA	Sept. 13–19	505	100	G. MacKenzie
92258	Kentucky Forests and Caves	Sept. 20–26	360	50	Alice Honeywell
92259	Crossing the Cumberland Mountains, TN and GA	Sept. 27–Oct. 3	360	50	TBA
92260	California Vintage: Napa Valley Wine Country	Oct. 4–10	495	50	Peter Bengtson
92261	Through the River Country of Georgia	Oct. 4–10	360	50	Charles W. Hardy
92262	Florida's Swamps and Forests	Oct. 11–17	360	50	Glenn Gillis
BURRO TRIPS					
92266	The Mammoth Crest, Inyo and Sierra Forests, Sierra	July 25–Aug. 1	615	100	Ted Bradfield
92269	Lake Italy, Inyo and Sierra Forests, Sierra	Aug. 16–23	615	100	Robin Spencer
92270	The High Southeastern Sierra, Inyo and Sierra Forests	Aug. 23–30	615	100	Rich Hamstra
HAWAII TRIPS					
92289B	Try Kauai: Kayak, Hike, and Snorkel	June 20–26	1135	200	Joe Braun
92290	From the Mountain to the Sea, Haleakala Park, Maui	Oct. 17–25	1250	200	Lou Wilkinson
HIGHLIGHT TRIPS *(See Alaska trips for another Highlight outing.)*					
92295	Sleeping Bear Dunes Lakeshore, Lake Michigan, MI	June 14–20	390	50	Jack Thompson
92296	Teton Splendor I, Jedediah Smith Wilderness, WY	July 22–30	995	100	Constance Lederer
92297	Teton Splendor II, Jedediah Smith Wilderness, WY	Aug. 1–9	995	100	Joanie Hoffmann
92298	Sequoia Peakbag Odyssey, Sequoia Park, Sierra	Aug. 1–9	830	100	Terry Flood
92299	King's Peak Circuit, Ashley Forest, UT	Aug. 9–18	1030	200	TBA
92300	Harriet Lake Basin, Yosemite Park, Sierra	Aug. 17–26	1085	200	Bert E. Gibbs
92301	Evolution Valley, Kings Canyon Park, Sierra	Aug. 23–30	1360	200	Alan Stahler
92302	Wet Canyons of Southeast Utah: Van and Hiking Tour	Aug. 30–Sept. 5	785	100	Joe Sinclair
92304	Hostel Hopping Along California's Central Coast	Oct. 11–17	395	50	Barbara Poole
INTERNATIONAL TRIPS *(All International trips are tier-priced; prices do not include airfare.)*					
AFRICA					
92625	Portrait of Kenya: A Leisurely Photo Safari	June 22–July 4	3280/3485	200	Carolyn Castleman
92640	Aardvarks to Zebras: A Safari to Kenya's Game Parks	July 25–Aug. 9	3525/3800	200	J. Victor Monke
ASIA					
92635	Batura Glacier and Nanga Parbat Treks, Pakistan	July 12–Aug. 6	2755/3025	200	David Horsley
92665	Southern Dolpo: Pokhara to Jumla, Nepal	Oct. 5–Nov. 7	2855/3130	200	Cheryl Parkins
92675	Annapurna Sanctuary and Royal Chitwan Park, Nepal	Nov. 11–Dec. 3	2170/2420	200	L. Barbour
93700	Lamjung Holiday Trek, Nepal	Dec. 21–Jan. 3,'93	1490/1680	200	Peter Owens
93720	Gorkha Chitwan Trek, Nepal	Feb. 22–Mar. 12, '93	1860/2085	200	Peter Owens
EUROPE					
92630	Adventure in Iceland: Hiking the Lava and Moorland	June 24–July 8	2970/3180	200	Ellie Strodach
92655	Mountains of Contrast: The Diverse Dolomites, Italy	Aug. 31–Sept. 13	2670/2875	200	Wayne Martin
92670	Romania's Fall Colors	Sept. 6–18	1905/2180	200	Jim Halverson
92660	The Dordogne: Its History, Culture, and Ecology, France	Sept. 7–17	2170/2445	200	Elaine Adamson
93705	Winter in Austria: Cross-Country Skiing	Jan. 23–Feb. 6, '93	2575/2850	200	Carol Dienger
LATIN AMERICA					
92615	Endangered Forests of Costa Rica and Ecuador	June 1–14	2940/3295	200	Wheaton Smith
92680	Rio de Janeiro and the Rainforests of Brazil	Dec. 20–31	2850/3125	200	Gail Solomon
93715	Paine Towers Trek, Patagonia, Chile	Feb. 19–Mar. 4, '93	2725/3000	200	Bud Bollock
PACIFIC BASIN					
93710	Exploring New Zealand	Feb. 7–27, '93	2965/3250	200	Wayne Martin

Trip Number		Dates	Trip Fee (including deposit)	Deposit Per Person	Leader
SOVIET UNION					
92650	The Soviet Far East	Aug. 18–Sept. 6	2470/2745	200	Bob Madsen
SERVICE TRIPS					
92313	Blue Range Primitive Area, Apache Forest, AZ	June 6–13	155	50	Rod Ricker
92323	Sierra Club's Own Trail, Sierra Forest, Sierra	June 20–30	195	50	Bart Hobson
92324	Zion Park, UT	June 24–July 1	250	50	Steve Lachman
92326	Women's Trip, Marble Mountain Wilderness, CA	July 1–11	245	50	Didi Toaspern
92327	Hunter-Fryingpan Wilderness, White River Forest, CO	July 1–11	245	50	Mike Wagner
92330	Pine Valley, Dixie Forest, UT	July 11–18	195	50	Paul Pochan
92331	Bear Creek Canyon, John Muir Wilderness, Sierra	July 11–19	195	50	John Uzupis
92335	Pike Forest, CO	July 14–24	245	50	Ralph Keating
92336	Ruby Mountain Wilderness, NV	July 16–26	195	50	John Anderson
92338	Monument Lake, Marble Mountain Wilderness, CA	July 19–29	195	50	Cindy Miles
92339	Surprise Lake, Lake Chelan–Sawtooth Wilderness, WA	July 22–Aug. 1	325	50	Richard Garner
92342	Cottonwood Lakes, Inyo Forest, Sierra	July 28–Aug. 7	245	50	Jeff Myll
92343	Cloud Peak, WY	July 29–Aug. 8	245	50	C. Griffin-Brown
92344	Pioneer Basin, Sierra Forest, Sierra	July 30–Aug. 9	195	50	Ken Amster
92345	Ball Lakes, Selkirk Mountains, Panhandle Forest, ID	Aug. 1–11	195	50	Bob Limbert
92348	Wind River Range, Popo Agie Wilderness, WY	Aug. 4–14	245	50	Wally Mah
92353	Hell's Canyon Wilderness, Seven Devils Mountains, ID	Aug. 11–21	245	50	Bill Glenn
92354	Targhee Teton, Jedediah Smith Wilderness, WY	Aug. 11–21	245	50	Jan Ketelle
92355	The Wyoming Trail, Mt. Zirkel Wilderness, CO	Aug. 11–21	245	50	Larry Wheelock
92356	Tuolumne Meadows, Yosemite Park, Sierra	Aug. 12–23	325	50	Steven Hartwell
92357	Big Fisher Lake, Selkirk Mountains, Panhandle Forest, ID	Aug. 15–25	195	50	Jack Spalding
92358	Mt. Rainier Park, WA	Aug. 17–27	245	50	TBA
92360	Rolling Creek, Lost Creek Wilderness, CO	Aug. 20–30	245	50	Steve Wickenden
92362	High Uintas, Wasatch-Cache Forest, UT	Aug. 24–Sept. 3	245	50	Tony Lambe
92371	Chiricahua Wilderness, Coronado Forest, AZ	Sept. 13–24	195	50	Sherri Serna
92372	Piñons and Needles, Canyonlands Park, UT	Sept. 20–26	245	50	Sandra Wilson
92373	Grand Gulch, Southeast Utah Wildlands	Oct. 3–10	270	50	Chuck Buck
92374	Illinois Ozarks Trail, Shawnee Forest	Oct. 18–24	185	50	Jim Balsitis
92377	Buffalo River, Ozark Forest, AR	Oct. 25–31	215	50	Joe Gottler
WATER TRIPS					
CANOE					
92385	Trinity River, CA	July 26–31	565	100	Carol Malcolm
92389	Algonquin Park, Ontario	Aug. 30–Sept. 5	440	50	Jim Lynch
92391	Bayous and Beaches, LA and MS	Oct. 12–17	390	50	Bill Carroll
KAYAK					
92390	Blueberries and Mussels, Maine's Coastal Islands	Sept. 27–Oct. 3	755	100	F. McDonough
RAFT					
92383	Rogue River Benefit for Inner City Outings, OR	May 25–29	230	50	D. Zuckerman

For More Details on Outings

Outings are described more fully in trip brochures, which are available from the Outing Department. Trips vary in size, cost, and the physical stamina and experience required. New members may have difficulty judging which trips are best suited to their abilities and interests. Don't sign up for the wrong one! Ask for the trip brochure before you make your reservations to 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. Write or phone the trip leader if any further questions remain.

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done when people are moved, and they are moved not only by a sense that things are awry, but also by a sense of how things *ought to be*. An organization sustains itself with new visions of how to implement change. At the same time, success demands resources, know-how, and hard-headed strategy. We need to determine where power lies, and see to it that we address it directly. Our strategies can't simply be comfortable, familiar, or driven by good intentions—they must succeed.

Fourth, technology and science must be our allies, and must be put to work to save the planet, not just to expand economic production. Existing energy technologies can meet the needs even of affluent societies while reducing greenhouse-gas emissions, phasing out nuclear power, and curbing air pollution. The rapidity with which substitutes emerged for ozone-destroying CFCs suggests that engineers and technologists, if only handed an "eco-blueprint," can create clean, sustainable processes.

Finally, the Sierra Club must perfect the "fractal" organization. A fractal system is one that displays a similar pattern on every scale. The Club at its various levels lobbies the United Nations, the federal government, state legislatures, and city councils. Our local outings program is paralleled at the national and international levels. Many of our national issue committees have chapter and group counterparts. This structure gives the Club its strength and adaptability.

Such organizations are crucial to planetary survival, because sustainable strategies must be implemented at every level of social structure. Globally, the integrated world production system will require the stability and predictability of world governance, if not government. It is up to environmentalists to pressure nations to serve as stewards of the global commons, creating workable institutions and conventions to protect the atmosphere, the oceans, and biodiversity.

