INSIDE: SIERRA CLUB SPRING OUTINGS 1995

SIERRA

THE MAGAZINE OF THE SIERRA CLUB • NOVEMBER/DECEMBER 1994

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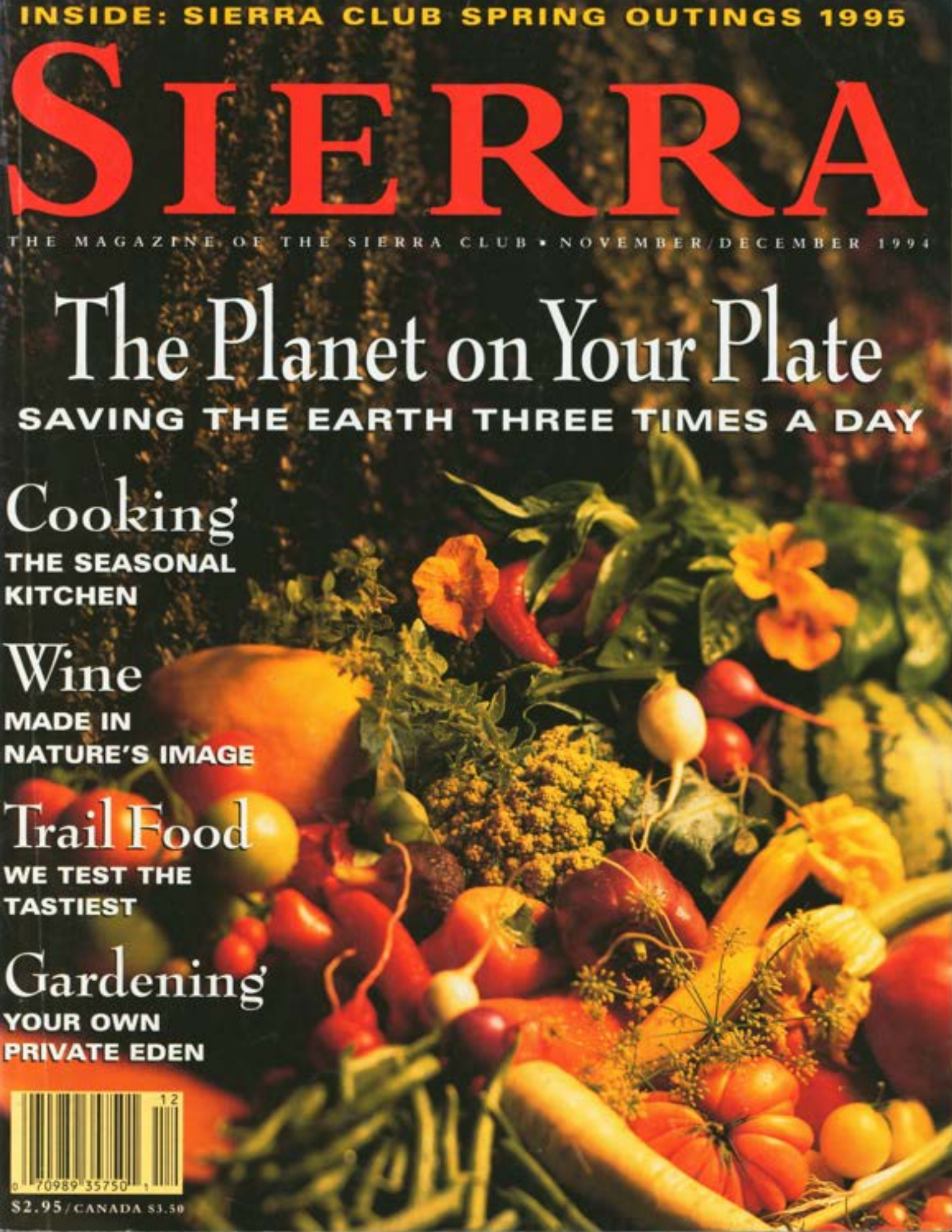

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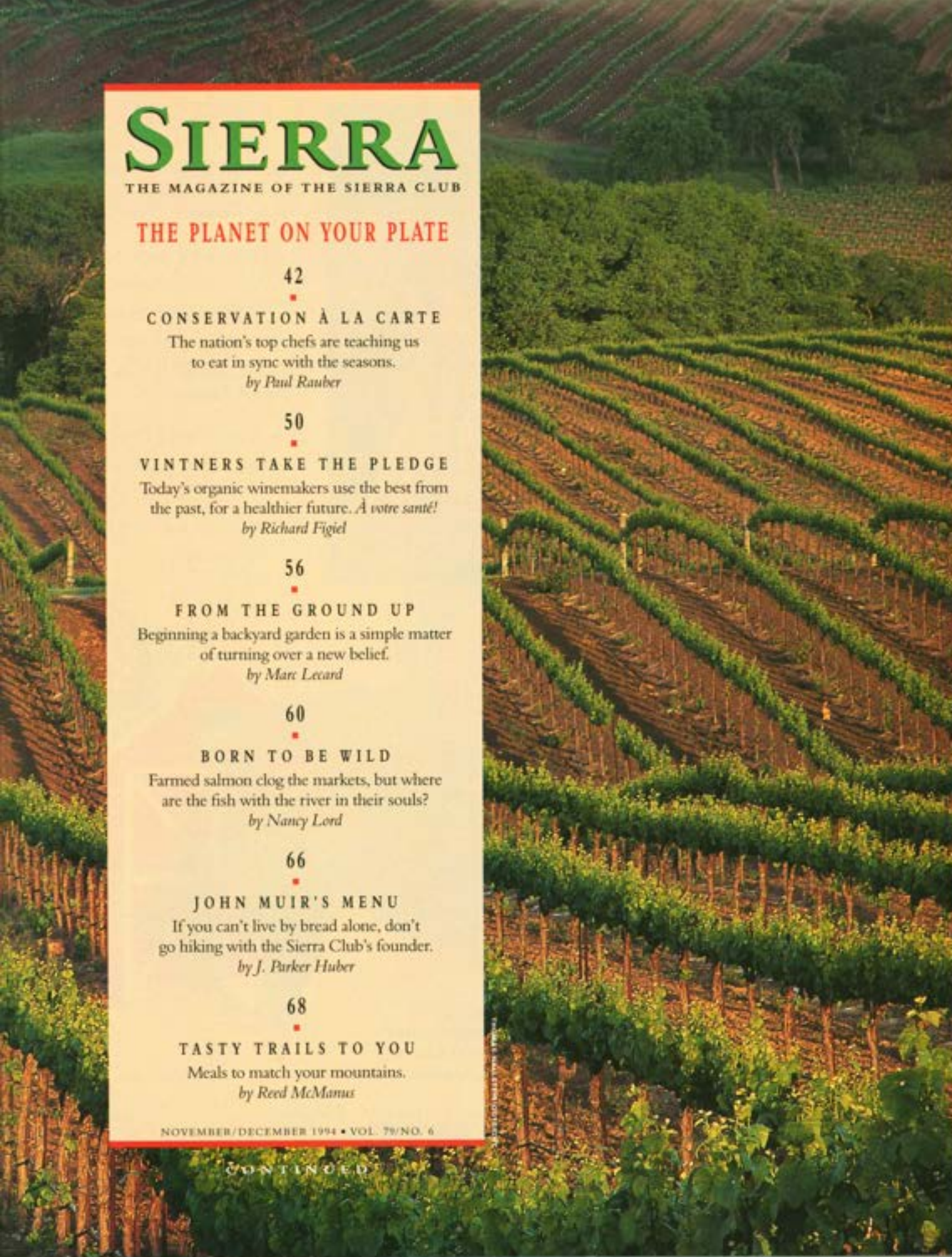

SIERRA

THE MAGAZINE OF THE SIERRA CLUB

THE PLANET ON YOUR PLATE

NOVEMBER/DECEMBER 1994 • VOL. 79/NO. 6

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SIERRA

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AFIELD

DEPARTMENTS

COVER
A farmers'-market harvest. Background: Pomponio Creek Farm, San Gregorio, California
Photo by Joyce Oudkerk Pool / Styling by Pouké

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THE SIERRA CLUB

BULLETIN

THE NEWS FORUM FOR SIERRA CLUB MEMBERS

Private Greed vs. the Public Interest

The 'Takings' Crusade—Or, Patriots for Pollution

Under the guise of defending private property, polluters have taken the offensive against the environment.

by B.J. Bergman

From the flag-waving, Constitution-thumping, Redcoats-are-coming rhetoric of its backers, you might think the "prop" in Arizona's upcoming "Prop. 300" referendum stood for "property rights."

Listen closely, though, and you'll hear the unmistakable sound of the radical right, the pollution lobby, and the cunningly named Wise Use movement—"prop" as in "propaganda"—chipping away at public-interest protections ranging from neighborhood zoning rules to the federal Endangered Species Act.

In fact, environmentalists warn, the Arizona measure and others like it form the wedge in a widening assault on America's legislative landscape. Their trepidation is shared by many beyond the environmental community. Proposition 300, asserts Tucson's leading newspaper, "is about giving cattle, timber, and agribusiness interests a bulldozer to flatten environmental, consumer, and public health-and-safety laws."

Moreover, this gilt-edged gift to special interests—called, with no trace of irony, a "takings" bill—could mire the state in millions of dollars of new costs and a virtually endless stream of red tape.

Never heard of takings? Just wait. The "property rights" bandwagon-cum-bulldozer is on the move. And wherever it may turn up, from the Copper State to Capitol Hill, takings legislation is a polluters' dream, say opponents, and "a taxpayers' nightmare."

Reagan, Radicals, and Repackaging

The takings crusade—like the Wise Use movement itself, from which it draws both shock troops and inspiration—has found that populism, even the synthetic variety, sells. Its mantra, "private property rights," is fast becoming a favorite of conservative politicians. Leaders of the congressional choir include Rep. Billy Tauzin, a Louisiana Democrat, and, in the Senate, Republican presidential hopefuls Phil Gramm and Bob Dole.

And what vile beast have they discovered trampling America's property rights? As takers describe it, the hydra-headed menace is the sum of public-interest laws and regulations—not to mention public agencies charged with implementing them, or grassroots organizations, including the Sierra Club, working to ensure their enforcement—in these United States.

"Takings advocates pretend they're defending mainstream American values, but they're really out to subvert them," notes Joni Bosh, an Arizona activist and member of the Sierra Club's national Board of Directors. "Americans value fairness, a balance of competing interests, being a good neighbor. Property-rights absolutists don't seem to understand that paving a wetland on their land might cause flooding in my living room, or that my kids might have to breathe toxic fumes

continued on page 8G

Taking the Fifth, Wise-Use Style

Takings advocates base their case on 12 words in the Fifth Amendment: ". . . nor shall government take private property for public use without just compensation."

But takings bills, environmentalists say, stretch that constitutional protection far beyond what the Supreme Court, in more than 70 years of rulings, has interpreted it to mean.

"The takings offensive is about politics, not jurisprudence," says Alex Levinson, coordinating attorney for the Sierra Club. "Private property rights are already fully protected by the Constitution and the courts, as takings proponents know perfectly well.

"What the Wise Users are really doing is wrapping themselves in the Constitution in hopes of sabotaging the public's ability to protect the environment."

Takings advocates' arguments have consistently been

continued on page 8G

Help shape the Sierra Club's future.

See member poll, page 8E.

Don't Get Mad, Get Even!

EDITORIAL

Whatever happened to government "of the people, by the people, and for the people"?

by Bruce Hamilton
Director of Conservation

The 1992 election of Bill Clinton and Al Gore and a Congress with lots of new faces gave environmentalists high hopes that 12 years of "greedlock" would end.

The Sierra Club drafted an ambitious agenda for these critical times—ranging from reforming the antiquated 1872 Mining Law, to taking the steps necessary to curb global warming, to promoting environmental justice by strengthening the basic environmental laws that protect our air, water, and communities.

But now, two years later, little has been accomplished and much valuable time has been lost. This year, the Senate took up the Safe Drinking Water Act, enacting provisions that will make the public's vital drinking-water supplies less safe and the public less well-informed of probable contamination. Meanwhile, in the House, opponents of the existing Safe Drinking Water Act, Clean Water Act, and Endangered Species Act rallied sufficient support for bills that would so seriously weaken these laws that our allies decided to postpone taking any of them up in this Congress. Even bills as simple as establishing a new National Biological Survey or elevating the EPA to Cabinet-level status have been thwarted by anti-environmental forces.

While we have environmental champions in the Congress, there is not a reliable working majority that we can count on to cast green votes. One obvious problem is the power of money: It is the rare politician who doesn't get the vast majority of his or her campaign funds from large corporate political-action committees interested in promoting their special-interest agendas.

In the state capitals as well, business interests have bankrolled efforts to gut environmental programs. Our state-level volunteer and staff lobbyists now spend most of their time defending existing environmental-quality and public-safety programs. "Takings" legislation has been introduced around the country that would effectively require government to pay businesses if regulations designed to protect public health, environmental resources, or neighborhood quality of life would limit their profits. Governors and legislators willing to stand up to these privateers are few and far between—and where they exist, their opponents' campaigns to defame and unseat them are funded by the same interests who claim they don't have enough money to comply with existing laws.

We established the Sierra Club Political Committee to fight back. As the largest grassroots environmental political committee, SCPC works to educate the public about the environmental positions and records of incumbents and challengers, provides campaign contributions to select candidates in key races, and mobilizes volunteers to join electoral campaigns.

You can do a number of things to help SCPC in its work. The primary resources you have to offer are your time and commitment, and your financial support.

Consider volunteering your time to the candidate of your choice. (Let the campaign organizers know you're doing this as a Sierra Club volunteer.) You can also contact your Club chapter to find out how to participate in a local campaign. They may have a Club phonebank or get-out-the-vote effort.

Financially, you can send a contribution to the Sierra Club Political Committee, which will make sure it is put to the best use. (Make checks payable to Sierra Club Political Committee, and mail to Sierra Club Political Desk, 730 Polk St., San Francisco, CA 94109.) Or send a contribution directly to the candidate of your choice—but please include a note mentioning that you're a Club member who is donating because of the candidate's environmental commitment. This reinforces the message that being good on the environment is good politics!

Realistically, there is no way we can hope to match the money that big business lavishes on elections through its own PACs, so we must make up the difference through citizen action. But where are the American people in this battle? Anti-government forces claim to be riding a tidal wave of public sentiment in favor of reduced environmental protection—even though opinion polls show just the opposite. The public doesn't want to see environmental laws dismantled; it's even willing to pay more, if necessary, to preserve and expand these programs. But somehow this overwhelming public sentiment in support of the Sierra Club's agenda is not translating into political clout.

Public opinion is on our side, but public activism is not. That's why the biggest threats we face today come not from big business and the so-called Wise Use movement, but from growing public apathy and the commonly held belief that the voice of the common citizen cannot be heard over the clinking of special-interest money.

Politically active public-interest groups like the Sierra Club represent this nation's last, best chance to restore a responsive government "of the people, by the people, and for the people." If you're worked up about the way government doesn't seem to represent the public anymore, you have the power through the Sierra Club to do something about it. The Sierra Club Political Committee and the country need your active engagement in the political process now more than ever before.

Volunteer
SPOTLIGHT

Activist CEO Spreads the Club "Gospel"

by Amy Wilson


Harry Dalton

Harry Dalton traces his interest in protecting the environment to a three-week camping trip he took in 1974 through the Rocky Mountain high country with four teenagers, two of them his children. Along the trail, the young people began asking questions about environmental issues such as Americans' consumption of energy and the exploitation of natural resources.

"We sat around a campfire, with the kids lined up on one log and me on another, debating these questions," says Dalton. "I had a lot of difficulty answering many of them."

Those conversations—and the example set by his wife, 'Becca, who was concerned about the health of the environment—sparked what has become an enduring commitment to the preservation of the Earth.

In 1976 the Daltons joined the Sierra Club's South Carolina Chapter, becoming active in the Henry's Knob group. "I liked the idea that the Club would allow me to participate to any extent I wanted," says Dalton. "With the Club, I can go as far and do as much for the environment as time and money and bylaws permit."

Although he never dreamed he'd be a national leader, Dalton eventually served in "most of the key positions" at the local level, then made the transition from group to chapter chair. Dalton's focus—drawing on his business experience—was to help the Club in the administrative, fundraising, and political arenas.

A chief executive with a paper company whose products are made entirely from post-consumer waste, Dalton worked at building ties between industry and the environmental movement.

His stature as a prominent businessman also helped Dalton bring the voice of the Sierra Club into the political arena—and, over the years, establish strong bonds with legislators at the state and national levels.

Dalton now writes or calls elected officials at least once a week and responds to most activist alerts that reach him through the Sierra Club's electronic-mail system. "I try to do this religiously," he says. "It's one of the best ways to help the environmental community."

Grassroots activism is just one facet of Dalton's commitment to the health and effectiveness of the Sierra Club. Because of his business leadership and knowledge of fund development, he was asked to serve on the Club's Finance Committee in 1992 and to co-chair the Centennial Campaign Steering Committee in 1993. And his effectiveness at "spreading the Sierra Club gospel" by reaching out to others made him a natural for his position, held since 1992, as a trustee of The Sierra Club Foundation.

A recent retiree, Dalton now devotes much of his time to helping the Sierra Club develop a stronger financial base. Dalton and his wife are significant donors to the Club who hope that their continued generosity will serve as a catalyst to other potential donors—and bolster the Club's budget at the same time.

Just as his family opened his eyes to environmental problems, Dalton's overarching goal is to inspire concern for the environment in others. "Education is the key," he says. "We've got to continue to gain broad public support for environmental protection, and in turn convince our nation's leaders that we are talking about real problems."

A Multicolored Movement Springs to Life

Minority activists are changing the character and complexion of the environmental movement. Two new Sierra Club Books examine the phenomenon.

The contributors to Robert D. Bullard's *Unequal Protection: Environmental Justice and Communities of Color* ($25) range from sociologists and legal scholars to community activists and journalists. Some focus on specific communities victimized by environmental racism; others identify common themes in the struggles of diverse groups seeking to ease their toxic burdens.

Journalist Jim Schwab illumes the depth and vitality of this emergent movement in *Deeper Shades of Green: The Rise of Blue-Collar and Minority Environmentalism in America* ($30). He vividly profiles eight community activists—people devoting their lives to documenting the dangers they face, challenging the legal establishment, and eventually forcing drowsy officials to wake up and take action.

Both books are available from the Sierra Club Store by phone (Visa or MasterCard) at (800) 935-1056 or by mail from Sierra Club Store Orders, 730 Polk St., San Francisco, CA 94109. California residents, please add appropriate sales tax.

Letter from the **PRESIDENT**

Our Finances and Our Future

by J. Robert Cox

As I write this, the Sierra Club is hard at work in all 21 ecoregions of North America, pursuing its century-old goals of preserving the wild planet and protecting the environmental quality of our communities. As the lead story in this issue of *The Sierra Club Bulletin* shows, we're going toe-to-toe with the Wise Use movement over "takings" legislation in the Congress and the statehouses. After years of struggle, our public-lands activists are poised for a major success in the California desert. And, by the time you read this, our Political Committee will have endorsed approximately 225 environmentally sympathetic candidates running in the November election.

But in addition to this inspiring list of activities, I must also share with you some distressing news, and ask for your input and support in the challenging months ahead.

The Sierra Club is facing an intensified version of the financial and membership problems that have affected us for most of the period since early 1991. Though we cannot yet quantify the size of the crisis, we do know that the problem is very, very serious indeed. As soon as we have more solid information, we will share it with all our members.

In the meantime, it is clear that the Club will need to make major changes in its operations if we are to continue to focus on our core priorities and our basic conservation mission. These changes will enhance our long-term revenues while reducing our short- and long-term costs.

There are two major risks an organization facing this kind of challenge confronts.

The first is the risk of failing to respond, of allowing expenses to continue to exceed revenues indefinitely. That path leads either to bankruptcy or to an organization so crippled financially that it cannot accomplish its mission. The Club's volunteer and staff leadership are united in their commitment to avoiding this pitfall.

Club leaders have likewise been doing everything in their power to increase our income. Our Centennial fundraising campaign has brought in millions of dollars from individuals and foundations. However, our main source of revenue for Club programs—membership dues and member contributions—continues to decline.

We also implemented a series of actions to control expenses. These have included the reduction of our staff by attrition, delays in filling staff vacancies, and cutbacks in travel and other operations.

Still, this has not been enough. We can either cut all programs "across the board" (rather deeply, I'm afraid), or make some hard choices about our core priorities and which programs must be preserved and even strengthened. I believe our choice lies in the second direction. There is simply no rational choice for the Sierra Club other than to take immediate steps to reduce expenditures to a level no greater than income, and to begin to restore our financial health.

The Board of Directors, our volunteer Finance Committee, and our staff are exploring a range of options that will change the Sierra Club in major ways, affecting programs and services many of us consider fundamental to the organization. For example, we are considering a reduction in services to (and perhaps some consolidation of) the field-office system, possible sale of Club assets (funds from which would go into the Club's endowment), a smaller number of major conservation campaigns, reduction in some services to chapters and groups, further reduction of travel and fundraising costs, and other program changes. The process of review and decision-making will continue through the Board of Directors' meeting in December; changes will be reflected in our 1995 budget.

What of the second risk the Sierra Club faces? It is this: that we will deal only with the present crisis, and fail to consider our future vision and priorities. To do so would "keep us going," but to what end? An organization so philosophically shortsighted would be one capable of doing nothing well, one that has lost its sense of mission and its purpose.

Presenting coherent choices is easier than making them. The most difficult part of this task will fall to the Board of Directors. Its core governing function is to choose, and that function is very painful at times like this. The Board will want to consult broadly with the Club's leadership. It will want all the information it can obtain on the preferences and priorities of our members and our activists.

We need to know what you think. On the following pages, you'll find a questionnaire designed to help us ascertain what our members believe our most crucial priorities ought to be, and how they view their own role within the organization. For a democratic, grassroots enterprise like the Sierra Club to make the appropriate decisions about its future, a clear understanding of how each member views that future is essential. Your responses to our survey will go far toward giving us that understanding; we'll report on the results in a future issue of the *Bulletin*.

Member Survey

What does the Sierra Club mean to you? How do you view our work? What are we doing too much of? Too little of? Is being a Sierra Club member what you expected? Where do you want us to be five years from now? Are you likely to be there with us?

As the President's message (opposite page) makes clear, this is a time of decision for the Sierra Club. We're faced with difficult choices—choices that you, as a Sierra Club member, have an important role in making. Belonging to the Sierra Club means, among other things, having a voice. We encourage you to share it with us.

Please take a few minutes to fill out and return this questionnaire. We urgently want your input at this critical time. Because whatever the Sierra Club means to you, your support is vital to its future.

1) How much do you know about the Sierra Club and its goals?

____ A great deal
____ Quite a bit
____ Only some
____ Almost nothing

2) Which ONE of the Sierra Club's activities is most important to you?

____ Lobbying and influencing legislation
____ Local grassroots activities
____ Litigation and winning lawsuits
____ Educating people about the environment
____ Organizing outings
____ Other (specify)

_____

3) Which TWO of these Club priorities are most important to you?

____ Protecting wild places
____ Cleaning up pollution
____ Population stabilization
____ Ensuring safe energy/preventing global warming
____ Creating a sustainable economy

4) What is your impression of the Sierra Club's effectiveness as an advocate for the environment?

____ Extremely effective
____ Fairly effective
____ Not very effective

5) The Sierra Club is active at many levels. Please rank in order which is most important to you.
(1 is most important, 4 is least important)

____ International level
____ National level
____ State level
____ Local level

6) Do you view yourself as an active participant in the activities of the Sierra Club, or do you see yourself more as a financial supporter?

____ Participate in activities
____ Financial supporter
____ Both equally

7) If you do participate, what do you do?

____ Attend meetings
____ Volunteer on projects
____ Go on outings
____ Write letters or make phone calls to legislators
____ Other (specify)

_____

_____

8) If you do not participate, why not?

____ Not a priority
____ No time
____ Don't know how to get involved

9) Overall, do you feel more attached or committed to the national Sierra Club or to your local Sierra Club chapter or group?

____ National
____ Local
____ Both

10) From what source do you get the most useful information about the Sierra Club?

____ Local group newsletter
____ Chapter newsletter
____ *Sierra* magazine
____ *The Sierra Club Bulletin*
____ Other (specify)

_____

_____

11) How effective do you think the Sierra Club is at doing the following compared with other environmental groups?

Being effective and really making environmental progress

MUCH BETTER EVEN WITH NOT AS GOOD NOT SURE

Giving members a chance to get personally involved in local issues

MUCH BETTER EVEN WITH NOT AS GOOD NOT SURE

Keeping members informed about its major goals and projects

MUCH BETTER EVEN WITH NOT AS GOOD NOT SURE

Spending members' contributions wisely and not wasting money

MUCH BETTER EVEN WITH NOT AS GOOD NOT SURE

12) How responsive is the Sierra Club to your needs as a member?

____ Very responsive
____ Moderately responsive
____ Not responsive

13) Compared to other organizations, how would you rate your experience with the Sierra Club's fundraising efforts?

FAVORABLE ABOUT THE SAME UNFAVORABLE

Comments

_____
_____
_____
_____

14) Regardless of your current situation, do you think you will belong to the Sierra Club one year from now?

____ Definitely will belong
____ Probably will belong
____ Probably will not belong

15) How visible do you think the Sierra Club is in the media?

National

VERY VISIBLE SOMEWHAT VISIBLE NOT AT ALL VISIBLE

Local

VERY VISIBLE SOMEWHAT VISIBLE NOT AT ALL VISIBLE

8F

16) From what media do you get most of your information about the environment?

(check as many as apply)

____ Network TV
____ Cable TV
____ Radio
____ Newspaper
____ News Magazines
____ Other (specify)

_____

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Alita Paine, Director of Outreach
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San Francisco, CA 94109

Takings
(FROM PAGE 8A)

from their unregulated smokestacks.

"The takings campaign has nothing at all to do with the property rights of American homeowners, of people like you and me," says Bosh. "It has even less to do with my rights as a parent, a citizen, and a taxpayer. It has to do with polluters and developers coming in the back door to undermine environmental laws meant to keep them from acting recklessly."

After the developer-controlled state Legislature passed a takings bill, however, activists waged a successful campaign to place the measure on the ballot. "The taxpayers," Bosh says, "are fighting back."

Like its counterparts nationwide, Arizona's Prop. 300—officially, the State Regulatory Takings Act—has its origins in the Reagan Justice Department. On March 15, 1988, Ronald Reagan signed Executive Order 12630, which called on federal agencies to assess the "takings implications" of proposed policies and actions. The object, it said, was to protect the rights of property owners under the so-called takings clause of the Fifth Amendment, which states: ". . . nor shall government take private property for public use without just compensation."

Charles Fried, the president's solicitor general, saw a darker motive. Reagan's ides-of-March directive, Fried later wrote, was part of a "quite radical project" designed to "use the takings clause of the Fifth Amendment as a severe brake upon federal and state regulation of business and property."

Six years later, that "radical project" is being sold to unwary voters, as well as elected officials—many of whom know better, or should—as a grassroots defense of besieged private-property rights. In truth, counter environmentalists, polluters have simply found a new, more deceptive package for their arrogant offensive against public health, public safety, and public lands.

Taking Till It Hurts

Today's new-and-improved takings provisions come in two basic flavors.

"Assessment" measures, modeled on Reagan's executive order, would subject virtually all government actions to costly, bureaucratic reviews of their supposed takings implications, effectively freezing them until the reviews were completed.

"Compensation" measures, such as one offered by Tauzin, require payment whenever government actions may limit landholders' future development of their property—even when, as in the case of wetlands, such action is needed to preserve a vital ecological resource.

Both forms of takings bills, agree environmentalists, mean more bureaucracy, higher costs, and ever-tighter constraints on our ability to protect public health and safety.

Bruce Hamilton, the Sierra Club's national conservation director, calls takings measures "anti-environment, anti-taxpayer, anti-public, and anti-democratic."

"It's not a question of 'takings,'" says Hamilton. "It's a question of *taking*. The industries bankrolling these efforts have taken from us for years. They've taken billions in taxpayer subsidies. They've taken publicly owned land and minerals. They've taken the quality of our air and water. Now they're playing the victim. We can't let them get away with it."

More than 40 states have had takings bills introduced since 1992, and at least nine such bills were introduced in the U.S. Congress during the past year.

Debbie Sease, the Sierra Club's legislative director, adds that some of our most important environmental laws, including the Endangered Species Act, are being targeted for destruction by the takings crusade.

"Takings has cropped up more and more during the 103rd Congress," notes Sease, "and it's already derailed some important initiatives. The other side thinks it's found the magic potion in its war on the environment. They'll keep going to the well until it dries up."

At the state level, at least, the record is encouraging: Of the 40 states to have considered them, only 10 have passed takings bills, most of them relatively toothless. The vast majority of state legislatures have rejected takings bills outright. In Arizona—among the first states to approve one—activists gathered enough signatures to place the measure on the November ballot; they hope voters will vigorously reject the bill.

Bosh, a leader of the "No on 300" campaign, says the outcome is too close to call.

"We've got truth, logic, and the public interest on our side," says Bosh. "They've got money, influence, and a catchy, deceptive slogan. It remains to be seen whether we can make our message heard.

"Win or lose, though, the takings campaign is not going away. Whatever happens in Arizona, this is an ongoing battle, with key federal laws as targets. We need to stop it not only state by state, but at the national level. Everything we care about—from public lands to endangered species to the health of our kids—hangs in the balance."

Taking the Fifth
(FROM PAGE 8A)

shot down in the courts. It is precisely the weakness of their legal case, Levinson says, that has caused anti-environmentalists to lobby legislators to effectively rewrite the Constitution in ways more favorable to polluters.

Until a 1922 Supreme Court ruling, the Fifth Amendment's takings clause was interpreted to apply only when the government, exercising its right of eminent domain, physically appropriated and took ownership of private property. The court said in 1922 that compensation is required for "regulatory takings" as well.

At no time, however, have the courts come close to embracing the absolutist claims of the takings campaign.

"This has nothing to do with property rights, or the Fifth Amendment to the Constitution," Levinson says. "This is a political war against environmental, health, and safety protections on which all Americans depend."

Ecoregion ROUNDUP

In 60 chapters and hundreds of local groups spanning 21 ecoregions and two nations, Sierra Club members are hard at work for a healthier planet. What follows is a small sampling of recent activities.

To share news from your ecoregion, send it to the* Bulletin *c/o the Sierra Club, 730 Polk St., San Francisco, CA 94109.

Atlantic Coast

RHODE ISLAND Since August, Sierra Student Coalition activists have been bringing the SSC's Lead Poisoning Prevention Campaign to pre-school and nursery-school parents through slide shows and pamphlets. The Sierra Club is the only environmental organization to reach at-risk populations through programs at the schools they attend.

CONNECTICUT Volunteers this fall coordinated the third annual Connecticut Inner City Outings Science Weekend, an event designed to give disadvantaged youth the opportunity to learn about careers in the environmental sciences.

American Southeast

GEORGIA The Sierra Club joined other environmental groups in filing suit to prevent the University of Georgia regents from leasing a prime parcel of coastal land to the Savannah Sailing Center. The center plans to develop a yacht harbor at Priest's Landing, which is habitat for the endangered wood stork and other wetlands-dependent species.

FLORIDA Club leaders convened a Local Carrying Capacity workshop in Miami this fall for citizens concerned about the effects of population growth on South Florida's environment.

Great Lakes

WISCONSIN Eighty Sierra Club volunteers joined together to clean up the banks of the Fox River. One hundred bags of debris were removed from nine locations along the river.

Great North American Prairie

TEXAS An activist-training workshop was held in Austin by trainers from the regional conservation committee. Activists learned about Club resources such as publications, policies, and training manuals. Other topics included lobbying legislators and organizing letter-writing, media, and issue campaigns.

Great Northern Forest

VERMONT The Sierra Student Coalition held its fourth annual High School Environmental Leadership Training Program, a five-day event designed to give prospective high-school activists from all over the country the skills and opportunities they need to get involved in the environmental movement.

Hawai'i

OAHU The Sierra Club cosponsored a state conference on ecotourism, where activists educated industry entrepreneurs about a variety of topics such as natural-resources management, land-use policy, and public planning.

Pacific Coast

CALIFORNIA Staff and volunteers have established the Coast Watchers Network, a Club subsidiary, to educate activists about coastal issues and provide up-to-date information on the status of regulations and other pending actions. The group recently published an activists' manual about protecting coastal-zone resources and public beach access in California.

Pacific Northwest

IDAHO In a campaign to stop the creation of an Air Force bombing range in the Owyhee Canyon, Boise activists mailed thousands of alerts to residents of Idaho, Oregon, and Nevada; placed newspaper ads in Boise; put up displays on city billboards; and devised and distributed 25,000 doorhangers that incorporated ready-to-mail postcards to federal officials.

WASHINGTON Urban youth from the Seattle area and Sierra Club volunteers are building and selling bat houses in cooperation with the nonprofit group Bat Conservation International. The project raises money for the Club's Inner City Outings program while promoting preservation of the forest and cave ecosystems that bats inhabit.

BRITISH COLUMBIA After years of work to preserve Western Canada's ancient temperate rain forests,

Sierra Club activists here are celebrating the recent government-ordered protection of the Khutzeymateen grizzly bear sanctuary in northwestern British Columbia and the Kitlope Valley watershed, one of the largest temperate rain forests in the world.

Southern Appalachian Highlands

NORTH CAROLINA The local Club chapter co-sponsored a Durham conference and workshop titled "Endangered Species Law: Time to Act." The conference opened with a speech by Sierra Club President Robbie Cox and included presentations on "takings" law, the Endangered Species Act, and working with the media. Nearly 100 people attended.

Southwest Deserts

ARIZONA In a victory for Sierra Club activists, a federal judge has blocked construction of a large binocular telescope at the University of Arizona's Mount Graham International Observatory, habitat for the endangered Mount Graham squirrel as well as other threatened species.

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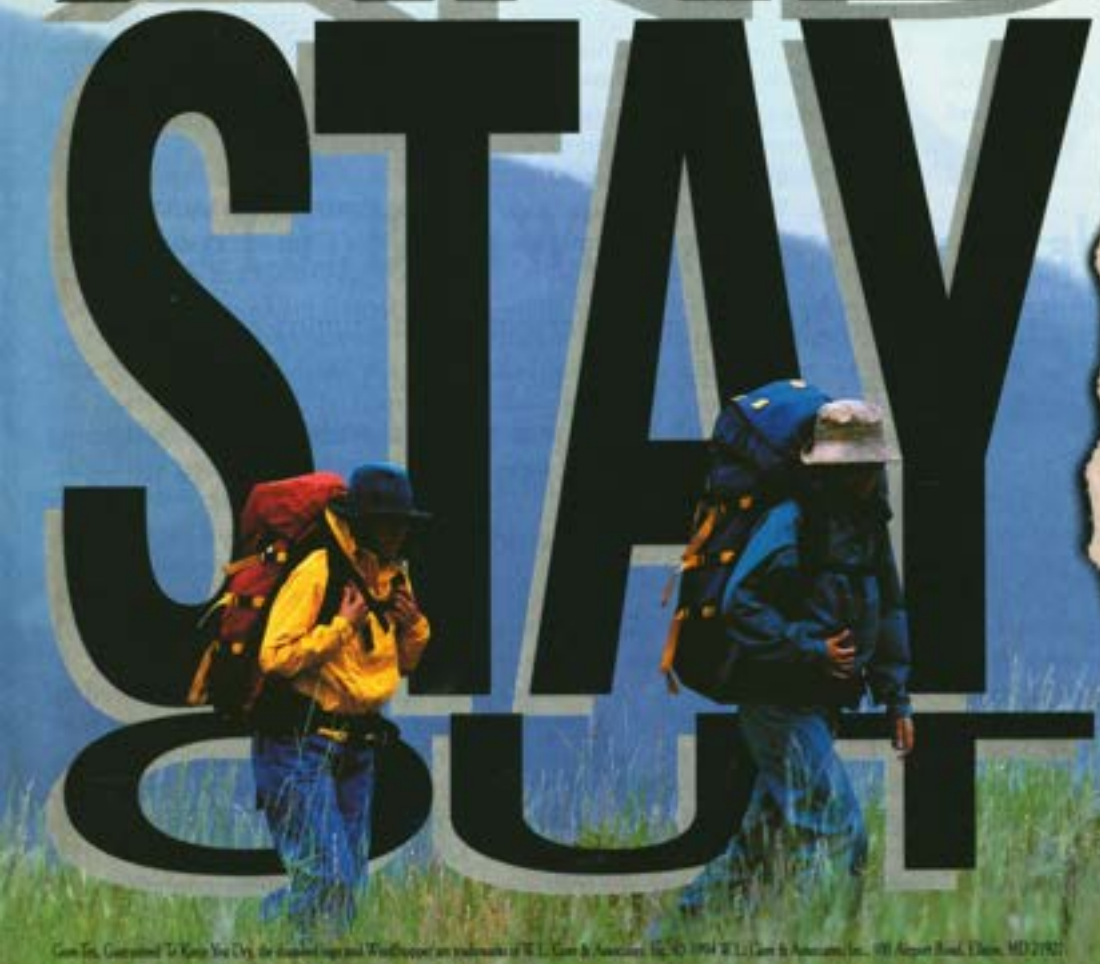

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LETTERS

FRIENDS IN HIGH PLACES?

Joan Hamilton's assessment of the current Interior Secretary ("Babbitt's Retreat," July/August) is disturbing but not surprising. It also provides a textbook lesson in democracy.

When I studied political science in college in the late 1960s, the professor remarked that noisy and well-organized minorities often get their way in a democracy. I suspect that if environmentalists were as involved and committed as, for example, the Christian right, we would have better luck in Washington. We can't just vote every two, four, or six years and then sit back. If we are to be successful, we have to be as involved, committed, and persistent as our opposition.

Robert Handelsman
Evanston, Illinois

I'm amazed that the Sierra Club could be so critical of the best friend it has in Washington. After all the battles the Club has had to fight over the past 100 years, did you really think Clinton and Babbitt were going to waltz in and clean up Dodge?

Ron Cooper
Sergeant Bluff, Iowa

We have made a very big mistake in assuming that Bruce Babbitt and Bill Clinton are our friends. Because development interests control the United States, no administration will ever be our friend.

The greatest threat to the rural West today is real-estate and resort development. In principle, sustainable ranching and timber operations in the West could support small communities having no propensity toward explosive growth. On the other hand, resort communities must, by their very nature, expand, since most of their year-round residents are employed in the real-estate and/or construction industries. Towns like Vail/Beaver Creek and Telluride are turning into rapidly growing "cancer cells" in the mountains.

As bad as it may sound, a clearcut forest or overgrazed meadow has a reasonable chance of recovering; such harmful practices can even be eliminated. But once a large tract of rural land has been developed into hundreds of vacation homes and a golf course, the destruction is irreversible. Any policy (e.g., higher grazing fees) that accelerates this process by encouraging rural people to sell their land is a mistake. If the "New West" means the mountains are to become a big country club for the rich, I'll take the Old West any day.

Gregory A. Voth
Wallingford, Pennsylvania

The issues seem clear: How much control of land should be exercised by the owner, and how much exercised by a detached person, acting for the interest of the populace generally?

There is a belief among landowners everywhere that environmentalism is the rider on the horse of socialism. Neither your article, your magazine, nor your movement cares to countenance or consider the losses a successful environmental movement would cause affected individuals or society generally. Was it your own Aldo Leopold who said environment is important only after stomachs are full?

God bless and allow us full stomachs, beautiful sunsets, clean water, pure air, and the leisure time to reflect and create. But the day the populace goes to the store and there are no tomatoes, there'll be hell to pay. Bruce Babbitt has learned this.

Edward S. Clark
Merritt Island, Florida

The obvious hole in Clinton's Interior Department is a complete lack of "biological correctness." If activities such as grazing are tearing up the public lands, then said actions must go. Period. The same applies to all other extractive uses. Apply sound biology per ecosystem to the equation, *then* ask political questions.

As for those few citizens who claim a "right" to continue their ancestors' cowboy/rancher/miner lifestyles: bullshit! My ancestors owned slaves here in Alabama. Should I be sobbing to Congress that I want the family's slaves back, as a matter of historical imperative, because great-granddaddy did it? It's the same argument, and it stinks.

Until Clinton *et al.* evolve some semblance of a spinal column, the rest of us should not be surprised at the current administration's willingness to sell out America's wild for a few votes and a bushel of bucks.

Pete Jones
Birmingham, Alabama

Cancel my membership! The hatchet job on Bruce Babbitt was overdone; it was also a stupid and unproductive way to achieve environmental goals. There are plenty of polluters and despoilers to attack: Why pick on someone as environmentally sensitive as Babbitt?

Roger Knutson
Lake Oswego, Oregon

SAFE DRINKING WATER

As a Sierra Club member since 1981 and general manager of one of the nation's largest public-water utilities, I read "Tapwatergate" by Carl Pope ("Ways & Means," July/August) with great interest. I fully understand the Club's advocacy role, and I also know that actions by legislators, regulators, and local officials can be viewed differently through different sets of eyes. However, I cannot understand the inclusion of outright falsehoods in a written communication from the Club's executive director.

Pope asserts that the bill passed by the Senate (S.2019) as well as the Slattery/Bliley bill being considered by the House (H.R.3392) would "mean that water agencies would no longer have to test public drinking water for safety"; would eliminate public notification ("if

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they do find the water is not safe, they would not have to tell the public"); and would allow water agencies to avoid the use of "easily affordable technology" to make the water safe. These statements are completely untrue, as Pope would learn if he would peruse the text of S.2019, which passed the Senate by a vote of 95 to 3.

While his article purports to be a discussion of the "unfunded federal mandates" issue, Pope spends little energy shedding light on this subject, preferring to mischaracterize the new legislation and making completely unsupported assertions about use of bottled water by "most elected officials and managers of city water systems." A provision of S.2019 subjects bottled water (which is currently virtually unregulated) to the same drinking-water standards applied to public systems. I have never met a drinking-water-system manager who regularly drinks bottled water, because as a group we recognize that this product generally combines the attributes of inferior quality and high price.

Michael S. Marcotte
Dallas, Texas

As a Sierra Club member and environmental engineer who has spent over 40 years in the water and wastewater industry, I was appalled to read Carl Pope's article. He implies that there was little regulation of public water supplies until passage of the Safe Drinking Water Act in 1976. This is an affront to the many dedicated water commissioners, waterworks managers, consulting engineers, state and county regulatory authorities, and local boards of health who are responsible for the safety of public water supplies.

The current issue with the SDWA is one of burdensome overregulation and ludicrous reporting requirements. The federal bureaucracy would like to have all 60,000 U.S. public water-supply systems in lockstep regardless of their specific situations. The regulations in question have nothing to do with protection from waterborne-disease outbreaks such as the recent occurrence of cryptosporidiosis in some large systems. They have to do with testing for carcinogens and other contaminants, the importance of which is sometimes controversial, and whose health effects are usually long-term. Even the EPA admits that it does not have the resources to deal with these substances at the rate mandated in the current SDWA. Small-waterworks operators have even fewer resources to cope with this paper-intensive regulation.

John R. Elwood
Bourne, Massachusetts

The EPA is trying to kill a fly with a sledgehammer. For example, in rural, nonindustrialized areas it is overkill to test for some classes of pollutants; testing for nitrates, bacteria, pesticides, and herbicides makes sense, but testing for industrial chemicals probably does not. The Sierra Club could do much to advance the goal of safe drinking water if it would recognize that some of the testing called for is excessive in many circumstances, and that equally effective but less-expensive testing strategies could be utilized.

Michael William Mullen
Center for Environmental Research and Service
Troy State University
Troy, Alabama

Carl Pope responds: *The Centers for Disease Control estimates that 900,000 people get sick every year from drinking tapwater in the United States. Just since I wrote my column on this topic, Las Vegas suffered a major outbreak of waterborne cryptosporidium, in which 19 people died.*

Section 1415 of the Slattery/Bliley bill would prevent the EPA from enforcing standards for most of the diseases and chemicals that can contaminate drinking water. Section 1414 would relieve water agencies of having to inform the public when the water they provide exceeds safe levels of contamination.

The Safe Drinking Water Act can be improved, and the Sierra Club supports proposals by the Clinton administration to meet some of the special needs of smaller water systems. But many of the horror stories the act's opponents tell are bogus. They've argued, for example, that it requires cities in Ohio and California to test for a pesticide (DBCP) that is used only on pineapples in Hawaii. True enough—but DBCP was previously used all over America, and it still routinely turns up as a contaminant in drinking-water wells in agricultural areas.

Finally, bottled water is indeed not necessarily safe. My point was that millions of consumers spend billions of dollars for bottled water because they fear their tapwater is unsafe, as do most of the members of Congress who are busy voting to weaken tapwater standards anyway.

POOR RELATIONS

Paul Rauber's negative assessment of public relations' influence on the environmental movement ("Beyond Greenwash," July/August)—based on *one* article in *one* public-relations newsletter—is meagerly informed, misleading, sanctimonious in its gratuitous recitation of the Sierra Club's corporate-donor screening process, and, most importantly, counterproductive to genuine public-relations efforts to positively affect corporate environmental performance.

For years I have counseled Fortune 500 companies that responsive regard for society is in the best interests of business. The principal function of corporate public relations is, in fact, to interpret and report internally to management the needs, desires, and constraints of society, and then to assist in the creation of a response to this reality that will allow the company to progress toward legitimate goals. The premise upon which corporate public relations rests is that society has the capability to affect progress toward corporate goals.

That the Sierra Club has only one regular corporate donor—so strict are its standards, according to Rauber—says less to me about the Club's standards and more about its ignorance of positive corporate public relations, to which your article is testimony.

Harry Matte
Lafayette, California

Paul Rauber responds: *I am sure it is comforting for corporations to believe that*

Continued on page 18

energy

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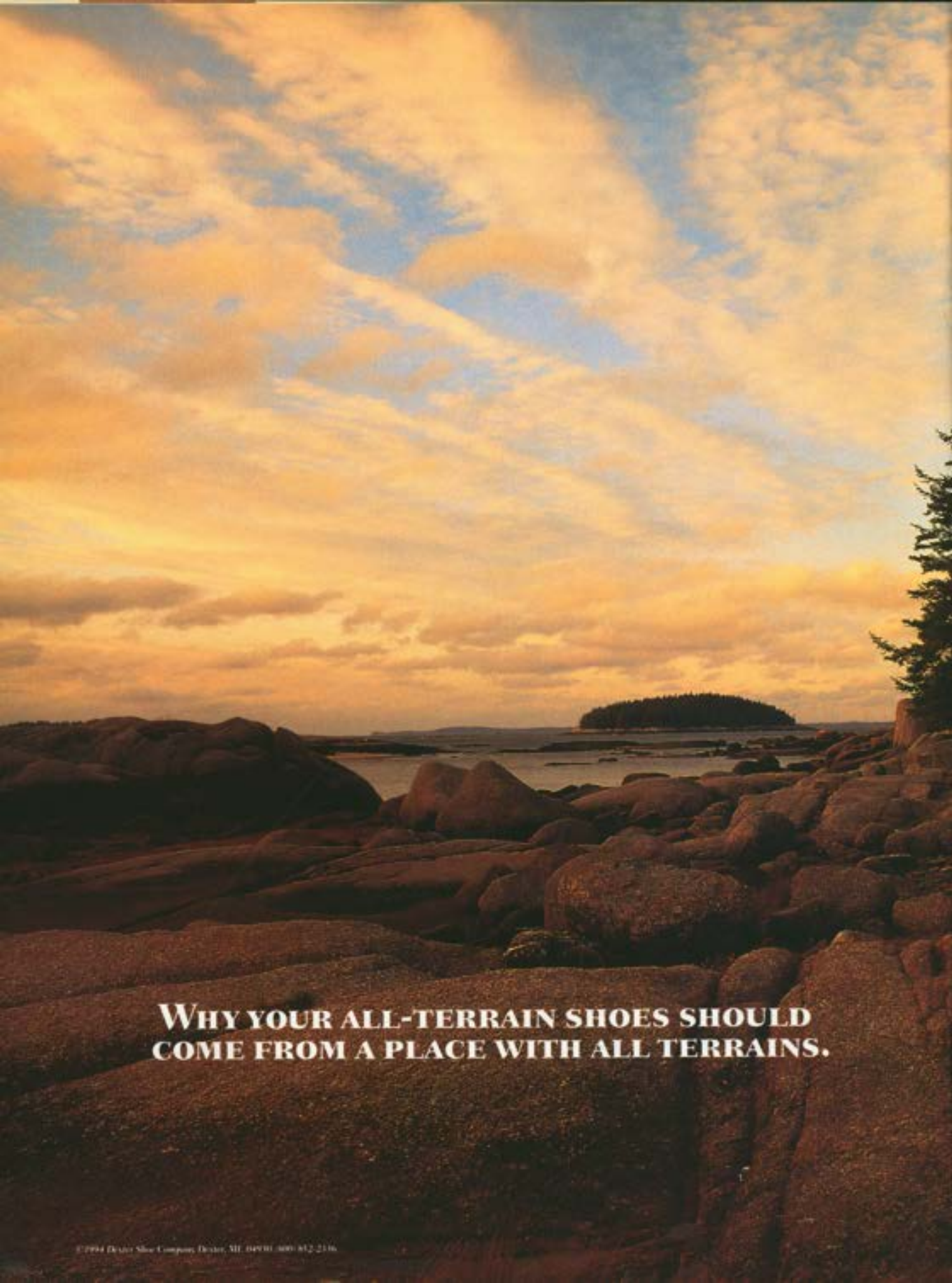
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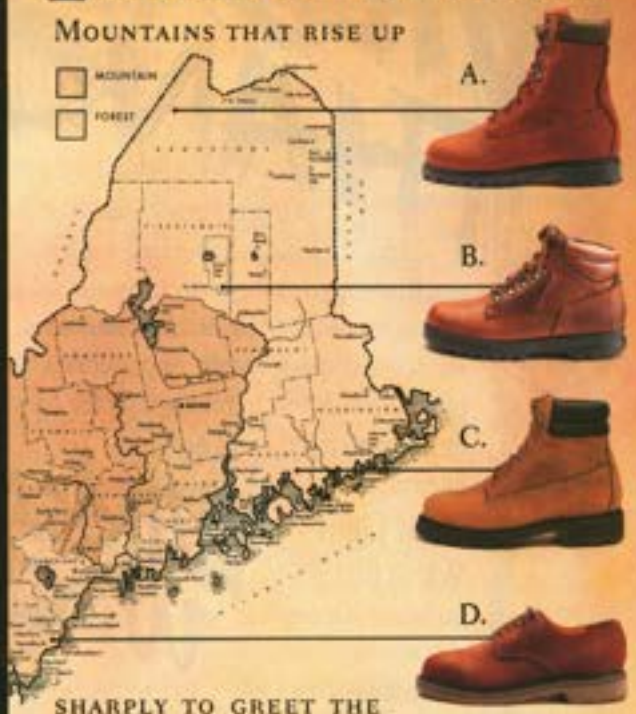

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LETTERS

Continued from page 14

"society has the capability to affect progress toward corporate goals." As my article demonstrated, those goals can include killing tough environmental legislation and coopting environmental groups, while still maintaining a green façade. But what happens when society tries to pursue its own goals? Out come the corporate P.R. flacks to try to convince us that those goals are too radical or too expensive.