The cultural leadership of the United States can work in our favor; along with bluejeans and Michael Jackson, conservation is one of America's most successful exports. This country must take the lead in reducing greenhouse emissions, filling out insufficiently linked land-preservation areas, and creating a system of biological zoning that ensures niches for all species.

New policy approaches must be tested on the state and local levels—which can also serve as checks against environmental backsliding at the national level. State-implemented policies have already begun to fulfill their promise: A recent report prepared for California Governor Pete Wilson found that Proposition 65, the state's pioneering toxics initiative, had accomplished in four years what would have taken the federal regulatory system a century.

A multifaceted organization such as

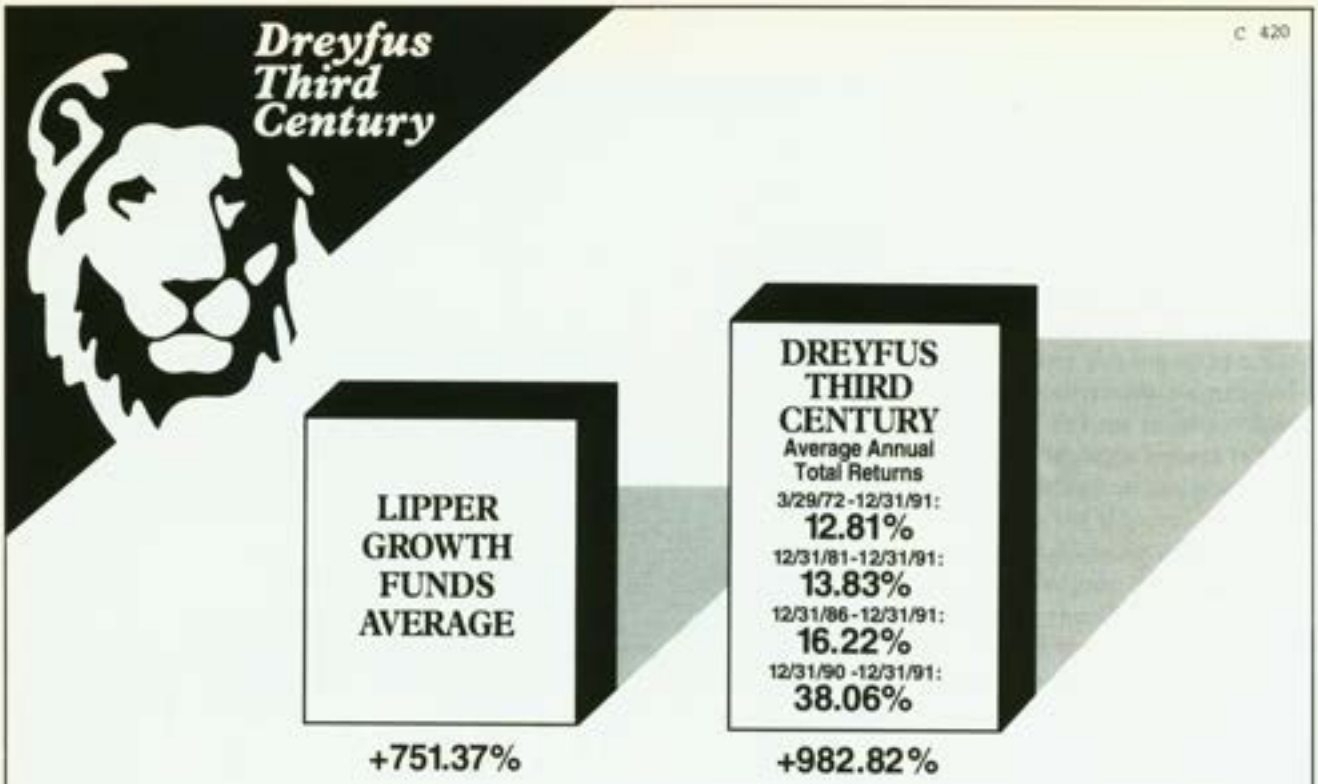
the Sierra Club is well suited to address the crises of the next hundred years. An energy strategy based on conservation and renewable resources, for example, depends upon simultaneous policy initiatives at the global, national, state, and local levels. The Club is involved in an array of efforts that can dramatically accelerate market acceptance of sustainable technologies: a global-climate convention, national improvements in auto fuel-efficiency, least-cost energy regulation of public utilities by states, and local zoning ordinances governing new housing.

The political, economic, and technical hurdles are immense, but the most daunting challenge is cultural. Within an extraordinarily short period of time we must change the *attitudes* toward growth that are at the root of the crises we face, be it the population explosion, reckless economic expansion, or the fouling of our natural heritage.

It is our task in the years ahead to address these issues. Environmental reform has occurred rapidly in North America, and it must be possible to continue it. The incredible political evolution in Eastern Europe, the seemingly instantaneous flowering of civil society beneath the smothering weight of bureaucracy and oppression, should inspire us: Change can come as a cascade as well as a trickle.

The Sierra Club is in a unique position to work for the changes necessary if Earth is to survive. We are old and wise; we are young and daring. We have behind us victories to celebrate and defeats to learn from. We know that having a halfway sustainable home doesn't count. Most importantly, the experiences of the last hundred years have taught us the connection between the human spirit and the natural world. We can use the strength we derive from that connection to overcome the forces that would deny their interdependence. ■

J. Michael McCloskey *is the Sierra Club's Chairman.* Carl Pope *is the Club's Associate Executive Director for Conservation and Communications.*



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Travelers Between Two Worlds

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Day ceremonies at Times Square. Mukash has learned the ways of the south.

Born in the bush, Mukash grew up hunting caribou and partridge in the taiga, learning to survive off the land in all seasons. The only difference between his life and that of his father was that he attended school from the age of six. When he was 16, his father sent him to Montreal for further study. "My father saw a fight was coming. He'd seen the railroad come to Cree territory, followed by alcohol, sickness, and all the rest."

Down south, Mukash learned a different set of survival skills, like how not to get run over by a truck and how to keep from being mugged. He also studied engineering and political science, and returned to Great Whale River with an understanding of just who and what his people were up against. When he speaks of his Hydro-Quebec opponents, it is with a certain sadness. "They were born on a mat of concrete. So right away they're not in touch with nature. They lost it a long, long time ago. They think the fish will be more prosperous in one big lake. They don't realize that when you put a species in a new environment, only the big ones survive."

Talking with Mukash, I feel the loneliness of his position, straddling two worlds, two ways of life. It's as if he knows too much. He speaks of always trying to beat time when he travels to the south. He speaks of the ease he feels on Cree land, where time doesn't control him. And yet he uses a snowmobile to hunt, because he has places to go and things to do in his other life. He knows that the elders are right when they say the old ways are best, knows that you see more when you walk: "My father brings back more partridge on snowshoes than I do on my Skidoo."

The ironies run deep. His children want to learn the skills of their ancestors, but Mukash can't teach them, with a workload that sometimes keeps him away from home two weeks at a time. Anyway, children don't grow up in the bush in the old way any more, surviving off the land in all seasons. Still, Mukash goes hunting every chance he gets. He plans to retire by the age of 50 and return to the traditional life.

Hughes, Marinelli, Miller, Macdonald, Mukash. Though they've never met, I can easily imagine them around the campfire together, talking about how they would all stay in the wilds if they could, if they didn't know too much. But for now we'll gather here by the fire, they say. Listen, you can hear the snow goose passing. Listen, you can hear the train roaring. We're camped here, somewhere in between, staying the distance. ■

Elizabeth Wray *is a writer living in San Francisco.*

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If *I* Ruled the World

Continued from page 119

that while death is both natural and inevitable and that the death of one individual often sustains the existence of another, death without purpose, death that is careless, death that is not sanctified by the solemn gratitude of the taker of life is a violation of all that could be called holy.

I would have the child learn, deep in the marrow of its being, that it has the power either to enhance or to degrade some portion of the world into which it has come, and that the exercise of that power has consequences that will outlive the child itself. In the mirror of every action, the child should be told, is the face of the future.

Not until these things have become so imbedded in the child's mind and heart that life would be incomprehensible without them—not until then would I introduce the child to the world of practical matters, of institutional learning, of the getting and spending of money, of the promise and perils of citizenship.

For the first time in human history, in short, I would have us produce an entire generation of young people whose understanding of their place in the long narrative of humanity's sojourn on this planet is secure, and whose responsibility to the world around them is something they assume without question. For only through such a generation could we truly hope to change the course of history and redeem our species.

SUSAN MERROW *is the only woman ever to serve as First Selectman of East Haddam, Connecticut. (She is giving the townsfolk a year to get used to the fact before asking them to change the title.) She was Sierra Club president in 1990–91.*

A popular Gary Larson cartoon shows All the King's Men trying unsuccessfully to put the pieces of a Humpty Dumpty–size egg back together. The captain of the effort says something like: "Okay, you guys have had your chance. The King's Horses want another try." The environmental problems that we now live with every day—global warming, ozone depletion, deforestation, loss of biodiversity, overpopulation—are potentially every bit as calamitous to our planet as that fall from the wall was for the egg-shaped fellow.

To begin to put things right, I'd give All the King's Women a chance to try their hand. Women tend to build bridges to other people—they try to establish mutually satisfying relationships. Men, on the other hand, seem compelled to establish hierarchies and to deal with one another in terms of pecking order. If there were ever a time in global history when collaborative problem-solving was required, it's now. There would be an important spin-off of putting women in charge, too: Women with power and resources at their command will inevitably take control of, among other things, their own reproductive lives, and will help lead society out of the population problems that exacerbate every environmental issue I can think of.

I would begin my rule as environmental dictator by attacking energy problems. If we in the developed world do not get the oil monkey off our backs and move quickly to a sustainable energy policy, one based on efficiency and renewables, we might as well pack it in. Either the earth's natural systems will collapse or we will destroy them and one another in a world destabilized by greed for oil. I would appoint Hunter Lovins of the Rocky Mountain Institute as Global Secretary of Energy. The only special favor I would ask of her is that she immediately mandate the 40-miles-per-gallon standard for automobile fuel efficiency. (So there, Detroit!)

With energy policy headed in the right direction, I would turn my attention next to the developing countries, where basic survival needs are straining natural resources. As their economies falter and they fall deeper into debt, these countries are forced to ex-

ploit their fragile ecosystems. This in turn threatens the existence of indigenous peoples.

We have the know-how to break the poverty-exploitation cycle—all we need is the political will. I would support—financially and technically—appropriate technologies and sustainable agriculture throughout the developing world. With government incentives and educated consumers, we could help people in the less-developed nations (and all of us along with them) to live within their environmental means. I would appoint Wangari Maathai, leader of Kenya's Green Belt Movement, as Global Secretary of Health, Education, and Welfare.

There is no environmental problem we face today that is not made more complicated by the fact that there are just too many of us trying to squeeze a living out of this planet. Providing our burgeoning population with anything like a reasonable standard of living will further strain already overstressed ecosystems. I would appoint Faye Wattleton, former head of Planned Parenthood, as Global Secretary of Family Planning, and charge her with making access to birth control an inalienable right of all women of child-bearing age.

Overpopulation, poverty, resource exploitation, and pollution are locked in a vicious circle. We must break the links between them. I believe that women, with their compassionate, cooperative leadership styles, are just the people to put the fractured pieces of our fragile global environment back together.

MURRAY BOOKCHIN *is a social ecologist and the author of* Remaking Society: Pathways to a Green Future.

It is essential to my vision of an ecological society to emphasize that "rule"—viewed as domination, hierarchy, and the coercive powers of the state—must give way to participatory democracy. My vision, which I have long designated as *social* ecology, rests on the conviction that the very idea of dominating nature

stems from the domination of human by human—initially, in the form of gerontocracies, patriarchies, warrior sodalities, priestly corporations, and, later, economic classes and the state. Hence, I would no more appeal to governments, corporate institutions, or elites to resolve our ecological problems than I would to the military or to neo-Nazis to create a peaceful, harmonious, and democratic society. The need to resolve ecological problems can be used to justify either highly centralized authoritarian social systems that will regulate every aspect of human behavior—or else the most decentralized and democratic network of ecologically oriented communities.

Given these premises, what is my own vision? I would like to see society rescaled to human dimensions, based on confederally interlinked communities, each sensitively tailored to the ecosystem in which it is located. Such communities, possibly numbering five to ten thousand people, would recreate directly democratic institutions such as the New England town meeting, enriched by traditions of mutual aid, a caring sensibility, neighborliness, the production and sharing of goods according to need rather than gain, and a sense of complementarity among the society's different personalities and proclivities.

Having advocated the need for the substitution of polluting technologies by organic farming, solar and wind energy, and the like as early as 1952, I do not have to elaborate in any detail on the extent to which these eco-technologies can be deployed to create a new synthesis between town and country, urbanity and wilderness, and, more broadly, humanity and the natural world. Yet if I am to accept seriously the maxim that we should live simply but richly, then we must not jettison advanced technologies in the naive belief that "high-tech" is necessarily anti-ecological. Indeed, unless people have the free time and material security to cultivate their aesthetic sensibilities, intellectual faculties, and emotional sensitivities, they will remain the passive taxpayers and "constituents" whose

lives, today, have been trivialized by the practical concerns of mere survival and exhausted by the drudgery of meaningless, often dangerous work. As a foundryman and autoworker in my youth, I have never found toil ennobling or conducive to civic-mindedness, although I have found creative work such as crafting useful things and gardening indispensable to the development of my personality.

Is the sketchy vision I have advanced myopic in view of growing populations and a culture of consumerism? I think not. I have yet to be convinced that population growth rates foredoom us to ecological catastrophes and that our environmental dislocations are due exclusively or overwhelmingly to self-indulgent shoppers. That we have to educate ourselves and others into the parental responsibility of having fewer children to give both them and ourselves culturally fulfilling lives; that women in particular should be free in the interests of their own self-development to choose the number of children, if any, they will have; that high concentrations of people in vast urban agglomerations necessarily pollute their environments—all of these are, in my view, painfully obvious. That daily life for millions of people is often so vacuous that they are obliged to gratify their tastes—tastes often orchestrated by the mass media—by buying needless, even harmful junk is equally obvious.

I'm not sure I can present any vision for the future that doesn't relate to the problems we face today. If the environmental movement resorts to neopagan rituals, anti-rationalism, ecotheologies, or an encounter-group mentality that fosters a privatistic inwardness, it will seem understandably absurd to people who are concerned with real-life problems.

I rest my own vision of a decentralized, participatory democracy as much on popular resentment toward the concentration of power in corporate and political elites as I do on the imperatives all people face in the prospect of ecological catastrophe. Left with nothing but despair and

hopelessness, I fear that our most inspiring visions will become polluted by "business as usual" or authoritarian manipulation. In reaction to these grim alternatives, I call upon environmentalists to consolidate their efforts into a truly democratic, nonhierarchical movement aimed at creating a rich, humanly scaled community life, material security, alternative technologies, and a rational method of sharing the means of life based on the needs of human and nonhuman beings. Such a movement will have to be grassroots, confederal in structure, and genuinely populist in its sensitivity to the needs of ordinary people.

RODERICK FRAZIER NASH *is the author of* Wilderness and the American Mind, The Rights of Nature: A History of Environmental Ethics, *and* American Environmentalism. *He is Professor of History and Environmental Studies at the University of California at Santa Barbara.*

Presently, especially in the temperate latitudes, wild places exist as islands in a growing sea of civilization. I propose that in the next 1,000 years we reverse the ratio. Instead of islands of wilderness in a matrix of civilization, we would have Island Civilization.

This scenario demands two kinds of restraint. First, the human population on Earth must drop to 1 to 2 billion, the number biologists think is sustainable over the long run. The other requirement is a reduction in human claims to habitat. I would like to see the 1 to 2 billion humans in 500 concentrated locations on no more than 2 percent of the planet.

In the vast spaces between the cities of the future, human impact would hardly be discernible. Roads and railroads would be gone, in favor of mass or individual aerial transportation. Rivers would be dammless; the lumbering, mining, and agriculture that would be necessary would take place in narrow belts surrounding the cities. Intensely urban as this civilization would be, when the people of 2992 left

their civilized islands they would enter an ecosystem of remarkable wildness, beauty, and integrity. The 10 million Californians of 2992, for instance, will be concentrated in 20 habitats. The rest of the state will be golden once again: Antelope will play in Antelope Valley, and grizzlies will have returned (or been restored) to chase the salmon that run once again in the coastal rivers.

Implicit in Island Civilization is full development of human intellectual and technological potential. I regard many characteristics of modern civilization as worthy of protection and extension. Computers, television, and nuclear power are marvelous tools—if we only knew how to use them responsibly. And in a thousand years what wonders might exist? Technology is not the basic problem; machines only express human values. Change these and you can alter the most basic pollution problem of all: mind pollution. The trick, as Thoreau recognized a century and a half ago, is "to secure all the advantages" of civilization "without suffering any of the disadvantages." Moreover, don't a reasonable number of humans have as much right to fulfill their evolutionary potential as any other form of life? The essential proviso is that in doing so they not compromise, or eliminate, the chances of other species to do the same.

How to make the dream of Island Civilization come true is beyond the scope of this outline. Suffice it to observe that if the reform route proves ineffective, the radical option of force or revolution will make increasing sense to a population shocked and frightened by the early-warning signs of ecological catastrophe. Violence, after all, has figured frequently in human history as a way to change paradigms. Environmentalism could similarly rationalize the use of force for the liberation of nature. Or, as some are starting to argue, the violence may come from nature, striking back and purging itself of the threatening human cancer.

I am a historian, and from my perspective mankind now stands at a crossroads not merely of human histo-

ry but of the entire evolutionary process. Life has evolved from stardust over billions of years until one species has developed the capacity to disrupt the whole biological miracle. But amidst the fear associated with this thought there is one comfort. We are not threatened, like the ecosystem of the dinosaurs, by a death star. We *are* the death star. We could also be the star of ecological salvation.

CLEVELAND AMORY *is the founder of The Fund for Animals, based in New York City, and author of* The Cat Who Came for Christmas.

I take the phrase "If I Ruled the World" literally—I am King of the World. And since in the Old Days animals were one of the things kings particularly ruled over, I am clearly King of All Animals.

In the Old Days the kings were kings of all animals primarily to shoot them. Game teemed in the Royal Forests, and of course only royalty and royal friends could partake in the killing thereof. Woe betide any commoner who wanted to do something besides serve as beater or bearer or skinner. If they shot anything, they themselves would be shot. I shall of course continue this practice.

I realize that to implement this wonderful world I will have to turn all the people who formerly made a living out of killing into nonkillers. Even in my own country it is not going to be easy. Many governors' heads will have to roll, as well as almost all their departments of environmental conservation or natural resources or whatever. As a starting point I would throw out any government agency or society with the words "wildlife," "game," "conservation," "federation" or "natural resources" in it.

All animals will not only not be shot, they will be protected—not only from people but as much as possible from each other. Prey will be separated from predator, and there will be no overpopulation or starvation because all will be controlled by sterilization or implant. At the same time neither will

there be any human overpopulation. When there are too many people from the animals' point of view, they too will be controlled by sterilization or implant. I shall place in charge of this program the National Rifle Association. It is time they learned how to control populations with something besides rifles and AK-47s.

DAVID ORR *is Professor of Environmental Studies at Oberlin College, the author of* Ecological Literacy, *and education editor for* Conservation Biology.

It's the year 2092 and the world breathes a little easier than it did a century ago, when the great planetary crisis was still gathering momentum. The worst is now over, and the damage caused by the late-20th-century growth spasm is being repaired.

It's hard now to understand why things that are so obvious to us were so hard for those living in the late 20th century to comprehend. But that's the point: The way they thought about things was bizarre, to say the least. It took a while for people to understand that the planetary crisis was a crisis of mind and of what goes into minds, which is to say it was a crisis of education in the deepest sense. It is interesting to compare how people living in that earlier time thought with how we now think, and how their education compares with our own.

First, where we educate people to think in systems and patterns, 20th-century schools still educated the young to think in boxes called "disciplines." They did not worry much about how or whether these boxes fitted together or whether people who thought in boxes could make sense of a world stitched together as systems, ecosystems, and biosphere. They thought education had only to do with analytical thinking. This explains why their creativity was so distorted and dangerous and why it so often produced violence and addictive behavior. Stranger still, they confused intelligence and cleverness. Mostly the schools and colleges of the 20th cen-

tury educated people to be clever and assumed that they were also intelligent. The difference, we now know, is that intelligence pays attention to the long-term and the interrelations among things, while cleverness does neither. We had to learn the hard way that intelligence also has to do with things like character, wonder, courage, play, and compassion.

A hundred years ago liberal-arts colleges did not yet offer opportunities in the "ecological design arts." Now no one graduates without knowing the basics of ecological design. We assume that an educated person knows about sustainable agriculture, sustainable forestry, restoration ecology, ecological engineering, and solar technologies.