That the Sierra Club does not depend on corporate handouts should be a source of pride to its members as well as to any corporate donors willing to help us achieve our goals along with theirs.

BEAT DEET!

Your July/August "Body Politics" column on Lyme disease recommended that any insect repellent containing DEET should be used to avoid the bite of the deer tick. The efficacy of DEET—the most common repellent on the market—improves as its concentration increases. Unfortunately, as its concentration increases, so do its toxic characteristics. DEET has been linked to mild and severe skin irritation and blistering, hives, seizures, and even the deaths of three children last year. The state of New York recently banned the sale of products containing more than 30 percent DEET.

I am not totally unbiased in this matter, as I am the product manager for Treo®, the only natural insect repellent/sunscreen available at retail stores. Treo, registered with the EPA, is as effective in repelling ticks as any product containing 40 percent DEET. Your readers should know that there is a safe and healthy alternative to the standard chemical repellents on the market.

Jonathan Banner
Biopharm Lab, Inc.
Bellport, New York

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Carl Pope

Risky Business

Historically, Americans have been unanimous in their contempt for those who kill for profit. Recently, however, this moral consensus has started to erode. Somehow, the national dialogue has shifted from preventing killing to preventing "excess" killing. The vehicle for this shift is the debate over "risk management."

On the surface, the idea has great appeal. It suggests that we concentrate our limited financial resources on combating the greatest risks; that we let science and economics set the precise level at which the cost of regulating a chemical exceeds its benefits, and allow the release of chemicals below that level into the environment. It's an attractive idea—but a very dangerous one.

Risk management, in many of its forms, depends on science to quantify the risk posed by low levels of exposure to toxic chemicals and to determine what level is "safe enough." This, unfortunately, is something that science is ill-equipped to do. Epidemiology and toxicology may be able to tell us when increased exposure to toxic chemicals raises the risk of cancer or birth defects by 200 or 300 percent, but not when we can expect increases of 25 percent, 50 percent, or even 75 percent. In the case of dioxin, seesawing studies indicated first that it was less toxic than previously believed, now that it is a greater problem. Had the EPA sanctioned widespread exposure to dioxin on the basis of the old risk assessments, enormous human suffering would have received the full benediction of the regulatory system.

Skeptics of risk assessment are often accused of being irrational and anti-science. The Sierra Club, however, has long advocated spending more on toxicology. Since 1976 it has been the Sierra Club, not the chemical industry, that has advocated full study of the health effect of new chemicals before they are introduced. It was the Sierra Club, not pesticide manufacturers, that successfully lobbied for legislation—first in California, then nationally—to require that all pesticides be tested, and the dangerous ones phased out.

Many corporate advocates of risk assessment are risk-averse when it comes to testing their own chemicals. When we find evidence that these chemicals are hurting us, they then want the EPA to find the precise point at which that harm exceeds an "acceptable risk." At this point, of course, the "costs" of eliminating exposure to harmful chemicals are much greater than if we had detected their toxicity before we built entire industries around them.

What is an "acceptable risk"? Sometimes one death in a million, sometimes one in ten thousand. Sometimes the risks are supposed to be weighed against the benefits. To do this, risk managers assign a dollar value to human life. If a regulation costs more than a given number of lives, it is deemed not "cost effective." While no one suggests allowing murder if it is sufficiently lucrative, allowing a chemical company to poison its workers or neighbors because it can make a lot of money is, to some, morally defensible.

Science without morality: just quibbling over the price.

After risk managers have calculated how much a human life is worth, they then determine when it would be saved so they can "discount" its value, typically by 10 percent a year. By this method, 14,000 lives saved a century from now are worth the same as one life this year. A calculation sentencing 14,000 children to serious birth defects in 1994 would hardly be considered fair today because it looked good on paper in the 1890s—yet this is exactly what the risk managers expect our great-grandchildren to accept.

The dangers that some advocates of risk management ask us to overlook may appear "trivial" for many reasons: because we don't know enough about them; because avoiding the risks will cost someone a large amount of money; or because the ultimate price will be paid far beyond our own lifetimes. The dangers cease to be trivial, however, as soon as names and faces are attached to the sacrificial statistics.

The Sierra Club is not opposed to focusing attention on important problems first, or on intelligent attempts to reduce risks. A regulatory system could easily be imagined that required testing chemicals for safety *before* we become economically dependent on them, just as is done for new drugs; that required companies to do everything possible to phase out chemicals discovered to cause harm; and that required full disclosure to those exposed to risks we can't find ways to avoid. Such a system would dramatically reduce our exposure to toxic chemicals, at a fraction of the cost of cleaning them up after they poison us.

The powerful advocates of risk management oppose these simple, cost-effective steps, preferring to hold technology innocent until proven guilty, and to make our human and natural communities laboratories for testing what is "safe enough." Given their interests, the attitude may seem rational—but it surely isn't moral. ■

CARL POPE *is the executive director of the Sierra Club.*

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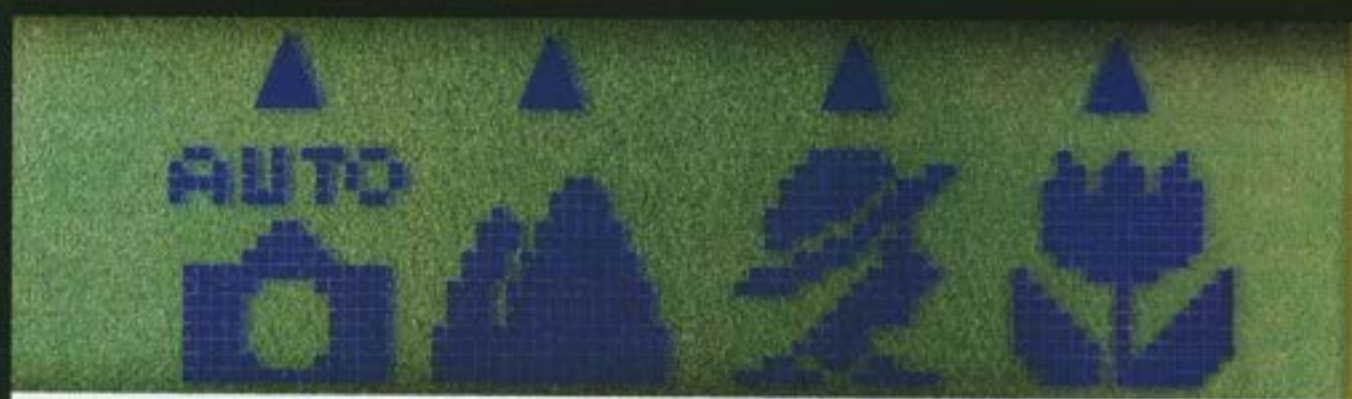
EENIE, MEENIE, MINIE, MOE.



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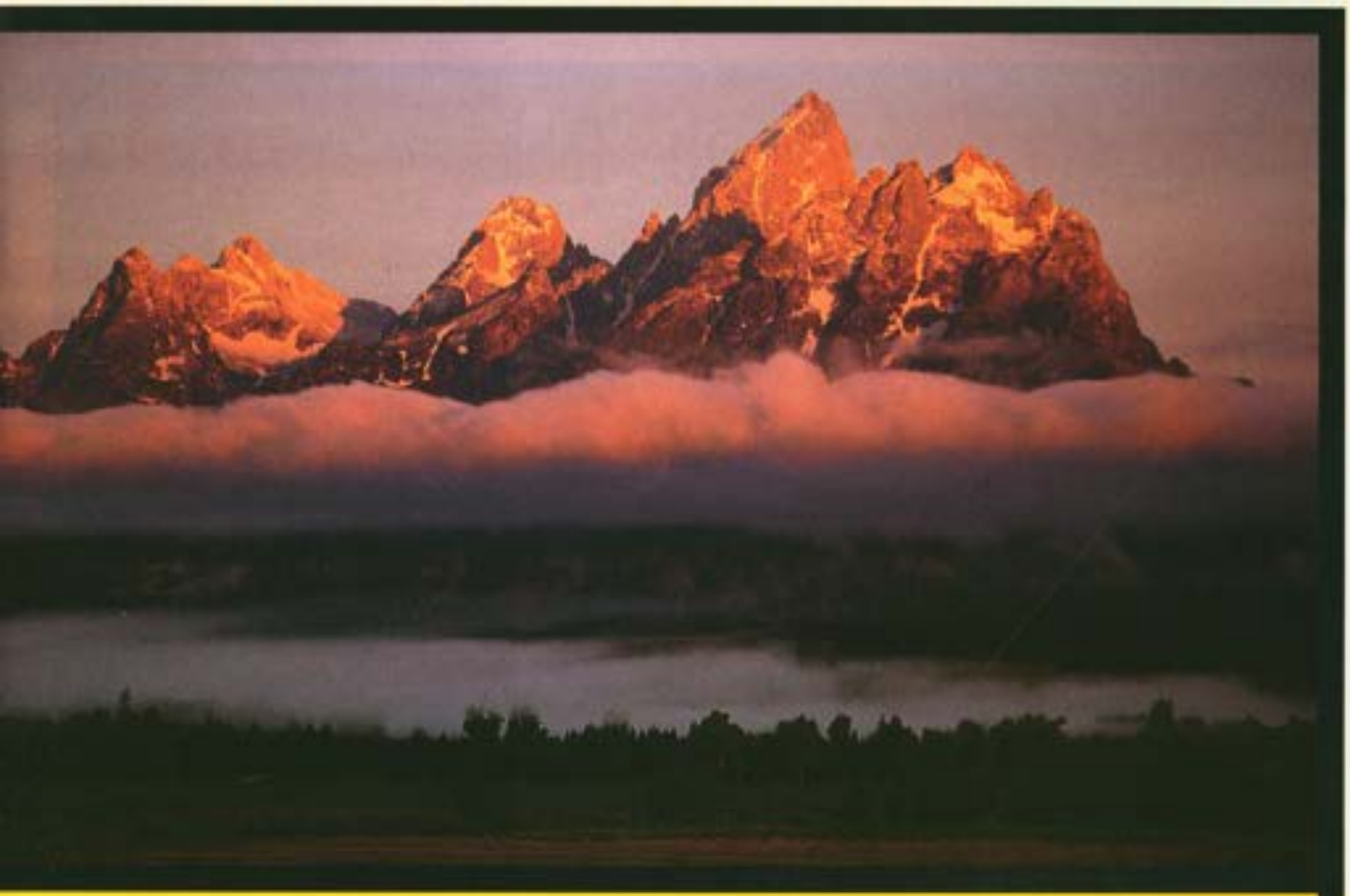


▲

AH, MEENIE IT IS.

Setting the Table

Put ten environmentalists in a room and you'll get ten different opinions on the topic of your choice, from the reality of global warming to the best use—if any—for a cow. These differences of opinion are often quite pronounced, making a mockery of any effort to portray us as a monolithic "special interest," all cut from the same green cloth.

There is one thing, however, that binds us not only to our kin but to the world at large, inclusive as it is of tree-huggers and Wise Users, polluters and birdwatchers. Like everybody else, when hunger and habit call, we've got to stop and eat.

But as environmentally aware consumers—a word we use here in its most literal sense—we likewise all face the same question: what are the impacts of our dietary practices and preferences on the planet?

As we've learned while working on this issue of *Sierra* devoted to food and the environment, those effects can be profound. They emanate from hundreds of decisions we make, as individuals and as a society, at every stage in the eating process, from the cultivation of crops and the husbandry of animals to the packaging of produce, its shipment to market, and even how we decide to cook it.

We collectively decide, for example, which cultivar of corn is to be nurtured to make its production profitable on a large scale, and which varieties less appealing to agribusiness will be allowed to become extinct. We decide what crop will be planted year after year on the same plot of land, despite the soil's plea for rest and our knowledge of the damage being done—to that land, and to our health—by the chemicals it takes to maintain this unnatural arrangement. Our susceptibility to advertising (and its pernicious appeal to our "convenience") promotes the development, marketing, and consumption on a mass scale of processed foods bearing little relationship to what our bodies require and our spirits crave. Our food choices, in sum, reverberate across the globe, determining how many endangered species—and how many small-scale farmers—will be driven off the land, how much rainforest will burn to keep our burgers cheap, and whether our grandchildren will ever know the taste of wild salmon.

Against the formidable powers of capital and the status quo, it might seem quixotic to argue—as we do throughout this issue—that change can come from the local farmers' market, a bottle of organic wine, or the garden in your own backyard just as surely as from direct political pressure applied to state and federal legislators. But when it comes to food, the customer is king; in this field as in few others, change can result as certainly from individual actions as from public-policy pronouncements.

We're mouthing off about the way America eats—the better to feed you with.

■

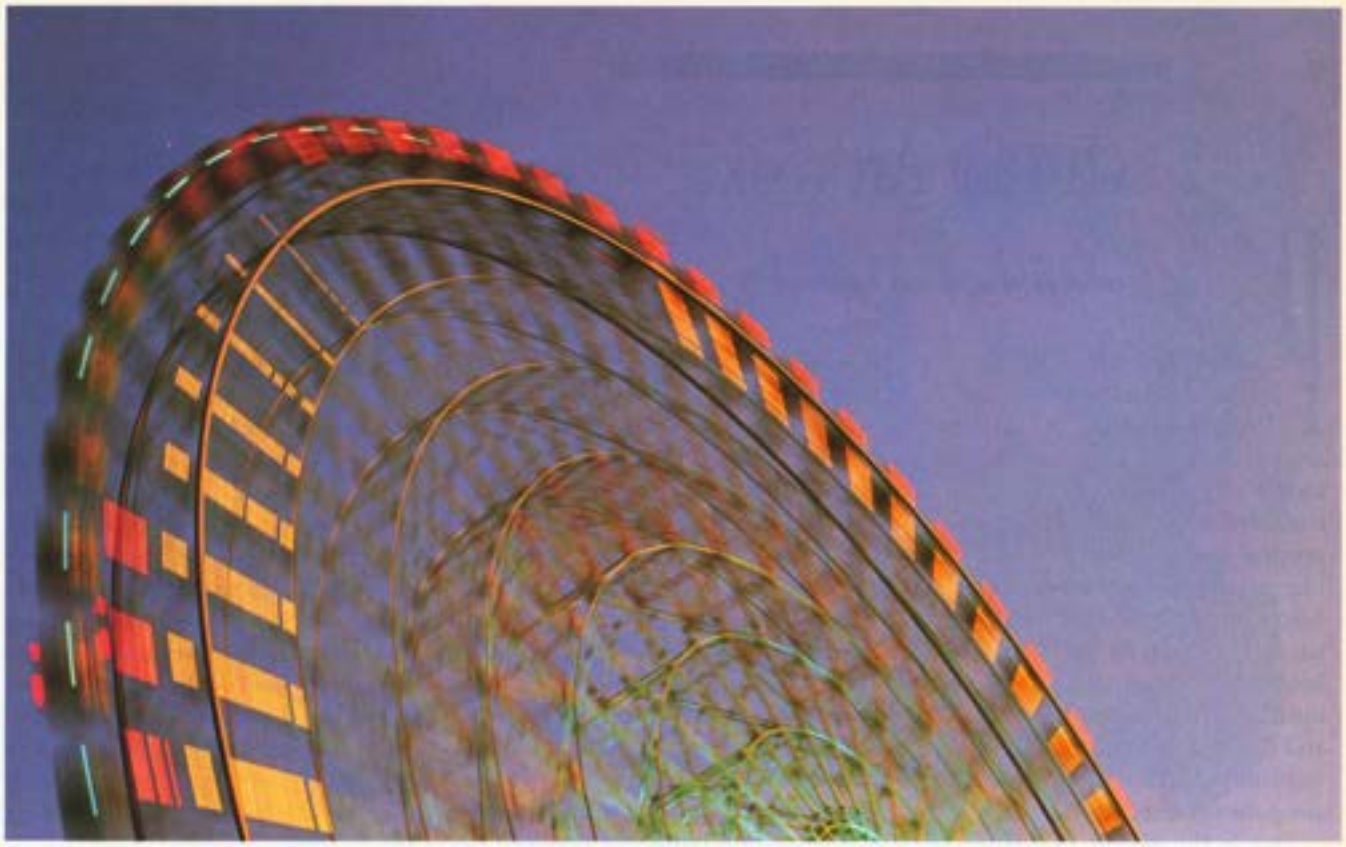
And there's a bonus—for while many other environmentally beneficial lifestyle changes necessarily involve sacrifice, the conversion to Earth-friendly eating is purely pleasurable. After all, it's one thing to try to persuade the lifelong commuter to abandon her single-passenger car for a bike (while others still drive) or the bus (where many still stand); it's quite another to give her a taste of a tomato bred for flavor rather than durability, picked at the height of its season, and then suggest that she support her local organic grower instead of the suburban Drop 'n' Shop. Add into the bargain that she can walk or bike to the Town Hall farmers' market, pick up fruits and vegetables for the week while visiting with neighbors and enjoying a ragtime band, and you've got a formula for environmental change that's easy to swallow.

Lunch is never free, of course, and the transition to sustainable agriculture will not be quite as idyllic and easy as limned above. In fact, lunch will cost rather more—it's cheap now only because we allow producers to deplete natural resources without paying for them. At this level there is definitely a role for collective action; the archaic policies that keep agribusiness slopping at the public trough won't change without it. And the nation's growers won't complete the transition to sustainability until the institutions responsible for educating them—primarily the USDA, its agents in the counties, and the academic centers funded by agrichemical consortia and other self-interested parties—take the challenge seriously. Particularly on the governmental level, that will include putting their (our) money where their (our) mouths are, and funding research into alternative agriculture above the pittance currently allotted it. (See "Future Farming of America," page 38.)

The obstacles are numerous and complicated—as the obstacles we face in growing a better world always seem to be. But unlike those we stumble over in our efforts to restore the ozone layer, to reduce population growth, or to limit PCB contamination, they are here in plain sight on the plate in front of us. These are problems we can tackle with a hunger for change that renews itself three times a day.

—the editors

Some things weren't meant for a wild ride.



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HAND & EYE

Eat for Art's Sake

HANNAH HINCHMAN

Patrolling the yard, I see that the weeds are under control in the flower beds and in the bark trails around them. With my new weeding tool, I have coaxed out even the most stubborn white-top, whose underground shoots, when exposed, look like masses of vermicelli. The next hour I can devote entirely to my journal. I'll catch up on the events of the last week in narrative form, and go out into the garden to draw the hop vines and their ways of twining, and maybe to paint the unfurling of the gentian along the streambank.

But in the middle of writing my concentration begins to lose its edge, and an insistent rumble reminds me that I need to eat. This comes as an unwelcome interruption, and I'm as irritated with my body as I would be with a whining child: Go to sleep for a while! I'm busy! But it won't. I have to stop what I'm doing and appease it with lunch, a big salad with tuna and sunflower seeds, that will give it something to work on this afternoon.

As I rip up the lettuce and spinach, it strikes me that my attitude is disrespectful and condescending. If I feel that the most basic act of living is tedious and distracting, how can I profess to revere what it makes possible: transforming life into art? The implied judgments make me feel trapped in the 18th century: the body, nature, acts of nature are gross and primitive, to be acknowledged in a minimal way, in order to rise above them to the life of the mind. Do I really subscribe to that? My behavior indicates that I do.

And yet, on other occasions, I relish the basic acts as the mysteries they are. I love to watch and help my friend, who is a chef, as he prepares food with affectionate skill, and I love to eat the art he produces. He thrills to the perfections of vegetables and fish the way I do to fine heavy paper and sable brushes. I know that his art is the equal of mine; in fact it must be superior, because it unites the universal to the particular, the body to the intelligence, in a far more direct way. What he produces becomes pure energy; I produce knickknacks that have no tangible use.

In July, I taught for a week in Yellowstone, and spent almost all of each day outside. If May is the breeding month, then June and July are the eating months. Everywhere I looked things were eating and being eaten, with a frenzy that dies down as the abundance of the high-altitude summer wanes.

I took the time to watch all kinds of animals eat. There was the buffalo bull across the creek that lay down and commenced ruminating. His mouth moved in a steady circular pattern, and the chewing seemed to have a pacific effect on him, the way knitting does with some people. He had, essentially, collected the food in the basket of his first stomach, then found a quiet place to grind it up into a usable form, like grain on a *metate*.

Since this was a drought summer,

Regarding the basic transactions between body and soul

and the grasses were burned and dry, the Uinta ground squirrels had to solve the problem of where to find fresh greens within their limited territories. I watched one through a spotting scope and discovered its method: to grasp the dry part of a blade of grass and pull—not with a jerk, which would have broken the stem, but slowly, so that the succulent core slid out of its sheath. The squirrel ate the still-green stem and discarded the rest.

A few creatures seem to savor what they eat, but for the most part the emphasis is on bulk. Judging by the way mountain bluebirds swallow moths and grasshoppers, they have no taste buds to be gratified. Their pleasure in food must come mainly from feeling well-fed, from having energy for further hunting.

Topologically, like other creatures, we are tubes, stuffing things in one end and pushing them out the other, until we wear out. This is one of the conditions that is so fundamental to us as humans that we have trouble even noticing it, let alone remarking on how peculiar it really is. Instead of maintaining ourselves by transforming light into energy, as plants do, we move on a more substantial plane, absorbing a wide variety of matter. We are, after all, omnivores, and that trait makes us widely adaptable, like crows and raccoons. And like bears and marmots, we carry an emergency fuel kit in the form of fat.

In a way, it's natural that I should see my meals as matter-of-fact fire stoking, since that's how most other creatures see theirs. When food is regarded as ceremonial, sacramental, it becomes part of the life of the mind, an art form, distancing us from animal nature. But to become a more responsible person on the planet, I need the awareness contained in that art form. I need to remember, more than ever, the implications of my most basic acts. ■

Culinary Pest Management

■

MARC LECARD

Gardens are fragile things. Sometimes it may seem that you tend yours only to provide a haven for weeds and a salad bar for insects and snails. One way to get an edge in the eternal struggle is to turn the tables on the invaders and eat *them*.

When you're out in the garden pulling weeds, knocking bugs off plants, or smashing voracious gastropods, you could be harvesting bounty for the table. Many of the plants (and at least one of the critters) we think of as garden pests suitable only for instant annihilation were brought to this country by immigrants, who bothered to carry them all this way because they liked to eat them. But tastes change; markets are influenced by considerations of shelf life, transportability, appearance; people tend to eat what they're familiar with. For all these reasons, some plants ceased to be cultivated and consumed. They became weeds.

Open any field guide to edible weeds and you'll immediately recognize some of the botanical annoyances you've been pulling out of your beds by the handful. But once you begin using them in the kitchen, you won't want to toss them—except as salad.

Some of the more common comestibles: Purslane, found across the country, is despised by gardeners for its tendency to grow everywhere without invitation. Yet it's delicious in salads, and goes well in soups, where it acts as a thickener. The leaves of curly dock, another unwelcome garden-invader, are good raw or cooked in season (spring and fall). The clover-like

wood sorrel adds a lemony accent to salads. Burdock is considered a pest by many, yet its root is edible (though the leaves are not). Lamb's quarter is also known as pigweed, since pigs are supposed to like it. You might like it, too; the young leaves are good in salads, and the seeds can be gathered and ground into a flour. Plantain, which grows in annoying abundance in some gardens, is good in salads when picked early in the season; picked later, it's best used in vegetable broth. And kudzu—"the weed that ate the South"—can be eaten in its turn.

Dandelions—greens, flowers, roots and all—have long been foragers' favorites, often someone's first experience of wild food. My father used to tell me how, back in Montreal, his family would gather young dandelion greens for salad in spring, and roast and grind the roots as a coffee stretcher or (during the war) substitute. (Chicory root, as any native of New Orleans will tell you, can also be used to make a kind of coffee.) Dandelions, of course, are only too easy to find. The greens are best in spring; after the flowers appear they become bitter. The root can be eaten anytime, stewed or baked.

A personal favorite among edible weeds is the nettle, perhaps because eating nettles is so unlikely that spooning some up represents a triumph over the expected. The nettle's pain-producing chemical cocktail is neutralized in cooking, however, and the hairlike stickers soften up. Just the stuff for a tasty, if counterintuitive, soup.

Other wild edibles you might find amongst the cultivated: chickweed, wild onion, fennel, common mallow, wild carrot. And there are many more; your harvest depends on the season and the part of the country you live in.

Eating the bugs off garden plants is something many people would rather leave to lady beetles and praying mantises. But insects are dinner-table items in many cultures; why not ours? Catch and eat them, and you'll be adding to your arsenal of biological, chem-free pest controls while tapping a new source of protein.

Little has been written on insect-eating for the layperson, but the marvelous and informative *Food Insects Newsletter* is a clearinghouse for info on entomophagy; reports on edible insects from around the globe and occasional bug recipes appear in its pages. Some of the insects you might rather see on a platter than in your garden include ants, grasshoppers (called "sky prawns" in Thailand), grubs, caterpillars, and locusts.

My own experience with crawling cuisine is fairly limited, but those in the know describe insect flavors that seem to alternate between "nutty" (ants, 'hoppers) and "buttery" (grubs, caterpillars). Mushrooms and potato chips are other taste references cited in the literature.

A weed by any other name might suit your salad

Some of the worst garden pests, unfortunately, remain inedible. Though related to millet, crabgrass is not eaten, as far as I can determine. Neither are cucumber beetles or aphids (though a chart in *Food Insects Newsletter* notes that some indigenous North American peoples ate honeydew, or aphid *excreta*).

One prime pest, however, is also prime table fodder. Every California gardener knows the story: how a French emigrant to the West Coast introduced European brown snails from his native land, thinking to raise them for the table; how the domestic snails escaped, went feral, and invaded gardens up and down the state and as far away as Washington and Texas.

The two snails most commonly found at the end of a fork are *Helix pomatia* and *Helix aspersa*. The latter, also known as the common brown snail, is the one you're most likely to encounter in North American gardens.

Collecting a sufficient number of gastropods should not be a problem for most gardeners living in snail territory. Night or early morning are the best times to capture them. Back in Brittany, my grandmother found the local graveyard to be the best gathering spot—the snails seemed to favor the cold stones of the tombs.

Because not everyone has given up on pesticides, and since snails are not notoriously discriminating eaters, you'll have to clean your catch before you can savor it in safety. At least three days in a lidded wooden box with well-ventilated top and sides should do it. Put in some cornmeal and lettuce for the snails to eat, and some water in a small plate. Change the water every day. Be sure to keep the cage clean and the food fresh; remove any dead snails. Starve them for two more days before you plan to cook them so that they'll purge themselves. Blanch them in boiling water for three minutes, cool, wash with vinegar, cook another 30 minutes, and they're ready to use in any number of recipes. Snails are best, in my opinion, drenched with scarcely credible amounts of garlic and butter—what the French call *beurre d'escargot*.

A word of caution: before you fill up the refrigerator with formerly despised items, scan a few field guides, and be sure of what you're foraging. If you're not completely certain, don't put it in your mouth. But once you've begun feasting on the things you formerly squashed, poisoned, or angrily uprooted, you'll never look at a pest-infested garden in quite the same way again. ■

► *For more information, see "Resources," p. 106.*

Canyon Rumblings

JONATHAN F. KING

After four tiring days on the ankle-straining goatpaths that pass for trails in the depths of Copper Canyon, my dreams were of Posturepedics and flannel sheets. I felt entitled, at the least, to some form of shelter enclosed on four sides. But our tents had gone back to the trailhead two days before—along with most of our food—when the route became too steep for the burros. So instead I spent that sleepless night in a cave.

At dawn our small party—several gringo trekkers and our Tarahumara Indian guides—faced our fifth, last, and hardest day of hiking, straight up the better part of a mile to the canyon rim. Hunger made the prospect grimmer, and as I sat glumly beneath the limestone overhang under which we'd camped when darkness fell, I yearned for the groaning board of goodies we'd enjoyed earlier in the trip.

The chickens are charred
and the salsa's gone;
the beans will have to do

Two burros laden with pots, pans, and a generous larder of foodstuffs (including two live chickens tied to a saddle) had descended with us into Mexico's deepest canyon. Our first dinner began with guacamole, scooped up with fresh tortillas patted into shape from fistfuls of moist *masa harina* and warmed on a cast-iron grill. There followed tough but flavorful beefsteaks, cut into rude chunks with a jackknife, and folded with pinto beans and salsa into more tortillas. These juicy tacos we washed down with cold bottles of *cerveza*, chased, around the evening campfire, with slugs of tequila.

Subsequent meals were less ambitious, especially once the burros turned back. The third night out we had only *quesadillas* made from tortillas, beans, and *queso Menonita*, a bland cheese made by a German Mennonite community in the flatland town of Cuauhtémoc. By the next night—the one spent in a most un-Platonic cave—dinner was simplicity itself: the Tarahumara strangled, plucked, and gutted the long-suffering chickens, then grilled them, in apparent keeping with local preference, to charred inedibility.

And now the dawn. The Taras had, overnight, boiled up a quantity of dried beans. I piled some into my coffee cup with the very last bit of cheese and downed the mixture greedily. We shouldered our packs and began the long climb out.

Tired, footsore, and still hungry, I got off to a cranky start. But as the morning wore on I became more and more energetic—powered, I guessed, as much by the readily digestible carbohydrates embedded in my beany breakfast as by any vision of rejoining the world of motorized transport and Sunday brunch. I roamed far enough ahead to make brief side trips off the main trail, climbing outcrops to better enjoy the expanding view, and irritating my companions with chirpy enumeration of the geologic wonders arrayed below us. By the time we cleared the canyon rim at midday I was thinking of home, contemplating a morning regime of pintos and tortillas that would replace the croissants and granola on which I had grown sluggish and fat. And in the event, my resolve held firm—halfway through the first week back. ■

BODY POLITICS

Mother Knew Best

MICHAEL CASTLEMAN

"Eat your vegetables," Mom always said. "They're good for you." But even she didn't know *how* good. During the last decade, evidence has accumulated that a diet high in fruits and vegetables helps prevent several cancers. But these findings had only modest impact on the scientific community until two years ago, when epidemiologist (and mother) Gladys Block, a professor at the University of California at Berkeley School of Public Health, assembled all the studies on diet and cancer into a coherent whole. The results made a compelling case that, except for quitting smoking, the best way to prevent cancer is to eat more fruits and vegetables.

Block reviewed 156 studies that correlated diet with rates of the major cancers (lung, breast, colon, cervix, ovary, bladder, uterus, mouth, esophagus, pancreas, and stomach). Every study showed that as fruit and vegetable consumption increased, cancer risk decreased. Those who ate the fewest fruits and vegetables had twice the cancer risk of those who consumed the most. (Eighty-two percent of the studies showed a statistically significant protective effect for diets high in fruits and vegetables. The other 18 percent did not reach statistical significance, but all showed a clear trend in favor of plant foods' cancer-preventing ability.)

How could oranges, salads, and minestrone reduce the risk of cancer?

No dessert until you've had five helpings of okra

"Antioxidants," Block explains. "Fruits and vegetables are high in antioxidant nutrients, notably vitamins A, C, and E, that help prevent the oxidative damage that contributes to the development of cancer."

"Antioxidants" and "oxidative damage" are a mouthful, but the science behind Block's assertions is not difficult to understand. It begins with oxygen, which though crucial to life is also problematic. As it circulates through the bloodstream, some oxygen molecules lose an electron and become highly reactive— and chemically unstable—"free radicals." To regain chemical stability, they snatch electrons from other molecules, causing oxidative damage. Over time, this damage can alter cells' DNA and lead to cancer. Normal metabolic processes produce some oxygen radicals, but more are produced by exposure to things like cigarette smoke, toxic chemicals, and a diet high in animal fats. Vitamins A, C, and E and other substances in plant foods graciously donate electrons to oxygen radicals, stabilizing them and protecting the body from oxidative damage.

The National Cancer Institute recommends that we "Strive for Five": five servings of fresh fruits and vegetables a day. "It's not difficult to get your five," Block says. "Orange juice with breakfast, a salad for lunch, two fruit snacks, and a salad or vegetable with dinner will do it." But surveys show that only about 9 percent of Americans get their daily five, and a recent one-day analysis of the diets of 12,000 showed that 41 percent ate no fruit at all, and only 25 percent ate a fruit or vegetable rich in vitamins A or C.

Many of these underachievers are probably no more concerned about pesticides than vitamins, but conscientious vegetable-eaters might worry about the chemical residues on their five-a-day. While pesticides do pose a serious threat to health and the envi-

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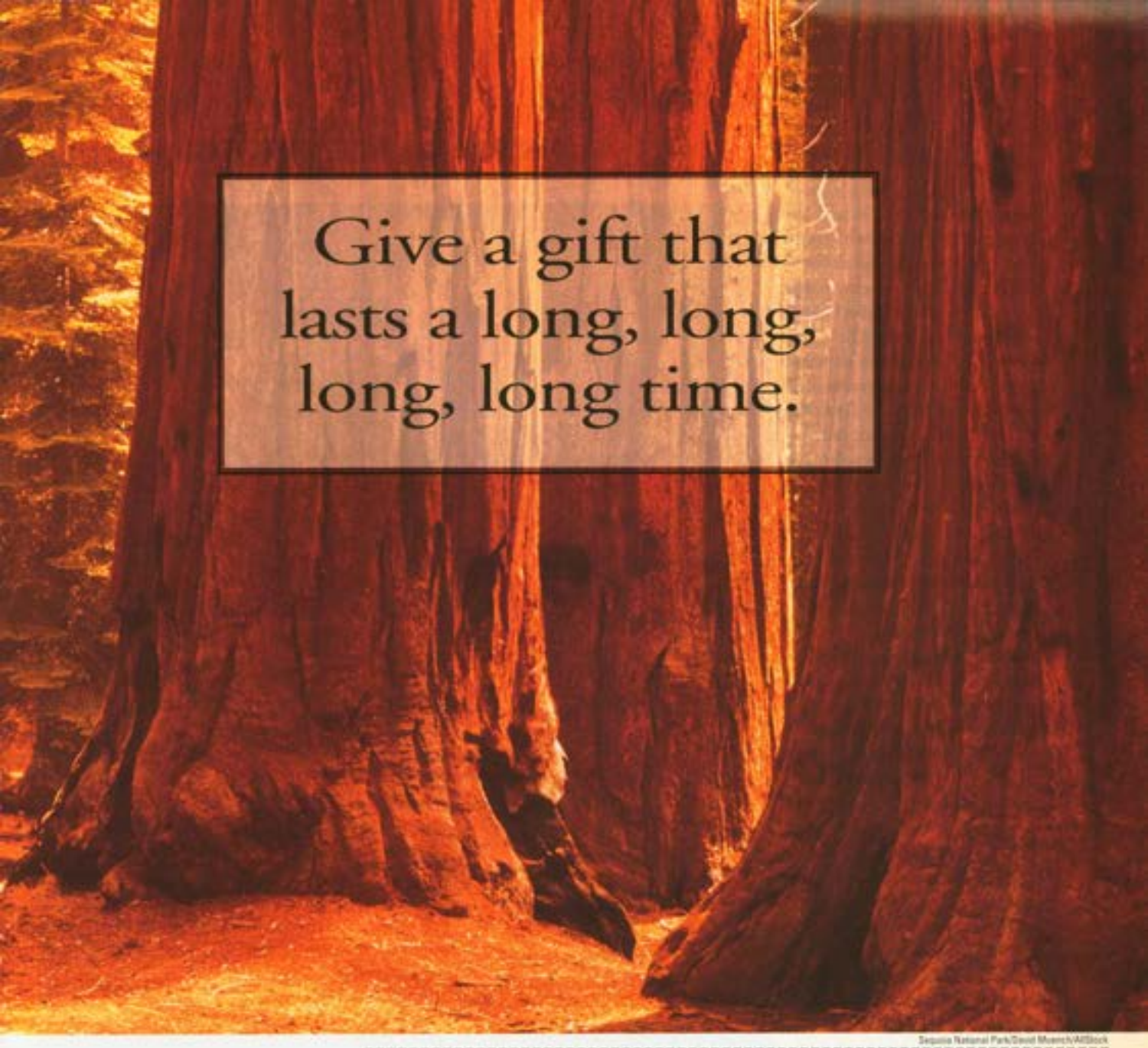

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ronment—and we should minimize their use while encouraging organic farming methods—the ability of fruits and vegetables to fight cancer vastly outweighs the threat of cancer from pesticide residues. "The studies I reviewed used ordinary, non-organic produce," Block explains. "The data clearly show that *any* fresh fruits and vegetables help prevent cancer."

Except for those people occupationally exposed to pesticides, or who live in areas where these poisons are heavily used, the major source of the typical American's pesticide exposure is not fruits and vegetables, but meats. Most pesticides and industrial pollutants are fat-soluble. Pesticide or other toxic residues in an animal's food are stored in its fatty tissue, and concentrate there over the creature's lifetime. Humans who eat beef, pork, lamb, veal, duck, chicken, turkey, or fish (or drink other than nonfat milk) consume all the pesticides stored in fat. Fruits and vegetables, however, are extremely low in fat, and pesticides are unlikely to accumulate in them at the levels found in fatty tissue.

The easiest way to estimate the body burden of pesticides in humans is to examine breast milk, which is high in fat and, therefore, in fat-soluble pesticides and other pollutants. In one study, researchers compared contaminant levels in breast milk from the general population with breast milk from vegan vegetarians, who eat no animal products or dairy items. Pesticide levels in the vegetarians' breast milk were only 1 to 2 percent of the omnivorous population's average.

You can cut back on pesticide-laced meat and dairy items by doing what Mom told you to do: have some broccoli. Eat a fruit salad. Put down those tortilla chips and pick up a carrot stick. If you eat five servings of fruits and vegetables a day, every day, you'll cut your cancer risk in half. Mom was ahead of her time. ■

WHEREABOUTS

Fields of Plenty

■

GENE LOGSDON

My home ground appears to urban America as a dull, plain landscape inhabited by dull, plain people, which is precisely why my wife and I chose to move here 20 years ago. We could see nothing here that would tempt economic "development"; nothing to attract the tourist to violate our privacy; nothing to charm the media into turning us into lies. No breathtaking views of either mountain or valley lure the vacationer. No large body of water puts property taxes at the mercy of rich peoples' condos and second homes. No significant event by history-book standards has occurred here; no one the least bit famous ever lived here. The landscape appears to be wall-to-wall corn bounded by thistles and poison ivy. We are saved by an accident of geography, the only armor that can effectively fend off greed. We live in Flyover Land and pray that it stays that way.

We settled on the edge of the Corn Belt in north-central Ohio not only because we thought this rural community would remain relatively unspoiled, but because it was my homeland. Other communities might have worked just as well, but here I already had 40 years of knowledge to build on. And I wanted, in my contrary fashion, to prove that a person could go home again.

Returning to familiar ground, I knew that beneath the corn was a great treasure and natural wonder. This landscape contains some of the planet's richest soils, and the best climate to take advantage of them. Think of it: *the most fertile soil in the world!* And, soil scientists told me, I had some of it in my bottomlands along the creek. Even our upland soils are richer and deeper than most soils and will respond with unbelievable fertility if restored and cared for lovingly and patiently.

This land is capable of holding more species of plants and animals than any temperate wilderness. I have a hunch our cornfields could even be transformed into a paradise of flora and fauna nearly as varied as that of the tropical rainforests. That capability lies hidden from social view only by the tall corn's economic stranglehold on the farmer's mind. The fact that corn, soybeans, and wheat do so well here without irrigation is evidence that most other temperate crops would also thrive: oats (which once did), barley, rye, scores of grasses and clovers, sorghums, grain sorghum, sweet corn, popcorn, all manner of temperate fruit and nut trees, a wide variety of flowers, berries, and vegetables. (That we import asparagus and potatoes into the Corn Belt is ridiculous, and my onions are the equal of anything shipped out of Vidalia.) There were once even hop farms here, ginseng beds, hemp fields for cordage, and tobacco crops. Native plants, wildflowers (some considered rare only because so few of us look for them between the cornfields), and beneficial herbs of myriad varieties grow here in addition to the many weed species, some potentially useful, that humans have introduced.

■

No fallow land where
joyous effort and
the good dirt dwell

Patient native plants await their time to return: where I dug a barn foundation, a strange fern that looks Jurassic grew from the dirt excavated four feet below the present woodland floor. I dug a tile line through the gardens, and a clump of a prairie grass common a hundred years ago grew in the dirt left at the surface. In a nearby field where a backhoe gouged out a drainage ditch, a lovely cardinal flower grew and bloomed, a rare sight here since nearly all the wetlands have been drained—and with them the lush, game-filled cranberry bogs that greeted the pioneers.

From this cornucopia of plant life spring wild animals that coexist with a full complement of cows, horses, sheep, hogs, and chickens. I have counted 130 species of wild birds living on or regularly passing through our 32 acres, and 40 species of other wild animals. I wonder if anyone knows all the insect species here, including such rarer beauties as the luna and emperor moths and the zebra swallowtail butterfly. (I am sure that no one has identified all the species of microorganisms in the soil.)

As I work to improve the quality of the creek water, to improve the soil, to add more plant species to the farm, as the trees become more mixed in age to provide more kinds of habitat, as I renew meadow and wetland, and as the new pond in the pasture fills with fish and other aquatic life, more species will come or could be introduced. The diversity here could increase exponentially to a degree we can't yet even imagine.

If millions of humans join those of us already at this task, we can change the countryside and even most parts of the city into a patchwork quilt of Edenic garden farms supporting a stable, sustainable society in local environments so full of natural and domestic wonder, peace, and plenty that retreats to distant vacationlands would become unnecessary.

I find on my garden farm all the beauty, wonder, challenge, and satisfaction that any human could realistically ask for. I am fulfilled. I have no desire to go anywhere else or do anything else because in traveling my farm I travel the whole world, and in doing my work, I do the whole world's work. ■

GENE LOGSDON *is the author of numerous magazine articles and 14 books, the most recent of which are* At Nature's Pace *(Pantheon, 1994) and* The Contrary Farmer *(Chelsea Green, 1994).*

Down on the Farm Bureau

Farmers face a bumper crop of troubles. Family farms continue to be squeezed out by agribusiness. The chemical "inputs" recommended by county agricultural-extension agents have poisoned the groundwater, and officially approved tillage techniques have caused the topsoil to wash away. Few young people can afford to get into farming these days, and debt-ridden farmers can't get off the commodity-program Stair Master.

Yet according to the American Farm Bureau Federation, "the nation's largest farm organization," the direst threat is posed by nature. "Toads, owls, chubs, suckers, rats and bats, bugs and weeds," Dean Kleckner warned delegates to the Farm Bureau convention in Fort Lauderdale this January. "They're claiming title to our lands." Regulations to preserve wetlands and protect wildlife, the Bureau president said, are making farmers and ranchers "the true endangered species." (They *are* rather rare, at least within the Farm Bureau—only a quarter of whose 4 million members are actually farmers. The rest are purchasers of cheap Farm Bureau insurance who get automatic membership.)

BY PAUL RAUBER

Under Kleckner, the influential lobby has become the nation's largest anti-environmental organization, with ten lobbyists in Washington, D.C. and many more in Farm Belt statehouses. It is pledged, he says, to "defend farmers' property rights against assaults by 'envirocrats' who use environmental legislation to take control of land use out of the hands of private-property owners." The Farm Bureau also opposes the Voting Rights Act of 1965, the Delaney Clause outlawing carcinogens in processed food, the World Court, the Equal Rights Amendment, statehood for the District of Columbia, gay rights, and people who question the safety of the food supply. (In the last case, the Farm Bureau supports "the protection of producers from unproven reports of food-related risks through the development of state and/or a federal anti-disparagement bill." Dis a carrot, go to jail.) It "defends" its members against grazing reform, the National Biological Survey, "one world government," and the Clean Water Act, whose

The nation's largest farm lobby has a brown thumb

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"zero risk" pollution standards Kleckner derides. "To live," he explains, "is to pollute."

There is nothing new about the Farm Bureau's conservatism—it was, after all, established in the early years of the century to counter the populist farm organizations of the day. ("I stand as a rock against radicalism," proclaimed the Bureau's first president, James Howard, in 1920.) What is different is its current emphasis on anti-environmentalism and "property rights," both hallmarks of the nationwide "Wise Use" movement that is seeking to turn back the environmental gains of the past 20 years.

While the Farm Bureau spreads the Wise Use gospel, however, it coyly shuns the label—fearing, perhaps, to alienate its more moderate members. Yet, together with groups like the National Cattlemen's Association (with whom it has considerable cross-membership), it does the movement's heavy lifting. "Out West it's them and us on grazing fees, public lands, predator control, wilderness," Bureau lobbyist Mark Maslyn candidly told author David Helvarg (*The War Against the Greens,* Sierra Club Books, 1994). "Wise Use . . . also play[s] a constructive role in the process, and we wish them well. If nothing else, they make us look moderate."

The Farm Bureau doesn't want to look *too* moderate, though. Bill Craven, the Sierra Club's lobbyist in Kansas, tells of rising to speak at a hearing on water policy following a Bureau speaker. " 'I'm here to announce to an astonished world that the Kansas Sierra Club and Farm Bureau have the same position,' I said. Later the Farm Bureau lobbyist came charging up, saying 'Goddamn it, Craven, don't ever do that again! You'll ruin my reputation.' "

The Bureau's reputation in Congress and the statehouses is that of a tightly controlled, top-down organization that serves as the mouthpiece of agribusiness, aggressively defending the use of chemical pesticides and the gravy train of commodity subsidies. Yet while it often complains about the effect of environmental policies on agriculture, it is anxious to squelch any talk of the effect of agriculture on the environment. In a wonderful interview with the electronic news service *Greenwire,* Dean Kleckner complained about the "overemphasis on agriculture" by environmental-policy makers:

"There's a belief that agriculture is dirty," he said with evident amazement, "that we're using way too many chemicals and that we ought to be able to use less, or actually not use chemicals at all—to go back to the olden days . . . when we used manure for fertilizer, we rotated crops and we plowed down the clover and alfalfa for nitrogen." In the upcoming debate over the 1995 Farm Bill (see "Future Farming of America," page 38), the Farm Bureau will do its best to defend the status quo and keep environmental considerations off the table.

Those whining about governmental "takings" are perfectly happy to accept "givings"—handouts from Uncle Sam.

The easiest way to avoid discussing the environmental consequences of modern agriculture, the Farm Bureau has found, is to frame environmental protection as an assault on private property. Thus it argues that protecting wetlands or outlawing carcinogenic pesticides lowers property values, thereby constituting a government "taking" under the Fifth Amendment. In Texas, the Farm Bureau has attacked efforts to designate Outstanding Natural Resource Waters, on the theory that farms would become less valuable were they required to stop polluting waterways. In Idaho, it singlehandedly foiled an attempt—supported by everyone from environmentalists to the timber industry—to create a state endangered-species program, for fear it would restrict property owners' God-given right to destroy natural habitat. In Arizona, the Bureau wants the state to reimburse farmers for any damage done to their fields or livestock by any wild creature. Bonus points would be awarded if the culprit were an endangered species, with the state paying double.

Loopy as they sound, such measures are serious threats in many states. The Farm Bureau has joined the American Legislative Exchange Council ("Look Who's Taking," *Sierra,* September/October 1993) in pushing draconian "anti-takings" measures that would drown any new environmental regulation in a sea of bureaucratic spittle. Last year, Club activists and others in Kansas were able to prevent an override of Governor Joan Finney's veto of a Farm Bureau–supported state takings bill—but the issue is sure to be back again next year.