Other landmarks along the way helped to re-form the American mind. There was the federal enactment of 1998 that provided evening courses in ecological literacy for members of Congress, White House staffers, federal officials, bank presidents, and corporate officers. There was the great re-ruralization movement that reversed the tide of urbanization that had so damaged the American mindscape and landscape. There was the Railroad Act of 2000 that got us out of our cars. And there was that night when an estimated 100 million Americans inexplicably stood up in their living rooms and dens, nearly in unison, and hurled heavy objects at high speed through their TV screens. People read more now. And, yes, miracles do happen.

JAMES GUSTAVE SPETH *is president of the World Resources Institute in Washington, D.C.*

Environmentalism began on the periphery of the economy, saving a bit of landscape here, bottling up some pollution there. The challenges ahead are such that it must spread as creed and code to permeate to the core of the economies of the world.

For this to happen, a new type of cooperation among government, the private sector, and environmental advocates must be forged. As their first

contribution toward this end, America's Fortune 500 companies should each agree to (1) bring outside environmental experts and leaders onto their corporate boards and committees, and (2) make complete environmental disclosures and have their environmental accounts independently audited, as financial accounts are now. Correspondingly, environmentalists should adopt a new, more collaborative approach to companies that demonstrate a real commitment to environmental leadership—an approach that focuses on future performance and not past mistakes.

My second recommendation is for the U.S. government to commit to economic reforms that will make prices reflect the full environmental costs of doing business. It has been said that the planned economies failed because prices did not reflect economic realities; it might also be said that the market economies will fail unless prices reflect ecological realities.

ERNEST CALLENBACH *wrote* Ecotopia *in 1975 and* Ecotopia Emerging *in 1981. He also edited the California Natural History Guides series for the University of California Press.*

As a congenital optimist, I assume in what follows the best about world social processes in the decades ahead: that a certain amount of political democracy will prevail in many countries, that lasting change will come not through compulsion but through widespread adoption of new ecologically conscious norms, that humans will escape being converted into corporate-owned cyber-beings, and that wars will become smaller and rarer.

If we survive the 21st century, it will be because the idea of sustainability displaces the idea of economic growth as the basic imperative of our society. Of course, knowing the goal does not mean that reaching it will be easy. But without a goal, we have no way to judge policies or actions. Here then is my notion of the Sustainable State of the Earth, A.D. 2092:

To start with the "easy" stuff, wilderness areas vast enough to assure lasting biological diversity have been preserved or restored on every continent (including the eastern part of the United States), but much larger areas are operated as natural preserves, with a human presence about as heavy as that of indigenous peoples: some use of fire, a little agriculture, hunting, and so on. (Since the opportunity to live in such relatively pristine areas even for, say, five years is greatly prized, there is a lottery.) A worldwide Endangered Species Act has tigerish teeth. Truly sustainable forestry and fisheries practices are normal, and people who deviate from them spend lengthy periods in jail. Regulatory-commission members are drawn from the people, not from the industries being regulated. Sustainable agriculture has been achieved, providing a healthier, low-meat global diet.

After 100 years, U.S. consumption levels—like those of Japan and Europe—are half 1992 levels; those of other industrialized parts of the world have risen somewhat. The rich Northern countries have gradually declined in population, as some Western European countries were doing in 1992, to a point where Northern populations are also about half 1992 levels. With heroic improvements in technology, these changes have reduced the total Northern contribution to environmental degradation to a level about equal to the South's.

Such reorientations of our habits and minds have not been achieved by an access of eco-altruism; we simply grew to realize, slowly but steadily, that other activities besides working and buying are important ways to spend our limited lifetimes. Somehow, the perceived ecological, personal, and economic costs of consumer-zombie life combined to reverse our legacy of post–World War II commercial brainwashing.

Environmental impacts also depend upon the nature of our deployed technologies. The global economics of 2092 are almost entirely solar-based. To slay that dragon the car, whose en-

vironmental and social impacts no technofix could render acceptable, was the central eco-problem of the 21st century. It was not until a new eco-industrial complex arose to displace the military-industrial and highway-oil-auto complexes that the United States and other economies began seriously to rebuild the wreckage of urban civilization. In 2092 we take for granted a pattern of compact mini-cities linked by rail, supplemented by taxis and minibuses propelled by electricity, fuel cells, and alcohol.

Someday the glaciers will probably return and require a new round of adaptation from humankind. But in the meantime, the people of 2092 are eager to make survival fun. After all, our species is gifted with a certain amount of brains, spontaneity, sexiness, and other delightful qualities, most of which had been previously thwarted and perverted by the institutions of industrialized life, as well as with bloodthirsty qualities that those institutions too often encouraged. Now that we have ensured that the earth remains a decent habitat for ourselves and our fellow species, we are truly able to enjoy the miracle of our existence in this astonishing universe.

A fit life for a species like ours, according to the ideas prevalent in 2092, requires new social institutions that are more comfortable for us, even if less "efficient" in the eyes of accountants or economists. In 2092 we work about 20 hours a week and accept the lower (and ecologically benign) consumption of goods that entails; we work in employee-owned organizations where we have a real say in what goes on, including the ecological consequences of our products; we live in large, "extended" families that offer more emotional support and stimulation than the shrunken nuclear family. We have in our towns, neighborhoods, and even workplaces more rituals, holidays, dance, poetry, and music. We treat children lovingly and spend a lot of time with them; we teach them the names of the stars and the ways of beetles, and we teach them how to find the way home from the wilderness. ■

READINGS

The Sierra Club was but seven months old when Volume 1, Number 1 of the Sierra Club Bulletin *appeared in January 1893. (That estimable journal changed its name to* Sierra *in 1977.) Though the format of the publication has been revised many times in the last century, the desire of the editors to bring to the membership's attention news that motivates, views that provoke, and writing that heartens has remained constant. We present here a sampling of the* Bulletin's *best.*

From "A California Outing"
by John R. Glascock
January, 1895

I was just dropping off to sleep when a gentle snore attracted my attention. It always does. There is about a snore a magnetism that is *sui generis*. It fascinates while it repels. It may be as soft as the breathing of an Æolian harp, but it is more potent as a promoter of sleeplessness than the roar of a twenty-stamp mill.

If the noise were a constant quantity, one might sleep under the infliction. It is its intermittent character that arouses speculation and drives away sleep. One always finds himself, during the short intervals of quiet, wondering how long it will be before the next blast, and whether there will be any variation in its note. It came from the direction of Fred's tent. Now, I knew that Fred did not snore. Was it possible that—but no; ladies are never guilty of such a sin against rest. Come whence it did, it rubbed the poppy-juice from my drooping lids, and set me to watching with curious interest the fantastic shadows traced upon the wall of my tent by the swinging lantern without. Worn-out nature at length came to my rescue during a longer interval between the gentle raspings, and I slid off into dreamland, carrying with me the sights and sounds last imprinted on my senses.

"On the Naming of Mountains"
from a letter by Colton Boit Brown
January, 1897

As the Sierra becomes better known, the problem of finding suitable designations for its peaks grows in urgency and in difficulty. Our heritage of Indian names seems never to have been very large—at least within the High Sierra; and the greater part of what might have been saved from that source, has now been irrecoverably lost under the spendthrift regime of sheep-herder and prospector. On the other hand, the nomenclature which these later nomads have invented is generally so void of euphony and dignity—is often so unutterably vulgar—that one can hardly regret its scantiness. Here, then, is an opportunity for valuable and lasting service to society—or for lasting harm. . . .

Why should we not have—what is our excuse for not having—names that are appropriate in sound and sense? A good name will harmonize; it will, in euphonious syllables, either appropriately describe (as does *Half Dome* or *Cloud's Rest*), or to be to us a meaningless, euphonious, appropriate sound (like *Tahoma, Shasta, Kearsarge*), which may designate that group of impressions which we call the mountain. And it will not force on all comers any particular piece of suggestion or sentiment, especially none of a personal sort, which the namer may have happened to think of. Each person ought to have a fair chance to have these things mean what they will to him, and should not, as a rule, be afflicted with *Twin Sisters, Devil's Slides*, or *Bridal Veils*. All such pseudo-romantic appellations smack of childishness and of cheap sentimentalism. . . .

Of descriptive names, I should call *Cathedral Spires* middling; *Sawtooth Mountains* and *Arrow Peak*, good. *Tuolumne Meadows*, in the common pot-bellied corruption of it—*Tuh-wol'lumny*—is absurd; but when given rightly, as I have heard an Indian speak it—*Tu-ah-lum-nee*, in distinct syllables—there is hardly a more beautiful name in the mountains. *Sierra Nevada* falls most musically on the ear; and, taken with its meaning, is, perhaps, the best name of all. No, not all—*Shasta* is the best of all.

From "Some Aspects of a Sierra Club Outing"
by Marion Randall
January, 1905

For a little while you have dwelt close to the heart of things. You have lain down to sleep in a wide chamber walled about by mountains rising darkly against the lesser darkness of the sky, where stars looked down on you between the pines, stars more brilliant than on the frostiest night in the lowland; you have awakened to the laughter of streams and the songs of birds. You have lived day-long amid the majesty of snowy ranges, and in the whispering silences of the forest you have thought to hear the voice of Him who "flies upon the wings of the wind." And these things live with you long after the outing has passed and you are back in the working world, linger even until the growing year once more brings around the vacation days, and you are ready to turn to the hills again, whence comes, not only your help, but your strength, your inspiration, and some of the brightest hours you have ever lived.

From "John Muir As I Knew Him"
by Robert Underwood Johnson
January, 1916

To some, beauty seems but an accident of creation: to Muir it was the very smile of God. He sung the glory of nature like another Psalmist, and, as a true artist, was un-

unashamed of his emotions.

An instance of this is told of him as he stood with an acquaintance at one of the great view-points of the Yosemite Valley, and, filled with wonder and devotion, wept. His companion, more stolid than most, could not understand his feeling, and was so thoughtless as to say so. "Mon," said Muir, "can ye see unmoved the glory of the Almighty?" "Oh, it's very fine," was the reply, "but I do not wear my heart upon my sleeve." "Ah, my dear mon," said Muir, "in the face of such a scene as this, it's not time to be thinkin' o' where you wear your heart."

From "John Muir—President of the Sierra Club" by William E. Colby January, 1916

John Muir will never be fully appreciated by those whose minds are filled with money getting and the sordid things of modern every-day life. To such Muir is an enigma—a fanatic—visionary and impractical. There is nothing in common to arouse sympathetic interest. That anyone should spend his whole life in ascertaining the fundamental truths of nature and glory in their discovery with a joy that would put to shame even the religious zealot is to many utterly incomprehensible. That a man should brave the storms and thread the pathless wilderness, exult in the earthquake's violence, rejoice in the icy blasts of the northern glaciers, and that he should do all this alone and unarmed, year in and year out, is a marvel that but few can understand. These solitary explorations were quite in contrast with the usual heavily equipped expeditions which undertake such work. John Muir loved and gloried in this sort of life and approached it with an enthusiasm and power of will that made hardships and those things which most human beings consider essentials, mere trifles by comparison. He was willing to subordinate everything in life to this work which he had set out to do supremely well, and it is little wonder that he attained his goal.

Continued on page 146

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"Sierra *or* Sierras"
by Francis P. Farquhar
February, 1928

The Spanish word *sierra* means "range of mountains," and is usually found in combination with other words, such as Sierra Blanca (White Range), Sierra Madre (Mother Range, or Central Range), and Sierra Nevada (Snowy Range). Occasionally *las sierras* is used to designate a group of mountain ranges or ridges. In the Spanish narratives of exploration *una sierra nevada* is frequently found written without capital initials, referring simply to a snow-covered range of mountains. It was in this way that our own Sierra Nevada was first designated. Early in the nineteenth century it was sometimes called the Californian Range by American explorers, but gradually the Spanish phrase prevailed, and after a while it became a specific name and took its place on all maps. The Sierra Nevada is distinctly a unit, both geologically and topographically, and is well described as "una sierra nevada." Strictly speaking, therefore, we should never say "Sierras," or "High Sierras," or "Sierra Nevadas" in referring to it. Nevertheless, these forms are so widely used colloquially and are so frequently found in the very best works of literature and science that it would perhaps be pedantic to deny their admissibility. It becomes, therefore, a matter of preference, and for our part we rather like to keep in mind the unity of our great range by calling it simply the Sierra or the Sierra Nevada.

Having thus promised not to look askance at "Sierras," we may perhaps be spared the pain of hearing "Sierra Nevada Mountains." Surely one does not say "Loch Katrine Lake," "Rio Grande River," or "Saint San Francisco."

From "After Forty Years"
by Theodore S. Solomons
February, 1933

I have but two suggestions for the young and girthless. In their zeal for the big things, let them not forget the small. Size is only a relation—and the least significant, often the least valuable. The great peaks, the great rocks, the great trees, are few; the lesser, myriad; and myriad are the carices, shrubs, and insects. More revealing, more enthralling often, are these miniature books in the running brooks, these sermons in the smallest stones—these microcosms in the great Sierra macrocosm.

The other suggestion is, it's a good thing—I speak from experience—to go into the High Sierra at least every forty years. Get the habit!

From "The Beginnings of the John Muir Trail"
by Theodore S. Solomons
February, 1940

The idea of a crest-parallel trail through the High Sierra came to me one day while herding my uncle's cattle in an immense unfenced alfalfa field near Fresno. It was in 1884 and I was fourteen.

The Holsteins were quietly feeding,

and I sat on my unsaddled bronco facing the east and gazing in utter fascination at the most beautiful and most mysterious sight I had ever seen. It was May. The rain-washed air of the San Joaquin plain was crystal clear. I have thought since of an earlier May when John Muir waded out into that valley in a sea of flowers and first beheld his Sierra. I must have felt that day in my cruder, boyish way something of the awe and reverence that filled the mature man when he looked upon those zones of light and color—the bloom-flooded plain, the old-gold of the foothills, the deep blue of the forest, the purpled gray of rock, the flashing teeth of the Sierra crest.

I could see myself in the immensity of that uplifted world, an atom moving along just below the white, crawling from one end to the other of that horizon of high enchantment. It seemed a very heaven on earth for a wanderer. And heaven on earth it was and will be until our new race is very old. I made up my mind that somehow soon I would make that journey.

From "Sierra Club Cups"
by Blanche Stallings
February, 1940

If I had to be a cup, and wanted a delightful, varied, interesting, and useful career, I think I'd say, "Make me neat and smooth, out of tin, stamp these words on me, 'Sierra Club of California,' and hang me on the belt of a good mountaineer."

Bright, little Sierra Club cups! Over the mountains they go, dipping pure, sparkling water for thirsty high-trippers. They dip from streams—streams over trails, streams over granite, streams in forests, streams in meadows, white streams cascading down from the blue sky, clear streams bubbling up from the ground. They dip from lakes—blue, wind-ruffled lakes, quiet, reflecting lakes, green-blue, half-frozen lakes, dark, silent, star-filled lakes. From streams and lakes, changing and changeless in sunshine and shadow, cups of cold water.

But what do the cups do when the high-trippers aren't thirsty?

Montana: Magnificent Wilderness
George Wuerthner
Westcliffe Publishers; $12.95

Political compromise threatens to release millions of acres from wilderness consideration in Montana this year—a public-lands giveaway of fabulous proportions. At *Sierra*'s presstime it seemed likely that Congress might agree on a severely deficient Montana National Forest Management Act by the end of the current session. Thus continues the struggle for wilderness protection that has preoccupied the Sierra Club for a century.

GEORGE WUERTHNER

From "The Kings River Valley"
by John Muir
February, 1941
(First published in* The Daily Evening Bulletin, *San Francisco, August 13, 1875.)

I have just returned from an extended excursion to the summit of Mount Whitney, in the course of which I passed through the Kings River yosemite, which is larger, and in some respects more interesting than the yosemites of the Tuolumne and Merced. . . . We camped on the riverbank a mile or two up the valley near a small circular meadow, that is one of the most perfect flower gardens I have ever discovered in the mountains. The trampling mules, whom I would fain have kept out, fairly disappeared beneath the broad, overarching ferns that encircled the garden proper. It was filled with lilies and violets, and orchids, and sun-loving golden rods and asters, and oenothera, and purple geraniums, and epilobium, with a hundred others all in bloom, but whose names no one would read, though all the world would love to revel in their beauty as they grow. One of the tiger lilies that I measured was six feet long, and had eleven open flowers, five of them in prime beauty. The wind rocked this splendid orange panicle above the heads of the geraniums and brier roses, forming a spectacle of pure beauty exquisitely poised and harmonized in all its parts. It was as if nature had fingered every leaf and petal that very day, readjusting every curve, and touching the colors of every corolla; and so she had, for not a leaf was misbent, and every plant was so placed with reference to every other in form and color that the whole garden had evidently been arranged like one tasteful bouquet. Here I lived a fine unmeasured hour "considering the lilies," . . . and gazing into the countenances of the briers and small white violets. Every individual flower radiated beauty as real and appreciable as sunbeams, and the lily bells swinging on their long stalks rang out music that was heard as plainly as the river, or wind in the pine tops.

From "On a Wilderness Trail"
by Charlotte E. Mauk
June, 1949

There came a July morning when a hundred and seventy-three unlike individuals awoke as a strangely unified body and began the first day of a new life. There had been thousands of man-weeks of waiting for this moment, hundreds of man-days of preparation for it, unreckoned man-hours of detailed planning and cross-checking and adjustment, of listing, reconciling repairing, ordering, packing, shipping, apprehensive rechecking. Now here were the people and their equipment, the commisaryites and the utensils and the food, the packers and their stock. The myriad heterogeneous elements had been gathered together by rail and air and road and trail, and a mysterious alchemy had transmuted them overnight into the integrated components of a High Trip. There were still a few loose joints, to be sure, a few rough places that had to be worn

in, perhaps even a nonconformity or two—but the important thing was that the parts had become a whole, and the whole was functioning.

From "These Are the Shining Mountains"
by David R. Simons
October, 1959

It is night, some time in the Pleistocene. Over the Central Cascades the sky is starless, obliterated by floating clouds of volcanic ash. Only the pulsating melt of living magma glows. The earth trembles underfoot. Without warning, sharp crackling explosions rip upward as if from the core of the planet. Heaving thunder against the horizon, a great pyroclastic cone erupts molten bombs. They rain down in fiery orange parabolas. Still incandescent, these ropy, spindle- and pear-shaped ejecta burn in chaos over the earth. In the distance, men can be seen fleeing in terror from the once-protective circle of their own fire—now but a feeble echo of the surrounding inferno of light and sound. Massive fissures split the surface. Within them, seething fountains of lava boil with quiet power. Irresistibly, liquid rock wells forth, speeding away in immense sheets. Streams vanish in steam. Forests are vaporized. Miles away, the flow exhausts itself in its own spectral wreckage of red, orange, green, and blue flames.

Today the volcanoes are still. Glaciers have deeply carved many of the peaks, dramatically revealing their internal structures. Yet it is as if the fires of the earth had died only yesterday. Surrounding mile-high McKenzie Pass, a great black wilderness of basalt—nearly one hundred square miles—lies new-congealed and nearly treeless. Small islands of green float like jewels on the jagged lava.

From "A Day With Aldo Leopold"
by Alfred G. Etter
December, 1963

Morning for Professor Leopold did not begin with daylight: it began with the silence just preceding it. He was dressed when I awoke and was blowing on the coals. A fire crackled as I clambered into the room and coffee was ready for the flame. The Professor hung the pot in place, took his light meter and chart for recording bird songs, and went out the back door and listened. I watched him silently as I finished dressing. He looked closely at his watch and his light meter and made an entry in his book. "Cock Pheasant was first again," he said, opening the door. The coffee was ready. He poured each of us a cup and returned to the wooden bench outside. Each waking bird voice became an entry in his book, and yet was more than just that in the Professor's morning. The orderly, predictable succession of birds' song was implicit in his concept of a day.

When the voices of late-rising species began to confuse the early pattern, he came in, returned the coffee to the fire, and put eggs and bacon in the skillet. Soon we were having breakfast in the quiet, misty dawn, our conversation mingled with the honking of geese. We hastened through the meal, stacked the dishes, and left the cabin. The path through the river bottom led toward the old pines of the neighboring farm, passing the fenced-off garden plot along the way.

We came out of the low growth of scented willow and ash and elm, and crossed a weak, wire fence. Ahead of us, hundred-foot pines, scattered and clustered, seemed to converse in an interminable monotone. These were what the Professor wanted, if not for himself, then for those who would follow in his spirit. He was heartsick with fragments and remnants of the beauties he had once known. Somewhere he wanted them restored to inspire his successors with the knowledge of what could be, what once was. . . .

The Professor took out his small black address book in which he kept his daily observations and pointed to the sky above the marsh. "Geese." He took the stubby pencil, a constant companion to the little notebook, and began recording flock counts. Flock after flock passed on its way from feeding. They were magnificent and loud as they swept down into the lake be-

yond the farm. The Professor was moved by their demonstration. "It is rare now," the Professor said, "to see any kind of wildlife like this in excess. There is something satisfying in it. There is some symbol of freedom here that we're losing rapidly elsewhere. I'm glad we have something in excess on this farm; we don't have to skimp on geese. They find something here that suits them." So did those who watched.