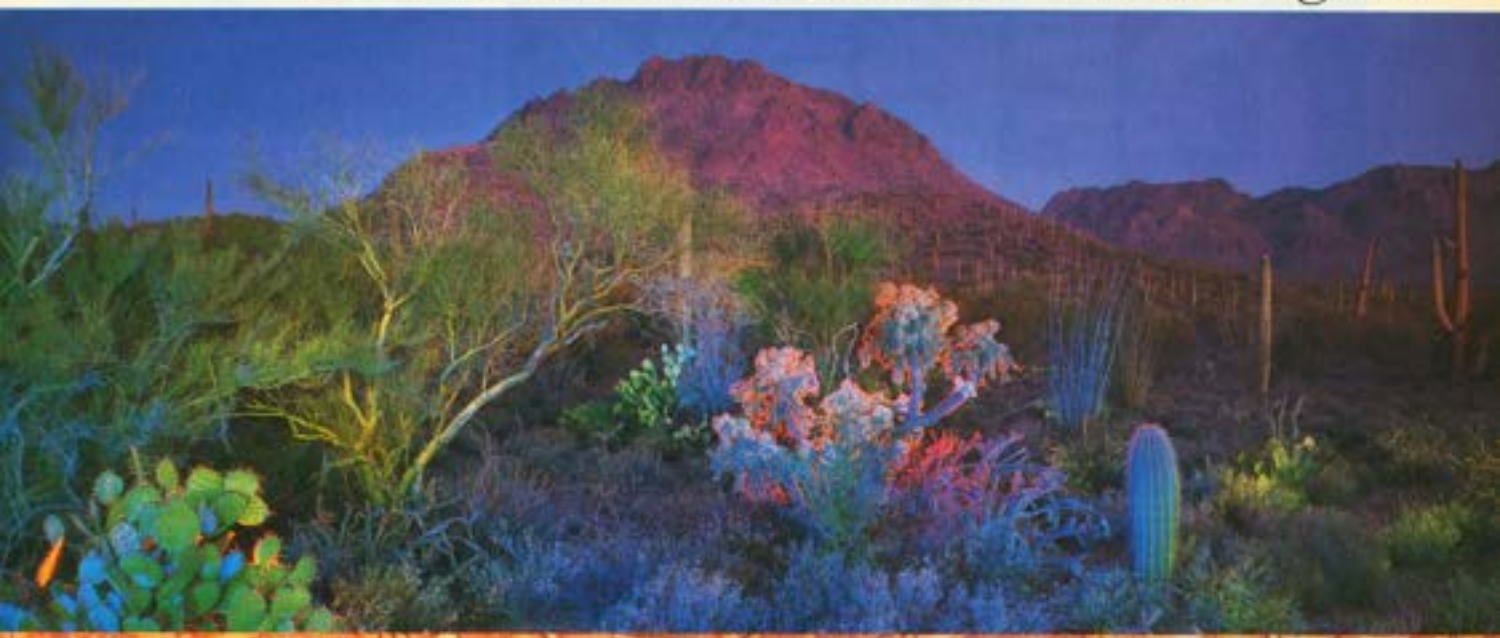
"This is a very conservative state," says Club lobbyist Craven. "We send a fellow named Bob Dole to the U.S. Senate fairly regularly. The proponents of this bill initially got the high ground, and were able to couch the issue as protecting private-property rights, rather than what it really is, an attempt by extremists to redefine the Constitution."

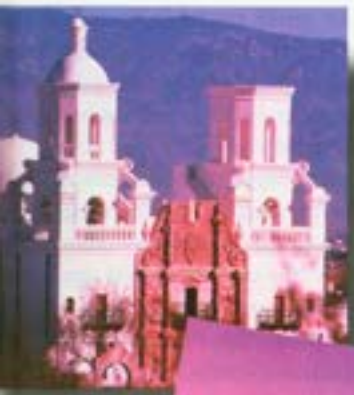
As the Environmental Working Group points out in its new report *Faking Takings,* those whining about governmental takings are perfectly happy to accept Uncle Sam's handouts. The report compares the diminution in property values through environmental regulation to the value added to farmland through commodity subsidies. Its conclusion is that taxpayer "givings" have contributed from $85 billion to $110 billion to the value of the nation's farms—15 to 20 percent of their total value.

You wouldn't think, given the heaping servings agribusiness already receives, that this would be the time to come asking for seconds. But the Farm Bureau is smugly confident; as long as concerned farmers and consumers fail to speak up, it has nothing to fear. ■

► *For more information, see "Resources," p. 106.*

See the desert in a different light.





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All You Can Stomach?

That $7.95 prawn platter is no bargain. Here's the real cost of our appetite for shrimp.

I used to feel both indulgent and virtuous eating shrimp. Their succulent pink-and-white flesh reminded me of sunny, salt-scented places. On restaurant menus, they made it easy for me to pass up beef and chicken, for shrimp were superior in every way. They were delicious, exotic, low in fat, high in protein, and—I thought—an ecologically correct gift from the sea.

Then I learned what it takes to put this "ideal" dinner onto my plate. Sixty percent of the two-and-a-half pounds of shrimp the average American eats every year are pond-raised in Asia and Latin America by an industry that is clearcutting mangrove forests, poisoning bays and estuaries, and impoverishing coastal dwellers.

Take, for example, the glistening black-and-white-striped tiger shrimp in my local supermarket. They come from Thailand, the world's largest producer of pond-raised shrimp. In the mid-1980s shrimp fever broke out in Thailand (and on the tropical coasts of countries such as Ecuador, China, and Indonesia), a boom fueled by the combined greed and ingenuity of Third World governments, the World Bank, and multinational corporations. In Thailand, says government planner Tassanee Chantadisar, "There was a saying that formerly those who want to get rich must traffic in heroin, but now they had to raise shrimp to make big money."

World appetite for shrimp, a crustacean far more affordable than its popular cousin lobster, was growing rapidly. So Thai rice farmers converted their coastal fields, and often the mangrove forests that bordered them, to

shrimp ponds. As much as five tons of shrimp a year could be produced from a pond the size of a football field. Rice farmers who had been making $500 a year suddenly saw profits of $20,000 to $40,000. For a while the future looked bright.

Then the ponds began to choke on their own wastes. Shrimp feed and excrement, sometimes combined with antibiotics and fertilizer (used to boost the growth of plankton, shrimp's natural food), proved too rich a broth for the estuaries in which the ponds had been built. In some places an explosion of plankton used up the oxygen needed by shrimp and other sea life. In others, the ponds' "enrichment" nurtured harmful bacteria and viruses. It soon became clear that farmers were attempting to raise too many shrimp in ponds that were too close together.

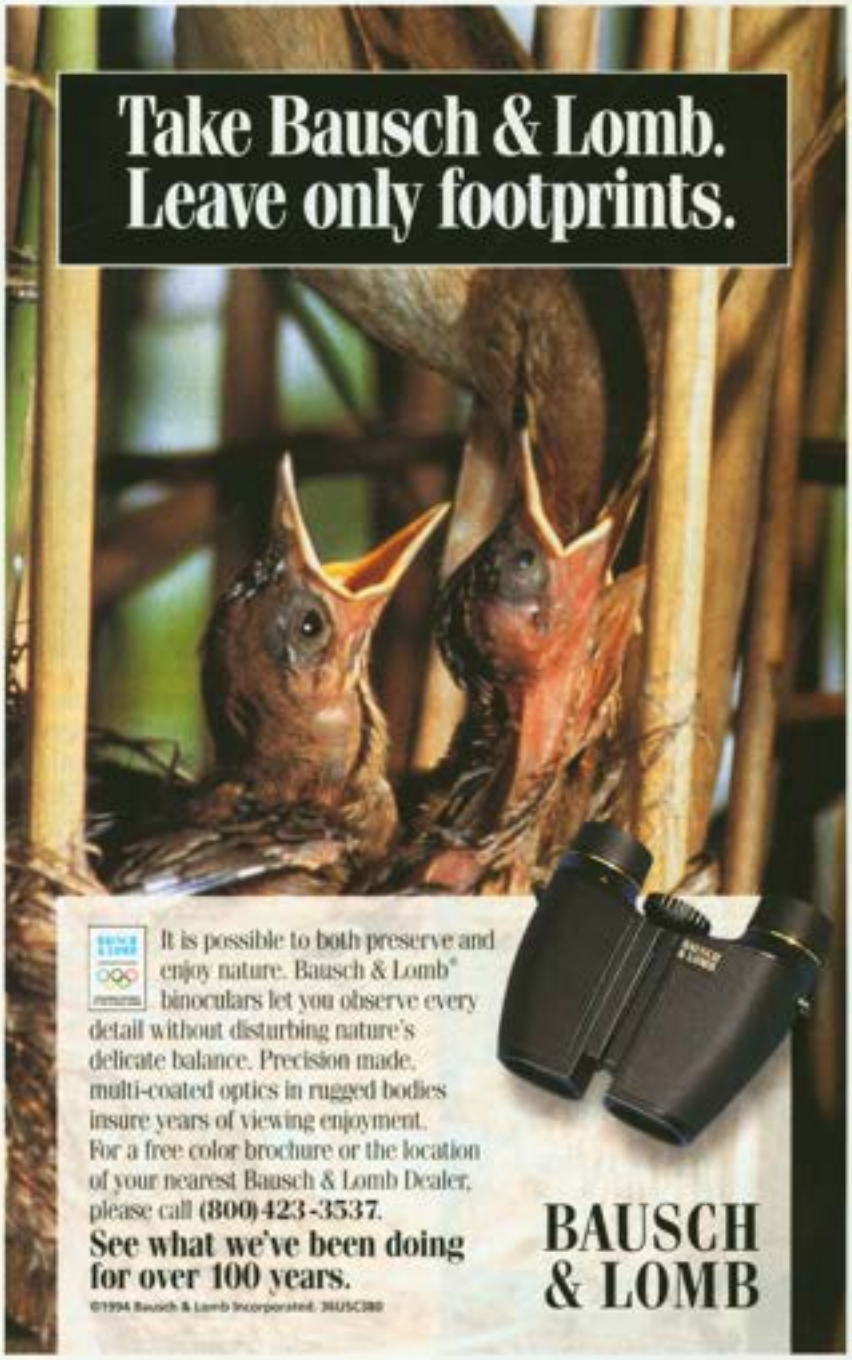
But by then it was too late. Not only were the ponds poisoned; the mangroves that could restore the life they once contained were gone, in some places even from forests in so-called reserves. Because 80 to 90 percent of the commercial seafood species that inhabit tropical oceans spend some part of their lives in the mangroves, coastal areas once rich with fish and crabs were rendered lifeless without them. In both Thailand and Ecuador the shrimp mania reduced mangrove forests by at least 25 percent.

Small-scale farmers paid dearly for their mistakes. Many became pariahs in their communities and most went broke, sometimes selling their land to larger landowners or to feed and fertilizer corporations for a pittance. Thailand's east coast, where the industry got its start, is now a wasteland, "a scarred battlefield of abandoned ponds, dead trees, and contaminated land and water," according to Alfredo Quarto of the Washington state–based Mangrove Action Project.

Business is still booming for those with the capital to pick up and move to undamaged sites, though: Thailand, a country only 25 percent larger than the state of California, still had 14,000 shrimp farms in 1993, and produced 170,000 tons, a whopping 25 percent of the world supply of pond-raised shrimp. The new frontier for corporations like Seattle-based Aqua Star (owned by British Petroleum) is the still-rich fisheries and mangrove forests of the country's western coast.

The juggernaut simply rolls on. "We have had problems everywhere in the world," admits Bob Rosenberry, publisher of *Shrimp News International*. "There is a ten-year cycle in shrimp farming where the industry goes bananas and then crashes. Now the industry is hopping into places like Vietnam, India, Bangladesh, and Myanmar [formerly Burma]. They say they'll do things differently, but I expect the same thing to happen there. The tendency is to produce as much as you can until you have a crash."

It's a tale that can and probably should take your appetite away—at least for pond-raised shrimp, which make up most of U.S. imports. But what about wild shrimp? They are a different, slightly more hopeful story.



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PRIORITIES

Most of the wild shrimp eaten in the United States come from trawlers plying the Gulf of Mexico. Fishing here is regulated to keep the three most commercially important shrimp species (white, pink, and brown) healthy. Thanks to environmentalists, U.S. shrimpers are now required to install turtle excluder devices (TEDs) in their nets. Starting in 1992, these devices reduced the deaths of sea turtles in the Gulf from 11,000 to 350 annually. That's progress, but a dramatic increase in the number of dead turtles washing up on Texas beaches this summer has raised questions about how vigorously the federal government is enforcing the new TED law. Earth Island Institute, the Sierra Club, and other groups are trying to increase the turtles' protection by calling for a ban on the importation of shrimp from nations that don't require TEDs on their fleets.

As endangered species, sea turtles have gotten most of the media attention, but they are not the shrimp fishery's only victims. The long, funnel-shaped nets used by trawlers hit the ocean bottom like underwater tornados, sucking up and killing anywhere from one to 20 pounds of fish for every pound of shrimp. Thanks to the TEDs, turtles and other large creatures can usually escape capture. But every year millions of pounds of immature catfish, croaker, mackerel, flounder, red snapper, and other fish are still hauled up in the trawlers' nets and tossed back into the sea dead or dying. Gear specialists with the National Marine Fisheries Service are developing devices that could reduce this "bycatch" carnage by half. Yet the current situation remains bleak: shrimping wastes more marine life than any other type of commercial fishing operation in the United States.

In my search for good shrimp, the facts were lining up like bleached-out exoskeletons on the beach. After discussing the transgressions of the trawlers, I asked Earth Island Institute's Todd Steiner, who has been working to reform the shrimp industry for six years, whether he could stomach Gulf shrimp these days. While he loves the taste of shrimp and believes it is only a matter of time before the bycatch problem will be solved, he says, "I still don't eat any shrimp unless I've been out on the shrimp boat and know it was caught with a TED."

Most of us, of course, have no way of telling whether what we are eating was pond-raised or wild-caught, much less whether the wild shrimp have been caught without killing sea turtles. I pressed Steiner further. If my menu choices were beef, chicken, or shrimp, all of unknown origin, which should I eat?

He paused, perhaps trying to weigh the relative seriousness of such disparate environmental sins as overgrazing, water pollution, and bycatch. Finally, he said, "It's better to eat mangoes." —*Joan Hamilton*

►*For more information, see "Resources," p. 106.*

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It took David Long's south-central Wisconsin neighbors a long time to get used to looking at his bottomland and seeing trees and native grasses, because for as long as anyone could remember it had been in corn. But since Long chose to rotate his small dairy herd from field to field the way his grandfather did, rather than feed his cows corn from the silo the way his neighbors do, he doesn't need to plant the streambanks. Soon after he stopped, 80 species of native plants reappeared, followed closely by a wide variety of wild birds.

If Long is lucky, he'll be chosen to participate in the U.S. Department of Agriculture's Wetland Reserve Program, a feature of the 1990 Farm Bill that would give him a one-time payment of $400 per acre to preserve his

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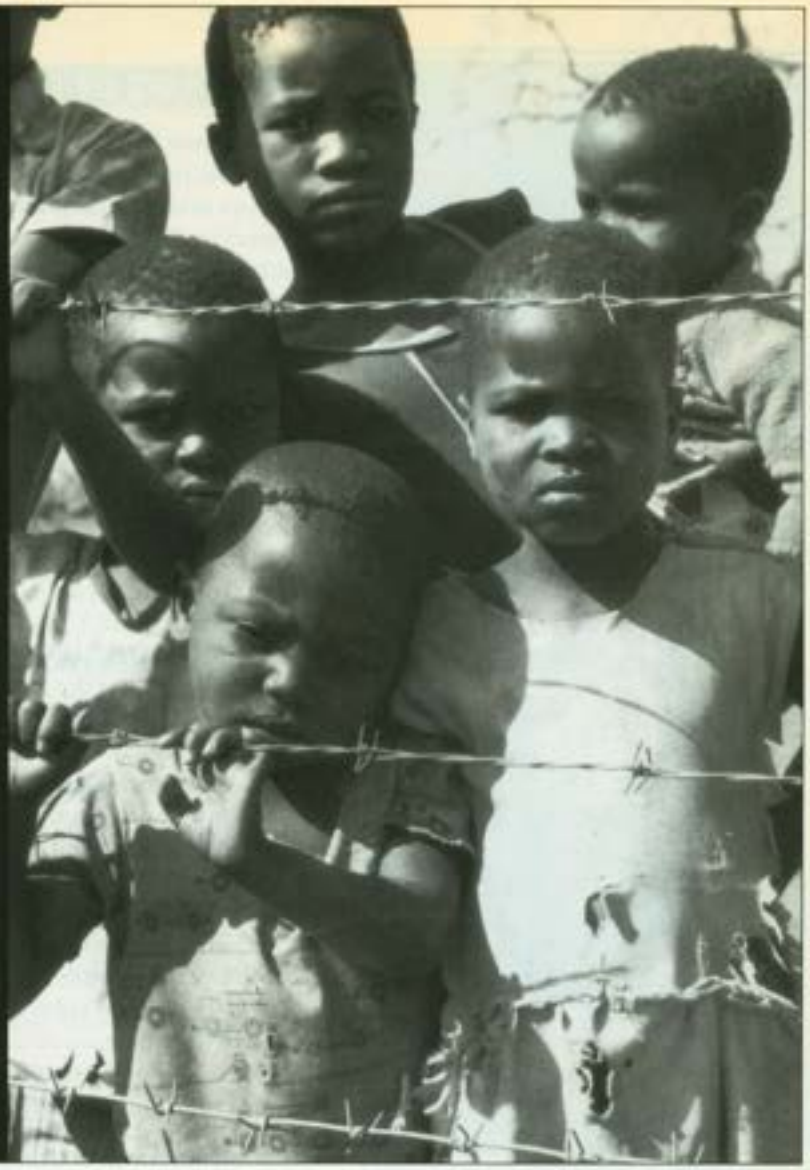

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waterway and shelter the cardinals, kingfishers, and towhees. But even if he doesn't make the program, he says, he'll leave his little wetland alone, "because it's right." Besides, he's happy to avoid the fieldwork of growing corn; he'd rather watch the birds that live on his land.

Many farmers who share Long's sense of ecological propriety, however, cannot afford to indulge it. (Long can do so only because he is not burdened by debt; his simple operation cost just $5,000 to capitalize, compared with $120,000 or more for a modern conventional dairy farm.) Thanks to the Wetland Reserve and Conservation Reserve programs that the Sierra Club worked hard to have included in past farm bills, however, farmers have been paid to remove 36 million acres (an area larger than Illinois) from cultivation, saving almost 7 billion tons of soil from erosion and rejuvenating wildlife communities.

The Farm Bill made it possible. Every five years, this omnibus legislation sets the ground rules for the 27 percent of the land mass of the United States (excluding Alaska) that is devoted to crops and pasture. It governs, for instance, the roughly $9 billion that goes to farm subsidies each year, determining whether they will be used to reward environmental stewardship or—as now—to support vast chemical-dependent monocultures of corn, wheat, rice, and cotton. As Sierra Club farm activist Bill Wenzel points out, "The biggest sponsor of agriculture-related pollution is Uncle Sam."

It doesn't have to be that way. The Farm Bill, with its vast resources, could just as well be the engine of sustainable agriculture, encouraging the rotation of diversified crops, rotational grazing by livestock, and reductions in chemical use. Past Farm Bills poured $20 billion into Conservation Reserve—a far from perfect program, but a step forward. If a similar amount were invested in rural environmental programs over the next decade, says Ken Cook of the Environmental Working Group, "the nation could solve most of domestic agriculture's conservation and environmental problems, from water-quality protection to wetlands restoration to pesticide contamination of food and drinking water." Environmentalists, Cook says, "have as much at stake in the 1995 Farm Bill as they have in any major federal environmental law."

In the last two Farm Bill cycles, the Sierra Club and its allies succeeded in getting large amounts of money earmarked for environmental purposes—including some vastly popular with farmers, like the Conservation and Wetlands reserve programs. ("How many government programs championed by environmentalists have inspired *that* response in American agriculture?" asks Cook.) This time out, the Club is setting its sights on the following elements:

- Research and education. At present, less than one-half of one percent of the USDA's education budget goes to sustainable agriculture. When pressed by circumstances—such as last year's report from the National Academy of Sciences detailing the susceptibility of children to pesticide residues on food—the USDA will trumpet its $40-million sustainable-agriculture budget from the 1990 Farm Bill. What they won't mention, however, is that only $7.4 million was actually funded. How can farmers kick the chemical habit if there's no one to tell them how?

- Polluted runoff, known in jargonese as "nonpoint source pollution." This is water pollution whose source is not a pipe from a dark satanic mill, but fields saturated with pesticides and fertilizers (like the cornfields that used to be in David Long's bottomlands) or oil-slick city parking lots. Farm runoff, however, is the nation's largest source of water pollution. We know that sustainable agriculture is the solution, but it's up to the Farm Bill to fund it.

- Commodity subsidies. For 60 years, the government has attempted to regulate the quantity and price of basic farm products by giving subsidies to producers, buying their surpluses, and sometimes paying them not to produce. The biggest winners are

the biggest farmers: more than 80 percent of farm subsidies go to fewer than 3 percent of the farms. The programs virtually require farmers to grow the same amounts of the same crops year after year, thereby penalizing those who rotate their crops, encouraging the use of vast amounts of chemical fertilizer and pesticides, and creating the very problems that other government billions are spent to clean up. According to Wenzel, many farmers now in the commodity programs are anxious to diversify: "Everyone knows that continuous corn is ultimately going to rob you of your land."

Chances for reforming this expensive and counterproductive program are aided by the stingy mood of Congress, which is already cutting back: gone this year, for example, are the subsidies for wool, mohair, and honey. "The people of the United States are tired of providing a free lunch to a bunch of fat-cat farmers," says Sierra Club Agriculture Committee Chair Bob Warrick. "Let's reward conservation instead."

- Conservation Reserve. Beginning in 1997, funds authorized for renting fields to take them out of production for conservation purposes will plunge drastically. Of course it doesn't make sense to rent lands indefinitely; in some cases this costs more than buying them outright. A promising alternative is Conservation Compliance, whereby any farmer receiving benefits from a commodity program would have to develop a soil conservation plan.

What else? The 1995 Farm Bill could encourage farmers' markets and give a boost to family farms by promoting direct marketing, whereby consumers get fresher—maybe even organic—produce, while farmers get fairer prices. (As is, only ten cents of every food dollar actually goes to the farmer.) It could support minority and Native American farmers, who are losing their land at more than three times the rate of other farmers; it could help save farmland from development pressures; it could stop encouraging the ridiculous dairy overproduction that obliges the government to buy mountains of surplus butter and cheese every year.

It could do so much—but it could also easily do very little. Powerful forces argue for stasis: "This ought to be a bill addressing traditional farm concerns," argues American Farm Bureau Federation president Dean Kleckner. "Let's address environmental concerns in separate bills and have as few of them in the Farm Bill as possible." Agribusiness will spend millions in campaign contributions in order to safeguard its billions in subsidies, and many urban legislators will presume that their constituents don't much know or care about what happens down on the farm.

"Environmentalists and farmers are natural allies," says Sierra Club activist Wenzel. "It's the money in agribusiness and in the commodity programs that keeps them at odds." The 1995 Farm Bill can bring them together—if everyone's willing to get their hands dirty to make it happen. ***—Paul Rauber***

► For more information, see "Resources," p. 106.

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Chefs who cook by nature's rules

Conservation à la Carte

by Paul Rauber

It was a stroke of genius to choose the tomato as the first commercial bioengineered product. The sad, pale baseballs passing for tomatoes in the supermarket are so loathed—especially by anyone who has ever had a Brandywine, Marvel Stripe, or Golden Jubilee fresh from the garden—that any improvement looks like progress. Calgene's patented, genetically engineered FlavrSavr™ can be picked later and riper; it still tastes only about as good as a supermarket tomato in the summer, but it tastes like that all year around.

Will a marginal improvement in the quality of commercial tomatoes be enough to sweep away what little remains of our indigenous food consciousness? While the rich, deep yellow of eggs from free-ranging chickens, the pungency of varietal cucumbers, even the smell of strawberries fade from our collective memory, the flavor of a real garden tomato lingers. Like Eve's apple, which conferred the knowledge of good and evil, a perfectly ripe summer tomato teaches us the difference between authentic and fake—and provides our link to the garden of true tastes.

At the entrance to the downstairs dining room of Chez Panisse restaurant in Berkeley, California, there is what can only be called a food altar, an artfully arranged cornucopia of the same seasonal produce that diners will soon find just as elegantly arrayed on their plates. While tomatoes would brighten the mid-June display, however, they are not yet welcome in this temple of produce. I am in the bustling kitchen preparing to sally forth with Alan Tangren, a former meteorologist with the enviable job title of "forager" for the famed restaurant, when the year's first box of cherry tomatoes arrives—and is unceremoniously rejected.

"Mealy," Tangren pronounces. A cook frowns; he's getting a little bit tired of fava beans, which have been on nearly every menu for weeks, and is anxious for something new. But when he pops a tomato in his mouth, he reluctantly concurs: "No good except for throwing at each other."

Peak tomato time at Chez Panisse, in fact, will not come until the Indian summer days of late September and early October. Then they will be ubiquitous, in dozens of varieties and dozens of preparations: in salads with cucumbers, olives, and salty cheese; in lightly warmed slices, dressed in puff pastry; baked, in sauces, roasted, raw.

High time for tomatoes in the Midwest comes earlier—July and August—

Restaurateur Alice Waters, apostle of seasonal eating.

and is likewise cause for celebration. At Charlie Trotter's restaurant in Chicago, the eponymous proprietor/chef paints a rapturous picture: "Tomatoes grown in season, ripened on the vine, picked at their optimal ripeness and eaten within the day, sliced up, a little drizzle of basil oil, a few pieces of olive, a little salt and pepper—the purity and intensity and poetry of the flavor from that tomato cannot be rivaled."

By November, the transubstantiation of sunlight into explosive taste is no longer possible. (From December to May, half of all U.S. tomatoes come from Mexico's Culiacan Valley, where they are sprayed with pesticides every four to seven days.) Yet even though the proper hour of the tomato has passed, they still garnish fast-food burgers and glow in great mounds under supermarket fluorescent lights calculated to burnish their pallor. They are banished, however, from Chez Panisse, Charlie Trotter's, and a growing number of restaurants across the country that choose to play, as Trotter puts it, "by nature's rules."

Those rules dictate the use of fresh, local, natural food in season. What 50 years ago were the rules of necessity are today the revolutionary prescripts of gourmet cooking. Learn them and you too could be a celebrity chef in a fashionable restaurant—or in your own kitchen. And a corollary benefit: by paying attention to what you put on your plate, you can reconnect to the land and help to save it.

In the boom years following World War II, a funny thing happened to American eating: we forgot how to do it. The long migration from farm to city completed, we soon forgot—or were made to forget—our link with the land. Chemical pesticides like DDT made possible enormous single-crop farms; faster transportation allowed perishable food to be shipped long distances; freezers enabled long-term storage; processing and packaging innovations produced the TV dinner, and advertising called it progress. The rapidly growing food industry elevated economy and convenience above taste and diversity; food changed from something you coaxed from the earth and cooked yourself into a ready-to-eat commodity in aluminum and plastic, transmogrified by unseen hands in unknown locations.

"Until I was 12," recalls *Moosewood Cookbook* author Mollie Katzen, "I thought spaghetti came from a can, and that vegetables grew in the freezer. When I discovered that green beans grew in the ground, I thought it was a miracle."

Today, few American eaters know or care where their food comes from. It's often hard to tell anyway, since the food in-

Fresh Starts

Growing a new life at the Garden Project.

In San Francisco, just down the street from a gritty housing project ("Stay out for your own good" warns the spray-paint), a quarter-acre vacant lot that formerly sprouted wine bottles and trash now blossoms with delicate beds of exotic salad greens. Here, the benefits of reconnecting to the earth are shared by eater and grower alike. Fresh Start Farms is tended by a staff of homeless people, earning a minimum wage and looking forward to a year-end bonus of $5,000 apiece that will, they hope, bounce them off the streets and into a new world.

"I'm doing something somebody likes," marvels a young man named Norwood, leaning on his rake. "It's cool to walk into the Safeway, look at the vegetables and say, 'I do that.' It's cool just to have work."

Fresh Start is the inspiration of Ruth Brinker, who put San Francisco's homeless problem together with the desire of the city's restaurants for fresh specialty produce. Its "biointensive" gardening methods require more labor than a conventional farm, but yield a far greater return per acre. And, says Brinker, by having a farm in the middle of the city, "we're able to offer people the freshest produce they've ever had in their lives."

What next? Brinker dreams of putting Fresh Start graduates to work on rooftop farms all over the city, providing an alternative to welfare and the street. "When people reconnect with nature," Brinker says, "they really do feel like they're home again."

Across town, another neglected vacant lot blooms as the Garden Project, an offshoot of a wildly successful horticulture program Catherine Sneed runs at the San Francisco County jail, growing food for soup kitchens and AIDS patients. Once released, however, Sneed's gardeners wanted to know what they could do other than return to jail. Her solution was to put her ex-cons to work at the three-quarter-acre garden, which supplies fruit for Just Desserts Bakery and produce for Chez Panisse and other restaurants in the area.

"The main mission is to start thinking about health and food," says Sneed. "Food can change people."

She's right. "Instead of robbing people," beams satisfied employee Kevin Burns, "I'm at the garden every day, planting seeds." —***P.R.***

dustry makes money "adding value" to food by altering its taste, feel, smell, and look. (Even the sound of food has become a commercially determined trait: Red Delicious apples have been engineered for crispness, not for flavor.) Processed carrots are uniform stubs in cello-wrap, salmon is molded in patties like hamburgers, and mashed potatoes come in a box. Fat and sugar, which used to be luxuries, are now staples: today we get 18 percent of our caloric intake from sugar, and 42 percent from fat.

As food is de- and re-constructed, the social role it has played for thousands of years is disappearing. The family dinner is becoming a thing of the past, and fewer and fewer people are cooking at all; nearly half of each food dollar is now spent outside the home. And inside the kitchen, the cookbook is shrinking: for many American families, dinnertime is an endless rotation of burgers, hot dogs, spaghetti, and pizza.

CHARLIE TROTTER

It's supply and demand, and chefs and restaurants have to create the demand.

There are consequences other than indigestion. One out of three U.S. adults weighs at least 20 percent more than they should. Coronary heart disease, the country's leading cause of death, has been conclusively linked (as have cancers of the breast, colon, and prostate) to a typical U.S. diet heavy in red meat and fat, and low in fresh fruits and vegetables. That diet also typically includes residues of the chemical poisons sprayed on those fruits and vegetables to make them grow in times and places and quantities convenient to the food industry's marketing plans. (The main path for these poisons is through animal flesh, where pesticides bioaccumulate. Less than 10 percent of the pesticides we ingest come from produce.)

The sickness of our bodies is mirrored by the sickness of the land. Pesticide runoff into streams and rivers is now the primary source of water pollution in the United States, and agricultural chemicals have poisoned the groundwater in many areas: half the wells in Dane County, Wisconsin, for example, are tainted by the herbicide atrazine, a suspected carcinogen commonly applied to cornfields. Continuous heavy production of a handful of crops—encouraged by U.S. farm policy (see "Future Farming of America," page 38)—results in both massive topsoil loss and chemical poisoning. And while the raising of export cattle for the U.S. burger market destroys biodiversity in Central and South America, the diversity of our own barnyards and farms is dwindling as well. Since the turn of the century, records Martin Teitel in *Rain Forest in Your Kitchen*, more than 6,000 varieties of apples (86 percent of those ever recorded) and 2,300 varieties of pears have become extinct. Nine out of ten eggs now on the market are laid by one breed, the white leghorn; seven out of ten dairy cows are Holsteins; and two varieties of peas account for 96 percent of the total. Even though there are 6,000 varieties of potato in the world, 40 percent of all U.S. potato acreage is devoted to Russet Burbanks, the variety favored by McDonald's for its french fries.

"People have to come back in contact with food and how food is grown," insists Alice Waters, founder of Chez Panisse and mother of the movement back to natural, seasonal ingredients. "They have to understand that the way people take care of the land really affects the wholesomeness of what they're eating. But they haven't made that connection, and it's one of the reasons they can be so abusive to the land and the water—because they don't see any relationship with what they're putting in their mouths."

We are sitting at the coveted front table in Chez Panisse's main dining room—a room customarily booked months in advance, empty this morning except for a staffer changing tablecloths and vacuuming the stairs. Waters is delicate and soft-spoken, yet animated by a passionate conviction (a quality she attributes to her early career as a student radical, which, she says, "in all its innocence, prepared me for a lifetime of determination and optimism").

Waters' interest in food and the environment is not just the whim of a fabulously successful restaurateur. It is what made her fabulously successful. When she founded Chez Panisse 23 years ago with a borrowed $10,000, Waters knew nothing about running a restaurant. All she had was the revelatory experience of her junior year in Paris: "For the first time," she recalls, "I was seeing how people live who think of good food as an indispensable part of their lives." Back home in Berkeley, she sought to recreate that experience, initially by picking through the produce bins of the super-

market across the street in search of a handful of perfect beans. She quickly learned to look farther afield.

"The process began when a neighbor offered us radishes and sorrel from her backyard garden," she says. It continued in small ethnic markets, at local farms, even in forays to vacant lots that yielded riches of fennel, nasturtiums, and blackberries. Today Chez Panisse has a network of more than 90 suppliers, mostly organic and local (although truffles are still shipped from France—the domestic variety having "what some people consider an objectionable odor," as forager Tangren puts it). The list is constantly evolving. The restaurant's large commercial dairy, for example, was dropped this spring after refusing to reveal whether its cows were injected with bovine growth hormone; its happy replacement is the Straus family's nearby organic dairy.

Seeking out these suppliers is Tangren's job. He travels the back roads of the San Francisco Bay Area in search of perfection, encouraging farmers to plant new varieties, and assessing the sustainability of their farming methods. In mid-June we visited grower Didar Singh, who has 16 acres of beautiful organic grapes and fruit trees and tried to tempt us with early peaches. "We usually wait until the middle of the season," demurred Tangren with a sigh, "when they're cheaper and taste better." We did leave, however, with a lug of perfect apricots and a box of green almonds for the mysterious purposes of a visiting Spanish chef.

"We discovered a pattern," says Waters. "When we looked for the freshest and best-tasting ingredients, we found that the people who produced them were frequently the most environmentally responsible. When we tried to find the products that were certified organic, we found that if they were fresh and ripe, they usually tasted the best."

A meal at Chez Panisse is a voyage of rediscovery, a reminder of half-forgotten essences. A group of visiting Midwesterners at the next table eagerly attacks a starter plate of just-out-of-the-ground white radishes. "That's how a radish is supposed to taste!" exclaims one—exactly the reaction Waters seeks to every dish she serves. While some patrons arrive expecting to find "California cuisine" ("a gathering of things from all over the world combined willy-nilly on a plate" in Tangren's definition), they find instead simplicity itself. Like the platinum bar in Sèvres, France, that is the prototypal meter, Chez Panisse is the measure of foodstuffs.

Producing plates fit for Plato's heaven in a restaurant with a staff of 100 is a costly enterprise; Saturday *prix fixe* dinners at Chez Panisse run $65. Yet it does not follow, Waters argues, that you have to be rich in order to eat natural, healthy food. The basic elements of Chez Panisse's menu are available to anyone willing to do a little foraging themselves.

"I'm not talking about food for gourmets," Waters insists heatedly. "I'm talking about a ripe tomato just sliced. You can make polenta for 100 people for $6. I'm talking about shell beans, 20 different varieties of shell beans that give you a great deal of pleasure all winter long, and cost next to nothing. Wholesome, honest food should be an entitlement of all Americans, not just the rich."

The "stigma of elitism" that has attached itself to eating well, Waters believes, will be erased by the rising number and popularity of organic farmers' markets. They are, in her view, the ideal meeting place of town and country, an opportunity for city people to remember where their food comes from. "It helps people understand the responsibility that the farmer has to the person who's eating, and that the person who's eating has to the farmer," she says. "The two go together."

Part of the responsibility eaters bear is to support farmers

What's for Dinner?

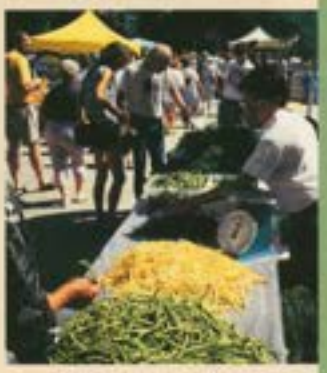
Tired of eating out of styrofoam? Ready to take responsibility for what you eat? Here's how to make mealtime healthier for you, your community, and your earth:

❖ Shop regularly at your local farmers' market. If you don't know where it is, call your state department of agriculture or local cooperative extension service. For the USDA's free list of all 1,755 farmers' markets in the United States, write Denny Johnson, P.O. Box 96456, Room 2642 South, Washington, DC 20090-6456.

❖ Participate in Community Supported Agriculture, a program in which local organic farmers pack weekly boxes of food for distribution to subscribers. The farmer is guaranteed a market, and the customer gets the freshest possible local produce. For information about enrolling in a CSA in your area, call the Biodynamic Farming and Gardening Association at (800) 516-7797.

❖ If your local supermarket doesn't offer organic produce, ask the produce manager to start. If it *does*, be sure to buy some; a recent poll revealed that whereas 53 percent of respondents claimed to prefer organic produce, only 19 percent actually bought any.

❖ The best way to assure healthy, local, organic produce is still to grow your own. Start planning that springtime garden.



Farmers' market, Madison, Wisconsin

even when their selection dwindles from its summer bounty. Doing so requires some invention, but Waters is happy to lead the way. "We have to learn again how to eat seasonally," she says. "If I had not made it my business to find out, I would not have imagined the beauty and variety of the food that's available in winter. We get five or six different sizes and shapes and colors of turnips; we get little white carrots, bright-red carrots, and orange carrots; you mix those together and it's as beautiful as a tomato salad in the middle of summer."

However colorful, tasty, and healthful the organic food at farmers' markets may be, it may well cost more than the bland, cosmetically homogeneous, pesticide-laced produce at the Piggly Wiggly. The problem is actually one of perspective, Waters argues; it's not that organic produce is too expensive, it's that supermarket produce is too cheap, because large conventional growers can "externalize" their costs by diminishing soils and polluting waterways. As is, U.S. consumers spend less on food, as a percentage of average income, than do eaters in any other nation on earth—only 12 percent, compared to 20 to 30 percent in most other countries.

"We don't know what the cost of food is," laments Waters. "It looks cheap, but it's very expensive when it comes to the environmental cleanup on the other side. And then there's our health—the big tab. At the farmers' market, we're supporting the people who are taking care of the land for all of us. I am always willing to pay extra money for that."

As Waters sees it, deep-dish environmental choices are made every time we lift fork to mouth. "The good news is that by making the right choices, you're also giving yourself pleasure. It's not like medicine, not like exercise, not like eating non-fat. This is a way of coming into a whole other relationship to food that makes it *irresistible* to eat fruits and vegetables. They're no longer something you *have* to eat—you want to do it. Because they are delicious."

That sounds all very well for the balmy Bay Area, but what would it be like if Chez Panisse were in, say, Chicago? Waters seems to blanch. "It would be—different," she concedes.

I meet Rick Bayless at O'Hare Airport. He is just back from New York and an appearance on *Good Morning America* where he has defended the honor of Mexican food against the previous day's broadside by the Center for Science in the Public Interest. Following blanket condemnations of Italian and Chinese cookery, CSPI had turned its guns south of the border, declaring war on the chimichanga and chile relleno ("like eating a whole stick of butter"), warning against both rice and refried beans (too much salt in one, too much fat in the other), and even the "tortilla terror" of the staple of all Mexican cuisine. "The sad part," CSPI concluded, is that "unlike Chinese or Italian restaurant food, it's tough to make Mexican better."

The klieg lights are off, but Bayless is still hotter than a handful of habaneros. The CSPI study was based, he said, on only the most commonly ordered dishes from large chain restaurants. "That's not what Mexican food really is!" he fumes. He should know: he and his wife, Deann, are authors of an excellent cookbook, *Authentic Mexican* (Morrow, 1987) and owners of the Frontera Grill and Topolobambo, contiguous dining rooms of what is quite possibly the best Mexican restaurant in the United States.

RICK BAYLESS

We need to look at our roots, at how we have eaten in the past—even if it means a much more local source base, even if it means not having grapes in the middle of winter.

No burritos or nachos here, no artificial, Anglified dishes like chimichangas or fajitas. Real Mexican food, insists Bayless, is low in fat, largely plant-based, and as healthy a cuisine as they come. A menu he submitted to *Eating Well* magazine, he boasts, easily passed its strict nutritional analysis even though the entrée featured beef, one sauce contained homemade *crème fraîche*, and the fruit tart had a butter crust. On average, the meal still ended up below the magazine's health limit of 30 percent calories from fat.

"It's all in the flavoring of the sauces," says Bayless. "Mexican sauces are served in great abundance on the plates, because all the vegetables are pureed into them. In Mexico, dishes are called by the name of the sauce, not by the name

of the meat." The Baylesses serve half a dozen kinds of *mole*, savory sauces of chile, vegetables, and nuts that range from delicate pumpkinseed-and-tomatillo concoctions to an intense three-chile *coloradito* that had sweat dripping in my lap. At Frontera, as in Mexico, hunks of meat and globs of cheese are beside the point.

"If CSPI can help the chain operators move toward a healthier and more truly Mexican menu, I'm all for that," says Bayless. "But what they do is encourage people to use nonfat sour cream, which to me is as horrific as those fatty chimichangas. I think we're heading down the wrong path: Non-dairy sour cream is not the answer. It's more than just figuring out a way to magically remove or replace the fat so we can go on eating this incredibly luxurious diet and not suffer serious repercussions for doing so. We need to look at our roots, at how we have eaten in the past—even if it means a much more local source base, even if it means not having grapes in the middle of winter."

Yet Chicago's local source base is hardly adequate to supply the Baylesses' demands. Their search for local suppliers has gone from disaster to disaster: one farm was sold for a subdivision; then a dependable elderly farmer retired with no one to take his place. In desperation, the Baylesses and a few like-minded restaurateurs rented their own farm and hired a manager to run it. But this spring, with seeds already in the ground, the manager quit. And when the Lincoln Park farmers' market opened this year, the grower who always brought *verdolaga* and other Mexican produce items wasn't there—no one knows why.

The setbacks sting, especially given his high hopes for the local farmers'-market scene. "In the ideal world," says Rick, "I'd get all my produce from someone I know, someone I can chat with if I want to. I can share in their difficulties, they can share in mine. Unless we can cement that relationship, I don't see a whole lot of hope for really doing much environmental work. If you've completely lost your contact with the earth, why should you make environmentally appropriate decisions? Sure, something can pull at your heart-

Alice Waters' Sausage, Winter Greens, and Semolina Pasta

2 leeks
3 cloves garlic
2 bunches winter greens (mustard, beet, turnip, red chard, etc.)
4 sausages (sweet Italian, or spicy, or hot, etc.)
6 or 7 tablespoons virgin olive oil
Semolina linguine for 4
Salt and pepper
Pitted black olives
Crushed red pepper (optional)
Parmesan cheese

Wash and thinly slice the leeks, white part only. Peel and chop the garlic. Remove any large stems from the greens, cut the leaves crosswise into thin ribbons, and wash and dry them. Slice the sausages.

Stew the leeks, garlic, and sausages in about 5 tablespoons olive oil for 10 minutes or so. Add the greens and continue cooking for 5 minutes more, until they are soft and wilted. The addition of a little water or stock will help to steam them. Moisten the mixture with another tablespoon or two of olive oil. Cook the pasta, drain it well, and add it to the pan. Toss all together and taste for seasoning. Serve garnished with a generous sprinkling of pitted black olives and a little crushed red pepper if you like it spicy. Serve with freshly grated Parmesan cheese at the table.

—From Chez Panisse Pasta, Pizza, & Calzone *(Random House, 1984)*

Odessa Piper's Maple and Hickory Nut Apple Crisps

Heat oven to 325 degrees.

1 cup shelled hickory nuts
1 teaspoon vegetable oil
⅛ teaspoon salt

Toss the nuts to cover with oil and toast in 325-degree oven for 10 minutes. Set aside for garnish.

1½ tablespoons vegetable oil
½ teaspoon pure maple extract
2 tablespoons maple syrup
⅛ teaspoon salt

Combine and add to 1½ cups rolled oats to coat thoroughly. Spread oats out on a cookie sheet and crisp at 325 degrees for 10 minutes, until oats are just golden. Set aside to cool. Raise oven heat to 375 degrees.

4 tablespoons soft butter
3 tablespoons brown sugar
½ cup flour

Combine butter, sugar, and flour until smooth. Add cooled toasted oats and mix with fingertips until crumbly.

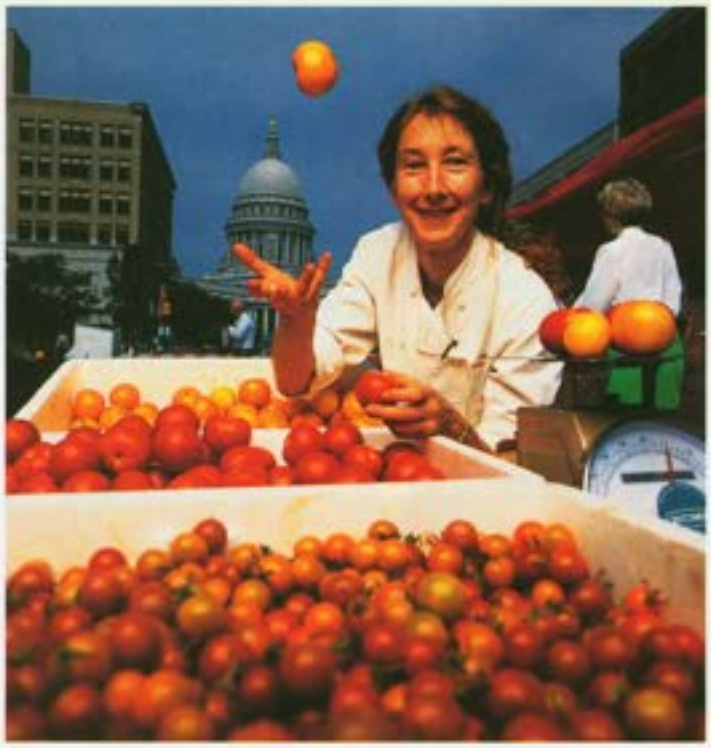
8 cups peeled, cored, and sliced apples such as Gravensteins, Winesaps, or Pippins
1 teaspoon cornstarch
⅓ cup sugar

Toss to coat. Moisten with 1 tablespoon Calvados, maple syrup, or reduced cider. Turn into a 9" x 12" buttered pan. Cover with oat-crisp mixture, and bake at 375 degrees for 20 minutes. Cover with foil and bake for 10 more minutes, or until apples are tender and juicy. Remove foil and crisp for 10 more minutes.

Serve warm with homemade vanilla-bean ice cream. Drizzle with maple syrup and the reserved toasted hickory nuts.

strings—I can listen with my daughter to environmental songs on her Raffi tape and feel warm and fuzzy—but that's not going to get an adult to make appropriate decisions, like doing without something you want or paying more money to do the right thing."

As is, the Baylesses make do (magnificently, as the two-hour wait at the door attests) with what they can get from the farmers' markets, supplemented by specialty growers in California. Still, says Rick, "Some days I'd just like to close the restaurant because the stuff's not good enough. I just don't know what to do." I suggest that perhaps reforming an entire region's food-supply system is more than one person can reasonably expect to accomplish. "I don't mean on a broad scale," he replies. "I mean I don't know what I'm going to serve in my restaurant. I really don't."



ODESSA PIPER

I learned what I could about freezing, drying, and preserving. I thought about what Native Americans did in this cold climate, and began to see what I could do, very elegantly, in my own restaurant.

If Charlie Trotter had any doubts about what to serve in *his* Chicago restaurant, it seems unlikely that he would ever mention it. A culinary superstar at 34, he has not yet lost the audacity of youth; his luxury restaurant—where two diners would have trouble getting out the door for less than $300—is dedicated to "ultra and absolute purity of flavor." He features tasting menus of five to eight small, inventive plates (a tart of artichokes, summer truffles, and pigs' feet, for example, or quinoa with shiitake mushrooms and lamb's tongue), impeccably presented and maximally sensual. This is the antithesis of fast food: At dinner that night, I found it necessary to pause frequently to let my brain catch up to my taste buds.

Like the Baylesses, Trotter is devoted to ingredients that are organic and—in the summer at least—largely local. Yet he refuses to "wave the organic flag," as he puts it; he chooses organic products simply because they taste better. "Our statement is the pursuit of excellence; everything else falls into place. We don't look at it as vegetarian food or alternative food or health food; we look at it as a meal made up of vegetables, cooked the way we cook meat, fish, and everything else: with precision, with technical expertise, and with love."

While Trotter offers an entirely meatless menu—chosen by one out of four diners—he calls it "vegetable" rather than "vegetarian." He is, in fact, openly scornful of what generally passes for "health food," declaring 99 percent of it inedible: "Bogus cheese melted into a sauce, those cardboard tortilla things with bland tofu pieces, a couple of pills and a protein shake with wheatgrass juice—I don't consider that very healthy. Food is about sensuality; it's one of the few aesthetic, sensual experiences you have every day. Rather than saying, 'I'm going to eat healthy,' if we eat healthy foodstuffs, and prepare them properly, health will follow."