From "An American Land Ethic"
by N. Scott Momaday
February, 1970

Once in his life a man ought to concentrate his mind upon the remembered earth, I believe. He ought to give himself up to a particular landscape in his experience, to look at it from as many angles as he can, to wonder about it, to dwell upon it. He ought to imagine that he touches it with his hands at every season and listens to the sounds that are made upon it. He ought to imagine the creatures there and all the faintest motions of the wind. He ought to recollect the glare of noon and all the colors of the dawn and dusk.

I am interested in the way that a man looks at a given landscape and takes possession of it in his blood and brain. For this happens, I am certain, in the ordinary motion of life. None of us lives apart from the land entirely; such an isolation is unimaginable. We have sooner or later to come to terms with the world around us—and I mean especially the physical world, not only as it is revealed to us immediately through our senses, but also as it is perceived more truly in the long turn of seasons and of years. And we must come to moral terms. There is no alternative, I believe, if we are to realize and maintain our humanity, for our humanity must consist in part in the ethical as well as the practical ideal of preservation. And particularly here and now is that true. We Americans need now more than ever before—and indeed more than we know—to imagine who and what we are with respect to the earth and sky. I am talking about an act of the imagination essentially, and the concept of an American land ethic.

It is no doubt more difficult to imagine in 1970 the landscape of America than it was in, say, 1900. Our whole experience as a nation in this century has been a repudiation of the pastoral ideal which informs so much of the art and literature of the 19th century. One effect of the Technological Revolution has been to uproot us from the soil. We have become disoriented, I believe; we have suffered a kind of psychic dislocation of ourselves in time and space. We may be perfectly sure of where we are in relation to the supermarket and the next coffee break, but I doubt that any of us knows where he is in relation to the stars and to the solstices. Our sense of the natural order has become dull and unreliable. Like the wilderness itself, our sphere of instinct has diminished in proportion as we have failed to imagine truly what it is. And yet I believe that it is possible to formulate an ethical idea of the land—a notion of what it is and must be in our daily lives —and I believe moreover that it is absolutely necessary to do so.

REVIEWS

THOMAS J. LYON

A vast field of literature has flowered along with the environmental movement. These ten works rank among the pick of the crop.

My First Summer in the Sierra
John Muir (1911)
Sierra Club Books, $9.95

This book is practically incandescent —about as joyfully wild as sentences written on paper can get. At age 31, outwardly careerless, John Muir went to the mountains, and in the summer of 1869 began to discover his true vocation. The journal he kept has revelation on every page: new flowers, new birds, new mountains, new evidence of glaciation, and within the writer himself a constantly renewing wild identity—"true freedom, a good practical sort of immortality."

The transfiguration is moving. It is grounded in a deeply felt landscape,

described by Muir in intimate detail. Reading this beautiful record—a handbook for the higher human self—recommits one to keeping alive the wilderness where such experiences may be had.

Deep Woods
John Burroughs
(selections from 1871 to 1912)
Gibbs Smith, $9.95

John Burroughs was a great localist. The love of his life was the mixed farm-and-forest terrain around the Catskill Mountains where he was born and raised, and where he happily spent most of his adult life. His essays—enormously popular and influential in their day—convey a relaxed intimacy with his surroundings. This anthology, edited by Richard F. Fleck, draws from seven of the Catskill sage's books, and demonstrates that Burroughs responded as vividly to the far-flung wilds of Maine, Alaska, and Yosemite as he did to the hills of home.

The Land of Little Rain
Mary Austin (1903)
University of New Mexico, $8.95

This is one of the first books to make the case that the desert is beautiful and interesting and should not necessarily be converted into something else. *The Land of Little Rain* doesn't argue the point in so many words. Instead, Austin presents evocative images of mesa, arroyo, and wheeling vulture, putting us in touch with the poignancy of existence on the margins, where life is earned.

We see what she saw, and feel the uniqueness of her surroundings. While her entrepreneurial husband scurried around California's Owens Valley in search of real-estate and water deals, Austin chose a different path, venturing out to learn the secret of desert life by sitting still and observing pattern and system. She represents the antithesis of her husband's manifest-destinarian hustle-bustle. Her theme is adaptation: "The manner of the country makes the usage of life there, and the land will not be lived in except in its own fashion."

The Outermost House
Henry Beston (1928)
Viking Penguin, $7.95

A year on the wild edge of the continent (the "forearm" of Cape Cod), facing outward to surf and storm, gave Henry Beston a strong feeling for the elemental. The record of his solitary retreat communicates this connectedness in poetic images. Seeing the gray, powerful waves of a winter storm, or the vulnerability of a bird's nest on the dunes—really seeing, and feeling with the heart—erases the fragmentation of modern life. Beston helps us rediscover the real reason, the deepest reason, for our concern for the wild world. The author's camaraderie with members of a Coast Guard station some miles down the beach and his appreciation for a lone swimmer in the surf show humanity as a working and sometimes even beautiful part of nature.

A Field Guide to the Birds
Roger Tory Peterson (1934)
Houghton Mifflin, $13.95

The more you're out in nature, and the more in it you can name, the more likely you are to fight for it. Roger Tory Peterson has helped move thousands or even millions of people from generalized nature-appreciation to more specifically informed allegiance and concern. He honors birds with descriptive prose that is winnowed down and dead-on accurate, and offers a similarly economical sense of their habitats. (Of the spruce grouse: "In the deep wet coniferous forests of the north we look for this tame slate-colored Grouse.") His word sketches may simplify, as do his paintings' clean lines, but this is only the compression of poetry. *A Field Guide to the Birds* is a primer, but it suggests a world, and it inspires us to go forth and *see*.

A Sand County Almanac
Aldo Leopold (1949)
Oxford University Press, $8.95

Aldo Leopold's ethical formula rings like truth chiseled in stone: "A thing is right when it tends to promote the integrity, stability, and beauty of the

biotic community. It is wrong when it tends otherwise." The author's emerging biocentric thought stands forth in such exemplary sentences. But the book is also humanly accessible. In its pages we drop in on Leopold's weekend property in Wisconsin, where we learn about the habits of woodcocks and geese, and the life of oak trees, and about Leopold's wish to help nature reclaim abused land. We feel his guilt when he admits his previous environmental sins, in particular his complicity in predator "control." As we begin to understand that he came to his elegant formulations only after much personal struggle, the *Almanac* becomes, between the lines, an instructive human chronicle.

The Voice of the Desert
Joseph Wood Krutch (1954)
Morrow, $8.95

By training and bent a rational skeptic, and for many years, early in his career, an apologist for modern, urban pessimism, Joseph Wood Krutch traveled a long philosophical arc to become one of the great champions of wilderness. Krutch's transformation began with his reading of Henry David Thoreau, and deepened with his move to Arizona in 1952. The desert, with its textbook lessons in adaptation and coevolution, taught him about a world far more complex and alive than he had seen through the lens of sophisticated alienation. Something changed in his own most fundamental outlook. Thus in this book he inquires into the observer, into the mind as it looks at wild nature. He sharply questions the dominant definition of human consciousness—the Cartesian, mechanistic model—and also, as a kind of proof, delivers some of his best descriptions of the mysteriously involving power of the natural world.

Silent Spring
Rachel Carson (1962)
Houghton Mifflin, $8.95

The first great call to ecological consciousness in the postwar era is sadly still not out of date. Carson's analysis and conclusions, 30 years young now, need to be better known and applied today. The fact that U.S. companies still export more than 400 million pounds of pesticides each year argues that we require Rachel Carson's wisdom as urgently as ever. Her insight is that all parts of the world are interrelated. We cannot, for another contemporary example, fog the landscape of Latin America with biocides and expect to see thrushes and warblers keep returning undiminished to northern climes each spring. The genius of Carson is to present the world as a living system, a vivid, breathing totality, with humanity very much a part of it. Once we grasp this fact, we know what we've got to do.

Desert Solitaire
Edward Abbey (1968)
Simon & Schuster, $9.95

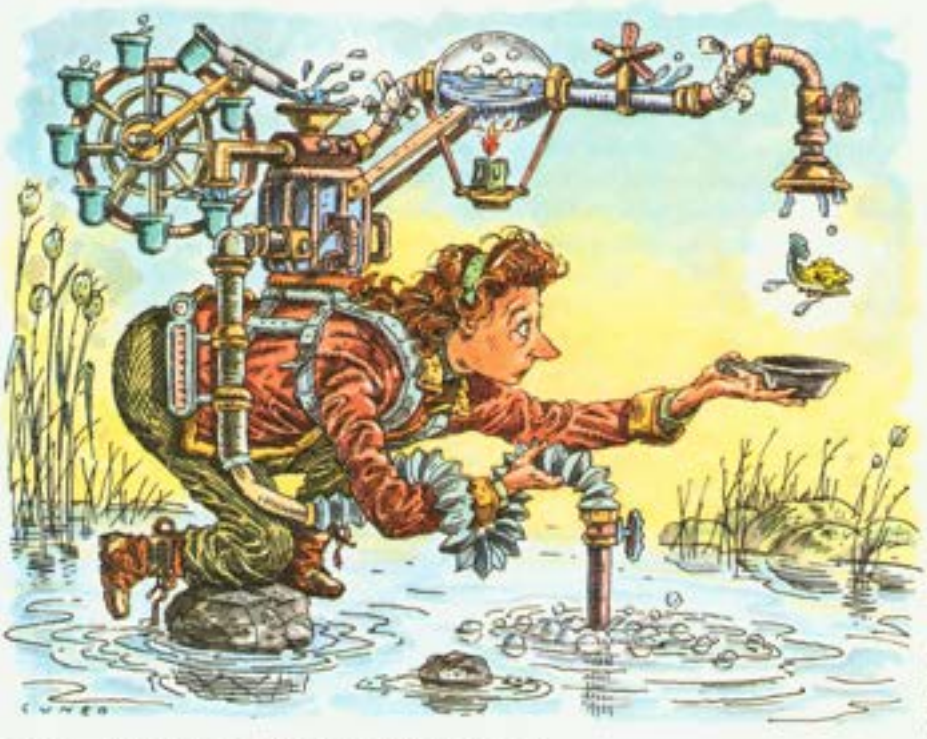
This is nature writing with a no-nonsense edge to it, a militant stance, and at the same time the rare, saving gift of humor. As a writer extolling and defending desert wilderness, Edward Abbey is a member of a very small group—a group of one. There simply is (was) no one like him. He is outrageous, poetic, sarcastic, reverent, and many other seemingly contradictory things. But the intensity and durability of his following suggest a man who spoke his true mind, and in doing so spoke for a great many of us. The future of "Abbey Country" is being decided right now; that it has willing and informed defenders is in some important part owing to this author.