(Chicago, with its temples of beef on every block, is pretty ambivalent about health anyway. Gordon Sinclair, whose swanky restaurant also uses mostly organic ingredients, asked rather anxiously that I be sure not to identify Gordon's as a health-food restaurant. "I wouldn't want anyone to think they couldn't get a martini here," he explained.)

While Trotter may not be vegetarianly correct, he does insist on playing by the seasonal rules. "Some chefs don't really care. They write a menu and serve asparagus, strawberries, and tomatoes all year around. You can get those things flown in from South America; they look okay, but they don't have any flavor.

"When I serve a plate of food, I make it profound with the vegetable components. Peas cooked just through, using the juice and a little red wine essence to make the sauce; some roasted morel mushrooms flavored with garlic, and everything sitting on this beautiful satiny organic Yukon Gold potato puree—it's just going to blow up in your mouth. When

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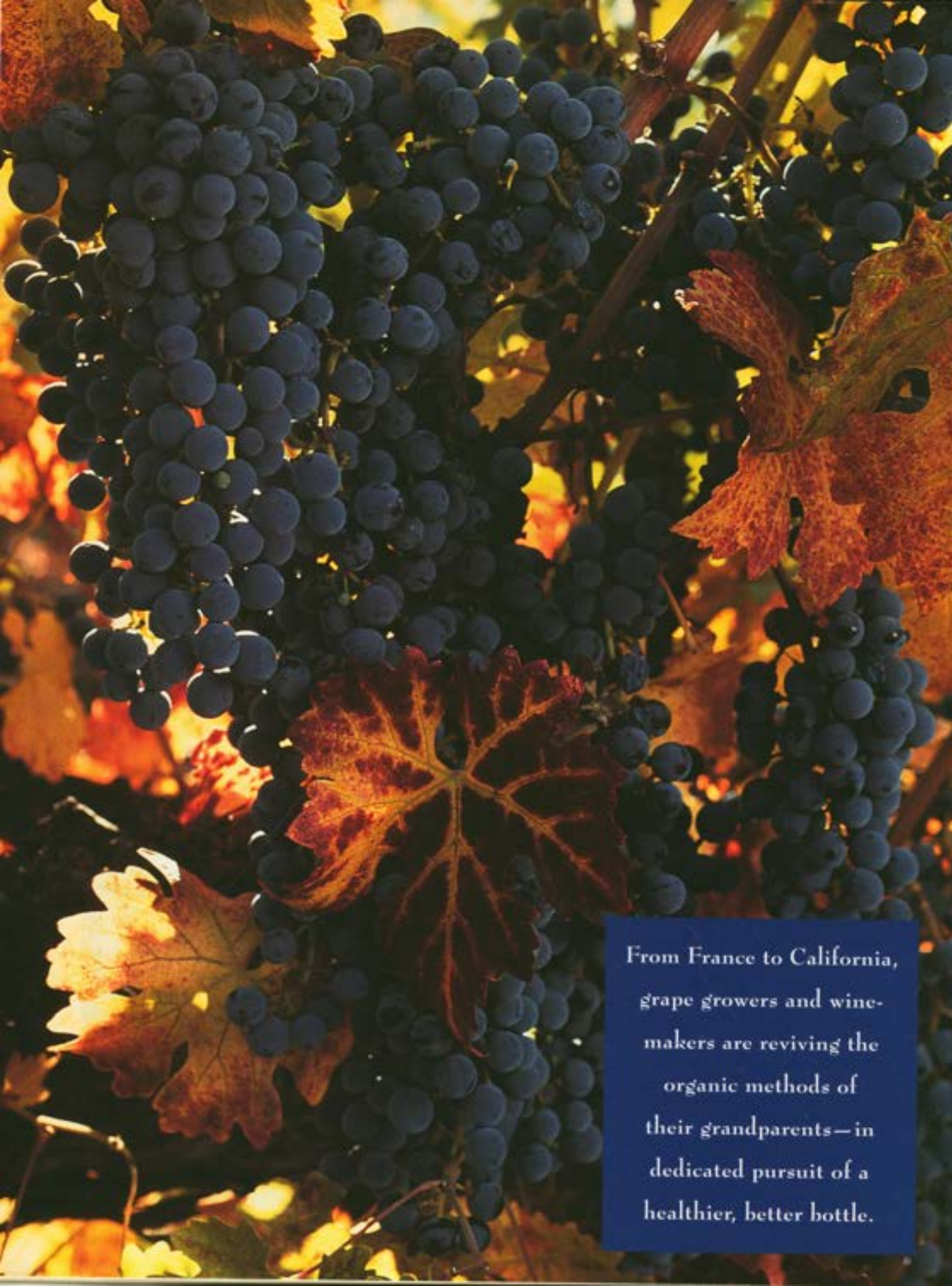

From France to California, grape growers and wine-makers are reviving the organic methods of their grandparents—in dedicated pursuit of a healthier, better bottle.

RICHARD STEVEN STREET

VINTNERS TAKE THE PLEDGE

by Richard Figiel

The speaker stood at the front of a crowded hall in Davis, California. "My name is Rich," he began, "and I've been chemically dependent. . . ." The audience burst into laughter, drowning out his punch line: ". . . mostly on organophosphates."

Richard Nagaoka, a high-powered Napa Valley vineyard consultant, was addressing a group of grape farmers and winemakers at a University of California Extension seminar titled "Going Organic." He went on to describe his running battles with the grape leafhopper, a bug smaller than a grain of rice that has become a major pest in California vineyards.

Nagaoka had found himself in a vicious cycle: as leafhoppers kept adapting and building up resistance to each petroleum-derived, organophosphate insecticide used to control them, he would switch to a new formulation. Even after spraying the leafhoppers repeatedly through the season, huge populations would still confront him. Unable to control them with chemicals, he says, he finally turned to an organic strategy "by default."

The transition wasn't easy. Withdrawal from insecticides meant several years of agonizing crop losses until the leafhoppers' natural predators—whose numbers had been decimated by the barrage of pesticides—could get re-established in the vineyards.

Nagaoka was hardly alone on that treadmill. Many farmers continue to walk it, whether they grow grapes or grains or green beans. Cornell University entomologist David Pimentel says pesticide use has increased 33-fold on U.S. farms since 1945, when synthetic agrochemicals were introduced on a mass scale. Yet over the same period, losses to pests have *increased,* from about 31 percent to 37 percent of crop totals. Produce, of course, is not the only thing at risk. Despite their increasing ineffectiveness on adaptive pests, agricultural chemicals take a serious toll on human health. According to the World Health Organization, there are a million nonlethal poisonings from pesticides each year among agricultural workers and consumers, and about 20,000 deaths.

Wine-country springtime: Fetzer's organically nurtured grapevines float in a sea of yellow mustard.

Spurred by consumer scares, voter initiatives, government regulation, and resistance problems in the field, grape growers and winemakers have begun jumping off the treadmill over the past several years. In California, Mendocino County's Fetzer Vineyards was the first to begin converting its holdings to an organic regimen on a large scale, in the mid-1980s. Other big West Coast wineries shifting at least some of their vineyards to more-natural, sustainable farming methods include Buena Vista, Robert Mondavi, Sutter Home, Gallo (all in California), and Washington's Chateau Ste. Michelle. Among the smaller California converts are Spottswoode, Callaway, Hess, Frog's Leap, Jekel, Mark West, and Chateau Montelena. Vineyard acreage certified by the California Certified Organic Farmers association (CCOF) jumped from 200 in 1989 to more than 6,000 in 1993. While this is just under one percent of the total acreage devoted to winegrapes in California, it's enough to make them the state's largest organic crop.

Many winemakers eagerly embracing sustainable agriculture seem less eager to put the O-word on their labels. Marketing departments worry that the "organic" image isn't right. Or else they worry that it *is* right, but that only some of their product line comes from organic vineyards. Among the big players only Fetzer has begun organic labeling, on a couple of limited-production wines they call "Bonterra."

Fetzer aside, U.S. wines that proudly proclaim themselves "organic" generally come from a band of small-scale pioneers who laid the groundwork for the movement over the last 15 years. One of the first, in 1980, was Four Chimneys Winery in the Finger Lakes district of New York. In California, Mendocino County sprouted the liveliest community of organic-winegrape growers. Something of a viticultural backwater while neighboring Napa and Sonoma counties have found fame and fortune, Mendocino still has a surprising number of old-guard growers doing things the way their fathers and grandfathers did, when there were no herbicides or synthetic sprays.

The late Paul Frey fell into winegrowing as he backed away from his first career, as a physician. He and his large family started planting vineyards on their 100-acre ranch in 1967 to pay the property taxes. With little interest in wine ("I didn't even drink it"), Frey put only enough effort into the vineyard to bring out a marketable crop. "The organic component just evolved out of neglect," he once recalled. But when a Santa Cruz winery won a gold medal at one of California's major wine judgings with a cabernet sauvignon made from Frey's grapes, the wheels began to turn. With 12 family members knee-deep in all aspects of the farm, Frey found himself in a good position to enter the labor-intensive organic-wine business.

Since their first commercial vintage in 1980 (made not by the senior Frey but by two of his sons), the Freys have added some high-tech touches to their minimalist management style. They (like many organic grape growers) spray their vines not with pesticides but with compounds, such as sulfur dust, permitted by the CCOF, while in the cellar they use newly developed yeast cultures and blanket their wines with nitrogen gas to prevent spoiling.

After a few years of trial and error they hardly qualified as experts in a profession that measures experience by the century; yet the Freys became gurus of the early organic-wine movement on the West Coast, eager to share their experience and commitment. Other Mendocino growers soon followed their lead, including the Fetzers, Olson Vineyards,

Organic winegrowers are suspicious of much of the "progress" made in agriculture over the last half-century. They are reviving or carrying on older ways of doing things.

Hidden Cellars, Octopus Mountain Cellars, and Konrad.

At the same time Frey and Four Chimneys were getting started, Brian Fitzpatrick opened a small winery on a ridge in the Sierra Nevada foothills near Placerville. He started planting apple trees for cider, then switched to grapes because they require less water. (His area has no water-subsidy program, so he must irrigate with well water.) "It's relatively easy to grow grapes organically around here," Fitzpatrick says. "Vineyards are scattered, and there's a diversity of crops." A diverse ecosystem helps keep pests, predators, and natural cycles in balance. While Fitzpatrick builds up his own estate vineyard he buys most of his grapes from other growers in the foothills, luring them onto the organic path with expert guidance and the enthusiasm of the true believer. "They come along about one a year," he smiles.

In the early 1980s another pioneer, Aleta Apgar, retired from professional ballet to make organic wine in the Mayacamas Mountains between Napa and Sonoma valleys, under the Las Montañas label. On the other side of Sonoma County, Charles Richard walked away from a concert career as a classical guitarist to start Bellerose Vineyards, farmed organically with the help of a pair of Belgian draft horses, Curly and Red.

Most of these individuals appeared on the front lines of the organic-wine movement with little or no farming experience or technical training. They had nothing to unlearn, no old habits tied to conventional ag-school strictures, no chemical dependency to kick. They were green and open to something new.

A few years ago they got together to sort out their various experiences. As the field expanded beyond a few mavericks, it was time to answer an important question: What *is* organic wine, exactly? Wine drinkers didn't know. Wine retailers didn't know. Nor did most winemakers have a clear idea, and those who thought they did weren't sure they agreed.

The principle of organic farming was clear enough: to work as much as possible in harmony with nature, rather than in opposition to it. In the vineyard this means mulching grapevines, cultivating the soil, and planting cover crops—all in lieu of applying herbicides. It means encouraging natural predators of insect pests instead of poisoning foe and friend alike with insecticides. Organic growers use no synthetic growth-regulators (like Alar) and no chemical fertilizers. They build up the soil with composted animal manure and green manures (cover crops like clover turned under to add nitrogen and organic matter). Maintaining a healthy, biologically active soil lies at the heart of all organic farming.

To ward off vine diseases, growers thin the foliage, letting in breezes and sunlight to flush out mold and mildew. Synthetic chemical pesticides are taboo, but most organic growers do spray their vines with naturally occurring minerals, most commonly with mined sulfur, ground-up bluestone (copper sulfate), and lime. A combination of the latter two, called Bordeaux mix, has been used in vineyards for more than a century, while sulfur was prescribed for Roman vineyards in Virgil's *Georgics*. These sprays function as protective shields on vine leaves, rather than entering into the plant's vascular system like new synthetic fungicides do. This makes them less potent and persistent, and it eliminates the resistance factor, keeping sulfur and Bordeaux mix as effective today as when they were first used.

The Frey family works in wine year-round, from winter's pruning through autumn's crush.

In the cellar, "organic" suggests minimal processing and no use of chemical additives. But here in particular, the winegrowers began wading into gray areas. Essentially a simple, natural process, the conversion of grapes into wine has over the years been accompanied by all kinds of high-tech innovations, from centrifuges and super-filters to dozens of chemical additives and "processing aids." Most of these are designed to speed up the process, to make it more predictable or consistent, or to fix problems that come in with the grapes.

Among the additives, sulfites proved most troublesome to organic winegrowers. It's tough to

make a wine that will keep well without adding at least some sulfites. (This is particularly true of white wines, which ferment apart from grape skins. Red wines ferment with juice and skins together, providing them not only with their color but with tannin, a natural preservative.) Sulfites can be added in the form of naturally occurring sulfur-dioxide gas, as has been done for a thousand years, or in the chemical form commonly used today. Some winemakers wanted to allow small additions of gas; others felt any added preservative would contradict the principles of natural food. It was the thorniest of disagreements to arise when the winegrowers tried to outline specific practices and substances that define organic wine.

For guidance on all these issues, the Californians looked to the *real* organic pioneers, in Europe.

The stony soil of Châteauneuf-du-Pape—a natural mulch for the vines of this distinguished appellation.

Where vineyards encircle villages, running literally up to doorsteps and wells, people take a keen interest in pesticides and fertilizers. There are more than 300 organic-wine estates in France alone, and hundreds more scattered throughout Germany, Italy, Switzerland, and Eastern Europe.

Michel Ginoulhac runs Château La Bousquette, an organic estate whose 50-acre vineyard drapes over the craggy hillsides of St. Chinian in Languedoc, 30 miles from the Mediterranean coast. It is an area best known for rustic *vin ordinaire* made by local cooperatives. Ginoulhac took over the vineyard a number of years ago after leaving his practice as a Rolfer in Toulouse. In this he followed in the footsteps of his grandfather, who in 1970, after retiring as professor of medicine at the University of Toulouse, resolved to make La Bousquette rise above the reputation of its region. He expanded the vineyard with superior grape varieties more common in the Rhône Valley and Bordeaux, including syrah, mourvedre, and cabernet sauvignon, and applied his principles of holistic medicine, putting the vineyard on an organic track that led to certification by Nature & Progrès, one of several French certification associations with standards spelling out precisely what materials, quantities, and procedures are permitted in growing grapes and making wine (and other foods) organically.

The French vanguard provides TLC to properties both smaller and larger than Ginoulhac's. Nicholas Joly's Clos de la Coulée de Serrant, in the Savennieres appellation of central France, is a 17-acre vineyard whose wines have long been considered one of the treasures of the Loire. But when Joly's family purchased the property in 1962, it had fallen on hard times. Nicholas left a job as financial analyst for Morgan Guaranty Trust to restore and manage the estate. ("People took him for a madman," his mother says.)

Obsessed with the idea of drawing out the essence of his patch of land, he began working the vineyard according to the biodynamic system of agriculture proposed by the Austrian philosopher Rudolf Steiner in the early 1900s. Biodynamics encompasses the tenets of organic farming, rejecting herbicides and chemical fertilizers as enemies of a biologically healthy soil and soil/plant relationship. "The soil itself should provide nourishment to the vine through its microbial and bacterial life," says Joly, "in order to brand the plant with its own 'typicity.' A soil asphyxiated and drained by herbicides can no longer perform this task. This is the reason why the use of chemical fertilizers has developed concurrently with the use of weed killers. As these fertilizers act solely through water, they nourish the plant directly, short-circuiting the soil life which can no longer express itself through the vines." Thus the link is broken between a wine and the special character of its vineyard—the intangible relationship the French call *terroir*.

Biodynamics moves beyond mainstream organic farming when it addresses the relationship between agriculture and cosmic rhythms. Joly schedules chores in the vineyard according to the position of the moon. Cultivating, for example, "must be done only when the moon is located in front of certain constellations which are favorable to a proper development of the fruit. Thus the freshly turned ground can be recharged by the energy forces of those constellations."

In addition to typical organic sprays of sulfur and Bordeaux mix, the vineyard at Coulée de Serrant receives regular homeopathic sprays "to energize the links from soil to grape." All this takes manpower; five people working a vineyard that two might normally manage.

In the southern Rhône Valley, François and Pierre Perrin run their 325-acre estate, Château de Beaucastel, organically because they are convinced it makes the best-quality wine. (Their product is certainly highly prized by many, including

In the hands of a competent maker, organic wines are likely to be fuller, more direct expressions of their vineyard and vintage—the language of good wine.

the ranking American wine critic, Robert Parker, who consistently singles out their Châteauneuf-du-Pape for praise.) Château de Beaucastel is not certified or identified as organic on the label, but the procedure followed by its makers is typical. The estate composts its own fertilizer from sheep manure and grape skins discarded from the winepress. An abundance of egg-shaped stones in the soil provides a natural weed-squelching mulch raked around vine trunks. The vineyard is minimally sprayed with elemental sulfur and Bordeaux mix.

The Châteauneuf-du-Pape district is an intensively cultivated one, presenting some of the problems of an eco-warping monoculture. The Perrins work around this by keeping only 250 of their 325 acres in vines; the rest lie fallow in a rotating program. Each year three to five acres of vines are pulled out and an equal amount replanted on land that has been left alone for at least a decade to restore natural plant and animal populations and pest-predator balances.

The job of liaison between the French organic-wine movement and the pioneers in California fell to Veronique Raskin, a French expatriate living in San Francisco and working as a clinical psychologist. She was enlisted by her brother, Michel Ginoulhac, to help market his *vin biologique* in America. Château La Bousquette became the first wine imported into the United States with "organic" on the label—and Raskin became a feisty advocate of the organic ethic of sustainability and responsibility, eventually spending more time helping to launch the movement in California than selling her own wine. She played a lead role in the founding of the Organic Grapes into Wine Alliance, a new organization of American winemakers involved in adapting European standards to organic winegrowing in this country.

At the Mondavi winery's Carneros vineyard, Mitchell Klug controls erosion by planting cover crops between rows of chardonnay and pinot noir.

Though organic and "natural" winegrowers on both continents are finding significant common ground, there are still disputes within the community. One issue is price. Few vintners care to see their wines become luxury products. Some, like the Fetzers, say it costs no more to grow grapes organically—maybe less. But a number of growers maintain that extra labor, selective harvesting, and the risk of crop losses justify higher prices. In a natural system, after all, nature takes its share of the bounty.

Perhaps a more difficult question is that of scale. Everyone may want to see sustainable methods embraced by mainstream agriculture, but some wonder if attempts to mass-produce organic wines don't gloss over something close to the heart of organic farming, an intimacy between farm and farmer that happens also to lie at the heart of great wine. Every serious winemaker agrees that the most important requirement for fine wine is a vineyard at the right spot receiving exceptional care. How does one give the personal touch to hundreds or thousands of acres? And how does one pursue an organic approach when by their nature large tracts of vines discourage the natural checks and balances of a diverse ecosystem?

Charlie Hossum ran into this challenge as vineyard manager for the largest winery in Washington state, Chateau Ste. Michelle, which has 3,000 acres of grapes in the Columbia River Valley. Several years ago he shifted 25 acres to an organic regimen as a pilot project. It worked well, and encouraged Ste. Michelle to begin phasing out certain synthetic fungicides in all their vineyards.

But Hossum questions the feasibility, on a mass scale, of providing the equipment and manpower required for the frequent grooming and quick response to problems needed in organic farming. He too cites his experience battling the grape leafhopper. Ste. Michelle has planted European prune trees alongside their organic vineyard to provide a favorite winter haven for leafhopper predators. "But the trees are effective only within a limited area," says Hossum. "To maintain predator populations in a large vineyard, you'd have to plant prune trees all over the place. Before long, you're in the prune business!"

Nevertheless, Americans must do things in a big way. Million-case wineries are stretching the notion of chemical-free, labor-intensive farming into the realm of agribusiness. When Gallo adopted organic methods on its 2,700-acre Ripperdam Ranch near Fresno, it instantly became the world's largest organic grape grower, and the largest member of California

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LARDY.

The unmaking of a nongardener

FROM THE GROUND UP

by Marc Lecard

Illustrations by Philippe Lardy

"The real Arsenal of Democracy is a fertile soil, the fresh produce of which is the birthright of nations."—Sir Albert Howard

AT FIRST I WAS UNENTHUSIASTIC ABOUT renting the hillside house. A small, plain cube of weather-tarnished white stucco, from the street it looked like the bad guy's adobe in a spaghetti western.

Then I glanced out a back window. The entire hillside behind the house had been let run wild; long tufts of bunchgrass, brown in the California summer, cascaded over the edges of walled terraces dug into the hill, giving the slope back something of its original shape. Rows of fruit trees, branches grown long and goblin-like, made a tangled canopy. The whole hill seemed to pulse with living, growing things. And, amid the grasses tumbling down the hillslope like a vegetal waterfall, I could see the remains of a garden, surrounded by broken-down fence.

I had never been much of a gardener, but always in the back of my mind a garden had been lying fallow, waiting for the proper time to emerge. Now that time had come. We took the house.

The garden that slowly began to surface was a vegetable garden. While I am capable of luxuriating in the sights and smells of a flower garden, I have never felt the urge to dig in and work in one. If you can't eat it, why spend so much time and effort forcing it to grow? If it doesn't want to grow, fine. Lying back in my neighbor's *chaise longue* and contemplating the jasmine, roses, and lilacs glowing with the gentle inward illumination of plants and perfuming the corner of the garden where I'm loafing, I realize I could never nurture these plants, however much I might appreciate them. I want something more substantial for my efforts, something I can sink my teeth into.

But as I thought, and planned, and mapped, and read, I realized that I had in mind more than a simple vegetable garden, one that would just lie there and grow things. What I was dreaming began to take on an emblematic, symbolic quality, something like those energy sites the New Age locates on Mt. Shasta or in Sedona, Arizona. I wanted my garden to manifest vegetables, but I wanted to harvest more than that.

My first approach to any new activity is to read everything I can about it. There are a million different ways of going about a garden, a thousand schools of thought, a barrowful of organic gurus. Probably the most important of the books I got my hands on was *The Soil and Health: A Study of Organic Agriculture*, by Sir Albert Howard, who stands in relation to organic gardening as does Aldo Leopold to conservation. Most of the issues important to environmentally concerned farmers and gardeners today were broached in Sir Albert's 1944 book: local versus exotic inputs, soil depletion, the profit motive, pesticide addiction—and, of course, compost.

Composting changes the way you

think. The whole material world changes aspect, becoming potential for the pile. You begin to see groceries as future garbage; garbage as future soil. *Sic semper detritus.* An alert composter slowly becomes aware of the ongoing process of decay and rebirth; hooked on a sense of vast cycles turning, it almost seems that the purpose of things is to rot.

One of the first things I did when we moved in was to put a five-gallon compost bucket in the kitchen. No longer would nitrogen-rich vegetable cuttings and coffee grounds waste themselves in the garbage can, waiting to be buried in some sterile landfill where they would exist in a mummified state for all eternity. Instead, they would surrender their most intimate cellular secrets to bacteria and nearly invisible insects. And when it came time to condition the soil, I would be ready.

A local gardener had suggested bucket composting to me. Helpful fellow composters warned that this method could not possibly succeed; the container, they said, was too small

A Classic Compost Recipe

The Indore Process is what Sir Albert Howard called the composting system he developed during his quarter century as an agricultural adviser in central India (1905–1931). Howard was the first great apostle of organic gardening, and his work remains the foundation of this movement.

One reason that Howard's work attracted so much attention at the time was his thoroughly respectable, conventional credentials: he was a university-trained, scientific agriculturist who came to believe that improving crop yields would require a holistic approach. Instead of addressing such matters as soil fertility or pest control piecemeal, Howard realized that the soil and crop—and the farmer, too—must be treated as a single system. This led to his emphasis on healthy, biologically active soil, and his discovery of the fundamental role that humus plays in creating and maintaining this condition. His study of soil microorganisms, then a new field, led to an interest in microbial decomposers and from there to a revolutionary understanding of composting.

Howard began to see managed decomposition as the means to what had become a cherished goal: He was determined to devise a way in which average rural Indians could replenish their fields' humus supply. In 1924 the Darbar of the central Indian state of Indore helped him found his own agricultural research institute. There, over the next seven years, he developed the first scientifically based composting system.

To make this process practical for the farmers it was supposed to serve, Howard kept it simple and made sure it didn't depend on sophisticated chemistry or machinery: An incidental effect of this was to make his composting attractive to weekend gardeners as well. The ironic result was that though composting never caught on in India to the extent Howard had hoped . . . it has revolutionized the way that educated Westerners understand agriculture.

What is the Indore Process? As originally designed by Howard, it required a supply of manure, and ideally this should be mixed with the urine-soaked bedding from the stalls. . . . [J.I.] Rodale and his followers have proven that virtually any source of organic nitrogen can substitute for manure if none is readily available.

Classically, you make such a heap at least 5 feet long and 5 feet wide and you begin it with a layer of brush—this helps ventilate the heap by allowing some air to penetrate through its bottom. On top of this you spread a 6-inch-thick layer of vegetable waste, and on top of this you lay 2 inches of manure, the fresher the better. Cap this with a layer of soil perhaps 1/8-inch thick (this introduces into the heap the decomposers found naturally in the soil) and a sprinkling of pulverized limestone (this is to prevent an acid condition from developing with the heap—the decomposers prefer an environment that is pH neutral, neither acidic nor alkaline). Moisten all the materials thoroughly and begin again, adding layers of green stuff, manure, and soil in sequence until the heap reaches a height of 5 feet. Let the heap heat up, then as soon as it starts to cool, turn it over with a pitchfork. This mixes the materials and aerates them, and you moisten the heap once again (if necessary) as you rebuild it. The heap should heat up again; when it cools again, you turn it a second time. Howard's enormous heaps (for farm use, he recommended building them 30 x 14 x 3 feet) completed their composting in about three months. Depending on the heat of the season and care you take in managing it, your home heap should mature in half that time. At that point, as Sir Albert pronounced in his book, *The Soil and Health*, your Indore heap "will have fulfilled its purpose—the restitution of their manurial rights to the soils of this planet."

—Excerpted with permission from Compost This Book! *by Tom Christopher and Marty Asher (Sierra Club Books, 1994).*

Trees need pruning, and pruning requires highly specialized tools, unique, bizarre shapes that set you wondering, trying to reconstruct their peculiar adaptation to specific tasks.

to achieve critical mass. Something very like compost, however, grew in the bucket. Mixed with sawdust, the kitchen scraps began their transubstantiation.

Jane, my housemate, was not convinced by my assurances that the brewing compost wouldn't stink, and eyed the bucket with suspicion. She pointed out to me, with barely concealed triumph, that white mold had begun to grow all over the contents. This was good, I told her, a sign that decay was progressing; in any case, it had no smell. Think of it as frost, I suggested. She didn't buy it. The bucket was banished to the back porch.

The transformation from scraps of waste food to compost is, to me, miraculous, alchemical. I planned a demonstration to redeem my compost. After letting things sit for a few weeks, I led Jane to the bucket, reminding her of what we'd been putting into it, then plunged my hand beneath the chaste top layer of sawdust.

Bruising a knuckle on an uncomposted corncob I'd been too lazy to chop up, but keeping a calm face, I brought out a handful of dark, crumbly matter that smelled like the floor of a forest after a light rain. She was grudgingly impressed, and allowed the bucket back inside.

I have to admit that Jane's fears were not entirely groundless. Composting by this method requires attention—and oxygen. The methane/sulfur marsh-gas reek emerging from unoxygenated compost will not be readily forgotten. To avoid re-exile, I made sure to turn the contents of the bucket each time I added scraps to it. I used a two-handed turn, a garden trowel in one hand and a hand cultivator in the other, mixing everything thoroughly, something like tossing a salad.

The new garden also came equipped with an outdoor compost pile, or the remains of one. Stakes and two-by-fours corralled off a corner formed by the retaining wall of a terrace and a crumbling stairway (more avalanche than structure) that tumbled down the hillside. Stalks of ryegrass carpeted the bottom of the bin; whatever compost it may have held had fulfilled itself, becoming indistinguishable from the soil below.

My first attempts at processing yard waste in the outdoor bin failed utterly. Sweating and cursing, I had hacked down the ubiquitous bunchgrass with a sickle, raked it, and carried it to the pile. In the morning all but a few stray wisps were gone. The compost-to-be had become a deer manger.

Frustrated, in deep need of more soil conditioner, I began sneaking out at night to piss on the compost pile. This had two good effects: the human smell kept the deer away, and the urine provided a good source of nitrogen and an excellent activator for the woody, carbon-heavy pile of yard wastes. With the addition of some of the stuff from the kitchen bucket, things began to cook along nicely.

Reading by itself was not enough to prepare me for the complex terrain of organic gardening. But from books (some of which were acquired too late), and from talking to experts and friends (all my friends are experts, it turns out), I found out what I should have done. In some cases, I had actually done the right thing.

In Peter Harper's *The Natural Garden Book: A Holistic Approach to Gardening* (Simon & Schuster/Fireside, 1994), there is a picture of the ideal house and garden site, as determined by *feng shui*, the ancient Chinese science of geomancy. The house is situated halfway up a hill; to the east is a protective mountain, symbolized as a smiling tiger; to the west, another mountain looms, a grinning dragon draped over it. At the base of the hill runs a stream.

As I looked at the illustration I felt a curious recognition dawning: substituting Northern California's wooded ridges for rugged Chinese mountains, and minus legendary and symbolic fauna, this was the situation of my hill garden.

Site research provided a great excuse for spending long hours of apparently idle time on the hillside, observing where the sun fell and how hard the wind blew during the course of a day, noting the color and texture of soil, how rainwater moved down the hill, what tree shaded what part of the garden. Soon I came to feel a remarkable identity with my hill; I knew the slope of it like the contours of my own body.

The first year we set out a pilot garden, on a small plot, to see what we could grow, and when. Tomatoes did remarkably well; so, in their seasons, did serrano and jalapeño peppers, zucchini, and garlic. Pole beans not so well; some blight took them. Snow peas grew dementedly. The future looked bright. Next spring, I told myself, I clear the whole terrace.

As my first year in the new place passed, I found I had come to live on an edible hillside. Nearly everything that grew there, except the bunchgrass, could be eaten. Some terraces held volunteer onions and various other traces of cultivation; in the past, neighbors told me, a legendary race of Italian gardeners raised enormous zucchini and tomatoes as big as babies' heads on this sunny, south-facing slope. The grapevines that ran wild and tied together plum and olive and loquat trees were most likely planted in the 1920s to supply local winemakers with grapes during

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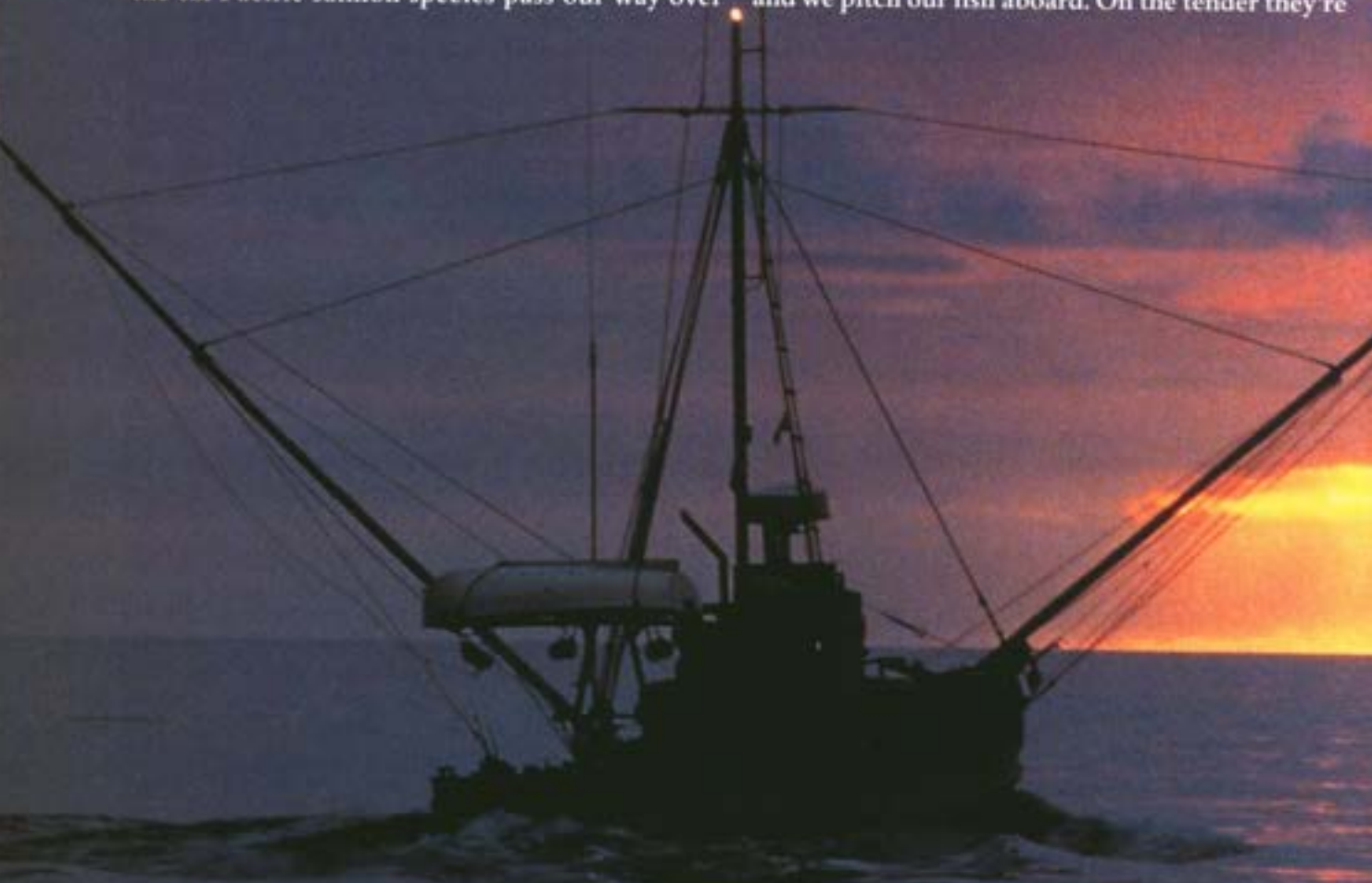
There is no better food in the entire world than fresh wild king salmon. And there is no king salmon better than the first catch of the year, the bright fatty fillets that taste not even like fish but like something ambrosial, deserved only in heaven. I grill this salmon plain, without seasoning, and eat it with brown rice and a salad of tender beach greens and fireweed shoots picked just feet from my summer doorway.

I fish commercially for salmon in Alaska, and to do so live in a cabin on a far shore, at the meeting place between silty sea and a roadless, wooded land full of spruce grouse, lakes, and berry patches. Kings, sockeyes, pinks, chums, and cohos—five of the six Pacific salmon species pass our way over the course of each summer.

These salmon flood in from wide-open roaming in the Gulf of Alaska and beyond, heading for their natal streams to spawn and die. On designated fishing days my partner and I intercept some in gill nets anchored just offshore, then pull the nets across the bow of our skiff to snap fish loose into the boat bottom. These are wild fish, shapely and scrappy, each individual unique. Very often they bear the scars of the gauntlet they've already run: seal bites, claw marks, bald patches where parasites have peeled away scales, old web lines across the tops of their heads, sometimes a rusted fishing lure hooked in a mouth.

A collector boat known as a tender drifts past, and we pitch our fish aboard. On the tender they're



We lose more than taste when salmon are born in trays and reared in pens. We sever our link to the river spirits, and to memories of life in the open sea.

packed in ice and carried to what's still called a cannery, though it's been a long time since most of the plants here packed salmon in cans. The majority of our fish are headed and gutted, frozen, and shipped to Japan. The product is known as fresh-frozen, an oxymoronic term marketers use to suggest that the freshness has been frozen in—in contrast to "fresh" fish, which might be several days old by the time they get to market.

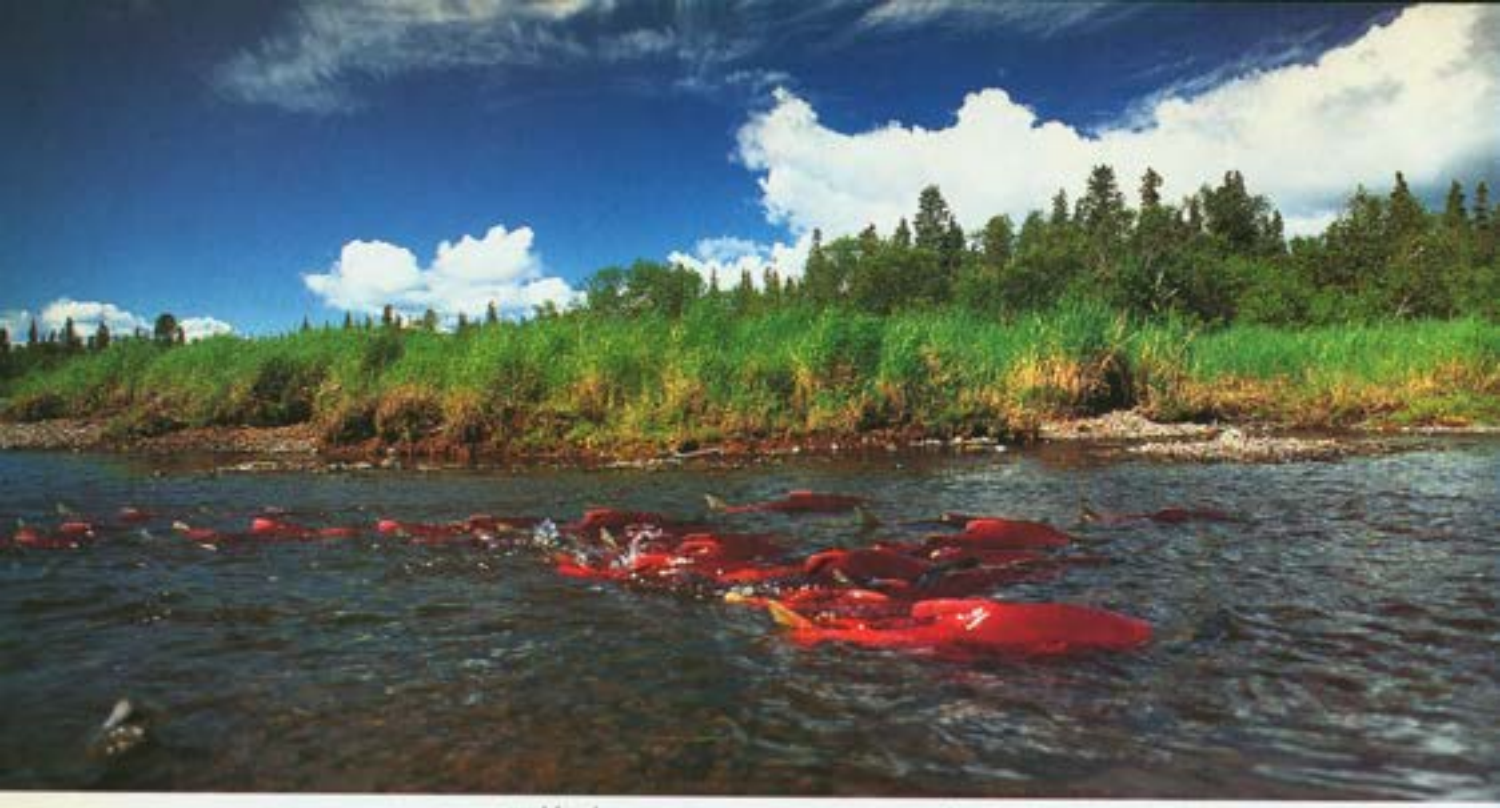
This is a business we run—the heavily regulated catching and selling of salmon. But we also live with fish, day in and day out, sharing a rough, competitive world of gray distances and choppy waves. We learn to tell one river's sockeye from another's, to anticipate their courses along the beach, to estimate counts and delivery weights. We complain that we never catch enough fish, and about low prices, and we swear at the seals that work our nets, leaving mangled fish.

Worldwide, overfishing has caused a crisis—the Food and Agriculture Organization considers one-third of the 200 fisheries it tracks either depleted or heavily overexploited. Cod fishing in the North Atlantic has gone right to the brink. Salmon fisheries in the Pacific Northwest are shut down because hydroelectric dams and destruction of natural habitat have decimated runs. Nevertheless, the sheer numbers of salmon in the world are not decreasing, but, to the contrary, have stabilized and are on the rise. Alaska's salmon runs are at record peaks.

It's not the salmon supply that's in danger, but a

BORN TO BE WILD

by Nancy Lord



Wild salmon spawning in Hansen Creek, Alaska.

world that supports *wild* salmon. What is at stake is not the salmon on the plate or in the can—the consumer's product—but the ethos of salmon. This ethos includes nature's design of a particular fish for a particular place, within an overall culture of water, gravel, and shade; copepod, bear, and people.

Each spring, we gorge on our first king salmon and throw its carcass back to the sea. Doing so, we live out a ritual that's only the latest variation in traditions that extend as far back as people and salmon have lived together. Long before white people brought their nets to these shores, long before most of the world even knew there was such a creature as a Pacific salmon, Native Americans from Alaska and down the coast as far as California's Monterey Peninsula lived in profound dependence on the annual salmon migrations. Salmon were the broad base of their food supply, bales of dried fish the currency of trade. To acknowledge the salmon's central importance, culture after culture developed elaborate and remarkably similar ceremonies to celebrate the salmon's return and assure its continuance.

In this place where we fish, the original inhabitants were Dena'ina Athabaskans. In their version of the fish ceremony, recorded by an ethnographer in the 1930s, the first king salmon of the year were laid carefully on an outdoor mat of fresh grass. The people took sweat baths, dressed in their best clothes, and burned a certain "lucky" plant. They cleaned and cooked the fish, taking great care not to break the backbones, which, with the entrails, were thrown back into the water. This was done, the ethnographer was told, because "the salmon want their clothes." The entire ritual was underlain with a complex mythology and accompanied by stories from the time when people and animals talked together. Finally, the people, who had—like the fish—completed another yearly cycle, feasted.

After the first salmon, much of the traditional Dena'ina summer was given over to catching and preserving enough fish for the rest of the year. Day and night, fires smoldered in the smokehouses, and the smoked fish, dried to feather lightness, was bundled for storage. Dena'ina elder and scholar Peter Kalifornsky (who died last year) wrote that, before the first Russians came, "it was the rule that one [winter] day's allowance of food was a piece of dry fish as big as from the meaty part of your palm at the base of your thumb to the tip of your middle finger."

When the Russians did come, in the late 18th century, they brought with them nets that made catching salmon easier. Unhappily, they also brought diseases that wiped out entire Native villages and threw families and cultural traditions into a disorder from which they never recovered. The American salmon industry arrived in Alaska in 1878, a decade after the first cannery opened on the Columbia River, and salmon "ownership" was transferred from those who depended on fish as food to those who built an economy on its export. Native people sold their catches to the canneries or took wage work.

My partner and I, latecomer white people who exchange salmon for dollars and cents, also eat hundreds of pounds of it. Much of our personal supply we preserve the traditional way, smoking batches for ten days at a time with a cold smoke of green alder and damp chunks of cottonwood bark. Our method is the result of years of learning from others, Native and white, and experimenting. The glazed strips of fish darken to a resinous, translucent amber. At one time everyone called this salmon "squaw candy"; today the more

Hatchery fish are selected only for being able to hatch in piles of plastic chips. Gradually and unavoidably, the perfect genetic match between salmon and situation is lost.

culturally sensitive term is "hard smoked salmon." The candy analogy remains apt, however; although the fish isn't sweet, it separates into crystalline flakes with a rich succulence of oil, smoke, and salt. Just the idea of reaching into the smokehouse for a strip of oily king salmon belly . . . the golden grease running down my chin and over my hands, the melting taste, a food so well designed for the fat-burning work of this place. My mouth, months later, aches with wanting.

The history of wild salmon is a sorrowful one. Atlantic salmon, from which the six Pacific species are thought to have evolved, not so long ago surged into European rivers in such numbers they caused banks to overflow and boats to swamp. The situation was similar on the "new world" side of the Atlantic, with a Connecticut writer noting in 1783 that "shad, bass, and salmon more than half sustain the province." The Industrial Revolution, however, with its pollution and dams, eliminated salmon from most major and many minor rivers on both sides of the Atlantic. Belated rehabilitation efforts have helped some salmon survive. In the late 1970s a surprise find of a stray salmon in the Thames below London led to a cleanup and stocking program that resulted in the return of 300 fish last year. Similar programs have brought token numbers of salmon back to New England rivers.

Salmon drying in the sun.

Pacific salmon were given more than a century's reprieve, but the great salmon rivers—the Sacramento, the Rogue, and the Columbia—were each in their turn so abused by overfishing, destructive mining and logging practices, and the proliferation of dams that their runs were almost destroyed. (See "Dance of Denial," *Sierra*, March/April 1993.) Today, wild salmon in the Pacific Northwest outside of Alaska are thought to be only 20 percent as abundant as they once were. Extraordinary efforts and expense are going into trying to save Idaho's last remaining Snake River sockeyes, and ocean fishing for salmon has been banned this year from the central Oregon coast to the Canadian border. Only British Columbia, Alaska, and the Russian Far East still have significant wild salmon runs.

Yet world salmon production today is at historic highs and rising. Thirty years ago about 873 million pounds of salmon—Atlantic and Pacific combined—were going to consumers. Fifteen years ago the amount was 850 million pounds. In 1993 it was 2.5 billion pounds. There is so much salmon currently available that supply exceeds demand, and prices to fishermen have fallen dramatically.

How can this be? Two answers: hatcheries and farms. Just as terrestrial cultures "progressed" from hunting and gathering to herding and husbandry and then to feedlots and agribusiness, those who would "manage" fish have followed a similar track. Today, most of the world's salmon are born in plastic trays. Giant hatcheries, particularly in Japan and Alaska, release billions of fry to graze far and wide—a form of ocean ranching. Other salmon spend their entire lives in net pens. Fish in these aquatic farms are fed pellets and harvested at consumer-convenient size with nary a ruffled scale. Ten years ago farmed salmon didn't even register as a share of the world market; today they make up one-third of all salmon sold. Cookie-cutter salmon, mass-produced.

Before I began commercial fishing, I worked at one of the state of Alaska's first pink-salmon hatcheries. In the mid-1970s, the state was just beginning an ambitious program to increase the number of fish for commercial, sport, and subsistence fishermen and to moderate year-to-year fluctuations in run strength. Today about 20 percent of Alaska's salmon come from hatcheries, and overall runs are at record highs, on the order of 200 million fish.

In theory, salmon hatcheries are a technological dream, an easy and effective assist to nature. When salmon eggs are laid in stream gravel, fewer than 10 percent typically survive the flooding, drought, predation, siltation, and ice-scouring that occurs in any natural system. But with human intervention, eggs can be stripped, fertilized, and placed in incubators, and nearly all will hatch and swim away. The more

Most Americans are probably not concerned about what's fed to or grazed upon by salmon. Driven as we are by convenience and price, we do not think past food to context.

little fish go to sea, the more big fish return as adults, to be caught by commercial and sport fishers.

Early on, hatcheries were accepted as a way to replenish declining stocks. The *reasons* for the declines, however, were not usually addressed: the dams that block access to spawning grounds, the poor logging practices that fill streams with silt or leave them exposed to hot sun, the rivers treated like sewers. Hatcheries substituted for environmental care and cleanup; in the Pacific Northwest, money that might have been spent on habitat protection and restoration went instead into costly hatchery operations, while the real threats to fisheries were unacknowledged.

Moreover, attention to genetics and disease wasn't always adequate. In the early days, it was routine hatchery practice to transport salmon stocks among regions and drainages, disregarding specialized adaptations, and spreading diseases. In modern-day hatcheries, tremendous attention is paid to disease prevention and maintaining the genetic diversity of individual stocks. Still, there's no way of getting around the laws of natural selection. When salmon aren't tested for their abilities to swim a particular river or to survive the rigors of streamlife, the genes that govern such success aren't favored. The fish that go to sea are no longer tailored to a unique niche but are instead just numbers, selected only for being able to hatch in piles of plastic chips and live for a time in a crowd. Gradually and unavoidably, the perfect genetic match between salmon and situation is lost.

Perhaps the most insidious effect of hatcheries on wild salmon stocks has to do with the numbers of fish produced and resulting harvest rates. When hatchery production leads to higher harvests, the wild stocks, which mix with the hatchery ones, may be exploited at the same rate. This takes a bigger bite out of the wild stocks, resulting in their overharvest and ultimate decline.

At the hatchery where I worked, one of my jobs was fin-clipping, a delicate operation performed with circumcision scissors on anesthetized half-inch fry. Different batches—wild fry, hatchery fry released directly to the bay, hatchery fry reared for a couple of weeks in saltwater net pens before release—were coded by removing different combinations of their fins. When the adults returned the following summer, we could calculate the ocean survival rates of each group. In the early years, the returns from our hatchery-raised fish were impressive, as high as 17 percent. In general, the fry that were reared a short time in pens, where they were fed fish meal before being released at the peak of the spring plankton bloom, survived at twice the rate of both the wild and the directly released hatchery fish. Hundreds of thousands of pink salmon were added each year to the fishery. Since then, as increasing numbers of hatchery salmon have been released, lower percentages have returned, and the fish have very often been smaller. Some years the return percentage has fallen below one percent.

In estuaries around salmon hatcheries, and in the North Pacific generally, it may be that the waters are overloaded with voracious juvenile salmon. It seems there is such a thing as carrying capacity, for oceans no less than rangelands, although the dynamics of who-eats-whom in the marine ecosystem are ever so much more difficult to track than those of cattle in the grass.

Claims that the carrying capacity is being tested by hatchery-fish overgrazing are largely anecdotal. The pink-salmon runs of Alaska's Prince William Sound, where hatcheries pump out 750 million fry yearly, fell off dramatically, but rebounded in 1994. The low wild chum-salmon runs of western Alaska may be in competition with the 2 billion chum fry released annually in Japan. In Japan itself, the survival rate of hatchery chums has held steady, but the average size of fish has decreased by as much as two pounds.

Steve Matthews, a fisheries professor at the University of Washington, concludes that there's "fair evidence of too many fish," at least in the two places he's studied—Japan and the Oregon coast. Japan, he says, offers perhaps the clearest case that upper limits of chum-salmon productivity may have been reached. "The general opinion [of those studying the situation] is that there's not too much else to explain the decline in size. They simply hit the fence."

Not everyone buys the overgrazing theory. "Starvation is not the story," says Ted Cooney, a biological oceanographer at the Uni-

Perfect Grilled Salmon

2 wild-salmon steaks
1 tablespoon sesame oil
2 tablespoons soy sauce
1 clove fresh garlic, pressed
1 teaspoon sugar
freshly ground black pepper

Combine seasonings in a shallow pan, mixing well. Immediately before grilling, coat the wild-salmon steaks with the mixture. Cook over medium-hot coals, about 4 minutes per side.

Salmon feeding at a fish farm near Sechelt, British Columbia.

versity of Alaska's Institute of Marine Science. His studies of Prince William Sound pinks show very little relationship between the amount of food available and the growth rate of fish, but they do show a striking relationship between temperature and growth rate. Warmer temperatures enable fry to grow faster and thus escape predation more easily, while cooler temperatures—now part of a cyclic trend—retard growth and increase predation. Whatever the exact dynamic in the web of ocean life, scientists agree that, as Cooney puts it, "You don't get something for nothing in the marine environment."

From ocean grazing, it was a short conceptual step to salmon farming. Instead of releasing hatchery fish to wander the oceans unescorted, vulnerable to predators and food shortages, aquatic farmers keep salmon in net pens until they are sold. Farm-reared salmon, like chickens or greenhouse tomatoes, can be harvested any time of year, allowing their "producers" both to process them efficiently and to take advantage of market swings. Shoppers and restaurant-goers, likewise, can get a good-looking fresh fish whenever they want.

All of which is fine, if what we want is another consumer item coming off a production line, offering us uniform size and shape, unblemished appearance, dependable consistency. None of these qualities, of course, speak to taste. Salmon connoisseurs—not just me but at least one group of restaurant chefs surveyed—agree that a salmon that's consumed a varied natural diet and developed a good set of muscles is tastier than a fish fed on meal and kept in a pen. Tim Garling, a chef in Alta, Utah, told *The National Fisherman* that although he appreciates the quality and freshness of farmed salmon, he prefers the muscle tone of wild salmon. "Wild fish taste better to me," he said. "They're more athletic."

Salmon farming was pioneered in Norway in the 1960s, and by the late 1970s the practical technologies and economics were worked out well enough to begin commercial production. The growth since has been phenomenal, with Norway's farms expected to produce 400 million pounds of salmon this year, nearly half as much as Alaska's record catch of all salmon species in 1993. For a time, Norwegian farmed salmon couldn't gain much of a hold in U.S. markets, because of anti-dumping litigation and a boycott of Norwegian products to protest the resumption of minke-whale hunting. Even so, Norwegian imports are on the rise in the United States.

Chile, meanwhile, has increased its production more than sixfold in the last four years. Major farming activity is also taking place in the waters of Scotland, Japan, British Columbia, the Faeroe Islands, Ireland, and New Brunswick, and is developing in Maine, Washington, and New Zealand. Salmon farming is prohibited in Alaska where, after considerable debate, the state's independent and politically forceful commercial fishers convinced lawmakers that risks to wild and hatchery salmon—and to salmon markets—weren't worth whatever benefits might result from a new industry.

Farmed salmon sometimes escape their pens, usually when predators like seals rip through nets. Unlike chickens or cattle, escaped fish are not easily rounded up. In Norway, increasing numbers of farmed Atlantics have appeared in spawning streams, where they both compete for space and interbreed with wild fish; in some of these streams, fully 80 percent of the spawners have been found to be escaped farmed fish. Additionally, some of Norway's farmed fish carried a parasite apparently brought from Sweden, and entire rivers had to be dosed with chemicals to keep it from spreading.

Even when farmed salmon stay in their pens, farms present a raft of potential problems for the immediate environ-

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by J. Parker Huber
Illustrations by John Cuneo

John Muir's Menu

When you've got spiritual beauty bread, who needs trail mix?

Many hikers and climbers know of John Muir's minimalist approach to preparing for a wilderness adventure: "I rolled up some bread and tea in a pair of blankets with some sugar and a tin cup and set off." (In this he resembled the South African Bushmen, who make ready for a journey of a thousand miles in 90 seconds.) A closer examination of the dietary habits of the Sierra Club's founder suggests a connection between Muir's Spartan fare and the elegiac quality of his prose: the great man was starving to death.

Austerity was part of Muir's heritage. As a child, he was raised on paternal severity and Calvinist self-denial. His Scottish diet featured oatmeal porridge with a little milk or treacle for breakfast; vegetable broth and mutton for lunch; boiled potatoes, barley scones, and tea with milk and sugar for dinner. "We were always hungry," Muir lamented, "about as hungry after as before meals." As William O. Douglas noted in *Muir of the Mountains*, at a very young age Muir "acquired the habit of eating very little—a habit that was to stay with him all his life." The most Muir ever weighed was 148 pounds; the least, 90. Both extremes were recorded when he circled the globe in 1903 and 1904; ptomaine poisoning in Russia caused his diminution.

When asked what kind of bread he took to the mountains, Muir replied, "Just bread." At his home in Martinez, California, he'd buy sourdough at an Italian bakery. In Yosemite, he'd secure French bread at Black's Hotel, or soda bread from Degnan's. Sometimes he would bake cakes of unleavened flour over the coals. His preference, however, was "feeding on God's abounding, inexhaustible spiritual beauty bread."

In the autumn of 1872, Muir set out for the summit of Mt. Ritter, a crust of bread fastened to his belt. His immutable breakfast of bread and tea that morning was almost his last. Scaling a cliff, he came "to a dead stop, with arms outspread, clinging close to the face of the rock, unable to move hand or foot either up or down. My doom appeared fixed. I *must* fall." He didn't. Summoning preternatural strength from an unknown source ("the other self, bygone experience, instinct, or Guardian Angel"—apparently not protein reserves) he gained the top. Power does not come from PowerBars alone.

When traveling with others, Muir could sometimes be persuaded to expand his menu. On an expedition to Mt. Whitney in 1875, each participant carried, in addition to bread and tea, "a block of beef about four inches in diameter, cut from the lean heartwood of a steer."

"Muir never lived off the land," reports historian Michael P. Cohen. "Since he wasn't a hunter or fisherman, he was frequently hungry." Even when his money ran out and he was "faint" and "giddy" from hunger on his 1,000-mile tramp from Indiana to the Gulf of Mexico in 1867, he rejected wild rice and corn, subsisting instead for five days on soda crackers and water. When money from his brother arrived, he broke his fast with gingerbread.

Only in desperate circumstances did Muir dine directly from nature. In the autumn of 1871, "far and high in the mountains" with bread gone, he feasted on manzanita berries "like a bear." Another time he followed the example of hummingbirds and sucked nectar from the long tubes of *Zauschneria*, California fuchsia. He also savored the sweetness of sugar-pine sap, preferring it to maple sugar.

In the forests of Nevada, in October 1878, Muir observed Indians harvesting pine nuts, "their main dependence—their staff of life, their bread." His account is matter-of-fact. How unlike fellow naturalist Henry David Thoreau, who found in wild food a path to transcendence! In 1851, for example, Thoreau discovered white acorns to be "unexpectedly sweet and palatable. . . . To my taste they are quite as good as chestnuts. Their sweetness is like the sweetness of bread . . . the whole world is to me the sweeter for it. How easily at this season I could feed myself in the woods!"

Thoreau would try anything once—even oak sap. The poet Ellery Channing, who walked with him frequently, said he had an "edible religion." "Gathering berries in our field," Thoreau wrote, was "gathering health and happiness and inspiration and a hundred other far finer and nobler fruits than berries."

Even the austere Scotsman indulged in wild berries with unabashed pleasure: "Never before in all my travels, north or south, had I found so lavish an abundance of berries as here [in Alaska]," he wrote, "the largest and finest-flavored of all the huckleberries and blueberries I ever tasted." Yet he does not extol these fruits with Thoreau's sacramental verve. He is not swelled with ecstasy and gratitude. They do not release his sensuality, as do the wind and the rain.

Nor did our daring explorer exhibit the slightest sense of adventure in his choice of beverages. He recognized only two

varieties of tea, "weak and strong, the stronger the better." He didn't care for herbal infusions. Once in Alaska, having run out of black tea, he boiled a common heath, *Ledum groenlandicum*, for his companions, but declined to drink the "rank-smelling liquor" himself. Thoreau, by contrast, rejected conventional stimulants ("Think of dashing the hopes of a morning with a cup of warm coffee, or of an evening with a dish of tea!"), preferring the delights of the sylvan herbarium. In the Maine woods, he agreeably sampled every plant his Indian guides did: "We could have had a new kind of tea every night." His favorite was the wintergreen flavor of creeping snowberry, *Gaultheria hispidula*.

Fasting was an intrinsic part of Muir's explorations, so much so that he resented the necessity of eating. "Rather weak and sickish this morning, and all about a piece of bread," he complained in 1869. "Can scarce command attention to my best studies, as if one couldn't take a few days' saunter in the God-ful woods without maintaining a base on a wheat-field and grist-mill. Like caged parrots we want a cracker."

In 1873 Muir returned to Yosemite after a heavy dose of civilization "to run out for a while to say my prayers in the higher mountain temples." Provisions were unimportant, even unwanted: "A fast and a storm and a difficult cañon were just the medicine I needed." In 1875 he climbed Mt. Shasta on a 2 a.m. breakfast of coffee and frozen venison broiled on coals. Though a snowstorm pinned him on the mountain that night, he survived. By the next morning he was safe but still not hungry: "We had been so long without food that we cared but little about eating." Two years later, a ramble through the San Gabriel Mountains left him breadless "a day before reaching the settlements, but I felt all the fresher and cleaner for the fast."

Muir could run on almost nothing, and often did. "After my twelve-mile walk" in Glacier Bay, Alaska, "I ate a cracker and planned the camp." At Sum Dum Bay, he admitted that he "had fasted too long [he doesn't say how long] to be in very good order for hard work." Nevertheless, he scrambled for two hours "through thorny chaparral and across steep avalanche taluses of rocks and snow," seeking a glacier before breakfast.

Yet Muir was not always so ascetic. In 1880, he traveled in Alaska with the Reverend Samuel Hall Young and Young's dog Stickeen. Rising one morning at five to explore Taylor Glacier, Muir left untouched the breakfast of bread, beans, venison, and coffee that Young had thoughtfully prepared the night before. He took with him only bread—and Stickeen. Seventeen hours later the two returned, wet and weary. On this occasion, before telling Young of their adventures, Muir ate a veritable feast of "clam chowder, fried porpoise, bacon and beans, 'savory meat' made of mountain kid with potatoes, onions, rice and curry, camp biscuit . . ." Finally, over dessert of wild strawberries and coffee, Muir told of his perilous crossing of a crevasse on an icebridge, the story of *Stickeen*.

Another rare recorded instance of the stirring of Muir's gastronomic juices was when dining with the Indians of Admiralty Island. There he ate gull eggs and wild celery ("the petioles were hollow but crisp, and tasted well"), liked the potato-salmon stew, but was most pleased—wouldn't you know it?—by the turnips they served peeled and sliced. "These we ate raw as dessert, reminding me of turnip-field feasts when I was a boy in Scotland."

While Muir roamed from one end of the continent to the other, his tastes were bounded by the stone walls of the croft. When his Native companions ate "the hips of wild roses entire like berries," Muir was "laughed at for eating only the outside of this fruit and rejecting the seeds." Sometimes we may sympathize with his squeamishness, as when he politely declined "the back fat of a deer, preserved in fish oil and seasoned with boiled spruce and other spicy roots." He did attempt seal once in Alaska, finding it "excellent, dark-red, and very tender, with a taste like that of good venison." He notes the Natives eating seal liver, walrus, whale skin, and blubber, but seems content to have watched from a distance. (All great naturalists had their bounds. Even John James Audubon, who often ate the birds he painted, balked at steamed buffalo brains.)

"I live on the fat of the land without getting fat," Muir wrote, "crackers and claret and a birdpicking of fruit." Even this diet proved too rich for the old Scotsman, who dreamed of "going back to the faith of my fathers—a poke of oatmeal, a luggie of parritch and a bicker of brose [translation: oatmeal, oatmeal, and oatmeal]." In the end, Muir longed for the taste of childhood. But his only appetite was for wilderness. ■

J. Parker Huber *is working on a series of essays about John Muir in New England.*

Tasty Trails to You

by Reed McManus

I'll never forget the looks of utter disappointment I got from ten weary Sierra Club cyclists one drizzly Alaskan day when I announced that dessert that night would be warm Jello. "But it's popular on our backpacking trips," I whined. "And it's lime." This was the start of a two-week expedition, and whatever confidence in my leadership I hoped to instill was vanishing into the surrounding mist. I quickly raided a more palatable dessert of shortbread cookies and applesauce scheduled for a meal further down the road. Mutiny averted—but not before "warm Jello" entered the group's lexicon as a synonym for a faux pas, a lamentable error in judgment, a do-over.

One camper's gorp is another's tiramisù

I've always shared the great outdoors with people who care as much about the meals they eat as they do about their trip's destinations and duration. A hot breakfast gives hope on a cold and wet morning; a complete lunch menu turns a pit stop into a picnic; a well-considered soup-through-dessert supper (one without warm Jello, for example) reassures you that the comforts of home can still be found among the mosquitoes and marmots. (And if you're a trip leader, a good meal may save your skin.)

But there are many minimalists out there who, concerned merely with keeping their gear's weight low and meeting their body's nutritional needs, turn mealtime into a mechanical refueling process. In a recent issue of *Backpacker*, writer Mark Jenkins listed his standard no-frills dinner as "Lipton rice and chicken, 4 oz. Hot chocolate w/ dried milk, 1 oz." Jenkins is no hair-shirt ascetic; what he gains from his Spartan repast is the opportunity to keep the weight of his food down to one pound per day, which contributed to his ability to hike for four days in Montana's Beartooth Mountains with a pack weighing a liberating 16 pounds.

Jenkins will most likely fly past Carole Latimer on the trail, but he'll probably regret it at dinnertime. Latimer is author of *Wilderness Cuisine* (Wilderness Press, 1992), a cookbook

Illustration by Gary Baseman


CUP O' MUSH
CURRY
gourmet
BASEMAN

Get Off My Fork!

We taste, rate, and ruminate on freeze-dried food for camping.

With freeze-dried products like "Jamaican BBQ with Chicken" and "Oriental-Style Spicy Chicken Vegetables with Rice," why go to the trouble of packing meals from scratch? The enticing packages lining the shelves of outdoor-equipment stores are light in weight and couldn't be more convenient. You have to learn only one recipe: Add boiling water, stir, and let sit for ten minutes. Eat it right out of the pouch if you want to.

Sierra's editors set out to get the freeze-dried lowdown. We assembled in a bucolic glen in Tilden Regional Park, the closest wilderness setting we could find amidst 6 million people in the San Francisco Bay Area. Between morsels served up in Sierra Club cups, we asked ourselves the simple question: "Would we eat this again while camping?"

Perhaps we should have trudged 12 miles along a mountain trail before sitting down to eat. With only a few exceptions, these meals were, to put the best face on it, uninspiring. At times the proceedings devolved into a symposium on synonyms for *unpleasant:* "vile," "bland," and "insipid" were often heard, along with the oft-repeated "eewhhhh!" "Stuff like this causes prison riots," was voiced at one point, "The Donner Party wouldn't have eaten this," at another.

None of these products can pretend to be a reasonable facsimile of a freshly cooked meal. Too much texture and flavor seems to be lost in the freeze-drying process, especially with vegetables and meat, and many ingredients end up tasting like cardboard. For this reason, the most palatable of the foods we tested were those based (however loosely) on ethnic prototypes, where the herbs or hot peppers managed to conceal off-flavors more or less successfully.

Lest readers dismiss the reviewers as a bunch of arugula-fed whiners (though we are), we did find several entrées that we would take camping without considering the excursion doomed from the start. The winners garnered such accolades as "not half bad!"—which in the freeze-dried world is the equivalent of three stars from Michelin.

Sierra's editors do not subscribe to the theory that all food tastes better in the out-of-doors. To stock your backpack, kayak, or canoe with freeze-dried meals, you'd better value convenience over virtually everything else life has to offer. (And you'd better not be cost-conscious, either: a freeze-dried entrée for two will set you back $6 to $7.)

This is public service at its most self-sacrificing: we hope you never have to go through what we did. Here's the good, the not-so-bad, and the ugly:

The Savory

The best freeze-dried entrées successfully blend varied tastes and textures with judicious spicing. *AlpineAire Chicken Rotelle* has a brothy but flavorful cheese-and-sour-cream sauce and plentiful chunks of chicken. It elicited general cries of "Hey, this is okay!" *AlpineAire Beef Stroganoff with Noodles* is the creamiest of the "Stroganoffs" we tasted, with generous sprinklings of tomatoes, mushrooms, and red peppers. *Backpacker's Pantry* seems to have a flair for south-of-the-border dishes: the chili flavor and spicy quality of its *Black Bean Tamale Pie* caused one note-taker to gush: "It's complex and flavorful, with each ingredient distinct and toothsome." That company's *Mexican Rice with Beef* is a moist, Spanish-ricey concoction with lively tomato bits and an appealing cayenne bite. Though the beef bits are too few and far between, it still earned the rave "Not bad—not bad at all." The day's top honors, however, went to *Mountain House Oriental-Style Spicy Chicken Vegetables with Rice*. It appeared late in our lineup, causing lots of excited chatter around the table just when fatigue and despair were setting in. Peanuts and water chestnuts that retain their crunchiness, a pleasant soy-sauce character, balanced spicing, and large, discrete vegetable pieces make this one a keeper.

The Horrid

Three samples epitomize the consequences of leaving the spice cabinet unlocked. *Natural High Honey-Lime Chicken* delivers an intense blast of chemical lime flavor "like radioactive Gatorade," in one reviewer's words. "Get off my fork!" was another's plea. A jarring hickory note (something like Liquid Smoke) tramples *Richmoor Stroganoff and Beef with Noodles*. Its yellowish hue is off-putting, its minute quantities of beef unsatisfying. The stark aroma of clove in *Backpacker's Pantry Jamaican BBQ with Chicken* dominates that dish. Too bad, because otherwise it's an appealing blend of rice, chicken, and beans.

The Inoffensive

The bulk of the meals we tried will fill you up and keep you going, but they're not the stuff memories are made of. *Backpacker's Pantry Pasta Vegetable Parmesan* was colorful, with a nice hint of basil, but soupy. *AlpineAire Mountain Chili* has a "why bother?" phony-meat texture and flavor. The sweet/cheesy sauce of *Mountain House Pasta Primavera* reminded us of Kraft Macaroni and Cheese, which is good or bad depending on your taste. *Natural High Chicken Fajitas with Tortillas* have a nice, mushy, tummy-filling quality—accompanied by a cardboardy taste that begs comparisons to Taco Bell. *Richmoor Lasagna with Meat and Sauce* wasn't by any stretch of the imagination a lasagna—which made us wonder about the "meat." Rounding out the runner-ups were *Mountain House Stroganoff Sauce and Beef with Noodles, Mountain House Hearty Stew with Beef, Backpacker's Pantry Stroganoff with Beef, AlpineAire Wild Tyme* [sic] *Turkey,* and *AlpineAire Leonardo da Fettucine*. Consider them simple fuel, not sumptuous feasts.

There is no better morale-booster than a hearty meal. Tired bodies regain energy, spirits are rejuvenated, and laughter and lively conversation begin to flow. — Carole Latimer

that allows the balsamic-vinegar-and-sundried-tomato crowd to head for the wilds without checking their taste buds at the trailhead. If you wouldn't consider eating Kraft Macaroni and Cheese or Jello No-Bake Cheesecake at home, Latimer figures, there's no reason to eat them on the trail, either. "The first principle is to use fine, high-quality ingredients and fresh food whenever possible," she tells her readers. Among Latimer's recipes you'll find Pasta with Andouille and Fried Sage, Sherried Mushroom Bisque, and Cherries Jubilee, all which can be made from scratch, using the best ingredients. Even a basic dish like macaroni and cheese will beat its store-bought equivalent hands down, she says, if you make it with aged New York cheddar and sauté your own fresh onions. You may not meet a minimum-weight goal following Latimer's gourmet guidelines, but you can pack delectable meals that weigh in at a still-reasonable two to two-and-a-half pounds per person per day.

It's no surprise that some of Latimer's recipes are labor-intensive, primarily in the "pre-trip" preparations done at home or on the trail. If you're at all fussy about what you eat, the work that goes into mixing raw ingredients and assembling individual meal packages in your kitchen is worth doing, because it reduces the amount of cooking time in the field.

Be careful, though, about overdoing meals that require many steps to prepare in camp. They are usually welcome luxuries on layover days, but are the last thing you need when you arrive in camp dog tired right before sunset. Any good camping cookbook will spell out the number of steps needed at home and on the trail. If, like most campers, you'll be using just one stove, make sure that your menu is not so complicated that individual courses will get cold, and look for recipes where simmering time is kept to 15 minutes at most, so that you won't have to carry a lot of fuel.

Even if you don't follow the trail of the from-scratch gourmets, there's still a lot they can teach you. By planning well in advance, you can dehydrate almost everything you need for a trip, from fresh fruits, vegetables, and herbs to spaghetti sauce, salsa, and entire entrées. (Home-dried food is delicious and takes up one-third to one-twelfth the volume of the original fresh food.) You can carry durable fresh vegetables—like snow peas, cucumbers, and zucchini—for several days on the trail if you wrap them in brown paper and postpone cleaning and cutting them until you need them. Just about any one-pot meal can be prepared in advance, frozen in a plastic bag, and thawed for dinner the first or second night out. Essential items for the pantry include fresh garlic, fresh onions, and real butter. (Salted butter can keep up to ten days unrefrigerated; use ghee—clarified butter—for longer trips.) And if you screw up an entrée, Latimer says, try adding lots of Parmesan cheese (freshly grated, of course).

Good food isn't necessarily expensive, either. Leaders of the Sierra Club's Alaska outings have taken hundreds of people into the Far North over the last 25 years following a build-it-yourself recipe formula while adhering to strict budgets. One key is to "shop the food chain," says veteran leader Carol Dienger. Pick up bulk foods like grains, oatmeal, instant milk, trail mixes, crackers, and canned meats (if you're car camping, kayaking, or rafting) at supermarkets and warehouse stores. Next, celebrate yuppiedom: many markets now carry "gourmet" dry-mix products, such as macaroni mixes from Annie's Homegrown, soup mixes from Mayacamas and Knorr, grains from Arrowhead Mills, pilafs

Don't Worry, Eat Happy

Meeting your body's nutritional needs in the outdoors is mostly a simple matter of consuming more calories. The National Outdoor Leadership School calculates that we require about 2,500 to 3,000 calories a day for "average" outdoor activity such as backpacking, kayaking, and ski touring; 3,000 to 3,700 calories for the heavier workdays that come with snow camping; and 3,700 to 4,500 calories for extreme mountaineering. Your exact nutritional need depends on your age, size, and sex, and the intensity and duration of your energy expenditure.

If you plan a varied menu, you'll most likely get all the carbohydrates, fats, and proteins you need. Half to 60 percent of your calories should come from carbohydrates such as fruits, vegetables, and the starches of grains, pasta, bread, and beans. Aim for a diet that's up to one-third fats, and even more in wintry conditions. The energy of fats is released over a long period of time, which makes them particularly important in cold weather and long-term activity. (At high altitude, however, you may not be able to tolerate this much fat, since altitude dulls the appetite.) Finally, figure that about 12 to 15 percent of your daily calories should come from proteins. Good sources include meat, fish, cheese, milk products, eggs, nuts, seeds, nut butters, grains, legumes, and beans. Their intake must be spread throughout the day, since the body can't use a full day's supply at one time.

from Lundberg Farms, instant refried beans and chili from Fantastic Foods, and lentil and other instant soups from Near East and Nile Spice. All taste much better than their mass-marketed cousins.

Get still more exotic by scouring ethnic food stores for quick-cooking and instant meals. If you're willing to put in the effort, you'll benefit greatly from foods imported from countries where refrigeration isn't a given. Coconut-milk powder, for example, can be the base for terrific Thai dishes. The quick-cooking, apricot-colored lentils Indians call *masoor dahl* are perfect for backpacking. Asian pastas are among the quickest-cooking available. Don't limit yourself to raw ingredients, either. The Dutch firm Conimex makes an excellent spice mix for Indonesian *nasi goreng*—a rice dish that will impress even sulking, weather-bound campers.

Turn to the expensive processed and packaged foods sold at outdoor stores only when you've exhausted these other resources. You'll knock at least half of the price off a meal if you avoid totally prepackaged meals.

Because participants on Sierra Club outings share in the cooking of meals planned by the leaders, meal preparation must be as simple and unambiguous as possible. With few exceptions, individual meals are bagged separately, keeping forays to the commissary for additional ingredients to a minimum. This method limits the cooking crew's ability to embellish a predetermined recipe, but it can avert disasters—like when the distracted cook accidentally adds salt instead of sugar to the dessert. Some campers then bag each day's meals together; others bag all the breakfasts, lunches, and dinners separately. The latter method allows cooks to change menus depending on how easy or difficult a day turns out.

Camping food must be convenient, compact, lightweight, nonperishable, and nutritious. Dare add "tasty" to that list, and you've got a tall order to fill. But with a little forethought and legwork, your backcountry meals can be as impressive as their surroundings. ■

REED MCMANUS *is a senior editor at* Sierra *when he's not on the trail.*

►*For more information, see "Resources," p. 106.*

CHEF'S CHOICE

A comparison of three backcountry entrées: A minimalist's rations, a quick one-pot meal, and the centerpiece of a full-on gourmet trailside feast.

MINIMALIST

Lipton Rice and Sauce, Chicken Flavor

Mix 2 cups water and 1 tablespoon butter or margarine. Bring to boil, simmer 10 minutes. *Serves four.*

QUICK AND HEARTY

One-Pot Rice Curry

At home: In a sealable bag combine 1 cup basmati rice or quinoa; 1 tablespoon onion flakes; 2 teaspoons curry powder; ½ teaspoon salt; a handful each dried apricots, raisins, dates, and chopped pears; a handful whole or chopped almonds, cashews, *or* peanuts. *Optional:* an onion, chopped in camp, to replace onion flakes; coconut or peanuts for garnish.

In camp: Bring 3 cups water to a boil and stir in the rice mixture. Return to a boil, cover, and reduce heat; simmer for 20 minutes. Stir occasionally to prevent sticking. *Serves two.*

—From Simple Foods for the Pack *by Claudia Axcell, Diana Cooke, and Vikki Kinmont (Sierra Club Books, 1986).*

TRAILSIDE GOURMET

Andouille and Summer Garden Stew With Polenta

2 medium zucchini
2 medium yellow summer squash
3 red, yellow, or green bell peppers, cut in strips and dehydrated
1 medium eggplant, cut in rounds, then ½" strips, and dehydrated
½ Andouille sausage (about 6 ounces)
1 6-ounce can tomato paste and ½ cup tomato flakes (or 6 ounces dehydrated spaghetti sauce)
1 small onion, diced
⅔ cup Parmesan cheese
2 cups instant polenta
1 cup basil pesto [preferably homemade, from your favorite recipe]
Optional: ½ cup red wine or ¼ cup brandy

At home: Package dehydrated foods in separate boilable plastic bags. Package fresh vegetables in brown paper bags. Put pesto and wine or brandy in separate plastic bottles. Package Parmesan cheese in sealable bag. Pack polenta instructions.

In camp:

1. Rehydrate dried foods in their boilable plastic bags.

2. Cut sausage in ¼" rounds and sauté in frying pan. Add onion to sausage and cook till translucent.

3. Add tomato paste and tomato flakes (or spaghetti sauce) plus 2-3 cups water. Simmer 5 minutes. Add rehydrated vegetables and wine or brandy and cook for 15 minutes more.

4. While tomato sauce is cooking, slice fresh veggies as if for stir-fry. Thickly coat bottom of cooking pot (or Banks Frybake Pan) with olive oil. Then add ingredients in layers starting with tomato sauce, then fresh veggies, pesto, and Parmesan. Repeat until pot is full, finishing layers with tomato sauce. Sprinkle Parmesan on top.

5. Simmer for 15-30 minutes on a stove with a heat diffuser, checking often to prevent burning on bottom (or bake in Frybake Pan with stove on simmer and a small twig fire on top to make coals).

6. Prepare instant polenta as directed. When cooked, pour polenta on individual plates. Make a well in the center and spoon in sausage and vegetables. *Serves six.*

—From Wilderness Cuisine *by Carole Latimer (Wilderness Press, 1992).*

Continued from page 65

ment. Oxygen depletion and the production of nitrogen can cause excessive plankton blooms, and accumulations of uneaten feed and of fecal matter can smother the seabed. Overcrowding causes stress, which makes outbreaks of disease more likely; diseases and parasites have, in some cases, spread to wild stocks. The control of disease in close-quartered farmed fish has traditionally been achieved with costly antibiotics. Aside from the expense, public concern over antibiotic residues in food brought about regulations requiring non-medication periods before salmon were harvested, and this "window" resulted in more dead fish. Smolt vaccinations, cheaper and longer-lasting, have recently begun to take the place of antibiotics.

Salmon farmers look for any way to make a "better" fish. Farmed salmon are fed high-caloric fish meal to bulk them up. Breeding programs select characteristics best suited to farm life and rapid growth. Genetic manipulations, now in experimental stages, will make fish grow twice as fast, while desexing fish so that none of the growth is wasted on reproduction.

Consumers like their maraschino cherries red, and their bacon red, and they like salmon red too. The color of fish flesh is partly determined by species, partly by diet. Atlantic salmon are normally a troutish pink color, the coho somewhat redder, but both would fade if fed a straight diet of plain fish meal. To compensate, commercial fish foods include pigments that redden the meat.

Most Americans eat so little salmon (per capita only a pound, in all its forms, annually) that they're probably not too concerned about what's fed to or grazed upon by salmon, and most will never taste-test the difference between farmed and wild, or even Atlantic and sockeye. Driven as they are by convenience and price, it may be too much to expect diners to think past food to context.

So what should the conscientious consumer do now that the explosion in farmed fish has pushed down prices? What's the right choice to make when salmon is on the menu or at the local market? First, know where that salmon comes from, and be as selective with it as you are in choosing any other food. Choose farmed fish, and you support the transition to fish as caged chickens, just another modern agribusiness cut off from the natural environment. But choose wild salmon, and your choice will require that the world of salmon continue in all its wholeness and variety. Then, don't stop with eating. Demand that rivers run clean and unimpeded, and that fish-management policies protect the resource and sustain its harvest—forever.

Salmon are more than food. They belong to the open ocean and the tree-lined mountain streams, and to their fellow travelers, people and sea lice among them. They belong to time itself. Only when we honor their free-running place in the world do we also honor the connections among us all, one animal to the next, and the rights of all of us to an environment in which it's possible to continue.

AT MY FISH CAMP, THE KING SALMON pass, and then the sockeyes and cohos. Huge pods of beluga whales trail the runs, their rising backs like a sea of whitecaps. At night, bears search the low-water rocks for any fish that might have dropped from our nets. There are more jellyfish, fewer pink salmon, a spotting of stray sea lions, a change in the way the cohos run the beach—every year something different, surprises, patterns within a pattern. Then one day the wind blows cold from the north, and the ocean has a solemn smell of dead fish, spawners washed out of the rivers, ghost salmon going back to sea in their old clothes. We catch our last reddish and fin-tattered coho, and the circle turns again. ■

NANCY LORD *is the author of two short-story collections. She is at work on a book about the human and natural history of her fish camp. She lives in Homer, Alaska.*

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Certified Organic Farmers. This elicits mixed feelings among old-guard CCOF members like the Freys. "We watched Gallo fumigate one of their Sonoma vineyards with methyl bromide before converting it to organics," says Katrina Frey. (Methyl bromide is a soil sterilizer, anathema to the organic ethic but a quick way to enter the transition to organics with no pests.) "For years there was a philosophy behind organics. Now there's a lot of concern about people who are just getting into it for the profits."

Still, the Freys are glad to see so much vineyard acreage no longer doused with chemicals. And while Gallo may not quite subscribe to the Freys' philosophy, is it really "just getting into it for the profits"? Public-relations director Dan Solomon says Gallo has no intention of promoting or marketing its organic efforts, and yet it is experimenting with sustainable-farming practices on all of its 9,000 acres of vineyards. Thousands of blackberry bushes have been planted along vineyard borders to encourage beneficial predator insects. The winery is tentatively encouraging contract growers around the Ripperdam Ranch to follow its lead. Gallo's potential impact is impressive: easily the world's largest winery, it draws grapes from about 180,000 acres, a quarter of California's vineyards.

Although growers face new expenses in going organic, some old costs are eliminated—so cost-cutting may be one important attraction of following the organic (or quasi-organic) path. Fetzer president Paul Dolan reports that "getting rid of chemical sprays means we're spending a lot less on material costs. And once you get it down to a science, the extra labor inputs really aren't that great either." So why isn't everyone going organic? "People just don't like to change. And the transition can be sticky." As Rich Nagaoka discovered, there may be losses to ride out while natural balances re-establish themselves. Still, with all of Fetzer's own 1,400 acres certified organic, Dolan hopes to bring along their 150 contract growers in time to make all Fetzer wines organically grown by the year 2000.

Minus the timetable, and a little further back on the learning curve, the Robert Mondavi Winery is farming almost half of its 1,200 acres of Napa Valley vineyards organically, with more coming on. Protecting and enhancing soil and water quality is a particular focus of operations at Mondavi's rolling Carneros-district vineyards, at the southern end of Napa Valley. Cover crops between vine rows reduce erosion and let rainwater percolate down to a cleaner Huichica Creek, a haven of the endangered California freshwater shrimp. The creek's natural riparian habitat is also being restored. To keep a lid on mice and voles harbored by the cover crops and known to nibble on vine trunks, raptors are being encouraged by roosts erected throughout the vineyard. In all the Mondavi vineyards, winery wastewater is recycled for irrigation purposes, and drip-irrigation systems or dry farming aid in water conservation.

The winery has been refining its vine-management techniques and moving away from synthetic chemicals since the 1970s. The Mondavis prefer to call their program "natural winegrowing"; like the Perrins at Château de Beaucastel, they choose not to certify their vineyards and make no claims on their labels, believing that a nature-centered vineyard makes its statement in superior wine. "By implementing natural winegrowing techniques," says CEO Tim Mondavi, "we're not only protecting our environment, the people who live and work with us, and our wildlife, but we are growing fruit that more fully expresses our soil and climate."

ORGANIC WINEGROWERS ARE PART OF a small but growing segment of the agricultural community suspicious of much of the "progress" made in agriculture over the last half-century. They are reviving or carrying on older ways of doing things, sometimes with new twists and technologies, but purposefully looking to traditional models that accept the risks and labors and costs of integration with the natural order.

Are their wines better or worse for being made the natural way? Perhaps both.

"Organic winemakers tend to be the ultimate purists," says Berkeley, California, retailer and importer Kermit Lynch, who has tramped through small European vineyards for many years looking for wines with a stamp of character. "I want the most expressive, least emasculated, least mucked-up, most alive, natural wine possible. So I go out of my way to taste in the cellars of organic winegrowers. If they don't like chemical fertilizers or herbicides in their soil, or chemical pesticides on their vines, they are not likely to oversugar or oversulfur or sterilize or acidify or artificially color and flavor their wine.

"But don't think I'm telling you that organic wine automatically means good wine. More often than not, like most wines I taste, they're not good enough to buy because of some flaw in the vinification. But the successful ones can be spectacular; there does seem to be some charismatic quality they share."

In the hands of a competent winegrower, then, organic wines seem likely to be fuller, more direct expressions of their vineyard and vintage—the language of good wine. But there are more risks and fewer remedies—in the hands of a neophyte, more chances for something to go awry. "When you stop farming conventionally and start farming organically," says Mendocino grape grower Ron Bartolucci, "you learn how much you didn't know." ■

RICHARD FIGIEL, *the former editor of* International Wine Review, *makes organic riesling, chardonnay, and pinot noir as the owner/operator of Silver Thread Vineyard in New York's Finger Lakes wine district.*

► ***For more information, see "Resources," p. 106.***

Continued from page 59

Prohibition. A belt of prickly-pear cactus ran along the hill's meridian; where the trail down the back of the hill emerged from the shade of plum and almond and olive, it had to run a gauntlet of prickly pear. (Young cactus blades are excellent peeled, sliced, and fried with onions, tomatoes, and hot peppers, served with eggs and corn tortillas; the bright-purple pears make a delightful jelly, with a strange flavor combining wild grape and pomegranate with a vegetal undertaste vaguely like artichoke.) At the foot of the collapsing stairway, following a seasonal stream that seeped out under the bottommost retaining wall, flourished a mad tangle of blackberry canes that produced fat, purple-black fruit, each the size of the last joint of my thumb.

There were a half-dozen olive trees, with clusters of small, light-green leaves, nearly white underneath. Huddled on the brown, sun-blasted hillside, they made me think of Provence. I pictured myself seated at civilized tables under the trees in the hot summer afternoon, a glass of cool rosé in hand, black coffee in the cooler morning. Welling up from memory came strong desires for brandade, salt cod, aïoli.

Several kinds of plum trees, both Japanese and European, dominated the hillside and gave us bushels of yellow, red, purple-unto-black, juice-dripping fruit. Apple trees and quince bushes flourished; a fig tree held on tenuously to life.

There were nut trees as well—black and English walnut, an almond—from which we never took a single nut, though it was pleasant, looking out the high window at breakfast, to watch the squirrels strip them bare.

Trees, of course, need pruning, and pruning requires tools, highly specialized tools, unique, bizarre shapes that set you wondering at their use, trying to reconstruct their peculiar evolution and adaptation to specific tasks. Well-made, sharp-honed, clean and oiled pruning saws that fold back into carved hickory handles; lopping shears with small sharp blades like the beaks of cartoon birds; pole saws like medieval Japanese weapons. I began using hand tools because I didn't have power tools or the money to buy them. But soon I began to feel virtuous. I was mildly self-conscious taking down the dead walnut on the middle terrace with a bow saw and an ax, imagining practical neighbors shaking their heads. But there is enough noise in the world already, and I was in no hurry. A chainsaw is fine for harvesting cords of winter firewood from a woodlot. But in my garden, power tools seemed overkill.

For me, and probably for most North Americans, gardening is not an imperative. Neither our lives nor our livelihoods depend on it. Why spend money on devices that will remove hand labor from the process? There is nothing in the garden that can't be done by hand. One reason many of us garden is to establish a direct connection between ourselves and our sustenance, vegetables, dirt, beauty. Power tools are a form of mediation. They are seldom beautiful. Besides, they are conveniences, not necessities. Gardens are not convenient.

LOOKING AT THE COMPACTED, CLAYEY soil, long given over to wild grasses, I decided to *double-dig* the whole terrace. Double-digging involves methodically redistributing the soil in your garden, digging down about 18 inches, and loosening the soil still deeper. Topsoil and subsoil are kept separate so that they can be returned to their proper strata; lots of compost gets mixed in. The idea is to break up dirt to allow root growth, drainage, and aeration while preserving the nutrient-rich topsoil, instead of merely turning everything upside-down. It is a backbreaking labor I would not willingly repeat. (To my relief, all the authorities I consulted said it need only be done once.)

I was not as scientific and organized as I might have been. The shovel itself was my measure: one shovel up, the next shovel over; a shovel of compost in. I managed to get the job done, probably with minor damage to the soil's ca-

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pacity for nourishment. It certainly absorbed a lot of compost: all we had produced domestically the previous winter, plus two large sacks from the local organic nursery.

Double-digging is good, and not only for your soil; it impresses your gardening friends. "Yeah," you say casually, "I double-dug a 400-square-foot terrace this spring." The listener's eyes widen slightly; before he can recover you add: "with hand tools." (There is no other way to do it. But say it anyway, just to emphasize the labor-intensivity of the process.)

Rooting in the garden some months later, I was encouraged by the amount of earthworm activity. When I had first tilled the ground I had seen next to none, a sure sign of unhappy soil. If worms had been present in any numbers, in fact, my shovel-frenzy might have been unnecessary; worms are double-diggers by nature.

Once the soil was ready, and the neighbors duly impressed, it was time to lay out the big, the imperial, the full-terrace garden.

Since tomatoes had done so well in our pilot plot, we planted two kinds—Beefsteaks and Early Girls. Jalapeño peppers, too, had been wildly successful, and we put them in again. Then what was for me the heart of my dream: corn, beans, and squash, the "three sisters" of the Iroquois. As a finishing touch, struck by inspiration and childhood memory, Jane planted sunflowers randomly throughout the garden.

In among the vegetables, we seeded marigolds, nasturtiums, and yarrow, to combat aphids, beetles, disease. There is some uncertainty as to why such companion planting works, but vegetables seem happier, and pests less a problem, when certain flowering plants are put between the rows.

I mulched. I weeded. I handpicked insects, meditating on tolerance. I watered, watched, waited. I applied fish emulsion.

As the plants began to come up and to flourish, the garden began to attract visitors. One of the purposes of an environmental garden is to "create habitat for wildlife," says Karen Arms in her useful handbook *Environmental Gardening* (Halfmoon Publishing, 1992). This had not been one of my goals, but I managed to achieve it anyway, somewhat against my will.

The local deer kept a careful eye on all my preparations. I would sometimes spot one of the bucks at twilight, kneeling on the terrace above and contemplating the freshly turned soil. Though I had surrounded the terrace with a four-foot-high fence of stout wire, I had seen deer leap higher fences—easily. Would the strips of white cloth fluttering from clothesline strung three feet above the fence itself fool them? Or were they just biding their time? Someone told us that deer actively dislike oleander, so we planted it thickly around the outside of the fence.

One morning I found a sizable gopher mound in the middle of the beans, and a tomato plant—one of the prized Beefsteaks—leaning at a drunken angle. When I tugged softly to straighten it, the entire plant came out of the

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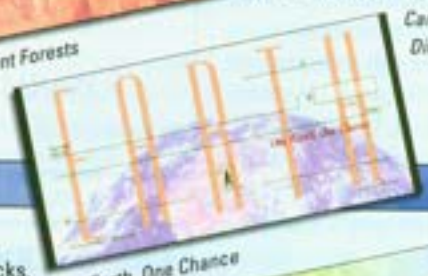

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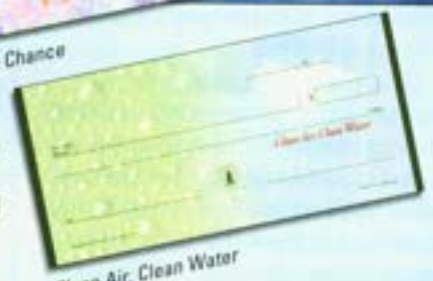

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ground, gone at the root.

Traps came to mind, along with guns, poison, and Juicyfruit gum (gophers love it, but it plugs up their insides, and they die). I confined myself to flooding this one out, running a hose into his burrow and washing the varmint into the next world—or, as seemed more likely, my neighbor's yard. But we knew it would be only a matter of time before another gopher discovered our tomato plants. To deter invaders, we planted gopher purge, a flowering shrub the rodents detest, at strategic points around the garden, and garlic all around the perimeter, just inside the deer-fence, like sentinels around a medieval citadel. They did their job; no more mounds appeared.

Other living things were harder to exclude. Something was eating the cornsilks, leaving bristly yellowish crewcuts, like small Bart Simpson heads, protruding from the ends of my ripening ears. Without long, golden silks to catch the falling pollen, the ears would never set, or would ripen with few and distorted kernels spread haphazardly over the cob—what my mother referred to contemptuously as "chicken corn." Something had to be done.

Night visits to the garden revealed a *danse macabre* of munching insects. But I was not afraid, nor did I begin buying powerful insecticides. Instead, I recruited, at the local nursery, more than a thousand lady beetles, my own mercenary insect army. Bug packet in hand, I marched down to the midday terrace, opened the envelope, and released a cadre of lady beetles to do their worst.

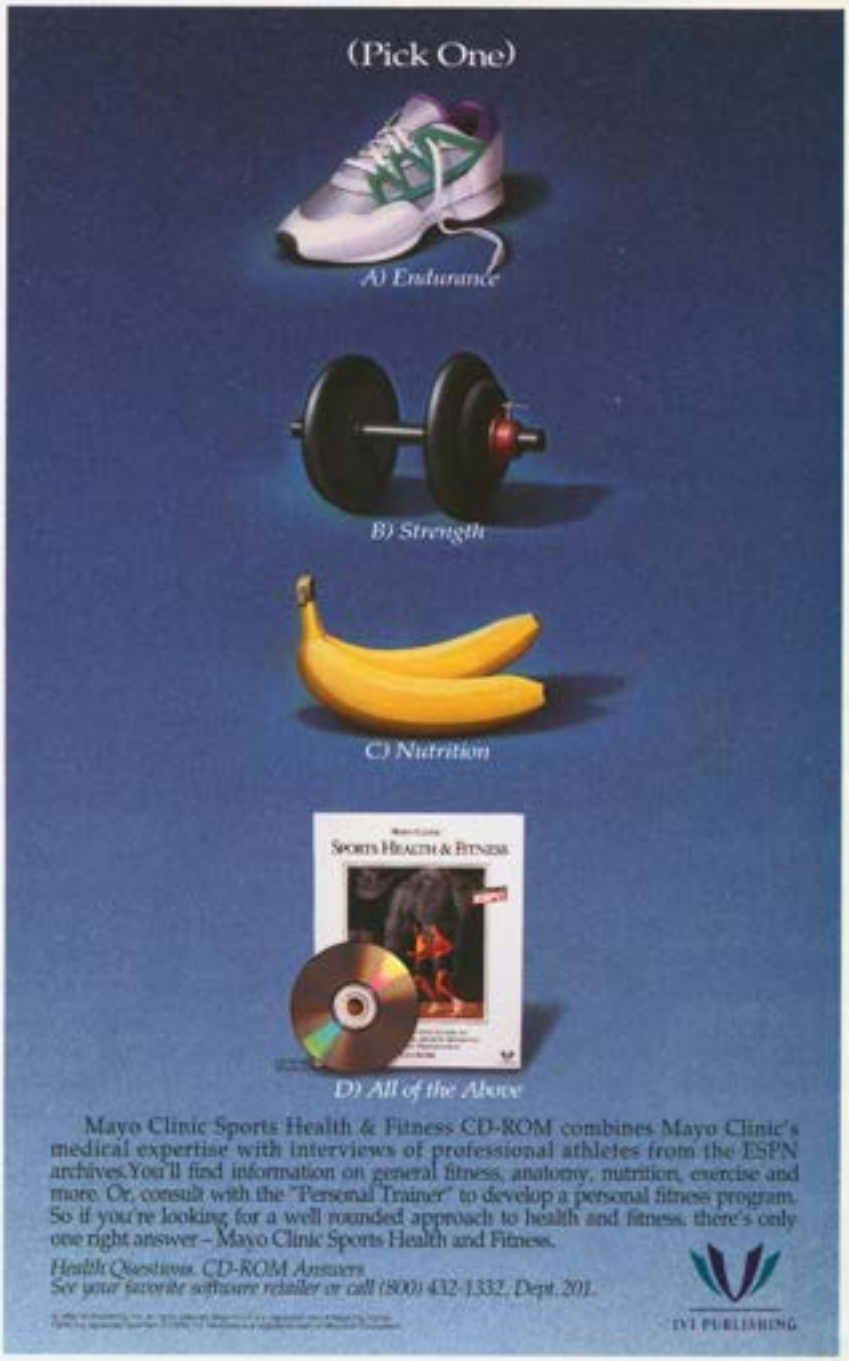
The small black-spotted orange insects landed broadcast, on leaves and on clods of dirt. After a moment of disorientation, they snapped open their wings and flew away. Every last one of them.