Home Economics
Wendell Berry (1987)
North Point Press, $9.95

Against the giddy spiral of our time, in which each part of life seems to fly away from every other part, Wendell Berry proposes a radical centering, a home-making. In deceptively calm and reasonable sentences, he subverts sophistication, money-love, irresponsibility, and other pillars of society as we know it, substituting reflection, integrity, and character. How we touch the ground, literally touch it, is at the center of Berry's thought. ■

Reed McManus

All Creatures Small and Smaller



The venerable Sierra Club cup, always ready when you were to scoop a restorative drink from a mountain stream, is best suited these days to holding paper clips on a desktop. Long ago, North American hikers begrudgingly accepted the pervasiveness of the waterborne parasite *Giardia lamblia*. They know too well that untreated water from even the most pristine-looking source can bring weeks or months of unforgettable gastrointestinal agony.

Fortunately, *Giardia* is a big lunk among disease-causing organisms. Its cysts (the protozoan's hardy, "immature" stage, which is easily transmitted) measure a whopping (as you look through a microscope) 5 to 8 microns across, and are easily blocked by a respectable water filter. Things become more complicated when you travel to developing countries, where smaller and nastier microorganisms abound. That's why many portable filters stop organisms as small as 0.1 micron, thwarting unwanted bacterial souvenirs such as typhoid and cholera (the latter now epidemic in parts of Latin America). Even so, no filter is fine enough to stop viruses, such as polio and hepatitis A; only boiling, chemical disinfection, or drinking nothing but Perrier from the poolside bar will protect you from these.

While it may cramp your wilderness experience, filtering is preferable to boiling and chemical treatment. Vigorously boiling water for one minute (three to four minutes at high altitude) works well, but consumes fuel and leaves the water tasting flat. Chemicals (iodine tablets or crystals are the most common) take from 20 minutes to an hour, depending on the water's clarity, acidity, and temperature. Iodine leaves a distinctly un-pristine aftertaste, and can be harmful to people with thyroid problems and to fetuses.

Most portable water filters are octopus-like contraptions that consist of a hand-operated pump and a filter canister with two dangling hoses; you dip the intake hose into a lake or stream, then pump water through one or several ever-finer screens and out the other hose. The most convenient models have "prefilters" that stop coarse particles before they can clog the works, and outlets that latch directly onto a waiting bottle or bag, so you have fewer items to juggle. Some large-volume systems use gravity instead of a pump to push water through the filter. They treat as much as two gallons

Forget the lions and tigers and bears. You need a water filter to take on the real beasts.

▲ ▲ ▲

in one swoop, but must be hoisted from an overhead branch (not included) and are usually much slower than pump models.

While a filter's ability to nix microorganisms is most important, other things to consider are convenience, weight, ease of cleaning (all filters clog eventually), and cost (you can spend from $30 to $240 to keep from doubling over amid spectacular scenery). A filter element may claim to last "100" or "500" gallons; those figures, however, are more valid in the lab than in nature. When pumping becomes difficult, clean the unit; when that doesn't help, replace the filter canister.

One of the cheapest filters is the $30 Timberline, a no-frills plastic device that weighs just six ounces. It filters undesirables down to 2 microns, which won't protect you from anything smaller than *Giardia*—but that's all most North American hikers need. It fills a quart bottle in about 90 seconds. The Timberline's cartridge can't be cleaned; after about 400 quarts you'll need to buy a $15 replacement. Its short intake hose and puny handle make it awkward to use, but whaddaya want for 30 bucks?

The top-selling First Need Deluxe stops nasties as small as 0.4 micron. It costs $55; an optional $10 prefilter and a cap that connects the pump directly to a Nalgene-brand water bottle are, in fact, essentials. First Need weighs 12 ounces, and pumps about one quart in two minutes. When clogging slows the pump, the filter can be backwashed, or replaced (after 400 quarts) for about $28.

The $140 MSR WaterWorks filter is one of the easiest to use because of its farmyard-style pump lever (the others have plungers), a four-foot-long intake hose, and its ability to clamp onto a Nalgene bottle. Its intricate four-filter mechanism removes gunk as small as 0.1 micron, weighs 18 ounces, and screens a quart of water in about 90 seconds. The pump can be disassembled and cleaned in the field, but you'll need to pore over 19 pages of instructions first.

The Katadyn PF uses a ceramic filter that outlasts the membrane or carbon versions used by most other systems. The manufacturer estimates that the filter element can process 5,000 gallons (with regular cleaning) before being replaced. That's 10 to 100 times more water than other filters, which helps compensate for its steep $250 price. Cleaning the PF can be tricky, though, because you must brush off the accumulated organisms inside the cartridge, possibly exposing yourself to pathogens. The PF filters down to 0.2 micron, weighs 23 ounces, and pumps one quart per 90 seconds. Its small plunger is uncomfortable to use, and it has a spout instead of an outlet hose, so filling water bottles takes dexterity.

The Pur Explorer ($130) and Pur Scout ($60) are the only true "purifiers" in the bunch, because water is exposed to an "iodine resin matrix" that inactivates bacteria and viruses after the water has been filtered for protozoans such as *Giardia*. A carbon-filter attachment ($20) that eliminates the slight iodine aftertaste is worth considering. The Explorer weighs 21 ounces, effortlessly pumps about one quart per minute, and can be cleaned without opening the filter element. The cheaper Scout weighs only 12 ounces; it pumps about one quart in two minutes and lacks the self-cleaning ability of the Explorer.

A few fundamentals apply to all filters: To prevent yours from clogging too quickly, start with the cleanest water possible. If only sedimented water is available, strain it through a coffee filter or let it settle in a pot; avoid stagnant ponds as well as swiftly flowing water (the latter carries large amounts of particles). Don't draw water from the surface or let the intake hose touch bottom. Don't let the outlet hose touch anything that could contaminate it, and make sure your water containers are themselves cleaned with treated water. Finally, don't let a clinical approach to nature overwhelm you: It's a microscopic jungle out there, but these beasts are easily kept at bay. ■

REED MCMANUS *is a senior editor of* Sierra.

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Join Sierra Club 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 Sierra Club's regional, national, and international conservation campaigns, subscribe to the *National News Report*. Request a free sample issue and subscription information from the Campaign Desk at the above address.

THE SIERRA CLUB

Items in Print

The following may be ordered through the Sierra Club Store, 730 Polk St., San Francisco, CA 94109:

- *Sierra Club Mail-Order Service Guide*. A complete listing of titles available from Sierra Club Books. Free.
- *The History of the Sierra Club, 1892–1970* by Michael P. Cohen. A lively account of the Club's evolution into a national political force; $29.95 each ($19.95 for Sierra Club members) plus $5 shipping.
- *Sierra Club: 100 Years of Protecting Nature* by Tom Turner. A lavishly illustrated coffee-table book commemorating the Sierra Club's centennial; $29.95 each ($19.95 for Sierra Club members) plus $5 shipping.

Other literature of interest to Club members may be ordered from Sierra Club, Dept. SA, P.O. Box 7959, San Francisco, CA 94120:

- *Sierra Club Sourcebook*. A 48-page listing of fact sheets, films, videos, posters, and policy statements. Free.
- *The Sierra Club: A Guide*. An illustrated handbook describing the history, beliefs, and goals of the Sierra Club. Copies are $9 each for members, $10 for nonmembers.
- *The Sierra Club Centennial Photograph Album*. A brochure picturing 33 historic photographic images from the Sierra Club's William E. Colby Memorial Library and the Ansel Adams Publishing Rights Trust. The prints listed are available for purchase; copies of the brochure are $1 each.

Sierra Club Outings

The Sierra Club's National Outings Program is recreating the 1901 First Annual Outing to Yosemite Valley and Tuolumne Meadows, June 20 to 28. For more information contact the Outing Department, Sierra Club, 730 Polk St., San Francisco, CA 94109; phone (415) 923-5522. Request trip brochure #92227.

AFIELD

"Hearth & Home," page 27

Common-Sense Pest Control, by William Olkowski, Sheila Daar, and Helga Olkowski (The Taunton Press, 1991). An encyclopedic IPM reference.

Tiny Game Hunting: Environmentally Healthy Ways to Trap and Kill the Pests in Your House and Garden, by Hilary Dole Klein and Adrian M. Wenner (Bantam Books, 1991). Folksy, amusing and informative, with emphasis on practical household remedies.

"Body Politics," page 29

To have someone evaluate the air quality in your building, contact the American Industrial Hygiene Association; phone (216) 873-2442.

"Good Going," page 34

Educational and interpretive programs at Glacier National Park are available through the Glacier Institute, P.O. Box 1457A, Kalispell, MT 59903. General information for visitors to the area may be obtained from Glacier Country Regional Tourism Commission, 945 Fourth Avenue E, Suite B, Kalispell, MT 59901; phone (800) 338-5072.

Montana Wolf Recovery. An occasional newsletter from the U.S. Fish and Wildlife Service in Montana, available through Ed Bangs, USFWS, 301 S. Park, Box 10023, Helena, MT 59626.

DEPARTMENTS

CLUBWAYS

Sierra Club Archives, page 20

For information on how to search for selected materials in the Bancroft Library's Sierra Club holdings, contact the reference desk at (510) 642-6481 or visit the library's Heller Reading Room on the U.C. Berkeley campus.

Beginning in June 1992, the U.C. system's computerized library catalog, MELVYL, will reference the Bancroft's Sierra Club collection. The catalog can be called up at selected terminals on all University of California campuses. Nationwide, the catalog is accessible on-line at libraries subscribing to the Research Libraries Information Network (RLIN) or the National Union Catalog of Manuscript Collections (NUCMC).

One significant collection—John Muir's—resides not at the Bancroft Library but at the Holt Atherton Center for Western History. For information contact Daryl Morrison, Holt Atherton Center, University of the Pacific, Stockton, CA 95211; phone (209) 946-2404.

A small portion of the Sierra Club Archives, including many black-and-white photographic prints, is held at the Sierra Club's William E. Colby Memorial Library. For more information contact Phoebe Adams, Colby Library, Sierra Club, 730 Polk St., San Francisco, 94109; phone (415) 923-6666.

PRIORITIES

Hickel, page 38

Alaska residents may obtain recall petitions from the Hickel/Coghill Recall Campaign, P.O. Box 22825, Juneau, AK 99802. Concerned citizens anywhere may contribute to the effort.

For more information on Alaska environmental issues, contact the Sierra Club Alaska Office, 241 East 5th Ave. #205, Anchorage, AK 99501; phone (907) 276-4048.