There were several things I'd done wrong. If I'd waited until evening, or early the next morning, or if I had watered the garden beforehand, the beetles would have been happier and perhaps stayed around longer. Somehow I had missed this in my research.

The next release, after further study, was more successful. The lady beetles stayed around, and kept the aphid population within reasonable bounds. But the cucumber beetles, which by now I considered my deepest enemy, seemed unaffected. And the cornsilk remained cropped. Much too late, I discovered that earwigs were the likely corn culprit. Lady beetles do not eat earwigs.

Biodegradable dish soap was as close as we came to the use of chemicals. Diluted in water and sprayed on the infested plants, it worked well enough on every bug we tried it on, but needed frequent reapplication. Friends told us of sabadilla, a naturally occurring poison of some potency; sometimes, they said, it was the only thing that would rid your garden of cucumber beetles. We reserved judgment, though the sorry state of the squash and beans made me add sabadilla to my mental supply list for next year.

For most pests, the best method is simply to get used to them. A serious infestation usually indicates a deficiency, such as depleted soil or some other imbalance. I hoped that assidu-



ous composting and attentiveness to soil health would help reduce the most damaging insect and disease problems. As for the rest, I felt I could afford to share. There was plenty to go around at the end of the season.

At its height, with the companion plants in bloom, the squashes spreading between the ripening ears of corn, beans climbing the cornstalks, tomatoes dangling heavily, peppers and eggplants and peas bursting forth, the sunflowers towering over all, my garden was as various and beautiful (I thought) as any carefully designed floral wonderland.

But unlike flower gardening, vegetable gardening is not an end in itself. The result of all this work and thought is meant to be food.

We ate well from the dream garden. The tomatoes—red, meaty, and flavorful beyond the wildest dreams of supermarket produce buyers or genetic engineers—were eaten out of hand, or else went into the simplest tomato salad: sliced fairly thick, laid on a fat white serving plate, sprinkled with minced shallots, coarse black pepper, then a basic vinaigrette, using good Provençal olive oil, and balsamic vinegar from Italy, salt, and more black pepper. That's it—you could add a spoon of Dijon mustard to the dressing, if you wanted to get fancy. I was served such a salad one summer morning in a café outside Montélimar, hiking north out of Provence; I have never forgotten it. My attempts at re-creation never held up well to the memory until I grew my own tomatoes.

My olives, once pickled in brine for a couple of months, made a fine tapenade, mixed with anchovy and shallots and capers and garlic and lemon juice, all chopped finer than fine with a rocking knife. (You can make tapenade in a blender; you can also make an omelet in a cement mixer, but it won't be any good either.) I experimented with packing the cured olives in different media: olive oil and a sprig of tarragon from the herb garden (my favorite); garlic vinegar, stale wine, a couple crushed garlic cloves, and a dried red pepper (robust). The olives—the tiny, oily Mission variety, with more pit than flesh—salt-cured well, too; I rubbed them with olive oil and dry herbs when they finished curing.

The jalapeños produced maniacally, and I ended up pickling most of them in vinegar, with carrots, onions, garlic, and fresh oregano, though some of course went into fresh salsa. The *escabeche* turned out surprisingly mild; what fire the peppers contained was transferred to the carrots, an effect I've always enjoyed. Aphids and earwigs had triumphed over the sweet corn; the ears were small, the kernels uneven and random. Perhaps, I thought, I could begin keeping chickens.

If, as Aldo Leopold has asserted, "A hobby is a defiance of the contemporary," my garden has allowed me to defy those parts of contemporary reality I have least use for. It is a place where I can, without significant consequence, and with every chance to start over, live out my ideas of how the world should be ordered (or disordered). A ground of free experiment, of connection and participation.

And while one person may not be able to have much of an effect on the world at large, it's worth remembering that gardening is the most popular hobby in the United States; some 80 percent of that complicated nation call themselves gardeners. In light of this, gardening takes on subversive potential. It's not that by eschewing power tools, say, you can have much direct effect on planetary environmental degradation. It's more a refusal to assist in such degradation; the garden becomes a place of refuge and noncompliance. A leafy, growing protest; a locus of anti-corporate, anti-monocultural activity. An exemplary plot of ground, rather than Candide's retreat from the world.

The clear implication of organic gardening is that there are natural cycles and forces not subject to human manipulation, at least not without incurring serious, long-term losses. In place of chemical bullying of the soil and the imposition of technology on nature, this kind of gardening offers the possibilities of partnership, cooperation, of coming to understand natural cycles so that we can put ourselves, our gardens—and our menus—in harmony with them. ■

Marc Lecard, Sierra's *managing editor, is still learning and still gardening.*

►*For more information, see "Resources," p. 106.*

Green Aïoli

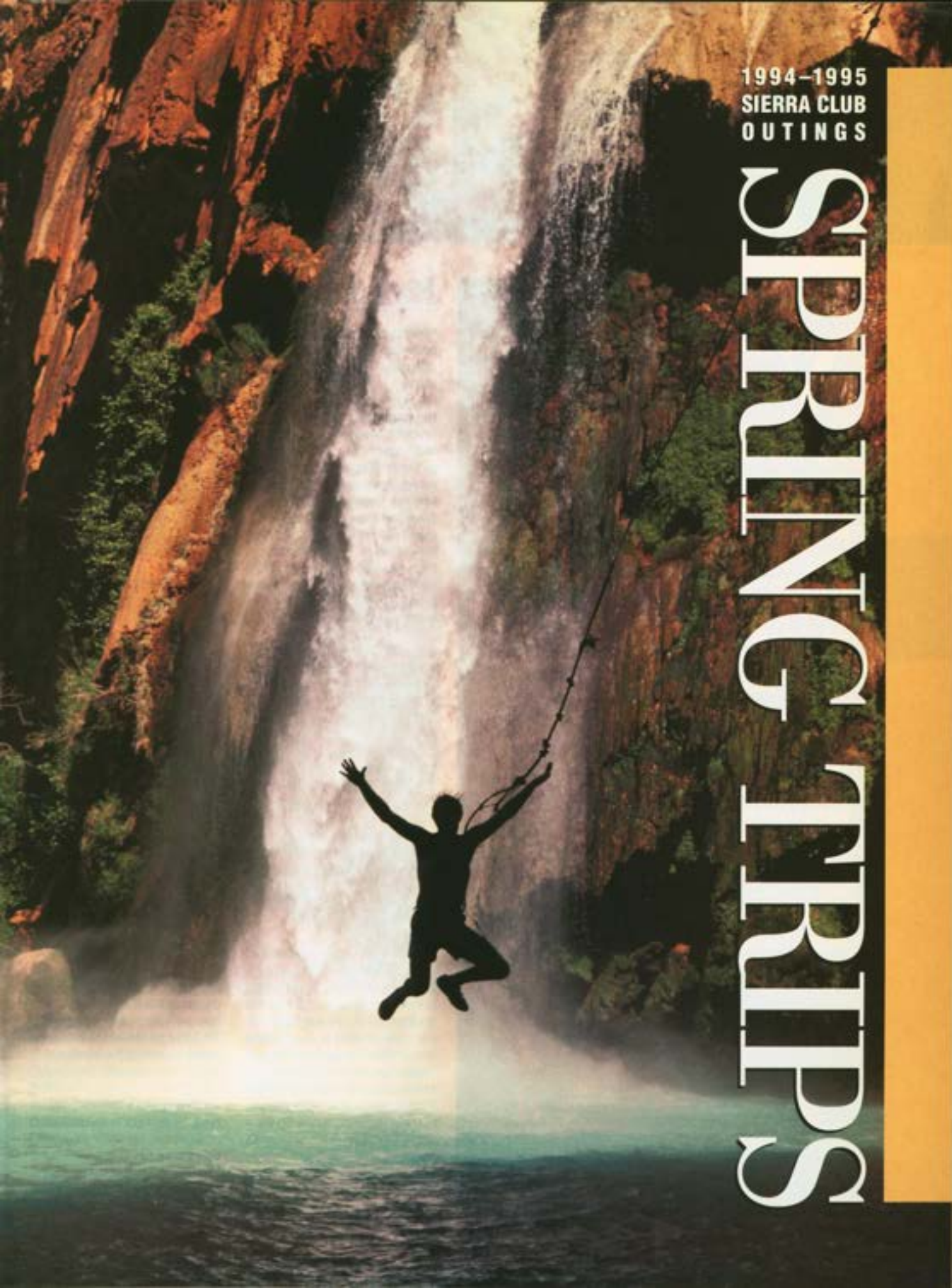
Jesse Cool, chef and owner of the Flea Street Cafe and Late for the Train restaurant in Menlo Park, California, uses this herbed version of the classic sauce (most famous in the French *grand aïoli*) on fish or as a dip for vegetables. You might be tempted to put it on everything.

MAKES ABOUT 1-1/2 CUPS

1/4 cup scallion greens cut into 1/2-inch slices
1/4 cup loosely packed basil leaves
2 to 3 large cloves garlic
1 whole egg plus 2 egg yolks, brought to room temperature
2/3 cup olive oil
1/2 cup vegetable oil
2 tablespoons lemon juice
Salt and pepper to taste

In a food processor, chop scallions, basil, and garlic. Add egg and yolks. Through feed tube, add oils slowly in a steady stream while processing the mixture until sauce thickens to the consistency of light mayonnaise. Add lemon juice and salt and pepper and process until well blended. Chill. Use as you would a mayonnaise.

—Excerpted with permission from Cooking From the Garden: Creative Gardening and Contemporary Cuisine *by Rosalind Creasy (Sierra Club Books, 1988).*



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We have divided backpack trips into five categories of trip difficulty. They are as follows: Light (L) trips cover up to 35 miles in four to five travel days, the remaining days being layover. Moderate (M) trips may cover longer distances of up to 55 miles and involve more cross-country route-finding. Strenuous (S) trips cover as many as 60 to 70 miles with greater uphills and downhills at a continuous high elevation. Light-Moderate (L-M) and Moderate-Strenuous (M-S) designate intermediate ratings.

Superstition Wilderness Trek, Tonto Forest, Arizona—February 12–18. Hiking within the Superstion Mountain Range 75 miles east of Phoenix, we'll traverse high Sonoran Desert terrain. Daily hikes will range from six to eight miles over well-marked trails. Famous for the legendary Lost Dutchman Gold Mine, the area provides a wide variety of desert flora, fauna, and geological formations. There will be one layover day. (Rated M) *Leaders: Suzi and Jack Thompson. Price: $395; Dep: $50.* **[95031]**

Florida Trail Odyssey, Ocala Forest, Florida—February 19–25. Warm your winter-weary bones and escape to Ocala, the southernmost national forest in the continental U.S. Our 37-mile hike on the Florida Trail skirts several ponds and grassy prairies ideal for viewing wildlife. We'll spend one layover day at Juniper Springs, canoeing its clear, twisting stream, lined with lush vegetation. Two food caches will lighten our loads. (Rated L-M) *Leader: Bill Carroll. Price: $435; Dep: $50.* **[95422]**

Superstition Wilderness Trek, Tonto Forest, Arizona—March 5–11. See description for trip #95031 above. (Rated M) *Leader: Jay C. Nichols. Price: $395; Dep: $50.* **[95032]**

Glen Canyon Recreation Area, Southern Utah—March11–18. Join seasoned canyoneer and author Steve Allen as we explore a seldom visited area of the Escalante. Our route takes us over the Kaiparowits Plateau into Twilight Canyon and Cottonwood and Llewellyn gulches. We will climb through spectacular slot canyons and camp on the shores of Lake Powell. (Rated S) *Leader: Bert Fingerhut. Price: $495; Dep: $50.* **[95033]**

Rainbow Bridge and Navajo Mountain, Arizona and Utah—April 2–8. In the cool, high desert of the Navajo Reservation, we'll circle the north flank of 10,388-foot Navajo Mountain, a place sacred to the Navajo. We'll follow unmaintained trails through a wonderland of winding sandstone canyons, natural bridges, and domes. A re-supply by boat will make our long first day easier. Other days will be leisurely, with ample time to enjoy deep pools, photography, and exploration. Vegetarian

TRIPS

WE NOW ACCEPT CREDIT CARDS. SEE PAGE 93 FOR DETAILS.

JENNY HAGEN/ALPINE IMAGES

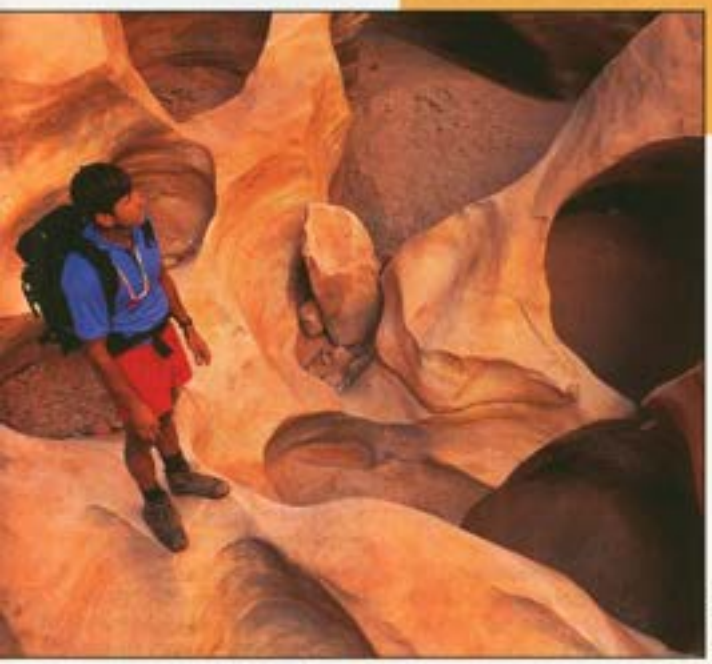
menu available. (Rated M–S) *Leader: Terry Gustafson. Price: $485; Dep: $50.* **[95034]**

Coyote Gulch, Glen Canyon Recreation Area, Utah—April 9–15. Greet the arrival of spring in this hidden jewel of the Escalante region. Our 27-mile journey takes us the full length of Coyote Gulch, with its streaked sandstone walls, natural bridge, arches, waterfalls, fresh springs, and deep overhangs. We camp in protective alcoves or cottonwood groves. A gentle pace and one layover day allow us to absorb the wonders of this special place. (Rated L) *Leader: Cathy Underwood. Price: $525; Dep: $100.* **[95035]**

Easin' Down the Escalante, Glen Canyon Recreation Area, Utah—April 9–15. Starting on the historic Hole-in-the-Rock Road, we'll descend gently through beautiful Harris Wash to the Escalante, taking plenty of time to photograph and explore side canyons in this redrock wilderness. Expect frequent stream crossings, warm days, and cool, crisp nights. Our exit route through Twenty-Five Mile Canyon tops off this scenic week. (Rated M–S) *Leader: Michael Murphy. Price: $495; Dep: $50.* **[95036]**

Galiuro Wilderness, Southeast Arizona—April 16–22. On the edge of the Sonoran Desert, the mysterious and seldom-visited Galiuro Wilderness is a primeval mix of mountains and canyons. Our route will take us over agave- and cactus-studded ridges to lushly forested canyons with running streams and pools. One of our stops, the lovely Redfield Canyon, is protected by the Nature Conservancy. Some cross-country; elevations between 4,500 and 7,700 feet. (Rated M–S) *Leader: Barry Morenz. Price: $395; Dep: $50.* **[95037]**

MIKE A. ARCH



JAMES W. KAY

Cover, Havasu Falls, Havasupai Canyon, Arizona (photo by Bob Ludwig); top, green maple leaves; left to right: Paria River Canyon, Utah; Stone Creek Falls, Grand Canyon; Cedar Mesa, southern Utah; poppies, Ventana Wilderness, California.

Big Sur Backcountry, Ventana Wilderness, California—April 21–28. Our trip takes us into the heart of the wild and rugged Santa Lucia Range at what should be the peak wildflower season. Our camps will alternate between pine-covered ridgetops with far-reaching ocean views and deep canyons with clear, running streams. We'll cover approximately 45 on-trail miles, plus possible side trips to peaks and waterfalls. (Rated M) *Leader: Mark Maslow. Price: $360; Dep: $50.* **[95038]**

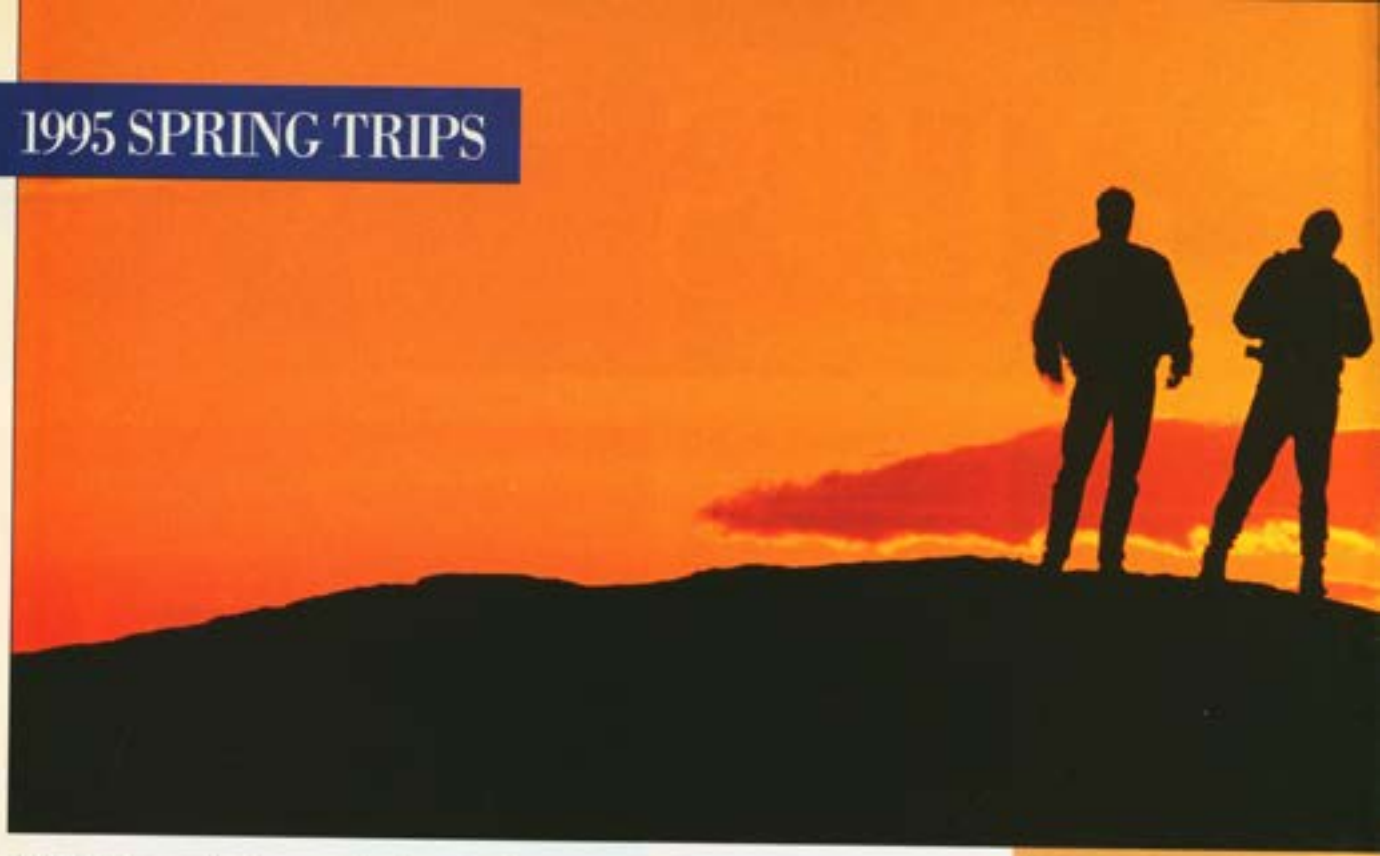
Paria Canyon Wilderness, Utah and Arizona—April 23–29. Paria Canyon begins in southern Utah and follows the Paria River to its confluence with the Colorado River at Lee's Ferry. We'll explore both Buckskin Gulch and Paria Canyon, two of the southwest's most famous slot canyons. The area features geology, petroglyphs and pictographs, dramatic side canyons, wildlife, and abundant wildflowers. Two layover days; vegetarian cuisine emphasized. (Rated M) *Leader: Jeffrey D. Black. Price: $525; Dep: $100.* **[95039]**

Under the Tonto Rim, Tonto Forest, Arizona—April 23–29. Prominent in Arizona's history and in Zane Grey's novels, the Mogollon Rim is "a mountain canted up on one side." Using historical trails through saguaro, piñon, and ponderosa, we will skirt the shoulder of this famous 7,200-foot escarpment at about 6,000 feet, with dayhikes to the top for some of central Arizona's most incredible views. (Rated M+) *Leader: Caroline Sides. Price: $495; Dep: $50.* **[95040]**

Thunder River and Kanab Canyon, Grand Canyon, Arizona—April 29–May 6. This trip begins with a steep but rewarding nine-mile descent to Thunder River, followed by explorations of the canyon's treasures—120-foot Deer Creek Falls, hidden canyons with beckoning pools, the narrows of

The Outing Committee welcomes diversity among its trip participants, and has made a strong effort to offer trips suited to individuals of a wide range of abilities and interests. We encourage all people, regardless of age, gender, race, religion or sexual orientation, to join us in our exploration and enjoyment of the wilderness.

1995 SPRING TRIPS



Jumpup, and a spectacular panorama as we ascend Kwagunt Hollow to Sowats Point. Experienced hikers only; no layover days. (Rated S) *Leader: Gene Glenn. Price: $495; Dep: $50.* **[95041]**

The Lost Coast, King Range, California—May 6–13. Spend a delightful week hiking and backpacking along the rugged north coast and through the redwoods. The weather should be mild, with the rainy season hopefully over and the fog yet to come. We'll dayhike two days in Humboldt Redwoods and backpack five days (one layover) in the King Range. Our route features a historical lighthouse and seals frolicking off shore. (Rated L) *Leader: Bob Berges. Price: $310; Dep: $50.* **[95042]**

Sky Island Treasures, Chiricahua Mountains, Arizona—May 7–13. Bring binoculars and enjoy three days of superb birdwatching and dayhiking from our 5,600-foot drive-in base camp at Cave Creek Canyon, a renowned birding hotspot. Then car-shuttle over the mountains to our new base camp with two layover days for exploring, dayhiking, and birding in Chiricahua National Monument at elevations from 5,500 to 7,000 feet. No backpacking (late itinerary change due to fire). *Leader: Ed Marty. Price: $495; Dep: $50.* **[95043]**

Dark Canyon, Utah—May 13–20. Starting in aspen and fir forest at 8,000 feet, we'll backpack 38 miles and descend over 5,000 feet through this remote, wild canyon, ending in piñon and juniper desert. Following the stream between steep, colorful canyon walls, we'll enjoy pools, waterfalls, and riparian vegetation. We will explore several spectacular side canyons and end the trip climbing a 1,000-foot talus slope. Highly seasoned multi-ethnic cuisine will be featured. (Rated M) *Leader: Martin Rosenthal. Price: $495; Dep: $50.* **[95044]**

Exploring Escalante Canyon, Utah—May 14–20. Come explore Escalante Canyon with its winding passageways, hanging gardens, hidden alcoves, waterfalls, and Anasazi petroglyphs. We will cover six to eight miles per day with very frequent stream crossings. There will be one layover day to savor the intoxicating beauty of the area. (Rated M–S) *Leaders: Joseph Sheader and Angela Eyre. Price: $495; Dep: $50.* **[95045]**

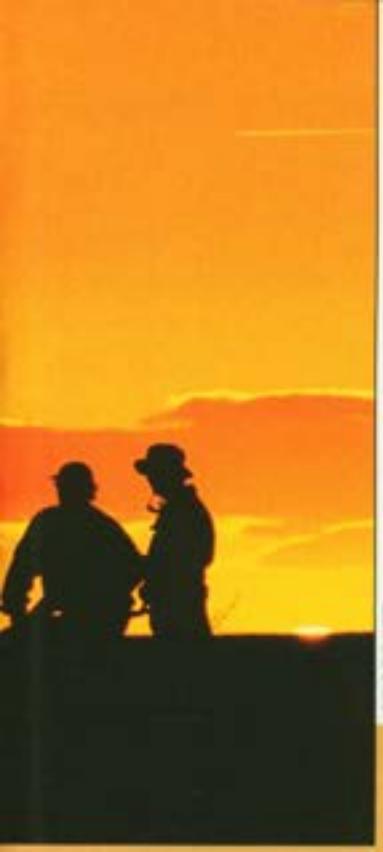
Paria Canyon Wilderness, Utah and Arizona—May 14–20. Explore one of the southwest's most beautiful slot canyons. Winding through Navajo sandstone, we'll see magnificent cliffs, Anasazi petroglyphs, desert flora and fauna. Very frequent stream crossings; two layover days for relaxing; optional dayhikes to Buckskin Gulch and Wrather Arch. Bring a camera and plenty of film to capture this exceptional area. (Rated L–M) *Leader: Glen Hampton. Price: $525; Dep: $100.* **[95046]**

THE NATURE COMPANY

Get your holiday shopping done early and help the Sierra Club while you're at it! Shop at the Nature Company during the week of November 14 -18, 1994 and 20% of the proceeds will go to the Sierra Club. You must state that you are a Sierra Club member at time of purchase; some restrictions apply. Call 1-800-227-1114 for the location of The Nature Company store nearest you.

Base Camp

Coral Reefs, Turtles, and Parrot Fish: St. John, U.S. Virgin Islands—December 27, 1994–January 2, 1995. Leave cold winter behind to snorkel, sun, and hike in the warmth of St. John! The Caribbean is 50 feet from our rustic cottages at Cinnamon Bay, while the forest stretches out behind us. Mornings we'll explore forests and historic ruins; afternoons we will swim and snorkel over spectacular reefs, watching fish and looking for rare turtles. Snorkeling instruction available. Transport by safari vehicles.



CARL R. DISS-BAKER

accompanied by a naturalist and a conservation activist. Car-camping in one or two sites, we will carpool to trailheads for moderate daily walks. Bring your swimsuit, camera, and field glasses. *Leader: Carol Baker. Price: $455; Dep: $50.* **[95050]**

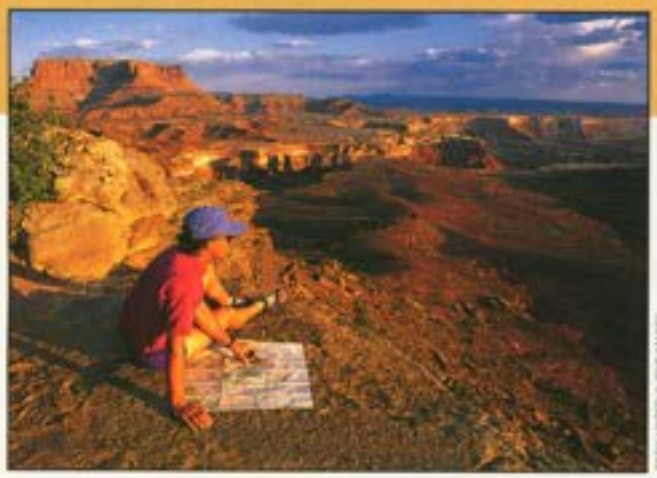
California Desert Celebration, East Mojave Scenic Area—April 8–14. Come to the desert this spring and toast the Sierra Club's victory in getting the California Desert Protection Act passed in Congress! We'll explore the panoramas, sand dunes, and cinder cones of soon-to-be Mojave National Park. From our 5,600-foot camp we'll carpool daily to the trailheads. Hikes vary from easy to moderately strenuous; the campground at O'Leno State Park, we'll explore this area on dayhikes and by canoe. Canoe rental not included in trip fee. *Leader: Steve Rodney. Price: $410; Dep: $50.* **[95052]**

Havasupai Indian Reservation, Grand Canyon, Arizona—April 23–29. Visit this remote reservation on the western end of the Grand Canyon, renowned for its riparian vegetation and large, travertine pools. Horses will carry our equipment and food, and we'll also ride horses to our base camp, located between the grand Havasu and Mooney waterfalls. We will spend our days swimming in pools below the falls, and hiking to scenic areas. *Leader: John Malarkey. Price: $795; Dep: $100.* **[95053]**

Naturalist's Puerto Rico—April 24–30. Explore the unspoiled island of Culebra, snorkeling and swimming at pristine beaches and assisting with Fish and Wildlife Service surveys of nesting sea turtles. Hike the trails of El Yunque, the Forest Service's only tropical rainforest, a land of giant ferns, waterfalls, and exotic vegetation. Accommodations include a villa in Culebra and an historic hotel. Meals not included in trip price. *Leader: Marjorie Richman. Price: $765; Dep: $100.* **[95054]**

Daughter of the Stars, Shenandoah Park, Virginia—May 14–20. Witness nature's rejuvenation in the fabled Shenandoah this spring! Wildflowers and gentle deer peek through the woods on our hikes, restoring spirits on misty mornings, while spring-replenished brooks cascade beside us on warm afternoons. Evenings will find us gathered

Left to right: Dead Horse Point State Park, Utah; California red poppy; Murphy's Camp, Canyonlands National Park, Utah; McKinley River Valley with Denali in background, Denali National Park, Alaska.



JOHN MUIR NATURE IMAGES

Meals not included in trip price. *Leader: Helene Baumann. Price: $705; Dep: $100.* **[95423]**

Coral Reefs, Turtles, and Parrot Fish: St. John, U.S. Virgin Islands—January 22–28. See description for trip #95423 above. *Leader: Gary Skomro. Price: $705; Dep: $100.* **[95424]**

Anza Borrego Park, California—March 4–11. Anza Borrego is California's largest state park, an exotic desert corner comprised of a mad variety of habitats—fossilized seabed, juniper scrub, badlands, and sandstone washes. We'll be

toughest day is six miles with a 1,000-foot gain. Our pace is modest as we stop for flowers, wildlife, and talks on history, archaeology, and conservation. *Leader: Rose Certini. Price: $325; Dep: $50.* **[95051]**

Spring and River Country, North Central Florida—April 16–22. The north-central part of the Florida peninsula offers a range of uncrowded natural areas. Large, clear springs rise from the ground and empty into gentle, flowing rivers lined with live oaks, cypress, pines, and hardwoods. The area is also home to lakes, sinkholes, and grassy prairies. From our

SECOND ANNUAL

John Muir Society Outing

Alaska Grand Tour:
DENALI AND KATMAI NATIONAL PARKS
July 24–August 3, 1995

Denali and Katmai, two of Alaska's most magnificent national parks, will be the focus of this very special outing with hosts Ed and Peggy Wayburn, noted experts on Alaskan wilderness and conservation.

Our trip begins in Anchorage with a flight to Katmai. Katmai National Park is famous both for its abundant grizzly bears who fish in the Brooks River, and for the incredible Valley of 10,000 Smokes, formed in 1912 by a massive volcanic eruption. Lodging at Brooks Camp will be in four-bunk cabins, each with private bath. Bear-watching is possible at all times, and great fishing and hiking, plus a van trip to the Valley of 10,000 Smokes, are additional highlights.

After flying back to Anchorage we travel by bus to Denali National Park. Once in the park, a six-hour van trip will offer us sightings of bears, moose, mountain sheep, and caribou! We will stay for five nights at the North Face Lodge in the heart of Denali, with its fantastic views of Mt. McKinley. At this lodge, a sister facility to Camp Denali, rooms are primarily doubles with private baths. The food is delicious! Naturalist-led walks and other hikes will be available daily.

We conclude the trip with a ride on the Alaska Railroad, for our final night together in Anchorage. Trip price includes round-trip air travel between Anchorage and Katmai, ground travel to and from Denali, and all lodging and food, including three overnight stays in Anchorage. *Trip Coordinator: Carol Danger. Price: $3,970; Dep: $200.* **[95100]**

1995 SPRING TRIPS

around the campfire, discussing Shenandoah's history and our impact on the land the Indians called "Daughter of the Stars." *Leaders: Lissa and Ted Jackson. Price: $415; Dep: $50.* **[95055]**

Pinnacles and Prairie, Badlands Park, South Dakota—May 21–26. Coyotes serenade at night, a symphony of birds heralds the dawn, and buffalo may wander casually through our grasslands campground. In contrast are the starkly eroded peaks and spires where wind, water, and the chisel of time have made the mako sica (bad land). A haunting, peaceful land with outstanding sunsets, storms, and rainbows. *Leader: John Molenaar. Price: $455; Dep: $50.* **[95056]**

Bicycle

Biking through Civil War History, Virginia, Maryland and Pennsylvania—May 14–20. Retrace the footsteps of General Lee's invasion of Union soil! Starting at Manassas, Virginia, we ride north through historical Harpers Ferry and Antietam, and along the gravel C & O Canal Towpath. Our route takes us through the Catoctin Mountains and concludes with a guided tour of Gettysburg. This van-supported, camping trip takes in six national battlefields and parks, and is for mountain or road bikers with intermediate cycling ability. *Leader: Brian Vandegrift. Price: $480; Dep: $50.* **[95057]**

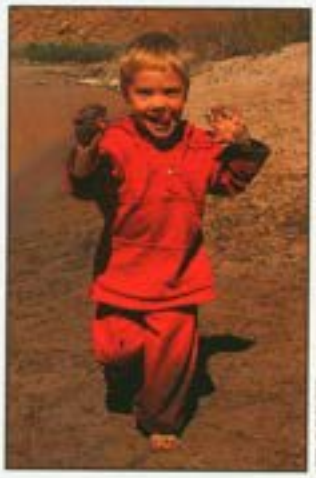
Virginia and North Carolina's Blue Ridge Parkway—May 21–27. We're back and ready for more! We had so much fun last year on the first leg of the world-famous parkway, this year we'll continue for another 200 sag-wagon-supported miles. Our itinerary includes camping, overlooks, wildlife, a winery, and a layover day. Will we see bears and get chased by wild turkeys again? There's only one way to find out! Newcomers welcome. *Leader: Ken Singletary. Price: $470; Dep: $50.* **[95058]**

Canoe/Kayak

Canoe and kayak rental are not included in trip fee unless otherwise indicated. All canoe trips require some canoeing experience.

The Florida Everglades by Kayak: A Natural History Tour—January 29–February 4. Wetlands forests, deserted islands, open bays, and narrow mangrove creeks are featured on this paddling and hiking tour of the 10,000 Islands region of Florida's Gulf Coast. From the water and on foot we will explore this domain, searching for ancient artifacts, and rare and exotic plants and animals. Suitable for beginners with paddling experience. *Leader: Marjorie Richman. Price: $885; Dep: $100.* **[95426]**

Canoeing Everglades Park, Florida—February 5–10. We camp at the southern tip of the



park, a threatened subtropical wilderness. Daily canoe explorations take us through mangrove and buttonwood, freshwater ponds, brackish water, open coastal prairies, and saltwater marshes—home to rare plants, birds, and animals. This leisure trip is for competent canoeists who enjoy birding, animal-watching, and photography. *Leaders: Vivian and Otto Spielbichler. Price: $275; Dep: $50.* **[95059]**

Canoeing Okefenokee Swamp, Georgia—March 26–31. From base camps on the east and west edges of the swamp, we will canoe various sections of the Okefenokee. We'll explore coastal prairies and cypress forests, habitat for birds, mammals, and reptiles (such as Pogo and friends!). This trip is for canoeists of all ages who enjoy birding, animal-watching, and photography. *Leaders: Vivian and Otto Spielbichler. Price: $290; Dep: $50.* **[95060]**

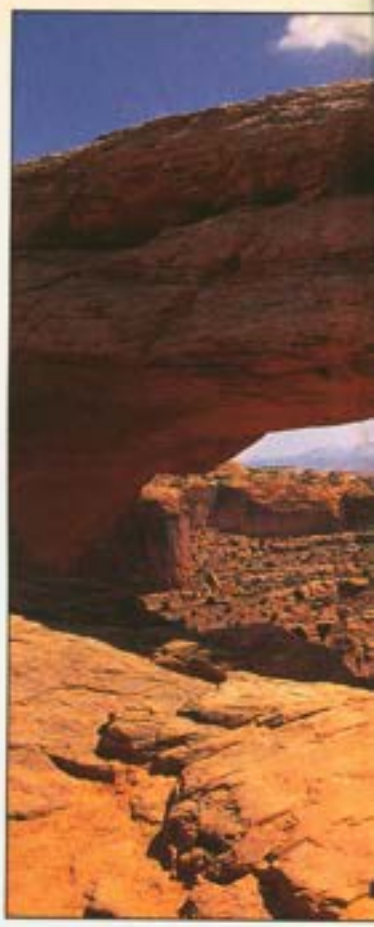
Okefenokee Wildlife Refuge Family Canoe, Georgia—April 9–14. See description for Family trip #95065 below. *Leader: Marty Joyce. Price: adult $340, child $230; Dep: $50.* **[95065]**

Spring and River Country, North Central Florida—April 16–22. See description for Base Camp trip #95052 above. *Leader: Steve Rodney. Price: $410; Dep: $50.* **[95052]**

Lakes and Lures, Boundary Waters Canoe Area Wilderness, Minnesota—May 21–27. Paddle, portage, and fish in remote lakes along the U.S.-Canadian border during peak fishing season. Try your luck for walleye, northerns, smallmouth bass, and lake trout. Search for Indian pictographs, waterfalls, wildflowers, and morel mushrooms. We'll see mergansers, hear loons call, and maybe spot a moose or black bear. Eat fresh fish and enjoy the beauty of the North Woods before tourist season. *Leader: Max Bonecutter. Price: $535; Dep: $100.* **[95062]**

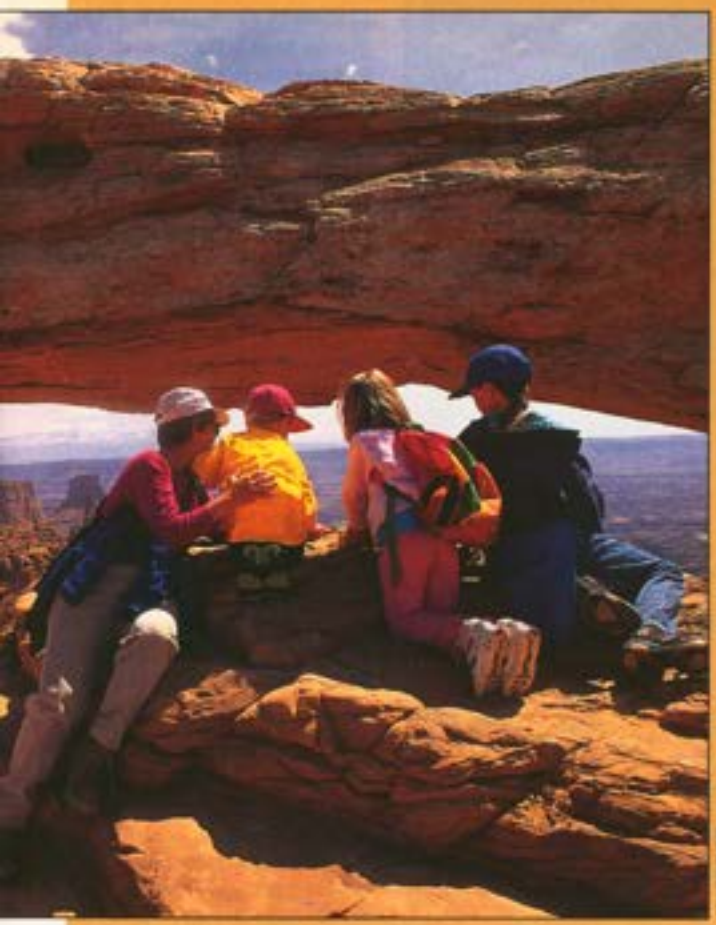
Family

Cumberland Island Seashore, Georgia—December 26–31, 1994. From our base camp under live oaks on this undeveloped barrier island, we'll explore the Carnegie mansion ruins, bird-watch on the salt marshes, and stroll on the deserted beach. With its ample trails and flat terrain, Cumberland Island is a delight for hikers and bikers. Children will delight in the deer, wild horses, armadillos, and other critters on the island. *Leaders: Jeff Funderburk and Mary Gex. Price: adult $270, child $180; Dep: $50.* **[94429]**



Okefenokee Wildlife Refuge by Canoe, Georgia—April 9–14. Explore the nation's largest freshwater swamp with your family. From our base camp at Stephen Foster State Park, we'll canoe through cypress forests and lily-pad ponds, hike on raised platform trails, and visit abandoned settlements and historical sites. We may even catch a glimpse of the rare cottontail alligator. Suitable for families with some canoe experience and kids six and older. Canoe rental not included. *Leader: Marty Joyce. Price: adult $340, child $230; Dep: $50.* **[95065]**

Arches and Canyonlands Parks Adventure, Utah—April 15–21. Spring is a good time to visit the heart of Utah's canyon country. We'll see the arches, including Delicate and Devil's arches, The Windows, and Fiery Furnace, and also explore the Needles District of Canyonlands National Park. Short, easy day-hikes make this trip suitable for young children and parents with child-carry packs. Other trip highlights include evening



Far left, beach of Colorado River near Moab, Utah; clockwise from above: Mesa Arch, Canyonlands National Park, Utah; Okefenokee Swamp, Georgia; petroglyph, James Hole Creek, Yampa River, Utah; Ke'e Beach, Kauai, Hawaii.

ranger presentations and a layover day for families to explore on their own. This section of the trip is appropriate for families with children aged two and up. *Leaders: Jennifer and Ron Taddei. Price: adult $375, child $250; Dep: $50.* **[95066]**

Arches and Canyonlands Parks Adventure, Utah—April 15–21. See description for trip #95066 above. This trip is appropriate for children aged five and up. *Leaders: Margaret and Vern Clevenger. Price: adult $375, child $250; Dep: $50.* **[95067]**

A–Z Toddler Tromp, Prince William Forest Park, Virginia—April 16–21. Age-based, curiosity-driven, ecology-focused, gentle hiking, insect jars, knot-learning, meeting nature, organized playtime, quiet relaxation, s'mores toasting, unusual vacation, water "xings," youngster zaniness. Tent-camping, ranger program, conservation project, some personal vehicle use. Optional day-trip to D.C. natural areas. *Leader: Howard Luehrs. Price: adult $245, child $165; Dep: $50.* **[95068]**

SUMMER PREVIEW!
Kauai Family Adventure, Hawaii—June 24–July 1. Come one, come all, for a summer delight on the Garden Isle. Experience the island's exciting and surprising contrasts—beautiful Na Pali Coast, rugged Waimea Canyon, mysterious Alakai Swamp, and dramatic beaches. Our pace will be comfortable as we explore our many options: hiking, snorkeling, and sightseeing. Enjoy the awesome view from our rustic beach lodging. Children of all ages welcome. *Leaders: Bob Smith and Wayne Martin. Price: adult $785, child $525; Dep: $100.* **[95069]**

Hawaii

Whale of an Outing, Maui Service Trip—March 19–31. How do whale calves gain the strength to swim from their Hawaiian birthplace to Alaska? Find out when you take part in an ongoing research project observing the humpback whale behavior, and monitor their numbers off the coast of Maui. We'll also hike and explore a variety of island terrains—lush tropical forests, an ancient trail along a rugged coastline, and spectacular Haleakala Volcano. *Leader: Ray Simpson. Price: $1,035; Dep: $200.* **[95070]**

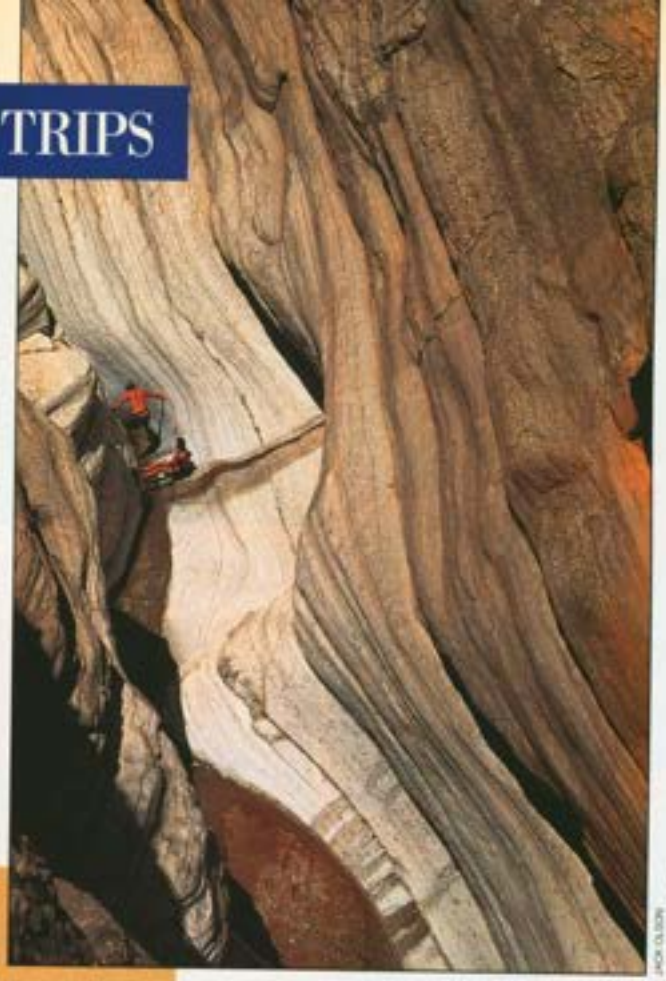
Hawaii Spring Rainbow—April 8–17. A broad-spectrum excursion to the Big Island of Hawaii offers hiking in Volcanoes National Park, snorkeling, swimming at a new state park, and joining a local chapter outing. We'll observe tropical plants and birds, varieties of coral, colorful fish, and multi-hued sand beaches. We begin with lodgings in Hilo; move to a state park; and will conclude the trip camping on a remote white sand beach. *Leader: Lynne Simpson. Price: $885; Dep: $100.* **[95071]**

SUMMER PREVIEW!
Kauai Family Adventure, Hawaii—June 24–July 1. See description for Family trip #95069 above. *Leaders: Bob Smith and Wayne Martin. Price: adult $785, child $525; Dep: $100.* **[95069]**

1995 SPRING TRIPS

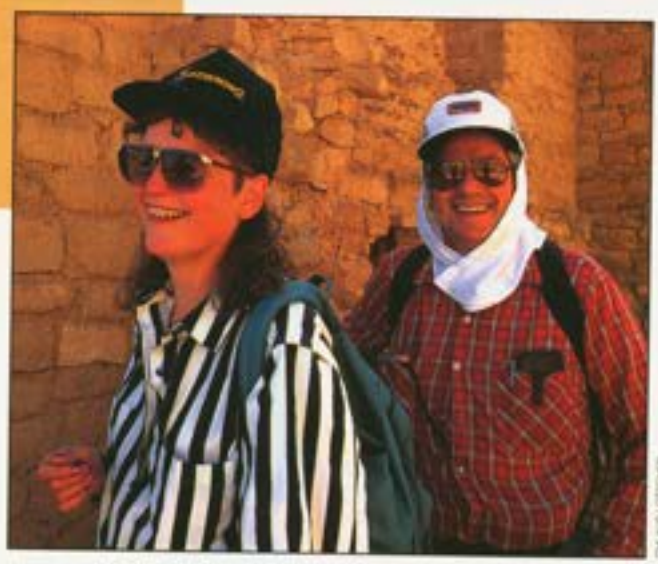
Raft/Sail

Yampa River Raft, Dinosaur Monument, Utah—May 22–26. The undammed Yampa roars 72 miles through the colorful canyon maze of Dinosaur National Monument. Most days we float serenely through the canyon, its 1.5 billion-year-old walls towering 2,000 feet over us while we observe bighorn sheep, eagles, and other wildlife. Late May mountain run-off provides over 40 Class III rapids, including Warm Springs Rapid, one of the legendary "Big Drops." Minimum age eight. *Coordinator: Mary O'Connor. Price: $650; Dep: $100.* **[95073]**



Top, National Canyon, Hualapai Indian Reservation, Arizona; left to right: Colorado River, Arizona; Chaco Culture Historical Park, New Mexico; southern Kenai Peninsula, Alaska.

Sailing the Queen Charlotte Islands, British Columbia, Canada—May 26–June 2. This archipelago, known as the "Canadian Galápagos," is one of North America's richest biological areas, and unsurpassed for cruising and exploring. Join our naturalist aboard a luxurious 68-foot sailboat to explore old-growth forests, sea lion rookeries, and tidal pools; visit a Haida Indian village; watch for the rich variety of bird life and five species of whales; and dine in style! *Coordinator: Margie Tomenko. Price: $1,795; Dep: $200.* **[95074]**



Service

Arizona's Superstition Wilderness—February 19–25. 50 miles east of Phoenix is the locale of this backpack, trail-repair, and general maintenance outing. Enjoy high desert sunshine while alternating work and hiking days. *Leader: Sue LaVigne. Price: $250; Dep: $50.* **[95075]**

Last Texas Frontier, Big Bend Park—March 5–11. Conquistadors and Comanches, Texas Rangers, rustlers, and revolutionaries once roamed this untamed wilderness on the Rio Grande. Operating from our base camp we'll brush and build trails and perhaps do some work on historical buildings. *Leader: Harry Allan. Price: $245; Dep: $50.* **[95076]**

El Yunque, Caribbean Forest, Puerto Rico—March 7–16. A rainforest of palms, waterfalls, and ancient dwarf trees is our setting for trail maintenance and reconstruction, rain shelter repair, and photographic surveys. Dormitory accommodations; touring on free days. *Leader: Sarah Stout. Price: $550; Dep: $100.* **[95077]**

Whale of an Outing, Maui Service Trip—March 19–31. See description for Hawaii trip #95070 above. *Leader: Ray Simpson. Price: $1,035; Dep: $200.* **[95070]**

Santa Cruz Island Preserve, California—April 3–10. Enjoy the beauty of spring while helping to maintain a nature trail on this Nature Conservancy island. We'll also work on a historic ranch and stay in cabins nearby. *Leader: Laurie-Ann Barbour. Price: $345; Dep: $50.* **[95079]**

California Coast Range, Ventana Wilderness, California—April 14–22. Backpacking to our base camp high above the Big Sur coast, we'll have spectacular ridge line views and great dayhiking. The dense chaparral on the Black Cone Trail awaits our pruning. *Leader: David Stern. Price: $275; Dep: $50.* **[95080]**

Redrock Trails, Munds Mountain Wilderness, Arizona—April 16–22. We'll base-camp in this wilderness of unexcelled beauty, amid canyons, redrock formations, and forested mountains. We'll improve an existing trail and still have ample time for dayhiking and photography. *Leaders: Pam and Jerry Meyer. Price: $255; Dep: $50.* **[95081]**

Historic Indian Trail Restoration, Nantahala Forest, North Carolina—April 22–29. From base camp we'll work on a trail that once connected Charleston with the historical capitol of the Cherokee Nation. We'll also enjoy bird migration, wildflowers, and never-logged Joyce Kilmer Memorial Forest. *Leaders: Vivian and Otto Spielbichler. Price: $255; Dep: $50.* **[95082]**

Shawnee Forest Backcountry Archaeology, Illinois—April 23–29. Work with archaeologists

to survey, map, and photograph prehistoric Indian sites. Free time allows for wildflower walks, swimming, and hiking. A short backpack gets us in and out of base camp. *Leader: Jim Balsitis. Price: $245; Dep: $50.* **[95083]**

Spring Trail Maintenance, Buffalo River, Arkansas—April 23–29. From base camp on the Buffalo River we'll do trail maintenance and some relocation of old trails amid spring wildflowers. Enjoy Ozark hills-'n-hollers, history, and humor. Good beginners trip—no experience necessary. *Leader: Bill Riecken, Jr.; Cook: Jeanenne Riecken. Price: $225; Dep: $50.* **[95084]**

Springtime Arches, Arches Park, Utah—April 23–29. The desert in bloom, highlighted by dramatic rock formations, sets the scene for this fifth spring visit. From our roadhead base camp, projects include trail work and exotic vegetation removal. *Leader: Linda Thibodeaux. Price: $245; Dep: $50.* **[95085]**

Slickrock and Joyce Kilmer Trail Maintenance, North Carolina—April 30–May 6. Backpacking to our camp high in the Nantahala Forest, we'll improve and develop trails. Free time offers hiking, sweeping Appalachian views, the virgin forest of Joyce Kilmer Memorial Forest, and plentiful spring flowers. *Leader: Mike Verange. Price: $255; Dep: $50.* **[95086]**

Chaco Canyon Archaeology, New Mexico—May 7–13. This World Heritage Site witnessed the disappearance of the Anasazi around 1,200 A.D. Your appearance is requested to assist with trail-maintenance, fencing, and other chores. Moderately strenuous; base-camping at 6,400 feet. *Leader: Barbara S. Gooch. Price: $250; Dep: $50.* **[95087]**

Archaeology of the Gallina Culture, Santa Fe Forest, New Mexico—May 14–20. In the canyon and piñon forest country of northern New Mexico we will base-camp, explore the area, and build trails to a cliff dwelling and pueblo of the Gallina culture (circa 1,000–1,300 A.D.). *Leaders: Pam and Jerry Meyer. Price: $275; Dep: $50.* **[95088]**

Paiute Primitive Wilderness, Arizona—May 21–27. Experience the solitude and natural beauty of northwestern Arizona while improving trails from our roadhead base camp amid ponderosa pine. We'll have time to explore and photograph the spectacular natural beauty of this area. *Leader: Linda Takala. Price: $250; Dep: $50.* **[95089]**

Tusayan Trails, Grand Canyon, Arizona—May 28–June 3. Enjoy views of the Grand Canyon while working on the Arizona Trail. From our base camp near Hull's Cabin, we'll have time to hike and photograph this spectacular and historic area. *Leader: Larry Hyde. Price: $245; Dep: $50.* **[95090]**

Ski, Dogsled & Snowshoe

Cross-Country Skiing in Colorado—January 15–21. Our six days of skiing in the spectacular Rockies will take on Montezuma Basin, the scenic traverse of Shrine Pass, and trails from Tennessee Pass. Accommodations are in the historic towns of Georgetown and Leadville, including the Victorian Hotel Delaware. Breakfasts and lunches are included, with organized dinners an option (not included in trip fee). Time for relaxing and exploring. Moderate skiing ability is advised. *Leader: Beverly Full. Price: $725; Dep: $100.* **[95427]**

High Sierra Skiing I—January 29–February 3. Enjoy Nordic ski lessons and tours while staying at the Sierra Club's own Clair Tappaan Lodge. Develop and improve cross-country skiing skills—diagonal stride, Telemarking, ski-skating, and other techniques—in an area of heavy snowfall. You'll also enjoy warm accommodations, camaraderie with Club members, good food, a hot tub, and other amenities. Your leader is a certified ski instructor. *Leader: Herb Holden. Price: $420; Dep: $50.* **[95428]**

Superior Ski Trails, Boundary Waters Canoe Area Wilderness, Minnesota—February 6–10. Escape to the quiet of the Northwoods snow country on groomed and tracked trails that wander through pine and birch forests, between frozen lakes, then back to cozy cabins and home cooking. Ski in the gentle glow of lanterns, listen for distant wolf music, track a wild moose, and relax in the sauna. Snow-shoeing, ice-skating, and broom-ball too! *Leader: Faye Sitzman. Price: $545; Dep: $100.* **[95429]**

Boundary Waters Sled Dog Trek, Minnesota—February 12–15. Explore this magnificent wilderness with an experienced sled dog musher and a team of furry friends. Travel is 15 to 20 miles per day, and accommodations are yurts along the trail. Learn to drive a team or ride along with a friend. Neither experience nor athletic ability is required—only good health and a desire to participate in the world of sled dogs. *Leader: Maxine Austin. Price: $965; Dep: $100.* **[95430]**

High Sierra Skiing II—February 26–March 3. See description for trip #95428 above. *Leader: Herb Holden. Price: $420; Dep: $50.* **[95431]**

Snowshoe/Cross-Country Ski Cabin Tour, North Kenai, Alaska—March 25–April 1. Enjoy the magic of northern lights and the solitude of early-spring Alaska! From Coopers Landing northward, we'll traverse forested slopes to reach open, level terrain and lake shores, sheltering in rugged cabins on our eight-day, 25-mile trek in the Kenai Mountains. On layover days we'll relax, day-tour, split wood for cabin stoves, and complete a few chores for the Forest Service (required for cabin use). *Leader: Duane Ottens. Price: $1,410; Dep: $200.* **[95432]**

Spring Cross-Country Skiing in the Sierra—April 16–21. This popular trip offers corn snow, Telemarking, Nordic downhill, and backcountry. It's all here at the Sierra Club's Clair Tappaan Lodge near Donner Pass, where the average snowfall is the highest in the Sierra Nevada. There will be daily lessons, and tours to Castle Peak, Crow's Nest, and German Ridge led by a certified ski instructor. Enjoy great food, warm accommodations, and a hot tub! *Leader: Herb Holden. Price: $420; Dep: $50.* **[95433]**

INTERNATIO

Antarctica

Adventure Cruise, Antarctic Peninsula—December 7–18, 1994. Explore the seventh continent as a passenger on a fully equipped polar research vessel. You'll visit Deception Island, Hope Bay, Anvers Island, Lemaire Channel, Paradise Bay, and more. Landings will be made by inflatable rubber rafts. Please note: The regular Cancellation Policy does not apply; see brochure for details. *Leader: Leo Le Bon. Price: $4,995 (shared bath) / $5,595 (private bath); Dep: $500.* **[94700]**

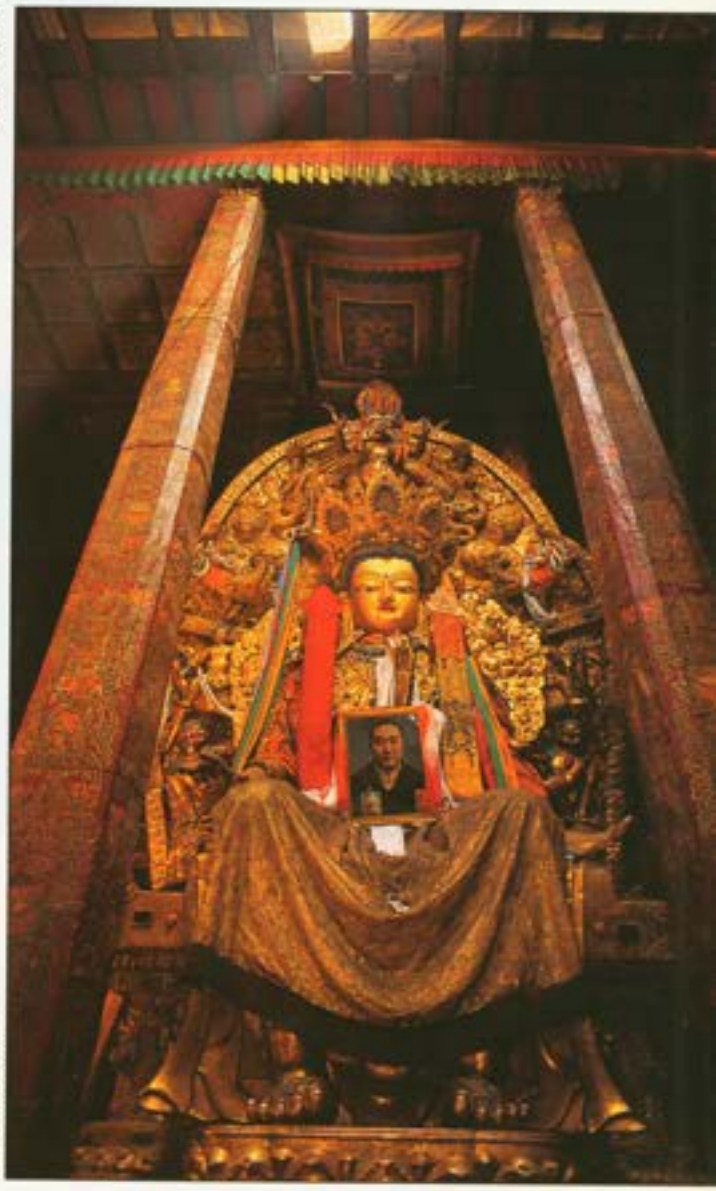
Asia

Lamjung Holiday Trek, Nepal—December 16–29, 1994. Leave the shopping mall frenzy behind this holiday season to hike beneath some of the most beautiful mountains in the world. On this little-known route we will enjoy the solitude of true Himalayan wilderness. The ascent takes us through delightful Gurung villages, where terraced fields are planted with winter wheat. The watchful presences of Machhapuchhare, Annapurna IV, Annapurna II, and Lamjung Himal make this a rewarding pilgrimage to the "roof of the world." Maximum elevation approximately 13,000 feet. *Leader: David Horsley. Price: $1,500 (12-15) / $1,700 (11 or fewer); Dep: $200.* **[94705]**

South China Holiday—December 19, 1994–January 2, 1995. Kunming, Dali, Xishuangbanna, and Guilin are the highlights of this adventure through fascinating, exciting, and scenic south China. Many of China's colorful minority groups live in this area, and we plan to visit them in their homes and in their markets. You'll never forget the Bai people of Dali, the jungle and peoples of Xishuangbanna, or the Li River cruise in Guilin. Kunming, China's "City of Eternal Spring," is the highlight of our trip. *Leader: Phil Gowing. Price: $2,630 (10-12) / $2,945 (9 or fewer); Dep: $200.* **[95710]**

Annapurna Sanctuary, Nepal—March 27–April 9. We begin our spring trip by exploring the fascinating temples and world-famous bazaars of the fabled city of Kathmandu. Our moderate trek then takes us into the heart of the Annapurna Sanctuary, where we'll be surrounded by the 26,000-foot peaks of the Annapurna Massif. Nepalese guest lodges will provide us with Spartan accommodations and ample food. We'll support the Annapurna Sanctuary conservation program and its planned conversion to fuel-efficient cooking stoves and reduced dependency on scarce firewood. While in Pokhara we will tour the exotic sights and visit a lakeside bazaar. *Leader: John Bird. Price: $1,615 (8-10) / $1,870 (7 or fewer); Dep: $200.* **[95715B]**

Kangchenjunga Himal, Nepal—May 1–30. Kangchenjunga, the world's third-highest peak (28,208 feet), soars above the unspoiled eastern end of Nepal. We will trek on-trail, on an



NAL TRIPS

JERRY HABER/ALPINE IMAGES

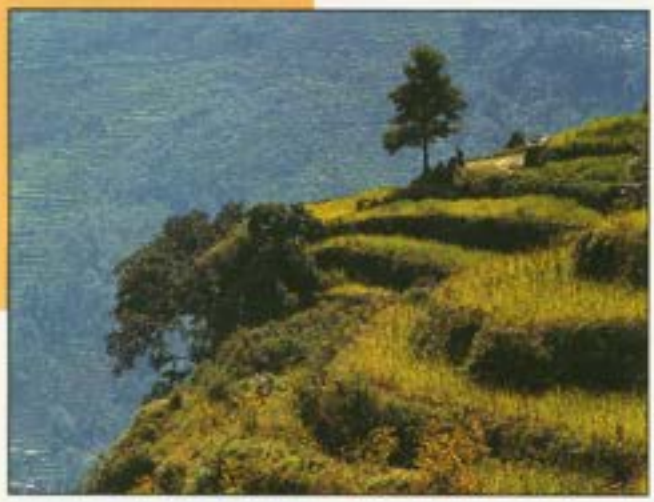
up-and-down route through terraced fields, thick rhododendron, and bamboo forests, along mountain ridges and across glaciers to our goal—Pengperma (16,500 feet) and the views it affords of towering Kangchenjunga. On the way we will enjoy the magnificent mountains surrounding Yalung Glacier.

land by bus and by foot. We'll visit Swayambhunath (the "Monkey Temple"), Bhaktapur, the burning *ghats* in Kathmandu, Sakya Monastery in Shigatse, and the Jokhang Temple and Potala Palace in tabled Lhasa. *Leader: Kern Hildebrand. Price: $2,790 (12-15) / $3,080 (11 or fewer); Dep: $200.* **[95730]**

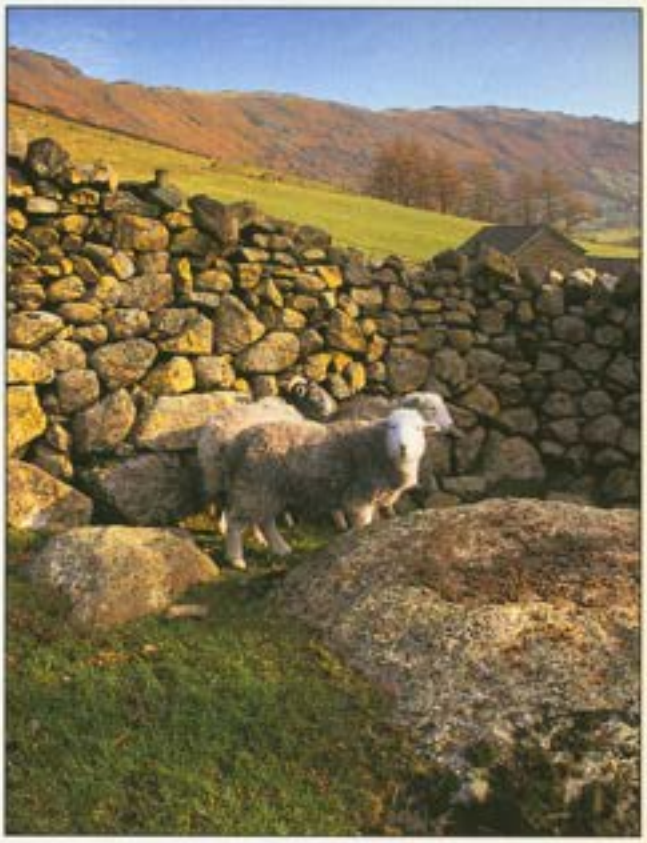
Top, white cockle seashells; left to right: Icebergs, Half Moon Bay, Antarctica; Jokhang Temple, Lhasa, Tibet; Rolwaling, Nepal; Lake District National Park, England.

Europe

Treasures of Corfu and Northwest Greece—May 13–27. Travel to a part of Greece still wild and mountainous. Explore the archaeological wonders of



DAVID STEWART



KEITH SUTTON

This is a moderate-strenuous trip. *Leader: Jack Zirker. Price: $2,680 (12-15) / $2,970 (11 or fewer); Dep: $200.* **[95725]**

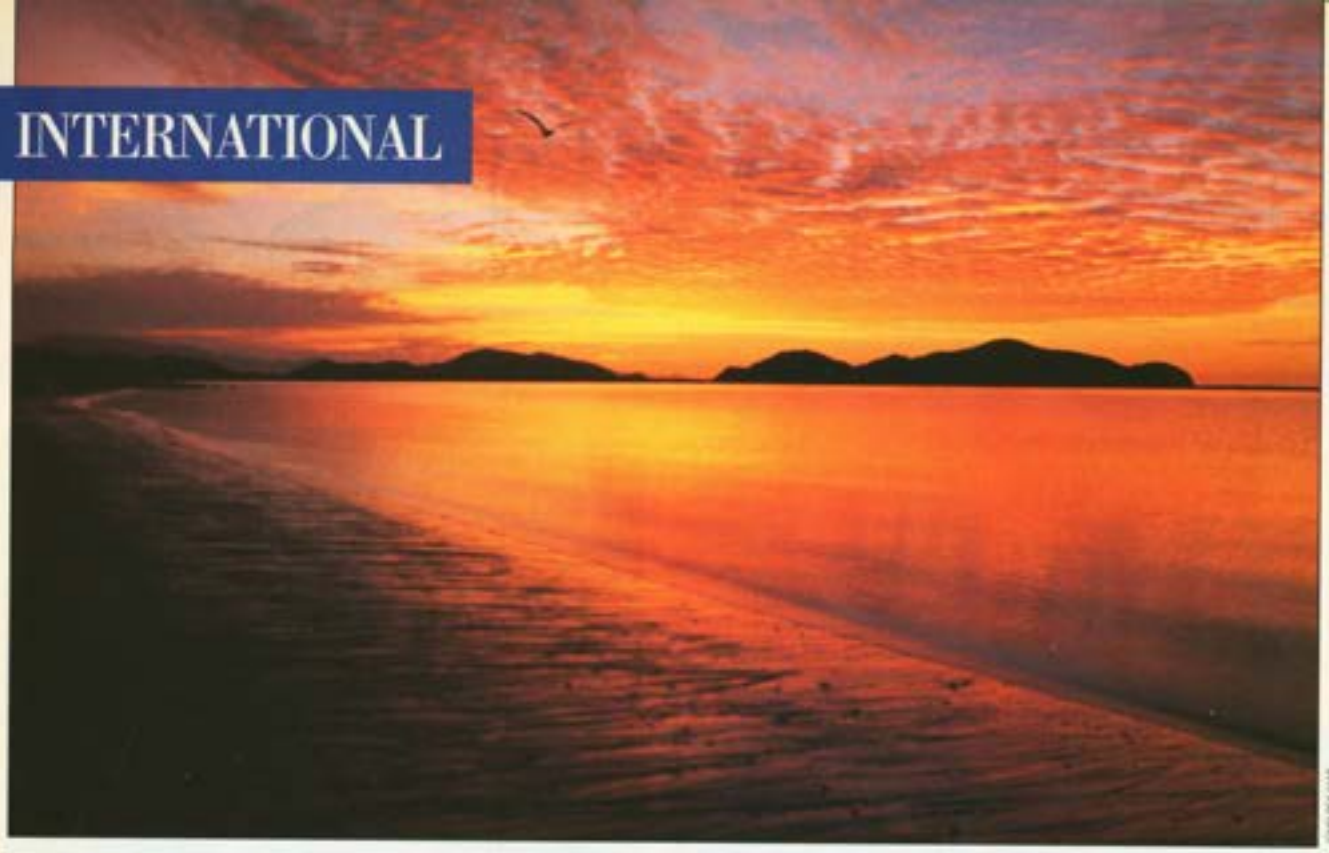
Cultural Connections, Kathmandu-Lhasa Overland, Nepal and Tibet—May 5–18. We'll snake like the tail of a dragon through the highest mountains on earth to the "roof of the world." Protected for centuries by natural barriers, Tibet is now partially open to foreign travel. On this high-elevation trip, we explore this mysterious

Athens before flying to Corfu, an island serenely situated in the beautiful violet-blue Ionian Sea. By ferry we return to the mainland and drive to Epiros for some of Greece's most rugged and spectacular mountains. Light to moderate hiking opportunities abound, including a trip through dramatic Vikos Gorge ("Grand Canyon of Greece"). Accommodations are in hotels and local village establishments. *Leader: Carolyn Castleman. Price: $2,690 (12-15) / $2,960 (11 or fewer); Dep: $200.* **[95765]**

Discover the Baltics: Lithuania, Latvia, and Estonia—May 20–June 2. The Baltic countries contain fascinating cities, still rural countryside, and pristine beaches. Off the touristed beaten path for many years, they remain in many ways largely unchanged from a century ago. Their cultures and history differ greatly from one another, creating a potpourri of experiences for the visitor. On our specially prepared itinerary we will meet local people, enjoy cultural events, and visit sanctuaries, markets, and castles. Accommodations will be in small hotels; we'll travel by van, with many hiking and walking opportunities. *Leader: Ruth Dyche. Price: $2,885 (10-13) / $3,195 (9 or fewer); Dep: $200.* **[95770]**

England's Coast-to-Coast Walk: From the Irish Sea to the North Sea—May 21–June 3. Join us on this classic walk across the breadth of England through three of the country's most scenic national parks—the Lake District, the Yorkshire Dales, and the North York Moors. Our moderate daily hikes will take us to the towns of Grasmere, Keld, and Robin Hood's Bay—pastoral England at its finest! Our luggage will be transported by minibus each day to our overnight accommodations in comfortable bed-and-breakfasts, where we'll meet fellow hikers from around the world. *Leader: Paul McKown. Price: $2,660 (11-14) / $2,960 (10 or fewer); Dep: $200.* **[95760B]**

INTERNATIONAL



Latin America

Enchanted Isles, The Galápagos, Ecuador—December 17–24, 1994. No freeways. No frantic schedules. Winter in the Galápagos promises warm breezes and white sand beaches teeming with the wildlife that inspired Charles Darwin. Azure waters and golden sunsets accompany us as we travel from island to island, using anchorages that were once favored by whalers and pirates. Whether snorkeling with fur seals at Devil's Crown, exploring unique bird colonies, or hiking through surreal lava flows, the Galápagos Islands remain Eden on the Equator. Join us! *Leader: Dan Noble. Price: $2,565 (7-9) / $2,945 (6 or fewer); Dep: $200.* **[94685]**

Holidays in Belize—December 18–26, 1994. Using a rustic lodge as our base, we'll explore Belize's lush interior, touring limestone caves and Mayan ruins, and rafting a gentle jungle river. A short plane flight to Flores, Guatemala, enables us to spend a full day at the magnificent Mayan ruins of Tikal. Then we'll move to the Caribbean coast and a palm-fringed island adjacent to a barrier reef. We'll stay at a simple guest house on the beach, snorkel in crystal-clear water, and feast on fresh seafood. *Leader: Tim Wernette. Price: $2,140 (12-15) / $2,415 (11 or fewer); Dep: $200.* **[94680]**

Cultural Exchange and Rafting Adventure, Costa Rica—December 24–30, 1994. Get a glimpse of Costa Rica's unmatched biodiversity. We will spend four days rafting the Pacuare and Reventazón, beautiful and exciting rainforest rivers with fern-laced waterfalls and enchanting side streams. One night we will camp along the Pacuare, while other nights we'll be guests in private homes or at a rustic mountain hotel with splendid views of the countryside. The last day we will tour the Carara Biological Reserve with its abundant bird and wildlife. *Leader: Sallee Lotz. Price: $1,650 (12-15) / $1,895 (11 or fewer); Dep: $200.* **[94690]**

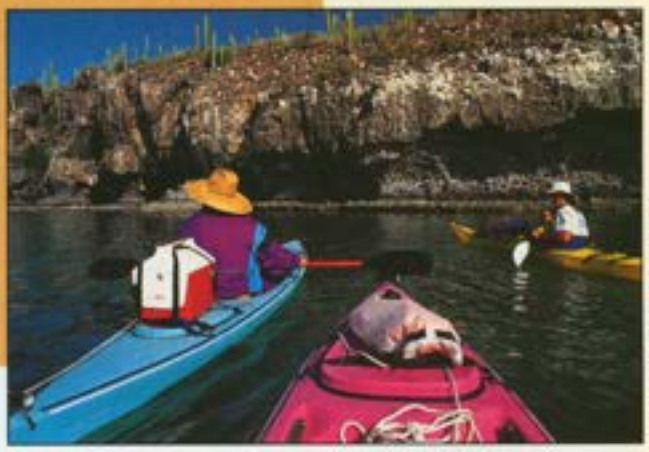
Costa Rica Service Trip, Santa Rosa and Rincón de la Vieja Parks—January 3–16. Santa Rosa National Park in northern Costa Rica is rich in history and nature, protecting the last large stand of tropical dry forest in Central America. From forest and beach base camps we'll work on a variety of tasks, perhaps reforestation and trail maintenance. The trip concludes with three days of hiking from a stream-side base camp near gently active Rincón de la Vieja volcano. *Leader: Judith Harper. Price: $1,225 (12-15) / $1,360 (11 or fewer); Dep: $200.* **[95815]**

San Ignacio Lagoon, Baja California, Mexico—February 18–22. Experience whale-watching at its best! This is the first time the Sierra Club has offered a trip to this remote, unspoiled area. The lagoon has limited access, and is perfect for hiking on deserted beaches, exploring sand dunes, photographing a variety of birds, or paddling single kayaks from our beach camp. Sign on for a peaceful adventure with comfortable accommodations—spacious tents with cots provided. *Leader: Carol Dienger. Price: $1,680 (10-13) / $1,770 (9 or fewer); Dep: $200.* **[95820]**

Belize: Reef and Ruins—February 18–26. We'll first explore Belize's lush interior while staying at an ecology- and conservation-oriented lodge. Then, at the island city of Flores in neighboring Guatemala, we'll have two full days to experience the magnificent Mayan ruins at Tikal. The remainder of our Central American adventure will be on a palm-fringed island next to a barrier reef. Here we'll snorkel in the crystal-clear waters of the Caribbean, learn about marine ecology and conservation, and feast on fresh seafood. *Leader: Blaine LeCheminant. Price: $1,995 (12-15) / $2,270 (11 or fewer); Dep: $200.* **[95825]**

Patagonia: Trekking in Parque Nacional Torres del Paine, Chile—February 19–March 5. Enjoy Chilean culture, natural splendor, and hospitality on a moderate, packer-supported trek in one of South America's most famous national parks.

Left to right: sunrise, Baja, Mexico; signposts at lighthouse, Cape Reinga, New Zealand; breakfast, Baja, Mexico; Scarlet macaw in palm, Corcovado National Park, Costa Rica; Conception Bay, Baja, Mexico.



The imposing Paine *cordillera* is sandwiched between the vast windswept steppes of Patagonia and the massive continental icesheet. The majestic glaciers, frost-polished pink granite *cuernos*, and dense, lower forest house a tremendous diversity of flora and fauna, from *mogote* to *ñanda* and the great condors. *Leader: Frances Colgan. Price: $2,755 (12-15) / $3,045 (11 or fewer); Dep: $200.* **[95830]**

Guatemala: The Mayan Road—February 26–March 10. Join us for this exploration of Central America's most fascinating country. Starting from the charming colonial city of Antigua, we travel the Mayan Road to beautiful, volcano-rimmed Lake Atitlan, the bustling Indian market at Chichicastinango, and the Cloud Forest Reserve—home of the resplendent quetzal. We'll visit the remote highland villages of present-day Mayans where traditional, hand-woven clothing of exquisite design and color is still worn. We'll also explore the realm of the ancient Maya amid the spectacular ruins of Tikal in northeastern Guatemala, and of Copan in nearby Honduras. *Leader: Wilbur Mills. Price: $1,850 (8-10) / $2,100 (7 or fewer); Dep: $200.* **[95835]**

River Rafting and Rainforest Adventure, Costa Rica—April 15–22. A natural-history paradise, Costa Rica boasts unmatched biodiversity. We will view an active volcano at Poas National Park, spend two days exploring Corcovado National Park, then visit an archaeological site in the premontane forest of the Guayabo River Canyon. The highlight of our trip will be three days rafting on two beautiful tropical rivers—the Pacuare and Reventazón, where we'll relish waterfalls, rapids, and inviting pools. *Leader: Bruce Macpherson. Price: $2,195 (12-15) / $2,485 (11 or fewer); Dep: $200.* **[95840]**

Pacific Basin

Water Wonderland: New Zealand Sea Kayaking—February 5–25. Escape the rigors of our northern winter and enjoy the height of New Zealand summer! We'll sea-kayak pristine waters as we explore four of the world's finest kayaking locales. We begin with the Waitangi (Independence) Day celebrations at Bay of Islands in the north; move on to Fiordland, where we search for penguins and seals; and end the trip at Stewart Island, New Zealand's closest point to Antarctica. This is a leisurely trip for those with moderate kayaking ability. *Leader: Ray Simpson. Price: $3,540 (10-12) / $3,860 (9 or fewer); Dep: $200.* **[95865]**

For More Details on Outings

Each outing is described in detail in individual trip brochures. We highly recommend reading a brochure before signing up for a trip. Trips vary in size, cost, and physical stamina and experience required. Don't sign up for the wrong one! Read the brochure, and save yourself the cost and inconvenience of changing or cancelling a reservation. The first three brochures are free. Please enclose 50 cents for each additional brochure. Write or phone the trip leader if you have any further questions. A complete listing of all our 1995 Outings will appear in the January/February issue of *Sierra*.

Name _____

Address _____

City _____ State _____ Zip _____

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

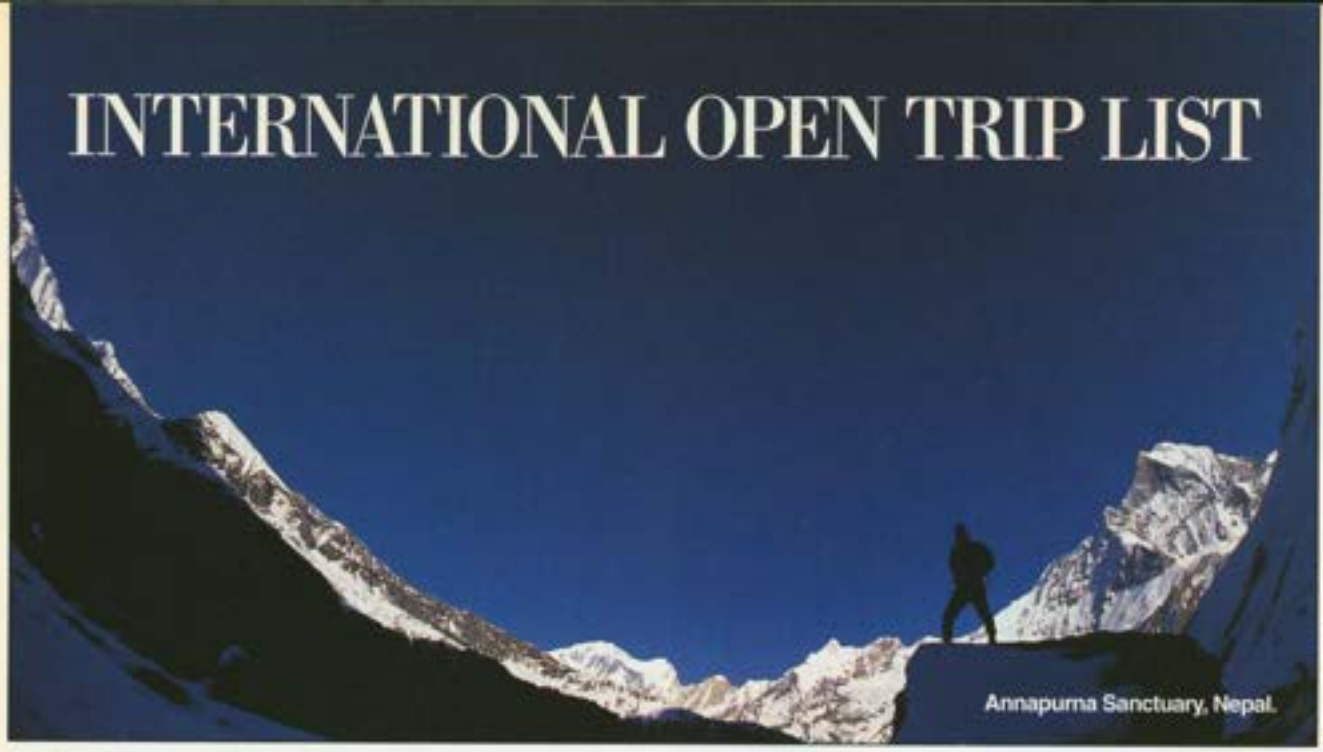
_____ # _____ # _____

TOTAL ENCLOSED: $ _____

Do not mail cash. Make checks payable to Sierra Club.

Clip coupon and mail to: **Sierra Club Outing Department,** 730 Polk St., San Francisco, CA 94109

INTERNATIONAL OPEN TRIP LIST



Annapurna Sanctuary, Nepal.

In addition to the trips described on pages 80-86, the following summer and fall 1995 international trips are also available. A full listing appeared in the July/August 1994 issue of *Sierra*; the complete descriptions will appear again in the January/February 1995 *Sierra*. Send in the coupon on page 91 for individual trip brochures. Questions? Call (415) 923–5522.

TRIP#	TRIP TITLE	DATES	LEADER	PRICE
AFRICA				
95720	Kenya/Tanzania Safari Sampler	June 24–July 8	Carolyn Castleman	$4,040 / $4,330
ASIA				
95735	Mongolia Service Trip	June 17–July 1	Patrick Colgan	$2,270 / $2,490
95740	Sagarmatha Service Trek, Nepal	June 21–July 11	David Horsley	$2,025 / $2,250
95745	Himalayan Traverse, India	July 3–August 4	Cheryl Parkins	$3,455 / $3,770
95750	Trekking the Altai Mountains, Kazakhstan	August 20–September 7	Cahit Kitaplioglu	$3,095 / $3,410
95755	The Knot of Asia, Pakistan and China	September 16–October 10	Dennis Schmitt	$3,700 / $4,040
EUROPE				
95780	Waterways of England and Wales	June 4–16	Lou Wilkinson	$2,535 / $2,835
95785	The Dordogne, France	June 18–28	Vivian Spielbichler	$2,240 / $2,530
95790	Norway: Hiking, Huts, Fjords, Glaciers	July 2–15	Jim Halverson	$2,565 / $2,860
95795	East Greenland by Boat and by Foot	August 1–12	Dennis Schmitt	$3,235 / $3,595
95800	Dolomite Peaks to Glaciers, Italy	September 4–16	Wayne R. Woodruff	$2,205 / $2,495
95805	The Luberon, Provence, France	September 26–October 4	Lynne Simpson	$2,165 / $2,445
95810	Greece Sailing and Hiking	October 14–27	Carolyn Castleman	$3,300 / $3,590
LATIN AMERICA				
95845	Galápagos and Amazon, Ecuador	July 3–15	Gregg Williams	$3,760 / $4,050
95850	Galápagos and Amazon, Ecuador	December 18–30	Margie Tomenko	$3,760 / $4,050
95860	Sea of Cortes Kayaking, Mexico	December 23–29	Harry Neal	$1,460 / $1,550
RUSSIA				
95870	Lake Baikal Service Trip	July 4–21	Bud Bollock	$2,195 / $2,415
95875	Vodlozersky Park Service Trip	August 4–18	C. Draves Ladyzhets	$1,975 / $2,190
95880	Shores of Baikal, Southern Siberia	August 14–September 3	Bob Madsen	$3,010 / $3,300

RESERVATION & CANCELLATION POLICY

IMPORTANT INFORMATION ON SIERRA CLUB OUTINGS

Ways to Apply

1. Mail check, money order, or credit card information to:
   Sierra Club Outing Dept.
   Dept. #05618
   San Francisco, CA 94139
   **Do not send Express Mail applications to this address. Doing so will delay your application!*
2. FAX (credit card reservations only):
   415-923-0636
3. Call (credit card reservations only):
   415-923-5588
4. Express Mail or Federal Express (check, money order, or credit card):
   Sierra Club Outing Dept.
   730 Polk St.
   San Francisco, CA 94109

1. All reservations are subject to the reservation/cancellation policy of the Outing Committee; leader approval is required for all outings. Cancellation fees apply unless you are waitlisted at time of cancellation.
2. A signed liability release is required for all international trip participants.
3. All participants age 12 and over must be Sierra Club members to attend an outing.
4. Your address may be released to other trip participants for purposes of ride-sharing or other trip-related purposes.
5. Not all trips can accommodate special dietary needs or preferences. Contact the leader for this information before applying.
6. Applications for trip space will be accepted in the order they are received.

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INTERNATIONAL OPEN TRIP LIST

OUTING RESERVATION FORM

Please read important policy information on reverse.

MEMBERSHIP NUMBER	TRIP NUMBER	TRIP NAME	DEPARTURE DATE

YOUR NAME

HAVE YOU RECEIVED THE DETAILED TRIP BROCHURE?
YES ☐ NO ☐

STREET ADDRESS

YOUR HOME PHONE
( )

CITY STATE ZIP

YOUR WORK PHONE
( )

PLEASE PRINT YOUR NAME AND THE NAMES OF OTHER PEOPLE IN YOUR PARTY	MEMBERSHIP NUMBER	AGE	RELATIONSHIP	NUMBER OF OUTINGS YOU'VE BEEN ON		YEAR OF LAST NATIONAL OUTING
			SELF	CHAPTER	NATIONAL	
1						
2						
3						
4						

PER PERSON COST OF OUTING	TOTAL COST OF THIS APPLICATION	DEPOSIT ENCLOSED	FOR OFFICE USE ONLY

❑ Check ❑ Money Order

❑ Visa ❑ Mastercard

CARDHOLDER NAME

SIGNATURE

CARD NUMBER

EXPIRATION DATE

DATE

01

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OUTING RESERVATION FORM

Please read important policy information on reverse.

MEMBERSHIP NUMBER | TRIP NUMBER | TRIP NAME | DEPARTURE DATE

YOUR NAME

HAVE YOU RECEIVED THE DETAILED TRIP BROCHURE?
YES ☐ NO ☐

STREET ADDRESS

YOUR HOME PHONE
( )

CITY STATE ZIP

YOUR WORK PHONE
( )

PLEASE PRINT YOUR NAME AND THE NAMES OF OTHER PEOPLE IN YOUR PARTY | MEMBERSHIP NUMBER | AGE | RELATIONSHIP | NUMBER OF OUTINGS YOU'VE BEEN ON | | YEAR OF LAST NATIONAL OUTING

SELF | CHAPTER | NATIONAL

1

2

3

4

PER PERSON COST OF OUTING | TOTAL COST OF THIS APPLICATION | DEPOSIT ENCLOSED | FOR OFFICE USE ONLY

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❑ Visa ❑ Mastercard

CARDHOLDER NAME

SIGNATURE

CARD NUMBER

EXPIRATION DATE

DATE

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(FLAP IS GUMMED.) ENCLOSE IN THIS ENVELOPE, FOLD FLAP, SEAL AND MAIL.

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PLEASE *DO NOT* USE FOR MEMBERSHIP FORMS.

Send membership forms separately to avoid processing delays.

PLACE
STAMP
HERE

Sierra Club Outing Dept.
Dept. #05618
San Francisco CA 94139

RESERVATION & CANCELLATION POLICY

PLEASE READ CAREFULLY

Eligibility: Our trips are open to Sierra Club members, applicants for membership, and members of organizations granting reciprocal privileges. You may include your membership application and fee with your reservation request.

Children must have their own memberships unless they are under 12 years of age. Unless otherwise specified, a person under 18 years of age may join an outing only if accompanied by a parent or responsible adult or with the consent of the leader.

Applications: One reservation form should be filled out for each trip party and should include all persons who wish to be considered as traveling together. The person listed first on the application shall be considered the primary applicant and will be the only party member to receive confirmation information, brochures, invoices, etc. Include any addresses that may be different from the primary applicant's on a separate sheet of paper.

Mail your reservation with the required per person deposit, to: Sierra Club Outing Dept., Dept. #05618, San Francisco, CA 94139. You may reserve space with your Visa or Mastercard by calling 415-923-5588. Please have the trip number and your membership number ready. You may also fax your reservation form, with credit card information, to 415-923-0636. Before you submit your application, refer to the Cancellation Chart on page 94 to review penalties for cancellation .

Reservations are accepted (i.e. confirmed) in the Outing Department on a first-come, first-served basis. Leader approval (based on applicant's experience, physical condition, etc.) is required for all trips. Therefore, all reservations are accepted subject to the leader's approval, for which the member must apply promptly. When a trip is full, later applicants are put on a waitlist.

NOTE: Cancellation from a trip position that has been accepted in the Outing Department will result in the loss of funds. Please read the Cancellation Chart on the next page very carefully.

Give some thought to your real preferences. Some trips are moderate, some strenuous; a few are only for highly qualified participants. Be realistic about your physical condition and the degree of challenge you enjoy.

The Sierra Club reserves the right to conduct a lottery in order to determine priority for acceptance in the event a trip is substantially oversubscribed shortly after publication.

Reservations are accepted subject to these general rules and to any specific conditions announced in the individual trip brochures.

Deposit: A deposit is required with every trip application. The amount of the deposit varies with the trip price, as follows:

Trip price per person	*Deposit per person*
Up to $499	*$50 per individual*
$500 to $999	*$100 per individual*
$1,000 and above	*$200 per individual*

The deposit is applied to the trip price when the reservation is confirmed. All deposits and payments should be in U.S. dollars.

Confirmation: A reservation is held for a trip applicant, if there is space available, when the appropriate deposit has been received by the Outing Department. A written confirmation is sent to the applicant. The reservation is accepted subject to the leader's approval, as stated above. If there is no space available when the application is received, the applicant is placed on the waitlist and the deposit is held pending an opening.

When a trip applicant is placed on the waitlist, the applicant should seek immediate leader approval. When a person with a confirmed reservation cancels, the person at the head of the waitlist will automatically be moved onto the trip, subject to leader approval. The applicant will not be contacted prior to this automatic reservation-confirmation except in the three days before trip departure.

Payments: Generally, adults and children pay the same price; some exceptions for family outings are noted. You will be billed upon receipt of your application. Full payment of trip fee is due 90 days prior to trip departure. Trips listed in the "International" section require additional payment of $300 per person six months before departure.

Please note that payments are due at the above times, regardless of your leader-approval status. If payment is not received on time, the reservation may be canceled and the deposit forfeited.

No payment (other than the required deposit) is necessary for those waitlisted. The applicant will be billed when placed on the trip.

The trip price does not include travel to and from the roadhead. However, a few trips include on-trip-transportation; check individual trip brochures for this detail. Hawaii, Alaska, and International trip prices are all exclusive of airfare to the trip starting point.

Transportation: Travel to and from the roadhead is your responsibility. To conserve resources, trip members are urged to form carpools on a shared-expense basis or to use public transportation. On North American trips, the leader will try to match riders and drivers. On some overseas trips you may be asked to make your travel arrangements through a particular agency.

Infrequently the Sierra Club finds it necessary to cancel trips. The Club's responsibility in such instances is limited in accordance with the Trip Cancellation Policy.

Accordingly, the Sierra Club is not responsible for non-refundable airline or other tickets or payments or any similar penalties that may be incurred as a result of any trip cancellation.

Cancellations and Refunds: You must notify the Outing Department directly during working hours (weekdays 9-5; phone 415-923-5522) of cancellation from either the trip or the waitlist.

The amount of the refund is determined by the date that the notice of cancellation by a trip applicant is received at the Outing Department. The refund amount may be applied to an already-confirmed reservation on another trip.

The Cancellation Policy applies to all reservations, regardless of whether or not the leader has notified the applicant of approval.

The Outing Committee regrets that it cannot make exceptions to the Cancellation Policy for any reason, including personal emergencies. Cancellations for medical reasons are often covered by traveler's insurance, and trip applicants will receive a brochure describing this type of coverage. You can also obtain information regarding other plans from your local travel or insurance agent. We encourage you to acquire such insurance.

Trip leaders have no authority to grant or promise refunds.

Transfers: For transfers from a confirmed reservation made 14 or more days prior to the trip departure date, a transfer fee of $50 is charged per application. Transfers made 1 to 13 days prior to the trip departure date will be treated as a cancellation, and the Cancellation Policy will apply. No transfer fee is charged if you transfer from a waitlist. A complete transfer of funds from one confirmed reservation to another, already-held, confirmed reservation will be treated as a cancellation, and will be subject to cancellation fees.

Medical precautions: On a few trips a physician's statement of your physical fitness may be needed, and special inoculations may be required for international travel. Check with a physician regarding immunization against tetanus.

Continued on next page

Emergency care: In case of accident, illness, or a missing trip member, the Sierra Club, through its leaders, will attempt to provide aid and arrange search and evacuation assistance when the leader determines it is necessary or desirable. Costs of specialized means of evacuation or search (helicopter, etc.) and of medical care beyond first aid are the financial responsibility of the ill or injured person. Since such costs are often great, medical and evacuation insurance is advised, as the Club does not provide this coverage for domestic trips. Participants on international outings are covered by limited medical, accident, and repatriation insurance. Professional medical assistance is not ordinarily available on such trips. Please make sure your insurance covers you in the countries involved.

The leader is in charge: At the leader's discretion, a member may be asked to leave the trip if the leader feels the person's further participation may be detrimental to the trip or to the individual.

Please don't bring these: Radios, sound equipment, firearms, and pets are not allowed on trips.

The following obligations are undertaken by trip applicants: To accurately and completely furnish any personal information requested for leader approval; to carefully review all information furnished about the requested trip, and to understand as thoroughly as possible the physical and mental demands of the trip and the risks to be encountered on the trip; to properly equip themselves for the trip in accordance with recommendations of the leader and of the Sierra Club; to respect the customs of countries visited, avoid breaking any applicable laws and to refrain from antisocial conduct during the trip; to follow environmental guidelines and regulations while on the trip in accordance with direction from the leader; and to always respect the rights and privacy of other trip members.

INTERNATIONAL TRIP TIER-PRICING

International outings are tier-priced. This means a trip's price is dependent on the number of participants. Two prices are listed for a trip, showing the signup levels associated with each.

Final billing is based on the signup level at 90 days prior to the trip departure date. If the signup level goes up sufficiently between the billing and departure dates, the lower tier price will apply, and refunds will be issued after the trip is over.

Cancellations from trips where the tier price has changed are subject to our reservation and cancellation policy. All regular cancellation fees will apply.

CANCELLATION CHART

1. All Cancellations (except those in category 2 below):

Time or event of Cancellation	Cancellation Penalty Per Person	Refund Per Person (if any)
90 or more days prior to trip departure	$100 or amount of deposit, whichever is less	Refund equals any funds paid in excess of cancellation penalty
60-89 days prior to trip departure	Amount of deposit	As above
14-59 days prior to trip departure	20% of trip fee, but no less than the amount of deposit	As above
4-13 days prior to trip departure date, if replacement can be obtained from the waitlist	30% of trip fee, plus $50 processing fee, but in no event more than 50% of total trip fee	As above
4-13 days prior to trip departure date, if replacement cannot be obtained from waitlist (or if there is no waitlist at the time of cancellation processing)	40% of trip fee, plus $50 processing fee, but in no event more than 50% of total trip fee	As above
0-3 days prior to trip departure date	Trip fee	No refund
"No-show" at the roadhead, or if participant leaves during trip	Trip fee	No refund

2. The only circumstances under which no cancellation penalties apply:

Time or event of cancellation	Refund Per Person
Disapproval by leader (once leader approval information has been received by leader)	Full refund of all fees paid
Cancellation from waitlist	Full refund of all fees paid
Applicant has not been moved from the waitlist three days prior to trip departure	Full refund of all fees paid
Trip cancelled by Sierra Club	Full refund of all fees paid

Mail checks and applications (excluding those sent by express mail) to:

Sierra Club Outing Department
Dept. #05618, San Francisco, CA 94139

Mail all other correspondence (including express-mail applications) to:

Sierra Club Outing Department
730 Polk St., San Francisco, CA 94109

Continued from page 49

you paint the picture, a piece of salmon provides four colors of flavor, but the vegetables provide a hundred others."