Greens, page 44

The California Green Party can be reached at 1007 7th St. #500, Sacramento, CA 95814; phone (916) 448-3437. Information about Green groups in other parts of the country can be obtained

from The Greens Clearinghouse, P.O. Box 30208, Kansas City, MO 64112; (816) 931-9366.

For more in-depth news and analysis, subscribe to the quarterly *Green Letter*, available for $10 a year from the Green Letter Collective, P.O. Box 14141, San Francisco, CA 94114. If you find that too tame, try *Left Green Notes*, published by the Left Green Network, P.O. Box 366, Iowa City, Iowa 52244.

FEATURES

Sierra Nevada, page 76

If you are a Sierra Nevada activist—or want to become one—write to the Sierra Club's Sierra Nevada Biodiversity Task Force, c/o Joe Fontaine, P.O. Box 307, Tehachapi, CA 93561.

Write your senators and representative to urge that protection of the Sierra be included in any ancient-forest legislation in Congress this year. To volunteer to help the ancient-forest campaign, write to the Sierra Club's Northern California/Nevada Field Office, 4171 Piedmont Ave., Suite 204, Oakland, CA 94611. A book detailing the Club's vision, *California's Ancient Forests: A Grassroots Proposal for Ancient Forest Protection*, is available for $2 from that office.

A Forest Service–sponsored conference, "Giant Sequoias: Their Place in the Ecosystem and Society," will be held June 23–25 at the Visalia (California) Convention Center. Call the agency's regional office for more information: (415) 705-2874.

Conservationists hope to hone solutions at the "Sierra Now" conference Aug. 7–9 at the Sacramento Convention Center. For information, contact Wiltshire Associates at 116 New Montgomery, Suite 220, San Francisco 94105.

Copies of the *Sacramento Bee* series, "Sierra in Peril," are available for $2 from the *Bee*'s Metro Desk, attention: "Sierra in Peril," P.O. Box 15779, Sacramento, CA 95852.

The Sierra Nevada: A Mountain Journey, by Tim Palmer (Island Press, 1988). Comprehensive information about the Sierra, its people, and its problems is woven into the tale of an epic hike along the spine of the range.

The Sierra Club Naturalist's Guide to the Sierra Nevada by Stephen Whitney. A standard handbook to the region, $24.95 ($22.45 for Sierra Club members), cloth; $14.95 ($13.45 for members) paper, available from Sierra Club Store, 730 Polk St., San Francisco, CA 94109. Add $5 shipping with each order. ■

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We were camped at a lake in the Barren Lands of the Northwest Territories. We'd been looking for wildlife, hoping especially to see the hump-shouldered, short-legged musk-oxen. On our last day I was moving some canoes back to base camp when one of our group came running to tell me that a small herd of the massive animals was *in our camp!* I quickly ran back to see for myself.

By then the musk-oxen had wandered onto a peninsula in the lake. Since they hate to swim, we knew they'd have to return through camp, so we stationed ourselves behind what little grassy cover there was near the lakeshore and, with binoculars and cameras in hand, lay waiting. In less than an hour they were within shutter range, and all of us were happily clicking away. Suddenly they sensed our presence, spooked, and began running. They stampeded past us, rumbling and shaking the ground. After they disappeared in the distance, no one spoke for at least ten minutes.

Carol Dienger
Palo Alto, California

As a lad of 12, I accepted an invitation to go on a Club-sponsored canoe trip in northern Maine. My host chose to guide our canoe down rapid watercourses by standing in the rear and planting a long staff downstream, first to the right, then to the left. The bow would swing one way, then another. As I sat in the middle of the craft, the pole occasionally struck me an unwelcome blow from astern. Had this punishment continued, I might have developed an unhappy feeling about the Club. Fortunately our canoe chanced upon another that had gotten trapped sideways in an eddy. We struck this vessel amidships, and, with a splintering crack, both canoes sank. I received a soaking, but my spirits were lightened, and to this day, a score of years later, I remain a Club enthusiast.

Jonathan Stoke
Hailey, Idaho

It was showdown time on the House floor as the final votes were being cast on the Clean Air Act. All night long our champion, Representative Henry Waxman, had negotiated with John Dingell, our nemesis. As the Club's midwestern staff director, I lobbied representatives from my region, then joined Jim Price, my Club colleague from the Southeast, in the Speaker's Gallery.

Directly below us, Dingell Waxman, and their staffs were negotiating intensely. House Speaker Tom Foley joined them. He spoke briefly with Dingell, turned to Waxman, spoke briefly with him, shook his hand, and turned away. Jim and I instantly looked at each other, our eyes flashing with the mutual recognition that a deal had been cinched. We had won! The Clean Air Act would pass within hours.

Carl Zichella
Madison, Wisconsin

Our soggy backpack group arrived at a ranger station on the lower Kern River in the Sierra. A Forest Service trail crew was holed up there as well, and their packer lit a warming fire for us. We stumbled through camp songs until one quiet trip member borrowed the mule skinner's guitar and sang a melodious "Bridge Over Troubled Waters." That beautiful, emotional song stilled us all. Finally the trail boss offered to give us his mule skinner, if we'd hand over our singer.

Louise "Letty" French
Upland, California

Recently I worked with the Sierra Club's Central Delaware Valley Group to block construction of an incinerator. An EPA official had assured community leaders that the incinerator would be licensed if they signed disposal contracts, which they seemed inclined to do. After extensively studying the project's technical specifications, our group found millions of dollars in hidden costs. Presented with this evidence, the officials postponed their vote. I now know how a goalie must feel when he blocks a shot.

George S. Emmons
Newtown, Pennsylvania

In 1947 I was a new Sierra Club member with no real appreciation of what wilderness was all about. On a High Trip that year, I had the good fortune to meet and hike for several days with the late Lewis Clark, who was then a Club director and would become its president two years later. He taught me what the Sierra Club was and still is about: the ideals, ideas, dedication, and hard work required to enable my grandchildren and their children to have the kind of wilderness experiences that Clark and I had.

L. Wheaton Smith
Palo Alto, California

It seemed hopeless, trying to stop Mineral King Valley from being turned into a Disney ski resort. As part of the Sierra Club effort to protect this gem of the western Sierra slopes, I gave talks and slide shows to numerous groups in Southern California. Often the response was that "Mineral King can't be saved. Economic interests are just too strong." But we prevailed: The day came when Congress passed a bill making Mineral King a part of Sequoia National Park.

J. Douglas Dancer
Lebanon, Oregon

When I first started to work for the Sierra Club, I was in awe of its leaders and professional staff. I wanted to emulate their confidence, but was afraid to speak up in front of a group of more than three people. Little by little, though, I crawled out of my cocoon, until finally the Club's Mother Lode Chapter asked me to give the keynote speech at its annual meeting. I found myself before a large and attentive audience that even laughed when I made jokes. Afterward, strangers told me how much they had enjoyed my talk. My metamorphosis is complete. From the insecure caterpillar I once was, there has emerged—mature, professional, competent—a ham!

Pam Brodie
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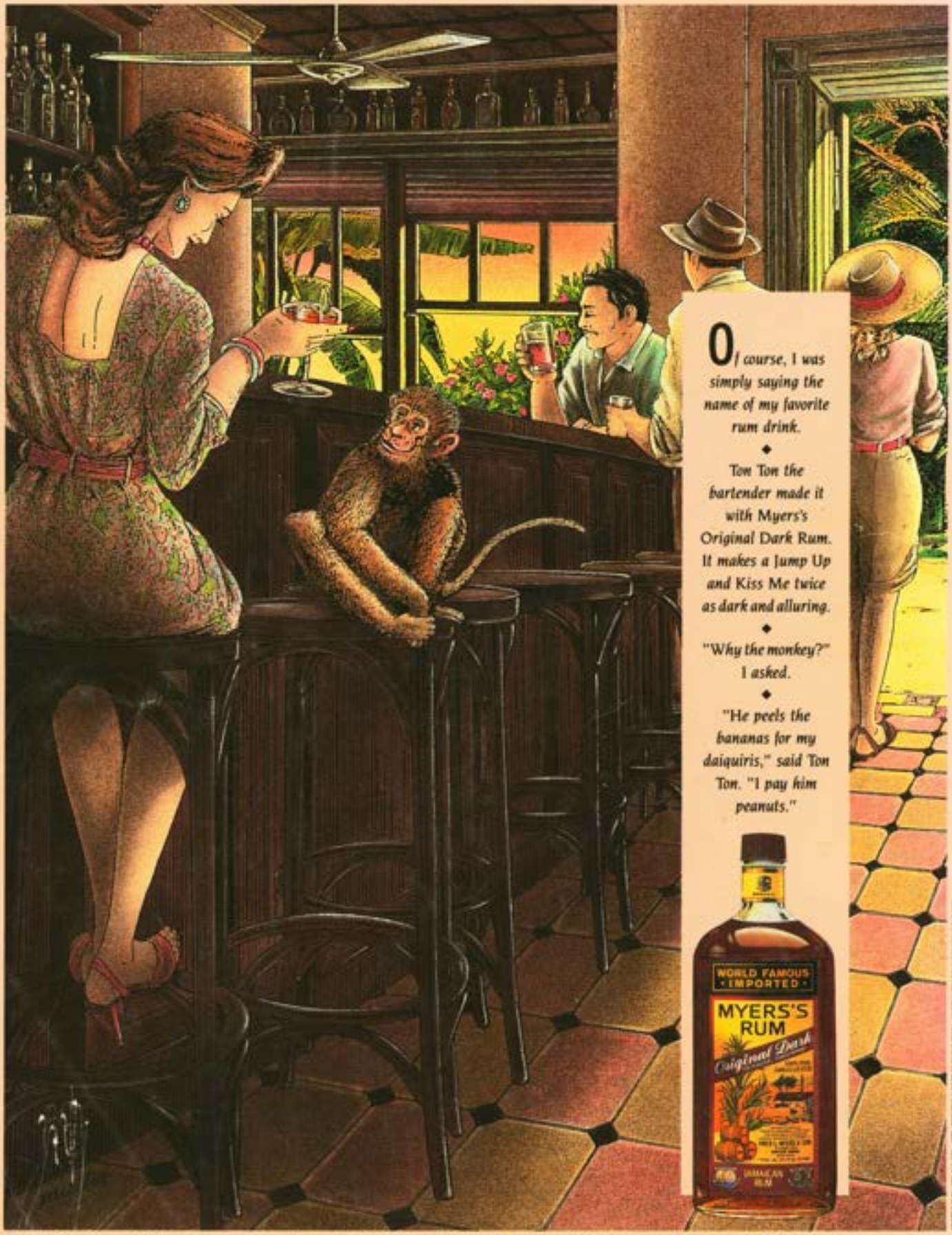

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