Trotter is more sanguine about the organic future than is Bayless. "It's easier to get these things today than it was five years ago, and I predict it will be easier still five years from now. It's supply and demand, and chefs and restaurants have to create the demand. Rick and I and Odessa Piper in Madison will have to continue to inspire people, to set the pace."

SATURDAYS IN MADISON, WISCONSIN, that pace starts at 6:30 a.m., when it is still possible to drag a child's wagon from stall to stall at the farmers' market. In another hour, the crowds of shoppers will make the sidewalks surrounding the capitol square nearly impassable. Eighteen to twenty thousand people regularly show up at this venerable (John Muir's father used to sell here) and phenomenally successful market, spending an average of $10 each. In Madison, it looks as though Alice Waters' dream has come true.

My companion's purchases are sure to boost that day's average expenditures: a lug of sour cherries, the last red currants of the season, three boxes of fat and happy tomatoes, a couple of goat *boulots* from Fantome Farm, and more corn than our little wagon could possibly carry from Egsters, where young women behind heaping tables shout to passersby: "Fresh corn, untouched by human hands! Picked by Norwegian goddesses!"

I am tagging behind a woman who, if not the goddess, is at least the patron saint of the Madison farmers' market—Odessa Piper, chef and owner of L'Etoile, a restaurant directly across the street. Piper has been involved with the market since 1976, when she opened her restaurant and sold filled croissants (an item she invented) at a market stall. Eighteen years later, she is still a devoted consumer and fervent booster. Ingredients from the market are high-

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For more information, please contact:

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lighted at the top of her weekly menu and on chalkboards on the wall, and when market day is over—or just cold and wet—the farmers troop up her stairs to eat and talk. These lucky suppliers are also fêted at a special annual dinner at the restaurant; Piper calls it "the good party strategy."

By the time the sun is fully up and the market is in full swing, we are finished with our shopping and can watch the milling crowds through L'Etoile's front window as we breakfast on double espressos and venison-and-lingonberry sandwiches. I am put to work with a paper clip (the tool of choice) pitting sour cherries that will reappear that evening, along with black walnuts, in a sauce for sliced chicken breast, and again in a miraculous *clafouti* for dessert. While I probe for pits, Piper and her co-chef Eric Rupert (who has since left to start his own restaurant) plan the week's menu based on what they have just bought. "I'm very moved by the idea that I can personally select food at the market," says Piper. "It's *these* strawberries I want. I'm feeding my beloved customers *these* raspberries."

L'Etoile is the answer to what Chez Panisse would be like if it were in the Upper Midwest. While the Bay Area's climate inclines Chez Panisse toward Mediterranean cuisine, L'Etoile reflects the "regional palette" of Wisconsin and, more distantly, Northern Europe. An autumn menu might feature a strudel of wild mushrooms, or whitefish with seared cabbage and apples, locally smoked bacon, and cider vinaigrette. Hickory nuts serve where one would find almonds in California, fiddlehead ferns replace radicchio. The wine cellar is weighted toward rieslings—including one from nearby Prairie du Sac's own Wollersheim Winery—and may soon include a selection of hard ciders made from Wisconsin varietal apples. L'Etoile also has an extensive root cellar for the apples, potatoes, tubers, nuts, onions, and smoked hams of its winter menu. In her early days as a hippie farmer, Piper says, "I learned what I could about freezing, drying, and preserving. I thought about what Native Americans did in this cold climate, and began to see what I could do, very elegantly, in my own restaurant."

The effect is stunning—not only for taste and presentation, but for warmth of spirit. Every afternoon the staff dines together, as they might in a French bistro; the customers are then drawn in, almost as members of the family. And anyone is eligible: Piper recalls the time she got a reservation for a large party from an agrochemical behemoth that peddles poison to the state's farms. They were, she says, particularly insistent that all the dinner's ingredients come from the farmers' market.

L'Etoile's seasonal menu is constantly becoming more so. While most places claim only four seasons, Piper has identified (at last count) nine. Early spring is the time for maple syrup and watercress, the year's first green; spring is marked by morels, asparagus, and fiddlehead ferns; late spring by strawberries and mayapples. Early summer sees dill and the first herbs, plus peas, new potatoes, and early raspberries; high summer is tomatoes, cucumbers, Door County cherries, stone fruit, and basil; Indian summer turns to apples, wild plums, eggplant, squash, and wild mushrooms. Autumn is time to start cidering, and for cruciferous vegetables and peppers. In late fall come sage, thyme, winter squash, and apples like Golden Russets that like a light frost. Then the holiday season and snowtime: aged cheese, leeks, hickory nuts, black walnuts, rosemary and other hardy herbs, the cider turning hard. And finally quiescent January, when one eats from the garden via the root cellar, "the still point in the turning world" says Piper, "until you go up the next rung of the spiral."

When one paints from the regional palette, the choice of colors is limited, but the result is true.

"IT SEEMS TO ME THAT THERE ARE TWO choices," writes novelist Jane Smiley in her essay, "A Wedge of Lettuce." "We can continue to process our food, as through a machine, from field to table, and continue to content ourselves with mechanically opening our jaws and processing it through our alimentary

canals, or we can sow the seed, harvest the fruits, bring care and interest to the preparation of meals, and take our daily reward in the pleasure of aroma, flavor, and visceral satisfaction. We can decide that what doesn't taste good cannot be good for us."

This is, perhaps, a challenging message for many Americans, whose tastes tend toward the utilitarian, who view food as fuel, and who regard time spent procuring and preparing it as time wasted. Yet that attitude runs directly counter to our most deeply held beliefs about the land, our bodies, and how they should be treated. Luckily, we don't have to wait for change to come from Capitol Hill or the EPA to realize these aspirations; we can achieve them every time we sit down to dinner.

"You can make your own decisions about food without needing anyone's permission and without anyone else's help," says Alice Waters. "If you choose to eat mass-produced fast food, you are supporting a network of supply and demand that is destroying local communities and traditional ways of life all over the world—a system that replaces self-sufficiency with dependence. And you are supporting a method of agriculture that is ecologically unsound—that depletes the soil and leaves harmful chemical residues in our food.

"But if you decide to eat fresh food in season—and only in season—that is locally grown by farmers who take care of the earth, then you are contributing to the health and stability of local agriculture and local communities. Actions have consequences, and people acting responsibly *can* make a difference. I believe that how you eat, and how you choose your food, is an act that combines the political—your place in the world of other people—with the most intensely personal—the way you use your mind and your senses, together, for the gratification of your soul. It can change the way we treat each other, and it can change the world." ■

PAUL RAUBER *is a senior editor at* Sierra *and a happy eater.*

►*For more information, see "Resources," p. 106.*

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REVIEWS

The Contrary Farmer
by Gene Logsdon
Chelsea Green; $21.95

"A farmer of deep ecological sensitivity," writes Gene Logsdon, "is to the plow jockey on his 200-horsepower tractor what a French chef is to the legions of hamburger handlers at fast-food chains."

Logsdon works 32 acres in Ohio, where he has rediscovered successful, small-scale, soil-conserving alternatives to the industrialized, chemically dependent, soil-depleting agribusinesses he so eloquently disparages. He describes himself as a "contrarian farmer," more of an artist working in the complex and intriguing medium of biological processes than a mere manager of crops and soil. The key to contrarian success, writes Logsdon, is diversity of crops and livestock.

Yet Logsdon finds solidarity with his "plow jockey" counterparts even while criticizing their ways. Rather than moralistically blaming them for selling their souls for profit, he sympathizes with the way they've been pushed into environmentally and financially unsound practices by business, government, and university experts. They've often had little choice but to convert from self-sufficient producers to spendthrift mimics of credit-crunched urbanites.

How-to-farm advice, agroeconomic theory, and lyrical effusions all combine to convey Logsdon's playful sense of wonder and devotion to his contrary art: "True farmers see their farms and their communities as a source of never-ending discovery, a microcosm of the world. . . . It is no surprise that a god might choose a stable to be born in; only the ignorant think such a birthplace would be below a god's dignity."

—Bob Schildgen

Seeds of Change: The Living Treasure
by Kenny Ausubel
HarperSanFrancisco; $18, paper

Seeds are like books, storing information for the future, and seed collections are like libraries that hold the histories of cuisines and cultures. Kenny Ausubel points out that, in our ignorance and haste, we are burning books we have never read.

Ausubel, founder of a seed company devoted to preserving heirloom plant varieties, says "the greatest danger to genetic diversity today is the multinational seed industry." Five major seed companies dominate the U.S. home-gardening market, breeding hybrid plants for characteristics such as size and yield. But a hybrid is a "mule"; its seeds won't reproduce the same type or quality. Thus next season the gardener must buy more hybrid seeds. What the seed industrialists have created is planned obsolescence for plants.

Equally important, the seeds that the multinationals sell to farmers tend to drive out older varieties, because bred-in "advantages"—appearance, shelf-life, resistance to pesticides, etc.—cater to the profit-driven dictates of agribusiness. Taste, nutrition, and tradition get lost in the march to market. This has led to the disappearance of foodstocks cultivated for centuries, and as well to an impoverishment of biodiversity. Ninety-seven percent of the crop varieties available at the turn of the century have disappeared.

Against monolithic corporate ownership of the sources of life, Ausubel pits an underground network of "visionary botanists and biologists and committed backyard gardeners." His hope is that through concerned people like these, "value-driven" companies like his own can effect a change in thought and practice, and help preserve not only unique taste experiences but "the biological diversity that maintains life on the planet." ***—Marc Lecard***

Food for the Future: Conditions and Contradictions of Sustainability
edited by Patricia Allen
John Wiley & Sons; $39.95, paper

Most academic and popular treatises on sustainable agriculture focus on production: how to maintain yields while minimizing chemical inputs, by encouraging crop rotation, and the like. But there's a little-explored human dimension too. The 12 essays in this collection address, in the words of editor Allen, the challenge of "connecting the social and the ecological." Doing so raises the possibility that sustainable agriculture could become the engine driving our progress toward a truly just society.

Before such progress can be made, observes contributor Katharine L. Clancey, persistent misunderstandings among affected groups will have to be overcome. The urban poor, for example, are unlikely to embrace ideas about sustainability promoted by environmentalists until mainstream green groups demonstrate a serious commitment to solving environmental-justice problems as well. Yet, she adds, urban minorities must come to appreciate that the negative effects of, say, commodity surpluses on poor farmers are equivalent to those of toxic-waste sites in their own communities.

Other barriers to Utopia present themselves, in daunting profusion: the difficulties debtor nations face in trying to switch from growing crops for export to feeding themselves; the failure of agricultural planners to view laborers as human beings rather than as "economic inputs"; and—most

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-- Edward M. Moersfelder
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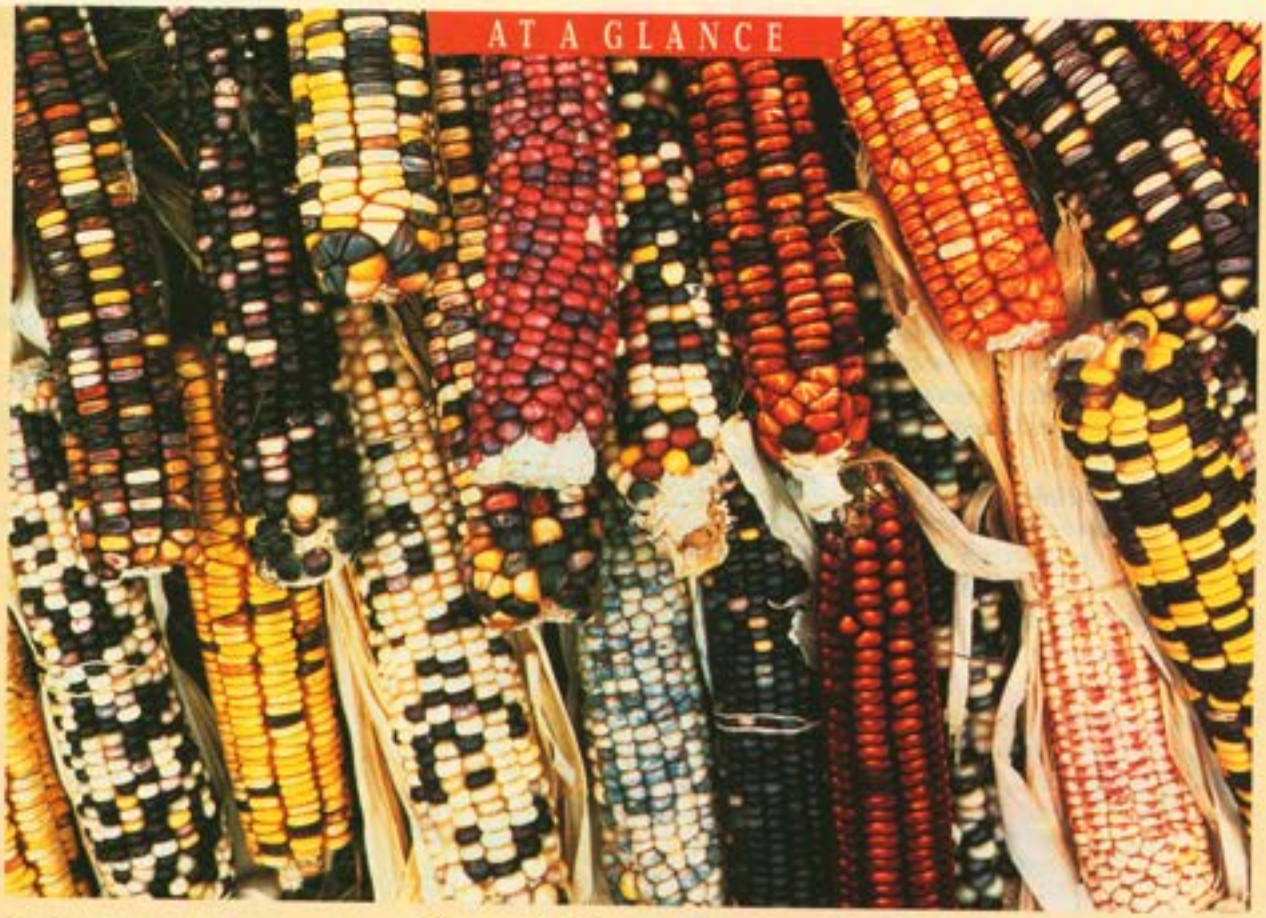

Cooking From the Garden: Creative Gardening and Contemporary Cuisine
by Rosalind Creasy
Sierra Club Books; $20, paper

Herewith 17 theme gardens for tending by the hungry horticulturist. You can grow filet beans, cucumbers, baby beets, golden peppers, new potatoes, and everything else you need for a traditional Provençal *aioli monstre* (except the salt cod, eggs, and oil); experiment with heirloom broccolis and kales (decorative as well as delicious); even do your bit for biodiversity with endangered strains of Native maize (above). And if the latter project is sabotaged by warm, rainy weather, you'll still reap the savory bonus of *huitlacoche*—a delicacy dating back to the days of the Aztecs, who would no doubt recoil from our more prosaic description of this edible mold as "corn smut."

challenging of all—the dominant view of nature as a resource for exploitation rather than a complex of interrelated components, each deserving study and care.

This book raises far more questions than it answers, its theme is awesomely broad, and its tone is unremittingly academic—and yet the subject matter could not be more important to us all, whether we grow food or merely consume it. The transitory struggle one must make to read *Food for the Future* presages the struggle our society must undertake to fulfill its vision, and is more than worth the effort.

—Jonathan F. King

Fields of Greens: New Vegetarian Recipes From the Celebrated Greens Restaurant
by Annie Somerville
Bantam Books; $26.95

Until recently, most vegetarian cookery in this country has suffered from meat envy, depending upon vast amounts of cheese and butterfat (or worse yet, quivering lumps of soy product) to fill the perceived void on the plate.

It was a great day, then, when vegetarians discovered vegetables. Some of the credit for this goes to San Francisco's Greens Restaurant, which since 1979 has cultivated fine vegetarian cooking with a Zen accent (much of its produce comes from the Zen Center's Green Gulch Farm in Marin County, just north of San Francisco). In this sequel to Deborah Madison's popular *Greens Cookbook*, current chef Annie Somerville delves into the delights of fresh market vegetables in preparations that tend toward lightness, with maximum olive oil and minimal butter. Most recipes come with welcome indicators of their appropriate season (although they are mysteriously not grouped accordingly).

It being high summer at the time of this writing, I was inevitably drawn to dishes featuring tomatoes and basil.

The Tomato-Basil Tart with Smoked Mozzarella and the Spinach Fettuccine with Tomatoes, *Crème Fraîche,* and Basil were both simple and delicious. The primary flavors of Risotto with Summer Beans, Tomatoes, Peppers, and Basil were sweet and vibrant against the relative blandness of the tomato-mushroom stock, a substitute for the traditional chicken broth. It didn't taste quite like risotto, but my guests were too busy eating to complain.

As might be expected, the salad section shines with imaginative combinations: oranges, tangerines, grapefruit, and kumquats with bitter greens, for example, or romaine hearts with avocado, mango, and ginger. The dessert section is short but sweet: the Ginger Pound Cake with fresh fruit is already a personal favorite. ***—Paul Rauber***

Healing With Whole Foods: Oriental Traditions and Modern Nutrition
by Paul Pitchford
North Atlantic Books; $24.95, paper

If you want to reduce or eliminate your meat consumption, but have dithered for fear of mutating into some sort of pale, enervated, preachy vegetarian, this is an excellent guide. Frankly warning us about dietary deficiencies vegetarians may face, Pitchford draws on modern nutritional research to explain how to ensure adequate amounts of protein, Vitamin B_{12}, and other nutrients without necessarily consuming animal products.

These modern concepts are linked in this medical tract/cookbook to ancient Asian theories of diet, with discussion of topics like *yin* and *yang* (opposing yet complementary phenomena such as active/passive, masculine/feminine, etc.) and *qi* (vital essence and energy) that mostly spares us the West-bashing Zenbabble that passes for spirituality in many a New Age book.

The Chinese use of diet to alleviate disease—based on several thousand years of observation—is thoroughly described and indexed. Dozens of disorders are discussed and a specific diet is prescribed for each. There are no rigid rules, however, as any diet has to be fine-tuned to the individual, and while

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Outside Magazine, February 1992

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vegetarianism is considered ideal, meat-eating is not forbidden. In fact, for certain conditions, meat may be recommended (pork nurtures *yin*, while shrimp enhances *yang*).

The recipe section will be very helpful to those trying to get started on a sound vegetarian diet. The operative term is "get started," because the recipes are often pretty basic, and lack the culinary sophistication of some of the well-known veggie cookbooks. —***B.S.***

BRIEFLY NOTED

"Across the fields and prairies and along the roadsides and wooded streams of the American heartland," writes Kay Young in ***Wild Seasons: Gathering and Cooking Wild Plants of the Great Plains*** (University of Nebraska Press; $40, cloth; $15, paper), "grow wild plants whose products rival the gourmet fare of any place in the world." Young has long scoured the landscape for berries, nuts, flowers, and leafy greens, but only recently did she find time to put her recipes in a book. The result is a tantalizing array of eminently edible concoctions: nettle noodles, dandelion quiche, cattail-pollen pancakes, milkweed-flower fritters, chokecherry syrup, and black-walnut toffee, to name but a few. . . . Veteran investigative journalist and public-interest advocate A. V. Krebs provides a comprehensive discussion of U.S. farm policy in ***The Corporate Reapers: The Book of Agribusiness*** (Essential Books; $19.95, paper). This 600-page tome covers everything from strategies for manure management to global food policies. It is especially effective at exposing the economic interests that have handed agribusiness and food-processing companies a near-monopolistic control of the nation's food supply. . . . For those who want to network with people specializing in organic, sustainable, and humane ways of producing food, several sources provide guidance. ***The 1994 National Directory of Organic Wholesalers, Food and Farm Suppliers*** ($34.95, paper, plus $5 shipping and handling from Community Alliance With Family Farmers, P.O.

Box 464, Davis, CA 95617) lists farmers, food wholesalers, farm suppliers, certification groups, and other resources; a yearbook summarizes national and state standards for organic produce. . . . The quarterly journal of the Canadian Organic Growers, ***Cognition,*** helps readers find and employ alternatives to traditional chemical- and energy-intensive food-growing practices. Subscriptions are $20 from COG, Box 6408F, Station J, Ottawa, Ontario, K2A 3Y6. . . . If you're interested in livestock, you'll find a list of specialists to assist you in ***The Humane Consumer and Producer Guide: Buying and Producing Farm Animal Products for a Humane Sustainable Agriculture,*** published by the Humane Society of the United States and the International Alliance for Sustainable Agriculture ($12, paper, plus $3 shipping and handling, from IASA, Newman Center, University of Minnesota, 1701 University Ave., S.E., Room 202, Minneapolis, MN 55414). Those listed generally eschew hormones and advocate both using organic feed and providing livestock with freedom of movement to keep them happy and healthy right up to slaughtering time. ▪

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- ***Shopping for a Better World: The Quick and Easy Guide to All Your Socially Responsible Shopping*** by the Council on Economic Priorities ($14, paper).
- ***The Sierra Club Guide to 35mm Landscape Photography*** by Tim Fitzharris ($18, paper).
- ***Savage Dreams: A Journey Into the Hidden Wars of the American West*** by Rebecca Solnit ($20).
- ***Life With an Electric Car*** by Noel Perrin ($12, paper).
- ***Evolutionary Medicine: Rethinking the Origins of Disease*** by Marc Lappé ($30).
- ***The Wild Country of Mexico/La tierra salvaje de México*** by John Annerino, bilingual edition ($25).

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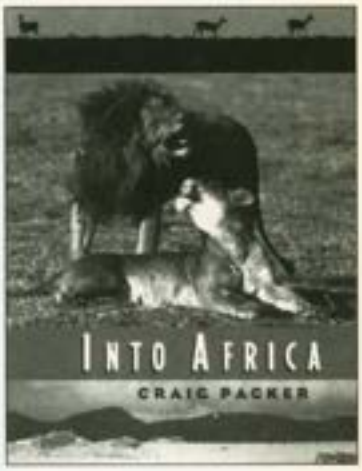

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—Lory Frame, *Natural History*

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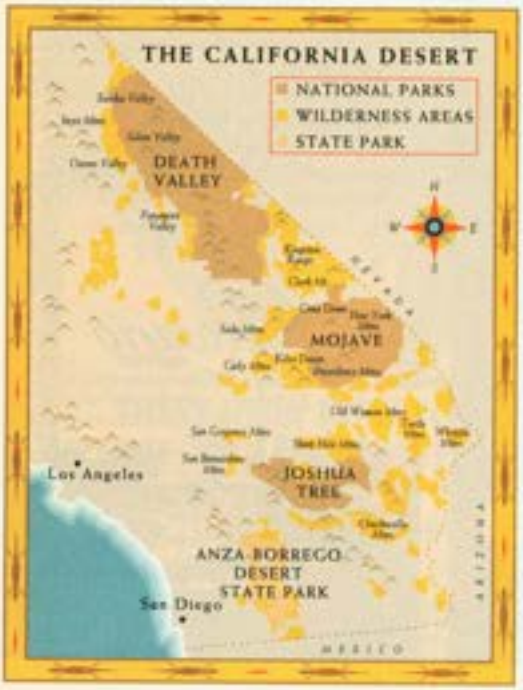
Reed McManus

The Enduring Desert

By the time you read this, the California Desert will be either the latest prize in the national-park system, or the continuing subject of a quarter-century effort to protect California's arid lands. As *Sierra* went to press in September, the story that has spanned nearly nine years of legislative debate and Sierra Club activism over the California Desert Protection Act had reached its final episode—but it turned out to be a cliffhanger, as a few senators threatened to delay the bill on behalf of hunting and mining interests.



At issue are nearly 7 million acres of long-neglected, much-encroached-upon, yet absolutely stunning desert lands. Signing of the legislation would transform Joshua Tree and Death Valley national monuments into national parks, and greatly expand their boundaries. It would also give park status to the East Mojave National Scenic Area, now administered by the Bureau of Land Management, and bestow full wilderness protection on 71 BLM wilderness-study areas throughout southeastern California.

Dry but not barren, the desert sustains more than 2,000 species of plants and wildlife, including the endangered desert tortoise. But its particular beauty is the unfamiliar: rumpled chocolate-brown mountain ridges; monumental, wind-rippled sand dunes; splashes of green lichen adorning vermilion rocks; and everywhere the interactions of light and shadow as an omnipotent sun moves across the sky.

To clue in to this otherworldly landscape, the desert rats say, take a sunrise walk, preferably barefoot, along the arcing ridgeline of a sand dune such as those found in the East Mojave's 600-foot-high Kelso Dunes. Your footprints

Mormon pioneers called the most characteristic tree of the California Desert the Joshua, because it resembled the biblical character, his arms raised in supplication.

The map at left portrays the "new" desert landscape conservationists envision. At presstime, however, a compromise was looming that would downgrade the Mojave's status from national park to preserve (with hunting permitted).

will be erased by the next wind, and the dune may have reshaped itself by your next visit.

Hike to the top of 11,049-foot Telescope Peak or drive to Aguereberry Point in Death Valley, where you can take in the Lower 48's extremes of elevation in one giant gasp. On your way back, snap the requisite photo of two-lane blacktop leading off into incomprehensible infinity. Then head to the riparian woodlands and palm oases that dot the desert, blunt lessons in the significance of water to life on Earth. Among the former are Piute Creek in the East Mojave, lined with cottonwoods, willows, and sedges and frequented by bighorn sheep.

If November arrives and the United States has a new set of parks and wilderness areas, it'll be time to celebrate. If the California Desert's future is still in doubt, it's never too late to agitate: call the Capitol switchboard at (202) 224-3121 and let your senators and representative know that protection for the desert is long past due. ▪

NUTS & BOLTS

Planning a Trip

Spring and fall are the desert's most comfortable and popular seasons. Spring wildflower blooms (pray for a wet winter!) are followed by their devotees as ardently as "leaf peepers" track autumnal displays in the East. In winter, daytime temperatures reach a comfortable 60 degrees or so, but can plummet below freezing as soon as the sun goes down. Snow is not at all unusual in the region's higher elevations.

If you're traveling by car, make sure it's in top condition. High ground-clearance is required on many roads; flash floods can wipe out entire routes. Check with the appropriate agencies before setting out.

For More Information

For camping, hiking, road, and spring wildflower conditions contact: Bureau of Land Management, California Desert District Office, 6221 Box Springs Rd., Riverside, CA 92507, (909) 697-5200; Death Valley National Monument, Death Valley, CA 95328, (619) 786-2331; Joshua Tree National Monument, 74485 National Monument Dr., Twentynine Palms, CA 92277, (619) 367-7511. **For deeper-into-the-desert reading see:** ***Adventuring in the California Desert*** by Lynne Foster (Sierra Club Books, 1987), a comprehensive guide to the wild areas that would be protected by the Desert Bill, and ***Walking the East Mojave: A Visitor's Guide to Mojave National Park*** (HarperCollins West, 1994) by *Los Angeles Times* hiking columnist John McKinney and Cheri Rae. Also of interest are ***California Deserts*** by Jerry Schad (Falcon Press, 1987); ***Desert Hiking*** by Dave Ganci (Wilderness Press, 1993); and ***The California Deserts*** by Edmund C. Jaeger (Stanford University Press, 1965).

Who Can Get You There

Sierra Club Outings, 730 Polk St., San Francisco, CA 94109; (415) 776-2211. (Also contact individual California Sierra Club chapters.) **Desert Survivors,** P.O. Box 20991, Oakland, CA 94620; (510) 357-6585. This group lobbies on desert-related environmental issues and leads excursions in California's desert regions.

WRITE on the WILD SIDE

Sierra's Seventh Annual Nature-Writing Contest

SIERRA welcomes your essay on any aspect of the natural world. We will select up to three winning essays for publication in our July/August 1995 issue.

Each writer may submit only one manuscript. Essays must be limited to 2,000 words (approximately eight double-spaced pages). Handwritten or single-spaced manuscripts will not be considered. No poetry, fiction, previously published materials, or accompanying photographs, please.

Send your submission to *Sierra* Nature-Writing Contest, 730 Polk St., San Francisco, CA 94109. Entries must be postmarked by February 1, 1994. Be sure to include a stamped, self-addressed postcard if you wish receipt of your manuscript to be acknowledged, and an SASE (with appropriate postage) if you wish your manuscript returned. We will not notify non-winning entrants of the results unless we have an SASE.

The contest is open to all professional and amateur writers except Sierra Club staff and their immediate families, and previous winners of this competition. Void where prohibited.

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

AFIELD

"Hearth & Home," page 25

The *Food Insects Newsletter* details entomophagy past and present, investigating insects as a potential supplement to the world food supply. The newsletter is free on request from Gene R. DeFoliart, editor, Department of Entomology, 545 Russell Laboratories, University of Wisconsin, Madison, WI 53706. Contributions of any amount are welcome; make checks out to Board of Regents, University of Wisconsin, and specify *Newsletter*.

If you get serious about eating weeds, you'll want the formidable and comprehensive *Handbook of Edible Weeds* by Dr. James Duke (CRC Press, 1992); also essential is *Identifying and Harvesting Edible and Medicinal Plants in Wild (and not so wild) Places* by "Wildman" Steve Brill (Hearst Books, 1994).

Snails: From Garden to Table by Frances Herb (Illuminations Press, 1990) tells how to capture, nurture, and prepare the slimy but toothsome gastropods; it includes many recipes.

Out-of-print but worth the search, *Unmentionable Cuisine* by Calvin W. Schwabe (University Press of Virginia, 1979) is "about the foods seldom eaten by Americans." It includes several interesting insect recipes, including this model of brevity: "Dragonfly Nymphs: Boil dragonfly nymphs. Eat them."

DEPARTMENTS

PRIORITIES

Farm Bureau, page 32

A good source of information on the Farm Bureau is the Clearinghouse on Environmental Advocacy and Research, a project of the Environmental Working Group, 1718 Connecticut Ave., N.W., Suite 600, Washington, DC 20009; phone (202) 667-6982. For an analysis of the Bureau's early years, see *The Corporate Reapers: The Book of Agribusiness* by A. V. Krebs, available for $19 from Essential Information, P.O. Box 19405, Washington, DC 20036. To go straight to the source, contact the American Farm Bureau Federation at 255 Touhy Ave., Park Ridge, IL 60068.

Shrimp, page 36

The Mangrove Action Project (MAP) is an international coalition of groups devoted to protecting the world's remaining mangrove forests. The Project urges people to reduce their consumption of shrimp to slow the rate of the forests' destruction. For more information or to lend your support, write to MAP at P.O. Box 1854, Port Angeles, WA 98362-0279.

For an action kit to help save sea turtles in the Gulf of Mexico, contact Earth Island Institute's Sea Turtle Restoration Project, 300 Broadway, San Francisco, CA 94133; phone (415) 788-3666.

Ask the World Bank to stop funding destructive shrimp-aquaculture projects. Send a letter to Lewis Preston, 1818 H St., N.W., Washington, DC 20433.

Current concerns in the Gulf shrimp fishery are outlined in the May 1994 *Fishery Management Plan*, available free from the Gulf of Mexico Fishery Management Council, Lincoln Center, Suite 331, 5401 W. Kennedy Blvd., Tampa, FL 33609; phone (813) 228-2815. Detailed information about the shrimp industry worldwide is available from *Shrimp News International*, 9434 Kearny Mesa Rd., San Diego, CA 92131, but the price for six issues—$95—is better suited to lobster.

Farm Bill, page 38

The Sierra Club is working to shape the 1995 Farm Bill through the National Sustainable Agriculture Coordinating Council. This is the umbrella organization for a number of autonomous regional Sustainable Agriculture Working Groups, which bring together farmers, environmentalists, and public-interest groups in an attempt to craft a progressive farm policy. To get involved in the Farm Bill campaign, or to get in touch with the SAWG in your area, contact Amy Little at the National Sustainable Agriculture Coordinating Council, 32 North Church St., Goshen, NY 10924; phone (914) 294-0633.

The Midwest SAWG has produced a report called *Clean Water and Thriving Farms* detailing the mutual goals of its member organizations (including the Sierra Club) for sustainable agriculture. It's available from 110 Maryland Ave., N.E., Box 76, Washington, DC 20002; phone (202) 547-5754.

The Environmental Working Group produces invaluable reports on farm policy. *So Long, CRP* ($10) is an exhaustive look at the Conservation Reserve Program; *Pesticides in Children's Food* ($15) is the study that finally shook the EPA into action on regulating pesticide residues; *Sowing Disaster: The Implications of Farm Disaster Programs for Taxpayers and the Environment* ($20) describes itself, and *Faking Takings* ($20) examines the ways those espousing "property rights" are benefiting at public expense. There is a $3 postage-and-handling charge for each item. To order, contact the Environmental Working Group at 1718 Connecticut Ave., N.W., Suite 600, Washington, DC 20009; phone (202) 667-6982.

FEATURES

Chefs, page 42

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Two outstanding cookbooks emphasize seasonal ingredients: *Fields of Greens* by Annie Somerville (Bantam, 1994) and *Potager: Fresh Garden Cooking in the French Style* by Georgeanne Brennan (Chronicle Books, 1992).

A very readable primer on backyard biodiversity is *Rain Forest in Your Kitchen: The Hidden Connection Between Extinction and Your Supermarket* by Martin Teitel (Island Press, 1992).

For general information on healthy, regional cooking, contact Oldways Preservation & Exchange Trust. Oldways is currently promoting the Mediterranean Diet, which emphasizes plant-based foods, olive oil, and minimal red meat—along with regular exercise and a glass of red wine at dinner. Oldways is also the sponsor for the Chefs Collaborative 2000, the first environmental organization solely for chefs. Information is available from 45 Milk St., Boston, MA 02109; phone (617) 695-2300.

Wine, page 50

For information about organic wineries in the U.S., contact the Organic Grapes into Wine Alliance at 54 Genoa Pl., San Francisco, CA 94133; phone (800) 477-0167. The same address and phone number will serve for enquiries about Veronique Raskin's Organic Wine Co., which imports Château Bousquette and other French wines.

Author Richard Figiel's Silver Thread Vineyard is located at 6075 Sirrine Rd., Trumansburg, NY 14886; phone (607) 387-9282.

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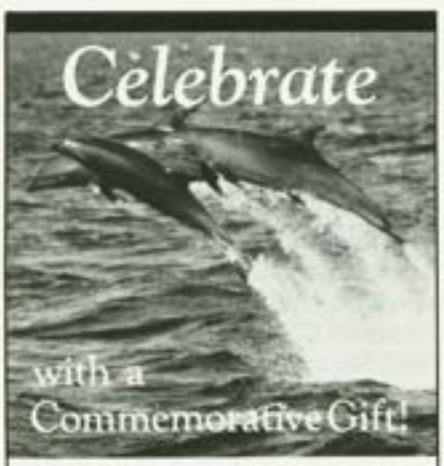

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The Fine Wine Review recently carried an article on biodynamism and viticulture. For a photocopy send an SASE to Claude Kolm, 443 Fillmore St., P.O. Box 455, San Francisco, CA 94115. A yearly subscription (six issues) is $27.50 (add $2.33 sales tax in California).

Gardening, page 56

A backyard booklist, some essential, all enjoyable: *Compost This Book! The Art of Composting for Your Yard, Your Community, and the Planet* by Tom Christopher and Marty Asher (Sierra Club Books, 1994); *Cooking From the Garden: Creative Gardening and Contemporary Cuisine* (Sierra Club Books, 1988) and *The Complete Book of Edible Landscaping* (Sierra Club Books, 1982) by Rosalind Creasy; *How to Grow More Vegetables Than You Ever Thought Possible on Less Land Than You Can Imagine* by John Jeavons (Ten Speed Press, 1991); *Environmental Gardening* by Karen Arms (Halfmoon Publishing, P.O. Box 30279, Savannah, GA 31410-0279); *The Natural Gardening Book: A Holistic Approach to Gardening* by Peter Harper, with Chris Madsen and Jeremy Light (Fireside/Simon & Schuster, 1994); and *The Rodale Encyclopedia of Organic Gardening* (Rodale Press, 1992).

Trail Food, page 68

Turn these well-trod pages: *Simple Foods for the Pack* by Claudia Axcell, Diana Cooke, and Vikki Kinmont (Sierra Club Books, 1986); *The One-Pan Gourmet: Fresh Food on the Trail* by Don Jacobson (Ragged Mountain Press, 1993); *The Lightweight Gourmet: Drying and Cooking Food for the Outdoor Life* by Alan S. Kesselheim (Ragged Mountain Press, 1994); *Wilderness Cuisine* by Carole Latimer (Wilderness Press, 1993); *Good Food for Camp & Trail: All-Natural Recipes for Delicious Outdoor Meals* by Dorcas S. Miller (Pruett Publishing, 1993); *NOLS Cookery* edited by Sukey Richard, Donna Orr, and Claudia Lindholm (Stackpole Books, 1991). ■

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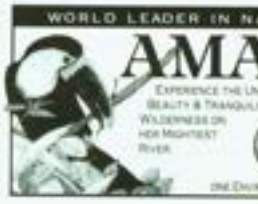

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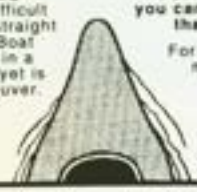

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My local farmers' market helped change my environmentally destructive eating habits. I've abandoned the supermarket, which now seems as sickly and joyless as the industrial food system that supports it, and gladly eat only foods that each season can offer, and foods with a freshness only my neighbors can provide. I'm healthier, and so is this small part of the world.
Guy Hand
Santa Barbara, California

I don't believe the Earth Day myth that individual actions will change the balance of power or result in the real change that only governments can bring about. So I shop at supermarkets (because there's no farmers' market nearby) and buy a lot of packaged foods (because I work all day and don't have the time or energy to cook). I'm green at heart, but I have to be realistic.
Martin T. Rollins
Hagerstown, Maryland

We shop only at health-food stores. It costs more, but I consider organic foods a wise investment in my family's health, as well as in the planet's well-being.
Becky Trombley
Princeton, Texas

Unless you're in a position to set up your own backyard farm, the cost of cooking "pure" is discouraging, as is the price of prepared incidentals like salad dressing. I've asked the owners of health-food stores why this is so, and they can't give me a satisfactory answer. Finding a way to remove natural and organically grown foods from the elitist category and placing them on supermarket shelves at competitive prices would be half the battle won. We are all growing increasingly leery of the way our food supply is being chemically manipulated.
Joyce Long
Sayville, New York

From March through November our family purchases all of our produce from a local organic farmer through partnership in a Community Supported Agriculture program. We purchase most of the balance of our groceries from a small, local, natural-food co-op. The cost of consuming in this manner is no more than that of buying food that has been sprayed with pesticides and traveled many miles by truck.
Terry Dressler
Goleta, California

As a working mother I find that many of my good intentions come in last in my race with time. This means that my kids' dinners consist primarily of fish sticks (no filler, of course), chicken fingers (who knows if they once roamed freely?), or noodles (always the meal of choice). From time to time we can even be found in a fast-food restaurant, where most of the booths are filled with other weary-looking parents and their kids. Compared to the atrocities being committed around the world each day, I believe these habits are benign. My family is healthy and happy, and, being the busy goddess she is, Gaia will, I'm sure, forgive us our small trespasses.
Hillary S. Tower
Flint, Michigan

As a single man on a ranch, I don't have time for gardening and heavy cooking, sewing, and washing, and women who do such traditional women's work are like diamonds in the desert—few and far between. So I eat a lot of heavily packaged frozen foods—but I also recycle.
Kent Karstadt
Saint Hedwig, Texas

I get my organic produce from my community garden or farmers' market two times a month. I buy beans and grains in bulk four times a year. Any required cooking is done once a day in one pan. The local Sierra Club Food and Agriculture Committee has provided me with much guidance in living my environmental philosophy.
Jean Salmon
Santa Clara, California

We shop for produce 27 weeks of the year at our local, organic Farmshares Co-op. Any extra produce (even lettuce) goes into a soup stock, which we freeze. We don't cook very much, only once a week for stove-top foods, which we freeze and/or refrigerate, then microwave daily for our main meals. Cleanup keeps me in the kitchen only on cooking day. Our dog pre-cleans a lot of pots and pans. This eliminates rinsing before they go into the dishwasher, which I run twice a week (unless we have company).
Jacquelyn Barr
Port Townsend, Washington

I grow all my fresh vegetables, buy grains, beans, and dairy products in bulk from a food co-op, and get fruit and what little meat we use from farmer friends or from the co-op.

One tough decision I face is whether to use organic or synthetic fertilizers. Some organics (cottonseed meal, wood ashes, leaves, manure, lime) are readily and locally available. But manure and leaves are heavy and require a lot of energy to haul and spread on the site. Manure also has lots of weed seeds, increasing the need for cultivating, which also requires energy. Some critical nutrients like potash and phosphates are expensive. The shipping can cost as much as the fertilizer itself. Therefore, I sometimes buy cheap, locally available synthetic sources of these nutrients, especially phosphorus.

There are no easy answers; everything has tradeoffs.
Shannon Stoney
Cookeville, Tennessee

Our family does its best to "shop, cook, and eat in keeping with our environmental values." We're vegetarians, eat organic produce, use cruelty-free, environmentally friendly products, and avoid products with non-recyclable packaging.

Living a life consistent with one's values is seldom easy, and usually requires one to choose paths other than those of least resistance. For us, hypocrisy is not an acceptable alternative. Nevertheless, we feel that lifestyle is an individual choice and that those who take some green actions in their personal lives should be applauded for their efforts, not chastised for doing too little.
Lori Hoffman and Francis Chlapowski
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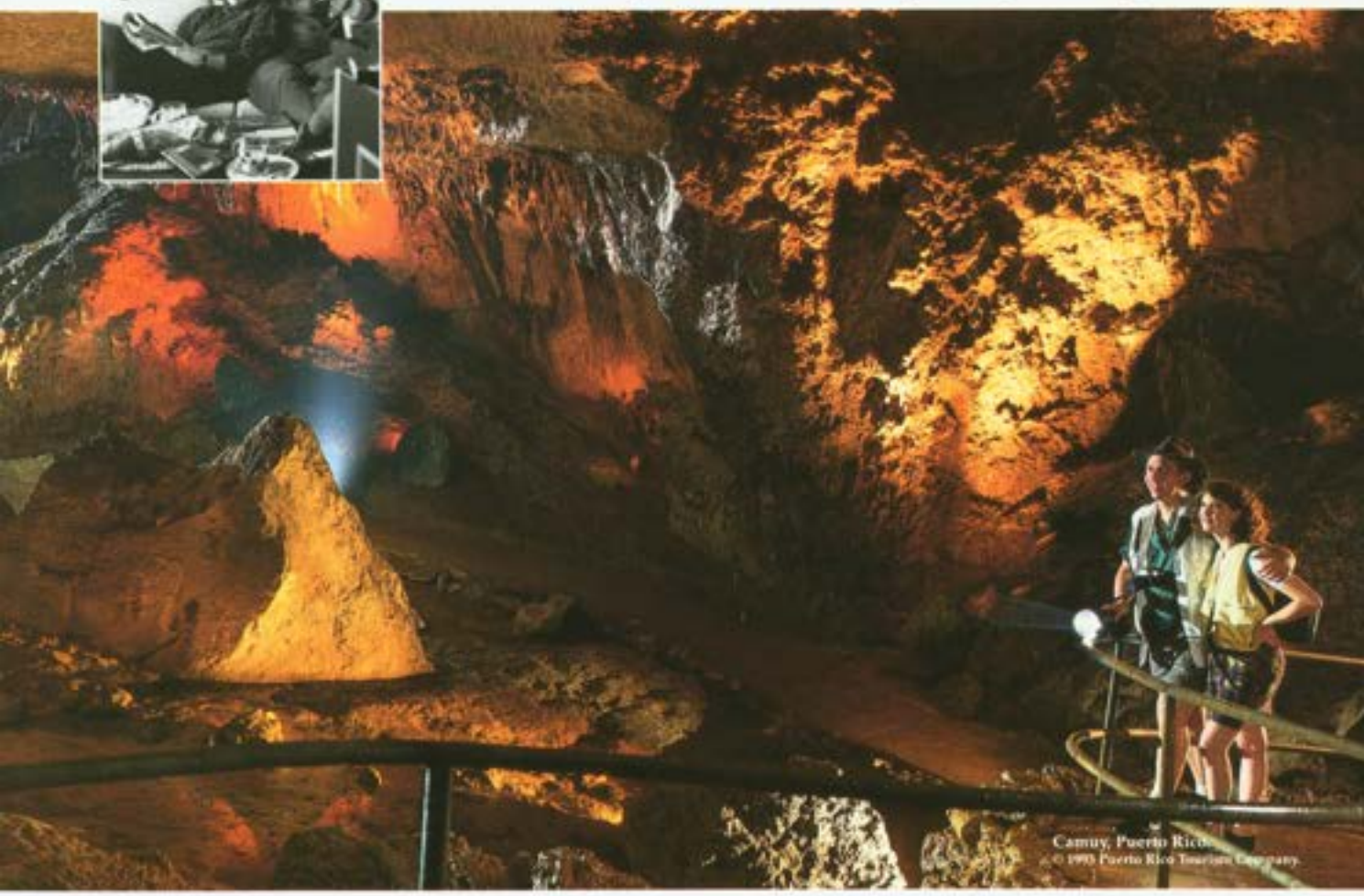

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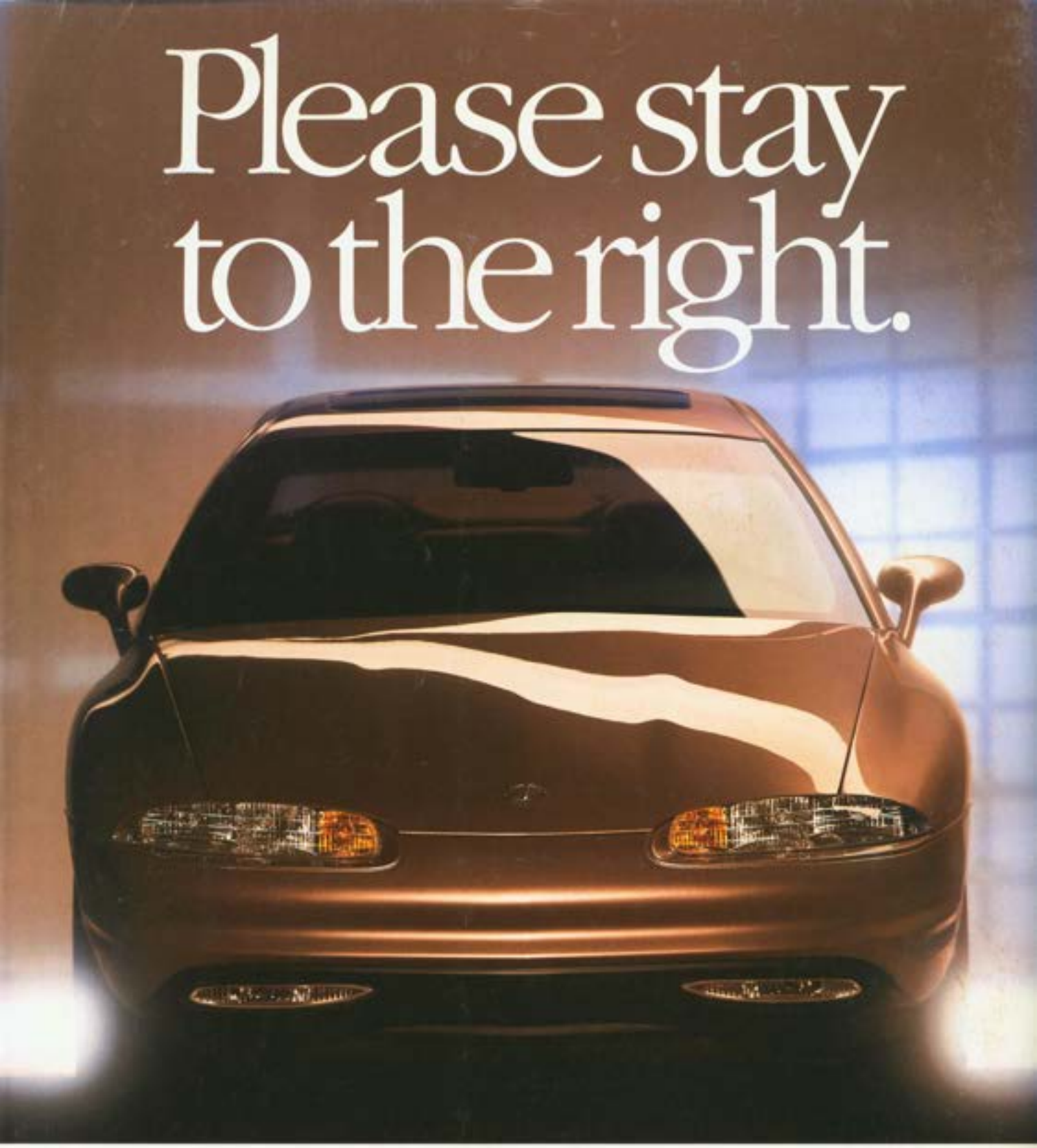

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